Industrial Development and its Impact on Environment and Infrastructure Facilities in Kachchh District of Gujarat (India)

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ABSTRACT
Kachchh district, with an area of 45,652 sq. kms, is the second largest district in India (Asia). After 2001, an announcement of various tax reliefs and concessions to the industries boosted up the industrial development. In this context, the researcher has tried to find out the industrial development and its impact on environment and infrastructure facilities through a survey of urban and ten rural areas of Kachchh. More than 80% families are of the opinion that transportation, communication and entertainment facilities have increased after earthquake, but quality-wise they have not improved.

1. Introduction
Kachchh district, with an area of 45,652 sq. km. (approximately 23% of the State) forms the northwestern region of Gujarat (India). It is the largest district in Gujarat and the second largest in India (Asia). Rann (desert) is its special feature. According to 2011 census count, the total population of Kachchh is 20,90,313. Among them 10,96,343 are males and 9,93,970 females. The gender ratio is 907 females per 1000 males. In 2002 the total population was 15,82,759. Rainfall in the district is less and scattered. Performance of the agriculture sector in Kachchh is very low as compared to performance in other districts. But the district has historically rich stock of animals.

2. Objective of Research
After 2001 government provided many kinds of relief and assistance to the Kachchh district for industrial development. As a result of it, the economic growth came into existence in Kachchh. In the context of the above situation, the investigator has tried to study:
(i) the impact on environment in Kachchh District due to Industrial development and
(ii) the impact on infrastructure facilities due to urbanization in Kachchh district.

3. Impact of industrial Development on Environment
Due to industrial development, population, especially in urban areas increased. According to The Local self Government units are unable to provide propersanitation facilities. Another negative result of urbanization and industrialization found in selected areas is that dangerous gases and smokes of factories, noise and air pollution from heavy traffic are increasing. 71.17% families agree that they live in polluted areas in post earthquake.

The investigation established that in the pre-earthquake period, 39.83% families lived in clean environment areas but after earthquake, this ratio reduced to 28.83%. The main cause is industrial development. Before earthquake, there was no environmental pollution. However, after earthquake industrialization has emerged as the second main reason for polluted environment. Lack of cleanliness and proper sanitation facilities are the basic reasons for pollution. Moreover, due to urbanization, corruption and crime have increased after the earthquake. Rural areas are deprived of health facilities. Fatal diseases like diabetes have increased two to three times after the earthquake due to polluted environment and its adverse effect on pure water.

4. Facilities at Glance

- **Pure Drinking Water and Sanitation**: The Kachchhees are deprived of pure drinking water. After earthquake about 70% samples of families are not satisfied with the supply of drinking water in their areas. In urban areas about 74% samples of families have commented that water facility is not satisfactory. Sanitation facilities are slightly improved in the selected areas. In rural areas, about 63% families have no sanitation facilities and about 40% selected urban families have accepted that sanitation facilities are medium in their town.

- **Electricity and Street Light**: Before earthquake 40% and after earthquake 72% families are satisfied about the supply of electricity in their areas. In urban areas 53% and after earthquake 81% families are happy with the services of electricity. Street light facilities play a very important role in human life. In urban areas, in particular, it is a basic need.

- **Health Facilities**: After earthquake, especially in urban areas, the number of private dispensaries and hospitals is increasing day by day and the quality and efficiency has also improved more in private sector than in public sector. In rural areas mostly government institutions provide the health facilities which, is not up to the level of the satisfaction level. About 52% in selected urban families and 16% rural families are fully satisfied with health facilities. It means that health facilities in rural areas are still very poor.
Transportation: Railway is a safe and comfortable mode of transportation. About 50% families have not availed of the railway services in their areas. Almost all rural areas are deprived of railway facilities. Before earthquake, about 27% and after earthquake about 43% samples of families agreed that, facilities were not good. Bus service is also an important mode of transportation, especially in rural areas so they may be connected to cities. After earthquake about 80% families have agreed that facilities are increase but not satisfactory. The investigator has also found that outer roads have improved but the interior roads have not improved much after the earthquake.

Banking facilities: Banking facilities are also essential facilities for human life. Due to industrial growth, business and trade have grown fast, so importance of bank facilities has also increased. After the earthquake, a revolutionary change is found in the Kachchh district. In 2001 only 17% and 2016 about 51% families are agreed that facilities have been good; But in rural areas most families have no bank facilities.

5. Suggestions

- Clean potable water should be provided to people.
- The Government should, therefore, build more dams in rural areas so rain water could be harvested and then made available to the people after purification/chlorination.
- Samples of water available to the rural folk should be periodically checked in laboratories to ensure its fitness for human consumption.

A negative effect of urbanization and industrialization, emitting dangerous gases and smoke which are highly injurious to human beings. Such dangerous establishments should be shifted to remote areas in the Rann which are uninhabited.

6. Pollution control measures should be implemented, such as

(i) Pollution Control Act (Air, water and land) should be enforced strictly for the industries in Kachchh to make the environment free of any such pollution. Presently, emission of pollutants is enormous and the Government should take effective measures to control it.
(ii) “Grow More Tree Programs” should be implemented.
(iii) Traffic problems should be attended to properly. Traffic rules should be implemented strictly.

Government should provide sufficient funds to Gram Panchayats for development of infrastructure facilities in rural areas, such as pure drinking water, street light, sanitation, deepening of public wells, removal of silt from ponds, animal health centers, primary and secondary education and public gardens and parks etc.

A strong Earthquake Management policy should be launched by the Government.

References

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