



Joint project with:



and with partner organisations in six case study regions

## Restoring the Zayandeh Rud River: Addressing the Political Causes of Water Shortage in Iran

### Summary

This Briefing Paper presents one of six analyses of cross-sectoral coordination challenges that were conducted as part of the STEER research project and on which separate Briefing Papers are available.

Water problems in Iran are intensifying and have mostly been left unaddressed. The Zayandeh Rud River, as one of the main rivers in Iran, suffers from severe physical water scarcity. For decades, water demand has intensified, leading to increased rivalry between regions and economic sectors. Water transfers to the basin have been implemented as the main response without addressing the societal reasons for water scarcity. Currently, considerable tensions and conflicts over water – amplified by climate change and variability – are evident. Despite legal prescriptions for coordination and top-down command of the state, implementation has been deficient. Ineffective coordination practice manifests in fragmented planning, missing information exchange, centralised rule-making, intransparent decision-making and a lack of accountability. The persistence of these challenges implies that water shortage is a symptom of a deeper problem related to the consequences of Iran's oil state context: Revenues pouring from the rent of oil have changed the role of the state as the principal recipient of the external rent. Power has become concentrated at the national level with an expanding bureaucracy and top-down intervention while undermining the capacity to develop coherent policies.

A lack of state capacity in policy implementation and administrative disorganisation has led to insufficient coordination. In the context of the Zayandeh Rud basin, these deficits become apparent in the limited control and enforcement of rules over water withdrawals, especially from wells (which partly are illegal); redundant coordination mechanisms without well-defined structures and no stakeholder involvement; and missing adaptation of plans and strategies to address the challenges. The technocratic focus on inter-basin water transfers and dam construction projects hides the lack of institutional capacity in the water sector, and it weakens incentives to develop more sophisticated approaches such as basin-wide strategies to manage water demand. We therefore recommend:

- more transparency in decision-making, along with general public access to information on the water consumption of different users; the promotion of a realistic picture of the river and a raising of the public's awareness about each individual's responsibility for a healthy river as well as the social benefits of successful water cooperation;
- an alteration of the relationship between oil rent and the illusion of water abundance through the development of a proactive and collaborative strategy to build public support for shifting from water supply-oriented to water-demand management policies.

## Introduction

The water crisis ranks among the top five global risks in terms of the severity of impact over the next 10 years. A quarter of the world's population faces high levels of water stress. Most of the extremely high water-stressed countries with the greatest expected economic losses from climate-related water scarcity are in the Middle East and North Africa region. Iran is also currently experiencing serious water problems. Some of these water problems in Iran have sparked security and socio-political challenges, as reflected in the increasing number of protests in recent years. One of these challenging issues is related to the Zayandeh Rud River, which is the principal river of the central plateau in Iran; the river used to have significant flow all year long and today has become temporarily dry due to severe physical water scarcity (Mohajeri & Horlemann, 2017). Despite several inter-basin water transfers to this basin (Figure 1), strong cross-sectoral and inter-regional competition for a greater share of the river's water resources has led to overexploitation and the subsequent polarisation, tensions and conflicts among stakeholders. In response to the drying river and the lack of coordination – especially between Isfahan and Chaharmahal-Bakhtiari provinces after shifting the water management from basin to administrative boundaries at the provincial level in 2005 – the Zayandeh Rud Basin Coordination Commission for Integrated Water Resources Management (IWRM) was formed by Iran's Supreme Water Council in 2014. This commission was chaired by Iran's Minister of Energy, and its main achievements were the limitation of new water-use licences as well as the active involvement of a farmers' representative in high-level water management for the first time. Nevertheless, the main challenges have largely

been left unaddressed, and the over-use of water resources in different contexts (such as for agricultural, domestic and industrial purposes) is still causing environmental, economic and social problems. We argue that the persistence of such problems goes beyond physical water shortage and requires digging deeper into societal circumstances and the political causes. This Briefing Paper builds upon findings of a case study in the research project "Increasing Good Governance for Achieving the Objectives of Integrated Water Resources Management" (STEER). The project aimed at capturing the complexity of water governance systems – with a focus on coordination and cooperation among different actors – and understanding how the societal and environmental context influences its performance (Pahl-Wostl et al., 2020).

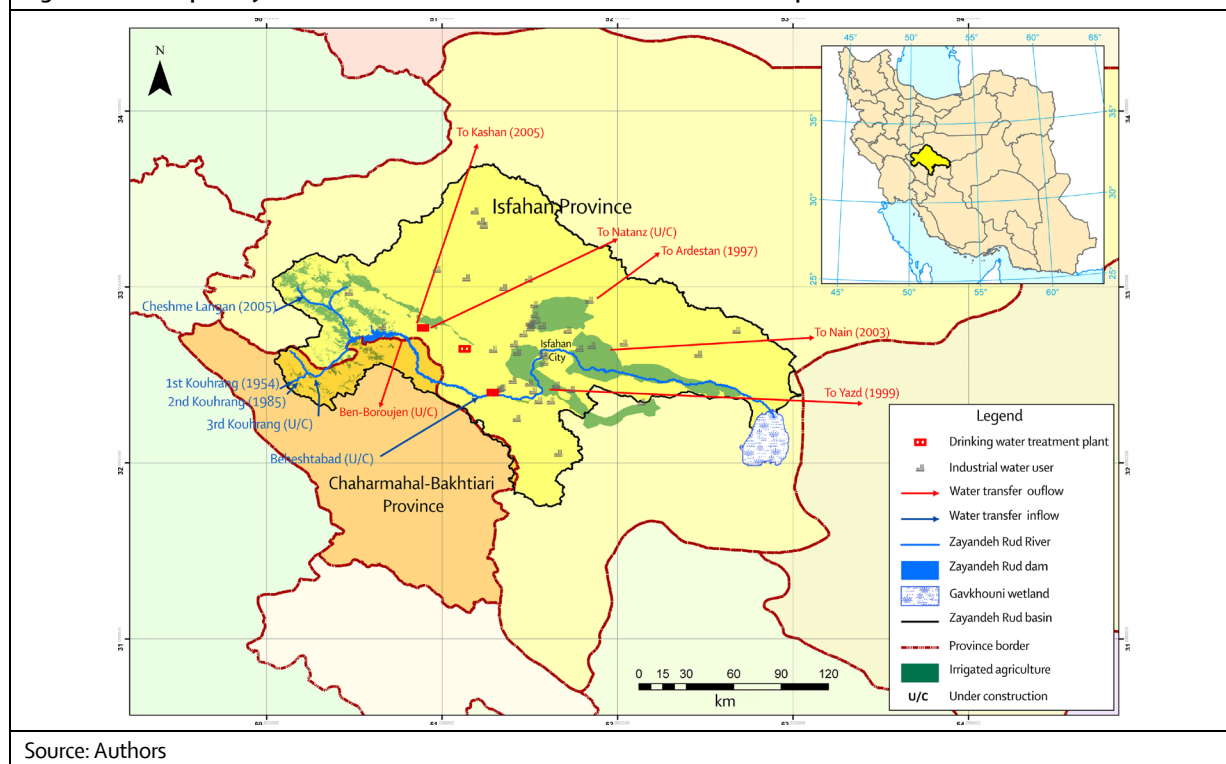
## Results

This section unpacks the severe problems caused by the impacts of Iran's socio-political situation on water governance. It addresses four interrelated themes: weak state capacity, path-dependent socio-economic development, a lack of accountability and the widely spread practice of rent-seeking.

### Oil revenues and weak state capacity

According to Iranian law, all water bodies are commons, and allocating permits to use the water for domestic, agricultural and industrial purposes is the responsibility of the Ministry of Energy. Most rule-making for the Zayandeh Rud basin happens at the national level; information exchange between provinces, sectors and governance levels (national, province, basin and local) is largely absent and knowledge plays no role in decision-making. Although laws and regulations specify

Figure 1: Map of Zayandeh Rud basin and Isfahan and Chaharmahal-Bakhtiari provinces



Source: Authors

instruments for horizontal coordination (across provinces and sectors) and for vertical coordination (across governance levels), and despite the existence of several entities for collective decision-making between various state agencies, coordination is insufficient in practice. The most important coordination entity – the Zayandeh Rud Basin Coordination Commission for IWRM – has not been able to resolve disputes over water rights. Decision-making is based on zero-sum negotiations and hard-bargaining techniques with keeping information secret. The commission focussed on a supply-oriented approach (water transfers, release of reservoir water), whereas no effective plans and measures exist to control the abstraction of surface and ground water. Despite the hierarchical, command-driven style of the state, there is a lack of authority and enforcement of the commission's regulations at the local level.

The problem concerning the lack of institutional capacity in the water sector can hardly be solved within the water sector alone, because part of it seems to be related to the consequences of Iran's oil-rent state context. The state-owned national oil industry has been the engine of economic growth: It represents nearly 50 per cent of the government budget, the prime source of foreign-exchange earnings and directly affects public development projects. However, oil rents alter the framework for decision-making, and spending becomes the primary mechanism of stateness. Revenues from the rent of oil change the role of the public sector by expanding bureaucracies as well as centralising power and intervention, whereas the public sector lacks effective policy formulation and implementation capacities in other sectors. Due to ineffective water management, the associated conflictual situation and the necessity for improving coordination, the Supreme Water Council of Iran abolished the Coordination Commission for IWRM in 2019 and formed the Zayandeh Rud Reviving Working Group instead. This working group is chaired by the vice president of Iran, and the farmers' representative is not a member anymore. The growth of new bureaucracies with the disorganisation of old ones leads to a general lack of coordination and administrative chaos (Karl, 1997). Hence, the lack of state authority was addressed through centralisation and a decrease in stakeholder involvement. Meanwhile, the challenges require the state to be more cohesive, and further politicised decision-making undermines the authority of the public sector.

### **The illusion of water abundance and path-dependent socio-economic development**

Another layer of the Zayandeh Rud challenges is related to the illusion of water abundance. The windfall rents create the illusion that the country's path towards economic development is without major obstacles, and oil revenues inflate the state's goals and expectations. Massive spending becomes a model for the rest of the economy, with little consideration given to constraints in light of the environmental conditions. Therefore, oil revenues strengthen actors and activities that use water resources inefficiently. In light of oil revenues, water policy-makers pursue large-scale, short-term, supply-oriented projects that massively depend on the abstraction of

water resources instead of implementing more difficult but sustainable options, such as water-demand management and improving water productivity. In the last half-century, the construction of the Zayandeh Rud dam and water transfer tunnels, access to pumping technology and cheap energy, concurring with wet periods, have led to human overexploitation of the ecosystem and a sharp increase in water demand through the development of agricultural lands and energy/water-intensive industries. For decades, water shortage and control of water abstraction were of no concern to policy-makers. In some cases, the focus has even been on land drainage. The path dependence of those people whose livelihoods depend on growing water use and the large number and diversity of stakeholders with divergent interests – amplified by climate change and variability – imply the severe nature of the problem, which is intertwined with uncertainty, ambiguity, feedback and the complexity of social-ecological systems.

### **Resource-based industrialisation and water transfer: The source of self-interested rent-seeking behaviour**

Fiscal dependence on oil revenues institutionalised a permanent tendency towards rent-seeking. Access to oil rents through energy subsidies is one of the most important sources of power and wealth for political and economic groups. One way to get these subsidies is to develop large industries, such as steel, petrochemicals, mining, etc. As an example, the profit of Isfahan's Mobarakeh Steel Company was about USD 1 billion in 2014, but without gas subsidies, it would amount to a loss of about USD 220 million. These revenues also generate staggering wealth that facilitates corruption and patronage networks. However, the respective industries need water, and political decision-makers for resource allocation prefer inter-basin water transfers over the effective management of water demand. In the Zayandeh Rud basin, the development of large industrial factories as well as water transfer projects intensify self-interested rent-seeking behaviour. Other consequences are intense competition for water between the Isfahan and Chaharmahal-Bakhtiari provinces, an atmosphere of unjust access to water and polarisation as a result of ineffective coordination. Due to the recent decline in Iran's oil revenues, the funding of projects in the water sector has increasingly depended on public-private partnerships. However, these large rent-based/semi state-owned companies are involved as the private investor party. In return, they pursue a higher water demand – consequently, in the long run it causes more path dependence and resistance to improving the water consumption pattern.

### **Fake news and accountability gap**

In the current situation, there is little transparency in decision-making, and the accountability gap is evident. Key decisions take the form of political decision-making behind closed doors. Often, it is not clear who makes the final decision, and changing plans and strategies and implementing the measures would require convincing numerous actors. Examples include decision-making through the National Security Council due to the emerging security atmosphere, regulations on the non-disclosure of information, and undue

interference of members of parliament in forcing regional and national authorities to pursue their interests, such as dam and water transfer construction and establishing industrial factories. Transparency is generally seen as a precondition for revealing the interests of otherwise hidden beneficiaries, as the basis for joint fact-finding and as the obligation of actors to accept responsibility for their activities (Islam & Susskind, 2013). In the case of the Zayandeh Rud, the general lack of data availability as well as public awareness about the causes of existing challenges have created fertile ground for the malicious use of social media to spread disinformation. At present, social media reinforce existing water conflicts, especially through misleading and selective news such as: dissemination of fabricated or exaggerated information about households with no access to drinking water to create victim narratives; claims about higher socio-economic benefits of water use in one area or for one economic activity and blaming another area or sector for high water withdrawal. A further example is the favourable interpretation of water laws as well as decisions on commission regulations concerning water rights or water-use licences to influence public opinion in one direction, consequently increasing tensions and polarisation and destroying of social capital.

## Conclusions

There is no universal solution for overcoming a lack of institutional capacity to achieve good governance. Each country must develop its own pathway based on its political, social, environmental and economic context. The centralised and proliferating bureaucracy in Iran – an oil-based economy – combined with limited authority, has led to weak institutional capacity in the water sector. This lack of institutional capacity can hardly be changed within the water sector alone.

Overspending on dams and water transfer projects provides policy-makers with an “easy” road, and it hides institutional weaknesses. Therefore, more rigorous measures – such as strengthening the rule of law, water-demand management

and improving water productivity, all of which take time and provide few immediate benefits – are not given priority.

The mere existence of collective decision-making entities for addressing coordination deficits is not enough. Instead, the enabling environment for stakeholder involvement, information exchange and the presence of diversified coordination mechanisms are of paramount importance. Raising public awareness about the benefits of successful water cooperation (and the costs of current tensions) and the lack of political will for more transparency and accountability remain challenges in conflict-prone regions with emerging fears about water scarcity.

## Recommendations

- Combat disinformation campaigns by providing the public with data and information on the water consumption of different users and a realistic picture of river resources and water availability in a comprehensible, accessible and timely manner.
- Raise public awareness about individual social responsibility for a healthy river and the social benefits of successful water cooperation.
- Develop community support to make policy-makers refrain from new water transfer and dam construction projects in the Zayandeh Rud basin and other places such as the Karun basin.
- Cease the supply-oriented management scheme to alter the direct link between oil rent and the illusion of water abundance and push policy-makers towards basin-wide water-demand management strategies.
- Strengthen networks of farmer organisations in the basin to develop their capacities for more coordination, participation and responsibility-taking.
- Design problem-solving forums to engage stakeholders in fact-finding, data gathering, knowledge-sharing, participatory monitoring and the adoption of a consensual strategy.

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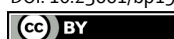
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