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Smart as the new Urban Utopia in post industrial nations, case of Dholera, Gujarat

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Abstract

Contemporary cities are faced with a rising population due to rural to urban migration, significant demographic changes, climate risks, economic shifts and rapid technological change. The proposals for new cities and its development process is looked at as a "ready- made" finished fit for all model where the planning fails to acknowledge the existing demographics and friction on ground. This paper argues that there is a disparity between vision and planning for Dholera Smart city. It investigates the strategy cantered on land use adopted by the Dholera Special Investment Region and its land development mechanism to understand the process of city making. It critically reflects on the Town Planning scheme model of development and the idea of greenfield city planning. Investigating Dholera as a case for special investment region and it tries to position it in the theoretical understanding of paradigm shift in the model of urban governance. The paper critically reflects on the narrative of speculative urbanism and state rescaling in the case of Dholera greenfield city. This research argues that new cities by themselves are not an answer to the urbanization challenges that India is facing in contemporary times.

Keywords: Smart City; Dholera; Special Investment Region; Greenfield City; Land- Use Strategy; Speculative Urbanism; Rentier Economy; State Rescaling.

1. Introduction

Urbanization in 19th century increased unhealthy conditions in the existing European towns and cities. Post-industrial cities were epicentres for industrial growth, hence migration to these cities were new challenges that these cities faced in the process of industrialisation. The process of urbanization went parallel to the process of Industrialization, as new trends in mechanization led to new factories and industries being set up in faraway locations from city centre. This was followed by many cities collapsing with the influx of people due to migration, unhealthy and unsanitary housing conditions, droughts, famines making people move these far way industrial centres as a rescue. Ebenezer Howard conceptualized the 'Garden City' as a relief from the horror and crises of urbanization in 1900s. It comprised of a utopian idea of dreamy, peaceful and perfect city life. There have been various utopian projects and concepts that have been projected in their times as futuristic living and science fiction as early proposals of urbanism. Some of them are "New City' (1914) concept by architect Antonio, Archigram (1960). All these projects never saw reality as envisaged and were flights of imagination as experimental urbanism and never tuned into live projects (varghese, 2015)".

Contemporary cities are faced with significant demographic changes, climate risks, economic shifts and rapid technological change. This results in adopting new frameworks of new city making, urban regeneration, special investment zones, special economic zones regenerating infrastructure to make governance ready to adapt the changing models of cities. Since 2000, Smart cities have emerged as the only solution for rapid urbanization in Indian urban context. Smart cities like Nashik and Thane in Maharashtra, Vadodara and Ahmedabad in Gujarat have been praised for their interventions in the form of urban regeneration and public projects under SMART city but have been criticized for having a narrow epistemological perspective. Smart city is in its infancy and faces issues like having a corporate agenda that serves multinational consultancies and technological companies. It suffers from a fragmented approach towards new city planning and urban regeneration (Hollands, 2008) (Vanolo, 2014). Several scholars like Ashima Sood (Loraine Kennedy, 2016), (Datta A. , 2015), Dr. Nikita Sud have argued that the issue lies in the conceptualization of the smart city itself and the premise in which the new city making is thought about. It considers the city as a clean slate and erases the demographic and the historical landscape.

The new city making process is looked at as a "ready- made" finished fit for all model where the city fails to acknowledge the existing demographics and friction on ground. Latour argues that the cities should align themselves with processes and aligns its understanding in relation to science. All the explanations of science are understood as a process and "in the making" (Latour, 1987).

This paper argues that there is a disparity between vision and planning for Dholera Smart city. It investigates the strategy centred around land use of a greenfield development adopted by the Dholera Special Investment Region and its land development mechanism to understand the process of city making. It critically reflects on the Town Planning scheme model of development and the idea of greenfield city planning. Taking Dholera as a case for special investment region it tries to position it in the theoretical understanding of paradigm shift in the model of urban governance. The paper critically reflects on the narrative of speculative urbanism and state rescaling in the case of Dholera greenfield city. It sees Dholera as a case of 'Rentier Economy' responding to the new model of urban governance under private public partnership and Special Purpose Vehicle model.

1.1. Dedicated Freight Corridor

The project of Dedicated Freight Corridor project was conceptualized by the NDA government in 2005. In 2005 post Japan and India summit at Vibrant Gujrat , Japan was brought on board as a partner for the DFC project. A Special Purpose vehicle was created in the name of Dedicated Freight Corridor (a national highway project connecting Delhi and Mumbai targeting Global Investment from World bank and Foreign Direct Investment) in 2006 to oversee the construction. This attempt was a shift in the traditional planning paradigm reflecting the bypassing of the power of planning and execution to private authorities and role of politics in planning. The Delhi Mumbai Corridor is a project under the dedicated freight corridor which was exclusively planned in response to the urbanization in India. The planning of the DMIC corridor was highly influenced by the idea of global capital gain affected by the liberalization reforms of 1991. The Delhi Mumbai Industrial Corridor was handheld by Department of Industrial Policy and Ministry of Commerce and Industry showing their involvement and approval for the Special Investment region. Following the release of "DMIC Concept paper" by above mentioned authorities the Indian government in 2008 set up the "DMIC development corporation" in 2008. A new corporation was appointed by the State that would be henceforth responsible for the implementation of the project and selection of the various agencies in support of the real estate development.

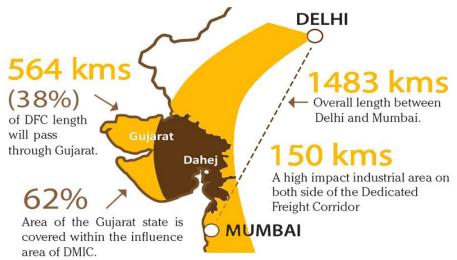


Figure 1. Proposed Dedicated Freight Corridor

"The Government of India held 49% of the stake in the DMICDC while IL&FS and IDFC, private development and financial corporations held the remaining 51 percent. (This arrangement lasted till September 2012 when both private companies were asked to exit due to potential conflict of interest and replaced by State run institutions including HUDCO and LIC)" (Ghosh, n.d.)

Figure 2 shows the 25 new Special Investment Regions proposed as Industrial towns by the DMIC concept paper. Scott Wilson Group prepared the 'Detailed Perspective Plan' for the project and a global consultancy firm called McKinsey & Company as a research consultant to facilitate economic analysis, demographic projection and policy recommendation. McKinsey & Company in their report (McKinsey, 2010) recommended that these cities should be active facilitators in the provision of infrastructure and services. The report highlighted the infrastructure development to be the prime objective of the project. The DMIC satellite cities are envisioned as "industrial areas and investment zones" administered by a centralized State-run development agency (DMICDC) in collaboration with authorities (AECOM and HALCROW) sitting in Japan (Extrastatecraft, 2021). These agencies were overseeing the funding provided by them.

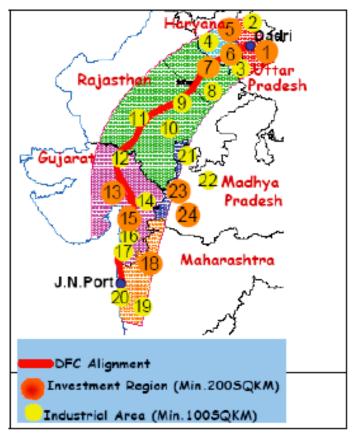


Figure 2. Proposed Industrial towns along Freight Corridor

1.2. Conceptualizing Dholera along Delhi Mumbai Industrial Corridor Project (DMIC)

Dholera is a small village with a population of 39,000 people situated in the low-lying area off the Gulf of Khambhat. It is one of the 22 villages which were pooled together to make 'Dholera smart city'. Datta in her paper clarified the demographic conditions of Dholera as 47% is agricultural, with 62% is occupied with residents with agriculture as mainstream occupation (Datta A. , 2015) . The locals have continuously shown high dependability on their agricultural outcomes as their primary source of income. However, DMIC concept paper identifies the region to be saline with low agricultural produce and people being large landowners of greenfield site and barren crops. Dholera is an extension of the Narmada Dam debate that the central and state government promised the villager around Dholera and surrounding villages. These farmers were promised services like water from dam, but it still remains as a speculated promise. Out of 924 sq kms of identified site are for the Special Investment region project, almost half land falls under coastal regulations.

The size of the city was proposed to be 920 square kms which is double the size of Ahmedabad city. The proposed industrial city was planned to be a twin city to Ahmedabad. "Dholera has at times been labelled an industrial city, a knowledge city, a global city, an eco-city and only recently as a smart city. Therefore, its aims and objectives have remained slippery and changed continuously. This ambiguity is part of an entrepreneurial urbanization model that makes it harder to examine its claims and therefore conduct a systematic examination of its strengths and weaknesses. (Datta A. , 2015)." The ambiguity in the terminology and the shallow approach of loosely using them interchangeably shows the lack of clarity in the conceptualisation of the Dholera SIR project. These terms have been used to attract investments on state and national scale. The target group of the project being Big Giants, using these terms proved to be helpful for Dholera's case during its first phase to collect funds.

1.3. Dholera SIR as new Utopia

"The Dholera Special Investment Region (DSIR) is envisaged to be a world class destination with efficient infrastructure opportunities for setting up of manufacturing units which will help in increasing the industrial output of the country and create jobs besides providing an environment for work, live, learn and play. DSIR is a planned smart, sustainable community which will be the role model for future cities in India." (https://www.nicdc.in/, 2021).

¹ Entrepreneurial Urbanism was the term coined by (Harvey, 1989) explaining the impact of decentralisation on various processes of urbanisation. He used this term to describe the paradigm shift in the model of urban governance.

(Kalia, 1990) describes Dholera to be continuation of the narrative of the "postcolonial modernisation" that characterised "new towns" as investment projects. Kalia argues that "Dholera can be understood as a real time socio- technical manifestation of an urban utopia with its vision of becoming a global industrial hub (Kalia, 1990)". The master planning of Dholera was done by HALCROW, who worked with Indian consultants and local architecture team named Design Planning Counsel. They envisioned Dholera Special Investment Region to be 924 sq. km of site as a large-scale project that was planned to be developed in three phases at an interval of 10 years each. The project showcased the aspirations of a developing country like India wanting to create a benchmark in the global market by imitating the trends of European and Asian countries. Dholera followed the new city making process as a top-down model which was particularly inspired by the Neo Liberal state. The top-down model of master planning the cities from scratch has also been seen nationwide in cities like Navi Mumbai, HITEC city, Lavasa and many more. Like these examples, Dholera was also branded as "pinnacle of technology driven urbanism (Datta A. , 2015)".

Scholars have argued that the "rise of gated communities, new towns, satellite cities in the global South have been seen as a symbol of 'postcolonial urbanism' and it reflects a different move towards the 'worlding' of cities (Roy, 2011)" and assemblage urbanism (Macfarlane, 2011). The Indian Finance Minister proposed 24 new smart cities along the DMIC corridor in 2010 as a part of the Dedicated Freight Corridor mega project. This mega project was a national project to uplift the real estate and scale up the development in parallel to the global narratives of Third World Cities. 'Industrial' and 'Smart' have been used as labels to describe Dholera interchangeably- "the former representing economic reasoning and the latter reflecting globally marketable logics for attracting business and investment. (Datta A., 2015)". The vague understanding of the terms and loosely fitting them to create a vision for Dholera Greenfield site shows the depth of the understanding of the project and its proposals at National level.

2. Material and Methods

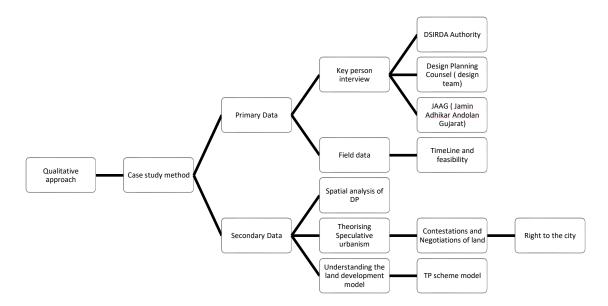
The research begins with the theoretical understanding of Smart cities and how new cities have been conceptualized in contemporary Indian cities. Understanding the Delhi Mumbai Industrial Corridor as the mega project of the nation, a systemic understanding of the need of the cities in the DMIC corridor is needed. Analysing the infrastructure requirements of the corridor, a case was selected to explore the specifics of the master planning practice along the DMIC corridor. Building on the narrative of the Utopian city, an argument was made that Dholera SIR is exclusive, exhibiting post industrialization traits and is utopian in nature.

The research adopted pragmatic case analysis to compare two Special Investment Region along the same corridor and analyse them on the basis of their land use and development mechanisms. Further considering Dholera as a specific case of speculative urbanism², the Dholera Development plan was reviewed based on the parameters of infrastructure provision identified in the DP.

A comparative land use analysis was done for Dholera SIR and Mandal Becharaji SIR based on the premise that both have the same development model but different approaches to land mechanism to city making. From the analysis, an alternative land development model was suggested justifying it with an example of the community led planning of Magarpatta city in Pune. Key person interview was conducted with the local design team and the DSIRDA authorities to understand the opinions and the challenges faced.

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² Speculative urbanism can be said to embody urban governance as "investment strategy"; it represents the turbulent trajectory of world-class city making projects in an era where the returns to capital are their primary driving force and metric (Sood, 2019)



2.1. Speculative Urbanism

The state of exception in the entrepreneurial mode of city making completely overlook the spatial growth patterns and socio-cultural geography by facilitating privatized forms of urban government, investment-led growth and structural growth. This results in the planning project being totally disconnected and fragmented on the ground with the labour markets that are segments and highly polarized labour wages. Dholera smart city is analogous to a private township and a high-end gated community striving through segmented housing markets, concerned with the heterogeneity of contestation and co- production of spaces. These proposals question the master-planned development and need-based economy failing to provide basic infrastructure services to the community. The only aim of the Dholera smart city seems to create speculative urban landscapes, imagined through mixed-use buildings and iconic architecture. "The temporary 'state of exception', with both its attendant suspensions of civil and human rights as well as their institutionalization into government practices, reflects a shift into new forms of 'speculative' government, economy, urbanism and citizenship (Goldman, Speculative Urbanism and the Making of the Next World City, 2011)"

Since 1991, India has been experimenting with the institutionalisation of "public private partnership" (PPP). The emergent method of governance led to the conception of Special Purpose Vehicles to guide the urban regeneration and megaprojects in the developing and the new cities. The 74th Constitutional Amendment legitimized decentralised mode of governance against the background of IMF- supported states. This not only created speculative modes of governance but also demanded for reconfiguration of state powers and functions across national, subnational and local scale. (Goldman, 2011) (Mahadevia, 2011).

2.2. State Rescaling

The 74th constitutional amendment gives the opportunity to the state government to play the role of dominant urban actors adopting the entrepreneurial mode of governance and promoting large infrastructure projects like riverfront development and airports on the outer peripheries of booming metropolitan cities along the DMIC corridor. The change in power role created supporting institutions at various levels (SPVs and regional authorities) These institutions outsourced the project planning to global market and private consultants. The creation of Regional Development Authority in DMIC is an evident example of state actors relying on extraordinary privileges to depart and "bypass" the policies of state government.

ORGANISATIONAL STRUCTURE DELHI MUMBAI INDUSTRIAL CORRIDOR STATE GOVERNMENT, DEVELOPMENT CORPORATION GOVERNMENT OF GUJARAT DEPARTMENT OF INDUSTRIES (DMICDC) AND MINES GUJARAT INDUSTRIAL **GUJARA**1 PMNC INFRASTRUCTURE CORRIDOR CORPORATION (GICC) (AECOM) DEVELOPMENT BOARD (GIDB) DSIRDA BOARD MEMBERS: A. PRINCIPAL SECRETARY DHOLERA SPECIAL INVESTMENT B. CHIEF EXECUTIVE OFFICER, GIDB C. INDUSTRIES COMMISSIONER (DSIRDA) D. COLLECTOR, AHMEDABAD E. DISTRICT DEVELOPMENT OFFICER, (51%) AHMEDABAD F. DIRECTOR, CEPT DHOLERA INDUSTRIAL CITY G. SHRI U.S. MEHTA (49 %) DEVELOPMENT LIMITED H. PRESIDENT, GUJARAT CHAMBER OF (DICDL) COMMERCE AND INDUSTRIES I. CHIEF EXECUTIVE OFFICER, DSIRDA [SPV] **Apex Monitoring Authority** (chaired by FM) National Industrial Corridor Development & Implementation Trust (NICDIT) Knowledge Partner (NICDC) Investment Node/ State Govt. City/ Project Level SPV Land rolling development model in Shanghai Rural collectively-owned land Pudong New Area government pays 30% of estimated price to convert land ownership and land management (land pre-acquisition costs) Pudong New Area Development Zone Land ownership and land Development Zone Company management are transferred to the Company pays 70% of purchases development zone land using funds provided by the the land price to Development Zone procure full ownership government of the land Government establishes the Development Zone Company

Development Zone Company may mortgage land for loans to construct the development zone.

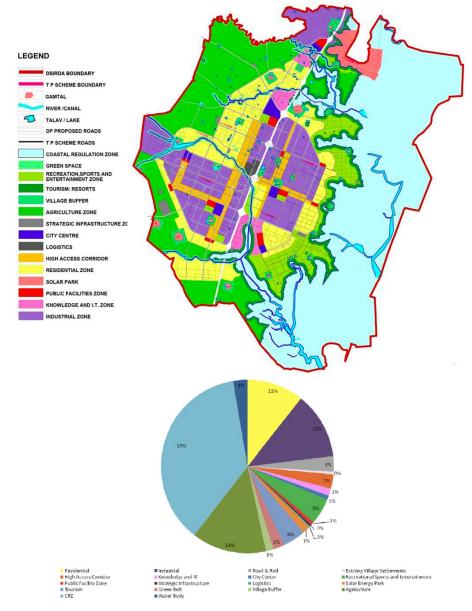
2.3. Shanghai Model of Development

The Shanghai model of development is a strategy that converts 'raw' land into 'developable' land. The urban development process in China has been dual because of the land ownership patterns. The development of land is important for the government to attract investors and get financial support. China has a dual land holding system. The land in the city is owned by the state and the rural area is collectively-owned land. Hence, when new towns and cities are proposed or an existing development project reaches certain stage and is in need of more land rural land is used first. The government appropriates the collectively-owned land first and converts into state owned and makes it available for development. The government compensates the owner for their land by charging the 'betterment' fees for developing their land. Thus, this model leaves little scope for the land proclaiming method to fail and makes it easy for the state to develop and own the land. Figure 5 shows the structural framework of Shanghai model of development executed in Pudong demonstrating land procurement method.

3. Dholera Case Study

Dholera Smart City was a joint venture of Government of Gujarat and the central Government. It is located on the Ahmedabad-Dholera industrial region along the DMIC corridor. The master planning of Dholera was done with the premise that it would be a "self-sustaining eco-system consisting of economic drivers through industrialisation, utility & logistic infrastructure, Social Infrastructure including education, healthcare and other public amenities".

3.1. Exclusive Land Use Planning



The land use planning (figure 3) was done by Halcrow, UK and Design Planning and Counsel as the local Indian architecture firm. It was done based on twelve spatial planning exercises and conventional principles like:

"Creation of a compact city, Integration of land uses, Accessibility of industrial zones, Focus on the city internally away from the central expressway, Separation of industrial and city traffic, Provision for a high quality public transport system, Development of a poly centric structure that has number of commercial and community nodes, Integration of existing villages in new city, Conservation of the better agricultural land, Protection of CRZ (Coastal Regulations Zone), Development of strong landscape strategy (Authority, 2012)"

Analysing the land use plan spatially based on the above-mentioned principles and the manner in which they were conceptualised in the master plan, it is evident that the major thrust lies with the provision of industries and commercial use. The farming activities and the provision of land back to the villagers does not hold true because the plan clearly shows the gentrification of the farmlands and housing to the periphery of the land use plan. The plan has centrally placed Industrial zone which reflects the principles of entrepreneurial urbanism of prioritising space for private investments and not integration policies as promised by the vision of Dholera SIR. The development strategy also commands for the forceful acquisition of the land for the industrial purpose because the land title clearance of the village restricts them to execute the planning mechanism fruitfully without control and ownership of land. An analysis of the percentages of allotted land use reflects the agenda:

- Importance to industrial sector (32%)
- 0% share of the existing villages in the master plan leaving the existing village as it is in a confined boundary. The exclusion of the village boundary and the response of the master plan to it shows the nature of exclusivity in the planning of Dholera SIR.
- Village buffer and agricultural provision are clubbed together restricting the future growth and farming needs of the people of the village.
- The residential share (11%) is the sum total of all the housing needs. It includes the new high-density housing, vertical living, medium density housing and EWS housing. The housing clusters are divided as per the affordability data received from the feasibility report.
- The forceful insert of infrastructure like logistics, strategic infrastructure, Knowledge and IT in the land use plan is an example of ad-hoc planning and fragmented approach where the target user group and the supply have no relation to each other.
- The public facility zone and the city centre are strategically located at a distance far from the village buffer and the existing village proximity assuring their forceful exemption in the use of the elite spaces planned by the authority.

3.2. Land Development Model

Land being the key component of urban development for any project there are two methods of land procurement in India:

- Land Acquisition Act (1984)
- Town Planning Scheme under GTPUDA (Gujarat Town Planning and Urban Development) Act (dholerasir.com, 2020).

Dholera SIR adopted Town Planning Scheme model to readjust and allocate land for the SIR project.

3.2.1. Town Planning Scheme

The Land development model in Dholera SIR is based on the Town Planning Scheme³. The draft report mentions the authority to acquire land in the SIR zone by sale, lease, grant, allocation, donation, consent agreement or through proceedings under the Land Acquisition Act (1894) (dholerasir.com, 2020).

The entire area (920 sq. kms) of Dholera SIR was divided in six TP schemes under GTPUD Act (1976). Land for roads including 250-meter expressway and the strategic infrastructure proposed in the development plan was deducted from the land acquired. The model worked in the percentage share of 50-50 where farmers were asked to give away 50% of their land in lieu of compensation. The remaining land was readjusted, developed by the SIR and returned to them. The government decided to waive off the betterment charge from the land holders to portray a win-win situation of the TP scheme model.

"The problem with the 2013 land acquisition Act is that its patronized farmers, not empower them. Also, the debate on land has been dominated by ideological posturing and political opportunism. Ruling parties feel the onus to deliver on industrialization, but opposition parties are eager to hem them in with anti-farmer charges. Elections only switch roles" (Ghatak).

³ Town Planning Scheme (TP Scheme) is a tool used in Gujarat to appropriate land for public purposes, social infrastructure and other national projects. It helps to organize urban growth in a planned manner (AMC Town Planning Schemes, Ahmedabad 2001 -2003, n.d.)

The greenfield site required for new city building requires huge land suitable for an infrastructure project. The rezoned land after the implementation of the Town planning scheme in Dholera leaves the farmers with dislocated plots with highly contested land use. The changed land use restricts the farmers from continuing cotton farming in their land and in no choice but to surrender to the demands of the real estate developer. The project assumes that the locals should pay the price of the "greater good" and promote development by giving their land. The development model did not pay any pre-acquisition costs to the owners and the developed land that the locals got in return was 50% of their original land. Under the 73rd Amendment Act ,70% consent is required before acquiring land and since this project works on the principle of decentralized PPP model the project got approved by bypassing the laws. Government agencies acquired land without prior consent of the farmers.

However, the local leaders who could understand the scheme made money out of the scheme by selling their lands at cheap prices in lieu of Audi car "char bangda wadi" as they name them. This glaring ignorance is an evidence of the spectacular dream of the individual to be part of the urban utopian identity and the national agenda to capitalize on the middle-class dreams.

4. Documentary Analysis

The document analyzed was the Draft Development Plan of Dholera SIR. This was done based on the analytical framework of land uses identified in the development plan and the stock of it in the explanation in the report. The analysis tried to navigate through the land use provisions in the Land use map v/s the provision and the proposed execution framework.

4.1. Review of Dholera Draft Development Report

The purpose of the Draft Development Plan was put out a framework for the area of the DSIR for a period of 30 years starting from 2010. It presented the background, vision and the DSIR guideline. The report provided spatial allocations for the new city and phasing strategy including land use, transport and major infrastructure utilities and services.

Zone	Allocation	Analysis
Industrial and	11,661-hectare land for	Ambiguity in clear demarcation of percentage share of knowledge, IT, industries and
Economic zone	industrial and logistics	activities for the logistics zone
Residential Area	6785 hectares of land	Further division of low, medium and high-density housing details to chart out the
	allocated for housing	provisional location of the same and allocation of resources to each. No separate
		provision of affordable housing.
Government, Civic	Government offices	The allocation of land for civic services and religious places were not in relation to the
and cultural		need of the space or its service to the neighbourhood around it. They were just placed
activities.		randomly in the CBD area making it not usable and inaccessible to majority of the
		people. Though these civic services primarily serve the city and not really promote
		business, the conceptual idea of distributing activities in DP is questionable.
Leisure and Tourism	Eco- resorts, Black buck	Allocation of leisure and tourism activities show very less opportunities for the villagers
	sanctuary, hotels, Film	to involve in the new city. The black buck century highlights the context whereas other
	city	activities such as eco-resort, film city have no feasibility check whatsoever. They were
		just identified as probable business opportunities.
Green spaces,	21% of total master plan	21% includes village farming land, village buffer, green space, future expansion and city
Recreation and	allotted for open and	level recreation spaces making it very unclear regarding the space allocation for each
Agriculture	green areas	of the activities. The ambiguity resulted in contestations of space and demand from
		the villagers to use the land under green area.
Transport	International Airport,	The allocation aimed to improve network with the freight and the Navagam village
	Central expressway	where the proposed international airport was situated. The entire project is based on
	corridor (SH-6), Trams,	the premise of this larger DMIC connectivity and Dholera being a part of the
	metro	connection. However, the internal connectivity follows the typical primary, secondary
		and tertiary bifurcations and there is no concept of last mile connectivity for the
		proposal of metro and service trams as proposed in the plan.
Utilities	Freshwater, world class	The city lacks freshwater source due to its geographical location near the sea.
	power facilities,	However, the plan promised to borrow water from a distant Narmada canal increasing
	telecommunications, gas	the infrastructure cost. The city was planned as a world class city with technologically
	and waste management.	advanced services like WIFI, hence power supply and fibre networks also become part
		of the planning exercise which has no mention in the development stage or
		implementation.
Environment and	Creation of buffer zone	The notion of creating the buffer zone outside the village refrained resettlement of the
social strategy	around the village	villagers, but also detached them from the larger project around them. The project
		being built on their land reaped no quality benefits to them.

4.2. Mandal Becharaji Special Investment Region, Gujarat

Mandal Becharaji was a parallel SIR announced by the central government along with the city of Dholera. Mandal Becharaji Special Investment region (MBSIR) was proposed over an area of 101 sq. km by its special regional authority and Gujarat government. It was an initiative built on the similar premise and with the similar vision and aspiration

of global investment from the central government. The positive features of MBSIR can help to understand the shortfalls of DSIR project.

Looking at the approach of the land use exercise done by State gives us a completely different narrative for how this industrial city was planned. The major difference between both the projects was the scale of the project, type of soil and the land use strategy adopted to implement the project. Director of DPC mentioned MBSIR as one of the learning lessons and a successful example of land procurement because of its scale of plan and its execution and phasing strategy.

Here the land use proposal was envisioned to promote a strategic quality of life in the industrial city and it included following zones:

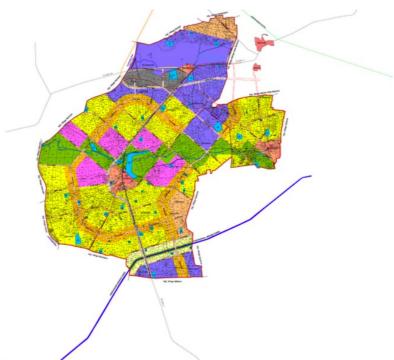


Figure 6. Mandal Becharaji Land use plan. Source: DPC

"Industrial, Logistics, Knowledge and IT, Residential, Affordable Housing, High Access Corridor (dholerasir.com, 2020)"

- Mixed Use
- Village Buffer
- Recreation, Sports and Entertainment.

Looking at the spatial analysis of the land use plan (figure 4) it showed that the proposal of residential zone at the core of the plan and industries on one side of the proposed land use division were strategically done to promote healthy living and betterment of quality of infrastructure. The plan had a clear provision of mixed-use land use anticipating new business models of Public private partnership on that land along with the village community. Comparing the Dholera and Mandal Becharaji approaches of allocating land for various uses, the following things

Comparing the Dholera and Mandal Becharaji approaches of allocating land for various uses, the following things are evident:

- Residential zone in MBSIR occupied an equal share as the industrial zone in plan. The zone is supported by the
 proposed high access corridor to provide catalyst for development. Whereas in Dholera, Industrial zone
 occupied the centre.
- The MBSIR plan clearly mentioned the provision of an affordable housing for the gentrified and displaced people showing an attempt to bring equity at the grassroot level. However, Dholera has no such opportunity as planned.
- Mandal's plan also has the allocation of the land as 'mixed use' where they proposed residential and commerce
 together to support the low-income commerce and for village people who in lieu of their land can start small
 scale businesses. The mixed-use zone run along the entire residential zone to serve as a resource provider for
 the residential area. Dholera has no provision of such a mixed-use zone.
- The green zone runs in Mandal plan lies in the centre and is equally divided spatially and made accessible to all surrounding areas and not at the peripheral boundary as planned in Dholera.

5. Conclusion

Dholera SIR is a case of Greenfield development proposed under the contested top-down approach in planning of new cities. It is an example of massive "Humanization" due to its land development model approach. The TP Scheme approach converted the agrarian land and its surrounding into an exercise of design making for the new city where the site demographics and the local need seemed not to be reflected in the development plan proposed. The development plan was conceptualized on the premise of market-oriented economy and investment model of city development. This discourse of city building narrates and example of paradigm shift in the planning practices where top-down model of development. The master planned cities are an example of considering the site to be "clean slate" and erasing the land dynamics and ownership on ground. Being built on the narrative of Speculative urbanism and Rentier economy, Dholera generates a debate of right to the city in the project. The project envisaged a million job opportunities and infrastructure deals during its conceptualization, but the sheer lack of interest of industrialist for the project raises the question of market-based economy on the site. The need of demand for the production affected the supply of funds and people both.

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Conflict of Interests

The Authors declare no conflict of interest.

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