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Challenges of Climate Change on Children's Education of the Farming Families Tarun Kumar Das,* Kausik Pradhan and Biman Maity

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ABSTRACT

The purpose of the study was to determine the how the climatic variability affects the children education of the farming family in the rural area. The study was conduct in 4 village namely Chilakhana and Maruganj, Singimari Pachimpar and Pedbhata Chandanchowra village of Cooch Behar district of West Bengal. Randomly 200 no. of farming family were selected for the study. Data were collected through well design structured interview schedule. Collected data was analyse with help of statistical tools. Garrett's formula are used to determine the rank of various identified constraints faced by the rural children due to climate change. The results revealed majority of the farmers had knowledge to some extent on climate change and its impact of crop production. The study also showed that the impact of climate change has also affected the children education of the families of the farmers. The finding indicate that poor economic status and harvest of a farming family, children are taken away from the school and force to generate income for family and its total score is 12810 and mean score is 64.05 and ranked first. Policymakers and donors who dominate country-level climate change response programmes, particularly from the environment, meteorology and finance ministries, have yet to apply a child rights lens when planning for adaptation. Organizing various awareness programme, conferences, seminars and workshops on climate change by different line department including NGOs may raise the knowledge level of farming community in rural area which will help them to minimize the rising constraints and adoption of scientific mitigation strategies.

INTRODUCTION

Climate change is occurring at alarming impacts which have been seen mostly in rural area. Climate change poses considerable threat to rural farmers and their communities in developing countries, especially those living in the tropics and sub-tropics (IFAD,2008). The direct impacts of climate variables such as air, temperature, humidity, wind speed and other climate factors influence animal performance such as growth, milk production, wool production and reproduction. Children in rural area of the farming family are critically exposed to the impacts of climate change. The effects are intense or terminal droughts, sudden floods, uneven distribution of rainfall and shifting seasons are severely hampering their education as well causing community pressures in the rural areas. The main threats occurs due to climate change among the children are malaria, diarrhea and under nutrition are highly sensitive to climatic conditions. Climate change causes increasingly absent from

school or drop out altogether to increase their role in domestic tasks or income generation. Climate changes also induced migration as a results caused displacement as well as hit children education. Due to climate change the rivers have dried up and sand mining has increased and that caused many children to drop out of school to work in mines in loading the vehicles near riverside. Climate change indices such as flood, drought, soil erosion, high temperature, shortage of water, wind storm, frequent sea rise can also affect the population of farmers through impacts on the necessity and comfort of life such as water, energy, housing, transportation, food, natural ecosystems and health systems (Lal, Alavalapati, & Mercer, 2011). Farmers move away to various locations due to the impacts of climate change, it disturbed the communities or households drift as a result raise in hunger, poor health and poor wellbeing of the farmers' households. Consequently, climate change is causing child rights to become even more difficult to safeguard and governments do not fully appreciate the threats to their children's future to fulfil their responsibilities to protect them.

Methodology

The study was conducted in four village namely Chilakhana and Maruganj of Tufanganj –I block and Singimari Pachimpar and Pedbhata Chandanchowra village of Cooch Behar – II block under Cooch Behar district of West Bengal. Randomly 200 no. of respondent of farming family were selected for the study. Data were collected through well design structured interview schedule. Collected data was analyse with help of statistical tools. Garrett's formulas are used to determine the rank of the various identified challenges. The Garrett's formula used for converting ranks into percent are

$$\text{Percent position} = 100 * (R_{ij} - 0.5) / N_j$$

Where,

R_{ij} = Rank given for i^{th} constraint by j^{th} individual

N_j = Number of constraint ranked by j^{th} individual

Total score and mean score are also obtained by using above formula of different constraint face by the rural children during their educational process due to climate change.

RESULTS

The above tables reveals that majority of the respondents have the poor economic status and climate change mainly dominating on them and for which children are taken away from the school and force to generate income for family and its total score is 12810 and mean score is 64.05 and ranked first followed by the challenges of Water borne diseases, increase temperature, air pollution, severe cold and poor food quality result sickness restricts children to attend the school and its total score is 11706 and mean score is 58.53 and ranked second.

Table 1. Various climate change challenges face by the rural children on their education

Sl. No.	Challenges	Total score	Mean score	Rank
1.	Children drop out of school as a result of food scarcity as they cannot go to school with empty stomach and spend time in search of food.	9214	46.07	5
2.	Poor economic status of a family force their children to go to school, not for learn, just to have mid day meal only.	11160	55.8	3
3.	Farmer's migration makes children away from educational right.	6792	33.96	7
4.	Poor economic status of a family, children are taken away from the school and force to generate income for family.	12810	64.05	1
5.	Seasonal calamity such as flooding, cyclone, collapse of houses/roads /bridges etc prevent children from the right to education.	8056	40.28	6
6.	In rural area, schools used as houses for victims during any natural calamities or disasters remain closed for longer time affects of learning of children.	10686	53.43	4
7.	Water borne diseases, increase temperature, air pollution, severe cold and poor food quality result sickness restricts children to attend the school.	11706	58.53	2

CONCLUSION

The impact of climate change on the education of the respondents' family include: loose of time for schooling as they have to go for work due to family financial problems, children drop out of school as a result of food scarcity as they cannot go to school with empty stomach, farmers migrations make children loose education right, schools used as houses for victims of climate change disasters such as flood or heavy rain remain closed for learning for the length of time the victims are in the school among others. Organizing various awareness programme, conferences, seminars and workshops on climate change by different line department including NGOs may raise the knowledge level of farming community in rural area which will help them to minimize the rising challenges and adoption of scientific mitigation strategies. Policy makers needs to figure out some of the solution in collaboration with the department of environment, meteorology and finance ministries on adaptation.

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