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# ROLE OF NGOS IN WATER CONSERVATION: A CASE STUDY OF VASUNDHARA SANJIVANI MANDAL, THANE

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**Abstract:**

*The earth, the air, the land, and the water are not an inheritance from our forefathers but on loan from our children. So, we have to hand it over to them at least as it was handed over to us. – Mahatma Gandhi.*

*Organizations that are non-governmental and volunteer, consisting of citizens who share a common goal and are committed to working towards it, are known as nongovernmental organizations (NGOs). In the nonprofit sector, nongovernmental organizations (NGOs) are usually mission-driven advocacy or service groups. The total quantity of water that is obtainable for humans and other living things to consume is rapidly declining. Water conservation is the need of the hour as unrestricted groundwater discharge leads to depletion of groundwater at an alarming rate; rising pollution of water bodies due to industrial and human waste; and the impact of climate change has become glaringly visible with increasing flash floods and recurring droughts. The objective is to understand the role of NGOs and localized efforts for water conservation through watershed development. The hybrid methods – case study and qualitative – were adopted. Vasundhara Sanjivani Mandal (2016) is established with the mission of rural development through water conservation. It is operative in Shahapur and Murbad talukas in Maharashtra. It has achieved water conservation with check dams, rainwater harvesting, and farm ponds. With an aim of holistic development, it is engaged in women's empowerment and allied occupations. It has contributed commendably to the development of the watershed in this brief period.*

**Keywords** – *Civil Society, Participatory Governance, Water Scarcity, Watershed Development, Water Conservation, Holistic Rural Development.*



## Introduction:

The most vital component of human life is water. It is a significant natural resource is water. Water is essential for household use, industrial production, and production in agriculture. Without water, human survival is untenable. History has made it evident that human evolution has occurred by the banks of the water, and all civilizations have evolved along riverbanks. All living things, including humans, animals, birds, and plants, need water to survive. Water is required for human use in home settings, agriculture, and industry. The most water consumption occurs in humans more than any other living being.

Water is the utmost necessity of human life. Water is a prime natural resource. Water is essential for domestic purposes, industrial manufacturing, also for agricultural production. Human survival is not possible without water. It manifests from history that all civilizations are on the river banks and human evolution is along the side of the water. Water is an essential commodity for all living beings, like plants, birds, animals, and humans. Humans require water for

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domestic purposes, agriculture, and industry. Among all living beings, the water consumption by humans is the maximum.

Water is a scarce finite natural resource. Even though Earth has more water resources than land, the water available for human consumption is less than 0.4% (Zac, 2023). This precious resource is depleting due to climate change; erratic floods and droughts; rising industrialization; unrestrained urbanization; multiplying global population; unrestricted and excessive extraction of groundwater; and illicit deforestation. Worldwide, 2.3 billion people live in water-stressed countries, (UN-Water, 2021). This implies that approximately, one- fourth of the population is facing severe water scarcity. Woefully, it has resulted in conflicts and violence among people in different parts of the world.

The governments of various nations work with international organizations like UNESCO, UNEP, and UN-Water to mitigate water scarcity. International organizations direct the states in formulating policies by providing data and guidance on priority areas that require attention.

In addition to establishing and implementing these guidelines, the nations also take certain actions in response to local conditions. Given how things are becoming worse over time, it has been noted that the state-centric strategy does not produce the desired results.

Participatory governance entails involving stakeholders and civil society organizations in the development and enforcement of policies for water conservation and management. NGOs in the field of environment protection and water conservation are playing a decisive role in the following ways – sensitization about the different environmental concerns; emphasizing measures for its conservation; rainwater harvesting and groundwater recharge; rejuvenation of water bodies; policy advocacy; watershed management; and reviving traditional water conservation methods.

Broadly Civil society is a group of active citizens collaborating for betterment and development of the society at large. In modern times, it is the link between the state and the people.

Civil society plays a crucial role in water conservation and effective water management in the following ways:

- Creating awareness and educating the masses about water conservation involving local stakeholders.
- Capacity building and providing training for rainwater harvesting, and watershed development.
- Advocacy is upholding the research by the think tanks and water experts and aiding the government in policy formulation.
- Civil society collaborates with water experts, engineers, academicians, and progressive farmers to formulate and implement water conservation strategies.
- Restoration of traditional water sources and rejuvenation of water sources like rivers, lakes, and ponds.

Civil Society initiatives through Non-Governmental Organizations (NGOs) have been instrumental in water conservation worldwide and in India. At the international level, voluntary organizations are functioning for environmental awareness. A few examples are described below.

**International Water Management Institute (IWMI),** is a research institute focusing on sustainable agriculture, with the objective of a water-secure world.

**Global Water Partnerships (GWP)** aims to govern and manage water for a sustainable future, with a network of multiple agencies.

**Water for People** strives to provide communities across the world with environmentally friendly options for water and sanitation. They concentrate on developing local infrastructure and capability to

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guarantee long-term access to sanitary facilities and clean water.

**The Pacific Institute** analyses and advocates for a range of water-related topics, such as water policy, consequences of climate change, and scarcity of water. They aim to disseminate sustainable water management techniques across the world.

In India, the notable and remarkable personalities in water conservation are Shri. Rajendra Singh from Rajasthan, Shri. Vilasrao Salunkhe of Paani Panchayat, Shri Anna Hazare from Ralegan Siddhi, Shri. Popatrao Pawar from Hiwre Bazaar. Their personal dedication and community engagements in water conservation have resulted in marvels. Along with these eminent leaders, some remarkable NGOs working relentlessly for water conservation.

**Watershed Organization Trust (WOTR):** It works for watershed development, integrated water resource management, and advocacy in water management.

**South Asian Network for Dams, Rivers, and People (SANDRP):** This is a network functional about awareness of rivers and dams.

**India Water Portal:** This is a website for sharing data and knowledge about water. It is an online portal that offers data, tools, and resources about water management and conservation in India. It acts as an information centre for people, groups, and decision-makers involved in the water industry.

**Society for Promoting Participative Eco-System Management (SOPPECOM):** This Pune-based organization works for community-driven natural resource management in rural areas. It carries out training, participatory planning, and awareness programs.

**Advanced Centre for Water Resource Development and Management (ACWADAM):** This Centre carries out action-research projects in collaboration with the government and other NGOs.

**Paani Foundation:** This is a well-known organization led by Mr. Amir Khan, it has a motto of 'drought-free Maharashtra' and emphasizes capacity building. A novel method is adopted to generate awareness and to ensure the active involvement of villagers in water conservation, that is arranging the Satyamev Jayate Water Cup, Samruddha Goan Spardha, and Satyamev Jayate Farmers' Cup competitions among the villages and farmers. The organization prioritizes knowledge exchange, community involvement, and sustainable practices to mitigate water scarcity and enhance drought resistance in rural Maharashtra.

**Arghyam:** It strives to provide everyone in India with sustainable access to water and sanitation. It backs efforts for community-based water management, rainwater collection, and groundwater management.

**Tarun Bharat Sangh (TBS):** TBS is widely recognized in Rajasthan for its community- driven initiatives to save water. It has been crucial in restoring groundwater levels in the area and has brought back to life many traditional water harvesting structures like johads, (small earthen dams).

**Jal Bhagirathi Foundation:** To solve the problem of water scarcity in Rajasthan's desert regions, NGOs, government organizations, and local people collaborate to implement the Jal Bhagirathi initiative. The initiative intends to improve water availability for drinking, agriculture, and other uses by revitalizing antiquated water collection facilities and encouraging rainwater harvesting.

**NAAM Foundation:** The mission of the Naam Foundation is to "build a sustainable and progressive society" by fostering rural development as well as tackling a range of other challenges, such as food, jobs, infrastructure, and education.

Other than these there are a lot more organizations doing a remarkable task of rural development focusing on water management. These organizations are carrying out their work and are dedicated to their cause in a specific area. But their efforts are noteworthy. One

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such organization is Vasundhara Sanjivani Mandal. This research paper is an attempt to collect data and evaluate the functioning of this organization.

**Methodology** : Mixed and hybrid methods i.e., the qualitative and quantitative methods are adopted to carry out the research.

- The case study method was adopted, to study the Vasundhara Sanjivani Mandal.
- For observation, the researcher rendered a field visit in Shahapur and Murbad on 27th November 2022. This enabled the researcher to understand various completed and ongoing projects of water conservation and collect data on water resource management.
- Personal interviews with Shri. Anand Bhagwat, the Founder of the organization, and other volunteers were taken on 31st January 2024.
- Secondary data was collected through books and articles.

**Case study - Vasundhara Sanjivani Mandal (VSM), Thane.** Vasundhara Sanjivani Mandal (VSM) was established in 2016, by Mr. Anand Bhagwat, who was a Corporate Trainer by profession. He realized that the regions in Thane district – the Murbad and Shahapur talukas- are facing severe water scarcity. Women were fetching water from 2 to 3 kilometers away from their homes, leading to the migration of the population to nearby peri-urban areas of Thane, Kalyan, and Dombivli. Thane district is a satellite region of Mumbai, which is the financial hub of the nation. The areas that are hardly 75 kilometers away are facing water woes.

Thane district has 3 rivers namely Ulhas, Vaitarna, and Tanasa. Tributaries are Surya, Baravi,Bhatasa, and Kalu. (p 2 Zilla Samajik v Arthik Samalochan,2016.) Overall, there are 12rivers in this area with approximately 150 water ponds and lakes. It has an average annual rainfall of approximately 1800- 2000 milliliters. Tanasa Lake is situated in Shahapur Taluka and supplies water to Mumbai City. Thane district has Baravi, Bhatasa, Middle Vaitarana, Dhamani, and Tanasa dams. (p 10 Zilla Samajik v Arthik Samalochan).

But irrespective of these water resources, certain tribal areas in Murbad and Shahapur talukas are facing acute water scarcity.

While highlighting the problems of these areas, Mr. Bhagwat explained that there are 7 Municipal Corporations in Thane District, which is the highest in India. The focus of the administration is on the urban and semi-urban areas. Consequently, the tribal and rural areas of these talukas were neglected by the Government, administration, and also by the NGOs, according to Mr. Bhagwat. While the natural lakes were filled with slits led to reduced water storage and lessening of percolation thus leading to depletion of groundwater levels.

Resultantly, it activated and encouraged Bhagwat to carry out water conservation projects in this area. Thus, the efforts of Vasundhara Sanjivani Mandal were initiated in Shahapur and Murbad Talukas, with the mission of Rural Development with water conservation. The objective was to achieve a holistic development of the area through water conservation. The vision and mission of VSM are a combination of idealism and feasibility.

- **Vision:** A Holistic & Integrated Approach to Rural Development & Transformation focusing on integrating people's participation and education for Water Conservation & Management. (VSM website).
- **Mission:**
  - To identify and develop sustainable solutions for overall rural development.
  - Rural upliftment by creating water availability and accessibility.
  - To introduce effective water management through the latest technology for the productive

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use of water. (VSM website).

VSM has implemented numerous initiatives in the areas of sustainable farming practices, women's empowerment and water conservation and management to fulfil the ideals outlined in the vision and mission.

1. **Water conservation**:

This is the primary objective because once the supply of water is ensured then the other aims can be achieved. The organization accomplishes the basic goal following measures are adopted.

A) **Construction of check dams** - Check dams, also referred to as rubble or gabion dams, are small obstacles constructed across rivers or streams to reduce water flow and decrease soil erosion. These constructions are usually made of concrete blocks, stones, or rocks arranged in a staggered pattern. These obstructions get struck by the water as it flows downstream, and the material they catch causes pools to form behind them. This replenishes groundwater levels in addition to aiding in the restoration of natural habitats. Check dams are essential for managing watersheds and preventing flooding, particularly in desert areas where a shortage of water is a serious issue. Overall, 23 check dams have been built in the villages of Shahapur and Murbad talukas. To name a few are - Dadarwadi, Pradhanpada, Ashta, Pendhari, Waghachi wadi.

B) **Desilting** – This is the process of clearing accumulated silt, debris, and sediment from rivers and ponds. It is a crucial component of water resource management. This procedure is necessary to protect the surrounding ecosystem from harm, preserve the ecological balance, and maintain the quality of the water. Desilting is also essential for sustainable water resource management since it increases the amount of water available for industrial, drinking, and agricultural use.

C) **Rainwater Harvesting-** It is the process of gathering and storing rainwater for use in a variety of ways. It is an environmentally friendly and sustainable technique. Rainwater collection is becoming a practical way to supplement conventional water sources as the world's population grows and water shortage becomes an issue. Until now, at 17 locations which include schools and Primary Health Centres, Rainwater Harvesting plants have been installed. These are the Z. P. Schools at Dhasai, Padwalpada, and Kheware, and the Primary Health Centre at Takipathar.

**D) Farm Ponds-** these are the ponds developed on the farm, where the rainwater is collected during monsoon. It is later used for farming and other purposes.

**Table 1. Data of water storage created by VSM.**

| Projects | Number | Amount of water storage (in Litres) |
|---|---|---|
| Building of check dams and gabion *bandharas* | 23 | 6.57 crore |
| Desilting of rivers and lakes | 47 | 21.57 crores |
| Rainwater harvesting | 21 | 685 lakhs |
| Farm ponds (*shet tali*) | 19 | 9.5 crores |

2. **Tree plantations** - Fruit-bearing trees like Jamun, Pomegranate, Cashew, and Drumsticks have been successfully planted. There are more than 500 Jamun trees, which get water through drip irrigation. The bee culture and honey collection on jamun trees is an allied occupation other than the selling of Jamuns.

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3. **Women empowerment:**
   Kishori Vikas Prakalp is executed for underprivileged Adivasi girls between the age group of 12-18 years, which creates awareness about health, hygiene, and sanitation. Weekly awareness lectures are held for these girls in the schools. Training programs for women are conducted which include stitching and other activities.
4. **Capacity Building :** Training the farmers and youth as a step of holistic integrated development.
5. **Cluster development of villages:** Villages in the vicinity with similar geographical conditions and resources are taken together and water conservation methods are carried out.

**Strengths:** The organizational structure is a good synthesis of experts in various fields such as electrical engineers, environmental experts, charted accountants, structural engineers, and agricultural experts as the advisory members.

At the field level, the local leadership is nurtured by the organization, and youths and school teachers are involved in projects of water conservation. Local and stakeholder participation has facilitated the organization to achieve spectacular results.

Support from administration and district and taluka level officers from various departments like agriculture, forest, and revenue.

Financial support from Trafigura, Mahindra Finance, and Amogh Chemicals under the Corporate Social Responsibility. (VSM website).

**Achievements :** In the last 7 years, different types of 110 water projects have been completed, which brings in 150 acres of irrigated land for the whole year. Now, the farmers can take crops and vegetables throughout the year.

Reverse migration of population as they can take allied agricultural businesses.

Appreciation from the Maharashtra Chief Minister Shri. Eknath Shinde on the floor of the house on 19th December 2023. Rejuvenation of Kanakveera River.

**Conclusion:** Participatory governance is a collaboration between the Government, administration, and enlightened citizens that can achieve excellent results. The impact of NGOs that are involved in capacity building leads to long-term benefits to the community. The participation of experts brings about spectacular change in the area where the activities are undertaken. The successful implementation of governmental policies, also the efforts of community development by the NGOs can be effective only when the local stakeholders are involved with their active participation.

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