As we know, India is a rich country for natural resources. A substantial progress has been made in development and management of water resource from past in the country. The pace of development in the country has led to the exploitation of water resources in leaps and bounds resulting in over use of surface supplies and over exploitation of groundwater an essential water resource. One has to realize the need and importance of conservation of not only groundwater but also other water resources.

The rapid pace of urbanization, industrialization as well as agricultural activities has made environmental pollution a growing concern globally. Off all the receptor systems exposed to the contaminants, groundwater has received little attention in the past because of the common belief that groundwater was pristine. The over-exploitation of groundwater mainly accounts for depletion of this resource. Studies carried out in India reveal that one of the most important causes of groundwater pollution is unplanned urban development without adequate attention to sewage and waste disposal.

Ganesh, (2004) stated that improper treatment and hazardous waste disposal carried out on open land can cause the groundwater pollution. Excessive applications of fertilizers for agricultural development coupled with over irrigation intrusion due to excessive pumping of fresh water in coastal aquifers are also responsible for groundwater pollution.

Armal and Dahsahashra (1992), in their study on Amravati water supply scheme, reported that, besides two rivers water supply to city is supplemented by 67 tube wells and 155 bore wells. However, due to continuous drawl of groundwater, the groundwater table depleted considerably thereby affecting water supply of the city.
Piper (2007) published the paper on, in search of ideal groundwater treatment, in which he focused on different groundwater treatment technology for reduction of heavy metals and disinfecting the contaminated groundwater due to various microorganisms.

Deshpande and Goel (2002) studied the optimization of groundwater level monitoring network at Aurangabad (M.S.).

Karve (2003) stated that many factors affect the groundwater, mainly heavy pumping and wastage of groundwater sources, that has reflected geohydrological conditions of the village Sawangi.

Prasad et.al. (2003) studied the development prospects and management strategies of groundwater at Kavaratti Island, they also stated the groundwater potential is very limited and the stage of groundwater development is more than 90%, and scenario status of groundwater conservation and management techniques have to be adopted to control further deterioration of groundwater condition in this Island.

Subramanyam (1994) studied the naturally occurring and anthropogenic heavy metals, which are found in river sediments can easily percolate into soil and contaminate groundwater.

Barua (2001) denoted the groundwater impacts, in hydrological analysis, TDS at higher site (Maximum value of 1182, 2500 and 892 mg/lit.) and Hardness 300 mg/lit.

Sharifi and Hajabbasi (2004) made use of ‘Russet Norkotah’ in their experimental work of potato production, to reduce the nitrate leaching in groundwater.

Kuhad et.al. (1989) observed higher accumulation of metals such as Zn, Cu, Mn, and Fe in the surface layer of the sewage irrigated soils of Sonepat district of Haryana. Ramnathan and Chidhambaram (1993) in their study on geochemistry of fluoride
bearing groundwater of Erode district, TamilNadu, focused on problem of high fluoride content in groundwater.


Subramanyam et.al. (2002) studied hydrogeological effects on the fluoride contents of groundwater in a granites aquifer; they also reported the fluoride content in groundwater from a small watershed in granite terrene, which is made in space and time through a suitable dense network and with a frequent interval to arrive at a better understanding of the fluoride presence. Sharma (1995) examined the groundwater quality of various villages within the Municipal Limits of Gwalior and reported no threat to groundwater source, as there is no industrial zone and no over exploitation.

Tiwari and Shukla (2003) studied groundwater exploitation in Jhabua district, M.P. through remote sensing application. Balteman and Smedt (2001) stated that the regional groundwater models used for analyzing groundwater systems were often quasi-steady state and therefore needed long term recharge input.

Mondal and Singh (2001) from TamilNadu studied the hydrochemistry of groundwater, and reported that the depth of water table varies from 1.45 to 32.00 meters because of variations in the thickness of weathered zone, intensity of weathering and also extensive withdrawal rates. In the estimation of groundwater samples found higher level of sulphate, chloride.

Boutt et.al. (2001) made an attempt to examine potential relationships between land use derived solutes and base flow surface water quality using regional groundwater and solute transport models linked to geographic information systems.
Joseph and Dinesan (2000) in their study on groundwater investigation in the Kolar semi-arid region of Karnataka state reported that the groundwater is of acceptable quality for irrigation and domestic uses. As per quality standards of Bureau of Indian Standards, the groundwater cannot be used for drinking. The presence of high nitrate concentration in the groundwater sample of this particular area may be due to the leaching of nutrients from the manure storage pit located in the vicinity of the wells. A gradual increase in fluoride concentration in groundwater sample was also found towards west to east of the watershed.

Rajkumar and Ritakumari (2004) studied the impacts of sewage on groundwater body and surface water for phytoplankton communities from Parvathy Puthanar canal at Tiruvananthapuram and reported groundwater contaminated by microorganisms and by heavy metals.

Kumar et.al. (2004) assessed the characteristics of polluted water of Amanishah Nallah and neighbouring groundwater with reference to heavy metal contents. Hussain and Hussain (2004) evaluated the irrigation and drinking water quality of the villages near river Kothri at Rajasthan.

Israil (1997) studied evaluation of groundwater resource potential of Haridwar district, Uttaranchal, based on integration of various thematic maps viz. geological, geomorphologic slope and drainage density compiled from processed digital satellite data and showed very good groundwater potential due to gentle slope and very low drainage density in the lower piedmont geomorphic unit.

Purohit (1988) carried out the hydrochemical work on groundwater at Vill village of Nagpur, and observed that the tube wells water contained higher level of fluoride than the CPCB’s prescribed limits.
Agrawal (2005) studied the distribution of fluorides in the groundwater in shallow aquifers in Orrisa belonging to both hard rocks and coastal alluvium.

El-Kadi et.al. (1994) studied that groundwater modeling which was generally hindered due to lack of adequate information about the groundwater system and hence there was a need for interactive and efficient system for data preparation and result analysis. Bal (2000) elaborated the irrespective development of water supply systems in the country and demand of groundwater consumption.

Evans and Myers (1999) presented a GIS-based approach to evaluate regional groundwater pollution potential of an unconfined aquifer (Columbia). The geographic information system software used in this study was the ERDAS package. ERDAS was used to overlay and evaluate the various input layers of spatially oriented data to determine the potential for negative groundwater impacts within the study area. Two different type of groundwater evaluation were made with the first type, an evaluation of the pollution potential for any given location or cell was made based on local depth to groundwater, hydrolic conductivity of the aquifer, land surface slope and soil permeability. On other hand, a qualitative determination was made of the probability of groundwater pollution occurring due to human related factors and that was resulted in a ‘hazards assessment map’.

Sandikar (2004) carried out the research on the contamination of drinking water from groundwater caused by disposal of untreated waste (solid and liquid) released from industries and municipality. The hydrobiological examination of various groundwater samples were determined and found with more number of microorganisms in the samples and also in rainy seasons.
Kasture (2004) investigated the inlet wastewater from different chemical plants and treated effluents, which are directly discharged on the land. Pradhan and Fatima (2004) carried out the study on groundwater, focused on contamination caused due to hazardous waste.

Ganshwade et.al. (2004) studied the effects of hardness of water, in which mortality rates were recorded under different hardness at Aurangabad. Chaudhari and Andhale (2004) elaborated the importance of biodegradation technology from cyanide effluent of electroplating industries at Aurangabad.

Biswas (1996) worked out on some balance and sustainable approaches of water issues and implications for the developing world in the 21st century including populations.

Shivanikar et.al. (2004) carried out a case study on fluoride content in drinking water at village Kodgaon, Dist. Nanded, revealed the higher level of fluoride i.e. 4.15 to 6.5 ppm than recommended limit of 1.5 ppm by WHO. Bhosale (2004) highlighted on survey of some trace element contents from groundwater.

Shreenivas (1970) studied hydrobiology of groundwater at Madras and reported the higher level of chloride in groundwater samples. Mahar and Datta (2001) carried out simultaneous estimation of aquifer parameters and identification of unknown pollution sources.

Datta and Chakraborty (1990) thoroughly discussed lot of problems associated with groundwater management and development and environmental issues due to high variations in spatial and temporal rainfall and other reasons of Kanpur, U.P. and concluded with the various appropriate methods and techniques have to be evolved and practiced for groundwater conservation in U.P., so that water scarcity issues and problems could be addressed and solved to a great extent.
The groundwater quality of ‘Vyankatgiri Lake’ has been interpreted by applying correlation analysis. The groundwater quality mainly alkaline and hard in nature. It contains mainly chloride of Ca\(^+\), Mg- and SO\(_4\). High value of electrical conductivity generally indicates hardness of water. Strong correlation between the parameters was studied by Lingeswara Rao (2002).

Golani and Oza (2004) studied on the depletion of groundwater table and other geochemical factors, and resulted in the inverse of fluoride and salinity in groundwater. As a result of increase in hydrochemical parameters have been adversely affected which in turn has affected their socio-economics status.

Garg (2003) studied the physico-chemical parameters of groundwater at Chitrakoot region, and found the seasonal fluctuation in groundwater quality.

According to a recent report by the Industrial Toxicology Research Centre, Lucknow, practically all pesticides were found at higher concentration in groundwater as compared to CPCB standards.