WATER SUPPLY, SANITATION AND HYGIENE BRIEFING TO COP27 DELEGATIONS[1]

1. INTRODUCTION

The Climate Paris Agreement aims to strengthen the global response to the threat of climate change in the context of sustainable development and efforts to eradicate poverty. Water is the primary medium through which we feel the effects of climate change. Because of that, water is normally part of climate strategies and plans. However, climate planners and water managers need to understand better the interconnectivities between climate change, water as a resource, and the basic social services that depend on it – importantly, safely managed drinking water, sanitation and hygiene services.

There are clear impacts of climate change on water-sanitation-hygiene services exposing vulnerable populations, but there are also huge opportunities to contribute to global mitigation and adaptation goals by building a low carbon and climate resilient water and sanitation sector.

First, the bad news. Droughts mean less water is available for different users and uses increasing the risk of conflict, and lack of water inhibits good sanitation and hygiene practices. Floods lead to water contamination and heavy rainfall favor vector-borne diseases, with consequent health impacts. Ice melting represents an unsustainable loss of a key drinking source for many millions of people, and sea level rise leads to salinization of aquifers in coastal areas – from which a large amount of the global population relies on for drinking. Finally, water and sanitation infrastructure and service disruptions after climate shocks come at a huge economic and physco-social cost.

The good news is that investing in low carbon and climate resilient water and sanitation services is a key part of the solution to the global climate crisis. In the Race to Resilience and Race to Zero, businesses, cities, regions, investors and civil society are acting fast to transform the prospects of billions of people. Beyond the finish line a safer, healthier, more sustainable and cleaner world awaits.

Three aims of COP 27 presidency initiative AWARe (Action of Water Adaptation and Resilience)

1. **Decrease water losses worldwide and improve water supply**
2. **Propose and support implementing mutually agreed policy and methods for cooperative water-related adaptation action and its co-benefits;**
3. **Promote cooperation and interlinkages between water and climate action in order to achieve Agenda 2030, in particular SDG 6.**

2. ADAPTATION-RESILIENCE

The **article 7 of the Paris Agreement** establishes the Global Goal on Adaptation (GGA) of "enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change, with a view to contributing to sustainable development". Indeed, this global goal is well aligned with the first target of the Sustainable Development Goal 13 to "Strengthen resilience and adaptive capacity to

[1] This document is fruit of a collaboration of SWA partners, with inputs from UNICEF and the SWA Secretariat.

climate-related hazards and natural disasters in all countries". However, coming to a common agreement of what the GGA should comprise and how it will be measured and reported is still a challenge.

At COP26, countries established the **two-year Glasgow-Sharm el-Sheikh work programme on the Global Goal on Adaptation (GGA)** to enhance and support adaptation action through a country-driven process. Given the rapidly accelerating climate hazards around the world, **the GGA must be defined urgently, and it needs to be informed by local climate risks, solutions and limits to adaptation.**

If water is the primary medium through which we feel the effects of climate change, the solution should start by strengthening the synergies between SDG 13, and SDG 6 to "Ensure availability and sustainable management of water and sanitation for all". **Therefore, is there a more clear and tangible way to contribute to this double goal of global adaptation and sustainable development than fostering climate resilient basic services such as water supply and sanitation services?** This has to be indeed the basis to run the Race to Resilience and a center piece of the GGA.

To support adaptation and resilient WASH services makes sense from a financial point of view, both for governments and users. It fosters community resilience by reducing human, social, environmental and physical vulnerability. It also contributes to avoid or reduce conflict in areas affected by water scarcity. It provides an opportunity to policy makers and service providers to rethink access to basic services, adhere to a circular economy and green growth, and improve several pending aspects of service provision.

Key asks to climate negotiators as they finalize the shaping of the Global Goal on Adaptation (GGA):

4. **Ensuring community resilience through resilient water/sanitation services is a key priority for countries that experience both, insufficient access to water and sanitation and have high exposure to climate risks.**
5. **To ensure that advances towards the achievement of universal access to water-sanitation development targets pose no maladaptation risks, those countries lacking access to water and sanitation services must prioritize provision of low emission climate resilient WASH systems for those currently lacking access.**
6. **Existing water-sanitation systems in areas highly exposed to climate risks need to be first identified, then retrofitted and upgraded to pose no risk to populations.**
7. **Existing water-sanitation systems must foster water conservation, efficiency and reuse.**

Key lessons learned and good practices from water and sanitation to inform the shaping of the Global Goal on Adaptation (GGA):

- **The existing climate risk assessment tool for the identification of climate risks to water, sanitation and hygiene services is successfully being applied in countries at different levels:**
    - **Local level:** leading to the identification of measures to increase both the resilience of infrastructure and behaviors as well as contributing to build community resilience.

- **National and subnational level:** leading to the identification of water and sanitation priorities to feature in Nationally Determined Contributions, National Adaptation Plans and climate change national strategies.

- **The UNICEF-WHO Joint Monitoring Programme (JMP) has reported country, regional and global estimates of progress on drinking-water, sanitation and hygiene (WASH) since 1990**, and is responsible for monitoring the global SDG indicators for targets 6.1 and 6.2 on drinking-water and sanitation. The JMP maintains extensive global databases and is currently working to address the global monitoring of climate resilience in the sector. This workstream could be directly linked to the shaping of the GGA and how to monitor progress.

3. MITIGATION

The COP27 Presidency is calling for bold and immediate actions to raising ambition to cut greenhouse gases emissions from all parties, in particular those who are in a position to do so and those who can and do lead by example. COP27 will be a moment for countries to fulfill their pledges and commitments towards delivering the objectives of the Paris Agreement to enhance the implementation of the Convention. This year should witness the implementation of the Glasgow pact call to review ambition in Nationally Determined Contributions (NDCs) and create a work program for ambition on mitigation.

Negotiators at COP27 should consider that there are huge and untapped opportunities for mitigation by improving water and energy efficiency, and by ensuring, where possible, the use of renewable energy (e.g., solar and wind energy) for water and sanitation operations. There are huge opportunities as well to cut greenhouse gases emissions from wastewater and excreta disposal by choosing the most appropriate type of sanitation and wastewater treatment processes.

Updated information unpacking freshwater's role in climate change mitigation indicate for example that wastewater treatment and discharge directly account for 11,8% and 4,2% of global CH4 and N2O emissions, respectively. In addition, drinking water and wastewater management is responsible for approximately 4% of global electricity consumption, often associated with indirect carbon emissions. Overall, the fact is that the water sector is currently estimated to contribute up to 5% of GHG emissions.

With demand for water set to increase by 55% in the next 30 years, its emissions will only rise – unless something is done.[2]

Moreover, emissions from all sanitation systems are often not well captured. Current global estimates do not always consider the non-sewered sanitation systems which are prevalent in rapidly growing cities in low-and-middle-income countries. The global methane emissions from non-sewered sanitation systems in 2020 was estimated at 4.7% of global anthropogenic methane emissions[3], which are comparable to the greenhouse gas (GHG) emissions from wastewater treatment plants.

[2] https://www.international-climate-initiative.com/en/news/article/water_companies_on_the_way_to_co2_neutrality accessed on 28th September 2021

[3] https://www.sciencedirect.com/science/article/pii/S0013935122007952

In this context, The WASH sector also brings solutions to the race to zero emissions and the mitigation challenge.

Key asks to climate negotiators to help raise the mitigation ambition in the NDCs through water and sanitation services:

1. **Ensure, where possible, the use of renewable energy (e.g., solar and wind energy) for water and sanitation operations to reduce GHG emissions.**
2. **Prioritize the improvement of the energy efficiency of water and sanitation treatment processes (e.g., pumps, generators, etc.).**
3. **Limit the release of greenhouse gases (e.g., methane, nitrous oxide) from wastewater and excreta into the atmosphere by choosing the most appropriate type of sanitation and wastewater treatment processes.** This is particularly essential in urban contexts and includes methane capture and the production of energy from waste (solid and liquid). The energy-efficient management (transport and treatment) of solid and liquid wastes contributes to preserve carbon sinks and the environment.
4. **Include measures for improving water and energy efficiency by introducing water saving technologies, such as water meters, water efficient house appliances, rainwater harvesting and greywater reusing for other uses such as gardening.**
5. **Prioritize the reduction of leaks on the water distribution networks to increase water efficiency so less energy is consumed for pumping.**

4. CLIMATE FINANCING

The COP27 Presidency has indicated that it is essential this year to make significant progress on the crucial issue of climate finance while moving forward on all finance related items on the climate agenda. The importance of adequacy and predictability of climate finance is key to achieving the goals of the Paris Agreement, to this end there is a need for enhanced transparency of **finance flows and facilitated access to meet the needs of developing countries specially Africa, LDCs, and SIDS.**

Existing commitments and pledges, announced from Copenhagen and Cancun, through Paris and all the way to Glasgow COPs, require follow up at COP27 in order to provide clarity as to where we are and what more needs to be done. The premise is that progress on delivery of the annual USD 100 billion will build more trust between developed and developing countries, showing that actual commitments are being fulfilled.

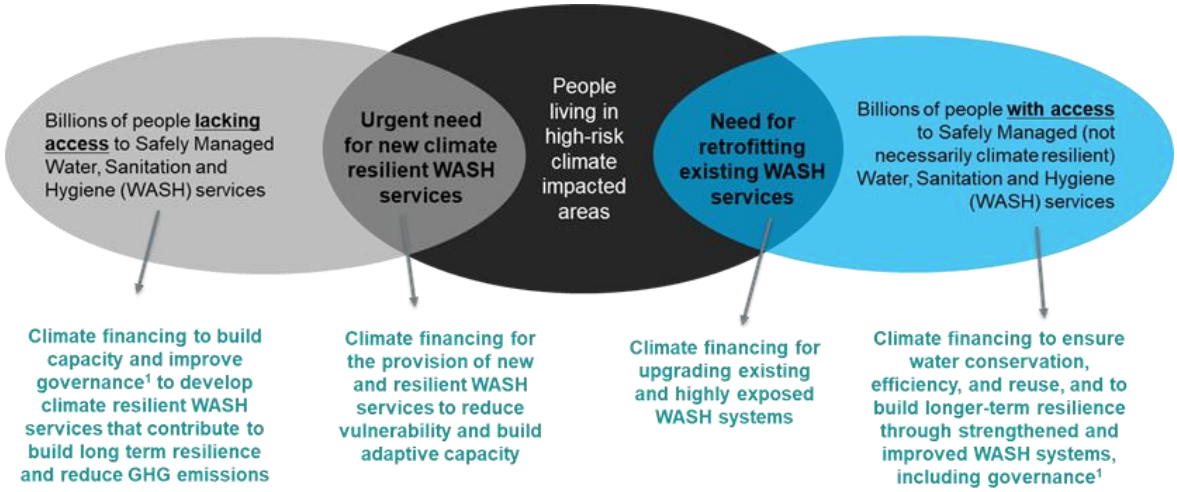
The WASH sector is able to contribute to achieve the Paris Agreement goal of mobilising USD 100 billion per year to address the pressing mitigation and adaptation needs of developing countries by supporting the mobilization of climate finance. In this regard the WASH sector is working to make investments in climate resilient water and sanitation attractive, and is exploring new avenues to team up and work with climate financiers.

Based on all the above, there is a **request for climate planners and policy makers to successfully accelerate adaptation and mitigation in the WASH sector as a key pathway to move the global climate agenda.**

Key asks to climate negotiators to direct adequate climate finance towards low carbon and resilient water and sanitation services:

1. **Direct climate finance efforts (blending with WASH finance) to identify and prioritize investment in areas where high exposure to climate hazards overlap with low access to water-sanitation-hygiene services, especially in the least developed countries, disadvantaged and rural areas (e.g., those that have contributed least to climate change).**
2. **Direct climate financing to help enable environments (i.e., through water-sanitation sector policy / strategy; institutional arrangements; planning monitoring and review; and capacity development) that accelerate access to safely managed sanitation and water services - additionally ensuring newer, emission-efficient treatment services**
3. **Direct climate financing to identify and then retrofit existing water-sanitation services that are highly exposed to climate change hazards.**
4. **Direct climate finance to ensure water conservation, efficiency and reuse, and to build longer-term resilience through strengthened and improved water and sanitation systems.**

Figure 1. WASH Sector Contributions to Water Security through Climate Financing



More information:

Why Water Sanitation and Hygiene must be Top of your Climate Agenda | UNICEF

Adapting to climate change and fostering a low carbon water and sanitation sector (SWA, 2019)

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