

GIS based Analysis of Environmental Issues of Vadodara

2004

The academic project was done under Mandar Mehta (as External Guide) by students of Environment Science of M S University of Baroda. The project aims at analyzing environmental problems of Vadodara. This is probably for the 1st time, that a comprehensive study has been made of each & every problem with its own set of cross-sectoral linkages that has had a substantial effect on the environment of Vadodara. This project not only throws light upon the environmental problems but also deals with its cause, impacts and action plan.

The primary data is collected from various government / non-government sources and Municipall Corporation offices. The data is critically analyzed and interpreted through GIS for detail study of the present status of the environmental problems of Vadodara.

There are three main issues that have been studied:

- (a) Public Health,
- (b) Traffic Management,
- (c) Town planning

Each of these three sections constitutes of a number of subtopics that have a direct or an indirect effect on that particular issue.

Under Public Health, information has been collected for various diseases prevailing in the city, types & patterns of the diseases and cases occurring in every ward to understand the spatial and temporal pattern of each disease, it's cause and necessary steps required to be taken to improve the present status. It also includes information about the solid waste generation in the city and in every ward, industries, landfill sites and various other issues concerning public health.

The traffic section deals with the types of vehicles, vehicular growth, accidental cases and deaths resulting from it at different locations in the city. An attempt to highlight the most congested areas, and the pollutions levels showing the levels of harmful gases emitted due to traffic at different locations.

The town planning section gives an overview about the land classification, water bodies, gardens, green belts, housing facilities, medical facilities, sanitation facilities, water distribution, etc.



The data required are collected from the V.M.C, Police Bhavan, R.T.O. office, G.P.C.B, GEMI. Some data is also collected from the hospitals and staff dispensaries. An extensive study of the whole city is made by collecting information from all 10 wards.

Environmental problems prevailing in every ward is studied through personal inquiry, one to one interviews with the ward officer, corporators, sanitary inspectors and technical engineers. A Survey was also conducted by interrogating the general public residing in every ward to get better idea about the environmental problems and its cause.

Some efforts have been made in the past to study such issues like SOCLEEN has done a survey exclusively as "solid waste generation" in the city. It also organizes seminars and workshops on environment related issues. The project is also inspired from one of the seminars of SOCLEEN held at Hotel Surya Palace. Baroda Citizens Council has also published a book called "Environmental Mapbook of Vadodara".

But so far no attempt has been made to cover all the environmental problems of Vadodara. This is the first ever project making a comprehensive study of each and every problem and getting to its roots and coming up with critical analysis through GIS along with the solutions and action plans.

