DCAF Geneva Centre
for Security Sector
Governance

UNDP

Stocktaking of security sector roles in climate and environmental security

Report on Iraq

March
2024

DCAF for UNDP

About DCAF

DCAF – Geneva Centre for Security Sector Governance is dedicated to improving the security of states and their people within a framework of democratic governance, the rule of law, respect for human rights, and gender equality. Since its founding in 2000, DCAF has contributed to making peace and development more sustainable by assisting partner states, and international actors supporting these states, to improve the governance of their security sector through inclusive and participatory reforms. It creates innovative knowledge products, promotes norms and good practices, provides legal and policy advice and supports capacity-building of both state and non-state security sector stakeholders.

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Acronyms

CBRN	Chemical, biological, radioactive and nuclear
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CTS	Counter Terrorism Service
DCAF	Geneva Centre for Security Sector Governance
DCD	Directorate for Civil Defence
DRM	Disaster risk management
DRR	Disaster risk reduction
EP	Environmental Police
EUAM	European Union Advisory Mission
FAO	Food and Agriculture Organization of the United Nations
FIIA	Federal Intelligence and Investigations Agency
GDP	Gross domestic product
GEC	Governorate Emergency Cell
IMCDHC	Inter-Ministerial Civil Defence High Committee
INTERPOL	International Criminal Police Organization
IOM	International Organization for Migration
ISIS	Islamic State of Iraq and Syria
ISSAT	International Security Sector Advisory Team (within DCAF)
JCMC	Joint Coordination and Monitoring Center
JOC-I	Joint Operations Command Iraq
KRI	Kurdistan Region of Iraq
MCNS	Ministerial Committee for National Security

MoD	Ministry of Defence
MoE	Ministry of Environment
MoI	Ministry of Interior
MoWR	Ministry of Water Resources
NATO	North Atlantic Treaty Organization
NCCDM	National Center for Crisis and Disaster Management
NSC	National Security Council
NSA	National Security Advisor
ONSA	Office of the National Security Advisor
PMO	Prime Minister's Office
RoL	Rule of law
SFA	Security force assistance
SSG/R	Security sector governance and reform
SSR	Security sector reform
UNAMI	United Nations Assistance Mission to Iraq
UNDP	United Nations Development Program
UNODC	United Nations Office on Drugs and Crime

Executive summary

Iraq is facing a range of climate and environmental risks, whose impacts on security are becoming increasingly apparent. From rising temperatures and water scarcity to widespread pollution and biodiversity loss, the combined effects of climate change and human pressures on the environment are contributing to local unrest, tensions and increasing different dimensions of fragility. This is exacerbated by the fact that these risks are affecting various groups differently. Consequently, climate change and environmental degradation as well as their subsequent effects risk perpetuating existing inequalities and further entrenching disadvantages certain groups face.

While many of these risks require a response which extends well beyond the security sector, security institutions have an important role to play in this context around three dimensions. The first dimension refers to security sector mandates on disaster risk management and civil protection. This can help mitigate impacts of climate change and environmental degradation on communities. The second dimension refers to mandates to enforce environmental legislation and capabilities on remediation. This can help protect the environment from further degradation and contribute to efforts to clean up pollution. And the third dimension is that by emphasizing people-centered security and service delivery, this could have a positive impact on how the security sector is perceived by communities, strengthening state legitimacy and trust in the government.

Climate change increases the prevalence and intensity of a plethora of phenomena. These include heatwaves, flooding, fires, and other related disasters such as power outages as well as land degradation, displacement of vulnerable communities, scarcity of water resources, and deteriorated agricultural productivity. This renders the role of security sector actors with Disaster Risk Reduction (DRR) mandates increasingly important. It also offers a valuable opportunity for institutions to work closely with communities as well as local government in order to better analyze and mitigate short- and long-term risks around climate and the environment. Likewise, institutions such as the Environmental Inspectors, the Environmental Police as well as customs authorities have the potential to play a stronger role in preventing and prosecuting environmental crimes and other forms of harm to the environment, such as illicit water use and

Photo: DCAF

pollution. There are important links between these two functions, as problems such as pollution due to toxic waste and industrial operations, not only have serious public health consequences, but also further degrade valuable ecosystem services that could mitigate the impacts of climate change.

Overall, this stocktaking study has found significant potential in the Iraqi reform process and to improve service delivery of security institutions with regard to mitigating and adapting to the impact of climate and environmental risks on communities and the environment, as well as strengthening social cohesion and contributing to sustainable peace. Concrete entry points to be highlighted are the Security Sector Reform (SSR) strategy and National Security Strategy development processes.

Main findings

There are a range of multidimensional risks at the intersection of environmental, human security as well as stability and peace in Iraq. The interaction of these risks increases the vulnerability of Iraqis as well as the Iraqi state to the consequences of a changing climate for human security.

Conflicts around the distribution and management of natural resources such as water and land, as well as subsequent displacement and migration to urban centres are in most cases inextricably linked to pollution and degradation of critical ecosystems such as water and soil. Mediation of and dialogue on community conflicts and stronger public order management to meet social unrest are insufficient to address these grievances. What is needed is a focus on protecting the ecosystems communities depend on for their livelihoods.

Iraq has a relatively diverse range of security agencies. Mandates on disaster risk reduction and environmental protection are not always entirely clear or distinct. There seem to have been differences in interpretation, for example, as to the respective roles and functions of institutions mandates on DRR as well as environmental protection. Especially on DRR, there is an ongoing discussion on shifting responsibility towards a civilian-led system. This lack of clarity with its subsequent untapped potential for coordination and synergies has been reported to lead to insufficient service delivery on DRR and significant enforcement gaps of environmental protection. Service delivery and enforcement were further reported challenged by weak coordination with the justice sector. In a context of many needs and limited resources, both gaps and overlapping mandates undermine the ability of state institutions to deliver the security services communities and ecosystems need most.

On the side of the Iraqi government, there are promising examples of the Iraqi government's commitment and support of its security sector being able to protect people, planet and peace . Among them are discussions around the inclusion of climate security as a pillar of the new SSR strategy and the National Security Strategy, the reform and restructuring of the existing Environmental Police, as well as the resources dedicated to the establishment of a better DRR infrastructure. All of those offer avenues of action and serve as potential entry points including

people-centered climate and environmental security considerations into the Iraqi reform process. However, there are several factors limiting the ability of the security sector to realize its full potential in responding to climate and environmental security risks.

Recommendations and entry points for SSG/R programming

This study proposes several potential ways forward as to how to realize the full potential of the Iraqi security sector to protect people, planet and peace through concrete strategic and programmatic Security Sector Governance and Reform (SSG/R) entry points.

1. Strategic coordination

At the strategic and political level and acknowledging Iraqi ownership and Iraq's high level of interest and engagement, partnerships should reinforce local ownership and bring together actors with technical expertise, such as United Nations Assistance Mission for Iraq (UNAMI), the European Union Advisory Mission in Iraq (EUAM Iraq) and embassies. Together, they could help shape a process to unify different actors under a joint vision and process to define climate and environmental security objectives, the required security sector architecture, and mechanisms for implementation. This would also entail expanding the scope of this stocktaking to include the Kurdistan Region of Iraq (KRI) and possibly the regional level. Moreover, in cooperation with the Ministry of Environment (MoE), the Al-Nahrain Center could provide a research cell for dialogue on climate change and environmental security.

2. Integration of climate and environmental security into the National Security and SSR Strategy

The conceptualization (and later implementation) of the revitalized SSR strategy development process (especially the discussed pillar on climate security) and the development of the National Security Strategy led by the Office of the National Security Advisor (ONSA) provide an opportunity to for an Iraqi-led process in strengthening a joint vision on tackling common climate and environmental security challenges as well as developing an implementation plan including indicators for monitoring progress (for example based on regular reports by the MoE on environmental threats), presented to the National Security Council.

3. Supporting security sector mandates and capacities

With regards to security sector mandates and in view of avoiding overlaps, functions, and capacity needs would benefit from being elaborated. These include: DRR and environmental governance, legal frameworks (strengthening the implementation of international agreements as well increasing accountability for public and private sector violations), coordination (including with the justice sector), capacities for data analysis and sharing (including possibly the establishment of a specialized national level entity on forecasting and risk assessment within the National Center for Crisis and Disaster Management (NCCDM) as well as a dedicated section on environmental fragility under the Provincial Fragility and Stability Assessment), and management of financial and human resources (such as capacity building and exchanges of expertise to train staff on budgeting and financial forecasting). Another opportunity would be to utilize the work on setting up a DRR architecture as an entry point to foster a process of dialogue.

With regards to bottom-up solutions that can strengthen current efforts, several opportunities could be seized. These include working with the Environmental Police and other environmental enforcement actors on defining their role and capacity requirements. There is also room for leveraging synergies with existing initiatives, such as UNDP's model police stations to include elements on civil Defence and environmental protection. Regarding DRR, partnerships could be sought on efforts around providing support to the NCCDM, once established under the Ministry of Interior (MoI).

4. Mechanisms for engaging communities

The new NCCDM will need to include a space for civilian actors as well as community engagement. In order to empower civilian DRR actors to step up their role, support could be provided to further capacitate entities such as the Civil Defence, as well as for mechanisms for engaging communities. This makes supporting civilian participation and oversight paramount.

5. Integration between SSG/R, climate and environment, peacebuilding, livelihoods, and development

Finally, as part of promoting people-centered approaches, reducing extremism, and reducing migration pressures, SSG/R should aim to tackle climate and environmental security from a broader perspective. This includes designing support to security sector functions around disaster protection as well as protection of ecosystems as the foundation of community livelihoods with a conscious aim at social cohesion and security impacts, and fostering trust and state legitimacy. In addition, linkages with livelihood and development interventions need to be considered, such as on water governance and management, engaging with the private sector and reducing migration pressures by providing essential services such as mobile clinics and schools.

Photo: DCAF

Introduction

Climate[1] and environmental[2] change pose a dual threat to national and human security in Iraq. Climate change impacts include unprecedented extreme high temperatures, land degradation, water scarcity, poor vegetation, recurrent dust storms, in addition to more unusual environmental phenomena like drought and dead buffalo in the marshlands. Moreover, climate change influences rainfall patterns, indirectly leading to desertification, soil erosion, sandstorms, and localized flooding. Sea-level rise, together with subsequent salination of soil and rising temperatures, are contributing to more frequent heatwaves and putting agricultural livelihoods as well as human health at risk.[3] This situation is compounded by severe environmental degradation, mostly as a result of past wars and different types of pollution stemming from a lack of infrastructure for treating wastewater as well a solid waste management. Oil extraction is subject to very little regulation, including the practice of gas flaring. Environmental standards for agriculture, industry and construction lack clear and thoroughly enforced legal safeguards. Remnants of war also pose a serious threat to human security in Iraq, including access to livelihoods for many community members.[4] Climate security vulnerability in a context where intra-agency competition and lack of mandate clarity could also potentially exacerbate already existing socio-economic vulnerabilities.

The recommendations in this report are building on a two-week, joint DCAF-UNDP engagement in Iraq, with in-country visits covering Baghdad and Basra, in September 2023. These exchanges were focused on the structures in federal Iraq excluding the Kurdistan region, which has its own structures outside the scope of this study. Considering this caveat, the current report was drafted to feed into thinking around shaping the Iraqi reform process on climate security, environmental harm and security sector reform. The report aims therefore to supply practical and programmatic recommendations and entry-points on operationalizing climate and environmental security in Iraq. At this decisive moment for the country, where serious efforts around the national security sector reform strategy are taking form, this engagement on the climate-environment-SSR nexus in Iraq is of key importance and relevance to the Iraqi-led reform process. The new security sector reform (SSR) strategy is currently being developed under leadership of the Prime Minister's Office (PMO) with reportedly a strong pillar on climate security. At the same time, a National Security Strategy is being drafted by the Office of the National Security Advisor (ONSA). The proposals put forward in this report would inform the formulation and the implementation of these strategy development processes as well as their implementation.

Background

In view of the climate security risks that Iraq is and will be facing, the ONSA requested UNDP's support in hosting an event on climate security. In the corresponding preparations and during discussions, it became apparent that the ONSA's and Iraq's benefit in general could be multiplied through additional knowledge generation and advice. This would revolve around the role Iraq's Security Sector needs to play in climate security to effectively contribute the Iraqi government's priority of environmental protection and countering climate change. Moreover, Iraq's efforts to draft a new SSR strategy have been re-energized in 2023. Taken together, this offered an opportunity to leverage the stocktaking of the role Iraq's Security Sector plays around climate and environmental security for both knowledge creation and to inform the SSR strategy.

Consequently, following ONSA's request, UNDP mandated DCAF to provide its thematic and methodological expertise for such a stocktaking study. DCAF has previously carried out similar projects in different contexts using a methodology developed over the past two years.[5] As such, it is well-placed to conduct a stocktaking exercise which engages with national and international stakeholders for a better understanding of roles, mandates, responsibilities, and challenges as well as extract thematically focused learning.

Methodology

This study explored *Climate Change Adaptation, Disaster Risk Reduction, and environmental protection related challenges in Iraq, providing insights on how the reform process could provide concrete strategic and programmatic SSG/R entry points for addressing a new generation of risks and protection needs.*

The main goal throughout the data collection and analysis was to focus on the tasks and responsibilities the Security Sector could have in relation to

environmental and climate security, as is depicted in Figure 1.

This report is based on desk research and a two-week mission to Iraq, covering Baghdad as well as Basra (such that this stocktaking report focuses on the Republic of Iraq without the Kurdistan Region). The research was done using 35 semi-structured interviews with security and environmental institutions, international organizations, and representatives of civil society, and three roundtable discussions.[6]
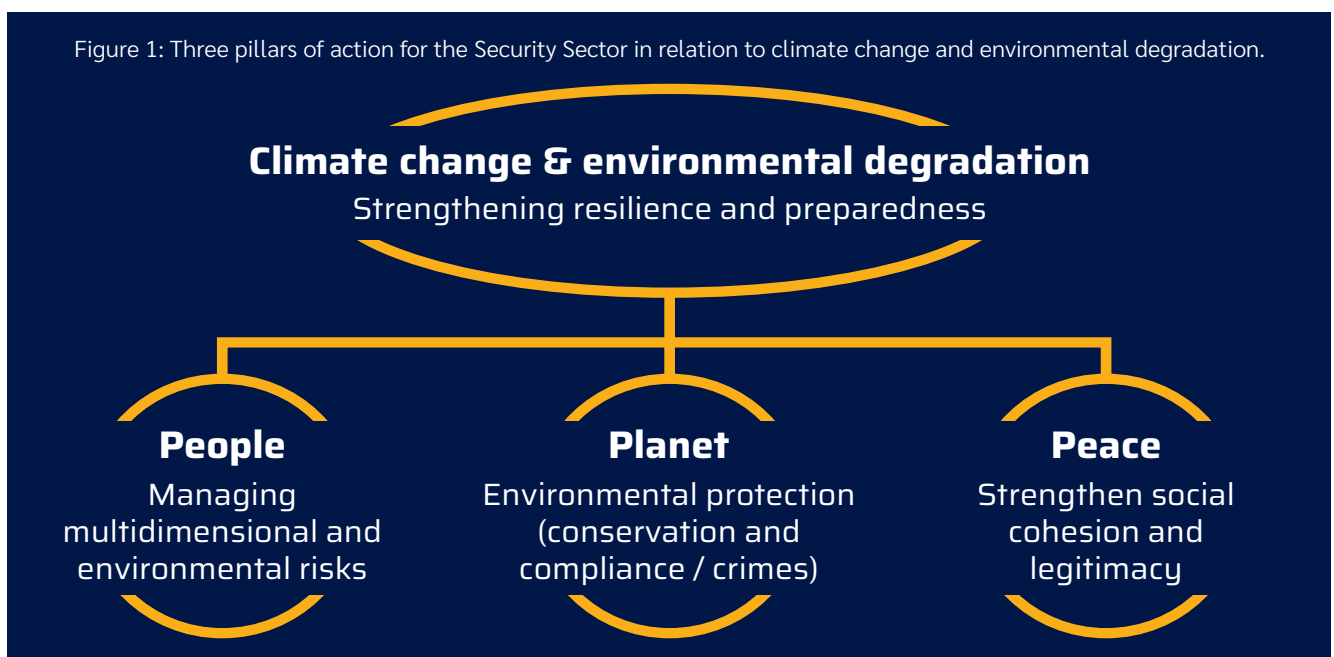
The context in Iraq

Iraq's politics, economy and security is significantly marked by a legacy of various wars. These include the Iran-Iraq war from 1980-1988 as well as the use of force against Iraq in 1990 led by the USA, based on UN Security Council Resolution 678, and the legally contested US-led Iraq war in 2003.[7] Subsequently, the UN Assistance Mission to Iraq (UNAMI) was established to support stabilization efforts as well as the establishment of institutions for representative government.[8] The current constitution was put in place in 2005[9], based on which democratic elections were carried out.[10] The latter also led to the establishment of the current political system.

In addition to pockets of sectarian competition remaining, Iraq experienced the rise of the Islamic State of Iraq and Syria (ISIS).[11] In 2014, this terrorist organization started large-scale offensives, leading to violations of international humanitarian law as well as civilian casualties and displacement[12], until victory over ISIS was declared in late 2017.[13]

The Security Sector, too, has undergone significant changes, for example facing the challenges around the rise of ISIS. In reaction to the war with ISIS, Security Force Assistance (SFA), which revolves around training and equipping the security forces, was prioritised over a holistic SSR approach including governance principles.[14] In recent years, however, SSR more broadly has regained traction as Iraq received assistance in that regard, for instance by UNDP and the EU.[15]

Economically, Iraq had a Gross Domestic Product (GDP) per capita of USD 5,937.2 in 2022, and has experienced upward-looking numbers in recent years, apart from 2020, due to the Covid-19 pandemic and previously the war against ISIS.[16] However, Iraq's economy is highly dependent on oil and its revenues, whereby the country's oil rents[17] were estimated at 42.8% of its GDP in 2021 (27% in 2020 and 40.2% in 2019)[18], and oil accounted for around 85% of the government's budget in the decade prior to 2022.[19] Other sectors are significantly smaller, such as agriculture, which is said to be "the largest non-oil contributor to Iraq's GDP"[20] and accounted for 5.9% of the country's GDP in 2020. At the same time, agriculture is responsible for around 75% of water use in Iraq[21] and is thus a sector where the impacts of climate change are already more visible.[22] Furthermore, while 40% of jobs in Iraq are in the public sector[23], the agriculture sector employs around 9% of the workforce.[24] Thanks to these revenues, Iraq is among the upper-middle-income countries (UMIC).

Figure 1: Three pillars of action for the Security Sector in relation to climate change and environmental degradation.

Climate change & environmental degradation
Strengthening resilience and preparedness

People
Managing multidimensional and environmental risks

Planet
Environmental protection (conservation and compliance / crimes)

Peace
Strengthen social cohesion and legitimacy

Climate and environmental risks

This section describes in detail some of the root causes and linkages between climate and environmental risks, their impacts on individuals as well as their broader impacts on security implications. This is presented in some detail because for the Iraqi security sector to address climate and environmental security implications, it is not sufficient to invest in community dialogue and mediation or more robust public order management. What is needed is for the security sector to engage constructively in all these root causes and risk factors presented here.

Iraq is vulnerable to a range of natural hazards[25] as listed in Table 1. These include earthquakes, floods (including flash floods due to heavy rains; particularly in rivers), droughts (water scarcity being a chronic problem in the region), heatwaves and epidemics.[26]

Disaster risks and vulnerabilities

Natural hazards

Climate change acts as a risk multiplier for the natural hazards outlined in Table 1, with Iraq being one of the most vulnerable countries to climate change.[27] The incidence of decreased precipitation and water scarcity reinforces desertification, and coincides with an increased incidence rate of dust storms (with projections of dust storms more than doubling)[28]. At the same time, this is going to lead to increased instances of heavy flooding because of dry soil's reduced absorption capacity.[29] Heatwaves are becoming stronger and longer (with projections that southern Iraq might be going to experience heatwaves of up to 21 consecutive days above 50°C)[30] and decreased river flow cannot push rising seawater back, leading to salination of arable land.

Notably, the changing climate does not affect all of Iraq equally, with the centre and south more highly affected by rising temperatures and water scarcity.[31] To exemplify the particularly strong effects of climate change in the southern region, from 2017-2021, the available farmland in Basra depleted by 80% due to rising salinity in the water, whereby this trend is projected to get stronger.[32]

Hazards exacerbated by unsustainable human activity

Among the man-made hazards, there are several types of biodiversity loss and pollution, the one most closely linked to the environment is the pollution of water resources, described in more detail below.

Moreover, the prevalence of land mines and unexploded ordinances poses a significant threat throughout

Photo: DCAF

Table 1: Observed natural and climate hazards and environmental degradation in Iraq.

Environmental Degradation	Natural Hazards
- Pollution (of water, air, and soil), ecosystem damage and biodiversity loss, amongst others due to remnants of war, municipal and other types of waste as well as depletion of environmental resources. - Infrastructure: Insufficient water treatment and management possibilities as well as haphazard sealing of ground.	- Drought - Heavy rainfalls (and subsequent flash floods) - Heatwaves (extreme temperatures) - Sand and Dust storms - Salination of soil and water (particularly in the South) - Sea-level rise - Earthquakes - Epidemics - Desertification

the country.[33] The threat does not only include the immediate risk of explosion, but also longer-term pollution, also described in more detail below. For example, according to interlocutors, in the Basra governorate, 1,25 million m2 is contaminated with mines.

Finally, the practice of gas flaring creates a significant hazard, impacting human health through the pollution of air, soil, and water as well as radiation pollution.[34] Iraq is the country with the second highest volume of gas flared in the past ten years globally, having flared around 17 billion m3 a year, whereby only Russia had a higher average flaring volume per year.[35]

Vulnerabilities

Poor infrastructure

Several reports and interviewees confirmed that risks are aggravated by dated and insufficient infrastructure, such as insufficient or inexistent sewage systems, infrastructure that is not always well maintained, such as dams, power plants and the electricity grid, and inadequate regulations for buildings and land conversion.

Particularly the rapid construction of buildings and sub-sequent de-greening and surface sealing of urban areas is a concern. With regards to infrastructure, the breaking of the Mosul dam stands out with regards to the significant risk it poses. As it serves irrigation efforts, flood control and the generation of hydropower, it is part of the country's critical infrastructure.[36] Also, terrorist organisations pose a further risk, which can be exemplified by ISIS taking control of the dam in August 2014.[37] Finally, the electricity supply is highly vulnerable to heat, as was exemplified by the explosion of a

power plant in the summer of 2023 in Basra, which had repercussions for the national energy grid as well as tap water in Baghdad according to municipality authorities.[38]

Notably, Iraq's infrastructure was significantly damaged due to the various wars and armed conflicts before and since 2003. While concrete data on the damage to Iraqi infrastructure during the Iran-Iraq war is limited, it caused a plethora of environmental[39] (with chemical weapons and due to remnants of war) and economic (such as opportunity costs and direct damage to infrastructure) damage.[40] In the later wars, dual-use infrastructure relevant to the provision of energy, communication and transportation was targeted, which had subsequent consequences on water purification and sanitary installations.[41] One example for this are the insurgency attacks on bridges in Baghdad in 2006 and 2007.[42] More concrete numbers exist for the war against ISIS. The financial damage to the infrastructure sector amounted to almost USD 16 billion. While the Power and Oil and Gas sectors were most affected, with USD 7 billion and 4.3 billion in damages, respectively, the Information and Communications Technologies (ICT; USD 400 million in damages), Transport (USD 2.8 billion), Water, Sanitation, and Hygiene (WASH; USD 1.4 billion) and Municipal Services (USD 88 million) were also hit substantively.[43]

Finally, due to the various conflicts, the large amount of uprooted people in Iraq are particularly vulnerable to disasters.[44] This stems from the fact that this group of people often lack social safety nets, lives in less stable housing and do not possess the necessary economic means to deal with disasters.

Eco-system based planning

Vulnerabilities around infrastructure are further compounded by challenges to central and regional planning for infrastructure, disaster risk reduction, water management and environmental protection.

This makes it challenging to apply eco-system and holistic planning across political and administrative boundaries.

Key environmental risks

Pollution

Iraq's air, water and soil are heavily polluted, causing significant health risks. This is due to a variety of factors.

On the one hand, facilities for treating wastewater and different types of household and hazardous waste throughout the country are inadequate. As an example, interlocutors referenced a sewage treatment plant in Baghdad[45], and Basra.[46]

Additionally, Iraq's history of wars and armed conflict has caused significant environmental degradation and pollution, leading to the destruction of valuable terrestrial and marine ecosystems, as well as contaminating large areas of land (and hence ground water) with remnants of war and decreasing the resilience of the infrastructure.

Finally, activities around oil and gas exploration cause pollution and subsequent health hazards. In addition to the practice of gas flaring mentioned above, there have also been anecdotal reports of oil spills and other emissions related to oil and gas exploration.[47]

Moreover, soil degradation is complex as it depends on multiple factors in terms of pollutants (for instance type and concentration), health impacts and remediation opportunities. Thus, it is difficult to estimate the effect of soil degradation on agriculture in terms of yields as well as subsequent effects on humans and animals.[48]

While some limited data on the levels of pollution and loss of biodiversity exists[49], there is room for obtaining more precise data which would allow a more tailored approach and prioritization of decontaminating certain ecosystems. Relevant data includes more precision in regard to sources, drivers and locations of pollution of air, water and soil.

Water management

Next to water scarcity due to a changing climate and retention of water by neighboring countries, officials from the Ministry of Environment (MoE) indicated that up to half of the reduction in available freshwater is due to factors around the management of water resources. These include the illegal water tapping for agricultural purposes such as unauthorized fish farms. Due to decreases in rainfall aquifers are at risk of not being recharged sufficiently[50] so that tapping into groundwater resources poses the risk of exhausting groundwater resources.

There are compounding factors risking sustainable water management. For instance, these factors include Iraq's weak legislation on water and insufficient implementation of its water management or irrigation plans.[51] There are questions on the extent to which the water budget is realistically assessing demands for water across all sectors and can inform sustainable decision-making.

Coupled with challenges related to decentralization that undermine local water management and national water governance, existing governance frameworks rely on unclear regulations and mandates and fragmented actors.[52]

Impacts on health, livelihoods, crime, and displacement

The combination of existing disaster risk, a changing climate as well as a highly deteriorated and polluted environment have a wide range of cascading impacts.[53]

The loss of water resources in combination with the high levels of contamination and pollution puts serious pressure on water supplies needed for an increasing population, particularly in urban areas. Iraq is not equally affected by these phenomena; southern Iraq and especially Basra as the lowest point are particularly affected. The significant health implications lead to more than 100,000 people being hospitalized in the Basra governorate because of symptoms relating to poor water quality in 2018.[54]

In addition to the immediate health impacts, there are a number of pathways in which these phenomena exacerbate existing types of fragility. Especially agricultural livelihoods have been and are being negatively affected by polluted soil, mines and limited available water. For example, in the marshes, traditional

livelihoods around buffalo husbandry resulted in communities having to resettle to areas with higher water availability. This leads to conflicts with the new host communities or migration to urban centres, putting additional pressure on infrastructure and services there, with the potential to cause social tensions. Moreover, water scarcity can lead to social tensions[55], as seen during an uprising in 2023 in the Southeast of Iraq. Reportedly, after more than a week without access to water, protesters occupied government buildings and set up their own checkpoints to keep the police out of the city.[56] Loss of agricultural livelihoods have further been connected to reports about increasing levels of crime such as smuggling, especially in the marshes at the border between Iraq and Iran. Although very little data is available on this phenomenon, UNODC's Container Control Programme is working to improve the limited data base on trafficked goods into and out of Iraq. Finally, environmental pollution has the potential to mobilize protesters, such as in 2018 in southern Iraq.[57] Reportedly, affected communities are also increasingly organizing against the practice of gas flaring. Interlocutors raised concerns that the loss of income is fueling violent extremism and organised crime especially among the population reliant on agriculture and fishing in the South.

Notably, some groups such as women and children, are more vulnerable to these impacts. While children are most affected by the health impacts of pollution, women are facing a range of issues. These range from increased domestic violence, but also increased levels of insecurity for female-headed households where male household members migrate to find alternative livelihoods.

Photo: DCAF

Entry points for supporting security sector roles on climate and environmental security in Iraq

The revitalized efforts towards an SSR strategy and the development of a National Security Strategy provide a window of opportunity for a nationally-led and owned process to create a joint vision for the Iraqi security sector mandates, functions and required capacities with regards to climate and environmental security, as well as a framework for implementation.

These strategy development processes could be used to further strengthen the three dimensions of Iraqi security sector actors with regards to climate and environmental risks. The first dimension refers to their mandate on disaster risk management and civil protection, to help mitigate and adapt to the impacts of climate change and environmental degradation on communities. The second dimension refers to mandates to enforce environmental legislation and capabilities on remediation, which can help protect the environment from further degradation and contribute to efforts to clean up pollution. And the third dimension is that by emphasizing people-centered security and service delivery, to contribute to strengthening state legitimacy and trust in the government.

Across all three dimensions, there remain significant opportunities to be seized. This underlines the importance of the ongoing strategy development processes to systematically reflect about climate and environmental security risks and anchor related reform objectives that can guide how the Iraqi security sector would need to be shaped in the future to protect people, planet and peace.

Protecting people

DRR structures and stakeholders

A multitude of different actors are involved in DRR (see text boxes in this section), and the architecture as well as the responsibilities are currently undergoing significant reviews and changes. This leads to various significant complications. For instance, interlocutors described the legislative framework as unclear.[58] This can be exemplified by the ongoing discussion around a civilian led DRR system. In a resolution by the National Security Council (NSC) from June 2023, the highest responsibility for disaster management had been shifted to the JOC-I, but this was reversed in November 2023, when this responsibility was returned to the Civil Defence High Committee under the MoI.

The **Directorate for Civil Defense (DCD)** under the Ministry of Interior (within the Police) is another key actor. Its operations room operates a central emergency hotline, with direct lines of communication to the regional Civil Defense operations rooms in 15 governorates, including Baghdad. Civil Defense also includes the **Fire Brigade**. There are reports of the Council of Ministers recently having approved a significant additional budget allocation to the MoI to construct an additional 100 Civil Defense centers as well as the purchase of equipment.

Moreover, the implementation of DRR activities is complicated by different units claiming the same roles and responsibilities, whereby a range of governmental actors reported being involved in different parts of the DRR cycle (including the DCD, JOC-I, IMCDHC, MoE, Popular Mobilization Forces and ONSA). Amongst the relevant factors for distributing tasks is the type of disaster (for instance regarding health, floods as well as chemical, biological, radioactive and nuclear [CBRN] emissions, etc.). Moreover, the MoE[59] was described by interlocutors as leading on disaster risk adaptation, but analytical approaches to threat and risk assessments appeared to be generally lacking.

The **Inter-Ministerial Civil Defence High Committee (IMCDHC)** is composed of ten ministries including the Interior, Defense, Planning and Development, Health, Communication, Environment, Water Resources, Foreign Affairs, Higher Education as well as the National Security Service and the Secretariat General of Council.

Furthermore, concrete instances of interagency communication and coordination could not be confirmed, although several bodies claiming the lead on coordination (such as the JOC-I, the DCD in the MoI, and the IMCDHC).[60] Whilst the size of the disaster seemed relevant to who would be in charge – with the IMCDHC taking over for larger emergencies – the concrete procedure and communication remained unclear.

For instance, while the Ministry of Defence (MoD) is represented in the IMCDHC, the relationship with the JOC-I structures would benefit from further scoping to understand internal dynamics. Moreover, all ministries reportedly have their own civil defence units, which are trained by the Civil Defence.

In addition, the predominant view is that coordination between the center and the peripheries is very poor. However, the Office of the National Security Advisor (ONSA)[61] anecdotally contributes to the disaster protection of particularly vulnerable provinces in coordination with other relevant actors, such as the UN, neighbouring countries, the Red Cresent Society, the Ministry of Health and the JOC-I.

Moreover, some interviewees underlined that ONSA was the main actor who had facilitated and coordinated the formulation of the DRR strategy (endorsed by the NSC in 2016).[62] In light of the significant security implications of climate and disaster related risks, the topic might benefit from additional attention by ONSA.

The **Counter Terrorism Service (CTS)** is funded by the MoD and reports directly to the Prime Minister of Iraq. Part of the special operation force' work is to contribute to DRR efforts in protecting critical infrastructure.

The **MoE** houses Iraq's Sendai focal point and engages with a range of actors mostly on risk assessment, such as the Iraqi Meteorological Organization under the civil aviation directorate of the Ministry of Transport collecting weather data, and the **Joint Coordination and Monitoring Center (JCMC)** which is collecting risk data on the governorate and national levels, reporting to the PMO. Reportedly, there are plans to attach the JCMC to JOC-I.

The **Office of the National Security Advisor (ONSA)** was established together with the **Ministerial Committee for National Security (MCNS)** through Order No. 68 of the Coalition Provisional Authority from 2004. Consequently, the ONSA's primary purpose was to advise the MCNS on national security policy and to support the coordination of a unified security strategy.

In regard to DRR and ONSA's role in disaster-related crisis management, it planned and organized meetings around CBRN threats. These served to raise awareness of the different stakeholders of the various hazards in relation to those threats and to connect the different stakeholders nationally.

The **Joint Operations Command Iraq (JOC-I)** is a key actor which has received a lot of support from the NATO Mission to Iraq. Whilst led by the Prime Minister in cases of crisis, it is otherwise headed a three-star general. JOC-I is not under the Ministry of Defense, but its staff predominantly comes from the Iraqi armed forces. The JOC-I at the national level is mirrored at the governorate level, where each governorate has a **Governorate Emergency Cell (GEC)** and Governorate Operations Command, responsible for managing incidents at the local level. The team was not able to independently verify any formal communication around interagency cooperation and coordination for DRR.

While JOC-I has been described by stakeholders to be mainly responsible for disaster risk mitigation, most recently, JOC-I had initially been tasked to establish a center on disaster risk management which points towards an expansion of this focus. However, this has been followed by discussions to attach this envisioned **National Center for Crisis and Disaster Management (NCCDM)** to the **Prime Minister's National Operations Center (PNOC)**, with questions around percentage of civilian staff (with a target of 70%), and having an available staff of around 2000, requiring significant resources.

From response to prevention

Following good DRR principles, prevention activities aim at reducing the likelihood of a disaster event occurring or the severity of an event. It is the joint responsibility of all stakeholders and includes on the one hand analysis and understanding of disaster risks, community awareness and education, as well as the development of mitigation strategies (such as investments in infrastructure, land use planning and hazard specific control activities).[63]

At the detriment of prevention, the Iraqi DRR system – both the JOC-I/newly established NCCDM and Civil Defence – focuses on response and relief, and the team found fragmented pieces of information on prevention efforts.

With regards to risk analysis, there are isolated efforts by individual actors, for example through the JCMC, Ministry of Planning, MoD (through specific engineers, mostly focused on controlling the safety of dams and roads) and the Sendai Focal Point housed in the MoE. Yet, according to interlocutors, these do not often lead to concrete action and there seems little coordination or information sharing.

Efforts to reduce vulnerability and risk mitigation are most strongly reflected in regulations around building safety, such as fire codes, which are enforced by the local Civil Defence. Although enforcement levels could not be verified, some interlocutors pointed towards the high level of political influence by developers.

Possible SSG/R entry points

There is a unique opportunity to support collaboration between technical actors involved in risk data and risk assessments, including mechanisms to mainstream local expertise and knowledge. To close this significant analytical gap, creating a dedicated capacity at Civil Defence or the new NCCDM to unify ongoing risk assessment efforts and methodologically and scientifically complement existing approaches would be an important step towards shifting from response towards prevention and preparedness. It would also require investments in strengthened data collection to contribute to holistic risk assessments, as well as analytical capacities to allow translating data into plans and operational implementation.

These efforts could study joint data sharing and management mechanisms for combining data which are currently being predominantly managed in siloes. This could hence constitute a priority for the national DRR plan, and would need to tackle multiple hazards including natural, man-made as well as conflict-related disasters in addition to exposure and vulnerabilities, including socio-economic factors.

These would all need to be explored from a people-centred approach, with a dedicated attention to vulnerable groups, such as women, the disabled, elderly and children, as well as special vulnerability factors.

In addition to accounting for vulnerabilities, a shift from response to prevention could also include further engagement with communities as first responders and empowering them to support efforts across the full disaster management cycle.

As current national efforts focus mostly on some sudden-onset disasters such as urban fires, support could be provided to complement this dynamic through a risk analysis that integrates the full range of climate and environmental risks such as air, water and soil pollution or bushfires, as well as slow-onset disasters such sea-level rise and droughts.

Another focus area could equally explore methods to render the data more actionable. For Iraqi security sector actors, this means informing their strategic and operational capability and deployment planning. The potential of this proposal is very promising and would show concrete results such as a costed capacity planning for Disaster Risk Management (DRM) roles. Beyond the security sector, risk data could inform investments in infrastructure to reduce sources of vulnerabilities for the community and the country. This would mean linking climate, security and development planning on disaster proofing infrastructure, improving facilities for water treatment and distribution as well as waste management, and investing in new agricultural technologies. One example for better water management in that regard is a recent agreement by the FAO and Ministry of Water Resources (MoWR) to better monitor the crop yields per water used in agriculture.[64]

Finally, there is an opportunity to facilitate a national process towards the establishment of robust early warning systems. The JCMC, the MoE's climate change directorate and the Ministry of Science and Technology, the Ministry of Higher Education, as well as the JOC-I would deserve further analysis with regards to their capacities and previous efforts to build on existing early warning system for earthquakes and weather forecasts.

Disaster risk governance

Preparedness activities include the development of comprehensive disaster management plans, translating risks and resilience factors into concrete actionable guidelines. This includes clarifying roles and responsibilities, establishing a permanent and ad hoc disaster management infrastructure that can be activated, plan for the required resources and financing, as well as setting up communications to all stakeholders (including communities) and early warning systems.[65]

Some older sources refer to the existence of a draft DRR plan[66], which could, however, not be confirmed to exist. In interviews, several actors indicated having individual response plans.[67] Those individual plans would merit further analysis, especially as apparently, they do not include protocols for early warning for rapid-onset disasters.

With regards to preparedness, several stakeholders indicated efforts on maintaining an overview of available capacities: JOC-I mentioned working on a database to capture all available capacities and capabilities of the

various ministries, accessible by all ministries. The Civil Defence Directorate also reportedly keeps an overview of all Civil Defence capabilities throughout the country, both human resources and equipment. The database is updated on a monthly basis and shared with the MoI.

In terms of trained and ready staff, while the team was not able to verify exact staffing numbers, generally there seemed to be a satisfactory level of equipment available. Civil Defence has its own training academy, which provides a 45-day basic training for all new officers joining the directorate. Civil Defence has a strong presence at the local level, with reportedly 225 Civil Defence centers across the country (although according to interlocutors, this is still insufficient). JOC-I can mostly draw on military resources. It would be important to understand how many are at its disposal and what are the exact modalities for drawing on other actors' capacities.

Possible SSG/R entry points

At the political and ministerial level, there should be a focus on combining technical and political levels to map the landscape of actors, legislation and policy frameworks. This should have the aim to invest in a process of clarification of their exact mandates, roles and responsibilities, as well as provide guidance and advice on interagency coordination.

It would be important to acknowledge the strategic role the MoE plays in conjunction with that of the Sendai focal points. This ministry has a key role in coordinating strategies, policies, actions and reporting as well as monitoring of the Sendai Framework. Specifically, the

Photo: ICRC/Mike Mustafa Khalaf

flows of information and analysis to inform operational planning between the civilian-led actors and the security sector actors would be of particular interest.

The establishment of the new NCCDM could provide another opening to develop a multistakeholder national DRR strategy and comprehensive disaster management plan. This would need to clarify roles and responsibilities between JOC-I, the new Center and Civil Defence, and develop a comprehensive framework to unify fragmented efforts between actors who are currently mostly focusing on individual parts of the DRR cycle. Necessary partnerships would need to be built in this space, including with the NATO mission in Iraq which is providing support to JOC-I and the establishment of the NCCDM.

Financial planning and human resources management

An essential component of national strategies and an underpinning factor of their sustainability and operability is applying a systematic approach towards the costing and financial sustainability, which includes human resources management. The JOC-I, NCCDM and Civil Defence are no exception to this principle. This means bringing together budgetary and financial actors with security agencies to discuss costs for training, salaries and allowances and operational costs, as well as equipment and infrastructure.

With regards to **financial resources and budgeting**, both the Prime Minister and governorates reportedly dispose of emergency budgets.[68] One question raised by interviewees, which would be crucial to follow-up, is

the lack of clarity of which budget line prevention and mitigation efforts would be financed from. Moreover, according to interlocutors, currently there is no costing of the planned JOC-I and NCCDM structures, hence no budgetary information exists on how much resources would be needed to establish an effective DRR structure.

Interlocutors described few data collection efforts that would enable data driven budgeting and forecasting future requirements. One example given was the Civil Defence Operations Room which collects and analyzes for example data on the number of calls, types of incidents and responses (for instance response times). This data, however, according to interlocutors did not feed into planning or budgeting.

Similarly, the **management of human resources** is a prerequisite to effective service delivery for disaster risk management. One aspect highlighted consistently by interviewees is the staff rotation system in the police. Among interlocutors there was consensus that DRR requires technical knowledge and an associated skillset that is difficult to develop in order to fully reap the benefits of Civil Defence capacity building efforts.

Possible SSG/R entry points

Another area of focus should be around bringing in the dimension of financial planning for DRR. The discussion on the implementation of the new SSR and National Security strategy might be an interesting opportunity to start a process of identifying concrete levels of ambition, forecasting future capability requirements, and costing them.

Moreover, there should be a scoping of potential management-related challenges for optimal DRR, such as the staff rotation rate within the police force. One particular area that could deserve particular attention is exploring the feasibility and utility of establishing certain specialized career paths, which might also add to the status of being in the Civil Defence.

With regards to the **armed forces**, further attention could be given to studying how the DRR functions are being organized (a dedicated unit, mainstreamed DRR elements into standard training, etc.), in addition to studying the repercussions of top-heavy age structure, within the security sector could impact operational effectiveness in providing disaster response.

Top-down and bottom-up coordination

International experience shows that national coordination mechanisms for disaster risk management and response have consistently proven to be challenging, and Iraq is no different in this regard.[69]

On joint response operations involving different security sector and other actors, there were different accounts on the effectiveness of coordination. Among the challenges to coordination, interlocutors highlighted command and control issues between and within MoD and MoI actors as well as unclear designations of responsibility at the political level.

One specific coordination question is the role of civilian actors. Current efforts to support Civil Defence in establishing the NCCDM have the potential for becoming an important initiative for strengthening people-centered functions of the security sector. Interviewees spoke about the need for an ultimately civilian-led NCCDM to clearly define the place of civilian actors and their role in the supporting DRR architecture. Currently, according to stakeholders, only the JOC-I has the necessary capacity to lead on DRR; however, one instance of successful coordination highlighted by interviewees were the effective coordination efforts led by Civil Defence, including with municipalities and governorates. Hence, stakeholders posed the question of how to enable civilian actors to step up their role, such as the Civil Defence, JCMC and MoE, and at local level governorates and municipalities.

This needs to be seen in light of risks associated with creating a vacuum in the interim which could be filled by other actors.

This lack of coordination negatively affects the effectiveness of operations, resulting in what one interviewee called a "mixed-up approach of security sector actors" in disaster response.

Possible SSG/R entry points

In order to build on the pockets of good experiences, there is a need to explore potential gaps between DRR efforts between actors, including at the national and the governorate levels and with regards to civilian actors, across the entire DRR cycle.

This would require further analysis, for example on specific aspects such as with regards to improving communication and information sharing around risk

analysis from the local to the central level. It would also entail fully involving the local level in any planning and preparedness efforts. The design of the planned NCCDM center, which reportedly aims to establish local centers in all governorates and would include liaisons with the Ministry of Interior, Ministry of Environment and Civil Defence, could indeed be a useful step to unify the DRM structure and enable a stronger participation of civilian actors.

Protecting the planet

Environmental protection in Iraq is a complex undertaking which requires the involvement of a range of security and non-security sector stakeholders, as well as a wide range of technical skills and a deep understanding of the multiple factors which put pressure on (or conversely build resilience in) local ecosystems. Related duties and responsibilities clearly extend well beyond the role of the security sector and a focus on environmental crime, particularly when considering that serious forms of harm to the environment are not always criminalised.[70]

Consistent with the exploratory nature of the stocktaking study, the analytical framework below is used to examine the role of the security sector not only in enforcement related to what can strictly be considered an environmental crime but also in detecting and preventing a wider range of practices which are both harmful to the environment and detrimental to human security. Accounting for a broader range of detrimental practices also resonates with a resolution passed by the UN General Assembly and supported by Iraq by a vote in favour[71], which recognizes "the right to a clean, healthy and sustainable environment [which is] related to other rights and existing international law".[72] Moreover, the Iraqi constitution from 2005[73] underlines the right to save environmental conditions.

As noted in the section on risks, a range of environmentally harmful practices have been and are contributing to environmental degradation in Iraq, with pollution related to inadequate waste management and sewage treatment, pollution related to the exploration of oil and gas, pollution related to remnants of war as well as unsustainable water use, and management regularly cited as top environmental concerns.

Legislative and regulatory framework

The national legal framework consists mainly of the the Iraqi Law of Protection and Improvement of the Environment, No. 27 of 2009, which broadly define different types of environmental crimes and sanctions. Various stakeholders have brought attention to numerous unresolved questions and legal ambiguities, making enforcement challenging and susceptible to exploitation by violators. Examples include the lack of definitions and precisions (for instance of what constitutes an ecosystem, concrete list of dangerous substances, limits for levels of pollution, concrete legal consequences and sanctions), and reference to international conventions (such as a concretization whether hazardous chemicals refer to the Rotterdam convention). Especially the lack of concretization on international conventions is also due to the fact that Iraq joined most international conventions after 2009 and hence the drafting of its Environmental Protection Law.

There are several other relevant legal texts, such as the Penal Code of 1969 and the Water Protection Bylaw of 2001, as well as environmental standards for customs, and the environmental impact assessments by the Ministry of the Environment, which according to interlocutors are not brought together systematically.

Iraq has signed and ratified a wide range of different international treaties and multilateral environmental agreements. These include the Convention on Biological Diversity (2009), the Ramsar Convention (2008), the Kyoto Protocol (2009), Paris Agreement (2016) or the Basel (2011) and Stockholm Convention (2016), as well as the Convention on the International Trade of Endangered Species of Wild Flora and Fauna (2014).[74] Moreover, Iraq has confirmed its acceptance of the Convention concerning the Protection of the World Cultural and Natural Heritage in 1974.[75]

Three specific issues were highlighted by interlocutors: As water scarcity and water pollution have one of the largest potentials to threaten national and human security in Iraq, they deserve special attention by the international community, providing the necessary expertise to strengthen the national processes in place. With regards to public liability, there were different interpretations of whether this existed or not; give the large Iraqi public sector with over 5 million civil servants, this might be a key area. More importantly, environmental law enforcement in Iraq struggles with challenges related to the enforcement of existing

legislation and environmental protection standards. It could be perceived to be non-uniform, weak or in some instances discriminatory.

Possible SSG/R entry points

Interlocutors highlighted the impacts of environmental law enforcement operating in an unclear legal and regulatory context. In 2023, UNDP commissioned a scoping mission on environmental justice, which has identified the need to revise and update the legislation on environmental protection. DCAF's mission came to a similar conclusion that these would be important components for work on climate and environment to address. Since 2022, the MoE is working on an update to law 27 of 2009. To adequately reflect the urgency of environmental protection and incorporate multilateral environmental agreements Iraq acceded to since 2009, this work should include aspects such as: the clarification of definitions of environmental crime in the Environmental Protection Law and the Penal Code, precisions around fines and penalties, including possibly considerations around crimes vs. offenses and more specific definitions of the different types of prohibited behaviors and substances, including bylaws where necessary, as well as the alignment with other domestic legislation. It would also include increased protection for civil society and environmental defenders and informants on environmental damage. The possibility of establishing public liability for severe environmental pollution, or clarifying the extent of it, could also be explored to stop violations and increase accountability of violations committed by government agencies. Finally, such an update might consider steps to ensure the implementation of multilateral environmental agreements to which Iraq acceded to since 2009.

Given the importance of water in Iraq, the establishment and enforcement of existing water management standards would be a worthwhile propriety focus area for a review of the policy framework, working with the MoE, MoI and MoWR.

Clarifying roles and responsibilities

Stakeholders

Environmental governance in Iraq is managed by a plethora of different entities (see the text boxes in this section). This includes actors within Ministries as well as security-oriented actors, such as the MCNS[76], whose concrete action against environmental degradation

remained opaque. Regarding the ministries, it seems like the MoI has an active role.

The **Ministerial Council for National Security (MCNS)** is chaired by the Prime Minister and is Iraq's highest body for security decisions, in which the National Security Advisor (NSA), and the Ministers of Defence, Interior, Foreign Affairs, Finance and Justice and the head of Iraq's National Intelligence Service participate.

It houses Police forces with different and sometimes unclear responsibilities and mandates.[77] This lack of clarity sometimes extends to other ministries as is exemplified by the Environmental Supervisor.[78]

Within the **Ministry of Environment (MoE)**, the Environmental Supervisor has law enforcement functions against activities negatively affecting the environment. Environmental inspectors under the MoE take over investigative functions to detect environmental crimes. On the subnational level, there are four regional departments of the MoE responsible for policy implementation.

They are technically linked to the MoI, but administratively sit in the MoE. The MoE further possesses responsibilities such as law enforcement and investigation.[79] When it comes to water use, both the enforcement and responsibility of environmental governance lies with the MoWR. Potential transnational crimes, then, are handled by the Commission of Border Crossing Points Authorities[80] and the Office for the International Criminal Police Organization (INTERPOL). While the latter coordinates international information exchange, it remains unclear to what extent this also concerns organised environmental crime.

The **MoWR** is responsible for the regulation of the utilisation of ground and surface water to foster optimal use and development of water resources. Specialised on protecting waterways and water quality, for instance from oil spills, the Water Police is the Ministry's enforcement organisation.

The **Commission of Border Crossing Points**, established in 2016, is an independent body responsible for law enforcement at Iraq's external border. Members are from mainly customs and intelligence from the MoI and MoE among other stakeholders.

Taken together, this variety of actors within and across ministries and units results in a complex field of action, which lacks clear responsibilities and allows for potential loopholes to be exploited. This can be prominently exemplified by the different Police units within the MoI, which could be equipped with a clear mandate based on international best practice.

There is a wide range of other actors which were not part of the research, but which have additional relevant potential to contribute to more effective environmental governance.[81]

The MoI houses the Environmental Police (EP), which was established in 2015 under the General Directorate of **Civil Defence**. The EP is technically linked to the Environmental Supervisor in the MoE responsible for enforcing environmental laws. This includes investigating environmental crimes, safeguarding health standards against soil, water or air pollution, radiation control, executing judicial orders and administrative decisions issued by the MoE, and raising awareness. The EP has Intervention and Treatment Teams which are specialized on combatting pollution. Integrated in local offices of the Civil Defense, the EP is represented in 16 offices in different governorates with around 300 people. Under the **MoI's Facilities Protection Service**, the **Oil Police** is charged with guarding Iraqi oil fields and oil infrastructure. The MoI oversees the **Iraqi Federal Police**, the **Border Control Guard** as well as the **River Police** and **Traffic Police** with a focus on monitoring waterways and streets, respectively the **Federal Police** often assists local police forces of Iraq's 746 police stations in addressing security challenges.

The MoI's main intelligence arm is the **Federal Intelligence and Investigation Agency (FIIA)**. It is tasked with collecting and analysing intelligence about domestic security threats and has directorates specialising in organised and environmental crimes. They are responsible for monitoring Iraq's compliance with multilateral environmental agreements such as the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) or the Basel and Stockholm Conventions. On the local level, environmental police officers enforce environmental laws.

Additionally, there are more actors active in environmental governance on the governorate and municipality level, whose role could not be assessed by the research team, including the role of communities. Approaches to regulation and enforcement would clearly need to be complemented also by similar efforts on the

side of the justice system, something that has begun by a UNDP mission in May of 2023.

Enforcement

Interlocutors agreed that not only the legal and regulatory side are lacking, but also that enforcement of existing legislation and environmental protection standards is non-uniform, weak and can even in some instances be discriminatory.

The following three functions related to combatting environmental crime offer a useful framework for analysing the role of the security sector in environmental protection, as well as possible entry points for future reforms: detection of violations, imposition of sanctions (or other actions) against perpetrators, and prevention of future harm.[82]

Detection of violations

Violations against environmental norms in Iraq are either detected through active monitoring of enforcement actors or through the prosecution of hints from individuals or public institutions.

Different enforcement actors, such as the EP, environmental inspectors of the MoE, and the river police are actively patrolling and conducting inspections to detect environmental offenders. The EP in particular reported very high numbers of inspections, including approximately one fifth of inspections leading to detecting a violation. The most prevalent include illegal slaughtering, illegal waste disposal, hunting of birds with illegal or non-conventional methods and illegal fishing. In addition to scheduled inspections, the EP reported that they control potential offenders following hints received from the population and the MoE.

There were some instances in which different enforcement actors reported conducting joint operations and partnerships for environmental protection. The EP highlighted working especially with the MoE environmental inspectors to combine the EP's policing expertise and authority with the inspectors' resources, legal authority to investigate and fine, technical equipment and expertise such as on the determination of allowed levels of pollution. The EP's role was described as mostly to execute orders of environmental inspectors as well as on the prosecution of industrial offenders and to detect unlawful levels of pollution. Various MoI actors such as EP, General Commission of Customs, Anti-Organised Crime Directorate and MoE

recently conducted the joint 'Operation Thunderbird' to address illegal wildlife trafficking. In other instances, the EP reported using the boats of the River Police to conduct joint inspections in Basra governorate, and further operations to protect waterways from pollution and illegal hunting of fish or birds. The EP also has liaison officers in other Ministries but reported that these were not actively used yet.

Interlocutors highlighted several factors limiting the effectiveness of inspections and patrolling. First of all, interlocutors described unclear legal regulations and mandates leading to what civil society representatives described as a passive approach by law enforcement on environmental crimes and harms. Another limitation is the factor the fact that environmental protection is not a high priority for the internal security community. This shows in the lack of budget – for instance, the EP does reportedly not have a budget for operational purposes such as transport and indicated that police officers had to use their own vehicles to go to crime sites; this obviously limits the effectiveness of patrols and inspections. Moreover, the lack of resources and staff makes it difficult to confront more robust perpetrators, with civil society interlocutors referring, for instance, to an inability to confront private security actors. Yet, in other instances, drawing on robust enforcement capabilities seemed possible. Interviewed experts highlighted one example where the military was called on to provide support with the dismantling of several thousand illegal hatcheries (reducing the water supply of up to 25 million people), due to an assumed affiliation with terrorist organizations. This demonstrates that robust environmental enforcement is possible where there is an additional security threat.

Finally, the numbers of the EP are limited. Consequently, there is little awareness of public actors and communities on the existence of the EP, which was confirmed by stakeholders; at the same time, local police forces rarely engage in environmental law enforcement due to a lack of expertise and equipment. Similarly, the role of communities in monitoring and detection as a possible force multiplier seems underexploited.

Sanctions and remediation

The imposition of sanctions ranges from fines, the duty to restoration, arrests as well as removal of licenses for businesses and corporations, or restrictions for market access for farmers.

Following the detection of a crime, the EP reported following a standard procedure to offenders: Once identified, cases are handed to courts and violators are given a certain time frame to stop the environmental damage. For example, if industrial sites lack environmental authorisation and the necessary general permission to conduct industrial activities, the EP cross-checks this information through on-site visits. Subsequently, the EP refers the case to an investigative judge who can order enforcement actions. Several interlocutors mentioned that judges are not necessarily specialised on environmental jurisprudence and do not have the technical and scientific background, such as on how to establish legally sound causality between gas flaring and individual cancerous diseases, to adjudicate. This highlights the importance of including the justice sector in the reform process.

The need to restore ecosystems, fines and arrests were mentioned as the most common sanctions by interlocutors. The EP works closely with the MoE on suspending licenses and permits. In the case of farmers exceeding their water allotments, interlocutors mentioned the possibility of restricting their ability to sell resulting yields.

However, interlocutors pointed to the fact that fines and penalties are not sufficiently high and moreover are seldom actually paid due to the lack of non-discriminatory law enforcement and following up after the imposition of sanctions. This is particularly relevant as it is extremely difficult to quantify the effects of soil pollution on agricultural yields, health and the environment more broadly.[83] Consequently, while suitable remediation measures are equally difficult to identify and it remains unclear to what extent remediation after environmental damage is undertaken, prevention efforts should be strengthened.

Prevention of future harm

The role of the security sector in preventing environmental crimes and other forms of harm to the environment appears to be relatively weak.

As noted above, due to its size, the EP seems to have very little presence on the ground. This echoes the fact that interlocutors from various stakeholders frequently mentioned the lack of awareness of the public and main government actors, such as in the security sector, on environmental issues. One promising example for awareness raising efforts was highlighted by the

EP, working with the Ministry of Education to conduct awareness-raising campaigns in primary schools on hazardous waste and demining.

Prevention of environmental crimes and other environmentally harmful practices also requires understanding why these practices occur.[84] Following the interviews and background research, there are basically four main fields contributing to environmental destructive activities in Iraq. First, interlocutors described that individual and livelihood-driven activities resulting in environmental degradation are mainly driven by the need for people to secure a basic livelihood and avoid poverty. Examples given included farmers unlawfully diverting water from Iraq's main rivers to balance the lack of water and secure their harvests. Interlocutors in Basra mentioned that especially people in the Marshlands are under pressure to hunt endangered birds for food. Secondly, interlocutors pointed towards the lack of infrastructure making it difficult for communities to abide to environmental standards. For instance, without clearly designated sites for adequate disposal of household waste, the risk of water or soil pollution is increasing. Coupled with the lack of infrastructure to mitigate the impact of environmental degradation on human health, such as wastewater treatment plants, a downward spiral of unaddressed root causes and impacts of environmental crimes further exacerbates human and environmental security risks. Third, some of the main environmental offenders play a crucial role for maintaining services, such as hospitals and other public institutions, or the local economy including the labour market, such as in construction, manufacturing or agricultural sectors.[85] Hence, strong enforcement against these offenses would come with significant trade-offs. Fourth, interviewees pointed towards significant political economy risks around obtaining licenses and permits for land development and land use change, applying for legal exemptions to allow natural resources exploitation or obtaining the required environmental impact assessment certification. These risks might in some instances be exacerbated by tribal ties between local law enforcement and offenders.

Possible SSG/R entry points

Stakeholders highlighted the need for a nationally driven process around the clarification of roles and responsibilities. To shape such support, successful coordination efforts in some distinct fields, such as combatting wildlife trafficking, pollution or awareness-

raising, could provide promising examples and approaches to be applied in other areas as well.

It could be particularly helpful to invest in a functional mapping of environmental law enforcement functions as an analytical step to better understand current gaps and requirements within the Iraqi environmental law enforcement system. It would be beneficial for such a mapping to look at who, from within and beyond the police, is currently engaging in environmental policing, as well as which functions would be required given the level of ambition. As an example, a functional analysis would include detection monitoring, inspections and patrols, investigations and collecting evidence to support prosecution, enforcement such as arresting and detentions/seizing/closing, forensics, community outreach, training and capacity building of other security sector stakeholders, analytics, and data management, etc.

For such an exercise to be effective, strong national ownership and leadership would be required, including from within the MoI, the EP as well as the environmental investigations' unit within FIIA, but also other parts of the police, such as the River Police, Electricity Police, Traffic Police, Federal Police and Civil Defence, who are mandated to remedy pollution. Beyond the MoI affiliated agencies, the relationship between the MoI and the MoE on environmental law enforcement would deserve further attention. There could be multiple entry points for synergies and need for institutionalization. This entails clarifying the state of operational procedures between MoI and MoE as foreseen in the Rules of Procedure No. (1) of 2015 for the Environmental Police Department, including the right to pose complaints or for clarifying how the MoE's specialized expertise could be used by the EP on forensics.[86] Finally, the modalities of bringing in federal police and/or the armed forces for robust operations could benefit from further clarification. As several stakeholders pointed towards the need to identify and shape a clear niche for the environmental police, providing support to these efforts could possibly contribute towards that objective. Providing this level of support to help the environmental police expand beyond the currently small and under resourced team could help build national capacity for collecting evidence and bringing cases to court, in support of environmental inspectors' role.

Another area that could be deserving of further analytical and programmatic attention is around exploring environmental protection aspects and the

(somewhat overlooked) Commission of Border Crossing Points and Customs. Areas of interest for further exploration and programmatic engagement include for example smuggling and trafficking of wildlife, the import of used electronic goods (which anecdotally are mostly electronic waste) and solid waste, research, and data on the import of chemicals needed for agriculture and controls and enforcement thereof, as well as an analysis of modalities of border and customs authorities' cooperation with other law enforcement actors.

Protecting the planet using a whole-of-government approach, efforts could be further explored to incentivize positive practices that invest in and safeguard the environment. This would entail coordination between SSG/R, financial and civilian actors on both the national and international levels. Together, they could complement enforcement measures with

initiatives to strengthening environmental action, such as monetary rewards for providers of ecosystem services, subsidizing sustainable agricultural practices, reforestation, and investment in green technology startups.

Financial and human resources management

One aspect highlighted repeatedly by interlocutors was around insufficient or non-existent dedicated budget allocation for environmental law enforcement in the past years, rendering long-term planning complicated. As mentioned above, the absence of an operational budget for the EP for example risks effective detection, confines its role to responding to emergencies and increasing its dependence on the enforcement capacities of the Federal Police.

Photo: ICRC/Mike Mustafa Khalaf

With regards to capability, interlocutors highlighted the fact that with reportedly around 300 staff, staffing only meets around 20-30% of requirements to effectively fulfil the EP's current functions of inspections and provision of support to the environmental inspectors. The EP's capacity to successfully do so was described as further challenged by a lack of specialized equipment, such as monitoring devices for pollution, and general shortage of vehicles. Especially the local level seems to be affected by these constraints. Interviewees raised the question whether given the apparent vision for the EP as a highly technical unit, there was space to conduct more specialized and targeted training on environmental sciences and forensics as well as on Iraqi environmental protection laws. As detailed more in the section on protecting peace, communities seem to be an underexploited force multiplier and partner which might be able to complement state institutions' role in monitoring and detection.

There are also some challenges with regards to the management of human resources in the EP which would need to be addressed first. Some are similar to the ones described for the Civil Defence above, due to the staff rotation system, random assignments of position and transfer from the EP to other directorates in the police. Others are around generalized recruitment processes that do not specifically aim to attract environmental expertise.

Interviewees moreover pointed towards the fact that capacity constraints, especially with regards to technical environmental expertise, affect also other law enforcement actors involved with environmental protection. Efforts by the MoE and MoI to conduct training on a limited number of topics such as on the protection of marshlands, poaching and pollution, was described as a successful practice to make best use of available expertise on environmental sciences.

Possible SSG/R entry points

Most of this mission's interlocutors concluded that financial constraints are among the impediments for a stronger environmental enforcement in Iraq. Hence, an important step would be to build on partnerships with the Ministry of Interior, Environment and Planning to further explore the existence and nature of the current budgetary allocation and planning on environmental law enforcement. Ultimately, there is the need for the establishment of a budgetary allocation for environmental enforcement, encompassing costs

for salaries, operations as well as investments. One avenue which might be worthwhile for security sector and financial actors, would be to explore the creation of incentives for stronger environmental enforcement. Another avenue would be to review the management of revenues, currently centralized through the central treasury. This is obviously a politically sensitive issue which would require careful analysis and partnership with all relevant stakeholders, and from a public financial management perspective, taking into consideration oversight and accountability issues.

In order to safeguard ongoing and future efforts made towards capacity-building for environmental law, there needs to be an increased awareness on some aspects of the human resources management system within the police which might be worth addressing before engaging in further reform projects. Instead of the current system of frequent and random rotation of police officers between different positions and units without clear career paths or specializations, an investment should be made to analyze the risks of this system and how can they be mitigated. A further assessment would be useful to determine whether this holds true for all agencies under the MoI (as it is for the Environmental Police and the Civil Defence directorate). The lack of sustainable human resources allocation and with the right capacity could undermine any effort of reform or development.

Should the vision of building up the EP as the technical law enforcement agency responsible for environmental law enforcement be further pursued, it would be worth exploring whether specialized career paths on environmental enforcement, such as initiatives to increase the recruitment of graduates in the environmental sciences, together with adequate budgetary allocations might contribute to raising the profile and status of environmental law enforcement and make it more attractive to candidates.

Analytics and data

Despite data collection efforts by several actors, such as by the EP on enforcement actions and sensitization activities, interviewees pointed towards evidence often remaining anecdotal because of several constraints with regards to data collection and analysis.

From the interviews conducted, it remained unclear to what extent the EP and other actors are collecting disaggregated data on various types of environmental crime that would give the level of detail needed to inform

operations and planning. A related challenge highlighted repeatedly is the gap between data collection and the strategic use of data for operational purposes. The collected data appears to be mostly used to give an overview of past operations. Data sharing was equally emphasized as problematic, as actors seem very reluctant to share data on environmental degradation within their ministries or with different ministries. According to interlocutors, all these factors result in an inability to cross-check data and operationalize them for identifying crime hotspots, common risks to environmental integrity or to communal peace. It also prevents anti-crime interventions based on data or allocation of resources according to a prioritization.

Possible SSG/R entry points

Another entry point is around strengthening nascent efforts by the EP and other environmental law enforcement actors to collect data on environmental crime cases and the prevalence of infringements. This would enable data-driven planning and operations. In addition to the capacity of individual parts of environmental law enforcement, one specific focus could be on creating the (possibly centralized) capacity to jointly analyze these data and translate into operational planning.

Support could be provided for the establishment of a national database for reporting environmental crimes and harms, accessible by all agencies involved in environmental policing (while upholding data protection standards). This could also be used for forecasting and planning of deployments, patrolling and inspections, which would be a major milestone towards joint data driven approaches.

Similarly, options could be explored for facilitating the verification and enforcement of permits for land conversion and construction, imports, agricultural and industrial activities as well as waste disposal and water distribution. In other contexts, similar challenges were addressed by calling for the establishment of a central database to enable verification and enforcement, especially if it was digital and easily accessible by all enforcement actors.

Protecting peace

The access to direct engagement at community level for this mission team has been very limited due to a number of operational reasons. Consequently,

there exists an important area for further study and exploration. Namely, this includes questions related to (i) how security sector actors are perceived by communities when providing disaster management services or combatting environmental harms, as well as (ii) how communities and local efforts can be further supported to develop agency and become partners in these endeavors.

In general, community members seem to be overlooked actors in Iraqi DRR, and their role as first responders to disasters is not fully acknowledged. Engaging with the community through disaster preparedness set-ups and disaster response management has a proven track record of improving state-citizen trust, and as such building legitimacy of state institutions. In Iraq, however, the team found little evidence where communities' local experience and expertise on vulnerabilities, resilience strategies and disaster response are being tapped into. Around the set-up of the new NCCDM, a planned directorate for engaging with volunteers was emphasized by interlocutors as the foreseen mechanism to engage communities. They pointed towards the next phase of design probably tackling questions around how the center is going to engage with communities and civil society actors, how the new NCCDM will seize their feedback, address their needs and establish clear protocols and frameworks on engaging with them.

The impact of environmental degradation and climate change is a question of people-centered security which should create opportunities for changing mindsets and frameworks for engagement between the state and the communities. Iraq struggles with violent extremism, which subsequently also increases displacement[87], and the levels of vigilance around national security are very high. The close connection between environmental degradation and socio-economic issues in Iraq has further complicated affairs and led to climate and environmental issues becoming instrumentalized in a divided political context. Representatives from civil society highlighted communities' frustration where state security actors failed to provide adequate protection of the environment, for example on pollution. Interlocutors moreover emphasized a shrinking space for environmental defenders.

These grievances seem to be further exacerbated when at the same time, more robust enforcement approaches target community members engaging in what they were considering an ancestral practice (though environmentally harmful), such as hunting animals.

Moreover, protests on environmental issues, such as in Basra on water pollution, are at risk of politicization of the environmental and climate agenda, with robust responses by the security sector further weakening communities' trust in state institutions.

Civil society representatives stressed the need for international actors advocating for a people-centred approach to climate and environmental security to step into this space, supporting selected and trusted civil society actors, along with state institutions and to foster a space of dialogue and exchanges which reaches out beyond set perceptions around the role of environmental activists and defenders.

Possible SSG/R entry points

There should be an increased exploration and awareness of potential benefits for the Iraqi security sector in case the capacities of communities and civil society actors in DRR and environmental protection are recognized and leveraged. This report suggests three programmatic avenues for such work.

Firstly, investments could focus on strengthening the systems and mechanisms within security institutions to institutionalize communities' roles as first responders to disasters, but also utilizing their contextual experience and expertise on local hazards and vulnerabilities, resilience strategies, and disaster response. It could also mean using communities' capacity, for instance, towards creating trust, including through joint training, information sharing, joint risk assessments, and dialogues. This also has the potential to reduce the potential of violent extremism.

Secondly, future engagements could be shaped around the question of how security sector actors could explore roles to strengthen awareness within communities on environmental and climate risks, as well as to identify possible localized mitigation and adaptation strategies. One way to do so could be through volunteers and increased dialogue formats. This outreach could then be tailored as a confidence-building measure between security sector actors and communities, for instance building on practices such as the fire brigade taking their fire engines to schools for the children to explore and playfully learn about fire drills. Notably, beyond awareness raising and as part of a whole-of-government approach to climate and environmental security, some interlocutors highlighted the importance of engaging with communities on the question of what they would

concretely need to not have to migrate, such as clean water, schools and mobile clinics.

Moreover, all efforts need to be designed in a way to address different vulnerability factors and profiles of all groups, including female-headed households, as well as disabled and elderly people.

Thirdly, efforts are urgently needed to sensitize security sector institutions and actors, at the operational level, to the fact that without tackling the underlying root causes of tensions around climate and environmental factors, investments into public order management alone are insufficient to address them. There is a clear need to convey the message to those actors that in a changing climate and degraded environment, protecting ecosystems, as well as the services they provide in terms of food, water and air, also means protecting critical infrastructure. Sensitization should especially target those involved in crowd control and public order management on the local level, but also those enforcing environmental regulations, on socio-economic needs and vulnerabilities of communities to climate and environmental risks. This is an opportunity to shift towards a more people-centered approach to enforcement. Such an approach differentiates between social conflict and legitimate grievances, industrial level infringements compared to ancient practices on land and water on a community level, livelihood needs, etc. In doing so, a people-centred security sector sees itself as a partner and service provider for communities. With

Photo: ICRC/Mike Mustafa Khalaf

regards to sensitizing and training security sector actors on awareness of a people-centered understanding and approach to climate and environmental risk, one opportunity could be to expand work on the nexus between violent extremism and environmental and climate issues. Another entry point is around an analysis of modules in the curricula of the various service academies and where such aspects could be added. Future programming in support of the EP for example could explore including a component that would enable them to play a significant role in this regard to design and deliver such modules and bring in specific expertise and examples.

Conclusion

Iraq is one of the most affected countries by climate change, the degradation of the environment and biodiversity loss due to decades of wars and pollution, and weak or damaged infrastructure, which together pose a complex threat to national and human security. However, in the Iraqi areas under consideration, which excluded Kurdistan that has its own structures, there are several opportunities to advance people-centered climate and environmental security through its rule of law (RoL) and SSR programming.

To return to the original question of how the Iraqi security sector could realize its full potential in Climate Change Adaptation, Disaster Risk Reduction and environmental protection through concrete strategic and programmatic SSG/R entry points, this study has proposed several entry points.

To sum up, first of all, on the side of its Iraqi partners, there are promising examples of the Iraqi government's commitment and support of its security sector being able to protect people, planet and peace . Among them are discussions around the inclusion of climate security as a pillar of the new SSR strategy, the reform and restructuring of the Environmental Police, as well as the resources dedicated to the establishment of a better DRR infrastructure. All of those offer avenues of action and serve as potential entry points in the Iraqi reform process to include and operationalize climate and environmental security considerations.

Recommendations and entry points for SSG/R programming

This study proposes several potential ways forward as to how to realize the full potential of the Iraqi security sector to protect people, planet and peace through concrete strategic and programmatic Security Sector Governance and Reform (SSG/R) entry points.

1. Strategic coordination

At the strategic and political level and acknowledging Iraqi ownership and Iraq's high level of interest and engagement, partnerships should reinforce local ownership and bring together actors with technical expertise, such as UNAMI, EUAM Iraq and embassies. Together, they could help shape a process to unify different actors under a joint vision and process to define climate and environmental security objectives, the required security sector architecture, and mechanisms for implementation. This would also entail expanding the scope of this stocktaking to include the KRI and possibly the regional level. In this light, further diplomatic engagement with, for instance, the League of Arab States to address climate challenges, could be explored. Moreover, in cooperation with the MoE, the Al-Nahrain Center could provide a research cell for dialogue on climate change and environmental security.

2. Integration of climate and environmental security into the National Security and SSR Strategy

The conceptualization (and later implementation) of the revitalized SSR strategy development process (especially the discussed pillar on climate security) and the development of the National Security Strategy led by the Office of the National Security Advisor (ONSA) provide an opportunity to for an Iraqi-led process in strengthening a joint vision on tackling common climate and environmental security challenges as well as developing an implementation plan including indicators for monitoring progress (for example based on regular reports by the MoE on environmental threats), presented to the National Security Council.

3. Supporting security sector mandates and capacities

With regards to security sector mandates and in view of avoiding overlaps, functions, and capacity needs would benefit from being elaborated. These include: DRR and environmental governance, legal frameworks (strengthening the implementation of international

agreements as well increasing accountability for public and private sector violations), coordination (including with the justice sector), capacities for data analysis and sharing (including possibly the establishment of a specialized national level entity on forecasting and risk assessment within the National Center for Crisis and Disaster Management (NCCDM) as well as a dedicated section on environmental fragility under the Provincial Fragility and Stability Assessment), and management of financial and human resources (such as capacity building and exchanges of expertise to train staff on budgeting and financial forecasting). Another opportunity would be to utilize the work on setting up a DRR architecture as an entry point to foster a process of dialogue.

With regards to bottom-up solutions that can strengthen current efforts, several opportunities could be seized. These include working with the Environmental Police and other environmental enforcement actors on defining their role and capacity requirements. There is also room for leveraging synergies with existing initiatives, such as UNDP's model police stations to include elements on civil Defence and environmental protection. Regarding DRR, partnerships could be sought on efforts around providing support to the NCCDM, once established under the MoI.

4. Mechanisms for engaging communities

The new NCCDM will need to include a space for civilian actors as well as community engagement. In order to empower civilian DRR actors to step up their role, support could be provided to further capacitate entities such as the Civil Defence, as well as for mechanisms for engaging communities. This makes supporting civilian participation and oversight paramount.

5. Integration between SSG/R, climate and environment, peacebuilding, livelihoods, and development

Finally, as part of promoting people-centered approaches, reducing extremism, and reducing migration pressures, SSG/R should aim to tackle climate and environmental security from a broader perspective. This includes designing support to security sector functions around disaster protection as well as protection of ecosystems as the foundation of community livelihoods with a conscious aim at social cohesion and security impacts, and fostering trust and state legitimacy. In addition, linkages with livelihood and development interventions need to be considered, such as on water governance and management, engaging with the private sector and reducing migration pressures by providing essential services such as mobile clinics and schools.

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Endnotes

1. Climate security describes all potential security issues and threats tied to climate change, which includes rising sea-levels, more frequent occurrence of extreme weather events and changing crop yields; See also The Secretary-General's Peacebuilding Fund 2020; Gaston et al. 2023.

2. In this report, environmental security sheds light on security and conflict implications of the environment more broadly as well as changes and degradation thereof. Thus, climate security is a subset of environmental security. See also Galgano and Rose 2021.

3. UNDP 2014; Binder et al. 2022; PMD/DPPA 2023; USAID 2017.

4. World Bank Group 2022.

5. Csordas, Robinson, and Wallin 2022; Csordas, Bennett, and Wallin 2023; González Esquivel et al. 2023; Csordas, Bennett, and Wallin 2023; Csordas, De Klerk Wolters, and Keske 2023.

6. Held in in the Al-Nahrain Center, see separate synthesis report for more detail.

7. MacAskill and Borger 2004.

8. UN Security Council 2004.

9. Constitute Project 2005.

10. UN Security Council 2004; UN Security Council 2010.

11. Hamasaeed and Nada 2020.

12. 1 million of which remained displaced in 2023. UNDP 2023c; IOM 2023.

13. Chmaytelli and Aboulenein 2017.

14. Costantini and O'Driscoll 2022.

15. UNDP 2023a; EUAM IRAQ n.d.

16. World Bank 2022.

17. 'Oil rents are the difference between the value of crude oil production at regional prices and total costs of production.' World Bank 2024a.

18. World Bank 2024b.

19. The World Bank 2023.

20. World Bank Group 2021, 13.

21. Al-Ansari, Ali Abed, and Ewaid 2020.

22. Berghof Foundation and Peace Paradigms Organisation 2023.

23. World Bank Group 2022.

24. Ibid.

25. Al-Shamsi 2019.

26. European Commission 2024.

27. UNEP 2019.

28. IOM 2022.

29. Ibid.

30. Ibid.

31. Mercy Corps 2023; Berghof Foundation and Peace Paradigms Organisation 2023.

32. Mercy Corps 2023.

33. Landmine & Cluster Munition Monitor 2021.

34. World Bank n.d.

35. World Bank 2023. The dams' foundation was constructed on unstable soil adding to its risk of collapse due to age. This would not only impact the services it provides but could also create a tsunami wave up to 45 m high. Such a wave would reach the population of Mosul city within 2-4 hours and further affect up to 4-6 million people downstream of the Tigris River, including Baghdad city.

36. Al-Ansari et al. 2020.

37. Ibid.

38. Abdulrahman 2023.

39. Amirahmadi 1996.

40. Ibid.

41. Knights 2003.

42. Villelabeitia and Al-Khairalla 2007.

43. World Bank Group 2018.

44. European Commission 2024.

45. Water Technology n.d. With a capacity to treat 750,000 m3 of sewage water per day, however it receives 1,25 – 1,5 million m3, leading to the release of 250,000 m3 per day of untreated sewage water.

46. Where interlocutors mentioned a sewage plant designed to serve 1 million people, while the population of Basra is now at 4 million. In Basra, only 11% of the population had access to clean drinking water in 2020; UNICEF 2019; UNDP 2020.

47. IOHR 2023.

48. Rodríguez-Eugenio, McLaughlin, and Pennock 2018. Ibid.

49. Al-Shammari 2016; CBD n.d.; Ministry of Health and Environment of Iraq 2018; UNDP 2023b; Al-Kasser 2021; Juhasz 2023; UNEP 2003.

50. Kareem 2013; Hassan, Hussein, and Nile 2022; Shlash and Obead 2023.

51. von Lossow et al. 2022; "[T]here are separate and disparate laws aimed at conserving and regulating water resources, including Law No. 50 of 2008 of the MoWR, which establishes a framework for institutionalizing water resource management (FAO 2008). The fragmented water governance structures require the various ministries to interact according to their responsibilities.".

52. von Lossow et al. 2022.

53. Peace Direct 2015; Al-Shammari 2016.

54. Wille 2019.

55. see also Mercy Corps 2023; Berghof Foundation and Peace Paradigms Organisation 2023.

56. Shafaq News 2023. Ibid.

57. Human Rights Watch 2018.

58. In addition to a range of older legislation (such as the Emergency Use Law 1961, the Civil Defense Law 1978, the Social Care Law 1980), references were made to a newer civil defense law number 42 from 2013, and variety of additional sources whose past and current status the team could not independently verify. These include a draft DRR law, a draft DRR plan from 2015 and a DRR strategy (which final status could not be independently verified).

59. UNDRR n.d.; About JCMC n.d.

60. Al-Shamsi 2019.

61. National Security Advisory 2023 Permanent members include the Ministers of Defence, Interior, Foreign Affairs, Finance and Justice as well as the Head of the Iraqi National Intelligence Service and National Security Adviser.

62. Not publicly available for verification.

63. Queensland Government 2022.

64. UN Iraq 2022.

65. Queensland Government 2022.

66. UNDP 2013.

67. While the MoE and international organizations working with the JOC-I mentioned early-stage planning for this, the Civil Defense reported having developed response plans and protocols for different types of incidents; the Ministry of Oil has common contingency plans with the Fire Brigade.

68. One example is the passing of the Emergency Law for Food Security and Development in June 2022 which allocates earmarked funds to the government; Ismail and Rasheed 2022.

69. UNDRR 2015: Sendai Framework Priority 2, Paragraph 27: "To establish and strengthen government coordination forums composed of relevant stakeholders at the national and local levels, such as national and local platforms for disaster risk reduction, and a designated national focal point for implementing the Sendai Framework for Disaster Risk Reduction 2015–2030. It is necessary for such mechanisms to have a strong foundation in national institutional frameworks with clearly assigned responsibilities and authority to, inter alia, identify sectoral and multisectoral disaster risk, build awareness and knowledge of disaster risk through sharing and dissemination of non-sensitive disaster risk information and data, contribute to and coordinate reports on local and national disaster risk, coordinate public awareness campaigns on disaster risk, facilitate and support local multisectoral cooperation (e.g. among local governments) and contribute to the determination of and reporting on national and local disaster risk management plans and all policies relevant for disaster risk management. These responsibilities should be established through laws, regulations, standards and procedures."

70. InforMEA 2023.

71. IISD 2022.

72. UN General Assembly 2022, 3.

73. Constitute Project 2005, art. 33.

74. InforMEA 2023.

75. UN Treaty Collection 2024, 3; IISD 2022.

76. National Security Advisor n.d.

77. For more details, see the textboxes and Dury-Agri, Kassim, and Martin 2017; Elbarlament 2020; Knights 2021.

78. Elbarlament 2020.

79. Almosly 2020.

80. Warda et al. 2019.

81. Several other actors are active in environmental law enforcement: The National Security Service has up to 450 000 personnel, including a research unit, which could enhance its role in environmental law enforcement and support of the EP. The MoI's National Central Bureau is Iraq's point of coordination for INTERPOL which is responsible for a wide range of transnational crimes such as combatting trafficking of nuclear or biological hazardous waste. Under direct supervision of the Prime Minister, the Iraqi National Intelligence Service (INIS) is responsible for collection, analysis and dissemination of national security threat intelligence, including on organized crime. A Ministerial Council, established in 2008, is composed of senior level ministerial officials and approves the working plan of the MoE and its operational and investment budget. Chaired by the MoE, a Federal Council of the Protection and Improvement of Environment is formed by senior officials of almost all Iraqi Ministries. Responsible for environmental matters on the national level, it has a relevant political function to provide recommendations on matters related to international environmental matters, (draft) environmental legislation as well as policy formulation and implementation by reviewing environmental aspects of national plans and programmes by other ministries or by coordinating with relevant authorities to prepare and implement local programmes for environmental protection; Almosly 2020.

82. European Commission. Directorate General for Environment. 2021.

83. Rodríguez-Eugenio, McLaughlin, and Pennock 2018.

84. European Commission. Directorate General for Environment. 2021.

85. International Labour Organization 2021.

86. Ministry of Interior (2015): No. (1) of 2015. Rules of Procedure. Environmental Police Department.

87. IOM 2023.

Photo credits

➤ Page 13: ICRC. Mike Mustafa Khalaf. 25/11/2021. Mosul, Old City. This child's only source of income is collecting and reselling metals from the city's rubble. A white flag on a pile of ruins means that the area is cleared of mines. With his friends, he sometimes collects resalable coins in areas that are not cleared. Reference : V-P-IQ-E-02453.

➤ Page 20: ICRC. Mike Mustafa Khalaf. 26/02/2020. In southern Iraq, the quality of available water is poor, with high levels of salt and contamination from sewage and agriculture. Reference : V-P-IQ-E-02384.

➤ Page 23: ICRC. Mike Mustafa Khalaf. 26/02/2020. Fao. Palm trees damaged during the Iran-Iraq war in the 1980s have not grown back. Reference : V-P-IQ-E-02382.

➤ Page 25: ICRC. Mike Mustafa Khalaf. 26/02/2020. The land in Fao is so dry that it is cracking. Reference : V-P-IQ-E-02383.

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