CHAPTER-VII
CONCLUSION AND SUGGESTION

During the last five decades Darjeeling district has made tremendous progress in various spheres of life. Its economy has expanded and diversified, society has become cohesive and polity democratized. It has also faced many problems, some of which have successfully been solved, but many others still plague it. This thesis was prepared to understand and examine the changes in the demographic structure of Darjeeling district and to analyze and propose feasible solutions to the problems identified.

Demography describes the composition (size, distribution and structure) and development of human populations (Dinkel, 1989, Hillmann, 1994 and Fröhlich, 2000). The dimensions which are taken into account include gender, education, place of residence and income, or a combination thereof. Demographic change represents the changes in these population features.

Demographics are of key importance to development, but this link is often ignored. Debates about population policy are stirring, with columnists and academics arguing about what lies ahead if global population challenges aren’t actively integrated into policy and planning processes. Population—the study of
people using the tool of demography—is now appearing across development discourse, with policy implications that reach far beyond family planning and reproductive health. Population is undeniably important—but how, for whom, and with what consequences is a complex story. Two things are certain:

1. Population issues in the 21st century are different from those in the last century.

2. With the development world midway through an uncertain effort to reach the Millennium Development Goals by 2015, population issues will be central to the success or failure of socio-economic goals.

Large size of population means heavy pressure on resources – natural as well as human-made. Poverty and environmental degradation, the two major problems of Darjeeling district faces today have much to do with population size. Besides size, ethnic diversity, rural character and uneven distribution are the other aspects of population affecting the process and pace of socio-economic development in Darjeeling district.

The study of demography has been assuming greater significance in population studies undertaken by the social scientists in India & aboard in recent years. The most important characteristics of population are its dynamic & consequent changing nature. Growth of population reflects the history of man’s
response to the environment. It exerts considerable pressure on the economy of a society and changes the ecosystem by making technological advances.

The concept of population change or growth of population is often used to connote the change in the number of inhabitants of a territory during a specific period of time, irrespective of the fact whether the change is negative or positive. Growth of population reflects the history of man’s response to the environment. It exerts considerable pressure on the economy of a society and changes the ecosystem by making technological advances.

Thus, there has been a growing interest of social scientists including population geographers in the ever increasing demographic dynamism. The growing consciousness among the social scientists about the need for exploring the trends in population change may be attributed to the

1. Recent population explosion reserving in a great demand for goods and other resources.
2. Widening gap between the per capita income of developed and less developed countries.
3. Increasing population pressure upon the limited resources of the less developed world.
For a population geographer however the phenomena of population growth have a special significance. He values it as a vital index for measuring the region’s economic development, social awakening, historical and cultural background and political ideology. Population growth is thus “pivotal to the regions demographic dynamism”. It is the attribute with which all other characteristics of population are intimately related and from which they derive their significance.

The analysis of population growth of a region is a major issue to understanding not only its problems but also for future planning at the local and regional levels because the task of providing food, schooling, employment, health care, housing etc., depends on the precise description and interpretation of the spatial patterns of population change.

Darjeeling district is the northernmost district of west Bengal. It is located on the lap of the eastern Himalayas of India and lies between 27°13’ N to 26°27’N Latitude and 88°53’E to 87°59’E Longitude. The district comprises of four subdivisions namely, Darjeeling Sadar, Kalimpong, Kurseong and Siliguri. The geographical area of Darjeeling district is 3,149 sq.kms. The Terai is only 91 meters high above the sea level. The area is bounded by the Sikkim Himalaya in the north, the Bhutan Himalaya in the east and Nepal Himalaya in the west. The southern foothill belt is demarcated by a highly dissipated platform of terrace
deposits extending along the east west axis. The exquisite scenic grandeur and invigorating climate in the area have earned the title of "Queen of the Hill Stations" (Chakraborti, P.K 1989.).

Prior to 1780, Darjeeling was a part of Sikkim. Nepal had invaded Sikkim in 1780 and ruled most of the district’s terai area and the land east of Teesta River for about thirty years. Under the Treaty of Titaliya (1817), the British restored the land occupied by Nepal to Sikkim. In 1835, the Raja of Sikkim presented Darjeeling, i.e, all the land of south of the Great Rangit River, east of Balasan, Kahail and Little Rangit rivers and west of Rungpo and Mahanadi rivers to the British. In 1839 Dr. Campbell came to Darjeeling as Superintendent with wide civil, criminal and fiscal powers. He was instrumental in encouraging the Nepalese settlement and changing demographic structure of the region.

As a result, the population of this area increased from about 100 at the time of annexation to 10,000 in 1849. By 1850, the number of inhabitants in this region had increased to 22,000 and by 1872 it had further increased to 94,712. By then Siliguri was annexed and by 1866 Kalimpong was also included in the district. The population of Kalimpong in 1865 was 3,536 and the Census of 1872 recorded the population of Siliguri as 47,985. Thus the high rate of population growth in the district between 1850 and 1872 was due to the annexations of Kalimpong and Siliguri.
The population of the district of Darjeeling was 265,780 during 1901 while in 2011 it increased to 18,46,823. The year 1921 is the turning point in the demographic history of Darjeeling district. Till 1921 the decennial growth rate of the district was almost stationary but after 1921 there was a marked increase in the decennial growth rate. During 1961 the decennial growth was 40.29% as compared to 18.30% during 1951. This is so because a part of Phansidewa area which was earlier in Bihar was included in Siliguri Sub-division under the State Reorganization Act, 1955.

During 1961 there was a huge influx of Tibetans who migrated to Darjeeling, as a result the decennial growth rate increased to 40.29%. But Darjeeling did not have the necessary infrastructure to accommodation such a huge migration from Tibet plus there was very less scope for trade and commerce in Darjeeling. Therefore, during the period 1961 to 1971 the decennial growth rate decreased to 25.16% as people migrated from Darjeeling to other parts of India for better trade and commerce.

During 1981, the decennial growth rate again increased to 31.02% due to migration of people from Bangladesh. From 1981 to 2011 the decennial growth rate has been steadily declining. This steady decline is due to better infrastructure like transportation, improved medical facilities, better education and family planning.
The contemporary pattern of population in the district of Darjeeling is largely a reflection of the history of settlement within different parts of the district to accommodate immigration of early settlers from Bangladesh, Bhutan, Nepal and Tibet and to some extent an expression of the carrying capacity of various regions.

In thirty years 1901 to 1931 the population increased by nearly 24.94% than in 1901 and in 50 years it has more than doubled. During the thirty years precedent 1931 census there were several natural checks on the population which operated through vastly increase deaths. These checks were made up of famines, epidemic diseases, endemic diseases the last being malaria in large parts of the district. The ravages of famine and disease were severe till 1921 but thereafter, appropriate measures had been taken with regards to public health care. Correspondingly the numbers grew. The population has grown rapidly after 1921 and the decennial growth rate has steadily increased. During the past 100 years the district’s population has increased from 2,65,780 in 1901 to 18,46,823 in 2011.

The period 1961 to 2001 may be regarded as the period of fluctuating growth of population. 1961 recorded the highest increase in the growth rate. The decennial growth rate in 1961 had almost doubled when compared to 1951 decennial growth rate.
The influence of physical factors depends on the way of life of the people. The more developed is the society; the less is the influence of the physical factors in the distribution and vice-verse. Thus the distributional pattern of the population is the result of all geographical phenomena operating in a region. Since population distribution is a dynamic process which is ever changing. The causes and effects vary in time and space. Therefore, after discussing population growth an attempt has been made to analyze the distribution of population of the subdivision of Darjeeling district.

The most potent factor contributing to the growth of population in the district has been the tea industry. Another potent factor, which also encouraged immigration in the district, has been the general agriculture (this is especially true in case of Kalimpong Sub-division with relatively low altitude and comparatively high potential for agriculture).

Besides, immigrations due to political reasons (mainly from Bangladesh, Tibet and Bhutan) have played role in the growth of population in Darjeeling. The rapid population increase has caused the expansion of the area of cultivated fields. Natural pakhas (slopes) and jungles have thus receded to greater distances from the original settlement. The daily transportation of fodder leaves and grasses, as well as firewood has become far more difficult and painstaking. This has reduced the number of animals per household over the period of time,
which has in turn impacted the agricultural productivity in rural areas of the district. Such situation has forced the local folks to construct new terraced fields on more and more inappropriate slopes. Vast areas of forests have shrunk and many pakhas have been turned into cultivated fields. Consequently, the jungles around the villages have begun to disappear. This nibbling effect is apparent in around the hill villages and its diameter is increasing day by day. In consequence, soil erosion has accelerated. In areas where the cover of natural vegetation has been stripped off, the cycle of successive landslides has been abruptly shortened. Thus, a number of landslides have begun to destroy fields and threaten the areas of inhabitants. Sources of water have begun to decrease in quantity. Consequently, the burden of everyday task of carrying water has become far more severe than before impacting the rural women. In number of cases, the quality of water has also dropped and as a result sickness increased. This simply means additional distress and economic burden.

Poverty, superstitions, religious beliefs, illiteracy and ignorance, early marriage, high fertility, increased birth rate and decreased death rate are some of the major cause for the rapid growth in population in Darjeeling district. Rapid increase in population may give rise to many economic problems like poverty and unemployment. Stabilizing population is an essential requirement for promoting sustainable development with more equitable distribution.
The population of the district according to 1901 census was 2,65,780 of which 2,44,387 lived in the rural area and 21,393 lived in urban area. In other words 91.95% of the total population was settled in the rural area and 8.05% was settled in urban area. The rural population of Darjeeling district has decreased from 91.95% during 1901 to 60.58% in 2011 and urban population has also steadily increased from 8.05% in 1901 to 39.42 % in 2011.

Darjeeling consists of four subdivisions, namely Darjeeling, Kalimpong, Kurseong and Siliguri. Of the total rural population of 601,565 during 1971, Siliguri Subdivision had the highest percentage of total rural population accounting for 33.96% followed by Darjeeling subdivision 33.63%. Kalimpong Subdivision and Kurseong Subdivision comprised 18.47% and 13.94 % respectively.

Rural to urban migration that carries the rural folk to the growing urban center is more pronounced in the less developed countries. It is caused by both push and pull factors. In the less developed world which has high rural densities and where rapid urban-industrial development is taking place, both push of the rural area and pull of the urban areas generate migratory tendencies among the people. In rural areas appalling poverty, unbearable unemployment, low and uncertain wages, uneconomic land holdings and lack of facilities for education, health, recreation and other services work as a push factors.
The male population and female population of the rural area increased by 64.29% and 65.82% respectively during 2011 when compared to 1971 census. Of the total rural population of 1,118,860, during 2011, the percentage of female population to male population was 49.33%. During 1971, the percentage of female population to male population was 47.65% which indicates that there was no much variance during the decade. During 1971 Siliguri sub-division recorded the highest number of male rural population, whereas, Darjeeling Sub division recorded the highest number of female rural population and Kurseong sub-division recorded the lowest number of male and female rural population. During 2011, Siliguri Sub-division recorded the highest number of male and female rural population, followed by Darjeeling Sub-division, Kalimpong Sub-division and Kurseong Sub-division.

The male population and the female population of the urban area have increased by 78.65% and 81.78% during 2011 when compared to 1971 census. Of the total urban population of 7,27,963 during 2011 the percentage of female population to male population was 49.13%. During 1971 the percentage of female population to male population was 44.23%. Siliguri Sub-division recorded the highest number of male and female in urban population, followed by Darjeeling Sub-division, Kalimpong Sub-division and Kurseong Sub-division during both 1971 and 2011.
Changes in rural and urban population bring with it several consequences – both adverse and beneficial. They impact on social and environmental areas. Many people who move to urban areas from rural areas in search of a better life end up as casual laborers as they lack adequate education. This leads to one of the worst problems - the growth of slums.

Slums in urban areas give rise to several problems.

- Land insecurity
- Poor living conditions
- Unemployment
- Crime

Environmental impacts

- Increase in temperature
- Air pollution
- Water issues
- Destruction of Habitats

The longitudinal nature of this study, combined with realistic constraints clearly indicates that urban population will steadily increase. The growth of urban population may be slow but surely does not show any signs of stopping. Opportunities should be created within rural areas to reduce stress on cities. This would also results in a higher standard of living for the people of the country as a whole. Currently, planning urban areas for sustainable growth, mainly in the third-world societies, is a major challenge for humanity. Restricting the population boom is another major issue of the third millennium. All these vital
factors would decide what the future would look like for humankind and our planet.

The density of population of Darjeeling district has seen a steady increase on a year to year basis from 1961 to 2011. The density of population was 208 person/Sq km during 1961 and during 2011 the density of population increased to 586 person/Sq. Km.

The age and sex pyramid of Darjeeling district for 1971 and 2001 presents a very broad base tapering off towards the top. The age composition of Darjeeling district is changing gradually due to the declining birth and death rates.

According to 1971 census, more than 40.91% per cent of total population of Darjeeling district is young, between 5 to 15 years of age, and 14.05% is below 5 years of age. The adult group (15 to 59 years) constitutes 54.73 % of the population of Darjeeling district during 1971. This age group is the backbone in the age-composition as it supports and carries the burden of the other two age groups. The working age group (15 to 59) increased from 54.73% in 1971 to 61.79% during 2001 because of declining mortality as a result of improvement in medical facilities and structural and policy reforms initiated by the government of West Bengal. The old age group (60 years and above) constitute 4.36 % of Darjeeling District population during 1971. The dependent population (60 years
and above) has increased to 6.64% in 2001 when compared to 4.36% in 1971. The increase is due to increasing life span of the people and due to increasing awareness in health and improvement in medical facilities.

There has been a significant increase in the literacy rate between 1971 and 2001. The literacy rate among male has increased from 45.20% in 1971 to 86.70% in 2001 in Darjeeling Sub division and literacy rate among female has increased from 23.10% during 1971 to 70.40% during 2001 in Darjeeling Subdivision. It is usually believed that once the critical mark of 50% in crossed in case of literacy, literacy and education becomes self expanding process. It is largely so because more than half of the population becomes socially and economically more awakened and starts having demonstration impact upon the rest which too tries to follow.

The sex ratio of Darjeeling district is characterized by deficiency of female in its population. During 1901, there was a wide disparity between the sex ratio in urban and rural parts of Darjeeling district. During 1901 there were only 690 females per thousand males in the urban area whereas there were 894 females per thousand males in the rural area. It is true that during 1901, more males were born in Darjeeling district than the females but this disparity between the two sexes at the time of birth got perpetuated if not accentuated due to higher female mortality. More females died in the district at infancy as well as the reproductive
period. The general neglect of female was largely responsible for high female mortality at childhood. Around the time India got Independence, there were 903 females per thousand males in the rural area of the district and 721 females per thousand males in the urban area.

This gap between the rural and urban sex ratio has drastically narrowed over the years and in 2011 the sex ratio in urban area was 966 and in rural area was 973. The recent census has revealed that the life expectancy at birth in case of females has outmatched that of the males. The expected female expectancy at birth is reported to be 59.1 years against 58.1 years in case of males. It indicates a perceptible fall in female mortality rate in the district. Although it may take a few more decade before the district can display the sex ratio of the developed realm type, yet movement towards a more balanced sex ratio could be a significant development. The decade 2001-2011 has initiated such a trend as the sex ratio during 2001 was 937 and in 2011 was 970.

The number of other workers in Darjeeling, Kalimpong, Kurseong and Siliguri sub-division, has increased substantially from 1971 to 2011. It has been observed that the occupational structure of Darjeeling district has changed drastically between 1971 to 2011 where the concentration of workforce shifted from cultivators, agricultural labourers and house hold industry towards other workers. It can be inferred that the percentage of other workers in Darjeeling
district is much higher when compared with cultivators, agricultural labourers and household industries.

Rural Darjeeling in the last few decades has been witnessing a notable migration for better opportunities. The migration is mainly taking place towards the urban environment of the district and to the major cities of the country like Delhi, Calcutta, Madras, Mumbai and Bangalore to name the important few. Population pressure; degradation of the Common Property Resources, long neglect of the region, backwardness of the economy and society, low agricultural productivity, lack of opportunity etc. have played prominent role in this regard.

Out of the total migration in 2001, 13.43% was due to employment, 3.17% was due to business, 0.81% was due to education, 10.15% was due to marriage, 0.87% moved after birth, 12.41% moved with household and 59.16% for other reasons. Out of the total migration of 5,634 within the state of enumeration but outside the place of enumeration, 4,256 migrated elsewhere in the district of enumeration and 1,378 migrated in other district of the state of enumeration. The total migrants of 10,458 was on account of migration of 5,634 within the state of enumeration but outside the place of enumeration, 3,388 migrated to states in India beyond the states of enumeration, 1431 migrated to countries in Asia beyond India and 5 migrated to other countries.
Consequences:

During the last 2 decades there has been an unprecedented growth of population in the hill areas, especially in the towns. The explosion has been followed by the rapid increase in vehicular movements. The continuous horizontal vibration along the roads gradually destabilizes the already unstable slopes and geological formations.

- The rapid population increase has caused the expansion of the area of cultivated fields.
- Such situation has forced the local folks to construct new terraced fields on more and more inappropriate slopes.
- Vast areas of forests have shrunk and many pakhas have been turned into cultivated fields.
- In consequence, soil erosion has accelerated.
- In areas where the cover of natural vegetation has been stripped off, the cycle of successive landslides has been abruptly shortened.
- Thus a number of landslides have begun to destroy fields and threaten the areas of inhabitants.
- Sources of water have begun to decrease in quantity.
- Rapid increase in population may give rise to many economic problems like poverty and unemployment.
- Stabilizing population is an essential requirement for promoting sustainable development with more equitable distribution.
Recommendations:

1. **Public consultation and involvements:** Policy development in Darjeeling has always been the prerogative of those who are in power. Given the complexity of issues and problems, it is apparent that the top-down solutions and management strategy for addressing the issues associated with the constant changes in the demographic structure of Darjeeling district will not be sustainable, because sustainable changes in demographic management depends on the participation of citizens in the system. The system of public consultation should be made a prerequisite. By doing so, the Darjeeling district stands to gain on many different fronts. Foremost, public involvement in decision making may help the Darjeeling district to bring the issue at hand to the people. This may in turn help in informing the people and making them aware of the existing problems or solutions proposed. People may be able to share their ideas, thoughts and concerns regarding various aspects of demographic changes in Darjeeling district. This may make the system transparent and efficient, as decisions once taken with general consensus will be easier to execute and people will be hopefully more willing to help to execute the plan.

2. **Set targets and goals:** The Darjeeling district needs to set targets and goals in terms of what it wants to achieve in the future. A realistic proposition would be to set a target to ensure that Darjeeling district has adequate infrastructure in place in
terms of better roads and transport facilities, better educational opportunities for higher studies, creation of adequate jobs. Baseline data on the status of population changes, literacy rate, urban and rural movement, sex ratio should be generated. For this, too, local bodies and institutions can play a substantial and an active role. Research and development should be promoted and encouraged.

3. **Responsible bureaucracy:** Bureaucrats are the back bone of any civil organization. In case of volatile and continuously changing political situations, the bureaucrats ought to play a pro-active role in ensuring that the projects and plans and processes are not affected by the prevalent political situation in Darjeeling district. Plans and processes ought not to be allowed to be abandoned mid-way, which results in loss of time and resources.

4. **Development of long term plan:** There is a need to develop a long term plan, which will take into consideration all the factors that are needed for achieving sustainable long term socio-economic goals. The Government of West Bengal would have to come up with feasible development plans to address demographic problems of Darjeeling district.
Conclusion:

In the new millennium, nations are judged by the well-being of their peoples; by levels of health, nutrition and education; by the civil and political liberties enjoyed by their citizens; by the protection guaranteed to children and by provisions made for the vulnerable and the disadvantaged.

The vast numbers of the people of Darjeeling district can be its greatest asset if they are provided with the means to lead healthy and economically productive lives. Population stabilization is a multi-sectoral endeavor requiring constant and effective dialogue among a diversity of stakeholders, and coordination at all levels of the government and society. Spread of literacy and education, increasing availability of affordable reproductive and child health services, convergence of service delivery at village levels, participation of women in the paid work force, together with a steady, equitable improvement in family incomes, will facilitate early achievement of the socio-demographic goals.

The study concludes that for the last many decades the district of Darjeeling endured several environmental problems including soil erosion, deforestation, overgrazing, landslides, siltation, decreasing soil fertility, drying of springs, increasing of slums, health hazards, etc. It can be suggested that all development efforts for the region should be made according to demographic traits
and needs, and keeping in mind the availability of the resources and ecologically fragile and geologically sensitive nature of the environment. A separate population policy should be framed for the Darjeeling district. Any approach adopted for planning in this region must consider the aspects of man and his environment. More employment generation programs should be launched in the region. Local participation must be considered at the time of policy framing.

The present analysis would be incomplete without specific suggestions for actions plans that need to be implemented to address the consequences as a result of population growth.

1. Address the unmet needs for basic reproductive and child health services, supplies and infrastructure.

2. Make school education up to age 14 free and compulsory, and reduce drop outs at primary and secondary school levels to below 20 percent for both boys and girls.

3. Reduce infant mortality rate to below 30 per 1000 live births.

4. Reduce maternal mortality ratio to below 100 per 100,000 live births.

5. Achieve universal immunization of children against all vaccine preventable diseases.
6. Promote delayed marriage for girls, not earlier than age 18 and preferably after 20 years of age.

7. Achieve universal access to information/counseling, and services for fertility regulation and contraception with a wide basket of choices.

8. Achieve 100 per cent registration of births, deaths, marriage and pregnancy.


10. Bring about convergence in implementation of related social sector programs so that family welfare becomes a people centered programme.

The longitudinal nature of this study, combined with realistic constraints clearly indicates that steady increase in population will have an inverse impact on the demographic structure of Darjeeling district if the demographic issues are not properly addressed. Besides, while formulating any sustainable development strategy the following points should be taken into consideration:

- The vast numbers of the people of Darjeeling district can be its greatest asset if they are provided with the means to lead healthy and economically productive lives.

- It can be suggested that all development efforts for the region should be made according to demographic traits, land use and needs, and keeping in
mind the availability of the resources and ecologically fragile and
geologically sensitive nature of the environment.

- A separate population policy should be framed for the Darjeeling district.

The effort of the Government of West Bengal and Darjeeling Municipality for improving of Darjeeling District is appreciable. However, many problems still remain to be solved for the people of Darjeeling District. The study concludes that this district needs particular attention of the Government so that problem due to demographic changes and its impact on population can be addressed.
Final thoughts:

Following the understanding of the socio-cultural, and geo-political setting of the area, along with the understanding of the strengths, weaknesses and problems associated with the changing demographic structure of Darjeeling district recommendations were made here based on the literature review, understanding of the issues and inputs from the thesis committee members. These recommendations have the potential to address the issues associated with the demographic changes in Darjeeling, West Bengal, India, more sustainable in the future.

This research endeavors to include a holistic view of the changes in the demographic structure in Darjeeling district. Prior to this study, no research or studies had been carried out in terms of the demographic changes in the Darjeeling hills; this study has partially filled that gap. However, a complete study of the problem including geographical, hydrological, environmental and socio-economic factors could help in providing new avenues for knowledge generation. Thus a complete interdisciplinary study undertaken with the help of GIS and satellite mapping technology will help further understand the problem and solutions.