IMPACT OF CYCLONE AILA ON THE LIVELIHOOD OF THE PEOPLE OF WEST BENGAL

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The Inception:

- On 25th May 2009, a tropical Cyclone that formed in the Indian Ocean, later known as Cyclone Aila, progressed inwards on the land from the Bay of Bengal.
- Among the worst affected districts were South 24- Parganas, North 24 Parganas and to some extent Kolkata, Howrah, Hooghly, Burdwan, Bankura and several other places.
- Its impact ranged from breached embankments, inundated lands, heavy torrential rains, uprooted trees, obstructed transit systems, high risk of epidemic and endemics to abandonment of homes/lands and loss of sustainable support system.
- Approximately 1 million people in and around the coastal areas were affected.
- This paper is a culmination of a month long annex study carried out in the Aila affected regions of Block Gosaba, district 24 South Parganas, West Bengal, India.
- It explores the aspect of livelihood of people living in the Sundarbans, post-Cyclone Aila.
Central to the study are the concepts of Livelihood and Asset.

“A livelihood comprises the capabilities, assets (both natural and social) and activities required for a means of living” by Robert Chambers and Gordon Conway.

Livelihood involves “assets”, its exchange, its utilization, barriers in obtaining assets and the resources that control the assets.

It is the assets, that are the means to distinguishing between the “impoverished” and the “bestowed”.

If categorized Assets are generally accorded five common yet distinct categories, viz. Human asset, social/political asset, physical asset, financial asset and finally natural natural asset.

The accumulation of these assets determines the immunity of livelihoods of a household to shocks and disasters.
Conceptual framework … (continued)

Change in Livelihood - A major impact of disaster leads to various secondary impacts emanating from lack of sustainable livelihood alternatives.

- Migration leading to family disorganization or complete breakdown of social structure
- Economic constraints erupting from change in occupation
- Modification in gender specific roles and related vulnerabilities
- Insecurity among women and children
- Psycho-social impact (Psychological Impact and Absence or Presence of Psycho-Support)
A conceptual model for the study was developed.
Information necessary for the model were based on secondary data that were collected during a month-long literature review in which compilation of various NGO/CBO reports, Media Reports released by the Government of West Bengal, Risk and Recommendation Reports prepared by research-based Organizations and Academic Institutions.
Common impact variables which shared some degree of concordance were assigned one broader theme.
A interrelationship between the variables was established.
The Sundarbans

- *The Sundarbans* is a unique and richly diverse system of halophytic mangrove communities in the Bay of Bengal.
- It is the largest in the world and is spread across two countries, India and Bangladesh with a giant area of 10000 Km sq.
- UNESCO has recognized it as a world heritage site.
- The climatic conditions, the flora and fauna of this estuarine system vary from that of any other biophysical system.
- Near these fresh-water inland forests lie a number of islands inhabited by human population.
- These inhabited islands are not only protected by the mangroves but are also provided for by the forests specially in terms of their livelihood.
- Gosaba is the last inhabited island of the Sundarbans.
About the Study

- After exactly a year of Cyclone Aila an annex study was carried out by MICRODIS in collaboration with the Department of Anthropology, University of Delhi supported.

- This study spanned over 15 days, in which a team of anthropologists visited the affected area and collected both qualitative and quantitative data using various ethnographic methods.

- Before the start of the main annex study, a week was spent in the area for pilot study.
Aim and Objectives

- The aim of the annex study in the Sunderbans was to invariably focus on the Impact of Cyclone Aila on the Livelihood of People in Sunderbans, West Bengal. Three primary objectives guided the annex study –

1. Tracing the course of change in livelihood if any, in the post disaster situation and establishing its relatedness to the disaster.

2. Understanding the implications and the impacts of change in livelihood, on the life of people belonging to communities that specialize in a particular occupation.

3. Formulating interrelationship between the impact variables resulting from change in livelihood and thereby establishing the hypothetical model prepared beforehand, based on the primary data.
Gosaba, South 24 Parganas – The Block and its people

- Gosaba is the southern most deltaic block in sub-division Canning traversed by a number of major river tributaries and creeks.
- It also happens to be the last human inhabited area before the mangroves starts, making this area extremely prone to natural hazards.
- According to the Government of India reports, Gosaba was the most affected block in West Bengal during Cyclone Aila.
- It has 14 Gram Panchayats, most of which are islands surrounding the main Gosaba Bazaar, the centre and commercial hub of the block.
- The population of Gosaba is a mix of Hindus, Muslims, Christians and Tribal population.
- The entire population is classified as rural.
- The major occupation of the people in Gosaba is agriculture closely followed by fishing, honey collection, business, tourism, poultry, ferry transport etc.
Gosaba (Map)
Methodology… (continued)

- Primary data was collected using methods like Focus Group Discussions, Key Informant Interviews, Case Studies, Group Interviews.
- The secondary data primarily comprised of Government statistical data and media reports, NGO and CBO reports. Printed data from hospitals, schools, research organizations was also taken into account during the research.
- Quantitative data was collected during a 15 days long extensive survey which was carried out in the 50 “maujas” and villages of Gosaba block.
- The details of the primary data are: *Focus Group Discussion* with fishermen, Honey collectors, women who worked in their households only, van-pullers etc were conducted. Questions like “*What do you understand by Cyclone Aila?” Or “What was the impact of Cyclone Aila on the livelihood of your household?” Or “What was your coping strategy post-Aila” were a part of the Focus Group Discussions. Analysis was done based on the responses given by the participants.
Methodology

- Key Informant Interview were framed around Cyclone *Aila* and its impact on the livelihood of people. Representatives of Non-Government Organizations, Block Development Office, village *Panchayat*, Boatmen, Fishermen were interviewed.
- Group interviews of NGO officials and teachers of schools were taken during the research.
- Case Studies of a large number of people belonging to different walks of life like fishermen, van puller, coconut seller, businessman, daily wage worker, agricultural laborer, carpenter, women widowed in *Aila* and so on.
- A cross-sectional survey was used to gather information on the population of Gosaba. The survey used the method of “Cluster sampling” in order to select a representative population for the area. A total of 774 questionnaires were filled by the people of the 50 “*maujas*” and villages in 65 selected clusters of Gosaba block.
A basic social-demographic profile of the population can be established with this table.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Religion</th>
<th>Caste</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Category</td>
<td>Category</td>
</tr>
<tr>
<td>Male</td>
<td>62.1%</td>
<td>Hindu</td>
</tr>
<tr>
<td></td>
<td>General</td>
<td>General</td>
</tr>
<tr>
<td>Female</td>
<td>37.9%</td>
<td>Muslim</td>
</tr>
<tr>
<td></td>
<td>Scheduled Caste</td>
<td>Scheduled Tribe</td>
</tr>
<tr>
<td></td>
<td>Christian</td>
<td>Other Backward Class</td>
</tr>
</tbody>
</table>
According to the survey data collected in the area, the livelihood profile of the people can be understood as below:

<table>
<thead>
<tr>
<th>MAIN SOURCE OF INCOME</th>
<th>BEFORE CYCLONE</th>
<th>AFTER CYCLONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>30.6%</td>
<td>23.6%</td>
</tr>
<tr>
<td>Horticulture</td>
<td>0.4%</td>
<td>0.4%</td>
</tr>
<tr>
<td>Aquaculture</td>
<td>4.5%</td>
<td>3.9%</td>
</tr>
<tr>
<td>Animal husbandry</td>
<td>0.4%</td>
<td>0.4%</td>
</tr>
<tr>
<td>Small business</td>
<td>6.1%</td>
<td>5.6%</td>
</tr>
<tr>
<td>Fixed salary</td>
<td>1.9%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Daily wages</td>
<td>51.3%</td>
<td>58.8%</td>
</tr>
<tr>
<td>Honey collection</td>
<td>0.1%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Others</td>
<td>4.5%</td>
<td>5.0%</td>
</tr>
</tbody>
</table>
Observations based on analysis of Data... (continued)

MIGRATION

- A combination of lack of sustainable livelihoods and vulnerability of any community to such natural hazards exposes the social profile of a community of population.

- Clearly enough *Aila* affected regions have found migration as the preferred coping strategy (28% according to survey data), much of the migration has been to metropolitan cities of India as employment opportunities have been plenty.
INSECURITY

- migration leads us to insecurity in many cases, among the population especially among women and children.
- Many a times adolescent males and females also migrate in search of better prospects.
- Women who have lost earning members of the family in the disasters have either relocated themselves in urban areas or have at least migrated in such places to work.
- The vulnerability of such adolescent and women migrants is high in terms of exploitation and forced employment.
- Insecurity does not always arise from migration only
- Exploitation occurs in every way. Vulnerability to exploitation at every step is a by product of lack of sustainable livelihood.
Observations based on analysis of Data… (continued)

ECONOMIC CONSTRAINTS

- One of the prominent constraints emphasized repeatedly with the loss of livelihood means, was frequently witnessed in the region.
- There was both human resource loss and asset loss (both tangible and intangible).
- Not only did the disaster delimit the livelihood options of people in Sundarbans, it left many of them without any shelter and food, causing extreme levels of poverty.
Observations based on analysis of Data... (continued)

GENDER

- Extensive loss of financial assets and other assets as well, forces a change in gender equation within a household in terms of their livelihood skills.
- Women are generally more culturally bound than men in south Asian communities as was evident even in case of Gosaba.
- However Post Aila, women migrated for work, they started working in Cooperative societies/ NGOs in order to sustain their families.
- Women and men both adopt income generating means based on their capacities in times of such disasters.
Observations based on analysis of Data... (continued)

PSYCHOLOGICAL IMPACT

- All the disasters have been known to have caused acute mental and social stress.
- Though critical to the well-being of an individual, not much importance is associated with the aspect of psycho-social impacts on the victims of disaster in many places in India.
- Cooperation and assistance were exemplified by many, which only proved that uniting in trauma and providing support to each other was the way in which people could sustain a disaster of such ferocity.
Conclusion

- Cyclone *Aila* was probably one of the most devastating disasters in the history of *Sundarbans* till date.
- The impact of Cyclone *Aila* on the livelihood of the people of *Sundarbans* has been critical in determining outcomes and coping strategies people employ to sustain in such testing times.
- Loss of livelihood or a severe blow on the livelihood strategies employed by an individual starts a cycle of cause and effect between its variables.
Conclusion

- Loss of livelihood would most probably cause economic constraints, which could directly lead to migration in search of better income opportunities, or it could lead to change in roles of men and women, which could either cause psychological or social stress or could simply lead to migration again, in want of income generation and food safety.

- One of the primary requirements in such a situation is the need of “sustainable livelihoods” unique to the geography and climatic conditions of the area.
THANK YOU