

# **Resource-dependent Livelihood and Folk Religion of the Island Villagers Residing in Sundarbans Delta of West Bengal: A Sociological Analysis**

Nabanita Das

## **Abstract**

The Sundarbans is a part of the world largest delta formed by the three mighty rivers like Ganga, Brahmaputra and Meghna and their large number of distributaries. In this paper, the researcher basically focuses on the Indian part of Sundarbans which is in the state of West Bengal comprising of many islands. Those part of the Sundarbans population who lives within the mainland, their livelihood patterns are similar to the rest of the rural population in the district but it is only the island villagers of the Sundarbans whose way of living and entitlements are different from that of their mainland counterparts. Forest is the main source of income for the people of the Sundarbans. Honey- collection , fishing and crab catching are the main source of income for the majority of the people of the Sundarbans. In this environment lives a community of brave humans whose courage is manifest in their daily battle against nature such as venturing deep in to the forest to collect honey, crabs etc. These professions are very dangerous because they end up being a victim of the tiger. Although these forests are very dangerous for these people but it is the sole source of livelihood for the honey- collectors, fishermen and this fact made them intensely superstitious and prejudiced by their belief in forest spirits and their forest goddess Banabibi. They were confident that their safety depended entirely upon supernatural agency. None of the wood cutters, honey – collectors and fishermen ventured in to the forest without a puja for Banabibi.

*Keywords:* Environment, honey- collectors, Banabibi, island villagers, forest, superstitious .

## **Introduction**

In the words of Amitav Ghosh, the Sundarbans is an immense archipelago of islands situated at the southern tip of West Bengal between the sea and plains (Ghosh, 2006). The Sundarbans is a part of the world largest delta formed by the three mighty rivers like Ganga, Brahmaputra and Meghna and their large number of distributaries. In this paper, the researcher basically focuses on the Indian part of Sundarbans which is in the state of West Bengal comprising of many islands but out of which only 54 islands are inhabited, covering an area of 4262 square kilometers. In the year 1997, Sundarbans was awarded as a World Heritage Site by UNESCO. The Sundarbans Tiger project was started in the year 1974 and also considered as a National Mangrove forest. In Bengali the word “sundar” means beautiful and” ban” is forest. Therefore the natural beauty of the region leads to call it Sundarbans. Then there are those who feel that the word sundar refers to the sundari tree that abounds in the forests. In terms of Biodiversity the Sundarbans is unique yet life seems to be paradoxical. According to Annu Jalais, we are all

---

Asst. Professor in Sociology, Jadavpur University, West Bengal, India

aware of the fact that the tigers of the Sundarbans are the nature's masterpiece creation. The reason why Sundarban is famous today is not because of its changing environment and the people who are living in it but the fact that it is the largest remaining natural habitats of Bengal tiger providing a home to an estimated 600 tigers from both sides of the Bengal Border (Jalais, 2010). In case of the Sundarbans, there is an interconnection between livelihoods of the people with the environment. The forests are considered as the most diverse and widespread ecosystem on the earth and millions of people living in most tropical countries derive a significant part of their livelihoods from various forest products for centuries and these products also play a vital role to the livelihood of people living in or adjacent to forests and we can find this similar scenario in case of Sundarbas too. According to Hunter, almost all the inhabitants are 'either Hindus or Muslims'. The Hindus are mainly from the Sudra castes: Napit, Kaibarta, Pod, Chandal, Jalia, Tior, Dhoba, Jogi, Suri and Kaora. There are different categories among Muslims also: Shaikhs, Sayyids, Pathans (Hunter, 1973). Those part of the Sundarbans population who lives within the mainland, their livelihood patterns are similar to the rest of the rural population in the district but it is only the island villagers of the Sundarbans whose way of living and entitlements are different from that of their mainland counterparts. The district of South 24 Parganas is a rich resource based region. However without massive efforts of mobilizing all available resources, no appreciable changes in the region can be achieved (Banerjee, 1998). Out of four million populations around 94% of the inhabitants of the Sundarbans depend on agriculture but the farmers of the Sundarbans find it extremely difficult to sustain themselves with such occupations because the sea engulfs a huge amount of agricultural land every year. As a result seasonal mono – cropping has forced the people of Sundarbans to engage in other forms of occupations like honey– collection, fishing which can be further subdivided in to prawn – seed collection, crab – collection and deep – sea fishing and wood – collection etc. The life and philosophy of these fisher folk are intermingled with ideas, beliefs, responses towards the surroundings and their activities are seen to be oriented with multiple attempts for adjustments with bio – environmental and eco- cultural perspectives (Sarkar, 2009). The people of Sundarbans are basically dependent on nature. Forest is the main source of income for the people of the Sundarbans. Honey- collection, fishing and crab catching are the main source of income for the majority of the people of the Sundarbans. The very mention of the vast mangrove forests of the Sundarbans creates an image of a dark and dangerous arena, the abode of Royal

Bengal tiger, snakes and crocodiles. In this environment lives a community of brave humans whose courage is manifest in their daily battle against nature such as venturing deep in to the forest to collect honey, crabs etc. these professions are very dangerous because they end up being a victim of the tiger. Although these forests are very dangerous for these people but it is the sole source of livelihood for the honey- collectors, fishermen and this fact made them intensely superstitious and prejudiced by their belief in forest spirits and their forest goddess Banabibi. They were confident that their safety depended entirely upon supernatural agency. None of the wood cutters, honey – collectors and fishermen ventured in to the forest without a puja for Banabibi

### **Review of Literature**

The researcher desired to study their livelihood which is totally depended on the nature and their tremendous faith on their goddess Banabibi and other folk deities. This step of the research aspires to review the relevant literatures, theories and various studies both at the international and national levels which have helped to develop the idea of folk religion of the people living in the Indian Sundarbans delta. **Sutapa chatterjee Sarkar (2010)** in her book “The Sundarbans: Folk Deities, Monsters and Mortals”, pointed out that the principal strands in the story of the Sundarbans centre around the contest between the tiger and the forest dweller. She basically focused on the Punthi literature of Sundarbans. During 17<sup>th</sup> and 19<sup>th</sup> centuries, the Punthi literature in Bengali verse, devoted to the gods and goddesses of Sundarbans. These deities are not the regular godheads of the Bengali pantheon. These gods and goddesses are basically worshipped by the woodcutters, honey –gatherers, bees wax gatherers, boat builders and the most desperate cultivators. Thus these Punthis offer interesting insights in to the characters of past human settlements in Sundarbans. **Shatarupa Bhattacharya (2016)** believed that throughout the Sundarbans, Goddess Banabibi bestows upon all her devotees whatever blessings they want irrespective of their religions. Both the Hindu and Muslims women fast throughout the festival day and eat during twilight. The local artistes started gearing up in the tents which had been set up in different corners of the villages. These artists would sing Bengali folk songs about mythological characters, religious songs etc. Originally mother goddess Banabibi emerged as a superpower who protected the fishing community, honey-collectors and others who entered the forests for their livelihood, from the tiger attacks. **Gautam k Bera and Vijoy S. Sahay (2010)** focussed that the multilingual, multi ethnic and pluralistic cultures of different ethnic affinities, religions characterize India. The people belong to Sundarbans are of multi ethnic

background with different occupational pursuits and pluralistic religious beliefs and practise some common religious activities due to their survival and sustenance in such risky environmental situation. During profession – oriented activities, these people of Sundarbans do not consider ethnic boundary. Such a bad environmental condition has forced them to adopt the local folk behaviour in order to survive. The effect of cultural mingling of different ethnic groups is evident in Bengali language which is found in Sundarbans. **Neera Sen and Kumudranjan Naskar (2003)** pointed out that there are three major components ruling this ecosystem of Sundarbans which are as follows: waterways, islands and the forests. Sundarbans has been bestowed with the highest flora like marsh, and swamp flora. etc. as well as fauna which comprised of certain components like the Royal Bengal Tigers, spotted deers, estuarine crocodiles, fishing cats, number of migratory birds, numerous shell- fish and fin – fish species. This ecosystem of sundarbans provides food, shelter and livelihood to these populations of 40 lakhs directly or indirectly by providing a number of viable and exportable commodities like timber, honey, wax, sea food etc. As a result of immense value and potential resources, now a days the Sundarbans have been getting a lot of attention from unwanted and undesirable sectors which have sustainable development. This kingdom is responsible for the sustenance of this unique ecosystem mainly composed of mangrove vegetation and the others form of algal groups.

#### **Objectives of the study**

The **first** and the main objective of the study is to explore how much level of religiosity and superstitions exist among the island villages of the Indian Sundarbans along with the religious practices (rites and rituals) performed by the forest workers of the four villages (Annpur, Jamespur, Dayapur and Lahiripur) and at the same time focusing on different roles played by the folk deities of the Sundarbans. The **second** objective is to find out how much co-operation and harmony exists among the villagers as Sundarban villages are composed of both the Hindus and Muslims but in reality they are the children of the forest. The **third** objective of the study is to find out whether the environment of the Sunbdarbans on which these island villagers are so much dependent act as a protector or destroyer. The **fourth** objective is to analyse the community dependency on Sundarbans natural resources, various factors which affect the income of the Sundarbans forest dependents and also to assess socio-economic status of Sundarban resource dependent community by focusing on the problems associated with the

Sundarbans forest dependent people. The **fifth** objective is to focus on the human tiger conflict i.e. (HTC) which is considered as serious public health issue in Sundarbans Reserve Forest and at the same time focusing on the forest-based resource collection and the vulnerabilities associated with them. The last objective is to focus on the factors which play an important role in conservation of the ecosystem with high tourism potential.

### **Research Methodology**

Research Methodology is the systematic, theoretical analysis of the procedures applied to a field of study. It involves procedures of describing, explaining and predicting phenomena so as to solve a problem. Research Methodology also includes the assumptions and values which serve as a rationale for a research and the standards or criteria which the researcher uses for the purpose of interpretation of data and arriving at conclusions. The researcher however has adopted both the qualitative and quantitative methods here.

### **Research Design**

In this research, the present researcher's effort is dedicated to the analysis of the underlying social implications of the specific trends of the responses of people of the Sundarbans region towards the Folk religion, Environment as well as their Livelihoods. This study employs both quantitative and qualitative methods. Thus the measurement of the concept is done by making use of the quantitative methods, where, the data is collected through questionnaires and the gathered data and the associated observation are analyzed by the means of qualitative method and thus enquiry will become more scientific if the researcher follows the rules of observation and as well as interpretations. Some photographs which are related to the field of enquiry have also been taken as a visual aide. Therefore lies the necessity of planning in the Research Design which can act as a blue print of the research and thus helps in the collection and analysis of the collected data and at the same time this design is very important because it guides and determines the execution of the research process. The Research Design will consist of the following stages which are as follows :

- 1) Conceptualizing the level of religiosity through the folk religion which is indicating the features of the concept
- 2) Considering the units of Analysis i.e. what or whom the researcher want to study.
- 3) Sampling

- 4) Choosing the methods of data collection and observation through which the researcher shall collect the data which is relevant for the study.
- 5) Analyzing the findings to arrive at the conclusion.

#### **Unit of Analysis**

The island villagers of Sundarbans particularly from the four villages of Jamespur, Annpur, Lahiripur, Dayapur is considered to be the unit of analysis. The island villagers basically the people who are related with both the forest-based occupations (like honey collection, prawn seed collection, fishing, deep sea fishing, crab collection etc.) and non -forest based occupations (like agriculture) are chosen as the unit of analysis in this research. The unit of analysis is also similar to the unit of observation. The researcher has chosen the above mentioned people because they can provide the researcher with immense informations as they are related to the forest more as compared to the non island villagers. The unit of analysis must be characterised on the basis of some socio-demographic features which are as follows.

#### **Size of Sample**

- A. Age-group
- B. Sex of the respondent
- C. Location
- D. Economic status
- E. Educational status
- F. Religious orientation
- G. Sample size is 110.
- H. Age – from 20 years to 80 years
- I. Sex – Both Male and Female
- J. Location – Satjelia Island
- K. Village – Jamespur, Annpur, Lahiripur, Dayapur.

#### **A. Economic Status (Income Range)**

- A: 1,000 – 5,000/-
- B: 5,000 – 10,000/-
- C: 10,000 – 15,000/-
- D: Above 15,000/-

#### **B. Marital Status**

- A. MARRIED
- B. UNMARRIED
- C. SINGLE

N. Religious Group :

1. Hindu.
2. Muslim
3. Christian
4. Others.

#### **Method of Data Collection**

1. Questionnaires : Both open ended and closed-ended questions were given to the respondents of the four villages (Jamespur, Annpur, Lahiripur, Dayapur) of Satjelia island. Open ended questions were provided to the respondents in order to gather informations from them which will help the researcher for further analysis. The closed-ended questions were provided for the statistical analysis, and they are more specific in nature.
2. Observation - : This method is also used in this research to check the tangibility of the data as well as gathering information related to the research topic.
3. Documentary Sources : This includes official and unofficial statistics, Bengali Newspapers, other publications which are related to the topic.
4. Personal Sources : A number of photographs from other archives as well as the pictures taken by the researcher has been used as a part of gathering information.
5. Library Sources : These are being used as sources of supplying both practical and theoretical knowledge which has helped in the accumulation of the data.
6. In-Depth Interview : This interview has also been conducted with the family members of the victims of tiger attacks focusing on the details of the tiger attacks, which helps the researcher to understand their daily struggle for existence. The in-depth interview is a technique designed to elicit a vivid picture of the participant's perspective on the research topic. This method has been used in order to get information from the participant about the research topic. This method of interview has been conducted in this research in order to gather accurate and detailed information from an individual.

#### **Research Setting**

The names of the villages surveyed are: Jamespur, Annpur, Dayapur, Lahiripur

P.S. – Sundarban Coastal, District – South 24 Parganas , Name of The River – Pichkhali River, Name of The Forest – Pirkhali Forest Range, Sample Size - 110 (Annpur -35, Jamespur- 35, Lahiripur -20, Dayapur 20) Block – Gosaba, Name of Panchayat – Emilybari Gram Panchayat, Total Population of the Four villages - 7881

Sundarbans covers 13 administrative blocks in south 24 Parganas,

Which are as follow :

Canning – I, Canning – II, Basanti, Gosaba, Kultali, Jaynagar, Jaynagar – II, Mathurapur – I  
Mathurapur – II, Patharpratima, Kakdwip, Sagar, Namkhana.

### **Sampling**

The type of Sampling Selected for the study is **Non-probability sampling** and the sampling method which is used in this research is the **Snowball Sampling** and **Purposive or Judgemental sampling**. Judgemental Sampling has been used by the researcher in this research since the researcher has intentionally and deliberately interviewed those forest working people and non-forest based working people of Sundarbans who could provide correct and in depth information about the religion, livelihood of the people of Sundarbans. Sampling which is always represented in terms of percentages Judgement or purposive sampling where the researcher knows the purpose and Judgement of her research and snowball sampling where the researcher getting hold of one person and with the help of that individual researcher getting hold of other individuals who can provide her with valuable informations. Thus here the sample size gets bigger and bigger. The snowball sampling helps to acquire more and more respondents from the four above mentioned villages of Sundarbans. The researcher has asked the respondents for the names of other people whom they know to have qualities that the researcher had in the research thereby the researcher got new names from each respondent for the sample.

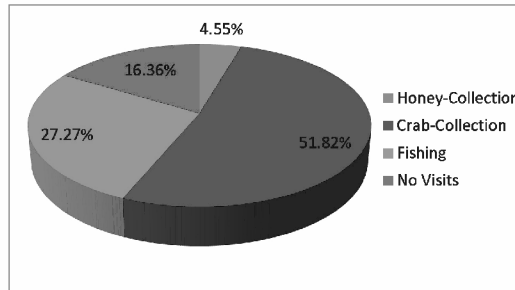
### **Result Analysis**

In this chapter, the results of the data analysis are presented. Here, the researcher has made the data analysis on basis of information collected from 110 respondents who live in the four villages namely Jamespur, Annpur, Dayapur, Lahiripur of Satjelia Island of Sundarbans. To collect information from 110 respondents, 110 questionnaires were distributed among the villagers of the Satjelia Island. From 110 questionnaires, 35 questionnaires were distributed among the villagers of Annpur village, 35 questionnaires were distributed among the villagers of Jamespur village, 20 questionnaires were distributed among the villagers of Lahiripur village and 20 questionnaires were distributed among the villagers of Dayapur.



**Table 1 : Represents the Purpose of visit to the Forest**

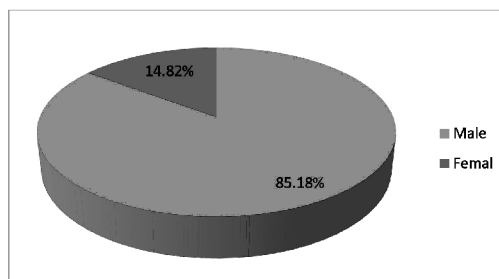
**Total Numbers of Respondents = 110**



From the above table, 4.55% Respondents enter into the forest for Honey –Collection, 51.82% respondents goes to the Forest for the Collection of Crabs, 27.27% respondents visit forest for fishing and 16.36 respondents donot visit the forest.

**Table 2 Represents the Gender of the people attacked or killed by the predators of the Sundarbans from the four villages of Satjelia Island.**

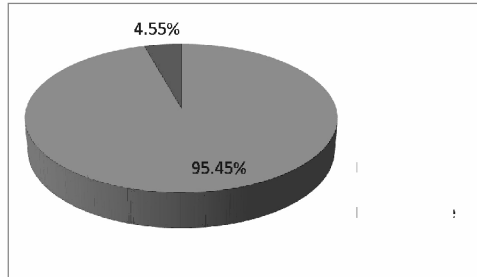
**Total Number of Respondents = 110, From the four villages, 27 people are attacked by the predators On the basis of this the Researcher has constructed the table.**



85.18% people are Male Forest-Workers who are killed or injured by the predators which include (Royal Bengal Tigers and crocodiles) and 14.82% are female forest workers who are killed or attacked by the predators of the Sundarbans.

**Table 3 : Analyses the Governmental Aids Given to the families of the victims of the Tiger Attacks.**

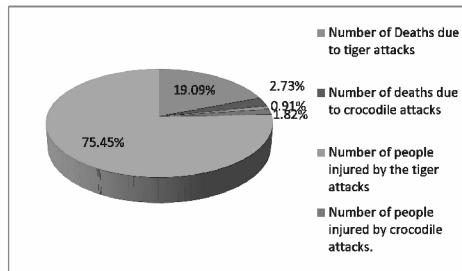
**Total Numbers of Victims of Tiger Attacks = 22**



From the above table, 4.55% people has received governmental help because the tiger attacks had taken place in the Buffer zone, whereas 95.45% did not receive governmental help because the incident had taken place in the core areas.

**Table 4 : Represents Number of People injured and Died by the attacks of the predators**

**Total No. of Respondents = 110**



From the above table, 19.09% people are killed by the man-eating Royal Bengal Tigers of the Sundarbans, 2.73% people are killed by the salt-water estuarine crocodiles of the Sundarbans 0.91% people are injured by the tiger attacks 1.82% are injured by the crocodile attacks and the remaining 75.45% people remain un-attacked by the predators.

## **Findings & Discussion**

On the basis of the Data Analysis, the following observations have been made. The majority of the inhabitants of Satjelia Island which is located in Indian Sundarbans are dependent on agriculture but they find it extremely difficult to sustain themselves with such occupations because the sea engulfs a huge amount of agricultural land every year by destroying the embankment, as a result, the saline water enters their land and thus makes the land unsuitable for farming for two to three years. Moreover those who have lands, the size of the land is very small. Apart from agriculture, they have no other sources of income. Therefore, these people are engaged into different forms of forest and river based occupations like honey-collecting, fishing, collection of crabs, prawn-seed collectors, deep sea fishing. From the collected data, the researcher has observed that these people who enter into the forest their livelihood are either attacked or killed by the man eating Royal Bengal Tigers of Sundarbans. In order to enter into this forest, they need to take permission from the forest office which is located at Sajnekhali. The respondents said that for registration, they have to give Rupees 12,000/- for each group consisting of 6 to 7 people. Apart from this, there are many people, who enter into the forest without taking permission from the forest office. The forest-workers believe that registration has certain advantages because those who are registered candidates will get certain benefits like Rupees. 1 lakh for those who have been killed by the tiger in the buffer zone area and twenty to twenty five thousands rupees for those who have been injured by the tigers in the buffer zone but they won't get any money if the attacks take place in core areas.

In order to collect data, the researcher has made frequent visits to the Sundarbans. As Sundarbans comprised of many large and small islands as a result it is not possible to collect data from each and every island. Thus the researcher had chosen four villages i.e. Dayapur, Annpur, Lahiripur And Jamespur of Satjelia Island. The people who first settled in this island were Sat or (seven) Jeles (fishermen) from whom the name of the island has derived. We can say that, Satjelia ranks in the hierarchy of geographical locations at the gate of the tigers lair but that does not mean that it is completely isolated.

Form the data analysis, the researcher has seen that the majority of the inhabitants of the four villages like Lahiripur, Annpur, Jamespur, Dayapur are Scheduled Castes (SC) and there are also some other communities like Muslim and OBC. There are basically two socio-economic

groups those who are living on the edge of the river and basically considered themselves as forest – workers and the other groups who are living along the road side and are engaged in business, services etc. The forms of syncretism which has been seen in Sundarbans is an attempt for mixing different elements in terms of their livelihood, habitation pattern, composition of folk songs, belief in saints, myths and legends which are present among the people professing different religions, practising different occupations. From the data collection the researcher has found that the people of Satjelia Island of Sundarbans worship Nature and River, cult of ancestors, Totem worship magic etc.

Majority of the people of Sundarbans are Hindus and Muslims but in spite of having different religious background the people due to the fear of natural hazards and environment developed the culture of their own and religious syncretism. The religious syncretism means blending of two or more religious belief systems into a new system or the incorporation into a religious tradition of beliefs from unrelated traditions. As a result, the people belonging to both Hindu and Muslim religion worship the goddess Banabibi. The villages from which the researcher has collected data comprised majority of Hindus and few Muslims but in reality they are the children of the forest. They together pray to Goddess Banabibi when it is time to go to the forest. Thus the forest of Sundarbans helps in removing all the conflicts, hatred among the people belonging to different religions..

On the basis of the survey, the researcher has found that, the sources of income for these people living in the above mentioned villages are very limited so they are forced to depend on the forest resources for their livelihood. As honey-collection is a seasonal occupation therefore the other type of occupation chosen by these people is crab-collection because the market price of crabs are very high nowadays. During the full moon period, for two to three days, people enter into the forest in order to collect crabs since during this time, the crabs are abundantly available in the creeks and thus getting killed and attacked by the Royal Bengal Tiger or Salt Water estuarine crocodiles. The researcher has collected information about the attacks of the predators from the selected 110 respondents. On the basis of the information provided by them, 22 people were injured and killed by the tiger and 5 people were injured and killed by the crocodiles. Those who were killed by the tiger in the Buffer zone and whose names are registered under the government, they only get financial help.

**Conclusion :**

The study explores the Folk Religion, Environment and Resource-dependent livelihood of the island villagers of the four villages Annpur, Jamespur, Lahiripur and Dayapur in Satjelia Island of Indian Sundarbans. These island villagers are very religious and superstitious in nature. Rabindranath Tagore said that the natural balance is very important for survival. He claimed that if the forest and the natural wealth were robbed systematically and destroyed, it would also destroy the country. In case of the Sundarbans man and nature are interdependent on each other. Thus man would be destroyed by destroying the nature and live happily nurturing it. If we compare today's Sundarbans with the Sundarbans before twenty thousands years ago, then we can find a vast difference, at that time Sundarbans were more dangerous risky, but nowadays it is developing slowly. The most dangerous threat for Sundarbans is deforestation and degradation of the environment which in turn reduces rainfall which in turn causes decline in the production of crops.

In order to stop the human – tiger conflict and for further development of the people of Sundarbans, the researcher has provided the following suggestions.

- If canals can be constructed for preserving the rain water, then they can use that water for cultivation during the off season and thus people will be benefitted from the facility.
- At present electricity is available in the Satjelia Island of Sundarbans. If the Government constructs cold storages and runs regulated market then the farmers will have an increase in their income.
- If the government creates small scale industries then this will help in solving problem of unemployment.

Since Sundarbans is both a domestic and an international tourist spot, government is urged to pay more significant attention towards the development and improvement of eco-tourism of Sundarbans.

**References :**

- Banerjee , A. (1998). Environment, Population and Human Settlement of Sundarbans Delta. Mohan Garden, New Delhi: Concept Publisher.
- *Bhattacharya, Shatarupa. An International Multidisciplinary Research Journal. Article: A discussion on the littoral societies in the Northern Bay of Bengal. South Asian Academic Research Journal.*
- Publication)
- *Bryman, Alan 2016. Social Research Methods, United kingdom : Oxford University Press.*
- *Babbie, Earl 2016. The Practise of Social Research USA: Cengage learning.*
- *Chaudhuri, A.B. 2007. Biodiversity of Mangroves New Delhi : Daya Publishing House.*
- *Choudhury, Amalesh and Chaudhuri B. Amal 1994. Mangroves of the Sundarbans : Volume One India : IUCN – The world conservation Union*
- *Chaudhuri, Kalyan. December, 1976. Economic and Political Weekly. Volume :11, Number : 50. Article : poverty and Exploitation in Sundarbans.(pages : 1914-1915). Economic and political weekly.*
- *Donnell, Anna O and Wodon, Quentin (edited) 2015. Climate Change Adaptation and social Resillence in Sundarbans Newyork : Routledge*
- *Das, Joyded 2015. Tourist Guide Book of Sundarbans : Joydeb Das.*
- *Frazer, G. James. “The Golden Bough”.Brick Court.*
- *Gottschalk, Peter (edited), Matthew. N. Schmatz. 2011. Engaging South Asian Religions : Boundaries, Appropriations and Resistances New York : Sunny Press.*
- *Ghosh, Amitav. 2004. The Hungry Tide New Delhi: HarperCollins*
- *Hunter, W. W. (1973). A Statistical Account of Bengal. Vol. I. District of the 24 Parganas and Sundarbans: Trubner.*
- *Jalais, Annu 2010. Forest of Tigers: People. Politics and Environment in the Sundarbans New Delhi : Routledge Publications*
- *Kothari, C.R. 2003. Research Methodology : Methods and Techniques New Delhi : Viswa*

*Prakashan*

- *Malinoswki, Bronislaw 1948. Magic, Science and Religion and other Essays: Beacon Press publications, 2010)*
- *Mandal, Rabindranath and Naskar, Kumudranjan 1999. Ecology and Biodiversity of Indian Mangroves Delhi :Daya Publising House.*
- *Naskar, Kumudranjan & Sen, Neera 2003. Algal Flora of Sundarbans Mangals Delhi: Daya Publishing House*
- *Sarkar Chatterjee, Sutapa 2010. The Sundarbans Folk deities, Monsters and Mortals; Social Science press.*
- *Sarkar Amitabha, Mukhopadyay. K . Ashok, Bera .k. Gautam, “ Syncretism at Sundarbans” in In the lagoons of the Gangetic delta ,eds. Gautam.k. Bera, Vijoy. S . Sahay ( New Delhi : Mittal*
- *Sarkar, R.M.(2009). Sundarban Fishermen in the World Heritage Setting. New Delhi: Serials Publication.*