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An Ethnographic Perception on the Consequences of Social Capital, Flood, Resilience and Disaster Issues in a Rural Setting of West Bengal, India

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Abstract: *Through the present ethnographic account, the authors try to explore the perception and sufferings of the residents of a rural setting of West Bengal, India. Thirty (30) semi-structured and in-depth interviews we intended the issues of their resilience strategies and three major recommendations for better policies and action.*

Keywords: *Flood, Disaster, Social Capital, Resilience, Sufferings*

I. INTRODUCTION

The studies on disasters are not at all an exclusive study on natural 'hazards'-like flood, famine and earthquake (Quarantelli, 2005). Disasters are seen as a process or an event that combines the potentiality of disruption/destruction of natural agent(s) and a population in socially or technologically generated conditions of vulnerability (Oliver-Smith, 1996).

This view opens two significant ways to understand disasters-(a) to understand the natural agent(s) and its potential to create disruption, and (b) to explore the human conditions with its social and technological vulnerabilities (Bankoff, 2007). Framing disasters from the perspectives of target agents is popular in geography and other geo-physical sciences, whereas the view from social science perspectives (specially in sociology and anthropology) indicates-the meaning of disasters are socially constructed and can be best understood in reference to its social, economic and political contexts (Mercer, Kelman, Lloyd and Pearson, 2008; Perry, 2007; Vayda and McKay, 1975; Torry, 1979; Quarantelli, 2005).

Anthropological studies on disasters were initiated in almost 1950s (Drabek, 1986). The discipline possesses a long tradition of studying the adaptive strategies of the societies in stressful and hazardous environments (Torry, 1979), traditionally known as 'Anthropology of Suffering' (Davis, 1992). The source of hazard(s) is not necessarily present in the natural environment; rather they are controlled by the social, economic and political forces to a given context (Vayda and McKay, 1975).

The studies on adaptive strategies lead the question of adaptation to hazard and disasters is paralleled by a similar concern about the long term sustainability of resource(s) use along with present levels of environmental degradation and pollution (Smith, 1999). However, the studies on adaptive strategies guided a new pathway to anthropological research regarding disaster. The new trend showed that any disaster involves loss of property and means of livelihood, calls for a change in the modes of subsistence and the social organization that regulates them (Firth, 1959). The era reflects an idea that disaster as a social phenomenon disrupts and constitutes cultural meaning(s) to a given cultural milieu. The transformation of cultural meaning(s) due to disaster as a central meaning shifted the focus of contemporary anthropological research to the study of the crisis and everyday life (Winchester, 1981).

Individual's social position and response are taken into account as the unit of study of disasters like wars and famine (Moser, 1989). The contemporary disaster researches in anthropology focuses on the concept of vulnerability in terms of the social, economic and political conditions which differently affects individuals and groups, as well as the overall capacity of the community to absorb shock and recover (O'Keefe, Westgate and Wisner, 1976). From the mentioned context, it is clear that the 'shock' related to a

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disaster and its system of recovery, needs an interdisciplinary attention. There have been many research efforts of using social psychological theories to unify and expand current conceptions of access in ethnographic research-the process by which researchers gather data via interpersonal relationships with participants/informants (Harrington, 2003).

A number of researchers have begun to recognize the increasing importance of broader anthropological and social psychological issues in the study of humans in extreme environments (Johnson and Finney, 1986; Harrison and Connors, 1984; Pierce 1985). In addition, the social- psychological issues of reactions and negative emotional experiences (like- fear, anxiety, anger, impatience, irritability, grief, shame, guilt, stress, and trauma) to disasters and mechanisms of resilience may be an effective means for contemporary anthropological researches, theory building and policy making on well-being.

II. THE CONTEXT AND DIMENSIONS OF THE STUDY

The state of West Bengal of Indian subcontinent has not been an exception of sufferings inflicted by disasters and has been frequented by cyclones, floods, droughts, landslide, subsidence and occasional earthquakes (Nath, Roy and Thingbaijam, 2008), the present researcher purposively selects the state of West Bengal for conducting the study on the dimensions of disaster. Conceptualized 'flood' as a natural agent with its destructive potential and power over the human agencies and their livelihood.

The focus is not the 'flood' and its 'nature of destruction', rather the research is inclined to reflect the dimensions of vulnerability, the crises and response of human actors, the role of different institutions, the issues of resilience and the perception of loss, and above all the politicization to the issues of relief and wellbeing for better policy and actions. Perceiving 'disasters' as socially constructed phenomena, the stand of the current research is to explain the multiple facets of vulnerability, livelihood, and resilience issues in two rural settlements of the state of West Bengal, India. To explore the gaze of the vulnerabilities and resilience due to flood the entire research is alienated into the following heads of the objectives.

A. The Objectives

- 1) To observe the mechanism of resilience, through which people perceive, create and categorize the meaning(s) to cope up a disaster and tries to reorient them in a changing circumstances in post-disaster situations.
- 2) To reach, above all, the local understanding of culture and psyche centering disaster with a view to contributing to the uses of knowledge, policy and action.

III. THEORETICAL BACKGROUND OF THE STUDY

The study is grounded on two major theoretical concepts with reflexive ethnographic stand. These are- 'Social Capital', and 'Resilience'.

A. Social Capital

Bourdieu in (1992) conceptualized the term 'Social Capital' as *the sum of the resources, actual or virtual, that accrue to an individual or a group by virtue of possessing a durable network of more or less institutionalized relationships of mutual acquaintance and recognition*. In this context it is worth mentioning that to any pre-disaster and post-disaster situation the theoretical orientation of 'social capital' might be very beneficial from individual to communal level to reduce and/or minimize the effect of a disaster; that further enhance the chances to form an alternative 'habitus' through generation after generation for adapting and facing the unexpected threat from natural hazards, like-flood (Sanyal and Routray, 2016).

B. Resilience Theory

The psychological framing of individual actors to face the impact and to respond to the hazards directly claims deep insights of 'resilience theory' that is defined as the ability of a system and its component parts to anticipate, absorb, accommodate, or recover from the effects of a hazardous event in a timely and efficient manner, including through ensuring the preservation, restoration or improvement of its essential basic structures and functions, came into psychological interpretations of negative emotional experiences in 1940s and rigorously practiced in disaster situation from 1970s (Torry 1979; Gaillard 2010).

IV. THE METHODOLOGY

The present effort is grounded by the ethnographic approach and methods, which become the principal pathway for collecting, sorting and interpreting data and which an ethnographer senses to be applicable as the exploration progresses (Murchison, 2010). The theories mentioned above were not pre-supposed, rather they appear as modes of observation and interpretation as the research gradually developed and multiple channels and roots were coming up.

The entire research design if we briefly focus is framed into four situations i.e. the pre-hazard conditions and warning systems, the process of preparation, the situations on the time of impact of hazards and people's vulnerabilities led to disaster, and the post-disaster situations. These four situations have been captured by following ways

V. THE AREA UNDER STUDY

The present researcher purposively selects the state of West Bengal for conducting the study on the dimensions of disaster. Perceiving 'disasters' as socially constructed phenomena, the stand of the current research is to explain the multiple facets of vulnerability, livelihood, and resilience issues in a rural settlement of the state- is 'Sukhchandrapur' of Ghatal Block, of Paschim Medinipur District of West Bengal is a closed area by the river Silabati, old Kangsabati and Dwarakeswar including Jhumi one of the tributaries of Dwarakeswar River those are non perennial in character. The major factors of the flood of this area are- intense storm precipitation, high antecedent basin, soil moisture, rainfall over areas, and occurrences to medium and major storms in quick succession, failure of dams resulting in a very rapid release of large quantities of water and water-blocked by heavy rainfall, poor drainage and sewage system and a long term water stagnation over the area.

A. Sampling

The present ethnographic account is based on two sampling methods as the source for collecting data that is very contextual to meet the objectives of the research successfully i.e. convenient sampling and Snow-ball sampling method. Thirty (30) individuals from the settlement were selected for data collection with their verbal consent.

B. The Techniques of Data Collection

The study uses semi-structured interviews, in-depth case studies, observations (direct and indirect), and Life-history, and photography as the principal ways for collecting data. To understand the historicity of the settlement and other contextual issues secondary data sources have been used in this study that is mentioned in the section of bibliography

C. The Transcription, Categorization of Themes, and Interpretation of the Findings

After collecting the rich data set, it has been transcribed verbatim to get a deep insight of the issues concerned. The transcribed data led to emerge themes and sub-themes that are contextual to the objectives of the research. The interpretation of the data has been done by using narrative data analysis method.

VI. THE FINDINGS

A. Flood as a Dreadful Phenomenon

The local perception regarding flood varies a wide range of expressions and experiences as individual actors perceive flood from multiple angles, like- as a 33 years old housewife senses the flood very 'negatively'. She is of opinion that- 'I have two children who suffers a lot with their schooling during flood...a long term (sometimes 5-6 months) water stagnancy makes them to be very irregular in schools and private tuitions...our two rooms became our world for several months...we have to collect drinking water from a long distant neighbour's house regularly...we became captive during flood'.

In this context, a 51 years old medical practitioner opined that- 'flood comes with horrible experiences in my professional life almost every calendar year in this place...a number of water borne diseases spread out during flood....It became very difficult to attain too many patients a day...in night the situation became very critical....I have to attend the patient's call at night in the ground of humanity...but there are great risks at night in the flooded areas.'

B. Absence of Electricity and Communication under Crisis

The absence of electricity in night made the situation very dreadful to the villagers, as a 46 years old farmer was of opinion that- 'due to absence of electricity we suffer a lot...in the last year an old man was going to the town by a 'dingi' (a Special kind of boat made up of wood) of his own....at night the situation was jet black as there was no light and there was full of water everywhere...even the light posts and the electric connections were invisible due to water....the old man got shocked from a faulty electric connections and died immediately...frankly speaking thinking the situation we really scared to go to anywhere at night during flood.' Gour Maity, a 60 years old person stated another stance of difficulties in communication during flood. According to him- 'At the time of flood, the prime concern is the arrangement of 'donga'. There are some risks associated with it. Our children don't know swimming which makes us anxious. Other one is when the weather deteriorates severely, at the time of storm and heavy rain...then we have to choose this school road to go to the markets. If we have to there, then...there is a field, it is approximately 1

km. If you go straight 1 km through this field, after that you will see a Krishna mandir.' Further he added- 'It is close to the dam. When we cross the dam then...there we bind the 'donga' with any tree. After that we go to the market. For that we again have to travel 1 more km. If you go from this side it is 2 km, if you want to go from there, then you also have to cross 2 km. In either way, for 1 km we have travel on water. The remaining 1 km I can walk or can go with cycle. Near the dam, in the adjacent areas there are some houses. There we keep our things and go to the job, again at the time of returning we pick our belongings from them.'

C. Difficulties in Obtaining Drinking Water

Absence of electricity 'stops' all types of electronic communication and put the residents under darkness for several month. A 38 years old housewife pointed out that- 'at night maintaining household activities became tough...we have to share three oil lamps for the different purposes....at the time of immediate danger we cannot even make a call for help as there is no charge in mobile phones...we have to go to the town for mobile phone charging...and to store the battery for immediate use we have to switch off the phones in the maximum time in a day....switching off the phone for a long time sometimes make my relatives worry about us at the flood situation.'

Another important inconvenience occurs with the drinking water. As the maximum water taps on the road remains under the water, the villagers has to depend on the tube well that is been owned by a few villagers. The rest of the villagers have to go to a long to collect drinking water by their personal boats. A 41 year old housewife mentioned that- 'we have to go a long to a neighbour's house for drinking water...we have to wait there for a long time as many villagers are there before us to collect the drinking water.'

In this regard, a 33 years old cultivator sated that- 'we have no tube well of our own...we have to collect drinking water from our neighbour's house...at the very early morning we have to go to collect water for an early return.'

In this context, a 51 years old medical practitioner opined that- 'we have to meet a great crisis of drinking water at flood situations...people have to collect water from long distances...the improper way to protect and store the drinking water makes people ill with water borne diseases,'

D. Issues of Health and Emerging Crises

Health became a major concern to the flood situations. Severely ill patients and pregnant women suffer a lot during flood. Mrs. L. Santra experienced a case with her neighbour who was a pregnant lady- 'In five years back Parvati (the pregnant lady) felt pain at night...around 11 p.m...me, Parvati, her husband and her father-in-law were in the boat to the way to town hospital..Parvati was almost senseless...the situations became very dreadful...we have reached to another village and by the help of other women and a local nurse of the same village made the delivery of the child successful...you can imagine what were the risks then?.'

Mr. S. Pramanik has experienced a dangerous situation with his son during 2007 flood. He told that- 'my son was infected by cholera...at a night he was almost senseless due to multiple times loose motion and vomiting....a local doctor put him saline and referred immediately to the town hospital...we felt anxious about how to move my child in a boat in such a dangerous situations...my neighbours helped me a lot at that night...we three along with my son in a boat started our journey to the hospital...water level was rising and the water current was very strong...it was raining heavily and constantly...my son started to vomiting again...for a single second... I felt that I have lost my son...after an hour we reached to the hospital...my son has almost lost his sensation...after a few hours my son got back his senses...the doctors of the hospitals was too good to treat my son...It's God's blessing that we were enabled to getting back my son in the home.'

VII. THE ALTERATION IN LIVING SPACE AND ARCHITECTURE

In Sukhchandrapur, an important issue due to flood and its impact is the alteration in living space and architecture. The previous experiences instigate the residents to alter their living space; means to lift up the residential space as the height of water reached in the previous years.

Mr. Maity, a 59 years old farmer is of opinion that- 'In the previous year...the height of the water was almost 7 feet from the main land. Though my house is built up in a high space...but the limit of the water raising was extensive...the rooms were almost under water...we temporarily built up a larger wooden bench, locally called 'mancha' above the room for the then situation. In that mancha we spent almost three weeks...oh...what a situation you never been felt.'

This alteration of the living space generates a new problem; i.e. the living surface area became reduced that compel the residents to move away from their birth place. Not only that the lifting up of the residential spaces and alteration in architecture shape the area like a big 'pot', where stagnancy of the water stays over a long time.

VIII. THE ISSUES OF 'RELIEF' AND 'LOCAL POLITICS'

The issues of relief from any Governmental and non- Governmental agencies in the setting are very poor during flood. Mr. L. Santra told that- nobody cares for us at flood situations...many surveys have been done in the area...but we faces the same critical conditions during flood...there are no space to pass the stagnant water due to the poor drainage and sewage system...sometimes the municipality offers some dry food for first two or three days of a flood...but is that enough???'.

The fundamental problem due to flood in the area is the long term water stagnancy that disrupts the life and living of the local people. Communication became very tough due to overflow of water. All the villagers do not have their personal boats. For communication, the villagers either have to depend on the neighbour's boat or have to wait for other private boats that are been used for business not for relief. Mr. S. Pramanik was of opinion that- the municipality offers boat for first few days of a flood for relief...but...there are no such relief for long term flood over the area...communication became impossible to us...the children do not attain school regularly...if they reach to the school anyway... but not in time.'

There are no health camps or mobile health services at the time of flood. The villagers have to depend on the town hospitals or to the local doctors. The municipality sometimes distributes some relief aids like-dry food, large plastic covers, and bleaching powder etc. but these aids hardly reach to them who really need this. Mr. J. Santra opined that-

'There are some political brokers in our village that negotiates between us and the municipality...actually they decide who needs aid at flood situations....unfortunately... their near and dear ones receive the relief aids...and those who need the relief aid really does not get anything.'

Local politics centering relief in the settlement under study is desperately practiced. The names form the victims list in flood became changed and altered through the local political influences. Mr. J. Santra told that- 'the house of my elder brother was severely affected by flood a few years ago...the verification after flood was done and the name of my elder brother had been registered in the victims list...after a month...when my brother enquired about his claim...found that his name became altered with the name of another person who has lost nothing in the flood.'

Political colour became a significant factor for relief in flood situation. In this context, Mr. S. Pramanik said that-

'We expect nothing from the municipality or from the Govt...the issues of relief is strictly depended on the political colour we belongs to'.

Data shows that the concern of relief in the village is depended on the political milieu and the dominant political players of the place.

IX. THE RESILIENCE ISSUES

The settlers are well accustomed with flood and its dreadful effects since years. They exactly what to do after they sense that the flood is coming, what effects it can be done and what will be the approximate scenario after the dreadful situation is over. When they sense that the flood may have to create a big trouble in the so called 'current calendar year', they first start to store the foods that may be expendable for at least four to six months.

Mantu, a 48 years house wife is of opinion that-

'We know very well that flood is our destiny, so when we got the warnings and/or can sense that the flood is coming, we store the foodstuff, the fuels and prepare our personal boats for ease of communication.'

There is another important issue that some of the residents of the settlement under study, borrows loan from local cooperatives to build their houses concrete. As Uttam Maity, 49 years old, local cooperative member stated that-

'Our house...you will be very much astonished to know how we built this house. There was one of our bosses in 'somobay'; he was a very kind man. He extended his help. We requested him "Babu please give some money we will also arrange some amount" In this way, by arranging monthly installments and taking loans from different people we finally able to build our house before the flood strikes.'

The settlers themselves maintain a very strong social network that extended the issues of social capital throughout the year that it became cultural dispositions to them-'habitus'. They know that something unexpected will occur at monsoon that needs a strong social bonding among them. In this perspective, Mrs. Sondhya Maity, a 55 years old housewife opined that-

'We know very well that there will be no hands at the dreadful situations of flood impacts for help...we maintained a strong unity among us...as for an example my house was almost under water last year...we collected the drinking water from a neighbor whose house is near about 2 km from my house...they helped me a lot.'

In spite of too many negative experiences, the settlers have had a 'positive' attitude to disaster issues centering flood. According to them, after the stagnant water had released the soil of the settlement became very fertile that is very helpful for cultivation and farming. Mr. Sanatan Maity, a 47 years old farmer stated that-

‘After the flood is over, the soil of this area became more fertile over the area that benefits a lot for large scale cultivation....and the products are sold out in the market in a very rising price due to crisis of need and supply post flood situation.’

The present study reveals the issues of resilience from multiple layers of flood and its orientation among the participants who are the actors to live the phenomenon. Different frames have been reflected in the study from the subjective stories of the respondents to relate their perception about flood with the wider issues of politics, welfare and development in a flood prone area of West Bengal. The study from its discussion is placing a hint to include the insider’s perspective of loss and suffering to construct any policies and action on flood and/or disaster issues.

X. CONCLUDING OBSERVATIONS

Thus came, we have reflected the issues of sufferings of the settlers under study. Though they have had an intra and inter group strong social ties or networks, more specifically ‘social capital’ through which they can cope up the unexpected catastrophic events, like-flood. The thread of social capital and social networking among them instigates rapidly to their resilience and or bouncing back the blow of the unexpected threat of natural hazards.

Through the study the authors have three recommendations that might help their better and sustainable living over the area and at the same time promotes the better policies and actions for the near future. These are- 1) to clear up the poor drainage and sewage system, 2) the immediacy of implementing ‘Master Plan’, and 3) the urgent need of ethnographic study in micro level.

BIBLIOGRAPHY

- [1] Aguilar, B. H., & Rivera, N. R. 2016. The production of vulnerability to landslides: the risk habitus in two landslide-prone neighborhoods in Teziutlan, Mexico. *Investigaciones Geograficas*, Vol. 90, pp. 7-27.
- [2] Alexander D. E.-O. 2005. An Interpretation of Disaster in Terms of Changes in Culture, Society and International Relations. In Ronald W. Perry and E. L. Quarantelli (Eds.), *What Is a Disaster? New Answers to Old Questions*, 25-38. USA: Xlibris Press.
- [3] Adams, V., Kaufman, S. R., Hattum, T. V. and Moody, S. 2011. Aging Disaster: Mortality, Vulnerability, and Long-Term Recovery among Katrina Survivors. *Medical Anthropology: Cross-Cultural Studies in Health and Illness*, 30(3), 247-270.
- [4] Alwang, J., Siegel, P.B., and Jorgensen, S.L. 2001. Vulnerability: A View from Different Discipline. Social Protection Discussion Paper Series, 1-42. Social Protection Unit. Human Development Network. The World Bank.
- [5] Anderskov, C. 2010. Disaster and Anthropology. Accessed on April 24, 2012. Available at: http://www.anthrobase.com/Txt/A/Anderskov_C_03.htm.
- [6] Baker, S.M. 2009. Vulnerability and Resilience in Natural Disasters: A Marketing and Public Policy Perspective. *Journal of Public Policy & Marketing*, 28(1), 114-123.
- [7] Bankoff, G. 2007. Comparing Vulnerabilities: Toward Charting an Historical Trajectory of Disasters. *Historical Social Research*, 32(3), 103-114.
- [8] Bartlett, S. 2008. Climate change and urban children: impacts and implications for adaptation in low- and middle income countries. *Environment & Urbanization*, 20(2), 501-519.
- [9] Barton, A. H. 2005. Disaster and Collective Stress. In R. W. Perry and E. L. Quarantelli (Eds.), *What Is a Disaster? New Answers to Old Questions*, 125-152. USA: Xlibris Press.
- [10] Blaikie, P., Cannon, T., Davis, I. and Wisner, B. 1994. *At Risk: Natural hazards, People’s vulnerability, and disasters*. London. Routledge.
- [11] Bledsoe, C.H. and Sow, P. 2011. Back to Africa: Second Chances for the Children of West African Immigrants. *Journal of Marriage and Family*, 73, 747-762.
- [12] Bolin, B. 2007. Race, Class, Ethnicity and Disaster Vulnerability. In H. Rodriguez, E. L. Quarantelli and R. R. Dynes (Eds.) *Handbook of Disaster Research*, 113-129.
- [13] Bolin, R. and Stanford, L. 1998. *The Northridge Earthquake: Vulnerability and Disaster*. New York: Routledge.
- [14] Boyden, J., and Mann, G. 2005. Children’s Risk, Resilience, and Coping in Extreme Situations. *Ungar*, 1, 3-25.
- [15] Bourdieu, P. 1977. *Outline of a Theory of Practice*. London : Routledge.
- [16] Bourdieu, P. 1989. Social Space and Symbolic Power. *Sociological Theory*, Vol. 7, No. 1, pp. 14-25.
- [17] Bourdieu, P. & Wacquant, L. J. D. 1992. *An Invitation to Reflexive Sociology*, p. 119, Chicago: University of Chicago Press.
- [18] Britton, N. R. 1986. Developing an understanding of disaster. *Australian and New Zealand Journal of Sociology*, 22, 254–272.
- [19] Buckle, P. 2005. Mandated definitions, local knowledge and complexity. In R. W. Perry & E. L. Quarantelli (Eds.), *What is a disaster? : New answers to old questions?*, 173–200. USA: Xlibris Press.
- [20] Carter, M., & May, J. 1999. Poverty, Livelihood and Class in Rural South Africa. *World Development*, 27, 1-20.
- [21] Chambers, R. 1989. Vulnerability, Coping and Policy. *IDS Bulletin*, 20(2), 1-7.
- [22] Comfort, L., Wisner, B., Cutter, S., Pulwarty, R., Hewitt, K., Oliver-Smith, A., Wiener, J., Fordham, M., Peacock, W. and Krimgold, F. 1999. Reframing disaster policy. *Environmental Hazards*, 1, 39-44.
- [23] Cook, S. 2002. From Rice Bowl to Safety Net: Insecurity and Social Protection during China’s Transition. *Development Policy Review*, 20(5), 615-635.
- [24] Cutter, S.L. 2005. Pragmatism and Relevance: A Response to Wolf R. Dombrowsky. In R. W. Perry & E. L. Quarantelli (Eds.), *What is a disaster? : New answers to old questions?*, 60-78. USA: Xlibris Press.
- [25] Cutter, S. L. 2006. *Hazards, Vulnerability and Environmental Justice*. London: Earthscan.
- [26] Cutter, S.L., Boruff, B. J. and Shirley, W. L. 2003. Social Vulnerability to Environmental Hazards. *Social Science Quarterly*, 84(2), 242-261.
- [27] Davidson, J. O. 2011. Moving children? Child trafficking, child migration, and child rights. *Critical Social Policy*, 31(3), 454-477.
- [28] Davis, J. 1992. The Anthropology of Suffering. *Journal of Refugee Studies*, 5(2), 149-161.

- [29] Dombrowsky, W. R. 2005. Not Every Move is a Step Forward: A Critique of David Alexander, Susan L. Cutter, Rohit Jigyasu and Neil Britton. In R. W. Perry and E. L. Quarantelli (Eds.), *What Is a Disaster? New Answers to Old Questions*, 79-96. USA: Xlibris Press.
- [30] Drabek, T. E. 1986. *Human System Responses to Disaster*. New York: Springer-Verlag.
- [31] Ehrenreich, J.H. 2001. *Coping With Disasters, A Guidebook to Psychological Intervention*. New York: A Guide Manual.
- [32] Eisenman, D.P., Cordasco, K.M., Asch, S., Golden, J.F and Glik, D. 2007. Disaster Planning and Risk Communication with Vulnerable Communities: Lessons from Hurricane Katrina. *American Journal of Public Health*, 97(1), 109-115.
- [33] Enarson, E., & Morrow, B. (Eds.), 1998. *The Gendered Terrain of Disaster: Through Women's Eyes*. Westport, CT: Praeger.
- [34] Few, R., and Tran, P. G. 2010. Climatic hazard, health risk and response in Vietnam: Case studies on social dimensions of vulnerability. *Global Environmental Change*, 20, 529-538.
- [35] Firth, R. 1959. *Social Change in Tikopia*. London: Allen and Unwin.
- [36] Fjord, L. and Manderson, L. 2009. Anthropological Perspectives on Disasters and Disability: An Introduction. *Human Organization*, 68(1), 64-72.
- [37] Fothergill, A. 1996. Gender, risk, and disaster. *International Journal of Mass Emergencies and Disasters*, 14, 33-56.
- [38] Fothergill, A. 1999. Women's roles in a disaster. *Applied Behavioral Science Review*, 7, 125-143.
- [39] Fothergill, A. and Peek, L.A. 2004. Poverty and Disaster in the United States: A Review of Recent Sociological Findings. *Natural Hazards*, 32, 89-110.
- [40] Fritz, C. E. 1961. Disasters. In R. K. Merton and R. A. Nisbet (Eds.), *Contemporary social problems: An introduction to the sociology of deviant behavior and social disorganization*, 651-694. Riverside: CA: University of California Press.
- [41] Gaillard, J. C., and Texier, P. 2010. Religions, natural hazards, and disasters: An introduction. *Religion*, 40, 81-84.
- [42] Greene, R. R. 2003. Resilience theory: Theoretical and professional conceptualizations. *Journal of Human Behavior in the Social Environment*, 8(4), 75-91.
- [43] Hampshire, K. R., Panter-Brick, C.P., Kilpatrick, K. and Casiday, R. E. 2009. Saving lives, preserving livelihoods: Understanding risk, decision-making and child health in a food crisis. *Social Science & Medicine*, 68, 758-765.
- [44] Harrington, B. 2003. The Social Psychology of Access in Ethnographic Research. *Journal of Contemporary Ethnography*, 32, 592-625.
- [45] Harrison, A. A. and Connors M. M. 1984. Groups in exotic environments. *Advances in Experimental Social Psychology*, 18, 49-87.
- [46] Hewitt, K. 1983. *Interpretations of Calamity*. New York: Allen and Unwin.
- [47] Hoffman, S. M. 2010. Disaster and the Field of Anthropology. *Anthropology News*, 3-4.
- [48] Jeffery, S. E. 1982. The creation of vulnerability to natural disaster: Case studies from the Dominican Republic. *Disasters*, 6, 38-43.
- [49] Jigyasu, R. 2005. Disaster: A "Reality" Or "Construct"? Perspective From The "East". In Ronald W. Perry and E. L. Quarantelli (Eds.), *What Is a Disaster? New Answers to Old Questions*, 49-59. USA: Xlibris Press.
- [50] Johnson, J. C. and Finney, B. R. 1986. Structural approaches to the study of groups in space: A look at two analogs. *Journal of Social Behavior and Personality*, 1(3), 325-347.
- [51] Johnston, B. and Schulte, J. 1992. Natural Power and Power Plays in Watsonville, California and the US Virgin Islands. Paper Presented to the Society for Applied Anthropology, March, 26, Memphis, TN.
- [52] Laditka, S.B., Laditka, J.N., Cornman, C.B., Davis, C.B. and Chandlee, M.J. 2008. Disaster Preparedness for Vulnerable Persons Receiving In-Home, Long-Term Care in South Carolina. *Prehospital and Disaster Medicine*, 23(2), 135-142.
- [53] Kumpulainen, S. 2006. Vulnerability Concepts in Hazard and Risk Assessment. In P.S. Thome (Ed.), *Natural and Technological Hazards and Risks Affecting the Spatial Development of European Regions*. Geological Survey of Finland, Special Paper, 42, 65-74.
- [54] Liverman, D. 1989. Vulnerability to Global Environmental Change. Workshop on Understanding Global Environmental change. Clark University.
- [55] Mercer, J., Howes, D., Kelman, I., and Lloyd, K. 2007. The Potential for combining indigenous and western knowledge in reducing vulnerability to environmental hazards in small island developing states. *Environmental Hazards*, 7, 245-256.
- [56] Minnis, P. 1985. *Social Adaptation to Food Stress: A Prehistoric Southwestern Example*. Chicago: Chicago University Press.
- [57] Moser, C. 1989. Gender Planning in the Third World: Meeting Practical and Strategic Gender Needs. *World Development*, 17, p. 11.
- [58] Nath, S. K., Roy, D., Thingbaijam, K. K. S. 2008. Disaster mitigation and management for West Bengal, India- An appraisal. *Current Science*, Vol. 94, No. 7, p. 858.
- [59] Murchison, J. M. 2010. *Ethnography Essentials: Designing, Conducting and Presenting Your Research*, Jossey-Bass, 989 Market Street, San Francisco.
- [60] Mustafa, D. 2005. The terrible geographicalness of terrorism: Reflections of a hazards geographer. *Antipode*, 37(1), 72-92.
- [61] Misomali, R., and McEntire, D. 2008. Rising Disasters and Their Reversal: An Identification of Vulnerability and Ways to Reduce It. In J. Pinkowski (Ed.), *Disaster Management Handbook*, 19-36. USA: CRC Press.
- [62] Morrow, B.H. 1999. Identifying and Mapping Community Vulnerability. *Disasters*, 23(1), 1-18.
- [63] Moser, C. 1998. The Asset Vulnerability Framework: Reassessing Urban Poverty Reduction Strategies. *World Development*, 26(1), 1-19.
- [64] Nasreen, M. 2004. Disaster Research: Exploring Sociological Approach to Disaster in Bangladesh. *Bangladesh e-Journal of Sociology*, Vol.1 (2), 1-8.
- [65] O'Keefe, P., Westgate, K. N., and Wisner, B. 1976. Taking the Naturalness out of Natural Disaster. *Nature*, 260, 566.
- [66] Oliver-Smith, A. 1991. Successes and failures in post-disaster resettlement. *Disasters*, 15(1), 12-23.
- [67] Oliver-Smith, A. 1992. Disasters and Development. *Environ. Urban Issues*, 20, 1-3.
- [68] Oliver-Smith, A. 1996. Anthropological research on hazards and disasters. *Annual Review of Anthropology*, 25, 303-328.
- [69] Oliver-Smith, A. 1999. What is a Disaster?: Anthropological Perspectives on a Persistent Question. In A. Oliver-Smith and S. Hoffman (Eds.), *The Angry Earth: Disaster in Anthropological Perspective*, 18-34. Great Britain: Routledge.
- [70] Oliver-Smith, A. and Hoffman, S. 2002. Introduction: Why Anthropologists Should Study Disasters. In S. Hoffman and A. Oliver-Smith (Eds.), *Catastrophe & Culture: The Anthropology of Disaster*, 3-22. Santa Fe: School of American Research Press.
- [71] Ortner, S. B. 1984. Theory in Anthropology since the Sixties. *Comparative Studies in Society and History*, 26(1), 126-166.
- [72] Parry, R. L. 2014. *Ghosts of the Tsunami*. London Review of Books, pp. 13-17.
- [73] Perry, R.W. 2007. What Is a Disaster?. In H. Rodriguez, E. L. Quarantelli and R. R. Dynes (Eds.), *Handbook of Disaster Research*, 1-15. Springer.
- [74] Pierce, C. M. 1985. Social science research in high latitudes. *Journal of Clinical Psychology*, 41, 581.
- [75] Prowse, M. 2003. Towards a clearer understanding of 'vulnerability' in relation to chronic Poverty. CPRC Working Paper, No. 24, pp. 1-41.



- [76] Quarantelli, E.L. 2005. A Social Science Research Agenda for the Disasters of the 21st Century: Theoretical, Methodological and Empirical Issues and Their Professional Implementation. In R. W. Perry and E. L. Quarantelli (Eds.), What Is a Disaster? New Answers to Old Questions, 325-396. USA: Xlibris Press.
- [77] Reddy, S. 2011. Understanding Disaster from Anthropological Perspectives. Indian Emergency Journal, 6(1), 83-96.
- [78] Sanyal, S., & Routray, J. K. 2016. Social Capital for Disaster Preparedness and Response: A Comparative study involving a mainland and an island scenario from the remote areas of Indian Sundarbans. International Journal of Disaster Risk Reduction, Vol. 19. pp. 101-111.
- [79] Shultz, J.M., Espinel, Z., Galea, S. and Reissman, D.B. 2007. Disaster ecology: implications for disaster psychiatry. In U. J. Fullerton, C.S., Weisaeth, L. and Raphael, B. (Eds.). Textbook of Disaster Psychiatry, 85. Cambridge: Cambridge University Press.
- [80] Solis, G. Y., Hightower, H. C. and Kawaguchi, j. 1997. Guidelines on Cultural Diversity and Disaster Management. Report Prepared by The Disaster Preparedness Resources Centre The University of British Columbia, for Emergency Preparedness Canada, Produced within the Canadian Framework for the International Decade for Natural Disaster Reduction.
- [81] Stallings, R. A. 1998. Disaster and the theory of social order. In E. L. Quarantelli (Ed.), What is a disaster: Perspectives on the question, 127-145. New York: Routledge.
- [82] Tierney, K. J. 2000. Controversy and Consensus in Disaster Mental Health Research. Prehospital and Disaster Medicine, 15(4), 181-187.
- [83] Tierney, K.J., Lindell, M.K. and Perry, R.W. (Eds.), 2001. Facing the Unexpected: Disaster Preparedness and Response in the United States. Washington, D.C: Joseph Henry Press.
- [84] Tol, W.A., Reis, R., Susanty, D. and De Jong, J.T.V.M. 2010. Communal Violence and Child Psychosocial Well-being: Qualitative Findings from Poso, Indonesia. Transcultural Psychiatry, 47(1), 112-135.
- [85] Torry, W. I. 1979. Anthropological Studies in Hazardous Environments: Past Trends and New Horizons. Current Anthropology, 20(3), 517-540.
- [86] Vayda, A. and McKay, B. 1975. New Directions in Ecology and Ecological Anthropology. Annual Review of Anthropology, 4, 293-306.
- [87] Wallace, A. F. C. 1956. Human behavior in extreme situations. Washington, DC: National Research Council, National Academy of Sciences.
- [88] White, P., Pelling, M., Sen, K., Seddon, D., Russell, S., and Few, R. 2004. Disaster Risk Reduction: A Development Concern. London: Department for International Development.
- [89] Whittle, R., Marion, W., Medd, W. and Mort, M. 2012. Flood of emotions: emotional work and long-term disaster recovery. Emotion, Space and Society, 5, 60-69.
- [90] Winchester, P. J. 1981. From Disaster to Development, Notes from India. Disasters, 5(2), 154-163.
- [91] Wisner, B., and Luce, H.R. 1993. Disaster Vulnerability: Scale, Power and Daily Life. GeoJournal, 30(2), 127-140.



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