

CHAPTER - 1

CONCEPTUAL FRAMEWORK

1.1 Introduction

A socio-economic (SE) Survey is regarded as one of the most important sources of statistical data on household expenditure and income as well as other data on the status of housing, individual and household characteristics and living conditions. This type of survey is conducted in order to obtain information about the social behaviour, trend of people, economic conditions and the trends prevailing in that particular area. It deals with the populations of an area, age group, sex, migration, education, occupation, health, size and type of family, language and way of living.

Socio-economic factors are the social and economic experiences and realities that influence an individual's or group's behavior, attitudes, and lifestyle. These factors can impact a wide range of areas including education, employment, income, health, and social status.

Key socio-economic factors include:

- a) *Income and Wealth*: The level of financial resources and assets available to individuals and households.
- b) *Education*: The level of educational attainment, which influences job opportunities and income potential.
- c) *Employment Status*: Whether individuals are employed, unemployed, or underemployed, as well as the type and quality of jobs they hold.
- d) *Social Class*: The hierarchical categorization based on wealth, education, and occupation.
- e) *Housing and Living Conditions*: The quality, stability, and affordability of housing, as well as the living environment.
- f) *Health*: Access to healthcare services, nutritional status, and overall physical and mental health.
- g) *Social Networks and Support*: The relationships and networks individuals can draw upon for support.
- h) *Geographic Location*: Urban vs. rural settings, and the availability of services and opportunities in different areas.
- i) *Cultural Background*: Cultural norms, values, and practices that influence behavior and perspectives.

Karang Island is a notable geographical feature in the Indian state of Manipur which was situated in the middle of Loktak Lake, the largest freshwater lake in northeastern India, located in the Bishnupur district of Manipur. The island is home to meitei community with residents primarily engaged in fishing, agriculture, and small-scale trade. Access to Karang Island is typically by boat, as it is surrounded by water. The island has limited infrastructure and connectivity. The local economy largely depends on the resources provided by Loktak

Lake. Fishing is a primary occupation, supplemented by agricultural activities. The island's economy also benefits from eco-tourism due to its unique location and natural beauty. The residents of Karang Island have a lifestyle deeply connected to the lake. They follow traditional practices and cultural norms, with festivals and rituals centered on their environment. Loktak Lake, and consequently Karang Island, is part of a unique ecosystem. The lake is known for its *phumdis*, which are floating biomass formations. The island's environment is rich in biodiversity, making it ecologically significant. The island faces challenges such as limited access to modern amenities, healthcare, and educational facilities. Environmental issues like pollution and the impact of hydrological changes on Loktak Lake also affect the island. Karang Island attracts tourists for its scenic beauty and the experience of traditional fishing communities. Efforts are being made to promote eco-tourism while preserving the natural environment. Overall, Karang Island is a distinctive and important part of Manipur, known for its unique location, culture, and reliance on the natural resources of Loktak Lake.

1.2 Statement of the problem

Karang Island, a small but ecologically significant landmass, faces numerous environmental and socio-economic challenges that threaten its sustainability and the well-being of its inhabitants. The island's unique biodiversity is under pressure from human activities, climate change, and inadequate conservation efforts. Furthermore, the local community struggles with limited access to resources, economic opportunities, and basic services, exacerbating the island's vulnerability.

Despite its potential for eco-tourism and sustainable development, Karang Island has not yet realized these opportunities due to a lack of comprehensive planning and management. The island's isolation and insufficient infrastructure further complicate efforts to address these issues.

This study aims to investigate the key problems affecting Karang Island, focusing on environmental degradation, socio-economic challenges, and potential strategies for sustainable development. Specifically, the study will address the following aspects:

- a) *Environmental Degradation*: Assessing the extent of biodiversity loss, habitat destruction, and the impact of climate change on the island's ecosystems.
- b) *Socio-Economic Challenges*: Analyzing the socio-economic conditions of the island's residents, including access to education, healthcare, and employment opportunities.
- c) *Infrastructure and Resource Management*: Evaluating the current state of infrastructure and resource management, including water supply, waste management, and transportation.
- d) *Potential for Sustainable Development*: Exploring opportunities for eco-tourism and other sustainable economic activities that can enhance the island's resilience and improve the quality of life for its inhabitants.

By addressing these issues, the study aims to provide actionable recommendations for policymakers, local authorities, and community organizations to foster sustainable development and improve the overall resilience of Karang Island. This statement of the problem outlines the primary issues facing Karang Island, providing a clear direction for the research and emphasizing the need for a comprehensive and strategic approach to sustainable development.

1.3 Objectives

The primary objectives of this field survey are:

- i. To analyze the social characteristics of the island's inhabitants of Karang island, focusing on their livelihoods, education, and healthcare access.
- ii. To analyze the economic characteristics of the inhabitants of Karang island focusing on income, employment and occupational structure and family assets.
- iii. To identify potential opportunities for sustainable development, including eco-tourism and improved resource management strategies.

1.4 Needs and Scope for the Field Survey

Given the pressing environmental and socio-economic challenges, a comprehensive field survey of Karang Island is essential to gather accurate and up-to-date data. This survey aims to assess the current state of the island's biodiversity, the socio-economic conditions of its residents, and the effectiveness of existing infrastructure and resource management practices. The findings will inform strategies for sustainable development, conservation efforts, and policy recommendations tailored to the unique context of Karang Island.

This field survey report encompasses a detailed analysis of Karang Island's ecological and socio-economic landscape. It includes data collection methodologies, findings, and discussions on key issues. The report concludes with recommendations for sustainable practices that aim to balance conservation efforts with the needs and aspirations of the local community.

By addressing the intricate interplay between ecological preservation and socio-economic development, this report aspires to contribute to the long-term sustainability of Karang Island and its vital role within the Loktak Lake ecosystem.

This introduction provides a comprehensive overview of Karang Island's significance, the challenges it faces, and the rationale behind conducting a field survey. It sets the stage for a detailed and focused examination of the island's unique context.

1.5 Database and Methodology

A database is an organized collection of structured information or data systematically stored for quick and easy access. Information can be searched with ease as it is arranged and stored in an orderly manner. Kothari C.R (2004). Research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically.

The presented field report is prepared based on visiting the spot, observation, internet and secondary data. Some of the methods used in this field report for data collection are as follows:

A. Methods of primary data collection: Some of the techniques adopted in acquiring primary data are.

Observation: The study area is surveyed by participants by visiting each house to know better the behaviors of the population and their socio-economic characteristics.

Interview: Apart from the household survey, we engaged a well known person who know better about the island and take short interview to him to collect information from the respondents. Questionnaire is prepared beforehand to obtain the required information.

Sampling: Random sampling technique is used to select the households. Key informant interview was undertaken to get a brief idea about the number of households in the island. Based on that, a random sample of 50 households were selected.

B. Methods of secondary data collection: In addition to primary data, significant secondary data and information were obtained from diverse sources. They include.

- I. *Internet:* One of the richest sources where one can acquire information of any kind is the internet. Various websites are accessed to collect data and information about the study area.
- II. *Social media:* social media like WhatsApp and Facebook plays an important role in the collection of data. It is used to communicate the respondents and send the questionnaires efficiently.

For mapping the study area, we have collected available secondary data from the Google Earth. Census 2011 data was also used to understand the population characteristics. Statistical methods are applied to illustrate various phenomena in respect of demographic, economic and socio-cultural aspects through charts and diagrams. The collected primary data are represented in tabulation form and graph was prepared for analysis.

CHAPTER - 2

GEOGRAPHICAL ACCOUNT OF KARANG ISLAND

2.1 Introduction

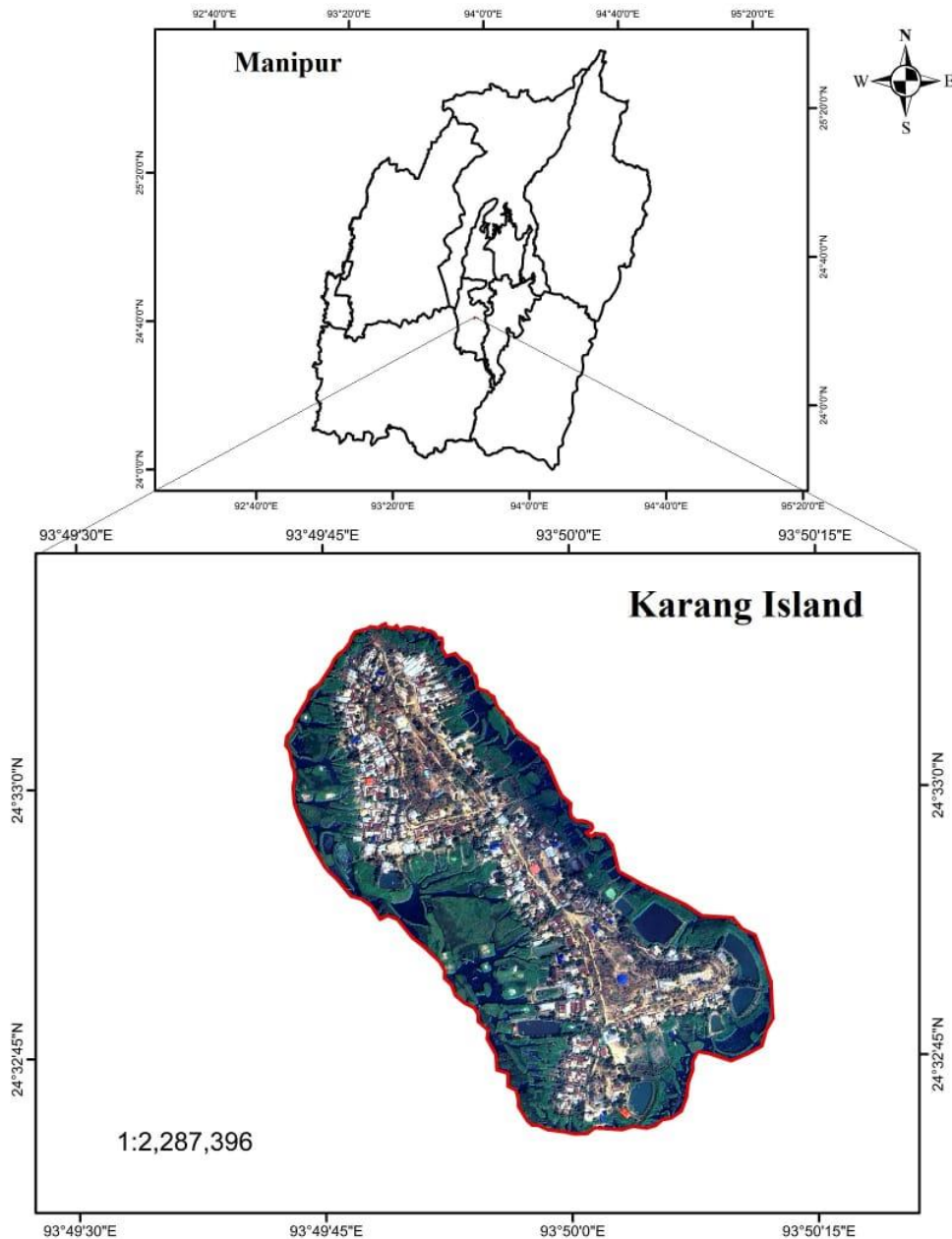
Karang Island is a unique and ecologically significant island located within the Loktak Lake in Manipur, India. Loktak Lake, renowned as the largest freshwater lake in Northeast India, is often referred to as the "lifeline of Manipur" due to its crucial role in the region's ecosystem, economy, and culture. Karang Island, situated amidst this expansive water body, is distinguished by its floating *phumdis* (heterogeneous masses of vegetation, soil, and organic matter), which provide a habitat for diverse flora and fauna.

Karang Island's ecological importance cannot be overstated. The island and the surrounding lake are home to several endemic and endangered species, including the Sangai deer (*Cervus eldii eldii*), which is Manipur's state animal. The unique ecosystem supports a rich biodiversity, making it a critical area for conservation efforts. However, the fragile environment faces threats from human activities, pollution, and climate change, necessitating urgent and sustained conservation measures.

In the context of Socio-economic, the inhabitants of Karang Island primarily rely on the lake for their livelihoods, engaging in fishing, agriculture, and traditional crafts. The island's community has developed a symbiotic relationship with their environment, yet they also face significant challenges. Limited access to education, healthcare, and economic opportunities constrains their quality of life. Moreover, the island's isolation exacerbates these issues, making sustainable development a complex but essential goal.

2.2 Location of the Study Area

Karang Island is situated within Loktak Lake, which is located in the northeastern state Manipur, India. Loktak Lake is the largest freshwater lake of Northeast India and lies approximately 53 kilometres south of Imphal, the capital city of Manipur. The geographical co-ordinates of the island are approximately 24°48'N Latitude and 93°78'E Longitude respectively.



Location of Karang Island

2.3 Physiography and Drainage

Karang Island is characterized by a unique physiography that is intricately linked to the broader landscape of Loktak Lake. Karang Island has a relatively flat topography with slight undulations. Its elevation varies minimally, as it is a low-lying area within the lake, which is typical for islands formed by floating vegetation masses known as *phumdis*. These *phumdis* are a unique characteristic of Loktak Lake, consisting of a heterogeneous mixture of soil, organic matter, and vegetation that float on the water's surface. The island is small in size and has an irregular shape influenced by the movement and growth of the *phumdis*. The shape and area of the island can change over time due to the dynamic nature of these floating masses. The soil on Karang Island is primarily organic, derived from the decaying vegetation

of the *phumdis*. This organic matter-rich soil is crucial for the unique vegetation types found on the island but is less suitable for traditional agriculture.

The drainage system of Karang Island is closely tied to the hydrology of Loktak Lake. Karang Island is part of the dynamic hydrological system of Loktak Lake, which is fed by several rivers and streams. The main rivers feeding Loktak Lake include the Manipur River, Nambul River, and Nambol River, among others. These rivers bring water into the lake, maintaining its levels and supporting its ecosystems. The surface water around Karang Island primarily consists of the waters of Loktak Lake. The water levels and flow patterns are influenced by seasonal variations, including monsoon rains that can cause significant fluctuations in water levels.

The physiography and drainage of Karang Island are essential for maintaining its unique ecological characteristics. Conservation efforts must consider these factors to preserve the island's biodiversity and the livelihoods of its inhabitants. Effective management practices should aim to protect the natural drainage patterns and the health of the *phumdis* to ensure the sustainability of the island and Loktak Lake.

2.4 Climate

Karang Island, located within Loktak Lake in Manipur, India, experiences a subtropical monsoon climate. This climate is characterized by distinct seasons, with variations in temperature, precipitation, and humidity throughout the year. The island's climate significantly influences its ecological and socio-economic conditions.

Seasonal Climate Patterns of the Island:

1. Summer (March to June):

Temperature: During summer, temperatures on Karang Island can range from 20°C to 35°C. The weather is generally warm to hot, with May and June being the hottest months.

Humidity: Humidity levels are moderate to high, often reaching up to 80% during peak summer months.

Precipitation: Pre-monsoon showers are common, particularly towards the end of the summer season.

2. Monsoon (June to September):

Temperature: Temperatures during the monsoon season range from 18°C to 30°C, with a slight cooling effect due to frequent rains.

Humidity: Humidity is very high, often exceeding 90%, leading to a humid and damp environment.

Precipitation: This period sees heavy rainfall, with the majority of the annual precipitation occurring during these months. The average annual rainfall in the region is approximately 1,500 to 2,000 mm.

Impact on Lake: The monsoon rains significantly influence the water levels of Loktak Lake, including around Karang Island, leading to potential flooding in low-lying areas.

3. Autumn (October to November):

Temperature: Temperatures begin to cool, ranging from 15°C to 25°C.

Humidity: Humidity levels start to decrease, making the climate more comfortable.

Precipitation: Rainfall decreases, marking the transition from the wet monsoon season to the drier winter months.

4. Winter (December to February):

Temperature: Winter temperatures range from 4°C to 18°C, with January typically being the coldest month.

Humidity: Humidity levels are lower compared to other seasons, generally ranging from 50% to 70%.

Precipitation: Winter is the driest season, with minimal rainfall. Clear skies and cool temperatures prevail during these months.

2.5 Vegetation

The vegetation of Karang Island may be categorized into the following:

I. Aquatic Vegetation:

Phumdis: The most distinctive feature of Karang Island's vegetation is the *phumdis*, which are floating masses of soil, organic matter, and vegetation. These floating islands support a variety of aquatic plants, which are crucial for the lake's biodiversity and ecological balance.

Common Aquatic Plants: Species such as water hyacinth (*Eichhornia crassipes*), water lettuce (*Pistia stratiotes*), and various types of reeds and grasses dominate the aquatic vegetation. These plants provide habitat and food for many aquatic and semi-aquatic organisms.

II. Semi-Aquatic Vegetation:

Emergent Plants: The edges of the *phumdis* and shallow areas around Karang Island are populated with emergent plants like cattails (*Typha spp.*), bulrushes (*Schoenoplectus spp.*), and wild rice (*Zizania latifolia*). These plants stabilize the *phumdis* and contribute to the island's structure.

Grasses and Sedges: Various grasses and sedges thrive in the semi-aquatic zones, playing a key role in maintaining the integrity of the floating islands and providing habitat for birds and small animals.

III. Terrestrial Vegetation:

Trees and Shrubs: Some areas of Karang Island support small trees and shrubs, which can grow on the more stable and less waterlogged parts of the *phumdis*. Common species include willows (*Salix spp.*) and certain species of fig (*Ficus spp.*).

Herbaceous Plants: A variety of herbaceous plants, including ferns, ground orchids, and other moisture-loving species, can be found in the less flooded regions. These plants contribute to the biodiversity and ecological complexity of the island.

IV. Vegetation Dynamics and Challenges:

Seasonal Variations: The composition and density of vegetation on Karang Island can vary seasonally. During the monsoon season, the abundant rainfall promotes lush growth, while the dry winter months can stress the vegetation.

Human Impact: The local community's reliance on the island for resources such as fuel, fodder, and agricultural land can impact the vegetation. Overharvesting and unsustainable practices can lead to degradation of the plant cover.

2.6 Transport and Communication

Karang Island can be accessed via boat from various point around Loktak , with the most common access points being from Thanga and Moirang. These towns are connected by road to Imphal, making it possible for visitors to reach the island by a combination of road and boat travel. The fare of boat per person in a single route is Rs 20.



Boats at its Parking

CHAPTER - 3

SOCIAL CHARACTERISTICS

3.1 Introduction

Social characteristics of a population or region include factors such as age distribution, gender composition, education levels, household types, and cultural diversity. These characteristics shape the social dynamics and quality of life within a community, influencing access to education, employment opportunities, healthcare services, and social cohesion. Understanding these social attributes is crucial for policymakers and organizations as it provides critical insights into the population's size, age, gender, and socioeconomic characteristics, informing policy-making, resource allocation, and economic planning. These can help in designing effective social programs, promote inclusivity, and foster community development. Some social characteristics included in the study includes demographics, education and health issues.

3.2 Demographics

The demographics of a region encompass various statistical data about its population, including size, density, age structure, gender composition, ethnic makeup, education levels, economic status, health indicators, and migration patterns. For instance, a region with a large, youthful population and high literacy rates is likely to experience dynamic economic growth and innovation. Conversely, areas with aging populations or large dependent population may face challenges related to labour shortages and increased healthcare demands.

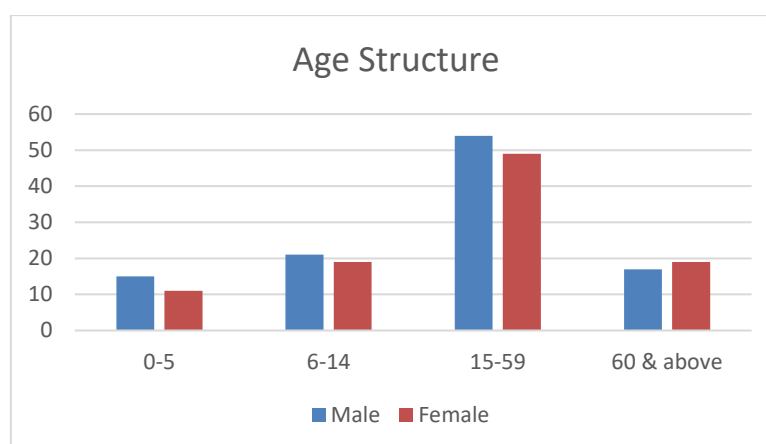


The study includes age structure, dependent population, sex ratio, migration if any. Dependent population is categorised as those below 5 years of population and above 60 years of population.

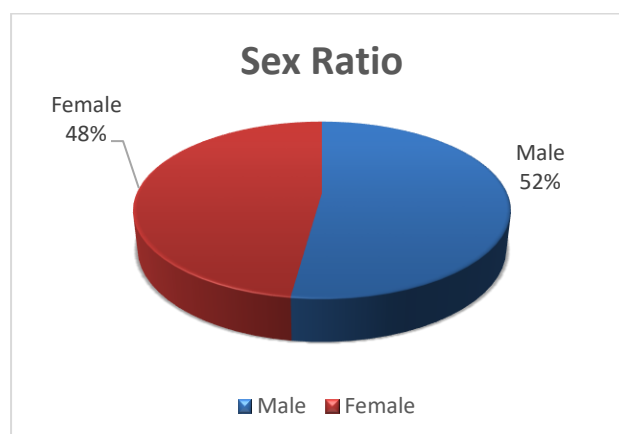
Age structure

A total of 50 households were surveyed. The age structure is as follows.

Age & Sex	0-5 years	6– 14 years	15 – 59 years	60 & above years	Total
Male	15	21	54	17	107
Female	11	19	49	19	98
Total	26	40	103	36	205



Sex ratio



3.3 Education

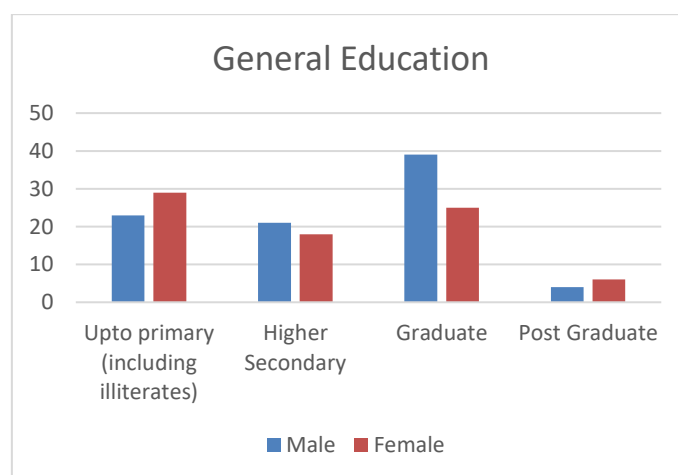
The educational levels of a population/region are crucial as it directly impacts economic growth, employment rates, and social development. Higher educational attainment is associated with a more skilled workforce, increased productivity, and better health outcomes. It also influences income levels and social mobility, shaping the overall quality of life. By analysing educational data, policymakers and educators can identify gaps, allocate resources effectively, and implement strategies to improve access to quality education and lifelong learning opportunities for all.

In Karang island, there is a primary school. For higher secondary and higher education, they depend on outside the village such as in Thanga, Moirang or other areas.

General education (age 7 years and above)

Since literacy rate is defined in India as persons above 7 years of age who can read, write and understand a simple message in any language, we have considered people with age above 7 years in studying the levels of education.

Levels of education	Male	Female	Total
Upto Primary (including illiterates)	23	29	52
Higher Secondary	21	18	39
Graduate	39	25	64
Post-Graduate	4	6	10
Total	87	78	165



Professional education

Professional degree	Male	Female	Total
Medical Graduate	6	2	8
Engineering Graduate	2	2	4
Others	1	0	1

As it can be seen from the above table, there are students who have or are pursuing professional educations in different fields, mostly on medical science and engineering.

3.4 Health

Examining the health issues and healthcare facilities of a region is vital for assessing the population's well-being and planning effective health interventions. Evaluating healthcare facilities, including the availability and quality of hospitals, clinics, and medical personnel, helps identify gaps in service delivery.

There is a government-run primary health centre in the island. Healthcare facility is a major concern here. As many a 90% of the households complaint of inadequacy and difficulty in accessing healthcare facilities.

CHAPTER - 4

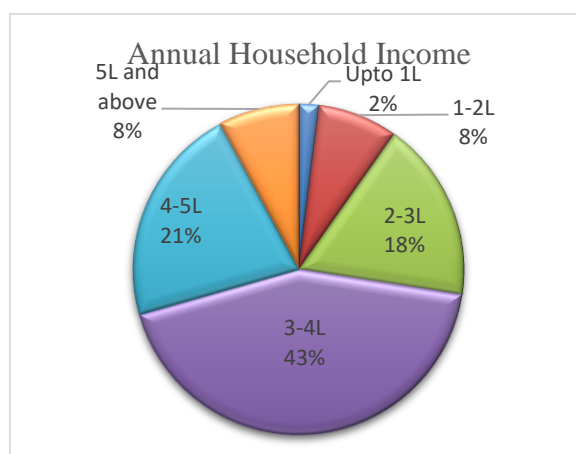
ECONOMIC CHARACTERISTICS

4.1 Income

Household income levels reveal disparities in wealth distribution, influence living standards, and affect access to essential services such as education, healthcare, and housing. Income plays a crucial role in determining living standards, as it directly affects individuals' and households' ability to meet their basic needs and enjoy a higher quality of life. Higher income levels enable access to better housing, nutrition, healthcare, and education, which are essential components of a decent living standard. Additionally, sufficient income provides financial security, reduces stress, and allows for discretionary spending on leisure and personal development. Conversely, low income can lead to poverty, limited opportunities, and poor health outcomes, highlighting the importance of income in achieving and maintaining a good quality of life.

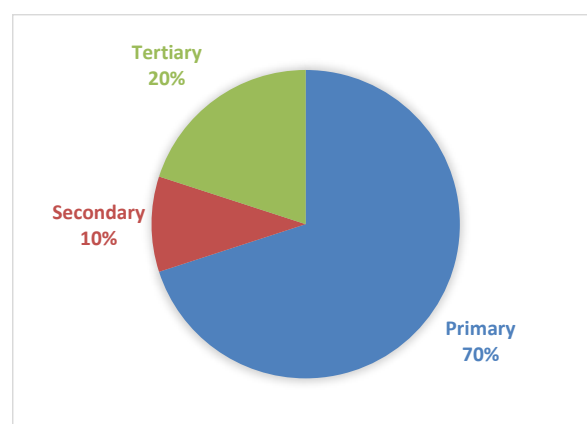
Annual Household Income (from all sources)

Income levels	No. of households
Upto 1 Lakh	1
1-2 Lakh	4
2-3 Lakh	8
3-4 Lakh	22
4-5 Lakh	11
5 Lakh and above	4



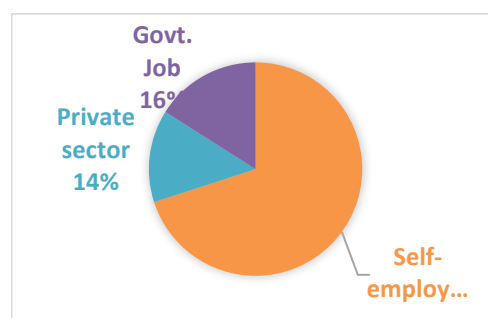
Sources of income

Sl. No.	Main sources of Income	Number of families
1	Primary (Agriculture and allied sectors)	35
2	Secondary (Manufacturing)	5
3	Tertiary (Services)	10



4.2 Employment and occupational structure

Sl. No.	Type of employment	No. of families
1	Self-employment including agriculture	35
2	Private sector	7
3	Govt. job	8



Employment and the occupational structure are pivotal elements in analysing the socio-economic aspects of a population. The distribution of employment across various sectors reflects the economy's health and its ability to generate opportunities. Understanding the occupational structure provides insights into skill levels, income distribution, and social mobility within the population. For instance, a diverse occupational landscape with opportunities in both skilled and unskilled sectors indicate a more resilient economy and greater employment prospects. Analysing employment trends helps policymakers address issues such as unemployment, underemployment, and skills gaps, ensuring inclusive growth and socio-economic stability.

4.3 Household assets

These assets encompass a range of possessions, including real estate, savings, investments, and valuable belongings. Understanding the distribution and nature of family assets provides insights into wealth inequality, intergenerational mobility, and access to resources. Families with substantial assets are better equipped to withstand economic shocks, invest in education and healthcare, and secure their future. Conversely, those with limited assets may face financial insecurity, barriers to upward mobility, and challenges in accessing essential services.



A handloom

Agriculture assets stand out as a crucial component, particularly in regions where agriculture plays a significant role in the economy. These assets include land, livestock, machinery, and crops, representing not just a source of income but also cultural heritage and livelihood security for many families.

Sl. No.	Assets	No. of households
1	Residential house	50
2	Cultivable land	15
3	Domestic animals/poultry	19
4	Agricultural tools	18
5	Car	6
6	Two-wheeler	15
7	Boat	38

The above table shows the various types of assets the households own. All the households have residential houses. Since many of them depend on agriculture and allied activities which are mostly self-employed, many houses own cultivable land, domestic animals or poultry and boat. Some of the households also own personal transport vehicles.

CHAPTER - 5

RESULTS AND DISCUSSION

The social and economic aspects of the Karang island were analysed using primary and secondary data. Within social aspects, the main parameters analysed includes demographic, education and health while the economic aspects includes income, employment and occupational structure and family assets.

Population

Each age structure between males and females were more or less the same. Age group of 15-59 years accounted for the majority of the population occupying more than 50%. This indicated that the population is mostly in the working age. This means that the island has a huge potential for growth and development by providing necessary education, skills and good healthcare. So, the major focus should be on the education and health of the inhabitants.

Education

The inhabitants have attained graduate level education by nearly 40% of the population as decoded from the sample. The proportion of post-graduate people is very minimal. The good thing is the high proportion of students in the primary stage which indicates the provision of education at the grassroot level. However, we should also acknowledge that this data also includes the illiterate people.

With respect to professional education, some students are pursuing medical science and engineering degrees.

Health

As many a 90% of the households complaint of inadequacy and difficulty in accessing healthcare facilities as just one primary healthcare centre operates there and the people depend outside the village for other healthcare facilities.

Income

Majority of the households belong to the income group of 3-4L annual income from all sources. There are significant number of households belonging to the income group of 4-5L as well as in the 2-3L.

Employment and occupational structure

70% people are self-employed which are mostly in the agriculture and allied activities such as fishing, animal husbandry and poultry. The people mostly depend on the tourists coming to the village. The village being the only island in Manipur is a major tourist attraction in Manipur with people coming from all parts of the state. Also, being a part of the Loktak lake is a bonus for the village as Loktak also attracts a lot of tourists.

Significant proportion of households also depend on government job (16%) and on private sector (14%).

Family assets

With respect to family assets owned by the household, all the households have a residential house of their own. Most of the houses own a boat as it is a major requirement in the village. They also own domestic animal/poultry as well as cultivable land. Some of the households own transport vehicles also.

Recommendations

1. *Education:* Providing adequate education, skills and healthcare focusing on the working population. Proper functioning of the primary school in the village.
2. *Vocational training:* Vocational training should be provided in food processing with a focus on fishing and allied activities. This can harness the opportunities provide by the Loktak lake.
3. *Healthcare:* Improving access to healthcare facilities should be the topmost priority as the people faces severe inadequate healthcare access. Primary health centre should function 24 by 7 with proper man power.
4. *Transportation:* Improved transportation is a necessity within the village as well as with the village to the outside area. Adequate boating facilities should be there to ensure proper transportation facilities to the residents of the village.
5. *Employment and Economic Opportunities:* Infrastructure development is much needed to ensure direct and indirect employment opportunities. Economic diversification is also necessary based on feasibility in the village to create a more resilient economy.
6. *Environmental Sustainability:* The village is environmentally sensitive and is prone to ecological impacts. Keeping this in mind, we should develop environmentally sound policies in a sustainable manner. Transportation and economic facilities should be developed in a sustainable manner.

Implementing these recommendations requires coordinated efforts from governments, non-governmental organizations and local community. Government should take proactive steps in consultation with the local people and community leaders.

Conclusion

The current study brings out the challenges facing the people of Karang islands and also the potentials the people of the island have. As indicated above, the people are facing severe issue of healthcare facilities and transportation problems while other socio-economic factors are fairly optimum. For example, the population has a huge chunk of working population, if provide with adequate education, skill and healthcare opportunities will be a huge growth factor in the village. Government needs to look into this potential. The local people in consultation with their government representatives should look into their existing issues of livelihood and look for sustainable solutions without overlooking the fact that the island is ecologically sensitive.

References

- Conger, R. D., & Donnellan, M. B. (2007). An Interactionist Perspective on the Socioeconomic Context of Human Development. *ANNUAL REVIEW OF PSYCHOLOGY*, 58.
- Gogoi, K., Hazarika, P. J., Chanu, N. S., & Hazarika, J. (2017). A study on status of family planning practices and its association with socio-economic and demographic factors in Manipur, India. *International Journal of Statistics and Systems*, 12(3). <https://www.arccoalition.org/wp-content/uploads/2019/08/Status-of-Family-Planning-practices-and-its-association-with-Socio-economic-and-demographic-factors-in-Manipur.pdf>
- Haobijam, V., & Maity, S. (2014). Socio-economic status of Manipuri women. *International Journal of Education Economics and Development*, 5(3). <https://doi.org/10.1504/IJEED.2014.065287>
- Laishram, J. (2021). A study on the bioresources of the Loktak Lake, Manipur (India) for livelihood by the people living in five villages located in and around the Lake. *Current World Environment*, 16(3), 928–941. <https://doi.org/10.12944/cwe.16.3.23>
- Rathod, G. R., & Ningshen, A. (2012). MEASURING THE SOCIOECONOMIC STATUS OF URBAN BELOW POVERTY LINE FAMILIES IN IMPHAL CITY, MANIPUR: A LIVELIHOODS STUDY. *International Journal of Marketing, Financial Services & Management Research*, 1(12).
- Singh, S. J., & Devi, H. P. (2006). A study of water-borne morbidities of Thanga village, Manipur. *Journal of Human Ecology*, 19(2), 103–105. <https://doi.org/10.1080/09709274.2006.11905863>
- Sophia Devi, S., & Moirangleima, K. (2023). Fishing techniques used by the fisherwomen of Loktak Lake manipur. *International Journal of Science and Research (IJSR)*, 12(11), 835–839. <https://doi.org/10.21275/sr231111204202>
- Zimik, A. S. S. (2023). Assessment on the Socio-Economic Status of Manipur: A Study base on Economic Perspectives. *World Academic Journal of Management*, 11(2).

Appendix

QUESTIONNAIRE ON SOCIO-ECONOMIC SURVEY AT KARANG ISLAND, LOKTAK

1. Name of the village:
2. Sub-Division /Block/District:
3. Name of nearest largest town:
4. Name of the Head of the Family:
5. Caste/Tribe /Religion:
6. Total number of Family member:
7. Age structure of the family members:

Age & Sex	0-5 years	6 – 14 years	15 – 59 years	60 & above years	Total
Male					
Female					
Total					

8. Educational Status of each Family:

Levels of education	Male	Female	Total
Upto Primary (including illiterates)			
Higher Secondary			
Graduate			
Post-Graduate			
Total			

Professional degree	Male	Female	Total
Medical Graduate			
Engineering Graduate			
Others			

9. Details of Educational Institutions in the village:
10. Income levels:

Income levels	No. of households
Upto 1 Lakh	
1-2 Lakh	
2-3 Lakh	
3-4 Lakh	
4-5 Lakh	
5 Lakh and above	

Sl. No.	Main sources of Income	Number of families
1	Primary (Agriculture and allied sectors)	
2	Secondary (Manufacturing)	
3	Tertiary (Services)	

11. Occupational Structure:

Sl. No.	Type of employment	No. of families
1	Self-employment including agriculture	
2	Private sector	
3	Govt. job	

12. Healthcare facilities in the village:

13. Family Assets:

Sl. No.	Assets	No. of households
1	Residential house	
2	Cultivable land	
3	Domestic animals/poultry	
4	Agricultural tools	
5	Car	
6	Two-wheeler	
7	Boat	