

Policy Brief

Gender and urban water management: A case study of Dharan, Nepal

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Access to clean water is one of the major goals of the Sustainable Development Goals (SDGs) 2015-2030. However, rapid and haphazard patterns of urbanization has led to a surge in the gap of supply and demand of water, highly pressurizing on water resources particularly in the cities of South Asia, leading to extreme water scarcity. Water scarcity risks are further exaggerated by climate change, alteration in agricultural practices, water intensive industries and water intensive modern life-styles of cities and societies. While securing water for cities is a growing challenge, many cities have a poor record in ensuring equitable and inclusive water access.

Due to the patriarchal social construction of the gender roles, women, in the most societies of South Asia including Nepal, play primary role for management of household water. The structure guided by patriarchal norms and mentality often associates women with the private sphere while men with the public sphere. Thus, generic participation of women in public decision-making sphere does not ensure that their engagement is active and meaningful, and also does not ensure that women have authority to reflect their will into decisions equivalent to that of men.

Literature demonstrates that societies in which gender equality exists, women and men have equal access to opportunities and services, equal control over resources, and an equal say in decisions at all levels (IFAD, 2012). Studies also demonstrate that societies in which gender equality is greater, there is higher economic growth, greater prosperity, and a better quality of life for all (IFAD, 2012). However, in many developing countries of the world gender inequalities continue to be extreme.

This is equally true in Nepal, and in urban, semi-urban and rural areas of this developing country. In this context, this brief assesses the socially constructed gender roles and responsibilities of men and women and their implications in urban water management in Dharan.

The brief also offers key policy recommendations for making cities and societies more gender sensitive and friendly in water management issues.

An Up-close Look at Dharan Sub-metropolitan

The case study of this research is Dharan Sub-metropolitan city, one of the rapidly growing urban areas in Eastern part of Nepal. Dharan serves as a gateway trading post between the hills and plains of the Tarai region. It hosts numerous hotels, production industries, retail businesses, agriculture tracts, religious places, and both a state and local user managed drinking water system, all of which are integral parts of the city's economy. It is also a major educational hub that includes a variety of educational institutions, situated on the Bhavar zone of the Himalayan foothill.

KEY FINDINGS

- » Although women are primary domestic/ household water managers, water collection activities are dependent on social and ethnic differences.
- » Socially constructed gendered roles and cultural norms related to water use and management exist in Dharan.
- » Water unavailability and supply management are very critical among squatter communities compared to others, especially during the dry season.
- » Conflicts related to water during collection is frequent at public taps/common water points mainly due to inequitable distribution of water.
- » Women exert influence primarily in household decision making related to water, while beyond households their participation is typically very low.
- » Tokenistic participation of women in water related institutions do exist because their voices are not reflected in water decisions.

Dharan is surrounded by perennial rivers like Tamor and Koshi however many neighborhoods of the city still face severe drinking water shortages and the climax of it can be noticed during the dry season.

Nepal Drinking Water Corporation, Dharan (NWSC-D) has only been able to supply 15 million liters per day of water although the demand is twice that amount (Pandey & Bajracharya, 2017).



However, in addition to extreme water rationing in distribution, NWSC-D does not supply water in all the areas of the city. Water coverage provided by NWSC-D includes the core urban area and peripheral area; while from non-coverage area includes two slum communities (squatter 1 and squatter 2), represent the whole city of Dharan.

Issues of Particular Concern

Water Availability and Collection for Domestic Purposes

The water demand during wet and dry seasons are fulfilled in different proportions, with critical shortages during the dry period (typically November through May) in Dharan. Squatter settlements faced critical water shortage among the other study locations and water shortage was severe during dry season.

The study found that 44% of the respondents in squatter 1 spent between 123 minutes and 71 minutes to fetch water during the dry and wet seasons, respectively in Dharan while 31% in squatter 2, travel less than 40 minutes distance.

Compared to a study conducted by Sudmeier-Rieux, et al. in 2012, the time to fetch water has considerably decreased, however, serious water scarcity issues and its implications still exist in the study sites of Dharan. According to respondents, the core area had the lowest average time taken to collect water compared to slum areas and peripheral areas. Collecting and fetching water from long distance, carrying it physically is considered one of primary roles of women and the study found that women of the study areas are primary collectors and household managers of water.

The women in the case study sites shared that the challenge of walking long distances for water collection has induced threats to their personal safety and restricted them from participating in other community and income generating activities.

The gendered involvement in water collection activities is highly dependent on ethnicity. The study found that men from the *Madhesi* ethnic group are not at all involved in water collection, while in other ethnic groups, they are involved to some extent only. Only 7% men from *Brahmin/Chettri* ethnic group and 2% men from *Janajati* ethnic group are involved in water collection. This trend, in fact, reinforces gendered roles of men and women and underpins social imbalances. According to female respondents of peripheral areas:

“Water is not coming in private line since the last three months so I have to carry water from public stand post, which is 50 meters away. I have to wake up at night and see whether there is water coming or not. Male members of family do not pay much attention to collect water and all the responsibility from collection to management of water falls on my shoulder, which has been very hard. The insufficient amount of sleep has lead to physical problems, I often get headaches and pain at joints as I need to carry water daily. In addition, I am often stressed whether or not I will be able to collect water and fulfill the needs of household member.”



Lack of Participation and inequity in Decision-making

The gender-based differences in household roles and social spheres with respect to action and decision making of water related activities are found in Dharan. The participation of women in water decision and management was very rare until UNICEF provided training to the community on water management and developed water system (Raut et al., 2019). In the initial phase, women's nomination into water management committees of Water User Groups (WUGs) was mostly a formality to fulfill the criteria.

It was a tokenistic representation with little space to voice women's opinion on water management. Even if women participate in meetings, their voices and interests are often ignored, as they may not have adequate knowledge of the subject matter under discussion or lack confidence to speak up their views.

Although women developed confidence, leadership and decision-making power to some extent over the period of time, due to structural barriers, they remain busy in multiple household chores and confined in domestic labor. Due to the overloaded burden of the domestic chores, gender norms and unequal power relationships, women think that any engagement with community work is an addition to their already burdened lives, which have restricted or discouraged them from engaging in formal public meetings or income generating activities.

The entrenched structural barriers, social hierarchies, gender norms and unequal power relationships discourage women to participate in public meetings as they are not able to draw any benefit from their participation (Shrestha and Clement, 2019). Also, the study found that women tend to regard themselves less strong physically for the tasks that need to be performed for keeping water management related constructions, operations, and maintenance. For such tasks, women consider that they have to depend on men, and if not, these tasks could not get completed on a timely manner. According to a female respondent from squatter settlement:

“We have to do lots of household work from early morning to late evening, fetching water, cooking, taking care of children, washing, cleaning and not always getting nutritious food, make us physically weak. Men are involved in tasks such as, construction and maintenance activities, which require physical power; and women have weaker physical power than men.”

Maintenance and management of water sources is still seen as men's work arena. Moreover, when it comes to decision-making beyond household such as, decision regarding water tariff allocation, collection and decision regarding new connections, men's participation is higher. The traditional gendered structural understanding reinforces that women need to rely on men for decision making with respect to issues that are socially classified as lying outside the domestic sphere and thus explains women's absence or silence in meetings.

The findings of this study also concurred that the reasons of preventing women from participation in decision-making were mostly structural, which include men make all the decisions related to water management; some women also need permission of husbands for participation; and a few women lack knowledge about tariff system and new connections.

It appears that the socio-structural barriers of women would further increase the knowledge gap, therefore, the creation of formal opportunities to involve women in the domestic water decision-making structures does not necessarily assure women's participation and gender-responsive services unless men are meaningfully aware and enlightened to break down such structural barriers.

The socio-structural norms and values reinforce and shape the relationships between men and women for intra and beyond household activities (Kabeer, 1994; Agarwal, 1994, 1997) and the power relations between the woman and her husband and his attitude as head of the household play important role in breaking the structural barriers, inequity and enabling women to meaningfully participate in decision making and have their voices reflected in the decisions (Kabeer, 2005).

Water Conflict and Vulnerability

Water related conflicts are not new. Many studies have already identified several water conflicts occurred in Africa and Asia (Kaplan, 1994; Watson and Pandey, 2015). Many scholars point to 'water wars' in the future and the South Asian case including Nepal's also align very well with this concept (Pandey, 2017).

In the case study areas of Dharan, respondents reported that the occurrences of conflicts mainly take place in squatter communities where water collection is done in common points of water/ public taps rather than in core urban and peripheral areas where most of the houses are connected with individual private water taps.

Key reasons for such water conflicts could be extreme level of water scarcity leading to competition for the resource limits and public water taps with rationing of water.

The study found that while economic burden associated with water scarcity including water quality and quantity were mostly reported by men, women reflected the direct burden of water scarcity in their lives, restricting women's and girls' freedom for engaging in other educational and income generating activities. Therefore, women are more involved in water conflict than men as this tends to occur mainly at the point of collection.

While physical security is a fundamental prerequisite for women's empowerment, the case study exhibited that the socio-structurally constructed gender roles have made women and girls very unsafe and vulnerable in the city. The study found

that women and girls of squatter areas fetch water at nights and in the early mornings because of two fundamental reasons:

- * **public taps with many women and long queue**
- * **fetch water from rivers and spring water sources which are far away from their settlements.**

The study found that more than 17% households are depended only on river and spring water, and they fetch water either early in the mornings or during nights so that they do not have to stay in long queue. Those who fetch water from the springs and rivers shared that these sources lie at the bottom of hills and in forest areas, where youth addicts gather for taking their narcotic doses and are also found hiding at these areas (Raut et al. 2019). This is why women and girls feel unsafe about their personal safety. According to female respondents from squatter settlement one respondent shared:

“ We do not have any options besides going at night to collect water as in the morning and the daytime there are always many people, long queue and it consumes more time. We know the place and path is not safe but to run the household we have to go there at night. ”

Key Policy Implications

Policy recommendations are highlighted:

- ◆ The creation of domestic water decision-making formal structure to involve women in better bargaining position rather than supportive/committee member is a necessity. Women's involvement in decision-making outside household sphere has to be implemented for their active participation.
- ◆ New institutions and interventions such as women's political leadership and private sector for promotion and motivation of women involvement in water governance and to advance gender equality are needed.
- ◆ A holistic analysis of the factors that hinders women's participation from being meaningful and less symbolic is required at a broad level.
- ◆ Enable women and men to have equal voice and influence in water related institutions and the decisions of these institutions by strengthening legislation and facilitating equitable tenure arrangements.
- ◆ Achieve a more equitable balance by addressing structural barriers in water related and other workloads and in the sharing of economic and social benefits between women and men.

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