

1 Institutional Capacities to Farmer Participation in Water Governance: A  
2 Case Study of Water Scarcity in Shahriar County, Iran

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4 ABSTRACT

5 Iran is in a severe water shortage crisis and the agricultural sector is the primary  
6 contributing sector. However, farmers do not have an active and decisive role in water  
7 resources management. The present study investigates the effect of existing institutional  
8 capacities on farmers' participation in meeting the water shortage challenge of Shahriar  
9 County. To this end, the required data were collected through semi-structured interviews  
10 with 20 experts at local, county, and provincial levels, then coded and analyzed using  
11 ATLAS.ti software. Findings show that the hierarchical governance approach—focusing  
12 on public administration and centralized planning—has led to the uncontrolled growth  
13 of formal institutions, such as laws, administrative structures, and bureaucratic  
14 frameworks of government organizations. This situation lacks the necessary flexibility,  
15 adaptability, and capacity to support informal institutions. Consequently, local  
16 governance, informal laws, and community-based organizations have become weak and  
17 inefficient. In this context, strengthening farmers' participation requires reforming  
18 formal institutions to support local organizations and customary laws, as well as  
19 institutionalizing participatory planning. Drawing on institutional theory (North, 1990;  
20 Ostrom, 2005), we argue that without formal recognition of informal governance  
21 mechanisms—such as local water norms and traditional organizations—participatory  
22 reforms remain ineffective in centralized water governance systems.

23 **Keywords:** Farmers' Participation, Formal Laws, Informal Laws, Shahriar County, Water  
24 Governance.

25  
26 1.INTRODUCTION

27 Iran is located within the global arid and semi-arid belt and is recognized as one of the  
28 countries facing severe water scarcity. The average annual precipitation in Iran is  
29 approximately 250 mm, which is only about one-third of the global mean. At the same time,  
30 the actual evapotranspiration rate is nearly three times higher than the precipitation rate. With  
31 per capita renewable water resources estimated at 1,718 cubic meters and a water exploitation

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32 coefficient (harvest index) of 72.3%, the country is currently experiencing a critical water  
33 shortage crisis (Abdollahi *et al.*, 2017; Marzban *et al.*, 2019; Mohammadjani and Yazdanian,  
34 2014).

35 In recent decades, the natural water scarcity in Iran has been intensified by climate change,  
36 recurrent droughts, and rapid population growth. These factors, along with rising demand for  
37 food security, pose a serious threat to the country's water resources and agriculture (Gholami  
38 *et al.*, 2025; Karamidehkordi and Naderi, 2025; Rastegaripour *et al.*, 2024).

39 Historically, however, Iranians learned to adapt to these harsh conditions by developing  
40 indigenous knowledge and establishing diverse institutions for water resource management.  
41 Traditional practices such as flood utilization, surface wastewater collection, Hotak, Degar,  
42 Khoshab, Ab Anbar (cistern), Chah Anbar (well-cistern), pools, streams, the construction of  
43 Qanats (underground aqueducts), and small dams or Ab Band formed the core of these adaptive  
44 strategies. These methods have been comprehensively examined in the works of Kameli *et al.*  
45 (2025); Yousefian *et al.* (2025); Ebrahimi and Salimi Kochi (2017); Maleki *et al.* (2016) ;  
46 Tahmasebi (2009).

47 In this context, studies highlight the significant role of traditional water management  
48 institutions—such as water users' associations, Mirab (water distributors), Boneh (collective  
49 farming units), and large organized labor groups comprising thousands of individuals known  
50 as Hashar—in the extraction of water resources, the construction, operation, and maintenance  
51 of hydraulic structures and Qanats (underground aqueducts), as well as in regulating water  
52 distribution and consumption (Jomehpour and Mir Lotfi, 2012; RWCOY, 2010). This rich  
53 historical experience in managing scarce water resources raises a critical question: why does  
54 Iran, despite such a legacy, continue to face acute challenges of water scarcity today?

55 Research indicates that the multiplicity of actors in water management has created  
56 institutional complexity, necessitating multi-layered participatory governance (Sani *et al.*,  
57 2019). Studies emphasize that integrated governance—combining governmental and social  
58 organizations with social mobilization—has proven effective in addressing water challenges  
59 (Ansell and Gash, 2008; Pahl-Wostl *et al.*, 2012; Rodríguez-Labajos and Martínez-Alier, 2015;  
60 Feldman *et al.*, 2015). Comparative evidence shows that irrigation systems tailored to local  
61 socio-economic and ecological contexts, such as in Australia, are more successful than  
62 externally imposed models, as seen in India (Poddar *et al.*, 2011).

63 Farmer participation is identified as a critical factor in water demand management,  
64 achievable through decentralized governance and empowerment of local organizations

65 (Qanaa't *et al.*, 2013; Shamsaii *et al.*, 2017; Tarmohammadi Ghorchi *et al.*, 2018). However,  
66 the uneven distribution of power among water sector actors, coupled with institutional and  
67 structural barriers, impedes meaningful stakeholder engagement — including that of NGOs  
68 (Mohammadi Langarani and Rafsanjani Nejad, 2015; Afrakhte *et al.*, 2017; Vahid and Ranjbar,  
69 2018; Askari Bazaye and Tahmasebi, 2019). Given farmers' direct dependence on water for  
70 their livelihoods, their participation in irrigation management is the most practical path to  
71 reform. Yet, policy-making has often excluded them, limiting their influence on institutional  
72 frameworks (Rahmani *et al.*, 2015; De Boer *et al.*, 2013; Ramella and De La Cruz, 2000).

73 Although the OECD Principles on Water Governance provide a useful benchmark for  
74 evaluating efficiency and trust, they are designed mainly for cross-country comparisons. Given  
75 our focus on Iran—a centralized, non-OECD country—we instead use North's and Ostrom's  
76 institutional theory to understand how formal-informal dynamics enable or constrain farmer  
77 participation. Thus, the OECD framework is not rejected but serves as a complement, while  
78 our institutional approach offers deeper insight into the specific barriers in Shahriar County.

79 Building on this perspective, the present study aims to investigate how institutional contexts  
80 influence farmers' participation in addressing water scarcity, with a specific focus on Shahriar  
81 County in Tehran province. Shahriar represents a critical case, as it faces acute shortages of  
82 agricultural water resources and severe land subsidence—estimated at 310 mm annually—  
83 making it one of the most vulnerable regions in Iran. The central research question guiding this  
84 study is: How do existing institutional structures facilitate or hinder farmers' participation in  
85 water resource management in Shahriar County?

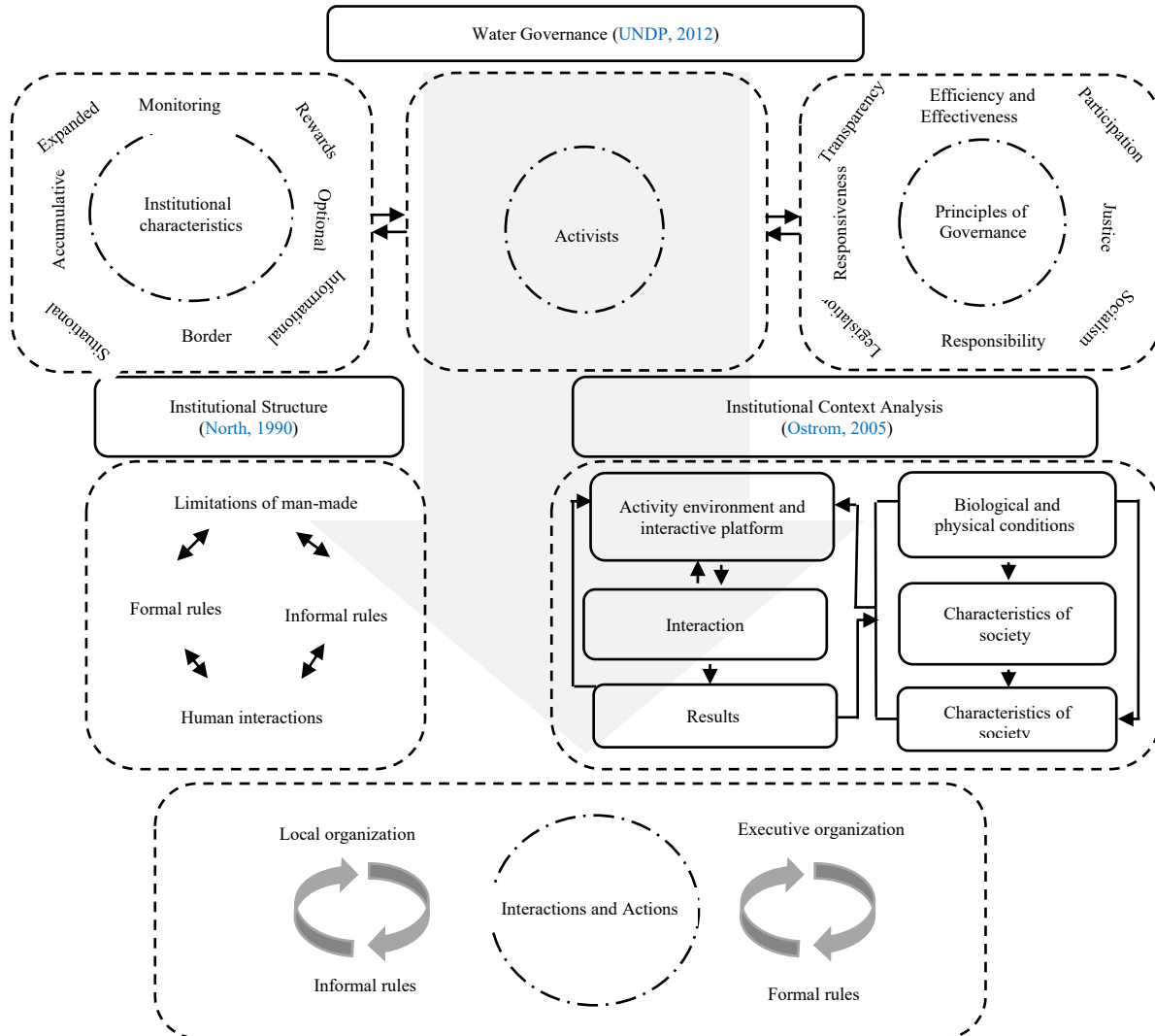
86 To address this question, the study adopts a conceptual framework grounded in institutional  
87 theory. According to North (1990), institutions encompass both formal structures—such as  
88 constitutions, laws, and bylaws—and informal arrangements, including norms, customs, and  
89 rules of conduct that shape actor behavior. Ostrom (2007) expands this definition by viewing  
90 institutions as sets of rules, norms, and strategies that structure patterns of interaction within  
91 and between organizations. In this study, the term institution refers to the legal frameworks and  
92 organizational arrangements governing water, alongside the policies, strategies, and programs  
93 that influence farmer participation and resource sustainability.

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## 95 2.THEORETICAL FRAMEWORK

96 Water governance promotes collaborative, multi-stakeholder decision-making to address  
97 water scarcity, moving beyond centralized control toward local participation (Kasuri *et al.*,

98 2026; Esfaram, 2014). GWP (2013) defines it as the political, social, economic, and  
 99 institutional systems involved in water management. This study is grounded in North's (1990)  
 100 institutional theory and Ostrom's (2005) work on common-pool resources (Figure 1).

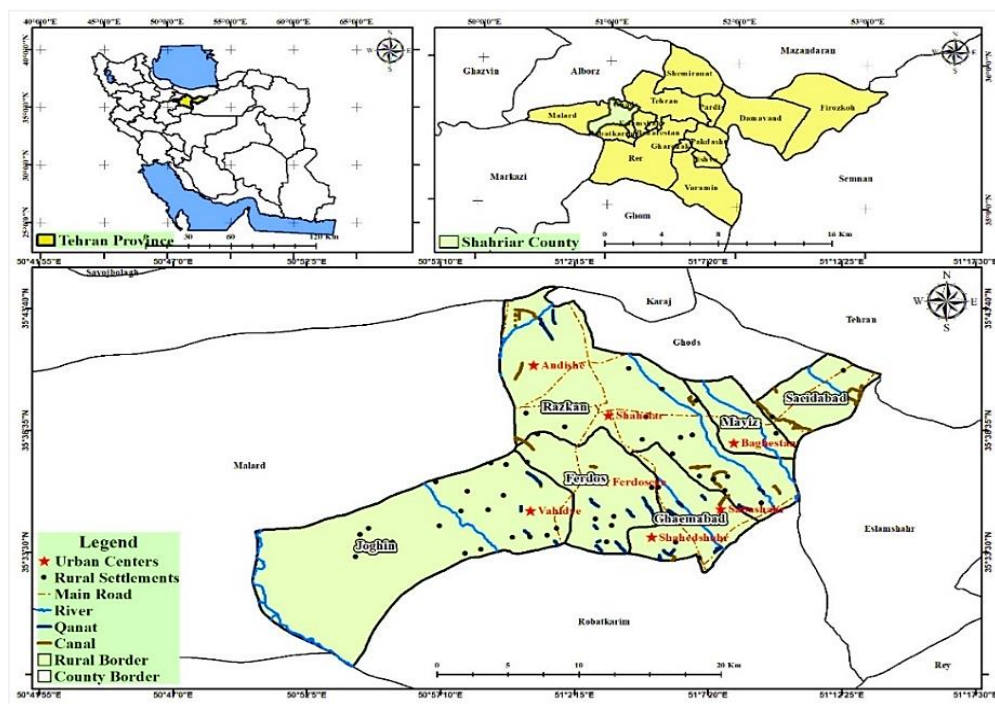


101  
 102 **Figure 1.** Conceptual model of the research.

103 The research's conceptual model (Figure 1), based on the UNDP (2012) water governance  
 104 assessment framework, defines institutions as the "rules of the game" shaping water  
 105 governance. The analysis integrates North's (1990) institutional framework and Ostrom's  
 106 Institutional Analysis and Development (IAD) framework (2005), emphasizing both formal  
 107 and informal water rules. According to Farzane *et al.*, (2017), Ostrom's classification includes  
 108 seven rule types: boundary, position, choice, scope, aggregation, information, and payoff rules.  
 109 A central component of the framework is the "action situation"—the social environment where  
 110 individuals interact, solve problems, or exercise dominance—along with the resulting  
 111 structures, interactions, outcomes, and their evaluation (Mosayebi *et al.*, 2017).

122 **3. MATERIALS AND METHODS**123 **3.1. Study Area**

124 Hydrologically, water management should be at basin/plain level. However, Iran's  
 125 centralized system implements policies at the county level. Fortunately, Shahriar County's  
 126 administrative boundaries overlap with a distinct groundwater plain, making the county-level  
 127 analysis defensible. Located in western Tehran Province (Figure 2), Shahriar County has one  
 128 central district, seven cities, and six rural districts. Of its 46 villages, 33 are inhabited, with a  
 129 population of 82,237 in 24,421 households (SYTP, 2016). Water resources include three rivers,  
 130 three qanats, and 224 wells, serving 1,019 farmers (IAO, 2020).



122 **Figure 2.** Geographical location of the study area.

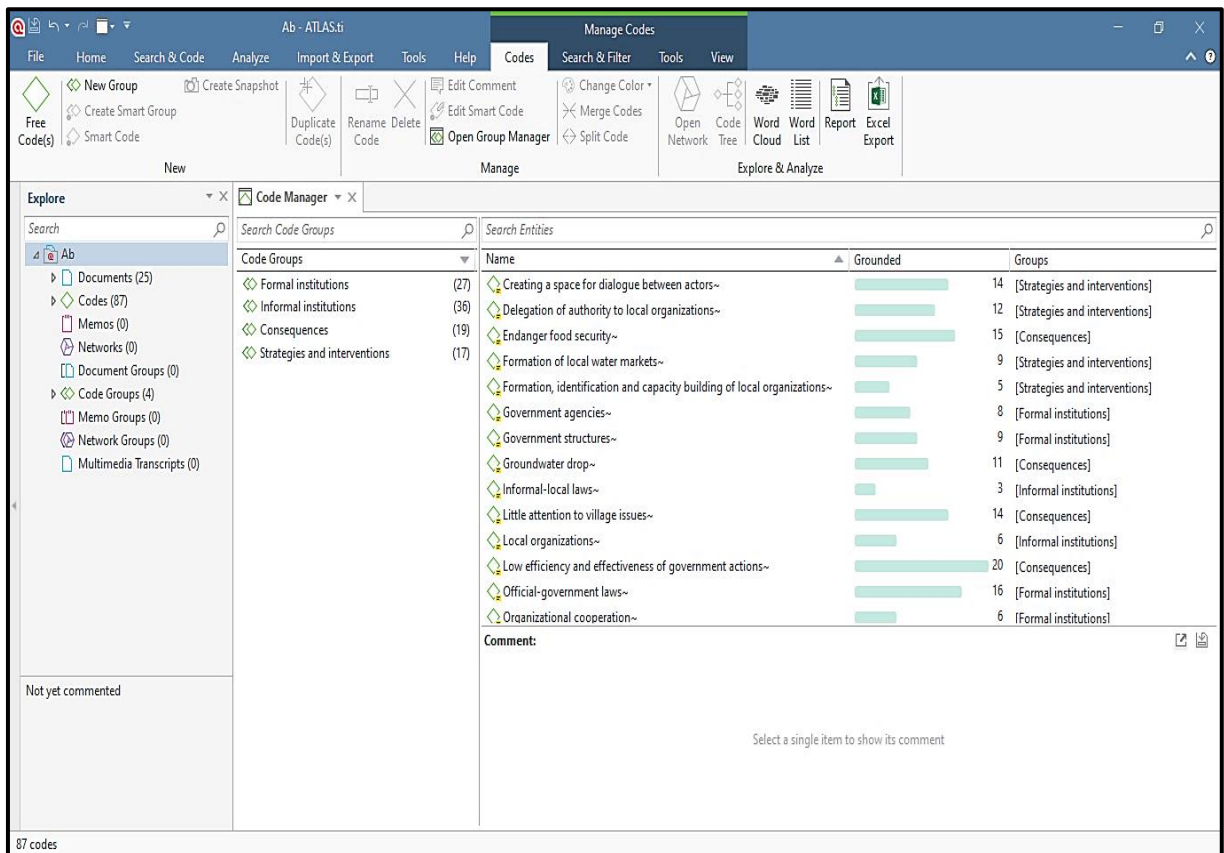
123 **3.2. Data Collection and Analysis**

124 The present research is applied in terms of purpose and qualitatively in terms of method  
 125 called Multi Grounded Theory (MGT). Due to the fact that water has a variety of functions and  
 126 values and different organizations and stakeholders have different behavior towards it, it was  
 127 tried to collect samples from different levels. In a semi-structured interview, the sample size  
 128 continued until the new sample did not add any information to the previous information. In this  
 129 case, after conducting interviews with 14 experts, theoretical saturation was reached; But to be  
 130 more sure, the interviews went on to 20 cases (Table 1).

133 **Table 1.** Number of people interviewed in each of the organizations related to the water  
 134 resources exploitation system at the county and provincial levels.

Name of offices	Name of organization	Number of Interviewees
Land Management; Agricultural Affairs Management; Soil and Water Management; Technical and Engineering Affairs	Shahriar Agricultural Jihad	4 people
Water Resources Affairs Management	Shahriar Water Resources Affairs	1 people
Shabahang Rural Cooperative Company; Azadi Rural Cooperative Company; Justice Rural Cooperative Company; Revolution Rural Cooperative Company	Shahriar Rural Cooperative	4 people
Deputy for Operation of Irrigation and Drainage Networks	Operation of Irrigation and Drainage Networks in Tehran	1 people
Department of Agricultural Organizations Affairs; Deputy for Development of Cooperatives; Organizations and Exploitation Systems	Tehran Rural Cooperative	2 people
Management of Basic Studies of Water Resources; Management of Water Resources Development Projects; Technical Management of Water; Management of Directorate and Executive	Tehran Regional Water	4 people
Research Group; Agricultural Economics Planning and Rural Development; Agricultural and Natural Resources Research and Training Center; Agricultural Knowledge and Technology Promotion Office	Tehran Agricultural Jihad	4 people

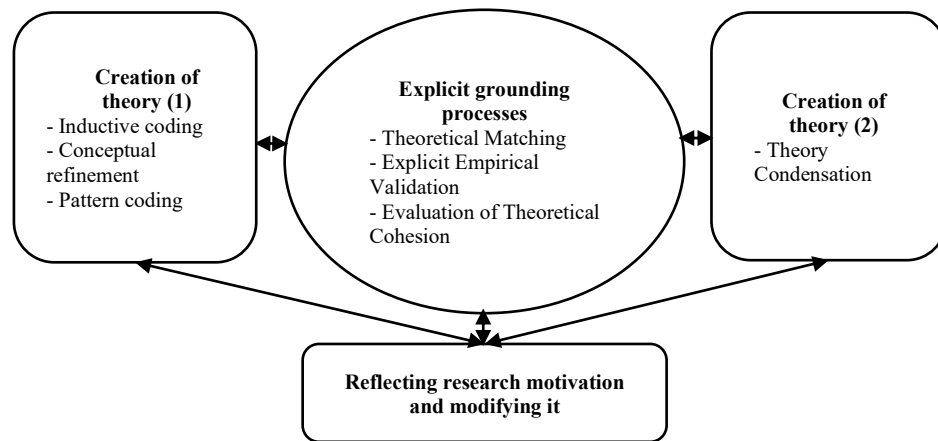
135  
 136 The data, were analyzed by coding method using ATLAS.ti software. Figure 3 presents a  
 137 screenshot of the ATLAS.ti Code Manager, showing the 87 codes derived from the inductive  
 138 coding process, their groundedness (frequency), and their assignment to the four main code  
 139 groups: Formal institutions, Informal institutions, Consequences, and Strategies and  
 140 interventions. The complete coding structure is summarized in Table 2.



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 142 **Figure 3.** ATLAS.ti coding structure—87 codes in four groups, with frequencies in the  
 143 'Grounded' column.

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Multiple Grounded Theory involves inductive coding, conceptual refinement, pattern coding, and theory condensation, complemented by theoretical matching, empirical validation, and cohesion evaluation (Figure 4). Validity was ensured through document preservation, interview recordings, member checking, and post-analysis feedback. Reliability was confirmed by reviewing codes with interviewees.



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**Figure 4.** Implementation process of Multiple Grounded Theory method. Source: (Lind and Goldkuhl, 2006).

#### 154 4.RESULTS

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The coding process yielded 87 semantic units, which were abstracted into 17 conceptual categories and further condensed into 4 pattern categories: (1) Formal institutions, (2) Informal institutions, (3) Consequences, and (4) Strategies and interventions. Table 2 presents the full coding structure. Below, each pattern category is described with supporting quotations and code frequencies.

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171 **Table 2.** Conceptual refinement and pattern extracted coding of the qualitative data.

Pattern category	Conceptual category	Example codes (Groundedness)
Formal institutions	Official-government laws	Lack of efficient rules; Scattered rules; Contradictory laws; Lack of flexibility and updating of laws and ...
	State sovereignty	Stabilizing the sovereign position of the state; Imposition of laws for the local community and ...
	Government structures	Lack of attention to farmers' participation; Bureaucratic and sectorial approach to planning and ...
	Government agencies	Organizational constraints; Departments focus on the problems of townspeople and ...
	Organizational cooperation	Disruption of coexistence between actors; Do not share data between agencies and ...
Informal institutions	Informal-local laws	Attention to the conditions and characteristics of the local community; Expansion of participatory democracy; Understandable rules and ...
	Participatory space	Achieving optimal water management; The effectiveness of government actions and ...
	Local organizations	Indigenouness of members of local organizations; Organizing and promoting local laws related to water and ...
Consequences	Water as Development Tool	Dominance of water policies as a factor in the development and modernization of the agricultural sector and ...
	Groundwater drop	Not caring about the value of water; Lack of water culturalization; Using traditional irrigation methods and ...
	Endanger food security	Reduction of agricultural production; Expansion of unproductive activities; Permanent and temporary population movements and ...
	Low efficiency and effectiveness of government actions	Overcoming the control and top-down approach of the government; Lack of will to implement policies and ...
	Little attention to village issues	Discrimination between city and village; Organizations focus on implementing large projects and ...
Strategies interventions and	Creating a space for dialogue between actors	Build a strong consensus; Creating an atmosphere of dialogue and building mutual trust between actors and ...
	Formation of local water markets	Achieving the goals of the balancing plan; Resolving the crisis of low water productivity and ...
	Delegation of authority to local organizations	Assignment of some responsibilities and government management to local organizations and ...
	Formation, identification and capacity building of local organizations	Local community empowerment; Capacity building and building confidence in local people and ...

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173 In the following, the extracted categories are described and quotations from the interviewees  
 174 are presented as examples of analysis:

#### 175 **4.1. Formal Institutions: Structural Barriers to Participation**

176 The formal institutional framework was identified as the primary obstacle to effective  
 177 farmer participation. Official-government laws were criticized as inflexible and contradictory.

178 As one expert stated:

179 *“Laws and regulations are mostly full of arcane language, and water resources*  
 180 *stakeholders, who are often less literate, struggle to understand them” (EXP-04, December*  
 181 *2023).*

182 Regarding state sovereignty, participants noted that the government positions itself as the  
 183 sole legitimate custodian of water. One expert explained:

184 *“The government, by introducing itself as the custodian of water resources management,*  
185 *has sidelined farmers. Farmers are even opposed to government policies”* (EXP-07, January  
186 2024).

187 Government agencies were described as urban-centric, leading to neglect of rural issues. An  
188 interviewee stated:

189 *“Almost all organizations except the Ministry of Agricultural Jihad have no government*  
190 *center in the villages”* (EXP-12, February 2024).

#### 191 192 **4.2. Informal Institutions: Constraints and Marginalization**

193 Contrary to their potential, informal institutions face significant constraints. Informal-local  
194 laws operate without formal recognition. One participant noted:

195 *“Empowering the farmer to comment builds his confidence... he adheres to the laws... and*  
196 *feels responsible”* (EXP-09, January 2024).

197 However, this potential remains untapped. Local organizations suffer from limited legal  
198 authority. An expert acknowledged:

199 *“They were familiar with the economic conditions... indigenous products, available water*  
200 *conditions and farmers’ interests”* (EXP-15, March 2024).

201 Yet these organizations are not integrated into the formal management structure.

#### 202 203 **4.3. Consequences of Institutional Failure**

204 The interplay of formal and informal institutional flaws has led to severe socio-ecological  
205 outcomes in Shahriar County. Regarding groundwater drop, one respondent stated:

206 *“We have not thought in laws about the intrinsic value of water. Increasing unauthorized*  
207 *abstraction... is rooted in the lack of determination of people and officials”* (EXP-02,  
208 November 2023).

209 Regarding endangerment of food security, a participant warned:

210 *“The undeniable share of Shahriar agricultural products... is decreasing due to lack of water*  
211 *resources... farmers are forced to migrate or change their land use”* (EXP-18, March 2024).

212 Regarding low efficiency of government actions, an interviewee stated:

213 *“The efforts that the government has made so far have not been responsive due to its top-down*  
214 *controlling approach”* (EXP-05, December 2023).

215 Regarding little attention to village issues, an expert contrasted:

216 *“If a small problem occurs in a city... all relevant government components raise it, but if 100*  
217 *villages do not have access to water, their needs will not be met for a long time”* (EXP-08,  
218 January 2024).

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220 **4.4. Strategies and Interventions for Institutional Reform**

221 Participants proposed several pathways to overcome the identified institutional barriers. The  
222 main strategies extracted from the interviews included: (1) creating a space for dialogue  
223 between actors, (2) formation of local water markets, (3) delegation of authority to local  
224 organizations, and (4) formation, identification and capacity building of local  
225 organizations (see Table 2 for code frequencies).

226 Regarding creating space for dialogue, one respondent stressed the fundamental need for  
227 inclusive forums:

228 *“Attracting consumer support and changing the approach of managers requires creating a*  
229 *space for dialogue between them. Building a strong consensus and mutual trust is essential*  
230 *before any policy can be effective”* (EXP-06, December 2023).

231 Regarding delegation of authority and legal capacity building, an expert highlighted the critical  
232 barrier of legal status:

233 *“Problems due to the lack of a clear legal status are problematic for both government agencies*  
234 *and farmers... the relevant official laws must be established and the legal status of these*  
235 *organizations must be determined. Without this, delegation of authority will remain*  
236 *superficial”* (EXP-11, February 2024).

237 Regarding local water markets, a participant noted:

238 *“Formation of local water markets could help resolve the crisis of low water productivity, but*  
239 *only if accompanied by strong monitoring and equitable access rules”* (EXP-14, February  
240 2024).

241 **Table 3** summarizes the key findings presented in Sections 4.1–4.4, linking each finding to  
242 supporting quotations (with interviewee codes and dates) and code frequencies. The table  
243 provides a concise overview of the evidence base for each major claim.

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## 260 5. DISCUSSION AND CONCLUSIONS

261 Before discussing the theoretical model, we explicitly address four key questions raised by  
262 our analysis. First, what problems were identified in previous research? Studies have  
263 documented institutional fragmentation ([Sani et al., 2019](#)), centralized governance ([Askari  
264 Bazaye, 2016](#)), and the formal-informal institutional gap ([Bayat et al., 2015](#)). Second, which  
265 of these problems does our research solve? We explain how formal institutions actively  
266 suppress informal participatory mechanisms in a centralized context—beyond merely  
267 describing their existence. Third, which results have not been examined before? The finding  
268 that hierarchical governance leads to ‘uncontrolled growth of formal institutions’ and that local  
269 organizations lack legal status has not been empirically examined in Shahriar County; prior  
270 studies focused on other basins (e.g., Zayandeh-Rood, Rasht). Fourth, how did we find the path  
271 and connection? Through systematic MGT coding (Table 2) and theoretical matching with  
272 [North \(1990\)](#) and [Ostrom \(2005\)](#), revealing causal links between state sovereignty, weakened  
273 informal laws, and farmer alienation. While prior research has documented institutional  
274 fragmentation ([Sani et al., 2019](#)) and centralized governance ([Askari Bazaye, 2016](#)), no study  
275 has empirically demonstrated how hierarchical governance leads to the ‘uncontrolled growth  
276 of formal institutions’ that actively suppress informal participatory mechanisms in a county-  
277 level Iranian context. Our finding that local organizations lack any formal legal status—  
278 rendering them incapable of negotiating with state actors—constitutes a novel contribution to  
279 water governance scholarship in non-OECD settings.

280 The trajectory identified in this research, as synthesized in the grounded theory model  
281 (Figure 5), illustrates a cyclical process of water governance failure that systematically  
282 constrains farmer participation in addressing water scarcity in Shahriar County. This failure is  
283 rooted in a hierarchical, monocentric governance regime where formal institutions dominate  
284 and suppress informal institutional mechanisms.

285 The analysis confirms that the prevailing formal institutional context is the primary driver  
286 of this impasse. The continuous expansion and dominance of rigid governmental laws and  
287 structures do not merely create bureaucratic inefficiency and weaken inter-organizational  
288 cooperation. More critically, they actively suppress and marginalize existing social interactions  
289 and informal governance mechanisms at the local level. As evidenced by participants’  
290 accounts, the state’s assertion of sole sovereignty over water resources displaces local norms  
291 and alienates farmers, making them passive subjects or even adversaries of policy rather than  
292 active partners. This finding aligns with [North's \(1990\)](#) conceptualization of institutions as

293 constraints shaping actor interactions, where a fundamental shift in formal rules disrupts the  
294 entire institutional ecosystem.

295 Consequently, informal institutions are not absent but are severely constrained and rendered  
296 ineffective. While local organizations possess invaluable contextual knowledge and informal  
297 laws hold historical legitimacy (Kasur et al., 2026), they operate in a legal and operational  
298 vacuum. Lacking formal recognition, authority, and resources, these informal structures are  
299 unable to counterbalance the power of centralized formal institutions or provide a viable  
300 platform for meaningful participation. This dynamic validates the insights from Ostrom's  
301 (2005) work, which warns that the imposition of external, monolithic governance can  
302 undermine the effectiveness of existing local rule-making and resource management systems.

303 Our findings show that institutional monoculture—dominated by hierarchical, top-down  
304 structures—directly leads to plummeting groundwater levels, threatened food security,  
305 inefficacy of government interventions, and neglect of rural communities. These results align  
306 with previous research on collaborative governance. For instance, Zhou et al. (2025)  
307 characterized collaborative processes under the River Cooperation System (RCS) by  
308 unchallenged political authority, exclusive decision-making, restricted information flows, and  
309 limited non-state actor involvement. Consequently, as Zhou et al. (2025) note, the RCS  
310 institutional design falls short in fostering effective multidimensional collaboration. Thus, our  
311 study not only confirms prior findings but also empirically demonstrates the tangible  
312 consequences of such top-down institutional arrangements for water resources and rural  
313 livelihoods. The lack of a legitimate space for farmer input results in policies that lack local  
314 buy-in and are often ill-suited to on-the-ground realities, leading to implementation failure.  
315 This reinforces findings from prior studies in the Iranian context that highlight the low  
316 efficiency of centralized water governance and the critical need for participatory approaches  
317 (Bayat et al., 2015; Ghaemi et al., 2016).

318 Therefore, breaking this cycle requires a fundamental reconfiguration of the institutional  
319 landscape from monocentric hierarchy to multilevel governance. As underscored by the  
320 strategies proposed by participants, reform must focus on deliberately creating space for  
321 informal institutions within the formal governance framework. This involves:

- 322 • **Delegating Real Authority:** Moving beyond token consultation to legally empower  
323 local organizations with concrete management responsibilities over water allocation,  
324 monitoring, and conflict resolution.

325 • **Building Bridging Capacity:** Systematically strengthening the organizational and  
326 legal capacity of local entities so they can engage effectively with government agencies  
327 and assume delegated roles. As one expert noted, establishing a clear legal status for  
328 these organizations is a prerequisite.

329 • **Fostering Authentic Dialogue:** Instituting equitable forums for dialogue that  
330 recognize and value local knowledge alongside technical expertise, building the mutual  
331 trust necessary for collaborative action.

332 In essence, the path forward lies not in replacing formal institutions but in orchestrating  
333 institutional diversity. This means consciously designing a governance system where formal  
334 procedures and structures are complemented by, and in constant dialogue with, informal  
335 processes and local structures. Such a multilevel approach, resonant with the integrated  
336 governance principles advocated by UNDP (2012) and scholars like Ansell and Gash (2008) ;  
337 Pahl-Wostl *et al.*, (2012) and Kasuri *et al.*, 2026) is essential to legitimize water management  
338 in the eyes of farmers. The OECD (2015) similarly emphasizes that participatory governance  
339 requires both formal institutional support and trust-building mechanisms—conditions that our  
340 findings show are absent in Shahriar County, where hierarchical state sovereignty has eroded  
341 local trust and collective action. Only by creating this synergistic institutional context can  
342 genuine participation be unlocked, leading to more resilient, accepted, and effective solutions  
343 to the water scarcity crisis in Shahriar and similar contexts.

344

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484 **ظرفیت‌های نهادی برای مشارکت کشاورزان در حکمروایی آب (مطالعه موردی کمبود آب در**  
485 **شهرستان شهریار، ایران)**

486 اصغر ظهماسبی، حمید جلالیان، و سمیه عزیزی

487 **چکیده**

488 ایران در وضعیت بحران شدید کم‌آبی قرار دارد و بخش کشاورزی متهم ردیف اول این بحران شناخته می‌شود. با وجود  
489 این، کشاورزان عاملیت فعال و تعیین‌کننده‌ای در مدیریت منابع آب ندارند. پژوهش حاضر به بررسی تأثیر ظرفیت‌های  
490 نهادی موجود بر مشارکت کشاورزان در مقابله با چالش کم‌آبی شهرستان شهریار می‌پردازد. این پژوهش از نظر هدف  
491 کاربردی و از لحاظ روش از نوع کیفی موسوم به نظریه داده بنیاد چندگانه است. داده‌های مورد نیاز به روش مصاحبه  
492 نیمه‌ساختاریافته با ۲۰ تن از کارشناسان سطوح محلی، شهرستانی و استانی جمع‌آوری و با بهره‌گیری از نرم‌افزار اطلس  
493 تی آی (ATLAS.ti) کدگذاری و تحلیل شد. یافته‌های پژوهش نشان داد که رویکرد حکمروایی سلسله‌مراتبی با تمرکز  
494 بر مدیریت دولتی و برنامه‌ریزی متمرکز منجر به شکل‌گیری و رشد بی‌رویه نهادهای رسمی از جمله قوانین و ساختار  
495 اداری و بوروکراتیک سازمان‌های دولتی شده است که تناسب، انعطاف و ظرفیت لازم برای حمایت از نهادهای غیررسمی  
496 را ندارند. در نتیجه، حکمروایی محلی، قوانین غیررسمی و تشکل‌های جوامع محلی تضعیف و ناکارآمد شده‌اند. در این  
497 شرایط، تقویت مشارکت کشاورزان مستلزم تغییر نهادهای رسمی در جهت حمایت از تشکل‌ها و قوانین محلی و نهادینه  
498 کردن برنامه‌ریزی مشارکتی است. با تکیه بر نظریه نهادی (نورث، ۱۹۹۰؛ استروم، ۲۰۰۵)، استدلال می‌شود که بدون  
499 شناسایی رسمی مکانیسم‌های حکمروایی غیررسمی—مانند هنجارهای محلی آب و تشکل‌های سنتی—اصلاحات  
500 مشارکتی در نظام‌های حکمروایی متمرکز آب ناکارآمد باقی می‌مانند.