

# CONCEPTUAL FRAMEWORK FOR REDEVELOPMENT OF TALAV BHILWADA SLUM AREA, DAHOD

Dhruv Samirkumar Sheth<sup>1</sup>, Prof. Ankit Somabhai Patel<sup>2</sup>, Vraj Prashantkumar Desai<sup>3</sup>, Karnashetal Kothari<sup>4</sup>

<sup>1</sup>PG Student, U.V. Patel College of Engineering, Ganpat University, Mehsana, Gujarat, India

<sup>2</sup>PG Coordinator, U.V. Patel College of Engineering, Ganpat University, Mehsana, Gujarat, India

<sup>3</sup>Government Contractor

<sup>4</sup>Government Engineer

\*\*\*

**Abstract** - The process of repurposing and improving real estate in a neighborhood or city by adding or rehabilitating buildings to make them more marketable is known as redevelopment. Talav bhilwada is located in Ward No.03, directly across from Fakri Society Station Road. It is accessible via State Highway 47 and is surrounded by housing development. The settlement remained undated during monsoons due to its location on a low-lying terrain. As a result, basic infrastructure services like individual tap water, drainage, and pucca roads were missing. For the redevelopment, the data is collected through interviews with contractors, land surveyors, and government engineers in Dahod, as well as interactions with top management in Dahod Nager palika and the R & B department. Data analysis was done on the collected data using various migration, land development, and financial calculations. How to design and provide the best facilities in the Talav Bhilwada Slum, as well as how to generate income for the Dahod Nager Palika. After the survey, the design of redevelopment project was prepared based on the opinion of people of talav bhilwada. Also, the calculation was done through the Average of Jantri price and market price of dahod city.

**Key Words:** Redevelopment, Slum area, Construction cost, Citizen Survey, Dahod.

## 1. INTRODUCTION

The process of repurposing and improving real estate in a neighbourhood or city by adding or rehabilitating buildings to make them more marketable is known as redevelopment. The term is frequently used when something ugly or outmoded is demolished or at least substantially reconfigured to make way for something new.

More than merely erecting new structures is involved in redevelopment. It guarantees that inhabitants of a community are empowered to enhance their quality of life and the environment as a result of solid planning practises. Redevelopment is the process of physically repositioning and regulating land usage and structures. Other areas of community development, including as design, historic asset preservation, public spaces, environmental justice, environmental remediation, and even concerns that improve

the level of social services supplied to local people, should be included in redevelopment goals (Suhas Choudhari, May-2019).

The relocation of businesses, the demolition of structures, the relocation of people, and the use of eminent domain (government purchase of property) as a legal tool to take private property for city-led development projects are all part of urban redevelopment. Village renewal is a similar process that takes place in rural areas, though it may not be identical in practise. When areas of cities receive freeways and expressways, redevelopment may result in urban sprawl and less congestion. Proponents see urban redevelopment as an economic engine and a reform mechanism, while critics see it as a control mechanism. It has the potential to improve existing communities while also resulting in the demolition of neighborhoods in some cases (Dhrupad S. Rupwate, 2017).

Many cities attribute the gentrification of residential neighborhoods and the revitalization of the central business district to earlier urban renewal programmes. Urban renewal has evolved into a policy based less on destruction and more on renovation and investment over time, and it is now an important part of many local governments, often in conjunction with small and large business incentives.

### 1.1 City information

Dahod is a town at the banks of the Dudhimati River in Dahod District in the State of Gujarat. It is stated that it has taken its name from Saint Dadhichi, who had an Ashram at the bank of Dudhumati river. The town serves as District Headquarters for Dahod District. It is 214 kilometers from Ahmedabad and 159 kilometers from Vadodara. It is likewise called Dohad (meaning "obstacles", because the borders of the states of Rajasthan and Madhya Pradesh are nearby). Islamic Mughal Emperor Aurangzeb became born in Dahod in 1618, for the duration of the reign of Jahangir. Aurangzeb became stated to have ordered his ministers to favour this town, because it became his birthplace. Tatyatope, the liberty fighter, is thought to have absconded in Dahod. He is assumed to have lived his final days on this region. It became formerly in the obstacles of Panchmahal District. However,

in 2006, Dahod become identified as a separate district. The place of Godi Road/Godhra Road has been drastically evolved, making the general house and industrial place very expansive. Urban Bank Hospital is located here. The basis stone for a dental university become lately laid through the accept as true with of philanthropist Girdharlal Sheth. The railway colony of Dahod is thought to had been construct via way of means of Britishers and it nevertheless follows the equal architecture. Dahod has been decided on as one of the hundred Indian towns to be evolved as a smart town below Prime Minister Narendra Modi's flagship Smart Cities Mission.

### 1.2 Physiographic and soil type

On the basis of topography, nature, geology, lands, and natural vegetation, the Dahod district is divided into three sub-micro regions: Dahod Upland, Forested, and Scrub Zone in the Eastern Hilly Region.

Sr. No.	Taluka	Black soil	Medium Black	Loamy	Sandy	Salty	Stony Light	Sloppy	Total Land (ha)
1.	Dahod	-	2046	35455	-	49	-	-	37550
2.	Devgadhi Baria	1765	3652	28816	750	25	-	-	35008
3.	Dhaupur	10050	19000	19800	40	8	-	-	48898
4.	Fatepura	10	502	23107	5	5	-	-	23629
5.	Garbada	1000	29	10505	75	25	5000	381	17015
6.	Limkheda	2375	5137	20889	625	1	-	-	29027
7.	Zakod	16400	8805	17315	4657	-	-	-	47177
	Total	31600	39171	155887	6152	113	5000	381	238304
	Percent	13.26	16.44	65.41	2.58	0.05	2.10	0.16	100.00

Fig 1 physiographic and soil type of dahod

### 1.3 Population

According to the 2011 census, the population of Dahod town was 1,23,841, with a decadal growth rate of 17%. It is expected to grow at a decadal rate of 20% by 2021. Dahod town serves as the district headquarters, and the surrounding villages depends on Dahod for administrative services, health care, and other amenities.

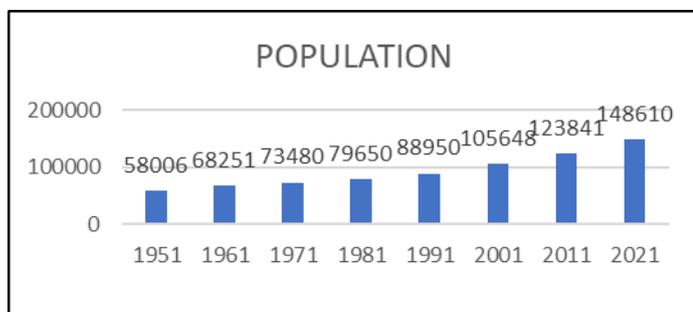


Fig 2 Population of dahod

### 1.4 Need for study

To find out if such redevelopment in the Talav Bhilwada area is possible. If this is possible, how do you determine project profitability and location, as well as what types of potential activities are feasible in the Talav Bhilwada slum.

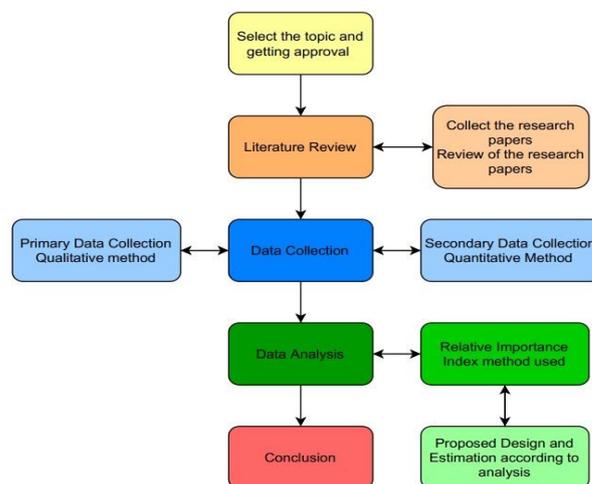
### 1.5 Objectives

The objective of this research to determine the need for urban renewal and opportunities to improve the quality of life in the community and provides facilities such as, amenities, water connection in slum area also create a number of methods for planning & strategy to speed up the project and examine different economic and non-economic model to upgrade the all economic sustainably of primary project location.

### 1.6 Scope of work

The project scope is upgrade and expand infrastructure to accommodate future growth this redevelopment will create local job both short term and permanent to the people of slum area also Removes threats to the community's integrity and safety and Increased tax revenue from startups, goods purchased, and property taxes.

### 1.7 Research methodology



## 2. LITERATURE REVIEW

A literature review may be required for graduate and postgraduate student work, such as a thesis, dissertation, or journal article. Literature reviews are also common in research proposals and annual reports.

A literature review is the text of an academic paper that summarizes current knowledge, including substantive discoveries as well as theoretical and methodological contributions to a field. Secondary sources that do not report on new or experimental research are literature reviews.

### 3. DATA COLLECTION

#### 3.1 General

For talav bhilwada Project needed data collected through personal interview, Questionnaire's survey in which Questionnaires verified by experts and fill through scheduled, content analysis and collected through meetings. Other data which collected from various Government office was Actual problem face by people of talav bhilwada., Bhilwada population survey, People are migrated from talav bhilwada, Demand survey study, Surrounding Development and Demand Studies (smart city development detail). Town planning And Development Planning Maps, Redevelopment area survey maps, Hakpatrak of ward no:3, Dahod (Redevelopment area ward), Request letter by ward councilor, Request letter by president of nagerpalika to principal secretary-Gandhinagar, jantri price near ward no: 3, GDCR 2021.

After a research problem has been defined and a study design has been placed out, the task of data collection begins. When choosing on the data collection method for the study, the investigator should keep in mind that there are main types of methods: primary and secondary data.

Primary data are those that are collected fresh and for the first time, and thus have a unique character.

Secondary data, on the other hand, is information that has already been gathered by someone else and has gone through the statistical process.

**Table 1: Primary Data**

Sr. no.	Name of documents	Collect data from	Collection method
1.	Actual problem face by people of talav bhilwada.	Talav bhilwada, near nilam society, Dahod	Personal interview
2.	Bhilwada population survey	Nager palika, Dahod	Personal interview
3.	People are migrated from talav bhilwada	Talav bhilwada, near nilam society, Dahod	Personal interview
4.	Demand survey study.	Take a review of responsible person of Dahod city.	Through Scheduled

#### 3.2 Actual problem face by people of talav bhilwada

1. Irregularities in construction of houses.
2. People occupy space illegally.
3. Small houses
4. No place for free walk and to breathe
5. Too much illegal residents
6. No playgrounds for children to play
7. That's the reason children are engaged in wrong activities like smoking and drugs addiction.
8. People are not afraid of anything because they don't have anything to lose
9. They don't follow any rules and regulations because of lack of education.
10. Due to less space and irregularities in construction of houses it becomes very difficult to provide basic amenities like water and electricity supply sewage etc.
11. They don't co-operate when govt do wants to provide good civic amenities like construction of roads and street lights.
12. They throw garbage anywhere and invite serious diseases around themselves.
13. They vote for money and they don't want to have development in their area
14. But there are few people who are civilized and good in nature and help each other in trouble. They are cooperative.

#### 3.3 Talav bhilwada area population calculation of year 2021

**Table 2: Socio economic survey**

SR NO	NAME	TOTAL
1	Casual worker	1060
2	House wife	445
3	Provision shop	5
4	Truck driver	23
5	Tailor	16
6	Study	320
7	Children	475
<b>TOTAL</b>		<b>2344</b>

**Table 3: House's condition**

HOUSES CONDITION IN SLUM	
kutchra	268
Pucca	115
Semi pucca	204
<b>TOTAL</b>	<b>587</b>

### 3.3 People are migrated from talav bhilwada

According to our research, 20% of people migrate from rural to urban areas in search of work. As a result, job growth in rural areas is lower than in urban areas. People also want better facilities and good education so that they and their families can be supported. In addition, compared to rural areas, urban areas offer more opportunities.

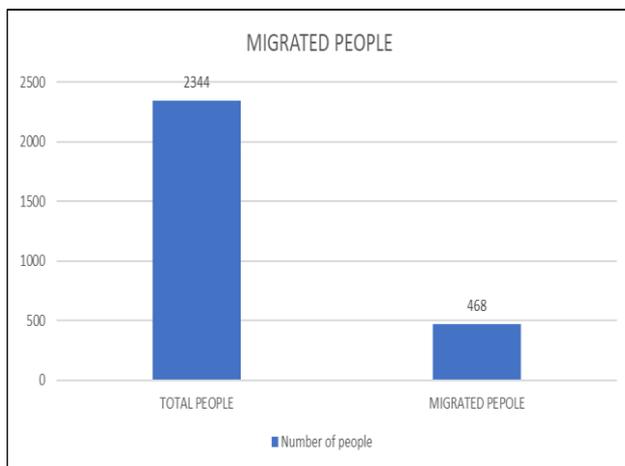


Fig 3 Migrated people

### 3.4 Questionnaire Survey

Questionnaire survey is designed in two parts. Part 1 contains 18 questions and part 2 also contains 18 questions. The part 1 of questionnaire was distributed to government officials and part 2 was distributed to local citizen. In this questionnaire all type of questions was covered which is related to redevelopment project.

The design of questionnaire based on what is people's need and what is actually provide by government. Some of examples of questions are given below,

1. Do you think that slum area talav bhilwada which is located center of the dahod city needs to be redevelop?
2. After redevelopment, it will change the life style of people. To which extent you agree for that?

3. During the construction, government will provide houses or money for rent to the people. To which extent you agree for that?
4. Absence of basic amenities like water supply, drainage and sewerage and disposal of garbage will be improve in redevelopment. To which extent you agree for that?
5. What your suggestion on which type of building construct in talav bhilwada area?
6. What is your opinion, which type of facilities government should be provide?

The scaling order of the questionnaire is given below:

5 = strongly agree 4 = Agree 3 = Neutral 2 = Disagree 1 = strongly disagree

After questionnaire designed, the form was verified by expert in civil industry. After that form 1 was distributed to government authorized persons in civil department, builders and contractors in Dahod.

Form 2 was distributed with locality people of talav bhilwada slum area.

In Form 1, Total 24 people responded out of 25 and in form 2 60 people responded out of 70.

### 4. DATA ANALYSIS

On basis of collected data, process of Data analysis was done. In this data analysis statistical report of Questionnaire survey which was done in Microsoft Excel and based on that Charts are prepared, design of Talav bhilwada slum Done after Discussion and help with design experts, calculation of construction cost and sale cost are analysed in this report.

On the basis of the Demand Studies for Talav bhilwada slum area redevelopment by demand survey questionnaires (part 1 & 2) statistical report of data analysis was generated.

Talav bhiwada slum design was prepared with help of Dahod land records, actual condition of Talav bhilwada slum at present.

Construction cost of Talav bhilwada was calculated based on prepared design of slum area.

Sale cost of Talav bhilwada was calculated from average rate of Jantri land price and market land price.

#### 4.1 Demand survey analysis

Total 36 questions were analysed in both parts. Here, few main questions related to redevelopment shown below:

4.1.1 Part 1

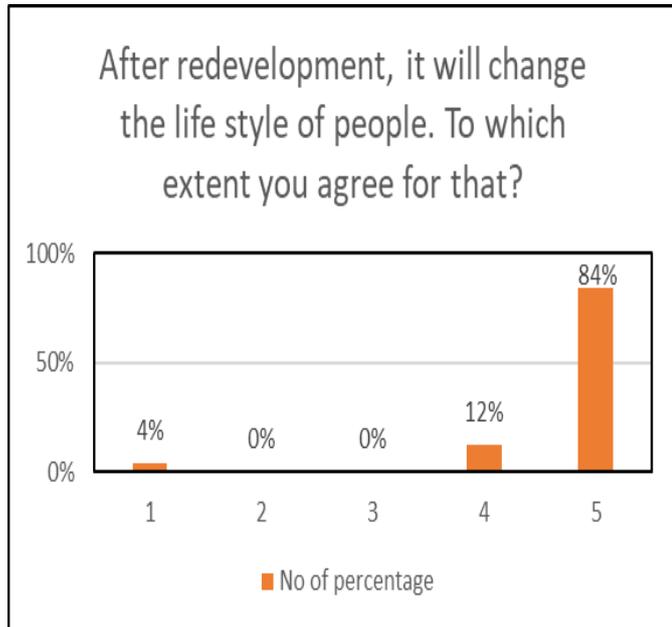


Fig 4 Question 1

84% people strongly agree while 12% people agree and 4% people strongly disagree with change the life style of people after redevelopment.

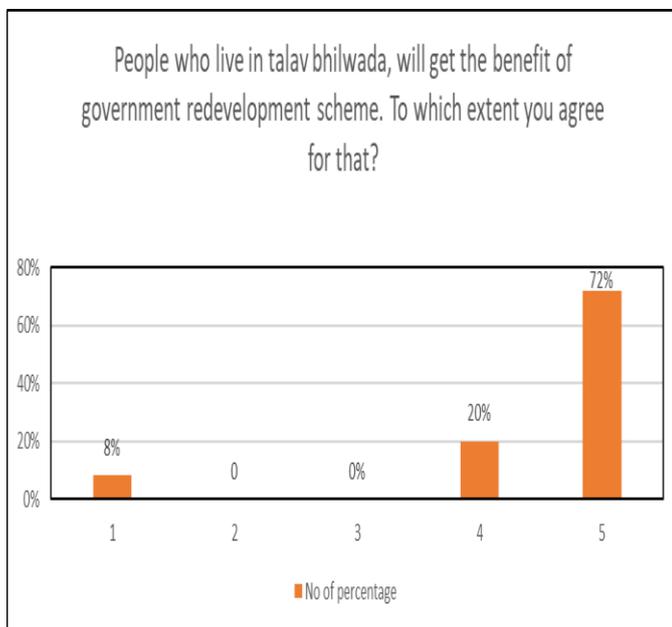


Fig 5 Question 2

72% people strongly agree while 20% people agree and 8% people strongly disagree with people who live in talav bhilwada, will get the benefit of government redevelopment scheme.

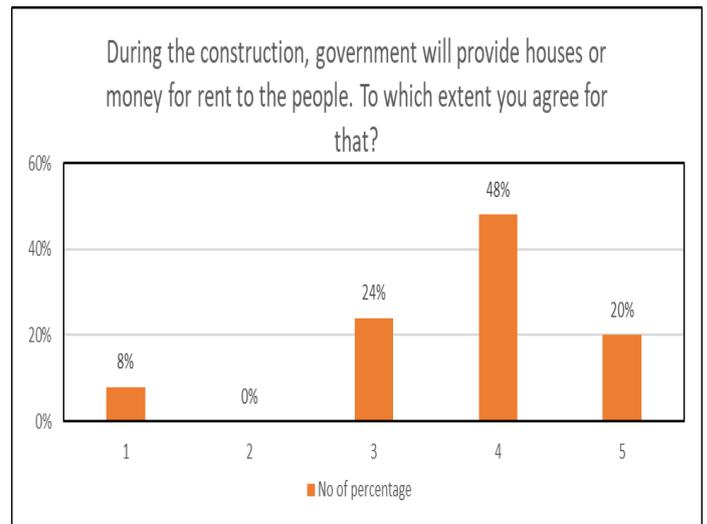


Fig 6 Question 3

20% people strongly agree while 48% people agree, 24% people neutral and 8% people strongly disagree with during the construction government will provide houses or money for rent to the people.

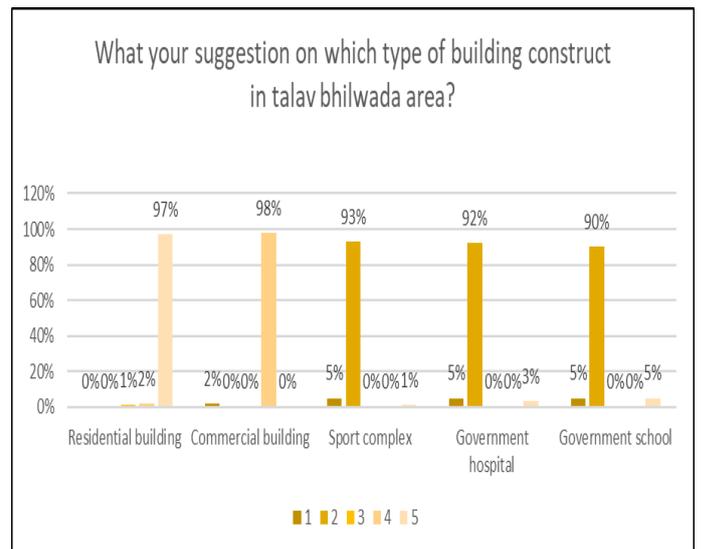


Fig 7 Question 4

97% people strongly agree while 2% people agree, 1% people neutral with residential building constructed in talav bhilwada.

98% people agree while 2% people neutral and 1% of people strongly disagree with commercial building constructed in talav bhilwada.

93% people disagree while 1% people strongly agree and 5% of people strongly disagree with sport complex constructed in talav bhilwada.

92% people disagree while 3% people strongly agree and 5% of people strongly disagree with government hospital constructed in talav bhilwada.

90% people disagree while 5% people strongly agree and 5% of people strongly disagree with government school constructed in talav bhilwada.

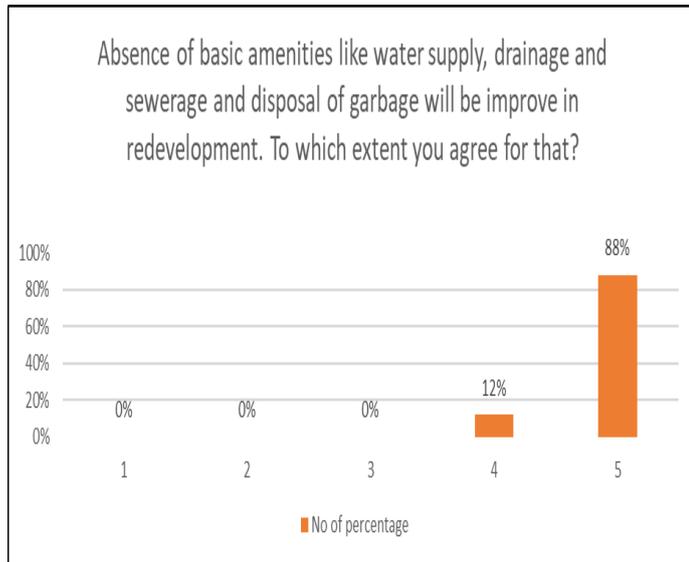


Fig 8 Question 5

88% people strongly agree while 12% people agree with change the life style of people after redevelopment.

**4.1.2 Part 2**

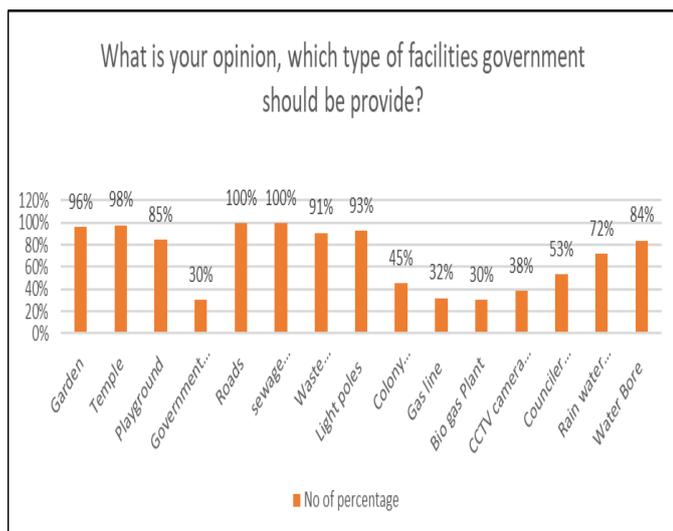


Fig 9 Question 1

In talav bhilwada which type of facilites should be provide on which type of responses are taken which is below:

96% people choose garden, 98% people choose temple, 85% people choose playground, 30% people choose government school, 100% people choose road, 100% people choose sewage treatment plan, 91% people choose garden waste collection system, 91% people choose light poles, 45% people choose colony maintenance unit, 32% people choose gas line, 30% people choose bio gase, 38% people choose cctv, 53% people choose councilor room, 72% people choose rain water harvesting, 84% people choose water bore.

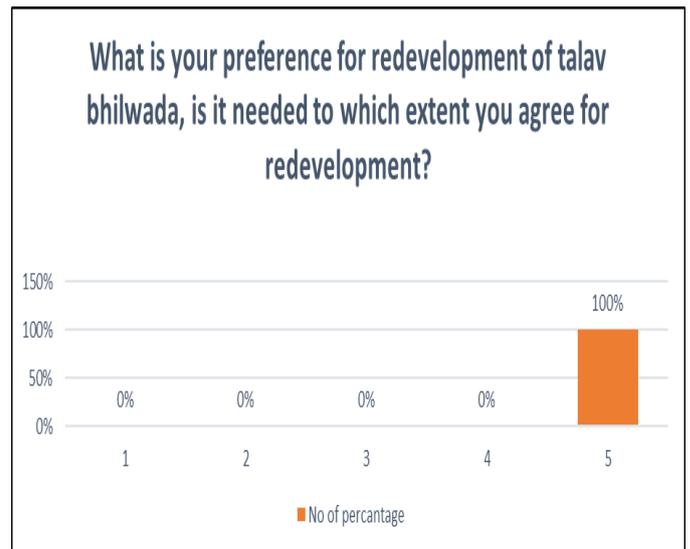


Fig 10 Question 2

100% people strongly agree with talav bhilwada needs to redevelopment.

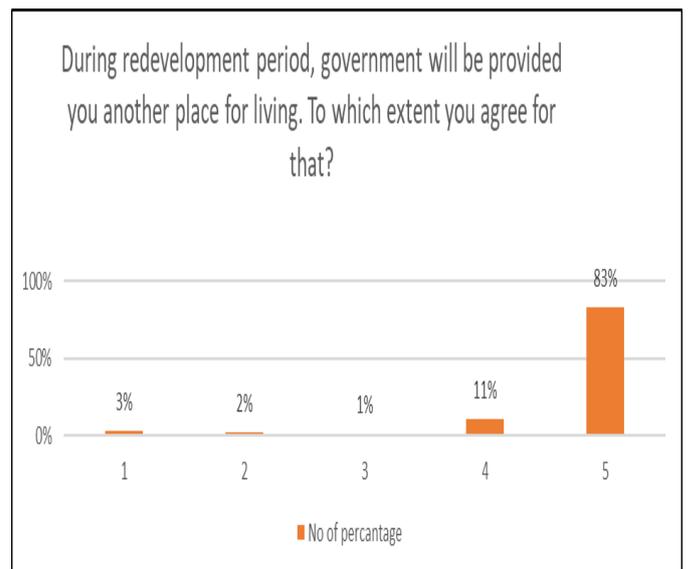


Fig 11 Question 3

83% people strongly agree while 11% people agree and 3% people strongly disagree with government will provide to another place to living those people who currently live in talav bhilwada.

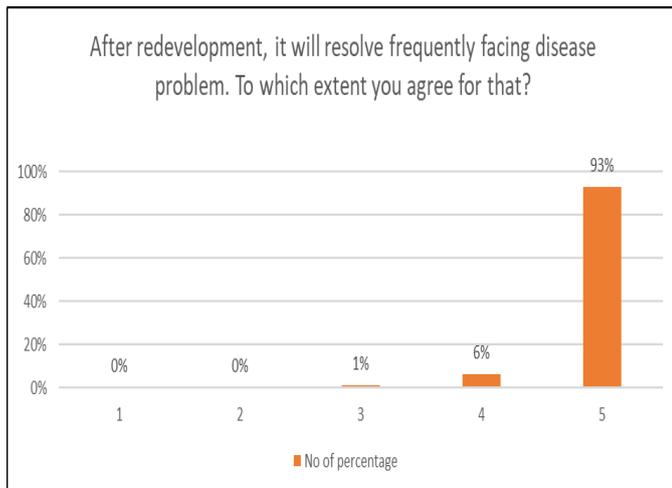


Fig 12 Question 4

93% people strongly agree and 6% people agree with resolve the frequently facing disease problem in talav Bhilwada.

After the analysis, the Design Includes Residential buildings, commercial building, garden, temple, parking, Anganwadi, PHU center, playground, Unisex gym, Banquet hall.

After the design, we calculated the total cost of the project which is mentioned below:

Table 4

Construction cost of Talav bhilwada slum	
Residential building	19,16,15,616
Commercial building	1,03,18,824
Amenities	50,67,816
<b>Total Cost of Talav Bhilwada Slum</b>	<b>20,70,02,256</b>

The tentative selling cost of the commercial building was Rs. 08,38,39,495 (Rates are taken from Average of Jantri price and market price of dahod city).

## 5. CONCLUSIONS

Dahod nager palika has decided to provide a 40-years long lease to residence of people and 99 years long lease to shop owners Talav bhilwada slum redevelopment program.

Design of Talav bhilwada is done on the basis of population of area, includes commercial buildings and other amenities.

Design is done through the questionnaire data survey and what is major opinion of people about redevelopment of talav bhilwada.

This design is prepare based on drawing of surrounding society, land records and surrounding development of area.

Design Includes Residential buildings, commercial building, garden, temple, parking, Anganwadi, PHU center, playground, Unisex gym, Banquet hall.

### 5.1 Total area of project

Based on design, for the requirement of Talav bhilwada, total 39919.92 sq. feet of area is allotted to residential area.

On the other hand, for the commercial construction total 3620.64 sq. feet of area is allotted.

From that total 551.62 sq. feet of area is allotted for Temple, 7133.79 sq. feet of area is allotted for garden, 7978.79 sq. feet of area is allotted for playground, 44621.78 sq. feet of area is allotted for roads. 370 sq. feet of area is allotted for anganwadi, 4639.26 sq. feet of area is allotted for parking.

### 5.2 Finance management of project

Total construction cost is approximately Rs. 20,70,02,256.

Total selling cost Rs. 8,38,39,495.

Total collected deposit Rs. 3,00,00,000 (each home member pays Rs. 50,000).

This selling cost and deposit amount are taken by Nagar Palika and they put approximately

Rs. 11,38,39,495 in bank FD for 7% of interest from that Nager Palika get Rs. 85,37,962 annually.

After, all maintenance & operation cost will be used from that FD'S interest.

In one-year nager palika get approximately Rs. 85,37,962 from fd interest so, Rs. 35,00,000 used for maintenance and remaining amount are save for 3-4 years after that solar will installed in all residential buildings.

### 5.3 Stake holder management

After the construction government will collect the deposit Rs. 50,000 from each house member.

If the house member does not want the flat in talav bhilwada area then the government will provide them Rs. 1,00,000.

Then, the government will have right to sell (Rs. 2,00,000) that flat to another BPL card holder who live in Dahod district.

### 5.4 Benefits for resident

As shown in the table, the Redevelopment Scheme results in significant changes in housing characteristics.

Table 5: Benefits for resident

Attribute	Before	After
House Structure	40-45% pucca house	100% Pucca house
Tenure	100% said to be on illegal land acquisition	Ownership papers, transactions are forbidden for 40 years

Access to Sanitation	94.7% didn't have bathroom inside and 99.6% didn't have individual toilets	Provision of separate toilet and separate bathroom
Access to Water	Only 16.6% had individual water connection	Each houses legal and independent connection to water
Electricity connection	60.6% had independent electricity connection	Each houses legal and individual meter for electricity connection
Settlement structure	Village type structure	G+4 multi-storey buildings

International Research Journal of Engineering and Technology, 7(7), p. 7.

- [9] Suhas Choudhari, A. S. P., May-2019. Redevelopment of Pandharinath Temple Area - A Case Study of Indore, M.P., India. International Journal of Research in Engineering, Science and Management, 2(5), p. 3.
- [10] Wadalkar, V. S. P. P. S., 2017. Recent Practices of Redevelopment of Housing Societies in the Developing Cities of India: A Survey. International Journal of Innovative Research in Science Engineering and Technology, 6(1), p. 5.

**REFERENCES**

- [1] Dhruvad S. Rupwate, R. D. B. V. V. S., 2017. Redevelopment of Urban Slum Dwellings: issues and Challenges. International Research Journal of Engineering and Technology, p. 16.
- [2] Glyn Williamsa, b. U. O. J. D. B. A., 2018. Enacting participatory, gender-sensitive slum redevelopment? Urban governance, power and participation in Trivandrum, Kerala. ELSEVIER, p. 10.
- [3] Gowda, V. D. & M. S., 2019. Slum-free city planning versus durable slums. Insights from Delhi, India. International Journal of Urban Sustainable Development, p. 19.
- [4] K., S. M., 2020. The Challenges of the Redevelopment of Old and Dilapidated Buildings in Mumbai: A Policy Perspective. International Research Journal of Engineering and Technology, 7(2), p. 11.
- [5] Khalifa, M. A., 2011. Redefining slums in Egypt: Unplanned versus unsafe areas. Habitat International, p. 10.
- [6] Mona N. Shah, S. D. R. K. R. J. & K. A., 2019. Causes of delays in slum reconstruction projects in India. International Journal of Construction Management, 5(2), p. 17.
- [7] Nijman, J., 2008. Against the odds: Slum rehabilitation in neoliberal Mumbai. elsevier, p. 13.
- [8] Sakshi Sable, S. P. A. P., 2020. Financial Feasibility Study on a Redevelopment Residential High-Rise Building.