

Regional Development Potentials of Inland Watercourse Settlements in Nigeria State

¹Ugwu Lucy Nkeiruka, PhD, ²Ugwoke Hillary Ugochukwu, MSc. URP, ³Ubani Princewill MSC.URP

¹Department of Urban and Regional Planning, Faculty of Environmental Sciences, Enugu State University of Science and Technology (ESUT), Nigeria

²Department of Urban and Regional Planning, Faculty of Environmental Technology, Federal University of Technology, Owerri Imo State, Nigeria

³Department of Urban and Regional Planning, School of Environmental Technology, Ken Saro - Wiwa Polytechnic Bori, Rivers State Nigeria

Corresponding Author: Ugwu Lucy Nkeiruka

Abstract: The regional development potentials of major inland watercourses have thoughtful and positive effect on the destination towns, communities and surroundings, as it activates physical, economic and social changes. The study x-rays the regional development potentials of major towns situated on lengthways of inland watercourse in Rivers State Nigeria. The objectives of this study was to evaluate the regional potentials of the towns, environmental conditions, facilities and challenges confronting it, identified the host communities and access how residents perceived the development. The research method includes in-depth fieldwork, observation, questionnaire, interviews and collation of field data. Descriptive and inferential statistics were used to analyse data collected for the study. The result of the study shows that towns situated sideways of inland waterways have transportation, recreation, tourism, agriculture and commercial development potentials. However, it was observed that 85.2 % of the residents perceived that the potentials nature deposited can develop such areas with the aid of technical planning. As 8.8 % maintained that adequate spatial development and control will not be achieved through regional potentials while 6.2% opined that the potentials of the region would not develop the areas at all. Also the study identified that lack of physical planning and facilities provisions, nature of environmental terrain, massive migration, unutilized resources and communal conflict/ insecurity are the challenges confronting the regional development of major towns located along inland waterways via potentials. The study recommended that government and the stakeholders must provide an enabling physical planed environment to enhance investment on the regional development possibilities of inland waterways towns and cities and apparent development of these towns will generate positive socio-economic impacts on the destination towns and surrounding communities.

Keywords: Development, Potentials, Towns, Inland Waterway and Nigeria

1. INTRODUCTION

The regional and sub-regional development possibilities of towns and settlements situated within the domain of inland watercourses has become a main focus for economic and social stability globally and particularly in developing countries where attention is being engaged to benefit the local economy and resolve regional development disparities. In assessment of this, it is important that regional potentials for urban communities positioned along inland canals are develop sustainably by means of providing all the sensitive and essential infrastructures that are unavailable or absent, which will collectively enhance the potential development experience of the regions (Researchers Survey 2022). For the actualisation of hurried regional development possibilities in major towns and settlements situated all over the inland waterway domains of Nigeria, the government, residents, environmental stakeholders and nongovernmental organisations must emerge to apply the technical planning processes and spread social, economic and environmental development scientifically for the destination or residents benefits. However, rivers state as a region in Nigeria is endowed with undeveloped towns and settlements scattered and situated on the sea sideways, rivers and stream terminuses were residents still felt that relevant authorities never cares about their general wellbeing or development possibilities (Researchers survey 2022).

The less attention emanating from the three recognised tiers of government in Nigeria towards the development of major towns situated within the domain of river and sea sideways through regional potentials has been a serious challenge to the entire country. Such developmental refusal is responsible for holistic absence of physical planning and provision of facilities, rural –urban migration, underutilization of natural resources, insecurity and communal conflict which the area experience and its residents are negatively affected [4]. This study aims at evaluating the regional development potentials of towns and cities situated on sea and river sideways domains. The investigation is essential especially when it focused on the development potential of waterway regions and shows the quest or hanger for such trend. The analysis gave much concern on the regional potentials of the area with a view of ascertaining the truth about the marginalization of smaller and larger towns found in coastal hemisphere. Meanwhile, to achieve the success, two objectives were outlined; to identify the regional potentials of the study area and examine the possibilities for regional development.

2. INFRASTRUCTURE, FACILITIES AND RESOURCES OF THE INLAND WATERCOURSE SETTLEMENTS

At these coastal settlements, old and modern infrastructural facilities which could interest or attract necessary land use activities are not in existence while old ones such as jetties are engulfed by dilapidation. The majority of the available houses located in the waterway communities are built on informal basis while those that portray little characteristic of modern are on fairly good condition and lack architectural design and ancillary facilities. However, the spatial ordering and scientific spread of land uses (agriculture, transportation commercial, industrial, institution and residential) to achieve regional development through available potential and town planning process are inattentive. Furthermore, the natural economic condition of the area anchored on trees such as mahogany, melena, iroko, palm tree and others. The animals common found in the undeveloped region are lion, leopard, eagle, bustard, cart, advert, elephant, buffalo, waterbuck, antelope, hartebeest, monkey, baboon, hunting dog are common in such region. It was revealed from the recreational, personal and other observations that the potentials for regional development of the area are not utilized and the problem of non-harnessing of these potentials or natural features continues to be worrisome in developing nations. Primary economic activities such lumbering, farming, hunting, fishing, and active sand mining on manual basis constitute the means of livelihood in the area endowed with dissimilar potentials.

3. PROMOTION AND POSSIBILITIES OF DEVELOPING INLAND WATERWAY SETTLEMENTS

By and large, town locate along the waterways are sometimes preferred; owed partially to the fact that water bodies are endowed with many resources and enhance more competent and reliable regional development than land. A waterway serves as critical transportation prospect for movement of people, goods, services and basis for social and economic prosperity in developing nations were critical avenues for local and regional commerce are important. Towns located in waterways are good for agriculture while produced within inland farms is conveyed through inland waterways to coastal ports and surrounding towns. However, the regional development and promotion of recreation in towns found along waterways motivate picnics activities, baptisms of religious members, and swimming enhance economic growth. Again, complete implementation of tourism plan in towns located along inland waterway may equal enhance much revenues generation and regional development and without good marine transportation network, inland water towns serving as a tourism centre may not be actualized in developing countries [4].

4. INLAND WATERCOURSES AND REGIONAL DEVELOPMENT PROSPECTS FOR COASTAL SETTLEMENT

The regional development of towns and settlements situated on the lengthways of seas and rivers encourage physical, social and economic development all over the world. Regional development remains significant to economic advancement and reduction of disparities especially whenever it incorporates industrial, commercial, agriculture, residential, transportation, institutional and recreational development demand of the residents and improve their standard of existence. In developing countries of the globe, regional planning and development possibilities of watercourse environment donates all aspect of development especially creation of employment opportunities free enterprise. By the means linking watercourse settlements development with other surroundings, the facilitation of commercial and industrial actions through the aid of transportation communication and inspiration of recreation and tourism in the coastal settlement is achievable while the implications anchored on the point that development of inland watercourses may contribute to the nation building, generation and upgrading of internal revenue. The ideology could also support the constructions and building of quality environment that would withstand the atmospheric condition of the coastal settlements, since it is the individual way of achieving standard development for various land use of developing nations competing globally.

5. LITERATURE REVIEW

Previous works confirmed that there is little analysis and result about development of inland waterways regions based on potentials to which all organisations, researchers and scholars working on regional development reach an accord. Rather majority of the studies on the subject matter encompasses social, economic and environmental opinion. Among which is the empirical work of [7] revealed that the Pahang Muar Waterways has the possibilities of developing economic, recreational, tourism and industry activities to improve the socio-economic condition and gave chance for sustainable suppleness. The study whispered that Pahang Muar waterways deposit vast chances of social and economic development for the destination settlement. Whereas a particular planning geared at building the inland waterways must be initiated by the local planning system. Proposed feasibility studies on inland waterways across Malaysia in the area of technicality, environmental, social and economic development should be introduced. [4] look at the the number, names and features of the major water transportation routes; people's perception of the water bodies with respect to their value for transportation and recreation and types, ownership and management of watercraft employed for water transportation. The findings further detailed that riverfronts of the designated villages demonstrated the possibilities of serving as a recreation and tourist centres which may be an avenue for statutory money making venture and recommended about intermittent dredging and canalization of waterways for actual conveyance system and improvement of recreational activities and called on the state government to create for enough security along the waterways, the streams to improve water transportation and recreational activities in the areas. [9] Discovered four major difficulties impacted on inland waterways development and they include financial constraints, congestion at the jetties, insufficient jetty facility, and political influence which explained 92.02% of the variance. [2] revealed how many developing areas especially the oil-importing nations are seriously on strong-minded energies to enlarge and renovate all their local waterways transportation schemes, though inability to develop or generate general master plans for inland waterways led to piecemeal development source. However, pointed out great disparities in the significance of one country to another and such differences clarified the degree by terrestrial situations, on the other hand, non-remembering of the possible advantages to the countrywide parsimonies as well contributed immensely. [10] affirmed that Inland waterways have high probability in seaside

zones but the uncomplicated morphometric settles that the zone is pure riverine environment but lack the development and utilization of marine transportation. While the key challenges militating against inland waterways developments are financial restrictions, inadequate jetty facilities, political influence and government plans which never give way for individual to own jetty and un-dredged waterways. But the concluded beacons on the sturdier plans and the necessity to inspire private/public participation in waterway development failed in Nigeria. [5] applied natural resources in determination of inland water. Challenges and opportunities for sustainable development of south Africa, the objective of the study was to deposit before decision makers, national experts and technical advisers and opportunity to share their ideas and interchange opinions on the challenges and potentials for inland waterways development by given specific audience to the functions that inland waterways can perform on more sustainable practices of the regional natural resources. The article was built about inland waterway infrastructure, discovering of economic potentials of national and regional inland waterways classifications, funding plan for inland waterways development and the building blocks of a national and regional policy on inland waterway advancement and formal framework work. [11] Developed a base for appreciation about the current condition of irrigation potentials to develop a region and monitoring proximity of fields to waterways and characterizing their general state. Accordingly, some of the finished fields are in proximity with beach of an inland waterway couple with Finland as water endowed nation may advance adaptive capability to upgrade with the potentially harmful impacts of future climate variations. The findings aided as basic data required to evaluate unforeseen demands for introduction of irrigation and evaluate the opportunities to nearby vintage gap and improve vintage stability through irrigation. In Kochi city region [3] discovered conceptual framework within the effect of back water transport and tourism advancement. The work scrutinized the efficiency of black water transport and tourism advancement and discovers sustainable development of tourism through integrated inland water transport. [8] Observed significant connection for the provided inland transportation facilities/services and smooth socio-economic development in Calabar river. The experiment further discovered that advancement of the marine transportation segment of the hemisphere will attract affirmative impact in the facet of trade and commerce, employment, revenue and tourism provision etc. Their analysis summarised that government plans should concentrate on the real growth and upkeep of inland waterways and the reason behind private sector or community participation in promotion development, upkeep and bearable of inland water transportation. [5] noted that economic potentials of the Oder region on the framework of validity for resonant investment activities strategized by the government in respect of upgrading the scientific restrictions of Oder Waterway and the definitive adaptation for the directional course. [1] Deliberated on model for measuring the present potential of river tourist circulation in Russia, considering vast nature of the nation. Countless areas, lengthy waterways, natural and geographical characteristics of water basins including regional condition and development of tourist circulation in the regions were important.

6. Method and Procedure

In this study, two sources of data; namely primary and secondary sources, were exploited. However, the work targeted three groups, namely; the regional advancement through potentials, perception of residents, existing facilities, and reasons for development of inland waterways, acuity and regional development challenges. For the purpose of this research, a survey design (field survey) method was adopted. The collected data was subjected to analysis using both descriptive and inferential statistical methods. Thus the data was subsequently analysed by means of statistical package for social scientist (SPSS version 17). The total number of households after projection in the sample area was 7,227. A total of 259 households were sampled in riverine and creek towns/settlement to represent all the fourteen settlements located in waterways and the questionnaires were administered to the households in the study area. These towns were marine base, Abonema, Borikiri, Bundu, marine base, Eagle Island and Mgbuodaya with their corresponding population 2,754 (75 households), 2040 (69 households), 1,150 (55 households), 530 (35 households), 290 (10 households) and 463 (15 households), respectively. This figure represents 2.8 percent of the population of the household heads (Table.1).

Table: 1 Determined Data/ Consulted Population of Inland Watercourse Settlement

SN	Riverine/ Creek Towns	Population	Household	Sampled Household
1	Abonema River	68,591	2,754	75
2	Borikiri/ Bonny river	75,006	2040	69
3	Bundu River	31,623	1,150	55
4	Marine base creek	5,303	530	35
5	Eagle island creek	1,440	290	10
6	Mgbuodaya creek	3,725	463	15
TOTAL		185,688	7,227	259

Researchers survey 2022

7. RESULTS AND DISCUSSION

Regional Development Potentials for Inland Waterway Towns in Nigeria

The analytical measure established that among the regional development potentials of the towns and settlements of the study area, transportation system ranked first as it accounts for the highest percentage for development possibilities of a coastal or inland waterway settlement region at (34.8 %). As it may be deduced that majority of the residents interviewed believed that the

development of marine transportation will enhance the movement of goods and services and link their localities with other surroundings which could be national and international communities. Other activities or potentials considered to encourage or enhance development in the area are recreation and tourism rated at mathematical percentage value of (25.2%), industrial and agricultural potentials. For commercial potentials, about 9% recorded that communities found along inland waterways has the opportunities of developing as a result of agricultural and others resources available in the aquifer environs. This indicates that these potentials (transportation, tourism and recreational etc) can be of good, strong consideration and a prerequisite for development of coastal regions.

Table 2: Percentage and Variance for Regional Advancement through Potentials

SN	Development Potentials	Occurrence	Percentage	Ranking
1	Transportation	101	34.8	1
2	Recreation & Tourism	71	25.2	2
3	Industrial	22	11.1	3
4	Agriculture	56	19.3	4
5	Commercial	9	9.6	5
TOTAL		259	100.0	Ranked

Sources: authors Field observation 2022

Residents Perception about Development of Inland Waterways by Potentials

As spelt out and demonstrated by the analysis, 85.2 % of the residents strongly agreed that the potentials nature made available or deposited in the region can developed the area through technical planning and proper harnessing of those natural resources. 8.8 % agreed that it will not provide or encourage adequate spatial development and control while the remaining 6.2% of the residents opined that the potentials of the region would not develop the area at all. This implies that the area has the possibilities of becoming developed towns and cities through regional development but such development stride will take planning process and number of years, the reasons behind the scenario beacons on the fact that the area lacks the availabilities of basic infrastructure, amenities, facilities and also responsible for the absence of secondary and tertiary economic activities that triggered the rate of rural-urban influx the region of waterway communities are experiencing on daily basis.

Table: 3 Frequency and Acuity for Inland Watercourse Potential Development in Nigeria

SN	Status	Perception	Frequency	Percentage
1	Strongly Agreed	Adequate development	228	85.2%
2	Agreed	Inadequate development	22	8.8%
3	Disagreed	No development at all	9	6.2%
TOTAL			259	100.0

Source: Researchers survey 2022

Regional Development Challenges of Inland Waterway Hemisphere in Nigeria

The result of the survey shows that the host or major communities identified lack of physical planning and facilities as one of the prominent challenges, with 58.2 % apportioned the blame on the government that has geographical jurisdiction on physical development of inland waterway. Everyone give the impression and pronounce that most responsibilities on the waterways rest with the government. Besides, 13.8% of the residents were of the view that the developmental challenges of towns found along waterways emanated from environmental terrain nature made available in the areas. This presumed that the government failed to do much on the advancement of the place or perceived it as any of its responsibility to see to the potential development of towns and cities located along major waterway. In order words, proper attention on physical planning and development of waterway communities was not giving. About 11.5% of the population in the host communities confirmed that inland waterway towns and cities are not developed as a result of massive migration of the populace in search of white cola jobs in areas developed with potentials and other criterions which they opined are much necessary for the development of their domain. Other challenges identified include problems of unutilized resources with 9.3 % and communal conflict/ insecurity with 7.2%. in summary, the findings from the study revealed that the major problems of the inland waterway towns can be attributed to government neglect. Therefore, stakeholders' participation and involvement is necessary in addressing the development challenges of towns and cities along inland waterway (Table 4).

Table: 4 Frequencies and Proportion of Inland Waterway Development Challenges in Nigeria

SN	Major Problems of the Towns	Frequency	Percentage
1	Lack of physical planning & facilities	138	58.2
2	Environmental Terrain	48	13.8
3	Rural –Urban migration	36	11.5
4	Underutilization of Resources	23	9.3
5	Insecurity/ Communal Conflict	14	7.2
TOTAL		259	100.0

Source: Researchers survey 2022

8. CONCLUSION

The research has revealed that the regional development potentials of the towns found along inland waterway has many benefits that could aid socio-economic development in the communities and their immediate surroundings. Based on the research findings, it is concluded that the towns are not developed and their natural resources are underutilised. It is apparent that the major challenges of these towns are blamed on the government through inadequate physical planning, environmental terrain, and rural –urban migration, underutilization of resources, insecurity and communal conflict. However, the developmental futures or prospect of inland waterway towns lies in the hands of government and stakeholders. Thus, government and stakeholders participation and involvement is essential in the development process and management of the national inland waterway towns and cities; hence will induce socio-economic growth and development in the host communities.

9. RECOMMENDATIONS

Sequel to the analytical conclusion, the study therefore recommended that government and the stakeholders must provide an enabling physical planning environment to enhance investment and the regional development of towns and cities located along inland waterway. In view of the findings, it is apparent that the development of these towns will generate positive socio-economic impacts on the destination towns and communities. The government should extent physical development to these areas to serve as transportation, recreation, tourism, industrial, agricultural and commercial towns. There is need for the government to clear the waterways and level the undiluted terrains in order to enhance linkage to immediate surroundings and make the area attractive for people to inhabit. The development of towns found along the waterways through public and private partnership is suggested in order to order bridge the disparities between inland waterway and none inland waterway towns. The development will create job opportunities to the residents of inland shore towns and improve their socio economic status. The government should ensure that towns located along river or sea shore become real project of actualization through regional development planning and also come up with proper policy implementation that would protect the environment. The policy should be harnessed in such a way that it will ensure the sustainability of towns located along inland waterways. These recommendations may facilitate the utilisation of the regional potentials and maximize prospects of development of the host towns and communities.

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