

# UNICEF GUIDANCE NOTE

HOW UNICEF REGIONAL AND COUNTRY OFFICES  
CAN SHIFT TO CLIMATE RESILIENT WASH PROGRAMMING



Cover photo: © UNICEF/UNI309803/Afghanistan  
Boy at the solar panels installed to provide safe water in Herat, Afghanistan

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CAN SHIFT TO CLIMATE RESILIENT WASH PROGRAMMING

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Solar panels installed to provide safe water in Kenya





People collecting water from a water tanker in Ethiopia

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## EXECUTIVE SUMMARY

There is an urgent and increasing need to invest in climate-proofing the WASH sector. From a global perspective, there is a growing recognition of the potential of the sector to contribute to worldwide climate mitigation efforts, through reducing emissions, increasing water and energy efficiency of operations, and supporting energy recovery. But there is also a specific and pressing need to protect the sector itself, so it can meet the needs of growing populations around the world if the climate changes as predicted in the years ahead. Adaptive capacity will need to be increased at all levels in the coming years; services must be able to continue to function as needed under increased uncertainty and pressures, changing hydrological/hydrogeological conditions, and more frequent extreme weather events. Focusing on these critical elements will help WASH services plan for the future, enhancing their resilience to climate change – and this must be at the core of our WASH programming.

The Strategic Framework for WASH Climate Resilient Development is a sector-wide tool that was developed in 2014 and updated in 2017, in collaboration with the Global Water Partnership. This Guidance Note is anchored in that Framework, exploring the rationale and, ultimately, guiding and facilitating UNICEF's SHIFT towards climate resilient WASH programming by 2021.<sup>1</sup> This Note provides UNICEF WASH staff with entry points and guidance for the design and implementation of programmes that are grounded in a comprehensive understanding of climate risks, and that set clear climate-based rationales as a central element. This guidance is intended to be used for UNICEF programming in all contexts, including protracted conflicts, fragile or humanitarian settings, as well as development contexts. It will also hopefully inspire and be useful for those developing WASH programming for other WASH actors.

1. UNICEF's shift to climate resilient WASH programming is abbreviated throughout this guidance to 'the SHIFT'.

Young girl collecting water in Afghanistan



© UNICEF/Afghanistan

## THE OBJECTIVES OF 'THE SHIFT' ARE THREEFOLD:

1. To ensure that WASH infrastructure, services and behaviours are sustainable, safe and resilient to climate-related risks. This goes hand-in-hand with the sustainable use, protection and management of surface and groundwater resources, and resilient waste management.
2. To ensure that resilient WASH programmes contribute to building community resilience to help them adapt to the impacts of climate change. To achieve this, inequalities in service provision that disproportionately expose vulnerable groups to climate threats, or
3. To work towards a low-carbon WASH sector by improving water and energy efficiency and ensuring, where possible, the use of renewable energy for water and sanitation operations to lower greenhouse gas (GHG) emissions, and energy generation from waste.

People collecting water from a traditional well in Mauritania



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© UNICEF/UN174782/Djibouti

Girl collecting water from the bottom of a well in a rural area in Padjourah District, Djibouti

## WHY THE SHIFT?

Because it is the right thing to do. UNICEF must continue evolving the way it works to be able to preserve its capacity to reach those who are most vulnerable and sustain its achievements. It is imperative to address climate change as part of overall efforts to increase efficiency, sustainability and equity in access to, and use of, water and sanitation facilities, as well as sustaining healthy sanitation and hygiene behaviours.

Global and donor financial commitments to development are also shifting. UNICEF can demonstrate how it can continue to fulfil its core mandate to children while using its US\$1 billion of WASH expenditure per year to contribute to global climate change efforts. UNICEF has the convening power, the comparative advantage, the potential and the imperative to shift its WASH programme to become a global, climate resilient WASH programme.

## IS IT COST EFFECTIVE?

Increasing WASH resilience may require higher upfront investments before reaping medium- and longer-term benefits. An easy example is building a new raised latrine, which would have a larger upfront cost, but would be less likely to be destroyed in the event of higher flood waters. According to a recent World Bank study<sup>2</sup>, the cost of building climate resilience of infrastructure assets in low- and middle-income countries is small compared with total infrastructure needs.

The incremental cost of ensuring new water and sanitation assets are climate-resilient would be between \$0.9 billion and \$2.3 billion a year. While not negligible, these investments represent around 1 per cent of baseline infrastructure investment needs and would reduce the risk of damage to new infrastructure by 50 per cent. The potential benefits of incorporating resilience into WASH programming are therefore enormous.

2. Hallegatte, S., et al. (2019). Lifelines: The Resilient Infrastructure Opportunity (Sustainable Infrastructure Series). World Bank Group. Available [here](#).



Solar powered water system in Afghanistan

© UNICEF/Afghanistan

## WHEN DOES THE SHIFT HAPPEN?

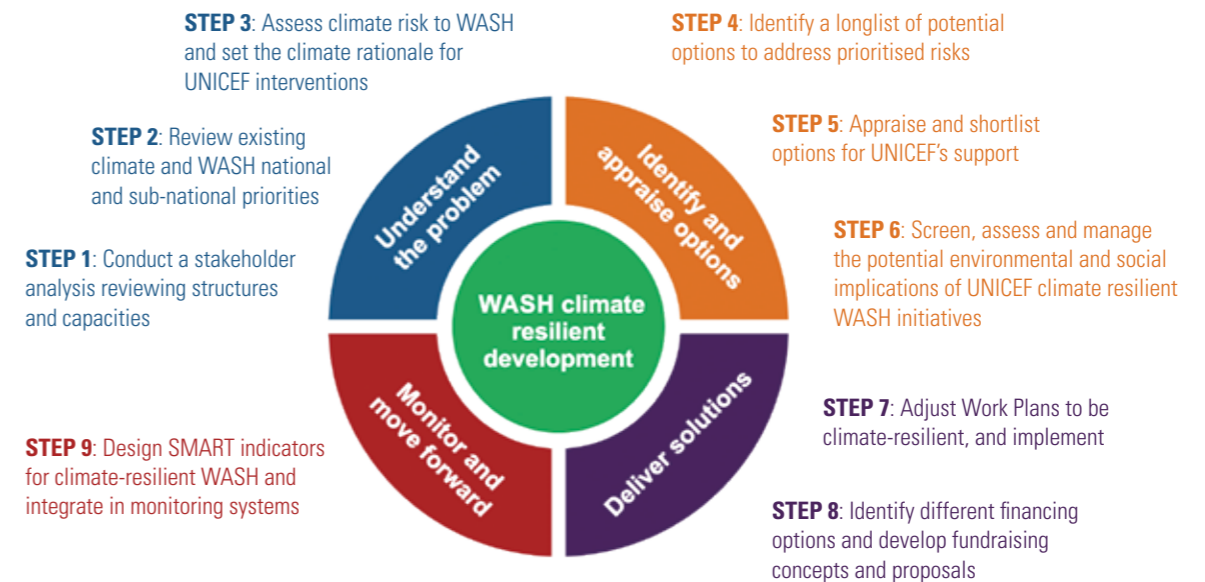
Before the end of 2021. The SHIFT can happen at any time in the country programme cycle. However, ideally the analysis of the enabling environment, climate risks and the WASH climate rationale would be embedded in the country office's Situation Analysis (SitAn), and risk-informed results would be included in the Programme Strategy Notes, Country Programme Document, Country Programme Management

Plan and, consequently, in Annual Work Plans. An excellent time to formally adjust the country programme, based on a fuller understanding of climate risks in WASH, would be during the Mid-Term Review of the Country Programme. But every country office can start the SHIFT by introducing the necessary elements in their Annual Work Plans, which are jointly developed with government and sector partners.

## HOW WILL IT HAPPEN?

UNICEF Headquarters and Regional Offices are ready to provide support to any country to implement the SHIFT. Existing global and regional partnerships will also support the SHIFT, and a global helpdesk function to support country offices is being made available. Nine

steps to facilitate the SHIFT are described in this Guidance Note, and they can be clustered for easier implementation (for example, Steps 1 to 5 can be completed through conducting a 'Risk-Informed WASHBAT'). The nine steps are outlined as follows:



Progress on the implementation of the SHIFT will be measured annually through UNICEF's Strategic Monitoring Questions (SMQs) and other means. Case studies will also be developed and disseminated, to foster knowledge exchange and share lessons learned.

As an immediate step, regional offices will map key entry points in programming and establish priority countries for support, in coordination with UNICEF Headquarters.

## INTEGRATING CLIMATE CHANGE IN OUR COVID-19 RESPONSE

Access to safe water, sanitation and hygiene is the foundation of health and survival – to mitigate the risks against, and to reduce the spread of, outbreaks. To ensure an effective Covid-19 response, water services, whether at the household, community, school, or health facility, must be sustainable, accessible, safe and affordable, to facilitate hand hygiene, cleaning, disinfection and permit social distancing when people collect water. These critical practices are almost impossible where water is scarce and waterpoints are overcrowded.

As we respond to the pandemic, our interventions must not only address the immediate and short-term needs, but also be linked to long-term solutions. The UN Secretary General has requested that Covid-19 responses 'build back better', and to do this, we must ensure that our responses incorporate climate change risks to strengthen the resilience of WASH services and the communities which depend upon them. Failure to do this, exposes already vulnerable communities to additional risks in the decades to come.

UNICEF staff inspect a newly installed solar system in Sa'ada, Yemen



© UNICEF/UN0163952/Fuad



Wastewater treatment plant in Za'atari refugee camp, Jordan

© UNICEF/Jordan

# CONTENTS

1. BACKGROUND - UNICEF'S COMMITMENT TO CLIMATE RESILIENCE	13
2. UNICEF'S SHIFT TO CLIMATE RESILIENT WASH PROGRAMMING	19
2.1 WHAT IS THE SHIFT?	20
2.2 WHY IS THE SHIFT NEEDED?	24
2.3 IS THE SHIFT COST-EFFECTIVE?	27
2.4 WHEN DOES THE SHIFT HAPPEN?	30
3. THEORY OF CHANGE	33
4. MAKING THE SHIFT TOWARDS CLIMATE RESILIENT WASH PROGRAMMING REAL	37
STEP 1: CONDUCT A STAKEHOLDER ANALYSIS, REVIEWING STRUCTURES AND CAPACITIES	40
STEP 2: REVIEW EXISTING CLIMATE AND WASH ESTABLISHED NATIONAL AND SUB-NATIONAL PRIORITIES	43
STEP 3: ASSESS CLIMATE RISK TO WASH AND SET THE CLIMATE RATIONALE FOR UNICEF'S INTERVENTIONS	46
STEP 4: IDENTIFY A LONGLIST OF POTENTIAL OPTIONS TO ADDRESS PRIORITISED RISKS	50
STEP 5: APPRAISE AND SHORTLIST OPTIONS FOR UNICEF SUPPORT	53
STEP 6: SCREEN, ASSESS AND MANAGE THE POTENTIAL ENVIRONMENTAL AND SOCIAL IMPLICATIONS OF UNICEF CLIMATE RESILIENT WASH INITIATIVES	56
STEP 7: ADJUST WASH WORK PLANS TO BE CLIMATE RESILIENT, AND IMPLEMENT	58
STEP 8: IDENTIFY DIFFERENT FINANCING OPTIONS AND DEVELOP FUNDRAISING CONCEPTS AND PROPOSALS	59
STEP 9: DESIGN SMART CLIMATE-RESILIENT INDICATORS FOR WASH	62
5. BUILDING CAPACITY AND TECHNICAL SUPPORT TO ACHIEVE THE SHIFT	65
6. MILESTONES AND MONITORING, AND THE ROLES OF HEADQUARTERS AND REGIONAL OFFICES	71
ANNEXES	75
ANNEX 1: CLIMATE RESILIENCE IN UNICEF'S WASH STANDARD MONITORING QUESTIONS (SMQS)	77
ANNEX 2: RELEVANT INFORMATION SOURCES ON WATER/SANITATION AND CLIMATE RISK	79
ANNEX 3: CHECKLISTS FOR CLIMATE-RESILIENT WASH ENABLING ENVIRONMENTS	80



# BACKGROUND - UNICEF'S COMMITMENT TO CLIMATE RESILIENCE



Children need water, sanitation and hygiene (WASH) to survive and thrive. This is true both in times of stability and crisis, in urban as well as rural communities, and in every country around the world. WASH is important in its own right, and is also necessary to achieve good health, nutrition, education and other outcomes for children. Girls and women are particularly affected by poor WASH, as are people living with disabilities.

UNICEF's *Strategy for Water, Sanitation and Hygiene*<sup>3</sup> guides the organisation's overarching contribution to achieving Sustainable Development Goal (SDG) 6 – ensuring the availability and sustainable management of water and sanitation for all by 2030. The strategy indicates that strong engagement is needed to adapt to climate change and follow environmental and social standards, while maintaining the focus on helping every child gain access to WASH, including in schools and health centres, and in humanitarian situations.

3. UNICEF (2016). *Strategy for Water, Sanitation and Hygiene 2016-2030*. UNICEF. Available [here](#).



A girl carries her water container in Ethiopia

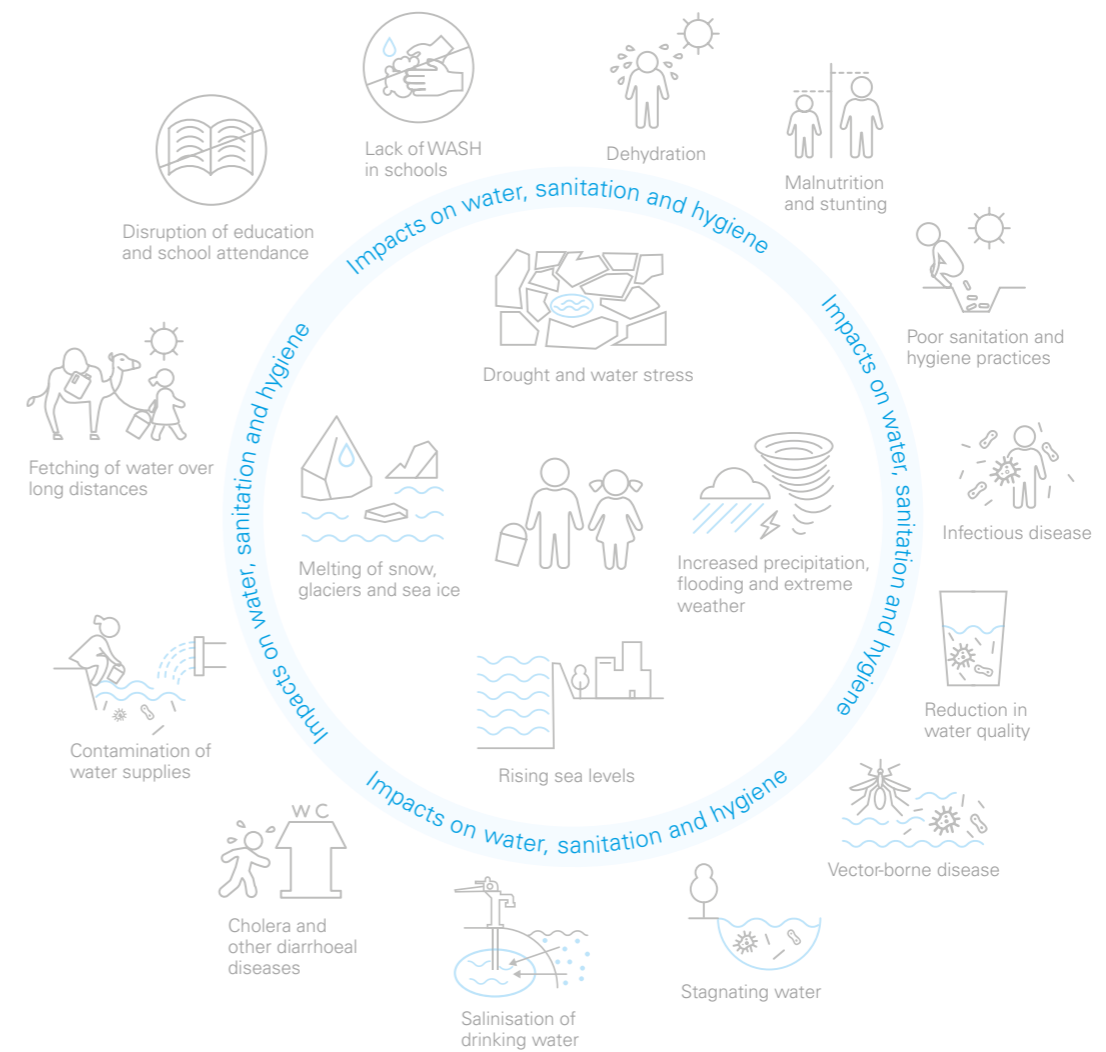
© UNICEF/Ethiopia

There is an urgent and increasing need (and an opportunity) to invest in climate-proofing the WASH sector. From a global perspective, there is an increasing recognition of the potential of the sector to contribute to worldwide climate mitigation efforts, through reducing emissions, increasing water and energy efficiency of operations, and supporting energy recovery. But there is also a specific and pressing need to protect the sector itself, so it can meet the needs of growing populations around the world if the climate changes as predicted in the years ahead. Adaptive capacity will need to be increased at all levels in the coming years; services must be able to continue to function as needed under increased uncertainty and pressures, changing hydrological/hydrogeological conditions, and more frequent extreme weather events.

Focusing on these critical elements will help WASH services plan for the future, enhancing their resilience to climate change – and this must be at the core of our WASH programming.

Climate change is already causing negative impacts upon economies, livelihoods, and the environment through droughts, floods, sea-level rise, glacial melting, and changes in rainfall patterns across the world. In many places these impacts are already being felt by communities, services and development programming itself which are often ill-prepared to respond to these threats. The impacts can cause vast loss and damage, sometimes devastating the supply and provision of safe WASH services, and affecting many other sectors including health, nutrition, child protection, and education.

Figure 1: THE IMPACT OF CLIMATE CHANGE ON WASH AND CHILDREN<sup>4</sup>



Note: These infographics are meant to be illustrative only. The impacts of climate change vary considerably depending on the context and time in which they occur, and the specific characteristics of the event. These images do not imply strength of association nor causality.

4. Taken from UNICEF (2017). *Thirsting for a Future: Children and Water in a Changing Climate*. UNICEF. Available [here](#).

The year 2015 was a key milestone for development cooperation. Agenda 2030 was agreed and included SDGs dedicated to “Ensure availability and sustainable management of water and sanitation for all” (SDG 6), and to “Take urgent action to combat climate change and its impacts” (SDG 13). The Sendai Framework for Disaster Risk Reduction 2015-2030 was also adopted, and one year later the Paris Agreement entered into force, building on the UN Framework Convention on Climate Change (UNFCCC).

In parallel to those global processes UNICEF’s WASH strategy (2016-2030) was developed, recognising the threat that climate change represents for children and their families and for the WASH services they rely on. UNICEF also included climate resilience as a corporate priority in its current strategic plan,<sup>5</sup> within Goal Area 4 – that “every child lives in a safe and clean environment.”

The Strategic Framework for WASH Climate Resilient Development and associated technical guidance for implementation are a sector tool

developed as part of a collaboration between the Global Water Partnership (GWP) and UNICEF, and were completed in 2017.

The four quadrants of the Framework are illustrated in Figure 2 below.

Figure 2: THE STRATEGIC FRAMEWORK FOR WASH CLIMATE RESILIENT DEVELOPMENT



5. UNICEF (2018). UNICEF Strategic Plan 2018-2021. UNICEF. Available [here](#).

Mother and her child wade through floodwater in Bolivia



© UNICEF/UNI28339/Bolivia



© UNICEF/Kenya

Collecting water in northern Kenya

On the basis of this Framework, UNICEF is committed to shift its WASH programming to a global climate resilient WASH programme by 2021. As a result of this, UNICEF will be monitoring and providing climate-resilient WASH results, contributing to the reduction of emissions where technically possible,<sup>6</sup> and ensuring that UNICEF’s WASH expenditure of around US\$1 billion per year is “green” expenditure.

UNICEF’s focus on equity across WASH programmes must be retained, continuing to ensure that equity is systematically addressed by governments and WASH sector partners. UNICEF’s Water and Sanitation Game Plans,<sup>7</sup> and further specific technical guidance are available to provide detailed explanation and advice, for example on how to complete the unfinished business from the Millennium Development Goal WASH targets to ensure we leave no one behind while playing a key advocacy role in areas such as public finance, equity and risk mitigation.

While the Strategic Framework for WASH

Climate Resilient Development is a sector wide tool, the purpose of this Guidance Note is to explain the rationale for, facilitate, guide and support UNICEF’s shift towards climate resilient WASH programming by 2021.<sup>8</sup> It provides UNICEF WASH staff with entry points and guidance for the design and implementation of programmes that are grounded in a comprehensive understanding of climate risks, and which set a clear climate-based rationale as a central element. It does so by tailoring the structured approach of the Strategic Framework to UNICEF’s internal processes and planning cycles.<sup>8</sup> This guidance is intended to be used for UNICEF programming in all contexts, including protracted conflicts, fragile or humanitarian settings, as well as development contexts. It will also hopefully inspire and be useful for partners and donors developing their own climate resilient WASH programming, as well as other programmes and divisions within UNICEF, as part of the broader SHIFT of the organisation towards climate resilient policy and programming.

6. At the onset of an emergency response UNICEF WASH will observe ‘do not harm’ and environmental principles and will avoid or reduce GHG emissions as much as technically possible. In the context of protracted crises, it is expected that this SHIFT will be widely applied to UNICEF WASH programming.

7. UNICEF (2018). UNICEF’s game plan to end open defecation. UNICEF. Available [here](#). And UNICEF’s game plan to achieve universal safe and sustainable water services for all by 2030. UNICEF. Available [here](#).

8. UNICEF’s shift to climate resilient WASH programming is abbreviated throughout this guidance to ‘the SHIFT’.



## UNICEF'S SHIFT TO CLIMATE RESILIENT WASH PROGRAMMING

## 2.1 WHAT IS THE SHIFT?

Climate change is a fundamental threat to development, particularly for the poorest children. There is therefore clear demand for new perspectives and innovative solutions to this problem. In this context, resilience can be defined as the ability of people and systems to anticipate, adapt to and recover from the negative effects of shocks and stresses (including natural disasters and climate change) in a manner that reduces vulnerability, protects livelihoods, accelerates and sustains recovery, and supports economic and social development, while preserving cultural integrity.<sup>9</sup> Resilience also involves improving the

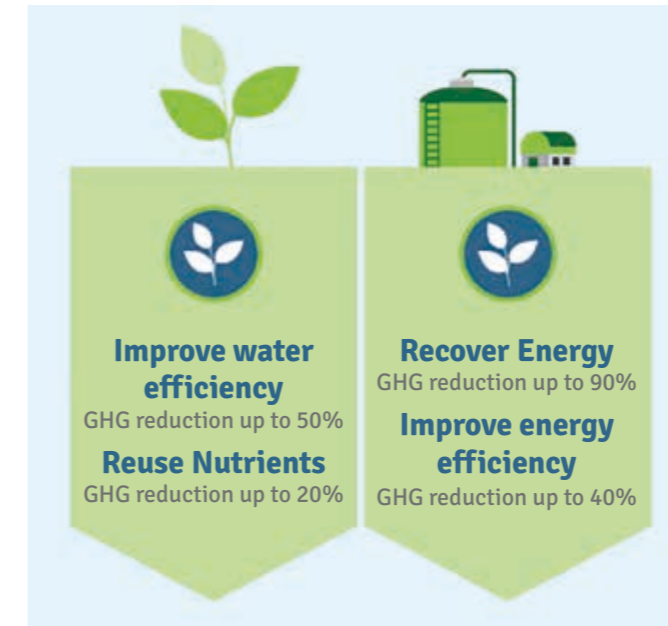
ability to change how resources are managed and services are delivered, if and when conditions change in unforeseen ways.

Climate resilient development involves measures and activities that will deliver benefits under likely potential future climate scenarios and which can cope with uncertainties over future conditions. It differs from 'business-as-usual' development in that it actively considers and addresses existing and future potential climate risks, capitalising on opportunities to promote low-carbon development.

9. Interpretations and definitions will vary across organisations. For example, "The ability of children, households, communities and systems to anticipate, manage, and overcome shocks and cumulative stresses" is from UNICEF; and, "The ability of a social or ecological system to resist, absorb, accommodate and recover from the effects of a (climate) hazard in a timely and efficient manner while retaining the same basic structure and ways of functioning" is from GWP.

Wind powered water pumping system in Colombia

Figure 3: LOW-CARBON OPPORTUNITIES FOR WATER AND SANITATION UTILITIES<sup>10</sup>



10. From Ballard, et al. (2018). Roadmap to a Low-Carbon Urban Water Utility. IWA. Available [here](#).

### THE OBJECTIVES OF THE SHIFT ARE THREEFOLD:

#### OBJECTIVE 1

To ensure that WASH infrastructure, services and behaviours are sustainable, safe and resilient to climate-related risks. This goes hand-in-hand with the sustainable use, protection and management of surface and groundwater resources, and resilient waste management.

#### OBJECTIVE 2

To ensure that resilient WASH programmes contribute to building community resilience to help them adapt to the impacts of climate change. To achieve this, inequalities in service provision that disproportionately expose vulnerable groups to climate threats, or restrict their capacity to respond effectively, need to be addressed first. Further WASH contributions to community resilience can be achieved through capacity development and by fostering income generation, as well as food, energy and ecosystem resilience.

#### OBJECTIVE 3

To work towards a low-carbon WASH sector by improving water and energy efficiency and ensuring, where possible, the use of renewable energy for water and sanitation operations to lower greenhouse gas (GHG) emissions, and energy generation from waste.



Table 1 below outlines requirements for UNICEF country offices to shift to climate resilient WASH programming, based on the three objectives of the SHIFT.<sup>11</sup>

Table 1: REQUIREMENTS FOR COUNTRY OFFICES TO SHIFT TO CLIMATE-RESILIENT WASH PROGRAMMING

SHIFT OBJECTIVE	INDICATIVE REQUIREMENTS
<b>ALL 3 OBJECTIVES</b>	✓ The country has undertaken a WASH risk analysis and understands what are the most critical climate risks to WASH services and communities.
	✓ Data is collected on a regular basis on the impacts of climate change on water resources and WASH services. The country is building a strong causal relationship, and a strong climate rationale.
	✓ The country has appraised options to address identified risks (to reduce exposure and vulnerability and/or raise capacity) at national, sub-national and local levels and agreed on a clear way forward to address objectives 1, 2 and 3 of the SHIFT to climate resilient WASH.
	✓ A set of SMART indicators (and measurement methodology) has been developed for the identified options, to monitor the results of WASH climate resilience programme implementation.
<b>OBJECTIVE 1</b> Ensuring that WASH infrastructure and services and behaviours are sustainable, safe and resilient to climate related risks <sup>12</sup>	✓ Sanitation programming is designed based on the particular climate risks faced by targeted communities.
	✓ Particularly in water-scarce areas, programmes look at additional aspects of multi-sector reforms to achieve a more rational use of water, giving priority to water for drinking. Programmes address water demand management, and water source protection at basin level.
	✓ UNICEF programmes scale up WASH services that are resilient to climate shocks (through direct or indirect interventions).
<b>OBJECTIVE 2</b> Ensuring that resilient WASH programmes contribute to build community resilience to adapt to the impacts of climate change	✓ The country has set as priority target areas those most affected by climate hazards where service levels are low, and where populations and systems are most vulnerable (for example, target communities in flood prone areas coupled with low levels of sanitation services, and communities in water scarce and drought prone areas with low water service levels) and the population is already facing many inequities <sup>13</sup> and with high rates of poverty.
	✓ WASH programme design assesses how to foster and sustain household income generation and/or food security (for example, the re-use of water for agriculture and other multiple uses of water) in areas impacted by climate change.
<b>OBJECTIVE 3</b> Working towards a low-carbon WASH sector	✓ WASH service provision contributes to reducing emissions by making use of renewable energy, with positive environmental impacts. WASH services and activities at community level are designed to minimise GHG emissions (for example, by installing efficient pumps).
	✓ WASH programmes contribute to increasing water and energy efficiency (for example, through the powering of water infrastructure and the treatment of waste and storm water).
	✓ Sanitation and wastewater treatment processes contribute to energy recovery.

Table 2 below outlines other additional points that UNICEF can aim at while shifting to climate resilient WASH programming, although these are not required.

Table 2: ADDITIONAL KEY CONSIDERATIONS FOR UNICEF COUNTRY OFFICES SHIFTING TO CLIMATE-RESILIENT WASH

✓	The Shift Approach is adopted by all sector partners – or inspires other sector partners to take similar measures – and is endorsed and driven by government.
✓	The country follows a multi-sector National Adaptation Plan (NAP) process that includes WASH among the main priorities.
✓	The country is actively implementing mitigation measures to reduce carbon emissions, including in the WASH sector.
✓	WASH-related targets for both adaptation and mitigation are included in the country's Nationally Determined Contribution (NDC) to the Paris Agreement.
✓	WASH strategies and plans integrate climate resilience and the priorities set in NAPs and mitigation strategies.
✓	The country has identified appropriate and innovative climate financing mechanisms, including bilateral and multilateral options, and explored opportunities with the private sector.

11. Note: These are core elements of the nine steps proposed later in the document for the implementation of the SHIFT, which acknowledge that employing low-carbon WASH technologies or approaches might not be feasible in the initial stages of an emergency response.

12. And that national (where they exist) or UNICEF Environmental and Social Safeguards have been met

13. Reducing these inequities now – providing the poorest children with access to safe water, adequate sanitation and good hygiene; good nutrition and food security; strong and accessible health systems; and well-functioning child and social protection systems – will give disadvantaged children a better basis for coping with the effects of climate change in the future. It will also make it less likely that today's inequities are exacerbated by climate change.

Water containers being filled at a kiosk with water from a solar powered system in South Sudan



© UNICEF/UNI285739/South Sudan

## 2.2 WHY IS THE SHIFT NEEDED?

The effects of climate change intensify the multiple risks contributing to an unfolding global water crisis, by affecting the quantity and quality of water, contaminating water reserves, and disrupting water and sanitation services. Rising temperatures, changing rainfall patterns, greater frequency and severity of droughts, floods and storms, melting snow and ice, and rising sea levels all threaten the WASH services that children rely on, as well as undermining key good hygiene behaviours.

Added to this pressure, industrialisation and demographic trends are increasing consumption needs, and overall demand for water continues to rise while freshwater supplies diminish in many parts of the world. Nearly 160 million children already live in areas of high or extremely high drought severity, and more than 270 million children live in extremely high flood prone zones, in countries where less than half of the

population has access to improved sanitation facilities.<sup>14</sup> By 2040, it has been estimated that 1 in 4 children – 600 million children – will live in areas of extremely high-water stress.<sup>15</sup> And it is the poorest, most disadvantaged children who will suffer the most; if UNICEF is to preserve its capacity to reach those who are most vulnerable, it must broaden its focus and change the way it works.

The SDGs include dedicated goals on water and sanitation (SDG 6) and on climate action (SDG 13), and therefore present a real opportunity to address WASH needs while also providing effective adaptation and low carbon measures, in order to respond to the global climate crisis. Indeed, action on WASH and climate are heavily interlinked; it is possible to achieve climate-resilient WASH outputs, as well as taking WASH-related climate action. Figure 4 illustrates how SDGs 6 and 13 are mutually inter-dependent:



Woman tending to her crops which are irrigated as part of a Multiple Use System in Madagascar

14. UNICEF (2017). Thirsting for a Future: Children and Water in a Changing Climate. UNICEF. Available [here](#).  
15. Ibid.



© UNICEF/Madagascar

Figure 4: SDG 6 AND SDG 13 ARE MUTUALLY INTERDEPENDENT

 <b>TAKE URGENT ACTION TO COMBAT CLIMATE CHANGE AND ITS IMPACTS</b>		 <b>SDG 6 / WASH CONTRIBUTIONS</b>
<b>13.1</b>	Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	<ul style="list-style-type: none"> <li>WASH infrastructure, services, and behaviours are sustainable, safe and resilient to climate-related risks</li> <li>Resilient WASH systems contribute to building community resilience and increasing capacity to adapt to climate change</li> </ul>
<b>13.2</b>	Integrate climate change measures into national policies, strategies and planning	<ul style="list-style-type: none"> <li>WASH identifies climate risks to the sector and communities and addresses them in sectoral national and sub-national policies, strategies and plans</li> <li>WASH works towards a low-carbon sector using renewable energies, increasing efficiency of operations and generating energy from waste</li> </ul>
<b>13.3</b>	Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	<ul style="list-style-type: none"> <li>The WASH sector addresses human and institutional capacity around climate change and its impacts in the sector</li> <li>WASH innovations on mapping and developing groundwater resources in a sustainable way contribute to raising awareness and feed into early warning systems</li> <li>Through environmental clubs in schools and the strengthening of WASH &amp; climate educational curricula, climate-resilient WASH in Schools programming builds on children's roles as agents of change, to raise awareness at community level and beyond</li> </ul>
<b>13.A</b>	Mobilising jointly \$100 billion annually to address the needs of developing and fully operationalise the Green Climate Fund	<ul style="list-style-type: none"> <li>WASH shifts its programmes to contribute towards green investment</li> <li>WASH helps to address the current gap of climate financing proposals in the area of water/sanitation linked to health</li> </ul>
<b>13.B</b>	Raising capacity for effective climate change-related planning and management	<ul style="list-style-type: none"> <li>UNICEF and its partners have developed a framework for climate-resilient WASH and is supporting capacity-building and implementation initiatives around the world</li> </ul>

The WASH sector needs an unprecedented paradigm shift to effectively incorporate a climate resilience focus in all WASH programmes, processes, procedures, procurement, disbursements and ultimately results. Global and donor financial commitments to development are shifting in the same direction: the climate

financing architecture has evolved, especially during the last decade, and advanced economies formally agreed to jointly mobilise US\$100 billion per year by 2020, to address the pressing climate mitigation and adaptation needs of developing countries.



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Most governments have also agreed that a major share of new multilateral, multi-billion dollar funding should be channelled through the Green Climate Fund (GCF).<sup>16</sup> At the G7 Summit in June 2015, leaders emphasised the GCF's role as a key institution for global climate finance. Many developing countries, too, are explicitly expressing their expectations from the GCF in their Nationally Determined Contributions (NDCs) to the Paris Agreement.

Indeed, the GCF's 2020-2023 replenishment (GCF-1) is an important element of the financial commitments under both the original United Nations Framework Convention on Climate Change (UNFCCC), and the Paris Agreement.

The public financing shift is real and tangible; by February 2020 the first formal replenishment process of the GCF was concluded with pledges from 49 contributors totalling US\$10.32 billion. Seventy-five per cent of donor countries

increased their pledges from the initial resource mobilisation, with almost half more than doubling their pledges. This has led to a 70 per cent increase in the GCF's annual programming resources. However, according to various sources, these global pledges still fall far short of the level of ambition needed to mobilise US\$100 billion per year to assist developing countries necessitating a significant scaling up of climate change funding from both the donor community and the private sector.

In such public (as well as private) financing environments, UNICEF has the convening power, the comparative advantage, the potential and the imperative to shift its global WASH programmes to create a worldwide, climate resilient WASH programme. It can – and must – demonstrate how it can continue to fulfil its core mandate to children while using its US\$1 billion of WASH expenditure per year to contribute to global climate change efforts.

Fourth-grade students from Hnen Ser Kyin Middle School wash their hands at a community water point in the village of Hnen Ser Kyin, Magway Region in Myanmar

<sup>16</sup> It is important to point out that this multilateral funding, though important, is a small part of overall climate financing flows - therefore influencing national and private sector budgets remains critically important.

## 2.3 IS THE SHIFT COST-EFFECTIVE?

Governments in low- and middle-income countries around the world are investing between 3.4 to 5 per cent of their respective gross domestic product (GDP) in infrastructure every year – equating to around US\$1 trillion.<sup>17</sup> Still, the quality and adequacy of infrastructure services vary widely across countries. Millions of people, especially in fast-growing cities in low- and middle-income countries, are facing the consequences of substandard infrastructure, often at a significant cost.

Underfunding and poor maintenance are some of the key factors resulting in inadequate water and sanitation systems.<sup>18</sup>

Making infrastructure more resilient – that is, better able to deliver the services people and different sectors need during and after natural shocks – is critical, not only to avoid costly damage but also to minimise the wide-ranging consequences of natural disasters for the livelihoods and wellbeing of people.

Making the SHIFT to climate resilient WASH will require accurately identifying who and what is at risk, and why. Making risk visible starts with understanding how climate change leads to adverse outcomes, like the loss of water and sanitation infrastructure, services and reduced

<sup>17</sup> Fay, M., et al. (2019). Hitting the Trillion Mark: A Look at How Much Countries Are Spending on Infrastructure. (Policy Research Working Paper 8730). World Bank Group. Available [here](#).

<sup>18</sup> Hallegatte, S., et al. (2019). Lifelines: The Resilient Infrastructure Opportunity (Sustainable Infrastructure Series). World Bank Group. Available [here](#).

Women using water at a healthcare facility in Mauritania



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hygienic practices. This helps integrate climate impacts into all planning decisions. It is important to consider that increasing WASH resilience may require higher upfront investments before reaping medium- and longer-term benefits. An easy illustration is building a new raised latrine, which would require a larger upfront cost, but would be less likely to be destroyed in the event of higher flood waters. In this case, factoring in climate risks would help steer the decision towards the more resilient option.

In the water supply and sanitation sector, the cost of reaching the SDG targets for universal access to safe water and sanitation in low- and middle-income countries by 2030, with the current resilience level, would range from \$116 billion to \$229 billion a year for capital investments and from \$32 billion to \$69 billion a year for maintenance.<sup>19</sup>

How would those costs increase to make water and sanitation systems more resilient? According to a 2019 World Bank study,<sup>20</sup> the cost of building the resilience of infrastructure assets<sup>21</sup> in low- and middle-income countries is

small compared with total infrastructure needs. The incremental cost of protecting new exposed water and sanitation assets would be between \$0.9 billion and \$2.3 billion a year. While not negligible, these investments represent around 1 per cent of baseline infrastructure investment needs, and yet would reduce the risk of damage to new infrastructure by 50 per cent. Making infrastructure more climate resilient should not greatly affect the affordability of new infrastructure, but by protecting the estimated US\$1.1 trillion to US\$2.2 trillion in WASH infrastructure investment that will be required between 2020 and 2030 to achieve the SDGs,<sup>22</sup> the benefits are enormous.

Figure 5: CLIMATE RESILIENT WASH INVESTMENT YIELDS<sup>23</sup>



► Water treatment plant and storage tank in Rhino Camp settlement in Arua district in Uganda

19. Hutton, G., and M. Varughese. (2016). The Costs of Meeting the 2030 Sustainable Development Goal Targets on Drinking Water, Sanitation, and Hygiene. (Water and Sanitation Program Technical Paper). World Bank Group. Available [here](#).  
20. Hallegatte, S., et al. Lifelines.  
21. Note: this includes resilience to climate change and natural disasters more broadly.  
22. Hutton and Varughese. The Costs of Meeting the 2030 SDG Targets.  
23. Adapted from Global Commission for Adaptation (2019). Adapt Now: A Global Call for Leadership on Climate Resilience. GCA. Available [here](#).

Child being washed at a healthcare facility in Mauritania



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## 2.4 WHEN DOES THE SHIFT HAPPEN?

The scope of UNICEF's SHIFT to climate resilient WASH programming spans across strategic and annual planning, implementation, monitoring and evaluation. The SHIFT can happen at any time in the country programme cycle. However, ideally the analysis of the enabling environment, climate risks and the WASH climate rationale would be embedded in the country office's Situation Analysis (SitAn), and risk-informed results would be included in the Programme Strategy Note, Country Programme Document, Country Programme Management Plan and,

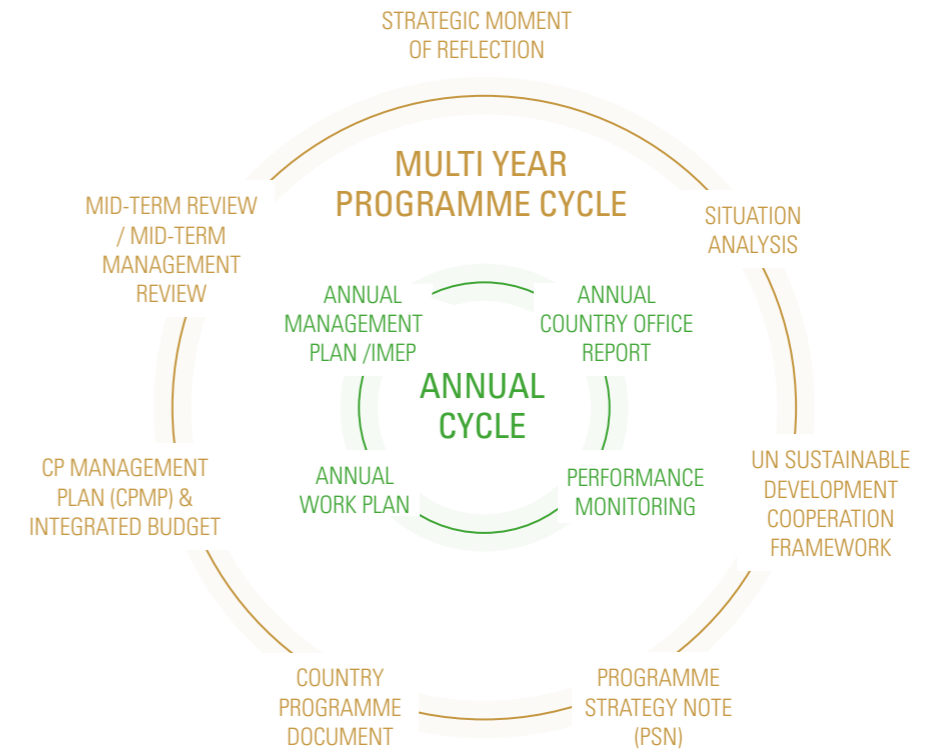
consequently, in Annual Work Plans. An excellent time to formally adjust the country programme based on a fuller understanding of climate risks in WASH would be during the Mid-Term Review of the Country Programme. But every country office can start the SHIFT by introducing the necessary elements in their Annual Work Plans, which are jointly developed with government and sector partners.

Figure 6 sets out some suggested entry points in the UNICEF programme cycle.

Drilling a deep borehole near Gashamo town, Somali region, Ethiopia



Figure 6: THE SHIFT TO CLIMATE RESILIENT WASH AND UNICEF COUNTRY PLANNING PROCESSES



**Annual Country Office Report**  
The annual Country Office report needs to highlight challenges and progress to climate resilient WASH.

**Performance Monitoring**  
Monitor and evaluate WASH climate resilience taking measures to avoid increasing risks through M&E process itself. Feed M&E findings into programmes to learn and adjust accordingly.

**Annual Work Plan (AWP)**  
Based on the approved CPD (even if on-going), conduct a WASH climate risk analysis and incorporate identified solutions: 1) to ensure rural WASH infrastructure and services are sustainable, safe and resilient to climate related risks; 2) that WASH contributes to building community resilience to climate change; and 3) that WASH contributes towards a low carbon sector. If your country is planning a WASH BAT make sure that includes the newly developed climate change criteria.

**Annual Management Plan (AMP) / IMEP**  
Based on evidence on observed impacts, incorporate climate resilient WASH in the country Annual Management Plan.

**Mid-term Review /strategic Moment of Reflection**  
For country offices that have not strongly addressed climate resilience in WASH programming this has to be done as part of the mid term review and strategic moment of reflection. It is recommended to conduct a WASH BAT with focus on climate resilience and develop a WASH climate risk analysis to inform the review.

**Situation Analysis (SitAn)**  
Implement a WASH BAT with focus on climate resilience, and as adequate a WASH climate risk analysis. Introduce a strong WASH climate rationale into the SitAn, and identify gaps and entry points with new stakeholders.

**UN Sustainable Development Cooperation Framework**  
Based on UNICEF'S role within the wider UN systems and detailed Climate Resilient WASH situation analysis, Country Offices can advocate for incorporation of climate resilient WASH in UNSDCF. Importantly, climate resilient WASH needs to feature in UN efforts that support national mitigation and adaptation planning .

**Programme Strategy Note (PSN)**  
Develop the PSN in consultation with traditional WASH partners but also with Ministry of Environment and Departments leading Risk Management and Water Resources. Highlight the climate resilient component of established WASH priorities, describing a clear climate rationale, barriers and bottlenecks to overcome and design a climate-sensitive theory of change that addresses identified climate risks. Design SMART climate resilient indicators. Secure commitments from government counterparts, maintaining clarity of mutual roles and obligations.

**Country Programme Document (CPD)**  
Based on the SitAn, incorporate strategies to address underlying drivers of risk, and build WASH climate resilience. The WASH country programme priorities need to be firmly grounded in a strong climate rational and include (as adequate) support at national (enabling environments), subnational level (resource management and monitoring) and local and project levels (infrastructure, behavioral change, standards, governance, etc.).

**Country Programme Management Plan (CPMP)**  
Incorporate adequate financial and human resources to support WASH climate resilient development.



## THEORY OF CHANGE

Theory of change (ToC) is a critical thinking approach to programme design, and monitoring and evaluation which has increasingly become common practice for international development programming. A ToC explains how activities are understood to produce a series of results that contribute to achieving the final intended impacts. UNICEF WASH sections in country offices are asked to develop a ToC for their respective programme components, as part of the Programme Strategy Note development. As part of developing a ToC, WASH teams normally define priority interventions that are based on current situation analysis, and which support the implementation and achievement of national action plans, taking into consideration equity, gender equality, human rights and environmental sustainability. A schematic representation of the results structure, based on the ToC, is then consolidated and included as part of the Programme Strategy Note.

Many UNICEF country offices have already been integrating climate resilience into their ToC and programming.<sup>24</sup> In 2019, 24 per cent of UNICEF's safe water result was reported as being from a climate resilient water system. Fully integrating climate resilience into a country's ToC and programming may often only require relatively small adjustments to ongoing work. For example, developing a clear and strong overarching climate rationale as an additional lens and including carrying out a climate risk situation analysis, will enable the further screening of potential options to ensure that they are resilient to climate change, foster community resilience, and contribute to a low-carbon sector.

Environmental sustainability is already an established consideration for UNICEF country office ToCs and programming; incorporating climate resilience is therefore not expected to require the complete transformation of a

Wastewater treatment plant in Za'atari refugee camp, Jordan

24. See UNICEF's Compendium of WASH Climate Resilience Programming Field Experiences. Available [here](#) (UNICEF internal document).

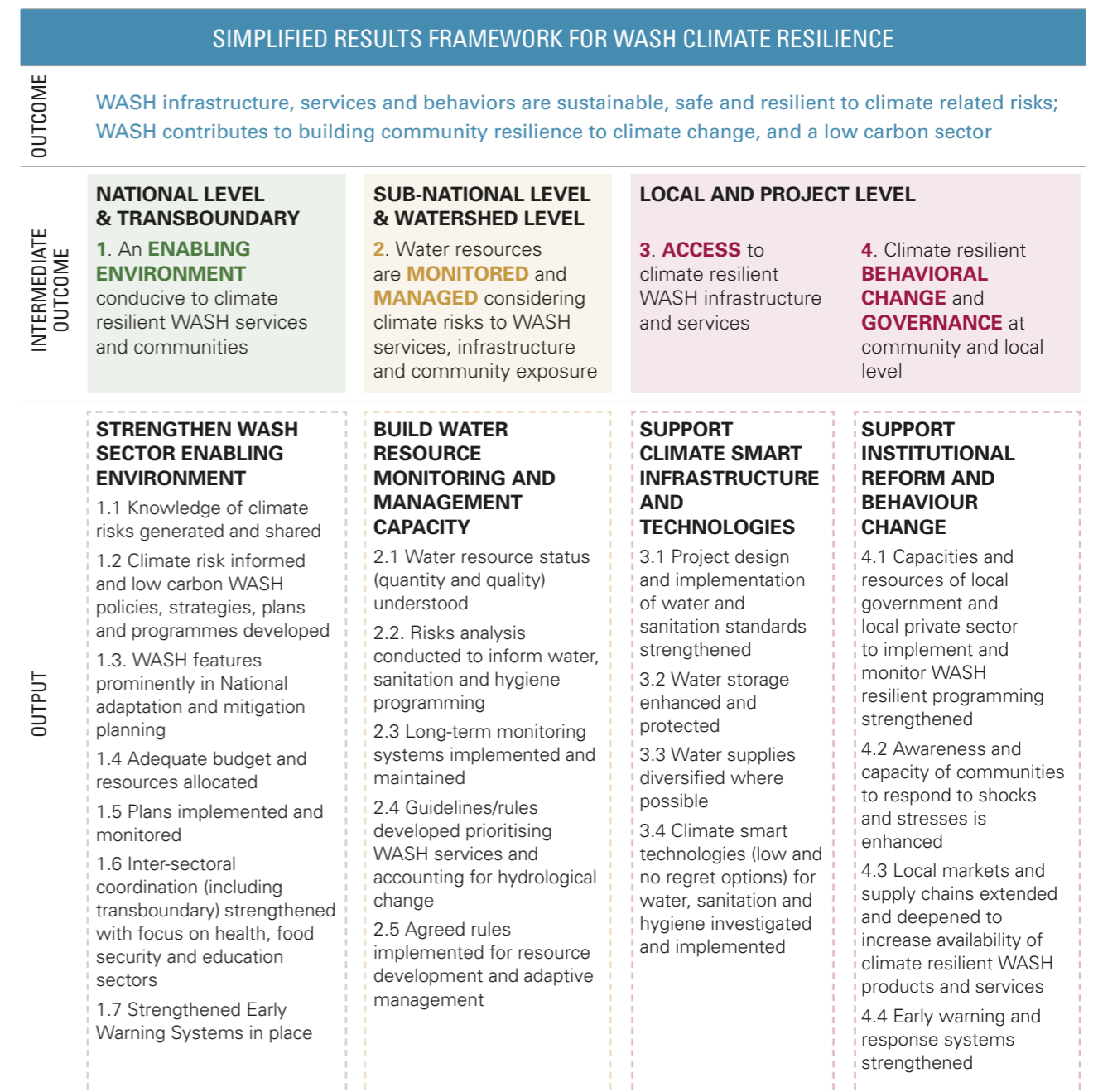


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country's current WASH programming. Neither should it dramatically change medium- and longer-term budgets for implementation; while climate-resilient programming is likely to mean greater up-front costs, it will also mean dramatically lower life cycle costs. The SHIFT to climate resilient WASH programming is not about rebuilding UNICEF's entire WASH programming. What the SHIFT will do is add an extra lens to our programming to ensure that it is climate resilient – producing more sustainable results, through more resilient infrastructure and communities.

Country offices will continue to develop and update their ToC so that it is tailored to their specific context. However, Figure 7 below outlines the considerations for the global generic results structure for the SHIFT. It is a schematic representation that sets out the clarity of the organisation's global vision, and is designed to help inform planning processes for country offices, as they make the shift to climate resilient WASH programming.

Figure 7: THE GLOBAL GENERIC SIMPLIFIED RESULTS FRAMEWORK FOR CLIMATE RESILIENT WASH





## REALISING THE SHIFT TOWARDS CLIMATE RESILIENT WASH PROGRAMMING



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Potential entry points within the UNICEF programme cycle have already been highlighted in this Guidance Note (see Figure 6). Country offices can (and should) therefore begin the SHIFT to climate resilient WASH programming regardless of where they currently are in their programme cycle. This section sets out in more detail what this may look like in practice. It follows the path of planning and programming processes that will already be taking place across

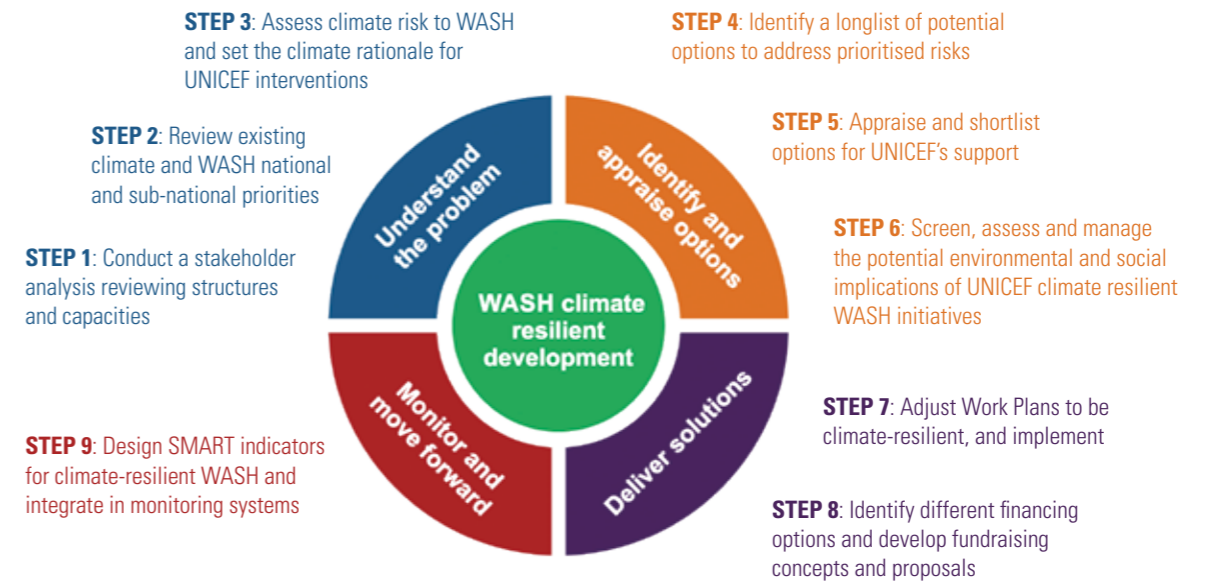
WASH country programming, but is overlaid with nine specific steps that are designed to help the organisation shift its WASH programming decisively towards climate resilience.

The nine steps follow the logic of the Strategic Framework for WASH Climate Resilient Development, with a strong emphasis on complementary and additional approaches that will help with fulfilling the three objectives

A girl uses a rehabilitated school latrine in Dafo, southern Djibouti

of the SHIFT. The nine steps are set out in Figure 8 below, and explored in detail in the section that follows, which includes useful links to existing tools and further technical guidance.

Figure 8: THE NINE STEPS OF UNICEF'S SHIFT TO CLIMATE RESILIENT WASH PROGRAMMING



The steps follow the Framework's implementation. However, the steps are very much a guide; they are not prescriptive and will likely be adapted or modified based on each country context and any actions that might have been already taken. For countries operating mainly in emergency or protracted crisis contexts, there will be a need to consider what the most relevant steps to implement are, beyond the immediate life-saving response (for example, those that consider risk analysis and appraising options).

It should also be noted that while the steps are laid out separately in some detail to illustrate how to implement the SHIFT, country offices may decide to cluster some of them together, if this works best for their particular context. For example, country offices planning to conduct WASH Bottleneck Analysis Tool (WASHBAT) workshops could maximise efforts and easily complete steps 1 to 5 as part of that process, with some adjustments for the implementation of a 'Risk-informed WASHBAT', as explained in Step 4.

Solar powered water system in Sa'ada, Yemen



© UNICEF/UN0153949/Yemen

# STEP 1

## CONDUCT A STAKEHOLDER ANALYSIS, REVIEWING STRUCTURES AND CAPACITIES


At any point in the Programme Cycle, this step builds a list of additional partners and stakeholders that will need to be included in the SHIFT to climate resilient WASH programming. These partners will need to be considered and consulted as you work through the other SHIFT steps, in order to achieve sustainable, safe and resilient WASH infrastructure, services and behaviours, increased community resilience, and progress towards a low-carbon sector.

A stakeholder analysis will identify those who have an interest or influence over WASH outcomes. It should also tell you which stakeholders are already engaging in WASH climate resilience, to be able to avoid duplication and build partnerships. Stakeholders can provide valuable inputs for many different aspects of the process – for example, on hazard and vulnerability assessments, identifying mitigation and adaptation options, or on the dissemination of information at local and national levels.

and the sustainable management of water and sanitation for all”. This goal is more ambitious than previous development goals, as it covers the entire water cycle, including the management of water under scarce conditions, maintenance of water for ecosystems, and water quality issues. The range of stakeholders to involve in the SHIFT to climate resilient WASH programming will need to be equally broad and ambitious. Importantly, it is vital that the SHIFT includes considering WASH programming on SDG 6 beyond targets 6.1. and 6.2 – as well as in conjunction with SDG 13 on climate action.

Goal 6 of the SDGs aims to “ensure availability

Figure 9: WASH CONTRIBUTIONS TO SDG 6 BEYOND TARGETS 6.1 AND 6.2

 <b>SDG 6: ENSURE AVAILABILITY AND SUSTAINABLE MANAGEMENT OF WATER AND SANITATION FOR ALL</b>		<b>WASH CONTRIBUTIONS BEYOND 6.1 AND 6.2</b>
<b>6.1</b>	Universal access to safe drinking water	<ul style="list-style-type: none"> <li>Those WASH targets cannot be achieved without achieving the other SDG 6 targets</li> </ul>
<b>6.2</b>	Access to sanitation and hygiene for all, and end open defecation	
<b>6.3</b>	Improve water quality: reducing pollution, halving the proportion of untreated wastewater, increasing recycling and safe reuse	<ul style="list-style-type: none"> <li>On-site and off-site safely managed sanitation, including decentralised and centralised wastewater treatment, improves water quality and fosters re-use</li> <li>Water safety planning addresses water quality</li> </ul>

<b>6.4</b>	Increase water-use efficiency, reduce the number of people suffering from water scarcity	<ul style="list-style-type: none"> <li>WASH contributes to water efficiency through demand management: efficiency, saving, re-use, and addresses key aspects of behaviour change</li> <li>By aiming at higher service levels (e.g. safely managed) and monitoring sustainability, WASH contributes to increased efficiency</li> <li>WASH is a key component of water supply policies and vital to address issues of increasing competition and conflict between different water users</li> <li>WASH sector supports coordinated action for preventing water crises in big cities</li> <li>Climate-resilient water safety and security programming addresses water quality and quantity</li> </ul>
<b>6.5</b>	Implement integrated water resources management (including trans-boundary)	<ul style="list-style-type: none"> <li>WASH is key to supporting a balanced use of shared water resources, together with agriculture, energy and ecosystems</li> <li>WASH has a comparative advantage supporting sustainable use and management of groundwater resources, linking up to irrigation and the agriculture sector</li> <li>WASH inputs to drought and flood management (including transboundary) are key to observing the Human Rights to water and sanitation</li> </ul>
<b>6.6</b>	Protect and restore water-related ecosystems	<ul style="list-style-type: none"> <li>Climate-resilient sanitation programming avoids contamination of water resources and the environment</li> <li>Climate-resilient water safety and security planning promotes catchment protection</li> </ul>
<b>6.A</b>	International cooperation and capacity-building: water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies	<ul style="list-style-type: none"> <li>WASH supports capacity-building on climate-resilient WASH programming and promotion of cost-effective WASH services and solutions for water supply and sanitation</li> <li>WASH provides global support to solar energy initiatives and capacity-building</li> </ul>
<b>6.B</b>	Participation of local communities in improving water and sanitation management	<ul style="list-style-type: none"> <li>WASH supports local governance and accountability mechanisms for sustainability and equity</li> <li>The WASH Bottleneck Analysis Tool fosters consultation with and participation of local actors, to inform water and sanitation policy and strategic decision taking</li> <li>WASH fosters community participation in planning, operation and maintenance of services</li> </ul>



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Goal 13 aims to “take urgent action to combat climate change,” something which the Millennium Development Goals agenda did not explicitly address. SDG 13 includes increasing adaptation and resilience, and building capacity at all levels to respond to the impacts of climate change. The WASH sector must recognise its responsibilities to SDG 13 as well as SDG 6, as it will be instrumental in delivering such adaptation and resilience, both nationally and for communities.

It is clear that stakeholders for the SHIFT will need to be broader than the ‘traditional’ WASH programming actors. We will need to engage ministries, departments, agencies and partners other than those with direct responsibility for WASH; for example those working on water and food security for agriculture, energy, water resource management, drought and flood management, resource and infrastructure monitoring, meteorology, and disaster prevention and management.

Stakeholders can be identified at various levels (supra-national, national, sub-national, local) and across many institutions (for example, government, private sector, non-governmental organisations, United Nations agencies, civil society, donors and academia) as well as communities and private individuals, each with

precise roles in climate resilient development. An institutional mapping exercise can be particularly helpful, to help you identify which stakeholders are involved in different aspects of WASH and climate, and to highlight where the potential institutional gaps are.

High-level participatory meetings with experts on climate impacts and resilience are likely to be a useful starting point, progressing to local level meetings to gain a depth of understanding, including with schools and health care facilities. There are many ways to approach Step 1; the objective is to enhance your stakeholder analysis and mapping both to identify additional stakeholders for the SHIFT, and to provide the opportunity for all stakeholders to discuss climate risks and uncertainties that could impact (and be influenced by) the WASH sector, as well as building an understanding of how the WASH sector in your context may be able to contribute to community resilience. As with traditional WASH programming, the stakeholder analysis process creates an environment in which to develop and agree on commitments between stakeholders to work towards a shared goal.

As described above, Step 1 is not resource intensive and can be done in parallel with Step 2.

Village Water Safety and Security Planning in Kawalewadi, India

## STEP 2

# REVIEW EXISTING CLIMATE AND WASH ESTABLISHED NATIONAL AND SUB-NATIONAL PRIORITIES

This step provides an assessment of the links between national climate planning and WASH, and determines if the needs of vulnerable groups and children are given proper attention. It also provides a clear understanding of your country’s current climate financing landscape.

### CLIMATE AND WASH ESTABLISHED PRIORITIES

Understanding where your respective country is on the scale of awareness, mitigating and adapting to climate change is critical. This will involve assessing what has already been done,

as well as the range of various proposed and approved interventions. It is crucially important to understand past and current work on climate resilience, and what the key national climate



Growing crops using water produced from the wastewater reuse scheme in Mafraq, Jordan

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priorities are (a requirement for many climate financing options), as well as identifying to what extent WASH, children and the most vulnerable have been included in both of these. National adaptation and mitigation agreed priorities for the broader WASH sector should be reviewed (such as for water resource management), with the aim of assessing WASH contributions beyond SDG targets 6.1 and 6.2.

It is also critical to identify any major revisions to national or sub-national climate policies and

strategies which are planned or underway, and what climate projects are under development. They represent golden opportunities for you to quickly influence climate policy and programming, helping revise them to include (for example) an increased focus on WASH, children, health impacts, education, and the most vulnerable.

Some key documents to help assess the status of national climate planning are detailed in Table 2 below.

Table 2: KEY DOCUMENTS TO HELP ASSESS THE STATUS OF NATIONAL CLIMATE PLANNING

TOPIC	DOCUMENT AND SUMMARY	LINK TO COUNTRY INFORMATION
Current understanding of climate change in the country with observed and projected impacts and priorities for mitigation and adaptation.	<ul style="list-style-type: none"> <li>• <b>National Communications</b> are a type of report submitted by the countries that have ratified the Paris Agreement under the United Nations Framework Convention on Climate Change.</li> <li>• National Communication reports are often several hundred pages long and represent the most standardised and comparable documents on the climate policies of different countries.</li> </ul>	<a href="#">National Communication reports to the UNFCCC</a>
Adaptation plans already developed or under development	<ul style="list-style-type: none"> <li>• <b>National Adaptation Programmes of Action (NAPAs)</b> were established by the UNFCCC in 2001 to help least developed countries identify projects for their most urgent adaptation needs.</li> <li>• <b>National Adaptation Plans (NAPs)</b><sup>25</sup> are broader reports that outline countries' detailed climate mitigation plans. As of April 2020, eighteen countries had compiled and submitted one, with several other countries engaged in developing their own NAPs.</li> </ul>	<a href="#">National Adaptation Programmes of Action (NAPAs)</a>  <a href="#">National Adaptation Plans (NAPs)</a>
National commitments to mitigate and adapt to climate change	<ul style="list-style-type: none"> <li>• <b>Nationally Determined Contributions (NDCs)</b> have to be submitted by the end of 2020 by every country that signed the Paris Agreement. They cover how the country will mitigate and adapt to climate change, with regular reporting on the progress, and the revision of the commitments given every five years.<sup>26</sup></li> </ul>	<a href="#">Nationally Determined Contributions (NDCs) to the Paris Agreement</a>

Note: Other resources to review include existing national and sub-national climate strategies not listed above, as well as climate-related elements of other related strategies and plans (such as for water resource management and WASH).

Sub-national governments often have a complementary role to national governments in adaptation planning that is reflective of the governance structure of the country. Although guiding frameworks have not been created for sub-national governments in many countries, the states and also provinces in some countries have an active role in climate resilience.

25. National Adaptation Programs of Action (NAPAs) used an eight-step process that resulted in a list of discrete projects for climate mitigation in least developed countries (LDCs), rather than a holistic plan. LDCs used them to apply for funding under the Global Environment Facility's LDC Fund. The NAP process, on the other hand, is for all developing countries and focuses more on broader climate adaptation plans, rather than as a way of procuring funding for projects. There is a UN global support programme that helps countries develop their NAP; more detail can be found [here](#).

26. To note, a recent analysis by the Global Water Partnership of the NDCs of 80 countries revealed that 90% of countries' adaptation components prioritise investing in water infrastructure, institutions, or governance.

## CLIMATE AND WASH FINANCING LANDSCAPE

Step 2 should include an assessment of what the climate financing landscape looks like in your country – meaning what has been funded and by whom, including identifying projects that

have accessed climate-specific financing. The following links provide a good starting point for this financial analysis:

1. [Green Climate Fund country profiles with country contact details and projects](#)
2. [Global Environmental Facility country profiles with all projects financed](#)
3. [Adaptation Fund website with search function by country](#)
4. [Country projects financed by the European Union Global Climate Change Alliance+ \(GCCA+\)](#)
5. [The Climate Investment Fund \(CIF\) project search function of beneficiary countries](#)
6. [Bilateral aid activities targeting Global Environmental Objectives by recipient country](#)<sup>27</sup>

27. The OECD tracks bilateral aid that targets climate change as either a principal (primary) or significant (secondary) policy objective.

Solar panels used for wastewater treatment in Mafraq, Jordan





## STEP 3

# ASSESS CLIMATE RISK TO WASH AND SET THE CLIMATE RATIONALE FOR UNICEF INTERVENTIONS

This step convenes the WASH sector, and other key stakeholders identified in Step 1 to undertake (or validate) a national WASH climate risk assessment. The analysis should build on existing evidence, observed climate impacts, and climate projections (at the timescale and geographical scope available). Key climate risks to WASH are identified, as well as potential information gaps.

WASH risk assessments aim to ensure that systems and services are more resilient and more likely to withstand shocks and stresses. This step ensures that climate change hazards, vulnerability, exposure and adaptive capacity are included as part of wider WASH risk assessments. This will identify which communities and systems are most at risk from current and future climate risks, providing valuable evidence for a national climate rationale – making the case for effective action by government and WASH sector partners. Given the cross-cutting effects of climate change, UNICEF should conduct such analysis as joint ventures with the government, as well as as other UN agencies, bilateral donors,

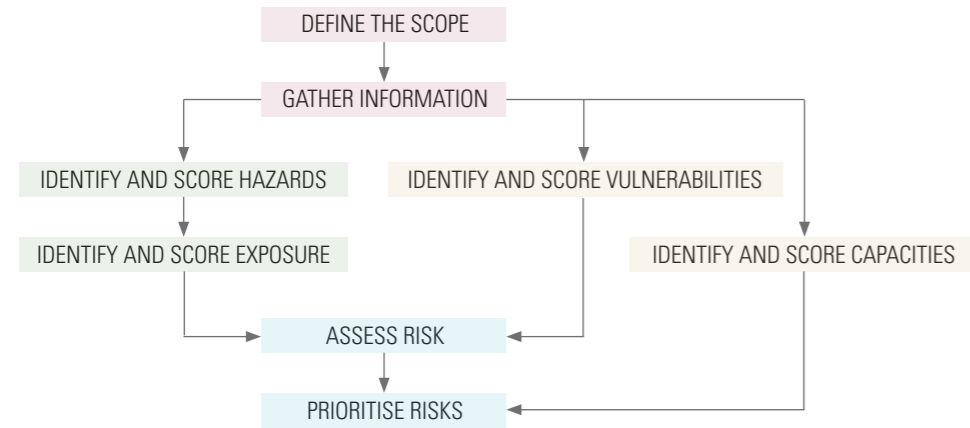
academic institutions, or the World Bank. This is also a good opportunity to review previous UNICEF WASH programming to learn what worked and what did not work well in terms of climate resilience.

In many countries, climate risk analyses have already been undertaken. Although these may not always provide the level of WASH-specific detail required to inform WASH programming, they can be a good starting point to understand national climate risks, and identify gaps in the data that need to be addressed. Other relevant sources for gathering information on WASH and climate risks are set out in Annex 2.

Providing water for livestock needs at Qacha Chalu waterpoint in central Ethiopia



Figure 10: WASH RISK ASSESSMENT APPROACH



▶ A man stands in front of his toilet which was destroyed by flash floods in Loturerei Village, Lodwar, Kenya



An approach for conducting risk assessments for the WASH sector is set out in the UNICEF/GWP [Risk assessments for WASH](#) Guidance Note. It covers risks across a wide range of hazard groups that affect the WASH sector, as well as climate-related risks in more detail. It is a resource for the WASH sector as a whole and focuses primarily on rural WASH services, encompassing small-scale and community systems. However, the approach outlined in the Guidance Note can

be applied to both rural and urban settings. The Guidance Note is accompanied by a [spreadsheet tool](#)<sup>28</sup> that helps guide the implementation of the risk analysis.

It is recommended that UNICEF makes use of its convening role in the WASH sector to facilitate such climate-related risk assessments, even if not all priorities identified will be addressed through UNICEF's programming.

▶ A girl collects water from a flooded handpump in Kurigram in northern Bangladesh

28. The tool is currently Excel-based, but is being upgraded to web-based interface.



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## RISK ANALYSIS AND BUILDING THE 'CLIMATE RATIONALE' FOR WASH INITIATIVES

The articulation of a 'climate rationale' for climate-resilient projects and programmes by key institutions<sup>29</sup> normally comprises three main phases:

1. Establishing credible climate science and evidence (e.g. historic meteorological records, output of climate models, studies by different organisations), robust assessment of exposure, impacts, vulnerability and disaster risks. This includes establishing accurate determination of greenhouse gas emission trajectories, their sources and assessment of effective mitigation options with best practical abatement potential; (Note: support on how to calculate emissions saved as a result of a solar systems is given [here](#))
2. Developing a set of optimal interventions that collectively and comprehensively addresses underlying climate risks and maximises sustainable development benefits (as outlined in the next steps of this Guidance Note); and
3. Integrating interventions into the broader national and international policy and decision-making processes for long-term, low-emission, climate-resilient development to meet the commitments under the United Nations Framework Convention on Climate Change, and other related global agendas.

Below are some examples of questions currently used by other institutions, to help frame their considerations of climate resilience and develop a climate rationale:

- What are the climate hazards and risks that are to be addressed?
- What aspects of climate vulnerability will be targeted?
- What are the risks, including climate change related risks that might prevent project objectives from being achieved?
- What does the broader context of risks, vulnerabilities, and impacts related to climate variability and change look like?

29. Such as the Intergovernmental Panel on Climate Change (IPCC) and climate finance institutions.

## STEP 4

# IDENTIFY A LONGLIST OF POTENTIAL OPTIONS TO ADDRESS PRIORITISED RISKS

This step ensures the sector has identified and assessed a list of potential options that can help address the impact of climate change on WASH

This step can easily be conducted in conjunction with the risk assessment, especially given the opportunities for convening stakeholders during the climate risk assessment. The aim of this step is to identify potential options to address the prioritised risks, keeping in mind the three key objectives of the SHIFT to climate resilient programming:

1. Ensuring that WASH infrastructure and services and behaviours are sustainable, safe and resilient to climate-related risks.
2. Ensuring that WASH programmes contribute to building community resilience to adapt to the impacts of climate change.
3. Working towards a low-carbon WASH sector.

Hula Mandir Managed Aquifer Recharge site in Kayamkhalahula village, Khulna District, Bangladesh



© UNICEF/Bangladesh

## SUPPORTING COMMUNITIES TO ADAPT TO CLIMATE CHANGE THROUGH WASH



Women harvesting crops in Mauritania

© UNICEF/Mauritania

- Repeated occurrences of disasters (including climate-related disasters) pose a huge threat to community resilience, and are often followed by the spread of water-related diseases. WASH interventions are a critical need and priority during the emergency, early recovery and longer-term recovery efforts, and can therefore present an opportunity to build community resilience.
- Multiple Uses Services (MUS) is an approach to help build drought resilience. The aim is to meet both households' domestic and livelihood needs, while ensuring the most efficient use of water resources. Such approaches which link use of water for domestic use to an income generating activity e.g. farming, significantly increases the sustainability of such water systems. In Madagascar, three principles had to be met before a MUS was developed: i) that groundwater proposed abstracted amounts would be sustainable; ii) that the quality of water for drinking purposes must be preserved; and iii) that water services should be paid for.
- Climate-resilient Water Safety Planning (WSP) approaches are increasingly being applied to safeguard drinking-water quality (in part because of their broad applicability and adaptability to different water supply settings at different scales). The aim of climate-resilient WSPs is to extend the risk management approach to address the impacts of climate variability and potential changes to water resources, systems and services.
- Drinking Water Security Planning (DWSP) is similar to climate-resilient WSP. Surface and groundwater resources are conserved, protected, enhanced and managed to ensure that the quantity of drinking water is sufficient to meet the demands of the population and that the quality of drinking water conforms to acceptable standards through the implementation of a series of preventive measures at the basin, source, system and household level.
- Natural systems such as forests, floodplains, and soils, and the use of renewable energy can contribute in different ways to safer, more reliable water supplies and protection against floods and drought. Considering this nature-based 'green infrastructure' alongside traditional 'grey infrastructure' (such as dams, levees, reservoirs, treatment systems and pipes) can enhance system performance, boost resilience, lower costs, reduce emissions, and better protect communities.
- Environmental clubs in schools, such as those supported by UNICEF in Jordan and Zimbabwe, and youth climate change ambassadors help promote awareness on the impacts of climate change in the water cycle and at river basin and community level. Efficient WASH systems, water conservation and reuse, and climate mitigation options are discussed within the clubs and then within wider communities. In Zambia, the UNICEF youth climate change ambassadors programme has led to large-scale community tree planting campaigns.
- UNICEF Ecuador has implemented a WASHBAT with a specific focus on climate change. It has led to the development of a Climate Resilience Action Plan which will, for example, strengthen the National Environmental Education Strategy to include climate resilient WASH.



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Action on climate change can also be considered at WASH enabling environment and broader capacity building levels. A WASH bottleneck analysis (WASHBAT), complemented with a strong scope on climate resilience is an option for identifying ways to address prioritised climate risks through improving the enabling environment. The WASHBAT process can be carried out in conjunction with the climate risk analysis (i.e. a risk-informed WASHBAT). Indeed, steps 1 to 5 of this Guidance Note can be achieved through complementing any ongoing preparations for WASH bottleneck analyses.<sup>30</sup>

Annex 3 to this guidance proposes a full set of checklists that can help UNICEF in country offices to facilitate wider sector discussions on WASH, climate and the enabling environment. Detailed guidance on the identification of water and sanitation climate-resilient options can be found in the UNICEF/GWP Technical Brief, [Linking Risk with Response: Options for Climate Resilient WASH](#). The document outlines practical insights such as:

- **At national level:**
  - Screening WASH technologies for climate risk
  - Strengthening standards and guidance for water supply and sanitation

- **At sub-national and watershed levels**
  - Building water resources monitoring and assessment capacity
  - How to improve water resources management capacity
- **At the local and project levels:**
  - How to support climate-smart infrastructure, technologies and governance, through:
    - Applying climate-resilient standards and practices for water and sanitation
    - Diversifying and decentralising water and sanitation services
    - Working with faecal sludge management and flood risk
    - Developing and exploiting water storage, covering a range of water storage options (for example, groundwater storage, closed tanks, open reservoirs, riverbed infiltration, rainwater harvesting, in-stream storage)
    - Scaling up solar-powered water systems as a climate-smart solution

The Technical Brief also includes a comprehensive appendix that looks at:

- Climate adaptation options for rural and urban WASH
- Climate adaptation options with a focus on utility water supply and sanitation

A woman collecting water from the newly constructed solar pipeline, in Nikoly, Madagascar

30. Different UNICEF country offices have already conducted WASHBATs that have had a focus on climate change (e.g. Bangladesh, Ecuador, Bolivia, Tanzania). Other country offices in MENA are preparing joint implementation of WASH risk and bottleneck analyses, which will be made available and shared widely as examples of ways to implementing the SHIFT to climate-resilient WASH programming.

## STEP 5

# APPRAISE AND SHORTLIST OPTIONS FOR UNICEF'S SUPPORT

This step narrows down the longlist of potential climate resilient solutions, to a prioritised and context-specific shortlist of interventions

Step 5 helps you narrow down the number of options that you will have identified in Step 4 that may be suitable to address identified WASH climate risks. You will need to consider this longlist and narrow it down to the most appropriate and effective ones to be implemented. A number of variables will need to be considered, and this analysis can easily be undertaken when UNICEF is convening the sector to identify and appraise risks and priorities. This will include the available financial and technical resources (including

those of UNICEF), the capacity and timeframe for implementation, and the sustainability of those interventions. The process of appraising potential options must include an accurate and thorough understanding of the effects of applying them on relevant related sectors (for example, public health, the environment, agriculture and livestock). Based on its comparative advantage and resources available, UNICEF country offices need to consider which of the agreed options will be incorporated into its programming.



A raised latrine (with rainwater collection) in an area prone to flooding in Peru

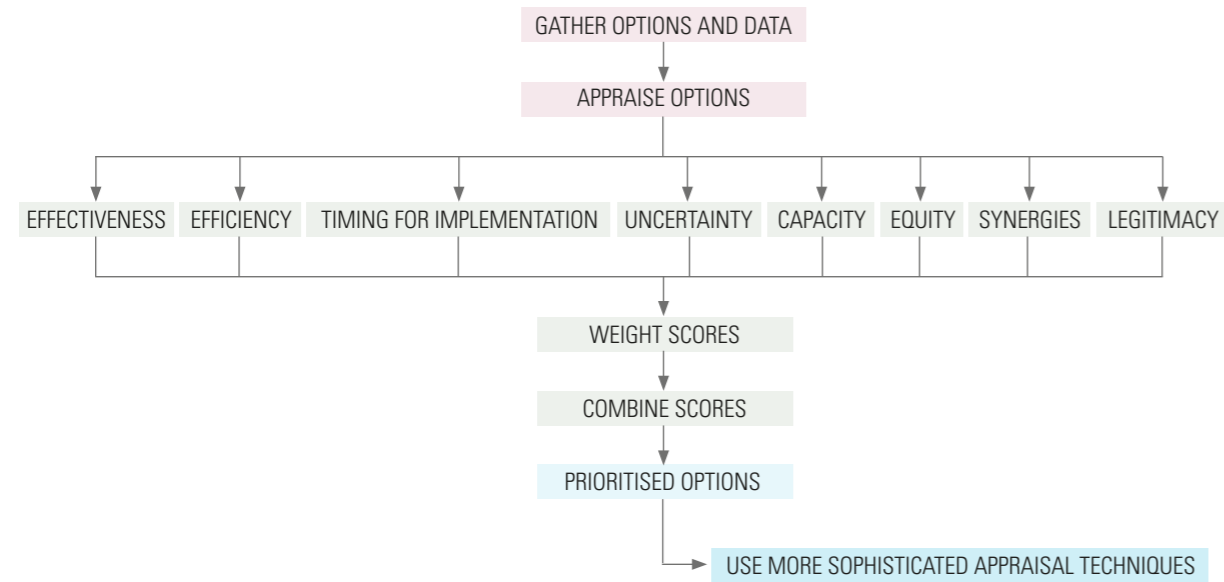
© UNICEF USA/Peru

Different appraisal techniques are available to help prioritise options in the WASH sector. These techniques range from simple sensitivity testing and scenario analyses, to more sophisticated approaches that can be used to account for uncertainties. Each approach has its strengths and weaknesses with respect to its application for increasing climate resilience. When appraising WASH climate-resilient

options, the guidance provided in the UNICEF/ GWP Technical Brief, *Appraising and Prioritising Options for Climate Resilient WASH* should be considered. This Technical Brief illustrates how options can be appraised and evaluated against set performance criteria – for example, by considering whether the option is effective, efficient and acceptable, both politically and socially.

► Aerial view of the solar powered water treatment plant in Gaza

Figure 11: EXAMPLE OF AN APPROACH FOR APPRAISING AND PRIORITISING OPTIONS



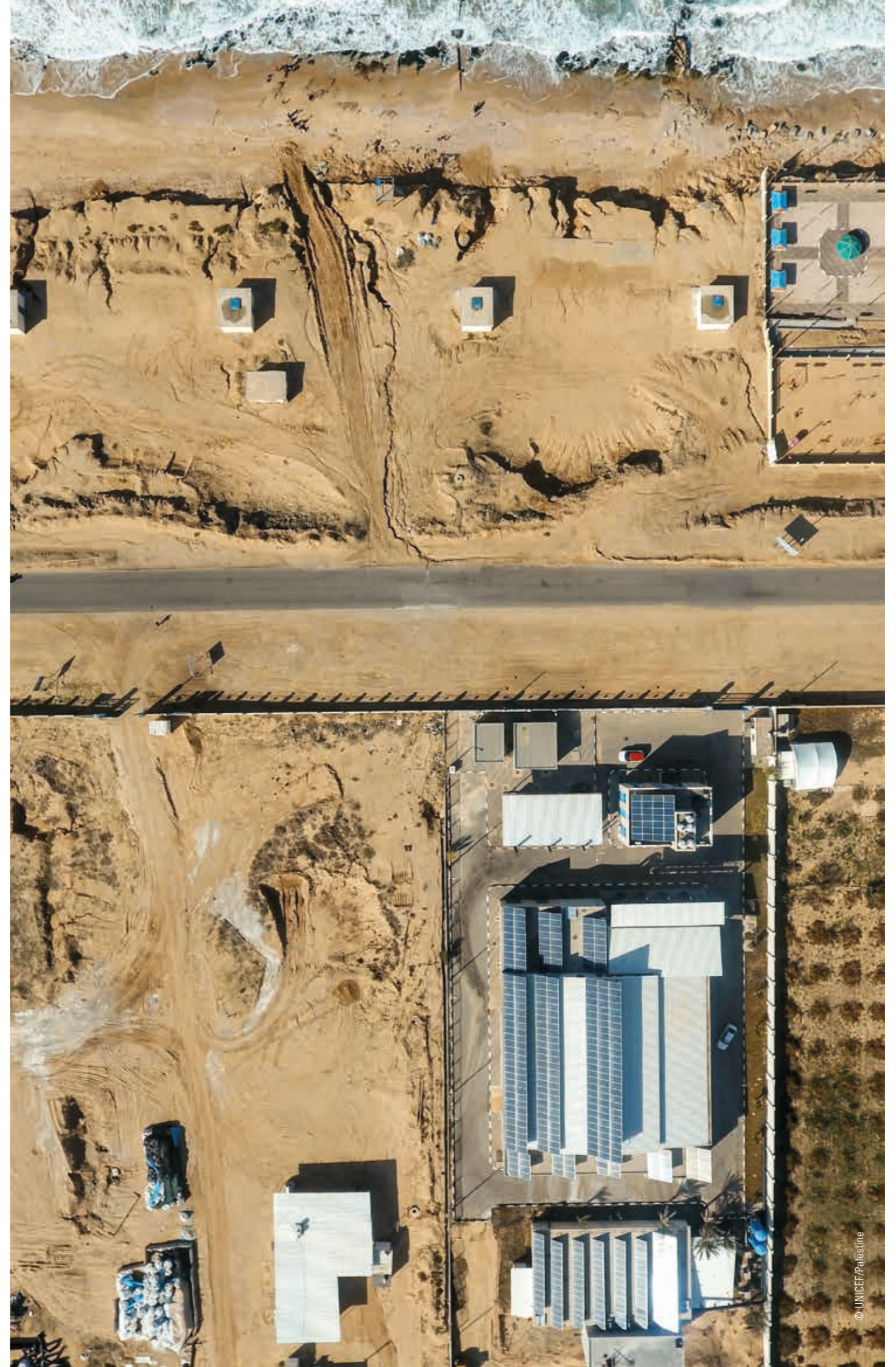
It is important to note that this approach only serves as an initial assessment of options. More sophisticated techniques and tools (for example, cost-benefit, cost-effectiveness, multi-criteria, real option analyses) are discussed

in the *Appraising and Prioritising Options for Climate Resilient WASH* Technical Brief mentioned above, and UNICEF country offices are encouraged to complete further detailed analysis of options, where useful or necessary.



Woman maintaining solar panels of a solar powered water system in Mauritania

© UNICEF/Mauritania



© UNICEF/Palestine

## STEP 6

# SCREEN, ASSESS AND MANAGE THE POTENTIAL ENVIRONMENTAL AND SOCIAL IMPLICATIONS OF UNICEF CLIMATE-RESILIENT WASH INITIATIVES

This step ensures that the UNICEF Environmental and Social Standards<sup>31</sup> are observed, and that interventions have been classified according to risk level. Projects or interventions classified as medium or high risk will need to carry out further assessments

UNICEF programme staff (whether in country or regional offices, or Headquarters) are responsible for applying organisational environmental (beyond climate resilience) and social standards during the design, implementation and monitoring phase of all UNICEF programmes and projects. The Environmental and Social Standards (ESS)

developed by UNICEF outline the approach that should be taken to screen, assess and manage the potential environmental and social implications of all UNICEF projects. They cover all of its programming, and also include an explicit climate component.<sup>32</sup> The ESS documents set out the organisation's environmental and

31. UNICEF's latest Environmental and Social Standards were still being finalised at the time this Guidance Note was published. They are included as a stand-alone step in this SHIFT guidance, because their implementation will apply to all UNICEF programming.

32. In the UNICEF context, "UNICEF project" refers to a set of planned activities over a specific period which contribute to programme components, and the outcomes of those components.



Latrine construction (with collection chambers) in Madagascar

© Diotomolo/Madagascar

social principles and performance standards which must guide all UNICEF staff involved in the development of Country Programmes and proposals.

An ESS Screening Note is under development and will provide detailed guidance on how the screening component of the ESS should be approached. The Screening Note outlines step-by-step instructions for UNICEF staff on how projects should be assessed for potential

environmental and social risks, ultimately assigning them a risk categorisation. Projects that are categorised as 'high' or 'medium' risk require further social and environmental assessment and management, in the form of an Environmental and Social Impact Assessment (ESIA) or a Social and Environmental Management Plan (SEMP), respectively. For projects identified as 'low' risk, no further assessment action is required under the ESS.

## APPLYING ENVIRONMENTAL AND SOCIAL STANDARDS IN EASTERN AND SOUTHERN AFRICA REGION

UNICEF's Strategic Framework on Environmental Sustainability for Children (2016-2017) committed the organisation to significant strengthening of policy, programmes, advocacy, research and engagement on environmental sustainability to deliver better results for children, especially the most disadvantaged. Priority 2 of this Framework committed UNICEF to the piloting and roll-out of a set of environmental and social sustainability standards and procedures.

In the Eastern and Southern Africa Region (ESAR), environmental and social standards and procedures have been applied on a range of UNICEF WASH projects in Ethiopia, South Sudan and Zambia, using a range of ESS tools. These include project screening and categorisation, the development of prototype ESIA and SEMPs; and the application of site procedures. They were implemented in cooperation with the German development bank KfW, combining their extensive experience in environmental and social safeguards with UNICEF's long-standing experience of WASH programming in the region.

To further strengthen the process, KfW supported a job shadowing for a UNICEF ESAR WASH staff member at the KfW headquarters in Frankfurt. During the job shadowing, the UNICEF staff member learned about the various tools, methods and best practices for the implementation of both screening and SEMPs across the KfW portfolio. In consultation with UNICEF HQ, ESAR adopted KfW's approach towards ESS screening and risk categorisation, which is also in line with the World Bank's environmental and social standards and categorisation.

An 'Action Plan' was developed by ESAR to implement ESS across UNICEF's WASH programmes in the 21 countries of ESAR. This included an initial 'face-to-face' orientation



Drilling a borehole in Somali region, Ethiopia

© UNICEF/Ethiopia

from KfW for 40 senior UNICEF WASH staff and UNICEF ESS experts in 2019, and a commitment to carry out ESS training for mid-level project managers during 2020. The other components of the Action Plan included a standardised approach for countries to access high-level technical support and quality assurance support from ESARO as country offices develop, implement and monitor the ESS requirements for their programmes.



© UNICEF/UND11.088/Indonesia

## STEP 7

# ADJUST WASH WORK PLANS TO BE CLIMATE RESILIENT, AND IMPLEMENT THEM

In this step, UNICEF's WASH country teams adjust their work plans to reflect the proposed new interventions, and begin implementation.

UNICEF country offices should adjust their work plans based on the adaptations to existing programmes and any new interventions identified by the SHIFT process so far. These adjustments to existing annual or rolling work plans can then feed into Country Programme Documents or Mid-Term Reviews.

Once the UNICEF country office rolling and annual work plans have been updated, you will have integrated solutions into your programming to ensure that WASH infrastructure, services and behaviours are sustainable, safe and resilient to climate-related risks; that WASH contributes to building community resilience to climate change; and that WASH programmes support a low-carbon sector.

You are now ready to implement WASH programming that fulfils the objectives of the SHIFT.

The scale and the geographical spread of the Covid-19 crisis has highlighted the importance of 'building back better'. In this respect, there is enormous potential to integrate climate resilience into any Covid-19 response plan. Ensuring that climate risks have been identified and incorporated into the design and siting of WASH infrastructure and interventions, will ensure that Covid-19 responses are not short term in their impact, but the benefits of such interventions will last for decades.

WASH Workplans at country office, regional office and Headquarters are being revised to ensure an effective Covid-19 response. While the contexts and solutions in each country office will vary, climate risks can easily be included into the proposed siting, design and implementation of Covid-19 interventions,

Children and their teacher from SD Pantaraan, Mamuju District, Indonesia

including the construction and rehabilitation of WASH infrastructure in communities, schools and healthcare facilities; resilience building of communities and multiple use water systems. Some particular Covid-19 responses, including

the solarisation of healthcare facilities and schools, and increased water/energy efficiency of WASH services, are considered to be climate mitigation activities, and could be considered for a range of climate financing options.

## STEP 8

# IDENTIFY DIFFERENT FINANCING OPTIONS AND DEVELOP FUNDRAISING CONCEPTS AND PROPOSALS

This step involves considering climate and environmental financing opportunities for climate-resilient WASH programming, exploring and assessing options that take into account potentially higher upfront costs, but dramatically lower lifetime costs of climate-resilient programming.

Sound implementation of the SHIFT to climate resilient WASH programming requires strong technical capacity and a particularly strategic approach to financing opportunities. It is very likely there will be higher up-front costs

for implementing climate-resilient WASH programming, but these can be easily offset by substantial savings in the long term, when infrastructure can withstand climate hazards (e.g. drought and floods) and where communities are



Rehabilitation of Madain Water Treatment Plant in Baghdad, Iraq

© UNICEF/Iraq

more resilient. It is important to ensure that this is understood and reflected in all WASH project proposals, so that climate-resilience does not become an add-on that needs separate funding. The UNICEF/GWP Technical Brief, [WASH and Climate Financing: An Overview](#) provides practical information on the various climate funding opportunities available for the WASH sector. Another UNICEF/GWP Technical Brief, [Accessing Green Climate Fund \(GCF\) Resources for Transformative Climate Resilience WASH Projects for UNICEF](#) has been developed with a specific focus on the GCF climate financing scheme. These documents provide practical information on the various funding opportunities, the conditions and criteria for accessing such funds, and how to apply, with links to sites for further information. UNICEF plans to review both documents periodically, to update them with the latest information on the adoption and implementation of funding streams, as well as with any new developments and trends in financing, as they evolve.

As part of Step 8 of the SHIFT towards climate resilient WASH programming, you can also assess the opportunity of partnering with accredited institutions for certain climate funds

if you have identified climate resilient WASH initiatives, with a strong climate rationale, as part of ongoing or new proposals. Concept notes and proposals can be prepared to be discussed and developed with the government, bilateral donors and the private sector.

UNICEF has established global partnerships with UNDP and UN Habitat to collaborate on proposals and projects for funding through the Global Environmental Facility, the Adaptation Fund, and the Green Climate Fund. UNICEF was recently confirmed as a delivery partner under the GCF's 'Readiness Programme'. As a result, UNICEF can directly access funds for a set of preparatory activities, such as strengthening country capacity on climate resilience and to strengthen the climate evidence. A [Technical Brief on Readiness](#) funding opportunities for WASH has also been developed to provide guidance to WASH programmes. UNICEF is also going through the process of applying for accreditation for project financing from the GCF, which would allow the organisation to directly access potential funding for climate-resilient WASH programming. The process is not expected to be completed before early 2021, and will be announced globally once it is obtained.

Children in a kindergarten washing their hands in Jongju City, DPR Korea



© UNICEF/DPRK

These are some of the options to facilitate the development of funding proposals for UNICEF climate-resilient WASH programming. However, in addition to exploring funding options for UNICEF projects, the organisation should also support the WASH sector itself in countries, for example by helping to identify climate projects

and associated potential funding sources for national governments. At an organisational level, UNICEF is exploring opportunities in blended finance options for different WASH interventions to improve the water and energy efficiency of WASH services, which is expected to expand significantly as an area of interest for the sector.

### EXAMPLE OF GLOBAL ENVIRONMENTAL FACILITY WASH-RELATED PROPOSAL WITH UNICEF PARTICIPATION



Solar powered water treatment and pumping system in Madagascar

© UNICEF/Madagascar

Enhancing the Adaptation Capacities and Resilience to Climate Change in Rural Communities in Analamanga, Atsinanana, Androy, Anosy, and Atsimo Andrefana (Madagascar, 2016)

Globally, Madagascar has one of the worst levels of access to safe water and sanitation. The most recent data from the WHO/ UNICEF Joint Monitoring Programme reveals that only 54.4 and 10.5 per cent of the population has access to at least basic levels of water and sanitation, respectively. Malagasy children are facing multiple climate risks, as the country is prone to cyclones, droughts and floods. At the same time, Madagascar is burdened with one of the highest rates of chronic malnutrition in the world. All of these risks

are expected to increase as the impacts of climate change worsen and threaten the lives and futures of children.

In 2015, UNICEF Madagascar teamed up with the United Nations Development Programme (UNDP) and the Malagasy Climate Change Coordination Office (Ministry of Environment, Ecology and Forests) to apply for US\$5.8 million in climate financing from the Least Developed Countries Fund, managed by the Global Environment Facility. The project was developed to support vulnerable rural communities to enable them to cope with the risks posed by climate change, specifically those relating to water and sanitation. More details on the project are available [here](#).



## STEP 9

# DESIGN SMART<sup>33</sup> CLIMATE-RESILIENT INDICATORS FOR WASH

This step involves developing a set of climate-resilient indicators linked to the shortlisted options for interventions identified in Step 5. This means programmatic adjustments can be carried out, new programming can be integrated into existing programming, and sustainability checks with climate resilience indicators can be carried out

The SDGs provide an excellent opportunity to bridge the WASH and climate agendas, to make WASH programmes more resilient to the impacts of climate change. UNICEF's WASH programming can and will contribute to achieving SDG 13 as well as SDG 6. It is vital to provide evidence of this; that we can show where WASH interventions are contributing to climate resilience.

The UNICEF/GWP Technical Brief [Monitoring and Evaluation for Climate Resilient WASH](#) provides guidance on how to develop and use indicators to monitor and evaluate measures

introduced to enhance the climate resilience of infrastructure, services and communities (as well as their contribution to the overall sustainability of WASH services). The Technical Brief focuses on the additionality that climate resilience monitoring and evaluation (M&E) introduces when incorporated into existing M&E systems. It provides examples of typical monitoring indicators that can be used and/or adapted where necessary, summarises the factors to consider in monitoring climate resilience, and suggests ways to address common challenges. While the Brief is designed to be a core component of national WASH climate resilience monitoring efforts, it can also be used to identify indicators which help UNICEF monitor its WASH climate resilient interventions.

The indicators will help the country office WASH team identify the most effective programmatic adjustments and the best ways for new programming to be integrated with existing programming. At a global level, UNICEF's Strategic Monitoring Questions (SMQs) will serve as a monitoring instrument to assess UNICEF's progress in implementing the SHIFT to climate-resilient WASH programming by 2021. In addition, the sustainability checks tool will also be used to monitor adherence of WASH programmes to the three objectives of the SHIFT to climate resilience, with specific new indicators.

Finally, UNICEF is developing new ways to effectively measure the climate resilience of communities, working with Bristol University and using Ethiopia and Nepal as pilot countries.

<sup>33</sup> SMART criteria are: Specific, Measurable, Attainable/Appropriate/Attributable, Relevant/Realistic/Reliable, and Timebound.

Water treatment system in DPR Korea





BUILDING CAPACITY  
AND TECHNICAL SUPPORT  
TO ACHIEVE THE SHIFT

The SHIFT to climate-resilient WASH programming will require increased capacity and new skills for successful implementation. New skills include:

**Technical skills**, in order to:

- Understand climate risks in different contexts and to support the development of a climate rationale as a basis for WASH programmes.
- Consider strategies for WASH programming that better adapt community sanitation approaches to climate risks, for sustained behaviour change.
- Use remote sensing/global information systems to map groundwater resource availability
- Address water efficiency, conservation and reuse, as well as urban water planning, utility operations, etc.
- Scale up solar technology.
- Comply with national/UNICEF's Environmental and Social Standards.
- Link with and support SDG 6 targets other than

6.1 and 6.2 (for example, in areas such as waste management, water demand management, water security, integrated water resources management, and the water-food-energy-environment nexus).

**Financing skills**, in order to:

- Understand the quickly changing and evolving climate financing architecture.
- Identify and successfully obtain climate funding opportunities for UNICEF programming.
- Support governments and the WASH sector to access to new climate funding streams.

While important efforts are going to be made to raise internal capacity within UNICEF, some strong global and regional partnerships are already in place that can greatly support UNICEF with the SHIFT to climate resilient WASH programming. These are outlined in Table 3 as follows:

A woman learns how to install solar panels at a Youth Empowerment Centre in Dollow, Somalia



© UNICEF/UN126042/Somalia

Table 3: PARTNERSHIPS FOR THE IMPLEMENTATION OF WASH CLIMATE RESILIENT PROGRAMMING

PARTNER	SUPPORT AND TOPICS
FAO/WFP	· Collaboration and joint advocacy on water allocations across sectors.
Global Solar Water Initiative	· Technical support on solar technology.
Global Water Partnership (GWP)	· Capacity development around the Strategic Framework for WASH Climate Resilient Development: online course, climate financing Technical Briefs available. · Remote helpdesk and on-site technical assistance, upon request, to implement the Framework at country level. · Technical support on the development of climate resilience concept notes and proposals.
IFAD	· Implementation of Multiple Uses Services (MUS). For example, see the Field Note on UNICEF-IFAD collaboration, to help build drought resilience for the poorest communities in Southern Madagascar. Available <a href="#">here</a> .
Joint Research Center (JRC) of the European Commission	· Remote sensing satellite technology to identify 'high potential' sites for the extraction of groundwater through the drilling of boreholes. Field Note on Ethiopia and Madagascar is available <a href="#">here</a> .
SKAT Foundation	· Leave no-one behind, support to advance WASH and address inequalities. · Groundwater governance and professionalisation of the drilling sector.
Stockholm International Water Institute (SIWI)	· Technical support on sustainability, accountability and governance. · Technical support for the facilitation of WASH bottleneck analysis (including climate change scope of WASHBAT and Risk-Informed WASHBATs).
UNDP	· Development of joint concept notes and proposals to the Green Climate Fund, the Adaptation Fund and the Global Environmental Facility. · Development of National Adaptation Plans.
UNEP	· Collaboration on climate proposals and development of National Adaptation Plans.
UN HABITAT	· Development of joint concept notes and proposals to the Adaptation Fund.
Water Mission	· Capacity building on solar energy technological options and procurement (online courses, manual and assessments available). · Operation of the 'Solar Hub', in the West and Central Africa region.
WHO	· Climate resilient water safety planning. · Climate resilient sanitation planning. · Forecasts on the health impacts of climate change.
WMO	· Access to credible climate science and evidence (e.g. historic meteorological records, outputs of climate models, studies by different organisations) and support to develop a climate rationale.

Table 4 below summarises other resources available to country offices to help implement the SHIFT to WASH climate resilient programming.

Table 4: RESOURCES AVAILABLE TO IMPLEMENT WASH CLIMATE RESILIENT PROGRAMMING

EXISTING
Framework: <a href="#">Strategic Framework for WASH Climate Resilient Development</a> (GWP/UNICEF)
Website: <a href="#">WASH Climate Resilience</a> site, for access to Technical Briefs, learning modules and additional resources (GWP/UNICEF)
Website: SharePoint sites for <a href="#">Climate</a> , <a href="#">Solar</a> , and <a href="#">Water Scarcity</a> (internal UNICEF Communication sites)
Online course: <a href="#">Solar powered water systems</a> (UNICEF/Water Mission)
Technical Brief: <a href="#">WASH and Climate Financing: An Overview</a> (UNICEF/GWP)
Technical Brief: <a href="#">Accessing Green Climate Fund (GCF) Resources for Transformative Climate Resilience WASH Projects for UNICEF</a> (UNICEF/GWP)
Technical Brief: <a href="#">Overview of Readiness funding opportunities for WASH</a> has been developed to provide guidance to WASH programmes (UNICEF)
UPCOMING
Report: <a href="#">Impact of Water Scarcity on Children in Middle East &amp; North Africa region</a> (UNICEF Middle East & North Africa Regional Office)
Technical Brief: <a href="#">Programmatic Approaches to Water Scarcity</a> (UNICEF)
Technical Brief: <a href="#">Mitigating the risk of Urban Water Scarcity</a> (UNICEF)
Online course: <a href="#">On the Strategic Framework for WASH Climate Resilient Development</a> (UNICEF/GWP)
Online course: <a href="#">Advanced course on solar powered water systems</a> (UNICEF/Water Mission)
Online course: <a href="#">Basic course on solar powered water systems</a> (UNICEF/Water Mission) (French)
Manual on the siting, design and installation of solar systems (UNICEF/Water Mission) – to be available in English, French and Spanish



Delegates at the [Zambian Children's Climate Conference](#) in Zambia

© UNICEF/UNIT19232/Zambia



© UNICEF/UN0208017/Côte d'Ivoire

Regional and Headquarters offices will provide technical assistance as needed to help country offices navigate the process to SHIFT to climate resilient WASH programming. Generic TORs will be made available so that country offices can hire consultants to support the SHIFT, if required. The Eastern and Southern Africa Regional Office has already provided technical support to country offices and has made available sample TORs to engage technical support.

The existing helpdesk for the global GWP-UNICEF collaboration can also assist with the implementation of the SHIFT. Internal capacity building on the implementation of the Strategic Framework for WASH Climate Resilient Development is also planned, through

online courses of five modules that comprise practical assignments on the SHIFT. The course is scheduled to be rolled out in June 2020, with plans for it to be made available for periodic registration for a self-taught version thereafter.

Headquarters is also creating a dedicated global helpdesk to assist country offices, with support from regional offices. Where and when needed, field support missions will take place based on agreed criteria for prioritisation.

Case studies on how country offices have implemented or are implementing the SHIFT to climate resilient WASH programming will also be developed and disseminated, to foster knowledge exchange and share lessons learned.

Students washing their hands at a school in Essankro, in the southeast of Côte d'Ivoire



MILESTONES  
AND MONITORING,  
AND THE ROLES  
OF HEADQUARTERS  
AND REGIONAL OFFICES

Nurse washing her hands using water from a solar powered water system in Arua District, Uganda



© UNICEF/UNI13220/Uganda

The implementation of the global SHIFT to climate resilient WASH programming will comprise the following milestones:

- Regional offices will develop a mapping of countries about to undertake a new Situation Analysis, develop a new Country Programme, or complete a Strategic Moment of Reflection or Mid-Term Review.
- Since carrying out a WASHBAT process is a great entry point to implement the SHIFT, regional offices will also map planned WASHBATs and, in collaboration with Headquarters, support will be provided to integrate climate resilience and/or develop a Risk-Informed WASHBAT as part of the process.
- Based on the mapping, a list of priority countries for support will be identified in each region.
- Headquarters and regional offices will agree on a roadmap for field and remote support to priority countries. A helpdesk function will be made available to all country offices.
- Together with UNICEF's WASH Regional

Advisors, Headquarters will monitor the SHIFT to climate resilience WASH programming during 2020 and 2021. This will be through quarterly updates of progress and annual programme reviews, and will maximise the use of existing organisational monitoring systems. The Standard Monitoring Questions (SMQ) reporting system will measure the degree of implementation of the SHIFT at the end of year in 2020 and 2021. The current sustainability checks indicators are also being complemented so that country offices can measure how their WASH programmes are progressing to meet the objectives of the SHIFT to climate resilience.

- An online dashboard will be available to enable visualisation of the monitoring data. The dashboard will provide accountability and give a clear sense of progress, both on the implementation of the SHIFT in country, and ultimately towards successfully achieving the organisation's global SHIFT to climate resilient WASH programming.

Students washing their hands in Mulli school, Ethiopia



© UNICEF/Ethiopia



ANNEXES

Solar powered water system in Mantapala refugee settlement, Nchelenge District, Zambia

© UNICEF/Zambia



## ANNEX 1

# CLIMATE RESILIENCE IN UNICEF WASH STANDARD MONITORING QUESTIONS (SMQS)

### 1. WASH RESULTS THAT ARE CR WASH RESULTS

#### SMQ-24-01-SUPP2401\_WS1-10v2

**How many of the direct beneficiaries of UNICEF interventions by service level (SQMs WS 1-12, WS 1-13, WS 4.2-6, and WS 4.2-9) were provided with climate resilient solutions in 2019?**

Further guidance on what is a climate-resilient system to be provided in a document being prepared (and available in November 2019).

In the meantime, climate resilient earmarked investments in the water sector are those which consider ALL of the following aspects:

- Risk analysis is considered to identify potential impacts of extreme weather events, and preventive measures are included (i.e. elevated infrastructures in flood-prone areas, additional storage capacities, climate resilient-water safety plans (CR-WSP), etc.
- Water sources are reliable at all times, both during the year (i.e. during dry season) and during extreme weather events (i.e. during droughts/floods).
- Management/service delivery models that are sufficiently robust to cope with crisis and ensure longer-term sustainability of the infrastructures
- Have considered the impact of the system in terms of greenhouse emissions (GHE) and (when feasible) use

renewable energy sources such as solar to mitigate that. The use of diesel-powered generators is accepted if is to be used as back up or in circumstances where other alternatives are not appropriate.

Information is disaggregated by service level: Unimproved/surface, Limited, Basic, Basic+ and Safely managed.

**Explanation of the SMQ Form:** Breakdown of service level achieved because of the interventions:

Safely Managed	
Basic+	
Basic	
Limited	
Unimproved/Surface water	
Don't know the breakdown	
Total	

Note: Please try to provide a breakdown of the level of service. In case you don't know the service level, then you can use the cell "don't know the breakdown". However, it is recommended to have an estimated breakdown of the existing levels of service. The total should be the total number of people reached with climate resilient systems.

### 2. USE OF SOLAR TECHNOLOGIES

#### SMQ-24-01-SUPP2401\_WS2-22

**Please provide the number of solar powered water systems installed in the reporting year with support from UNICEF:**

1. In community facilities
2. In schools
3. In health centres
4. Multi-use systems (communities, schools and healthcare facilities)

This question aims to better understand which Country

Offices are implementing solar programmes (for water systems) and for what purpose so that we can report more accurately and ensure that we can provide support on solar programmes and share updates on developments. Having information on the uses of installed solar systems will help us understand the scale of the programmes and see how they change. Please only report countries where new solar powered water systems were installed as part of a UNICEF WASH programme in 2019, either as part of development or humanitarian programmes.



### 3. INSTITUTIONS – SCHOOLS AND HCFS

#### SMQ-24-01-SUPP2401\_WS3-22

**In the year of reporting, what is the number of additional students that gained access to WASH facilities (one or more of the following: basic water, sanitation or hygiene facilities), through direct UNICEF-supported development (non emergency) programmes?**

Refers to the student population in the schools reported on in the previous SMQ (SMQ-24-01-SUPP2401\_WS3-21). In column 2 of the table, estimate how many of the students reached have access to WASH in Schools systems that are climate resilient (refer to SMQ-24-01-SUPP2401\_WS1-10v2 above for guidance on climate resilience systems).

	# number of students reached	Out of which are benefiting from climate-resilient WinS services
Total		

#### SMQ-24-02-4.b.1.a-4

**In the year of reporting, in how many additional schools were separate sanitation facilities for girls and boys constructed (or rehabilitated to reinstate access) with support of UNICEF, and not reported in previous years?**

This question will contribute towards the Strategic Plan target for institutions, as follows (separated by the type of facility or service):

Schools where separate facilities were constructed should be reported here, which enable boys or girls to use designated facilities for their gender. Segregated facilities refer to sanitation facilities for boys and girls which are physically separated from each other through distance, barriers or other means as per country norms and standards. In single-sex schools, new or rehabilitated facilities can be reported here as long as they are exclusively used for either boys or girls. As 2019 is the second year of the Strategic Plan, and the 2019 results will be added to the 2018 results, please do not include any schools reported in 2018.

Only schools which meet the following criteria should be reported under this SMQ;

- only schools where sanitation facilities constructed or rehabilitated in 2019 should be reported
- only schools where the sanitation facilities are segregated for use either by boys or girls
- the intervention was implemented as part of a UNICEF-funded programme

For more information see the JMP monitoring page on WASH in schools:

<https://washdata.org/monitoring/schools>

Of those please provide details on how many of them are climate-resilient

	# number of students reached	Out of which are benefiting from climate-resilient sanitation facilities
Total		

#### SMQ-24-02-4.b.1.c-7

**In the year of reporting, in how many additional Health Care Facilities were WASH facilities (at least water, sanitation or hygiene) constructed (or rehabilitated to reinstate access) through direct UNICEF-supported programmes, and not reported in previous years?**

The WASH facilities reported under this indicator should refer to any Health Care Facility where either water, sanitation or hygiene facilities were newly installed or rehabilitated for health staff and patients as per national standards or WHO guidance. As 2019 is the second year of the Strategic Plan, and the 2019 results will be added to the 2018 results, please do not include any Health Care Facilities reported in 2018.

Only facilities which meet the following criteria should be reported under this SMQ;

- only water, sanitation or hygiene facilities constructed or rehabilitated in Health Care Facilities in 2019 should be reported
- the intervention was implemented as part of a UNICEF-funded programme
- When possible, provide the population served by those HCF

See the JMP WASH in health care facilities monitoring page for further information:

<https://washdata.org/monitoring/health-care-facilities>

Please disaggregate data and provide information on how many of them are climate-resilient

	# number of HCF reached	Out of which how many have climate-resilient WASH facilities
Total		

## ANNEX 2

### RELEVANT INFORMATION SOURCES ON WATER/SANITATION AND CLIMATE RISK

- **WMO Hydrological Observing System (WHOS)** is a portal to the online holdings of National Hydrological Services (NHS) around the world that publish their historical and/or real-time data without restrictions or cost. Available [here](#).
- **AQUASTAT** provides standardised data and information and tools to generate analyses on water resources, water uses, agricultural water management. Available [here](#).
- **Global Runoff Data Centre (GRDC)** provides a long-time series of runoff data around the world. Available [here](#).
- **Global Precipitation Climatology Centre (GPCC)** provides gridded monthly and daily precipitation data sets. Available [here](#).
- **Global Groundwater Information System (GGIS)** of International Groundwater Resources Assessment Centre (IGRAC), providing information and data on groundwater around the world. Available [here](#).
- The **Global Groundwater Monitoring Network (GGMN)** shows groundwater level data and changes occurring in groundwater levels. Available [here](#).
- **Climate Information** offers various resources on how climate is predicted to change in any location. Various resources available, for example [here](#), [here](#) and [here](#).
- **International Data Centre on Hydrology of Lakes and Reservoirs (HYDROLARE)**, hosting global data on lakes and reservoirs. Available [here](#).
- **Consortium of Universities for the Advancement of Hydrologic Science (CUAHSI)** is a water data portal, listing existing data information websites. Available [here](#).
- **Group on Earth Observations System of Systems (GEOSS)** is a portal for accessing earth observations data from different archives. Available [here](#).
- **Earth2Observe Water Cycle Integrator (WCI)** provides a portal to view and analyse earth observations, in-situ and model data. Available [here](#).
- **Global Flood Monitoring System (GFMS)** is a NASA-funded experimental system using real-time TRMM Multi-satellite Precipitation Analysis (TMPA) precipitation information, hydrological runoff and routing model running, streamflow, surface water storage, and inundation variables. In addition, the latest maps of instantaneous precipitation and totals from the last day, three days and seven days are displayed. Available [here](#).
- **Global Precipitation Measurement (GPM)** mission provides data from an international network of satellites for the global observation of rain and snow data aiming to improve understanding and forecasting of tropical cyclones, extreme weather, floods, landslides, land-surface models, the spread of water-borne diseases, agriculture, freshwater availability and climate change. Available [here](#).
- **Emergency Events Database (EM-DAT)** contains data on the occurrence and effects of over 22,000 mass disasters (including water-related disasters) in the world from 1900 to the present day. Available [here](#).
- **Integrated Flood Management Help Desk** provides 24 tools and guidelines as well as a function to request tailor-made support from a community of 35 expert organisations on flood management, including early warning systems. Available [here](#).
- **Integrated Drought Management Help Desk** provides tools and guidelines as well as a function to request tailor-made support from a community of 34 expert organisations on drought management, including monitoring; early warning systems; vulnerability and impact assessment; preparedness and drought mitigation measures. Available [here](#).
- **Global Water Tool (GWT)** to identify corporate water risks and opportunities. Available [here](#).
- **Flood and Drought Monitor** is a portal where users can map satellite data to support their planning for flood and drought events. Available [here](#).
- **Water Risk Filter** a tool to visualise water data and analysis. Available [here](#).
- **AQUEDUCT Water Risk Atlas** allows mapping water indicators on a global level to identify water risks broadly. Available [here](#). Also includes also a 'Global Flood Analyzer'. Available [here](#).
- **Global Flood Alert System (GFAS)** uses global satellite precipitation estimates for flood forecasting and warnings. Available [here](#).
- **Real-time Integrated Global Flood Map** is an experimental platform to map extreme rainfall. Available [here](#).

## ANNEX 3

# CHECKLISTS FOR CLIMATE-RESILIENT WASH ENABLING ENVIRONMENTS

Using the same structure of WASHBAT (i.e. building blocks, functions and criteria), the following checklists can help country offices to facilitate sector discussions and the exploration of the wider enabling environment for climate-resilient WASH.

### Sector policy / strategy

There should be a strategic framework in which environmental and climate change mitigation and adaptation policies and strategies are well-aligned with those of WASH, and vice versa, with the aim of guiding programmes and interventions towards building more resilient services.

#### Checklist

- a. Does the National Adaptation Plan recognise water and sanitation as a priority sector?
- b. Do national water and sanitation development policies and strategies make special mention of how climate change affects them (shocks and sudden events, as well as slower onset), and are they aligned with national mitigation and adaptation priorities?
- c. Do national water and sanitation strategies include sustainable use of water and promote increased distribution efficiency, water savings and water re-use, and generally 'low regret options' that would be adequate even without climate change?
- d. Do drought and flood management strategies exist in the country (linked to early warning and contingency planning), and do they prioritise the use of water for human consumption over other uses in the event of scarcity?
- e. Does rigorous climate information exist in the country and is it available at the appropriate temporal and geographical scales to inform water resource planning in the medium- and long-term? If this information exists, is it effectively used to prioritise interventions in the water and sanitation sector?
- f. Do environmental policies integrate the principles of responsibility, participation, gender, protection of ecosystems, the rights of nature and the protection of the most vulnerable groups from the impacts of climate change?

### Institutional arrangements: Coordination

There should be an inter-ministerial coordination mechanism between departments responsible for environment, agriculture, energy, and for water & sanitation.

#### Checklist

- a. Is climate change integrated into WASH sectoral dialogues, joint sector reviews, information exchange and coordination meetings, thus strengthening collaboration between departments and agencies?
- b. Are the country Focal Points of the United Nations Framework Convention on Climate Change, National Communication processes to the Convention, National Adaptation processes and Nationally Determined Contributions to the Paris Agreement, coordinated with governmental water and sanitation departments for the establishment of sectoral adaptation and mitigation priorities?
- c. Is the WASH sector consulted, and does it actively participate in national adaptation and mitigation processes?
- d. Are coordination mechanisms and cross-border agreements for shared water resources in place to address climate adaptation and disaster risk reduction?

### Institutional arrangements: Provision of services

Water and sanitation service delivery models should be resilient to climate change and contribute to build community resilience to the impacts of climate change.

#### Checklist

- a. Are there technical guidelines and specifications for mitigation and adaptation to climate change of water and sanitation technologies?
- b. Are water and sanitation service delivery systems developed based on risk analysis that addresses climate change factors and is appropriate to different contexts, minimising population exposure to potential failures arising from climatic threats?
- c. Are environmental and social standards established both for existing services and for future interventions?

### Institutional arrangements: Accountability and regulation

There should be in place governmental systems to monitor climate change mitigation and adaptation national targets and international commitments related to WASH.

#### Checklist

- a. Are there clear and effective mechanisms for citizen participation (e.g. through civil society organisations) in national risk management, mitigation and adaptation processes?
- b. Are there functional internal control mechanisms, such as state audits or transparency commissions, that verify compliance with national objectives and international commitments (e.g. the Paris Agreement, the Sendai Framework, and SDG 13)?
- c. Is there an institution with clear functions for monitoring objectives and commitments? And is this information made public?
  - a. Are there sufficient resources and capacity to meet national objectives and international commitments in risk management, mitigation and adaptation to climate change?
  - b. Is the national department that monitors sectoral objectives and commitments (risk management, mitigation and adaptation) conducting regular reviews? And is it empowered to act as a valid arbitrator?
  - c. Are there incentives to invest in early warning, mitigation (e.g. renewable energy) and climate change adaptation technologies in the WASH sector?

### Sector financing

National priorities set for risk management, mitigation and adaptation within the water and sanitation sector need to be supported with adequate financing mechanisms.

#### Checklist

- a. Do funding criteria give weight to disaster risk reduction and climate resilience to be part of sustainable WASH programming, so that it is resilient against extreme and recurring weather events and fosters community climate resilience?
- b. Is there a comprehensive assessment of the cost of climate change mitigation and adaptation in the WASH sector under different scenarios (e.g. prolonged droughts and more frequent floods)? Are funding gaps estimated based on comparing funding needs versus those received?
- c. Is there sufficient capital expenditure, with budget lines for mitigation, prevention, emergency preparedness, and adaptation, to respond to international commitments and national targets in the water and sanitation sector,

including coordination and capacity building?

- d. Are prioritised climate-resilient WASH interventions articulated through a strong climate rationale?
- e. Has the WASH sector agreed on an action plan with national environmental focal points, on how to secure funding from multilateral funds for climate change (e.g. Green Climate Fund, Adaptation Fund, or the Global Environmental Facility)?
- f. Has an institutional analysis been carried out considering a range of financing options (e.g. cash transfers) and intermediaries to support sanitation systems, particularly for the poorest households, with reinvestment to adapt to climatic conditions and/or reconstruction after extreme weather events?

### Planning

The national WASH plans should be 'based on a good understanding of the problem' and 'developed after identifying and appraising options for climate resilience' (as per Quadrants 1 and 2 of the Strategic Framework for WASH Climate Resilient Development).

#### Checklist

- a. Has the WASH sector conducted, or updated, a national risk analysis (with local actors leading the process) that considers different climate threats, the level of exposure of infrastructure and population, as well as vulnerabilities (e.g. vulnerability mapping) of the sector in relation to climate change?
- b. Are identified climate change risks overlaid on a mapping exercise with the existence of disadvantaged communities and low levels of access to water and sanitation? Is this mapping used to set or update priorities, objectives and mitigation and adaptation activities appropriate to different contexts?
- c. Do WASH planning processes offer flexibility to integrate identified new risks and update priorities based on new national targets and international mitigation and adaptation commitments?
- d. Has the private sector been engaged to support the opportunities posed by climate change adaptation and mitigation?

### Monitoring and review

Monitoring systems used in the WASH sector should measure additionality and improvements resulting from the introduction of mitigation and adaptation measures. (Following Quadrant 4 of the Strategic Framework for WASH Climate Resilient Development).

#### Checklist

- a. Do WASH plans and strategies incorporate monitoring

systems that include indicators to measure the effectiveness of prioritised mitigation and adaptation measures?

- b. Are the indicators chosen to measure the level of climate resilience in WASH linked to existing databases (national or international), and are information collection methods viable and easy to use in a scenario of limited resources?
- c. Is there capacity to monitor slow onset and sudden climate events, and are there early warning systems to provide timely information to decision makers?
- d. Are there impact assessments of previous interventions in WASH that include an analysis of how climate threats have affected the achievement of the desired impact and objectives?
- e. Are there formative research programmes that provide information on the factors driving demand for sanitation, including the influence of climate risks (e.g. flooding) on people's willingness and long-term capacity to (re-) invest in sanitation?
- f. Are mechanisms in place to capture, share and disseminate lessons learned of the implementation of national pilot mitigation and adaptation experiences in the WASH sector?
- g. Are water resource monitoring systems in place at the watershed level?

#### Capacity development

The institutions working with WASH need to have the capacity to address the integration of climate change and risk reduction in the sector.

##### Checklist

- a. Is there a comprehensive capacity development plan for climate resilience and risk assessment which is based on a capacity needs assessment (e.g. meteorological data, modelling, groundwater trend analysis)?
- b. Do decentralised levels have the technical capacity to address risk management and climate resilience in WASH (e.g. to gather information on the impact on the most vulnerable and the rates of progress)?
- c. Is local market resilience to climate impacts enhanced, and is it able to accommodate demand during crises, whether slow-onset or sudden events?
- d. Does appropriate technology exist in the country to increase surface or underground water storage, to increase efficiency in distribution systems and to re-use water?
- e. Is there capacity for effective implementation of WASH's climate resilience efforts by implementing partners?

#### Wider favourable environment: Political leadership

The climate change agenda should be supported by the Government and by the WASH sector.

##### Checklist

- a. Is the country a signatory to the United Nations Framework Convention on Climate Change and the Paris Agreement and has set clear and realistic objectives of mitigation and adaptation?
- b. Are community and traditional leaders represented and committed to the national agenda addressing climate change?

#### Wider favourable environment: Decentralisation

Sub-national development plans should integrate climate resilience and WASH.

##### Checklist

- a. Are national climate change mitigation and adaptation priorities in the WASH sector reflected in the respective regional development plans?
- b. Are there mechanisms for coordination, data exchange and feedback between central, subnational, and local levels?

#### Wider favourable environment: Social norms

Social standards should support the use of renewable energy and adaptation to climate change.

##### Checklist

- a. Is there regular media coverage on climate change issues and the need for rational and efficient use of water resources?
- b. Is water advocacy regularly targeted at opinion leaders and decision makers?
- c. Do religious and traditional leaders actively support national engagement with the climate change agenda?
- d. Is local knowledge incorporated into climate risk and disaster analysis, and local climate change adaptation strategies considered while prioritising interventions?
- e. Do school curricula (and extra-curricular activities) cover environmental sustainability and climate resilience, so that children can become agents of change in the communities where they live?

#### Service providers

Water and sanitation providers should have the capacity and resources to adapt to climate change and contribute to reducing greenhouse gas emissions.

##### Checklist

- a. Do service providers have the capacity/resources to

analyse, design, implement and monitor adaptation and mitigation plans with concrete actions?

- b. Do water service operators follow WHO proposed guidelines on 'climate resilient water safety plans'?
- c. Has water and sanitation treatment, supply, distribution

and storage infrastructure been designed to respond and withstand climate threats, including extreme events?

- d. Do service providers have access to reserved budget lines or insurances to rehabilitate services after extreme events?



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Closing ceremony of the  
Zambian Children's Climate  
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