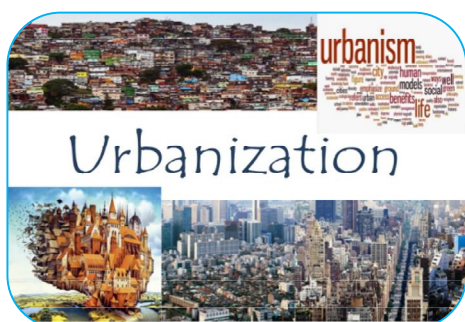




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## TOOLS AND PROCESSES OF URBANIZATION: A CASE STUDY OF SILIGURI AND BAGDOGRA OF NORTH BENGAL, INDIA

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### ABSTRACT:

A gradual transformation of any small Hamlet settlement into a Conurbation or Megalopolis due to site, situation, infrastructural potential and gradual change in the behavior of inhabitants; turning into a mixed advanced economy from an early agro-based economy is Urbanization. The process is slow but continuous in nature. The continuous interaction among Population, Infrastructure and Economy of a region results into change in the Level of Urbanization. This also influences the Hierarchy of an urban centre in particularly within an urban hierarchic system. Urbanism and accelerating tools of Urbanicity, together carve out the

systematic stages of Urbanization. Tools include infrastructures, facilities, services and economic advancement. Processes of urbanization are largely governed by Centrality and Connectivity. These two properties interact with each other and determine the Urban Hierarchy. In this paper, two urban of North Bengal, Siliguri and Bagdogra have been chosen; with the help of Composite Index most important variables are found which are influencing these two urban to grow towards each other, following the trails of their growth magnets, to form a Conurbation in near future. Key Informants Survey reveals that due to rapid Infrastructural expansion and increase in Connectivity, Siliguri and Bagdogra are engulfing nearby small towns and settlements and advancing to merge into each other. This scenario between Siliguri and Bagdogra, clearly depicts the functions of the Tools and Processes of Urbanization.

**KEYWORDS:** Urbanization, Hierarchy, Urbanism, Urbanicity, Centrality, Connectivity

### INTRODUCTION

Urbanization is a slow and long process of changing of a rural landscape into non-rural landscape. Along with site-situation, infrastructure and economy, changes in human behavior plays a crucial role in the process of urbanization. A Hamlet gradually takes the form of a Conurbation or Megalopolis as the result of interaction

among Site-Situation, Infrastructure, Economy and Human Behavior. These four properties are prerequisites for urbanization. If urbanization is considered as a Superstructure, there is a Deep-structure mechanism which carves out the endgame with some important tools, which drive the processes and finally shape up urbanization. Here 'Tools' refers to some in depth physical or non-physical qualities or special properties of a region, apart from physical and non-physical

aspects which are capable to trigger the processes of urbanization at the very beginning stage of transition from Rural to Urban. Urbanism and Urbanicity are two most important tools of urbanization. Together these tools influence Urban Hierarchy which further influenced by Centrality and Connectivity (parts of urbanicity) of the region. Studying and analyzing the growth and development of a small settlement makes the picture more clear to

understand the tools and processes of urbanization rather than studying a fully grown big city. In this paper, Siliguri and Bagdogra are two urban centers of North Bengal which are advancing towards each other to form a Conurbation in future. Within just 118 years these two urban have become the fulcrum of entire North Bengal. These two urban centers belong to an important planning region of North Bengal, "**Siliguri-Jalpaiguri Planning Area**" (SJPA). There are 15 more urban centers in that planning area apart from these two; but none of those are expanding or growing geographically. Siliguri, a Class-I city is the largest urban center of North Bengal and second largest in entire West Bengal in terms of population, accessibility, economy, infrastructure and network. Siliguri has a strategic location on the map of India which functions as "**Gateway to the Northeast**", also known as "**Chicken Neck**". Also this city has the largest Railway Junction in North Bengal and can be accessed from all directions. Bagdogra, a Class-III town, 10 km West from Siliguri, with 30000 population, has earned exceptional importance; because, this town has the only International Airport in entire North Bengal. Apart from this, recently, Bagdogra has been included in Asian Highway Project which has given this town a massive facelift in last three years. Bagdogra International Airport operates both domestic and international flights round the clock, throughout the year. Like Siliguri, Bagdogra also can be accessed from all directions. Development of Siliguri started since 1950s and Bagdogra started developing in 1980s. To understand the tools and processes of urbanization, study of these two urban centers is fruitful.

### MAIN POINTS: OBJECTIVES

To find out and analyze the tools and processes of Urbanization in respect of Siliguri and Bagdogra in North Bengal by tracing out most important factors which are accelerating the urban expansion process of Siliguri and Bagdogra towards each other.

### DATABASE AND METHODS

Both Quantitative and Qualitative data have been used in this paper. Based on the calculation of Composite Index and Key Informants Surveys data analysis has been done.

### RESULTS

Siliguri and Bagdogra, these two urban centers are expanding in terms of physical area and infrastructural advancement. There are three vital reasons because of which particularly these two urban centers are expanding, that is towards each other; which will eventually either form a Metropolis or a Conurbation in future. These reasons are:

1. These two urban centers are accessible from all four directions. Bagdogra possesses only Airport of entire North Bengal; this Airport is an International Airport along with domestic services. None of these two urban centers is located in a pocket where development may be ceased due to some institutional mechanism.
2. The Asian Highway Project stretches across Bagdogra. Thus within last three years the town has experienced massive development in terms of economy and infrastructure. Along with this, Siliguri also started expanding by engulfing the trails of its growth magnets.
3. Only Siliguri and Bagdogra are two such urban centers of entire Planning Area which have multitier and multi sector economic ecosystems. It means, whatever hindrances come, in terms of political, socio-economic or physical ambience, their economies never stop as they have large numbers of options.

In terms of urban hierarchy, it is found that Siliguri, being the largest city (A Class-I City as per The Census of India) of entire North Bengal, secures the apex of urban hierarchy in Siliguri-Jalpaiguri Planning Area. Interesting fact is, in spite of being a class-I city, Jalpaiguri comes after Bagdogra (a class-III town) in Urban Hierarchy when connectivity and infrastructure are considered.

**Composite Index Value for 4 main urban of SJPA  
(Based on Primary Data Variables)**

Dabgram (Class-I)	9.826
Jalpaiguri (Class-I)	4.980
Siliguri (Class-I)	55.712
Bagdogra (Class-III)	6.003

These Composite Index values have been derived from the Z-Score values for all these urban based on 17 variables **which are mostly related to infrastructure and economy**, which are most important feature of this area. The calculation has been done based on primary data as, variables which have been taken here, are not available in Census. In spite of being a class-III urban center, Bagdogra secures higher position than Jalpaiguri which is a class-I city. This is because Jalpaiguri has already achieved its maximum expansion much earlier; besides, it is located in a pocket from where Bangladesh border is very close, which functions as an institutional constraint for expansion. After the growth of Siliguri and Bagdogra, Jalpaiguri started experiencing urban stagnation.

**Composite Index Value for 4 main urban of SJPA  
(Based on Census Variables, Secondary Data)**

Dabgram (Class-I)	2.7297
Jalpaiguri (Class-I)	20.0247
Siliguri (Class-I)	83.9525
Bagdogra (Class-III)	-7.7008

Another set of 27 variables has been considered. From their Z-Score values, Composite Index has been calculated again. These variables were mixed; which were taken from the Census which depicts just an overall socio-economic picture. In this set Jalpaiguri scored more than expectation and Bagdogra resulted negative. In reality the picture is just opposite. As per census, Jalpaiguri has more than 100,000 population. It is designated as Class-I city but in terms of infrastructure, economy and accessibility it stands nowhere near Bagdogra which is a Class-III town as per Census, because it has almost 30,000 population.

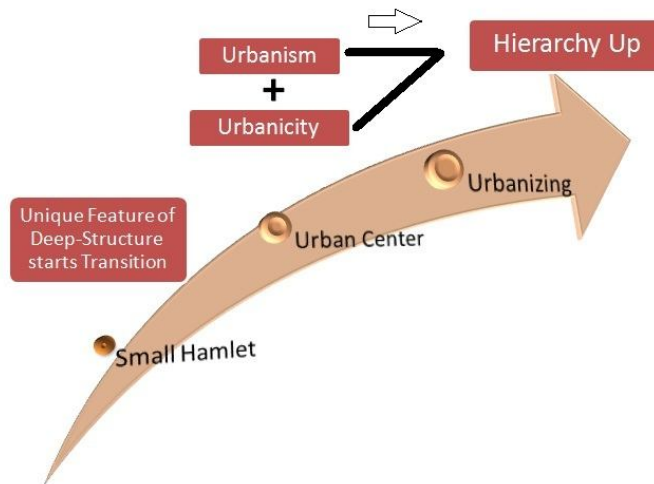
**DISCUSSION**

**TOOLS OF URBANIZATION**

**Urbanism** and **Urbanicity** are two most important tools of Urbanization which also govern the processes. Urbanization is a slow but continuous process of transformation of a rural settlement into urban. Urbanization always sets in from a very small rural based settlement. Due to some uniqueness of a particular settlement, in terms of physical or non-physical aspects, urbanization starts. That unique feature(s) are main driving force of urbanization of the settlement. For example, in case of Siliguri and Bagdogra, before 1900 Siliguri used to be very small hamlet. In that time Jalpaiguri was flourished. Till 1920 Jalpaiguri attained its maximum flourish; it was over-burdened and neither was being able to serve excess population nor supported infrastructural expansion. Besides, Siliguri, having a strategic location advantage, stepped into Urban category from Rural settlement. This was the '**main driving force**' for Siliguri based on which it turned urban from rural. After two decades, Bagdogra, having same location advantage started becoming urban. After this initial transformation, two most important tools of urbanization, urbanism and urbanicity carved Siliguri to grow as a town further. **Urbanism** is the lifestyle features of the inhabitants of a town or city. It plays a crucial role in urban development. Urbanism starts working after the deep-structure of transition from rural to urban is triggered. **Urbanicity** includes all further processes of urbanization, including **centrality** and **connectivity**. Urbanism influences urbanization more than Urbanicity. After the initiation of basic level urban set up, these two tools carve out the Urbanization by mutual interactions, resulting into change in **urban**

**hierarchy.** These all processes take place only after the unique feature of a settlement causes the transition from rural to urban. This entire mechanism works in one direction, from lower to higher.

**Fig-1: Rural To Urban Initiation And Urbanization Continuation**



Urbanism, the behavioral characteristics of urban inhabitants, gets changed as per the urban hierarchy is changed. Peoples lifestyle and behavior change with the continuous urbanization. This leads towards increase in demands and options. This process develops centrality and connectivity of an urban center. These two are major properties of Urbanicity. **The mechanism of upgrading urban ecosystem is Urbanicity.**

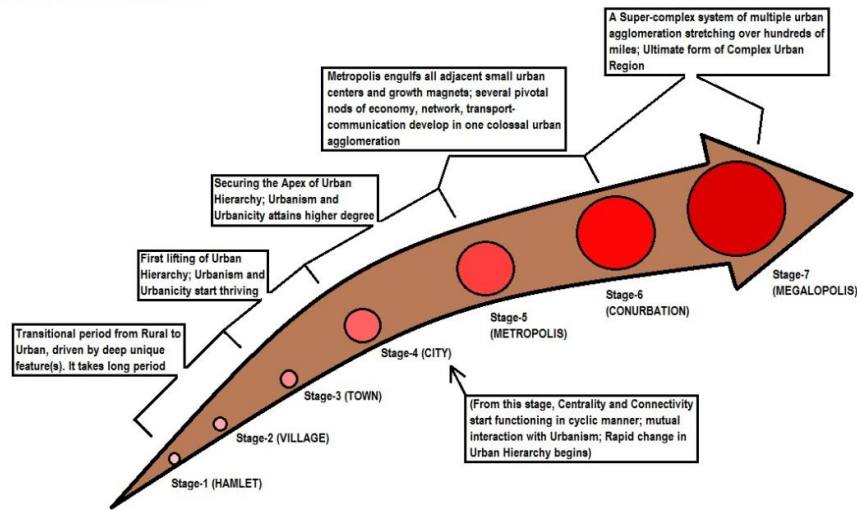
With the symbiosis of Urbanism, these two mechanisms work simultaneously in a cyclic manner for achieving higher degree of Urbanization. Centrality of an urban center rests on Economy, Infrastructure, Networks and Available Services. Connectivity of urban center rests on Networks, Accessibility, Transport, Communication and Nodal points. Both Siliguri and Bagdogra have good centrality and connectivity throughout entire North Bengal. Siliguri covers best medical facilities, administrations and economy of entire north bengal; besides, it has the largest multiplex mall in north bengal with end numbers of recreational options. This shopping complex provides special consumer durables and services, due to which people from hilly areas on northern side come to Siliguri even from 60-70 km radius. Siliguri also functions as main tourist transit node of entire north bengal. Bagdogra possesses only Airport of north bengal. This fact always keeps Bagdogra crowded by people from adjacent 50-60 km radius, sometimes even more. Both these urban centers transformed from rural to urban due to the indispensable feature of **unique strategic location.**

**PROCESSES OF URBANIZATION**

Starting from a Hamlet to a Megalopolis, there are 7 stages of Urbanization process. Both Siliguri and Bagdogra, at present come in between 4th-5th and 3rd-4th stages of Urbanization respectively.

**Fig-2: 7 Stage Processes of Urbanization**

**PROCESSES OF URBANIZATION**



**CONCLUSION**

Siliguri and Bagdogra of SJP are two rapid expanding urban centers both in terms of economy, infrastructure, services and population. Out of all 7 stages of urbanization process most long term stage is transition from 1 to 4. In this transition, a hamlet gets driven by a unique feature and eventually turns into a town and then eventually into a city. Siliguri has passed through these stages whereas Bagdogra is in transition between 3 and 4. After stage 4, Urbanism and Urbanicity predominantly start influencing upward urban hierarchy to achieve stages 5, 6 and eventually 7. Last three stages of urbanization process comparatively take shorter duration than initial 4 stages. Once a city has been formed (Siliguri), it picks up speed automatically due to intense interaction of Urbanism and properties of Urbanicity. Soon Bagdogra will enter stage-4 as it is growing rapidly. Whereas, from stage-1 to 4, that unique feature of the area needs to exert a boost to initiate Urbanization process. Siliguri and Bagdogra started from very beginning of urbanization process, i.e. Stage-1. Within only 118 years these two urban centers have passed through several stages and still advancing towards achieving Stage-6 (Conurbation) in near future with uninterrupted support of the tools of Urbanization, i.e. Urbanism and Urbanicity.

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