

## **EQUITABLE HOUSING FOR NEW INDUSTRIAL TOWNS IN INDIA AT DHOLERA, GUJRAT.**

### **Re-defining the housing typology**

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#### **Abstract**

With an increasing population, the need for accommodating them is also increasing exponentially. In this neo-liberal era industries are being established at a great pace like never before. The urge to create livelihood for oneself makes people migrate to cease these opportunities. This further leads to creation of an influx of a diverse population to a particular location. We have tons of apartments which are a result of modern construction and material technology. These can be deployed in a short period of time and can raise the value in this speculative market. Unfortunately, this has no relation with people who arrive but it's a sign of capital that has arrived. Investors globally inject a lot of capital into these high profit projects expecting high returns. This has been a widely accepted practice because of its monetary benefits but on the other side it creates inequity. Since this capital occupies prime space of the city with rich services and infrastructure. It marginalizes people and we see massive inequities that play themselves out as they eventually fled to the edges of the city. This clearly states the dire need of adopting equitable strategy in the housing sector. The social bifurcation also reflects the living conditions. While research suggests that people with affordable, well-designed housing lead healthier, happier lives than those who are rent-burdened or ill-housed. This concern transcends architectural boundaries. It is an issue to be addressed by various other respects and systems. There is still a scope of architectural intervention to initiate the process. The aim of the thesis revolves around the application of equitable strategy through design and its intervention in the housing system. Housing being the basic need it becomes a natural site of intervention to put forward the Avant-Garde ideas. To demonstrate and establish a working setup of equitable housing in new Industrial Townships in India is the main objective of this thesis. Dholera being at a germinating stage, the site has been chosen accordingly as a case example.

#### **Background**

Equitable housing is a principal element for a more democratic city. Unfortunately, in many countries, the term "Housing" still has a negative connotation. It is often seen as a project that seeks to build the largest number of units with cheap materials, and little-to-no concern for the quality of life of its residents. Oftentimes, it is designed for monetary reasons, as opposed to a project that serves the city and its people. Although this fact is recurrent, there are several examples that portray the opposite, in which architects manifest their political point of view through exceptional projects with innovative solutions that improve the urban experience.

Despite the fact that thousands and thousands of pieces of evidence call us to the idea that we should start with the capacities and the abilities in people and in communities, we see this great preponderance in governmental and non-governmental programmed alike, around the focus and the obsession with the starting on what is wrong, what is broken, what is pathological within people. Sadly, that focus has caused huge harm to millions of people around the world, especially poor people and especially communities.

Unfortunately, it has created four harms, unintended as they may be in particular,

- The **first** of which is that it actually takes people who we are trying to help, and it defines them not by their gifts and capacities, and what they can bring to the solution, but by their deficiencies and their problems.

- The **second** unintended consequence of this top-down obsession with what's wrong, is that money which is intended to go towards those that need the help, doesn't. It actually goes to those who are paid to provide the services to those who need help.
- The **third** unintended consequence is that active citizenship, the power to take action and to respond at the grassroots level, retreats in the face of ever-increasing technocracy, professionalism and expertise.
- The **fourth** entire neighborhoods, entire communities that have been defined as deficient, start to internalize that map, and believe that the only way that anything is going to change for them, is when some outside expert, with the right program and the right money, comes in to rescue them.

The problem isn't with the resident, but with the approach we have adopted to solve the issue. There is no benefit answering the wrong question. We need to identify the ground reality of the residents and the archetypes to provide a better solution to the problem. It can start just by identifying the **Factors ruling:**

1. The skills of local residents
2. The power of local social networks
3. The resources of public, private and non-profit institutions
4. The physical and economic resources of local places
5. The stories of our shared lives

In equitable community one of the things, that is deeply cared about is how people can live well and age well at their 'home' and also how they can ensure that those who are living, do not die with an experience of mediocrity and regret.

One of the things that I have also come to understand, is that there is no right program and there is no service for the underprivileged and their means of living. The only way that we can address this is by building community, by building deep relationships - and so traditional models, which take these LIG, EWS people and put them together with LIG people in programs for LIG, EWS people, will not be sufficient to end this inequity. Equitable housing, the focus is not on building a bridge between vulnerable populations at the center of their services, but on building a bridge between underprivileged people, and the center of community life.

For an idea, out of the **three billion** people living in cities today, **one billion** are under the line of poverty. By 2030, out of the **five billion** people that will be living in cities, **two billion** are going to be under the line of poverty.

That means that we will have to build a **one-million-person city per week with 7 lakh rupees per family during the next 15 years**. A one-million-person city per week with 7 lakh rupees per family. If we don't solve this equation, it is not that people will stop coming to cities. They will come anyhow, but they will live in slums and informal settlements. This is an alarming issue and there is a chance for us to cease this opportunity to initiate a new strategy that works for the people!

Urbanization and rapid population growth are affecting adequacy and access to basic shelter by a large section of the urban population. Since supply is not keeping pace with the growing archetypical demands. In order to address this problem public sector housing bodies have undertaken mass housing construction but funds and resource constraints quality is often compromised. As mentioned before, large sections are compelled to live in squatters, which are often unsanitary. Hence in India the present problems of housing do not confine itself to quantity, the quality of housing needs to be simultaneously addressed.

When the rest of the world is struggling to deal with issues like global warming and ozone depletion, in India more fundamental issues like poverty, unemployment, hunger, and shelter inadequacy need urgent attention. Therefore, in order to find a balance between current issues of poverty and climate change, shelter issues need to be integrated with the overall development of the country through proper evaluation of present action and future impacts with particular regard for the poor. For development to be sustainable it must integrate all aspects, which are social, economic, environmental, political and technological.

## **Introduction**

Shelter has been a basic need and a primary essential component of human habitation to survive and thrive. Today, housing has become a major concern amongst the demand of the increasing population. It is a major part of one's life and the most important investment or asset one holds. Hence, it is necessary to address this entity holistically.

### **What is Equitable development?**

Equitable by definition is something that is fair and impartial. Equitability is a principal element of a democratic country. It makes sure that all the citizens are treated unbiased irrespective of their economic and social status. Why do we need it in housing? Because, in India we vastly encounter a type of population who are arbitrarily discriminated against. In this era these people are being forgotten despite being an integral part of the city's lifestyle.

Equitable Housing strategy takes care of this imbalance in the society to promote wellbeing of every individual who lives there. It provides the neglected that little opportunity to thrive and lead a better life. Housing being the prime need it becomes a natural site of intervention to put forward this ethic. This will induce the sense of virtue of treating our fellow beings with dignity. Why is this shift necessary right now? As we are heading towards a more advanced state of living in terms of technology, resource management. We are also leading to a destructive phase of our own resources. These age-old typologies are no more relevant to today's context. Innovations help us to overcome challenges we will face in the future, and yet when it comes to housing, we are still not innovative enough to ensure we will even have a future. We are unable to see beyond the existing typology. This would be at a point in time redundant because of the new set of modern demands.

### **Need**

India is heading towards a phase of setting up industries. There comes a need for industrial townships to accommodate these people, as in the case of Dholera. Dholera SIR is an emerging industrial hub with a proposed industrial township. It has been planned in 3 phases of development. Proposed economic activity mix at the DSIR entails a total of 9,225 hectares of land up to 2040. This economic activity mix is expected to employ approximately 3,42,400 workers. The industries range from Heavy Engineering, Automobile and Ancillary, Electronics, Biotechnology, Metallurgical, General, IT and Agri based setups.

The Dholera Special Investment Region (DSIR) will be a major new industrial hub located on a greenfield site about 100km south of Ahmedabad and about 130km from Gandhinagar. The project is the first investment region to be designated under the proposed Delhi-Mumbai Industrial Corridor project (DMIC), a joint Indian and Japanese Government initiative to create a linear zone of industrial development nodes along a Dedicated Freight Corridor (DFC) railway.

The vision mentions that the Draft Development Plan aims at the creation of an economically and socially balanced, new age city with world class infrastructure and high quality of life. This would be a golden opportunity to implement the 'Equitable Housing Strategy' at Dholera SIR. Since the township is still at a germinating stage, with the right application of such strategies we can create a strong root foundation for the city for a better future. This can be the Experimental Project to break the existing housing and living typologies and trends. Simultaneously it can be an ideal case example for all new industrial townships in India.

This is an attempt to demonstrate how an architect can play an important role as an activist along with the community to reach desired results along with advocating policies and standards. In this face of persistent

social inequities worldwide, how can architects make a meaningful contribution? Housing's primary position in our lives, economies and the built environment makes it a natural site of intervention in the complex fight against systemic injustices. Beyond policies and data showing the generative value of housing, people across the world seek a sense of dignity and identity through their homes.

### **Housing sector in India**

The housing sector in India is a large functioning system. With a varied number of user groups, there comes a need to accommodate them according to their subjective demands. We can thus observe a common feature of these so formed typologies. At the core we see a compressed module of housing like High Rise apartments and mixed-use buildings catering to the elite or high-income group. Similarly, at the periphery we see low-rise unorganized buildings catering to the low- or mid-income population. This creates a social bifurcation of people hence leading to a stark difference in living conditions within the same context.

Ironically, there is no shortage of housing, Real-estate sector has established a large number of projects yet to be occupied. But it is awaited by the small section of the population who can afford it. For the unprivileged who can't afford, there remains an only option to settle for an under average housing.

Shelter has always been a major need for human habitation. There is an equal right of every human to live in a society where there is mutual growth amongst one another. There is a need to redefine the housing typology of the population based on their occupation or economic status.

This enables us to question, are we giving enough opportunity for the unprivileged to grow along with the privileged people? Accommodation could be one of the means through which we can achieve this harmony and thrive. We need a robust system of housing which does not discriminate against a group of people based on their economic or social status. The concept of co-living has to be implemented in our daily lives too. Architecture must not act as a barrier for housing the population, it must be done unbiased. This attempt does not force people to live together nor segregate them. But to give opportunity to the one who wants to liberate themselves.

### **Potential of Equitability**

Equitable housing is a principal element for a more democratic city. Unfortunately, in many countries, the term "Housing" still has a negative connotation. It is often seen as a project that seeks to build the largest number of units with cheap materials, and little-to-no concern for the quality of life of its residents. Oftentimes, it is designed for monetary reasons, as opposed to a project that serves the city and its people. Although this fact is recurrent, there are several examples that portray the opposite, in which architects manifest their political point of view through exceptional projects with innovative solutions that improve the urban experience.

### **Critique on DSIR:**

The guidelines of Dholera SIR will in general proceed with a similar pattern of lodging through modern municipality. The social bifurcation and their assumptions see the occupant to have a static progression of pay. Exposing them to a classification of lodging however not permitting a 'decision of lodging'. The vision has framed a fundamental image of how things can be deliberately planned at that town arranging level. Be that as it may, when we explicitly talk about lodging address it comprehensively at both miniature and large-scale level. Particularly EWS and LIG people group who will in general be a significant piece of the populace, their lodging must be pondered a level past. The TP plans proposed very well illustrates the modern municipality, it is the enumerating that must be done at much inborn level.

This could be the work of a planner or modeler to advance new drives to break the pattern that prompts undesired results at later stages. This should be possible by research in explicit fields for instance lodging and concentrating on their development modules, further prompting formation of an example. This example would then be able to be clubbed alongside the extended socioeconomics by DSIR and concoct a customized answer for the municipality.

Though the vision states production of a socially and monetarily adjusted society, the guidelines and arranging don't mirror any such activity. This gives an extent of design mediation to accomplish the ideal destinations in building an impartial society. This will be a once in a lifetime chance to carry out this procedure at Dholera SIR and make a fruitful illustration of evenhanded development.

### **Case Study Conclusions**

One of the important findings from a live case study that supports my hypothesis is of “Visakhapatnam Steel Plant Township, Ukkunagaram”. The following observation has been recorded as on the day of site visit.



*Parking being used as a studio at Vizag Steel plant Township*

Mrs. Sujatha Reddy, a resident of steel plant since 2005 is a house wife. Her husband works as a foreman with a salary of 37,000 p.m. “With increasing finances, it is really difficult to sustain a family of four” she says. With enough knowledge in tailoring, she set up her own tailoring studio in the parking space provided by the residential unit.

Here it is clearly visible how essential has accommodating alternative income generation has been. The priorities of the residents have to be thought of before designing. There are several other examples within the township where residents are seeking for opportunities somewhere compromising on their needs.

Unlike the case studies that are done to understand the subject the case studies have been chosen to find the deficiencies of the existing housing system. Further, to find clear evidence of inefficiencies of the house as an end product to the resident. Upon analyzing these case studies, the scenario demands a clear solution for all the issues being faced by LIG, MIG, HIG and all of them as a community.

The problems identified range from single residential unit design to neighborhood level. It also touches upon the social aspects and their impact on the overall eco-system. The interdependence of these social



groups who come to cities for the same particular reason (earn livelihood) at the same particular place (Industrial Townships) deserves fair treatment.

Thus, this gives an opportunity to introduce the concept of equitability in this sector to solve this issue. Strategies like Transit Oriented development also contributes towards equitability of the community. A small space of 5 sqm in a house could be a life changing entity for the unprivileged. Equitability is to be achieved on various grounds, not quantitative but qualitative. Like discussed, Social, Economic, Environmental, Technological and Political fields is where all the people connect but still far apart.

Throughout the process I encountered various stories where all the person needed was an opportunity to stand back on their feet. To the surprise, all they need was that little modification in their existing house without compromising on any other aspect.

Providing opportunity of choice of housing is what needs to be focused on. A robust system where a user can choose his/her house based on his ability and potential but not on his disability is what we are seeking for as we advance further. In the world where other countries are thriving for technological and social advancements, India is stuck at housing its population. Addressing this issue has the potential to partially eradicate the poverty.

### **Literature Reviews**

**“Housing Policies: Common goals and diverse approaches to social housing in India and other countries”** is a research paper by Madhu Bharati and Sriram Divi. This paper is a compilation of globally and nationally accepted housing policies and their working. It is a study on various approaches to a common goal and identifies possible interventions on ‘Housing’ in India and Other countries. This paper intended to be a comparative study of different housing policies goes beyond and establishes a relationship between housing and allied fields. A broad range of case studies has been identified and briefly summarized in order to achieve the objective.

The background has been well framed which gives the reader a contextual backdrop to base this reading upon. The facts and references clearly depict the dire need of this in today's scenario. Topics like Housing in India and Urban housing shortage, housing policies and the status of implementation backs the need of this study. The current trends of housing have been identified and the issue is correctly pinpointed across the nation and at a global level. Further the paper goes into the deeper aspects of it for example the relation between ‘Security of tenure’ and ‘poverty’ and their vicious cycle. The facts and figures mentioned depict the scale and intensity of need for this intervention particularly in India. It hints at the role of the government and the need for their intervention into this.

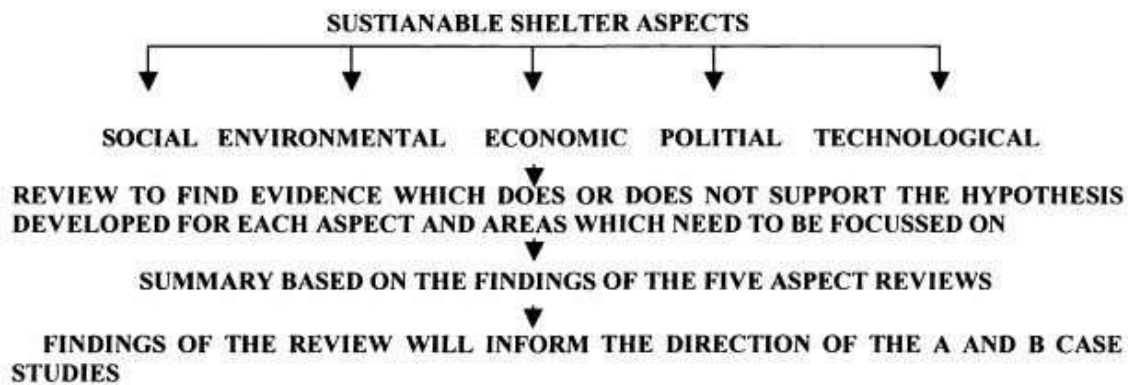
The methodology adopted gives the reader a sense of vision on how the issue can possibly be solved. The stepwise approach in the order of a hierarchy illustrates the process in a nutshell. The First part of the paper consists of successful stories of implemented cases of social housing from other developing and developed countries. The second section focuses on the provisions made by central as well as different state governments to help promote affordable housing in India. The last section identifies the parameters for implementation of pro-poor Public Private Partnership (PPP) in housing policies and how. The reason for the housing shortage has been clearly established in relation to the rapid urbanization in developing countries.

**“Housing as an Intervention - Architecture towards Social Equity”** is a book edited by Karen Kubey. This 17-essay volume of Architectural Design (AD) examines how housing projects around the world, and the design processes behind them, might be interventions towards greater social equity, defined here broadly as fair access to opportunities and resources for an economically stable, healthy life. Across the world, the housing

crisis is escalating. Mass migration to cities has led to rapid urbanization on an unprecedented scale, while the withdrawal of public funding from social housing provision in Western countries, and widening income inequality, have further compounded the situation. In prosperous US and European cities, middle- and low- income residents are being pushed out of housing markets increasingly dominated by luxury investors. The average London tenant, for example, now pays an unaffordable 49 per cent of his or her pre-tax income in rent. Parts of the developing world and areas of forced migration are experiencing insufficient affordable housing stock coupled with rapidly shifting ways of life.

In response to this context, forward-thinking architects are taking the lead with a collaborative approach. By partnering with allied fields, working with residents, developing new forms of housing, and leveraging new funding systems and policies, they are providing strategic leadership for what many consider to be our cities' most pressing crisis. Amidst growing economic and health disparities, this issue asks how housing projects, and the design processes behind them, might be interventions towards greater social equity, and how collaborative work in housing might reposition the architectural profession at large. Author talks about 3 strategies that could be a tool in achieving the objective i.e; **COLLABORATIVE APPROACHES, NEW FORMS OF HOUSING AND A NEW KIND OF ARCHITECT**. The pursuit of a more equitable society and the creation of new forms of housing have long gone hand in hand. It has never been more urgent for architects to work towards reducing economic, health and social inequities. While the long-term impacts of the projects in this issue will only reveal themselves with time and inquiry, they help us to reimagine architects as collaborative leaders, helping to improve residents' lives. More equitable housing solutions and design processes prove as diverse as the challenges they address. As the role of architects evolves, engaging in these interlinked issues has the potential to shift design practice at large, allowing designers to contribute to the common good.'

The third literature introduces the background to housing in India, urbanization and the gradual shaping of housing in Indian cities. The review is directed towards issues of sustainable housing development in urban India. For the purpose of this review data used has been obtained from government reports, various organizational reports, newspaper clippings, web pages, publications, journals and books.



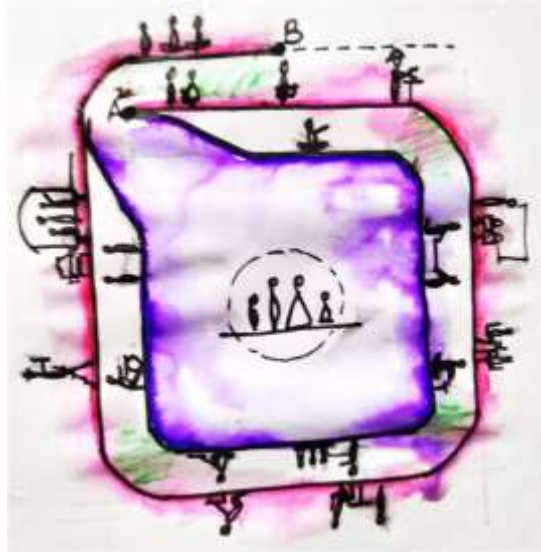
The literature focuses on the relationship between:

- Social influences and Cultural acceptability and feasibility of present shelter designs and its likely impact on the quality of life of an individual.
- Economy and its relationship with shelter in terms of cost of shelter, employment, affordability and access to shelter.
- Shelter and the environment concerns with relation to resource inputs, energy use and waste outputs, in addition to the impacts on various environmental issues like global warming, consumerism, rising living standards on shelter design and comfort outputs.

- Shelter schemes/programs and their influence on the user shelter requirements and the course of sustainable shelter development.
- Technologies adopted and their influence on sustainable shelter.

### **Architectural Intervention**

The statistics suggest the urgent need for quality housing worldwide. Rapid urbanization is necessitating more access to housing—half of humanity now lives in cities. That means making sure that everyone can find safe, decent, affordable housing within reach of where they work, shop, study, and play. We'll look at ways to build equitable housing, and help create a community where everyone has a good place to live.



*The above illustration depicts how a person starts his day and how accommodating a secondary activity helps him step above at the end of the day through the income he received from that secondary activity. There is liberation from Point A to Point B. (Source: author)*

The strategies that can be implemented to achieve equitable housing in industrial township are:

1. Providing accommodation units that facilitates income generation for the residents.
2. Providing Flexible units for the dynamic nature of families that can adapt to accommodate.
3. Spatial hierarchy of planning and housing design that promotes communal harmony.
4. Adopting 'affordability as a tool to achieve equitable growth.
5. Adopting climate responsive design to ensure sustainability.
6. Use of Transit Oriented Development (TOD) as a strategy to ensure equitability.
7. Creating Socially balanced and mixed typology of housing.
8. To make a provision to the user through architecture for adaptable housing.

The design objectives will be to provide a equitable housing strategy for various user archetypes who will be living at Dholera. Also, to provide such modules which allows the user to choose among the options of accommodation instead of restricting them to a particular type. Further, the focus will also be on delivering a housing strategy that gives every resident a fair chance to grow. Finally, to achieve a harmonious community life amongst the citizens through architectural Intervention and Planning.



## **Bibliography**

- <http://eqxdesign.com/why-equity-in-architecture-matters>
- <https://medium.com/erika-harano/equity-matters-to-me-because-it-goes-hand-in-hand-with-justice-without-equity-we-dont-have-c0caf689f1bd>
- [https://www.re-thinkingthefuture.com/rtf-fresh-perspectives/a4496-equity-in-architecture-an-inclusive-approach-towards-design/?utm\\_source=rss&utm\\_medium=rss&utm\\_campaign=a4496-equity-in-architecture-an-inclusive-approach-towards-design](https://www.re-thinkingthefuture.com/rtf-fresh-perspectives/a4496-equity-in-architecture-an-inclusive-approach-towards-design/?utm_source=rss&utm_medium=rss&utm_campaign=a4496-equity-in-architecture-an-inclusive-approach-towards-design)
- <https://www.oregonmetro.gov/tools-partners/guides-and-tools/guide-equitable-housing>
- [https://www.policylink.org/sites/default/files/HCO\\_Web\\_Only.pdf](https://www.policylink.org/sites/default/files/HCO_Web_Only.pdf)
- <https://www.buildinggreen.com/feature/equity-design-and-construction-seven-case-studies>
- <https://www.facebook.com/apigbv/photos/a.325129677983278/728075384355370/?type=3>
- <https://www.re-thinkingthefuture.com/rtf-fresh-perspectives/a1024-what-is-flexible-housing>
- <https://dicdl.gujarat.gov.in/wp-content/uploads/2020/05/RTI-MANUAL.pdf>
- <https://dholera99.in/dholera-sir-town-planning>
- <https://dholerasir.com/planning/> [https://dicdl.gujarat.gov.in/downloads/?q=DICDL\\_Brochure](https://dicdl.gujarat.gov.in/downloads/?q=DICDL_Brochure)
- <https://www.tandfonline.com/doi/full/10.1080/14036096.2018.1459826>
- [https://www.researchgate.net/publication/44642933\\_Assessing\\_housing\\_quality\\_and\\_its\\_impact\\_on\\_health\\_safety\\_and\\_sustainability](https://www.researchgate.net/publication/44642933_Assessing_housing_quality_and_its_impact_on_health_safety_and_sustainability)
- [https://www.habitat.org/lc/theforum/english/pdf/forum\\_housing\\_health.pdf](https://www.habitat.org/lc/theforum/english/pdf/forum_housing_health.pdf)
- <http://www.ijiet.org/papers/491-S10009.pdf>
- [https://www.researchgate.net/publication/303839757\\_Performance\\_criteria\\_for\\_public\\_housing\\_evaluation\\_in\\_developing\\_countries\\_Case\\_Study\\_of\\_Gombe\\_Metropolis\\_Nigeria](https://www.researchgate.net/publication/303839757_Performance_criteria_for_public_housing_evaluation_in_developing_countries_Case_Study_of_Gombe_Metropolis_Nigeria)
- [https://www.researchgate.net/publication/318120833\\_HOUSING\\_QUALITY\\_ASSESSMENT\\_CRITERIA](https://www.researchgate.net/publication/318120833_HOUSING_QUALITY_ASSESSMENT_CRITERIA)
- [file:///C:/Users/LENOVO/Downloads/applsci-10-06246%20\(1\).pdf](file:///C:/Users/LENOVO/Downloads/applsci-10-06246%20(1).pdf)
- <https://www.yourarticlelibrary.com/essay/essay-on-housing-problems-in-urban-areas-1683-words/4689>
- <https://www.semanticscholar.org/paper/Flexible-housing%3A-the-means-to-the-end-Till-Schneider/a8d91cb87d250f6e74ef016ce1ac5a92fba201f5>

<https://www.cambridge.org/core/services/aop-cambridge-core/content/view/94333D2CA11B516B00F5D93CC49D0792/S1359135505000345a.pdf/div-class-title-flexible-housing-the-means-to-the-end-div.pdf>

<https://odr.chalmers.se/handle/20.500.12380/257054>

<https://www.gidb.org/newprojectdmic> [https://en.wikipedia.org/wiki/Mumbai-](https://en.wikipedia.org/wiki/Mumbai-Bangalore_economic_corridor)

[Bangalore\\_economic\\_corridor https://gowercrowd.com/real-estate-](https://gowercrowd.com/real-estate-investing/what-is-workforce-housing)

[investing/what-is-workforce-housing](https://gowercrowd.com/real-estate-investing/what-is-workforce-housing)

<https://www.statista.com/statistics/884027/india-affordable-housing-in-the-real-estate-sector-in-india-by-state/>

<https://www.gidb.org/activationareadsir><https://www.avirahi.com/Videos.htm>

<https://www.youthkiawaaz.com/2020/10/how-are-public-policies-acts-made-in-india/> (Public policies India)

<https://in.boell.org/en/2020/03/19/mega-industrial-infrastructure-projects-and-their-impact-people> (DMIC - Dholera SIR impact)

<https://dholerasir.com/maps-reports/>(dholera official website)

<https://www.cahdco.org/expanding-role-of-the-architect/> (Literature review)