

**MIZORAM POLLUTION CONTROL BOARD:
ORGANISATION AND WORKING**

**A Dissertation submitted to Mizoram University
for the award of the Degree of Master of Philosophy
in Public Administration**

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Declaration

I, K. Lalremruata, hereby declare that the subject matter of this Dissertation is the record of work done by me, that the contents of this dissertation did not form basis of the award of any previous degree to me or to do the best of my knowledge to anybody else, and that the dissertation has not been submitted by me for any research degree in any other University/Institute.

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ABBREVIATIONS

AEE	Assistant Environmental Engineer
AIR	All India Radio
AMC	Aizawl Municipal Council
ASCI	Administrative Staff College of India
BMW	Bio Medical Waste
CAAQMs	Continuous Ambient Air Quality Monitoring Stations
CBMWTF	Common Bio-Medical Waste Treatment Facility
CEE-NE	Centre for Environment Education North East
CEMS	Continuous Emission Monitoring System
CHC	Community Health Centre
CO	Carbon Mono-oxide
CO ₂	Carbon di-oxide
CPCB	Central Pollution Control Board
CYMA	Central Young Mizo Association
DC	District Commissioner
DEO	Data Entry Operator
DIMC	District Implementation and Monitoring Programme
EIA	Environmental Impact Assessment
ENVIS	Environment Information System
EPA	Environmental Protection Act
FA	Field Assistant
GoI	Government of India
GOM	Government of Mizoram

HCF	Health Care Facilities
Hg Waste	Mercury Waste
I & PR	Information and Public Relation
JLA	Junior Laboratory Assistant
JSA	Junior Scientific Assistant
LAD	Local Administration Development
LDC	Lower Divisional Clerk
MFA	Mizoram Forest Act
MHIP	Mizo Hmeichhe Insuihkhawm Pawl
MoEF	Ministry of Environment & Forest
MPCB	Mizoram Pollution Control Board
MSW	Municipal Solid Waste
NAMP	National Air Monitoring Programme
NCEPC	National Committee in Environmental Planning & Coordination
NEPA	National Environment Protection Authority
NEMP	National Environment Monitoring Programme
NERF	National Environment Restoration Fund
NGO	Non Governmental Organisations
NGC	National Green Corps
NHI	National Host Institute
NWMP	National Water Monitoring Programme
NOC	No Objection Certificate
NRHM	National Rural Health Mission
ONGC	Oil and Natural Gas Corporation Limited

PCBs	Pollution Control Boards
PCC	Pollution Control Committees
PHC	Primary Health Centre
PPCB	Punjab Pollution Control Board
PUC	Public Health Centre
SA	Scientific Assistant
SIPMIU	State Investment Program Management and Implementation Unit
SoER	State of Environment Report
SPCB	State Pollution Control Board
UDC	Upper Divisional Clerk
UD & PA	Urban Development and Poverty Alleviation
U.N	United Nations
UT	Union Territory

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MIZORAM



CHAPTER I

INTRODUCTION

Historically in India, efforts at pollution control were started in the mid nineteenth century.¹ The Indian Constitution provides for power sharing between the federal and state governments. Parliament has the power to legislate for the whole country, while the state legislatures are empowered to make laws only for their respective territorial jurisdictions. Under Article 246 of the constitution the subject areas of legislation are divided between the union and the states into three lists: Union, State, and Concurrent list. Central laws prevail over a state law in the concurrent list but state laws prevail if the centre receives representation from the respective states. States play a major role both in the formulation and the enforcement of laws.²

According to Ogus (1994), there are four different degrees of state interventions, a) Regulation of information b) Standards c) Licensing and d) Price controls. Licensing is the highest degree of state intervention which involves: administrative costs, compliance costs, and indirect costs.³ After the 1972 United Nations Conference on Environment and Development at Stockholm, Sweden, the Indian Government amended the Indian Constitution and adopted Articles 48 A, and 51 A (g). Article 48A of the Indian Constitution says that the State shall take endeavors to protect and improve the

¹ *Evaluation Study on Functioning of State Pollution Control Boards: PEO Study No.180:* <http://planningcommission.nic.in/reportspeoreportcmpdmpmpeovolume1180> (accessed on 12.12.2013)

² P.M Prasad “*Environmental Protection Role of regulatory System in India*”, *Economic and Political weekly*, Vol 41 No. 13, April 1, 2006 pp-1278

³ Ogus, Anthony I, *Regulation: Legal Forms and the economic theory*, Oxford: Clarendon Press, 1994, pp-341, 1994.

environment and to safeguard the forests and wildlife of the country. Article 51 A (g) states that it is a fundamental duty of every citizen to protect and improve the natural environment.⁴

On the basis of these articles, the Indian Parliament enacted Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981 which were the landmarks in the recent times in environmental regulation. The Water Act, 1974 resulted in the institutionalization of pollution control machinery by establishing the Central Pollution Control Board (CPCB) at the centre and State Pollution Control Boards (SPCBs) at the state level. An umbrella Act called Environmental Protection Act of 1986 was passed which vested the Pollution Control Boards at both above mentioned levels with wide powers.⁵

A large number of legislations were enacted in India and the most prominent among them are mentioned below:

1. **Water (Prevention and Control of Pollution) Act 1974**, this Act maintains and restores the wholesomeness of water with the purpose of preventing and controlling water pollution with a view to carrying out the various purposes for the prevention and control of water pollution.

2. **The Air (Prevention and Control of Pollution) Act 1981** enacted for the prevention of air pollution and to maintain the quality of air. Since then a large number of Acts, Rules, Amendments and Guidelines have been issued by the Central and State

⁴ B.P Singh Sehgal, Human Rights in India: Problems and Perspectives, New Delhi: Deep and Deep Publications, 1996, pp- 420

⁵ P.M Prasad “*Environmental Protection Role of regulatory System in India*”, Economic and Political weekly, Vol 41 No. 13, April 1, 2006 pp-1278

Governments in India. The Indian Constitution has a direct commitment to environmental protection, which is one of the first in the world to recognize the importance of environmental conservation.

3. The Water (Prevention and Control of Pollution) Cess Act, 1977: An Act to provide for the levy and collection of a cess on water consumed by persons carrying on certain industries and by local authorities. With a view to augment the resources of the Central Board and the State Boards for the prevention and control of water pollution constituted under the Water (Prevention and Control of Pollution) Act, 1974.

4. The Environment Protection Act, 1986: This Act was enacted to provide for the protection and improvement of environment and for matters which are connected therewith. The Act includes several measures and activities which includes planning and execution of a nation-wide programme for the prevention, control and abatement of environmental pollution, restriction of areas in which any industries, operations or processes or class of industries which are considered to be harmful for the environment as well as human beings. It also lays down procedures and safeguards for the prevention of accidents, which may cause environmental pollution and remedial measures for such accidents; carrying out and sponsoring investigations and research relating to problems of environmental pollution.⁶

5. Rules for the Manufacture, Use, Import, Export and Storage of Hazardous Micro Organisms Genetically Engineered Organisms or Cells, 1989: The Rules aim at the protection of the environment, nature and health, in connection with the application of gene technology and micro-organisms. According to Article 2.2, these Rules shall apply

⁶ Aftab Alam (Ed), Human Rights in India: Issues and Challenges, New Delhi: Raj Publications, 2000, pp-279

to genetically engineered organisms, micro-organisms and cells and correspondingly to any.

6. Bio-Medical Waste (Management and Handling) Rules, 1998: Under the Environment (Protection) Act 1986, section 6, 8, and 25, the Central Government has made the Biomedical Waste (Management & Handling) Rules, 1998 to safeguard the public and health care workers from the risk arising due to Biomedical Waste. The CPCB has, prepared guidelines for disposal of biomedical wastes expected to be generated. The guidelines prescribe for District Hospitals/CHCs/PHCs are as follows: a) Removal of needles from the syringes cutting from the hub and b) Collection of cut needles and broken vials in white translucent puncture-substances and products and food stuffs, etc. of which such cells, organisms or tissues hereof form part.⁷

6. Hazardous Wastes (Management and Handling) Rules, 1989: Under Sections 6, 8, and 25 of the Environment (Protection) Act 1986, the Central Government has made rules relating to hazardous wastes management and handling excluding waste water and exhaust gases (covered under Water Act, 1974 and the Air Act, 1981) and the waste arising out of the operation from ships beyond 5 kilometers (Merchant Shipping Act, 1958). Radio-active wastes covered under the provision of the Atomic Energy Act, 1962. The Rules state that any occupiers generating hazardous wastes shall take all practical steps, to ensure that such wastes are properly handled, i.e. collection, reception, treatment, storage, and disposed of without any adverse effects to human health and environment. Such occupier shall apply for authorization in prescribed format to the SPCB or Committees of Union Territories (UTs). a) Proof containers and collection of

⁷ C.SK Mishra, J.W Kim and Amita Saxena (Eds), Environmental Issues and Options, Delhi: Daya Publishing House, 2006 pp- 99-102.

syringes (cut from the hub). b) Unbroken discarded vials in red bags/containers. c) Labelling of the containership. d) Sending both the containers to CBWTF for treatment if available, if not, autoclaving. e) Boiling in water where autoclaving is not available. f) Disposal of needles and broken vials in pits/tanks. g) Sending the Syringes and unbroken vials for recycling. h) Washing of autoclaved containers for reuse. i) Record keeping and reporting.⁸

8. Municipal Solid Wastes (Management & Handling) Rules, 2000:

Central Government notified in exercise of the powers conferred by Section 3, 6 and 25 of the Environment (Protection) Act, 1986 with the objective of regulating the management and handling of the Municipal Solid Wastes(MSW). This notification is applicable to all Municipal Authority for the collection, segregation, storage, transportation processing and disposal of MSW. Littering of MSW shall be prohibited in cities, town and in urban areas notified by the State Governments. To prohibit littering and facilitate compliance, the following steps shall be taken by the Municipal Authority, namely:-

- a). Organizing house-to-house collection of MSW through any of the methods, like community bin collection (central bin), house-to-house collection, collection on regular pre-informed timings and scheduling by using bell ringing of musical vehicle (without exceeding permissible noise levels);
- b). Devising collection of waste from slums and squatter areas or localities including hotels, restaurants, office complexes and commercial areas;

⁸ S. L Goel Urban Local Self Government: Administration and Management in the 21st Century, New Delhi: Deep and Deep Publication, 2011 pp-273-274

- c). Wastes from slaughter houses, meat and fish markets, fruits and vegetable markets, which are biodegradable in nature shall be managed to make use of such wastes;
- d). Bio-medical wastes and industrial wastes shall not be mixed with MSW and such wastes shall follow the rules separately specified for the purpose;
- e). Collected waste from residential and other areas shall be transferred to community bin by hand driven containerized carts or other small vehicles;
- f). Horticulture and construction or demolition wastes or debris shall be separately collected and disposed off following proper norms. Similarly, wastes generated at dairies shall be regulated in accordance with the State laws;
- g). Waste (garbage, dry leaves) shall not be burnt;
- h). Stray animals shall not be allowed to move around waste storage facilities or at any other place in the city or town and shall be managed in accordance with the State laws.⁹

9. Draft Municipal Solid Waste (Management and Handling) Rules, 2013: Ministry of Environment and Forests has released draft rules for management and handling of municipal solid waste. Once implemented, it will become mandatory for the municipalities in the state to develop landfills and submit annual reports to state government and pollution control boards. It also has guidelines and specification for setting up landfills. Municipal Bodies shall develop the necessary infrastructure development for collection, storage, segregation, transportation, processing and disposal of municipal solid waste directly or by engaging agencies or groups as per the rules. The new rules also make it mandatory for the municipal authority to prepare solid waste management plan as per the policy of the state government.

⁹ ibid pp-262-263

Overview of the draft rules are as follows:

1. Municipal authority is responsible for implementation of the rules and for the necessary infrastructure development for collection, storage, segregation, transportation, processing and disposal of municipal solid waste.
2. SPCBs and PCC will monitor the progress of implementation of Action Plan and the compliance of the standards regarding ground water, ambient air, leachate quality and the compost quality.
3. Central Pollution control Board shall publish requisite guidelines for processing/treatment and disposal of municipal solid waste from time to time.
4. Landfill sites shall be set up as per guidelines of Ministry of Urban Development. Existing landfill sites which are in use for more than five years shall be large enough to last for at least 20-25 years.¹⁰

10. Battery (Management and Handling) Rules, 2000: Acknowledging the steady increase in the use of rechargeable batteries, as well as potential environmental impacts resulting from their improper disposal, Government of India made Battery (Management and Handling) Rules, 2000. The main objective of the Batteries (Management & Handling) Rules, 2000 is to regulate the collection and recycling of used lead acid batteries in the country both indigenously generated and imported. Responsibilities of various stakeholders as well as Central and State Governments authorities are clearly spelt out in the rules. This rule represents a major step forward in the effort to facilitate the recycling of nickel-cadmium and lead-acid rechargeable batteries.¹¹

¹⁰ ENVIS centre on Urban Municipal Solid Waste Management <http://www.nswai.org> accessed on 12.12.2013

¹¹ <http://www.envfor.nic.in/legis/hsm/leadbat.html> accessed on 12.12.2013

11.The Noise Pollution (Regulation and Control) Rules, 2000: With the increasing ambient noise levels in public places from various sources, inter-alia, industrial activity, construction activity, generator sets, loud speakers, public address systems, music systems, vehicular horns and other mechanical devices have mysterious effects on human health and the psychological well being of the people. The Government of India considered necessary to regulate and control noise producing and venerating sources, with the objective of maintaining the ambient air quality standards in respect of noise.¹²

12. Re-cycled Plastics Manufacture and Usage Rules, 1999: The objective of the rule is to regulate the manufacture and use of recycled plastics, carry bags and containers. The rule has made the prohibition of usage of carry bags or containers made of recycled plastics that no vendor shall use carry bags or containers made of recycled plastics for storing, carrying, dispensing or packaging of foodstuffs. It also notifies that any person may manufacture carry bags or containers made of plastics, if the following conditions are satisfied, namely: -

- (a). Carry bags and containers made of virgin plastic shall be in natural shade or white;
- (b). Carry bags and containers made of recycled plastic and used for purposes other than storing and packaging foodstuffs shall be manufactured using, pigments and colorants which are entitled "*List of pigments and colorants for use in plastics in contact with foodstuffs, pharmaceuticals and drinking water.*"¹³

The established environmental rules and regulations are enforced by the concerned administrative authorities. In addition, they act upon the direction of the courts and

¹²<http://www.lawsindia.com/Industrial%20Law/K092.htm> accessed on 12.12.2013

¹³ <http://pib.nic.in/newsite/erelease.aspx?relid=57488> accessed on 12.12.2013

Pollution Control Boards (PCBs).The PCBs, in particular, try to prevent environmental degradation through formulation of standards, issuance of consent for establishment and operation and closure orders to rogue industries.¹⁴

Environment in Five Year Plans

The Scheme of Assistance for Abatement of Pollution was conceptualized during the 7th Five-Year Plan (1985-1990) with the main objective to strengthen the Central Pollution Control Board (CPCB) and State Pollution Control Boards (SPCBs) / State Pollution Control Committees (SPCCs) /Union Territories Pollution Control Committees for enforcing statutory provisions of pollution abatement. The Scheme is now a part of a Centrally Sponsored Umbrella Scheme of 'Pollution Abatement'. The SFC Memo of the Scheme was approved during the Eighth Five Year Plan with shift in focus from supporting manpower requirements to supporting equipment, studies and projects to meet the objectives of policy statement, 1992. The grants were being provided to State Pollution Control Boards/UT Pollution Control Committees, Environment Departments, Central and State Research Institutions, Government Agencies and other Organisations with the aim of strengthening their technical capabilities of effective pollution prevention and control across the country. During the course of implementation of Scheme, the States were advised that expenditure on staff would have to be from their own resources from financial year 1993-1994 i.e 1.4.1993, except for the Union Territories. With the increasing responsibilities of the Pollution Control Boards, greater emphasis is being laid on several polluted areas, low and no waste technologies, chemicals, small scale industries and other innovative schemes for control of pollution for which technical

¹⁴ P.M Prasad “*Environmental Protection Role of regulatory System in India*”, Economic and Political weekly, Vol 41 No. 13, April 1, 2006 pp-1279

studies are needed and items will be added to the list of equipment when the need arises. Appropriate equipment for emerging concerns will be provided to all the States/Union Territory PCCs e.g. noise, land, air and water pollution and bio-monitoring facilities. An objective of the Policy Statement on Abatement of Pollution is to involve the public in decision making. According to the statement, the information about the environment will be published periodically. In order to identify sources of pollution and create awareness among the public, the Non-Governmental Organizations (NGOs) can play a major role in this regard. The scheme will supplement the existing regulatory machinery through either individual or NGOs for this scheme. They shall be provided with material support to develop basic infrastructure like setting up of laboratories and equipments etc.¹⁵

The Twelfth Five Year Plan (2012-2017) adopts promotion of continuous 24×7 online air quality monitoring which includes Continuous Ambient Air Quality Monitoring Stations (CAAQMS) and Continuous Emission Monitoring System (CEMS). It is proposed to set up a National Environmental Monitoring Programme (NEMP) for monitoring forests, air and water quality, river and ocean pollution, noise and so on. With sharing of real-time data from local to national levels which will also help in monitoring change. Amendments to environmental laws to introduce pollution charges and other economic instruments enable creation of fund in order to augment allocation to the sector. This fund can be utilized for incentivizing good environmental performance; creation of a National Environment Restoration Fund (NERF) from voluntary contributions and the net proceeds of proposed economic instruments such as user fees for access to specified

¹⁵<http://moef.nic.in/assets/rev-guidelines-2809> accessed on 12.12.2013

natural resources. The fund may be used for restoration of environmental resources and cleanup of sites contaminated with toxic and hazardous waste.¹⁶

A National Environment Protection Authority (NEPA) is also proposed to be set up fully empowered to restructure the existing environmental management regime. For effective regulation on environmental pollution, it is suggested that the Environment (Protection) Act, 1986 may be amended for an upward revision in the quantum of penalties and also to include an enabling provision for civil administrative adjudication to fast-track levy of penalty. In the year 1985, Indian Government has created the Ministry of Environment and Forests. This Ministry is the central administrative organization in India for regulating and ensuring environmental protection. National Environmental Policy 2004 and 2006 which emphasizes to control all types of pollution in order to have pollution free environment. The CPCB is operating under Ministry of Environment and Forests (MoEF) which is a nodal agency for planning, promotion, coordination and over seeing implementation of environmental policies and programmes.¹⁷

Regulatory system in India

The PCBs are two-tier systems, i.e. CPCB at the central level and the SPCBs at the state level. Water boards were established under the provisions of the Water Act of 1974 in order to prevent water pollution. The boards were then renamed as PCBs under the provisions of the Environmental Protection Act, 1986. The responsibilities of PCBs increased with the adoption of environmental protection rules in the context of prevention

¹⁶ *Twelfth Five Year Plan (2012-2017) : Faster, more Inclusive and Sustainable Growth Vol-I: Planning Commission of India, New Delhi: Sage Publications India Pvt Ltd, 2013 pp-208-210*

¹⁷ *ibid-211*

of water pollution, supervision of hazardous wastes, implementation of court directions, etc.¹⁸

Central Pollution Control Board (CPCB)

The CPCB was constituted in September, 1974 under the provisions of the Water (Prevention and Control of Pollution) Act, 1974. It has been receiving additional responsibilities in terms of prevention of air pollution under the provisions of the Air (Prevention and Control of Pollution) Act, 1981. Thus, the main aim of the CPCB is to promote and assure the cleanliness of streams and wells in different areas of the country or States by prevention, control and abatement of water pollution.¹⁹

State Pollution Control Board

In addition to its functions, the Central Board was established with the State Pollution Control Boards to co-ordinate with the State towards the successful implementation of pollution control.

Functions of SPCBs

The SPCBs seek to achieve their objectives through three instruments - (a) consent to establish producing units (NOC), (b) consent to operate, and (c) standards for air and water pollution. The specific functions of the SPCBs include; (a) formulation of preventive measures; (b) laying down standards; (c) technology development which is environment friendly; (d) control of pollution through inspection of industrial units;

¹⁸ R. B Jain and Kanchan Sharma: *Implementation Machinery for environmental protection in India: Indian Journal of Public Administration*, Vol 35 No. 3, 1989 pp-410-412

¹⁹ R.K Trivedy, . *Handbook of Environmental: Laws, Acts, Guidelines, Compliances & Standards, Vol-I* Hyderabad: BS Publication, 2004, pp- IX-4

(e) regulation of location of industries; (f) disposal of hazardous wastes; and (g) collection and dissemination of information on the prevention and control of pollution.²⁰

Similarly, SPCBs are functioning under the Department of Environment & Forests at state level. So the Department is running very extensive environmental monitoring programmes throughout the State with the help of several agencies, amongst them the most prominent one is the SPCBs. The SPCBs in India are mandated to enforce key environmental legislations for the protection of the environment under the overall guidance of the CPCB. The SPCBs ensure compliance to the recently formulated complex environmental regulations. The SPCBs strengthen the infrastructure and deploy modern tools in the fields of monitoring and information management. The present role of SPCBs is no more confined to as enforcement agencies. They function as regulators and facilitators too. The SPCBs put a restriction that no person shall without the previous consent of the Board establish any industry and non-compliance is a punishable offence. They have to facilitate that all development projects has made adequate plans and provisions for pollution control and also to ensure that industries do not discharge untreated effluents/emissions into the environment and that the project site is adequate from the environmental angle, the SPCBs consider applications for grant of NOC from the pollution angle. The application form for a NOC can be obtained from the offices of the Board.²¹

²⁰*Evaluation Study on Functioning of State Pollution Control Boards: PEO Study No.180:*<http://planningcommission.nic.in/reportspeoreportcmpdmpeovolume1180> (accessed on 12.12.2013) pp-1

²¹R.K Trivedy,., *Handbook of Environmental: Laws, Acts, Guidelines, Compliances & Standards, Vol-I* Hyderabad: BS Publication, 2004, pp- IX-4

Statement of the Problem

Mizoram is a mountainous region and has a pleasant climate. It is one of the most pleasant states as far as climate condition is concerned. It is generally cool in summer and not very cold in winter. The entire area is under the direct influence of the monsoon. It rains heavily from June to August and winter is generally rain free and is very pleasant: Mizoram has great natural beauty and endless variety of landscape and is also very rich in flora and fauna.²² In Mizoram out of the total geographical area of the State (21,087 sq.km) 91.27 percent (India State of Forest Report 2011) is covered by forest.²³ But now, those days are gone due to various reasons such as traditional practice of shifting cultivation, forest fires, unregulated felling, etc. the forest areas are diminishing in Mizoram. The people of Mizoram have converted the life supporting systems of the entire living world into their own resources and have vastly disturbed the natural ecological balance. Environmental degradation and depletion of natural resources have been caused through overuse, misuse and mismanagement of resources to meet the human greed.²⁴ Majority of the local people (60%) are depending on agriculture for their living by which Jhum cultivation is practiced.²⁵ Thick forest are being felled and burnt every year during the month of March and April resulting in deterioration of the air

²² Lalduhawma, C. "Climate change and Pollution with reference to Mizoram" *Mizo-Envis: Newsletter of Mizoram Pollution Control Board*, Vol 4, No 1 November, 2009 pp 4-11

²³ Economic Survey, Mizoram 2012-2013 Planning & Programme Implementation Department, Government of Mizoram, Aizawl, pp-ii

²⁴ Status of Environmental Mizoram: www.Anguill.com, www.anglefire.com accessed on 25.03.2013 pp-1-4

²⁵ Economic Survey, Mizoram 2012-2013 Planning & Programme Implementation Department, Government of Mizoram, Aizawl, pp-i

quality. The major air pollution is vehicles, forest fires including jhuming, few industrial activities like mini cement plants, food processing units, flour mills, stone crushing units, etc.²⁶

Mizoram Pollution Control Board (MPCB) is a statutory organization working under the Department of Environment and Forest, Government of Mizoram responsible inter alia for monitoring and regulation of environment pollution of the state. It intends to contribute to the invention and innovation of control and remediation technologies to save and improve the environment of the state. At the same time, the Board is keen to spread environmental awareness and to generate environment and pollution related data in the state. It is a governing body to control air, water and noise pollution in the state of Mizoram.²⁷ An environmental measure to regulate emissions of air and water pollution is important because of the limitations of market induced correctives. But, the liability system in India is unable to improve the environmental quality in the country, because of informational asymmetries with respect to scientific knowledge, legal delays, and poor monitoring of compliance. For these reasons, the Government of India established pollution control boards (regulatory system) at both central and state levels. Unfortunately, environmental degradation persists even after three decades of regulatory oversight.²⁸

²⁶C. Lalduhawma, "Climate change and Pollution with reference to Mizoarm" *Mizo-Envis: Newsletter of Mizoram Pollution Control Board*, Vol 4, No 1 November, 2009 pp 4-11

²⁷ Status of Environmental Mizoram: www.Anguill.com, www.anglefire.com accessed on 25.03.2013 pp-1-4

²⁸ *Ibid*-1-4

However, the extent and level of pollution caused by this is not monitored by anybody, not even the MPCB for want of air quality monitoring instruments as well as the personnel. Pollution controls in these units is practically nil. The Board has given No Objection Certificate (NOC) for setting up of industries. However, no action has been taken so far, for the existing and polluting industries. Industrial water pollution is almost negligible, as there are not many water polluting industries. However, pollution arising out of domestic sources, motor workshops is quiet a problem. There is no effluent treatment system; all the waste water is let off everywhere that ultimately join the rivers polluting the water stretches including ground water as well.²⁹

MPCB is the key instrument and agency of the government for the effective implementation, monitoring and controlling of various anti-pollution programmes in Mizoram. But the problem of pollution in Mizoram has assumed great importance in recent years. Despite the serious commitment on the part of the government in general and the board in particular, the programmes and policies do not seems to control or remove the pollution as expected and they fail to serve fully the purpose for which they were launched. This is mainly because human resources particularly technical and scientific staff is in inadequate, lack of sufficient funds and infrastructure facilities like laboratory and equipment towards their activities, which needs to be looked into carefully. But till now no in-depth studies have so far been taken up to throw sufficient light on the subject and to highlight the major problems confronting to pollution control

²⁹ P.M Prasad “*Environmental Protection Role of regulatory System in India*”, Economic and Political weekly, Vol 41 No. 13, April 1, 2006 pp-1278

in Mizoram. Since no specific study on pollution control board in Mizoram has been done so far. Therefore, the present study has been taken up.

Review of Literature

The Scholar has undertaken review of the following literature pertaining to the working and organization of Pollution Control Board and its related issues. Knowledge is growing rapidly. It gets doubled in a very short span of time. Scholars, researchers and writers go on adding knowledge through their studies and writings. There is a tremendous increase in the number of publications: books and periodicals in developed and developing countries. The literature in any field is the foundation upon which all future work will be built. The review of related literature is an essential aspect of research studies. A summary of the writings of recognized authorities and of previous research provides evidence as to what is familiar with, what is already known and what is still unknown and untested. The effective research is based upon past knowledge, which helps to eliminate the duplication for what has been done and provides useful hypothesis and suggestions for significant investigations. The published literature is a good service for the investigators and helps us to interpret the significance of its own results. Therefore the researcher has reviewed some of the literatures on the studies on Pollution Control Boards in the following pages.

A.K Tiwari (2006) in his book, '*Environmental Laws in India*' says that the environment furnishes all the essentials for life and so there has been a close link between the environment and human beings. The healthy living and survival of man depends on how judiciously he manages the natural resources and thus maintains the quality of overall environment around him. Attempts are in to stop damages to the natural

environment all over the world and law is responsible to play a very important role therein. It identifies the problem areas and examines the merit and weakness of the Indian legal system pertaining to environmental legislation and concentrates on the contribution of the Apex Court of India in the administration of environmental justice. When assets on environment create adverse socio-economic repercussions, courts cannot sit idle with closed eyes. It is expected from the Apex Court of the country to provide leadership in finding the solution of such important and grave problems. He concentrates on the contribution of the Supreme Court of India in the administration of environment justice and in the process draws inferences through analytical and critical appraisals of relevant laws and judicial decisions.³⁰

H.M. Saxena (2000) in his book, '*Environmental Management*' discussed that the environmental management is a social issue and it requires social engineering and creation of new institution to facilitate social participation for proper resolution of the manifest problem. Humanity has been exploring the natural environment for thousands of years, but in the last two centuries human impact has increased manifold owing to population growth and technological change. We have also witnessed a growing awareness and concern for environmental issues to maintain and improve the well-being of both people and the environment. Thus, the environmental management has now become a broad and rapidly evolving discipline which involves environmental planning, conservation of resources, environmental status evaluation and environmental legislation and administration.³¹

³⁰ A.K.Tiwari *Environmental Laws in India*, New Delhi: Deep & Deep Publication Private Limited, 2006

³¹ H.M Saxena, "*Environmental Management*" Jaipur: Rawat Publication, 2000

Prakash Talwar (2006) from his book, '*Environmental Management*' starts with the study of ecology which is the study of animals and plants and their relations to each other and to the environment. The main objective is to improve the quality of human life which involves the mobilization of resources. The degradation of resources had manifold impacts on the socio-economic life of the communities. Thus the ecological fallout of such degraded resources negatively affected the local agriculture, animal husbandry and completely shattered the ecological balance between man and environment. The regulatory and institutional decision making framework for the environmental protection in India is embodied in numerous Acts and notifications which includes the Water (Protection and Control of Pollution) Act, 1976 and the Air (Protection and Control of Pollution) Act, 1981, establishment of CPCB and SPCB. The Environmental Protection Act, 1986, the Forest Conservation Act, 1980, the Environmental Impact Assessment, 1994 etc and supporting notifications are aimed at strengthening the command and control regime and is mostly ecology. In the complex and interdependent world, environmental management is required because the activities of the development process in one section affect in both positive and negative ways, the quality of life in others.³²

R.S Ambasht and P.K Ambasht (2005) from their book, '*Environment and Pollution*' introduce environment and the problems now being faced by humans, including those of pollution. Human activities create a large variety of waste and by products which accumulate over a period of time and become toxic to the naturally growing plants, animals and man. Pollution is the Act of defiling or making things

³²Prakash Talwar, *Environmental Management* New Delhi: Isha Books Publication, 2006

unclean or introducing unfavorable changes in the environment. Water has been given priority and stress that all that we drink, eat and breathe is on water and its product and so it is the very basis of life. This is followed by the atmospheric aspects including the air that surrounds us. It includes all the gaseous space that surrounds the earth. It also contains numerous other gases in traces and floating particle matter such as dust, pollen grains, and micro-organisms like viruses, bacteria and fungal spores. These gases are the major pollutants of the air which are emitted mainly through forest fires, burning of fossils fuels, smoke released from industries, ash and odor of different kind of polluting substances. Thus pollution and consequent environmental protection is an important aspect in modern times.³³

R.D Gupta (2006) in his book, '*Environmental Pollution: Hazards and Control*' states that the life on earth was originated and flourished only because the environment of the planet provides necessary condition for its sustenance. It is the basis of human survival and provides an established fact that there exist a vital link between the environment and life. Basically, the environmental pollution is the by-products of modern civilization which is impacting environment in various ways all over the world. This has resulted in multidimensional environmental crisis; these have in turn created pollution in many aspects. Therefore in view of the hazards created by the environmental pollution, it becomes imperative to bring about a change towards the monitoring and control through different measures. Thus it is theoretically necessary to attempt to deal with a broader

³³ R.S Ambasht, and P.K Ambasht, *Environment and Pollution* New Delhi: CBS Publishers & Distributors, 2005

perspective that encompasses the factors underlying substances which are causing the pollution.³⁴

R. B. Singh and Suresh Misra (1996) in their book, '*Environmental Law in India: Issues and Responses*' deals with the aims at focusing on global environment concern and the Indian responses as evident from legal measures attempted to meet the growing demand for economic development without sacrificing the environmental goals and objectives. The laws have to be enacted at variety of territorial level. The multi-dimensional and multi-territorial nature of environmental law and its application aims to collect and disseminate data on environmental law, to promote the development or adoption of new agreements, principles or guidelines concerning environmental law and to provide assistance to state in matters of national legislation and the enforcement of environmental law.³⁵

R.Swarup, S.N Mishra and V.P Jauhari's (1992) in their book, '*Dimensions of Environmental Pollutions*' gives us a study of the analysis of the tremendous technological achievements of the past century, which have brought many benefits including a rising standard of living, but on the other hand how has our environment suffered? How far has industry polluted the environment? How much is being done to keep these essential parts of the ecosystem unharmed? They give us the environmental analysis which may be defined as the evaluation of natural and of damage to it through human and non-human agencies which involves efficient monitoring of the general

³⁴ R.D Gupta, *Environmental Pollution: Hazards and Control* New Delhi: Concept Publishing, 2006

³⁵ R.B Singh, & Suresh Misra, *Environmental Law in India: Issues and Responses*, New Delhi: Concept Publishing Company, 1999

environment. This is essential because by this one becomes sure what control measures are required and whether those are in operation have been working.³⁶

Sumit Malhotra (2004) from his book, '*Air Pollution and its Control*' defines air pollution as an atmospheric condition in which substances are present at concentrations higher than their normal ambient levels to produce significant effects on humans, animals, vegetation or materials. It has been growing since Industrial Revolution. Rapid industrialization, burgeoning cities and greater dependency on fossil fuels have brought in their wake increased production on harmful pollutants making life more and more unpleasant and unhealthy. Effective approaches to abate the air pollution rely on laws and regulation with the specific objective of regarding emission and hence improving air quality. The taxes in certain fuels and materials that produce harmful air pollutants may help to reduce their use. Each country has different sets of environmental laws and regulation. Thus air pollution control or more general environmental pollution laws at national level and State level are the backbone of modern air quality management in most industrial and some developing countries.³⁷

S.M Khopra (2004) in his book, '*Environmental Pollution: Monitoring and Control*' says that environment includes all the disciplines of physical, chemical and biological sciences. The natural environment is clean but due to multifarious activities of man, it gets polluted resulting in what is called environmental pollution. The main objective of this book is to spread an awareness to keep our environment clean. One way of achieving it is by curbing all of our activities. Whatever mistakes developed countries

³⁶R.Swarup, & S.N. Mishra, & V.P Jauhari, *Dimensions of Environmental Pollution*, New Delhi: Mittal Publication,1992

³⁷Sumit Malhotra, *Air Pollution and its control*, Jaipur: Pointer Publication, 2004

have made in the past, at least the same mistake should not be repeated by other developed or developing countries. So, in order to follow this it is necessary to make an impact assessment. Thus, the Environmental Impact Assessment concept came into existence since 1980. Environmental control is an important field from the point of view of future forecasting. In the long run, we must have periodical training programme in the field of environmental control and monitoring. The future is very bright only if we have the will and desire to do hard work to attain excellence in this field.³⁸

S.P. Mishra (2006) in his book, '*Environmental Pollution*' says that Pollution is judged by its impact in social values as well as environmental components, if this is damaged to structure or amenity; the substances caused by the effect are by definition pollution. Three broad strategies are presented in the book for advanced preservation of the natural environment and to curb the pollution: a). reducing potential stress by limiting population growth and thereby decreasing mankind's footprint on the environment; b). regulating pollution at the sources; and c). increased efficiency in utilizing energy and other resources.³⁹

A.R.Temburkar, V.A. Mhaisalkar in an article "*Environmental Appraisal of an Institutional Campus – A Case Study*" say that environmental assessment to improve the environmental quality should be conducted in institutional campuses. This would help improving the environmental quality and ensuring the availability of goods and services on sustainable basis. Paper presents a case study on environmental appraisal of an

³⁸ S.M Khopra, *Environmental Pollution: Monitoring and Control*, New Delhi :New Age International Publishers, 2005

³⁹S.P Mishra, *Environmental Pollution*, Jaipur: Avishkar Publisher, Rajasthan 2006

institutional campus. The recovery from waste has attracted the attention of many countries in view of the increasing awareness about the conservation of natural resources.⁴⁰

Shyamalamani, Anil Kumar and Reema Banerjee in an article “*Bio Medical Waste and its Impact on Environment and Health in Indian Cities*” consider that so far, the Bio Medical Waste Management had not received its due attention as it used to be disposed off along with the municipal solid waste. In the process, it has led to several environmental hazards contamination of solid waste, recycling of sharps; contamination of shall aquifers etc. however, with the judicial pronouncement and subsequent legislative enactments have led to the development of comprehensive bio medical waste management rules developed by the Ministry of Environmental and Forests. Though the Rules are enacted, the implementation is not quite satisfactory. To study the implementation of these rules, and the attitude of eth various hospital management a survey was conducted in the city of Delhi. The detailed results are presented in this paper, with some suggestions towards the improvement of hospital waste management.⁴¹

S.M .Dhabadgaonkar in an article “*Some Thoughts on Strategies for Pollution Prevention and Control in India*” outlines some thoughts on strategies for pollution prevention and control in India with special attention to water pollution. While dealing on the subject, the basic premise is that there is a strong desire and political will to eradicate

⁴⁰Temburkar AR, Mhaisalkar VA, Environmental appraisal of an institutional campus – a case study. Proc Natl Conf Polln Prev Contl India : IAEM, 2-3 Nagpur, March 2002

⁴¹Shyamalamani, Anil Kumar and Reema Banerjee, Bio Medical Waste and its Impact on Environment and Health in Indian Cities, in the book Solid Waste Management, Current Status and Strategies for the Future, Edited by R.K. Somashekar and M.A.R. Iyengar, Allied Publishers Pvt. Ltd., Bangalore, 2002.

the pollution to a sustainable level, not overlooking the aspect of development? Therefore, it is emphasized that Research and Development assumes a great significance in the promotion of effective and sustainable solutions.⁴²

Namita Gupta in her article “*An analysis of pollution Control Boards: A Case Study of Ludhiana City, Punjab*” intends to make a critical assessment of the functioning of Punjab Pollution Control Board (PPCB) in Ludhiana City. It is pertinent to note here that Ludhiana being one of the most populous and polluted city in Punjab, PPCB has a greater role to ensure sustainable development and striking balance between environment and economic development in the city. The State of Punjab is facing a diverse range of problems related to environment. The main sources of pollution in the state are industry, vehicular traffic, community sewage and garbage, roadside dust and pollution from non-point sources, etc. The city of Ludhiana occupied a place of pride on the industrial map of the country and was rightly called the home of small scale and household industries. It is one of the fastest growing cities in India. Its population according to the provisional figures of 2001 Census was 30,30,352 besides a large chunk of migrant population-more than five lakh approximately. In the country Ludhiana has got the highest per capita vehicles. Every three months around 10,000 vehicles are added in the city. Though the official capital of Punjab is Chandigarh, the business Capital of Punjab is Ludhiana. Being one of the fastest growing cities of Punjab state, the severity of the problem of environment degradation in Ludhiana became a challenger for the state government.

⁴² Dhabadgaonkar, S.M., (Environ Engng Consultant, Nagpur), Some Thoughts on Strategies for Pollution Prevention and Control in India, Proc Natl Conf Polln Prev Contl India: IAEM, 2-3, Nagpur, March 2002.

The study was carried out in the Ludhiana City and covered the period 1995-2005. The objectives of this research were to study the effectiveness of the functioning of PPCB and to suggest measures to improve the functioning of the concerned agencies.⁴³

The above studies on Pollution Control Boards have not analyzed the system of Mizoram Pollution Control Board: Organisation and working. A research study on Pollution Control Boards could help the policy makers to find solutions to various processes of organization, structure, functions and programmes of Pollution Control Boards. Therefore, the scholar thought it is appropriate to take up a research study on, “*Mizoram Pollution Control Board: Organizations and working*”.

Scope of the Study

The present study covers the history and organizational structure of SPCB in Mizoram particularly its role and functions in towards the controlling of pollution in Mizoram. The study also focuses on the problems and challenges faced by the board and possible solutions and suggestions for improvement in its working. Since no researcher has done any work on the working of the Board, it is felt necessary to make a study of the MPCB. The research work studies the PCB in Mizoram since its inception till date. This study is expected to be useful to the MPCB personnel as well as different organizations working for the protection of environment, environment impact assessment, and monitoring and air quality control.

⁴³ Namita Gupta “*An analysis of pollution Control Boards: A Case Study of Ludhiana City, Pubjab*” Nagarlok, Vol 52 No.4, October-December, 2010 pp-49-67

Objectives of the study

The objectives of the present study are:

1. To study the origin, history and background of Mizoram Pollution Control Board.
2. To study the organizational structure and functions of MPCB.
3. To examine various activities and programmes of MPCB and
4. To study the problems and challenges confronting the board while discharging its functions and to suggest remedial measures.

Research Questions

The proposed research attempt to answer the following research questions:-

- (1). What are the circumstances that led to the establishment of MPCB?
- (2). What are the major activities and programmes carried out by the MPCB?
- (3). What are the major problems faced by the Board in order to implement their programmes and how to solve them?

Methodology

The present study is based on exploratory design. It study was carried out with the help of both primary and secondary data. The primary data were collected through the use of case study method, semi-structured interview schedule to obtain information from the staff of MPCB. The secondary data were collected from different sources such as books, articles, journals, booklets, reports, documents etc.

Chapterisation

The study is organized into the following chapters:

Chapter I Introduction

Chapter II Mizoram Pollution Control Board Origin & Evolution

Chapter III Mizoram Pollution Control Board Structure, functions and
Programmes

Chapter IV Results and Discussions

Chapter V Conclusion and Suggestions.

CHAPTER II

MIZORAM POLLUTION CONTROL BOARD: ORIGIN AND EVOLUTION

Mizoram means "*Land of the Mizos*". It has international borders with Myanmar which runs 404 Km and Bangladesh which runs 318 Km. It also has Inter-State borders with Assam (123 Km), Tripura (66 Km) and Manipur (95 Km). Mizoram is the former Lushai Hills District of Assam. The hills in this beautiful land run north to south, unlike most of other Indian mountain ranges which run east to west. Mizoram have an average height of about 900 meters. Perching on the high hills of North Eastern corner, Mizoram is a storehouse of natural beauty with its endless variety of landscape, hilly terrains, meandering streams, deep gorges, rich wealth of flora and fauna. Mizoram occupies an importance strategic position having a long international boundary of 722 Kms. The geographical area of Mizoram is 21,087 sq. km. and the state lies between 21⁰58' - 24⁰35' N latitude and 92⁰15' - 93⁰29' E longitude, straddling the Tropic of Cancer. The territory stretches over 277 km in a north-south direction, while the east-west width extends over 121 km.

Mizoram has a mild and very pleasant climate of 11°C in winter and 20°C to 30°C in summer. The entire area is under the direct influence of southwest monsoon. It rains heavily from May to September and the average rainfall in 20 years is 2670 mm per annum. During rains the climate in the lower hills is humid and enervating. Malarial fever was a common feature during and after rains particularly in the lower area. It is quite cool

and pleasant on the higher hills, even during the hot season. A special feature of the climate here is the occurrence of violent storms during March-April. Heavy storms come from the northwest and they sweep over the hills in the entire state. Temperature in the state varies from about 4°C in winter to about 30°C in summer. Winter is from November to February. There is generally no rain or very little rain during the winter months. Winter is followed by spring which starts at the end of February and continues till the middle of April. In April, storms occur and the summer starts.

As per details from Census 2011, Mizoram has population of 10.97 lakhs, an increase from figure of 8.89 Lakh in 2001 census. In 2011, Aizawl had population of 400,309 of which male and female were 199,270 and 201,039 respectively. Mizoram is one of the most urbanized states in the country with 52.11 percent of its population living in urban areas. The proportion of urban population in Mizoram has increased from 3.54 percent in 1951 to 5.36 percent in 1961, 11.36 percent in 1971, 24.67 percent in 1981, 46.10 percent in 1991, 49.50 percent in 2001 and 52.11percent in 2011.

The vast environmental diversity of Mizoram has a very taxonomic range, in proportion to the enormous diversity of ecosystem and geographical condition. This diversity at the environment, species, and variety level is a result of evolutionary processes. However, in the last few decades, which has been facing increasing soil erosion, different types of pollution and a series of environmental degradation, habitat loss, poisoning and over exploitation of natural resources, introduction of exotic species in the river eco systems, and other factors which includes progressive disempowerment of local communities and destabilization of Mizo traditional management system etc. So

far there is no clear cut solution for research and monitoring and evaluation of environmental impact.

During the British regime, there was no planned management of the environment except for the declaration of the Lushai Hills as "*Excluded Area*" and the Constitution of the "*Inner Line Reserve Forest*" along with the inter-district boundary of Cachar and Mizoram covering an area of 1317.8 sq. km vide the Assam Gazette dated 17.3.1877 issued under section 2 of the Bengal Frontier Regulation, 1873 (V of 1873). There was no interference or control of the inhabitants beyond this mine except for political influence. This regulation certainly helped the hill tribe from exploitation by outsiders. Thus the forest and other natural resources were also saved from exploitation and thus regarded as a remarkable landmark contribution by the British towards the protection and conservation of environment.

On 25th April 1952 under the Sixth Schedule of the Constitution of India, the "*Autonomous Mizo District Council*" was inaugurated and the management of all the unclassed forest other than the Inner Line Reserved Forest was handed over to the District Councils with the creation of the Forest Department. There was no proper management of the environment during the initial stage except for the enactment of the following Acts under the Sixth Schedule of the Constitution of India with regard to the conservation and regulation of Forest and its products, in addition to the Assam Forest Regulation, 1891, applicable in the Inner Line Reserved Forests. Then in the following years, The Pawi-Lakher Autonomous Region (Forest) Act, 1954 (Applicable in the Pawi-Lakher Autonomous Region) and the Mizo District (Forest) Act, 1955 (Applicable in

Aizawl and Lunglei District) made prescriptions on royalty rates to be levied for various Forest products and also classified Forest into various categories. Since then, the Forest Department had been effectively working in the State. However, when Mizoram was made a "*Union Territory*" in 1972, the State Forest Department was strengthened by appointing a Director as its head. This post, which was earlier of the rank of "*Conservator of Forests*", was upgraded as "*Chief Conservator of Forests*" in 1983. Two circles - Northern Circle and Southern Circle - were created in 1984. In 1987, the Department was renamed as Environment and Forests Department and the post of Principal Chief Conservator of Forests was also created. After Mizoram acquired statehood in 1987, the Mizoram Forest Act (MFA) was the most important formal legislation, which provides for the management of any forest that is not Reserve Forest.¹

Then subsequently, Mizoram has been rendering its potential forces towards the protection, control and monitoring of the local environment. Then the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981 and Water (Prevention and Control of Pollution) Amendment Act, 1988 came into force on March 31, 1989. According to the provision, in the same year on September 9, 1989 the Mizoram Pollution Control Board was constituted under Section 4 (i) of the Water (Prevention and Control of Pollution) Act 1974, read with sub Section 5 (i) of the Air (Prevention and Control of Pollution) Act, 1981. Comprising of the following members:

¹ *A Short Profile of Mizoram*: <http://mizervis.nic.in> (accessed on 12.09.2013)

Table No. 1

Members of Mizoram Pollution Control Board as on 09.09.1989

Sl.No.	Name	Status
1.	Pu Lalthanzama	Chairman
2.	Principal Chief Conservator of Forests	Member
3.	Chief Engineer, P.H.E	Member
4.	Director of Industries	Member
5.	Director of Health Service	Member
6.	Director of L.A.D	Member
7.	C.E.M Mara District Council	Member
8.	C.E.M Lai District Council	Member
9.	C.E.M Chakma District Council	Member
10.	President CYMA	Member
11.	Pu C. Rokhuma, Mission Vengthlang, Aizawl	Member
12.	President, Mizoram Chamber of Commerce	Member
13.	Pu C. Pahlira, Republic Veng Aizawl	Member
14.	Chairman, Zidco	Member
15.	President, MTEPA	Member
16	Pu R. Kemp, I.F.S., D.F.O	Member Secretary

Source: Information received from MPCB on 10.12.2013

Appointment of the Chairman

The Government of Mizoram is empowered to appoint a Chairman by publication in the Official Gazette. A person having the knowledge or practical experience in respect of matters relating to environmental protection or a person having the knowledge and experience on administering institutions dealing with the matters relating to environmental protection are eligible to be nominated to be appointed as the Chairman of the Board.

Terms and conditions of Service of the members

a) A member of the Board other than the Member- Secretary shall hold office for a term of three years from the date of his nomination. Provided that a member shall, notwithstanding the expiration of his term continue to hold office until his successor enters upon his office.

b) The term of office of member of the board nominated by the Central Government to represent the respective Government and two persons to represent the companies and corporation owned, controlled and managed by the Central Government to be nominated by the State Government shall come to an end as soon as he ceases to hold the office under the Central Government or State Government or the companies and corporation owned, controlled and managed by the Central Government or the State Government by virtue of which he was nominated.

c) The Central Government or the State Government (as the case may be) if it thinks fit may remove any member of the Board before the expiry of his term of his office, after giving him a reasonable opportunity of showing cause against the same.

d) A member of the Board, other than the member secretary may at any time resign his office by writing, under his hand addressed:- (a) in the case of Chairman to the Central Government or as the case may be, the State Government (b) in any other case to the Chairman of the Board and the seat of the Chairman or such member shall there upon become vacant.

e) A member of the Board other than the member secretary shall be deemed to have vacated his seat, if he is absent without reason, sufficient in the opinion of the Board from three consecutive meetings of the Board.

f) A casual vacancy in the Board shall be filled by a fresh nomination and the person nominated to fill the vacancy shall hold office only for the remainder of the term for which the member in whose place he was nominated.

Disqualification of Members of the Board

1) No person shall be a member of the Board who:-

a) is, or at anytime has been adjudged insolvent or has suspended payment of his debts or has compounded with his creditors, or

b) is of unsound mind and stand so declared by a competent court, or

c) is, or has been convicted of any offence of which in the opinion of the Central Government, or as the case may be, of the State Government, involves moral turpitude, or

d) is, or has been convicted of any offence under this Act, or

e) has directly or indirectly by himself or by any partner any share or interest in any firm or company carrying on the business of manufacture, sale or hire of machinery, plant, equipment or apparatus or fitting for the treatment of sewage or trade effluents, or

f) is a director, Secretary or manager or other salaried officer or employee of any company or firm having any contract with the Board, or with the local authority in the State or with a company or corporation owned, controlled or managed by the Government for the carrying out of sewerage schemes or for the installation of plants for the treatment of sewage or trade effluents, or

g) has to abused, in the opinion of the Central Government, or as the case may be, of the State Government his position as a member as to render his continuance on the Board detrimental to the interest of the general public.

2) No order shall be made by the Central Government or the State Government, as the case may be unless the member concern has been given a reasonable opportunity of showing cause against the same.

Meeting of Board

A Board shall meet at least once in every three months and shall observe such rules of procedure in regard to the transaction of business at its meeting as may be prescribed by

the Board. Provided that if, in the opinion of the chairman, any business of an urgent nature is to be transacted, he may convene a meeting of the Board at such time as he thinks fit for the aforesaid purpose.

Constitution of Committees

(a) A Board may constitute as many committees consisting wholly of members or wholly of other persons or partly of members and partly of other persons and for such purpose or purposes as it may think.

(b) A committee constituted under this section shall meet at such time and at such place and shall observe such rules of procedure in regard to the transaction of business at its meeting as may be prescribed.

(c) The members of a committee (other than the member of the Board) shall be paid such fees and allowance, for attending its meeting and for attending to any other work of the Boards as may be prescribed.²

In the year 1991, the Board was upgraded by appointing Assistant Environmental Engineer (A.E.E), Lower Divisional Clerk (LDC), two (2) Grade IV Staff and Driver. The Department of Environment & Forests took over the Board under its control since 9.12.1992. In 1997, Assistant Environmental Engineer (A.E.E) and LDC were promoted to EE and UDC respectively while Driver and Peon (Grade IV) were also recruited. Since then, for about thirteen (13) years, the Board has been functioning with this

² *Pollution Control Acts, Rules and notification issued thereunder*, 2010 Central Pollution Control Board Sixth Edition

skeleton staff until the recruitment of various eight technical posts like AEE, Scientist 'B', Junior Scientific Assistant, Data Entry Operator (DEO), Junior Laboratory Assistant and F.A in June 2003, under the Scheme 'Assistance for abatement of pollution' sanctioned by the Ministry of Environment & Forests, Government of India for salary support of staff. The Administrative section of the office runs with Upper Division Clerk at the top assisted by one Lower Division Clerk.

Under the above said Acts, the Mizoram Water (Prevention & Control of Pollution) Rules, 2002 & the Mizoram Air (Prevention & Control of Pollution) Rules, 2002 were passed by the Government of Mizoram vide its Notification No. C.18012/12/2002-FST Dt. 9.4.2003 and the whole of Mizoram has been declared as Pollution Control Area vide order No. C.18012/12/2000-FST dt. 2.7.2002

At present MPCB is located at Aizawl Tuikhuahtlang, Dr Silver's Building in a rented building with its head designated as Chairman of MPCB is functioning as a part time. Presently R.C Thanga IFS Rtd. is the Board Chairman and Er.C. Lalduhawma is taking the charge of Member Secretary. By following the provisions of the Central Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981 the terms of the Chairman, Member Secretary and Members are prescribed as three years from the date of Constitution of the SPCB. As such the State Government reconstitutes the Board after every three years. Presently MPCB consist of 20 Board members including the Board Chairman and member secretary as follows:

Table No. 2

Members of the Mizoram Pollution Control Board as on 06.12.2013

Sl.No.	Name	Status
1.	R.C. Thanga (IFS Rtd)	Chairman
2.	Er. C. Lalduhawma, E.E., MPCB	Member Secretary
3.	Principal Chief Conservator of Forests	Member
4.	Director, Industries Department	Member
5.	Director- Hospital and Medical Education	Member
6.	Chief Executive Officer, Secretariat Complex	Member
7.	Engineer in Chief, Public Health Engineering Department	Member
8.	Director, Urban Development & Poverty Alleviation	Member
9.	Deputy Commissioner, Aizawl	Member
10.	Chairman- AMC	Member
11.	Adviser- State Planning Board	Member
12.	Principle Scientific Officer, Science Technology and Environment	Member
13.	President, Central Young Mizoram Association	Member
14.	Head of Department, Environmental Science, MZU	Member
15.	Dr. Tawnenga, Mission Veng	Member
16.	Managing Director, ZIDCO	Member

Source: Information received from MPCB on 10.12.2013

There are 39 personnel engaged in the office of MPCB. The board is autonomous body which is working under the Department of Environment and Forest Government of Mizoram as its nodal Department. Soon after the Board was constituted by the State Government in the year 1989 the office of MPCB started functioning with bare minimal staff initially headed by Assistant Environment Engineer.

CHAPTER-III

STRUCTURE, FUNCTIONS AND PROGRAMMES

The previous chapter has traced out the origin and evolution of the Mizoram Pollution Control Board. This chapter discusses on the organizational structure, functions and programmes carried out by the MPCB towards the management, control and abatement of pollution within the state.

Overview of the Organizational Structure

Table No. 3

Details of existing staff of Mizoram Pollution Control Board as on 01/07/2013

Sl. No	Name of Post	No of post
1	Chairman	1
2	Member Secretary	1
3	Assistant Environment Engineer	1
4	Scientist B	1
5	Upper Divisional Clerk	1
6	Lower Divisional Clerk	1
7	Junior Laboratory Assistant	3
8	Scientific Assistant	3
9	Senior Programme Officer (ENVIS)	1
10	Information Officer (ENVIS)	1
11	Web Assistant (ENVIS)	1
12	Field Assistant	19
13	Data Entry Operator	2
14	Field Attendant	2
15	Driver	3
16	Peon	2
17	Grade IV	1

Source: *Interview with P.C. Lalmuanpuii, Assistant Environmental Engineer, Mizoram Pollution Control Board*

At present 10 posts are sanctioned by the Department of Environment and Forest, which consist of the Chairman, Member Secretary, Upper Divisional clerk, Lower Divisional Clerk, Driver-3 Nos, Peon- 2 Nos, and Chowkidar- 1. There are 8 technical staff which is sanctioned by MoEF, Government of India (GoI) which consist of Assistant Environmental Engineer, Scientist 'B', Junior Laboratory Assistant- 3 and Field Attendant- 2. Under the National Air Monitoring Programme (NAMMP), there are 14 staff supported by the CPCB consisting of Scientific Assistant- 3, Field Assistant- 6. Under the Vehicular Monitoring Project sanctioned by the MoEF there are 8 Field Assistants. Besides this, there are four members under Mizo-Envis (Official News letter of the MPCB) supported by the MoEF consisting of 1 Senior Programme Officer, Information Officer, Web- Assistant and Data Entry Operator.

Major Functions, Duties and Responsibilities of the Board

MPCB is performing its functions according to the provisions of the Water (Prevention & Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, the functions of the MPCB shall be:-

1. To plan a comprehensive programme for the prevention, control and abatement of pollution air and of streams and wells and to secure the quality of air and water in the State.
2. To advise the State Government on any matter concerning the prevention, control or abatement of water and air pollution.
3. To encourage, conduct and participate in investigation and research relating to problems of water and air pollution and prevention, control or abatement of water and air pollution.

4. To collaborate with the Central Board in organizing the training of persons engaged or to be engaged in programmes relating to the prevention, control and abatement of water and air pollution and to organize mass education programmes relating thereto.

5. To inspect sewage or trade effluents, works and plants for the treatment of sewage and trade effluents and to review plans, specifications of other data relating to plants set up for the treatment of water, works for the purification thereof and the system for the disposal of sewage or trade effluents or in connection with the grant of any consent as required by the Water (Prevention and Control of Pollution) Act, 1974.

6. To inspect at all reasonable time, any control equipment, industrial plant or manufacturing process and to give such direction to such persons as it may be considered necessary to take steps for the prevention, control and abatement of air pollution as required by the Air (Prevention and Control of Pollution) Act, 1981.

7. To advise the State Government with respect to the suitability of any premises or location for carrying on any industry which is likely to cause water and air pollutions.

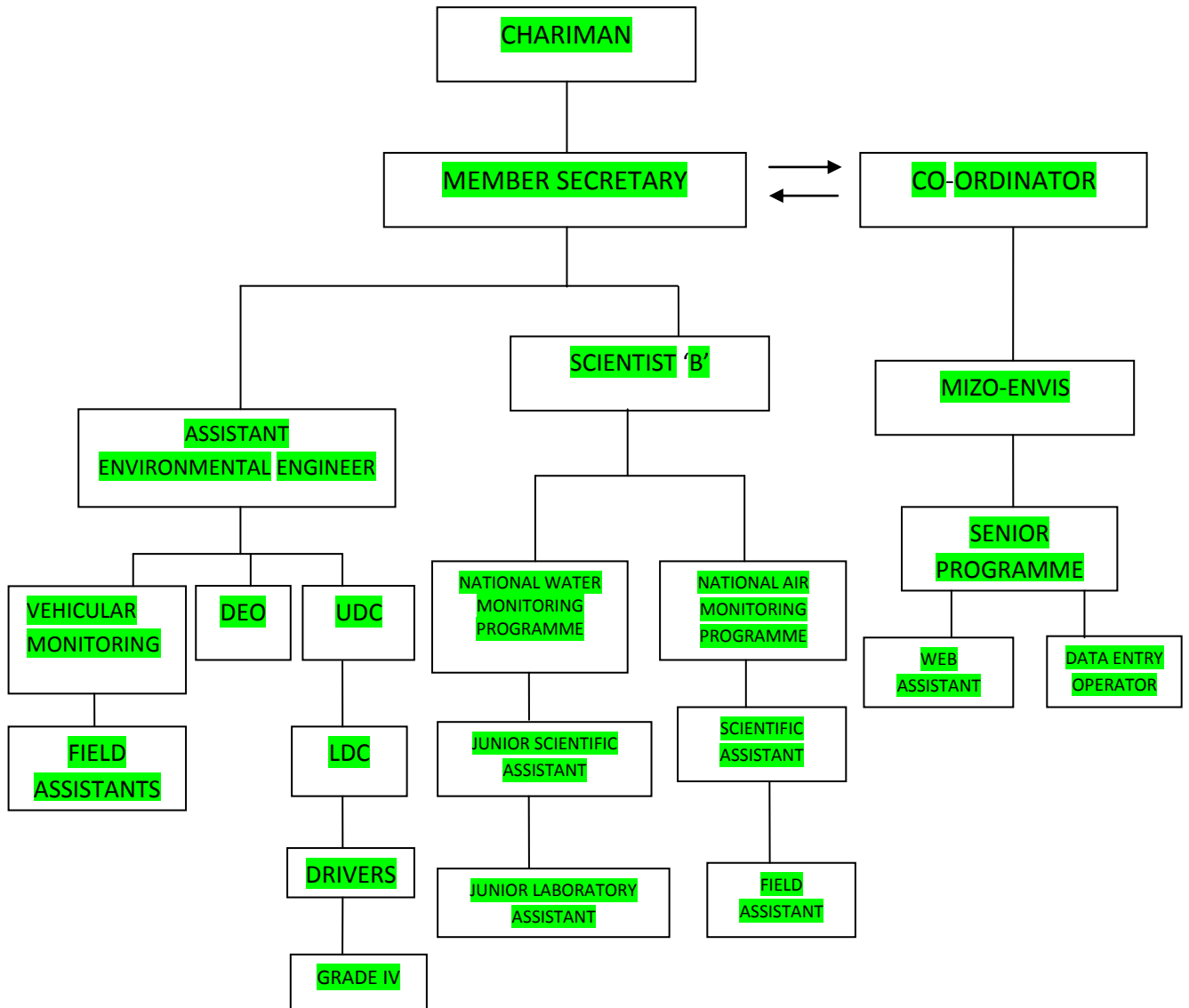
8. To evolve efficient methods of disposal of sewage and trade effluents on land as are necessary in account of the predominant condition of scant stream flows that do not provide for major part of the year the minimum degree of dilution.

9. To evolve methods of utilization of sewage and suitable trade effluents in agriculture.

10. To perform such functions as may be prescribed from time to time by the CPCB or the Central Government.

Chart No. 1

Overview of organizational structure of the Mizoram Pollution Control Board



Source: Interview with P.C. Lalmuanpuii Assistant Environmental Engineer, Mizoram Pollution Control Board and Official Documents of Mizoram Pollution Control Board

Implementation of Various Rules, Programmes and Activities by MPCB

In Mizoram, the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) 1981 and Water (Prevention and Control of Pollution) Amendment Act, 1988 came into force on 31st March, 1989. In the same year on 9th September, 1989 the MPCB was constituted under section 4(i) of the Water(Prevention and Control of Pollution) Act, 1974 and Sec 5(i) of the Air (Prevention and Control of Pollution) Act, 1981. MPCB had no technical staff for a number of years since its inception. In the year 2003, the Board was manpowered with the eight technical staff sanctioned by the MoEF and after that during 10th Five Year Plan (2002-number of activities were initiated by the Board and various technical functions assigne2007) to it have been undertaken. In fact, all the technical activities and functions of the Board today are completely assigned to the above 8 staff.

Activities performed under various rules according to the National Environment Protection Act, 1986

1. Manufacture, Storage & Import of Hazardous Waste (Management & Handling) Rules, 1989, amended 2000:

According to the Manufacture, Storage & Import of Hazardous Waste (Management & Handling) Rules, 1989 and Amended in the year 2000, the MPCB carried out Inventory of Hazardous Wastes Units in Mizoram wherein it has been found that hardly any industry worth thinking in terms of Hazardous Wastes exists since the quantity of wastes were less than the specified value of the schedule of the Rules. Units associated with the use or generations of the hazardous chemicals were therefore taken

care of under the Air Act and Water Act and were granted consent with specific conditions for wastes disposal. However, with the notification of the new rule called the Hazardous (Manufacture, storage and Trans-boundary Movement) Rules in 2008 which nullifies the concentration standard, wastes are said to be hazardous irrespective of the quantity if it conform to the criteria set in the schedules and require authorization from SPCB. So far 4 units have been granted authorization.

2. Municipal Solid Waste (Management & Handling) Rules 2000:

In Mizoram, solid waste management is being handled by the Department of Urban Development & Poverty Alleviation Department, Trade & Commerce Department and the Aizawl Municipal Council. The Urban Development & Poverty Alleviation (UD&PA) Department collects Municipal Solid Waste in Aizawl City while Trade & Commerce Department separately collects vegetable waste from meat and vegetable market places. For an efficient and effective implementation of the MSW (Management & Handling) Rules, 2000, the Board has been making efforts to improve the present system of waste disposal by advising and interacting with the concerned above departments. As per the provision of the MSW Rule, 2000, the MPCB collects information as provided in the schedule of the aforesaid Rule from the Departments or Municipal Authority concerned, compiles the two reports and submits to the CPCB by 15th September every year.

To improve the existing dumping site at Sakawrhmutuai which is illegal, UD&PA Department and Trade & Commerce Department are advised to obtain Authorization from MPCB as per the provisions of the Rules. The UD&PA Department was granted an authorization for Engineered Land filling at Tuirial which is located 20

km from the heart of the city. MPCB also conducted public hearing as the project requires environmental clearance from MoEF. However, authorization to Trade & Commerce Department was refused on the ground that the proposed site is within the radius of 20 km from Lengpui Airport which is against the provision of the Rules.

In compliance of Hon'ble Supreme Court's Order, dated October 4, 2004 and July 26, 2004 in the matter of Writ Petition (Civil) No.888 of 1996, MPCB has filed an affidavit on 9.2.2005. Following the above Court's Order dated 4.10.2004; the CPCB has been initiating a scheme on setting up of demonstration Project for Solid Waste Management. Under this scheme, UD & PA Department prepared a project for Lunglei town and the Board had forwarded the same to the CPCB.

3. Batteries (Management & Handling) Rules, 2001

Effective implementation of the Batteries (Management & Handling) Rules, 2001 are hindered by foreign made batteries which are locally available in the market at lower prices, thereby, increasing number of unauthorized sellers.

Progress made so far are:

- 1) Inventory of Lead Acid Battery dealers /sellers all over the city of Aizawl.
- 2) As part of awareness campaign, copies of the Batteries (Management & Handling) Rules, 2001 Rules were given to all the dealers/sellers identified in the inventory. All the dealers/ sellers were informed of the adverse consequences of lead acid batteries and their duties as per the provisions of the Rules. The Board has even requested them to fill up the relevant forms as per the provisions of the Rules and submit the annual compliance status report to MPCB.
- 3) The Board also sends copy of the Rules to all the head of department requesting

them to comply with the rules wherever applicable.

4) There is no manufacturer or recycler of batteries, the Board however decided to enforce the buyback policy from the authorized dealers. In this regard, the Board has written to Amco Battery Limited, Chennai, Calcutta Industries Limited, Exide House, Kolkata and Motor Industry Co. Limited, Bangalore to provide a list of authorized dealer in Mizoram.

5) The Rule is amended in 2010 and it was notified in the Official Gazette dated 2.5.2010. Press release on the duties of dealers and other stakeholders specified by the new Rule was made for public awareness through Information and Public Relations (I & PR) Department in September, 2010.

4. Recycled Plastics (Manufacturing & Usage) Rules, 1999

According to the Recycled Plastics (Manufacturing & Usage) Rules, 1999 and the Plastics (Manufacture, Usage and Waste Management) Rules, 2011, the MPCB is the prescribed authority for manufacture or recycling of waste polythene, the role of the Board is therefore somehow limited. However, it continues to give effort for effective implantation of the Rules: Such as:

1) Awareness generating programme was made by coordinating NGOs (Non Governmental Organizations) like CYMA (Central Young Mizo Association). Meetings were held and pamphlet regarding the ill-effects of the use of polythene and littering of plastic wastes was also jointly issued by the MPCB and Central YMA, largest NGO in Mizoram.

2) Regarding the use, collection, segregation, transportation and disposal of plastics, the prescribed authority i.e., Deputy Commissioners of Districts of Mizoram have been

intimated by the MPCB to enforce Recycled Plastics (Manufacturing & Usage) Rules, 1999. Besides, the Board had also written to all the Deputy Commissioners regarding their responsibility on pollution control especially in management of plastics and solid waste.

3) A meeting was also held at the chamber of DC, Aizawl regarding prescribed authority on the use, collection, segregation, transportation and disposal of plastics on 16.8.2010 as there was confusion on the subject.

4) As invited by DC, Aizawl, assistance was rendered to the District authority in ascertaining whether quality of polythene bags shipped into our state conforms to the specification of the Rules in February 2010.

5) Action taken Report on status of implementation is regularly submitted to CPCB.

6) With notification of the new plastic Rules called the Plastics (Manufacture, Usage and Waste Management) Rules, 2011, the AMC (Aizawl Municipal Council) was requested to incorporate the provisions of the Rules pertaining to them in the municipal bye-laws.

7) The AMC was also requested to take necessary actions regarding ban on use of plastic material for packaging gutkha, pan masala as per Supreme Court's order.

8) The Secretary, UD & PA Department was also requested to constitute State Level Advisory Board to monitor implementation of the Rules.

9) Press Release on salient features of the new Rules was made through the Department of I & PR.

5. Bio - Medical Waste (Management & Handling) Rules, 1998:

The MPCB has been taking up necessary steps for the implementation of the Bio - Medical Waste (Management & Handling) Rules, 1998. The steps taken so far are as mentioned as follows:

i. Directions: For effective implementation of the rules, directions have been issued to various stakeholder Departments and Health Care Units such as:

a) Directors, Health & Medical Education and Health Services Department– to instruct all Health Care Facilities (HCFs) for compliance with BMW (Bio Medical Waste) Rules

b) All HCFs-to apply for authorization (23.9.2008 & 17.6.2010)

c) Directors, Health & Medical Education Department, Health Services Department and National Rural Health Mission (NRHM) to obtain authorization for all CHCs & PHCs in rural areas (11.5.2010).

d) NRHM -to adopt deep burial system for disposal of category-I wastes in rural areas.

e) All HCFs-Reminder to submit Annual Report every January

f) Health & Medical Education Department-to pursue with setting up of Common Bio-Medical Waste Treatment Facility (CBMWTF) in Aizawl as per MoEF's letter D.O No. 20-3/2008-HSMD dt 26.12.08

g) All HCFs – to ensure proper collection of Hg wastes as per HW Rules, 2008 (21.7.10)

h) All HCFs – to segregate, pack, transport and dispose their wastes as per BMW Rules and to have their own treatment facilities like deep burial, autoclave, chemicals for disinfection & needle cutter (17.6.2010).

ii) Inspection: The Board has also carried out inspection number of times to oversee compliance. These includes:-

- a) Inspection for authorization
- b) Surprise Inspection
- c) Inspection for Inventory. 3 rounds have been completed in Aizawl during 2009-2010.
- d) Inspection for the cleanest hospital in Aizawl for 2009-2010 during UD & PA Dept. sponsored Cleanliness week.

iii. Authorization: Under the Rules, all Health Care Facilities require authorization from State Pollution Control Board. The process of authorization includes:-

- a) Scrutiny of application form
- b) Site inspection with instruction for treatment of BMW
- c) Issue or rejection of Authorization.
- d) Terms & Conditions in Authorization is appended with BMW waste treatment instruction in pictorial form as per the recommendation of the 184th Report of the Committee on subordinate legislation, Rajya Sabha.
- e) Terms & Conditions also includes instruction for management of Hg wastes as per HW Rules, 2008.

The status of the authorization granted to the health care facilities are mentioned in the following table, as follows:

**Table No. 4
Status of authorization granted so far**

Year	Health Care Facilities
2006-2007	1
2007-2008	3
2008-2009	6
2009-2010	7
2010-2011	4
2011-2012	5
Total	26

Source: Office Documents of Mizoram Pollution Control Board (09.08.2013)

The above table No. 4 shows that the total number of Health Care Facilities granted so far are 26 in which 7 authorizations has been granted in the year 2009-2010 which is the highest but only 5 are granted in the year 2011-2012.

iv. Meetings:

- a) A meeting on ‘Bio–Medical Waste Management & Operation of Disposal Facilities’ was held on 29th July, 2008 at Public Information Bureau (PIB) Media Center, Tuikhuahtlang.
- b) BMW Mgt has been discussed as agenda items in several Board Meetings
- c) Meetings on transportation of hazardous BMW to Falkawn Incinerator on 9.8.2007, 24.11.2008 & 9.8.2010 at Health & Medical Education Department Office.
- d) Trainers’ training on Bio-Medical Waste Management for Doctors and Nurses was held at I & PR Department Auditorium during 9-10th June 2011.

v. Annual Report: Annual Report is regularly submitted to the CPCB by March every year.

Table No 5

Status of Total Quantity of Bio-Medical Waste generated

YEAR	Total HCFs	Total Quantity of BMW generated (kg per day)
2007-2008	89	695.43
2008-2009	89	821.47
2009-2010	94	631.00
2010-2011	91	808.34

Source: *Official record* of the Mizoram Pollution Control Board (09.08.2013)

From the Table No.5 we can see that the total quantity of BMW generated is highest during the year 2008-2009. Then the total number of HCF is highest during the year 2009-2010 but the total quantity of BMW generated in the same year is the lowest.

On-going schemes that the Board is currently undertaking:

1. Air Quality Monitoring Under National Air Quality Monitoring Programme (NAMMP)

Despite the pressing need the Board could not initiate the work of air quality monitoring due to lack of technical personnel and fund for a long time. In the year 2004 the CPCB has sanctioned number of Ambient Air Quality Monitoring Stations in Mizoram. Regular monitoring of ambient air qualities has been carried out at three locations in Aizawl since June, 2005 viz Khatla, Laipuitlang and Bawngkawn. At present, four parameters i.e Respirable, Suspended Particulate Matter (SPM), Sulphur Dioxide and Nitrogen Oxide are measured. Monitoring is done twice a week for 24 hours each session.

Besides that, Meteorological data of Aizawl including humidity, rainfall, wind speed and direction as well as temperature are monitored on daily basis. Data have been frequently published for public awareness which is sent regularly to the CPCB. Also, one air monitoring sampler has been stationed at Lengpui village since January, 2008 to study the effects of Jhum burning on air quality.

2. Water Quality Monitoring Under National Water Monitoring Programme (NWMP)

Under NWMP, CPCB has sanctioned 6 Water Monitoring stations for Mizoram. The following water monitoring stations are established at Tlawng River (Upper Stream),

Tlawng River (Lower Stream), Tuirial (Upper Stream), Tuirial (Lower Stream), Two Natural fountains (Tuikhur) located within the city at Mission Vengthlang and Ramhlun. These are monitored 4 times a year during different seasons at regular intervals and 18 parameters have so far been measured. The results of these monitoring are then sent to the CPCB.

3. National Green Corps Programme (Eco- Clubs)

National Green Corps (NGC) Programme was set up in India to enlist the involvement of students for spreading the message of environmental protection; the MPCB is identified as the nodal agency for implementing the programme in Mizoram. The State Government constituted State Eco-Clubs Steering Committee under the chairmanship of Secretary of the Environment & Forest Department on 17th June, 2002, and district implementation and Monitoring Committee (DIMCs) have been constituted in all the eight districts of the state under the chairmanship of respective Deputy Commissioner and District Education Officers as Member Secretaries. In 2002-2003, a total of 800 Eco-Clubs were established.

Thirteen (13) Master trainers are identified from all the 8 districts of the state and three days Master Trainer's was organized by the Nodal Agency in collaboration with Centre for Environment Education North East (CEE-NE), i.e. Resource Agency for Mizoram during 9th – 11th January, 2003 at Aizawl. Another Master Trainer's Training was also organized during 26th – 28th March, 2008, at PIB Media Center, Tuikhuahtlang, Aizawl. National Green Corps and other resource materials such as books, pamphlets, posters received from MoEF were also distributed to all the Eco-Clubs. In charge teachers training was also organized by the Nodal Agency with CEE-NE and Master

trainers in each of the district capital for all the 8 districts during May- June, 2003. As MoEF increased the coverage of the programme, another Eco-Clubs are established from different districts. As for now, there are 1235 Eco-Clubs functioning in the State under NGC Programme. Each year a sum of Rs 2500 each are given to all the Eco-Clubs. The Eco-Clubs are performing various activities effectively and enthusiastically which include Awareness Programmes, Plantation, Cleanliness drives, Outdoor activities, Essay & Painting competition & other Environment related activities.

4. Bio-Monitoring Of Important Perennial Rivers of Mizoram

Bio-Monitoring is found to be very useful and worthwhile especially for the state of Mizoram. There is in information data in existing water quality of rivers available which can provides the basis for future developmental activities. There is hardly adequate basis for assessing the overall health of water bodies of the state. Hence the programme is proposed to be taken up more extensively. The ongoing Bio-mapping of six Important Perennial Rivers of Mizoram has been carried out under the financial support of the MoEF, GoI. The rivers that have been monitored are Tlawng, Tuirial, Tuivawl, Tiau, Chhimpluipui and Khawthlangluipui. With the upcoming upgradation of the laboratory, these rivers are proposed to monitor for physico-chemical and bacteriological characteristics as well so that the bio-monitoring result shall be supplemented with the physico-chemical and bacteriological characteristics to provides complete overall health of the water bodies.

5. State of Environment Report (SoER)

MoEF, GoI initiated a project called '*Preparation of State Environment Report*' for all the states of the Country. For Mizoram, SPCB is identified by the state

Government to be the identified National Host Institute (NHI) and the Administrative Staff College of India (ASCI), Hyderabad is the National Host Institute. Member Secretary of MPCB is the Nodal Officer under the project.

The project was initiated by the Board since 7.3.2003 and various actions have been taken henceforth for preparation of SoER, Mizoram. This includes interaction meetings among NHI, State Host Institute (SHI), Department E&F and various stakeholder government departments identified by the SHI. It also includes identification of resource persons from each stakeholder department, constitution of State Steering Committee under the chairmanship of Chief Secretary of the state Government, collection of information data's from various stakeholder departments and other sources. The "*State of Environmental Report, Mizoram 2005*" was published for the first time in collaboration with ASCI, Hyderabad and various stakeholder departments of Government of Mizoram. The report was financed by the MoEF, GoI and was released by Dr R. Lalthangliana, Hon'ble Minister of State Environment & Forest Minister in September 29, 2006.

6. Implementation Awareness & Public Participation

The subject of pollution control and environment protection is still new to the people of Mizoram. The awareness level in general is now among the general masses and even among those who are handling development works. The Board has strongly felt that awareness for all section of the society is first and foremost to control pollution effectively. Various Mass Awareness Campaigns are carried out in All India Radio (AIR) and Doordharshan Kendra, Aizawl. Apart from AIR and Doordhanshan programme in the form of paid awareness programme, the Board takes up many activities amongst which the most notable are:

- i) Organized awareness programme amongst all heads of departments of the government under the chairmanship of Chief Secretary of Mizoram at I&PR Conference Hall on 17th August, 2004
- ii) Held a meeting with the journalist and media persons on 11th May, 2004 where pollution acts and statutory laws are informed.
- iii) Held a meeting with the largest NGO in Mizoram i.e. the Young Mizo Association (YMA) in 28th July at Central YMA Office.
- iv) Frequent discussion was held with the Local Administration Department (LAD) on handling of Solid Wastes.
- v) Held Awareness programme in various schools and colleges many a times.
- vi) Cleaning of Aizawl City was organized on World Environment Day 2005 with the Eco-Clubs.
- vii) Acts on Battery Management are distributed to the dealers. Held Seminar in Lead Acid Battery on November 2007 in collaboration with the Exide Ltd.
- viii) Pamphlet in pollution and polythene are prepared and distributed.
- ix) Live-phone-in programmes had been held five times in televisions and radios.
- x) Various Pollution subjects are frequently published in the local daily newspaper.

7. Environmental Information System (ENVIS) Centre:

Memorandum of understanding was signed on 28th August, 2002 between ENVIS Capacity Enhancement Programme and Environment & Forest Department, Government of Mizoram for setting up of Node of Capacity on ENVIS for the state of Mizoram. MPCB is entrusted by the state Government to carry out the establishment of ENVIS

Node in Mizoram which was assigned the task of collection, collation, storage, retrieval and dissemination of information on status of environmental and its related issues.

Consequently, ENVIS Node was established and two staff were engaged since 3rd June 2003 and since then, various activities such as creation and maintaining websites on environment & forest, collection of information for dissemination to all concerned, etc. are being effectively carried out. The ENVIS Node had created two websites-ones in information on the status of Environment and the other on Mizoram Pollution Control Board having URLs: www.mizoenvvis.nic.in and <http://www.mizoenvvis.nic.in/mpcb/mpcbindex.html> respectively.

The ENVIS Node is now functioning fully as the ENVIS Centre so as to fulfill the aims and objectives of the ENVIS-Capacity Enhancement Programme. The Centre has been working in full swing collecting and disseminating more and more environment related data and information and regularly enhancing the websites. It has also published newsletter and journals regularly.

MPCB had no technical staff for a number of years since its inception in the year 1989 and it was only since June 2003, the Board was manpowered with the eight technical staff sanctioned by the Ministry during 10th Five Year Plan. Since then a number of activities were initiated by the Board and various technical functions assigned to it have been undertaken. In fact, all the technical activities and functions of the Board today are completely assigned to the above 8 staff.

Some other functions

1. Consent Management

The Mizoram Air & Water & Rules was notified in the official Gazette in 2002. The whole state of Mizoram has also been declared as “*Pollution under control area*” vide Order No. C 18012/12/2000-FST Dt. 2.7.2002. In continuation with these legislation, the 31st Board Meeting held on 12.09.2009 resolved to take up consent management and adopted the categorization of industries for consent management which classifies industries into Red, Orange and Green ‘A’ & ‘B’ category depending upon the pollution load.

Industrial Consent management was therefore taken up in full swing since September 2003. To start with, all units are notified to apply for NOC/ Consent in the local Newspaper and each unit within Aizawl are visited at the site. The process of granting consent involves checking and evaluation of application received in a prescribed form, spot verification and issue of certificates to the consented industries and maintenance of separate register for record of the status. The Board is making a steady progress in consent management till date. Most of the industries in Mizoram are cottage type and the most common being Furniture workshops, Motor Workshops and Steel Fabrications. However, some big industries which could generate wastes on a large scale came up lately. More attention is therefore required on this matter. Most of these so called industries are small and cottage type only and they could be regarded as entrepreneurs. It is therefore rather difficult to strictly enforce the pollution control Acts & Rules.

Table No. 6

Total Number of Consents given to different categories of Industries

Sl.No	Category	Noc/Co
1	Red	67
2	Orange	395
3	Green 'A'	150
4	Green 'B'	159
5	Non-Polluting	44
6	Total	815

Source: Information pertaining to CAG Audit: Reference No. Y/L No.B-4041ISSI/Inventorisation of SSI/PCI-SSI/2008/8426 dt 17.3.2011 Under Notification No.H.88088/Poltn/3/91-MPCB (Part)

From the above (Table No. 6) we can see that the highest number of consent has been given in the Moderate-Polluting Industries which is 395 Nos and there are 67 Highly Polluting Industries which has been given the No Objection Certificate. So from the above table we can see that the Board is making a huge progress towards the control of pollution in terms of Industrial Consent management. All of these industries are granted consent under strict conditions to be complied with. Due to non existence of good industrial policy in Mizoram, there is no proper Industrial Estate within the state. Majority of the industries are sited either in a residential area within city and towns or wherever there is suitable space within private owned land.

The Board, therefore, already carried out inventory of defaulting units in the city at its own expense. Complete inventory of industries within the state is also being taken up under the centrally sponsored schemes.

2. Public Hearing for Environmental Clearance

An Environmental Impact Assessment (EIA) is an assessment of the possible positive or negative impact that a proposed project may have on the environment, together consisting of the environmental, social and economic aspects. The purpose of the assessment is to ensure that decision makers consider the ensuing environmental impacts when deciding whether to proceed with a project. Some developmental projects require Environmental Clearance from the MoEF, GoI, which involves various stages. One of the first and foremost stages is public consultation or public hearing. The EIA Notification has placed conducting public hearing at the hands of SPCB. The public has a right to know and to be involved in information exchange and decision-making that may potentially affect lives, resources, and properties. A public hearing is a forum for interested and affected entities and entire communities to obtain and exchange adequate and accurate project information. A public hearing provides an opportunity for concerned stakeholders to express opinions, voice their concerns, and provide suggestions to the authorities to facilitate balanced decision-making. Such hearings facilitate the public involvement process. When the public is fully aware and informed of project benefits and effects, project development usually becomes relatively trouble-free. Therefore, a good public hearing process is in the interest of the proponent as well. As per required under the EIA Notification,1994 and later EIA Notification,2006, the Board had been conducting Public Hearing from time to time as and when required. So far Seven (7)

public hearings have been conducted. Accordingly, the MPCB has conducted several such hearing during the reporting year as listed below:

Table No. 7

Reports of Public Hearings conducted by Mizoram Pollution Control Board

Year	Project Proponent	Project	Venue	Time
2008-2009	ONGC Ltd	Oil Exploratory drilling	Hortoki	9.1.2009
2009-2010	Mizoram PWD	National Highway	Lawngtlai	18.11.2009
2011-2012	SIPMIU	Sanitary Landfilling	Zemabawk, Aizawl	17.6.011
	OIL Ltd.,	Oil Exploratory drilling	Thenzawl	18.8.2011
			Maubuang	23.8.2011
			Darlung	25.8.2011
			Phulmawi	30.8.2011

Source: *Office Documents* of the Mizoram Pollution Control Board as on 10th July, 2013

From the (Table No. 7) we can see that public hearing has been conducted 2 times in the year 2009 and 5 times in the year 2011-2012 in different locations. The most frequent number of hearing has been conducted against the Oil India Limited for the Oil Exploratory drilling at Thenzawl, Maubuang, Darlung and Phulmawi.

3. Laboratory Works

The MPCB established 'C' grade laboratory which is capable of analyzing about 30 parameters. With minimal staff strength and facilities, the laboratory has been made functional to certain extent against several constraints. Although the workings and infrastructures of the laboratory is yet far from satisfactory, it has managed to evolve and initiate water and air monitoring, at least for few analytical parameters which are

expected to be increasing with proper upgradation of the laboratory. The laboratory is gradually upgraded. The equipments of the laboratory are listed as follows:

Table No. 8

Table showing equipments for testing Water Analysis

SI No	Item	Nos
1	pH Meter (Digital)	1
2	Electrically Operated	2
3	Turbidity Meter	2
4	Conductivity Meter	2
5	B.O.D Incubator	2
6	Electronic Balance	1
7	Water Bath	1
8	Hot Air Oven	1
9	Hot Plate	3
10	Flame Photometer	1
11	Fumehood	1
12	Spectrophotometer	1
13	UV Spectrophotometer	1
14	Sitrer	1
15	Compressor	1
16	Furnance	1
17	Refrigerator	1
18	Dessicator	1

Table No. 9

Table showing equipments for Bacteriological Test

Sl No	Items	Nos
1	Bacteriological Incubator	2
2	Laminar Flow	1
3	Sterilizer	1

Table No. 10

Table showing equipments for testing Water Analysis

Sl No	Items	Nos
1	Refrigerator	1
2	Spectrophotometer	1
3	High Volume Sampler For doing SPM,RSPM, NO2 & SO2 Analysis)	11
4	P.M 5 (RSPM)	1
5	Dessicator	1
6	Electronic Balance	1

Source: Information received from MPCB Laboratory (as on 10th July, 2013)

4. Vehicular Pollution Monitoring

In Mizoram, vehicles are the major contributor of pollution as there are no significant industries. Meanwhile the Pollution of vehicles in the State has been increasing at an alarming rate causing a steady deterioration of air quality especially in Aizawl City. The State Government has identified the Board as Vehicular Emission Testing Agency. The work has started with one Auto Exhaust-CO-HC Analyzer for Petrol Engine Emission and one Smoke Meter for diesel. At present, the Board is on the

lookout for convenient site for carrying out the emission in full swing. Earlier, the authorized testing agency in the state was the Transport department. But, the department due to lack of expertise and other reasons could not implement the job. As the Board is now manpowered with the technical qualified staff, it is considered well capable and as such, vide letter No.D.21017/98/TRP (MVW)/Pt dt 10.12.04, the Government of Mizoram handed over the job to the Board which is now the only authorized testing agency in the state. The Board since then is gearing itself up to start the testing of vehicular emissions. However, due to lack of fund for procuring instruments, the work could not be started sooner. Proposal for procurement of necessary equipments like Auto Exhaust-Co-HC Analyzer for Petrol Engine emission and Smoke Meter for Diesel Emission is submitted to the CPCB & the MoEF.

With release of the financial assistance from the MoEF, GoI vide its order No. G. - 27017/6/201-CPW Dt 14.2.2012, 14 sets of 5 – Gas Analyser ‘Auto Serve, Model HG-540’ and Diesel Smoke meter ‘Naman, Model SM have been procured and testing have been commenced at four sites in Aizawl since December 2012 though the programme was officially launched on 17th January 2013. These sites are:

- 1) New Secretariat Complex, Aizawl- (Station Code – 001)
- 2) Kimte Motor Works, Ngaizel, Aizawl – (Station Code – 002)
- 3) Pu H. Lalthlanga In, Bawngkawn, Near Brigade Field – (Station Code – 003)
- 4) Pu K. Vanlalmuana In, Zemabawk North – (Station Code – 004)

Testing has been carried out in these sites and till February, 2013, 824 vehicles have been tested. Testing in other districts may be subsequently extended as required.

In this Chapter attempt has been made to describe the organisational structure, functions and programmes of the MPCB. On the other hand this chapter examines the activities performed under various rules according to the National Environment Act, 1986 and also the ongoing schemes that the MPCB is currently undertaking. The next chapter presents the results and discussions of the present study.

CHAPTER IV

RESULTS AND DISCUSSIONS

The previous chapter covers the organizational structure and functions which is carried out by the MPCB. It gives us the detail studies of the existing staff of the board and also presents the different functions and activities performed by the board towards the control and abatement of the different kinds of pollution prevailing within the State. This chapter includes the results and discussion which arises out of the study of organizational structure, functioning and activities etc, of the board. The following are the major findings of the present study:-

The author prepared structured and semi structured interview schedule for the board officials in order to obtain their opinion and various information on the functioning of Pollution Control Board. 40 officials were interviewed to get their opinion about the functioning of the Pollution Control Board. The author asked their opinion on the following issues:

i) Dissemination of information: Although the board provides expert opinion to the Guwahati High Court bench, Aizawl branch about the State of affairs of environmental pollution, some of the officials considered that there expert reports may hide factual information about the polluting industry. Pollution Control Board also does not provide information to the citizens about their activities of polluters. For example, disclosure of information about the industries may create panic amongst the public. However,

dissemination of information about polluters is the bedrock function of the MPCB. But Citizen can exercise the rights and campaign against the polluting industries.

ii) According to officials, monitoring industry in the state is a complex issue for the MPCB. Some of the industries do not comply with the conditions because they are not economically viable. Most of the officials felt that there is no political involvement and moreover they do not face any pressure from interest groups or civil society organizations.

iii) Out of 40 officials 16 of them are working as a permanent and the remaining 24 of them working on contract basis so that they are facing job insecurity. In addition to that they are having lack of man power, trained personnel, expertise, financial resources, sincerity incentives and infrastructure facilities. Moreover, they felt that the standards formulated by the Pollution Control Board were not scientifically and economically viable. These are the reasons that most of the industries are violating standards. As a result, a majority of the officials of the MPCB proposed that to set up a legal cell and well equipped with technical and scientific laboratory facilities to test water and air quality which can help them in a timely disposal of cases, monitoring and implementation of orders, etc.

iv) The study reveals that majority of officials of MPCB stated that Mizoram experiences a low level of pollution, due to the absence of large scale industries. It is quite moderate comparing to other states but they are not completely free from pollution. But the air quality has been observed to be deteriorating due to the release of CO₂ and CO from emission of vehicles. This is because of the steady increasing number of vehicles in

the state and also quite alarming. The total number of vehicles on road in the State upto the end of 2010-2011 for both private and government vehicles was 91,922. The number of vehicles on the road has increased by 11,734 during 2010-2011 as against 80,188 at the end of the previous year i.e 2009-2010. Out of the total number of vehicles in operation during 2010-2011, 55.03 percent were two-wheelers while 38.10 percent were light motor vehicles (Auto Rickshaw, Motor Cab, Maxi Cab, Jeep Gypsy, etc), trucks and lorries constituted 4.17 percent of all vehicles on the road. The total number of vehicles registered as on 31st January 2011 was 1,02,660.

Table No. 11

The following table is showing the trend in increase of vehicles in Mizoram

Year	No of Vehicles (all types)	Increase percentage
2007-2008	61,534	8.75
2008-2009	69,130	12.34
2009-2010	80,188	16.00
2010-2011	91,922	14.63
2011-2012	1,06,105	11.68
2012-2013 (Upto January,2013)	1,17,631	10.86

Source: *Economic survey, Mizoram 2012-2013*: Planning & Programme Implementation Department, Government of Mizoram, pp-74

Out of the 6 years mentioned in the above table No. 11, one interesting fact shows that in the year 2009-2010 the number of vehicles was increased by (16%), which is

highest among all the years. Since, then it reduced by almost 5 percentage point for the years (2010-2013) it is very strange phenomena.

v) The Chairman of MPCB is working as a part time staff. At present, the Environmental Engineer of the board takes charge of Member Secretary. Although the total number of staff, both regular and project staff appears to be higher as compared to the time of its inception, on the other hand the lack of qualified technical and scientific staff still prevails as a result of which, technical work associated with the board is greatly slowed down.

vi). The laboratory of the board started to function from 2005 when it was upgraded to a level of 'C' grade with the help of financial assistance received from the MoEF, GoI. The laboratory was lying idle for many years since the inception of the board in the year 1989 for want of manpower and facilities. At present, the laboratory has a total of 10 scientific staff, all supported by the Ministry, and headed by Scientist 'B'. Out of the total 10 laboratory staff, 6 are the Ministry's supported staff under the scheme, 'Abatement of Pollution-Strengthening of North Eastern Pollution Control Boards' and the rest 4 staff are project staff, engaged under 'National Air Monitoring Project (NAMPP)'. With this minimal staff strength and facilities, the laboratory has been made functional to certain extent against several constraints. Although the working and infrastructures of the laboratory is yet far from satisfactory, it has managed to evolve and initiate water and air monitoring, at least for few analytical parameters which are expected to be increasing with proper up gradation of the laboratory.

vii). The MPCB has been facing tremendous financial constraints from its beginning. The problem became more prominent after eight technical posts have been recruited under the MoEF. The total number of regular staff was increased from 8 to 16. These posts were filled up only after the state government's commitment to support these staff from the 6th Five Year plan (1980-1985). Accordingly, these posts were filled up in 2003. Although the funds which were sanctioned before and during the 5th Five Year Plan (1974-1979) were increased during 2007-2008, the sanctioned amount was still not enough to support salary of all these staff. Besides, the Environment & Forests Department has informed the board that the grant-in-aid from the state government cannot be increased as the department is under tight financial constraints. A small revenue in the form of consent fee are being collected which amount from Rs 20,000/- to Rs. 50,000/- annually on average. This amount is too small to depend upon. Due to these financial constraints the board is facing problems in recruiting sufficient staff and technicians, providing necessary equipments for the laboratory, for conducting seminars and awareness among the peoples, etc. The amount of annual grants-in-aid received from the state govt. since the year of inception till date is as follows:

Table No. 12

**Yearly records of the amount of annual grants-in-aid received from the state
govt.**

Sl No.	Year	Amounts of Grants- In-Aid received from state govt. (Rupees In Lakhs)
1	1990-1991	4
2	1991-1992	3
3	1992-1993	3.5
4	1993-1994	2
5	1994-1995	2
6	1995-1996	2
7	1996-1997	10
8	1997-1998	8
9	1998-1999	5.75
10	1999-2000	10
11	2000-2001	8
12	2001-2002	8

13	2002-2003	15
14	2003-2004	15
15	2004-2005	15
16	2005-2006	15
17	2006-2007	15
18	2007-2008	30
19	2008-2009	30
20	2009-2010	30
21	2010-2011	30
22	2011-2012	30
23	2012-2013	30

Source: Information received from MPCB on 15.11.2013

viii) The board neither has a land nor a building of its own nor is functioning in a rented house at Silver's House, Tuikhuahtlang, Aizawl, with a rental of *Rs.31, 644/- per month*. The central laboratory is located in it. Although the rent is rather high, it is not possible to go for a smaller building as it can no longer accommodate water laboratory and air laboratory. There is also be enough space for organizing seminars, workshops and training regularly for those who are deployed in the pollution control and monitoring

activities for conducting inspections and awareness among the people. Inadequately, since the board has only one main office and the laboratory is the only Pollution Control Board's laboratory in the whole of Mizoram, the board is not able to take up much analytical activities apart from their regular activities. Hence, in order to strengthen its environmental monitoring network, the board has made a proposal of setting up of more stations to cover the whole of Mizoram some of which are still in process.

ix) The problem is further enhanced by conveyance problems. It is now equipped with two Gypsy and a mobile Van. One Gypsy is at the disposal of Member Secretary and another Gypsy is available for surveillance. This gypsy is rather old and is not fit enough to be taken everywhere. It is often required to be taken to a repairing workshop. Besides, the mobile van is hardly of any use as rivers are in deep gorges, approach road for which are in a very bad condition. In spite of all these hardships, data collection and environmental surveillance are to be carried out.

x). Due to the financial constraints as mentioned earlier, the board is unable to recruit sufficient amount of personnel as required. Most of the employees working in the board are still facing problems due to non-regularities in their posts. There are only sixteen (16) staff who are regularized by the State Government. The irregularities of posts create personnel feeling like insecurity which affects negatively in carrying out their jobs. Besides at present, inventorization of industries could not be done completely due to shortage of manpower as a result of which the board is facing huge problems in pursuing industrial pollution control in a more effective way. Manpower strengthening is really needed as there are no personnel in the board who could solely put their work on Solid

Waste and Hazardous Waste management. These wastes, being a technical and scientific subject, need a strong manpower with technical and scientific backgrounds. Besides, due to limitation in the number of staff, the board is not able to widen its scope in air and water quality studies apart from looking after the existing stations.

xi). Majority (60%) of the people of Mizoram are depending on agriculture for their livelihood in which the traditional system of shifting cultivation is being practiced. The air pollution in Mizoram is largely contributed by these agricultural activities. Due to the relative backwardness in economy, majority of the people of Mizoram depend on agriculture for living which is practiced on the slope of the hills. Agricultural wastes mostly liquid forms enter water bodies below thereby polluting river water. Moreover, practice of fish and crab poisoning is encountered many times along the rivers by using gelatin, calcium carbide, limestone, bleaching powder etc, thus killing all the aquatic organisms and polluting the river water as well. Sometimes fish is poisoned by using a locally made material intoxicated to fish. Occasionally poisoning of fish is carried out in many rivers of Mizoram where fish swarm and which can lead to extreme decreases of fish populations in river water. Though much effort had been given by the government and NGOs to restrain these practices, they are still on the process. Therefore, inducing awareness amongst the public therefore remains the first necessity.

xii). For quite a long time since the inception of the board in 1989, the laboratory could not be made functional for want of equipments and manpower. The board had been functioning with bare minimal staff and with no laboratory staff for a number of years. Since the board has only one main office and that the laboratory under discussion is the

only Pollution Control Board's laboratory in the whole of Mizoram, the board is not able to take up many analytical activities apart from its regular activities, it is necessary to upgrade its laboratory in terms of its personnel and equipments. It is proposed to upgrade its existing central laboratory at the main office at least to 'B' grade and to set up Regional laboratories of 'C' grade at the Northern and Southern region of the state

xiii). There are three monitoring stations under National Air Monitoring Programme (NAMP) all located in the state capital Aizawl. The staff comprise of one Scientific Assistant and three Field Assistants only. As the three existing NAMP stations are located only in the capital, they could not well represent whole of the state. Under National Water Monitoring Programme (NWMP), the water laboratory is looking after 6 monitoring stations located within Aizawl district. From these stations, regular water quality monitoring is being undertaken since the year 2005 till date. The laboratory is unable to extend its functions apart from its current activities that is monitoring under NWMP and monitoring of water quality of only nearby water sources within Aizawl city due to constraints of laboratory staff, infrastructure and fund.

xiv). There exists only one legal dumping site at present which is located at Tuirial. As of today it is considered that this dumping area is not sufficient enough to handle all the solid waste of the whole city. Wastes are not segregated at any point and there has been no proper awareness programmes for promoting segregation of waste. At present, bio-medical wastes are mixed with municipal solid wastes by way of collection, transportation and disposal. There is no storage facility for municipal solid waste and no community bin is constructed within Aizawl City. Wastes are transported by means of

truck vehicle which are not specially designed but are covered so that wastes are not exposed to the open environment during transit. Regarding processing of municipal solid waste, scientific technologies including land-filling system are not yet adopted and the waste are neither processed nor recycled at present.

xv). Mizoram is less industrial state. There are no large or medium scale industries in Mizoram even though the Government is encouraging industrial activities for economic development; however, it has not taken proper arrangement for industrial estate as fast as it should. So the quality of air and water are still devoid of industrial pollution. For a long time the people of Mizoram has been boasting of the clean environment, the cool weather in summer and the moderate winter which nature has bestowed on them. The cool climate of the state all these years has been the pride of the land and the people. However, there is a change that has been silently happening since the time of our forefathers. The practice of jhum burning has been going on for hundreds of years and never seems to stop. Today this is coupled by modern day technology and development. Now, at this very moment, the silence is broken. Vast lands are burnt up for jhum cultivation each year, releasing tons of harmful gases in the air; thousands of tons of garbage are generated everyday with no scientific process available for their disposal; tons of wastes are entering the river system; new industries and hospitals are coming up whether big or small; thousands of vehicles are newly registered each year; big companies are venturing into search for mineral wealth hidden underneath; railroads will sooner be introduced; materials like polyethylene, foreign-made batteries, plastics etc, easily finds their way in, but their wastes never finds a way out the state. To combat all these happenings and to

influence the masses the pollution control mechanism in the state really needs to be boosted up.

xvi) Although industries are small, complaints are being received from time to time. The nature of complaints includes water, noise, air, solid waste, etc. Besides, negligence on the part of entrepreneurs results into partial compliance of the Board's direction. Most of the complaint cases arose from the people in the City area which is an indication of the ever increasing awareness on pollution effect which the Board had created in the city. The number of complaint cases received by the MPCB during the year 2008-2013 is shown as below:-

Table No. 13

Number of complaint cases received by the MPCB during the year 2008-2013

Sl.No	Complaints	Remarks
1.	Complaint against waste from a Private Resident at Venghlui	Joint Inspection with UD&PA had on 29.08.2008
2.	Against contamination of drinking water source at Khatla	Inspection done on 29.08.2008. Water sample collected and analysed in the lab. Notice given to Khatla V.C
3.	Against contamination of water by practice of Tuiburthlawr at river near Mualpui Police Training Centre.	Inspected on 23.01.2009
4.	Against Aircel Tower at Thakthing Veng	Inspected on 24.11.2008. Aircel Company directed to stop operation immediately on 09.02.2009
5.	Against furniture workshop at Dawrpui, Chhinga Veng and Saron Veng	On 26.08.2008 notice to stop operation given to the proprietors.
6.	Against F.C Furniture works at Saron Veng submitted by Saron Veng YMA	A letter was sent to President YMA Saron Veng Branch to enquire the condition as owner of the workshop already rectify the problem.
7.	Against drainage and septic Tank system at Mr. Zauva's Building at Venghlui.	Inspected on 29.08.2008 Director UDPA was sent inspection report and request to take necessary action.

8.	Air polluting problem arising out of burning fodder practiced by cattle farmer at Durtlang	Inspected in 14.12.2008 Notice given to the owner to stop their practice but instead to led the fodder decomposed and used it as manure.
9.	Against Aircel generated at Thakthing Veng	Aircel Company already given notice
10.	Against tuiburthlawr submitted by ITI V.C on 20.03.2009	Inspected on 08.05.2009. It was left to be discussed.
11.	Against fire hazards that erupt from a school hostel submitted by Thangliani Tuikhuahtlang	No action was taken since the matter was not within our purview
12.	Against air and noise pollution from engine running saw mill and rice mill submitted by Mr. Lalchhuanga, Republic Veng.	Mr Lalchhuanga was called up in the office to explain the matter. To response the office notices to clarify the matter and submit a letter wherein it was written that he agreed to shift his industry to a safer place. He was given 3 months for shifting his industry.
13.	Aircel DG set at Ramthar, Tlangveng submitted by Mrs. Lalramsangi	Inspected on 03.03.2009. Aircel Company was directed to stop operation immediately unless and until the problems are rectified.
14.	Excessive dust arising out of repairing of side drain along NH-54 undertaken by BRTF (Pushpak), Zemabawk submitted by V.C Zemabawk.	Inspected on 12.08.2008. During inspection complainant were caked up and the matter was discussed. Since the problem were already rectified by BRTF it was not necessary to take any action.
15.	Hot mix plant at Hlimen submitted by Quarry ven Welfare Committee, Hlimen	Chairman Quarry Veng Welfare was contacted to discuss the problem. According to him the problem was already discussed with Engineer in Chief, PWD and the Govt officials requested them to give 2 months time for clearing the problems. The committee also agreed the terms as the work was meant for improvement of city road. As such no action was needed from our end.
16.	Foul smell arising out of Cattle farm submitted by Mr. K. Hmingthanauva, Lunglei, Rahsi Veng	Sanitation and UDPA Dept. were referred to take necessary action.
17.	Dust coming from along the road near Kulikawn Middle School	Matter was referred to S.E Building Circle, PWD to take necessary action. A

	submitted by Headmaster Kulikawn Middle School.	copy was also sent to MLA, Aizawl South Constituency.
18.	Excessive smoke arising from illegal waste dumping site along Aizawl-Sairang road.	Joint inspection has on 02.06.2009 with DC, Trade and Commerce Dept and concerned V.C. ii) SDO agreed to give 2 months prohibition order under QPC-144
19.	Smoke arising out of fire grate at Durtlang Leitan submitted by Pu R.C Khuma and Party.	NA
20.	Stone crusher submitted by Bung Welfare Committee.	Inspected on 17.09.2009. Owner of the crusher was advised to shift the crusher and all other activities to the quarry site located about 1 km away from the existing site or any other suitable placed approved by MPCB within a year.
21.	Leakage of Septic tank owned by Pu Remsiana, Damveng which disturbed the nearby spring source used by nearby dweller submitted by Pu Lalengmawia and Party Salem Veng	Since the complaint was not directly referred to MPCB. Actions to be taken by UDPA.
22.	Noise pollution created by generator turned on continuously for running Airtel Mobile Signal tower at Maubawk Sikul VEng submitted by Pu C. Kaphleia and Party, Maubawk Sikul veng	Letter was sent to manager, Airtel regarding the problem and was advised to stopped
23.	Complaint against Dumping of debris into tlawng river by PWD constructors submitted by Mr P. Rohmingliana Convener INT Chaltlang	E In Charge PWD was sent notice to the complaint and requested him to oversee the problems and take immediate action
24.	Excessive noise generated by two furniture workshops submitted by Pu Lalramliana Ramthar Veng	Inspected on 28.05.2010 by Joseph Lalhmunliana JSA and Pu Francis Lianmawia, JLA MPCB.
25.	Water pollution due to construction of septic tank at the upstream of Hmawngkai River submitted by Venghlui V.C	Inspection notice given to VCP Venghlui to be done on 02.05.2010
26.	Noise generated by loud speaker posted near Government K.M Higher Secondary School by Kanaan YMA for local information	Letter send to President YMA in which it was said that such action of placing loud speaker near residential area without prior approval of D.C Aizawl was illegal

	submitted by Principal, K.M Higher Secondary School.	and it was also against Noise Pollution (regulation and control act) Act. As such he was advised to take necessary action.
27.	Foul smell produced from farm owned by R. Lalliana, Kawn Veng, Durtlang submitted by A. Thangkima and party	N/A
28.	Diesel Generator Sets owned by Airtel situated at Wg J.Lahminglianas Building, A-17 Tuikual submitted by Dr Lalthakima & Party	N/A
29.	Copy of complaint against smoke arising from firing of garbage dumped along Aizawl-Sairang Road, NH-54 within Vaivakawn V.C area.	N/A
30..	Diesel coming out from PHE water supply pump house No. 2 situated at the mouth of water supply for private firm at Dihmunzawl submitted by Pi Laltawii, Bungkawn Aizawl.	N/A
31	Septic tank leakage and toilet leakage of New DC office building submitted by Manager, Zenics and SDEO Aizawl East, etc.	Letter was sent to D.C regarding the complaint and informed that the site was already inspected as similar complaint was received during the year 2008. The D.C was again requested to take necessary action immediately
32.	Dumping of garbage near Bethlehem Veng YMA Hall that created foul odour and threat to human health for nearby resident submitted by Secretary Bethlehem Veng UPC Mual Welfare Committee.	Copy of the complaint was sent to Director UD&PA for information and initiating necessary action.
33.	Air pollution arising from Hot Mixture machine of PWD placed at Vaivakawn V.C area from 2006 that post threat to health of nearby dwellers submitted by Pu H. Vanlalsanga, Vaivakawn Zohnuai	The Engineer In Chief PWD was notified about the complaint and informed him that such operation of air polluting machine in an 'Air Pollution Control Area' required valid consent from State Pollution Control Board and requested him to clarify the matter to as soon as possible.
34.	Excessive noise produced by generator owned by SBI	Bank Manager, SBI Bawngkawn Branch was notified about the complaint and to

	Bawngkawn submitted by Pu C. Lalsangliana and party	take necessary action
35.	Excessive noise generated by D.G set and generator of BSNL situated at Tlangnuam Phunchawng submitted by Pu Sakhawliana, Tlangnuam Phunchawng.	Divisional Engineer (Mobile) BSNL was informed about the complaint and requested him to construct acoustic enclosure around the DG set as the inspecting official from MPCB found that excessive noise was generated from the DG set and tower
36.	Dumping of human faeces at illegal dumping ground at Zemabawk and ITI veng submitted by Mizoram Septic tank Service association	The owner of the land were informed that since the D.C approved usage of only the Oxidation Pond for dumping of faecal matter, they must stop their practice and follow the Governments order for t=better management and healthier environment.
37.	Cow shed owned by Assam Rifles Khatla that caused nuisance to the Secretariat staff and road users submitted by C.E PWD (building) Mizoram.	Copy of complaint was sent to Director UD&PA govt of Mizoram with a request to initiate necessary action
38.	No action taken against YMA loud speaker placed near K.M H.S.S submitted by Principal KM HSS Dawrpui Vengthar	President Kanan YMA was asked to sent action taken report to clarify the matter as soon as possible to the Member Secretary.
39.	Dumping of garbage within Chanmari H.SS compound by nearby residents submitted by Principal, Chanmari HSS Chanmari	Director UD&PA was informed of the problems and complaint received and requested him to take n/a.

Source: Information received from MPCB on 15.11.2013

The above table shows that there are thirty-nine (39) cases which are received by the MPCB. Out of thirty-nine (39) cases, thirteen (13) of them are inspected, fourteen (14) of them are given notification or warning in the form of letter or in person, four (4) of them are referred to Other Departments in order to take necessary action. So far, there is no action taken against two (2) cases since the matter is not within the purview of MPCB. One (1) case is given the order to stop operating in the case of Aircel Tower at

Thakthing Veng and 5 cases are left unattended. In the analysis, it clearly indicates that MPCB has been responding to majority of the cases.

The following are the suggestions given by the officials of MPCB:

Allocation of more funds, human capital, laboratory facilities, infrastructure development, vehicle, establishment of regional offices in almost all the headquarters of District of Mizoram, installation of pollution monitoring stations in all cities, awareness programme in the media through local channels like Zonet Cable TV and LPS Cable operator, etc.

The MPCB maintains a good relationship with the Department of Environment & Forest and several other state departments. The MPCB since its establishment in September 9, 1989 has been the sole leader in the state towards controlling of various types of pollution. In spite of the various constraints, it has faced that the functioning and coordinating with the various state agencies and at the same time guiding them towards its various goals. The various state agencies with whom the works of pollution control are coordinated as follows: District Commissioner (DC) of various Districts: Environment & Forest Department, GOM: Urban Development & Poverty Alleviation Department, GOM: Trade & Commerce Department, GOM: Health & Family Welfare Department, GOM: Public Health Engineering Department, GOM: Industries Department, GOM: Transport Department, GOM: Council for Science, Technology & Environment, GOM: Mizoram ENVIS Centre, Central Young Mizo Association (CYMA) and Mizoram Hmeichhe Insuihkhawm Pawl (MHIP)

Major activities of the MPCB are organizing programmes on various environmental issues like training of teacher's in-charge of Eco-clubs, presenting papers on related topics at different Higher Secondary Schools and Colleges, participating at public hearing programmes, organising trainings, seminars and workshops in order to spread awareness and campaigns of environmental control. There are three major programmes carried out by the board which are- The NAMP and the NWMP which are both sanctioned by the Central Pollution Control Board to set up various monitoring stations at different locations. As such there are 6 stations established for the monitoring of water and there are three monitoring stations under the NAMP all located in the state capital Aizawl. Besides, the Board acts as the nodal agency for implementing the National Green Corps Programme in Mizoram. The State Government constituted State Eco-Clubs Steering Committee under the chairmanship of Secretary, Environment & Forest on 17 June, 2002 and District Implementation and Monitoring Committee (DIMCs) were constituted in all the eight districts of the state. As for now, there are 1235 Eco-Clubs functioning in the State under National Green Corps Programme. Each year a sum of Rs 2500 each are given to all the Eco-Clubs. The Eco-Clubs are performing various activities effectively and enthusiastically which include Awareness Programmes, Plantation, Cleanliness drives, Outdoor activities, Essay & Painting competition & other Environment related activities.

The study found out that the major problems includes the lack of funds, problem on infrastructure, lack of manpower- both in technical and administrative staff, problems in conducting inspections due to non-availability of sufficient infrastructure, lack of adequate laboratory equipments and staff. The most effective way of solving these

problems is that the Governments, both the Central and the State should allocate more funds to the board so it can meet its requirements. Otherwise, the problems would aggravate further and may result in malfunctioning of the board.

Implementation of New Land Use Policy

The practice of shifting cultivation has contributed to large scale deforestation-disturbing ecological balance resulting in destruction of wild animals and their habitats, elimination of source of water and so on. It also converted vast area comprising valuable timber trees into degraded or barren. The State govt. has come up with a very promising program called the New Land Use Policy (NLUP) to do away with the wasteful practice of jhuming and faulty land use. Though the primarily objective of the programme is socio-economic upliftment of the rural poor, it is going to have a remarkable impact on preservation of the forests and its resources in the state as the project envisages ensuring – 60% of geographical area of the state to be tree/rain forests, 10% of land for Community Forest Reserves, 10% for Community fuel wood reserved forest, 15% for land based development for the implementation of NLUP and another 5% for habitation, industrial area, communication, etc.

Under NLUP, the Department E&F, Govt. of Mizoram has been selected to implement Bamboo Development Programme. So the following are the status of implementation of NLUP under Department E&F, Govt. of Mizoram:

Implementation of NLUP under Environment and Forest Department

1. Allotment of fund under NLUP during 2011-2012 & 2012-2013

= i) Rs, 1173.91 Lakhs (ACA and CSS fund) for 1st phase

ii) Rs. 1424.94 Lakhs (1266.06 ACA and 158.88 CSS) for 1st phase maintenance and 2nd Phase development works.

2. Families or beneficiaries in number

= i) 1st Phase - 1409 beneficiaries

ii) 2nd Phase - 1200 beneficiaries

iii) 3rd Phase - 3rd and 4th Phase beneficiaries being selected by Deputy Commissioner concerned.

3. Area affected by NLUP

= i) 2 (two) hectares per beneficiary

ii) 1st Phase – 2818 ha. for 1409 beneficiaries

iii) 2nd Phase – 2400 ha. for 1200 beneficiaries

Table No. 14

Number of beneficiaries in District and Division-wise

(a) 1st Phase

SI No	Name of District	Name of Division	No Of Beneficiaries	Total beneficiaries
1	Mamit	Mamit	61	72
		Kawrthah	11	
2	Kolasib	Kolasib	37	37
3	Aizawl	Aizawl	77	129
		Darlawn	52	

4	Champhai	Champhai	283	283
5	Serchhip	Thenzawl	47	47
6	Lunglei	Lunglei	231	747
		Tlabung	516	
7	Lawngtlai	Lawngtlai	94	94
Total				1409

Source: Economic Survey, Mizoram 2012-2013: Planning and Programme Implementation Department, Government of Mizoram pp-58-5

Table No. 15

Number of beneficiaries in District and Division-wise

(a) 2nd Phase

Sl No	Name of District	Name of Division	No Of Beneficiaries	Total beneficiaries
1	Mamit	Mamit	81	87
		Kawrthah	6	
2	Kolasib	Kolasib	73	73
3	Aizawl	Aizawl	133	216
		Darlawn	83	
4	Champhai	Champhai	211	211
5	Serchhip	Thenzawl	100	100

6	Lunglei	Lunglei Tlabung	172 253	425
7	Lawngtlai	Lawngtlai	86	86
Total				1200

Source: Economic Survey, Mizoram 2012-2013: Planning and Programme Implementation Department, Government of Mizoram pp-58-59

The last and 4th installment of 1st Phase and 1st installment of 2nd Phase have been released to Deputy Commissioner and Divisional Forest Officers joint account on 17th January, 2013 for implementation of NLUP as per work programme and the fund is being released to the beneficiaries in all Districts.

This is not a purview of MPCB. The Government of Mizoram has been implementing NLUP through the Department of E&F in order to reduce the traditional practice of jhum cultivation which can help to reduce air pollution and environmental degradation. This policy is really helping the MPCB towards the abatement of air pollution.

CHAPTER V

CONCLUSION AND SUGGESTIONS

The final chapter is divided into two parts- Part I and Part II. The first part contains a brief summary of all the previous chapters. The second part contains the major findings and suggestions for successful implementation of the functions and activities of the board towards the monitoring and control of pollution in Mizoram.

PART – I

The first chapter starts with the introduction, highlighting the various reasons which cause environmental crisis and the importance of conservation and protection of the environment. It also discusses the amendments made by the Indian Constitution and the adoption of several Articles which deals with the prevention and control of the environment, on the basis of which many Acts and Rules are enacted and amended which are briefly discussed in this chapter. This chapter describes the establishment of Ministry of Environment and Forest (GOI) and gives a brief introduction of the Constitution of the CPCB under the provisions of the Water (Prevention and Control of Pollution) Act, 1974. It further describes the added responsibilities of the board including the establishment of the SPCB. It also introduces the scope of the study, the aims and objectives, the problems and methodology used for the study.

The second chapter traces the origin and evolution of the MPCB. It highlights the steps taken by different agencies towards the protection of the environment like the United Nations and the creation of the United Nations Environment Programme. It covers the establishment of the Department of Environment and Forest in India which subsequently led to the establishment

of the MoEF. It also gives us a brief profile of Mizoram as found during the British regime and gives us a brief outline on how the State Forest Department originated in 1987; the Department was renamed Environment and Forests Department. It also highlighted the functions of the MPCB as laid down under the provisions of the Water (Prevention & Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981.

The third chapter deals with the organizational set up and functions performed by the MPCB. It gives us the details of existing pattern staff of MPCB and the current sanctioned strength of the board. It also highlights a brief summary regarding the appointment of the Chairman of the board, the terms and conditions of service of the members, meeting of board and the Constitution of Committees. This chapter gives an in-depth study of the functions and programs performed by the MPCB towards the abatement of pollution by studying its various activities and programmes ever since the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) 1981 and Water (Prevention and Control of pollution) Amendment Act, 1988 came into force on March 31,1989.

The fourth chapter includes the results and discussions arising out of the study and highlights the problems and challenges faced by the MPCB. It briefly describes the problems faced by the board on infrastructure, lack of man power and insufficient funds. It also highlights the difficulties faced by the laboratory technician due to lack of equipment and manpower. The board is not able to take up analytical activities apart from its regular activities. Some factors of the causes of environmental pollution in Mizoram like traditional practice of shifting cultivation, deforestation and the increasing motor vehicles are highlighted in this chapter. It also points out

the need for regular monitoring of the quality of air and water and the need for the addition of Water and Air Monitoring Station to cover the whole of Mizoram.

PART – II

Since no authentic study has been made on this topic, the present work attempts to study the organization, working and activities of the MPCB. The study reveals that the Board had successfully implemented the activities as laid down by the MoEF and the CPCB with a very few staff. There are some instances where the researcher has identified certain problems confronting MPCB and as such, remedial measures have been made to rectify the problems. The study focused wholly on MPCB to determine whether it is effective in preventing environmental pollution in Mizoram. Since the market and the liability systems are unable to provide incentives to the polluter to reduce pollution, so there is a need for pollution control board to prevent, control and abate environmental pollution in the state. The Pollution control Board where established under the provisions of the Water, Air and Environment Acts in order to fulfill the objectives of formulating environmental standards, monitoring them, issuing consents for establishments and operation of industries and advising the courts and the government on scientific and technicalities of environmental issues.

The study is based on primary and secondary data. The insights obtained from the data which were used to prepare structured and semi-structured interview schedule that were then given to the officials of MPCB to get their opinion and information about the functioning of the institution. We have critically analyzed the data and opinions of the MPCB official to determine the role of MPCB in order to control pollution in the state.

The study reveals that the role of the board is of great importance in preventing, controlling and abating environmental pollution in the state. The decentralized system of pollution control board, however are ineffective in ensuring internalization of environmental concerns in the process of economic development. This is mainly because the responsibilities are manifold, human resources, particularly technical and scientific staff are inadequate, the resource base is uncertain, punitive measures are absence totally, minimum sampling test manuals are lacking, there is no effective and efficient work culture. Therefore, there is a need to introduce policies on restructuring of existing pollution control board, establish competitive environment, empower pollution control board to impose a fine against rogue industries, create an incentive mechanism for the personnel and provide financial assistance. Overall, the study emphasizes the necessities of improving the functioning of the pollution control board by making necessary changes not only in substance of the law but also in the working conditions of the pollution control board in order improve the environmental quality in the state of Mizoram.

The entire administrative set up of the Board is controlled by the Member Secretary. In its performance, the Secretary performs three-fold duties. *First*, he discharges the duty of Secretary to the Board; *secondly*, he controls the administrative staff of the Board and; *thirdly*, he establishes link between the government and the Board. Besides, he also acts as the Coordinator in the maintenance of the ENVIS (Environment Information System) which is the official newsletter of the Board assigned with the task of collection, collation, storage, retrieval and dissemination of information on status of environmental and its related issues.

Suggestions

In order to perform better in monitoring and control of pollution the board needs to be strengthened purposefully in many ways. The following below points contain the suggestions and remedial measures in order to improve the working of the board and make it more effective in its functioning, as follows:

Currently the Board maintains three (3) stations under the NAMP and six (6) stations under NWMP. In order to strengthen its environmental monitoring network, it is essential to increase the number of stations to cover the whole of Mizoram and to identify various water sources and air polluting sources for regular monitoring and subsequent environmental studies and management. As the 3 existing NAMP stations are located only in the capital, they could not well represent the whole state. Therefore, expansion of NAMP network is really necessary at the moment. Increasing of monitoring stations to at least 11 stations is required. It is therefore proposed to establish new additional 8 NAMP stations, besides the existing 3 stations, at all the District Headquarters and nearby the state airport from the four zones i.e. East, West, South and North covering whole of the state.

It is also desired to strengthen the capabilities of the laboratory to take up environmental monitoring on a large scale to carry out the proposed work. It is therefore very much desired to strengthen the capabilities of the laboratory to take up environmental monitoring on a large scale including water quality survey and monitoring of rivers, groundwater and other sources located all over the state and interstate as well as international boundaries, sewage, municipal dumping site monitoring, industrial effluents, biomedical wastes, air quality assessment for the whole of Mizoram, industrial emissions, noise monitoring on regular basis, bio-monitoring and

microbiological survey of rivers and other various water sources. Further, present air quality monitoring work include only air monitoring of Aizawl city from the NAMP stations at the frequency of twice a week, therefore, it is proposed to set up at least one continuous monitoring station in Aizawl city to have in-depth studies on the increasing air pollution and to generate air data on continuous basis. To carry out these proposed works, it is required to upgrade its laboratory in terms of manpower and infrastructure. It is proposed to upgrade its existing central laboratory at the main office at least to 'B' grade and to set up Regional laboratories of 'C' grade at the Northern and Southern region of the state.

Currently, the Board is functioning under a rented building, so it is necessary to have a separate building in order to have more space for performing laboratory work, for conducting seminars, workshops and trainings in order to spread awareness among the people. And as such there is an urgent need for the Board to have its own Office and Laboratory building and Government of India is requested to provide assistance for this requirement, so that the Board can function efficiently. A plot of land for the Board is under acquisition. It is estimated that an area of about 1,160 sq.m will be needed for the office building.

The administrative site of the office also requires strengthening. The correspondences received by the Board are quite technical sometimes which may be too difficult to interpret as an Upper Division Clerk (UDC) or Lower Division Clerk (LDC). Moreover, all other posts are technical in nature. As such, an administrative cell with Administrative officer (Administration & Accounts) assisted by two Sectional Officers, two Assistant, two UDC and LDCs are required.

The present dumping site of the solid waste near Tuirial should be improved immediately and consent should be sought by the concerned department from the MPCB. The Mizo people

are becoming more alert and aware of the wastes surrounding around them. To assist their problems and reply their query, the MPCB has much task to perform in this regard. The solid waste management system is still at its infantile stage and therefore a strong centre with technical and scientific capabilities needs to be created. Without the Board's direct influence, the municipal solid waste management in the state can never reach the desired state. In order to fulfill these there are several actions which are required such as manpower strengthening, monitoring of the municipal solid waste dumping sites, characterization of municipal solid waste and the adoption, construction and monitoring of future scientific disposal sites.

Mass awareness programme in a phase manner in association with several NGOs such as Clean Mizoram Society should be organized at regular intervals. It is also necessary to strengthen the National Green Corps (NGC) Programme sponsored by MoEF in Mizoram. MPCB is the state government's identified Nodal Agency to implement NGC (Eco-clubs) programme in the state of Mizoram. Besides there are other requirements for increasing the awareness programmes like increase in the number of staff and strengthen infrastructure of ENVIS Centre, Setting up of separate cell in the Board to look after Mass Awareness programmes, to allocate fund for Mass Awareness campaigns.

It is required that when a new act or rule is enacted, a separate mechanism should be established for it. Alternatively the already established institutions should be provided with additional staff or training to carry out their new responsibilities. This would help in implementing the enactments in a better manner and would also save the specific office from feeling overburdened because of multiplicity of tasks.

There should be a provision of pre-service training programme so that an employee who was already skilled at the time of entry was also oriented before starting work. Secondly, the

training should in the second stage be oriented towards the job assigned to an individual. Thirdly, the training programme need to be systemized so that both generalist and specialist could participate to improve their effectiveness in performing the job assigned.

Future Visions of the MPCB

1. Installation of Vehicular Tests at all the Districts of Mizoram.
2. Strict enforcement of the prevailing rules and regulations to those industries and hospitals that are violating the norms.
3. Public Hearing is proposed to be conducted in order to disseminate awareness throughout the state in terms of controlling and monitoring of air and water pollution.
4. They are preparing a proposal for E-waste Management by allowing a Registered Recycler.

These are the future plans of the MPCB. So it is in the paper but it has to be implemented in true spirit and letter for the betterment of the whole of Mizoram.

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Mizoram Pollution Control Board
Interview Schedule

1. Kindly give the opinion on the state of affairs of Environmental Pollutions.
2. Any Political involvement or any pressure from interest groups like YMA. MHIP, etc?
3. How many cases are fined for violating the rules, are they disposed timely or not?
4. Are you regularly monitoring the standard rules, regulation, activities and programmes?
5. Are you aware of New Draft Municipal Solid Waste (Management and handling) rules, 2013?
6. Have you taken any actions/complaints against any polluting industries based in complaints received from citizen?
7. Are you taking sample test frequently or not?
8. What are the sources which are generated by the Board?
9. Is there any problem to get information from regulatory agency (CPCB)? Is the CPCB giving information frequently or not?
10. Are you creating awareness among the people? If yes, in what way?
11. Are you celebrating the World Environment Day? If yes, in what way?

-For Research Purpose only





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EDUCATIONAL QUALIFICATION (From Matriculation onwards)

Sl No.	Exam Passed	Year of passing	Percent	Division/Grade
1	H.S.L.C	2001	67.2	1
2	H.S.S.L.C	2003	52	2
3	B.A	2008	42.5	3
4	M.A.	2011	58.06	2
5	M.Phil (Course work)	2012	-	A