

Water Conservation Resources In India : Role of Corporate Sector

Paper Submission: 14/07/2021, Date of Acceptance: 24/07/2021, Date of Publication: 25/07/2021

Abstract

As primary resource of conservation of water corporate sector are often in an ideal spot to help drive productive change in the design & maintenance of water system, water distribution, water consuming and policy making. What can we done to increase corporate system involvement in water conservation. The data is taken on the basis of study done in India. The data mainly related to the role of corporate sector in India has been complied. This study shows that corporate has an important role in water conservation.

Keywords: Water Conservation, Water Resources, Water and Society.

Introduction

Our earth provides us many natural resources are air, water and soil. Water is one of the important resources on earth water is the basis of all life on earth. It is available in seas, rivers, lakes and ground water. Water is essential for all forms of life. Many uses of water include agricultural, Industrial, household and environmental activities. Virtually all of these human uses require fresh water, leaving only 2.5% fresh water of which over two thirds of frozen in Glaciers and polar icecaps. We make use of these resources to live. It is our duty to preserve them and take care of them because water is the most important element in the biosphere. It helps in the movement circulation and cycling of nutrients in the biosphere water is also important for power generation, Navigation, irrigation of crops, disposal of sewage etc. These resources have their adequate capacity to feed and bear the burden of the requirements of the mankind. Once these resources are overburdened. Due to the undue pressure of human activities it disturbs the equilibrium relationship between the man and the nature necessary for human existence. It gives rise to the problem of pollution.¹

Conservation of water resources means using our water resources wisely and caring it properly water conservation also refers to reducing the usage of water and recycling of waste water for different purposes such as cleaning manufacturing and agricultural irrigation. A water conservation measure is an action, behavioral change, device technology or improved design or proves implemented to reduce water loss, waste or use. Water efficiency is a tool of water conservation that results in more efficient water use and thus reduces water demand.

Conservation of water resources is not a job that is just for a Technician, soil scientist, wild life manager, plant scientist, Park manager or mine owner alone. It is a job for the everyday person who just like to have access to the life sustaining resource of water.

We must learn to save water now for the future. We have the same amount of water now as there was when the earth was created. These are the resources we have water is the foundation of food and life.

The Indian legal system also provides four major sources of law for addressing water pollution problems and conservation of water resources-

1. Comprehensive scheme of administrative regulation through the permit system of the water (Prevention and control of pollution) act of 1974;
2. Provisions of the Environment (Protection) Act. of 1986 relating to water quality;
3. Public Nuisance actions against pollutes, including municipalities charges with controlling, water pollution,
4. The common right of riparian owners to unpolluted water. In addition the union governments department of environment, forests and wild life has developed an action plan for the prevention of pollution of Ganga. The Supreme Court of India, most Notably in the Ganga Pollution Cases² has added the force of these laws by hearing public interest writ petitions, submitted under Article 32 of the constitution, that seek implementation of measures to prevent water pollution and to conserve the water resources.

D.P.S. Tomar
Associate Professor &
Head,
Dept. of Sociology,
J.V. College,
Baraut, Baghpat,
Uttar Pradesh, India

Sachin Verma
Research Scholar
Dept. of Sociology,
J.V. College,
Baraut, Baghpat,
Uttar Pradesh, India

Aim of the study

Water is the basis of life on earth whether human and animal, water is very essential for everyone. We get water through various resources like rain, sea, river, lake, pond etc.. It is the duty of human being to do that. Save water, don't waste it. In this study an attempt has been made to know the role of corporate sector in water conservation in India.

How to Conserve Water Resources

Water is an important factor in the life of organisms. It is a universal solvent in which practically all the minerals, present in soil may be dissolved. It supports life systems and its shortage has been the main concern of human beings. It covers about one thirds of earth's surface.

Water is a useful element of human living but it is useful only when it is unpolluted. The higher the standard of living, the greater the danger of pollution. To make it fit for use removal of pollutant and conservation of water resources is essential.

All over the world there is a problem of fresh water. Water pollution is becoming acute in number of regions of India. Most of the rivers are polluted by the direct discharge industrial effluents and Sewage into them. Pollution levelers high in river Ganga in certain areas, and it is unfit as a drinking water supply source. The main source of water pollution in India is sewage, which comprise 90 percent of the pollutants while 10 percent comes from industry. Many of the cities....do not have sewage and water treatment systems..... All fresh water lakes are becoming severely polluted. Most of the fresh water lakes (Dal Lake, Nainital Lake and Kollenru Lake) are polluted. The problem of degradation is here very complex as it is caused by increasing population density. The dumping of Industrial and Agricultural wastes and sewage, reduced inflow of water into the lakes because of water withdrawal for Agriculture, Siltation and cultivation close to the streams, which causes fertilizer runoff. Hence it will be difficult to protect the lakes.

Groundwater contamination is becoming severe in many areas, but there are very few data on its extent. Protected water supplies are available only for 30 percent of total urban population and others depend for these drinking water upon wells. Households tanning and dyeing units do not have water treatment systems.³

The once sparking water of the Tungabhadra considered the elixir of the Gods, is now a stinking brownish red. Frothy black liquid and pale green alkali wash travel down to the river under a smelly Canopy of sulphide fumes. Gases like sulphur dioxide, Carbon monoxide and Hydrogen sulphide play havoc with the lungs of the villagers.⁴ The results are obvious. Almost all the villagers downstream are forced to use the polluted water and complain the frequent headaches and leg and back pains. Dysentery, indigestion and gas are common as are skin irritation and eruptions. The eyes turn yellow. There is also an unknown malady regardless of age...

Most villagers are usually dependent on the river for drinking water bathing, irrigation, fishing and

for giving water to their animals with the river polluted, the daily collection of water has become a slow tortuous procedure...

So it is a great challenge before us to save these water resources. So that we can get the proper advantage of these resources.

First of all we all have to recognize our responsibility and just not leave it up to other people. We all enjoy the many ways that we use water, so why not do our part in caring these resources.

Secondly as we know that the main is sewage, which comprise 90 percent of the pollutant but even today many of the cities do not have sewage and water treatment plants. We have to make efforts to established sewage and water Treatment systems. So that our water resources can be saved from pollution.

Moreover Indian Constitution also provide objects of law to conserve water resources.

This is an act which came on the statute book in pursuance of clause of Article 252 of the constitutions. Consequent on resolutions passed by all the houses of legislature of the states of Assam, Bihar, Gujrat, Haryana, Himachal Pradesh, Jammu and Kashmir, Kerala, Madhya Pradesh, Rajasthan, Tripura and West Bengal. This act was enacted to provided for the prevention and control of water pollution and maintaining or restoring wholesomeness of water, for the establishment of Boards, with a view to carrying out these purposes, for the prevention and control of water pollution, for conferring on and assigning to such Board Powers and Functions relating threat and for matters connected therewith. The other states may adopt this particular act if they pass a resolution, under Article-252 of the constitution. The object of the Act as already observed, is to prevent and control water pollution and maintain or restore wholesomeness of water.

In order to remove administrative and practical difficulties that emerged over the years after the enforcement of the Act, many of the provisions were amended by the water (prevention and control of pollution) Amendment Act 1988.

Water and Society

Water is the basic human need without water a society can not survive. Every creature need water to alive on this earth in other words water is the basis of all life earth.

Many uses of water include agricultural, industrial households and environmental activities we get this water from water resources seas, rivers, lakes, tubewell, well, handpumps etc. India is an agricultural country. Agriculture depends on monsoon rainfall which is uneven, insufficient and after uncertain. Crops need to be watered when it does not rain. So we have to depend on means of irrigation to raise crops- wells, Tubewells canals and rivers are the popular means of irrigation in India.

So it is obvious that we are totally depended on water resources for our life, agricultural industrial, households and environmental activities. When we know this truth why we are polluting these water

resources. In Armin Rosencranz, Environmental Law and Policy in India, p. 152. The results of using polluting water of river Tungbhadra has been given. The lines are "Almost all the villagers downstream are forced to use the polluted water and complain of frequent headaches and leg and back pains. Dysentery, indigestion and gas are common as are skin irritation and eruptions. The eyes turn yellow. There is also an unknown malady of the intestines which calls for costly surgical treatment and strikes at everybody regardless of age..."

Most villagers are usually dependent on the river for drinking water, bathing, irrigation, fishing and for giving water to their animals with the river polluted, the daily collection of water has become a slow tortuous procedure.

Crops are as drastically affected. A farmer says where he used to get 6 tonnes to 7 tonnes of flower from one hectare, he now gets just 1.8 tonnes to 2 tonnes. Groundnut yield have dropped 10 bags from 15 bags. One prosperous farmer says he knew the factory was the culprit because the yield went up when the factory was shut down for six months due to a strike. A Farmer complained that his bulls do not live as long as they used toanother farmer began taking her water buffaloes upstream of (of the factory) three of them died after drinking the water.

These lines are only a glimpse of using the polluted water. In India not only Tugbhadra but all the major resources of water has been polluted. Ganga, Yamuna, Satlaj, Kosi are also facing the pollution problem. River Ganga has become so polluted that it is unfit as a drinking water supply source. River Ganga is not only a river. It is considered the 'Mandakini Ganga' by Indian. It is the main source of irrigation and water supply for the people in its area. About 40 crore Indians are depended on Ganga for irrigation and water supply but this Mandakini Ganga'. Water has become so polluted that its sparkling water is now a stinking brownish red.

In-spite-of knowing these factors we are also involved in polluting our water resources.

Our Responsibility for Conserving Water Resources

Everyone knows that we must not pollute our water resources because it is the only water we will even have some people do not realize the importance of water resources and they are continually polluting it. Only about ten percent of waste water is disposed of properly. Some people do not realize the importance of water and they are continually polluting it. We must learn to save water now for the future. The quality of our water is very important. We have the same amount of water now as there was when the earth was created. This is the water we have and we must preserve its quality water is the foundation of food and like. Next to air, water is our most precious resource. We can not live without water saving water helps to preserve our environment. It reduces the energy required to process and deliver water which helps in reducing pollution and in conserving fuel resources. Saving water resources now means having water available in the future for recreational purposes.

Conserving the water resources we have minimizes the effects of water shortages and helps build a better defense against future drought years. If we save water now, we are helping to ensure a water supply adequate for future generation. Saving water saves money.

Expert says "Disease from unsafe water and lack of basic sanitation kill more people every year than all forms of violence, including war. Children are especially vulnerable, as their bodies are not strong enough to fight diarrhea, dysentery and other illness.

90 percent of the 30,000 deaths that occur every year from unsafe water and unhygienic living conditions are of children under five years old. Many of these diseases are preventable. The UN predicts that one tenth of the global disease burden can be prevented simply by improving water supply and sanitation.

So it is our responsibility to clean our water resources. We must all recognize our responsibility- For example: The case of M.C. Mehta V. Union of India,⁵ popularly known as Ganga water pollution case or Kanpur Tanneries case. In this case tanneries functioning in and around Kanpur discharging effluents and waste products invariably in river Ganga which rendered the water unfit for any purpose. Industries had not set up any waste treatment plant. On these facts a public Interest litigation was filed by the appellant requesting the supreme court to issue direction restricting tanners from discharging trade effluent into the river. After examining all the relevant facts the Supreme Court directed them to stop working. The court observed-

"The financial capacity of the tanneries should be considered as irrelevant while requiring them to establish primary treatment plants. Just like an industry which cannot pay minimum wages to its workers can not be allowed to exist, a tannery which can not set up a primary treatment plant can not be permitted to continue to be in existence for the adverse effect on the public at large which is likely to ensue by the discharging of the trade effluents from the tannery to the river Ganga would be immense and it will outweigh any inconvenience that may be caused to the management and the labour employed by it on account of its closure."⁶

Thus in the matter of environmental protection financial constraints are of no significance. One is under a duty to comply with the primary requirements at least. K.N. Singh J. Further observed-

"We are conscious that closure of tanneries may bring unemployment, loss of revenue, but life, health and ecology have greater importance to the people."⁷

The question relating to tanneries was again considered in Vellore citizen's surface forum Union of India.⁸

Popularly known as T.N. Tanneries case. The this case too, a public interest litigation was filed against the pollution which was being caused by enormous discharge of untreated effluent by the tanneries and other industries in the state of Tamil Nadu. Because of this, entire surface and sub soil

neater of river polar has been polluted resulting in the non-availability of the potable water to the residents of the area. A huge area of Agricultural land, approximately 35000 hectares had become either partially or totally unfit for cultivation because of destruction of physiochemical properties of the soil. out of 467 wells nearly 350 wells were rendered Polluted- "On these facts, the supreme courts observed:⁹

It is no doubt correct that the leather industry in India has become a major foreign exchange earner and at present Tamilnadu is the leading exporter of finished leather accounting for approximately 80 percent of the country's export. Though the leather industry is of vital importance to the country as it generates foreign exchange and Provides employment avenues, it has no right to destroy the ecology, degrade the environment and pose as a health hazard. It can not be permitted to expand on even to continue with the present production unless it tackles by itself the problem of pollution created by the said industry.¹⁰

People¹¹ Participation Needed to Conserve Water Resources

In the present era we must all recognize that the water conservation really is our personal responsibility and not just leave it up to others. We all enjoy the many ways that we use water, So why not do our part in caring our water resources experts also accepted that people's participation is must for conserving water resources.

Mr. Vinod Bodhankar and Mr. Suneel Joshi from Pune Jal Biradri, Who are also members of the Maharashtra Nadi Panchayat said, "Encroachment on rivers and neater bodies is another concern. Details of such Encroachment should be disclosed by the water resources department and others departments concerned. The responsibility of conserving our rivers was passed on by the government to various departments. This has resulted in the degradation of these water bodies.

Water expert Mr. Madhav Chitale said, "The Need of the hour is to increase people's participation in the conservation of rivers. Maharashtra Nadi Panchyat will help restore and protect rivers that are in trouble.

So in the Present era the need of the hour is to increase people's participation in the conservation of water resources.

Role of Corporate Sector

"Water is an astonishingly complex and subtle force in an economy. It is the single constraint on the expansion of every city and bankers and corporate executives have cited it as the only natural limit economic growth."

Margaret Catley – Carison, Vice-chair, World Economic Forum- It is estimated that 15 percent of world water use is industrial. Major industrial users include power plants use waters for cooling or as a power source, are and oil refineries, which use water in chemical processes and manufacturing plants which use water as solvent but these activities polluted our water resources. Most of the industries do

not have primary treatment plants. There are water-using industries which are discharging wastes with a total BOD load about three to four times as large as the load from severed population. Only 08 percent industrial waste waters have been disposed of in municipal sewer system, but they constitute about half of the total municipal load. Unfortunately, only a small percentage of the approximately 3,00,000 factories using and contaminating water is their manufacturing processes adequately treat water prior to its release.

The industrial waste water contains raw materials, processed chemicals, final products, processed intermediates, processed by products and impurities of the industry.

Most of the Indian rivers and fresh water streams are seriously polluted by industrial waster or effluents which come along waste water of different industries. The industrial waste of these industries are highly toxic. It brings about death or sub-lethal pathology of the liver, kidneys, reproductive systems in both invertebrate and vertebrate aquatic animal.

Chlorine which is added to water to control growth of adage and bacteria in the cooling system of pioneer station, may present in steamy to cause morality of plankton and fish. Heavy fish mortality in river Sone near Dehri-on-sone in Bihar is reported to be caused by free chlorine content of the chemical wastes discharged by factories near Mirzapur in Uttar Pradesh.

In India, all the 14 major rivers have become polluted. The river Damodar is perhaps the most heavily polluted river Mini-mahi in Baroda has been another heavily polluted river which is having a variety of Industrial and petrochemical wastes. The river Colour flowing through Madras has got polluted by Sewage so much that not even the Zooplanktons have been able to thrive in it. One liter of Colour water is having as much as 900 mg. iron, 275 mg. of lead, 1313 mg of nickel and 32 mg. of Zinc. Besides heavy metals, very high level of phosphates, alicates and nitrates also occur in the water sulphate levels ranging from 80-408 mt. I were the highest recorded among Indian rivers. The river Ganga from Haridwar to Calcutta is regarded as one unending sewer which is fit only to carry urban liquid waste, pesticides and insecticides. Nearly 312 industrial units are dumping their waste into the river, only a dozen have effluent treatment facilities. The 27 cities contribute 902 million liters of waste water to the river each day. The water of Ganga affects the health of 250 million people of northern India.¹²

It is true that the rapid, progress is must for a country's development but It harms our environment and water resources. It can be clear by this example of Himachal Hydel Projects- Rivers Siphoned off with water being sent into tunnels under mountains to run turbines of hydropower projects 'nearly the entire length of the Sutlaj in the state and parts of major rivers would not be seen above surface by 2022, severely impacting the local population and environment.

The soaring rapids of the Sutlaj are well on the way to be silenced and breathtaking sights of the life sustaining river wiped off the mighty Himalayas in Himachal if all hydroelectric projects proposed are commissioned by 2022, as planned. Thus far, there is a little reason why they would not. What will remain is a dry riverbed, dotted with manmade reservoirs built to divert water into long tunnels bored under the towering mountains for power generation.

The cascade of 648 small and big projects planned will have serious implications for the people, who have already set off agitations across the state while large projects with big reservoirs are being opposed by environmentalists all over the country, in Himachal small projects too are seen as a curse by villagers.

The season is most villagers are perched on hillsides, which are served by streams- large rivers run at the bottom of valleys between hills, nearly 400 small projects (UP to 5MW) are coming up on streams and rivulets, which cater to villagers need of drinking water and irrigation. The streams also have religious significance, with funeral grounds located on their banks. People are not much dependent on the main rivers.

Villagers also say that the long tunnels under the mountains have disrupted the natural aquifers, as a result of which natural springs are drying up, leading to shortage of water for drinking and irrigation. This has affected apple orchards in Kinnaur.

Himachal, a Himachal-based environment action group, obtained data under the right to information Act. from the irrigation and public health department which revealed that 43 out of 167 resources had dried up in villages affected by Karchham Wangtoo project, and discharge in another 67 has gone down. The numerous projects coming up on small streams has villagers up in arms. Lal Chand Katoch of the Lal Jungle and Zameen Bachao Samiti, who has been leading movements since 2003 in Kullu has moved the high court to save the Haripur stream from a 1.5 MN project. The stream serves 19 villages including 12 watermills and several fish farms. Religious sentiments of people are also hurt when projects are allowed on sacred sites such as the Jogini waterfall.

So it is obvious that Industries are also polluting our water resources industries should use these tips to conserve water resources-

1. As sewage is the major factor of water pollution so industry also use sewage treatment plants.
2. Industries should use primary treatment plants.
3. Industrial sewage should not reach any water body.

Today India has become the 10th largest industrial nation of the world but at the same time, it is one of the most polluted countries of the world as far as industrial pollution and hazardous wastes are concerned. Industries extract raw materials from nature and discharge 'products' from their front doors and 'pollution' from their back doors to the environment. Therefore attention needs necessarily to

be focused not only on the increase in the quantum of production but also on the environmental determination as a consequence of industrialization.¹³

Moreover the Business Council for sustainable development also expressed its views for conservation of water resources.

1. Business can not survive in a society that thirsts.
2. One does not have to in the water business to have a water crisis.
3. Promote mutual understanding between stakeholder on water management issues.
4. Support effective business action as part of the solution to sustainable water management.

Indian constitution is amongst the few in the world that contains specific provisions on environment protection. The directive Principles of state policy and the fundamental duties chapters explicitly enunciate the national commitment to protect and improve the environment our fundamental duties also describes the conservation of environment article 51A say.

"It shall be the duty of every citizen of Indiato protect and improve the natural environment including forests, lakes, rivers and wildlife and to have compassion for living creatures.

Remedies for Conservation of Water Resources and Prevention of Water Pollution

Conservation of water resources is the basic need of present era. We have to prevent water pollution if we want to conserve our water resources. Our constitution has provided us many provisions and remedies for protecting our water resources. Any one of the following remedies may be obtained by the aggrieved person either to compensate himself and for conserving water resources. The remedies are-

1. Civil remedy for damages or injunction.
2. Criminal remedy for punishment for a public nuisance or removal of nuisance under the code of criminal procedure.
3. Writ jurisdiction to compel the agency to enforce the Law.

Civil Remedy

It is of two kinds- (a) damages (b) injunction

Damages

An action under the law of tort to abate nuisance is the oldest remedy most of the cases relating to pollution are covered by the heads of nuisance, negligence or strict liability. In the law of tort the primary remedy is a claim for unliquidated damages. But where it is not an appropriate remedy the prevention of the tortious act is essential, the remedy of injunction with or without damages may be granted.

Damages may be either substantial damages are awarded to compensate the plaintiff to the position he or she would have been as if the tort had not been committed.

Exemplary damages are intended to punish the defendant for the outrageous nature of his or her conduct for instance when he or she persists in causing a nuisance after being convicted and being fined for it.

It is, however significant that the amount of damages awarded in our country is not a good sign so

as to deter the wrongdoer. Prolonged litigation and chronic inflation dilute the real value of any damages.

Injunction

Injunction is the next important civil remedy which can play vital role in abating or preventing pollution and conserving the water resources. An injunction may be defined as a judicial process whereby a person who has infringed or is about to infringe the rights of another is restrained from pursuing such acts. It has also been defined as an order of judgment by which a party to an action is required to do or refrain from doing, a particular thing.¹⁵ Injunctions are either restrictive (preventive) or mandatory.

References

1. *Population Growth Prime Cause of Environmental Pollution and its Legal Control in India*, by N.S. Kamboj, Vol. XXII, 1995, *Indian Bar Review*.
2. *M.C. Mehta V. Union of India AIR 1988 SC1037 (Action Against Tanneries Polluting the River Ganga) and M.C. Mehta V. Union of India, AIR 1988 SC 1115 (Action Against Municipalities Polluting the Ganga)*.
3. *Bowonder: Environmental Management Problems in*.
4. *Armin Rosencrantz: Environmental Law and Policy in India*, p. 152
5. *The Time of India*, May 27, 1987
6. *Problem and Policies* by N. Manormoney in *Environment Protection, Challenges and Issues*, 1993
7. *J.C. Galslaun V. Dunie Lal Sea (1905)*, 9
8. *Fart Jawitt, The Dictionary of English Law*.
9. *M.C. Mehta V. Union of India AIR 1987 SC9658*, p. 981
10. *Pride of Derby and Derbyshire Angling Association V. British Celanese Ltd. AIR 1953*, Ch. 149
11. *Rural Litigation and Entitlement Kendra, Dehradun V. State of Uttar Pradesh AIR 1985 SC652*
12. *Ryland V. Fletcher AIR 1968*