

## **Impact of the Compensation on Livelihood of Gas Affected Population in Bhopal Madhya Pradesh, India**

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**ABSTRACT :** *The Industrial Catastrophe occurred on the night of 2-3rd (12.15 am) December 1984, at Union Carbide India Limited (UCIL) pesticide plant in Bhopal a subsidiary of the U.S. based Union Carbide Corporation. The country India faced the worst industrial accident ever in the world, which was responsible for claiming over five thousand lives and rendering more than 200000 people morbid. The UCI Company did a vain trying to dissociate from legal responsibility of this accident, eventually it reached a settlement with Indian Government through mediation of that country's Supreme Court. As settlement between the Government of India and Union Carbide Corporation in 1989, the UCIL paid 470 million U.S. dollars as claim settlement. Meanwhile various relief and rehabilitation measures have been implemented by the Government. A heavy induction of money has led to far reaching economic and social consequences that are both favorable and damaging at micro as well as macro levels. An experimental method of sample survey only can give answer to the questions arising*

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### **I. HISTORY :**

Period was before Green Revolution, India was plagued with periodic droughts that result in famine in the northern part of India. Drought resistant varieties of wheat, originally from the Sonora region of Mexico was developed to adapt to Indian conditions. This wheat variety had bigger inflorescence, and resistance of rain and wind. This however required higher fertilizer application and had higher pesticide requirements. In these circumstances the Government of India began approving pesticide factories all over India. Thus the parent union Carbide Corporation (UCC), West Virginia, USA, opened the pesticide factory in Bhopal, India. The UCIL manufactured the pesticide carbaryl (sevin). The production was intended primarily for demand within the country. However, the plant had a production capacity far greater than the production planned for UCIL, Bhopal. Interestingly, the demand and use in agriculture for carbaryl in India was far below the output from the UCIL plant. UCIL had a large stockpile of phosgene when the disaster had occurred. That was more than what was required for the manufacture of the pesticide carbaryl. Phosgene, chemically known as carbonyl chloride is a deadly gaseous toxin which was used in World War II. The MIC gas tragedy in Bhopal showed the world its potential to annihilate mankind and its use as a good chemical warfare agent. There *had been* natural hazards of immense magnitude including those which wiped out the massive dinosaurs from the surface of the earth. There had been terrible wars which caused large scale destruction of human life and property, like witnessed by the Second World War. But it was in the Orwellian year of 1984 that Bhopal became the scene of the greatest peace time manmade disaster. It killed thousands and left many more to suffer slow death and condemned their future generations to unforeseen genetic disorders and ailments. The tragedy exposed the callous indifference of the multinational company. Bhopal is still reeling under the shock of this ghastly tragedy. Neither the local authorities nor the factory management seemed to know the exact nature of the leakage and the possible protective measures which could minimize its impact. The tragedy is a standing testimony of the dehumanizing impact of the hazardous pursuits of the rapacious Industrial development.

### **II. INTRODUCTION**

The town of Bhopal had 56 municipal areas in 1984 out of which 36 have been identified as core affected and the rest 20 were unaffected. The underground toxic gas tank emitted a huge cloud of deadly fumes in the night spreading in different directions according to the prevailing winds and the low ambient temperature of December. The demarcation of the region was based on the number of deaths in these localities between 3rd and 6<sup>th</sup> December 1984. The 36 affected wards were further classified in to severely affected, moderately affected and mildly affected. The tale of this shocking mass death does not end here. Redress and compensation was sought from UCC through legal means, a settlement took place between the Govt. of India and UCC in 1989. Under the terms of the settlement, UCC promised to pay 470 million U.S. Dollars (Rs. 705 crores) for compensation while the government agreed to drop all criminal cases against it. Out of 1029,517 claims for compensation 574,376 claims were awarded compensation for personal injury up to October 2013. On war footing State Government had implemented various relief and rehabilitation measures. One of the relief

measures was of disbursement of ex-gratia payment of Rs. 1500 per family reporting a monthly income less than 500 and Rs. 10,000/- in case of death.

The families were identified for beneficiary, on the basis of a socio-economic survey conducted by the Tata Institute of Social-Science about Rs. 12 crores were so disbursed. The impact of the disbursement of such a sizeable sum (over a period of two years) was studied by the Directorate of Economics and Statistics. The findings were disturbing. Therefore, these have been concerns about the possible adverse impacts of the flow of large sums of money at the time of disbursement of final compensation. The Govt. of India announced a decision to disburse Rs.360 crores as interim relief to all residents of the 36 wards constituting the core affected area @ of Rs.200/ month per head from 1st April 1990. It was estimated that Madhya Pradesh government had spent Rs. 67.24 crores for various rehabilitation measures for gas victims up to 31st March 1990. In the year 1990 Government of India had sanctioned a five year action Plan of the State Government with a capital outlay of 258.00 crores for medical, economic, social and environmental rehabilitation of the victims. It was decided that the expenditure would be shared by Government of India and Madhya Pradesh government in ratio of 75:25 in accordance with the recommendation of 9th Finance Commission. The Action Plan was extended up to July, 1999. State Government has been incurring all the expenses of smooth running of the Rehabilitation Programmes and welfare of the gas victims, for this purpose State Government had to spend Rs. 512.56 crores from July 1999 to October 2013. (Reported Bhopal Gas Tragedy Relief and Rehabilitation Department, Government of Madhya Pradesh). There are many Non Governmental Organizations in Bhopal. They are playing a significant role for the rehabilitation of Gas victims. The process of distribution of compensation to gas victims commenced in 1994 and 10, 29,517 claim cases were filed for compensation. All these cases have been settled. As on October 2013 Rs. 3097.69 crores have been awarded to 5,74,376 claimants of the Bhopal gas leak disaster as compensation, found to be eligible by the Welfare Commissioner, who is a sitting judge of the High Court of Madhya Pradesh. The orders of the Supreme Court dated 19<sup>th</sup> July 1994 and 26<sup>th</sup> Oct. 2004, pro-rata compensation on 1:1 basis. Two installments of compensation – of up to Rs 25,000 each – have been given till now to the injured, one from 1994 and the next in 2004. The initial beneficiaries of Rs. 25,000 are the same in the second also. (Reported Anwar M.F. Addl. Welfare Commissioner, Bhopal Gas Victim, Bhopal, May 2013). The Court also gave seal of approval to the figure of 15,248 deaths, reported by Bhopal Gas Tragedy relief and Rehabilitation department. The socio-economic implications of the flow of fund are not only short term and long term but also positive as well as negative. The present study has been undertaken in this background.

#### **AIMS & OBJECTIVES:**

Whether, these reliefs help the families in their rehabilitation?

How, the beneficiaries utilize the relief fund for improving their livelihood, acquiring durable assets and their changes in saving pattern?

#### **III. METHODOLOGY:**

The study has been conducted in Bhopal city dividing it into two segments, one comprising 36 wards (MIC gas affected area) – the residents were beneficiaries of relief and the second remaining 20 wards (non-affected) treating as control area. The experimental method of sample survey is the only possible method for a study like this where primary data need to be collected. It was estimated that population of Bhopal in 1984 was 8.33 lakhs out of which 3.12 lakhs were in non affected area and 5.21 lakhs in affected areas of 36 wards. The total 36 wards in Bhopal are grouped in to three as Severely, Moderately and Mild affected. From the report of National Institute for research in Environmental Health (Indian Council of Medical Research) (ICMR), Bhopal a great percentage of affected families have migrated for many reasons. Among the rest gas affected families of three groups around 200 random sample families from each group (a total of 600 gas affected families) formed the sample for this study. The study has been completed only on the information supply by the respondents, sensitive and touchy issues such as income, savings, investments, drinking habits, family-relations etc. of the mentioned area. Data relating to crime rates, gambling and divorce in these areas has been collected. The data collection through surveys and tabulation will be undertaken with the help of computer. Various statistical techniques such as correlation of coefficient will also be used to analyze the data.

#### **IV. DISCUSSION**

“Impact of the Compensation on Livelihood of Gas Affected Population in Bhopal” is an effort to put light on the far reaching socio economic consequences of dispersing of heavy induction of money to the Bhopal Gas Victims has been favorable and or unfavorable. The main motive of this study has been both to estimate the impact of compensation on gas victims as well as provide guidelines for necessary precautions for any possible further disbursement of money on such a gigantic or even larger scale. No suitable legal regulatory measures applied to regulate the flow of compensation money and mitigate its possible adverse effects and provide appropriate environment for favorable effects. Many reasoning that a flow of money in an economy, in the

hands of various categories of people would have various effects depending upon the patterns of income, expenditure, consumption, living conditions, family relations, general behavior etc on the beneficiaries and some reflections on non-beneficiaries also. The disbursement of compensation to all the affected persons individually, provided an economic independence of the family members and changes in social values and attitude of the people. These changes have short term as well as long term socio economic implications and micro and macro level collisions. For administrative purpose Bhopal Municipal Corporation had divided Bhopal in to 56 wards, out of which 36 wards are gas affected and 20 wards are unaffected, then these 36 wards have been again divided into severe moderate and mildly affected areas according to the death rate experienced during 3<sup>rd</sup> to 6<sup>th</sup> December 1984. In the year 1986 Indian Council of Medical Research<sup>18</sup> (ICMR) started their comparative cohort study among 62,706 MIC gas affected population of Bhopal from these severely moderately and mild affected areas and 13,526 non-affected population. But it is gradually reduced as 16,860 affected and 5,741 non-affected up to 2010 means after 25 years they had a loss of 79% of cohort population. The reason behind the loss of cohort (gas affected) population are probably shifting of the population to different places, marriage migration shifting of young age cohort to older age one and succeeding death of elderly cohort. National Institute for Research in Environmental Health (NIREH) (ICMR) Technical Report 2013). Therefore, I decided that it would be better to do a random sampling survey and taking up every seventh present gas affected family so that, it will become a good data for my studies, which means a total of 600 gas affected families, i.e. 200 families from each area.

Again in NIREH's Technical Report their comparative studies from 1985 to 2010 socio economic profile noticed significant improvement in housing, per capita income and educational status of affected as well as in non affected population of Bhopal. Here my effort is on an isolated study of various compensations and its impact only on gas affected population. The actual disbursement of interim relief to the victims started since July 1990 which was to be effective from 1.4.1990. 56 municipal wards of Bhopal divided into two segments 36 wards are gas affected beneficiaries of interim relief the rest 20 wards non- affected and are non beneficiaries. In the year 1991 Malik et al<sup>17</sup> conducted a study on socio economic impact of Disbursement of interim relief to Gas affected families of Bhopal. It was a comparative study between 4% beneficiaries and 1% non beneficiaries to total population of Bhopal. In this study results showed that as compared to the control area, there has been a larger shift of families from low expenditure group to higher expenditure group. Employment opportunities increased. This survey was conducted after interim relief only, at 1991 among a large population of 600,000 gas victims, and the size of the sample was very small being only 4%. The impact is found to be varying with different income groups indicating interaction between economic & social factors. Sathyam<sup>21</sup> et al expressed that earlier study taken up by the directorate of economic and statistics in the contest of impact of distribution of ex-gratia payment the finding was quite adverse. In this study the population was divided in to four income group. It was observed that in the matter of income low income group has much better family income than high income group because of large family size and interim relief distributed on the proportion of victim's family income. It was noted that expenditure on education, food, health and luxuries increased 24% in the lowest income group and similar changes in higher income group also. My random sampling study should explain over all development of gas affected with compensations without any separation of income group. A Brief Report on the work done by government of Madhya Pradesh for gas tragedy victims, the main responsibility of the Gas tragedy relief & Rehabilitation Department<sup>9</sup> is to implement and monitor various proposals/ programmes for the welfare of the gas victims pertaining to medical, economic, social and environmental rehabilitation. My effort is to find out how much the gas affected were rehabilitated with these welfare programmes? The limitations are, the study had to rely on the information of the respondent viva-voice, information on sensitive and touchy issues, such as income, savings, investments, family relations, habit of drinking, social disharmony, crime, gambling etc. Concluding here with disbursement of various compensation made to all persons individually provided economic independence of the family members changes in social values and attitudes of the people affect the economic institutions. It may be positive and negative. The effect may be positive such as more productive investment, additional employment opportunities, incentive to work, improved quality of life and negative effects such as crimes, wasteful consumption, disincentive in work, social disharmony, vice etc.

## **V. RESULT AND CONCLUSION**

Nutshell of all these events in Bhopal revealed that expanding industrialization without concurrent safety measures has far reaching consequences. Public health infrastructure was very weak in Bhopal in 1984. Far more needs to be done for public health in the context of industrialization to show that the lessons of the countless thousands dead in Bhopal have truly been heeded. The turning point of my fact finding voyage among records, find out that the tragedy shattered the socio economic life of the society and was boosted up by the subsequent compensation. This process can lead to topple the socio-economic behavior of the people. . Government had implemented various rehabilitation steps in health, economic, social and environmental field

for the victims. Veblen highlighted in his draft towards conspicuous consumption and bellicosity arising out of income and leisure. Such a well founded theoretical assessment of human behavior provided the back drop for the present study to evaluate the impact of the compensation on livelihood of Gas Affected population in Bhopal, Madhya Pradesh, India. Since the disaster, India has experienced rapid industrialization and has undergone tremendous economic growth. As an increase in small scale and cottage industries that are clustered about major urban areas in India. The incident and then continues flow of heavy induction of money topple the socio economic set up of the common people. Looking at it positively the result of various compensations, more children were able to attend school, money was spent on treatment and food, and housing also eventually improved. While some positive changes in government policy and behavior of a few industries have taken place, major threats to the environment from rapid and poor regulated industrial growth remain wide spread. Environmental degradation with significant adverse affect on human health consequences continues to occur through out India. Future management of industrial development requires that appropriate resources be devoted to advance planning before any disaster occurs. The event in Bhopal a testimonial for developing countries like India, expanding industrialization without concurrent evolution in safety regulations could have catastrophic consequences. It is also important to note here that Carbide was able to operate its deteriorating plant because industrial safety and environmental laws and regulations were lacking or were not strictly enforced by the state of Madhya Pradesh or the Indian government making the indirectly responsible for the tragedy at Bhopal. This study also provides guidance for any possible further disbursement of money on such gigantic or even larger scale. If any legal regularity measures are applied to regulate the flow of compensation and various relief measures obviously a suitable strategy would be evolved to mitigate the possible adverse effects and provide appropriate environment for improving the efficiency of favorable effects.

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