



The lived Experience of Local Community Participation in Facing Water Scarcity and Its Governance: The Case of Dastgerd Village in Qom Province

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ABSTRACT

Local community participation in water crisis management is considered one of the most important strategies both to institutionalize optimal consumption and to cope with water resource scarcity. Assuming that the major problems of water scarcity are rooted in the nature of governance rather than resource limitations—which is possible through studying the experiences of actors, especially at the local level—this study seeks to understand the nature of water governance and, in particular, the experience of local participation in water scarcity management. For this purpose, Dastgerd village in Qom province was selected as the case study, as it is located in one of the country's water-poor provinces. To gain a deeper understanding of the phenomenon, a qualitative method was employed. Research data were obtained through semi-structured in-depth interviews with 20 local activists and stakeholders and were analyzed using thematic analysis. The findings showed that water management can be organized around five main themes: structural silence, inequality in power distribution (understood as unequal accessibility to water resources), institutional weakness of the state, non-participatory management, and multiplicity and plurality in management—revealing some of the most important challenges at the local level. The analysis of stakeholders' experiences indicates an inconsistency between the biological needs related to water at the local level and its decision-making structure at higher levels. While water is a vital issue affecting daily life, from their perspective, decision-making processes have proven to be decentralized, out of reach, and lacking accountability. This partially confirms Wittfogel's perspective on centralized management in the water-scarce geographies of the East, which encounters dysfunctional contradictions in practice within today's modern society.

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Introduction

Water scarcity is one of the most pressing development challenges of our time. This issue, along with climate change globally—especially in arid and water-scarce regions already grappling with this problem—has intensified, emerging as one of the most urgent global challenges. Some researchers, such as Pahl-Wostl (2015), have referred to it as global climate disasters. The 1974 report by the thinkers of the Club of Rome and the "Our Common Future" conference, also known as the Brundtland Commission, were among these global actions. Concern about environmental outcomes and crises, particularly regarding water, can be seen as a significant starting point for activism aimed at managing emerging crises with long-term roots.

Since this crisis affects the quality of people's daily lives for their survival, especially through variables such as gender, age, social and regional inequalities, it has become a universal social problem (Fazey et al., 2018). Hence, it is argued that addressing and managing these challenges requires strategies to increase local adaptive capacity and resilience, not just against catastrophic events, but as part of everyday life (Harth, 2021). Achieving this also necessitates public participation in creating effective and inclusive climate governance (Tsinda et al., 2022). Therefore, the problematization of water supply and distribution due to scarcity caused by climatic changes or other reasons such as over-extraction indicates a transition from a hydrological crisis towards a social policy crisis. In this context, the water crisis is not merely a material object but a social phenomenon embedded in a complex network of power relations, structural inequalities, and citizens' subjective representations of social justice.

In general, two approaches can be identified in the literature for dealing with the water question. The first emphasizes resilience and adaptation to the environment, where over many years people gradually learned to adapt to environmental conditions through long-term experience. The second underlines intervention, often from the outside, through formal institutions with a technocratic nature, reducing water issues merely to the concept of management from the outside, mainly from the top down. Assunta et al. (2021) divided these approaches into the technocratic approach, focused on governmental environmental policies, and the people-centered approach, based on social action and activism. As they pointed out, despite having connections, these two approaches have different perceptions of the issues, consequently leading to different policy outcomes or solutions. This is because the concern of government officials has been to standardize environmental and climate issues as part of the policymaking process, while the concern of the people or social activists has been how to involve people in adapting to the environment and all of its possible scarcities for living, based on their close and long-term knowledge and experience of their environment.

For this reason, it might be said that the concept of water governance has been introduced as a more comprehensive concept to move beyond a reductionist view of water management, referring to a set of norms, institutions, actors, decision-making processes, coordination mechanisms, and accountability practices that determine how water is distributed, how decision-makers are involved, and how water conflicts are resolved. Accordingly, one may argue that the main issue in the water crisis is not just how much water resources have been reduced. Rather, it is the extent to which the institutional and social system of water management is capable of dealing fairly and accountably with shortages and conflicts (United Nations, 2021).

Since water lies at the intersection of interests of actors such as the local community, the state, the market, and the environment—which may not be aligned—the legitimacy of decisions depends on transparency and fairness in allocation procedures (Molle,

2015). Recent approaches, by criticizing structural technocracy, believe that water scarcity has less of a climatic nature and more of an institutional-social nature rooted in societies' behavior and performance over the distant past, but now often manifests itself as a climatic unexpected event. From this perspective, it is the distribution of power and the pattern of interaction among stakeholders and relevant agents that controls the quality of managing water scarcity for living in the local community (Hufty, 2011). In this regard, the water crisis can be understood as a social trauma resulting from the imbalance of power and the nature of water governance in societies that are, so to speak, located in water-scarce regions due to geographical characteristics. However, each society at its various levels of development can show different reactions to environmental crises, influenced by ecological identity. According to Sutton (2018), these reactions are often manifested in the collective activism of the local community and are better manifested in societies and regions that have experienced these crises over the long term.

Qom province, owing to its location in the water-scarce region of the country and its severe involvement with the issue of water resource scarcity^[3], as well as some dealings taken for its management both in modern and traditional forms or a mixture thereof, holds particular importance for evaluating issues related to optimal water consumption.

It is worth noting that, among the measures taken towards local community participation in optimal water consumption in the province are: making available the Synergy (Hamyar-e Ab) educational-interactive system for different groups of people such as managers, elementary school teachers, students, and their families with the aim of promoting a culture of optimal water consumption and educating the future generation on managing water resource consumption; holding the "Sarbaz-e Ab" (Water Soldier) and "Jahad-e Abi" (Water Jihad) campaigns in the province concurrent with public gatherings in defense of the homeland during the Ramadan War; implementing the "Hamyar-e Ab" (Water Supporter) program among elementary school students in the province; establishing modern irrigation systems in agricultural lands; planning to eliminate water-intensive crops; and educating families on optimal consumption towards achieving the "Smart Family" scheme. Nevertheless, the success of these measures depends on local community participation, especially in habitats that have faced drought and scarcity since the beginning of their formation. Their very long-term survival can also be seen as an indication of the success of local initiatives or resilience in adapting to the harsh living environment. Therefore, understanding the strengths and weaknesses of policies requires studying the experiences of the indigenous community as reflected in their perceptions. Accordingly, the following questions can be raised: What are the characteristics of people's participation in water governance? And more importantly, how is it meaningful in the lived experience of local actors? Considering that Qom province has historically been located in an arid and water-scarce region, the local population has long-term experience in water management, making a study in this region better able to reflect these experiences. Given the nature and objective of the study, the focus would be on Dastgerd village, which shares the characteristics of water scarcity in Qom and has faced this issue since its establishment. As Koch et al. (2021) state, environmental issues such as water can hardly be separated from the experience of popular and participatory policies. Therefore, understanding the experience of activism in case studies can provide a broader perspective on environmental issues in Iran as well.

Most studies in the literature are focused on broader issues such as reactions to environmental challenges and crises caused by climate change, which have manifested in formal (governmental) policies or environmental movements (e.g., Hasanian, 2021; Hashemi, 2022; Fadaee, 2011; Gulliver et al., 2021), and a smaller part have focused on collective activism and local community participation in crisis management (e.g., Ghaffari et al., 2024; Milder, 2022; Harth, 2021). Likewise, most studies have focused on water management, particularly agricultural water, but predominantly from a technocratic policymaking perspective, and a few have paid attention to the local community's reaction at the village level (e.g., Vahabi et al., 2025; Khorasani, 2025; Dehghani et al., 2022).

Nevertheless, in recent years, the study of water governance has moved beyond the scope of purely technical and managerial analyses and has become an interdisciplinary field. In this shift, water is not merely considered a natural resource. Rather, it is an institutional, social, and political problem that gains meaning in connection with decision-making rules, distribution of authority, stakeholder participation, justice in access, and the quality of institutional accountability. From this perspective, the water crisis should not be limited to issues such as resource depletion or infrastructure deterioration, but should be extended to a broader area such as the social experience of scarcity, institutional trust, and people's relationship with the institutions in charge (Cook & Melle, 2022). In this line, the Organization for Economic Co-operation and Development (OECD), by formulating principles of water governance, has focused on the three axes of effectiveness, efficiency, and trust, underlining that good water governance depends on institutional coordination, executive capacity, stakeholder participation, transparency, and accountability. Similarly, Pahl-Wost (2015) has also examined water governance in relation to complexity, global change, and the necessity of institutional learning, showing that centralized and non-dynamic models are insufficient for dealing with water crises. This is because the issue of water in practice is linked with such matters as conflicting interests, uncertainty, and decision-making processes at various levels. Hufty (2011), by proposing the Governance Analytical Framework, highlights the role of actors, rules, norms, and decision-making processes in understanding public issues and considers governance as the arena of interaction between power, legitimacy, and institutions. Having confirmed these perspectives, Ostrom (1990), in her study on common-pool resources, shows that the sustainable management of natural resources does not necessarily have to go through state centralization or complete privatization. Because local users can establish effective rules, monitoring mechanisms, enforcement guarantees, and conflict resolution methods when there is a possible way for collective action and institutional trust. Agrawal (2001) also shows that local institutions play an effective role in natural resource governance when formal and informal rules, organizational capacity, local knowledge, and trust relationships are linked together.

Among studies focusing on Iran, we can find different research reports that discussed more general water issues of the country rather than her rural water problem. For example, the research by Yadegari et al. (2018) on "the water governance structure in the Zayandeh-Rud basin" showed that the water governance crisis is a product of a number of different phenomena such as institutional friction, slowness in revising legal frameworks, and the persistence of structural paradigms, which ultimately disrupt governance functions. According to them, all of these are rooted in the weakness of the accountability system. Zare-Shahabadi and Bonyad (2021), in a study on water governance research in Iran, have shown that this area faces theoretical and

methodological shortcomings, and part of the existing studies requires deepening in terms of theoretical approach, analytical method, and sociological formulation. Sedghian et al. (2023), in their analysis of "factors affecting water governance in Iran," have also shown that water resource problems are not solely due to natural limitations, but a significant part relates to management processes and policymaking methods.

The second part of studies has focused on the role of local institutions and stakeholder participation in water resource governance. For instance, a study by Kamal et al. in the field of water governance indicates a structural transition, in the sense that traditional and self-organized systems of local users have been weakened and marginalized in the face of expanding state interventions and licensing procedures. This disintegration of local arrangements, in turn, has directly led to the intensification of conflicts among stakeholders. Salari et al. (2016), using social network analysis, have also shown that understanding relationships among stakeholders and local capacities is a crucial condition for designing participatory water resource management.

Another part of the studies has examined water as a social and meaningful issue at the level of actors' experience. Hatami and Nourbakhsh (2019), in a study focusing on the semantic reconstruction of the water crisis in eastern Isfahan based on grounded theory, analyzed the water crisis from the perspective of farmers and showed that this crisis is not merely a natural scarcity issue but is linked to the political economy of water, mis-governance, institutional diversity, and the farmers' lived experience. Likewise, Ghasemi and Abdollahi (2024), in a study on collective coexistence and the social governance of water in Semirum, have shown that the water scarcity issue is a multifaceted phenomenon arising from the intersection of environmental, cultural, social, political, and economic dimensions. They have concluded that any coping strategy that focuses solely on one of these dimensions will be insufficient; rather, coping strategies must be based on the simultaneous reconstruction of cultural, social, managerial, and economic structures. Afsari et al. (2017), in a similar way, probed water governance in the Lake Urmia crisis employing grounded theory, and have shown that the water crisis is linked to legal voids, ambiguous responsibilities, weak coordination, and the actions of multiple actors.

A review of the aforementioned studies indicates that although extensive studies have been conducted on water governance, there is still a fundamental gap. First, the dominant focus on macro-basin and policy-oriented studies has mainly led to the neglect of smaller-scale analysis, such as the village level, local institutions, and the lived experiences of actors. Second, the prevailing approach in examining participation is merely mechanism-oriented and managerial, overlooking qualitative aspects such as the feeling of voicelessness or that of ineffectiveness among stakeholders. Third, existing studies have mostly analyzed some significant variables such as governance, justice, etc. in terms of distribution or institutional performance and have failed to analyze the links between these concepts and everyday narratives in connection with power, access, and trust. Finally, the geographical concentration of research on traditional water-rich centers like Lake Urmia or Isfahan has meant that water-scarce regions like Qom province and local/rural experiences of water management, despite their long history, have received less attention.

Literature

Conceptual and theoretical approaches

As previously noted, the core issue in the water crisis is the extent to which the institutional and social system of water management is capable of dealing fairly,

participatorily, and accountably with scarcity and conflict. In other words, policymaking and management in this domain can lead to sustainable development only to the degree that they engage the effective cooperation of stakeholders and actors.

New approaches in this field, by critiquing traditional approaches that focus solely on natural and technical factors, believe that water scarcity is more institutional and social in nature than mere climatic. As consequence, the interactions among humans, and between them and the natural environment should be considered an significant water governance analysis. This means that, achieving the goals of sustainable conservation of natural resources depends on a shift in adoption of a more comprehensive approach—namely, a social-ecological system (Karami & Keshavarz, 2016). According to the Stockholm Resilience Centre, these social-ecological systems are complex systems composed of ecological systems and various social institutions that interact within networks. Individuals' behaviors are interdependent; people adapt themselves to changes in their social and ecological environment and, in turn, change that social and ecological environment. These systems are constantly changing and fall into the category of complex systems. They share common features such as resilience and complexity. This approach offers a more realistic view of social and ecological structure compared to traditional approaches to natural resources. For example, Ostrom's social-ecological system framework provides a theoretical framework for advancing collective action theory and a general tool for diagnosing the sustainability of social-ecological systems, which can be used to explain the influence and susceptibility of relevant variables at micro and macro economic, social, and political levels (Ostrom, 2007, 2009).

The issue of managing scarcity or the water crisis is, above all, tied to the imbalance of power among actors and the nature of water governance, which manifests as passive or indifferent consequences among stakeholders—an imbalance that, if sustained over the long term, takes on a structural character. The perspective of structural silence explains this issue better.

The theoretical foundations of structural silence in the literature, at both micro and macro levels, predominantly converge on a single central axis: intentional apathy. Morrison and Milliken (2000), in their classic article, define organizational silence as "the collective withholding of employees' evaluations and concerns about organizational issues." They regard silence not as an individual choice but as a collective and structural phenomenon that takes shape within a context of shared beliefs about the futility of speaking up, rooted often in structural/rational calculations concerning the consequences of voice. To explain "structural silence" more deeply, however, one must turn to theories that treat silence as a product of power structures and inequality—at organizational, local, and broader societal levels—that are mainly related to the control of valuable resources. According to Resource Control Theory (Hobfoll, 2001), for instance, human behavior is organized around the acquisition, preservation, and accumulation of resources. Central problem in human interactions is the "primacy of resource loss," since losing resources is psychologically more harmful than gaining them. Individuals therefore resort to behaviors such as silence in order to prevent resource loss and reduce threats. In the context of water governance, this theory explains why farmers and water users may refrain from voicing concerns about inequities: silence serves as a strategy for preserving existing access to water and avoiding potential negative consequences.

The concept of "structural silence" has been highly developed in the water governance literature by Ese (2019) in a study of urban water markets in Nigeria. Drawing on

Hirschman's (1970) "exit, voice, and loyalty" framework, Acey demonstrates that water access in cities with limited networked infrastructure is shaped through interactions between state and non-state sources, and is filtered through service providers with differing regulations and through each actor's "perceived authority." This process can culminate in what he terms "structural silence." Acey's findings indicate that "structural silence" is not a passive choice but rather a product of governance structure and power relations within the water service delivery system. Other studies (such as Rajabi and Tavakoli, 2025) in contexts such as Iran demonstrate that structural silence in the Iranian setting is not an imported phenomenon but is rooted in particular institutional and cultural structures; indeed, the "imbalance of power" is itself the principal factor restricting participatory governance to "façade institutions," which are simultaneously both an effect and a cause of weakened social capital. These findings clearly indicate that "structural silence" in governance is the product of a combination of centralized decision-making structures—in *Wittfogel* term— *at macro level* and that of institutional weakness as well as the absence of trust-building mechanisms at the local level.

Methodology

Concepts related to collective activism and collective experiences concerning the environment, including water governance, are embedded in unstable attitudes and perceptions that are mainly based on people's involvements and understandings. According to McIntosh (2019), these concepts can be best recognized through using qualitative methods and data-gathering techniques such as individual and group interviews as well as case studies. Because, as Husserl (2007) argues, the goal in such studies is to analyze the structure of consciousness, and in order to achieve a deeper understanding of an issue or phenomenon, one must focus on lived experiences. So, the present study took on an interpretive phenomenological approach.

Dastgerd village located in Qom province was chosen as a field research site. From the point of view of geographical location and political-administrative divisions, Dastgerd is a part of Fordo district in Kohak county of the province, which was previously known as Nofel-Loshato district, a part of Qom city. This rural settlement is located at the geographical coordinates of 50 degrees and 55 minutes east longitude and 34 degrees and 22 minutes north latitude. In terms of relative accessibility, Dastgerd is located 11 kilometers southeast of the county center (Kohak city) and 42 kilometers south of Qom metropolis. This village is limited to the heights of Mount Kalengeh from the northeast, where, similar to most other parts of the province, it climatically suffers water scarcity and low rainfall, having long involvement in dealing with this phenomenon.

The research statistical population included local activists and stakeholders related to the water issue in Dastgerd village. Participants were selected through purposive (judgmental) sampling, based on criteria including maximum experience and knowledge in water consumption management in the region and village, the ability to convey narratives of experience, and willingness to participate in the research. In other words, the main criterion for inclusion in the research was having direct or institutional experience with the water issues and the ability to narrate those experiences. In total, the number of participants in the research reached 20, and the interview process continued until the stage of theoretical saturation was reached. General characteristics of research participants indicated in table 1.

To collect the data, semi-structured in-depth interviews were used. For this purpose, the semi-structured interview guide was developed based on main axes including: participants' definition of the water problem, their experience of scarcity or disruption in water services, their evaluation of decision-making mechanisms and the accountability of institutions in charge, their perception of the role of Islamic Councils and Village Councils in water resource management, and most importantly, their experience of participation in the scheme for optimal consumption management. Data analysis was conducted using the logic of interpretive phenomenology and employing thematic analysis consistent with this approach. Data analysis was conducted in the following stages. First, the interview texts were read completely. Then, meaning units related to the experience of water governance were extracted, and initial codes were developed for each unit while maintaining due commitment to the interview text. Subsequently, initial codes were classified into sub-themes based on conceptual similarities. Finally, by merging the sub-themes, the main themes of the research were formed.

Table 1. General characteristics of research participants

Alias	Place of residence	Role/Position	Relation to Participatory programs
		City council member	Participant in training courses
N1	city	Rural representative	Public relations
N2	village	Small agricultural operator	Experienced person as a liaison
N3	village	Upstream operator or garden owner	with local institutions
N4	village	Production operator	Experienced person as a liaison
N5	village	ABFA service employee	with local institutions
N6	city	Water network technical expert	Livelihood dependence on water
N7	city	Social/environmental activist	Water consumption management trainer
N8	city	Representative of the district	in the village
N9	city	Member of the village council	Water infrastructure repairer
N10	village	greenhouse manager	Livelihood dependence on water
N11	village	Citizen living in the village	Inter-agency coordination
N12	village	local trustee	Livelihood dependence on water
N13	village	Network repairman	Water consumption management trainer
N14	city	Social activist	Livelihood dependence on water
N15	city	Environmental activist	Social authority and local arbitration
N16	village	Media activist	Field experience of damage and repairs
N17	village	Greenhouse investor	Awareness raising and criticism of local governance
N18	village	Resident of the village	Conducting awareness raising courses
N19	village	Resident of the village	for the audience
N20	city	City council member	Conducting awareness raising courses

Source: authors

To ensure the reliability of the findings, the four criteria recommended by Lincoln and Guba (1985) were used. They include credibility, transferability, dependability, and confirmability. Table (2) addresses the strategies used to achieve reliability of the findings.

Table 2. Strategies for Ensuring Data Trustworthiness

Credibility	Repeated reading of interview transcripts, maintaining the link between themes and raw data, and using selected quotes in the findings section.
Transferability	Description of the research context, introducing the general characteristics of participants, and explaining the social and institutional conditions of the research field.
Dependability	Recording the analysis process, maintaining analytical notes, and documenting the coding stages.
Confirmability	Observing researcher reflexivity and avoiding the imposition of presuppositions and pre-defined concepts on the data.

Source: authors

The analysis of in-depth interviews with sample local activists and stakeholders indicates that in the mentality of participants, water governance in Dastgerd village is redefined beyond the technical management of resources or mere administrative mechanisms. The findings showed that local actors interpret and give meaning to water governance in light of their lived experiences of inequality in access to such issues as water resources, infrastructural deficiencies including pressure drops and distribution network deterioration, as well as structural and functional limitations of local institutions. In this framework, water surpasses its status as a merely natural resource and service commodity, becoming a political-social category. This in turn reflects actors' perception of matters such as distributive justice, institutional accountability, governance system efficiency, and the social legitimacy of responsible institutions.

In the analysis process, semantic units were first extracted from the interview text. Then, initial codes were formed at a level close to the participants' language. In the next stage, synonymous codes were categorized into sub-themes, and finally, the following overarching themes were obtained. The general path of the analysis is also indicated in table 3.

Structural Silence: The first overarching theme is called structural silence. The findings indicate that the actors see local participation as a limited, intermittent, and ineffective phenomenon. Participants' narratives reveal that the shift of local demands and issues to higher levels of governance often faces a disconnect in the decision-making cycle, and final decisions are primarily made at higher levels. As an interviewee mentioned, "See, here, participation and people and their opinions are only complimentary, the final decision makers are those at the top. The opinions of ordinary people are not considered at all. At the same time, people feel they have neither the ability to participate in decisions nor the authority to do so." Consequently, a significant gap forms between the expression of local demands and their reflection in policies and executive actions. This situation has caused popular participation to be experienced not as an institutionalized and continuous mechanism in water management, but as an intermittent intervention, mainly in reaction to crisis situations. Accordingly, as the findings indicate, the process of democratizing water governance at the local level, although observable in terms of creating formal platforms for the presence of citizens and local institutions, remains minimal and non-institutionalized due to the limited authority and capacity of the local actors to influence final decisions. Except for intermittent participation from local people, the lack of platforms for monitoring and evaluating programs by local people, and the absence of platforms for expressing local opinions regarding projects are among the concepts included under the category of structural silence.

The theme of "structural silence" does not only indicate the limitation of local participation, but also indicates an institutional mechanism in which formal forms of participation (attending meetings, proposing demands) without the support of influencing decision-making, lead to the reproduction of apathy and ineffectiveness. The analysis of the narratives shows that the decision-making cycle in local water governance suffers from a structural break. In fact, local demands are formed at the lower level, but are left at higher levels without institutionalized feedback. This break turns participation from a continuous and institutional process into an episodic and crisis-oriented reaction. As a result, even when formal platforms for citizens' presence are provided, the lack of impact capacity reduces participation to an incomplete and non-institutional level. Concepts such as "intersectional role creation", "lack of monitoring platform" and "impossibility of expressing opinions" are actually empirical

indicators of this structural mechanism that exhausts participation from within, without denying it completely by the official institutions.

Institutional Weakness: The second all-encompassing theme extracted can be titled the institutional weakness of the state, often reflected in the imbalance between authority and responsibility. The participants' narratives show that local institutions like councils and village administrations are the closest point of reference for people. When people face water pressure drops, network failures, cutoffs, poor quality, or a sense of injustice in distribution, they find local institutions the first places to sue. However, these very institutions often lack sufficient authority for decision-making or immediate action. In this regard, a participant in the research interview stated: "Basically, village administrations lack the necessary authority to follow up on water cutoffs and pressure drops, and are the first places to file a lawsuit. This issue itself eliminates the possibility of accountability for people's needs from the village administrations, whereas we should not at least theoretically face such limitations in authority." Similarly, another participant confirmed this state of affairs by pointing out the consequences of this inconsistency: "When I, as a landowner, go to the village administration because of a water cutoff, I expect to hear a proper answer. When I see that this institution does not consider itself responsible or does not give me a proper response, I get the impression that there is essentially no plan to answer me or people like me. In this case, a kind of distrust develops in me. As a friend of mine always says, we feel like strangers to this system."

"Institutional weakness"—beyond merely describing the inefficiency of local institutions—signifies a structural imbalance between authority and responsibility. On one hand, local institutions (such as councils and village administrations) serve as the primary point of contact for the public; on the other, they lack the authority to make decisions or take immediate action. This discrepancy places the local institution in a paradoxical position: it bears the burden of accountability yet lacks the means to fulfill it. The analytical consequence of this situation is the emergence of a vicious cycle of mistrust: a citizen turns to the local institution, but the institution proves unable to respond, and the citizen attributes this failure to the local institution itself rather than to the higher/macro-level structure. The result is the erosion of social capital and a growing sense of "alienation from the system." This highlights that institutional weakness is not merely an administrative shortcoming but a mechanism that undermines institutional legitimacy at the local level and fosters further passivity.

Inequality in Power Distribution: This theme is based on the feeling of a lack of justice and inaccessibility of water for all villagers, indicating a latent discrimination. In this regard, participants acknowledged that access to water is not the same for downstream and upstream residents, causing the water scarcity problem to go beyond a natural issue and become a social problem that can easily steer social relations and interactions among residents toward hostility. An important point is that from the participants' perspective, this asymmetric access occurs due to the unequal relationships and interactions of villagers with the local institutions responsible for water management. Although the present study does not have the scope to address the veracity of this claim, the main point is that the participants' perception of asymmetric access to water resources and related limitations seems to have a causal relationship with the relationships between villagers and the officials of local institutions. What is clear from such a perception is that the consequent decline in the level of trust in local institutions can diminish popular participation in water consumption management plans. As one participant stated, "some people think that if the water is cut off for downstream areas

longer than for upstream lands, the reason is that upstream people have communicated better with the village administration. That is, a kind of friendship or informal links has formed between them, and as a consequence, they have been able to reduce the hours of water cutoff. That's why many decided to have less contact with the village administration. Many households did not even attend the meetings."

The theme of "inequality in power distribution" can be reinterpreted as a social mechanism wherein access to water is determined not by necessity or geography, but by power dynamics and relational networks linking residents with the institutions responsible for management. Narrative analysis reveals that the perception of inequality rests on two pillars: tangible experience and the subjective interpretation of the causes behind these disparities. Crucially, this perception itself becomes a driver of action—manifesting as reduced engagement with local institutions, absenteeism from meetings, and, ultimately, diminished participation in consumption management schemes. Thus, inequality in water distribution is not merely a matter of allocation but a relational and political issue that steers village social dynamics toward hostility and mistrust. This theme demonstrates that, in the absence of transparent and equitable mechanisms, water governance serves to perpetuate existing social divides.

Non-Participatory Governance: This theme indicates that decisions regarding water cutoff hours, target centers for cutoffs, repair of deteriorated networks, and replacement of worn-out and high-consumption parts with low-consumption ones are all outside the reach of the people, and policymakers and officials bear all the responsibility for these decisions. As one council member put it, "they think they know everything and that the village and water are their absolute property. They think they can determine what is best for us better than anyone, while they know nothing about water, its management, or its fair distribution. They decide however they want and pretend they are making the best decisions. I think they are just pretending, but practically their job is to fulfill a duty and report to their boss that we are doing our job well in the village."

The theme of "non-participatory governance" can be reread as an analytical model in which the monopoly of decision-making in the hands of policymakers and trustees not only eliminates participation foundations, but also leads to the production of a kind of "institutional distrust". The analysis of this theme shows that this decision-making monopoly has two analytical consequences: first, the formation of a perception of the trustee institutions as "other" who has no knowledge of water or its management; Second, interpreting decisions as "fixing the task" and "reporting to the boss" instead of answering to the citizen. This situation weakens the institutional legitimacy at the local level and provides the ground for hidden resistance or widespread passivity. Therefore, non-participatory governance is not simply a management style, but a mechanism that erodes the social legitimacy of trustee institutions in the long run.

Multiplicity of Actors: This theme reveals that local actors are not only critics of the current situation but also possess knowledge for improving existing procedures. This is clear from their sporadically but repeatedly stated narratives that offer a wide range of suggestions such as holding regular meetings, specifying the responsible person for each issue, transparently informing about plans/cutoffs/restoration times, systematic accountability, monitoring unauthorized extractions, reducing network wastage, and consumption education. These suggestions show that they possess real potentials for participatory governance in water issues, but these capacities require a clear and trust-building institutional framework. In other words, although this theme cannot be categorized under the public perception of water consumption management patterns, what emerged from the interviews indicates that local people have significant potentials

for increasing participation and entering into optimal consumption management plans. But these potentials need to be realized through appropriate institutional arrangements that create an enabling environment. As one interviewee emphasized, "people have many solutions and know them best, but they have no place where they should be considered. It seems that when outside interventions, including the involvement of bureaucracy, are proposed, the idea is that solutions are solely in the hands of technocratic bureaucrats, and people have no knowledge of the emerging issues. As a result, the solutions they offer are at best more suited to their own (urban) place of residence than to remote rural areas." Another finding requiring special attention is that from the participants' perspective, the implementation of these plans (from the outsiders) is related to the water crisis and the possibility of water famine in the region. In other words, participants consider the implementation of these plans as a warning signal for themselves and their agricultural jobs. The participants' lack of awareness regarding the reasons for implementing the optimal water consumption management schemes, and the sense of danger regarding the implementation of these schemes, indicates that the implementers have many flaws in institutionalizing optimal energy consumption (including water) as a base of the Islamic-Iranian lifestyle and the culture of complacency in the Islamic-Iranian lifestyle.

The theme of "multiple actors" can be analyzed as both promising and cautionary. On one hand, the narratives reveal that local actors are not merely critics of the status quo but possess the knowledge and practical proposals to reform it—demonstrating an actual participatory capacity on the ground. On the other hand, in the absence of a clear, trust-building institutional framework, this capacity remains on the periphery of the decision-making system. It can be argued that the challenge of participatory governance in this village stems not from a lack of knowledge, but from an institutional and trust-related void. So, until institutional structures redistribute authority and accountability, this potential will not translate into effective collective action.

Table 3 and Figure 1 clearly summarizes and illustrates these findings regarding the extracted themes and their relationships.

Table 3. Themes, Concepts, and Quotations from Semi-Structured Interviews

Quotes	Concepts	Themes	Research Findings
Perception of the nature of people's participation in optimal water consumption	Structural Silence	- Expectation of random participation from local people - Lack of platforms for monitoring and evaluating plans by local people - Lack of platforms for expressing local opinions	"In water consumption management, a kind of silence is observed from the people. But this silence is not voluntary. It is structural and forced. Meaning that the executive or even policy structure has been formulated in a way that expects participation from people only at specific times. Times other than policymaking, opinion polling, and..."
	Non-Popular Governance	-Decision-making regarding water cutoff hours -Decision-making regarding target centers for cutoffs -Decision-making regarding repair of deteriorated networks -Decision-making regarding replacing worn-out, and high consumption parts with low consumption ones	"If these plans are called people participation, then everything should truly be democratic. But when people have no role in decision-making, even for repairing worn-out networks, or even in identifying worn-out networks; truly, this kind of work is not popular."

	Institutional Weakness	- Lack of proportion between authority and accountability of responsible institutions - Lack of authority to deal with all needs and issues by responsible institutions	"Basically, village administrations lack the necessary authority to follow up on water cutoffs and pressure drops, and this lack of authority removes the possibility of responding to people's needs from the village administrations. While it seems we should not practically face such limitations in authority."
Experience of Multiplicity in Participation in the Province	Participatory Potential	- Knowledge of the environment - Potential for dealing with problems	"Local people, due to their lived experience and indigenous knowledge, can greatly help in identifying challenges. Their presence can essentially be a problem-solver. People are currently ready to participate if the structures are reformed."

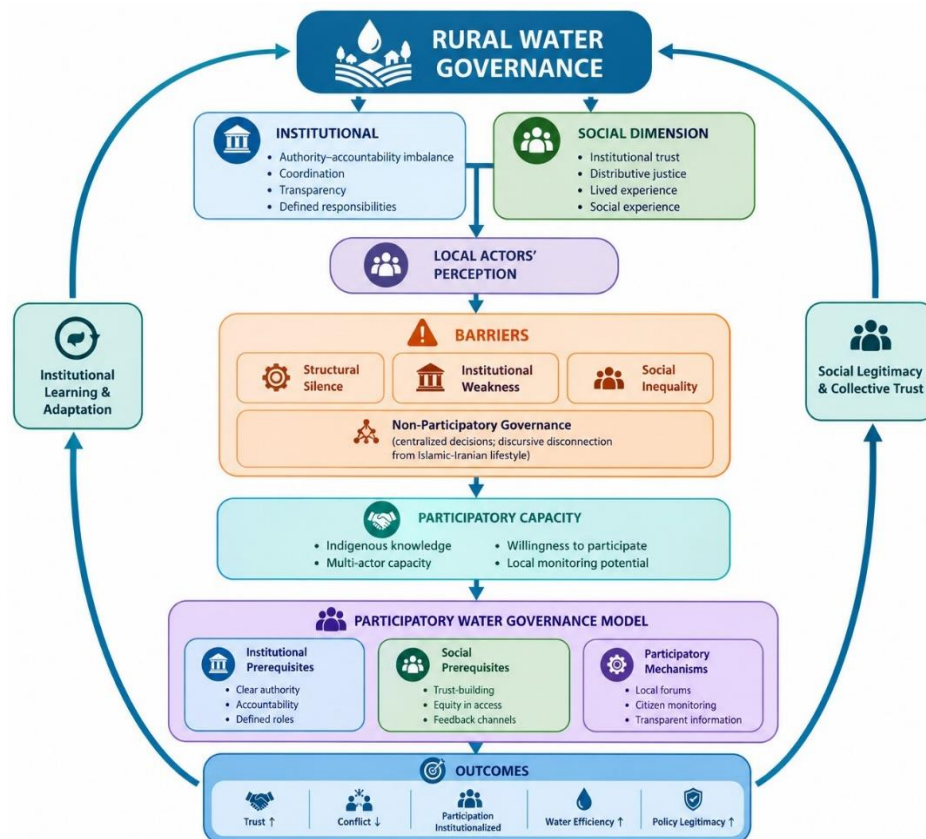


Figure 1. Conceptual model derived from themes

Conclusion

This study aimed to probe the lived-experience of water governance of local people/actors using a qualitative method. For this purpose, the perception of local actors in Dastgerd village, Qom province, regarding optimal water consumption management was examined, employing semi-structured interviews. The findings revealed that local actors understand optimal water consumption management through such concepts as structural silence, inequality in power distribution, ambiguity in the responsibilities of local institutions, and asymmetric and unjust access to water resources. Having considered the indigenous knowledge and motivation of local people in optimal water consumption management, the analysis of the data found a multiplicity of actors involved. This suggests that there is a multi-capacity governance potential in this village—a capacity that can be considered a strength of water governance in this village.

Because, as researchers such as Chambers (1990), Cernea (1985), and Reed et al. (2021) have acknowledged, local participation is key to the success of plans and is one of the most important strategies for overcoming obstacles. In general, the research findings regarding structural silence are consistent with the findings of studies by Ghaffari et al. (2024), Eboselumen et al. (2026), and Behera et al. (2026), indicating that energy optimal consumption management plans have not yet fully implemented all stages of participation—from awareness-raising and opinion polling to implementation and monitoring. Furthermore, the findings on the theme of divergence between authority and accountability of institutions in charge are more consistent with the findings of studies by Omoyeni et al. (2026) and Islami & Rahimi (2019), indicating that part of the challenge in popular management of optimal water consumption stems from structural factors, which can ultimately lead to the distrust of local people towards the institutions in charge.

The local people's appraisal of non-participatory governance also indicates that water consumption management models, despite efforts towards developing participatory processes, have not been able to bring the desired participation for the people. This finding is consistent with many research findings in the literature such as Mohammad et al. (2026) and Chen et al. (2026). This in turn necessitates that, firstly, there is still a good potential for multi-capacity governance at the local level; secondly, local people should be considered as an important source for realizing the popular participation model in optimal water consumption processes by the policymaking body. In general, it should be said that plans concerning optimal water consumption management and the participation of its stakeholders, regardless of their positive outcomes in the area of optimal consumption, still face perceptual barriers among the people regarding participation levels.

As a historical fact, it can be said that because of factors such as the traditional over-centralization of decision-making power in state institutions, the lack of opportunity for stakeholder and non-governmental sector participation in the resource policymaking process, the political and social dimension of water governance has been considered unimportant. It seems that there is still this Wittfogelian (1957) mentality both among state institutions and decision-makers that optimal water management in Eastern lands, including Iran, must be carried out through a powerful and centralized state.

In light of the research findings and in order to reform the perceptual and discursive patterns of local actors, the following recommendations are offered at both policy and executive levels:

At the Policy Level: Given that developing public educational mechanisms towards optimal water consumption as well as developing their indigenous knowledge are primary steps for local people involvement, it is recommended that the feasibility of establishing educational centers be placed on the agenda by the institutions in charge at the national, provincial, and village levels—including the Ministry of Agricultural Jihad and the cooperation of the Ministry of Energy, the Ministry of Health, Medical Education and Medical Education, the Technical and Vocational Education Organization of the country, the governorates, village councils and village Islamic councils

At the Executive Level: To enhance perceived justice and protect social capital, it is recommended that the Water Resources Management Organization (at national and provincial levels), under the auspices of the Ministry of Energy, along with relevant executive organizations, continuously implement protocols. This would help to clarify allocation criteria, violation processing procedures, and the status of resources by

shifting from purely technical management towards justice-oriented governance. The transparency would also help to prevent perceived discrimination and the erosion of public trust.

It is also recommended that in order to get hold of public opinions, identify gaps or capacities for optimal consumption management in the rural areas, a participation system for villagers be designed and utilized under the auspices of the Water and Wastewater Company of Qom province.

Moreover, to raise awareness and gain their support, it is suggested that the Center for Planning, Programming, and Budgeting of the Islamic Republic of Iran Broadcasting (IRIB) Organization develop and broadcast programs with a focus on consolidating optimal consumption, emphasizing the provincial areas.

It is recommended that a rural public participation system such rural associations be designed and implemented under the stewardship of the Qom Province Water and Wastewater Company. The objectives of this system would include gathering public views, suggestions, and demands; identifying gaps and potentials regarding water management and optimal consumption; recording and reporting water wastage and distribution network issues; identifying and documenting indigenous rural knowledge and experiences; and prioritizing water-related issues at the village level. Furthermore, incorporating educational and informational components, enabling feedback to citizens regarding the outcomes of their participation, and establishing a platform for collaboration among village administrations, Islamic village councils, and other local entities could strengthen sustained rural participation and utilization.

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Authors' Contribution

All authors contributed equally to the preparation of this manuscript.

Conflict of Interest

The authors declare that there is no conflict of interest.

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