

## SLUM DETERIORATION AND ITS EFFECT ON HUMAN HEALTH

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### Abstract:

*“Slum” one of the known cause for obstructing the development of urban area. It define as the places where buildings are in any respect unfit for human environment; are by cause of Devastation, Overcrowding, Faulty arrangement and design of such Building, Narrowness or Faulty Arrangement of Streets, lack of Ventilation, Light, sanitation facilities or any combination of these factors which are Detrimental to Safety, health and morals. This study focuses on status of all such conductions in Vikas Nagar slum in Dehuroad, Pimpri-Chinchwad Municipal Corporation, Pune, Maharashtra, India. The study puts finger on overall environment of slum including Pollution, Garbage-Solid Waste, Sewage-Drainage System, Water Supply system and health problems on peoples living in slum.*

**Key Words:** *Deterioration, Field Survey, Spatial Analysis.*

### 1. Introduction:

Slum punctuate almost in every city of the world. This has become a universally accepted reality and an inevitable phenomena accompanying urban growth in all countries. The slum in Pimpri-Chinchwad (Pune) India , is one of prosperously growing urban area having near about 71 slum pockets which contribute 12.85% population out of total population of the city in Pimpri-Chinchwad municipal corporation (census of India 2001). The existence of slums can be traced back to the decade of industrialization in Pimpri-Chinchwad. Slums have proliferated as a corollary of industrial growth in the area. The first survey carried out by the municipal council in 1976 identified 35 slum pockets (5621 hutments) with a open lands close to the workplace .The survey was updated by PCMC in 1987 when 65 slums pockets (21326 hutments) with a population of 96,272 person were identified. The growth of slums in urban area is one of the major issues for urban development authority.

### 2. Aims & objectives of study:

1. To study the status of toilet seats, sewage and water supply system in study area.
2. To study the water borne diseases and its effects on human health in study area.

### 3. Methodology:

#### 3.1 Selection of site:

One slum area is selected for study in Pimpri-Chinchwad Municipal Area. Selection of slum pockets with base of stratified random sampling method were performed in the ratio of 1:5 and Vikas Nagar Slum in Dehuroad is selected. This slum is situated near Dehuroad Railway Station. This slum is having polluted surrounding with spreading of solid wastes and dirty water stream (*gutter*).

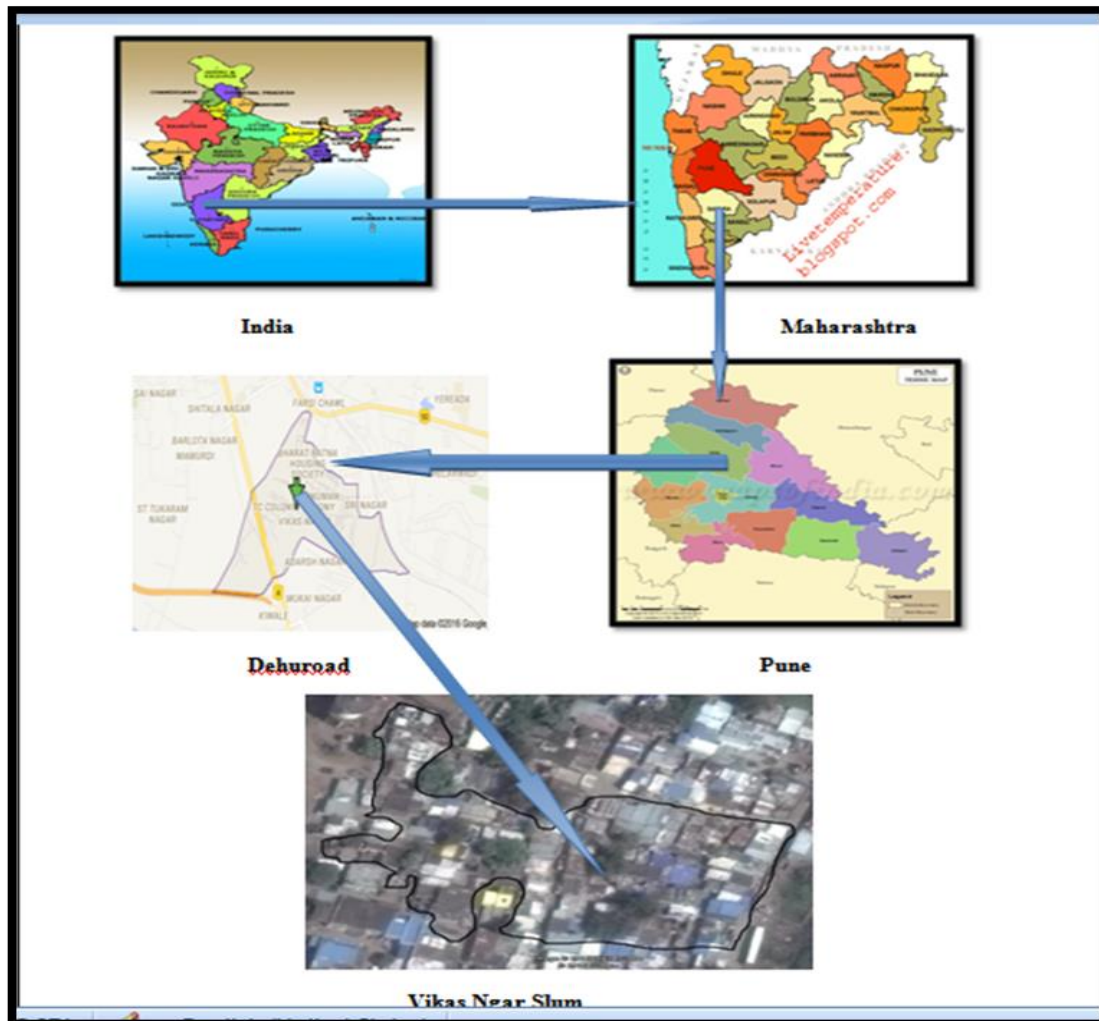
### 3.2 Data collection and management:

Data collection has done with the help of the interviews, observation, areal measurement, photos, Google images and field survey. Questionnaires have prepared for getting information of garbage collection system, environment of slum, Water borne diseases status etc. However spatial analysis of study area has been done on Google image using ArcGIS in order to calculate area and related features. This paper will be mostly focus on their living environment, sanitation, solid wastes pollution, water pollution and its impact on human health with the help of graphs, figures.

### 3.3 The location of study area:

The location of Vikas Nagar slum area of Dehuroad in Pimpri Chinchwad is situated near the western margin of the Deccan plateau on the leeward side of the Shyadhri ranges and Western Ghats, 609m above sea level. Dehuraoad is located on 18°40'35.21"N latitude and 73° 44'09.58" E longitude. Vikas Nagar slum in Dehuraod is situated in west side of Dehuraod Railway station.

Fig. No.01: Location map of study area



## 4. Causes of slum deterioration and its effect on human health:

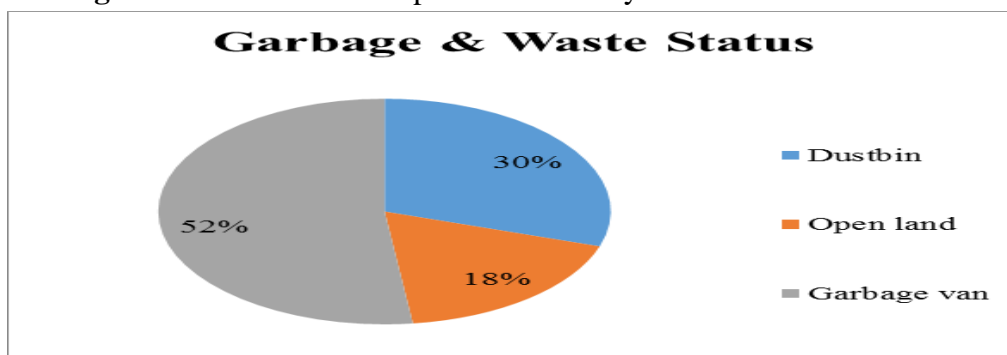
### 4.1 Status of solid waste pollution in study area:

In Vikas Nagar slum of Dehuraod having daily generation of Garbage and according to the study it shown no of houses garbage management and percentage respectively.

**Table no.1:** Status of solid waste pollution in study area.

| Source       | No. of Houses | Percentage  |
|--------------|---------------|-------------|
| Tin bin      | 15            | 30%         |
| Open space   | 9             | 18%         |
| Garbage Van  | 26            | 52%         |
| <b>Total</b> | <b>50</b>     | <b>100%</b> |

**Figure no.02:** Solid waste pollution in study area.



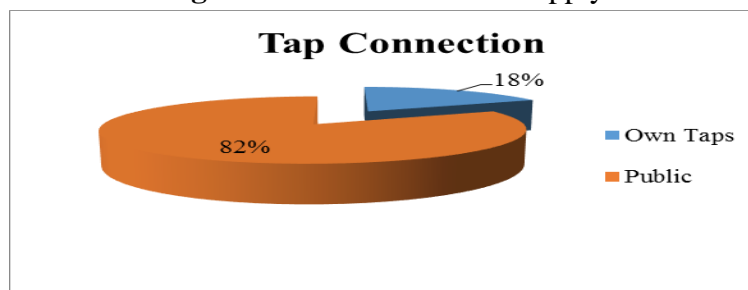
#### 4.2 Water supply analysis:

The cleanness of drinking water taps and location of water taps is a very important aspect for sanitation in Vikas Nagar slum area. In the study area we have observed that there are 18% of people having own tabs in their houses and nearly 82% of peoples are still using public tabs.

**Table no.2:** Status of Water Supply

| Own water taps | Public water taps |
|----------------|-------------------|
| 18.00%         | 82.00%            |

**Fig no.03:** Status of Water Supply



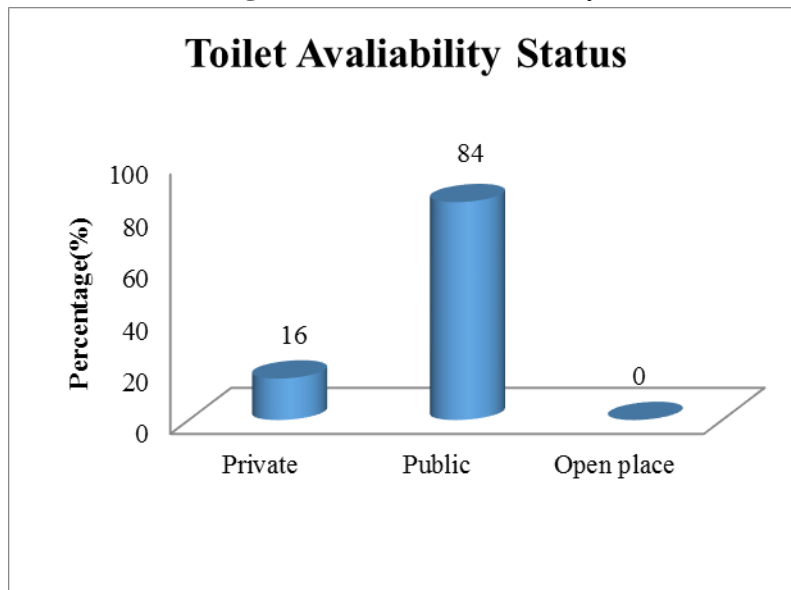
#### 4.3 Status of Toilet seats in study area:

In the study it is observed that there are 8 houses having their own toilet and 42 houses are using public toilets. There is no open place toilet seen in the study area.

**Table no.3:** Toilet Availability Status

| Use of toilet seats | No. of Houses | Percentage |
|---------------------|---------------|------------|
| Private             | 8             | 16%        |
| Public              | 42            | 84%        |
| Open place          | 0             | 0          |
| <b>Total</b>        | <b>50</b>     | <b>100</b> |

**Figure.04:** Toilet Availability Status



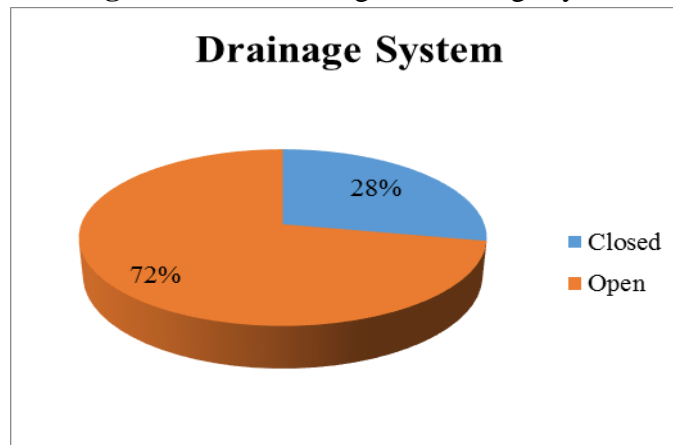
**4.4 Status of water supply system in study area:**

The Vikas Nagar slum is having open and closed sewage gutter, flowing openly very close to slum huts. It can be observed that there are 14 houses which are having close sewage canal near their houses and there are nearly 36 houses which are having open sewage gutter in front of their houses.

**Table no.4:** Drainage & Sewage System

| Types        | Drainage System | Percentage |
|--------------|-----------------|------------|
| Closed       | 14              | 28%        |
| Open         | 36              | 72%        |
| <b>Total</b> | <b>50</b>       | <b>100</b> |

**Figure no.05:** Drainage and sewage system



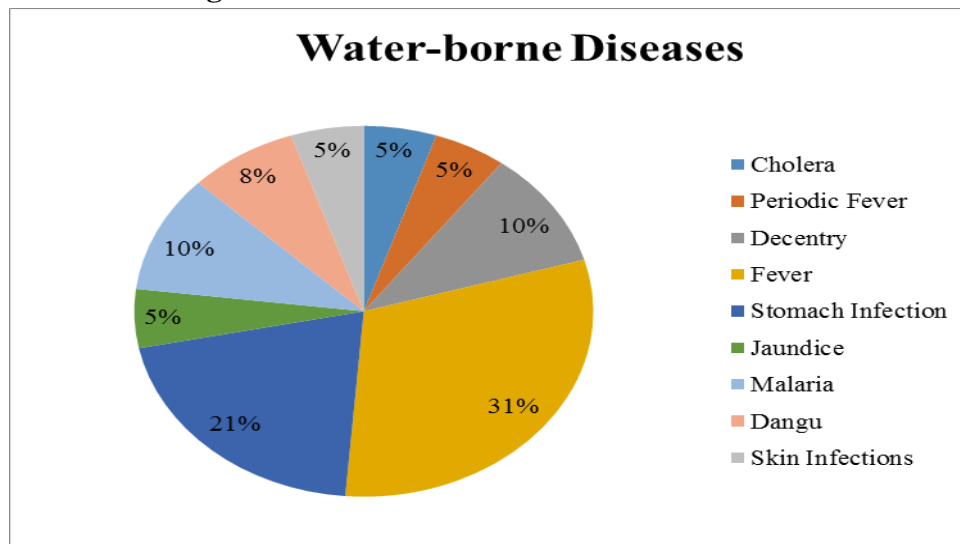
**4.5 Water borne disease:**

There are a many problems in Vikas Nagar slums such as solid waste pollution and water pollution and these all conditions leads to result in different types of diseases which are observed in study area. It is shown in following table and Graph.

**Table no.5:** status of Water-Borne Disease

| Diseases          | < 5 age group | 5 to 15 age group | 15 to 59 age group | <60 age group | Percentage |
|-------------------|---------------|-------------------|--------------------|---------------|------------|
| Cholera           | 0             | 0                 | 1                  | 1             | 5.4%       |
| Periodic Fever    | 2             | 0                 | 0                  | 0             | 5.4%       |
| Dysentery         | 0             | 0                 | 4                  | 0             | 10.81%     |
| Cold and Fever    | 0             | 0                 | 10                 | 2             | 32.43%     |
| Stomach Infection | 1             | 0                 | 7                  | 0             | 21.62%     |
| Jaundice          | 0             | 0                 | 2                  | 0             | 5.4%       |
| Malaria           | 0             | 1                 | 3                  | 0             | 10.81%     |
| Dengue            | 0             | 0                 | 3                  | 0             | 8.1%       |
| Skin Infections   | 0             | 0                 | 2                  | 0             | 5.4%       |
| <b>Total</b>      | <b>3</b>      | <b>1</b>          | <b>32</b>          | <b>3</b>      | <b>--</b>  |

**Figure no.06:** Water-Borne Disease Status



## 5. Conclusion:

From the study it can be concluded that the area of Vikas Nagar slum in Dehuraoad, Pimpri-Chinchwad Municipal Corporation is highly affected with Polluted environment and Dirty environment which may cause great effect on health of local people and leads to several diseases. So there should be proper maintenance of Garbage, Solid Waste and Cleanness of sewage cannels. And proper panning should be done with respect to town planning.

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