Urban Regeneration and Sustainable Development

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Abstract—*This research aims to look at the strategic actions towards urban regeneration and cities renewal restraint for the historical, cultural and environmental aspects of sustainable development .Sustainable development is the need of the era whether it is new cities or regenerating old cities. New cities are less challenging in this context because of complete new infrastructure and no issues so the actions orientation of public policies relating to innovative urban retrofitting of the brownfields is more important for a compact city because a city needs to look aesthetically appealing along with having social, environmental and economic sustain-ability with sporadic efforts to renew urban fabric. To become sustainable the urban regeneration has to be done in the local level so local area planning can be a tool for planning for a smart networked, self reliant or compact city.*

1. INTRODUCTION

Urban renewal is a very important factor for cities in India in the current scenario of development for the upliftment of the quality of the life of residents. Being a country of rapid urbanization where the cities sprawl, there is a greater demand to revitalize the existing city. The conflicts in the three critical factors of urban regeneration namely economy, environment & social cohesion need to be addressed to make the city liveable. Urban renewal basically focuses on the retrofitting of the built environment sustainably so that the local urban renewal projects can deal with the urban problems and complexities in the future. Major urban Planning strategies for the urban renewal cover all aspects of urban planning, both aesthetic and practical: streets, building facades, parks, sewers and water works, facilities and public monuments. A sustainable environment is about the built form, the environment and social well being of the communities. Like many other developing countries India has suffered from the plight of urban decay which needs to be addressed very intelligently**.**

2. BACKGROUND

Urban regeneration emphasizes on the brownfield redevelopment, sustainable construction and design of the urban built environment. It is about the use and reuse of the land in a holistic manner. In the past experiences of rapid urbanization, there is a need for revitalization of the underutilized or decaying urban areas to bring it up to mark to the current scenario of developments. The key focus is to develop a conceptual framework for a sustainable urban renewal approach and build relationships with the urban regeneration and sustainable development. Now we need to think that should the sustainability concept be adopted for urban redevelopment? If yes then how the urban design contributes to sustainable development. How do we achieve sustainable urban rejuvenation from urban design and how do we relate the concepts of urban retrofit and sustainable development together to make the city livable.The terminologies of urban regeneration, urban renewal, urban revitalization, and urban retro-fit although look like they mean the same but they are different from each other at the micro and macro levels. All these components are required for making a sustainable built environment. Along with the lack of maintenance and management, the ignorance towards the urban areas has led to the dying areas. India has a population of 1.252 billion has according to accommodate all the people inclusive of class and creed, India needs to retrofit the brownfields or regenerate urban areas along with the increase in sprawl. In India by 2050 all the rural settlements will be converted to urban areas. Conscious efforts should be directed at promotion of integrated national urban policies, partnerships, institutional and legal reforms. Cities must continue to align with global trends in developing its communities into smart habitats with appropriate technology and digital infra-structure. The dynamics of technology should be well aligned with the dynamics of population and city growth through proper planning. Considerable efforts should be directed at planning with the people rather than for the people through better engagement across the various stakeholders: government, planners and communities. Historically, cities were never on the government's priority development agenda as policies were governed by the dictum that "India lives in her villages". It is in this context that the National Democratic Alliance (NDA) government's grandiose

"100 smart cities" project holds mega significance as it marks a momentum shift in national policy. This is a positive move as India is rapidly urbanizing, and much needed expansion of the previous Jawaharlal Nehru National Urban Renewal Mission (JNNURM) which was limited to 65 selected cities. The new vision is to cover urban renewal of 500 cities, rejuvenation of heritage cities (like Varanasi) and the implementation of 100 smart cities (understood to be both "Greenfield" and "Brown-field" development).- (2015)

Indian cities have been failed earlier with their collective desire to copy London, Tokyo or New York. Politicians are now for the 1st time talking about regeneration of cities based on systems instead of aesthetics. But there are genuine fears that we might fall into the trap of westernized idea of smart cities and empty our limited coffers in building something which might further reduce our urbanscape into refined, high-end enclaves surrounded by vast, formless slums where issues like e-governance and broadband connectivity have little immediate relevance. Today, smart thinking will require not only copying the model cities of the already developed Western world, but also find a new measure of livability that will work for the Indian situation, where the cost of growth is unaffordable for most.

A city has three kinds of spaces the Greenfield, brownfield and Greyfield. Greyfieldland is economically obsolescent, outdated, failing, and moribund or underused real estate assets or land. Unlike brownfields, which feature actual or perceived levels of environmental contamination, Greyfield typically do not require remediation in order to unlock value to an investor. Other important potential qualities include parking, a central location, etc. may also be leveraged in a well-executed redevelopment of the site.(wikipedia).

3. URBAN REGENERATION

The key priorities to be worked upon for achieving urban regeneration are economic development, physical improvement, environmental actions, neighborhood strategy, training & education. To deal with the economic generation, the social and economic issues need to be looked upon along with the maintenance of the land with acceptable standard of the buildings, walkable spaces; public domain places in short maintain the whole urban environment. The spaces should be inclusive and safe places for everyone to access. There should be harmony of space for the social sustainability, energy efficient buildings, generic urban fabric, mixed use urban development, strategic urban open spaces all over creating green urbanism and compatibility of urban life. The re-use of land revitalizes communities and renews economic activity, particularly in under-served urban areas.

Retrofitting of the urban areas can be done in three types of models namely smart networked city, self reliant green city and compact city. Since India is a diversified country, one single model of retrofitting cannot be possible for the regeneration of the urban areas so these three models can be used to retrofit and renew the existing city to be smart, efficient and sustain-able in nature. Cities today face new challenges and urban planning should adapt to accommodate these at the micro, Meso and macro levels. Administrations have to consider the future of our cities in a globalised and interconnected world, and deal with issues such as climate change mitigation, social inclusion and preserving cultural heritage of existing city and needs to be regenerated to reach to the level of smartness of the future cities.

4. URBAN REGENERATION POLICY MILESTONES

Urban regeneration policy has changed over decades, moving from a specific area based regeneration effort to encompass a strategic regional and national perspective. Property led regeneration and government's focus upon urban economic policies in the past, received a lot of criticism claiming that it failed to recognize critical social and community issues and problems. Even though environmental improvements and physical renewal was achieved, the fundamental needs of inner city residential were neglected and favorable opportunities to apply their skills and capacity were missed.

Urban renewal policies underwent significant changes in Europe in recent decades. With some simplification, the following periods can be distinguished:

1970s: "hard" urban renewal – extensive physical interventions

1980s: "soft" urban renewal - efforts to keep the original population in place

1990s: "integrated urban renewal" - combining physical, economic and social interventions- (tosics)

Period policy type	1950 reconstruction	1960 revitalization	1970 renewal	1980 redevelopment	1990 regeneration
Major strategy & orientation	Reconstruction of older towns based on master plan	Suburban and peripheral growth	Insitu neighbourhood schemes	Major schemes of development and redevelopment of flagship projects	Policy and practice for integrated treatments

Major policies	Town and country planning act	Urban programme	White paper: policy for the inner cities areas act	Urban development grant City action teams Urban regeneration grant	Planning policy guidance notes City challenge Regional development agencies act
Key actors and stakeholders	National and local gov. Sector developers	Move towards a greater balance between public and private sectors	Growing role of private sector	Private sector emphasis	Devolution of power to the local authority
Economic focus	Public sector investment in private sector	Growing influence of private investment	Resources constraints in public sector	Private sector dominant with selective public funds	Balance between public private and voluntary funding
Social content	Improvement of housing and living	Social and welfare improvement	Community based action	Community self help	Emphasis on role of community
Environmental approach	Landscaping and some greening	Selective improvements	Environmental improvement with some innovation	Wider approach to environment	Environmental sustainability

The inclusion of social and environmental policies in association with economic and physical policies illustrates a more comprehensive approach to addressing urban deprivation, particularly through efforts in 1990s. The increasing emphasis on genuine and comprehensive partnerships, between the private and public sectors to achieve successful and sustainable regeneration indicates a major shift in state urban policies.

5. LINKING URBAN REGENERATION AND SUSTAINABLE DEVELOPMENT

This current research line foresees a multi-scale approach: cities can be studied as layered structures in which buildings, neighborhood and districts represent constitutive units, organized spaces and specific portions of urban fabric. Gentrification is the major requirement of the current urban issues because it leads to stabilization of the declining areas and Encourages viability of sustainable development. Urban Regeneration & Renewal is concerned with physical, economic and social regeneration of urban communities. It includes Raising and structuring finance for regeneration, Selecting investment and development partners, Marketing and branding, Planning, Economic development, Encouraging inward investment, Delivering regeneration projects on schedule and on budget, Reinvigorating town centers and the high street, Leveraging arts, cultural and heritage, Improving access to employment, Housing and regeneration, Major infrastructure projects and regeneration, Tourism, Leases, rents and rating issues, Urban/community planning. When urban regeneration is talked about, the approach to be taken for sustainable urban regeneration is to have a bottom's up vision for the same. Smart cities have a focus for the top down approach but if bottoms up approach is taken along with the ICT developed smart city, sustainability is ought to happen. The intelligent way to retrofit the existing areas to level up to the smart agenda is to have bottoms up approach integrated with the top down approach.

New urbanism-The urban design promoting walkable neighborhoods with land use strategies supports regional planning for balanced development namely new urbanism needs to relate to green urbanism which is conceptualized as creating communities collaboration with environmental sustainability. So for an existing city, the vision of urban regeneration needs to club with the new urbanism and green urbanism for sustainable development where the principles would be of zero waste city, water recycling, making the places usable with green buildings districts, livable, healthy communities having mixed used developments preserving the heritage and lastly good urban governance, leadership and best practices.

6. HOW LOCAL AREA PLANNING CAN CATER TO THE MAKING OF THE MASTER PLAN OF A CITY

A local area plan is proper planning and sustainable development of a specific area within a local authority where there are a set of objectives of land use zoning, public & private open spaces planning, car parking, and provision of infrastructure along with conservation of built heritage, natural environment and building and development standards. A local area plan objectives should be consistent with the objectives of the development plan. The local area planning is aimed towards a more sustainable development with involvement of the communities. The involvement of the communities or public participation and democratic oversight should be more effective to enhance the quality of the policies proposed for local area planning. The local area planning should be more people centric and should look after their interests by effective participation of the local participation. The local area planning tool is a good tool to rejuvenate the threatened areas of the city and protection of environmental qualities along with biodiversity. It has to be taken into consideration while

planning for the local area the social, economic and environmental perspective of the place. The incorporation with the master plan can then only be sought when the local area planning is according to the vita of its local areas.

7. CASE STUDIES

Urban regeneration of European cities- Roubaix in the Lille conurbation in northern France is an area where once a major textile town which became extremely run-down following the collapse of the industry in the 1970s and 1980s. The town has been regenerated through a wide-ranging programme of urban retrofitting.

Urban regeneration and economic restructuring were made between the physical transformation of the areas concerned and improvements to the prospects of local people, especially those who were adversely affected by the industrial decline who are referred to as 'pro poor'.

Roubaix experienced decline and deprivation after the collapse of the main industry therefore driven with regeneration programme

Roubaix is one of the France's few truly industrial regions mainly important for its textile towns. It was once very much important to Manchester because there were also coal mining and steel making industries then. After the world wars, these textile mills were hard hit and then these places collapsed in the face of the competitive world along with the other heavy industries nearby.

In the boom years, it had attracted many immigrants from all over Europe & North Africa to work in the mills. The employment rate was about 54000in 1973 in textile industry will went down to 8000 in 2000.

The Comité grand Lille was an informal body in 1993 under the local leading industrialist. The motto of this body was to provide an opportunity for civic and business leaders to think strategically about the bright future of the city region. It recommended the possible actions to improve the area's image and position as a major European centre in all fields of interest with international partnership. The committee creates links between business leaders to create strategies for promotion of the city region and help flagship events.

The aim and scope of regeneration of Roubaix focussed on rebuilding the town's economy, bringing retailing back to town and making it a shopping destination, creating safe and attractive public realm and promoting the city's heritage promoting social cohesion for tourists and therefore improving the housing stock to benefit the residents and linking new employment and training opportunities for local people from new investments .this town has a landmark of urban regeneration history. This helped many key players to have

employment for years. The region therefore benefitted from the metropolitan Lille and French government for the succession of the urban policies.

Pruitt–Igoe was an urban renewal failure. a large urban housing project was first occupied in 1954 in the U.S. city of St. Louis, Missouri. Living conditions in Pruitt–Igoe began to decline soon after its completion in 1956.By the late 1960s; the complex had become internationally infamous for its poverty, crime, and segregation. Its buildings were demolished with explosives in the mid1970s, and the project has become an icon of urban renewal and public policy planning failure.

During the mid 1900s, the city of St. Louis was overcrowded, with housing with deteriorated housing stock between the 1920s and the 1940s, and more than 85,000 families lived in tenements.

Survey in 1947 said that about 33000 houses had communal toilets mostly middle class people started leaving these areas as it was being predominated by the low income families. These slums and squatters were expanding and there was a threat that it would engulf the city centre. So the planning authorities decided to redevelop the area because the decay was profound there that gentrification of existing real estate was considered impractical.

The plan did not appear to be nicely implemented instead the mayor and republican state leaders favoured clearing the slums and replacing with high rise high density public housing. This would help the city increase revenue, open spaces and shopping space and basic amenities

"We must rebuild, open up and clean up the hearts of our cities. The fact that slums were created with all the intrinsic evils was everybody's fault. Now it is everybody's responsibility to repair the damage." -(Darst, 1951)The initial proposal provided a mix of high-rise, midrise and dense built form but later the cost of the federal nation exceeded the limit because the floors were above 11. It was initially a step forward in the urban renewal because the people looked at it to be an oasis in the desert compared to extreme poor housing conditions occupied previously. It was referred to as poor man's penthouse. Gradually these houses only accommodated 600 people in 17 buildings and other 16 buildings were left vacant. Later local authorities cited that there was lack of funding for the maintenance of these buildings and despite the decay of the public spaces and gang violence, it contained pockets of well brings even in the bad times. In 1968 the department of housing encouraged the residents to leave Pruitt- Igoe. They tries differentapproaches to decrease the density of the place 1st by demolishing the towers from 11 to 4 floors moving from vertical to horizontal development by which only a little people were displaced but legacy explained this regeneration as an architectural failure because it was cited by critics to be social factors including economy decline

. It was much about the social exclusion of the racial and class perspectives. Similar projects in New York were successful but Pruitt-Igoe was an example of urban regeneration failure just because government intervention in social problems only leads to waste, and to justify cutbacks on social and economic "equalization" programs.

These examples create a sense of social exclusion which led to the failure of the urban renewal just because of lack of the social inclusion because the factors of sustainable urban regeneration has three major components of social equity, environmental protection and economy generation which are interlinked with each other .

In the present situation Pruitt – Igoe has taken initiatives of competitions for the renewal of the area and there are a few illustrations of project ideas given by architects and students worldwide. it is still under the process of choosing the right and appropriate renewal strategy to bring the place back to life.The enormous piece of land has sat empty for 30 years now in an area of St. Louis that Struggles with population loss and crime, but is hopeful for redevelopment. the entire lot was purchased for just 1 million dollars this past year, and that the new owners are hopeful in making use of it.-(Freidrichs)

RETROFIT 2050 – UK city regionsis an urban retrofit initiative thataims at the step change in current knowledge and capacity for urban sustainability by the challenging but realistic social and technical ways of systematic retrofitting of the UK city regions. The need to retrofit buildings and urban infrastructure has gained increasing importance. The question arising was -

'How' do we collectively organise urban retrofit activities at scale to deliver significant environmental, social and economic benefits?-(ARUP)

An integrated bottom up approach to sustainable development has frequently been pursued at the expense of social sustainability and warns of creation of low carbon enclaves. Three models of retrofitting have been essentially proposed for the regeneration of the UK region namely smart networked city, self reliant green city and compact city. This means targeting investment to maximise environmental, economic and social benefits, often through area-based initiatives. It also means urban green growth strategies that promote greener public services; greener industrial production; and raising education and awareness programmes in cities to help underpin technology deployment and supporting innovative research and development.

Smart Networked City- A smart networked city as the name means is about how to retrofit an existing city to smart by relating to the present ICT age boom. After critically analyzing smart city characteristics the need for global urban issues are to be addressed in a smart city policy framework. The necessity for the smart characteristic of the city connected with the utilization of technology in urban life is essential for understanding to make the city smartly networked. The digital infrastructure with the services built upon these networks is one of the main economic driving forces for urban regeneration of regions. The characteristics of urban sustainability, which is a complex notion based on the interaction of physical, social and economic systems. Smart cities are a group of tool range that is linked through multiple networks which provide continuous data about the physical and social form of the city.Role of ICT is the main in the smart networked city. Digital network infrastructure is used for economic and political efficiency along with social, cultural and sustainable urban development. Therefore the information based development of a city is the feed of the present. A new understanding of the urban problems with effective and feasible ways to co ordinate urban technologies using various models and methods of urban retrofitting looking at risk, uncertainty and hazard management of the city is required to be done where efficiency has to be balanced with the equity and livability. The major challenges for Indian cities are to ensure the public participation and awareness. There is a need for joined up planning for envisioning the smart city to be woven into the fabric of the existing city governments whose mandate is producing a better quality of life for its citizenry.

Self Reliant Green City- Identifying urban typologies that relate to the physical and social conditions that occupy the city, along with a set of criteria that can be used to assess, plan, and design streets that are more contextual in nature.. Green Urbanism as can be perceived from the terms relates the green of the city, town or even the local community with the urbanizing effects. Beatley, in his revolutionary book 'Green Urbanism: learning from European cities' has mentioned that the vision of green urbanism includes the programs, policies and creative design ideas for urban renewal and environment sustainability. Though, it not only has to do with planting green but to look at the alternatives of sources of energy or anything of daily use and make it environment friendly. The planning regulations along with sensitive and efficient policies, which appeals to the local communities can put forward a city which is green and self-reliant.

Compact City - Compact city aims at a high-density mixed-use, and intensified urban form and is basically about making cities for people where neighborhoods are designed for walkability, connecting dense networks of street and path for non motorized transit, cycle friendly network with mixed use urban development for short commutes from places of living and work. Most of the cities in India are rapidly growing and they face challenges of congestion, pollution, poverty and crime. Urban regeneration is the most required in the case of the compact cities because this most challenging among the urban retrofitting models. As the urban land institute puts it - recognize the importance of public sector innovation in

promoting the socio-economic environment and sustainability of cities and regions and advancing the livelihood of their citizens." The major objectives spoken of are being strategic by responding to real needs, creating a framework, not a straitjacket, closing the gap between planning and execution, Collaborating to increase the likelihood of a positive impact, Thinking systemically and acting transversally, Using taxpayers' money wisely, Creating traction through reliable conditions and Facilitating performance metrics.-(institute)

8. CONCLUSION

The history of urban problems and opportunities are the relationship between physical conditions and social response. the possible use of urban fabric , the importance of economic success as a foundation for urban prosperity and quality of life , the need to make the best possible use of the urban land and avoid unnecessary sprawl and the importance of recognizing the urban policy mirrors the dominance of the social and political forces are the themes which should be done with the sustainable initiatives .therefore urban regeneration is the current need of the era where cities sprawl needs to controlled and core areas and brownfields need to be retrofitted resulting in implementation for sustainable development . .

REFERENCES

[1]   (Littig and Griesler (2005: 72). (1972). *social sustainablility.*

[2]   ., U. d. (n.d.). Urban development agenda 2015 .

[3]   2015, U. d. (n.d.).

[4]   ARCHDAILY.   (n.d.). *http://www.archdaily.com/153704/thepruittigoemythanurbanhistory/.*

[5]   ARUP. (n.d.). *http://www.retrofit2050.org.uk/.*

[6]   Christopher Cadell, N. F. (2008). *Regeneration in European cities.* joseph rowntree foundation.

[7]   Darst. (1951). *Pritt igoe.* St. Louis: Wikipedia.

[8]   Freidrichs . (n.d.). pruitt-igoe. *The Pruitt-Igoe Myth: An Urban History* .

[9]   *http://www.lille-metropole-2015.org/adu/sommaire.html.* (n.d.).

[10] institute, u. l.

[11] Iván Tosics. (n.d.). *Dilemmas of Integrated Area based urban renewal programmes* .

[12] tosics, i. (n.d.). *Dilemmas of Integrated area based urban renewal program* .

[13] wikipedia. (n.d.). *wikipedia.com.*