7.1 This concluding chapter is meant for summarising broad conclusions derived from the study and discussing the policy implications thereof. However, to facilitate the process, the principal findings of analysis are first listed without technicalities and details of numbers. Thus, this chapter is consists of two main parts-

A. Summary of Findings and

B. Broad Conclusion and Policy Implications.

7.2 SUMMARY OF FINDINGS:

7.2 (A) Findings from Macro Level Analysis:

- In entire Assam, there has been an improvement in sex ratio in the last three decades. For scheduled tribes as a whole and for the Mising population, there has also been improvement too. Indeed, for scheduled tribes and also for Misings the rates were higher than that of all Assam. This is an indication of lesser gender disparity among the Misings and tribal population as a whole. However, among the tribes, the sex ratio is lower for the Misings, which can be a cause of concern.

- There has been a marked decline in child sex ratio of the Misings along with scheduled tribes and Assam as a whole. This may be an indication of
relative neglect of girl child creeping into the social fabrics of Assam across all communities including the scheduled tribes and the Mising tribe.

- The literacy rate of the Misings is lower than the averages of all scheduled tribes as well as state as a whole in the successive census periods.

- An analysis of decadal improvement rate of literacy further shows that the literacy rate among Misings has improved faster than that of Assam as a whole. This implies that there has been a tendency towards convergence in literacy rate of the Misings to the state literacy rate. The scheduled tribes as a whole have had higher rates of improvement than the Misings in recent decades. Though, the Misings have been gradually catching up with all Assam literacy rates, the other tribes of the state in general are catching up faster than the Misings.

- The trend in workforce participation rate over the successive census periods shows that there was a sharper increase in workforce participation rate in the previous two decades. But, the recent census data shows a marked decline in workforce participation rate among Misings. The declining trend in workforce participation rate is not necessarily negative sign of moving downward. This may take place even as a consequence of socio-economic progress. There are studies (Vepa, 2012; Mehrotra, et al, 2013) to show that female workforce participation is sometimes given up by distress that means women are force to work because of economic hardship of the family. So, with improvement in the economic condition, their compulsion to work may slowly be receding. Some women may stop
working and concentrate on households and domestic responsibility. Secondly, as both girls and boys as larger percentages go for higher education. Workforce participation rate may show decline for sometimes.

- The workforce participation rate of the Misings is comparatively higher than the averages of all scheduled tribes and Assam as a whole, over the last three decades.

- The occupational distribution of main workers of the Misings reveals that the dependence on cultivators has been declining over the last three census periods. Female main workers working as cultivators have also declined considerably. It is further observed that the share of agricultural labourers has not gone up much in this period, though the share of cultivators has declined to some extent. It may be a positive sign for the population group that the share of other workers has increased slightly over the years. The occupational shift from farm to non-farm can be interpreted as an indication of transformation.

7.2 (B) Findings from Field Study:

- **Expenditure Pattern:** In contrast to the common stereotype, the percentage of household consumption expenditure on intoxicants is fairly limited. On the other hand, the percentage of social ceremonies is fairly high. This collaborate the findings of AIRTSC (2011) that “the tribal society is egalitarian and cooperation is the salient feature of their social organization. They are to spend lots of money on various socio-religious
ceremonies and inter tribal mutuality demands maintenance of coherent social life”. Despite transition, community bonding continued to be there.

- It is also seen that the significant part of monthly expenditure goes to education of children. The significant amount of investment on child education can also be expected to expedite transition to more rewarding occupation.

- **Dwelling House:** Most of the residential dwellings appear to be traditional. More careful observation reveals that traditional model has undergone modification with introduction of RCC pillars into the structures. This is obviously a positive transitional development.

- **Sex Ratio:** Demographically the surveyed areas show an impressive sex ratio for females in comparison to the entire Mising population in Assam, scheduled tribes and state as a whole. The sex ratio is also very impressive in Lakhimpur district, where the females per thousand male is higher. The sex ratios in Golaghat and Jorhat districts are somewhat adverse compared to the sex ratio of overall scheduled tribes of Assam as per census 2011.

- **Education:** The educational status of the head of the sample households indicates that one third head of the sample households are illiterate. The enrolment ratios in the 6-16 age groups are encouraging for both boys and girls. A positive sign is that girls are well ahead of boys. All moderately flood affected sample villages in the surveyed areas have been attaining 100 per cent enrolment for boys and girls.
• **Health Status:** The average number of sick days in a year is higher in Golaghat district as compared to Lakhimpur district and Jorhat district. The incidence of diseases such as Malaria and Jaundice is still acute in the surveyed areas. The incidence of such diseases is found to be more in all chronically flood and erosion affected villages of Golaghat and Jorhat districts. The incidence of such diseases occurs after flood. Generally, the tube-wells, which are the only source of drinking water, are submerged during flood and people have to take polluted water. A careful observation further reveals that quite a good number of sample households still depending upon ‘quacks’ for curing of diseases, reflecting poor delivery of health services as well as lack of health care awareness in the study areas. The coverage of children under immunization is encouraging, but, there is remains a gap from full immunization.

• **Sanitation:** In contrast, progress in case of sanitation the situation is extremely disappointed. Large majority of households still defecate in open. One of the reasons of backwardness in sanitation is however, the fact that the functioning of government toilets in chronically flood and erosion affected areas virtually impossible with the existing and available knowledge and model.

• **Energy Use:** As for energy consumption also we observe a contrasting picture. Majority of the sample households have the electricity connection. Electricity is primarily use for lighting purpose. However, as a source of cooking energy, use of commercial source like ‘liquefied petroleum gas’ is
still very low among the sample households. The liquefied petroleum gas is generally used by financially better off households.

- **Mobile Connectivity:** Most of the sample households in the surveyed areas have access to mobile phone. Analysis clearly indicates that there is a significant expansion of mobile phone connectivity across the all categories of sample villages in the three study locations. Jorhat district occupies highest position for having mobile phone connection to almost all the sample households, followed by Golaghat district and Lakhimpur district.

- **Ownership Pattern of Land:** The average land holding of the sample households in Lakhimpur district is significantly higher than Golaghat district and Jorhat District. Majority of the sample households in Golaghat and Jorhat districts fall in the category of small and marginal land holding.

- **Cropping Pattern:** A striking feature of the cropping pattern of the study locations is the predominance of paddy. District-wise analysis shows that the acres under paddy cultivation are the highest in Jorhat district, followed by Golaghat district and Lakhimpur district. Traditional paddy (Ahu, Sali, Bao) cultivation for different seasons accounting for almost all the gross cropped area of the sample households in Jorhat district, followed by Lakhimpur district and Golaghat district. Traditional Bao paddy is the most preferred variety in Jorhat district, while mustard in Lakhimpur district and traditional Sali paddy in Golaghat district. A considerable change has been noticed in cropping pattern in Golaghat district as significant percentage of
gross cropped area were covered under non-traditional Boro (HYV) cultivation.

- **Financial Inclusion:** Financial inclusion status shows that majority of the sample households have bank account in the surveyed areas. It was higher in Jorhat district than Lakhimpur district and Golaghat district. All the chronically flood and erosion affected villages have the lower percentage of sample households with bank account. There is a poor access to credit from any institutional sources by the sample households in the surveyed areas.

- **Impact of Special Programme and Schemes:** What is disappointing in this context is a fact that penetrations of special programmes made for helping the tribe striving in different physical environment is extremely low. Lower percentage of the sample households were able to avail the special scheme like-‘Family Oriented Income Generating Scheme’ and ‘Educational Development Scheme’, which are specially meant for uplifting the socio-economic status of ST people. There is an urgent need to rethink the implementation procedure of the schemes for which resources spent for this purposes to give better coverage.

- The impact of institution like-Mising Autonomous Council supposedly meant to contribute to empowerment and development transition of the tribe was conspicuous by absent. More or less the delivery of rural development schemes like-AAY, RGGVY and IAY scheme is encouraging in the study areas. The implementation of these schemes in the rural areas is rest on
Gaon Panchayats. MGNREGA is found to be availed by the nearly half of the sample households in Golaghat district. Negligible percentage of households were availing MGNREGA in Jorhat district and Lakhimpur district.

**Livelihood Diversification and Its Determinants:**

- There are incidences of shift of occupations given mainly by two factors. They are given to diversify livelihood due to push factor- erosion of land and other resources. Erosion forces people to diversify. Basically, it contributes people to diversify for non-traditional horizontal occupations. But, diversification is most significantly driven by education. Educational level in the households is the most significant influencing factor for moving up to higher occupational categories as expected. This factor has a strong positive influence on households’ ability and motivation for shifting to higher occupational categories.

- The sample households from the Lakhimpur district are less inclined to occupational shift than households in the other two locations. It may happen, because the average land holding size of the sample households in Lakhimpur district is significantly higher than other two locations. Relatively larger possession of land has enable sample households to stick their traditional occupation. In other words, households are under lesser compulsion to shift to other occupations.
Coping Mechanism of Flood and Erosion:

The analysis shows that the Mising population group in the study areas has been adopted a range of coping strategies in order to mitigate disasters arising out of flood and erosion. These are both structural and non-structural in nature.

- **Dwelling with ‘Chang-Ghar’**: It is found that almost all the households in the surveyed areas live in traditional ‘Chang-Ghar’ (raised platform type). The basic idea behind the construction of raised platform type house is to cope with flood. Flood water flows uninterrupted below platform without causing damage to life and property during flood (Gohain, 2011:11-14). The house type is proved to be a very effective and predominant coping technique not only to save shelter but also to keep households goods in the surveyed areas. Bamboo made ceilings in the inner side of house is also used to preserve food staff and crops seeds (Black gram, Garlic, Mustard etc.). Food-storage techniques are both innovative and creative because they are tuned to the local micro environment and flood levels (Das et al, 2008). During heavy flood, bamboos made walls are also used to make temporary platform above original platform depending upon the level of flood. It is further observed that the height of the raised platform is differing from each location. The height of raised platform is higher in Lakhimpur district than Jorhat and Golaghat districts.

- **Raised Granary**: Analysis shows that almost all the households have granary to store harvested paddies. Granaries are similar to their house type. The height of the granary is always higher than the dwelling house. The logic behind the height is to save paddies from flood damage.
• **Cultivation of Bao paddy:** More or less, almost all the households in the surveyed areas resorted to traditional ‘Bao’ paddy. ‘Bao’ is a flood resistant variety of paddy cultivated in low lying areas. It has the special feature of growing taller with the rise in the water level (Mandal, 2011:92). There is a growing tendency of adoption of High Yielding Varieties (HYV) of paddy among the Mising households in Golghat district. Most of the households in Golaghat district practice ‘Boro paddy’ (HYV) as an alternative to traditional Ahu paddy in order to avoid crop loss due to flood.

• **Raised Tube Well:** Analysis indicates that during heavy flood, the Mising population group face serious drinking water accessibility problem. Most of the households in the three locations use tube-wells as a source of drinking water. It is observed that almost all tube-wells were raised to a height from 4 to 8 feet above the ground level. The height of tube-wells is depending upon the flood experiences of households.

• **Boat and Banana Raft:** Analysis shows that wooden boat and banana made rafts are the only the mode of conveyance during flood, in the study areas. It is found that all day to day activities, including accessing health services, schooling of children etc., are performed by using wooden boat and banana rafts during flood in the surveyed areas. Every Mising household try to possess a wooden made boat in the house as far as possible. Poor families generally use banana rafts. On the other hand, households having wooden boat also extend their help to poor families during flood.
• **Bamboo Bridges**: Destruction of socio-economic infrastructure as a result of flood and erosion is common in the study areas. In order to cross river, damaged roads etc., the population group generally uses bamboo foot bridges. They extend their mutual cooperation in constructing of bamboo bridges as needed. The problem is found to be more in Lakhimpur district and Jorhat district than Golaghat district. Their community effort significantly helping the population group to manage and solve the problem.

• **Migration and Shifting of Shelter**: Analysis shows that people compelled/induced to diversify occupations due to flood and erosion in the study areas. It is found that most of the youths from Charanchuk Madaguri village of Lakhimpur district, Riri and Goraimari village of Golaghat district and Sumaimari village of Jorhat district have temporarily migrated to metro cities like-Chennai, Bangalore, Kerala, Mumbai etc., and working as manual labourer in un-organised sectors. Some of them are also out migrated to different districts of Assam. Some erosion affected displaced Mising households of Riri village of Golaghat district and Charanchuk Madarguri village of Lakhimpur district have migrated to different places for their settlement. People located in the most vulnerable areas and those belong to poorer segments internally redistributed. Conversely people from relatively better off socio-economic status and located vulnerable areas migrate out the island (Das, 2008). It was also happened in case of chronically flood and erosion affected village Sumaimari under Majuli Development Block of Jorhat district, where well to do households have purchased land outside Majuli and permanently settled there. Hence, migration is proved to be an
important coping strategy adopted by the households to mitigate livelihood shock arising out of flood and erosion.

- **Highland and Embankment:** Analysis shows that people keep their poultry and other domestic animal on Government constructed high land and embankment during heavy flood. Most of the landless Mising households in Charanchuk Madarguri village of Lakhimpur district, Sumaimari village of Jorhat district have been taking shelter on the embankment near the Brahmaputa River. They also take shelter on roads, school buildings etc., in case of heavy flood.

- **Community Cooperation:** Traditional community institution known as ‘Rikbo Ginam’ is still prevalent among the Mising population group in the study areas. It is found that following the norms of ‘Rikbo Ginam’ system, they extend their ‘mutual co-operation’- before flood, during flood and after flood as required.

- **Skill in Swimming:** Skill in swimming among the Mising population group as a whole has been proved to be an effective non-structural measure to save live irrespective of different age group. Death due to drowning is very rare in Mising community.

- **Bamboo Porcupine:** The Mising population group in chronically flood and erosion affected villages of Lakhimpur, Jorhat and Golaghat districts have used bamboo porcupines near the villages, in order to protect erosive
activities of Brahmaputra river. But, their community adaptation measures are not sufficient in minimizing the erosive activities of mighty Brahmaputra.

- **External Assistance:** Analysis reveals that the population group in the study areas highly depending on relief camp and relief materials provided by Government and Non-Government Organisations in case of heavy flood. In Lakhimpur and Jorhat districts an NGO, ‘Rural Volunteer Centre’ has been working for providing sanitary facilities, relief items to the flood and erosion affected people. In Golaghat district, ‘North East Affected Area Development Society’ (NEADS), a non-government organisation has also been working for overall socio-economic development of the Mising community in flood and erosion affected villages. The NEADS has been organising training programme on the ‘Disaster Preparedness and Mitigation’. The organisation has also been helping the population group by providing relief items, crop seeds and organizing heath camp.

### 7.3 BROAD CONCLUSIONS AND POLICY IMPLICATIONS:

- The findings from secondary data within the socio-economic and demographic spheres show that there are sign of socio-economic transition within the Mising community. The convergence in literacy rate of the Misings to the state literacy rate and shift in occupational distribution are the representation of positive changes with progress in time.
There are some areas in which the Mising households in sample villages are indeed going through socio-economic transition.

- Improvement in education has been noticed in terms of educational enrolment. Expenditure pattern of households has also undergone some change. Considerable amount of expenditure is directed towards education of children. Households limiting their monthly expenditure on intoxicants. Majority of the sample households have been able to bring themselves under the ambit of formal financial institutions by holding bank account. The occupational structure has undergone some change. There is a growing tendency of households to introduce modern agricultural practices. Extension of electric connection to almost all the households is a very positive aspect in the study areas. Modern means of communication has also been expanding in terms of mobile connectivity. Innovation in dwelling technology is one of the positive transitional developments. Uses of empowering consumer durables like-motorcycle etc., even computer/laptops are indicative of positive change with time.

There are problems areas, where transition process slowed down in the study areas.

- The delivery of health care facilities particularly in chronically flood affected villages is not encouraging. Incidence of diseases like Malaria and Jaundice is still acute in the study areas. Dependence on ‘quacks’ also the major cause of concern. There is remains a gap from full immunization of children. The decline in child sex ratio in the successive census periods is probably
the adverse consequences of transition. Poor access to credit from any institutional sources by the sample households indicates that financial inclusion achieves has remained thin. Temporary migration of youths in search of work is a matter of concern. The practice of open defecation stills a major challenge in the surveyed areas. Of course, some technical problems also associated with the construction of toilets. Firewood is still dominants as a source of energy for cooking.

The findings show that there are still lot of problems in the part of institutional policy interventions.

- The coverage of special programmes meant for improving the socio-economic status of the scheduled tribe people has been very limited and unsatisfactory in the study areas. It shows that the agency involved in execution of special programmes has not been effective in the study locations.

- The impact of institution like Mising Autonomous Council supposedly meant to contribute to empowerment and development transition of the tribe was conspicuous by absent. The Council has not come up to the expectations of the people as revealed in the study.

- The coverage of general rural development schemes, which are implemented under the Panchayati Raj Institutions, is to some extent better as compared to the special schemes. This indicates that the functioning of Panchayati Raj Institutions, particularly Gaon Panchayat has been
somewhat effective in case of implementation of rural development schemes than the Mising Autonomous Council.

Policy Implications:

Since Panchayati Raj Institutions (PRIs) has been found to be more effective in implementation of development programmes. There exists a strong case for strengthening of these institutions for better delivery of development programmes in the areas inhabited by Mising population. The functioning of Mising Autonomous Council has been found to be far from satisfactory. There is an urgent need to look into working of the Council. This however, not to suggest that PRIs can ensure fully replaced the Mising Autonomous Council. Indeed the Council can be reorganised but, learning from the experience of PRIs. One of the problems of Council is its inadequate grass root connection as Council as of now a centralised structure. The transmission of information about the programmes to the grassroots is inadequate. These deficiencies of information transmission breeze corruption, diversion of fund and lethargy in implementation. Council can have a more decentralised structure in like PRIs. It can probably be more effective. At the same time, it is necessary to avoid duplication of functions and authority between the two sets of institutions. The two sets of institutions need to be synchronised and converged for addressing the development backlog of the Misings.

There is a need for introduction of alternative delivery mechanism of health care services in the study areas. The peculiar riverine topography stands as a barrier
for accessing heath services. So, the alternative delivery mechanism may ensure the accessibility of health services to all the households.

In the absence of access to education and also financial services, larger sections of the Misings are forced to move to other occupations only horizontally. Since, access to education has been found to be the most significant influencing factors for vertical mobility. There is a strong case for expanding education both quantitatively and qualitatively among the upcoming generation of the tribe.

Policy also needed to rehabilitate the displaced Mising households in the study areas, who are living on the river embankment. Government intervention in terms of construction of high land in each village, construction of river embankment with new technology, construction of spurs and boulders etc., are the priority areas to strengthen the traditional coping mechanism of the Mising population group in the study areas.

Thus, it is expected that the study will provide a background for formulating a proper plan for expediting the development process of the Mising population group being living in flood and erosion prone areas, through integration with the broader economic system of the country and world.