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## Relative Deprivation, a Silent Driver in Hydropolitics: Evidence from Afghanistan-Iran Water Diplomacy

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**ABSTRACT:** This paper aims to unpack the affective factors in Afghanistan–Iran water conflict dynamics. It examines the role played by the feeling of relative deprivation (RD) (that is, riparian states’ subjective perception of their relative position) in conflicts over shared water resources. The model of RD-mediated hydropolitics is conceptualised through its application to Afghanistan-Iran water diplomacy by conducting process tracing and content analysis. The results reveal that Afghanistan’s domestic issues have led to a feeling of RD in its water sharing relations with Iran. Afghans’ feeling of RD has led to negative emotions and responses, which have in turn influenced decisions regarding their domestic use of transboundary waters and their withholding of water from downstream users. The RD feeling within Afghan society has a contributory role in hydro-infrastructure developments and the resultant desire on the part of government to meet societal expectations, notably within the Helmand/Hirmand River Basin. These responses aim to alleviate the RD feeling but have evoked social and political reactions as well as emotionally charged verbal disputes and water conflicts between riparian states. The research findings emphasise that RD feeling as a subjective and affective factor can subtly influence transboundary water behaviours, politics and diplomacy.

**KEYWORDS:** Hydraulic mission, hydropolitics, water diplomacy, Iran, Afghanistan, Harirud, Helmand

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## INTRODUCTION

Nearly half the global population depends on transboundary waters, but sharing of it can give rise to water conflicts with significant implications for international water relations (McCracken and Wolf, 2019). Although water conflicts may be considered simple collisions, they can be complex and involve various human-natural dimensions (Islam and Susskind, 2018). In transboundary settings, the interplay between social and political factors contributes significantly to the complexity of water-related behaviours and practices (Jaramillo, 2020); this is amply supported in the literature (Warner, 2012; Zawahri and Hensengerth, 2012; Hwang, 2015; Menga, 2016; Bréthaut et al., 2022). Political factors can have an impact on the distribution and utilisation of shared waters; these factors can include power dynamics and asymmetries, governance structures, and international relations (Ewing, 2011). Social factors such as norms, identities and values are also crucial to stipulating hydropolitical conduct and shaping patterns and structures of transboundary water conflicts (Nagheeby and Amezaga, 2023). Social factors, despite their importance, may often be overlooked in water conflict research; this can result in the examination of hydropolitics being limited to a consideration of merely politics (Bréthaut et al., 2022).

Social factors – particularly those associated with emotions and feelings – are increasingly being recognised as playing a crucial role in water diplomacy and conflict transformation; these have recently come to the forefront in water conflict research in the form of a discourse that addresses "affective hydropolitics" (Sehring and Wolf, 2023). This notion explores the effects of emotions such as fear, shame, and anger on water diplomacy, elucidating the significance of the emphasised feelings in this paper. Emotions give rise to short-term attitudes and immediate reactions, while feelings are considered to be products of emotions; the latter manifest as longer-term and more stable culturally sustained dispositions (Voris, 2009).

Water conflict studies must comprehensively grasp social and political, objective and subjective, and rational and emotional factors. Prevailing research trends have erred in dichotomising these components, disproportionately emphasising those that are deemed 'rational' and neglecting the impact on hydropolitics of subjective and societal factors (Nagheeby and Amezaga, 2023; Sehring and Wolf, 2023). It is imperative that these perspectives are integrated. This is highlighted in the literature, which underlines the importance of considering identity, trust, spirituality and, as we emphasise, emotions and feelings (Nagheeby and Amezaga, 2023; Sehring and Wolf, 2023; Seide and Fantini, 2023). Although the role of emotion in water diplomacy has been acknowledged, the mechanisms through which feelings are shaped by, and contribute to, hydropolitical conduct have hitherto remained unexplored.

Substantial progress has been made in understanding the role of social factors in hydropolitics, however analytical approaches have yet to be refined. The 'political sociology' approach facilitates the exploration of sociopolitical influences on the emergence and exacerbation of conflicts (Tilly, 1993; Monshipouri and Gurr, 1994; McAdam et al., 2001). It transcends a narrow focus on political phenomena by emphasising the role of social forces in shaping political behaviours, actions and practices (Orum, 1983). Mollinga (2008) proposed the political sociology approach in water resource management to investigate the interplay between social and political factors. Despite its analytical advantages, water conflict literature has yet to embrace political sociology, a lacuna that has been attributed to the absence of relevant frameworks (Wegerich and Warner, 2010). Many studies have delved into the role of sociocultural factors such as norms, ideas, identities and discourses in water conflicts; these studies include Suyarkulova (2014), Akhter (2015), Menga (2015), Hussein (2017), Hanna and Allouche (2018), Allouche (2020) and Nagheeby and Warner (2022), all of which contribute to a more holistic analysis of water conflicts. These conceptual contributions, however, have overlooked how feelings are shaped in a social context and how they shape political motives within water relations. The role of socially constructed feelings in water conflicts, particularly in transboundary settings, thus remains a subject of investigation.

Given the importance of affective factors in water diplomacy and conflict transformation, scholarly attention converges on emotions like fear, shame and anger. Among the array of affective facets, we focus on the feeling of RD that can precipitate the onset and exacerbation of diverse types of conflicts (Fu et al., 2015), including environmental conflicts (Homer-Dixon, 1991; Conca, 2002; Green, 2005; Hassan, 2021). Succinctly put, the RD feeling arises in people from perceiving the discrepancy between what they have and what they want. Offering a lens for scrutinising the sociopolitical influences on conflict exacerbation (Korpi, 1974; Seaton, 1997; Li, 2018), this theoretical framework underscores the importance of what Sehring and Wolf (2023) have articulated about the need to accurately assess the emotional states of actors in water conflicts and diplomacy. Despite the potential of RD theory, water conflict research contains few theoretical or empirical studies. The objective of this study is to bridge the existing knowledge gap by investigating why and how the RD feeling contributes to transboundary water conflicts; it does so by conceptualising it within the Afghanistan-Iran context of water relations.

On closer scrutiny, Afghanistan-Iran water relations over the Helmand and Harirud River Basins are more than mere political conflicts; they include social influences on policy design and decision-making (Nagheeby and Warner, 2022). Water governance within these basins has been crucial in shaping relations since the mid-19th century. Conflict over the Harirud River Basin started with the implementation of the 1857 Treaty of Paris and in the Helmand River Basin conflict began with the 1872 Goldsmith Arbitration (Nagheeby and Rieu-Clarke, 2020). Riparians have experienced fluctuating relations; these have ranged from legal complaints submitted to the United Nations, to verbal disputes, and to the 1973 Helmand River Treaty. The treaty is commonly hailed as the epitome of cooperation, yet conflicts have continued and even intensified (Mianabadi et al., 2021). Since 2004, however, there have been 27 rounds of Joint Committee of Commissioners, most of which have reached an impasse. Despite shared cultural affinities and ongoing negotiations, Afghanistan-Iran water relations have failed to achieve sustainable cooperation, thereby manifesting a contentious '150-year itch' (Nagheeby and Warner, 2022).

While there are broader water-related technical, quantitative and legal issues between Iran and Afghanistan, we argue that socially constructed feelings also contribute to shaping hydropolitical conduct. Throughout the historical ebbs and flows, Afghan people have had a general sense of themselves as victims; civil wars and foreign invasions, for example, are perceived to have caused the country's developmental lag (Nagheeby and Amezaga, 2023). Subsequently, hydro-infrastructural developments have been linked to ethno-nationalist values in the creation of a narrative around what Afghans are deserved (Ghoreishi et al., 2023). Iran, downstream, has responded emotionally to the hydro-infrastructural developments; it has framed environmental impacts as threats to human and national security and has delivered speeches imbued with anger, grief and threat (Loodin et al., 2023). These facts serve as a lens through which societies construct their image of selfhood and others, evaluate actions, and express emotional reactions towards each other. Academic literature, however, has largely focused on power dynamics, legal issues and geopolitics (Thomas and Warner, 2015; Nagheeby and Warner, 2018; Mianabadi et al., 2021; Nagheeby, 2024). While various explanations have been put forward to explain the perpetuation and escalation of water conflicts and the stalling of negotiations, we argue that it is feelings that underpin Afghanistan-Iran water relations.

By applying RD theory, we emphasise that it is not only interests that shape riparians' conduct; we contend that it is also the RD feeling that can intersect with water diplomacy and exacerbate water conflicts. The aim of this paper is therefore not to elucidate the connection between RD and other motivators in Afghanistan-Iran water diplomacy; rather, it aims to underscore the relevance of RD feeling as a contributory factor in water diplomacy. The following section explains the analytical framework of RD; it is structured as three consecutive phases: cognitive preconditions → affective preconditions → and responses to RD. In this exploration, a conceptual model is derived from RD theory, contributing to the political sociology of water and offering further applications in water conflict studies. The selection of Afghanistan-Iran water relations is supported by theoretical deliberations that are presented in the

study area section. In alignment with discussions on affective hydropolitics, we examine the case study's intertwined fabric of social and political factors to demonstrate how RD feeling can contribute to transboundary water relations.

### **THE THEORETICAL BACKGROUND OF RELATIVE DEPRIVATION**

In this paper, we conceptualise an analytical model of RD-mediated hydropolitics; it is based on RD theory that is rooted in political sociology and conflict theory. RD is a concept that emerged in the late 1940s in social science research (Stouffer et al., 1949; Merton, 1957). According to Gurr (1970), the RD feeling arises from a discrepancy between what societies desire (value expectations) and what they possess or believe they are entitled to (value capabilities). RD may stem from objective disadvantages; more than that, however, it is a subjective feeling that emerges when societies feel relatively underprivileged in their economic, social or political aspects (Duclos and Gregoire, 2002; Allan, 2007; Siroky et al., 2020). Interestingly, societies may continue to experience RD despite improvements in their objective conditions. Stouffer et al. (1949) and Merton (1957), for instance, observed that people in better situations experienced more resentment than those who were worse. RD feeling therefore depends on both objective and subjective conditions but is primarily a subjective and context-dependent feeling (Wang et al., 1993; Saturay, 2009).

Based on this background, we introduce the analytical model of RD-mediated hydropolitics. It provides a process for examining the role of RD feeling in transboundary water conflicts. In this model, the RD feeling shapes social forces and creates a socio-hydropolitically mediated context. Based on the political sociology approach, our epistemological stance is that transboundary water politics, behaviours and decisions are shaped by social constructs such as RD feeling and that RD feeling, in turn, influences them. This model comprises three consecutive phases: cognitive preconditions, affective preconditions, and responses to RD (Runciman, 1966; Gurr, 1970; Crosby, 1976; Smith et al., 2012).

#### **Cognitive preconditions of relative deprivation**

The first phase of RD theory necessitates an evaluation of the several cognitive preconditions, among which three are essential. The first one is perceiving the discrepancy; this denotes a society's awareness of the unfairness of its inability to fulfil its expectations with the available resources (Davis, 1959; Gurr, 1970; Crosby, 1976). The second precondition is the desire to resolve the perceived discrepancy; this is referred to as 'want' and is considered to be always present in social contexts (Bernstein and Crosby, 1980). The third precondition is disadvantageous comparison; this refers to a society's tendency to compare its situation to that of a reference group and find themselves at a disadvantage (Bernstein and Crosby, 1980; Walker and Pettigrew, 1984; Wheeler and Miyake, 1992). This occurs in RD-mediated hydropolitical contexts when a given society compares its condition to that of a neighbouring country and perceives itself as being at a disadvantage (Elliott, 1996; Podder, 1996); when Tajikistan, for example, compares its economic condition to that of Uzbekistan, it perceives itself as being worse off (Balafoutas et al., 2008; Menga, 2014).

Other cognitive preconditions can influence the formation of RD when present in social and political relations. One is feasibility, which is the idea of being able to meet expectations in the future when they are not currently being met (Runciman, 1966; Olson et al., 1995). Feasibility emerges in RD-mediated hydropolitical settings when a riparian state believes that resolving the perceived discrepancy is achievable through leveraging water resources. This precondition could be a prevailing factor in shaping water policies as water plays a crucial role in socio-economic development and in enhancing national

unity and territorial integrity through hydraulic missions.<sup>1</sup> Hydro-infrastructure developments can thus be seen as a solution to the complex nature of water-related problems, as showcased by the Grand Ethiopian Renaissance Dam (GERD) and the Rogun Dam (Seide and Fantini, 2023). The Rogun Dam is approached as a potential source of hydropower generation for Tajikistan, which currently faces recurring energy insecurity (Menga and Mirumachi, 2016); Tajikistan thus believes it is feasible to resolve its electrification issues through water and thereby become a regional energy exporter like Uzbekistan (Blumstein and Schmeier, 2017).

The other precondition is lack of self-blame, whereby the deprived society considers systemic inequities – rather than itself – to be responsible for its perceived discrepancy (Alain, 1985; Crosby, 1976). A society may attribute the inequities it suffers to various sources, including the state, governments, political regimes, and the structural factors that have shaped its historical trajectory. In the context of Euphrates-Tigris water relations, for instance, upstream Türkiye enjoys better conditions than its downstream co-riparians Iraq and Syria and has established itself as the regional hydro-hegemon (Warner, 2012). Türkiye's expansion of the Southeastern Anatolia Project – *Guneydogu Anadolu Projesi* (GAP) in Turkish – has resulted in a reduction in downstream water flow; this has led to Iraq, whose agricultural sector is central to its GDP, blaming Türkiye for its decrease in crop yield and in overall agricultural production (Warner, 2012). Riparian states engaged in RD-mediated hydropolitics thus refrain from self-blame, instead attributing their undesirable situation to exogenous causes such as climate change and the practices of other countries.

The last cognitive precondition is entitlement, whereby societies believe or interpret that they have a right to the resolution of the perceived discrepancy (Runciman, 1966; Alain, 1985; Olson et al., 1995); conversely, they may also believe that the reference group is not entitled to what it has (Krygier, 2018). The conviction of entitlement in water arrangements can be derived from various sources; these include, but are not limited to, international water law, customary law, and legal regimes (Zeitoun et al., 2019). In the Nile water arrangements, for instance, Egypt refers to its historic use and right, which was established during the construction of the Aswan High Dam. Ethiopia, in contrast, cites the equitable and reasonable water utilisation principle; they particularly used this principle to justify the construction of the GERD, which aims to improve socio-economic conditions such as the rate of electrification (Blumstein and Schmeier, 2017). The RD feeling arises when the deprived party asserts a claim of entitlement to resolve the perceived discrepancy by leveraging the feasible solution, or interpreting the entitlement to access, develop, and control transboundary waters based on conventions, laws, and rights. When the deprived party believes that others unjustly possess things, the RD feeling surfaces (Gurr, 1970; Feather, 2015), but the more unjust the perception of both our and their situations, the more intense the feeling of RD becomes (Feather, 2015).

### **Affective preconditions of relative deprivation**

If the cognitive preconditions are in place, formation of the RD feeling is contingent on the presence of the affective preconditions (Tougas et al., 2005). Affective factors include negative emotions such as resentment and envy (Feather, 2015); these can escalate water conflicts and make them more intractable (Seide and Fantini, 2023). Resentment can be defined as a type of anger that arises from an objective sense of injustice; it triggers a focus on the system that is producing the injustice (Walker and Pettigrew, 1984; Feather and Sherman, 2002; Kulczycki, 2008). Envy can be considered as a subjective sense of injustice towards someone who possesses an advantage, which triggers a focus on the comparison target and what they have (Walker and Pettigrew, 1984; Feather, 2015). Often intertwining with resentment, envy can be accompanied by additional emotions such as shame and fear (Feather and Sherman, 2002;

<sup>1</sup> A state's 'hydraulic mission' is manifested in the policies that it puts in place for the expansion and improvement of access to safe and reliable water, hygiene, and sanitation services for its citizens and communities; to further this mission, a state makes use of identity creation and slogans or symbols (Allouche, 2020).

Feather, 2015). These affective components, conventionally situated within the analytical framework of RD, have been underexplored in hydropolitical research. Emotions contribute to water conflicts and diplomacy in, for instance, the Aral Sea, Euphrates-Tigris, and Nile River Basins (Sehring and Wolf, 2023).

Emotions, whether positive or negative, have a complex influence on hydropolitics and water diplomacy. Sehring and Wolf (2023) articulated this complexity, saying that, "emotion, feeling, and sensations combined generate often unconscious and unreflective affective dispositions that connect and transcend individuals" (after Hutchison and Bleiker, 2014). Gurr (1970) also believes that individual grievances and frustrations can accumulate in a society leading to collective action and potentially even widespread unrest or rebellion, thus illustrating that emotions can extend beyond personal experiences. It is imperative to emphasise that emotions and feelings entail distinct features. Individuals and groups may experience emotions such as resentment, envy, or a combination thereof, but these typically represent short-term attitudes that fade quickly. Feelings such as RD, on the other hand, arise from emotions and are entrenched in long-term attitudes, patterns of behaviour, and relational structures (Voris, 2009). The relationship between emotions and feelings is not always straightforward; rather, there is a sense and meaning attributed to them, while feelings can embody sequences of episodic emotions that depend on particular relational contexts (Burkitt, 2002). The long-term collective experiences of negative emotions such as resentment and envy are thus a prerequisite for shaping the RD feeling.

### Responses to relative deprivation

The RD feeling unfolds through a sequence of cognitive and affective stages, culminating in a response by the party that perceives itself as deprived. The experience of RD creates a sense of powerlessness to pursue goals (Smith and Pettigrew, 2015). When the balance of power – actual or perceived – shifts in favour of the deprived party, it can increase expectations of a resolution of the perceived discrepancy, which intensifies the RD feeling. This, in turn, motivates the deprived party to mobilise its resources and strive towards its goals (Korpi, 1974). The response to RD is thus evoked when the deprived party experiences a sense of agency in international relations (Stack, 1984; Wright, 1997). During the early 2010s, for instance, Ethiopia was able to gain considerable control over the Blue Nile River; this followed from its negotiation of the Cooperative Framework Agreement (see Mekonnen, 2010) and from the fall of then President Hosni Mubarak of Egypt that led to the cessation of Western Bloc support for Egypt (Castro Méndez, 2014). The construction of the GERD is an example of a contentious project that was initiated at an opportune moment when the controlling entity possessed enhanced power to pursue its goals.

Responses to RD are oriented towards resolving perceived discrepancies and are contingent upon the emotions experienced (Runciman, 1966). One type of response is to enhance the capabilities of the deprived party, which can be achieved by improving its own situation (Wright, 1997); this response is often characterised by resentment towards those who are perceived to be the cause of deprivation (Walker and Pettigrew, 1984). Another type of response to RD aims to deliberately deprive the advantaged group of its resources and often involves envy of its capabilities (Walker and Pettigrew, 1984; Belk, 2011). Hostility and resistance are the primary characteristics of this type of response; it aims to decrease the capabilities of the advantaged group rather than increase those of the deprived group (Seaton, 1997; Gleick, 2006).

Gurr (1970) describes violence as actions – including turmoil, conspiracy and internal war – that are carried out by those experiencing RD against political regimes and their policies. Stepping back from the national to the international level of analysis results in a broadening of the scope of violence. In peace studies and international relations, violence is commonly defined as the intentional use of physical force or power (whether threatened or enacted) against oneself, another person, a group or a community, which may result in, or has a high likelihood of leading to, injury, death, harm, maldevelopment or *deprivation* (Galtung, 1969; Lederach, 1995; Richmond, 2002). As this paper shows, in common pool

resources such as shared waters, both self-improvement and deliberate deprivation of RD-mediated responses can trigger and exacerbate conflicts.

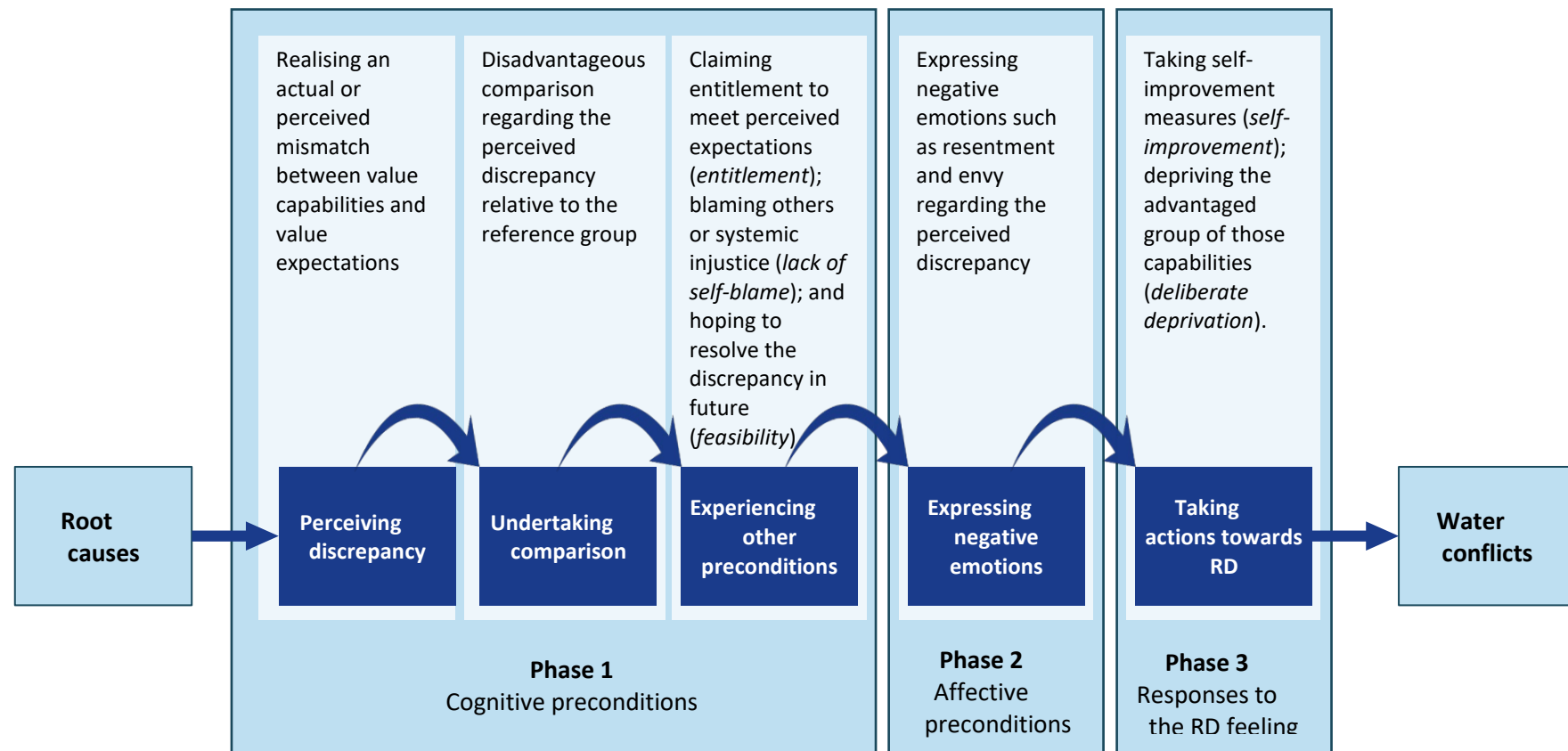
## METHODS AND MATERIALS

This study employed process-tracing methodology in the empirical application of the RD-mediated hydropolitics model to Afghanistan-Iran water relations. Process tracing is a qualitative research method that is particularly suitable for single, or limited, case study research (George, 2019). Various forms of process tracing have been used to trace the influencing factors in transboundary water relations; these include theory building, theory testing, and explaining outcome (Fatch and Swatuk, 2018; Adeniran and Daniell, 2021; Ide et al., 2021). Among these, the theory-testing method has most recently been employed in water conflict research (Grech-Madin, 2021; Turley, 2021). We used the theory-testing method to apply the model of RD-mediated hydropolitics. This method requires a systematic and theory-guided approach; this is essential to establishing a causal process through consecutive phases that involve entities, activities and manifestations (Beach and Pedersen, 2011). The entities are stakeholders such as individuals, groups, states or structural factors whose actions influence the process, initiating it and moving it forward. When the entities and their actions are clearly defined, the process is conceptualised. This enables the observation of manifestations that complement the theory-driven process (Beach and Pedersen, 2011). The main research hypothesis is confirmed once all phases have been validated by supporting facts and manifestations (Punton and Welle, 2015).

Based on the theoretical background of RD theory and the theory-testing method, we derive a conceptual model of RD-mediated hydropolitics (Figure 1). This model is designed to investigate whether RD feeling contributes to transboundary water conflicts. Certain context-dependent factors in a given society shape the root causes of the feeling of deprivation. The process is initiated when individuals, groups, and states perceive a discrepancy between reality and their expectations. The cognition of the deprived party can also be influenced by entitlement, feasibility and the lack of self-blame, all of which can contribute to a subjective sense of themselves as victims of injustice and being in a relatively underprivileged position. The RD theory requires that cognitive preconditions take chronological precedence and that they are followed by expressions of negative emotions within society. Responses to the experienced RD feeling then are manifested in the form of efforts to improve themselves or to deliberately deprive the other party of its advantages. This causal process can facilitate the conceptualisation of the role of RD feeling in the deprived party's water-related actions. These actions to resolve the perceived discrepancy can exacerbate transboundary water conflicts if they result in a conflict of interests and values with other co-riparians and cause harm to individuals, groups and/or the environment.

The data collection method is inspired by the systematic literature review approach which involved identifying, screening and selecting news articles. Following consultations with experts, Afghanistan's three primary news agencies were selected for data collection – *ToloNews*, *Pajhwok Afghan News* (*Pajhwok*), and *Hasht-e Subh Daily* (*Hasht-e Subh*). The search was conducted using predetermined keywords: neighbouring country (Iran), river basins (Helmand, Harirud, Hamoun, Godzareh), dams and hydraulic structures (Salma, Kamal Khan, Bakhshabad, Kajaki, Dahla), and water-related issues (irrigation, energy, electricity, transit, migration, deprivation). Three independent reviewers conducted the data collection process. Media reports containing statements made by Afghan officials and social actors regarding shared waters with Iran were gathered. After headlines were screened, 1178 news articles were collected and reviewers then evaluated the full contents to select 416 eligible articles for the primary repository. There was then a weeding out of the media reports that were not included in the

Figure 1. Conceptual model of RD-mediated hydropolitics.



Source: Authors.

Note: RD = relative deprivation.



research period, had missing information, or were repetitive. Finally, all authors conducted a collaborative evaluation of primary records, reaching a consensus on the inclusion of 155 news articles in the final repository for data analysis. The included data were in Farsi and Dari-Farsi languages.

In data analysis, qualitative and oriented content analysis methods were used to verify the theory (Hsieh and Shannon, 2005). Content analysis allows for systematic analysis of messages through coding, from overt levels to covert contexts, uncovering latent meanings through the use of why and how questions (Kracauer, 1952; Pashakhanlou, 2017). The RD feeling, which is a latent disposition (Kurtz, 2022), requires tracing beyond the overt aspects to the covert contexts in transboundary water relations. Coding was conducted to identify manifestations of RD feeling in quotes and statements and to transform them into analysable units in alignment with the model of RD-mediated hydropolitics. For coding purposes, MAXQDA 2023 software was used, which is a computer-assisted qualitative data analysis software suitable for content analysis (Morris, 1994; Saillard, 2011). The primary coding process involved two coders who critically assessed data relevancy and determined how these excerpts aligned with the model of RD-mediated hydropolitics. Consensus between the coders served as the predetermined rule in the coding procedure. After coding, as well as in cases of coders' disagreement, other authors provided their inputs. They drew from conflict theory in social and political sciences, a political sociology approach, and empirical case realities to evaluate and validate the results. The codes were subsequently organised chronologically based on the process-tracing method; a thematic hierarchy was established that classified key features, concepts and patterns of cognitive and affective preconditions and responses to the RD feeling. This process resulted in the synthesis of a narrative that elucidated the contribution of RD feeling to Afghanistan-Iran water conflicts.

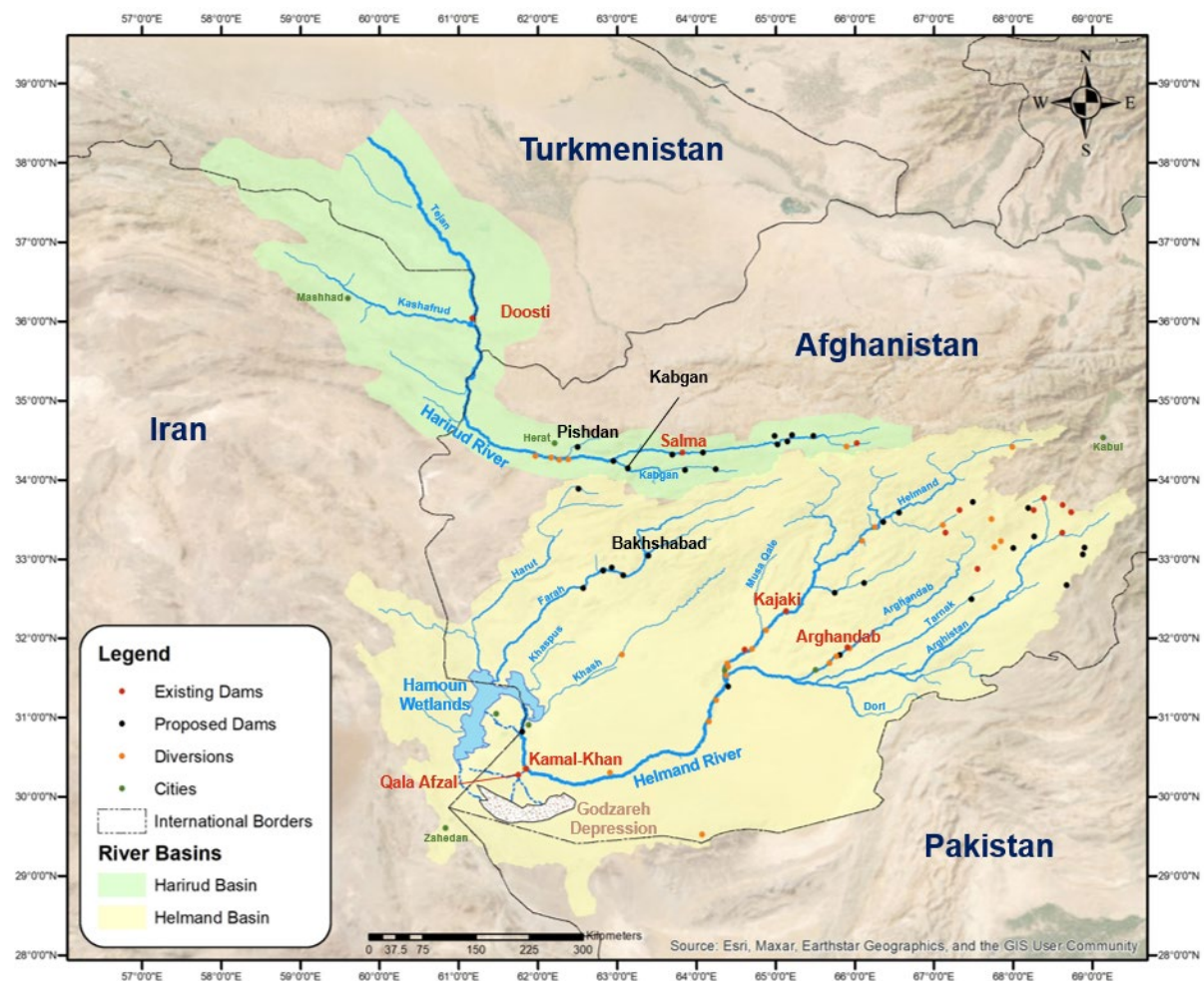
#### **STUDY AREA: CONTEXT, HISTORY AND WATER ON BOTH SIDES OF THE BORDER**

According to Figure 2, the Helmand and Harirud River Basins are transboundary water resources that are shared between Afghanistan and Iran. The Harirud River Basin covers nearly 112,000 km<sup>2</sup>, which is shared among upstream Afghanistan (39.5%) and Iran (43.7%) and downstream Turkmenistan (20.9%). The basin's inhabitants are comprised of 75% of the total population of Khorasan Province and 25% of the population of Afghanistan's Herat Province (King and Sturtewagen, 2010). The Harirud River originates from the Koh-i-Baba Mountains, located 250 km west of Kabul. As the river flows westward, its major tributary, the Kabgan River, joins the main river 70 km before reaching Herat City. From this point, the Harirud River turns northward and serves as the Afghanistan-Iran border for nearly 160 km (Favre and Kamal, 2004), and then forms part of the Iran-Turkmenistan border for about 170 km; after joining the Kashafrud River it is referred to as the Tejen River (King and Sturtewagen, 2010). The Harirud River reservoir is formed by the Iran-Turkmenistan Friendship (Doosti) Dam and provides 50% of the drinking water needs of Mashhad City, a large holy city in Iran; it also provides irrigation water to Turkmenistan before dissipating into the Karakum Desert (Nagheeby et al., 2019).

The Helmand River Basin covers an area of 353,400 km<sup>2</sup>. The majority of the basin is located in upstream Afghanistan (81.4%) and a smaller area is located in downstream Iran (15%) and Pakistan (3.6%). This basin is home to 74% of the residents of Afghanistan's Nimruz, Helmand and Kandahar Provinces and 13% of the residents of Iran's Sistan and Baluchistan Province (King and Sturtewagen, 2010). The mainstream of the Helmand River originates from the Hindu Kush Mountains in Afghanistan, flowing northwest towards Iran after it merges with the Arghandab tributary. The Helmand River is 1300 km long, with an annual water potential of 9552 million cubic metres (Mm<sup>3</sup>); it forms the Afghanistan-Iran border for 55 km before draining into the Sistan Delta. Other tributaries of the basin include the Khash, Farah, Khaspus and Harut Rivers, however these do not join the mainstream but rather drain into the Hamoun International Wetlands (Favre and Kamal, 2004). All the basin's rivers drain into the Hamoun wetlands, which has an environmental need for about 4378 Mm<sup>3</sup> of water (Van Beek and Meijer, 2006). The Iranian side of the wetlands is recognised in the Ramsar and UNESCO Biosphere Reserve Conventions

as the primary and most valuable aquatic ecosystem in the Sistan Plain region recognised as a Transboundary Ramsar Site and is listed as a UNESCO Biosphere Reserve; it is considered to be the primary and most valuable aquatic ecosystem in the Sistan Plain region (van Beek et al., 2008). The overflow from the wetlands drains into the arid Godzareh Depression via the Shile River. The depression has a capacity of 20 billion cubic metres ( $\text{Bm}^3$ ), which exceeds the total potential of the basin; it is replenished by Hamoun Wetland overflow after floods, which occur only about once in 20 or 25 years (Whitney, 2006; Miller et al., 2010). Both basins are vital to their co-riparians. This is especially true for Afghanistan as the basins encompass 52.64% of the country's total surface area and are home to 36.74% of its population; the area also includes a multitude of existing and proposed dams and diversions (Shroder and Ahmadzai, 2016).

Figure 1. The Helmand and Harirud River Basins and their main infrastructures.



Source: Adapted by authors from Shroder and Ahmadzai (2016).

In a broader national context, Afghanistan encounters numerous domestic challenges. Despite having abundant renewable water resources of about  $75 \text{ Bm}^3$  annually (Ahmadzai and Mckinna, 2018), Afghanistan is among the least water secure of West Asian countries (Ghoreishi et al., 2023). Approximately half of the population lacks access to safe and clean water, marking the country as high risk in the Water Stress Index (Shams and Muhammad, 2022). Water scarcity is particularly severe in Afghanistan provinces that share a border with Iran in both basins. Furthermore, food security is a

prevailing issue with a significant portion of the Afghan population experiencing emergency-level food insecurity (FEWS NET, 2019), including in rural parts of border provinces (Gohar et al., 2013; Salman et al., 2017). Energy security in Afghanistan is also at a low level, with little sustainability or self-sufficiency; electrification rates are at less than 40% and electricity imports account for 78% of its supply (Rostami et al., 2017; Ahmadzai and Mckinna, 2018).

Helmand waters are used primarily for irrigation on both sides of the borders (Mianabadi et al., 2021). In Afghanistan, agriculture uses nearly 93% of the country's water resources (Ahmad and Wasiq, 2004) and employs about 80% of the total population (Shams and Muhammad, 2022); it accounts for 30 to 50% of the country's GDP (Veilleux and Dinar, 2021). Farming is thus as crucial on the Afghan side of the Helmand River Basin as it on the Iranian side. Afghanistan's infrastructure is inadequate due to its larger population share, however both Iran and Afghanistan face challenges in providing drinking and irrigation water for their people (Nagheeby and Warner, 2022). Afghanistan's inability to supply sufficient irrigation water exacerbates unemployment and poverty. In the 2010s, the country's poverty levels surged by 21%, leaving almost 19.3 million Afghans below the poverty line (Central Statistics Organization, 2018). These challenges have been compounded by the impacts of war and insecurity; in combination, they motivate border inhabitants to migrate to neighbouring Iran in quest of improved living conditions (Nagheeby et al., 2019).

The Sistan Region of Iran, on the other side of the border, is also facing widespread socio-economic deterioration (Bagherzadeh et al., 2023). Compared to other provinces of Iran, for example, the Sistan Region ranks among the three worst regions of Iran on the Human Development Index (Omran et al., 2020) and on the Water Security Index (Maleki et al., 2021). This region of Iran has the second-highest rate environmental migration in the country, with about 26,500 people migrating to other regions of Iran between 2011 and 2016 (Mianabadi et al., 2022). These environmental migrations are due to increasing dust storm events in the region, which are caused by the drying up of the Hamoun wetlands (Rashki et al., 2013). In the Sistan Region, winds – locally called the '120-day winds' – blow from May to September and can reach speeds of 130 to 185 km/h. They typically provide a cooling effect, but in times of drought they bring hot air and disturb the wetland soil (Nagheeby, 2021). These dust storms cause social, economic and health problems for both sides (Mianabadi et al., 2021), however the eastward direction of the wind has a worse impact on Afghan society (Whitney, 2006; Nagheeby, 2022). Iran and Afghanistan are thus confronted with profound social, economic, environmental and health challenges within their shared river basins.

Water conflicts between Iran and Afghanistan are predominantly motivated by upstream hydraulic missions (Caponera, 2003; Zentner, 2012), albeit with ethno-nationalist values attached that transcend their objective functionalities. The 2014 to 2021 presidency of Ashraf Ghani was a period of relative stability. Amid that backdrop, Afghanistan intended to accelerate hydro-infrastructure development. In its hydraulic mission in transboundary waters, its policy approach moved from state building to nation building, with the aim of unifying and strengthening its national identity (Nagheeby and Warner, 2022). During this period, dams and other hydraulic structures have come to be regarded as a source of national pride and a critical component of the country's prosperity, aligning the hydraulic mission with broader social and subjective factors. The case selection is thus theory-guided, as Afghanistan's nation-building activities could be influencing the rise of RD feeling; this has also been showcased in other regions such as Nigeria (see Okeke, 2016). An investigation of the RD feeling in Afghanistan-Iran water relations was thus motivated by the sociopolitical ties in hydro-infrastructure development, the sense of injustice stemming from underdevelopment, and the emotive dynamics over transboundary waters on the part of both riparians.

## RESULTS AND DISCUSSION

### We ourselves need water; Iran should not have access to water

Afghan society grapples with numerous entrenched domestic challenges including, but not limited to, access to water and electricity, food insecurity, poverty, and human and national security issues. Its disadvantaged position stems from deep-rooted structural factors that are, at least in part, the consequences of prolonged conflicts such as civil wars and foreign invasions (Nagheeby and Warner, 2022). The accumulated feeling of deprivation in Afghanistan is due to centuries of geopolitical rivalry and interference by international powers including the USSR, Great Britain and the United States (Nagheeby and Warner, 2018, 2022). These factors have contributed to the country falling behind its neighbours in terms of socio-economic development (Ghoreishi et al., 2023). The underdevelopment is also attributed by Afghan society to central government mismanagement particularly its failure to control over transboundary waters. Afghans are also critical of their government's failure to resolve domestic issues such as inadequate drinking water, electricity, food, and job opportunities.

Hydro-infrastructural development is interpreted as a feasible solution to Afghanistan's domestic issues (see *ToloNews*, 2015a; *Hasht-e Subh*, 2019a). Water is considered to be key to increasing the area under cultivation which can lead, in turn, to self-sufficiency in food production, a reduction in food insecurity, and increased export of food products (*Hasht-e Subh*, 2021a, 2021b). Water for hydropower generation is also considered vital to self-sufficiency in electricity. Increased hydropower generation can address energy insecurity by increasing the availability of reliable electricity and possibly allowing for energy export (*ToloNews*, 2016a, 2016b). Such water-centric plans for resolving domestic issues have been initiated. Afghanistan, however, is positioned upstream in four of its five major river basins and 90% of its water resources are shared with neighbouring countries (Thomas and Varzi, 2015); hydro-infrastructural development is thus considered to be the 'silver bullet' by which it can resolve its domestic issues.<sup>2</sup>

Afghanistan perceives itself as having experienced deprivation due to mismanagement and the lack of control over its unjust water sharing arrangement with Iran; it believes this to be the reason for its current situation.<sup>3</sup> At both social and political levels, the sharing of transboundary waters with Iran has been deemed an "unjust affair" and a "great persecution" (*Pajhwok*, 2017a; *Hasht-e Subh*, 2019b). This perception has sparked a prevailing belief that transboundary waters should be entirely for Afghanistan's

<sup>2</sup> The use of water for domestic purposes and the perception of transboundary waters as a 'silver bullet' for Afghanistan's advancement are not confined to its water sharing relationship with Iran and the Helmand and Harirud River Basins. Afghanistan pursues this strategy across all transboundary river basins. In the southern region of the country, extensive dams are being constructed on the Kabul River (a tributary of the Indus River), including the Shah-wa-Arus Dam and the Shahtoot Dam. These developments are intended to meet the domestic needs and aspirations of the Afghan people but have led to hydropolitical tensions with Pakistan (*Andik and Mianabadi*, 2023). In northern Afghanistan, the country is redirecting the water resources of the Amu Darya River by constructing the Qosh Tepa Canal. According to Taliban officials, Qosh Tepa is one of the pivotal projects for the country's salvation. It represents a, "long-standing aspiration of the Afghan people hindered by prolonged conflicts and instability" (*Gazeta*, 2024) and, "the completion of this canal would enhance Afghanistan's economic situation and move the country closer to self-sufficiency" (IRNA, 2024). The construction of the Qosh Tepa, however, has sparked conflicts with upstream co-riparians Turkmenistan and Uzbekistan.

<sup>3</sup> Both social and political entities at various levels of authority have recognised and endorsed the idea that through hydro-infrastructural developments and the control of transboundary waters Afghanistan's multifaceted domestic issues can be resolved. President Ghani has indicated that by utilising water for hydropower generation, "our problems will be solved"; it will both tackle the inadequacy of the industrial electricity supply and improve low incomes (*ToloNews*, 2016c). The regional governor and authorities of Nimruz Province have also emphasised that water is linked to the "prosperity" of residents, citing the construction of the Kamal Khan Dam as a means to increase irrigated lands and address energy concerns (*Pajhwok*, 2017e). Abdulzahir, the Head of Farah River, further asserts that with the construction of the Bakhshabad Dam, Afghanistan can not only resolve unjust water sharing with Iran but can also resolve water scarcity issues in Farah Province (*Pajhwok*, 2016).

use.<sup>4</sup> Afghans also emphasise that the crucial nature of their domestic water needs necessitate control over transboundary waters. They advocate for hydro-infrastructure developments that will enable a just water distribution and optimal utilisation of transboundary water resources that will meet domestic requirements (*Hasht-e Subh*, 2019b).

The flow of transboundary waters to Iran is perceived as an unjust arrangement due to a range of unresolved domestic issues or – as per RD theory – a perceived discrepancy. Among Afghans, two main – but overlapping – perceptions thus prevail: (1) their own urgent need for domestic water, and (2) the conviction that water should not flow towards Iran. This cognition underscores that Afghan society and its government view Iran as a privileged, advantaged group that has unjustly profited from Helmand and Harirud waters (*Pajhwok*, 2017a; *Hasht-e Subh*, 2021b). Afghanistan's retaining of transboundary waters for its use is thus considered feasible and key to addressing its underdevelopment. This subjective perception has manifested itself as social pressure on the government to control transboundary waters; the government, in turn, has been influenced by the mismanagement discourse and has proclaimed its commitment to resolving domestic issues by developing hydro-infrastructure in transboundary waters. This is evidenced in President Ghani's speech at the inauguration of the Kamal Khan Dam: "Years ago, your complaint was about deprivation. Today you have dams, water, and management, and you also have wealth; congratulations (...). From now on, Afghanistan has the key to Helmand in its hands" (*Pajhwok*, 2021).

This shows that hydro-infrastructure development on transboundary waters are interpreted as a feasible way, at least in part, for Afghanistan to address its domestic issues. This suggests that controlling transboundary water resources could improve future socio-economic conditions or, in RD terms, it becomes feasible for resolving the perceived discrepancy. The values attached to hydro-infrastructure are also socially sensitive in that governmental actors and civil societies take pride in dam construction and feel that societal deprivation would be alleviated by having control over transboundary waters (see, for example, *Pajhwok*, 2021). Individuals and groups may thus reshape their subjective perception of themselves as deprived; they can feel that they hold 'the key to Helmand' in their hands such that the water does not unjustly flow further to Iran when there are domestic needs. As we go on to argue, Afghanistan's unilateral assertion of control over transboundary waters for its domestic use aligns with the other cognitive precondition that water sharing with Iran is unjust and that Afghanistan's water grabbing is a way for it to get what it deserves.

### **Suffering from deprivation 'relative' to Iran**

Following the perceived discrepancies in Afghanistan – their own urgent need for domestic water, and the conviction that water should not flow towards Iran – social and political entities in Afghanistan have been comparing themselves to Iran with regard to water-related issues. Afghanistan, which has abundant shared water resources, compares its capabilities with those of neighbouring countries; a farmer from Farah Province, for instance, stated that, "Iran sells its oil to us for 60 Afghanis<sup>5</sup> per litre, but we gave them our waters, which is more valuable than their oil, for free" (*Pajhwok*, 2014). This type of perspective, which compares a national source with shared resources, also exists at the top political levels of the Afghan government. President Ghani reflected this comparative argument in his speech at the inauguration of the Kamal Khan Dam, where he emphasised that, "if Iran wants (more) water, it must give oil" (*Pajhwok*, 2021). This position also underscores sociopolitical ties in Afghanistan, where parallel narratives converge or where governmental actors and policies yield substantial influence through

<sup>4</sup> Helmand civil society members, for instance, believe that, "water is given away to Iran under the pretext of Nimruz (...). Helmand waters should not be given to Iran" (*Pajhwok*, 2018). A farmer from Farah Province stated further that, "we seek water in the sea; the raging Farah River is the greatest blessing of God for farmers, while all the water flows to Iran (...), we deliver them our water for free" (*Pajhwok*, 2014).

<sup>5</sup> The Afghani is the basic currency unit of Afghanistan.

societal constructs. These resource comparisons align with the call for reciprocal access to transboundary waters in exchange for substances, which in turn supports the belief that water should not flow towards Iran.

Another point of comparison is the extent of water resource access and utilisation in both basins. According to the report of the Afghan Institute for Strategic Studies, for instance, "our neighbouring countries that share this basin [Harirud] have made significant strides in the agriculture sector and are excessively utilizing water in this region" (Pajhwok, 2019). In addition, Abdulzaher, the Head of Farah River stated that, "every year, one BCM [billion cubic metres] of water flows into Iran only from Farah River (...), [however], in most areas of Bakwa [district in Farah Province, Afghanistan], gardens have dried up and a large number of its citizens have been displaced due to the lack of water" (Pajhwok, 2014). While this may be considered implicit, these comparisons link water flowing towards Iran with the persistence of domestic issues in Afghanistan. These disadvantageous comparisons further reflect the perception by Afghan entities that having to share water with Iran is unjust and that transboundary waters should be utilised only for domestic purposes.

The state of development is another point of comparison. According to this assessment, Afghans believe that Afghanistan does not make effective use of its water before it flows downstream to Iran. A researcher at Kabul University articulated this belief, stating that, "As always, Afghanistan's transboundary waters will continue to flow to neighbouring countries unfairly and without effective utilization". The researcher highlighted the perception that Iran has achieved development through access to, and utilisation of, transboundary waters while Afghanistan, due to mismanagement in controlling its waters, lags behind. They went on to comment that, "the Afghanistan government will not be able to utilize and innovatively manage these huge and abundant resources, and we will always lag behind the leading convoy of neighbouring countries" (Pajhwok, 2017a). Another development-centric comparison comes from Najib Fahim, the then Afghanistan Minister for Disaster Management, who stated that, "Our neighbouring countries have designed and implemented large-scale plans for utilising the country's [Afghanistan's] water, using it to irrigate vast lands and build dams". Fahim also stated that Iran is utilising water to supply its water needs, while Afghanistan is not: "In our neighbouring countries, cities that did not have access to drinking water met their water needs and made extensive utilization of these waters" (ToloNews, 2015b).

The main comparison targets in Afghanistan are thus the extent of water utilisation and the level of socio-economic development; these reflect the perceived economic, political and social implications of unjust water sharing with Iran. These disadvantageous comparisons signify the strong belief that transboundary water arrangements should prioritise Afghanistan's domestic needs and that water sharing with Iran is unjust. These subjective water-centric comparisons mainly assess Afghanistan as being at a disadvantage, fuelling their perception of themselves as relatively underprivileged. Such self-perceptions underline the need for Afghanistan to control its transboundary waters in order to stimulate socio-economic growth and align the country's development with neighbouring Iran. The comparison acknowledges the perceived discrepancy while also underpinning the feeling of RD in accordance with interpretations of entitlement.

### **Our water, our right: The sources of Afghanistan's claims of entitlement**

Unjust water sharing entwines with culturally encoded narratives of victimhood and a sense of injustice (Nagheeby and Amezaga, 2023); according to that narrative, gaining control over, and use of, water will lead to the deprived party being rightfully recompensed. Hydro-infrastructural developments are thus intertwined with interpretations of entitlement to transboundary waters. Under the assumption that the Helmand River is national or internal (Nagheeby and Warner, 2022), Afghanistan claims entitlement to utilise transboundary waters as it wishes. Language such as "our water" and "water is our right" (Pajhwok, 2017b; *Hasht-e Subh*, 2021c) reveals Afghanistan's prevailing sense of ownership of, and entitlement to,

the unilateral use and hydro-infrastructure development of shared waters. Afghanistan requests energy or assets in exchange for releasing Iran's water right; this is represented in water-for-oil comparisons because it considers transboundary waters to be national capital (*Hasht-e Subh*, 2020; *Pajhwok*, 2021). Other aspects of Afghanistan's discourse aim to further legitimise claims of entitlement and ownership over transboundary waters; these include statements such as, "our country contributes more waters in the flow" and "the river passes a longer way through our lands" (Nagheeb, 2024). This interpretation is evidence of Afghanistan's belief that when water flows beyond its borders it is wasted (*Pajhwok*, 2020).<sup>6</sup>

Historical utilisation of water is another source of Afghanistan's sense of entitlement, which it claims is supported by the principles of international water law. According to such historical interpretations, Afghanistan prioritises its use of water for domestic needs on the basis of past utilisations. A researcher from the Afghan Institute for Strategic Studies, for example, claimed that downstream riparians of the Harirud River Basin – that is, Iran and Turkmenistan – have historically benefited from the floods while the Herat Plain has an historical right to utilise the surface waters (*Pajhwok*, 2019). Afghanistan thus sees itself as having an historical right to prioritise its own utilisation of transboundary waters. These historical interpretations intersect with the other cognitive preconditions of the RD theory; they particularly contribute to this perception of Afghanistan as being 'entitled' to prevent unjust water sharing.

Iran and Afghanistan signed the Helmand River Treaty in 1973. The parties accepted that, as stated in the treaty, the Helmand River is transboundary. According to the treaty Iran's water right in normal or above-normal water years is equivalent to 820 Mm<sup>3</sup> per year for drinking and irrigation purposes. Despite serving as the governing legal framework for Helmand River water management, diverging interpretations of the entitlement have led to controversy. The source of contention lies in Article V of the 1973 Helmand River Treaty (*Pajhwok*, 2017c). This article contains two controversial paragraphs that have given rise to legal disputes. Afghanistan commonly refers to the second of the two paragraphs as justifying its unilateral right to hydro-infrastructure development on transboundary waters. That paragraph serves as a cornerstone of Afghans' interpretation of entitlement; it notes that, "Afghanistan shall retain all rights to the balance of the water of the Helmand River and may make such use or disposition of the water as it chooses". It further stipulates that "Iran shall make no claim to the water of the Helmand River in excess of the amounts specified in this Treaty, even if additional amounts of water may be available in the Helmand Lower Delta and may be put a beneficial use by Iran". Afghanistan perceives itself as being entitled to the unilateral utilisation and diversion of all Helmand River water in excess of Iran's stipulated allocation (Nagheeb, 2022). In this regard, the first paragraph of Article V stipulates that, "Afghanistan agrees that it shall take no action to deprive Iran totally or partially of its water right to the water of the Helmand River as fixed and delimited by the provisions of Articles II, III, and IV of this Treaty".

Ultimately, Afghanistan claimed its entitlement to the control of transboundary waters based on a sense of ownership, historical utilisation, and interpretation of the treaty. Its further assertion that Iran does not deserve water from the Helmand River is fuelled by a commonly held conviction that during the Afghan civil wars Iran took more than its fair share of water (see, for example, *ToloNews*, 2015b, 2018). Iran, conversely, claims that the water it received from the Helmand River in excess of the stipulated amounts was overflow from flooding of the Hamoun wetlands, where it had first satisfied the wetlands' environmental needs. Water rights focus on drinking and irrigation needs from the Helmand River; this leads Iran to claim for the Hamouns' environmental needs from other watercourses in the Helmand River Basin (Amini et al., 2021). Afghanistan questions Iran's entitlement while at the same time asserting its own right to unilateral control and use; according to this narrative, Afghanistan is unjustly deprived and Iran is unjustly favoured, which gives rise to extreme RD feeling.

<sup>6</sup> A citizen of Herat Province stated that, "Afghanistan has the right to protect and control the water that is always wasted every year" (*Hasht-e Subh*, 2021c). Additionally, the governor of Farah Province stated that, "water is our honour, and it is the right of Afghans to utilize it, and we pay serious attention to its control, especially Bakhshabad Dam" (*Pajhwok*, 2017b).

### Resentment, envy and the complex emotional landscape of water sharing

The cognitive underpinnings of the RD feeling are evident within Afghan society. As previously shown, they revolve around two cognitive perceptions, the first being that they themselves need water domestically and the second being that Iran does not deserve to have access to transboundary waters. Together these two perceptions and the negative emotions they generated produced the affective preconditions of RD feeling. Afghan society palpably resents both the perceived injustice of the water sharing arrangement with Iran and the mismanagement of water by its own government. This negative emotion is evident in the statements of both Afghan society and government, which mostly reflect the first cognitive perception mentioned above, regarding the domestic need for water. Media outlets often express resentment with claims such as, "while the people of this country [Afghanistan] are dying of hunger and thirst, Iran, Afghanistan's western neighbour, is exploiting the Helmand and Harirud rivers" (*Hasht-e Subh*, 2017a). Civil activists of Nimruz Province also voiced their resentment, stating that, "A significant amount of water flows from the border areas of Nimruz into Iran, and the authorities are unable to manage it" (*Hasht-e Subh*, 2019b). Afghan society seems to interpret governmental mismanagement of transboundary waters as the main cause of their deprivation; in their quest for self-improvement and an end to unjust water sharing, they express resentment towards their government. In this regard, an Afghan economist noted that, "if the country's water resources are not further managed, Afghanistan will eventually face significant problems with its neighbours regarding transboundary waters" (*Hasht-e Subh*, 2017b). The Afghan perception that water control is inadequate thus causes rampant resentment, which leads in turn to pressure on the government to prioritise hydro-infrastructure development.

Resentment may be compounded by envy of Iran's access to transboundary waters. This emotion is reflected predominantly in the societal perception that water should be retained within Afghanistan rather than flowing towards Iran. As Afghan narratives lean towards legitimising the unilateral utilisation of water for its own domestic needs, Iran's access to water is also under question. Afghanistan's focus on 'others' and the desire to limit Iran's access to water can be seen as a result of envy. Envy becomes visible when negative emotions are accompanied by excessive criticism of others in detrimental comparisons and when the achievements of others are not acknowledged (Smith, 2004). An example of this is when Qais Mohammadi, a professor at Karwan University, supported Afghanistan's interpretation of entitlement to mean unilateral control of transboundary waters by claiming that it is unnecessary to let water flow downstream "so that the dust in Iran disappears" (*ToloNews*, 2017a). This can be considered as a symptom of envy as it indicates resentment towards others' possessions, a desire to obtain what others have, and a will to obtain others' assets even at self-destructive costs. Afghanistan's envy drives the dual objectives of seeking control over water and restricting Iran's water use; it does not consider that the drying up of the Hamoun wetlands would have a larger destructive impact on Afghanistan's health and economy than on Iran's.

### Relative deprivation, a silent driver in hydropolitical responses

Responses to the RD feeling are aimed at resolving perceived discrepancy. The RD feeling in Afghan society gave rise to RD-mediated hydropolitics in Afghanistan-Iran water relations. In its subsequent responses, Afghanistan used hydro-infrastructure development as a key instrument to enhance water control for its own domestic use and to restrict unjust water sharing. In this section, we illustrate how RD feeling creates a socio-hydropolitical context that influences the direction of Afghanistan's water policy. We discuss Afghanistan's two distinct responses to the RD feeling, namely self-improvement and the deliberate imposing of deprivation on the advantaged group; we explain how each has given rise to water conflicts. We do not claim, however, that motivations can be attributed solely to RD feeling, as the diverse interests in hydropolitical decision-making are accompanied by other factors.



### *Self-improvement responses to relative deprivation feeling*

The Afghan RD feeling has manifested in at least two distinct societal responses: collective actions such as upheavals and protests and, more individually, migration. Societal demand has centred on increased access to water and on regulating unjust water sharing.<sup>7</sup> Society has pressured the central government to promptly address domestic issues in order to ease tensions and pave the way for an improved developmental trajectory. The government has partially responded to RD-mediated social discontent by initiating self-improvement projects within the Helmand and Harirud River Basins. The relative stability between 2014 and 2021 provided an opportunity to conduct responses such as the "implementation policy".<sup>8</sup> The resulting rapid hydro-infrastructure development reflects the impacts of societal pressures on political decision-making and water policy design.

Hydro-infrastructure developments are a policy instrument that has been aimed at self-improvement and addressing domestic issues. In the Harirud River Basin, the construction of the Afghan-India Friendship (Salma) Dam in 2016 stands out prominently as self-improving; it allowed Afghanistan to elevate its water utilisation share from 46% to 79% (Nazari Mejdari et al., 2019). This development has been pivotal in providing water and hydropower generation; it has particularly benefited the disillusioned inhabitants of Herat Province. On the other side of Afghanistan's borders, however, the country's augmented water storage has the potential to a 30% to 80% reduction in the volume of water retained in the downstream Iran-Turkmenistan Friendship (Doosti) Dam reservoir (Nagheebby et al., 2019). This decline was considered as a water security threat to northeastern Iran (Mohamadi et al., 2022); it was further compounded by Iran's claims that it could meet the drinking water needs of this region until the mid-2030s if Afghanistan were to cease its hydraulic mission (Nazari Mejdari et al., 2019). Despite these implications, Afghanistan persists in pursuing further hydro-infrastructure development in the Harirud Basin, that is, the Pishdan, Teerpul and Kabgan Dams.

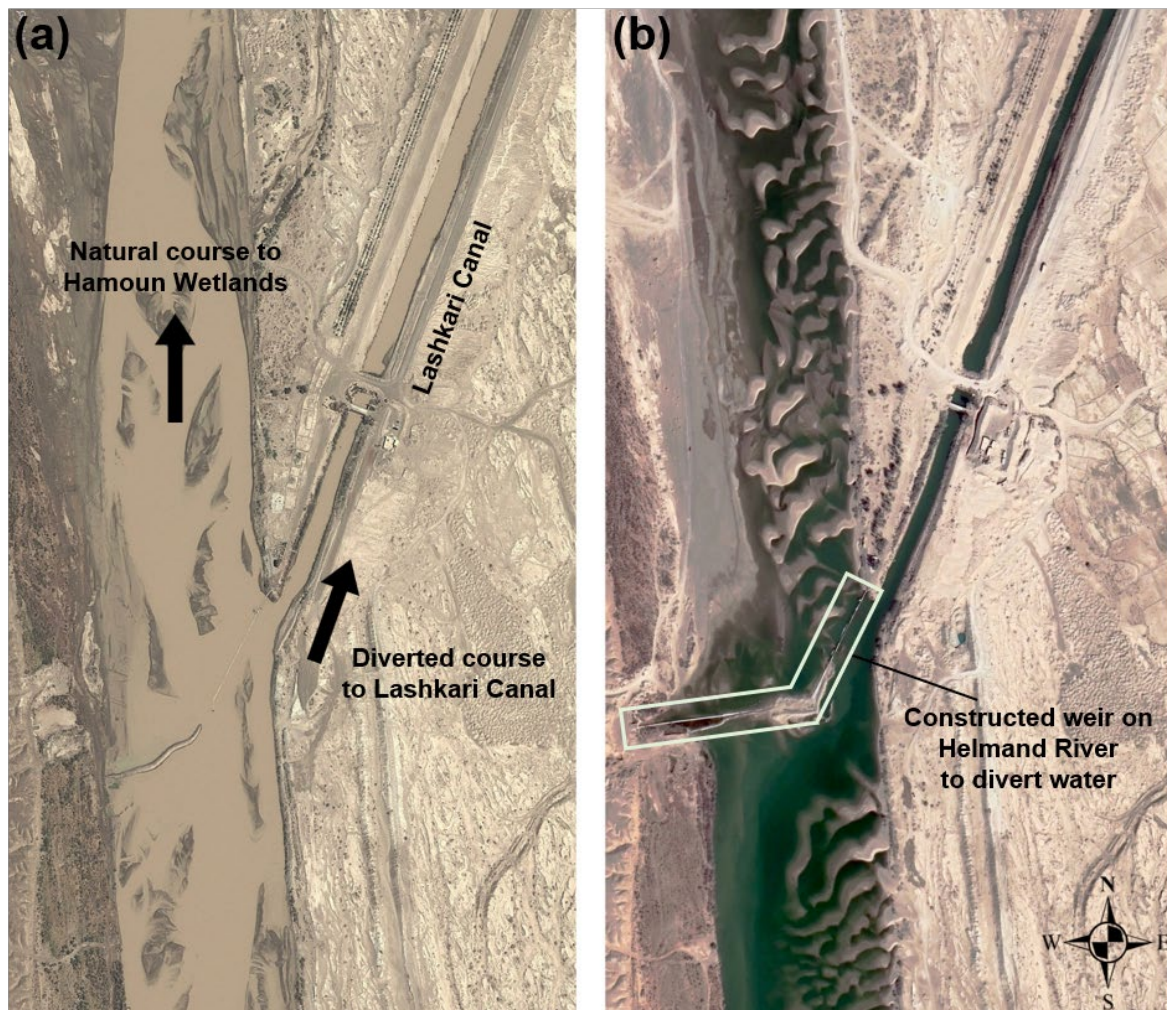
Hydro-infrastructure development is also actively being pursued in the Helmand River Basin. Initial hydraulic initiatives encompass revamping the Kajaki Dam by increasing its storage capacity from 1.70 to 2.34 Bm<sup>3</sup> and boosting hydropower generation from 51 to 152 kilowatts (KW) (Nagheebby, 2021). Following the natural flow of the Helmand River, the construction of the Kamal Khan Dam's third phase was initiated in 2017 and completed in 2021, along with its five associated canals (Tarko, Qala Afzal, Qala Fath, Sikhasar and Shirabad); it now boasts an annual diversion capacity of 5230 Mm<sup>3</sup> of Helmand River

<sup>7</sup> As shown earlier, a plethora of social protests and the expressing of grievances occurred in the Afghan provinces bordering Iran due to poor living standards and the inadequate meeting of basic needs. These collective actions compelled government to intervene to address the disparities. This leads to our main argument that the socially constructed feeling of RD, extending beyond water scarcity to encompass issues such as electricity and income, triggered government responses in the form of self-improvement initiatives. One can thus posit that the dam constructions in Afghanistan are, to a certain extent, a political response to the prevailing social feeling of RD.

<sup>8</sup> The implementation policy is a distinct water-related policy within Afghanistan that relates directly to Iran and the 1973 Helmand River Treaty. This policy was devised during the 2014 to 2021 Presidency of Ashraf Ghani and had the primary objective of asserting control over the transboundary waters of the Helmand River Basin. The premise is that downstream water distribution does not adhere to the provisions outlined in the treaty. This policy has resulted in a notable shift in approach towards the treaty. This is exemplified by the re-evaluation of historical figures like Musa Shafiq, the Afghan signatory of the treaty, who went from being labelled a traitor to being declared a martyr. Instead of being rejected, the treaty came to be called "the country's diplomatic masterpiece" (Pajhwok, 2017f; Nagheebby, 2024) and it was claimed that the treaty had been implemented in response to the deprivation. In analysing this policy, we argue that it reflects RD-mediated social pressures. These pressures are manifested through statements such as asserting control over transboundary waters, regulating environmental flow, and restricting Iran's water access in line with the treaty stipulations. Policy strategies include hydro-infrastructure development such as dam construction and canal refurbishment, which are designed not only to address state-centric concerns but also to alleviate societal pressures arising from challenging living conditions. While certain of Afghanistan's water policy instruments have been criticised as populist and have been accused of prioritising state interests over societal needs (Ghoreishi et al., 2023), we approach the implementation policy as an observable example of how affect-driven social forces influence Afghanistan's water policies.

water (Hasanzadeh, 2023).<sup>9</sup> Downstream of the Kamal Khan Dam lies the Lashkari Canal, a water diversion structure on the Helmand River. It has an annual diversion capacity of 900 Mm<sup>3</sup>, diverting the entire natural flow of the Helmand River. In 2016, a 1.5 metre weir was erected at the canal's intake point to prevent water flow towards Iran (Figure 3). The Bakhshabad Dam has also been under construction since the early 2020s. It features an estimated reservoir capacity of 1360 Mm<sup>3</sup>; this surpasses the annual water potential of 1250 to 1300 Mm<sup>3</sup> from the Farah River, which is the hydrologically significant tributary of the Hamoun wetlands (Thomas and Varzi, 2015; Shroder and Ahmadzai, 2016).

Figure 2. The watercourse of the Helmand River before (a) and after (b) the construction of the weir.



Source: Authors.

Hydro-infrastructural development is classified as a self-improvement response that addresses the RD feeling; construction of the Kamal Khan Dam, however, reveals its exacerbation of the Afghanistan-Iran water conflict (Nagheeby and Warner, 2022). Iran recognised the multifaceted implications of hydro-infrastructural developments; the country's then President Hassan Rouhani was prompted to criticise Afghanistan's hydraulic missions, stating that, "[w]e cannot remain indifferent to anything that harms

<sup>9</sup> According to the 1973 Treaty, the total annual flow of the Helmand River based on the Dehrawud Station is 5661.71 Mm<sup>3</sup> in a normal water year (Nagheeby, 2024).

our environment. The construction of numerous dams in Afghanistan, including Kajaki, Kamal Khan, Salma, and other dams in the north and south of Afghanistan, have had an impact on our Khorasan, and Sistan and Baluchistan Provinces" (*Hasht-e Subh*, 2017b).

It is claimed that this statement by the Iranian President is threatening and that it embodies anger at the upstream hydraulic mission (Loodin et al., 2023). A formal statement by the former Iranian Minister of Foreign Affairs, Javad Zarif, states further that Iran may carry out "reciprocal action" to Afghanistan's hydraulic mission.<sup>10</sup>

These statements by Iranian politicians gave rise to both social and political reactions in Afghanistan. Residents and civil societies in Nimruz Province organised protests in order to voice their dissatisfaction with Iran's stance; these echoed slogans such as 'Water is our right' and 'Water is our honour and dignity' (*Pajhwok*, 2017d), along with 'Down with Afghanistan's enemies' (*Iranintl*, 2017), thus highlighting their belief that Iran was impeding Afghanistan's right to manage water. As quoted in *Pajhwok* (2017d), "The international community should know that the people of Afghanistan, especially those in Nimruz, defend their right to live". These grievances were accompanied by negative attitudes wherein Iran was labelled a "freeloader" for receiving transboundary waters (*ToloNews*, 2017b). Afghan protesters and governmental actors interpreted Iran's objection as "direct meddling" in their country's domestic affairs.<sup>11</sup>

In mid-2016, Afghanistan-Iran water relations began to be marred by a verbal and securitised level of conflict that was motivated by rapid hydro-infrastructure development and Iranian political objections to hydraulic missions. A central aspect to consider is the societal overlap in hydropolitics, as hydro-infrastructure developments were initially claimed to bolster the country's self-improvement and, in the words of RD theory, resolve the perceived discrepancy. This highlights that in water relations, actions taken by riparians to improve their own conditions in an RD-mediated hydropolitical context can contribute to the exacerbation of water conflicts.

#### *Deliberately depriving the advantaged entity of water rights: The issue of the Kamal Khan Dam*

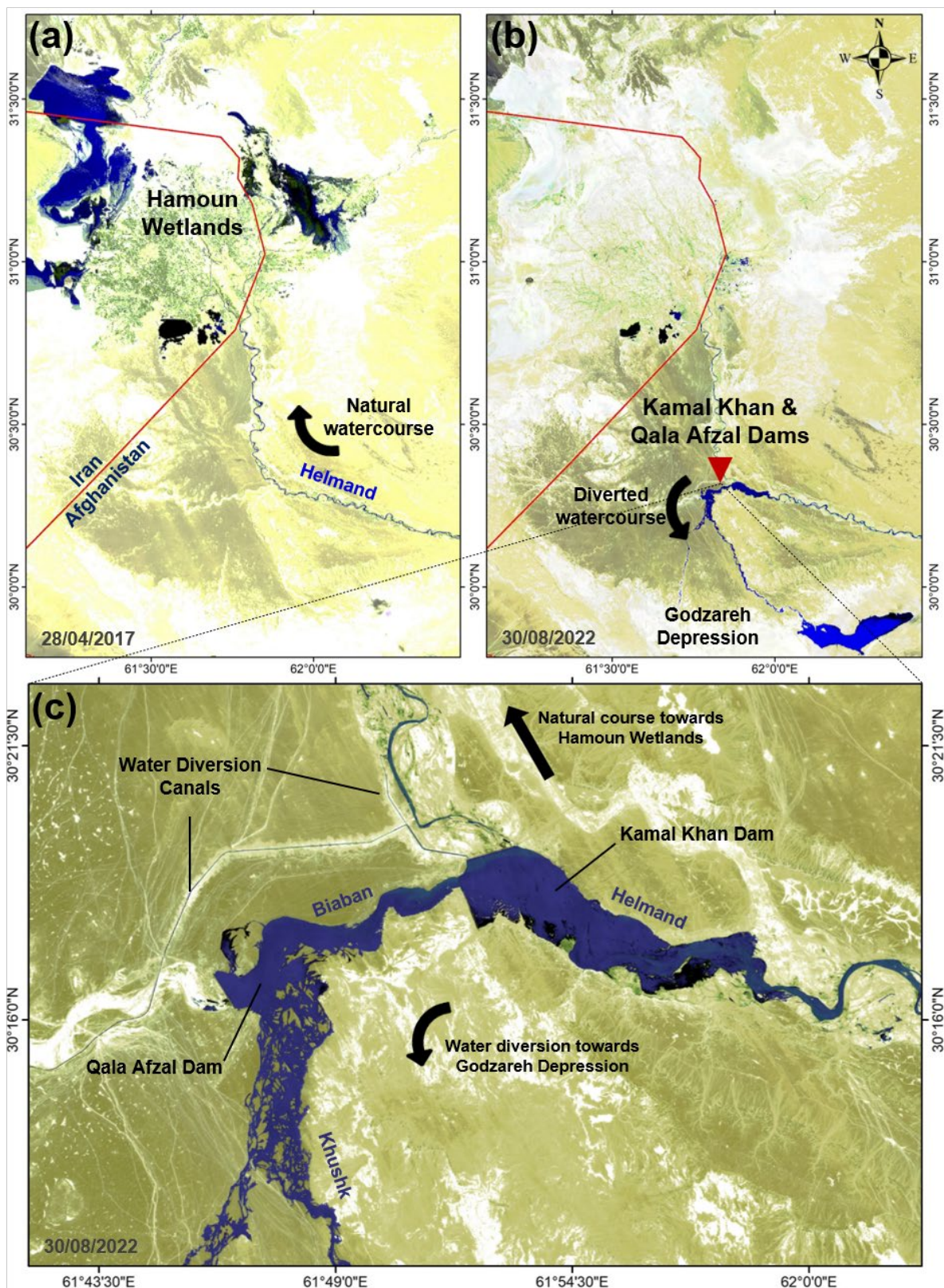
Another RD-mediated hydropolitical action is the deliberate depriving of the advantaged group. Such attempts to decrease the capabilities of the advantaged group are, by definition, violent; they thus inevitably exacerbate water conflicts. The foremost evidence of Afghanistan's attempts to deliberately deprive Iran of water are the performance of the Kamal Khan and Qala Afzal Dams (Figure 4). First, the dam does not have a spillway in the natural watercourse of the Helmand River and in the mainstream only valves are installed; therefore, water sharing with Iran is not natural but rather is dependent on either Afghanistan's willingness to open the valves or on the occurrence of large floods. Second, the capacity of the valves is extremely inadequate for delivering Iran's water right; this violates the soul and spirit of the 1973 Helmand River Treaty (Nagheeb, 2022). Last, but not least, the Kamal Khan Dam has a

<sup>10</sup> Former Iranian Minister of Foreign Affairs, Javad Zarif also stated that: "Now there remains one path, which is reciprocal action, that is, action should be taken towards strictness in some areas for Afghanistan; therefore, we expect the Afghan government to pay attention to the legitimate needs of Iran before the Islamic Republic is forced to take countermeasures (...). We now have one way ahead of us, and that is reciprocal actions. This is the only lever in the field of diplomacy (...). We hope that Afghanistan will not force us to exert pressure and pay attention to the needs of its big neighbor, Iran, which has always paid special attention to this country."

<sup>11</sup> Kabir Ranjbar, the chair of Afghanistan's Democratic Lawyers Committee, commented on this issue, saying that, "From a legal perspective, our government should adopt a serious stance, protest, and not remain silent. If it fails to react in this instance, that country will persist in its aggression towards Afghanistan. I believe this constitutes a clear meddling in Afghanistan's domestic affairs. Such behavior should not be tolerated by the government, civil society, or the Afghan populace." This interpretation was also echoed by Najibullah Azad, the then Deputy Spokesman for the Afghan Presidency, in his remarks regarding the verbal water-related exchanges between Iran and Afghanistan: "It is our right to utilize the waters of our country. Anyone using such language is irrelevant. The Afghan government has the right to use its resources for the benefit of its nation, and this is one of our priorities. We can only urge them to consider their words carefully. If Iran repeats its stance on this matter or if we detect any meddling in Afghanistan's affairs, the Afghan government will not remain silent."



Figure 3. The performance of the Kamal Khan and Qala Afzal Dams in diverting Helmand River water from its natural course towards Hamoun wetlands



Source: Authors.

spillway in the east-west direction a few metres below the crest which directs the diverted water towards the Qala Afzal Dam. The Qala Afzal Dam further diverts Helmand River water to flow in an artificial north-south path from the Hamoun wetlands towards the Godzareh Depression (Nagheeb and Warner, 2022). In the early 2020s, the volume of water thus diverted to the depression was at least 950 Mm<sup>3</sup> (while Iran's average water right is 820 Mm<sup>3</sup>); this resulted in, "the depriving of downstream households and the Hamoun wetlands of their water rights" (Nagheeb, 2022),

The governance of the Helmand River through these dams may resemble realpolitik tactics; however, it also serves as a political response to societal pressures that stem from the perception of water sharing with Iran as being unjust. The Kamal Khan and Qala Afzal Dams divert Helmand water to the typically dry depression without meaningful benefits for Afghanistan; this engenders deprivation and detriment for communities both upstream and downstream. The Sistan Region heavily relies on the Helmand River for basic needs such as drinking water, agriculture and animal husbandry, and the inhabitants face increasing vulnerability and hardship due to deliberate water diversion. This noncompliance with the treaty suggests that the obstruction of the Helmand River's flow might aim, at least in part, to intentionally deprive Iran and the wetlands of their water rights. This deliberate diversion seems to be driven by a mix of resentment and envy, epitomising not only a desire to possess what others have but also to display hostility and to alleviate the public sense of unjust water sharing. The envious disposition becomes evident when diversion of shared water lacks foresight and leads to what are ultimately self-destructive outcomes, while being considered in the short term to be valuable in countering the perception of unjust water sharing. The RD feeling therefore at least partially accounts for the deliberate diversion of the Helmand River and the lack of transparency;<sup>12</sup> it shapes a socio-hydropolitically mediated context that exacerbates water conflicts and causes ramifications for both the envious and the envied parties.

The construction of RD-motivated hydro-infrastructure that occurred during President Ghani's administration faced a setback in mid-2021 with the transition to the Islamic Emirate era. Following the construction of the Kamal Khan Dam, the redirection of the Helmand River towards the Godzareh Depression occurred three times, giving rise to numerous conflict-ridden interplays. Iranian authorities, including the regional Director of the Department of Environment and the Minister of Energy, have declared the diversion of the Helmand River near the Iranian border to be a hostile act and "arrogance" (IRNA, 2022a). The desiccation of the Hamoun wetlands as a result of intentional water diversion has incited residents of Iran to stage protests and to vandalise Afghan trucks and impede their passage across the Afghanistan-Iran border at the Milak checkpoint (IRNA, 2022b). These social responses underscore the escalating tensions surrounding water rights transgressions, reflecting the growing discontent and sense of grievance among affected communities. Protesters advocated for reconfiguring the Kamal Khan spillway to facilitate the natural flow of the Helmand River regardless of Afghanistan's willingness. They voiced slogans such as 'our rights must be taken' and 'violation of water rights equals destruction of the future generation', with religious leaders, regional governors, and parliamentary representatives attending the protests (IRNA, 2023). The mid-2023 political response of Iranian President Ebrahim Raisi to the deliberate water deprivation appeared threatening; it seemed to be imbued with anger over treaty violations and the endangering of human security:

Don't take our words lightly; take them very seriously. I am warning the authorities and rulers of Afghanistan to promptly grant the rights of the people of Sistan and Baluchistan Province (...). Take these words seriously

<sup>12</sup> The opacity surrounding the deliberate deprivation effected by the Kamal Khan and Qala Afzal Dams is increasingly evident; it follows from obstruction of transparency and a failure to share data. The Dehrawud Hydrometric Station, located upstream of the Kajaki Dam, is crucial to the determination of Iran's water rights. If the station shows an annual flow of 5661.71 Mm<sup>3</sup>, that year is considered to be a normal or above-normal water year; Iran's average water right is then determined as 820 Mm<sup>3</sup>. The 1973 Helmand River Treaty explicitly outlines the mechanisms for creating transparency in water sharing. Iran, however, claims that Afghanistan does not allow the Iranian delegation to visit and measure the Dehrawud Station.

and do not later complain that you were not informed, or that you believed the issue could be resolved through diplomatic and political talks and the passage of time.

These hydropolitical dynamics heightened intensity and led to conflictual events. The rapid hydro-infrastructure development upstream was ostensibly for self-improvement; the installation of the Kamal Khan Dam, however, can be seen as being at least partly motivated by the desire to deprive Iran of access to Helmand waters. This examination of Afghanistan-Iran water relations thus showcases how the RD feeling can exacerbate water conflicts by motivating both self-improvement and the intent to deliberately deprive another party of its advantages (see Table 1).

Table 1. RD-mediated hydropolitics in Afghanistan-Iran water conflicts.

Responses to RD feeling	Example	Affective preconditions	Cognitive preconditions	Causes of water conflict
Self-improvement	Construction, revamping and erection of dams, canals and weirs	Resentment at the lack of control over transboundary waters	We need water for domestic needs	Framing dam development as a threat to Iran's access to water rights
Deliberately depriving the other party of its advantages	Redirection of Helmand River's natural watercourse to the uninhabited Godzareh Depression	Resentment combined with envy at Iran's access to water	Water should not flow to Iran; Iran does not deserve it	Framing water diversion as hostile and as intending to deprive Iran and wetlands of water

It is important to clarify that we do not assert that all hydro-infrastructure developments, including dam constructions, are solely guided by emotions and feelings; however, the case of the Helmand River conflict demonstrates how RD feeling influences decision-making processes and hydro-infrastructure development, and how it exacerbates conflicts over shared water resources. As mentioned earlier, transboundary water conflict is an undoubtedly complex phenomenon that is influenced by various factors including social, political and economic aspects, and the RD feeling constitutes merely one of the factors that contributes to the complexity of a given water conflict. In this regard, it is worth noting that in Afghanistan dam construction is considered to be an instrument for gaining power and that third parties have played a significant role in the region's political geography. Our aim was to investigate the potential influence of RD feeling as a fundamental emotional factor in water conflicts. Through an examination of how RD feeling can function as a latent affective component, we sought to reveal its significance in shaping behaviours and decision-making processes within water relations.

## CONCLUSION

In this paper, we introduced RD-mediated hydropolitics and conceptualised it within the context of Afghanistan-Iran transboundary water relations. Despite ongoing negotiations between the riparian states concerning legal, technical and territorial issues within Afghanistan-Iran water relations, we argue that the impasses and the exacerbation of transboundary water conflicts are impacted, at least in part, by the RD feeling. RD-mediated hydropolitics represents a situation where a state feels itself to be unfairly deprived compared to a neighbouring riparian state(s). This situation involves negative emotions arising from a socially encoded perception of 'us' as entitled but underprivileged and 'them' as enjoying undeserved advantages. The RD feeling may not be directly linked to water; the perceived discrepancy can be associated with issues related to water such as food and energy, or to broader social and sovereign concerns. Through social forces and collective actions, pressure from the deprived society drives and



directs hydropolitical procedures to alleviate the socially constructed RD feeling. This transition of the RD feeling from a social context to hydropolitics and water diplomacy influences rhetoric, policies and decisions that aim to use transboundary waters to address perceived injustices.

To conceptualise the context of RD-mediated hydropolitics, we employed qualitative and content analysis methods on 155 articles from Afghanistan's primary news agencies. This showed that the RD feeling stemmed from Afghan society's subjective perception that it needs water domestically and that Iran should not have access to transboundary waters. Both of these perceptions have given rise to social forces that influence water policy and the acceleration of hydraulic missions. The construction and revamping of hydro-infrastructure, especially those in the Helmand River Basin, are demonstrated to be at least partially a result of this socially constructed RD feeling. Hydro-infrastructure development, whether unilateral or collaborative, is an example of a self-improvement response to the RD feeling, however the reduced downstream flow can spark transboundary water conflicts. Hostility and violence may ensue if depriving others is proven to be wilful and intentional. The deliberate diversion of the Helmand River towards the Godzareh Depression is contextualised as the Afghan response to the perceived injustice of its water sharing arrangement with Iran, the aim being to both increase its domestic utilisation of transboundary waters and deprive Iran of its water rights. Deliberate diversion, contamination or withholding of water are examples of violence in transboundary water relations; this is particularly the case when such actions result in significant deprivation, environmental harm or degradation, ecosystem disruption, or psychological distress. The RD feeling can contribute importantly to such water conflicts.

Beyond Afghanistan-Iran water relations, it can be generally argued that the RD feeling is context-dependent, that it arises within social structures, and that it influences transboundary water politics, decisions and practices. Utilising the analytical model of RD feeling in hydropolitical analysis proves to be beneficial for comprehending the sociopolitical dynamics at the domestic level, understanding how the RD feeling influences decision-making in water diplomacy, and assessing the impact of emotions and feelings on the allocation, accessibility and utilisation of transboundary waters. When decisions are made in RD-mediated hydropolitics, however, the RD feeling is a contributing factor but does not constitute the entire narrative, as decision-making processes in international politics and hydropolitics are influenced by diverse interests.

We acknowledge that this study focused on a scenario where the disadvantaged party is located upstream and where, as a result, responses to the RD feeling often took the form of water control and diversion, lacking comprehensive analysis. Given the context-dependent nature of RD feeling and its ensuing responses in transboundary water arrangements, it is crucial to conduct additional complementary research to establish more generalised arguments. One potential avenue for future research involves identifying the similarities and differences in RD-mediated hydropolitics depending on whether the disadvantaged party is located downstream, midstream or upstream. Pursuing research in this suggested direction could lead to an empirical analysis of RD-mediated hydropolitics; this could potentially generate a research stream from which a generalised argument can be derived. It is imperative to recognise the inherent complexity surrounding transboundary water arrangements as they are influenced by a multitude of factors that impact both water conflict and cooperation. We did not explicitly delve into the complex interplay between the RD feeling and other contributing factors, however, as our primary objective was to illuminate the role of emotions and feelings within Afghanistan-Iran water relations.

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