POLICY BRIEF

Water, Peace and Security

Addressing Water-related Security Challenges in Fragile Settings: Opportunities and Limitations for Defence and Security Actors

Executive Summary

In recent years, defence and security actors have shown increased interest in water as both a threat to and opportunity for peace. They are also increasingly looked upon to support prevention and stabilisation efforts in regions where water-related risks turn into security or even conflict risks. This raises the question of what roles defence and security can play – and should be playing – in supporting responses to water-related security challenges in fragile settings and beyond. While some emphasise the importance of leveraging the capabilities of defence and security actors, their involvement is sometimes met with concern by local communities, practitioners and researchers. Against this background, this policy brief reflects on the opportunities and limitations of involving defence and security actors in addressing water-security issues. A literature review and 10 expert interviews focusing on dynamics in Iraq, Ethiopia, Kenya and Mali yield three key observations regarding their involvement in this domain.

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1. **The socio-political context shapes both perceptions of, and trust in, security actors among local communities in the context of water security.** Previous experiences of armed conflict may foster deep societal distrust towards national and international security forces, undermining the perceived legitimacy of their roles in environmental enforcement and protection. In such contexts, strained relations between the military and public emerge as a key barrier to the legitimate involvement of defence and security actors in addressing water-related security challenges.

2. **Defence and security actors often have limited capacity and contextual knowledge to address water-related security challenges at the local level.** Limited capacity and knowledge among security actors in the area of water and climate security are major hurdles to addressing water-related issues. Conflicting operational priorities and insufficient understanding of the water security nexus in local contexts hinder meaningful engagement. Operational mandates and capacity constraints further limit the involvement of defence and security actors in immediate crises responses, impeding long-term investments in water-related initiatives.

3. **Military-humanitarian relations are challenged by the dilemma of maintaining the principle of impartiality.** Relations between military and humanitarian actors are oftentimes characterised by mutual distrust and a lack of coordination. Tensions between the political objectives of armed actors and the humanitarian principle of impartiality can impede the execution of water-related aid and development projects, hence undermining water security.

As the impacts of climate change intensify over the coming decades, so too will the need for integrated approaches to address water-related security challenges. Defence and security actors can – and likely will – have a role to play, despite the risks often associated with their involvement. To maximise the value of their contributions and minimise the risks, the '4D'-communities – defence, diplomacy, development and disaster relief – are urged to jointly design practical and integrated approaches which capitalise the strengths of the various actors while maintaining an adequate delineation of responsibilities. **Based on the observations above, three areas for action are identified to inform discussions about the involvement of defence and security actors in addressing water-related security challenges:**

1. Incorporate water security into the strategic planning and training of defence and security actors to enhance their knowledge and awareness.

2. Integrate defence and security actors into broader water governance strategies and local engagements to build community trust.

3. Break siloes between military and civil actors by fostering a shared understanding of water-related risks and action.

1. Introduction

The increasingly pressing impacts of climate change are intensifying water-related risks around the world. As global temperatures rise, for example, so do the frequency and severity of extreme weather events, as illustrated by the heavy rainfalls and flash floods seen in Paris and Pakistan during the summer of 2025. Conversely, droughts and water scarcity are widely recognised as threat multipliers, exacerbating food insecurity and potentially contributing to social conflict and displacement (Caretta et al., 2022, pp. 593, 618). In this context, defence and security actors have become increasingly involved in addressing these risks. Contributions include responses to water-related natural disasters, environmental crimes and water-security risks associated with conflict and violence. While the capabilities of defence and security could be leveraged to complement civilian efforts, in line with an 'integrated approach' to security and development (see info box below), local communities, practitioners and researchers have valid concerns regarding their involvement. In view of these perspectives, this policy brief aims to delineate the limitations and opportunities of involving defence and security actors in addressing water-related security.

In fragile contexts, such as the Middle East and North Africa (MENA), the Sahel, and East Africa, defence and security have already engaged in various ways to address water-related security challenges. These regions are particularly exposed to a variety of water security issues, with hydrological and ecological challenges and extreme weather events intersecting with instability and armed conflict driven by a complex interplay of socio-political factors. While the involvement of defence and security actors to mitigate these risks is not uncommon and often even necessary, their presence is sometimes associated with a complex interplay of asymmetric power dynamics and local community distrust.

This policy brief delves deeper into these dynamics, drawing lessons learned from the involvement of defence and security actors in addressing water-related security challenges. It adopts a two-fold approach. First, a literature review analyses the way in which defence and security actors are already involved in addressing water-related issues, supported by illustrative examples from the MENA, Sahel and East Africa. Second, three key observations are presented, highlighting the perceived barriers to – and opportunities for – the involvement of defence and security actors. These observations are derived from ten interviews with members of the security community, development and humanitarian practitioners, and researchers from Iraq, Ethiopia, Kenya and Mali. Given the limited number of interviews from highly complex contexts, these observations must be considered illustrative and not representative of a broader sample. Drawing on these insights, the paper concludes by outlining three areas for action to guide future debates on the involvement of defence and security actors in addressing water-related security challenges. These insights inform an integrated approach by the '4D'-communities – defence, diplomacy, development and disaster relief – that does not only consider water as a risk, but also as an opportunity for peace.

The 'integrated approach' and 4D communities

The 'integrated approach' – also referred to as the 'comprehensive approach' or '3D approach'– has emerged as a widely used concept among the international community. It aims to synergise the efforts of defence, diplomacy and development actors to holistically address security and development issues in fragile contexts. This framework has later been expanded by the Water, Peace and Security partnership to incorporate disaster relief, with the actors involved now referred to as the '4D' communities.

Source: Gabriëlse, R. (2007). A 3D Approach to Security and Development, Connections 6(2), 67–74; Meijer, K., et al. (2022). The WPS Approach: A design for an integrated, inclusive and informed approach to address water-related security risks, Water, Peace and Security (WPS), 1–16; Water, Peace and Security (WPS). (2025). Mobilise.

2. Security Sector Actors

Since the end of the Cold War, many have challenged the dominant state-centric notion of security, advocating for a broader security framework that extends to the societal and individual level and that covers both military and non-military threat dimensions (Baldwin, 1997; Krahmann, 2005). Thus, as the notion of 'security' has expanded beyond its traditional military meaning, so too has the range of 'security actors' and which types of activities they participate in. To assess the involvement of defence and security actors in addressing water-related security challenges, it is important to understand the types of actors involved and the typical roles they assume.

In its narrowest sense, the defence and security community comprises domestic state security actors, including national armed forces, paramilitary groups, police, intelligence agencies, and other special forces. In fragile settings, foreign state security actors may also play a crucial role, aiming to provide stability through observatory functions as well as peace enforcement and military training (Forsberg, 2020, p. 14). On a local level, communities themselves sometimes participate in the prevention and response to crimes and insecurity, in partnership and under authorisation of state authorities (Diphoorn & van Stapele, 2021). In conflict-affected regions, community-based self-defence groups also emerge without state authorisation, oftentimes in contexts where state security forces are either unable to provide adequate protection or are themselves contributing to security threats, i.e. through predatory or abusive behaviour. Finally, various non-state actors can be involved in the practice of security. Private military and security companies (PMSCs), for instance, may provide security for corporations or offer soldiers, training, consulting, or logistical support to state and non-state security forces (Krahmann, 2005). Additionally, non-state armed groups with criminal and political objectives, such as rebel movements, militias or organised crime groups, shape public and national security (DCAF – Geneva Centre for Security Sector Governance, 2015).

Typically, these actors are involved in either responding to internal or external security threats (DCAF – Geneva Centre for Security Sector Governance, 2015). Law enforcement and police-related forces, for example, are primarily concerned with the protection of people and property by enforcing law, preserving public order, and addressing crime (DCAF – Geneva Centre for Security Sector Governance, 2019).

Securitisation

Water securitisation describes the process by which water is framed as a security issue, thereby moving it outside of the realm of 'normal' politics. This process involves three dimensions: (1) The recognition of security threats related to water resources and infrastructure at the structural level, (2) the involvement of the military or high-level political actors at the institutional level, and (3) the justification of these actions through the use of alarmist language, metaphors, and other analogies at a linguistic level.

Advocates argue that framing water as a security threat through securitisation may help raise public awareness and mobilise critical financial and political resources. Critics, however, contend that water securitisation may legitimise repressive and insensitive government action, sideline civil society and concentrate decision-making power in the hands of political elites, thereby reinforcing existing power imbalances. These concerns are particularly relevant when securitisation extends to humanitarian tasks related to water services and infrastructure.

Sources: Fröhlich (2020), Fischhendler (2015), Bronte (2024).

Armed forces, meanwhile, are tasked with the national defence towards external threats, with secondary responsibilities regarding internal security and stability. Defence contributions to internal security may include support to law enforcement agencies, protection of critical infrastructure, and civil defence (e.g., tasks related to disaster response) (DCAF – Geneva Centre for Security Sector Governance, 2015). Importantly, defence and secuity actors can themselves pose threats to water security. Access to water resources, for example, may be weaponised by state and non-state actors for tactical and strategic reasons (Lossow, 2016).

3. The Roles of Defence & Security Actors in Water Security

In fragile settings, defence and security actors play a crucial role in addressing a variety of water-related security challenges. UN-Water refers to these challenges as "the capacity of a population to safeguard sustainable access to adequate quantities of acceptable quality water for sustaining livelihoods, human well-being, and socio-economic development, for ensuring protection against water-borne pollution and water-related disasters, and for preserving ecosystems in a climate of peace and political stability" (UN-Water, 2013). Based on this definition, water-related security challenges are two-dimensional: On the one hand, water-related security challenges can refer to factors negatively impacting the quantity and quality of accessible water. These factors may be ecological, political, socio-economic or conflict-related in nature. On the other hand, water-related security challenges can refer to the broader implications of changes in water security for national security and stability. Some of the major corresponding risks are summarised below (*Table 1 Water-related security challenges*).

Dimension	Water-related Security Risks
Climate & Ecology	• Water-related natural disasters and hazards, such as droughts and floods • Long-term environmental change, such as temperature rise, sea level rise, saltwater intrusion, altered precipitation patterns, and evaporation
Governance & Rule of Law	• Ineffective, corrupt and discriminatory water governance and management • Deficient enforcement of water-related policies and rules • Environmental crime (e.g., illegal mining) that impacts water security
Socioeconomic Factors	• Unsustainable patterns of water extraction by industry, agriculture and households • Demographic pressures, economic growth and urbanisation
Conflict & Violence	• Water as a victim of conflict and violence • Water as a weapon of conflict and violence • Water as a driver of conflict and violence

Table 1 Water-related security challenges

According to the literature discussed below, defence and security actors are particularly involved in addressing 1) water-related natural disasters, 2) governance and rule of law and (3) water-security risks associated with conflict and violence. In general, the security sector is not involved in addressing the socio-economic factors mentioned above. For each space of involvement, this section outlines the respective water-related risks, contributions from security actors in resolving them and general concerns raised about their involvement. Anecdotal examples from the MENA, Sahel and East Africa illustrate these observations.

3.1 Climate & Ecology: Natural Disaster Response and Relief

The risks

Globally, natural disasters and weather hazards have increased in frequency and intensity of occurrence; a trend which is projected to continue due to climate change (European Environment Agency, 2024; Seneviratne et al., 2021). Especially water-related disasters such as droughts, floods or extreme rainfall are on the rise, accounting for 74% of all reported natural disasters from 2001 to 2021 (Lee et al., 2020). Natural hazards undermine the quality and quantity of water directly and indirectly by damaging and contaminating water resources and critical infrastructure, with severe humanitarian implications for food and energy security. Additionally, water-related natural disasters contribute to internal displacement and migration, and can be potential drivers of conflict (Caretta et al., 2022). Over the coming decades, exposure to droughts is projected to increase, particularly in countries across the MENA and Sahel (Waha et al., 2017). At the same time, these prolonged droughts are expected to be accompanied by greater rainfall variability and rising sea levels that will likely increase flood risks in these regions (Serdeczny et al., 2017).

The responses

As the number of people affected by natural hazards oftentimes exceeds the limited capacities of civilian first responders and humanitarian actors, domestic and international governments increasingly deploy armed forces to support disaster relief responses. This involves logistical support, the protection of civilians and aid workers, and sharing of engineering knowledge (Kingham & McIlvain Moran, 2025). Despite recommendations of the United Nations to use military assets only as a last resort in disaster response (2007 Oslo Guidelines), the involvement of the military has become common practice worldwide (Canyon et al., 2020; Jessop, 2009). The Oslo guidelines distinguish between three forms of military assistance in disaster response: 1) Direct assistance, meaning the distribution of goods and services in crisis situations, such as water or medicine, 2) Indirect assistance, involving logistical support for the transportation of goods and personnel, and 3) Infrastructure support, covering activities facilitating disaster relief by ensuring a functioning public infrastructure (Simm, 2018).

In the Sahel, for example, military forces play a crucial role in water-related disaster response. In autumn 2024, heavy rainfall in West and Central Africa led to extensive floodings, affecting over 4.9 million people by December 2024 (UNHCR, 2024). National armies supported disaster relief in virtually all affected countries. In Nigeria, for instance, the army led rescue missions for people trapped by floods, which involved the transportation of relief goods by the Nigerian Air Force (Johnson, 2024).

The concerns

Positions of civilian actors towards military support in disaster response vary. On the one hand, military personnel bring crucial logistical and operational skills and capacities to the table. Therefore, given the impacts of climate change on natural disasters, demand for military support in this space will likely grow in the short- to medium term. In addition, military involvement in disaster response can provide an

opportunity for improved military-civil relations (Simm, 2018). On the international front, international military operations in disaster response can improve multilateral cooperation. On the other hand, military humanitarian operations are on average more costly than civilian missions. Disaster relief assistance may divert resources and capacities from the primary mandate of defence and security organisations. Beyond such operational arguments, a militarisation of disaster response is seen with scepticism for ethical and political reasons (Tinti, 2024). Concerns relate to the underrepresentation of certain ethnic groups or communities in military operations and the risk of political factors being prioritised over impartial humanitarian goals. Additionally, military involvement may have negative effects on the safety of civilian humanitarian actors and could cause mistrust among civilians that are confused about the various responsibilities of armed forces, especially during conflicts (Simm, 2018; Tinti, 2024). These concerns extend to the involvement of the military in response to man-made disasters as well.

3.2 Governance & Rule of Law: Enforcement and Regulatory Compliance

The risks

With water scarcity growing, addressing the widespread overexploitation and pollution of water resources in the Middle East, North Africa and Sahel becomes urgent. The enforcement of laws and regulations addressing these issues remains challenging, however, particularly due to the limited reach of government forces in remote areas and, in the case of transboundary water agreements, the use of water by upstream countries as a tool to exert pressure (Hoff et al., 2019). Where law enforcement is weak, a variety of illicit activities related to water pollution and theft may adversely impact the quantity and quality of water resources. These activities are oftentimes linked to organised crime, with armed groups controlling the access to and distribution of water resources (Meško & Eman, 2022).

Illicit activities are a particular source of concern in Iraq (von Lossow et al., *Water, Peace and Security (WPS)*, 2022). Illegal industrial, municipal and agricultural practices contribute to the contamination of water resources, for example through the illegal dischargement of oil, medical wastes and wastewater into rivers (Iraqi Observatory for Human Rights, 2022). Especially the population of the southern governorate Basra, home to large parts of the country's oil industry, is exposed to the consequences of such pollution. In 2023, for instance, the Guardian reported about oil companies diverting freshwater from rivers, deteriorating livelihoods for fisher communities (Manisera & Sala, 2023). To reduce reliance on such surface- and groundwater extraction, TotalEnergies is building a seawater treatment plant that would replace the fresh water currently used for maintaining pressure in the oil fields (Total Energies, 2025).

Despite these efforts, some communities still resort to using unauthorised lakes for fishing and irrigation. By 2023, the government observed approximately 5000 illegally constructed lakes, an increase of 100% since 2017 (Hall & Sobhi, 2023). Factions of the Popular Mobilisation Forces (PMF), a group of Iranian-backed militias, were reported to be involved in these activities, enabling them to generate revenue and gain regional influence. Government interventions against water-related crimes have largely spared areas under the control of such militias, highlighting the close intertwinement of water, organised crime, and politics in Iraq (Dag, 2023).

The responses

To strengthen water-related law enforcement, an increasing number of countries in the MENA, Sahel and East Africa have formed specialised police units. In Iraq too, a variety of specialised environmental police units are active, under the supervision of the Ministry of Interior and the Ministry of Environment. This includes the 'Environmental Police' (EP) established in 2015

by Resolution No. 1, with the aim of creating a nationwide police apparatus with offices in all 19 governorates to address a range of environmental crimes, including those related to water pollution. However, limited resources and staff have hindered the EP's development, constraining effective law enforcement and public awareness. As of 2024, the EP counts 300 employees distributed across 16 offices throughout the country (Csordas et al., 2024).

Specialised police units are also present in Algeria, where the illegal deepening of boreholes by farmers is worsening water scarcity (Kherbache, 2024). In response, the Algerian government reactivated the 'water police' in 2023 (Onyango, 2023). As a branch of the national security forces, the water police is tasked with controlling compliance with water use rules, specifically concerning agriculture. The agency has access to private and public water works and facilities and receives practical support from the army. Adopting a similar model, Togo established a water police in 2024 to ensure compliance with water quality rules (Anyango, 2024).

The concerns

Experts stress that law enforcement alone will not suffice to address violations of environmental laws. Rather, a comprehensive approach to preventing environmental crimes must incorporate efforts to understand the reasons and motives behind the harmful and unlawful practices (Csordas et al., 2024). Illegal water tapping, the diversion of river flows or the digging of wells may oftentimes be coping mechanisms of people to maintain livelihoods under conditions of water scarcity and perceivably inappropriate government interventions (Birkman et al., *Water, Peace and Security (WPS)*, 2022). Importantly, the focus on law enforcement should not distract from potential flaws in governance and justice frameworks. In this context, local customs and traditional water governance are problematised by some as hurdles to sustainable water resource management (Hoff et al., 2019). Others, however, indicate that – compared with centralised systems – customary approaches to water management can significantly boost the legitimacy of water-related regulations and compliance with them (Wong & Guo, 2014). These findings suggest that criminalising low-level rule violations at the local level may undermine rather than enhance water security.

3.3 Conflict & Violence: Water as a Victim, Weapon and Driver of Conflict

The risks

Water can be a victim, weapon or driver of armed conflict. As a victim, water security is threatened by incidental and intentional consequences of armed conflict. Combat activities not only disrupt water supply by damaging water resources and infrastructure, but also result in heavy water pollution and contamination. Moreover, conflict undermines the operational capacity of established actors in water governance. This can result in the erosion of water service provision and potentially empower non-state armed actors to fill the vacuum left by the state and function as alternative public service providers. Water systems may be further put under pressure as a consequence of conflict-driven internal displacement (Schillinger et al., 2020).

Secondly, conflict parties may weaponise water security (Gleick, 2019). Specifically in the MENA, water-related critical infrastructure and resources are increasingly instrumentalised for the advancement of ideological-political objectives (Chalecki, 2024). This weaponisation of water can take various forms and involves the usage of water for financial, military and coercive purposes (King & Burnell, 2017). In 2011, for example, Somalian terrorist group Al-Shabaab cut off liberated cities from their water supply during the midst of a severe drought (King & Burnell, 2017). Aiming to signal power and influence in the wake of several military defeats, the terror organisation buried crucial boreholes, which resulted in

significant death tolls ('Al-Shabaab's "water Terrorism" Is Yielding Results and Tragedy in Somalia's Civil War', 2014). In Iraq, meanwhile, ISIS diverted water flows to disrupt the Iraqi military and seized control over strategic dams, threatening their intentional sabotage (King & Burnell, 2017). The subsequent destruction of a dam in Fallujah in 2014 led to the displacement of 60,000 Iraqis and hampered the advancement of Iraqi forces (Al-Marashi, 2015). Similar to Al-Shabaab, ISIS cut off several Iraqi and Syrian cities from their water supply (Vidal, 2014). During the war period, the Assad-led Syrian government employed similar tactics, disrupting water supply for millions of people, contributing to the spread of diseases, the contamination of water resources, and malnutrition (Abbara et al., 2021). Recent examples of such weaponisation include the destruction of the Ukrainian Kakhovka dam by Russia and the conflict-related flood risks associated with the Sudanese Jebel Aulia Dam (IHE Delft, 2024).

Lastly, water insecurity is a potential driver of violence and conflict. While the relationship between water and conflict is far from direct and highly complex, changes in the availability and accessibility of water can increase conflict risk by impacting livelihoods, health, economies and food security, thereby increasing people's vulnerability. Especially in fragile settings with limited societal and governmental capacities to respond, water insecurity may feed into pre-existing social-economic and political grievances and fuel conflict dynamics at the local, provincial and national level (Meijer et al., 2022).

The responses

While defence and security actors may contribute to the water-related risks outlined above, they can also play a role in mitigating the consequences. According to the literature, they generally do so in three ways: by protecting water resources and infrastructure, supporting water-related humanitarian and development aid, and by resolving water-related conflict.

Protecting water resources and infrastructure

Defence and security actors are increasingly deployed to protect critical water resources from deliberate acts of sabotage, such as pollution, violence and explosions. In the case of Jordan, for instance, threats to water infrastructure are especially prevalent along its borders with Syria and Iraq due to regional instability and terrorist activities. The Jordanian government launched a Water Infrastructure Security Department tasked with monitoring and managing risks to and vulnerabilities of its critical water infrastructure. A comprehensive framework lays out a monitoring system and detailed emergency plans involving multiple actors. In cases of supposed sabotage plans, the agency is authorised to mobilise special police groups. In addition to government actors, private companies focused on security are integrated into monitoring and coordination efforts (Abdallat & Al-Zareer, 2019).

Domestic state militaries also support the reconstruction and improvement of water infrastructure. In Nigeria, for example, the army is involved in the construction of water-related projects, in addition to building hospitals, schools and roads (*Nigerian Army Presents Four Solar Powered Water Projects to Imo Communities – Infrastructure Development Magazine*, 2019; *Nigerian Army Unveils Water Project In Cross River Community*, 2024). Its involvement is part of the 'Special Intervention Civil-Military Cooperation scheme' initiated by the Chief of Army Staff to improve attitudes towards the military, as accusations of human rights abused are impacting civil-military relations (Elechi & Ohazuruike, 2024; Enyiazu et al., 2022). Likewise, Senegal deploys the military for water infrastructure projects as part of its "Army-Nation" programme, which aims to build trust and enhance stability (Civil-Military Relations: Building Trust, Ensuring Security, 2013).

Supporting water-related humanitarian and development aid

Since the 1990s, stabilisation missions have increasingly integrated development and humanitarian aid to increase the legitimacy of military intervention and promote security (Fishstein & Wilder, 2011). UN-led operations often implement these in the form of Quick Impact Projects (QIPs), serving peacekeeping objectives "by building confidence in the mission's mandate and the peace process" (United Nations, 2008). By 2015, roughly one-fifth of all conducted QIPs targeted water and sanitation (*Quick Impact Projects (QIPs)*, 2015).

Water-related QIPs have been an integral part of UN peacekeeping missions in the MENA, Sahel and East Africa, as is the case for UNMISS in South Sudan. To address the lack of safe drinking water – which had provoked tensions between host communities and pastoralists – UNMISS forces delivered a solar-powered water borehole in Aweil West in 2023 (Kele, 2023). In another instance in 2024, UNMISS handed over a water treatment plant to communities in Pieri, a region exposed to a large influx of internally displaced people (Mach, 2024). Similar projects are initiated under the UNIFIL II mission in Lebanon, where the deployed security forces use public service provision as an instrument to improve local legitimacy. According to a survey in 2015, more than half of the Spanish peacekeeping troops in Lebanon had been delivering humanitarian assistance, including projects related to water infrastructure (Durán & Bueno, n.d.). The importance assigned to public service provision was also reflected in the MINUSMA operations in Mali from 2013 to 2022. In the first five years of the mission alone, MINUSMA completed more than 286 projects to improve access to public services (Lyammouri, 2018).

Resolving water-related conflict

The explicit incorporation of water as a tool for conflict resolution by defence and security actors is rare. An example of such an engagement is the Dutch military operation from 2006 to 2010 in Uruzgan, Afghanistan. The Dutch army, leading the regional NATO mission, identified water as a cornerstone for effective peacebuilding in the region, which had a history of water-related armed insurgencies (Huizinga & Enserink, 2020).[1] In cooperation with local communities and NGOs, the military engaged in the reconstruction of water infrastructure, working towards the modernisation of irrigation systems to improve livelihood conditions. Moreover, the forces initiated regular meetings to restore a local water governance system. With these activities, the mission effectively utilised water as a tool to create trust on two levels: between the military and civil society, and amongst civil society actors themselves; with the goal to reduce incentives for insurgency (Middendorp, 2023).

The mission is one of the best known examples for the 'integrated approach' in action, with numerous studies conducted on its effectiveness (van der Lijn, 2015; Zaalberg, 2013). These suggest that the involvement of the military in people-oriented projects showed some success in the short-term. The deployed water projects were "those most appreciated and desired by the local population" (Huizinga & Enserink, 2020, p. 92). However, contradicting priorities, interests, and time frames, as well as difficulties to coordinate responsibilities between defence, diplomacy and development actors, limited the effectiveness of this integrated approach in practice (Internationaal Onderzoek en Beleidsevaluatie (IOB), 2023). Moreover, the reach of the Dutch army was constrained to security and development zones, and the withdrawal of the Dutch troops after only four years did not allow for a sustainable impact (Huizinga & Enserink, 2020, p. 92).

1 The deputy NATO Senior Civil Representative in Afghanistan responsible for the coordination of the civil-political aspects of this regional NATO mission was Gen. (ret.) Tom Middendorp, now the Chair of IMCCS, Strategic Advisor with HCSS, and Member of the Advisory Committee of WPS.

The concerns

It is clear that defence and security actors, in different contexts, are likely to play a role in protecting water resources from the impacts of violent conflict. Likewise, it is widely acknowledged that some degree of military cooperation is often necessary to deliver water-related humanitarian aid in conflict settings. In fact, the military may in many instances be in a better position to execute aid projects, in addition to providing security for humanitarian organisations in combat areas (Williamson, 2011). However, the co-optation of humanitarian aid for military purposes – such as the approach by NATO in Afghanistan – faces great opposition from the humanitarian sector, reflecting similar concerns raised about military involvement in disaster relief discussed before (Jessop, 2009). General critics fear that subjecting humanitarian activities to military strategic considerations is inherently incompatible with the very foundations of impartial, needs-based humanitarian assistance. In addition, the blurring of civil and military operations can put both humanitarian actors as well as receiving populations at a security risk. Concerns extend to military assistance in water infrastructure development, which may risk crowding out civilian actors, therefore preventing inclusive, participatory water governance (Mustofa et al., 2021). Last but not least, clear empirical support for the real stabilising value of military aid projects is lacking. In contrast, the focus on specifically short-term aid may even undermine the ability of missions to achieve their core military objectives (Williamson, 2011).

4. Opportunities and Limitations: Observations from Iraq, Ethiopia, Kenya and Mali

While defence and security actors can and do play a significant and diverse role in addressing water-related security challenges, the analysis above also illustrates that their involvement is often met with scepticism from researchers and practitioners alike. To detail the perceived barriers to and opportunities for the involvement of defence and security actors, ten interviews with members of the security community, researchers, and development and humanitarian practitioners were conducted. Complemented with desk research, the interviews focused on recent and ongoing relevant developments in Iraq, Ethiopia, Kenya and Mali. These countries were selected as illustrative examples to detail dynamics across varying socio-cultural and political contexts. While not representative, their comparative analysis yields three key observations regarding the role of defence and security actors in water, and more broadly, climate security.

Observation 1: The socio-political context shapes both perceptions of, and trust in, security actors among local communities in the context of water security

Across all cases, the socio-political context emerges as a key factor in shaping perceptions of security actors in water-related security. Previous experiences of conflicts and regional divides may result in deep societal distrust towards national and international security forces, therefore undermining the perceived legitimacy of activities related to environmental enforcement and protection. This is notable in Iraq, where interviewees highlight that state-society relations have been strained by the country's volatile political history since 2003. Continuous widespread corruption and ethno-sectarian patronage feed into pre-existing societal grievances towards the state and its security forces, including the Iraqi Environmental Police. Studies confirm these interview insights (Al-Marashi, 2023; Csordas et al., 2024).

In Ethiopia, interviewees point to the salience of ethnic and tribal identities in relation to local community perceptions of defence and security actors. Our interviewees observe that certain communities may not always view defence and security organisations neutrally and indicate that certain interethnic relations may lead to negative perceptions. Remote pastoralist regions are suggested to be more affected by such dynamics, as they tend to be further removed from centralised defence and security actors according to the interviewees. Furthermore, interviewees reported that local communities' perceptions of state and non-state actors can be negatively impacted by the effects of armed conflict on water infrastructure, for example during the period 2020 to 2022 (Berhane et al., 2025; Meaza et al.; 2025).

Building strong relationships between local communities and security actors remains a key challenge in the Malian context too. Interviews suggest that the presence of security forces can sometimes present logistical challenges for local communities, such as increased demand on water resources during deployments, which are often short-term in nature. As security forces continuously adapt to unfamiliar local contexts and practices, they may exercise heightened caution as part of their operational approach. This built-in scepticism and alertness can negatively translate to the military's interaction with civilians. Conversely, interviewees note that when military personnel shared cultural or regional ties with local communities, civil-military interactions were more positive and constructive.

In Kenya too, local communities' trust in security services differ. For example, interviews highlight that while community-level police forces have traditionally played an important role in Kenya, these have been gradually disarmed in favour of a national police force. According to the interviewees, this centralisation has been received negatively by some local communities, shaping their perceptions of state security actors. The Kenyan Defence Forces play a dual role within this security landscape. Local communities have positively perceived the military's involvement in infrastructure development, support for local livelihoods and environmental conservation efforts. Tensions remain high, however, between certain communities and security services, as military interventions emphasize the use of force and may stagnate community-based peacebuilding efforts, undermining community trust (Odero, 2025).

Across cases, improving public trust in the military emerges as a prerequisite for the involvement of defence and security actors beyond emergency responses. Local engagement and investments may help to build trust between communities and security actors. Participation of state security forces in water infrastructure construction offers one possible approach but requires careful consideration of how their involvement is perceived by local communities and integrated into broader efforts by diplomacy, development and disaster relief communities.

Observation 2: Defence and security actors often have limited capacity and contextual knowledge to address water-related security challenges at the local level

The limited capacities of security actors in the area of climate security are major hurdles to addressing water-related security challenges. Throughout the cases, interviewees note that these actors are largely unaware of how, for example, droughts, floods or water scarcity, intersect with and potentially shape conflict dynamics. The limited knowledge of security actors on water security and local contexts is further exacerbated by lack of planning, budgetary restrictions and conflicting operational priorities.

In Kenya, interviewees emphasise that the limited reach of national security forces in remote areas prevents timely responses to water-related conflicts at the local level.

Additionally, interviewees note that while natural resource management has increasingly been delegated to the community-level, the security sector remains largely centralised. Therefore, security forces are generally considered ill-equipped to understand local governance practices and to resolve resource-related conflicts accordingly. In contrast, interviewees express the concern that the militarisation of responses to water-related tensions may even risk exacerbating root causes of local conflict. Accordingly, one interviewee suggests that security actors should only be involved if they are perceived as legitimate by local communities and are adequately equipped to respond to climate-related conflicts.

Interviews on the Ethiopian case study indicate that Ethiopian defence and security actors may face similar capacity and knowledge constraints. Interviewees noted that short-term responses to climate-induced conflicts can limit defence and security actors from implementing long-term policies to mitigate the root causes of these conflicts. Additionally, interviewees suggest that defence and security actors have limited understanding of water security and local (water governance) practices, particularly when it comes to remote areas and transboundary communities. To overcome these challenges, it is suggested that defence and security actors need a clear mandate and policy framework on climate security to foster 'water sensitivity' in their operations. Importantly, these observations could not be verified beyond the interviews conducted and necessitate further research.

The Malian case illustrates that these challenges are also prevalent in the context of ongoing armed conflict. Interviewees note that the necessity of immediate crisis responses limited the military's ability to proactively address civil-military dimensions and the environmental impacts of military operations since the onset of the security crisis in 2012. As a result, operational priorities restricted efforts to establish longer-term projects with local communities, such as those related to improving water infrastructure. Similar challenges were faced by the international stabilisation mission MINUSMA, despite directing resources toward the implicit and explicit addressing of water-related security challenges. Through QIPs initiated by the Civil Affairs Division and a dedicated Mediation Unit, MINUSMA aimed at reducing and resolving community-level violence and conflicts, for example related to access to land between herders and farmers. However, the sustainability of these efforts was undermined by limited capacities, territorial dynamics, and the need to prioritise immediate security crises (Hegazi et al., 2021).

Reaction from the Embassy of Ethiopia in Brussels regarding the role of the Ethiopian National Defense Force in addressing water-related security challenges.

"*First, the Ethiopian National Defense Force (ENDF) has been contributing to the mitigation of natural and man-made calamities which were caused by the effects of climate change in Ethiopia. The defense force contributed to provision of relief food and water supplies to areas affected by drought in the country. Second, the ENDF is a national force of peace which has been engaged in international peace keeping missions under the auspices of UNSC over the last several decades and to date. Suffice it to mention the heroic internationalist stance of the ENDF in Korea, Congo, Rwanda, Burundi, Sudan, South Sudan and Somalia. In these missions, apart from keeping peace, the Ethiopian peace keeping missions were actively engaged in supporting communities in the countries by providing livelihood inputs, including supply of relief food and water, construction of schools, clinics and other infrastructure facilities.*"

Lastly, Iraqi interviewees suggest that limited capacities to address water security reinforce broader sentiments of dissatisfaction towards security forces and may undermine efforts of engagement. A survey conducted in Basra governorate in Iraq supports this notion: The perception that the dedicated 'Environmental Police' will either react slowly or not at all partly prevented respondents from reporting violations of environmental law in the first place (Moyel et al., 2023).

To enable greater involvement of defence and security actors in addressing water-related security challenges, interviewees suggest that security actors should develop a greater understanding of the dynamics underlying water-induced conflict and local governance structures. One interviewee noted that Civil-Military Cooperation (CIMIC) units, which already have a dedicated mandate to cooperate and engage with local communities, could play a useful role in this regard and might be prioritised in future awareness raising and capacity building efforts.

Observation 3: Military-humanitarian relations are challenged by the dilemma of maintaining the principle of impartiality

In fragile settings, relations between military and humanitarian actors are oftentimes characterised by mutual distrust and a lack of coordination. Tensions between the political objectives of armed actors and the humanitarian principle of impartiality impede the execution of water-related aid and development projects, hence undermining water security.

Interviewees in Mali identified aspects of these dynamics, noting how conflict dynamics can constrain the space for humanitarian activities in the country. Distrust between the military and humanitarian organisations may arise, for example, when impartial humanitarian aid is perceived by military actors as supporting the opposing conflict party. Humanitarian actors, on the other hand, develop distrust when military actors instrumentalise humanitarian aid for strategic objectives – for example, by limiting public service provision in territories outside state control. In Ethiopia too, the political disposition of military actors is seen by interviewees as a barrier to close cooperation with humanitarian organisations. Because of the resulting lack in coordination, humanitarian actors face increasing issues navigating hostile conflict environments, with armed actors denying access to territories and attacking civilian convoys.

Nonetheless, interviewees across all cases emphasise that civil-military coordination is indispensable to facilitate water-security interventions during armed conflict. Therefore, the mutual deconstruction of distrust and the exploitation of converging interests and complementary capabilities are recognised as crucial action points.

5. Conclusion

Defence and security actors play a significant role in addressing water-related security challenges in fragile settings. They support responses to water-related natural disasters, enforce laws and regulations, protect water resources, and help resolve water-related tensions. Although their involvement sometimes attracts criticism, the escalating impacts of climate change – including natural disasters, extreme weather events and water scarcity – are likely to increase their role. Given that defence and security actors will continue to be engaged in water security, a critical question arises: how can we maximise the benefits of their contributions while minimising the associated risks? In support of this much-needed dialogue, three areas for action are identified:

1. **Incorporate water security into the strategic planning and training of defence and security actors to enhance their knowledge and awareness**

To prevent, mitigate and resolve the implications of water insecurity, militaries, law enforcement and other security actors should understand the underlying dynamics of water-related issues and the variety of actors involved in addressing them. Defence and security actors should be trained to analyse water-related

risks, recognise relevant conflict pathways and understand how these translate to the needs and perspectives of affected communities. In addition to this general understanding of water and more broadly climate security, security actors should be made aware of traditional community approaches to water management, local sociopolitical grievances, and the potential unintended repercussions of their involvement. Knowledge and awareness of these topics can be increased by pre-mission trainings for domestic and international security actors, inclusion of water and climate security in military curricula, and incorporation of water security into the strategic planning of military missions. Additionally, international organisations can play a supporting role in the development of community-centred responses to water security risks. Involvement of international organisations and (international) military missions, however, should be accompanied by local capacity building. Without such efforts, water governance structures and infrastructure risk deteriorating as the knowledge to sustain them may diminish when international actors depart.

2. **Integrate defence and security actors into broader water governance strategies and local engagements to build community trust**

Contributions by domestic security forces to water security, for example through law enforcement and infrastructure protection, should be integrated into broader government strategies. These strategies must acknowledge and address deficiencies in water governance frameworks and raise awareness for sustainable water management practices through participatory and local engagements. The degree to which this is realised can have a substantial impact on whether communities perceive security actors as implementers of change or imposing forces that repress water-related issues. As such, improving relationships between security institutions and the public may prove crucial to avoid the unintended alienation of local communities from the state. This integrated approach can be strengthened by a clear mandate for defence and security actors to address climate and water security risks, local engagement and investments, and participatory governance frameworks.

3. **Break siloes between military and civil actors by fostering a shared understanding of water-related risks and required actions**

To maximise the contributions of domestic and international stabilisation missions, joint civil-military training and planning should be strengthened. While inherent differences between civilian and military actors cannot be fully resolved, (more) regular cooperation can contribute to reducing mutual distrust and reservations. It can also facilitate a shared understanding of key water-related risks, complementary capabilities, and possibilities for joint responses. In this context, military missions should critically evaluate how their activities connect with civilian efforts, facilitate information sharing and joint learning between military and civilian actors, and identify areas for improved coordination. Tighter civil-military collaboration may ultimately serve to enhance the sustainability of QIPs and other water-related projects.

As the impacts of climate change intensify over the coming decades, so too will the need for integrated approaches to address water-related security challenges. Defence and security actors can – and likely will – have a role to play, despite the risks often associated with their involvement. To maximise the value of their contributions and minimise the risks, the '4D'-communities – defence, diplomacy, development and disaster relief – are urged to jointly design practical and integrated approaches which capitalise the strengths of the various actors while maintaining an adequate delineation of responsibilities. The areas for action identified in this policy brief may inform these discussions and support the engagement of defence and security actors, in fragile contexts and beyond. Unlocking each sector's potential will be pivotal to advancing an integrated approach to the water-security nexus.

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