



Role of Women in the Conservation of Natural Water Resources: A Sociological Study of New Tehri Town in Tehri District, Uttarakhand

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Abstract

New Tehri, a significant hill town in Uttarakhand, is located at an altitude of approximately 5,500 feet above sea level. Owing to its mountainous geography and limited infrastructure, local residents largely depend on natural water sources such as Chamund, Dizer, and springs along the Budhogi motor road for drinking water. This study examines the role of women in the conservation and management of these natural water resources from a sociological perspective. Women, as primary users and managers of water at the household level, actively participate in the protection, maintenance, and sustainable use of these sources. The study highlights their traditional ecological knowledge, community participation, and environmental consciousness. It also addresses the challenges faced by women, including physical labour, time burden, and declining water availability due to environmental degradation. The research emphasizes the need to recognize women's contributions in policy-making and sustainable development frameworks.

Keywords: Women, Water Conservation, New Tehri, Uttarakhand, Natural Resources, Gender Roles, Sustainability

Water is a basic need for every human being. It is required for drinking, cooking, cleaning, and maintaining health. Without water, life cannot exist. However, in many hilly areas, getting water is not easy. The geographical conditions such as steep slopes, uneven land, and scattered houses make it difficult to supply water through pipelines. Because of this, people often depend on natural water sources like springs and small streams for their daily use.

Uttarakhand is a mountainous state where natural resources have always been very important for people's lives. In many villages and towns, natural water sources are still the main source of drinking water. These sources are not only useful but also need proper care and protection to ensure that they do not dry up or become polluted.

New Tehri, located in the Tehri district of Uttarakhand, is a well-known hill town. It is situated at a height of about 5,500 feet above sea level. Although it is a planned town, the supply of water is not always regular in every area. As a result, many people depend on natural water sources such as Chamund, Dizer, and the springs located along the Budhogi motor road. These water sources play an important role in meeting the daily needs of the local population.

In this situation, women have a very important role. In most families, it is the women who are responsible for bringing water to the house. They walk long distances, sometimes several times a day,

to collect water. This work takes a lot of time and physical effort. Because of their daily involvement, women understand the importance of water and the need to use it carefully.

Women also help in protecting water sources. They try to keep the area around the sources clean and safe. They avoid activities that may pollute the water and also teach others to do the same. Over time, women develop practical knowledge about water, such as which source has clean water, how water changes in different seasons, and how to manage water during shortages.

The relationship between women and nature has always been strong in Uttarakhand. Women have played an active role in protecting forests, land, and water. Their efforts show that they are not only users of natural resources but also protectors of the environment. However, their contribution is often not given enough importance in planning and decision-making.

At the same time, women face many problems. Carrying heavy water containers can affect their health. Spending long hours in collecting water reduces the time available for other activities. In some cases, water sources are drying up or becoming less reliable due to environmental changes, which increases their burden.

Keeping all these points in mind, this study focuses on understanding the role of women in conserving natural water resources in New Tehri. It tries to highlight their contribution, the difficulties they face, and the importance of including them in efforts related to water management and environmental protection. This study is based on the idea of ecofeminism, which explains the close connection between women and nature. It suggests that women, because of their everyday roles and responsibilities, develop a deeper understanding of natural resources and often take an active part in protecting them. Their daily interaction with water sources helps them gain practical knowledge about conservation.

The study also uses the concept of gendered division of labour, which shows how society assigns different roles to men and women. In most households, tasks related to water collection and management are mainly performed by women. This makes them directly involved in the use as well as the conservation of water resources.

Objective of the study

- To examine the dependence of local communities on natural water sources in New Tehri
- To analyse the role of women in conserving these water resources
- To understand the traditional knowledge and practices used by women

The relationship between women and natural resource management has been widely discussed in sociological and environmental studies. Scholars have emphasized that women, especially in rural and hilly regions, play a crucial role in the conservation and sustainable use of natural resources, particularly water.

Bina Agarwal (1992) highlights the strong link between gender and environmental management, arguing that women's everyday responsibilities bring them closer to natural resources. Her work shows that women possess practical knowledge and are often more concerned about sustainability due to their dependence on these resources for household needs. Similarly, Vandana Shiva (1988) emphasizes

that women in India have historically acted as protectors of nature, especially in regions like Uttarakhand, where movements such as Chipko reflected women's ecological awareness and activism.

Bhattacharya & Sharma (2024) This study examines spring shed management programs in Uttarakhand. It highlights that community participation plays a crucial role in conserving water sources. The authors argue that policies become more effective when local people are actively involved in planning and implementation.

Agarwal (2001) further discusses the importance of women's participation in environmental governance, stating that involving women in decision-making leads to better resource management outcomes. This is particularly relevant in water conservation, where women are the primary users and managers at the household level. Jackson (1993) also supports this view by analyzing gender roles in environmental practices and arguing that women's contribution is often undervalued despite their active involvement.

In the Indian context, studies by Fernandes (1996) examine the role of women in environmental movements in the Himalayan region, highlighting their active participation in protecting forests and water sources. These movements demonstrate how women's everyday experiences translate into collective action for environmental conservation.

Research by Government of India (2012) on rural water supply indicates that women bear the primary responsibility for water collection, especially in areas with limited infrastructure. The report notes that women spend a significant amount of time and energy in fetching water, which affects their health and productivity. Similarly, UN Women (2014) emphasizes that lack of access to water increases the burden on women and reinforces gender inequalities.

Bisht & Pandey (2021) This research focuses on community participation in spring and river rejuvenation projects. Through case studies, it shows that local involvement and traditional knowledge significantly improve the success and sustainability of water conservation initiatives.

Shah (2013), in his study on water management in India, points out that traditional water sources like springs are still vital in hilly regions, and their maintenance largely depends on community participation, especially women. He stresses the need for integrating local knowledge into modern water management practices.

Joshi and Fawcett (2005) focus on water, sanitation, and gender, highlighting that women's involvement is essential for sustainable water systems. They argue that policies often ignore grassroots realities and fail to recognize women's knowledge and contribution.

Overall, the existing literature clearly indicates that women are not only users of water resources but also active agents in their conservation. However, there is still a gap in recognizing their role at the policy level, especially in specific local contexts like New Tehri. This study attempts to address this gap by focusing on the lived experiences of women in managing and conserving natural water sources.

The present study is designed to understand the role of women in the conservation of natural water resources in New Tehri town of Tehri district, Uttarakhand. It follows a descriptive and exploratory research approach, as it seeks to describe the dependence of local communities on natural water sources and to explore women's role, traditional knowledge, and the challenges they face in water collection and conservation. The study area, New Tehri, is situated at an altitude of about 5,500

feet above sea level, where due to irregular and limited water supply, people largely depend on natural sources such as Chamund, Dizer, and the springs located along the Budhogi motor road.

Both primary and secondary data have been used for the study. Primary data has been collected directly from the field through interaction with local women, while secondary data has been gathered from books, research articles, and relevant reports related to water resources and gender studies. The respondents have been selected through purposive sampling, focusing mainly on women who are actively involved in water collection and management in their households. A sample of around 30 women has been considered for the study to ensure a better understanding of the issue.

Data has been collected using methods such as structured and semi-structured interviews, observation, and informal discussions. Interviews helped in understanding women's dependence on natural water sources, their role in conserving these sources, and the difficulties they face in their daily lives. Observation method was used to study their routine practices of water collection and the condition of water sources. Informal discussions provided deeper insights into community practices and traditional knowledge related to water conservation.

The collected data has been analysed qualitatively by organizing responses into different themes such as dependence on water sources, role of women, traditional practices, and challenges faced by them. The findings have been interpreted in a simple and meaningful manner. Ethical considerations have been maintained throughout the study by taking consent from the respondents and ensuring their privacy. However, the study is limited to a specific area and a small sample size, so the findings may not represent all regions. Despite these limitations, the study provides useful insights into the important role played by women in conserving natural water resources in hilly areas like New Tehri.

New Tehri is a planned town that came into existence after the construction of the Tehri Dam. Although it has developed as a modern urban settlement, the supply of water is not equally reliable in all parts of the town. Due to this uneven availability, many households continue to depend on nearby natural springs for their daily drinking water needs. Important sources such as the Chamund water source, Dizer water source, and the springs located along the Budhogi motor road play a vital role in supporting the local population. These natural water sources are especially important in areas where pipeline supply is irregular or insufficient, making them an essential part of everyday life in New Tehri.

Dependence on Water Sources

The analysis of responses reveals that households in the study area are highly dependent on natural water sources such as springs. Local sources like Chamund, Dizer, and Budhogi Motor Marg natural springs are the most commonly used, especially in hilly regions like New Tehri. However, some respondents also reported partial dependence on government-supplied tap water, though its availability remains irregular and unreliable.

Frequency of Water Collection Among Respondents

Response Category	No of Respondents	Percentage
Collect water daily	23	76.7%
Do not Collect water daily	05	16.7%
Never Collect water	02	6.6%

Total	30	100
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In terms of frequency of water collection, the findings indicate that it is a daily and repetitive activity. Out of 30 respondents, 23 reported that they collect water daily from these natural sources. In contrast, 5 respondents stated that they do not collect water every day, while 2 respondents reported that they never go for water collection, possibly due to alternative arrangements or household support. Most households collect water two to three times a day, and in situations of scarcity, additional trips are required, significantly increasing women's workload and time burden.

A significant number of respondents observed that water availability has declined over the years. They attributed this decline to factors such as deforestation, changing rainfall patterns, drying of traditional water sources, and increasing population pressure. Many participants noted that water sources that were once perennial have now become seasonal or show reduced discharge.

Seasonal variation in water availability emerged as a major concern. Most respondents reported facing acute water scarcity during the summer months, when springs either dry up or their flow decreases considerably. During this period, both the distance to water sources and the time required for collection increase. In contrast, water availability improves during the monsoon season, although excessive rainfall sometimes results in water contamination.

Overall, the findings suggest that dependence on water sources in the region is not only high but also increasingly uncertain and vulnerable to environmental and climatic changes. This situation directly impacts the daily lives of households, particularly women, who bear the primary responsibility for water collection and management.

Traditional Knowledge and Community Practices

During the field survey, women respondents from New Tehri shared valuable insights into traditional practices related to water conservation. It was found that cultural traditions continue to play a significant role in shaping community attitudes toward natural water resources.

A majority of respondents reported the presence of a customary ritual known as Dhara Poojan (worship of natural water sources), which is performed during marriage ceremonies and other social occasions. In this ritual, the newly married couple (nav-vivahit joda) performs the Pooja of the local spring, symbolizing respect for water and acknowledging its importance in sustaining life.

Out of the total 30 respondents, 27 respondents confirmed that the tradition of Dhara Poojan is practiced in their community, while 3 respondents reported no awareness or absence of such a practice. This clearly indicates that traditional ecological knowledge is still widely prevalent in the study area.

Practice of Dhara Poojan among Respondents

Response Category	No of Respondents	Percentage
Practice of Dhara Poojan exists	27	90%
No knowledge/ practice not reported	03	10%
Total	30	100%

The data clearly shows that an overwhelming majority (90%) of respondents follow the tradition of Dhara Poojan. This reflects the strong cultural connection between the community and natural water sources. Such practices not only promote respect for water but also encourage collective responsibility toward its conservation. The findings highlight that traditional knowledge systems remain relevant and effective in supporting sustainable water management in hilly regions like New Tehri.

The study shows that women in New Tehri play a crucial role in the conservation of natural water resources. They are actively involved in collecting, managing, and protecting water sources. Traditional practices like Dhara Poojan reflect a strong cultural connection with nature and promote conservation. However, women face challenges such as water scarcity, physical burden, and limited decision-making power. Despite these issues, their contribution remains significant for sustainable water management.

- Women should be given greater participation in decision-making related to water management.
- Traditional practices should be preserved and supported along with modern methods.
- Awareness and training programs should be organized for water conservation.
- Government should improve water supply facilities in hilly areas.
- Community participation, especially of women, should be encouraged for sustainable outcomes.

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