

Water For Life: An Analysis with Special Reference to Sagar Dist.

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ABSTRACT

Water is most important component on earth. Specially for the dry reason of Asia including MP. Ground Water Resources are one of the various resources of water available on Earth. Around 71% of the surface of the earth is covered with water. According to world bank report, by 2030, over 40 % population of the world will face water shortage and by 2040, one out of four children will face water shortage. Both international and national level several negotiations and legislations have been made. In this research article various areas of India and the state of mp including Sagar district and various other aspects including legal aspects have been discussed.

Key Words: water, law, ground water. “You could write the story of man’s growth in terms of his epic concerns with water”

Bernard Frank

INTRODUCTION

Water is very essential for life and wellbeing of living creature on the earth. Water resource is an important national asset. Water Resources are the various resources of water available on Earth. Around 71% of the surface of the earth is covered with water. According to world bank report, by 2030, over 40 % population of the world will face water shortage and by 2040, one out of four children will face water shortage. At present over 4 billion people are living in water scare areas. 1.43 billion People affected by drought. For global water security, cooperation is essential between countries. Recycling storm and wastewater, conserving rain water, protecting the (lakes, ponds, walls, rivers and other water resources) water resources and developing non conventional water resources through mutual cooperation of the countries and by new technologies is urgent need for strengthening global water security.¹

Water Resources in India:

The fresh water which is so essential for life is only a small portion about 2.7 % of the total water available on this earth. Water Resources are the various resources of water on Earth. About 71% of the surface of the earth is covered with water. Since last two decade, the demand for freshwater in India has increased significantly. The reason is industrial development, Water pollution, rapid urbanization, inefficient agricultural practices and growing population. Around 275 rivers in India are being polluted this time due to untreated discharge of both municipal and industrial wastewater.

India account for about four percent of the worlds water resources the main source of water resources are rivers, tanks, lakes, ponds and wells. Out of these water resources the river, canal, ponds and tanks have 690 cubic km of the available surface water. This is around 32 percent of the water available in India. River water flow generally depends n rainfall. About 432 cubic km are available total ground water in India. Lagoons and lakes in coastal area of West Bengal, Kerala and Orissa is very indented in these three states. Total annual precipitation aggregated water resources is 4000km³. Only 28 percent of this (1122km³) are the total utilizable resources in

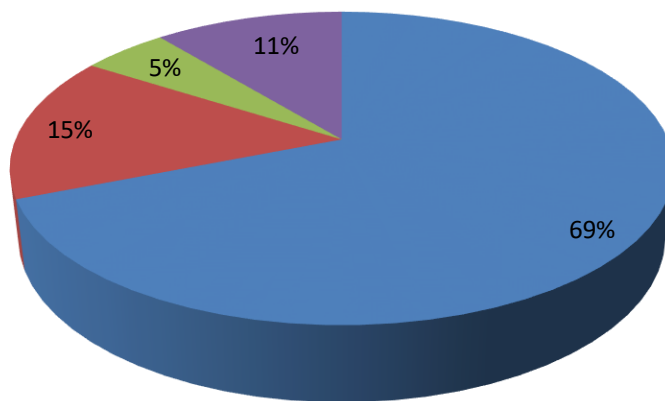
¹ Water resources management, available on <https://www.worldbank.org/en/topic/waterresourcesmanagement>, visited on - 8.02.2025.

India. Out of 1122 km³, the groundwater resources are 690 km³. Every year around 1953km³ is the average basin wise annual frown of water are there in India.

Demand of water for irrigation is very high in our country. India being an agriculture economy uses around 90 percent of water for agriculture. Particularly in summer season and for crops like sugarcane, jute, rice etc water is much needed for crops survival. High yielding varieties of crops need regular moisture supply. This is the reason green revolution become successful in north India where 70 percent irrigation is through tube wells. Over withdrawals of water in the state of Rajasthan, Maharashtra and Madhya Pradesh has increased floride concentration in groundwater. The Pradhan Mantry Krishi Sinchayee Yojana (PMKSY) 2015-16 launch with the aim of “ hark het ko pani” , physical access of water to every cultivable area. Appropriate use of water through appropriate technology is much needed at this time. Increasing in population is other main reason of dwindling of water. Industries in modern time are polluting drinking water. Industries are limiting the availability of usable water resources purity of water or water without unwanted foreign substances gets polluted by foreign matters.

Use of Water

■ Agriculture ■ Industry ■ Domestic ■ other



There is a significant gap exists in the ultimate irrigation potential, creation and utilization as the water use efficiency is around 25-30%. India being most populated country has only 4 percent of total water available on earth. The water resource envelopment have associated with many problems. Some of the common problems are expending multi sartorial demand, over exploitation and depletion of ground water resources, loss of surface storage due to reservoir sedimentation, recurring droughts etc. These problems may be short out through a well structure system. Consecutive use of surface and ground water and de-selinisation, watershed management, inter basin transfer, surface water storage essentials through a systematic plan. Satellite remote sensing technique have support scientific efforts of water management. This satellite technique is more effective to measure water resources than field technology capture unwilling electromagnetic radiation from earth surface features which is either reflected of omitted.²

Water Resources in Sagar District:

This special district of the Madhya Pradesh is located in the central part of the Vindhyan basin, covered with Deccan traps and Dundelkhand massif. Central ground water board monitors ground water four times every year. In district Sagar, pre-monsoon and post-monsoon behavior of ground water regime is covered like pre-monsoon depth of water level 1.92 mbgl into 36.52 mbgl and post monsoon depth water level 1.09 – 22 mbgl. Granite are quit hard and generally devoid of any primary porosity in this area. In the east f Sagar, near Deori village, lametas

² Raju VV & Rju PV; “Water Resource Management” Remote Sensing Applications ISRO, At p. 133-134.

are fairly thick upto 45 meter thickness. These formations support only wells. At Mukheri site, during Betwa Project Methane gas was found there.³

At a survey conducted by Central Ground Water Board, the pH of groundwater in Sagar district is varied between 7.38-9.05. This is found within permissible limit of 6.5-8.5, but Dalpatpur and Parsoria village pH of ground water is beyond permissible limits i.e., 8.76 & 9.05 respectively. Electric conductivity found between 160-2620 $\mu\text{S/cm}$ at 25 degree Celsius temperature. Thus, from this survey, ground water quality of district Sagar is satisfactory except few exceptions. Water resources here in District Sagar lie mainly in Ganga Basin, partly in Narmada basin and Ken Sub Basin. These rivers basin flow from east to west on the other hand, rainfall in Sagar are six rain gauge station. South western part of Sagar District account maximum rainfall in the district. The normal annual rainfall of the district is 1196.6 mm. out of 10252 sq.km of geographical area of the district, 90 percent, 9254 sq.km, is ground water. The groundwater availability in the district is 1212.88 mcm⁴

Atal Bhujal Yojana is extended to 6 district of Madhya Pradesh including Sagar, many gram panchayats i.e. Amet, Apchand, Bachhlon, Badkuwan, Badona, Baheria Gadgad, Bamhori Bika, Bamhori Dhunder, Bamhori Renguwan, Bamora, Bannad, Bansiya, Bararu, Baroda Rehli, Barpani, Belai Mafi, Berkheri Guru, Berkheri Suwansh etc are parts of the yojana.⁵

Law and regulations:

“Water cooperation can be an important factor in strengthening political stability and peace.” A Matter of Survival, report of the Global High-Level Panel on Water and Peace. Geneva, 14th September 2017

International convention

One of the most important recent milestones has been the recognition in July 2010 by the United Nations General Assembly of the human right to water and sanitation. The Assembly recognized the right of every human being to have access to enough water for personal and domestic uses, meaning between 50 and 100 litres of water per person per day. The water must be safe, acceptable and affordable. The water costs should not exceed 3 per cent of household income. Moreover, the water source has to be within 1,000 metres of the home and collection time should not exceed 30 minutes.⁶

The United Nations has long been addressing the global crisis caused by insufficient water supply to satisfy basic human needs and growing demands on the world's water resources to meet human, commercial and agricultural needs. The United Nations Water Conference (1977), the International Drinking Water Supply and Sanitation Decade (1981-1990), the International Conference on Water and the Environment (1992) and the Earth Summit (1992) — all focused on this vital resource. The ‘Water for Life’ International Decade for Action 2005-2015 helped around 1.3 billion people in developing countries gain access to safe drinking water and drove progress on sanitation as part of the effort to meet the Millennium Development Goals. The UN 2023 Water Conference adopted the Water Action Agenda, which represents voluntary commitments by nations and stakeholders to achieve the Sustainable Development Goals (SDGs) and their water-related targets. Recent milestone agreements include the 2030 Agenda for Sustainable Development, the 2015-2030 Sendai Framework for Disaster Risk Reduction, the 2015 Addis Ababa Action Agenda on Financing for Development, and the 2015 Paris Agreement within the UN Convention Framework on Climate Change.⁷

Convention on the Protection and Use of Transboundary Watercourses and International Lakes done at Helsinki, on 17 March 1992 object Water-quality objectives and criteria shall: (a) Take into account the aim of maintaining and, where necessary, improving the existing water quality; (b) Aim at the reduction of average pollution loads (in particular hazardous substances) to a certain degree within a certain period of time; (c) Take into account

³ Aquifer Mapping Report, Sagar District Madhya Pradesh, Central Ground Water Board, at p. 14-17.

⁴ Ibid. 28,36-39.

⁵ <https://ataljal.mowr.gov.in/WriteReadData/GeneralNotices/6ebd9724-a9b2-4bb1-a8d5-4843116c4e37> aadbde Master List ABY 26072024.pdf

⁶ United Nations: peace, dignity and equality on healthy planet; Global Issue: Water <https://www.un.org/en/global-issues/water>

⁷ Ibid.

specific water-quality requirements (raw water for drinking-water purposes, irrigation, etc.); (d) Take into account specific requirements regarding sensitive and specially protected waters and their environment, e.g. lakes and groundwater resources; (e) Be based on the application of ecological classification methods and chemical indices for the medium and long-term review of water-quality maintenance and improvement; (f) Take into account the degree to which objectives are reached and the additional protective measures, based on emission limits, which may be required in individual cases.⁸

Legal Framework in India

Subhash Kumar v State of Bihar (1991)⁹ In this case, the Supreme Court of held that “the right to live ‘includes the right of enjoyment of pollution free water and air for full enjoyment of life. If anything endangers or impairs that quality of life in derogation of laws, a citizen has right to have recourse to Article 32 of the Constitution for removing the pollution of water or air which may be detrimental to the quality of life.” Vellore Citizens’ Welfare Forum v. Union of India (1996)¹⁰ In this case, a writ petition was filed against the large-scale pollution caused by tanneries and other industries in the state of Tamil Nadu. The petitioners alleged that untreated effluent was being discharged into agricultural fields, waterways and open land, which ultimately reached the Palar river which was the main source of water supply to the residents of the area. The effluents had spoiled the physiochemical properties of the soil and had contaminated the groundwater by percolation. After carefully examining the facts of the case, the Supreme Court, while recognizing the common law right of the people to a clean and healthy environment, awarded compensation to the victims of pollution on the basis of the ‘precautionary principle’ and the ‘polluter pays principle’. Importantly, the Supreme Court held that “The constitutional and statutory provisions protect a person’s right to fresh air, clean water and pollution-free environment, but the source of the right is the inalienable common law right of clean environment.”¹¹

National water policy, 2012 National water policy, 2012 address the problem of water scarcity. It also talks about water pricing and optimal use of water resources. It says “large parts of India have already become water stressed. Rapid growth in demand for water due to population growth, urbanization and changing lifestyle pose serious challenges to water security.” Water (Prevention and Control of Pollution) Act, 1974 The Water Act provides for the constitution of the central and state pollution control boards empowered to carry out a variety of functions which include establishing quality standards, research, planning and investigations to promote cleanliness of streams and wells and to prevent and control pollution of water. No person without obtaining the consent of the state board can establish any industry, etc. which is likely to discharge sewage or trade effluents. This act empowers state boards to issue directions to any person, officer or authority, including orders to close, prohibit or regulate any industry, operation or process and to stop or regulate the supply of water, electricity or any other service. Parliament initiated a positive economic incentive for controlling water pollution by levying tax on water consumed by certain industries and local authorities. The Environment (Protection) Act, 1986 The Environment (Protection) Act extends to water quality and the control of water pollution. Section 2(a) of the Act defines the environment to include water and the interrelationship which exists among and between water and human beings, other living creatures, plants, microorganisms and property. The Act authorizes the Central Government to establish standards for the quality of the environment and for emissions of discharge of environmental pollutants from any source.¹²

The MP government seeks to consider water a “fundamental right” on the lines of right of life enshrined in the Constitution. “The Right to Water Act will be based on equal and fundamental right of every citizen over natural resources like the Right to Food and Freedom,” said a senior government official of the public health engineering (PHE) department who didn’t want to be named¹³

⁸ Convention on the Protection and Use of Transboundary Watercourses and International Lakes as amended, along with decision VI/3 clarifying the accession procedure at page 17, available on [https://unece.org/sites/default/files/2025-05/Water%20Convention 1992.pdf](https://unece.org/sites/default/files/2025-05/Water%20Convention%201992.pdf)

⁹ AIR 1991 SC 420

¹⁰ AIR 1996 SC 2715

¹¹ RIGHT TO WATER C 2021, National Human Rights Commission, India Manav Adhikar Bhawan, C-Block GPO Complex, INA, New Delhi - 110 023 at p. 10-12

¹² Ibid p. 16.

¹³ MP drafts right to water law, promises 55 litre/day to each **Hindustan Times, Bhopal |**

SUGGESTION AND CONCLUSION

Conservation of water with effective management is an important tissue of modern sustainable development approach. Government, both central and states, through effective policies and law should step for the misuse of water and for preventing ground water from pollution. Watershed technology and rainwater technology need to be encouraged. In 2015-16 government launch Jal Kranti Abhiyan with aim to encourage water security through per capita available in the country to create 672 district as JAL GRAM and Creating mass awareness and providing livelihood and food security through water security.

Around 70% of the world's groundwater is used in the production of food, livestock and industrial crops, and roughly a third of the water used in crop irrigation is groundwater. Groundwater is the water that is found in the cracks and spaces in soil, sand and rock. Lakes should be made deeper to store water and to be made available in summer. Nallas and wet water drains should be made diverted from lakes. For achieving this, various strategies have been identified as under:

- Research in area of increasing water use efficiency and maintaining its quality in agriculture, industry and domestic sector
- Incentivize recycling of water including wastewater
- Development of eco-friendly sanitation system
- Improve efficiency of urban water supply system
- Continuing monitoring of water consumption is required particularly in the district Sagar district of Madhya Pradesh. Satellite technologies offer cost-effective opportunities for estimating groundwater consumption and abstraction levels is a much needed for water conservation. Pollution should be stop for groundwater. Many rural families depends on groundwater, the better technologies and awareness among the families depends on agriculture about the better and less use of groundwater is a much need step which government and society should initiate for the protection of water for next generation.