

Chapter I

Introduction

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1.1 Background

Under the Environment (Protection) Act, 1986, 'environment' includes water, air and land and the interrelationship which exists among and between water, air and land, and human beings, other living creatures, plants, microorganisms and property.

The United Nations defined¹ environmental degradation as the “deterioration in environmental quality from ambient concentrations of pollutants and other activities and processes such as improper land use and natural disasters.”

While natural disasters such as earthquakes, cyclones and tsunamis have adversely impacted the environment throughout the earth's history, some of the major causes of degradation in the environment are human processes and activities such as deforestation, urbanisation, industrialisation and improper waste management. The National Environment Policy, 2006 states that the “proximate drivers of environmental degradation are population growth, inappropriate technology and consumption choices, and poverty, leading to changes in relations between people and ecosystems, and development activities such as intensive agriculture, polluting industry, and unplanned urbanisation.”

1.2 Rationale for selecting the topic

Guwahati is the largest and fastest growing city in the North Eastern (NE) Region of India. Home to approximately 10 lakh inhabitants, there has been a growing concern that pollution in and around the city is alarmingly high. Being the gateway to the NE Region, Guwahati has seen a constant influx of people from other NE States as well as other parts of the country in search of jobs and other means of sustenance. Commercial and industrial activities coupled with the pressure of an ever increasing human population have resulted in the generation of significant amounts of municipal waste, effluents as well as other industrial pollutants.

Guwahati falls under the Kamrup (Metro) district which comprises Guwahati Municipal Corporation (GMC) area, North Guwahati Town Committee Area, Amingaon and a few revenue villages. The area known as greater Guwahati covers an area of 955 sq. km. The southern and eastern sides of the city are surrounded by hillocks which have become major targets of illegal encroachment and rampant stone quarry mining. Further, besides having the mighty Brahmaputra running through it, Guwahati is also home to many eco-sensitive swamps, marshes and water bodies like Deepor Beel, Silpukhuri, Dighali Pukhuri, Borsola Beel, Silsako

¹ United Nations Statistics Division <http://unstats.un.org/>

Beel, etc. The proximity of these natural resources has made the city a sensitive area as far as conservation efforts are concerned.

As per Census 2011, the Greater Guwahati area supported 4.02 *per cent* of the state population on just 1.22 *per cent* of state land area. Population density was 1,313 persons per sq. km compared to only 398 persons per sq. km in the entire Assam and the all India population density of 368 persons per sq. Km.

In order to examine the level of environmental degradation caused by various human activities, and the role of the Pollution Control Board, Assam (PCBA) in mitigating the effects of such degradation through its regulatory and oversight functions, a Performance Audit (PA) was planned on the topic '**Environmental Degradation in the greater Guwahati Area – with special emphasis on the role of PCB, Assam**'.

1.3 Audit Objectives

The objectives of the performance audit were to ensure whether:

- PCBA and concerned stakeholders complied with all Acts, Rules, Government policies and instructions for prevention, control and abatement of pollution.
- Effective mechanism was in place in the Government organisations and private entities, involved in prevention, control and abatement of pollution, to ensure that adverse impact of their processes and activities on the environment was minimised.
- There was periodical analysis of the impact of environmental degradation and remedial measures to overcome it were being implemented.

1.4 Audit Criteria

The following were the sources of audit criteria for the performance audit:

- All related Acts, Rules like the Water (Prevention & Control of Pollution) Act, The Air (Prevention & Control of Pollution) Act, the Environment (Protection) Act, 1986, the Motor Vehicles Act, 1988 and the Central Motor Vehicles Rules, the Municipal Solid Waste (Management and Handling) Rules 2000, the Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008, the Plastic Waste (Management and Handling) Rules, 2011, the Batteries (Management and Handling) Rules, 2001, the e-waste (Management and Handling) Rules, 2011, the Forest (Conservation) Act, 1980, the Wild Life (Protection) Act, 1972, the National Environment Policy, 2006, the Biological Diversity Act, 2002, the Wetlands (Conservation and Management) Rules, 2010, the Guwahati Water Bodies (Preservation and Conservation) Act, 2008, the Ramsar Convention.
- Orders, instructions, guidelines, standards issued by Government, Central Pollution Control Board (CPCB), Hon'ble Courts etc.

1.5 Scope and Methodology of Audit

A Performance Audit was conducted between June and September 2015 and covered the period 2010-11 to 2014-15. Records were examined at the Secretariat of the Environment and Forest Department, the offices of the PCBA and Guwahati Municipal Corporation (GMC). Information was also collected from the offices of the PHE, Jal Board, Health, Transport, Census, Agriculture, Water Resources, Ground Water Commission, Central Water Commission, Industry, Soil Conservation, Bio-diversity Board, Principal Chief Conservator of Forests and Guwahati Metropolitan Development Authority.

An entry conference was held on 24 June 2015 with the Secretary, Environment and Forest Department and Transport Department in which officers of various departments including the PCBA participated wherein the Audit Objectives, Criteria and Scope were discussed.

The Audit methodology involved collection of data through document analysis, response to audit queries, questionnaires, joint physical verifications, joint collection of samples and photographic evidence. An advertisement was also put out in local newspapers and the website of the office of the Accountant General calling for public comments on the subject. Responses to the advertisement, Study Reports of different institutions/Scholars and of various implementing agencies of the Government of Assam were also examined.

The audit findings were discussed with the Secretary, Environment and Forest Department and Transport Department in an exit conference which was held on 17 November 2015 in which officers of various departments including the PCBA also participated. Replies received from various departments have duly been incorporated at appropriate places in the Report.

1.6 Acknowledgement

The cooperation extended by the Secretary, Environment and Forest department and Transport department, PCBA, GMC along with other Government departments and agencies is hereby acknowledged.

1.7 Audit findings

The audit findings have been organized into seven Chapters which include the roles of the Regulatory bodies and Government Departments, Water Pollution, Air Pollution and Management of different categories of waste.