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Adaptive Strategies and Challenges of Economically Marginal Santal Families in Fulfilling Food Security: Perspective of Mohipara Village of Rajshahi District

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Abstract: *Economically marginal Santals are the ones who suffer from food crisis because of degradation of forests and waters, land grabbing and increase of commercialization of agriculture accompanied with other common factors, such as natural calamities, climate change, insectism, economic poverty, displacement etc., in spite of rapid growth in agriculture, which lead Santals to occupy new strategies in order to ensure their food security. But existing researches did not focus on this burning issue, which made the problems Santals facing in ensuring food security unsolved. The current research aims to explore the problems, challenges and food related adaptive strategies of Santals and applying qualitative research techniques, the research found that the future status of Santals in terms of food security is going to be very much challenging because of unequal distribution of means of technology and lands, increased competition regarding controlling over natural resources and Santals' increased dependency on the money lenders for the survivals.*

Keywords: Adaptive strategies; marginalization of indigenous peoples; Santals; Food security; Challenges in ensuring food security.

INTRODUCTION

Food is one of the basic needs of human beings, without which man cannot survive. Food crisis is another important issue that is brought up in conjunction with food security. There are many people in the world who are suffering from food crises. Weather extremes, economic shocks, displacement, health shocks, crop pests, etc., are the reasons for food insecurities in most cases (FSIN, 2020). From the ancient periods, cultivation, fishing, huntinggathering, and husbandry have long been used as the means of overcoming food crises and ensuring food security. At the same time, natural insecurities, calamities, and attacks by insects have hampered food collection many times, which led men to adapt to new strategies in order to meet the challenge. These adaptive strategies may differ based on countries, nations, and ethnicity.

It is the 21st century when many development projects have been undertaken by government and nongovernment agencies in many countries in recent decades. In spite of progress in human welfare in recent decades, many people in the world are poor and suffer from hunger (FAO, 2017). When we think of the Bangladesh context regarding food strategies, it gives a pleasing appearance that the government of Bangladesh played a supportive role in developing the agriculture sector by expanding technology, diversifying crops, extending production of nonseasonal crops along with the seasonal ones, innovating new varieties of salinity and droughttolerant seeds, and highyielding varieties of paddy and jute, providing subsidies and agricultural credit, and ensuring uninterrupted power supply for irrigation (Centre for Research and Information, 2018). Since the first goal of the MDG was to eradicate extreme poverty and hunger (United Nations, 2015), agricultural development has played an important role in improving food security as well as economic growth and stability (FAO, 2014; Bagchi, Rahman & Shunbo, 2019) and meeting the conditions of the Millennium Development Goals (GED, 2018).

At the same time, the production of a huge amount of food does not mean the assurance of everyone's food security. It is seen that Bangladesh got success in producing rice, fish, meat but still many a man remain hungry dew to unavailability of food. In spite of the huge amount of food being grown, many people face the problem of food insecurity due to a lack of purchasing power and a lack of access to food. Many people suffer from chronic and transitory food

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insecurity because of being landless or seasonal laborers in agriculture only, since other nonagrobased livelihoods are under development (FAO, 2014). Bangladesh's indigenous communities are those who are deprived of food and nutritional security and access to safe drinkable water (Bangladesh Indigenous People's Forum, 2015).

But indigenous peoples also have the right to food and to be free from hunger. According to article 11 of the International Covenant on Economic, Social, and Cultural Rights of 1966, state parties are obliged to ensure the food security of indigenous peoples, and these obligations include preserving indigenous peoples' traditional ways of living, strengthening indigenous food systems, and protecting subsistence activities such as hunting, gathering, and fishing (FAO and UNPFII, 2008). But this is not followed at all in most cases. It is ethnic communities that are known as the most marginalized and disadvantaged groups in the world, and whose economic, cultural, and social activities are dependent on renewable natural resources. They face discrimination and exploitation in many cases, and their rights and institutions lack recognition (International Labour Organization, 2017; Asian Development Bank, 1998). Their socioeconomic, political, and ecological marginalization and disadvantages make them face food insecurity many times. Their ethnic, economic, cultural, historical, geographical, and political experience lead them to adopt different strategies for ensuring food.

It is adaptive strategies, which are sometimes regarded as livelihood activities, allow people to secure food and other necessities of life. They are meant to require knowledge, skills, networks, raw materials, and other resources to meet individual and collective needs on a sustainable basis with dignity. Generally, agriculture, fishing, horticulture, etc. play an important role in livelihood activities and generally provide the basis for their food security (UNHCR, 2014). At the same time, all the groups (i.e., ethnic peoples, nations) do not follow the same strategies in ensuring food availability since their ethnic, economic, cultural, historical, geographical, and political experiences are not the same.

The Santals are one of the remarkable ethnic communities of Bangladesh, who live basically in the northwestern part of the country (Islam, 2003). Being an ethnic community, their adaptive strategies differ from those of the mainstream Bengali community and other ethnic groups. Many Santal families live in Mohipara a village that is located in the Rajshahi district of Bangladesh. In this research article, their problems, challenges, and foodrelated adaptive strategies have been discussed.

Research Objectives

The research objectives of this research are:

- To know the adaptive strategies Santal families follow in ensuring food security.
- To analyze the problems Santals face in ensuring food security.

LITERATURE REVIEW

Swati (2021) asserts that Santals are dependent on agriculture for collecting foods, taking rice as a staple food, and facing malnutrition because of a lack of protein. Swati's perception can only be applicable to India and not to Bangladesh because of geographical, political, socioeconomical, and moral differences between these countries. On the other hand, the social problems Santals face in gathering food were not discussed. The article also lacks a discussion on adaptive strategies.

Saha & Sengupta (2014) focused on nature in finding Santal adaptive strategies. They also lack discussion on the social problems Santals face in collecting food. Moreover, this research is applicable to India only and not to Bangladesh because of environmental, geographical, political, socioeconomical, and moral differences between these countries.

In a report by Start Fund Bangladesh (2018), Geographic remoteness in Bander Ban district has been identified as the main reason for the food crisis. There is limited food stock and limited food consumption. Economic poverty, discrimination, natural hazards, intercommunal tensions, low access to physical capital, further distance from the market. Food gathering activities include Jhum and plough cultivation, horticulture, fishing, livestock, poultry, and other forestbased activities. Reducing meal size, borrowing money, and selling labor in advance are the adaptive strategies in this situation. However, there is a generalization about food crises and adaptive strategies in this study because adaptive strategies differ depending on cultural and ethnic identities.Moreover, this research mainly focused on the Chittagong Hill Tracts and not the plain land indigenous peoples.

Sarkar, Khan & Musarrat (2016) found that Santals depended more on natural capital for gaining food than in ancient times. They collected fish, wild foods, fruits, and honey from natural resources and hunted reptiles and animals in forests. But it has become challenging since they are losing access to common pool resources; they cannot get other adaptive strategies to get food because of low human capital (i.e., higher education), financial capital, physical capital (i.e., infrastructure, tools, equipment, etc.) and social capital. Santals are developing their livelihood capitals as adaptive tools

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to earn a living in multiple sectors. This important article lacks a discussion of shortterm and sudden adaptive strategies for food acquisition.

Shamsuddoha & Jahan (2018) pointed out that the Santals of Bangladesh are dependent on agriculture, hunting, and gathering and have a close relationship with nature. But land grabbing and the negative effects of technological and industrial development have put them into a food crisis and livelihood loss. For this reason, they are moving towards towns for jobs, but a lack of educational and technical knowledge has created obstacles to this adaptive strategy. Shamsuddoha & Jahan (2018) have generalized this research since all Santals of Bangladesh do not occupy migration as an adaptive strategy to food security.

METHODOLOGY AND MATERIALS

This research has been done following a qualitative research approach. Mohipara village of Durgapur Upozila in Rajshahi district was selected as the research area for this research because of the appropriateness of the research topic. For collecting primary data, a random sampling method was used while selecting the respondent. Also, to target a specific respondent, we assessed their knowledge, convenience, and desire to participate in the interview session. For secondary sources or literature, we have collected literature both global and local that goes with our study objectives and sorted it out under larger categorization. For secondary sources, we have taken into account books and journals found relevant to the issue of interest. The document review method was used as a secondary qualitative data collection tool. For primary sources of data, we have addressed different participants such as Santal wage laborers, cowboys, poultry farmers, and people who depended on hunting, gathering, and fishing. Unstructured interviews and observation methods were used in order to collect primary data. An individual has been considered as a unit of analysis in the study. The inductive analytical method has been used in this research.

FINDINGS AND DISCUSSION

Bangladesh is traditionally an agricultural country (Toufiq & Tortun, 2003). It is seen that people living in rural areas occupy different levels of livelihood strategies to ensure food security, and some of them include more than one strategy (Babulo et al., 2008). Generally, most people with poverty and hunger live in rural areas and depend on agriculture, fisheries, forestry and other primary occupations for their livings (FAO, 2017). Similarly, because of living in rural areas and being poor, Santals are traditionally dependent on agriculture, husbandry, fishing, hunting and gathering for their livelihood and food (Razzaque Sarker, Ahmad Khan & Musarrat, 2016; Shamsuddoha & Jahan, 2016). Like the Santals of other regions, the Santals of Mohipare are also dependent on agriculture, husbandry, fishing, hunting and gathering. It is known that the Santals of Bangladesh are economically poor and have fewer lands, which can easily be found relevant to Mohipara village too.

Many of the Santals of Mohipara take leases of land for cultivating rice and other crops. But those who do not have enough money lend lands for cultivation, giving an amount of rice in the Boro[1] season and a portion of rice in the Aman[2] season if they take lease without exchange of money. This fixation on difference has been practiced for a long time because irrigation in Boro rice is more expensive than in Aman rice. Generally, Aman rice is cultivated with water obtained from rain. The landless Santals of Mohipara village generally work as daily wage laborers in the same village. Sometimes they go to neighboring villages. In most cases, they plant rice, weed, and harvest. There is cultivated rice twice a year in this locality. In JanuaryFebruary, they plant *Boro* rice and *Aman* rice in JulyAugust. They weed the rice after 10/15 days of planting rice. When it is time to harvest, they harvest as wage laborers. But in many cases, they make a team consisting of 6–8 members and cut and thresh rice in exchange for averaging 67 kg per *mon*[3]. They also weed jute and cut and wash it. When there are work opportunities in this locality, Santal parents take their children to work with them so that they can earn more money at the right time, since it is impossible for them to earn money in other seasons when jobs are not available. At this location, the laborers get a 350 TK, meal in the morning and 1 kg of rice per head while working. The rice they get is cooked for the family, and thus the money they get as daily wages remains as savings for the future.

Many Santal families in Mohipara get their vegetables from the field. Generally, they collect *bhotua shak*[4], *knata shak*[5], *kolmi shak*[6], *kochu shak*[7] and so on. The *bhotua shak* and *knata shak* grow in winterspring in agrofields as weeds. Kolmi *shak* and *kochu shak* also grow as weeds but grow more in the rainy season. Some members of the Santal community cultivate vegetables beside their homesteads and get the vegetables they need. Generally, they cultivate pumpkins, creepers,

[1] A type of rice that is plant in January and February.
[2] A kind of rice that is plant in the rainy season (July-August) and harvested in November-December.
[3] One *mon* consists of 40 KGs.
[4] A type of uncultivated vegetable.
[5] See also 6.
[6] See also 6.
[7] See also 6.

***Corresponding Author:** James Soren

arum, green bananas, brinjals, ladiesfingers, and so on. But the vegetables they cultivate are for family consumption only and not for commercial purposes since they are in a limited quantity.

Their home economy also extends to cattle rearing. They rear cows, goats, hens, ducks and pigs at home. Among them, hens and ducks tend to trend in an open environment. But goats, cows and pigs need extra care. They cut grass from fields and tend cattle in them. But they have to cut arum from fields for pigs. They have rare pigs, hens and ducks for the purpose of eating, but cows and goats for milk, buying foods and other needs.

Mohipara's Santals hunt in order to obtain the protein they require. Generally, they hunt in the months of February and March as there is cultivated wheat in this locality. The field of wheat makes hunting easy since it is easy to mark where the animals or beasts are going. They also hunt rats in the early monsoon and winter. Basically, sudden heavy rain in the early monsoon creates a temporary floodlike situation, because of which rats move to comparatively higher lands. On the other hand, rice is collected from the land in winter, and when the field is cropfree, the Santals hunt rats, as no one makes obstacles in hunting since there are no crops in the fields.

The people of Mohipara generally catch fish in *beels*[8] and canals. Generally, when it is autumn, they catch fish with hooks in the canals. But the water in the *beel*s and canals dries up in the winter, so they put water aside with pumps or *dobka*[9]. In most cases, they put this water on the land of oil crops as it needs water because there is no rain at this time. On the other hand, the newly waterless areas are used for sawing rice seeds. They also collect conch, scorpion and cockle besides fish from *beel*s and canals. Generally, it is the rainy season and lateautumn when they collect them. But they also collect conch by digging with a saw when it hides itself under soil in winter.

The Santals of Mohipara village gather wild potatoes, namely *sang*[10], *dumra*[11] and *bayang*[12] in the month of September and October from the jungles. Generally, they chose the banks of ponds and bamboo yards since they grow in those places. But they go far in collecting potatoes, living there, making camps for 79 people, and they eat them the whole year.

Food sharing is best seen among the Santals of Mohipara, like the Santals of other parts of the world, especially when they hunt a good number of beasts and animals and collect potatoes from the jungle and bamboo yard. They share it with their relatives and neighbors to serve since they are now disappearing gradually and their relatives may not get them because of their being vanished. They also expect food from their neighbors. When there is a shortage of food, they lend food and rice from their neighbors and kin relatives. But they are to go to the *Mahajons*[13] for lending money at high interest when their neighbors and kin relatives also face a shortage of food. They give the money back to the *Mahajons* when they earn money after being hired to work.

Food conservation also goes with food collection since they collect food for future use as well. Generally, they conserve the meat of beasts by drying them in the sun. They conserve not only meat but also fish in this way. There are a few families who have frozen food to conserve food. Sometimes, they put meat in these freezers so that they can consume it later. In this case, they choose their neighbors and kin relatives with whom they share food and assist in overcoming their problems. They do not conserve food in nonrelatives' freezers in case they get disappointed or angry. They conserve fish and scorpions alive in jars made of soil and the fish and scorpions remain there alive for a long time. Santals of Mohipara put conch and cockle under soil for few months so that they may stay alive. Conservation of potatoes using indigenous knowledge is best practiced among them. After collecting potatoes, they keep them on wood or *chatai*[14]. But, while conserving wild potatoes such as the *dumra* and *baying*, they dig the soil and put them under it, so that they remain unrotten and eatable.

These foodensuring strategies are not easy and are sometimes hampered for a few reasons.

It is known that the availability of croplands in Bangladesh is decreasing because of rapid population growth (Hasan, Hossain, Bari & Islam, 2013). For this reason, Santals' food ensuring strategies are gradually becoming competitive since Santals from other regions are also coming to this village to get work. In the recent past, they used to fetch union from the field and get 15 kg per day. But since there are more laborers than needed, they get fewer unions. On the other hand, there are some tasks that do not require special qualities, such as collecting oil crops and pulse crops. In this case,

[8] A kind of natural waters where there is water in most of time, and rice and oil-crops are cultivated there when there is no water in the winter.
[9] A traditional irrigation instrument made of wood or tin and four pitches of ropes. There are two people needed to irrigate with a *dobka*.
[10] A variety of wild potato.
[11] See also 12.
[12] See also 12.
[13] Member of village elite who lend money at a high interest rate.
[14] A roof-like place to keep agro-products. Generally, *chatai* is made from Bamboos.

***Corresponding Author:** James Soren

the Bengali landowners hire people from their own community since they get them easily through their kin relations. Recent trends among the country's farmers to dig ponds in cultivatable lands are reducing rice cultivation and Santal job opportunities. This has led Santals to compete with the laborers of other villages. Their working time is decreasing fast because of the radical use of agricultural technologies. It has been observed in the research field that almost every farmer uses weedicide in their rice fields to minimize the cost of weeding and machinery for cutting rice. Mohipara's Santals have long been involved in agricultural activities. When there is an alternative, they become jobless. Basically, technological development has put them aside from their comfort zones and led them to joblessness (Shamsuddoha & Jahan, 2016). It has been found that Santals lead poor lives because of gradual joblessness too, and for this reason, they sell their labor at a low price in most cases (Ghosh, Shoily, Islam, Misu & Khatun, 2020). Insecticide use has also resulted in the extinction of insects and animals such as crabs, tortoises, and snails (Razzaque Sarker, Ahmad Khan & Musarrat, 2016), leaving the protein they require unsatisfied.

Santals' joblessness has also occurred in recent years since it has been raining a lot in the monsoon and creating temporary floodlike situations for a long time. In this situation, farmers are unable to grow food. Since Santals work in these fields, the uncultivation of foods makes them unemployed. It is current anxious news that climate change seems to be affecting people, ecosystems, and livelihoods all around the world in recent decades (MassonDelmotte et al., 2019). Bangladesh's vulnerability to climate change because of its geographic location and geomorphological conditions will become even more so as a result of climate change (Ministry of Environment and Forests, 2009; Ministry of Environment and Forests, 2012; Displacement Solutions, 2012). It is not new that indigenous people depend more on nature for their living (International Labour Organization, 2017. So, climate change effects on the environment put them at more vulnerability, which is already faced by the Santals of Mohipara.

Santals' hunting tradition is being limited because of the degradation of forest lands (Razzaque Sarker, Ahmad Khan & Musarrat, 2016). Moreover, the increase in agricultural demands left no land uncultivated. So, if the land owner forbids hunting, they do not hunt on that particular land, though local people encourage Santals to hunt beasts since they cause harm to poultry. Recently, there have been many types of crops cultivated in this locality, and uncultivated crop lands no longer remain uncultivated, which makes the growth of wild vegetables difficult since they are treated as weeds. Moreover, cultivation has made hunting difficult. Basically, the place where they dig soil to catch rats remains untouched by the original layer of soil, and it causes damage to the tiller when cultivating. When they go hunting, they are not permitted to enter the croplands like before since the agricultural costs have increased a lot. People are also using land so much that they are leaving no land uncultivated. As a result, they are not getting natural and uncultivated vegetables any more. It is not unknown that indigenous communities generally have harmonious relations with nature (Sangha, 2020) and their economies primarily depend on natural resources and eco systems (International Labour Organization, 2017). Santals and other indigenous communities hunted reptiles and animals (i.e., birds, rats, rattles) as their primary source of protein, and collected flowers, many varieties of wild potatoes, fruits, leafy vegetables, roots, fungi and honey from the forest in the past (Razzaque Sarker, Ahmad Khan & Musarrat, 2016). So, their limited access to nature burdens their lives. Another thing about hunting is that it is one of the different and diversified practices that make Santals and other indigenous peoples hated and neglected by the people of the Bengali community. Because of this food gathering strategy, Santals are not welltreated in local food shops and restaurants. They are also laughed at in class and cannot participate in the class as the students of the Bengali community do. Basically, (Sarker & Davey, 2009) also found that Santals' cultural food habits create forbiddance in eating in local restaurants and food shops, and negligence and hatred of the Bengali community towards ethnic food systems create a situation where ethnic children do not sit with the children of the Bengali community in the classroom. In light of this, Santal children in Mohipara hide their faces and avoid walking through village streets while hunting.

On the other hand, the increasing decrease of *beel* affects Santals' access to ecological settings, which also lessens their gains of fish, conch, scorpion and cockle, which were ensuring the protein they needed. There were only enough people to catch fish in the canals and *beel*s. But now they are competing with the people of Bengali communities. Moreover, they are lagging behind since they catch fish with their hands, whereas people from the Bengali community use big nets and shallow machines. It is seen all over the world that competition over natural resources has been increased due to rapid population growth, changes in dietary patterns, urbanization, and climate change effects (FAO, 2017). Moreover, commercial aquaculture is decreasing the Santals' access to common pool resources (*beel*s and *haor*s) (Razzaque Sarker, Ahmad Khan & Musarrat, 2016). It has been seen that many common pool resources (*beel*s and *haor*s) are transferred into ponds in Durgapur Upazilla of Rajshahi and other districts (The Daily Bangladesh, February 17, 2020; The Daily Star, May 1, 2021; The Daily Star, May 14, 2021; The Financial Express, December 21, 2017; The Daily Observer, March 2, 2018), which has already caused Santals' least access to these already transformed lands for collecting fish, conch, scorpion and cockle for themselves and their poultry, decreased land for trending cattle at the time after harvesting, and reduced their job opportunities and rice they could have got in every agroseason.

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It is not deniable that Santals all over the country are poor and child labor is seen among them in order to ensure food security, which is hampering child education and creating threats to making skilled human capital (Sarker & Davey, 2009). The unexpected and less income are making them dependent on the *Mahajons*, and the pressure of their high interest is meant to make them poorer and finally lead them to migration.

CONCLUSION

It is clear from the above findings that the Santals of Mohipara are dependent on agriculture, forests, hunting, gathering and fishing to ensure their food security, which is mainly dependent on nature and ecology. A radical decrease in agricultural cultivable lands due to rapid population growth, competition over natural resources, climate change, technological development and unsupportive roles of government agencies has increased their joblessness and poverty and reduced their food availability.

The continuous joblessness, lack of opportunities in hunting, less access to natural resources, loss of traditional lands and discrimination will make the food crisis of the Santals worse and increase their expense, migration to other places, and finally cause the loss of their cultural diversity. Regarding ensuring the food security of Santals, this research suggests policies that are as follows:

- conservation of waters, forests, and other natural spaces.
- Preservation of Santals and other indigenous peoples' access to natural resources.
- empowering indigenous peoples to access alternative sources of income
- ensuring their participation in formal education without neglecting and disrespecting them and their cultural differences.

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