

## WATER CONSERVATION COMMUNICATION IN INDIA AN EXPLORATION

*Yamuna B. Raj, M. S. Sapna, N. Mamatha & B.P. Mahesh Chandra Guru*

*Research Scholar, DOS in Journalism and Mass Communication, University of Mysore, Manasagangotri, Mysuru, Karnataka, India*

*Associate Professor, DOS in Journalism and Mass Communication, University of Mysore, Manasagangotri, Mysuru, Karnataka, India*

*Assistant Professor, DOS in Journalism and Mass Communication, University of Mysore, Manasagangotri, Mysuru, Karnataka, India*

*Retired Professor and Dean, DOS in Journalism and Mass Communication, University of Mysore, Manasagangotri, Mysuru, Karnataka, India*

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### **ABSTRACT**

*Sustainable development has gained significance in the new millennium. Environment friendly development approaches are essential to save the world from various disasters and disadvantages. Water conservation has become an important aspect of Sustainable Development Goals. Water resources have to be protected in order to save the humankind and environment from pollution, degradation and destruction in the name of development. The need for water conservation is seldom questioned by the people. Environmentalists have strongly advocated the need for water conservation, which assumes several dimensions. The issues and concerns of water conservation are also examined by the researchers in order to sensitize various stakeholders of sustainable development and prepare grounds for effective water conservation in the world. India also faces several constraints and challenges in water conservation, which demands active participation of all stakeholders in the endeavours for water conservation. The need for water conservation communication in India is examined in this article on the basis of qualitative research methodology.*

**KEYWORDS:** *Water Conservation, Exploration, Sustainable Development*

### **INTRODUCTION**

#### **Preamble**

Sustainable development has gained significance in the new millennium. Environment friendly development approaches are essential to save the world from various disasters and disadvantages. Water conservation has become an important aspect of Sustainable Development Goals. Water resources have to be protected in order to save the humankind and environment from pollution, degradation and destruction in the name of development. The need for water conservation is seldom questioned by the people. Environmentalists have strongly advocated the need for water conservation, which assumes several dimensions. The issues and concerns of water conservation are also examined by the researchers in order to sensitize various stakeholders of sustainable development and prepare grounds for effective water conservation in the world. India also faces several constraints and challenges in water conservation, which demands active participation of all stakeholders in the endeavours for water conservation. The need for water conservation communication in India is examined in this article on the basis of qualitative research methodology.

## Water Crisis in the World

The phrase water conservation gained significance in 20<sup>th</sup> century since the policy makers, bureaucrats, industrialists, people and other stakeholders of water conservation grossly neglected the issue of sustainable development. Water is the most precious resource, which needs to be conserved by the people on the basis of conscious and collective efforts.

- Research Scholar, DOS in Journalism and Mass Communication, University of Mysore, Manasagangotri, Mysuru-570006, Karnataka, India, Mob: 99646 55898, Email: yamuna.brajyamu@yahoo.com
- Associate Professor, DOS in Journalism and Mass Communication, University of Mysore, Manasagangotri, Mysuru-570006, Karnataka, India, Mob: 98454 85234, Email: splashsapna@gmail.com
- Assistant Professor, DOS in Journalism and Mass Communication, University of Mysore, Manasagangotri, Mysuru-570006, Karnataka, India, Mob: 97417 55335, Email: mamathauom@gmail.com
- Retired Professor and Dean, DOS in Journalism and Mass Communication, University of Mysore, Manasagangotri, Mysuru-570006, Karnataka, India, Mob: 94484 62590, Email: bpmcguru@yahoo.com

Industrialization, urbanization, modernization and other processes have brought about the depletion of water resources across the globe. The water resources are crucial for the survival and development of the world. The United Nations General Assembly declared March 22<sup>nd</sup> as the World Water Day in 1993 in order to create global awareness among the people about the magnitude of water crisis and prepare grounds for adoption of water conservation measures.

The people have suffered immensely due to the scarcity of water for agriculture, industry, power generation, existence of humankind, management of urban and rural areas and other vital purposes. There is ever increasing drought, water shortage, reduction of food supplies, health hazards and other threats to the humankind and environment due to depletion of water resources in the name of development of human civilization. There is also likelihood of the third world war due to water crisis in the near future. Water infrastructural facilities are not properly planned and developed mainly due to lack of environmental concern among the policy makers, administrators and other stakeholders of water conservation.

The growth of human population also threatens the water resources, which are absolutely essential for the survival and progress of humankind, flora and fauna in the world. Water resources are taken for granted by the people and rulers due to lack of conscious efforts to conserve water resources consistently. The number of people facing different degrees of water shortage is steadily increasing in the world. It is estimated that about 97% of water is saline and less than 3% of water is hard to access. Less than 1% of water is both fresh and easily accessible. Humanity is facing severe water crisis due to climate change also.

The magnitude of water crisis is reminded by World Water Vision Report (2000:21) thus: “There is a water crisis today. However, the crisis is not about having too little water to satisfy our needs. It is a crisis of managing water so badly that billions of people and environment – suffer badly.” Water crisis has become a serious threat to sustainable development since billions of people in the world do not have access to potable drinking water. India is also facing the worst kind of water crisis due to the unplanned growth of human civilization including the cities, townships and industries.

The policy makers have not ensured adequate corrective, preventive and protective measures to save the humankind and environment from the disastrous consequences of water crisis.

There is increase in tension among different users at the national and international levels, due to ever-increasing water crisis. Major water projects need proper implementation on the basis of regional collaboration. About 260 river basins are shared by two or more countries. Effective institutional arrangements and agreements are required to prevent trans boundary tensions across the globe. Water stress results from an imbalance between water use and water resources according to the experts. The World Health Organization states that humankind is not blessed with potable drinking water.

## **SUSTAINABLE DEVELOPMENT GOALS AND WATER CONSERVATION**

Sustainable development has become a great challenge before the humankind in the present times. Sustainable development has also become a new way of life. It has several dimensions and approaches. The United Nations Organization identified the Sustainable Development Goals in 2015 and called upon the global community to achieve these goals. They include: no poverty, zero hunger, good health and well-being, quality education, gender equality, clean water and sanitation, affordable and clean energy, decent work and economic growth, industry, innovation, and infrastructure, reducing inequality, sustainable cities and communities, responsible consumption and production, climate action, life below water, life on land, peace, justice, and strong institutions and partnerships for the goals. The UNO has called upon the various nations to take appropriate action to integrate the goals and targets into their national development plans and to align policies and institutions behind them.

Clean water and sanitation is one of the thrust areas of Sustainable Development Goals. Water conservation is essential to human health, food and energy security, poverty eradication and many other aspects of human life. Water-related ecosystems have always provided natural sites for human settlements, along with a wealth of ecosystem services. The scientists have estimated that 50 to 70 per cent of the world's natural wetland area is lost over the last 100 years due to environmental pollution. Billions of people in rural and remote areas still lack the basic services and amenities. Most countries have recognized the importance of better coordinating the use of water resources and have put in place integrated plans for their management. However, planned and deliberate efforts are required to improve access to water and sanitation services, increase wastewater treatment, enhance water use efficiency, expand operational cooperation across trans boundary water basins, and protect and restore freshwater ecosystems.

### **Water Governance in India**

Water governance is a widely acknowledged as an important factor for sustainable development. Water governance refers to the political, social, economic and administrative systems in place that influence water's use and management. The livelihood of people and the sustainability of water resources are basically dependent on sound water governance. It determines the equity and efficiency in water resource and services allocation and distribution, which benefit the people and environment. Water governance is intended to strike a balance between water use for social and economic activities and eco-systems. Water policy formulation and implementation of water conservation programmes are the key aspects of water governance.

The people have the right to water resources in order to live well in a civilized society. Water sector needs adequate investment by the government in order to save the humankind from water crisis and facilitate their social and

economic development. Water conservation efforts are required to improve people's livelihood opportunities. Inadequate rainwater harvesting programmes, excessive ground water pumping, inefficient water management and wasteful water management system have caused severe water scarcity in India. About 100 million people in the country are racing to reach zero ground water levels (Niti Aayog, 2018:11).

The stakeholders of governance are responsible for ensuring equitable distribution of water resources and services among various sections of society. Effective poverty reduction and economic growth primarily depend on conservation of water and other natural resources. People are entitled to take active part in the decision-making process concerning equitable distribution of water resources. Sustainable use of water resources is related to ecosystem activities (Ahmed and Araral (2019:01).

Government organizations, community based organization, non-government organizations, corporate houses and other institutions are required to facilitate meaningful collaboration for conservation of water resources. The champions of public interest have found a clear disconnect between water, society and economy. The Government of India realized the gravity of water crisis and established a separate ministry for water resources in order to tackle water issues with a holistic and integrated perspective. The ministry has set a target of providing piped water connection to every household in India by 2024.

#### **Water Conservation Measures in India**

India's \$2.6 trillion economy is primarily agrarian by nature. The agricultural sector accounts for just over 17 percent of the GDP and employs over 60 percent of the population, apart from contributing about 12 percent of exports. There is virtual water loss through the export of water-intensive crops which could have been used to grow much larger quantities of other crops like wheat or millet that require far less water. The demand for water among various sectors is increasing due to population growth and economic development. Water crisis has occurred due to over exploitation of water resources in absence of sound water governance and systematic water conservation measures in India. The government has not adequately implemented land development, water conservation and sustainable development in the post-independence era.

In India, around 83% of available fresh water is used for agriculture. Rainfall is the primary source of fresh water. The importance of storing rainwater through different techniques is not realized by the government and civil society. India sustains nearly 17 percent of the world's population but is endowed with just four percent of global water resources. The National Water Policy of Government of India was formulated in 1987 to facilitate expansion of irrigation facilities, power generation facilities, drinking water facilities and equitable distribution of water resources. The National Water Policy was also formulated to address the emerging water related issues and provide fruitful policy inputs.

National Water Policy (2012:10) had envisaged proper planning of management of water resources. It had laid emphasis on rainwater harvesting, conservation of water, augmenting the availability of water through direct use of rainfall, conservation of river, river bodies and infrastructure and community participation centred development of water bodies in the country. The policy further laid emphasis on the management of water resources as a common pool community resource, which is held by the state under the public trust doctrine.

Water conservation measures would improve the water and food security situations in the country (Ramappa et. al, 2014:15). The government also initiated measures for groundwater recharge, flood protection, land development, command

area development and watershed management programmes. Over 70% of surface water and ground water resources are contaminated in the country. This has led to a water scarce situation in many parts of the country.

The Government of India had increased the budgetary allocation in the 12<sup>th</sup> Five Year Plan. Rapid urbanization and water pollution has widened the supply and demand gap, putting enormous pressure on the quality of surface and groundwater bodies. Clean water is destined to become one of the rarest commodities soon, if the general public is not educated about the significance of storing, recycling and reusing water (Shah, 2017:16).

The water requirement for agriculture is considerably high in India. Out of our total groundwater availability, we use 6% for domestic use and another 5% for industrial purpose. The remaining 89% goes for agriculture.” He also said, “Our studies say that to grow one kilogramme of paddy, we consume 5,600 litres of water whereas China produces the same amount of paddy with just 330-340 litres of water (Shekhawat, 2019:18). The Government of India has taken a step to conserve water through the production of alternative crops for optimal water usage.

Water is the lifeline in India more than anywhere else. Water crisis would impair both agricultural sector and livelihood opportunities of the rural masses. India ranks 120<sup>th</sup> of 122 countries in a global water quality index (Bana, 2019:04). Several parts of the country have experienced an acute water crisis due to improper water governance and inadequate water conservation measures in India. The Prime Minister of India has called upon the people to conserve water amid country's water crisis during his 'Mann ki Baat' programme (Bakshi, 2019:03). Water crisis has become a major issue of concern in India. Water conservation experts have advocated the need for shifting the focus from land productivity to irrigation water productivity so that farmers can work on conserving water. They have also explored the need to cut down on water usage on crops especially paddy and sugar cane.

The Government of India launched nationwide water conservation scheme to conserve water for future generations. The activities would be carried out under the Mahatma Gandhi National Rural Employment Guarantee Scheme. A Nodal Officer was appointed to monitor the progress and suggest corrective measures for water conservation in India (Choudhary, 2019:05). The ministry of water resources has pitched for less water for crops as a high priority issue. Construction of field channels, levelling of fields, construction of bunds, recycling of wastewater, rainwater harvesting and adoption of micro-irrigation are required to ensure optimum utilization of water resources in the country. Experts have cautioned that India would be in the global hot spot for 'water insecurity' by 2050.

### **Media Intervention for Water Conservation**

The Land and Water Conservation Fund is widely acknowledged as the constructive water conservation program in the United States. The western green movement has also focused on afforestation, water conservation and sustainable development in modern times. Water conservation investments in various cities, villages, forests and national parks have also gained new significance. In India, several watershed development programmes are implemented to augment water resources and improve the economy. These measures need active publicity, propaganda and advertising campaigns in order to facilitate active people's participation in water conservation programmes.

Inter-personal communication channels, mass media, ICTs, social media, extension communication channels and multi-media are used to educate the masses about water conservation measures. Apart from these channels, media kits, web sites, videos, cable and Public Service Announcements are also extensively used to implement the water conservation

programmes at the grassroots level. Celebrities, environmentalists, role models and other credible sources of communication are utilized for the purpose of water conservation centric communication activities at various levels.

Soil and water conservation projects in Africa are not effectively implemented. Farmers were aware of land degradation processes and corrective measures. The farmers had invested heavily in social networks, which gave them flexible access to resources necessary for agriculture and soil and water conservation. The farmers had also amended social networks and technologies to adapt to the changing context in which agriculture was practiced. Social media and water conservation are intimately connected sectors of participatory development in the 21<sup>st</sup> century (Mazzucato et. al, 2001:08).

The Ministry of Water Resources Management and Development in Kenya implemented the communication programmes to create awareness among the masses about water conservation strategies and approaches. The campaign managers had established public participation mechanisms in order to engage opinion leaders as reform partners and advocates for water conservation. Multi-media and multi-channel communication program were also carried out to increase knowledge and build support for the water sector reforms (Water Sector Reform Secretariat, 2004:20). Capacity building and media advocacy were the key aspects of media intervention for water conservation across the globe. The proactive management of consumer expectations is critical for the successful implementation of communication strategies for water conservation.

The Water Act 2002 provided the framework for implementation of reforms aimed at enhancing water resources management, provision of water supply and sanitation services on a sustainable basis in Kenya. The programme provided the broad framework for undertaking communication campaigns for water conservation. The campaign was primarily intended to facilitate community mobilization for water conservation (Ministry of Water Resources Management and Development, 2004:09). Water conservation communication strategies are essential to generate new ideas, sensitize the stakeholders of water conservation and achieve active community participation in the water conservation programmes of the government.

Social media are widely used for the purpose of facilitating sustainable development including water conservation. The campaign managers have cast the contents on water conservation through a number of social media fishing lines, including Twitter, Facebook, and YouTube (Park, 2009:12). The water conservation public awareness program is required to increase public awareness of water conservation to save existing water resources and ensure the availability of water for future generations.

Media campaigns are carried out in the world about the imperativeness of water conservation in the new millennium. These programmes provide services to help cities, utilities, and districts establish effective water-efficient conservation programs. These media initiatives also provide a broad level of outreach and offer an easy-to-identify brand, a variety of materials, and a network of groups and communities dedicated to educating the masses about water conservation (Texas Water Development Board, 2010:19).

The government agencies spend money to educate the people about water conservation measures through series of publicity and advertising campaigns. Mainstream media have the capacity to create nationwide awareness about the water conservation measures undertaken by the government. Certain non-government organizations have also evolved locally relevant media strategies to facilitate active participation of people in the water conservation programmes.

The Internet and social media have the capacity to create awareness among the masses about water conservation ideas and actions. The social media have the power to facilitate meaningful interaction between the service providers and members of civil society (Gaines, 2011:06). Public awareness about water and drought related issues are an important yet relatively unexplored component of water use behaviour.

Public water conservation campaigns are required to create awareness among the people about the water crisis in the country and role of people in water conservation movement. The water conservation measures benefit the society and economy in several ways. Multidisciplinary and multipronged efforts are essential to change the attitudes and behavioural patterns of people about the need for water conservation in India.

The non-residential commercial irrigation customers responded to changes in climate while family residential customers decreased water use at the fastest rate following heavy drought related news media coverage. The policy makers and implementers should realize the importance of effective internally and externally driven public awareness and education campaigns for the conservation of water resources (Quesnel and Ajami, 2017:14). Establishment of partnerships with educational institutions, civil society organizations, media institutions, non-government organizations and local-self-government organizations are essential for effective dissemination of water conservation strategies and enlisting active participation of various stakeholders in the water conservation measures.

Social media and traditional media platforms are used to engage the citizens in water conservation programmes in modern times. Systematic media campaigns are required to raise awareness of water scarcity and enlist the participation of civil society groups in the water conservation activities (Pearce, 2019:13). Social media has been attributed as beneficial by aiding fast and reliable communication, which cuts across time and geographical boundaries when compared to the mainstream media.

Such attributes can be harnessed by municipalities to educate about water conservation, especially considering the drought and water crisis experienced by the people. The local municipalities had not used the social media platforms for participatory water conservation education effectively (Hove and Osunkunle, 2019:07). The media and non-profit organizations have a social responsibility of undertaking water conservation campaigns and mobilizing public actions to prevent persistent water shortage. Experience reveals that imagery can be a powerful tool for driving conservation, especially when it shows real people taking action in their homes and workplaces. Success stories and case studies also prompt the stakeholders of water conservation to undertake suitable measures at the grassroots level.

The Art of Living Foundation led by Sri Sri Ravi Shankar had launched the country's biggest television campaign namely 'AakhriBoond' (last drop) to create water consciousness among the people who faced severe water shortage in India (Sharma, 2019:17). The campaign emphasized that government and civil society had to play a vital role in water conservation, which is a neglected mission.

Social benefit campaigns are implemented with a view to promote sustainability of water resources in Sharjah. Water conservation campaigns are carried out by using various communications media. Each campaign used a different delivery method, which were a social media post, an app, and an event. Social media campaigns were user-friendly and effective means of education on water conservation (Algarni et. al, 2020:02). Multimedia campaigns are necessary especially at the grassroots level to enlist the active participation of people in the implementation of water conservation programmes across the globe.



## CONCLUSIONS

Water crisis has global implications and impedes the development of people regardless of demographic features. Water crisis has also affected all walks of life. India has also experienced severe water crisis due to several factors. The Government of India has formulated certain policies in order to facilitate water conservation measures in the country. The water conservation experts have advocated the need for water conservation in order to promote infrastructural facilities, agriculture, industry, and power and livelihood fields. Experts and activists have also sensitized the government about the possibility of severe water insecurity in the new millennium. Communications media are widely used for achieving the goal of sustainable development all over the world. Adequate scientific investigations are absolutely essential to sensitize the stakeholders of water conservation and media professionals about their responsibility.

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