Water and Conflict

A Toolkit for Programming

Integrated Natural Resource Management (INRM)

Sound management of natural resources is central to long-term development and resilience. Faced with an urgent need to reduce environmental degradation while improving human well-being, solutions that effectively integrate investments in natural resource management with economic and social development are increasingly urgent. INRM promotes integrated programming across environment and non-environment sectors and across the Program Cycle. INRM supports USAID to amplify program impacts, strengthen gender equality and social inclusion, and identify best practices for integration.

For more information:

https://land-links.org/project/integrated-natural-resource-management-inrm-activity/

Water and Conflict: A Toolkit for Programming

Contents

Acknowledgements

Abbreviations

CLA	Collaboration, learning, and adaptation
DRC	Democratic Republic of the Congo
GBV	Gender-based violence
GERD	Grand Ethiopian Renaissance Dam
IDP	Internally displaced person
IPCC	Intergovernmental Panel on Climate Change
LGBTQI+	Lesbian, gay, bisexual, transgender, queer, and intersex
MEL	Monitoring, evaluation, and learning
MHM	Menstrual hygiene management
NGO	Nongovernmental organization
OECD	Organization for Economic Co-operation and Development
SDG	Sustainable Development Goal
UN	United Nations
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations International Children's Emergency Fund
USAID	U.S. Agency for International Development
WASH	Water, sanitation, and hygiene
WFPC	World Food Policy Center at Duke University
WHO	World Health Organization
WRM	Water resources management
WSSH	Water security, sanitation, and hygiene
WUA	Water user association

Introduction

Water is fundamental and irreplaceable to life, from supporting basic sanitation and preventing disease, to sustaining ecosystems and undergirding economies. Due to water's centrality to other key sectors, water management must balance different interests from many stakeholders—from farmers and herders competing over shared water, to countries vying to control river water for irrigation and hydropower. Where access to water in sufficient quantity and quality is limited, competition risks triggering or exacerbating conflict within countries. Even when water is not directly connected to the conflict, water insecurity interacts with underlying political, socioeconomic, institutional, and cultural factors to increase conflict risks. However, when managed effectively and cooperatively, water serves as a critical pathway for conflict prevention and peacebuilding.

To achieve Sustainable Development Goal 6 (SDG 6)—universal access to clean water and sanitation for everyone by 2030—development programming must move beyond conventional water sanitation and hygiene (WASH) service provision to advancing water security, sanitation, and hygiene (WSSH) in fragile and conflict-affected settings. Of the 466 million people estimated to be living in conflict-affected states in 2015, 177 million (roughly 38 percent) lacked basic drinking water and 284 million (about 61 percent) did not use basic sanitation (WHO and UNICEF 2017). Expanding WSSH objectives requires programs to account for ecosystem health, climate change response, food security, energy development, livelihoods, and resilience. It entails moving away from viewing water exclusively as an entry point to conflict resolution. Instead, water programming should consider how WASH services operate in conflict-affected contexts, incorporate sectoral considerations, mainstream climate and ecological considerations, advance participation of women and marginalized groups, and examine WASH services and management in the context of socio-economic and political factors.

This practical toolkit explains the connection between water management and key risk factors associated with conflict, provides avenues for addressing those links, and suggests ways to incorporate conflict integration into WSSH programming. Its primary audience is implementing partners for water programming and USAID staff or other stakeholders who work to advance the whole-of-government White House Water Security Action Plan, the U.S. Government Global Water Strategy, and the associated USAID Agency Plan. While the toolkit is intended to guide design, implementation, and monitoring, evaluation, and learning (MEL) across all USAID WSSH programming, it is particularly relevant for programs that fall under Strategic Objective 4 of the 2022 Global Water Strategy: *Anticipate and reduce conflict and fragility related to water.*[1] This toolkit is intended to serve as a resource for any

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[1] Fragility refers to a country's or region's vulnerability to armed conflict, large-scale violence, or other instability, including an inability to manage transnational threats or other significant shocks. Fragility results from ineffective or and unaccountable governance, weak social cohesion, and/or corrupt institutions or leaders who lack respect for human rights (GFS 2020).

organization working on issues related to WSSH to become more sensitive to conflict intersections with water programming, specifically in their ability to: (1) understand the context in which it is operating, particularly with respect to inter-group relations; (2) understand the interactions between its interventions and the context/group relations; and (3) act upon these understandings in a way that avoids negative impacts and maximizes positive impacts.

This toolkit is divided into four parts. The first section presents the relationships between water management and conflict, cooperation, and peacebuilding. The second part explores six cross-cutting sector considerations that show the interconnections between water management and other sectors. It underscores why water programming must integrate inclusive development, incorporate a systems perspective, and plan with other sectoral interests in mind. The third section highlights best practices and program strategies from USAID WSSH programming to help design stronger and more conflict-sensitive interventions. This section also provides resources and recommendations to strengthen MEL in water programming. Lastly, the toolkit presents a conflict analysis guide for water programming with key steps and resources to help practitioners follow a structured process to identify and evaluate conflict risks and interventions throughout the USAID program cycle.

This toolkit should be used alongside other resources that address conflict integration. It is one of a series of forthcoming USAID resources that apply conflict integration to specific USAID sectors, including:

- Land and Conflict Toolkit
- Feed the Future Conflict Toolkit
- Food Systems Conceptual Framework Companion Guide
- Conflict Integration Guide

Conflict integration is the intentional effort to improve the effectiveness and sustainability of development and humanitarian assistance by addressing the collective dynamics that underpin peace, security, and core sectoral goals. Doing so can move programming beyond conflict sensitivity and the principles of Do No Harm to promote better development outcomes and sustain peace and prosperity.

Background on Water and Conflict

Reliable access to safe water and sanitation is integral to achieving development goals, yet people in fragile and conflict-affected settings are eight times more likely to lack access to it (UNICEF 2019). Some 23 percent of the world's population—and roughly three quarters of those living in extreme poverty—live in fragile contexts (OECD 2020). Moreover, roughly 80 percent of the places where USAID has programs are in acute crisis, recovering from crisis, or experiencing smaller-scale upheaval.

Conflict refers to a real or perceived set of tensions between two or more people, groups, and countries. It is a continuum ranging from incompatible interests, to public protests, to organized violence by state and non-state actors. Water can be involved in starting, intensifying, or being affected by conflict across the continuum. Although conflict is a common, unavoidable part of society, it can be transformed into a positive part of development when competing interests are resolved peacefully for shared benefits (OECD 2018). Water, in particular, can help foster peacemaking by creating entry points for dialogue and post-conflict peacebuilding through supporting livelihoods. History is replete with examples of how iterative cooperation over water resource management and the use of tools, like adjudication and administrative processes, can lead to longer lasting trust and peace (Conca and Dabelko 2002, Troell and Weinthal 2014).

Water scarcity and a range of ineffective water management practices can contribute to an increase in conflicts over freshwater resources and built water systems. Fresh surface water and groundwater is distributed unevenly within and across state boundaries, leading many places to face relative water scarcity. Inequities in accessing safe and sustainable water are reinforced by poor water management, including inadequate governing institutions, the lack of technical capacity, and corruption. These water challenges alone do not lead to water-related conflicts. Instead, they combine with a variety of underlying political, socioeconomic, institutional, climatic, and cultural factors to catalyze new conflicts, exacerbate the impacts of ongoing conflicts, and prevent societies from recovering. They also prevent the development of water resources and services to support sustainable livelihoods and economic development.

Water security, sanitation, and hygiene (WSSH) encompasses water, sanitation, and hygiene (WASH), as well as water resources used for supporting ecosystems, livelihoods, and industry (e.g., irrigation and hydropower). WSSH is fundamental to achieving prosperity, health, stability, and resilience.

Water Resources and Conflict

Water-related conflicts encompass a wide range of situations of competing interests that directly or indirectly involve issues of water quality, quantity, timing, safe access, and availability (see Table 1 for examples). Such disputes can trigger new conflict, exacerbate existing conflict, or act as multipliers of conflict risk. They occur across local, subnational, national, and transnational scales. Local and subnational conflicts are more common than national or regional conflicts, and conflict intensity is generally inversely proportional to scale (Wolf 2001). The risk of violent conflict is higher when water-related disputes arise in the context of perceived ineffective or illegitimate governance. While several social, economic, political, and institutional factors can contribute to water-related conflicts at local and subnational scales, issues of mistrust, lack of transparency, and lack of confidence in negotiations between nations can mark water-related conflicts at the transnational scale.

TABLE 1. SUMMARY OF TYPES OF WATER-RELATED CONFLICT.	
Type of water-related conflict	**Illustrative example**
Disputes between competing actors (e.g., two or more countries, refugees and host communities, farmers and pastoralists, etc.)	• In response to the **Syrian** refugee crisis in the mid-2010s, locals in **Jordan's** northern governorates protested against the government and Syrian refugees due to increased pressure on already-scarce water supplies. • In 2012, worsening droughts and competing claims to land and water resources led to farmer-herder clashes in the Tana River Delta of **Kenya**.
Disputes between competing uses (e.g., across agriculture, industry, and domestic purposes)	• In **Mexico**, intensive use of the Hermosillo basin aquifer for agriculture and new water projects to support growing industries has led to unrest and protest among farmers, industry, and indigenous communities.
Tensions over water rights or inequitable allocation arrangements	• **Sudan** and **South Sudan** remain in negotiations over Nile water allocation and the governing of the river basin following the latter's formation in 2011. • The water-sharing arrangement between **Turkey** and **Armenia** over the Arpacay River has dealt with quantity and not quality, leading to new challenges, such as pollution.
Dissatisfaction over inequitable use of water resources	• A number of upstream states have unilaterally built hydroelectric plants that have affected downstream users, for example, in **Ethiopia** (Nile River), **Turkey** (Euphrates River), and **Afghanistan** (Helmand River).

TABLE 1. SUMMARY OF TYPES OF WATER-RELATED CONFLICT.	
Grievances over impacts of water-related infrastructure	• The Farakka Barrage across the Ganges River has increased water stress and the likelihood of flooding in **Bangladesh**, which has led to refugee flows into **India**. • Tensions remain high over the Rogun Dam between **Tajikistan**, which seeks hydroelectric power, and **Uzbekistan**, whose agricultural production (including water-intensive cotton) could be adversely affected.
Protests over the quality of water services	• In 2017, residents in many parts of **Morocco** protested the government over the lack of safe drinking water and low supplies, resulting from water overuse for agriculture.
Disputes over land when new irrigation infrastructure is built	• Before being canceled in 2017, construction for the Santa Rita Dam Project in **Guatemala** led to violent evictions of local Indigenous communities from their claimed lands. • The Guneydogu Anadolu Projesi (Southeastern Anatolia Project), a large river basin development project in **Turkey** with many irrigation schemes, has led to conflicts over land rights between the Turkish majority and the Kurdish minority groups.
Demonstrations over water as a right versus water as a commodity	• In 2000, water privatization and subsequent price hikes led to public protests in Cochabamba, **Bolivia**.
Grievances related to government policies and actions that deteriorate water quality or reduce quantity	• Water pollution from past policies has created challenges for the five riparian states of the Aral Sea, which have various agreements in place to manage water resources, but still face interstate tensions when making decisions without considering regional cooperation and development.
Disagreements when existing agreements are placed under stress from changes in supply or demand (e.g., over-extraction, drought, refugee inflow, etc.)	• Despite the Indus Water Treaty distributing water between **India** and **Pakistan** since 1960, new disputes are arising from increased water stress, tensions over upstream water projects, and climate change impacts.

Shared water resources present extensive opportunities for potential disputes between water users within countries and especially between two or more states. In fact, the majority of the world's 310 transboundary river basins are shared between two or more countries (McCracken and Wolf 2019; see Figure 1). Disputes and collaborations can occur depending on whether decisions affecting water scarcity, quality, and pollution are made unilaterally or jointly. For example, upstream effects and decisions (e.g.; for agriculture and hydropower projects) can affect downstream users through flooding, sedimentation, pollution, and displacement. Similarly, downstream decisions that alter water flows (e.g., by building dams) can impact water availability and the ecology of upstream users.

Groundwater aquifers and reserves are similarly at heightened risk of unsustainable consumption, pollution, and uninformed perceptions on the quantity and quality of available resources.

Governance structures that are used to manage resources sustainably may no longer be operating effectively. Lack of knowledge and monitoring technologies on the quantity and quality of remaining groundwater can also lead to unsustainable water withdrawals and conflict between water users. Without effective institutions or mediation mechanisms, perceived imbalances become conflict risks.

At the same time, shared interdependence over scarce water creates opportunities for long-term repeated interactions that provides the impetus for cooperation, conflict resolution, and peacebuilding (Swain 2016, Conca and Dabelko 2002). Between 1945 and 1999, cooperative events related to water issues outnumbered conflicts by more than two-to-one, and none of the 1,800 disputes in transboundary basins over those years led to formal war (Wolf et al. 2006). From 1997-2009, about half of all water-related events in the Middle East and North Africa

© 2017 Transboundary Freshwater Dispute Database
Oregon State University
Cartographer: Melissa McCracken
Robinson Projection

International Basins

0   1,400   2,800   5,600 Kilometers
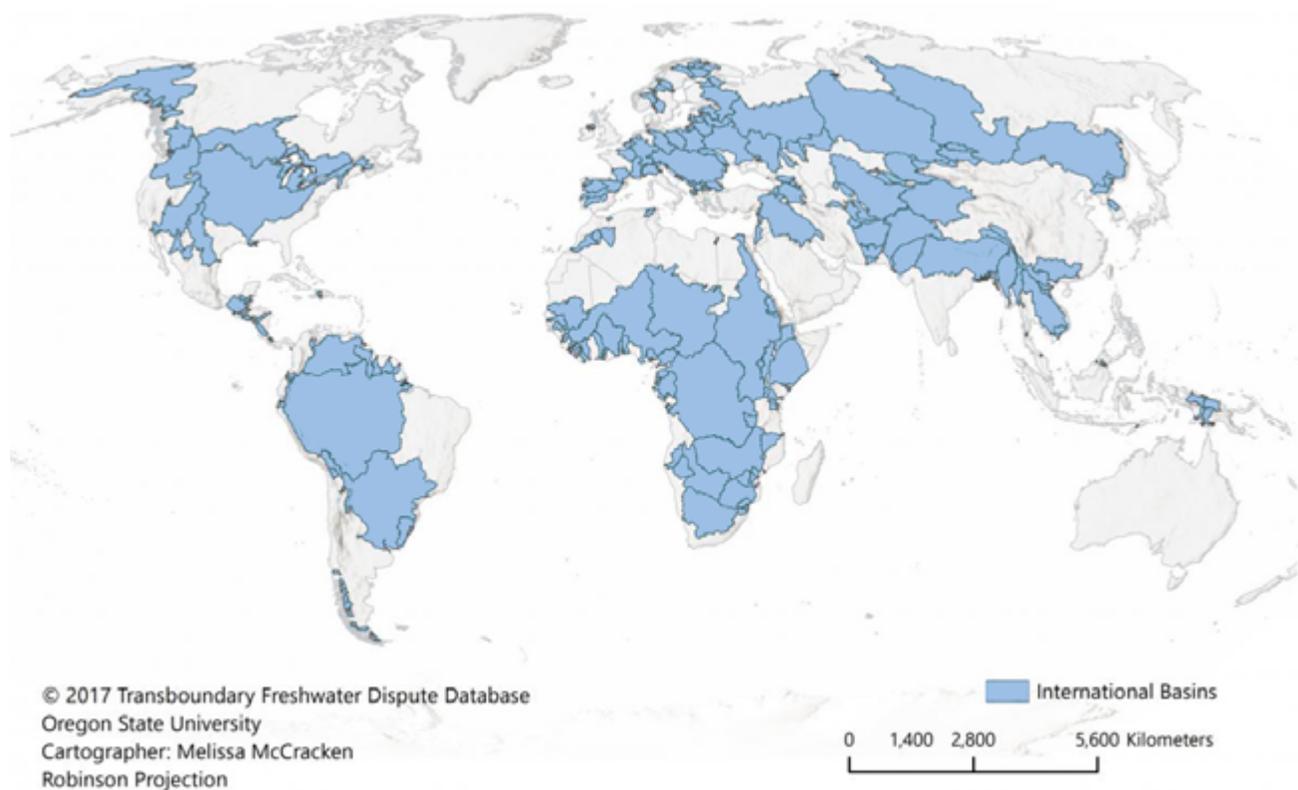
Figure 1. Transboundary River Basins of the World

did not have any positive or negative impact on water quantity or quality (see Figure 2). Cooperation on water-related issues is not the absence of conflict, but instead, implies the process through which people come together to collectively address disagreements in peaceful ways and find mutual benefits from cooperation. Cooperative approaches to achieve shared benefits lead competing groups to coordinate, negotiate, build trust, and solve problems together. Strong water management institutions, such as basin treaties across different levels of scale are key to creating opportunities to reduce conflict risks and prevent conflict recurrence in post-conflict situations.

MOST CONFLICT

Description	Level	Value
Events that are likely to or do result in a deterioration at the national level; physical violence associated with water problems	-5	33
Events that are likely to or do result in a deterioration at the regional level within the respective country	-4	89
Large-scale and general opposition of the public towards policies and actions that have negative implications at the regional to national level	-3	83
Tensions within governmental (intrastate) or between countries (interstate) that may have an affect at a domestic level	-2	237
Events that are likely to or do result in a very small negative impact at the local level	-1	199
Routine and purposive actions on water issues that have no identifiable positive or negative impact	0	1,603
Events that are likely to or do result in a very small improvement at the local level	+1	123
Agreements signed or other measures formally adopted that signal commitment to improvement at the regional or national level	+2	370
Events of a moderate intensity that may result in an improvement at the regional or national level within the respective country	+3	333
Events that are likely to or do result in substantial improvement at the regional level within the respective country	+4	25
Events that are likely to or do result in substantial improvements in the country as a whole	+5	13

MOST COOPERATION

Recreated from Borgomeo et al. (2021). Data source: Bernauer et al. (2012).

Figure 2. Water-related Domestic Events in the Middle East and North Africa, 1997-2009

Conflict Impacts On Wash and Service Delivery

Conflict can significantly compromise access to safe WASH services through direct and incidental impacts on critical water resources, interconnected WASH infrastructure, and key personnel. Water can be used as a weapon of war when a group contaminates water supplies, blocks deliveries, loots service parts, and controls distribution, including through cyber attacks. Explosive weapons that destroy infrastructure and materials used in intensive conflicts can release chemicals and debris that severely pollute water resources, especially in places with high population areas, like urban centers. The destruction of infrastructure, such as water pumping stations, water tanks, access points, and sanitation facilities can prevent the timely delivery of WASH services, contaminate water supplies, and impede appropriate infection prevention and control practices. Damage to systems housing data on water quantity and quality canhalt critical WASH operations. Additionally, personnel responsible for operating WASH services may be killed, injured, threatened, or prevented from reporting to work due to fear, or due to facilities being rendered inaccessible.

Attacks on energy systems also jeopardize WASH service operations through reverberating effects. Without electricity, it can be difficult to extract, purify, or desalinate water and maintain sanitation facilities. Across Syria, Libya, and Yemen, critical water services and infrastructure have become direct targets of conflict, generating long-term negative effects on local livelihoods. Between 2011 and 2018, there have been more than 100 instances of targets on facilities, such as water distribution canals and wastewater treatment plants (see Figure 3).

Conflict can sometimes weaken water governance and reduce the capacity of governments to establish and enforce water regulations. The resultant water insecurity can force people to use unsafe water and sanitation or rely on unprotected sources, leading to malnutrition and waterborne diseases, especially among children. Women and children are also vulnerable to conflict risks, such as gender-based violence (GBV) during water collection (see section 2.4).

People are regularly displaced internally or across borders due to conflict. Internally displaced persons (IDPs) and refugees often settle in camps and informal settlements without adequate WASH services, leading to disease outbreaks. When displaced people must compete with host communities for water, the risk of conflict can subsequently increase. In Jordan, for example, an influx of refugees fleeing the Syrian civil war added additional stress to scarce local water supplies, especially in the North and at the Zaatari camp. Urban centers with damaged water infrastructure or cities experiencing rapid growth face added challenges providing water services to conflict-affected populations and returnees. In Monrovia, Liberia, and Kabul, Afghanistan, whose populations more than doubled due to people fleeing violent conflict, providing basic services took several years (Troell and Weinthal 2014).

Instances of Water Infrastructure Targeting in the Middle East and North Africa, 2011–18
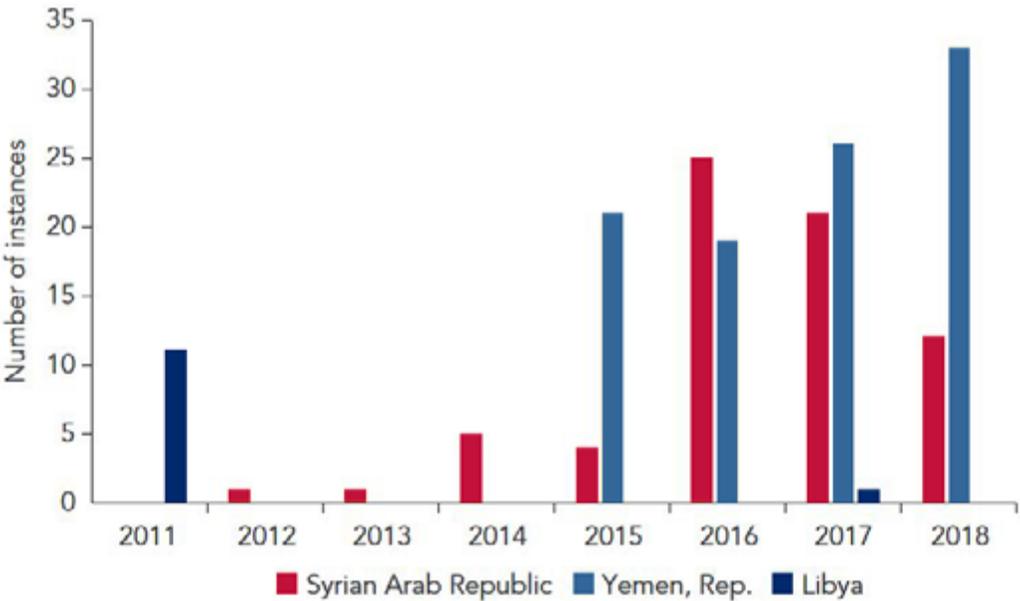
Recreated from Borgomeo et al. (2021). Source: Sowers, Weinthal. and Zawahri 2017. Data updated for water infrastructure targeted in Libya, the Syrian Arab Republic, and the Republic of Yemen, 2011-18. Overview of data and coding available at https://sites.nicholas.duke.edu/time/about-data/

Note: Includes infrastructure related to drinking water, purification, irrigation, wastewater treatment, and sanitation. Data from Łibya likely represent an underestimate given that few organizations are reporting from Libya on infrastructure destruction.

Figure 3. Water-related Domestic Events in the Middle East and North Africa, 1997-2009

WSSH, Peacebuilding, and Stabilization

In conflict-affected settings, improving water resource management and providing timely and affordable WASH services are fundamental to meeting WSSH objectives. They can also help reduce inequality and increase trust between populations and their government. For instance, when humanitarian actors and other organizations coordinate to strengthen organizational, technical, and financial capacity for WASH service provision, governments are better able to enable people to restart their lives. Coordination between local and national authorities across water-dependent sectors can also help rebuild confidence in governmental institutions, support nation-building, and facilitate economic recovery. For instance, prioritizing water allocation for agricultural communities and rehabilitating irrigation structures can positively contribute to supporting livelihoods and food security, especially because agriculture remains the largest user of water in many fragile and conflict-affected areas (see section 3.3).

Furthermore, ensuring sustainability in water service management can depend on having inclusive participatory processes and active engagement with diverse stakeholders, particularly marginalized populations. Building consensus over scarce water resources can help reduce the risk of conflict. Taking advantage of the windows of opportunity to enhance governance mechanisms during the post-conflict period can further improve representation in water-related decision-making and help reduce the likelihood of conflict re-emerging in the future. Involving women in local water management committees can lead to more effective water management that benefits multiple users and contributes to peacebuilding (Burt and Keiru 2011; see section 2.4). For example, in post-conflict Democratic Republic of the Congo (DRC), women refugees returning from camps leveraged their knowledge on the link between contaminated water and disease to advocate for safer water and the rehabilitation of the water system. However, to help lay the foundation for long-term recovery, interventions must be flexibly sequenced and be deliberately conflict-sensitive across the full project lifecycle. Interventions must also be adaptive to changing conditions, such as climate change. Doing so can help prevent renewing tensions or undermining essential water resources.

Cross-cutting Themes

In fragile and conflict-affected settings, advancing WSSH and proactively mitigating conflict risks requires addressing multiple cross-cutting issues in relation to water throughout the program cycle. Some key illustrative themes include: 1) governance/institutional challenges, 2) gender and marginalized populations, 3) climate change, and 4) data and transparency. While each theme is presented individually, they are interdependent and featured throughout this toolkit. These themes fortify USAID's strategic priorities for programming (see Annex I).

GOVERNANCE/INSTITUTIONAL CHALLENGES

Ineffective water management can increase the risk of conflict due to its destabilizing effect on water quantity, quality, and access. Ineffective management includes decisions and processes that promote narrow interests, conceal transparency, and ignore stakeholder priorities. Some examples include:

- pricing structures that fail to accommodate equity,
- insufficient data or use of data,
- inadequate and exclusive participatory processes,
- lack of enforcement and monitoring mechanisms, and
- unclear or inadequate water tenure and land ownership.

When combined, these approaches can lead to poor water management outcomes such as the overallocation of surface water and groundwater and increased burdens on women and children.

The lack of transparency, accountability, and participation can also lead to corruption in the water sector, which has costly impacts (Water Integrity Network 2016). In addition, ineffective governance through lack of political will and low technical competence can indicate fragile relations between government and societal actors. Overlapping and disaggregated decision-making among different government bodies along with weak understanding of traditional resource rights arrangements can produce competing claims on water, leading to conflict in places lacking systems for monitoring and enforcement. While most of the world's transboundary river basins do not have collaborative management agreements or river basin organizations, they can improve governance systems and help mitigate existing or emergent water-shared conflicts by improving governance systems (Giordano et al. 2014, Vink 2018).

Strong institutional capacity is necessary to manage scarce water resources and balance competing water needs for domestic, productive, hydropower, industrial, and ecological purposes. This capacity includes collaborative mechanisms, financial and material resources, trained personnel, clear legal frameworks, inclusive processes, and coordination with other sectors and communities, among others. In conflict-affected settings, these capacities can be built with a commitment to water resources management (WRM)[2] at local, regional, national, and transboundary levels of government. WRM promotes better governance and coordinated development that is supportive of ecological sustainability, equitable participation, and economic efficiency (Al-Saidi 2017). Effective water management also depends on strengthening land tenure rights, as water use rights have traditionally been linked to land rights.

Informal and traditional institutions can also affect institutional contexts and dictate user rights, seasonal allocations, and maintenance practices. In some places, informal and customary institutions compete with formal authorities, fail to incorporate critical hydrological information, or are ill-equipped to adapt to climate and conflict risks. Likewise,

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[2] Water resources management (WRM) is the process of planning, developing, and managing water resources, in terms of water quantity and quality, within and across water uses for the benefit of humans and ecosystems. WRM includes the institutions, infrastructure, incentives, and information systems that support and guide water management and uses.

when formal water institutions overlook or seek to replace traditional practices, ignore cultural and historical dynamics around water use, or make water decisions without stakeholder input, there can be a lack of compliance and heightened tensions, such as in pastoral communities.

GENDER AND MARGINALIZED POPULATIONS

The impacts of conflict and inadequate access to safe and sustainable WASH services disproportionately affect marginalized groups, including women, children, Indigenous Peoples, LGBTQI+ people, persons with disabilities, and other marginalized groups. Conflicts can lead to increased levels of GBV against women, children, and LGBTQI+ people, including torture, sexual violence, and forced marriages because GBV can be used as a weapon of war. Conflicts can also increase the prevalence of disability and reinforce pre-existing inequities, patterns of discrimination, and societal norms. For instance, young men can be viewed as threats or negatively perceived as being instigators of conflict. Conflict can disrupt and damage already limited water and WASH services, further limiting their access to other services,

PHOTO CREDIT: USAID INDIA

such as healthcare and education. Marginalized groups constitute the majority of IDP and refugees, which places them at greater risk of harm during displacement or at camps.

Marginalized groups are encumbered by poor WASH practices, face challenges in accessing WASH resources, and have unequal power in water resource management. In 80 percent of households with water off-premises, women and girls bear primary responsibility for time-consuming domestic water collection, which increases their risk of GBV from the long distances they travel (Pommells et al. 2018). Added risks of physical and psychological harm come from using sanitation facilities outside the home or practicing open defecation, often at night due to privacy needs and feelings of shame (Nunbogu and Elliot 2022). People who menstruate require adequate resources and privacy for menstrual hygiene management (MHM). A lack of such resources makes participation in income-generating activities, leisure, and political activities, like government meetings difficult. For children and young people, inadequate access to water and WASH resources can lead to lost education opportunities that can further prevent them from pursuing sustainable livelihoods.

People with disabilities can face barriers using water and WASH services due to inaccessible design and dependency on others for access, limiting their participation in society and ability to sustain their livelihoods. Conflict and climate change impacts can also adversely affect people with disabilities, who may be excluded from receiving information about water and WASH services in alternative formats or receiving direct assistance in conflict settings or refugee camps. They can also be excluded from participating in peacebuilding processes and public consultations due to stigma, social prejudice, and lack of accommodations (e.g., physical, visual, cognitive, etc.).

Similarly, Indigenous Peoples may be systematically excluded from accessing water and WASH services or participating in decision-making processes due to lack of recognition, marginalization, discrimination,

geographic isolation, and insecure tenure rights (USAID 2020). Their traditional water management practices are often not acknowledged or incorporated, which can increase the risk of conflict. Large water projects can threaten Indigenous practices and livelihoods, and displacement from their territories can increase instability and discontent with the government and others.

LGBTQI+ individuals also face challenges accessing water and sanitation due to social stigma, lack of legal recognition, criminalization, and lack of protection from discrimination. This can lead to living in areas with poor services, unstable housing, and fear of harassment and violence. As a result, they may be excluded from accessing communal resources and face difficulties accessing public WASH services that are traditionally sex-segregated.

Addressing identity-specific vulnerabilities as core parts of WASH programming requires abiding by USAID's inclusive development principles, including suggested approaches for Indigenous Peoples, LGBTQI+ people, persons with disabilities, and youth that consider:

- protection of women, children, LGBTQI+ and other marginalized groups from GBV;
- promoting the rights of Indigenous Peoples;
- support for youth livelihoods and youth participation;
- understanding different water uses by age and gender identity (e.g., for household use, for agriculture, etc.);
- ensuring sanitation facilities meet the needs of people who menstruate and persons with disabilities;
- evaluating women's changing roles in conflict, such as new labor roles and gendered migration;
- providing training to young and older men to help address issues facing women and girls; and
- promoting women and youth as agents of positive change through leadership and inclusion in water management.

CLIMATE CHANGE

The impacts of climate change affect not only the availability, quality, and distribution of water, but they interact with other factors like governance and migration to multiply water-related conflict risks (UNICEF 2021). Climate change disrupts weather patterns and impacts water availability, quality, and access in several ways, resulting in a range of impacts, such as: extreme events, shifting precipitation patterns, flooding, desertification, sea level rise, and contaminated/polluted water supplies. Climate change threatens to make water management challenging through its society-wide impacts that will alter water supply and demand. Regions that are naturally arid and experience droughts will continue to get drier, while areas with moist climates are expected to get wetter. Despite this imprecise rule of dry gets drier and wet gets wetter, climate scientists expect greater weather extremes and variability across many regions of the world.

Almost 75 percent of natural disasters between 2001 and 2018 were water-related, including droughts and floods (UNESCO 2020). Both acute and chronic climate events alter the volume, timing, and location of precipitation and shift the geographic distribution of water. Rising temperatures contribute to increasing water demands through water for irrigation and greater household and industrial cooling needs. While it remains contested whether climate change directly leads to conflict, there are multiple pathways through which it contributes to an increased risk of conflict (IPCC 2022).

Climate change generates instability through its impact on climate-sensitive activities and interactions with socioeconomic and political stresses that create or escalate tensions. In Syria, for instance, protracted drought in the 2000s coupled with poor government water management policies resulted in reduced crop yields, food insecurity, and loss of agricultural livelihoods. The subsequent civil war further contributed to forced displacement and water insecurity (Daoudy 2020). Across Central Asia, for example, climate change has increased glacial melt, leading to less predictable river flows, more flooding, and a reduced ability to capture

water and maintain water supply for hydropower and agriculture. Climate-related migration can also put additional stress on government water services to accommodate growing populations, particularly in places already facing water scarcity. As a result, previous water management schemes are ill-equipped to respond to changing realities, increasing the potential of new conflicts. Regional actors must incorporate climate change impacts in building resilient institutions to coordinate water sharing. Climate risk management tools can help programs assess and address the impact of climate change on conflict. Further guidance is available in USAID's Climate Strategy (2022-2030).

DATA AND TRANSPARENCY

Several institutional factors influence water management effectiveness, including data and information availability, management and use, weak governance, and competing governance arrangements. Reliable hydrological information (e.g., flood maps and groundwater levels) and socioeconomic data that are disaggregated by group (e.g., by sex) are necessary for effective water management decisions. Yet this data is often difficult to collect and maintain in fragile and conflict-affected settings where measurement tools and personnel capacity are unavailable or costly. In Afghanistan, for example, robust baselines of the Helmand River basin had not been collected since the 1970s due, in part, to lack of capacity (Palmer-Moloney 2014). In South Sudan, lack of data led the national government to divide its water sector budget evenly across its ten states, potentially limiting support to high-need areas (Huston 2014). As digital technologies are more widely adopted to monitor and manage water data, managing new conflict risks, like cyber attacks against water infrastructure, will be necessary.

Data from Indigenous and local knowledge on how to assess, govern, and manage water resources can also serve as an important complement to more technical information. In conflict-affected settings, this knowledge can be lost as people move or overlooked during reconstruction in ways that undermine governance. For example, in Afghanistan, humanitarian efforts to provide drinking water post-

PHOTO CREDIT: GDAGYS

conflict included digging deep wells that undercut the traditional, community-based *karez* water supply system.

Data must also be collected, verified, and shared transparently and frequently to increase public access to information and reduce mistrust between groups. Public knowledge on water management is often lacking in fragile and conflict-affected settings, which can mask mismanagement and preferential treatment that further disadvantages marginalized groups. Data transparency can help facilitate informed decision-making and dialogues to resolve water issues. Otherwise, the lack of transparency can fuel perceptions of corruption, and, in turn, contribute to social unrest and disputes. At the same time, improving data transparency in weak governance systems can lead to unintended conflict risks if the information reinforces perceptions of inequitable access to limited water. When comprehensive water information is missing, data that is jointly supported by all stakeholders, such as from third-party sources (e.g., NGOs and academic institutions), can help facilitate effective water management and manage conflict risks.

WATER AND CONFLICT DATA RESOURCES

Water Conflict Chronology categorizes events related to water and conflict from the 1980s to present

International Water Events Database documents historical international water events from 1948 to 2008

Global Early Warning Tool forecasts conflict over the next 12 months using a machine learning-based methodology

EJAtlas provides a global database of localized environmental justice struggles

Fragile States Index assesses each country's vulnerability or collapse

Global Gender Gap Index benchmarks the evolution of gender-based gaps at the country level

International Water Law Project provides resources on international water law and policy issues

Witnessing the Environmental Impacts of War offers global case studies on conflict-linked environmental harm

Cross-sectoral Considerations for Water Programming

Understanding interdependencies between WSSH, conflict, and other development sectors is important for incorporating conflict integration, mitigating conflict risks, and advancing programming to expand access to water and sanitation. This section describes the intersections between WSSH, conflict, and: 1) disaster risk reduction, 2) human migration and demographics, 3) agriculture and food security, 4) energy, 5) health and well-being, and 6) environment and ecosystems.

Disaster risk reduction

Most disasters that threaten people and the environment are directly or indirectly linked to too much or too little water, or polluted water (OECD 2022). Disasters include hazard events (e.g., floods, droughts, earthquakes, typhoons/cyclones, and water quality emergencies) that interact with "conditions of exposure, vulnerability, and capacity" to generate widespread disruption and damage to society (UNGA 2017). They can decimate crops, pastures, and livestock, halt energy generation, and catalyze population movements. In fragile and conflict-affected settings, disasters can reinforce existing conflicts or increase the risk of new conflict, such as through inciting socio-political instability and damaging resource-dependent livelihoods. Yet, disasters can also lead to pathways towards peace when they act as windows of opportunity to strengthen institutions and encourage cooperation between water users during pre-disaster, recovery, and reconstruction activities (Peters 2022).

Disaster frequency, intensity, and severity are expected to increase due to climate change, population movements, geopolitical tensions, and shifting land use patterns. For instance, people living and moving to marginal, degraded lands and informal settlements are exposed to higher disaster risks. These trends are exacerbated by poverty, land tenure insecurity, and poor flood protection. Disasters also interact with existing social and political systems to heighten the risk of conflict. In fragile and conflict-affected settings, weak institutions for managing water access post-disaster can increase perceptions of poor governance, leading to public discontent and mobilization, and raise tensions between various water users. Empirical evidence remains inconclusive on climate change impacts, like droughts, on conflict patterns. In parts of sub-Saharan Africa, droughts are linked to violence between pastoralists and farmers over water access (Detges 2016). At the same time, droughts may also reduce cattle raiding attacks and provide opportunities for cooperation over the use of limited water resources (Raleigh and Kniveton 2012).

Advancing disaster risk reduction can help strengthen resilience and ensure water security, per USAID's Climate Strategy (2022-2030). One way forward is to invest in early warning, preparedness, mitigation, and prevention to better assess the implications of disasters and climate change. Early warning systems improve forecasting and rapid information-sharing in marginalized communities, as has been done through USAID's End-to-End (E2E) Early Warning System project in the Nepali Kankai River Basin (2014-2017) to build flood resilience. While investing in climate-resilient infrastructure can help communities withstand disasters and hasten recovery, it must be done in ways that do not create additional risks (e.g., by clarifying property and tenure rights, by not building in hazard-prone areas, by ensuring construction quality and inclusive design, and by putting in place sustainable systems for operations and maintenance). Transboundary and groundwater risks also require coordinated cooperation because hazards can spread through transboundary river basins connecting multiple users or upstream and downstream countries (Bakker 2009).

PHOTO CREDIT: USAID

BUILDING RESILIENCE TO DISASTERS

Crises, such as conflict, climate change, and zoonotic diseases, like COVID-19, exacerbate cycles of water insecurity, food security, and economic instability which in turn increase the risk of conflict. In fragile and conflict-affected regions, building resilience to water challenges are key to disaster recovery, stabilization, and peacebuilding. This requires programming that strengthens locally led development and joint planning and investment with local networks across human capital, infrastructure, institutions, data/information, and alternative livelihoods. Sustaining WASH services is also vital to ensure peace dividends continue to be experienced by communities and to build trust in the state to deliver during a crisis. With greater resilience, communities can better respond to shocks when they occur, and the costs of recurrent crises will be reduced. Resources on how to incorporate resilience include courses through USAID and ResilienceLinks.

Tropical Cyclone Idai made landfall in March 2019 in central Mozambique as the most destructive cyclone recorded in Africa. An estimated 1.7 million people were in the cyclone's direct path, and at least 400,000 people were displaced, many health and education facilities were destroyed, and thousands of acres of crops were inundated (Macamo 2021). Key lessons learned to help build resilience and mitigate vulnerability/exposure to flooding disasters include:

- restoring and preserving coastal ecosystems;
- reinforcing early warning systems to provide sufficient information on severity;
- rehabilitating green and gray infrastructure; and
- bolstering the solid waste management system.

The COVID-19 pandemic disrupted access to WASH services in many ways. A 2020 survey across five sub-Saharan countries found that one in three people struggled to afford water or access water safely. WASH service providers struggled to operate amid diminishing revenues. Women and girls also faced increased risks to GBV due to their water collection responsibilities. Sustaining WASH services is critical to reducing the spread of COVID-19, safely reopening economies, and building trust in local organizations that can deliver during crises. This includes maintaining and extending services and working with WASH service providers to develop contingency and risk management plans to withstand and respond to future pandemics.

Human Migration and Demographics

While conflict is a known driver of forced displacement, water scarcity and poor water management can also accelerate, or in some cases suppress, human migration. Disrupted water supply, poor water quality, reduced potable water, and disaster events displace communities directly or indirectly in ways that increase food, land, geopolitical, and livelihood insecurities (Gleick and Iceland 2018). Yet in many places, the poorest households may not have the option to move due to cost, and when people do move, many are unable to return back to their place of origin. In Yemen, IDPs and returnees cite water scarcity as a main factor in the decline of their livelihoods and income-generating activities (Borgomeo et al. 2021).

Most people migrate internally rather than internationally, at a rate of almost three-to-one (McAuliffe and Ruhs 2017). These movements can be permanent, temporary, seasonal, or circular. Marginalized groups, such as women, children, Indigenous Peoples, and persons with disabilities face additional barriers when migrating, such as increased GBV, fewer economic opportunities, and discrimination. Water deficits result in five times more aggregate migration than from water excess and floods, with droughts in particular mobilizing migrants to move from rural agricultural areas into cities for employment opportunities (Zaveri et al. 2021). Growing population and rapid urbanization are expected to raise water demand by 80 percent by 2050 (Zaveri et al. 2021). Climate change impacts, such as increased aridity, may also exacerbate water sector issues and undermine resource-dependent livelihoods, increasing both migration and the risk of conflict at origin and destination sites.

The arrival of migrants can put pressure on WASH services of the host communities, and access to WASH services remains a key challenge for migrants. Conflict risks between displaced populations

PHOTO CREDIT: CLAUDIAD

and host communities are heightened when the resources, organizations, and infrastructure of host communities cannot meet increased water demand. Groups like pastoralists who depend on environmental conditions migrate in response to reduced grazing lands from expanding crop land and climate conditions, leading to disputes with other pastoralists or farmers. In eastern Chad, the lack of wells, boreholes, or groundwater of sufficient quantity and quality for the thousands of Sudanese refugees escaping conflict in Darfur exacerbated water scarcity, fueling tensions with local communities. Extending WASH services to the urban poor, and particularly to those who live in poorly designed housing stocks or informal settlements without secure land and property rights, presents additional challenges that may require private sector approaches.

Agriculture and Food Security

Water is critical to agricultural production and food security. Irrigated agriculture supports 40 percent of the total food produced worldwide, and agriculture as a sector is the world's largest consumer of water, accounting for 70 percent of all water use (World Bank, 2020).[3] The figures are even higher in some countries; agriculture accounts for almost 90 percent of Yemen's water consumption. With growing populations and a projected 70 percent increase in demand for agricultural output by 2050 to meet food and fiber needs, agriculture's overall demand for water resources is expected to increase. The effects of climate change on agricultural production and food security include changes in precipitation, land availability, run-off, soil health and fertility, and nutrient loads, as well as damage to irrigation

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[3] Agricultural water withdrawal includes self-supplied irrigation, livestock watering, and off-stream aquaculture (Kohli et al. 2010).

infrastructure and crop lands through more frequent and intense disasters (OECD 2014).

Globally, agriculture employs 27 percent of the world's workers. In many conflict-affected countries, the figures are double or triple that. For example, in Ethiopia, approximately 75 percent of the labor force is dependent on agriculture as the main source of income and economic activity (USAID 2022). Even in mineral-rich countries, agriculture remains the main source of livelihoods (Cuba et al. 2014). The agriculture sector employs more than half of rural youth in Africa, Asia, and Latin America (Dolislager et al. 2021).

Due to agriculture's high water use, conflict risks and tensions are heightened due to the competition it places on already limited water across multiple sectors. For instance, lack of water access among small-scale farmers and pastoralists can threaten local livelihoods and food security and cause them to turn against one another, against industrial-scale agricultural interests, or against state water managers in dispute over what little water is available. Migration due to loss of land, conflict, and climate change impacts can also lead to loss of livelihoods and conflict between groups that are newly brought together (Adie et al. 2021). Multi-use water supply interventions should consider provision of human, agricultural, and livestock access, where relevant, to mitigate conflict over limited water resources. Public frustration over food insecurity and associated loss of livelihoods can sometimes create a risk for unemployed people, particularly young people, to be recruited into gangs and organized crime (Cramer 2011). The effect of conflict impacts on critical inputs and infrastructure also destabilize populations, which hampers post-conflict recovery and forces crop decisions that undermine sustainable water use and food security. In Afghanistan, for instance, some farmers cultivate poppy at the expense of food crops, as it is more financially lucrative and consumes less water (Catarious and Russell 2012). Yemeni farmers similarly support their livelihoods by cultivating high-value *qat*.

Energy

Energy, water, and food are tightly interconnected, and shortages in any one of them can have destabilizing ripple effects and increase the risk of conflict. Water is needed to extract fossil fuels, generate hydropower, and grow feedstock for biofuels, meaning low or changing water levels can disrupt electricity production through multiple paths. Thermal energy production can come to a halt when water for cooling is insufficient or too hot, as is expected under climate change. In 2016, water shortages caused eighteen power plants in India to face shutdowns that would have otherwise produced enough electricity to power Sri Lanka for a year (Luo 2017).

Adequate energy is similarly needed to extract, transport, distribute, desalinate, and treat water as well as to produce, irrigate, harvest, and transport food crops. When the energy demands for domestic, industry, and agriculture go unmet, communities may be forced to consider destabilizing trade-offs. Destruction of water and energy infrastructure from conflict and natural disasters further reduce the reliability of energy generation, leaving many livelihoods vulnerable. As even more energy will be needed to power rural areas and growing cities, procuring it will require alignment with climate mitigation priorities. Water will be needed to transition away from fossil fuel-based energy generation and towards more renewable sources, such as hydropower. Conversely, while solar panels could be used to replace fossil fuel-based energy when pumping groundwater, governance mechanisms that limit over-pumping will be needed to prevent unintended resource depletion and associated risks of conflict.

Built infrastructure, like dams, are widely used for water resource management and hydroelectric production, both being necessary to mitigate conflict risks. While they help regulate water flows and facilitate flood and drought management, they can also produce adverse social and environmental impacts, generating local and regional conflict risks. Several hydroelectric dam projects have been halted due to protests over environmental concerns, including Burma's Myitsone dam. Upstream hydroelectric dams can directly reduce water supplies for downstream users and alter river flows upon which many ecosystems and livelihoods depend. Dams also cause forced population

displacement due to their large land needs, primarily affecting marginalized people and creating conflicts between communities and infrastructure developers. In Egypt, the upstream construction of the Grand Ethiopian Renaissance Dam (GERD) on the Blue Nile led to fears of water shortages, which can heighten tensions between the nations. Fostering coordination and cooperation remains contingent on gathering and using cross-sectoral data. For example, environmental and social impact assessments for large-scale infrastructure can be helpful in informing local stakeholders on hydrology and involving them in decision-making for projects that use water.

Health and Well-being

Polluted water resources, untreated wastewater, and inadequate WASH services lead to public health risks, endanger food supplies, and degrade livelihoods, ecosystems, and watersheds. Surface water and groundwater quality can be degraded from multiple interconnected sources: over-pumped groundwater, agricultural run-off, human and animal waste, extractive industries, return flows from power plants, manufacturing, plastics, and contaminants of war (e.g., explosive residues and heavy metals). For instance, water quality in Madagascar deteriorated between 2000 and 2010 due to forest loss, and more so when the forest land was converted to agricultural land, which discharged chemical fertilizers and pesticides. Infrastructural development for water, irrigation, and energy also generates run-off that degrades water resources if not regulated sufficiently. Downstream water users are especially vulnerable to chemical or microbial contamination hazards originating upstream. Climate change impacts, such as flooding, further release discharges of untreated waste into ecosystems, watersheds, and public water supplies. These contaminated resources can threaten crop health and undermine livelihoods dependent on ecosystem services. Exposure to contaminated water also increases the risk of exposure to disease and deteriorates quality of life, particularly among women and children due to their roles in water provisioning for households.

Weak governance and infrastructure gaps exacerbate adverse effects from poor quality water. Low levels of WASH services and poor hygiene practices result in high levels of waterborne diseases and malnutrition, which greatly reduces the ability of people to sustain their livelihoods and of children to attend school. In Haiti and Mozambique, inadequate WASH services contributed to the spread and severity of cholera. During active conflict, contamination of water resources can be especially common. Regulatory agencies and management mechanisms may collapse, or groups may intentionally or unintentionally damage water resources or facilities storing toxic chemicals. People most proximal to contaminated water are the most vulnerable to its effects, fueling grievances toward unaffected water users, polluters, and regulatory institutions. Allocating water resources sustainably and preventing water quality degradation requires addressing the multiple sources of pollution by monitoring and sharing water data.

Environment and Ecosystems

Degradation of shared water resources and water use patterns across sectors can threaten ecosystem health and biodiversity. Multiple factors contribute to degrading the environment, including infrastructure installation/removal (e.g., dams), climate change impacts, failure in coordinated natural resource management, weak land and resource governance, and conflict. In Iran, the building of multiple dams and groundwater pumping has shrunk Lake Urmia, a saltwater lake once home to rich biodiversity, by nearly 90 percent. The exposed salt poses risks to local communities and nearby agricultural lands and contributed to fueling protests and discontent with the government.

In fragile and conflict-affected settings, environmental degradation reduces the sustainability of water resources and generates tensions through loss of ecosystem services, cultural sites, and recreational spaces. Poor governance and conservation also contributes to deteriorating livelihoods that depend on natural resources and wildlife. In Iraq's Razzaza Lake, fish stocks that support local livelihoods have been decimated from sewage pollution and declining water levels from droughts and upstream dams in Iran, Turkey, and Syria. For years, the Lake Chad basin in Africa's Sahel region has supported the water, food, and livelihood needs of nearly 40 million people and played home to critical ecosystems and biodiversity. However, since 1963, the lake has shrunk by an astounding 90 percent, from 26,000 square kilometers to around 1,500 square kilometers in 2018 due to chronic droughts, irrigation development, and dam building projects, making it difficult for communities to adapt their livelihoods. Regardless of length and intensity, conflict can damage fragile ecosystems, landscapes, and wildlife through explosives, pollution, sudden population displacement, and by forcing coping strategies that add even more pressure on environmental services. In drought-stricken areas, wetlands provide crucial support to cattle, so destroying them can threaten

PHOTO CREDIT: MIHTIANDER

pastoral livelihoods. In the region of Tigray in Ethiopia, ongoing conflict and drought conditions since 2020 have undermined efforts in water, soil, and land restoration, which has, in turn, lowered agricultural productivity and increased the risk of further conflict (CEOBS 2022).

WSSH Best Practices and Programming Strategies

WSSH-related development activities that adhere most effectively to conflict integration incorporate multiple best practices and sectoral considerations in each local context. They frame, design, and assess interventions to suit local conditions and adhere to principles of conflict sensitivity throughout programming.

This section reviews USAID activities that showcase best practices and lessons learned to help inform future WSSH programming. The cases are grouped into three categories: 1) water programming related to conflict prevention, 2) water programming in conflict-affected contexts, and 3) water programming related to stabilization and peacebuilding. These categories are not mutually exclusive, and do not represent the full range of possible approaches to WSSH and conflict, but are examples of how implementing partners can effectively anticipate interactions between water security and conflict risk; maintain and improve WASH service delivery in conflict settings; and leverage WASH and WRM activities to promote long-term stability.

SUMMARY OF CONFLICT INTEGRATION IN WATER SECURITY, SANITATION & HYGIENE (WSSH) PROGRAMMING

Conflict Prevention

Programming in Conflict Affected Contexts

Stabilization & Peacebuilding
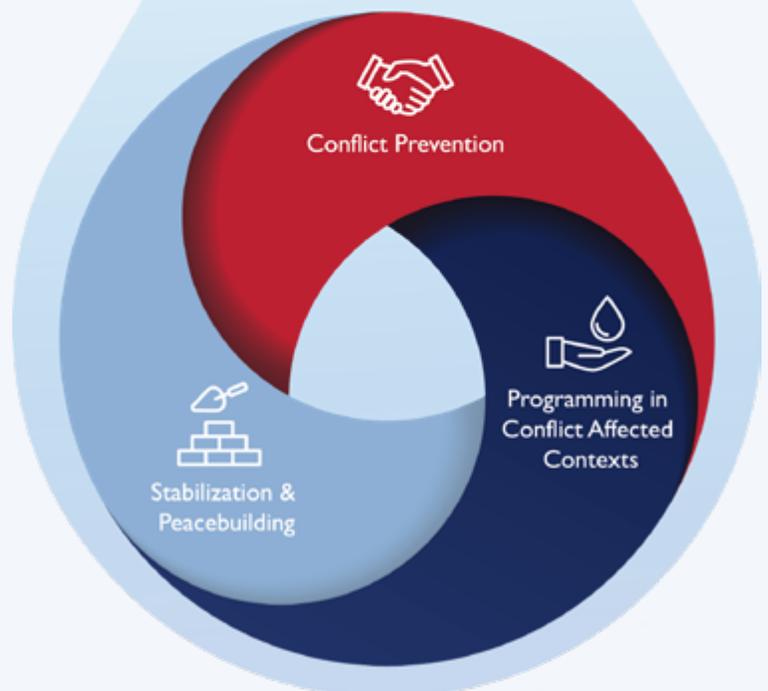
The first category (4.1) includes cases where WSSH programming can mitigate conflict risks at different levels. Implementing partners' approaches to water security challenges have the potential to exacerbate or mitigate conflict risk. Section 4.1 includes cases where USAID activities have addressed conflict dynamics by strengthening local water agencies, supporting community-led initiatives, and leveraging nature-based solutions to build shared resilience.

The second set of cases (4.2) consists of examples of WSSH programming in conflict-affected contexts, where coordination between humanitarian and development actors is critical. The cases describe WSSH activities that focused on addressing the needs of displaced populations and host communities, enhancing inclusive water resource governance, and preventing GBV.

The third set of cases (4.3) focuses on how WSSH programming can contribute to long-term recovery and stabilization. These cases demonstrate how effective WRM and WASH service delivery can lay the foundation for long-term development and reduce the risk of relapsing into conflict. These WSSH activities have strengthened local institutional capacity, increased access to sustainable water services, and engaged communities to manage water demand.

4.1 Programming Related to Conflict Prevention

Strengthen Local Water Agencies to Improve Self-sufficiency

NIGERIA

Context: Many rapidly urbanizing neighborhoods across Nigeria lack access to clean water and basic sanitation, adversely affecting population health and livelihoods. Limited resources and insufficient provisions have triggered intrastate conflict or led to insurgent groups assuming control. While the State Water Corporations (SWC), previously State Water Boards (SWB), in each of Nigeria's 36 states are responsible for providing water and sanitation services, their performance is hampered by low organizational capacity, little oversight, poor cost recovery, aging infrastructure, and lack of accountability to residents. Ensuring access to critical water resources remains difficult without effective state agencies.

Program details: Established in 2018, USAID's five-year Nigeria Effective Water, Sanitation Hygiene Services (E-WASH) program aimed to improve urban water service delivery by strengthening the governance and viability of SWCs in five high potential states: Abia, Delta, Imo, Niger, and Taraba. While the final evaluation underscores the challenges faced in significantly improving the quality of water service provision in Nigeria, the program helped the five SWCs establish a board of directors for internal oversight and adopt digital software to modernize bill collections and monitor water quality. E-WASH bolstered technical assistance and capacity strengthening with the use of information and communications technology (ICT) to gather water use data more efficiently and facilitate communication updates to the public.

Lessons learned:

- Strengthening localcapacity and building space for stakeholder engagement underscores conflict prevention.

- Adapting to changing communication conditions can keep implementation on track, such as by providing training through digital technology and prioritizing rapid consensus-building with key stakeholders for construction projects. For example, although the COVID-19 pandemic delayed utility activities and reduced revenues in two states, it created opportunities to promote regular handwashing and leverage technologies for communications.

- Addressing implementation missteps too late in the process may undermine compliance. Two of the five utilities decided not to incorporate the program's recommended organizational changes because their feedback was not appropriately considered during collaborative activities.

- Communicating the feedback process early, setting clear expectations, and creating space for critical stakeholders may reduce tensions and increase the adoption of key recommendations.

PHOTO CREDIT: USAID E-WASH

Support Community-led Water Management Initiatives

KYRGYZSTAN

Context: The economy of the Burgondu village in the Kadamjai region of Kyrgyzstan depends heavily on agriculture, which relies on a makeshift canal off the Soh River. In 2004, a water user association (WUA) was created to resolve problems managing water shortages, food insecurity, and inefficiencies in the irrigation system. However, conflicts between water users persisted because of perceptions regarding the inequitable distribution of water from a low-cost, annually constructed dam.

Program details: Between 2004 and 2011, the USAID Water Users Association Support Program helped strengthen the capacity of 110 WUAs to mitigate conflict by improving decision-making and financial transparency and by providing technical assistance and resources for the construction of a permanent diversion dam. The completed dam benefited 1,800 residents and helped farmers increase their rice yield from 25–30 tons per hectare in 2007 and 2008, to 40 tons in 2009. Across all WUAs, more than 8,000 hectares of abandoned farmlands also became productive with irrigation help.

Lessons learned:

- Increasing agricultural water supply helps reduce food and livelihood insecurities, thereby reducing the risk of conflict over water.
- Strengthening WUAs improves the long-term management of local water infrastructure like canals, which increases local resilience and prevents water shortages.
- Incorporating targeted outreach and communication programs to water users can help address perceptions of inequitable distribution

PHOTO CREDIT: USAID

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Leverage Nature-based Solutions For Resilience

SOUTHERN AFRICA

Context: The Limpopo River Basin is a transboundary water system shared by four Southern African countries: Botswana, Mozambique, South Africa, and Zimbabwe. Supporting rich biodiversity and 18 million people, the river basin is under stress from industrial pollution, inadequate upstream sanitation, and groundwater over-pumping. Worsening droughts and strong cyclones from climate change exacerbate the quality and quantity of its sub-basins, increasing the need for local, national, and regional cooperation to minimize conflict risks.

Program details: Established in 2018, the five-year Resilient Waters Program plans to increase water security by improving the management of transboundary natural resources facing river basin communities. The program also supports multiple activities to increase access to safe WASH services and strengthen the ability of communities and organizations to adapt to climate change. For instance, the program supports upstream fecal sludge management through tools, such as a climate delivery assessment, sanitation safety plan, fecal flow diagram, and an urban resilience toolkit. To conserve catchment areas and protect vulnerable natural areas, the program provides grants to local organizations and communities to conduct adaptation activities. It also equips staff of protected areas, such as Kruger National Park, with skills like geographic surveying. The program also assists existing community-based environmental monitors to conduct village patrols, assess river health, and support restoration activities, such as community clean-ups. Moreover, the program assists local and regional managers in planning for climate impacts on freshwater ecosystems and coordinating with national authorities to map aquifers and monitor groundwater levels.

Lessons learned:

- Building resilience for stressed water resources requires advancing nature-based solutions, strengthening local capacity through training, and assisting stakeholders across a range of scales.

- Coordinating data collection early between local, national, and regional authorities creates sustainable collaborative processes. These approaches help incorporate climate sensitivity in programming (e.g., through reconsideration of viable WASH options) and help better manage conflict risks.

4.2 Programming in Conflict-Affected Contexts

Promote Flexibility and Coherence of Humanitarian-Development-Peace Assistance

PHILIPPINES

Context: In 2017, a five-month-long armed conflict besieged Marawi City, Philippines due to clashes between government security forces and militants associated with the Islamic State. The conflict led to the internal displacement of over 90 percent of the city's population, adding pressure on host communities and their resources. It also deteriorated WASH services in Marawi City and led to lost livelihoods.

Program details: In 2018, USAID launched a three-year Marawi Response Project (MRP) to support IDPs and host communities and strengthen community cohesion in the aftermath of the siege.

USAID also tasked a separate, ongoing project with rehabilitating WASH services in Marawi City. The Strengthening Urban Resilience for Growth and Equity (SURGE) project provided technical assessments, hydrological simulations, and analysis of water quality to guide government investments in repairing and upgrading water infrastructure. The project trained Marawi City Water District (MCWD) staff in monitoring, testing, and analyzing water, and facilitated knowledge sharing with other water districts. For economic and livelihood recovery, SURGE collaborated with local government and private sector groups to launch more than 40 interventions to train, mentor, and financially assist IDPs and revitalized economic activity in Marawi City.

Lessons learned:

- Providing service providers with training on multiple aspects of WASH service delivery can ensure sustainable operations.
- Pairing short-term response with longer-term economic revitalization helps build resilience and social cohesion.
- Collaborating with government and private sector stakeholders on economic recovery activities can lead to faster recovery of economic livelihoods.

Identify Opportunities to Strengthen Inclusive Water Governance

NIGER AND BURKINA FASO

Context: Niger and Burkina Faso have low rates of access to safe water and sanitation and remain susceptible to violent conflict and displacement from political instability, armed conflict, and climate-induced floods and droughts. With 80 percent of the population relying on farming and animal husbandry, intensifying desertification is further undermining livelihoods. Water and land insecurity has increased poverty, tensions, and the displacement of hundreds of thousands of people.

Program details: Launched in 2019, the five-year TerresEauVie (TEV) Resilience in the Sahel Enhanced (RISE II) activity aims to improve water and land resource outcomes in Niger and Burkina Faso. TEV RISE II promotes improved water security, enhanced sustainable productive land use, and improved management of shocks, risks, and stresses. TEV RISE II operates in 25 out of Niger's 250 communes (4,100 villages) and 15 out of Burkina Faso's 350 communities (700 villages), with a key part of activity centered on mapping and examining water access and groundwater supply. In Burkina Faso, the activity has encouraged adoption of the Farmer-Managed Natural Regeneration (FMNR) approach – a set of techniques for restoring land affected by climate change to improve farming outcomes. In Niger, the activity has partnered with officials in the Goulbin Maradi Watershed to develop the country's first Water Agency to disseminate guidance and information to local leaders and community members. In partnership with the World Food Programme and government agencies, the program also helped establish communal guidelines towards natural resource protection and conflict prevention.

Lessons learned:

- Engaging local leaders and stakeholders across water, food, and land can build sustainable communication and cooperation and reduce the risk of conflict.

- Incorporating equity into water management committee meetings is possible by facilitating and engaging smaller groups, hiring staff at the commune level to lead gatherings, and by including quotas for women and young people for leadership roles.

- Adapting to changing circumstances in conflict-sensitive ways is also essential, such as through the program's COVID-specific gender analysis. This analysis identified the ways women were additionally burdened by COVID-19's impacts, from their expected role as household sanitizers, to their increased exposure to potential GBV on water collection routes.

Enhance Public Engagement to Prevent GBV

SOUTH SUDAN

Context: Over 60 percent of South Sudan's population practices open defecation, and women and girls are particularly vulnerable to GBV when visiting latrines or open defecation sites and when collecting water for household use.

Program details: Launched in 2014, the four-year Integrated WASH/GBV project worked with communities to improve access to safe water and sanitation and to raise awareness around hygiene and GBV prevention. The project builds or repairs WASH infrastructure, promotes good hygiene through the provision of WASH and menstrual hygiene items, and encourages women's leadership in water management. Strong community involvement is a central feature of the project, with members trained in borehole and latrine maintenance, women having at least 50 percent membership in each community committee, and men educated on harmful gender norms through dialogue. Taken together, the program has reduced path lengths to water points, with 38 percent of female beneficiaries reporting improved perception of safety from reduced risks of GBV.

Lessons learned:

- Addressing gender norms and context-specific taboos in WASH requires multiple approaches (e.g., raising community knowledge, increasing women's leadership, and providing WASH items and dignity kits)–all of which may take more time and effort than expected.

- Enhancing infrastructural support for women and creating sustainable leadership roles for women contributes to reducing real and perceived conflict.

PHOTO CREDIT: VICTOR LUGALA, USAID/SOUTH SUDAN

4.3 Programming Related to Stabilization and Peacebuilding

Increase Access to Sustainable Wash Services

HAITI

Context: Haiti has one of the lowest rates of access to improved water supply and sanitation, and the incidence of water-borne diseases has worsened in recent years due to the massive earthquake in 2010 and Hurricane Matthew in 2016. Grievances over the lack of basic water needs combined with economic and social vulnerabilities, such as acute poverty and lack of economic opportunities, increase the risk for conflict.

Program details: Established in 2017, the Haiti Water and Sanitation Project (WATSAN) increased access to safe WASH services to help reduce the prevalence of cholera and other waterborne diseases. The project focused on five urban areas — Canaan, Cap Haïtien, Jérémie, Les Cayes, and Mirebalais — to improve water services for 300,000 people and provide more safely managed sanitation services for 75,000 people. Rather than focus solely on building new infrastructure, the project championed self-sustaining, locally led development by providing capacity strengthening training for the creation of nine water and sanitation organizations, both at the national and sub-national levels. In addition to offering funding and mentorship to the private sector, it assisted the government in reopening two fecal sludge facilities. Through collaboration with the Haitian National Water Authority, the project strengthened the semi-private municipal water utilities, known as Centres Techniques d'Exploitation (CTEs) to function as independent businesses by

bolstering their management and revenue capacity. One strategy was to use a cloud-based "mWater" system to share and track data on costs, revenues, and water production for all 27 CTEs in Haiti, leading several CTEs to more than double their combined revenues. Supported by their own revenue, CTEs can reduce their dependence on the central government or donors.

Lessons learned:

- Making utilities more resilient to the stresses of future natural disasters requires encouraging self-sufficiency through more robust operations, maintenance, and monitoring.
- Leveraging digital technology empowers organizations to maintain critical data that sustain water services.

PHOTO CREDIT: DAN O'NEIL

Strengthen Water Governance Structures and Institutional Capacity

SOUTH SUDAN

Context: Following more than two decades of civil war, South Sudan faced many challenges in providing basic water services due to lack of water sector governance, poor infrastructure, and water data scarcity. Scarce water resources for household and livelihood use (e.g., water for cattle) further increase local competition over access, particularly between pastoralists and farmers. Without equitable access to sustainable and safe water, existing tensions can persist or turn into new conflicts.

Program details: Operating from 2004-2009, the Water for Recovery and Peace Program (WRAPP)[4] in South Sudan provided water services for peacebuilding by providing infrastructure, building community water management committees, and by offering training in gender equity.

Lessons learned:

- Emphasizing principles of equity and consensus-building at the local level ensures communities have voice in decisions to allocate resources and an interest in sustaining water supply services.
- Consulting with communities and local stakeholders when building water points can improve transparency and shared understanding, which are important steps to post-conflict recovery.

PHOTO CREDIT: IOM

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[4] Local context has changed significantly since the end of WRAPP in South Sudan.

Facilitate Meaningful Participation in Water Planning

JORDAN

Context: Jordan has one of the lowest domestic water usages in the world, yet water consumption in this arid country surpasses yearly renewable supply, with groundwater aquifers continuing to dry up rapidly. In addition to being one of the most water scarce nations, Jordan faces further water losses from leaks, theft, and other violations. With the arrival of Syrian refugees since 2013, demand for water has increased significantly, resulting in local shortages and rising tensions between people.

Program details: Operating from 2006-2013, the Community-Based Initiatives for Water Demand Management (CBIWDM) project helped strengthen capacity for community-based organizations in 135 communities by increasing awareness of water-saving projects and helping to operate loans to fund water-saving projects, with 25 percent specifically targeting women. The project extended its timeline to 2015 in response to the Syrian refugee crisis to reduce the social and economic impacts of limited water supplies. Activities included reducing water losses, improving efficiency, and increasing community involvement in managing demand. The project also helped pilot five community management programs and conduct leak detection and repairs for municipal water systems to increase water availability.

Lessons learned:

- Involving host communities and integrative planning bolsters local capacity.
- Improving water use efficiency builds resilience in places where increasing water supply is difficult.
- Monitoring conflict dynamics during implementation is necessary in case activities must be adapted to changing realities.

PHOTO CREDIT: MERCY CORPS PROJECT

Monitoring, Evaluation, and Learning (MEL)

WSSH programming must incorporate MEL to support effective program implementation, ensure stakeholder buy-in and accountability, and improve future water programming. In fragile and conflict-affected settings, water programming can incorporate conflict integration during planning and design by championing:

- locally led and demand-driven program development;
- inclusive participatory processes and informed program planning;
- strategic partnerships with local providers, private actors, and informal/formal government leaders; and
- positive peace pillars and social cohesion as program objectives.

MEL activities should monitor and evaluate the interactions between interventions and contextual conflict dynamics using tools, like stakeholder analysis, gender analysis, land and water tenure assessments, political economy analysis, and conflict analysis (see section 5). These tools help practitioners become alert to potential conflict, identify when programming must be halted or adapted to changing conditions, and determine when programming can resume.

MEL approaches can also be made conflict-sensitive by incorporating context-specific theories of change, gathering data on peacebuilding impacts and outcomes, and adjusting programming in response to periodic program reviews. By focusing on theories of change, implementers can better articulate program logic and determine the evidence needed to certify water programming and peacebuilding objectives are being met.

MONITORING

In fragile and conflict-affected settings where baseline data may be missing, monitoring water programming requires regular assessments of context and performance indicators as well as peacebuilding impacts and outcomes. It is essential to disaggregate qualitative and quantitative data by gender, age, group identities, and geography to capture distributional effects. Context indicators capture local conflict conditions; performance indicators measure the outputs and outcomes of water programming. Collectively, these indicators include the project's WASH-specific targets (e.g., related to water quantity, access, and quality), development objectives (e.g., strengthening water sector governance), sustainability measures (e.g., how many people have access to WASH services), and conflict dynamics. In areas of active conflict, it is often necessary to conduct monitoring in alternate ways that protect target populations and staff while promoting accountability, such as local implementing partners for MEL, remote technology-based monitoring, and third-party monitoring.

Practitioners should be on the lookout for signals that water-related tensions are growing or changing. Early warning indicators that are captured through continuous context monitoring may include:

- increased illegal pumping or water supply diversion;
- increased number of water disputes;
- increased reporting of environmental degradation;
- violence at water points and destruction of water infrastructure;
- increased inflammatory rhetoric about water-related issues within political discourse; and
- increased public grievances over social media.

On the other hand, indicators of potential water-related peacebuilding include water users' willingness to collaborate, public support for water policy reform, and progress toward expanding access to clean water and sanitation.

To assess conflict dynamics and unanticipated

consequences, implementers must look for information beyond indicators, such as processes that can trigger, mitigate, or extend water-related conflicts. Perception-based information is especially key to understanding these processes and the dynamics between water programming and the local context. For example, programs can ask whether and how increasing access to water built confidence in the peace process. Capturing this information requires methodologies, such as surveys, interviews, and open-ended discussions with target groups, which can highlight other stakeholders that may be excluded. In response to such data, programs can adjust activities and prevent inadvertently undermining water resources and/or the communities and ecosystems that depend on them.

Lack of information remains a key challenge in conflict-affected contexts. Data on water quantity, quality, access, and allocation can be incomplete, missing, or destroyed as part of conflict. Data is also difficult to gather in contexts with limited funds, data equipment, and personnel. In many conflicts, workers in the water utilities and ministries may have fled, taking their understanding of the water systems

with them. To sustain effective monitoring, programs must develop and maintain relationships with local government partners, private sectors, civil society, citizens, and other stakeholders who can fill critical water data gaps. Strengthening capacity to monitor hydrological data through remote sensing and satellite imagery may also be necessary in conflict settings.

EVALUATION

Evaluations provide structured assessments of program implementation and theories of change to help inform decisions on how to adjust the next phases of programming. Yet, in fragile and conflict-affected settings, evaluations must be attuned to understanding the local conflict context and be flexible to adapt under such conditions. For instance, systematic data collection and analysis is especially difficult in conflict contexts due to low capacity, high costs, and mismatched timings. As such, conflict dynamics that are captured in a conflict analysis must also be considered when designing evaluations, as they impact the availability of resources and viability of certain methodologies. For example, randomized

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control trials may not be feasible in many conflict-affected contexts. Instead, evaluators may need to switch to shortened questionnaires, adjust sampling designs to be inclusive and representative, and rely on local interviewers. Evaluation teams must also ensure the safety of those engaged in data-collection and apply care in questioning conflict-affected groups.

To support conflict-sensitivity and program adaptation, evaluators can use developmental evaluations in addition to traditional performance and impact evaluations. These rely on collaborative evaluation design between the evaluator, implementing partners, local stakeholders, and data collection teams. Critical steps include determining its purpose, questions, rigor, resources, and methodologies (e.g., quantitative, qualitative, randomized control trials, process tracing). Evaluators should be on alert for unintended consequences, both positive and negative, to conflict dynamics in order to help test, validate, and refine theories of change.

Incorporating formal and informal feedback loops and collaborative approaches to monitoring and evaluation can help adapt programming. In USAID's Lowland WASH program in Ethiopia, discussions between staff, partners, and stakeholders led to several changes that improved outcomes including: using solar water pumping in remote locations where diesel access is low, conducting gender-segregated consultations to address gender-specific water needs, and using field kits for water quality monitoring. Introducing iterative, participatory pause and reflection sessions (both virtual and in-person) in the middle of USAID/Gap Inc.'s Women + Water Alliance in India helped strengthen previously-weak partner relations, add a new partner to address gaps in community water resource management, and co-develop a new theory of change.

LEARNING

Collaborating, Learning, and Adapting (CLA) is a set of systematic practices to help improve development effectiveness. CLA underpins conflict-sensitive best practices by helping teams understand

program successes and challenges and adapt existing programming under changing conflict dynamics. CLA approaches include broad stakeholder engagement, community feedback, open learning forums, and scenario planning throughout the program cycle. Learning, in particular, is contingent on the analysis of past program evaluations that can provide empirical evidence on theories of change. What worked in one context may not be transferable to other situations, which is why MEL practices must always be self reflective.

Where possible, programming should foster sustainable monitoring systems and address the essential skills local stakeholders need for continued MEL. For instance, USAID's E-WASH project in Nigeria developed a web-based MEL module to track real-time performance of state-level water utilities and provided training workshops to staff across all levels. These trainings included a field course for hundreds of staff members at zonal and district offices on using computer tools and the importance of data as well as workshops for water utility management on investing in sustainable data management systems.

ADDITIONAL MEL RESOURCES

USAID Learning Lab provides three supporting toolkits: 1) monitoring, 2) evaluation and 3) collaboration, learning and adapting that discuss different evaluation methods and information on how to analyze data.

M&E and Learning at the Activity Level provides implementing partners with guidance on how to develop activity-specific MEL plans.

Monitoring and evaluating conflict sensitivity (UKAid and CARE International) provides guidance on how to monitor and evaluate for conflict sensitivity.

USAID Remote Developmental Evaluation provides guidance on how to conduct developmental evaluations remotely and without being physically embedded with program teams.

USAID Water and Development Indicator Handbook presents a set of performance monitoring indicators.

USAID Policy on Promoting the Rights of Indigenous Peoples provides a road map on engaging Indigenous Peoples throughout the program cycle.

Monitoring and Evaluation Strategies for Disability Inclusion in International Development (Chemonics) provides tools on how to integrate disability inclusion in programs

A Set of Proposed Indicators for the LGBTI Inclusion Index (UNDP) offers a list of indicators to measure the inclusion of LGBTQI+ people.
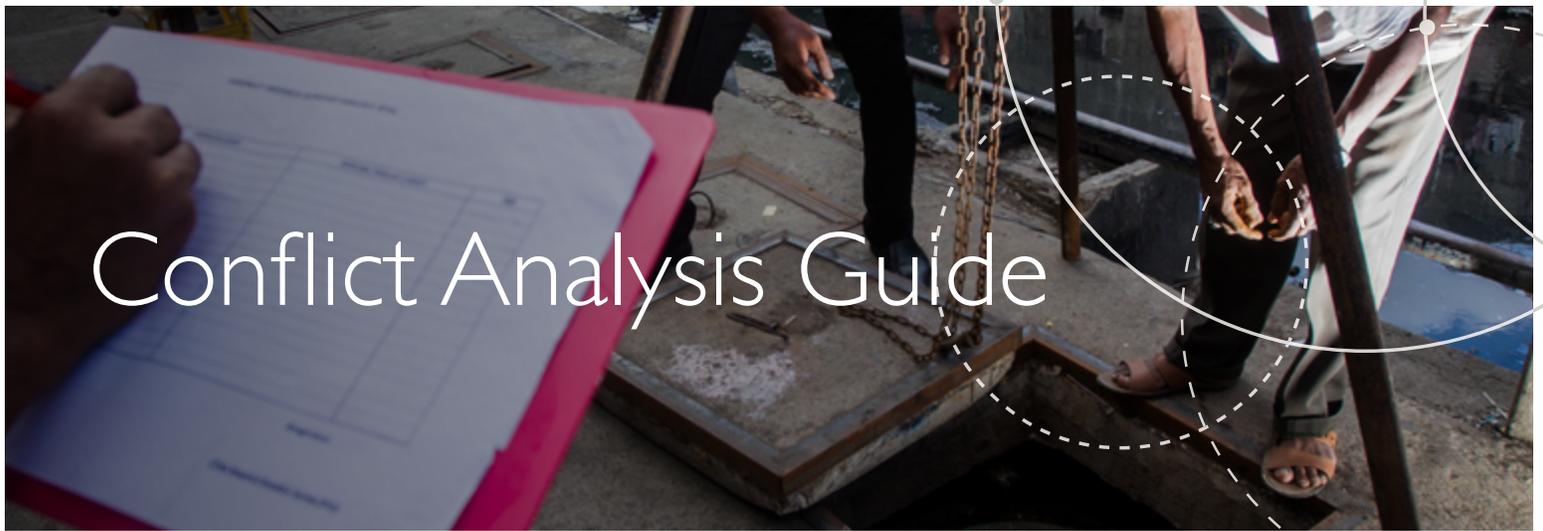
Conflict Analysis Guide

Conflict Integration and Conflict Sensitivity

Conflict integration is the programming strategy that questions whether the goals, approaches, and measures of success for interventions are appropriate for each conflict-affected context and in doing so, aims to improve the effectiveness and sustainability of development assistance. It requires deliberately focusing on issues of power, access, control, and marginalization throughout programming to seek opportunities for peacebuilding. For instance, programming can be designed and implemented in a way that supports stronger social cohesion and fosters inclusive consultative processes and dialogues. Basic components of conflict integration include abiding by the humanitarian principle of "Do No Harm," promoting conflict sensitivity, and conducting routine conflict analyses.

Conflict sensitivity is the approach of understanding explicit and implicit context dynamics to better adapt and respond to complex operating environments. It extends the "Do No Harm" principle of avoiding or mitigating negative conflict risks and seeks to build positive peace. In conflict-affected contexts, field practitioners and their program activities become part of the context through their impact on existing relationships and conflict dynamics. In this way, programmatic choices have the potential to exacerbate existing conflict dynamics. Designing and implementing WSSH programs with greater awareness helps minimize conflict risks to both communities and program partners. See Annex II for key considerations across the USAID Program Cycle when undertaking conflict-sensitive water programming.

Conflict sensitivity is the ability of practitioners to:

1. **Understand the conflict context**
   Conflict contexts span places that have no active conflict, are in the midst of active conflict, and are post-conflict. Key dynamics relate to economic, social, and political factors and issues of gender, power dynamics, and access. Relevant topics include patterns of grievances and resilience, how key actors mobilize groups for peace or conflict, and which events can trigger conflict or create openings to build peace.

2. **Understand interactions between programming and context dynamics**
   What is the interaction between the identified key elements of conflict and fragility and key elements of the intervention itself? Three fields of observation include: (1) the project, (2) the partners and stakeholders, and (3) the organizational setup. Identify relevant factors in each of these categories that are either creating tensions or positively affecting the conflict context. This should include consideration of sequencing and how the intervention fits with other assistance activities

(e.g., thoughtfully connecting humanitarian assistance and development interventions).

3. **Adapt and make strategic choices to mitigate negative impacts and promote positive ones**
Based on the assessment of how the conflict context and interventions interact, identify ways to avoid exacerbating conflict and to promote peace. Conflict sensitivity is as much about HOW you work as WHAT you do; it is possible to modify a project mid-stream without changing the goals. Making reflective, strategic adaptations in operations

and implementation should become part of the program management cycle. Project, program, and management decisions should be taken based on periodic assessment and CLA approaches.

CONFLICT ANALYSIS AND WATER

Conflict analyses are tools to help practitioners diagnose and respond to context-specific conflict dynamics, and can be undertaken during program design, implementation, and/or evaluation. They examine the causes and drivers of conflict and how they interact with each other. Conflict analyses help inform decision-making by highlighting peacebuilding opportunities, such as how to address conflict triggers or how to facilitate engagement between key actors involved in fueling the conflict. They should examine the differential effects of conflict on women, children, Indigenous Peoples, LGBTQI+ people, persons with disabilities, and other marginalized and/or underrepresented groups. Conflict analyses should be understood together with other analyses, as appropriate for the local context, such as those for land governance and use, risk, climate, environmental considerations, and gender.

Critical inputs to the process of conducting conflict analyses include time, financial resources, and personnel capacity in specific skills, such as conflict expertise, country expertise, facilitation, report writing, management/leadership, data collection and analysis, logistics, and interpretation/translation (USAID Conflict Assessment Framework). Implementers must be respectful and work together with conflict-affected communities, especially during data collection (e.g., surveys, interviews, meetings, etc.).

Some conflicts may be directly or indirectly related to WSSH interventions while others may be ongoing and unrelated to the water programming. Conflict analyses assess social and institutional patterns of grievance and resilience, account for emerging issues and trends, and identify key actors and their interests. Key information areas to diagnose and respond to water and conflict dynamics include:

BROADER CONFLICT CONTEXT

- Profile the history and areas of conflict (and how different groups understand history)
- Identify the motives, causes, and triggers of conflict and catalysts for resilience
- Determine the main actors (e.g., organizations, individuals, etc.) involved and their incentives
- Outline the conflict dynamics, trends, and possible windows of opportunity

SOCIO-ECONOMIC CONSIDERATIONS

- Identify who has rights to water and who can access water
- Determine how to secure reliable water, equipment, infrastructure, water for livelihoods, and water information
- Identify ways to strengthen capacity and support the community to maintain water infrastructure

GENDER CONSIDERATIONS

- Determine the needs and priorities that people of different gender identities have regarding access to water and WASH services
- Examine how power dynamics, socio-cultural dynamics, and gender norms affect access to water and WASH services, including discriminatory and exclusionary practices
- Assess people's perceptions of GBV when accessing water and WASH services
- Identify how marginalized groups are involved in the conflict, peacebuilding processes, and water management decision-making

INSTITUTIONAL CONSIDERATIONS

- Identify the water governance structures (e.g., the roles of formal and informal institutions that manage water or make decisions in water-related issues)
- Determine who owns and controls water access and who has rights to water, particularly under customary governance systems

ENVIRONMENTAL CONSIDERATIONS:

- Assess current and future environmental and climatic risks to water supply, infrastructure, resource-dependent livelihoods, etc.
- Identify risks to the environment from inadequate WSSH practices

CONFLICT DAMAGES AND RECOVERY

- Assess damage to water resources, infrastructure, or institutions
- Identify how resource governance mechanisms have managed the effects of conflict

ACCOUNTING FOR EMERGING ISSUES

- Consider water needs related to population growth and movement, climate variability impacts, and resource-dependent livelihoods

UNDERSTANDING KEY ACTORS

- Identify who could mobilize groups to express discontent related to water issues and who could mobilize group to collaborate peacefully on water management
- Examine how they would mobilize people and their motivations to do so

Annex

1. USAID strategic priorities

USAID STRATEGIC PRIORITIES

USAID's strategic priorities for programming center on changing the way assistance is delivered and adapting to the most pressing challenges. They involve charting equitable programming in the face of climate change, promoting locally led development, increasing the capacity to move forward from the COVID-19 pandemic, adapting programs in the face of governance challenges, and expanding the ability to curtail corruption. They include:

- **Locally led development.** WSSH programming should be locally led and implemented through partnerships with local NGOs and businesses, including during program design, implementation, and evaluations. Doing so helps strengthen local water management capacity and contribute to sustainability of water programming, both of which align with SDG 6 targets.

- **Equity and inclusion.** Programs should promote inclusive development programming and engage local people as agents of change in water resource management, particularly those who are underrepresented due to gender, age, disability, and other identity-based marginalization.

- **Private-sector engagement.** Programs should engage with private sector partners who can leverage their financial and technical capacity to provide and expand access to sustainable and affordable WASH services. Private sector partnerships help incentivize the strengthening of systems that provide essential WASH services. These engagements should be conflict sensitive to avoid undermining water equity and creating new conflict risks.

- **Nature-based solutions.** Programs should advocate for nature-based solutions such as conserving, managing, and restoring ecosystems to enhance water security, strengthen resilience, and foster adaptation to the impacts of climate change.

- **Evidence, technology, and innovation.** Programs should incorporate behavioral science, develop strong theories of change, and engage with a wide array of experts, including local experts, during the program cycle. They should consider the roles of portable and digital technologies for gathering key water data.

2. Considerations across the USAID Program Cycle

USAID PROGRAM CYCLE	CONSIDERATIONS AND RESOURCES
1. Country and regional strategic planning	• Identify short-term and long-term WSSH goals (in coordination with humanitarian-development-peace coherence aims) • Incorporate sustainable livelihoods support and natural resource management in WSSH activities • Review water governance capacity and foster government buy-in, where possible • Identify openings to advance "good governance" in water resource management • Confirm interventions are context-specific, even if programmatic interventions from other countries inform and help guide programming • Coordinate with other stakeholders who integrate water-related interventions that may be supported by multiple donors through different development tracks)
2. Project/Activity design	• Develop strong theories of change and approaches that work given contextual conflict dynamics • Identify cooperative opportunities and co-benefits that may exist in addressing underlying grievances that can help extend peace dividends to other development goals (e.g., food security) • Consult the Conflict Sensitive Activity Design Guidance
3. Project/Activity implementation	• **Decrease the degradation of scarce freshwater resources** • **Strengthen civil society and social capital** • **Include periodic conflict assessments** • **Align timing and sequencing with the setting** • **Consult the Conflict Sensitive Implementation Guidance**
4. Monitoring, Evaluation, and Learning	• Measure different aspects of interventions, including indicators that reflect the theory of change and outcomes • Evaluate conflict sensitivity earlier, such as during midterm evaluations, and at intervals to allow for program changes and adaptations • Assess the processes that enable conflict sensitivity and outcomes that measure changes in conflict dynamics • Apply sensitivity to local data collection, e.g., confirm whether data already exists, mitigate triggers when asking sensitive questions, assess perceptions of the interventions • Conduct self-evaluations to understand internal processes on implementation • Consider Monitoring and Evaluation Challenges in Conflict Settings

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