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Environmental Pollution of Slums in Moradabad

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INTRODUCTION

India has witnessed the growth of slums in almost all the major urban centres in recent years. Even in medium-sized towns like Aligarh, Moradabad, Bulandshahar, Meerut etc. in the predominantly agrarian region of Rohilkhand in Uttar Pradesh, slums has emerged. However, these are still at nascent stages of development, and do not pose any serious threat to environment. The problem of growth of slums si most acute in the metropolitan cities of the country. Therefore, any exercise aimed at tackling slum problem should be based on an appropriation of the problem in Moradabad, where they have assumed menacing proportions.

In 1951, there were just 1200 slum households in Moradabad. Today, there are 800 households living in jhuggi Jhompri clusters.

About 16.7 percent of the total population live in slums of the city oc Moradabad. The inmigration of more than five to six thousand persons each year from neighbouring areas A growth rate of 15 percent, of the slum population is estimated annually.

As observed during the visits, that the environmental problems are acute in these colonies, in which tha suatters have occupied all open areas. The consolidated and compounded effect of all the environmental problems can be easily observed in these colonies Thus, these colonies present the most holistic and comprehensive case studies. In the recent research study, these are called slums colonies.

ISSN (P): 0976-9447, (e): 2454-8391 ICRJIFR, IMPACT FACTOR

3.8741

The infrastructural amenities provided in the slums colonies, like living space, bathing facilities, water supply, solid waste disposal and sanitation etc. are already deficient. Additional strain created by the squatters on the already overstreched facilities, result in further environmental deterioration. Overcrowding living and noise and air pollution add to the extremely poor conditions of environment. In addition to the above, inadequate health, education and recreation facilities in these colonies further damage/complicate the environmental scenario of these colonies of the various environmental deficiencies effecting the slums colonies of Moradabad the most severe are those of inadequate and insufficient sanitation particularly facilities for safe and hygienic daily ablution. These areas either do not have a sewerage system, or even if sewers are present, they are non-functional.

Most of the inhabitants are very poor and are not in a position to afford household toilets. Besides, community toilets are also insufficient in numbers and these too are not maintained properly (Sahiti Guha 1995). The scenario of garbage management, too is, bleak and dismal. The slums colonies are replete with unattended garnage dumps, which pose a serious environmental health hazard to inhabitants. Open drains overflowing with sewage, roads with pot holes and dust, open areas littered with garbage and open defacation, contribute to render the environment unsuitable for human habitation. (Sabir Ali,1993)

In the above context, it nececiates a systematic research to understand the ill effects of sanitation situation and growth of slum on environment on one hand and facilitate urban planners and decision makers to take effective measures to improve the living environment on the other in these colonies of Moradabad.

1.1 Objectives

Appraisal of the environment problems of the slums colonies must inevitably precede any efforts in aimed at ameliorating these problems. In this context, the following objectives have been attempted:

- i) To describe the nature, and magnitude of the Moradabad slum's environmental conditions.
- ii) To acertain the socio-economic composition of the selectes slums colonies.
- **iii**) To assess the environment of slums colonies of Moradabad with particular reference ro various specific sanitation parameters/schemes.
- **iv**) To suggest strategies for ameliorating the environmental problems in the slums colonies of Moradabad

1.2 Methodoly

1.2.1 Sampling and selection of users/Non users of facilities

ISSN (P): 0976-9447, (e): 2454-8391 ICRJIFR, IMPACT FACTOR

3 8741

This study was carried out in slums colonies located in Moradabad There are 10 colonies in total. Conditions are extremely poor in this area as compared to rest of Moradabad Each colony is having a fixed number of blocks.

One block was selected from each colony which was observed to be most polluted mainly because of poor environment. For the purpose of survey, community latrine complexes were selected and divided into two categories namely, Pay and UseToilets(PUTs) and old Community toilets(OCTs). To ascertain the quality of environment, quantum of garbage existing, adequacy and state of physical and socio-economic infrastructure were also critically examined through pre-tested schedules.

From each of the selected block, 100 heads of households were interviewed for getting the requisite information from the selectes users of the community facility with the help of two types of interview schedules.

In addition to the above, only these block, were selected where:

- i) There was either no provision of sewer lines, or the lines were not functioning properly.
- ii) There was atleast one functional pay and use Toilet Complex and one old community Latrine Complex still in use.
- **iii**) Squatters have emerged on the open spaces reserved for housing, parks, schools, shopping, education and health etc. in the colonies in question.

1.2.2 Tools of data collection

Two semi-structured interview schedules were prepared. These were pro-tested and in the light of the findings of pre-test the same were modified and canvassed in eight resettlement colonies. The details of the interview schedules are given below:

1.2.3 Data Analysis

The filled-in interview schedules were checked manually. The gathered information on the schedules were entered in the computer with the help of a software, known as 'Data Expert'. The following statistical tools were used: frequency and percentages.

i)General Schedule for Household Survey:

The household surveys were conducted separately among the users of PUTs/OCTs through canvassing two schedules namely: (i) Household Schedule for Pay and Use Toilet users, and (ii) Household schedule for users of old-Community Toilet Complexes. These Schedules detail out the following.

- a) Socio-economic background of the PUT/OCT users by sex.
- **b**) The problems of PUT/OCT users by genders including those of the children.
- By inspection of latrine complexes in use during peak hours

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- By interviewing selected and knowledge users.
- (ii) Technical Interview Schedules of Pay and Use Toilet Complexes/Old Community toilet complexes and Environment The technical survey was conducted in PUTs and OCTs by canvassing two schedules namely: (i) Household Schedule for Pay and Use Toilet users, and (ii) Household schedule for users of old-Community Toilet Complexes Also canvassed were the Environment Schedules one in each colony These schedules contain and provide the following:
- (a) Information regarding slums, squatters, aspects of garbage management like location of dalaos, existing garbage, equipment/vehicals used for collection and disposal od garbage status of other infrastructural facilities in these colonies etc.
- (b) Details of the Pay and Use Toilet Complexes to determine the number of users per seat, breakage or chocking of drains and sewer lines, collapse of soakage pits, availability of water and conditions of hygiene etc.
- (c) Details of the Old Community Latrine Complexes to assess the prevailing ratio of personper-seat breakage of drains, seats and cubicals, sewer leakness, collapse of septic tanks and conditions of hygiene etc.
- (d) Provide a basis for comparison of both types of complexes, and
- **1.3** Re-capitulation Chart or Glossary of Phrases and Abbreviations:- To facilitate the readers, nomenclature associated with these colonies, squatters, Pay and Use Toilet Complexes, Old Community Toilet Complexes and other relevant terminologies.

1.4 Chapter Design

This study is divided into Nine Chapters. Chapter I is on introduction to the study, its objectives, methodology scope and limitation, etc. Chapter II is a review of literature and the recent research conducted for slums. Chapter III is giving about the nature, type and magnitude of slums problems in Moradabad Chapter IV is environmental condition of slum area colonies. Chapter V is devoted to study to low cost sanitation schemes and the environment of colonies. Chapter VI specifies the benefits and problems of the possible use of bio-gas plants in and use toilets to use human waste usefully. Chapter VII elaborates the effect of environment on the public health and hygiene. Chapter VIII documents the environmental conditions prevailing as consequence of the environmental improvements shemes. Chapter IX gives the conclusion and suggestions.

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ISSN (P): 0976-9447, (e): 2454-8391 ICRJIFR

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