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A Study on Housing and Environmental Quality of a Town Neharunagara

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***Abstract:** This paper investigates the effect of urban laze on housing quality and environmental quality of Neharunagara in Mandya district of Karnataka state to determine urban planning efforts. Data were collected with the help of observation, photo snaps, and questionnaires. Interviews, surveys were employed to resolve the objectives set for the study. Findings disclose the socio-economic characteristics of residents and its effects on physical environment of the area. It shows the amount of poor roads, congestion, poor buildings, inefficiency of infrastructure, public services and poor maintenance culture of residents. The paper suggests effective and timely regional planning through economic development and spatial integration to decongest so as to achieve long term environmental sustainability in the area. It promotes extensive urban renewal program through the provision of urban basic services in the area, which will supported with improved sanitation strategies for sustainable management of the area.*

I. INTRODUCTION

The modern age is becoming an age of urbanization, which means villages are growing fast into towns and towns into cities. Therefore it is necessary to know the rates, impact of the strategies for exploitation and conservation of resources, especially for lands. Many of the peripheral areas in and around the urban centres are assuming some characteristics associated with urban settlement. Therefore the difference between the urban centres and peripheral areas has become frontier that the Town planners, geographers believe that no effort should be made to differentiate it. Fast and speedy urbanization utilize strong impact on the peripheral areas in emerge of continuous urbanization and modernization with the increased demands for land, housing, physical infrastructural development, transportation, etc can significantly changes in the peripheral settlements/towns. These attributed changes are a result of improvement of infrastructural facilities and also connected with socio economic development. These play crucial roles in organization and change in the peripheral areas near the urban centres. Generally, urbanization processes introduces complete changes in the most of peripheral areas, for example villages are located near semi-urbanized settlements. In these areas, the modern buildings are intermixed with tradition ones and modern infrastructure are set down in place which brings changes in the way of life of the people, changes in occupation. So, these areas may be characterized as the rural-urban frill and described as interpenetration zones of urban and rural environment.

Neharunagara is a town in Mandya district of Karnataka state, which is becoming gradually an urban centre with the influence of urban expansion from the core to the peripheral areas. This research is meant to highlight the various impact of urbanization on the peripheral zone of the study area. Urbanization in Karnataka state is bounded with variety of problems which include high land value, pollution, poor housing planning and scattered developments etc. These problems lead to environmental problems such as flooding, soil erosion and general environmental degration. However, the study focuses on these problems in turn they are related to growth process of Neharunagara as a peri-urban neighbourhood in Mandya district. Therefore to investigate the housing condition and environmental quality of the town and also consequential effects on the residents.

II. ISSUES AND LITERATURE APPRAISAL

Earle Draper in 1937 developed the concept of ‘sprawl’ in the United States of America (Osborn, 1965), the term sprawl used by city planners to refer as wasteful type of urban growth (Black, 1996). Urban sprawl is an uncontrolled development, an increasingly common feature of the built environment in both the developed and developing countries of the world. Rapid urbanization especially the growth of cities which is associated with problems like poverty, unemployment, poor sanitation, inadequate health facilities, urban slums and environmental degradation constitute a intimidating challenge in many developing countries.

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The proportion of the world's population living in urban areas, which was less than 5% in 1800 and increased to 47% in 2000 and it is now expected to reach 65% in 2030 (UN, 1991). However in developing countries, more than 90% of future population growth will be concentrated in cities. In Asia urbanization is still much (about 41%) and is expected to be 54% urban by 2025 (UN-Habitat, 1995 and 2002). However urbanization is the driving force for economic growth, development and modernization, there is increasing treat on expanding cities mainly on livelihoods, human health and the environment. The question arises that whether the current trend in urban growth is sustainably considering the urban challenges such as slum development, poverty unemployment and environmental degradation, especially in developing countries.

In most other developing countries is experiencing unlprecedented rates of urban growth. In 1982 census, the population of about 1,00,000 in mandya district. This rose to some 19.6% in 1994 and it is been estimated that by the year 2020 more than 56% mandya people will be living under urban condition.

The physical growth of Neharunagara is an example of urban expansion in mandya which leads to demand for peripheral land space for development. There are four main characteristics of sprawl according to Gillham and Maclean (2002). These characteristics are commercial strip development, low density, leapfrog or scattered development and large expanses of single-use development. Leapfrog and scattered development go beyond the urban fringe and create built-up communities that are isolated from the city areas of undeveloped land. Therefore, these can be seen as the examples of urban sprawl with a highly inefficient use of the land, and considerable need to build highways and other infrastructure to service the outlying areas.

Clark (1975) in his book, identify three components of urban growth which includes the extension of built-up neighbourhood into the peripheral areas, the natural increase in population, net immigration leads to the extension of urban areas by centrifugal growth that swallow up the peripheral areas. Natural increase in population is overlooked factor in urban growth and expansion which makes demand for available peripheral space for development outside the city centre. Mandya settlement is gradually experiencing centrifugal expansion from the core of the city to the peripheral settlings. The urbanization growth from the core provides useful outline of that urbanization involves more than increase in number of people living and working in town and cities. It is operated by a series of interrelated processes of change in economic, demographic, political, cultural, environmental, social and technological issues. It is also modified by local factors such as natural resources, topography which causes changes in social ecology, nature of urbanism in the built environment and pattern of land use.

III. SETTING OF THE STUDY AND METHOD

The increase in urbanization in Mandya is allocated to the provision on better economic opportunities due to setting up of industries and factories. This has led to migration of population from rural regions to the city. Therefore as a result, people spread to the peripheral areas of the urban fringes. This spread will not be planned properly. It looks haphazard of the causing a lot of health and environmental disturbances to the community. The most of the land use in Neharunagara is purely residential. And however, few pieces of land were found scattered around the area and crops are cultivated as secondary means of livelihood for the residence.

There are some educational institutions in the study area, light industries are found like local food processing industries in the study area. Commercial activities take place along the major route like markets where farm products are sold, which attracts people to the area.

Collection of data for this study was essentially through questionnaires, field photograph, personal interviews and observation. Other sources include text books, journals, internet facilities, government ministries and establishments. The questionnaires were administered on 130 respondents and 10% sample of the total population of the study area. The collection of data was analyzed and results were finally presented in form of tables, photographs and charts.

RESEARCH DETECTIONS AND DISCUSSION

Research Discovered in this study are discussed under different types as follows;

A. Socio-Economic characteristics of Respondents:

1) Sex, Age and Marital status of Respondents

From Table-1 below, majority of the residents are married. This implies that there could be high natural growth rate o f the population because majority of the inhabitants are still active in procreating.

VARIABLE	PERCENTAGE

Age Distribution	
18-25 years	41
26-35 years	20
35-45 years	34
46-65 years	05
Total	100
Sex Distribution	
Male	59
Female	41
Total	100
Marital status	
Single	38
Married	62
Total	100

Table-1: Age, Sex and Marital status of Respondents.
Source: Field survey

2) Indices of Poor Environmental Quality of Neharunagara

The survey carried out revealed neharunagara as a typical slum community with following allocates:

- *Inadequate Basic services*

Survey shows that Neharunagara lack basic services that are essential to sustainable healthy environment. These services include electricity supply, sanitation facilities, improved surface road conditions, safe source of water and dominance footpaths in the neighbourhood.

- *Substandard Housing and unsafe Structures*

There is high number of substandard buildings constructed with low quality and non-permanent materials such as iron sheet, mud blocks, strips of timber, etc which is unsuitable for urban housing as shown in fig----. Various space and dwelling placement bylaws are violated in leapfrog pattern of development in the study area.

- *Overcrowding and congestion*

Overcrowding in the study area is as a result of low space per person, high occupancy rates and a high number of single room units. In the study area the dwelling units are overcrowded with four or more persons sharing a room or one room unit used for multiple purposes like sleeping, cooking, as well used as living room. Cheap housing which attracts people into the area. This is because there are cheaper lands and housing in the suburbs as compared as obtained in urban centres. Household accommodation cost very high in urban centres as compared to those in the dormitory area, owing to rise in land value which makes purchase. This has attracted many to settle in this area. Also, from observation and personal interviews, it is evident that migrants came into this area because of the fact that they were herdsmen. This was as a result of the presence of rich in agricultural Environment from which animal can feed sufficiently.

B. Unhealthy Living conditions and Hazardous Locations

These are associated with water pollution, air pollution, poor ventilation and overcrowding. In the study area, unhealthy living conditions connected with the lack of basic services lined with visible open sewers, uncontrolled dumping of wastes and polluted environments. Houses are built on hazardous locations like lands which are unsuitable for settlement. The layout of the settlement is hazardous because of lack of airspace/open space and lack of access ways to buildings around buildings.

C. Insecure Tenure, Irregular or Informal settlements

There is existence of squatter settlements, which means it is a typical slum area. Informal/unplanned settlements were identified in the study area. Many definitions highlight both informality of occupation and the noncompliance of the settlements, but they lack land use plans and structurally different with planning standard.

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D. Poverty and Social Exclusion

Income and standard of living of residents are very low in the study area and hence they are characterized with high poverty rate. This constitutes obstacle for residents to improve their physical environment. Thus the environment deteriorates and encourages slum development.

E. Condition of Housing and Infrastructural Facilities

Housing condition

The quality of housing is very low in the study area as shown in table---- due to poor quality of building materials used for construction, poor planning standard in handling the building components and inadequate technology.

Materials used for construction
(1) Walling – sun dried blocks Mud Timber Cement blocks
(2) Roofing – Aluminium roofing Zinc/corrugated iron sheer
Physical condition – good condition, fair condition, poor condition & Dilapidated

Table : Building characteristics in the study area
Source: Field survey 2018

F. Condition of infrastructural facilities

Source of water supply

Findings shows that water get from bore hole and kaveri water alternative day for limited time only. Therefore it can be concluded that kaveri water is the main source of water supply in the environment. This situation does not guarantee frequent supply of water in the area and does not guarantee adequate supply of quantity water in the area. Areas where there is a bore holes, they are not functioning. The rain water used as substitute during rainy season and has the possibility of being contaminated because of the roofing sheets are rust and dirty.

G. Toilet and Bathroom facilities

Majority of the area use pit latrine (67%) in their homes and only few of them use water closet (about 33%). Fig ‘a’ & ‘b’ shows a typical example of this primitive method used for faecal waste disposal, septic tank of most of the WC system and types of bathroom facility predominantly use in the area.

H. Source of Electricity supply

Over 50% of respondents responded that they are facing poor interminable supply of electricity to the area. Alternate source used as generator or housing lamp.

I. Condition of Drainages

Investigation on drainage condition reveals that 40% is in a very poor condition, 35% is in a poor condition and the remaining 25% is in average condition. This implies that the condition of drainage system in the environment is generally very poor.

J. Method of Waste Disposal

Majority of respondents dispose their wastes in open space/dump site. The modern system of waste disposal by the waste Management Authority is yet to be cuddle in the area.

K. Health and educational facilities

There is a basic health centre in this community being a local government headquarters and there are other available privately owned health institutions like maternity homes and clinics, but lack essential facilities and poorly staffed. Educational facilities too in the area are primary, secondary schools and Government College.

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L. Condition of Access Roads

Road accesses to buildings in the area are mainly through footpath and few access their building by road as revealed by respondents. The conditions of these roads are in depressed state as majority of them are not motor able.

IV. RECOMMENDATIONS

The survey carried out that the deterioration of physical conditions of Neharunagara are largely related to lack of both technical and social facilities, deterioration of building quality, security of tenure and overcrowding. Therefore it is vitally important to put up some policy recommendations that are necessary for the improvement of the study area. Such policies can be classified into two categories, which are short and long term policies. The short-term policy relates to various developmental programmes for upgrading the physical environment of any pathetic area. The aim of this policy is to provide decent and healthy environment and adequate housing units for dwellers of degraded neighbourhood. This involves total rehabilitation, renovation and redevelopment approaches. The Long-term focused on methods to prevent slum formation and development. Issues related to urban employment generation, the quality of life and urban environment cannot be improved in Mandya cities without increasing employment opportunities for urban dwellers. Other issue includes reduction in urban rate of population growth as a way to reduce overcrowding.

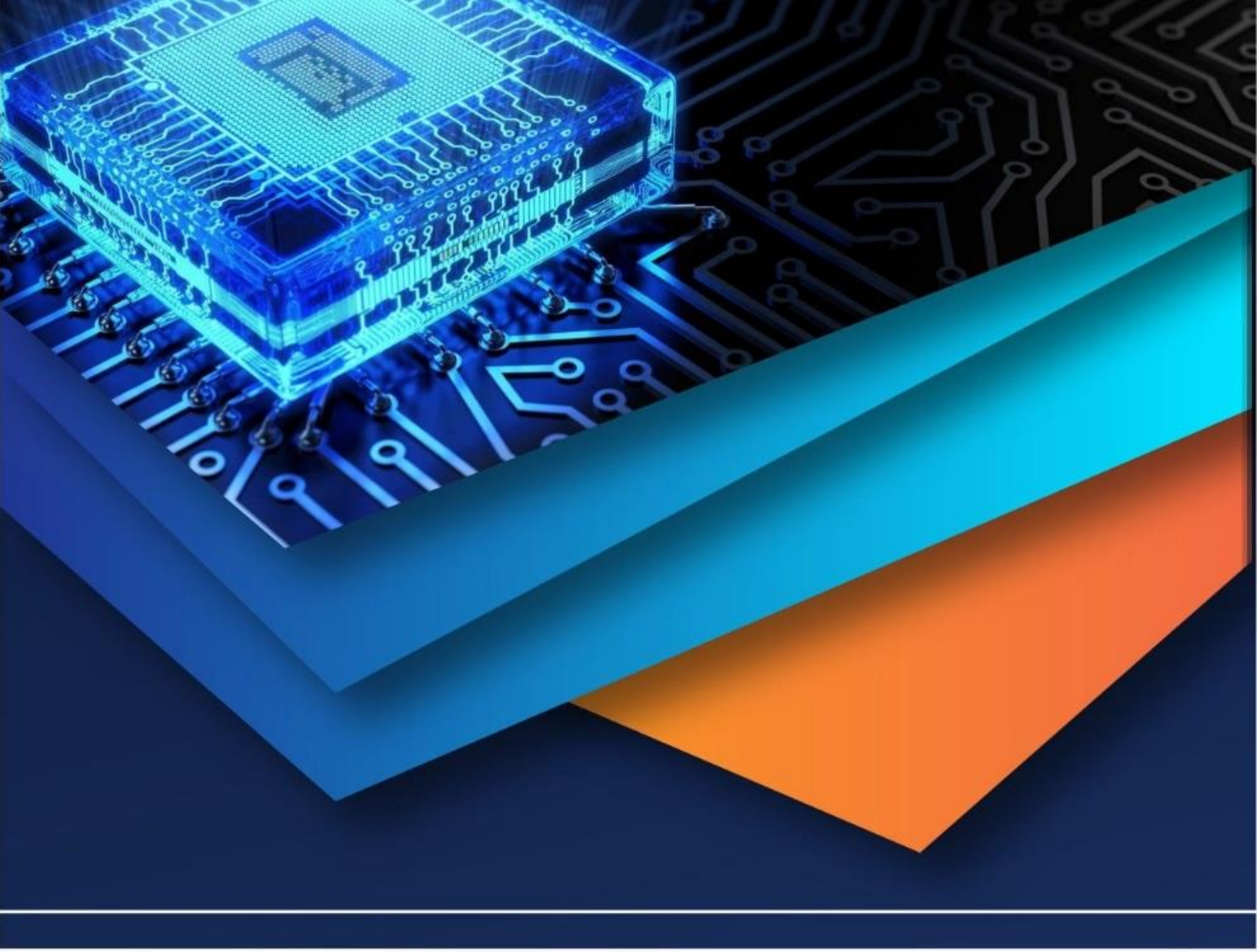
After due consideration of the characteristics and potentials including source of funds to undertake project in the study area, upgrading programme through renovation/rehabilitation approach, provision of employment generation and urban basic services are considered suitable for the area. This has to do with more effective of the affected parts of the area by retaining those structures that are retainable, upgrading the roads particularly the untarred ones, rehabilitating some old buildings and structures and opening up the ruined areas. It also involves providing new infrastructural facilities as well as improving the existing ones with a view to improving the structural quality and aesthetics of the environment. However the aspect of job provision cannot be neglected and Government should make efforts to create jobs for the unemployed through development of local industries or establishment of new ones like bakery, laundry, block making industries etc. besides, access to loans should be granted. This has the potential of revitalizing their economic base and re-orienting the people which believes them privileges to meet their basic needs and invest in the improvement of their dwellings.

The study on urban development, effective and enforceable environmental policies may be difficult to develop and implement in many countries, but this will be feasible solution if a country must be environmentally secured. Besides, residents of such area should be educated through awareness campaign program where they get familiarize with the benefits of healthy environments. Since poverty has the tendency to breed such activities which leads to formation of slum and growth, the ongoing minimum increase of wage is therefore recommended to be extended to all, so as to reduce the high rate of poverty that destroys the inhabitants of the area.

REFERENCES

[1] Onibokun, A.G. and Kumuyi, A.S. (1996): Urban Poverty in Nigeria: Towards Sustainable Strategies for its Alleviation; Centre for African Settlement Studies and Development (CASSAD).
[2] Onokerhoraye, A.G. and Omuta, G.E.D. (2000): Urban Systems and Planning; The Geography and Planning Series, University of Benin, Nigeria.
[3] Osborn, F.J. (1965): Preface in Garden Cities of Tomorrow; Cambridge Mass Press.
[4] Owoeye, J.O. (2006): Analysis of Slum Formation and its Associated Effects on a Residential Core Area of Akure – M. Tech. Thesis submitted to the Department of Urban and Regional Planning, Federal University of Technology, Akure.
[5] UN-Habitat (2002): Urbanization and Sustainable Development in the Third World: An Unrecognized Global Issue; UN- Habitat Centre for Human Settlement, Nairobi.
[6] United Nations Development Programme (1995): Human Development Report 1995; Oxford University Press.
[7] Areola, O. (1994): The Spatial growth of Ibadan city and its Impact on rural Hinterland in M.O. Filani, et al (Edited); Rex Charles Publication, Ibadan.
[8] Black, J. T. (1996): The Economics of Sprawl; Urban Land; 55(3), 52-53.
[9] Gilham, O. and Maclean, A. S. (2002): The Limitless City: A Primer on the Urban Sprawl Debate; Island Press, Washington DC.
[10] Mannion A. M. (1997): Global Environmental Change: A Natural and Cultural Environmental History; Longman Publication, Ibadan.

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