CHAPTER- 5

WATER POLLUTION IN PUNJAB WITH SPECIFIC REFERENCE TO BATHINDA

Bathinda district is situated in the Southern part of Punjab State in the heart of Malwa region. It forms a part of newly created division Faridkot Revenue Commissioners Division and is situated between 29 – 33 and 30 -36 North Latitude and 74-38 anb 75-46 East Longitude. The district of Bathinda is surrounded by Sirsa and Fatehabad of Haryana State in the South, Sangrur and Mansa districts in the East, Moga in the North-east and Faridkot and Muktsar in the North-west.¹

### BLOCK PROFILE OF BATHINDA

<table>
<thead>
<tr>
<th>SR. NO.</th>
<th>BATHINDA</th>
<th>SANGAT</th>
<th>NATHANA</th>
<th>TALWANDI SABO</th>
<th>RAMPURA</th>
<th>PHUL</th>
<th>MAUR</th>
<th>BHAGTA</th>
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<tbody>
<tr>
<td>1</td>
<td>Area Sq Km (Rural)</td>
<td>657</td>
<td>467</td>
<td>399</td>
<td>560</td>
<td>338</td>
<td>261</td>
<td>251</td>
</tr>
<tr>
<td>2</td>
<td>No. of Villages</td>
<td>59</td>
<td>38</td>
<td>32</td>
<td>47</td>
<td>28</td>
<td>24</td>
<td>33</td>
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<tr>
<td>3</td>
<td>A) Population- (2001)</td>
<td>397459</td>
<td>103667</td>
<td>129343</td>
<td>145217</td>
<td>134739</td>
<td>65259</td>
<td>104860</td>
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<td></td>
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<td>98271</td>
<td>116160</td>
<td>125668</td>
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<td>70836</td>
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<td></td>
<td>Urban</td>
<td>230201</td>
<td>5396</td>
<td>13183</td>
<td>19549</td>
<td>42820</td>
<td>Nil</td>
<td>34024</td>
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<td></td>
<td>B) Male Rural</td>
<td>87615</td>
<td>46634</td>
<td>59088</td>
<td>66895</td>
<td>47503</td>
<td>35892</td>
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<td></td>
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<td>31416</td>
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<td>D) Literacy-R</td>
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<td>33103</td>
<td>45796</td>
<td>37868</td>
<td>30352</td>
<td>18441</td>
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<td></td>
<td>E) Worker- R</td>
<td>51758</td>
<td>29481</td>
<td>34848</td>
<td>37698</td>
<td>27570</td>
<td>19591</td>
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</tr>
</tbody>
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According to Census of India 2001, Bathinda with a population of 1183295 ranks ninth in Punjab population wise which is 4.86 per cent of the total population of Punjab. In literacy, Bathinda district ranks 14th in the State having 61.51 per cent literate population. If classified on the basis of sex, male and female literacy in the District is 68.31 per cent and 53.76 per cent respectively.  

There has been increasing incidence of various types of cancer in and around Bathinda. It is attributed to the presence of polluting industries and the indiscriminate use of modern pesticides and other toxic materials in farming. A 2007 epidemiological study found that the surface waters of Bathinda are contaminated with arsenic, cadmium, chromium, selenium and mercury primarily due to the discharge of untreated waste water from surrounding industries. Farming practices, that emerged after the introduction of green revolution are also alleged to be a reason for growing incidence of not just cancer but also, high rates of spontaneous abortions, reproductive ailments, genetic deformities, anaemia, diarrhoeas, vomiting, fluorosis and a host of skin ailments including rashes and boils. Many young couples are also reported to be migrating out to save their children from adverse effects.

5.1 METHODOLOGY

Objective of the present study is to find out the causes of water pollution and its effects and at the same time, an attempt has been made to look into various legal remedies available for prevention and control of water pollution with special reference to Bathinda district of Punjab. From the State of Punjab comprising of seventeen districts, Bathinda district was chosen for the simple reason that the people of this district are worst affected by water borne diseases. To carry out the same, universe of the study taken is district Bathinda having seven blocks, viz. Bathinda, Sangat, Nathana, Talwandi Sabo, Rampura, Phul, Maur and Bhagta. For fulfilling this objective, a primary survey was done with the help of a well prepared questionnaire in both English and Punjabi languages as the area of the universe comprised of rural as well as illiterate people. To
carry out the primary survey, the statistical method of stratified random sampling is applied from amongst the seven blocks, people were chosen randomly. Before carrying out the primary survey, a pilot survey was carried out in Talwandi Sabo block of Bathinda district. Information was gathered starting with very simple questions and gradually responses were sought for technical questions. After carrying out the primary survey, the whole data collected through the questionnaire is analysed with the help of some very simple and easy to interpret figures and conclusions were drawn on the basis of the same.
5.2 ANALYSIS

Fast degradation and over exploitation of land resources is resulting in extensive loss to biological and economic productivity affecting the livelihoods and environmental securities of millions of people. Out of the total land area of 13.5 billion hectares, about 2 billion hectares is degraded due to various forms of land degradation. In India, 120.72 million area is degraded due to various forms of land degradation.4

It thus becomes pertinent to enquire whether the people are aware of the environmental degradation they are suffering. Accordingly, it was felt that before looking into the in depth knowledge of the people with regard to various facets of water pollution, we should initially find out whether they were aware of the existence of water pollution. It is felt that any improvement in the existing quality of water is possible only with the presence of informed citizenry.

When enquired from the respondents whether they knew what water pollution is, 100 per cent respondents answered in yes. It thus signifies that people in general are totally aware of the menace of water pollution. They are in some way or the other familiar with the issues relating to water, irrespective of the strata they come from.

5.2.1 Awareness about Water Pollution

As per figure number 1, we find that every single person in district Bathinda is aware of the problem of water pollution. This highlights the large scale prevalence of water pollution in Bathinda. Moreover, awareness of a particular problem is also a pointer in the direction that proper guidance with respect to different aspects of water pollution will be taken in its proper perspective and all is not lost if there is a will on the part of the interested parties to curb this menace.

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Once it was determined that the people in the district of Bathinda were aware of the existence of water pollution, it was felt that there is a need to find out whether they were aware of the existence of this problem in their area as well. In this way, we are also able to determine the existence of water pollution in the respondents’ areas. Thus question number 2 of the questionnaire enquired from the respondents about their awareness with regard to existence of water pollution in their respective areas. Once again 100 per cent respondents showed their awareness with regard to existence of water pollution in their area, thereby highlighting the extent of the problem of water pollution in the district of Bathinda.
5.2.2 Awareness of water pollution in Respondents’ Area

FIGURE NO. 2

AWARENESS OF WATER POLLUTION IN RESPONDENTS’ AREA

Source: Primary Survey (2012-13)

Figure number 2 shows that in all the seven blocks of Bathinda cent percent respondents’ are aware of the existence of water pollution in their respective areas.
5.2.3 Awareness about Limited Drinking Water Resources and its Diminishing Nature

The availability of water on the earth is finite and this has not changed over the millennia. This has to be juxtaposed against increasing demands from the growing population. The population of the world is expected to increase eight billion by the year 2050 and along with the increase in the numbers, the fast pace of urbanization and development are also going to increase the demand for fresh water.⁵

FIGURE NO. 3

AWARENESS ABOUT LIMITED DRINKING WATER RESOURCES AND ITS DIMINISHING NATURE

Source: Primary Survey (2012-13)

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Respondents were asked about the fact that the drinking water resources are finite and diminishing with the passage of time. Table number 3 reflects the aspect that one and all, literate or illiterate, are aware of the limited resources of drinking water and its diminishing nature. It is heartening to know that the population of Bathinda is well aware of the limited nature of water resources.

5.2.4 The Level of Water Table in Respondents’ Area

The water table of Bathinda district varies from 20 feet to 100 feet. As per figure number 4, it was found that 10 per cent of the selected area shows water table ranging from 20 feet to 50 feet and at the same time 90 per cent area is suffering from low level of water table to the tune of 51 feet to 100 feet. There is no scarcity of water in most of the areas, but there is definitely shortage of potable water in most of the areas, which is the major cause of concern.

FIGURE NO. 4

THE LEVEL OF WATER TABLE IN RESPONDENTS’ AREA

Source: Primary Survey (2012-13)
5.2.5 Causes of Water Pollution

Source: Primary Survey (2012-13)

Known as the cotton belt of Punjab, cotton crop has been the major source of financial stability of the farmers in the District of Bathinda and as such lots of importance has been attached to this crop all the years. However, the cotton crop has been highly susceptible to insects and pests and has thus been heavily relying upon pesticides and insecticides for its survival. Agricultural scientists have been suggesting that six to seven sprays of pesticides are enough for safeguarding the cotton crop, but the agriculturists of this area...
have been indulging in as many as twenty five sprays for protecting the cotton crop. When enquired about this huge gap, they justify their approach by stating that the pests have become so resistant to pesticides that they are left with no other alternative, but to keep spraying pesticides time and again. Figure number 5, endorses this fact and shows that 75 per cent of the respondents attributed water pollution in their areas to excessive use of pesticides and insecticides.

The District of Bathinda is considered as backward when it comes to the question of industrialisation. It does not boast of much industry as compared to other major districts of Punjab, but still it contributes to 15 per cent of the water pollution in this area. There is lack of implementation of environmental regulations and the industry is blatantly exploiting the natural resources and releasing untreated effluents all around. Even the thermal plants in this district are a big cause of water pollution in this area.

The region is very dusty and the vegetation is scanty. More over lack of proper planning has resulted in very thin plantations. Very few initiatives have been taken to redress the issue of plantation, but still with the passage of time realization has come amongst the people that there is a dire need to increase plantation in their areas.

As per figure number 5, deforestation has resulted water pollution to the extent of just five per cent. Other than the causes mentioned above, 5 per cent of the problem of water pollution in District Bathinda is attributed to some other reasons which are area specific and some are attributed to the geographical location of the area.

Water pollution is responsible for numerous diseases and the people of District Bathinda are worst hit, so much so that it has earned the notoriety of cancer belt of Punjab. As far as the surveyed area is concerned, water pollution is causing some very serious health hazards like cancer, hepatitis, gastroenteritis, etc. Jhajjal village in Talwandi Sabo block of Bathinda district is one of the worst affected areas of Punjab and has over a couple of decades recorded around one hundred patients of cancer. During the course of this survey, it was found that even today (as of June, 2013), around six people in this village are suffering from this fatal ailment and are on their death beds.
5.2.6 Diseases suffered by the people

Polluted water is the cause of number of diseases and as per figure number 6, the most commonly found disease in the surveyed areas happens to be cancer. Next in the category of ailments are found to be hepatitis and other gastro diseases.

FIGURE NO. 6

DISEASES SUFFERED BY THE PEOPLE

Source: Primary Survey (2012-13)

Bathinda district is a backward district of Punjab and in the surveyed area, majority of the people are illiterate and are not aware of any law enacted for the prevention and control
of pollution in India. It is clear from the figure number 7 that 75 per cent of the respondents were unaware of the existence of any law to this effect. 25 per cent, if aware of any such law, do not know to whom they should complain in case of any environmental problem. Here it is felt that there should be some state machinery or some non-governmental organization which could make people aware about the same. It is very disappointing to notice that number of initiatives have been taken at the national and international level to protect the environment, but there are hardly any efforts at the grass root level to educate the ignorant about the environmental laws.

5.2.7 Awareness of People about Environmental Laws

**FIGURE NO. 7**

**AWARENESS OF PEOPLE ABOUT ENVIRONMENTAL LAWS**

Source: Primary Survey (2012-13)
Ignorance of law is no excuse under the law, but still it is felt that for effective implementation of any law, awareness about the same is an essential requirement. Notifying any law in the Official Gazette is alright as far as the legal requirements are concerned to give effect to any law, but expecting the same to be in public domain and known to everybody is going too far. As the concern for environment is paramount for all of us, there is a dire need to evolve some kind of mechanism whereby people can be made aware of the different environmental laws and how they could contribute to its effective implementation. Knowledge is power and this power needs to be utilized to the maximum.

5.2.8 Awareness of fundamental duty to protect the environment

FIGURE NO. 8

AWARENESS OF FUNDAMENTAL DUTY TO PROTECT THE ENVIRONMENT

Source: Primary Survey (2012-13)
Constitution of India boasts of being one of the first Constitutions of the world which has incorporated specific provisions for the protection of environment. Forty Second Amendment Act, 1976 casts fundamental duty on us to protect the environment. However, even after more than six decades of independence and almost four decades of bringing about the provision of fundamental duty to protect the environment, we have still not been able to make people aware of their duty to protect the environment.

As per figure number 8, we find that very few people (10 per cent) are aware of their fundamental duty to protect the environment, which is a very negligible proportion. Majority of the people (90 per cent) are totally unaware of their duty or responsibility towards the environment.

The Punjab State Pollution Control Board is simply not looking into its responsibility of making people aware of the various aspects of pollution, be it water or any other type of pollution.6

5.2.9 Awareness about contribution of judiciary in India towards protection of environment

The higher judiciary in India has done a great service when it comes to protection of the environment. Judiciary is the ultimate citadel for those who endeavour to fight the injustice meted out to mother earth. As a result the Courts in India are called upon to nurture the basic seeds of this new jurisprudence by constitutional curing and manuring.7 The Supreme Court and the High Courts in India have passed numerous landmark judgments for protecting the environment.8 They have not only interpreted the legal provisions, but also widened the ambit of these provisions thereby strengthening the legal mechanism for protecting the environment.

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6 Section 17 (1) (c) of the Water (Prevention and Control of Pollution) Act, 1974 states “to collect and disseminate information relating to water pollution and the prevention, control or abatement thereof”.


The Courts have repeatedly issued directions and orders to the executive authorities in cases concerning environmental pollution. The judiciary has dealt with all those...

Source: Primary Survey (2012-13)

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Water Pollution in Punjab with Specific Reference to Bathinda

responsible for degrading the environment with an iron hand and has through innovative means fixed not only accountability of the wrong doers, but also made them pay for the restoration of the environment. Similarly, they have constituted Monitoring Committees to ensure that the timely action is taken with regard to its decisions and has made the concerned officials personally accountable. These efforts of the judiciary have earned them accolades all around the world and have earned them a place of pride in the hearts and minds of the people.

However, it is really unfortunate that very few people in the surveyed area are aware of the contribution that the judiciary in India has made towards the protection of environment. According to figure number 9, only 10 per cent have the knowledge as to the contribution of the judiciary in the protection of environment. Some of those who are aware of the judiciary’s contribution comment that though they have heard about what the judiciary has done for the protection of the environment, they do not see much change at the ground level. They complain that so much environmental degradation has taken place in their area, but the landmark judgments have not made any impact as far as they are concerned. There is need to show results at the ground level and make the concerned authorities personally accountable for enforcing different provisions of the law for safeguarding the environment. The Supreme Court of India has applied the polluter pays principle in a number of judgments.10

Once again there are people who are of the opinion that in certain cases there is no action taken, irrespective of judgments to that effect because of the nexus between the politicians and the bureaucracy.

5.2.10 Awareness of Fundamental Right to Life in a Clean Environment

Right to life as enshrined in Article 21 of the Constitution of India has gone in for a sea change as far its meaning and interpretation go. Starting with the case of Rural Litigation and Entitlement Kendra v. State of U.P.11, the right to life has been given a wider interpretation and the right to live in a healthy environment has been duly

11 AIR 1987 SC 1086.
recognised. It was in continuation of this recognition that judgment delivered in the case of *T. Damodhar Rao v. S.O. Municipal Corporation*\(^\text{12}\) recognised that the practice of violent extinguishment of life should not alone be treated as violative of Article 21 of the Constitution, but also the slow poisoning by the polluted atmosphere caused by the polluted atmosphere caused by environmental pollution and exploitation.

**FIGURE NO. 10**

**AWARENESS OF FUNDAMENTAL RIGHT TO LIFE IN A CLEAN ENVIRONMENT**

![Graph showing awareness of fundamental right to life in a clean environment](image)

Source: Primary Survey (2012-13)

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\(^\text{12}\) AIR 1987 AP 191.
Irrespective of such noteworthy judgments, it is ironic that people are not really aware of their fundamental right to live in a clean and healthy environment. Jurisprudentially speaking, rights and duties are reciprocal in nature. But here, majority of the respondents are not aware of either their rights or their duties. As per figure number 10, only 10 per cent of the respondents were aware of their fundamental right to live in a clean and healthy environment. There is a huge thrust when it comes holding seminars and conferences in the universities and colleges on the theme of environment protection, but there is hardly any effort to inform the general masses about their constitutional rights and duties. It is felt that some initiative should be taken at creating an informed society.

5.2.11 Awareness about contribution of judiciary in India towards prevention of Water Pollution

The contribution of judiciary in protection of water pollution has been immense. Though all the major rivers of the country are polluted, whatever positive developments have taken place in safeguarding the water bodies and preventing water pollution have come from the side of judiciary. Industrial units are under legal obligation to treat the industrial effluents released by them so that they do not degrade the environment. However, the industries have been generally guilty of not treating the effluents released by them and have thus been responsible for polluting the water bodies around them. The judiciary has intervened and delivered judgments preventing any further water pollution. However, as per figure number 11, only 12 per cent of the respondents showed their awareness about the contribution of judiciary in the prevention of water pollution.

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FIGURE NO. 11

AWARENESS ABOUT CONTRIBUTION OF JUDICIARY IN INDIA TOWARDS PREVENTION OF WATER POLLUTION

Source: Primary Survey (2012-13)
5.2.12 Awareness about National Green Tribunal Act

National Green Tribunal Act, 2010 is the latest development as far as environmental jurisprudence is concerned. It was enacted with the objective of providing effective and expeditious disposal of cases relating to environmental protection and conservation of resources including enforcement of any legal right.

FIGURE NO. 12

AWARENESS ABOUT NATIONAL GREEN TRIBUNAL ACT

Source: Primary Survey (2012-13)
The Act seeks to establish specialised Green Tribunal with five benches located at different regions in the country. It has a wider jurisdiction to hear cases involving environmental matters than the one conferred on the National Environmental Appellate Authority which now has been replaced by the new Act. The Act confers on the Green Tribunal the power to hear initial complaints as well as appeals from decisions of authorities under various environmental laws.

However, the fact of the matter is that very few people are aware of its existence. According to figure number 12, only 4 per cent of the respondents are aware of the existence of National Green Tribunal Act, 2010. In this kind of scenario, the effectiveness of the Tribunal gets undermined, not from its practical and legal effectiveness, but its accessibility. When people are just not aware of the existence of National Green Tribunal, approaching it is expecting too much. There is an urgent need to address this serious issue and special drives should be started with the sole objective of making people aware of the existence of the Green Tribunal. State Pollution Control Board needs to take up this matter at the earliest. No doubt, environmental studies has been made a compulsory subject in schools, colleges and universities, law colleges and departments have a special role to play. Legal literacy camps with this purpose in mind can make a big difference in dissemination of awareness about the existence and the procedure to be followed in the National Green Tribunal for redressal of grievances pertaining to environmental concerns.

5.2.13 Awareness of the authority before which a complaint can be filed

Law is a regulator of human behaviour and for regulating the same, filing of a complaint against all those who are responsible for violating the law is an essential requirement. This signifies the fact that complaint is a very important aspect in the effective implementation of any law. But the same is possible only if the people who want to file a complaint are aware of the authority before which the complaint can be filed and the procedure for doing the same is an easy and affordable one. However, the procedure laid down in the Water (Prevention and Control of Pollution) Act, 1974 or the Environment Protection Act, 1986 is a time consuming one.

Section 49 (1) (b) of the Water (Prevention and Control of Pollution) Act, 1974 states that no court shall take cognizance of an offence under this Act except on a complaint made by “any person who has given a notice of not less than sixty days, in the
manner prescribed, of the alleged offence and his intention to make complaint, to the Board or officer authorized as aforesaid”. Similarly, Section 19 (b) of the Environment (Protection) Act, 1986 states that no court shall take cognizance of any offence under this Act except on a complaint made by “any person who has given a notice of not less than sixty days, in the manner prescribed, of the alleged offence and of his intention to make a complaint, to the Central Government or the authority or officer authorized as aforesaid. Even the National Green Tribunal is inaccessible because of its distance.

Thus we can conclude that the procedure provided for filing a complaint for the redressal of any grievance under the environmental laws is a difficult one. It is really difficult to analyse the wisdom of the legislature in making any person interested in filing a
complaint related with water pollution or any other environmental concern to give a notice of sixty days and show his intention to the effect that he is intending to file a complaint.

It is not very surprising to see that only one per cent of the respondents (figure 13) were aware of the authority before which a complaint can be filed.

5.2.14 Filing of Complaint to any Authority against any individual/ group for polluting the water or knowledge of any such complaint

FIGURE NO. 14

FILING OF COMPLAINT TO ANY AUTHORITY AGAINST ANY INDIVIDUAL/ GROUP FOR POLLUTING THE WATER OR KNOWLEDGE OF ANY SUCH COMPLAINT

Source: Primary Survey (2012-13)
The pollution of environment is a matter of grave concern in India as the problems here are assuming alarming proportions. This fact can be attributed to relatively lax environmental laws and indifference on the part of the affected public.14

Figure number 14 highlights the fact that none of the respondents has ever made any complaint against anybody or are aware of any compliant having been made by any other individual or a group. There were, however, certain respondents who did not want their identities disclosed stating that oral complaints have been made to certain prominent politicians or their representatives about the erring industry in their vicinity, but no action has been taken. The concerned politicians have made all kinds of promises with them during the election that once they are elected, they will resolve all their issues pertaining to water pollution and other matters, but once elections are over, nobody ever bothers about their environmental concerns. People are also apprehensive of making such complaints as they are not sure whether any action will be taken or not and they will only land up straining their relations with the affluent people running these industrial units.

5.2.15 Awareness of functions of the Punjab Pollution Control Board

The State Pollution Control Boards are given the statutory responsibility of administrative regulation under the environmental statutes. They have, amongst others, the function of laying down the standards of pollution and make consent orders for industries, etc. for putting trade or effluent sewage effluent into a stream. The State Pollution Control Boards give consent to intending industry for the discharge of sewage or trade effluents into a stream or well, etc. and any person intending to set up such an industry, before taking any steps for establishing any such industry has to take the consent of the State Pollution Control Board.

In case of any violation the Water (Prevention and Control of Pollution) Act, 1974, the Act has empowered the State Pollution Control Boards to issue directions to any officer,

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person, or authority, including order to close, prohibit or regulate any industry, operation, etc. and stop or regulate the supply of water, electricity or any other service.\textsuperscript{15}

\section*{FIGURE NO. 15}

\textbf{AWARENESS OF FUNCTIONS OF THE PUNJAB POLLUTION CONTROL BOARD}

\begin{figure}[h]
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\includegraphics[width=\textwidth]{figure15.png}
\caption{AWARENESS OF FUNCTIONS OF THE PUNJAB POLLUTION CONTROL BOARD}
\end{figure}

Source: Primary Survey (2012-13)

However, the ground reality is all together different. The State Boards act as per their whims and fancies and due to the political interference/ patronage, there is lack of effective regulation. Moreover, with the people unaware of the functions enjoined upon the State Boards, there is nobody to really question the working of State Pollution Control Boards.

\\textsuperscript{15} Section 33-A.
Figure number 15 depicts that only 10 per cent of the respondents were aware of the functions of the State Pollution Control Boards. There is dire need to generate awareness amongst the people about the functions of the State Pollution Control Boards and only that will make these Boards more accountable. State Pollution Control Boards on their part should pass directions to district authorities to hold seminars and conferences for educating the people about different aspects of environmental pollution and how they can play a constructive role in preventing and abating the same.

5.2.16 Efforts by any individual/ political leader/ government officer/ NGO to prevent and control water pollution

FIGURE NO. 16

EFFORTS BY ANY INDIVIDUAL/ POLITICAL LEADER/ GOVERNMENT OFFICER/ NGO TO PREVENT AND CONTROL WATER POLLUTION

Source: Primary Survey (2012-13)
The respondents have time and again talked of false promises made by different politicians during the elections and once the same is over, they have never bothered to do anything for them. Figure no. 16 shows that 25 percent of the respondents answered in the affirmative that the government has taken some initiatives to provide safe drinking water to the people of district Bathinda through mainly two initiatives. Water works have been constructed independently for one village or collectively for two or more villages. Other than this RO plants have been installed in some villages where the problem of water pollution is very serious and people here have to pay a nominal amount of money for getting this water.

5.2.17 Efforts by any individual/ political leader/ government officer/ NGO to make you aware about water pollution

FIGURE 17

EFFORTS BY ANY INDIVIDUAL/ POLITICAL LEADER/ GOVERNMENT OFFICER/ NGO TO MAKE YOU AWARE ABOUT WATER POLLUTION

Source: Primary Survey (2012-13)
With the passage of time, there is a realization about the trans-boundary nature of environmental effects. Now we know that we are adversely affected by what is happening not only in our area, but also the areas around us. This awareness has led people from different walks of life to come forward and do their bit in safeguarding the environment. There are numerous instances of such people coming forward and making an impact. But when it comes to the district of Bathinda, not much has been done to educate the people about the ways and means in which they could contribute in safeguarding and preventing water pollution.

Human beings and the natural environment are on a collision course. This is mainly due to lack of an environmentally literate citizenry. There is, therefore, need to create awareness about different ways of maintaining, protecting and improving the human environment.¹⁶

Figure number 17 shows that cent per cent of the respondents stated that there has been no effort by anybody to make them aware about water pollution. However, it will be wrong to suggest here that nobody is concerned about this area, but the fact is that large numbers of studies have been carried.¹⁷ The only grudge of the people is that research groups have come for their vested interests and once they have got what they were looking for, they never came back to inform them about their findings. There is only Jhajjal village of Talwandi Sabo in district Bathinda, where respondents (nominal proportion) stated that there was a team of researchers which had come from Punjab Agricultural University, Ludhiana and told them that the water table of their village was not safe for drinking purposes and as such they should rely only on the water provided by water works installed in their village. They were also informed that the water table had got polluted by excessive use of pesticides and insecticides. Other than this one instance,

¹⁷ State of Environment Punjab, A report by “Punjab state council for science and technology”, A Health Surveillance of Pesticide Sprayers in Talwandi Sabo Area of Punjab; North–West India, A report by “School of Health Sciences, Central University of Punjab, Bathinda, Punjab, India”; Environmental Health Crisis in Cotton Belt of Punjab, “A report by Post Graduate Institute of Medical Research (PGIMR) Chandigarh”. 
no other respondent mentioned of any such happening. There was another team from Punjab Agricultural University, Ludhiana which installed some kind of monitoring gadget in the village Jhajjal and kept replacing them every fortnight for some time and then just vanished.

5.2.18 Role of documentary movies/ essays/ books/ expert talks in the electronic and print media to create awareness with regard to water pollution

A very important aspect of environment protection is the dissemination of knowledge with regard to protection of environment. With large number of people still illiterate in our country, innovative techniques are required to reach and inform the masses.

FIGURE 18

ROLE OF DOCUMENTARY MOVIES/ ESSAYS/ BOOKS/ EXPERT TALKS IN THE ELECTRONIC AND PRINT MEDIA TO CREATE AWARENESS WITH REGARD TO WATER POLLUTION

Source: Primary Survey (2012-13)
The Supreme Court of India understood the importance of making people aware about the environment two decades while delivering a judgment in the case of *M.C.Mehta v. Union of India*. The Court observed that in a democratic polity, where the dissemination of information was the foundation of the system. Keeping the citizens informed was an obligation of the government. It was equally the responsibility of society to adequately educate its various components so that awareness percolated down to every stratum of society.

In the light of these circumstances, the Court issued directions to the Union Government and asked it to issue directions to all the State Governments and the Union Territories to make it compulsory for all cinema halls, touring cinemas and video parlours to exhibit free of cost at least two slides/messages on environment during each show and make the same a condition for grant of license. Failure to comply with this direction was to be treated as a ground for cancellation of license by the appropriate authorities.

The Ministry of Information and Broadcasting of Government of India was directed to start producing information films of short duration highlighting the various aspects of environment and pollution and the benefits of clean environment on society.

Doordarshan and All India Radio were directed to produce daily programmes with duration of five to seven minutes with messages on the environment and a regular weekly programme on the subject.

It is really heartening to see that the observations made about two decades back by the Supreme Court of India have made a big difference in the lives of both literate and illiterate as far as awareness about the environment is concerned. They may not be aware of their rights and duties with regard to environment, but they surely know number of things about the environment. The documentary movies/essays/books/expert talks in the electronic and print media have definitely created awareness amongst the masses with regard to water pollution. Figure number 18 shows that 95 per cent of the respondents felt that both print and electronic media have made a huge contribution in creating awareness.

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18 AIR 1992 SC 382.
amongst them. What little they know about the existence of water pollution in their areas and how they can protect themselves from its adverse affects is attributable to media.

5.2.19 Personal initiatives for protecting self from water pollution

The contribution of media in spreading the awareness about water pollution has led people to adopting different kinds of measure to protect themselves from the adverse affects of water pollution. Almost every respondent has talked of some initiative or the other. The respondents belong to poor families have talked about bringing the water for drinking purposes from the water works. There are respondents who talk of boiling the water used for drinking and cooking purposes. Those who can afford have installed ROs in their homes. Some people have taken initiatives of getting all the outlets in their houses covered and maintain proper cleanliness around their houses.

In conclusion we can say that people in general are aware of the problem of water pollution and its existence in their areas. They are aware of the limited nature of water as a resource and there is also awareness about its importance in our survival. However, a lot needs to be done in the field of making people aware about their fundamental right to live in a clean and healthy environment and their fundamental duty to protect and improve the natural environment. Agriculturalists need to be made aware of the damage they are causing to the environment by using excessive pesticides and how large numbers of diseases are related to over use of pesticides. Similarly, the industrialists also need to be made aware of the damage they are causing to the environment. There is no dearth of laws for protecting us from water pollution, but their effective implementation is debatable. Accordingly, people have to be made aware about the ways and means of protecting themselves from the menace of water pollution and the need for them to be pro-active in enforcing their rights. Law colleges and university departments need to play a significant role in spreading this awareness by formal as well as informal environmental education. Punjab Pollution Control Board needs to be more active and provide for effective implementation of the laid down standards and take strict measures against all
those who are violating the laid down norms. People should be made aware of the complaint mechanism in case of water pollution and even the procedure laid down needs to be simplified. The requirement of giving sixty days notice of ones intention to file a complaint in case of environmental pollution matters is a an unreasonable one.