

# RELEVANCE OF GEDDESIAN IDEOLOGY FOR ATTAINING URBAN SUSTAINABILITY OF SLUMS AT INDORE

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## ABSTRACT

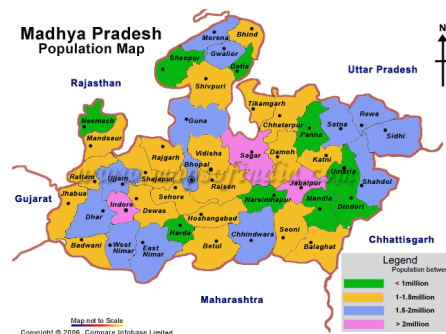
Sir Patrick Geddes was a Scottish biologist, sociologist and pioneer town planner. He created patterns of human settlements using a complex interplay between social, economic, cultural conditions, spaces and environment of natives. He sought to understand the vocabulary of Indian settlements. He preached every square, every street; every house has its own character and thus should be treated individually. All physically present elements of city become inseparable part of his scheme. He capitalized the voids in urban fabric, by adding value to it rather than eliminating it. His proposal and working style had left much impact on lives of people of India especially Indore. From ancient times Indore acts as magnet for migrants because of various reasons. The city has been growing throughout its long history and, according to census figures; it shows no indication of slowing down. As migrants mainly belonged to the economically weaker section mostly accommodate in slums or informal settlements. Results in formation of new slums or extension of existing ones, which offer poor quality of life to residents. A simple and cheap Solution need to be enforced. This paper aims to understand Geddesian ideology, its impact on life of urban poor, his efforts to gain urban sustainability of slums and also its relevance in present day scenario at Indore. This paper also deals with common factors in Geddes ideology and smart city mission.

## KEYWORDS

Patrick Geddes, urban poor, urban sustainability, slums, Indore, smart city mission

## INTRODUCTION

In 1914 Sir Patrick Geddes was invited by lord Pentland, the then governor of madras for advising on new emerging trends of town planning. In early 20<sup>th</sup> century the rulers of Indore invited Geddes to help the city to get rid of the evils of plague and other diseases. Before giving solutions he focused on prevailing problems, for which he travelled along India experiencing indigenious architecture of place and read relevant books focusing on Indian life giving him spiritual overview of Indian culture, looking particularly at the sacredness of a Indian house and specially role of women in society, he also read books on preservation of gardens and Indian auspicious trees, also books on sanitation issues, which gave him perspective of sanitation in India. Understanding integration of culture, tradition, history and life style of people, he made effort to propose solutions respecting existing customs and traditions to serve for modern purposes. this paper focuses on his town planning ideology and proposal for city of Indore.



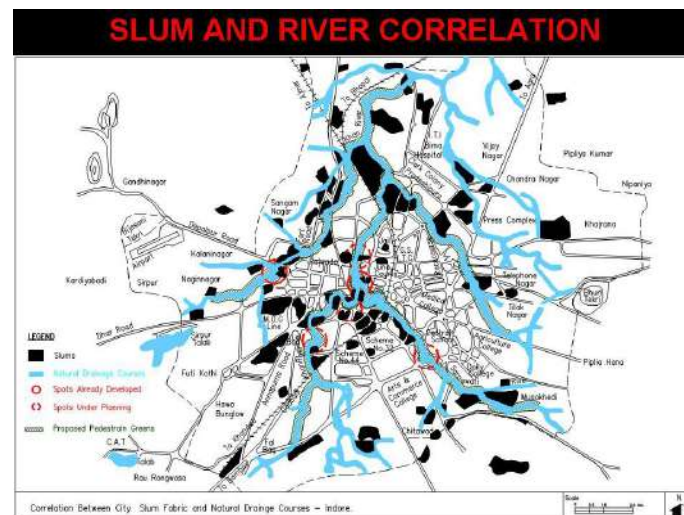
Indore, the largest city of Madhya Pradesh State in India, is located at the eastern side of the fertile Malwa Plateau. From ancient times Indore acts as magnet for migrants because of various reasons. Footprints of Indore are 16th century old when it acted as trading bridge between the Deccan and Delhi. The city was added to Hindu Maratha Empire on 18 May 1724 under Maratha Peshwa Baji Rao I. Under the British Raj, Indore State had a rare high rank later it acceded to the Union of India. Indore became the capital of the Madhya Bharat from 1950 until 1956.

Indore being financial district, houses India's third-oldest stock exchange. Indore is selected among first twenty cities to be developed as Smart Cities. Indore has been ranked as India's cleanest city three years in a row as per the Swachh Survekshan for the years 2017, 2018 and 2019.

The city of Indore is known as the commercial hub of India as well as the leader in education for the entire country. Thus making Indore as most populated city in the Madhya Pradesh state of India. The city of Indore covers a sizeable area totaling 530 square kilometers (approximately 204.6 square miles).The city has been growing throughout its long history and, according to census figures, it shows no indication of slowing down. Population of Indore in 2011 is 1.9640 million, the population of Indore in 2019 as per estimates is 4.8344 Million.

As migrants mainly belonged to the economically weaker section mostly engaged in daily wage jobs in the city. Large portions of the migrants chose slums or informal settlements within the low lying areas along the drainage channels and rivers. These slums are overcrowded, with poor temporary building structures and inadequate physical and social amenities, unplanned and poorly accessible and are in unhygienic conditions, lack of basic amenities and poor accessibility. Slums in Indian cities are major causes of lack in basic facilities for people, they suffer from housing deficiencies, improper sanitation and solid waste disposal, shortages of drinking water, water logging in monsoons due to open and unplanned drains, poor transportation and congested roads leading to accidents. The urban environment has polluted due to air, water and land pollution.

The initial slum development programs of the 1980's were based on extensive sharing of community facilities, including toilets at cluster level. These results in crime, violence and noncooperation due to the ethnic and social cultural backgrounds of the slum dwellers led to growing illiteracy, deteriorating health care and frequent epidemics. The major impact of the distress is especially on Woman and children living in slums as they have to lead their daily chores in this situation. Sir Patrick Geddes gave solutions in his theories.



## SIR PATRICK GEDDES THEORIES FOR IMPROVING LIFE OF URBAN POOR AT INDORE

### CIVIC SURVEY

Sir Patrick Geddes preached the civic survey as an inseparable part of urban planning. He believed in "diagnosis before treatment". The civic survey means survey of duties or activities of people in relation to

their town city or local area. Solutions depend upon local needs and possibilities of the surrounding quarter. Geddes encouraged consideration and exploration of the whole set of existing conditions, studying the place in its present condition, finding out its growth pattern and identifying its potentials, strengths, its difficulties and its threats. Such a survey comprises of collection of basic data of a place like the geology, the climate, the geography, the economic life, and the social condition of the city and surrounding areas. He preached area specific planning, encouraging the planner to consider the prevailing situations, inherent opportunities, constraints and potential of a given site, rather than imposing an alien idea by authorities. Unlike the tendency of looking down on local civic practices and blaming things on native habits, he conceived detailed portrait of a city, its neighborhoods, streets, alleyways and productive capacities along with a patient diagnosis. For Geddes, a city is not **“just place in space, but also drama in time”**

In India, Geddes saw a fertile land of possibilities where his alternative urban planning theory could be implemented and in turn was influenced by the eastern philosophies of Buddhism and Hinduism that recognized man and nature as one (Kitchen 1975). Patrick Geddes's experience of Indian cities and his resilient understanding of ecology as an inseparable part of daily human life without discriminations based on wealth. The potential of success and importance of Geddes's proposal lies in its global methodology and local scale of implementation.

## **EARLY INDORE**

Raja Indra Singh on his journey to conquer Ujjain rested in a camp beside the river kahn and was impressed by the natural scenic beauty of the place. Honoring greenery of place he established a Shivling at the meeting place of the rivers Kanh and Sarasvati. He constructed temple named Indreshwar along with adjoining settlement called Indrapur. Its name had evolved to Indur by Maratha Subedar (General) 'Malhar Rao Holkar'. later this name was changed to Indore during the British rule.

In early 20<sup>th</sup> century Indore was in the grip of plague. Sir Patrick Geddes closely observed situations and reason for spread of this epidemic. He found most residents kept their homes and streets scrupulously clean and it was really the fault of street layout of some neighborhoods which led to water clogging and the accumulation of dirt.

Secondly, he observed the importance of rajwada and surrounding areas in life of rulers as well as common people. Rajwada was built by the Holkars of the Maratha Empire. These seven storied structures is located near the Chhatris and serves even today as a fine example of royal grandeur and architectural skills. The market originated around it. All grand processions and festival celebrations took place majorly in this area.

Located 2 Kilometers from Indore's central market place Rajwada, Sarafa was the central trading point for jewellery, artifacts and ornaments. In early times as there was fear of theft thus owner of jewellery shops started eateries on the front platform of shops which could safe guard their shops and add to additional income. Due to its location and a large number of commuters, gradually it becomes unique feature of Indore. Presently, Indore is famous as food city of India.

Geddes analyzed the tanks or water reservoirs and evaluated their many benefits in regard to the Indian context. Reservoirs allow water levels to be maintained during the long dry season and ensure protection from flooding during the monsoon season. Reservoirs have an appreciable influence on the health and comfort of the poorest of the dwellers by cooling the environment and thus benefiting a section of society who are least likely to be able to afford expensive mechanical devices for artificially altering environments. An affluent person is not as sensitive to the location of a reservoir as a poor man because he can afford to transform his built environment through air conditioners, fans and coolers but these reservoirs are crucial to the comfort and well-being of the majority of the population who do not have any other recourse to fighting the hot Indian summers.

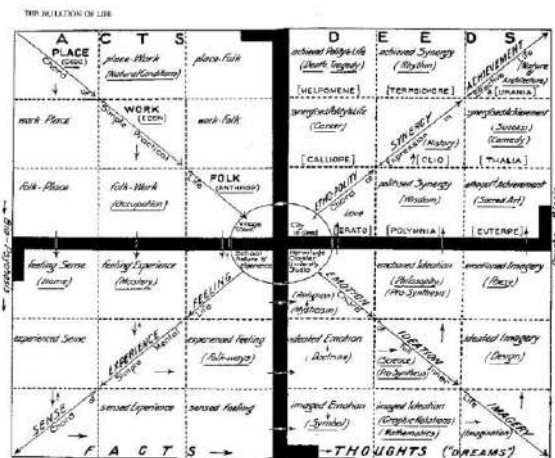
Seth Hukam Chand became a leading cotton business magnate of the country and established cotton mills, Hukam Chand Mill and Raj Kumar Mill at Indore. In early times people of Indore were majorly occupied in professions like hand dyeing, handloom, manufacture of niwar, oil extraction by ghani, manufacture of bamboo mats, baskets, manufacturing ayurvedic and unani medicines from roots, metal utensils, embossing and engraving of gold and silver ornaments, shellac industry, etc.



## SYNTHESIS

Sir Patrick Geddes preached **“Our greatest need today is to see life as whole, to see its many sides in their proper relations; but we must have a practical as well as a philosophical interest in such an integrated view of life.”** Geddes firmly believed that Nature and Life has larger view, it had to be worked on in coexistence with social, economic, cultural, emotional conditions, ecological dynamics and fundamental interconnection of nature and culture. Basic idea is to see life as whole.

Patrick Geddes conglomerate different aspects of work done by people and his evolutionary philosophy as a biologist and created a planning strategy based on a regional survey of the geological, ecological, hydrological, and climatologically as well as social and economic conditions of a particular place. He knew that **“spirit of urban planning lay in spirit of the people and the ethos that infused their habitats”**. He proposed solutions by agglomeration of all aspects of civic survey, regional survey and survey of existing acts, deeds, facts and thoughts of people.



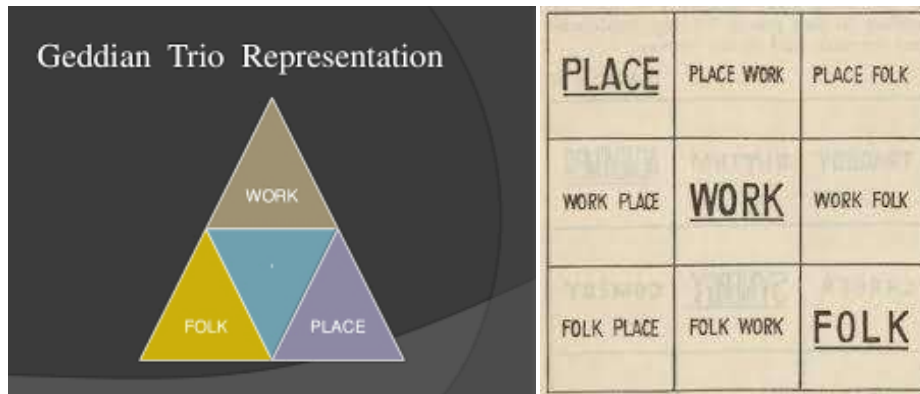
Synthesis of various aspects and its relationship to place (From ‘*Cities in Evolution*’ by Patrick Geddes, Source)

## GEDDIAN TRIO-WORK, PLACE AND FOLK THEORY

Geddes states his understanding of an organism’s relationship to its environment as follows:-**“The environment acts, through function, upon the organism and conversely the organism acts, through function, upon the environment.”**(*Cities in Evolution*, 1915).

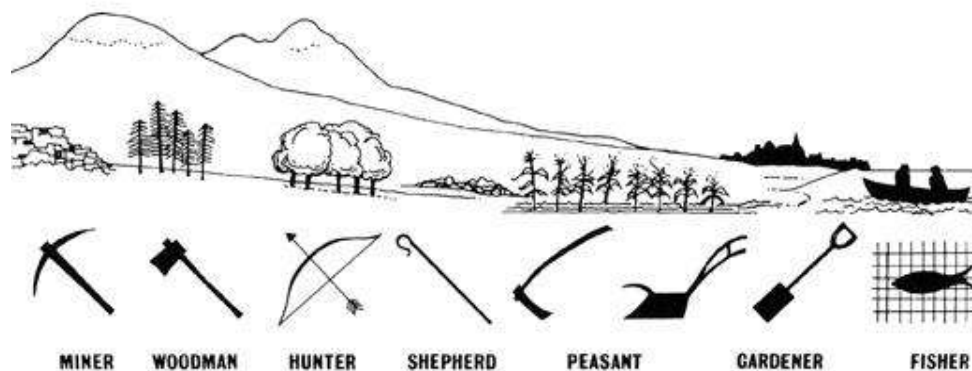
Patrick Geddes was influenced by social theorist Herbert Spencer (1820-1903) and proposed concept of place, work and people in this theory, “Town-planning is not mere place-planning, nor even work planning. If it has to be made successful it has to be folk planning. This means that its purpose is not to shift people into new settlements against their wishes, interest and associations, as bad schemes try to do. Instead its purpose is to make their existing places right according to their needs, interest and life style, where they can really flourish and grow. The family is viewed as the central “biological unit of human society” from which all else develops.

He believed that stable and healthy homes provide the essential conditions for mental and moral development of a person, from these houses come beautiful, healthy and brain strong children capable to becoming successful in life.



**INFLUENCE**-Many Indian cities adopted this idea. For example, Bombay adopted this notion and in the master plan most of the offices (i.e. work-place) were located in the south whereas the residences (i.e. folk-place) were in north. As a result of this, traffic patterns were quite significant. In the morning major traffic flow was from north to south and in evening vice-versa. Geddes wanted to provide solutions which are people centric and zones of work and elements of place making surrounds people, which will provide comfortable working accessibilities and relaxing environment for people. In his proposal of Juni Indore he proposed center work district as Rajwada, nearby areas and streets as different market places for promoting business. Prominent work place is surrounded by zones of folk living and place making elements. Such placements provide comfortable connectivity between all three: work, place and folk.

### REGIONAL PLAN (VALLEY SECTION)



**Geddes illustrated the section using the locally available landscapes of Edinburgh and its hinterland.**

“**region-city**”, the idea was first published in 1909 as an illustration given in form of the section using the locally existing landscape of Edinburgh. The region is marked in the city and the city spreads influence of the highest level into the regions. Geddes said that “**it takes a whole region to make the city**”. Geddes trilogy of folk/work/place to analysis of the region is illustrated by the valley section. The valley section is a complex ideological model that combines physical condition like geology, geomorphology and their biological associations with so called natural or basic occupations such as miner, hunter, shepherd or fisher and with the human settlements they reside into.

Demonstrating occupations such as hunting, mining or fishing depend on the physical geographies that in turn determine pattern of human settlement. The point of this model was to simplify the complex and entangled relationship between humans and their environment. Also to identify solutions of regional planning that would be rise due to these conditions. Indore observes rich black soil for agriculture, has cotton textile industries, food

industry. Other examples are the Port cities such as Bombay and Madras which have influence of this notion. Various neighborhood localities were occupation based like, fisherman communities settled near the sea coast.

## CONSERVATIVE SURGERY

“Conservative surgery means amending and improving an urban quarter by minimizing the destruction of existing buildings. “Take into account the existing physical, social, symbolic landscape of a place in order to allow its most favorable future development. The methodology also requires a case-by-case approach to problems. In direct contrast to the engineers’ straight roads that were applied widely to all cities irrespective of climate and culture, conservative surgery while having a clear action plan is particular to the site and therefore unique. Every square, every street, every house requires a case-by-case evaluation, decision and proposal.

**PROPOSALS IN CONSERVATIVE SURGERY FOR INDORE INCLUDES:** working with existing conditions.

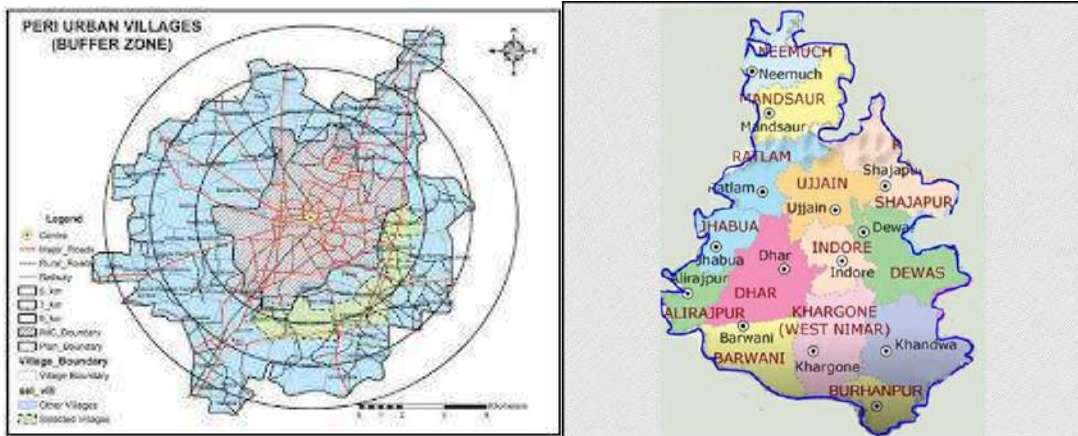
- **indian traditions:** “Let the temple flag be hoisted, let the building be repaired and adorned, its flower garden planted or renewed. Let the well be cleansed and cemented. Let the sacred tree have its platform repaired; or if dead and gone, let a new papal be planted, with the other trees beloved by gods and men – the pleasant *Neem*, the faithful *Bael*, the flowering *Kadam* – and let them be set in corners of the little squares as space may offer”(Tyrwhitt 1947). Indian traditions are wiser with its use of narrow streets, as these lanes admit shade and quietness, without entering dust and leave an ample of space for the houses dwellers to interact and spend time together, celebrate festivals and act as playing space for kids. This spatial negotiation works well with the large joint family social structure of Indians.
- **streets:** He suggests widening a narrow street running diagonally through a neighborhood into a sequence of small squares. Trees lining the new squares mark. The improvement and define borders of the new open spaces. Consequences like the expulsion of the former inhabitants are avoided.
- **water reservoirs:** Many of these reservoirs were filled up because they were seen as threats to public health. It was stated that they served as breeding grounds for mosquitoes and cause diseases such as malaria. Geddes protested against this citing their advantages and proposed alternative methods for dealing with the danger of mosquitoes breeding in the reservoirs. He proposed that the reservoirs should be kept cleaned and then stocked with good amount of fishes and ducks to keep down the growth of mosquito larvae. And on the issue that the tanks can become infected again and again, he argues that so can the houses but houses being more important than tanks cannot all be torn down and that “their values justify their care and preservation!” (Tyrwhitt 1947).
- **garden city:** In his master plan drawn between 1914 and 1921, he proposed that Indore be made garden city and cleaned up, he favored a massive tree planting drive and creation of garden spaces between built blocks, rather than developing city vertically. Geddes proposes the planting of wholesale and domestic fruits trees and vegetable patches, from a garden city to an orchard city. This would take care of dietary problems in many parts of the country with support from the local government. He proposes the re-use of human sewage as manure. He connected sanitation with religious beliefs and planned social events and celebrations accordingly to promote awareness, targeting the happiness, health and comfort of all citizens, rather than only for the rich.
- **civic consciousness:** Geddes had deep engagement with public awareness. The Hindu festival of Diwali being used as an auspicious day to undertake extensive district-wide cleaning. To bring the whole city together to respond to the danger of plague, he organized huge carnivalesque procession on diwali. he declared the procession will pass through most cleaned street and areas, rather than conventional routes. This resulted in clearance of 6,000 truckloads of garbage and thousands of rats were trapped.
- **local craftsmanship:** Geddes’s plans extend to inculcating self-respect and pride in the local craftsmen. Through his extensive surveys he identified the humble village homes to have an aesthetic that was individual and free. “One loves the painted plaster house fronts, of which some still survive, another one will have plain whitewash, and a third yellow or red” and proposes that a photographic exhibition be set up which “will call to attention to all the innumerable beauties of the city that, both in general aspect and in detail, are unnoticed or forgotten at present by the inhabitants. Their owners will be agreeably surprised to find their things appreciated” (Tyrwhitt 1947). Geddes here takes care of not only physical improvements but also plans to nurture fundamental self-respect in these communities.

- **conservation of nature and natural resources:** Geddes was committed to conservation of nature and opposed to pollution. His ideas and working style focuses on environmental goals, and sets about achieving these goals through grassroots participatory democracy. Conformity to an orderly plan carried out in stages.
- **people and environment:** Geddes planning proposal were people centric. Geddes, planned civic action would remedy social deprivation by the adaptation of 'people' to the conditions of their environment. And “In turn, this environment would be improved qualitatively, Geddesian-style, by practical artist-intellectuals. However poor or prosperous, everyday life would be improved by evolving to a higher, healthier cultural affinity with an aesthetically enhanced environment. He worked for well being of human beings and use of energy wisely, rather than superficial treatments and temporary beautification.
- **preservation of historic buildings:** Geddes believed in Preserving historic buildings and buildings of religious significance. He wanted to develop a city worthy of living for its natives, rather than not thoughtful imitation of other cities. As buildings are living proof of era thus preserving them preserves the history of a place.
- **modificationS:** Geddes proposed alterations and slight modifications that promised to make a world of difference in the quarter. He suggested that by simply enlarging the existing lanes, additions on vacant lots and removal of a few of the most dilapidated and insanitary houses, the lanes can be greatly improved and every house brought within reach of fresh air as well as of material sanitation. Starting with the existing open spaces, and extensions achieved by clearing fallen buildings and planting trees to protect the enlarged spaces against future encroachment, Geddes linked the open spaces by smaller clearances. Open spaces and garden spaces are the key to relieving congestion rather than creating wide dusty streets.
- **less demolition:** Geddes argues that it does not improve the living conditions of the poor. Instead **“the effect is that people and rats alike crowd into other already densely populated areas...for, when her old home is taken away, what joy has a woman in the inferior lodgings to which we have now consigned her?” (Tyrwhitt 1947)** He advocated a planning strategy sensitive to social and ecological concerns. He sought to understand the vocabulary of Indian settlements: the narrow, crooked lanes, shadows, trees, squares, temples, courtyards, shrines and tanks, all were a part of his scheme as he capitalized on the voids in the fabric, adding value to it rather than destroying it.
- **changing place create problem:** the judgment apparatus in developing countries no longer recognizes the value of existing structures and instead seeks to copy the images and structures of the developed world. In the process, two scenarios happen – either the sociological and cultural rules formed due to years of adapting to a particular climate and land get transformed or because the initiatives address only the physical appearance and not the ecological and cultural core of the problem, slums just shift geographic locations rather than becoming better places as envisioned by Patrick Geddes.

However this method has some constraints. This ‘Conservative Surgery’ process outlined by Geddes requires constant attention, detailed survey and on-site studies. And therefore, it can be a daunting time-consuming process. The conservative method requires long and patient study. The work cannot be completed in office, with ruler, parallels and computers, for the plan must be sketched out on the spot, after hours of work on individual houses, open lands and lanes. No inhabitants are schooled in this process thus requires a lot of understanding and counciling for them.

## CONURBATION THEORY

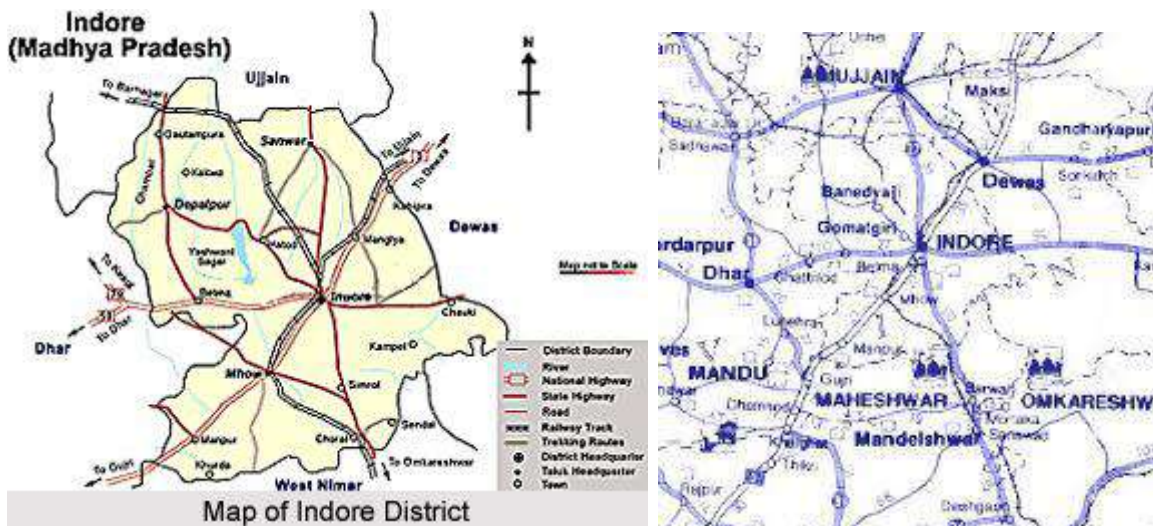
The term conurbation was first introduced in 1915 by Patrick Geddes in his book cities in evolution. A conurbation is a region comprising a number of cities, large towns and other urban areas that through population growth and physical expansion have merged to form one continuous urban and industrially developed area. In most cases a conurbation is a polycentric urban agglomeration in which transportation had developed to link areas to create a single urban labour market or travel to work area. Conurbation consists of adjacent metropolitan areas that are connected with one another by urbanization. Internationally the term “urban agglomeration” is often used to convey a similar meaning to conurbation. He drew attention to the ability of the then new technology of electric power and motorized transport to allow cities to spread and agglomerate together.



The images show the spread of Indore and merging with peri urban areas to form a continuous urban and industrially developed area.

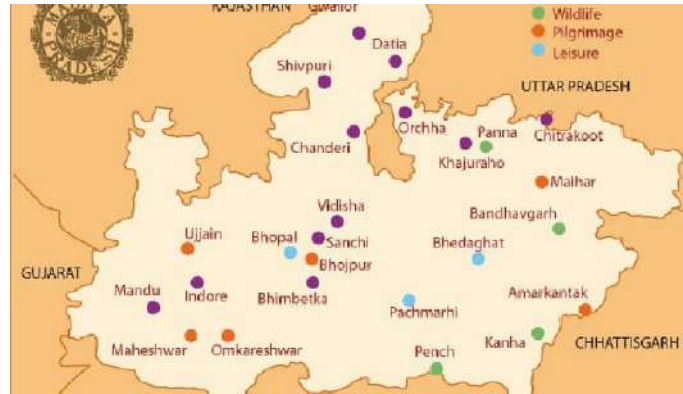
### CONSTELLATION THEORY

The term "conurbation" was first introduced in 1915 by Patrick Geddes in his book *Cities in Evolution*. Prominent interdependent cities of a state are connected forming a constellation shape. Minimum four or more cities, which are not economically, politically, socially equal come together in developing a whole region. This theory is mostly used for administrative purpose in all countries worldwide. Either cities are planned in particular pattern before hand, but in maximum situations if it is not possible then constellation theory is most prominently used. In constellation theory the basic idea is to share positive points of each city for growth of all cities. In case of Madhya Pradesh, the constellation is framed between Bhopal-administrative city, Indore-economic, commercial city educational city, Omkareshwar and Ujjain-religious city, pithampur-Industrial city, Mandu and maheshwar-Heritage city, badwani and dhar Agriculture city. . So that the benefits and individuality of each city can be shared giving benefit to people of all cities.



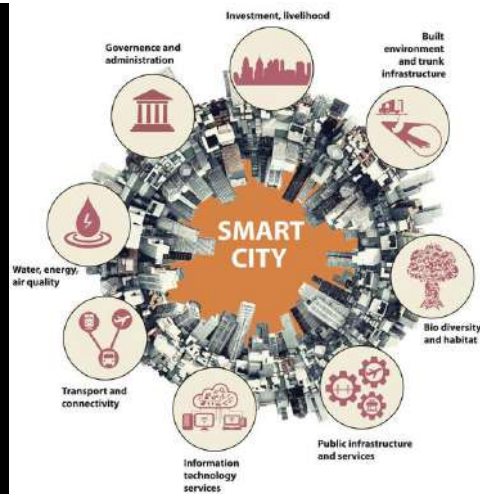
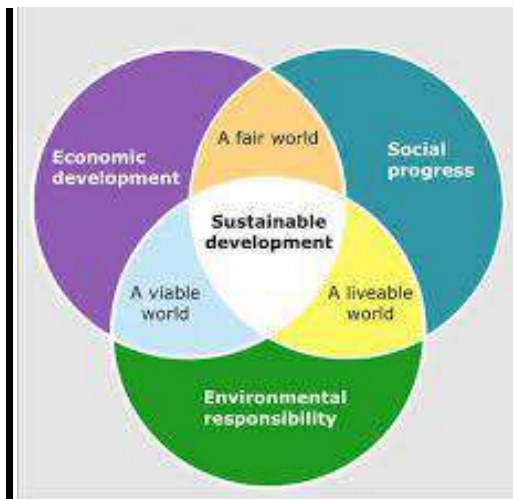
In present time districts are formed making administration easy. Districts help in successful working of many cities together, to form self sufficient and working governance. The distance between cities have range to vary between 100 km-300km. All this theories aims in improving daily life of people, focusing specially on urban poor and providing urban sustainability of slums.





## URBAN SUSTAINABILITY

Sustainability is most often defined as meeting the needs of the present without compromising the ability of future generations to meet theirs. Urban sustainability has three main pillars: economic, environmental, and social. These three pillars are informally referred to as people, planet and profits. The aim of urban sustainability is to create the smallest possible foot prints and to produce the lowest pollution possible, to efficiently use land, compost used materials, recycle it or convert waste to energy and to make the city over all contribution to climate change minimal. Awareness and contribution from people for their growth and development of city is basic factor of urban sustainability.



## SMART CITY MISSION

Smart city mission is a program by Government of India targeting urban renewal and retrofitting. This program aims to develop 100 cities across the country, making them sustainable and friendly to people. It was launched in 2015 by Prime Minister Shri Narendra Modi under ministry of urban development. The Indore Municipal Corporation under smart city mission is set for conservation, restoration, renovation, retrofitting and adaptive reuse. Digitized smart solutions in areas like water supply, sewerage, public transport, and e-governance. The pan-city initiatives are centered around the establishment of a 'backbone communication network', an intelligent transportation system, intelligent waste management, electricity with underground cabling, vendor markets, security systems by cctv cameras, street transformation ,façade development, organizing awareness among plebs by heritage walks, construction of bridges, skill development centres,health,mobile micro towers, environmental sensors, public bicycle sharing system(PBS),use of renewable resourses.

Under the Area-Based Development model, some 742 acres, centered around the Holkar palace Rajwada will undergo retrofit-cum-redevelopment .The Rajwada area is home to 1.2 lakh people, including 29,000 slum-

dwellers. There are plans for development of roads and junction, multi-level parking, multi-modal transportation, pedestrianisation and non-motorization of roads by creating no-vehicle zones, heritage conservation and promotion of tourism, environmental up gradation and green open spaces, redevelopment of public roads, employment generation centers, upgraded water supply and management.

Indore is situated on the banks of two tributaries of the Kshipra River — Saraswati and Kanh which will be redeveloped as a riverfront tourist attraction. The city is famous for its mouth-watering delicacies, and food hubs like Sarafa Bazar will undergo a total transformation. The proposed redevelopment hub, the dilapidated government employees' residential colony, known as the Majesty's Official Guards' Lines (MOG Lines), will be the new upscale business-cum-residential district. The Indore Metro is a rapid transit light metro system which is under construction for the city of Indore, India. The total system consists of 10 corridors covering a distance of 124 kilometers. Smart City Indore is an initiative launched by Indore Municipal Corporation, which included the participation of residents to qualify Indore to the Smart City.

## CONCLUSION

Geddes works are example of experimentally expanded design ideologies. He being promoter of multidisciplinary interests used his knowledge of different fields in public awareness, connecting other intellectuals and governing bodies to projects, enlightening citizens about their responsibility toward their family and city, and finally channelizing citizen participatory contributions for improving individual houses, lanes and city. Geddisian concepts are people centric and sustainable in approach. Solutions lie in holistic understanding of the immediate environment. Success for Geddes's proposal lies in global methodology but a local scale of implementation. He believed slums donot form cities, rather cities form slums, thus it is liability of other part of city to except slums as part of city and to work for improving its environment and infrastructure as for rest of the city. The city fabric should have slums as integral part specially in framing policies by government. If there will be inter weaving of services like transport, water supply and sewerage between slums and other part of city, it will automatically come in a system that will see city as a whole. The emphasis will not be in finding solutions unique for slums but instead it will be ruled by policy factor for the entire city. As slums are not the causes of urban degradation but the consequences of distorted development. Centuries ahead of Geddes smart city mission has been launched. Today, smart cities are created on the foundation of sustainable growth and development. In the approach to the Smart Cities, the objective is to promote cities that provide a decent quality of life to its citizens. The core of smart cities is also the people.

**Thus centuries ahead, the ideology of Sir Patrick Geddes are relevant and are used as the basis of core planning of Indore with addition of other relevant ideas and intelligent techniques. All geddisian theories remains true even today and can be worked on successfully for providing better life to people of Indore especially urban poor.**

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