



# A FRAMEWORK FOR CLIMATE RESILIENT WASH AND INTEGRATED WATER MANAGEMENT



## OVERVIEW

This document provides a framework for Plan International (Plan) integrated, inclusive, climate resilient water, sanitation and hygiene (WASH) and Integrated Water Management (IWM) programming that supports transformative change and which is aligned with Plan's strategic objectives and approaches.

Resilience programming is recognised as one of Plan's key strategies to respond to the climate crisis. Delivering climate resilient WASH and IWM will contribute to Plan's core vision of a just world that advances children's rights and equality for girls, including climate justice. Programs and projects will directly strengthen the resilience of vulnerable communities against climate change.<sup>1</sup>

By adopting the framework set out in this document, and undertaking the suggested steps, practitioners can develop programs that result in water and sanitation services that are 1) inclusive 2) gender transformative and 3) climate resilient. By doing this, WASH behaviours and services are more likely to be sustainable in a context of uncertainty and a changing climate.

<sup>1</sup> See Plan International's global strategy 2023-2027



# ACKNOWLEDGEMENT

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## ACRONYMS

- AoGD** Areas of Global Distinctiveness
- GESI** Gender Equality and Social Inclusion
- IWM** Integrated Water Management
- M&E** Monitoring and Evaluation
- PIA** Plan International Australia
- SDG** Sustainable Development Goals
- WASH** Water, Sanitation and Hygiene

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## PLAN'S GLOBAL STRATEGY AND WASH AND INTEGRATED WATER MANAGEMENT WORK

Through an integrated approach to programming, influencing and fundraising, Plan seeks to change the lives of millions of children, particularly girls and those who are excluded or marginalised. Plan works to achieve this change by collaborating with others to deliver high quality programs that result in long lasting benefits across five domains:

1. Adolescent girls in crisis.
2. Girls' freedom from fear and violence.
3. Girls' leadership and empowerment.
4. Gender and emergencies.
5. All children thrive.<sup>2</sup>

In support of the 'All children thrive' domain, Plan recognises that early childhood is the most important phase of development in a person's life. The physical, cognitive, social, emotional and language development that occurs during these years lays the critical foundations for lifelong wellbeing and resilience. In order to survive and thrive, young children need secure attachment, nurturing care, safe, stimulating environments, adequate nutrition, and good water, sanitation and hygiene (WASH).<sup>3</sup>

In pursuing 'All children thrive' outcomes Plan implements a portfolio of projects that provide sustainable access to essential WASH services that are required for the survival, development and wellbeing of children – especially girls – and their communities. Through WASH processes and outcomes, these projects also contribute to the other four strategy domains, notably girls' leadership and empowerment and freedom from fear and violence. WASH, and broader water management, contribute to all six of Plan International's thematic priority areas - the 'Areas of Global Distinctiveness' (AoGDs) - through the interlinkages between water and early childhood, education, health, skills, leadership and freedom from violence<sup>4</sup>. These WASH and AoGD interlinkages are further detailed in Table 1 (Annex A).

Research shows that women and children, especially adolescent girls, are disproportionately affected by inadequate access to clean water and safe sanitation<sup>5</sup>, which intersects with and compounds the disproportionate burden of climate change born by women and young girls. In many countries, they are responsible for spending large parts of the day finding and fetching water for their families, while a lack of private and functional sanitation facilities can contribute to girls not attending or even dropping out of school. Women are the primary carers for family members suffering diseases, which are often exacerbated by climate change hazards. Despite these responsibilities and impacts, women and girls often do not have representative involvement in and influence over water and WASH decision-making, operations, management and governance.

2 See <http://plan-international.org/about-plan> for Plan International's global strategy 2017-2022

3 See Plan's Early Childhood Development (ECD) Area of Global Distinctiveness (Plan internal)

4 See Plan International (2020) WASH, Gender & Plan's Global Strategy – A Briefing Paper (internal paper)

5 WHO/ UNICEF (2017) Joint Monitoring Programme

Plan has the opportunity through its WASH and IWM programs to transform the lives of girls, young women and women by improving both their conditions (addressing daily needs) and their social position (increasing value or status). WASH and IWM are crucial enablers of realizing Plan’s ambition: **“All girls standing strong creating global change”**<sup>6</sup>. By meeting fundamental daily needs and human rights, WASH uniquely and directly supports improvements for the whole community, and therefore the environment in which children are able to grow up, survive and thrive.

Focused in the Asia-Pacific region, Plan International Australia (PIA)’s WASH projects work to deliver on the commitments under Goal 6 of the 2030 Sustainable Development Goals (SDGs).



**SDG 6: to achieve universal and equitable access to safe and affordable drinking water for all and access to adequate sanitation, and hygiene for all, particularly women and girls and those in vulnerable situations.**

Because of the link between WASH, health and people’s ability to thrive, these projects also contribute to related SDGs including health (SDG 3), education (SDG 4), gender equality (SDG 5), decent work and economic growth (SDG 8), reduced inequalities (SDG 10) and climate action (SDG 13). There is a direct link with **SDG 13: Take urgent action to combat climate change and its impacts**, particularly Targets 13.1-13.3:<sup>7</sup>

**13.1** Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.

**13.2** Integrate climate change measures into national policies, strategies and planning.

**13.3** Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.

## THE IMPORTANCE OF ADDRESSING CLIMATE CHANGE IN WASH AND IWM

A changing climate is part of the uncertain future facing girls, young women, women, boys and men who are already finding increasing challenges in meeting their daily needs for WASH and IWM in order to survive and thrive. Climate resilient WASH and water resources services and facilities, further defined in Box 1, are required to help meet these challenges and achieve climate justice.

<sup>6</sup> See Plan International’s global strategy 2023-2027

<sup>7</sup> For further information see <https://www.un.org/sustainabledevelopment/climate-change/>

## BOX 1

# KEY DEFINITIONS FROM PLAN INTERNATIONAL'S RESILIENCE FRAMEWORK (2020)

As there is no universal definition of resilience, Plan International has adopted its own definition as outlined in its Resilience Framework.

**Plan International's definition of resilience** is the capacity of children, adolescents, youth, caregivers, communities and institutions to overcome stresses and shocks that undermine their full and equal enjoyment of their human rights.

Alternative definitions include:

**Resilience** refers to the ability of a system, community or society exposed to hazards to resist, absorb, cope with, adapt to, transform and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions through risk management.

**PIA's definition of climate resilient WASH and IWM** refers to WASH and IWM systems, infrastructure, services and behaviours that can mitigate risks and anticipate, resist, absorb, cope with, adapt to, transform and recover from climate change hazards and ensure continued access and availability of WASH for people's daily needs.

### Other definitions in the Resilience Framework

**Climate change** refers to changes in regional or global climate patterns. This often refers to changes from the mid-20th century which are attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.

**Hazard** is a process, phenomenon or human activity that may cause loss of life, injury or other health impacts, property damage, social and economic disruption or environmental damage.

**Shocks and stressors** are commonly thought of in terms of their source or types, such as "natural" or "man-made". Shocks are usually (but not always) acute (rapid onset, typically short duration) events, while stresses are usually (but not always) described as chronic (slow onset, typically protracted duration), which refers to the onset and duration of the event.

**Adaptation** is action that helps cope with the effects of climate change - for example construction of barriers to protect against rising sea levels, or conversion to crops capable of surviving high temperatures and drought.

**Mitigation** refers 1) to the lessening or minimising of the adverse impacts of a hazardous event. The adverse impacts of hazards, in particular natural hazards, often cannot be prevented fully, but their scale or severity can be substantially lessened by various strategies and actions. Mitigation measures include engineering techniques and hazard-resistant construction as well as improved environmental and social policies and public awareness. 2) In climate change policy, "mitigation" is defined differently, and is the term used for the reduction of greenhouse gas emissions that are the source of climate change.

**Risk** is the potential loss of life, injury, and/or destroyed or damaged assets which could occur to a system, society, community, household or individual in a specific period of time, determined probabilistically as a function of hazard, exposure, vulnerability and capacity.

**Water security** means there is sufficient and efficient water supply of good quality for WASH systems, IWM and ecosystem health.

*For these and additional definitions see the Glossary in Annex D.*





Climate change is having a significant impact on people's lives and well-being and on the world's water resources, infrastructure and services, most notably through its impact on the availability of water and associated sanitation and hygiene. Physical impacts due to climate change include sea-level rise, coastal erosion, intense flooding and drought, saltwater intrusion and reduced freshwater availability. Climate change is modifying infectious diseases, intensifying natural disasters, reducing drinking water quality and forcing migration, displacing people from their existing water and WASH services and increasing the demands on facilities and services in other areas.

In the Asia-Pacific region, island countries are prone to cyclones, droughts, landslides and floods as well as volcanoes, earthquakes and tsunamis. Climate change projections for the region include an increase in extreme hot days and extreme rainfall events, and sea level rise<sup>8</sup>. These hazards present risks to the natural environment and ecosystem health upon which communities and their water and WASH services depend.

Water and WASH practitioners must grapple with better ways of understanding climate change shocks and stressors and find improved ways of adopting long-term "no regrets" solutions<sup>9</sup> that support local people now and in an uncertain future. In developing climate resilient WASH and IWM programs, Plan can help build this resilience to hazards. In addition, through its programs Plan has the opportunity to be gender transformative, strengthening women and girls' resilience and ability to survive and to thrive.

The framework described in the following sections offers guidance on how climate change can be integrated into Plan's WASH and IWM program efforts. It aligns strategically with Plan's Global Strategy 2023-2027, Plan's Environment Policy (2022) and the Resilience Pathways which all identify climate action as a priority area for Plan. While the Framework is principally focused on action to support adaptation to a changing climate, Plan acknowledges the evolving opportunities for WASH and IWM to pursue sustainability and identify and mitigate the effects of climate change, including through low greenhouse gas emission services and infrastructure and environmentally supportive behaviours.

The framework is also focused primarily on longer-term (development) programming. However, it is recognized that WASH and IWM programming can, and needs to, support Plan's humanitarian work both in terms of providing technical advice, guidance and capabilities on resilient WASH and IWM as part of emergency response efforts, and by taking approaches to project implementation that increase the resilience of WASH and IWM services, infrastructure and behaviours.

8 IPCC (2021) Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change

9 "No regrets" solutions refer to well informed decisions that have a positive benefit irrespective of how the uncertainty and various scenarios play out.

Given the importance of mitigating and adapting to climate change, PIA has undertaken a process to strengthen its WASH and IWM projects by identifying core principles and developing a framework and an implementation guide (the latter forthcoming) for inclusive, gender transformative, climate resilient WASH and IWM.

As part of this process, a review of relevant literature researched and compiled by PIA and key partners has been undertaken. Out of an identified list of 78 resources 40 were analysed for their logical integration of gender and/or climate change. Key Plan International strategic documents were also reviewed as were a range of existing frameworks. These frameworks included visual graphics, text framing documents, logical frameworks, matrix-style and Likert scale, which were tabulated and assessed against Plan's needs for an inclusive gender transformative, climate resilient WASH and IWM framework for practitioners.

Integrating insights and analysis across the resources resulted in the synthesis of priority themes and the development of key principles for climate resilient WASH and IWM for Plan. Through consultation with the PIA WASH team a set of principles to achieve climate resilient WASH and IWM for all have emerged (Box 2 Section 4).

The analysis also led to the recommendation that Plan use a visual graphic and accompanying narrative as a means to present the framework. This is now developed below in this document. Resource summaries of the relevant literature, which are captured in a custom-built online database in Airtable, are available in Annex C. The detailed resource analysis is in a separate internal PIA document.



Plan International has developed a concept called “Resilience Pathways”<sup>10</sup> which identifies five key results areas that will bring about the most change for resilient development through Plan International’s work. The Resilience Pathways can be integrated in projects, programs, or country strategies as a means to strengthen resilience.

Resilience for Plan, as outlined in the Resilience Framework, is based on the well-known risk equation in Figure 1 below that recognises the link between shocks and stressors, vulnerability, exposure and capacity. The level of risk depends on different factors and is a function of the shock or stress (a cyclone, an earthquake, a flood, or drought, for example), the exposure of people and assets to the shock or stress, and the conditions of vulnerability of the exposed population or assets. These factors are not static, and risk can be reduced through increasing capacity or reducing vulnerability or exposure.

## RISK EQUATION



Figure 1: Risk equation (Plan Resilience Framework, 2020)

In order to build resilience through risk management, Plan International has developed five resilience pathways:

1. Risk knowledge
2. Equitable planning and continuous access to services
3. Healthy natural environment
4. Equitable social and economic safety nets and resources
5. Policy and legal frameworks

This document presents a framework for WASH and IWM practitioners that aligns with the five Resilience Pathways and their objectives. It aims to enable Plan staff and partners to build resilience by developing programs that ensure sustainable WASH and IWM behaviours, infrastructure and services through being inclusive, gender transformative and climate resilient. At the broader strategic level, the Resilience Pathways can be selected and adapted to the local program context, for example, for education and health. Given the alignment of climate resilient WASH and IWM and the Pathways, some work is needed in each of the five pathways as outlined in this framework.

<sup>10</sup> Plan International: Pathways to resilience - Plan International's Resilience Framework (2020)



## PURPOSE AND TARGET OUTCOMES OF THE FRAMEWORK

The purpose of the framework is to serve as a guide for practitioners, notably Plan staff and partners, as they identify, develop, design, implement and monitor WASH and IWM programs and projects so that they are inclusive, gender transformative and climate resilient. The goal is that these projects and programs result in sustainable WASH and IWM behaviours, infrastructure and services that meet the specific needs of all and especially women, girls and other marginalised people. The framework aims to shine a spotlight on the importance of these key components for Plan programs and to serve as an approach to ensure their success.

### **The framework does:**

- Describe an overarching process for integrating climate resilience into WASH and IWM programs and projects.
- Adopt an iterative, adaptive (assess, plan, act, monitor) approach to building resilience through the project cycle.
- Demonstrate the linkages between this WASH and IWM framework and Plan's Pathways to Resilience Framework and the six AoGDs.
- Make the connections to the six elements of Plan International's Gender Transformative Approach<sup>11</sup>.
- Indicate how programs and projects can be inclusive, transformative and climate-resilient in both process and outcomes.

### **This framework does not:**

- Provide all the detail needed to implement climate resilient WASH and IWM programs and projects.
- Pertain to a particular context or type(s) of climate hazard or risk.
- Repeat all of the information in Plan's Pathways to Resilience Framework, the AoGDs or the Gender Transformative Approach.
- Start something new, but rather aims to integrate core strategies to strengthen climate change resilience into current and future WASH and IWM programs and projects.

## HOW TO USE THIS FRAMEWORK

This framework should be used in combination with the Pathways to Resilience Framework to inform the development and design of WASH and IWM projects. Having considered the information in this document and the related Resilience Framework resources, the (forthcoming) "Climate Resilient WASH and IWM Implementation Guide for Practitioners" can be used to support project implementation and monitoring and evaluation (M&E).

<sup>11</sup> Plan International – Getting It Right: A Guidance Note for Gender Transformative Programming and Influencing (2018)

Through its WASH and IWM programs and projects, Plan aims to contribute to achieving the following impact:

**CHILDREN, ADOLESCENTS, YOUTH, CAREGIVERS, COMMUNITIES AND INSTITUTIONS HAV(ING) THE CAPACITY TO OVERCOME SHOCKS AND STRESSES THAT UNDERMINE THE FULL AND EQUAL ENJOYMENT OF THEIR HUMAN RIGHTS.<sup>12</sup>**

To help achieve this impact, Plan WASH and IWM programs and projects need to pursue two interrelated overarching long-term outcomes:

- Climate resilient WASH and IWM for all – including children, especially girls and other marginalised populations.
- Transformation of women and girls' agency, position, and influence over decision-making – through participation in climate resilient WASH and IWM programs and projects.

<sup>12</sup> Impact Statement in Plan International: Pathways to Resilience – Plan International's Resilience Framework (2020)



## Outcome 1: Climate resilient WASH and IWM for all

Climate resilient WASH and IWM for all means that WASH and water management behaviours, infrastructure and services are available to everyone and are able to anticipate, resist, absorb, cope with, adapt to, transform and recover from the impacts of climate change hazards in a timely and efficient manner.

Plan aims to ensure that WASH and IWM infrastructure, services and behaviours are available to everyone equally through programs that are inclusive of all community members, respectful of local knowledge, sensitive to social norms and that use their processes to engage and strengthen the agency of community members.

By prioritizing local climate change knowledge, practitioners can support the development of resilient WASH and IWM systems. These systems will be able to respond and adapt to increasing climate change hazards such as floods, droughts, cyclones and rainfall variability.

Achieving climate resilient WASH and IWM means that there are robust behaviours, infrastructure and services and a supportive environment in place to weather the uncertainty of future climate shocks and to meet individuals', households' and communities' multiple needs for WASH and water resources, in balance with the needs of the environment. It means that:

- Drinking water from an improved supply is available to everyone when needed and sustainably. Water is also available for ecosystem health and environmental needs.
- Sanitation services are robustly built, consistently used by all, and are repaired if damaged by climate hazards. For example, it means that if toilets are flooded and pathogens run off into drinking water sources that there is monitoring of water quality and that alternate water sources are available.
- Handwashing with soap and other hygiene behaviours are possible and adopted wherever feasible to prevent disease transmission.
- Attention is given to livelihoods, skills and economic opportunities and how these interlink with WASH and IWM needs.
- Systems-thinking approaches are supported (detailed below in process c) and e) that contribute to the long-term water security of communities, broader catchments and regions.
- There is an understanding about how WASH and water resources may be an outlet for other political and social stresses such as tensions over resources and their management.
- Plan programs continue to support individuals, households and communities to adapt to climate change but also look for ways to mitigate, reduce or slow down the contributions made by WASH and IWM programs to climate change.

The impacts of climate change on water resources and sanitation are not experienced in the same way by everyone. Women and girls, who are most often responsible for water and sanitation related household chores, are further disadvantaged by climate change and yet are often excluded from decision-making. This is despite having untapped knowledge and experience essential for finding effective and sustainable solutions.

It is therefore imperative for Plan's climate resilient WASH and IWM programs to ensure young people, women and girls are enabled and supported to meaningfully engage in the development and delivery of programs and to participate in WASH and IWM decision-making and management processes and forums so that these reflect and address the specific needs of women, girls and other marginalised communities.

Gender transformation means that Plan's WASH and IWM work:

- Results in positive changes and sustainable outcomes for girls and young women, and for society more broadly.
- Uses a gender transformative approach that goes beyond addressing "symptoms" to explicitly tackle the root causes of gender inequality, particularly unequal gender power relations, discriminatory social norms and practices, structures and policies.
- Improves the daily condition of girls while also advancing their position and value in society.

By taking a gender transformative approach to its climate resilient WASH and water management programs, Plan is able to encourage young people, women and men to meaningfully participate in these programs. This includes providing supportive spaces and processes which are sensitive to gender stereotyping and an unequal distribution of power between women and men, girls and boys and other genders. These processes can ultimately lead to new experiences and changes in roles and responsibilities within the community and/or in relation to control of WASH and IWM. For girls and women, it means supporting increased agency over decisions that affect them and increased knowledge, confidence and skills. Such increased capabilities help enable women and girls to voice issues and to influence processes related to adapting and building resilience to climate change impacts on water resources and WASH.

It also means addressing the disproportionate impact of climate change on women and girls by promoting resilient WASH which ideally means that women and girls do not have to walk as far to fetch and carry water, that disease prevention through managing drinking water quality, improved sanitation and handwashing with soap helps lower the carer's burden on women and girls and that they can manage menstrual hygiene in sanitary and private conditions.

# CORE PRINCIPLES FOR CLIMATE RESILIENT WASH AND IWM

To deliver on Plan International's Global Strategy and to contribute to the achievement of SDG 6: ensure access to water and sanitation for all and the linked SDGs notably SDG 13: climate action, WASH and IWM practitioners must adopt principles of resilience, inclusion, gender transformation and systems-thinking. In these categories, which inform the following framework, PIA has developed eight core principles to guide efforts to achieve the vision of climate resilient WASH and IWM for all (Box 2).

## BOX 2

### CORE PRINCIPLES FOR PRACTITIONERS TO ACHIEVE CLIMATE RESILIENT WASH AND IWM FOR ALL

**Risk identification and management** is fundamental for planning climate change resilient infrastructure and services.

**Adaptive planning** should be prioritized to ensure multi-level resilience of systems, livelihoods, communities and people.

Resilience should be established through **evidence-based decision-making** and applying the principle of sustainability to WASH and water management behaviours, services and systems.

**Local tradition, knowledge and culture** need to be an integral part of all climate resilient WASH and IWM program and project processes.

**All stakeholders should be represented** and involved in an inclusive, participatory and safe way in project planning, decision-making and delivery.

Processes need to **acknowledge and systematically address inequalities** within and between communities.

WASH and IWM resilience approaches should **prioritise women and girls and be gender transformative**.

Resilient water security for all means that **whole WASH and IWM systems should be considered**, and notably the environmental, governance, economic and cultural/social aspects of the system.

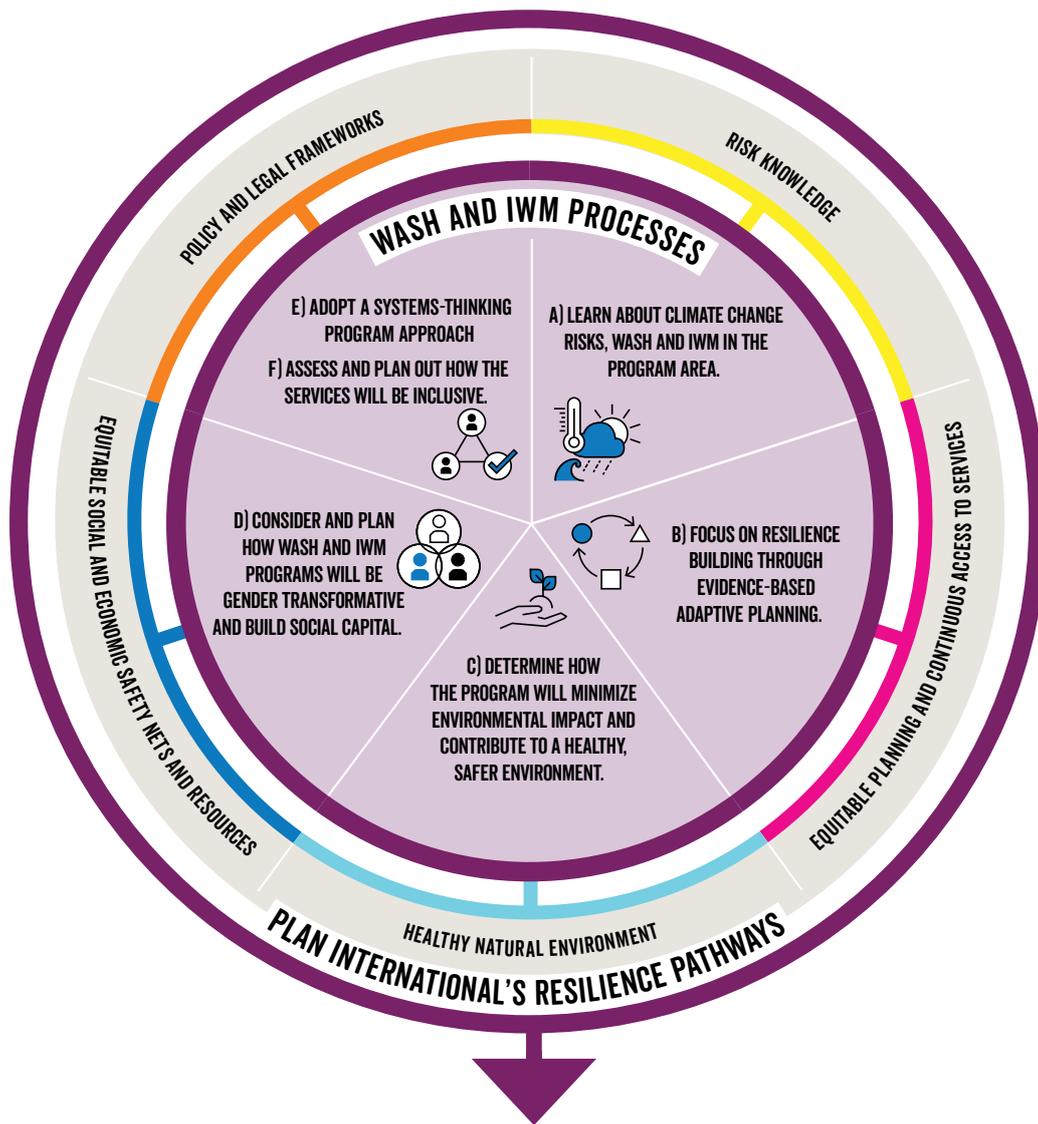


The eight core principles noted in Box 2 are incorporated within the six WASH and water management processes (a-f) of the framework, which is outlined below in Sections 5 and 6. They act as guiding values and appear as critical process features in the framework. They can and should be revisited at all stages of the project cycle. Examples of principles connecting to the WASH and IWM processes include:

- **Process a)** ‘Learn about climate change risks, WASH and IWM in the program area’ focuses on risk identification and management (principle one) and recognizes the need for this process to include drawing on traditional knowledge and understanding (principle four).
- **Process b)** ‘Focus on resilience building through evidence-based adaptive planning’ specifically focuses on the core principles of adaptive planning and evidence-based risk management (principle two and three).
- **Process c)** ‘Determine how the program will minimize environmental impact and contribute to a healthy, safer environment’, introduces a systems-thinking approach with a focus on the environmental system (principle 8). A systems-thinking approach is also discussed in process e) ‘Adopt a systems-thinking program approach that takes a holistic and integrated view of how WASH and IWM fit into the bigger picture of sectors, stakeholders and processes’.
- **Process d)** ‘Consider and plan how WASH and IWM programs will be gender transformative and build social capital’, calls for practitioners to achieve gender transformation through WASH and IWM processes (principle seven).
- **Process f)** ‘Assess and plan out how the services will be inclusive’, necessitates an inclusive approach (principle five) that reduces inequalities within and between communities (principle six).

In addition, the core principles align with Plan’s Resilience Pathways with several aligning directly, including local tradition, knowledge and culture being a critical contribution to improved knowledge of climate change related risks (Resilience Pathway 1), and adaptive planning contributing to continuous access to services (Resilience Pathway 2).

# CLIMATE RESILIENT WASH & IWM FRAMEWORK



## GENDER AND INCLUSION TRANSFORMATIVE PRACTICE

1. Address gender norms through children's life course
2. Strengthen girls and young women's agency, skills and control
3. Work with boys and young men to promote gender equality
4. Consider diversity
5. Improve conditions and social position
6. Foster enabling environment for gender equality

## WASH-IWM OUTCOMES

Climate resilient WASH and water resource management for all - including children, especially girls and other marginalised populations.

+

Transformation of women and girls' agency, position, and influence over decision-making - through participation in climate resilient WASH and water resource management programs and projects.

## RESILIENCE GOAL

Children, adolescents, youth, (CAY) caregivers, communities and institutions have the capacity to overcome shocks and stresses that undermine the full and equal enjoyment of their human rights.



## RESILIENCE PATHWAY 1: RISK KNOWLEDGE

**Overall objective: Children, adolescents and youth have the knowledge to make informed decisions to overcome shocks and stressors**

(Source: Resilience Pathways, 2020)

WASH AND IWM PROCESS A). LEARN ABOUT CLIMATE CHANGE RISKS, WASH AND IWM IN THE PROGRAM AREA.



To understand the potential impacts of climate change on WASH and water resources in the program area, a key initial step is to understand the community's current and future WASH and IWM needs and capabilities, including the specific needs of different parts of the community. This involves researching, asking questions, identifying and analyzing all possible present and future risks to a region and community in relation to their WASH and IWM needs. IWM needs include understanding the catchment area, its hydrology, industries particularly manufacturing, energy and agriculture, and the nature of the environment and related water use practices. This information should draw on the local climate resilience knowledge that exists in communities and from their experience in adapting to changing climatic conditions.

Program development and design should involve identifying, assessing and planning

for potential climate-related changes and impacts, their probability and the potential scale of their impact. In order to understand the risk picture, it is important to understand existing assets and capabilities, including social, economic, institutional, and educational, as well as the vulnerabilities of people and assets to combine with the climate change hazard and (potential) exposure information (Figure 1). Determining community capabilities is complex and involves seeking to understand the wider local context and broader challenges facing the community because the capacity to address climate change is interconnected with other challenges they face and capabilities that they have, such as in relation to gender (in)equality, work opportunities, housing, attending school, nutrition status, access to healthcare etc.

Climate change risks should ideally be identified and prioritized before problems

occur. It is crucial that risk information is developed with and is accessible to all part of the community and is communicated in a way that is understandable and targeted to its audience.

In determining the risks to types of WASH and IWM infrastructure, services and behaviours that are relevant to their program context practitioners may need to engage in discussions that are both relatively simple, such as about the weather, as well as those that are highly technical, such as using meteorological and other scientific indicators to determine risks. These efforts are likely to require collaboration with other sectors and entities such as national meteorological centres, offices of disaster management, public water resources management bodies, and sector and cross-sectoral coordination agencies.

Practitioners should find out if there are regional vulnerability assessments or

climate change reports by international organisations or government departments that can inform programs.<sup>13</sup> Where these types of resources do not exist, or they exist but only at a national level, projects may undertake a more detailed vulnerability assessment (Box 3) as part of risk management and adaptive planning (see Process b).

13 For example see <https://climateknowledgeportal.worldbank.org/>



### BOX 3

## VULNERABILITY ASSESSMENTS

Understanding vulnerability involves determining the exposure of people or assets to climate change hazards and their sensitivity to the hazards, that is, the degree to which they will be impacted by the hazard(s).

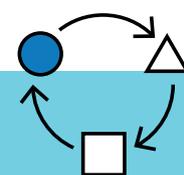
For example, a rural village that is in an area with a rising average temperature and increasing heatwaves and drought (i.e. highly exposed) and has one water source, a nearby stream, and depends on rainfall for agriculture as its primary economic activity (i.e. highly sensitive), has a high degree of vulnerability to climate change.

# RESILIENCE PATHWAY 2: EQUITABLE PLANNING AND CONTINUOUS ACCESS TO SERVICES

Overall objective: Children, adolescents and youth have continuous, equitable access to basic services

(Source: Resilience Pathways, 2020)

WASH AND IWM PROCESS B). FOCUS ON RESILIENCE BUILDING THROUGH EVIDENCE-BASED ADAPTIVE PLANNING.



Climate change planning involves a high degree of uncertainty. The best actions will consider this uncertainty and ensure that future options can adapt and respond to a dynamic context.

In order for Plan's WASH and IWM projects to ensure continuous access to services for all members of the community, a risk management and adaptive planning approach needs to be adopted. Risk management and adaptive planning need to prepare for climate impacts and preserve and restore essential basic structures and functions, thereby strengthening the resilience of a system, service or community.

Resilient services and infrastructure are those designed to be flexible enough to absorb potential impacts, continue functioning adequately, recover quickly and adapt to changed circumstances (see Box 4). Appropriate risk management proactively identifies and adapts the solutions available over the long-term to improve water security in an ever-changing context, with particular focus on vulnerable groups. This is termed adaptive planning. Adaptive planning utilises climate change

risk information (Process a) and where available country, regional and local early warning systems, weather information and emergency services plans. It also needs to understand, and where necessary plan to strengthen, the enabling environment for good WASH and IWM governance. Efforts should contribute to better inclusive climate resilient policies, legislation, budgets and governance and other services including those that affect children's and particularly girls' lives (see also Processes e and f). Local contexts will be different, and some project areas will have more resources and capacity for adaptive planning than others. Ongoing adapting of Plan's WASH and integrated water programming should be based on the evolving understanding of climate change impacts. For example, a clear focus on climate change adaptation is appropriate for many of Plan's WASH and IWM programs, however, some climate change mitigation strategies, such as pursuing low carbon materials and protecting waterways, may be relevant and feasible to address within some WASH and IWM programs. However, it is important to distinguish issues that can/should be addressed through other strategies that may be the responsibility of other parts of

## RESILIENCE IS THE CAPACITY OF PEOPLE, SERVICES AND INFRASTRUCTURE TO OVERCOME SHOCKS AND STRESSORS.

**Adaptive capacity** is the ability to adapt to multiple, long-term and future risks, learn from experience and adjust responses to changing external conditions. It is the capacity to take deliberate and planned decisions to achieve a desired state even when conditions have changed or are about to change. This ability to recover in such a way as to reduce vulnerability to future events is vital to the notion of adaptive capacity. Adaptive capacity is applied before and after crises.

### An example of adaptive planning

If an existing water supply system is affected by severe flooding, then protections need to be in place for managing stormwater runoff, ensuring water quality, repairing damaged water supply infrastructure and for maintaining the community behaviours that protect people from disease throughout the period of flooding and beyond. If increasing flooding or extreme weather events are anticipated, water quality monitoring and alternative water supply and/or treatment options may need to be put in place to reduce future impacts from such events.

the wider 'system' including government departments. Plan programs should include ways to collaborate with these other actors when shared objectives align.

To help strengthen resilience and improve the ability of WASH and water systems and communities to anticipate, resist, absorb, cope with, adapt to, transform and recover from the effects of climate change hazards in a timely and efficient manner, it is important to undertake evidence-based decision-making and ongoing monitoring and to have contingency and action plans in place to respond to change and ensure continuity of services. The evidence-base for assessing climate impacts should be based on what has already occurred and on the best estimates for future risks. Using available data can help target project activities and there continue to

be innovations in technology to capture, analyse and share data on climate change, such as remote imaging, geospatial and mobile mapping powered by cloud-based software and mobile technology which can enable a more accessible and detailed understanding of climate risks.

Long-term scenario planning to extend the thinking of what may occur under certain parameters and how to plan accordingly can help strengthen resilience. WASH and IWM investments should duly consider the specific vulnerability of communities, and groups within communities, and locations to climate change impacts (see Process a) and Box 3). This is particularly relevant for Plan as it aims to build WASH and IWM resilience of communities in fragile and conflict-affected countries.

# RESILIENCE PATHWAY 3: HEALTHY NATURAL ENVIRONMENT

Overall objective: Children, adolescents and youth live and thrive in a healthy and safe natural environment

(Source: Resilience Pathways, 2020)



WASH AND IWM PROCESS C). DETERMINE HOW THE PROGRAM WILL MINIMIZE ENVIRONMENTAL IMPACT AND CONTRIBUTE TO A HEALTHY, SAFER ENVIRONMENT.

A healthy and safe natural environment is critical for people's well-being and their ability to thrive. Climate resilient WASH and IWM have an important role to play in strengthening the health and safety of the environment, thereby building resilience and reducing risks for the community, especially young people. WASH and IWM practitioners need to develop and adopt WASH and water use and management approaches and technologies that minimise - and ideally reduce - environmental contamination.

To do this and to contribute to a healthy and safe natural environment, projects need understand the whole WASH and water resource context, including the environmental aspect of the system. This means instead of focusing on services and infrastructure in isolation, WASH and water management systems are considered together and as an interrelated and interconnected whole. This approach recognises that people or stakeholders and broader factors, such as governance, the environment and cultural and economic aspects, are all important to ensuring the long-term sustainability of services and

infrastructure (this 'systems-thinking' approach to project planning is further outlined under WASH and IWM Process F)).

The way that the environment and WASH and IWM connect in a system can be seen in the ways that WASH and IWM projects can support a healthier and safer environment, for example:

1. Wastewater and sanitation management that lowers faecal pollution of water bodies and thus water supplies, particularly drinking water sources.
2. Sanitation solutions that contain human waste (faeces, menstrual blood and urine) thereby reduce contamination of inhabited areas and faecal-oral disease transmission.
3. Breaking and preventing disease transmission through good hygiene practices thereby reducing health risks for people including in the context of building resilience to health pandemics, whose challenging disease control conditions are exacerbated when they intersect with climate change impacts.

4. Reducing the ways in which water systems or sanitation services create safety issues for people, for example, by constructing dams, tanks or systems that could fail, collapse or divert water courses and increase flooding.
5. Building individual, household, community and system wide resilience and capabilities to manage and respond to risks so that these are reduced, and people are safer as a result.
6. Using WASH and IWM solutions that mitigate contributions of greenhouse gases by using lower energy intensive materials and processes where possible.

In addition, WASH and water use and management approaches and technologies should also ensure that, where possible, adequate environmental water flows are maintained to preserve healthy ecosystems. These solutions may include

ecosystem-based disaster risk reduction<sup>14</sup> or “nature-based solutions”<sup>15</sup>, which focus on natural processes that enhance water availability, water quality and resilience to climate change impacts, such as restoring and regenerating water catchments and ‘rehydrating the landscape’ to improve the health of the environment. These environment-focused climate resilient WASH and IWM efforts make contributions particularly to SDG targets 6.3: improving water quality, 6.4: addressing water efficiency and water scarcity and 13.3 build knowledge and capacity to meet climate change.

.....  
 14 Plan International – Pathways to resilience: Plan International’s Resilience Framework (2020)

15 Nature-based solutions use or mimic natural processes to enhance water availability (e.g., soil moisture retention, groundwater recharge), improve water quality (e.g., natural and constructed wetlands, riparian buffer strips), and reduce risks associated with water-related disasters and climate change (e.g., floodplain restoration, green roofs) (UN Water, 2018).



# RESILIENCE PATHWAY 4: EQUITABLE ECONOMIC INCLUSION AND SOCIAL SAFETY NETS AND RESOURCES

Overall objective: CAY and their families are employing positive coping mechanisms to deal with shocks and stressors

(Source: Resilience Pathways, 2020)



WASH AND IWM PROCESS D). CONSIDER AND PLAN HOW WASH AND IWM PROGRAMS WILL BE GENDER TRANSFORMATIVE AND BUILD SOCIAL CAPITAL.

## A note about Resilience Pathway 4.

Resilience Pathway 4 draws attention to the importance of equitable economic inclusion and social safety nets and resources that can support households in employing positive coping strategies, which in turn can support in upholding girls' rights. While the focus of the Pathway is on efforts to advocate for and ensure credit and financial services, savings, diversified and sustainable livelihoods and social protection schemes, there is particular emphasis on supporting women and girls to empower them to be more resilient, to develop economic opportunities and to build "social capital".

Social capital refers to the quantity and quality of social resources (i.e., social relations, networks, membership in groups and access to wider institutions in society) on which people draw in pursuing their livelihoods and wellbeing.<sup>16</sup> It involves raising the voice of and supporting the participation of the most vulnerable to meet their needs. WASH and IWM projects

16 Plan International – Pathways to resilience: Plan International's Resilience Framework (2020)

have an important role to play in this through inclusive, participatory processes that strengthen community agency and resilience to overcome shocks, particularly for women and girls, as discussed below. Gender transformative WASH and IWM processes can provide a launchpad for efforts to increase economic and social safety nets.

Actions to address the impacts of climate change on water and WASH services and infrastructure and resilient planning processes can inadvertently exacerbate gender inequalities through reinforcing existing norms and power imbalances. Women and girls traditionally bear the burden of WASH provision, yet often do not have decision-making or financial power. Plan's WASH and IWM programs and projects offer an opportunity to be transformative by proactively incorporating process and actions that seek to tackle the root causes of gender inequality, such as role norms and gender discrimination, and significantly shift agency and the gender balance in decision-making and positions of influence in the community thereby increasing resilience.

Practitioners need to ensure that climate change resilient WASH and IWM programs, projects and processes promote greater gender equality through considered inclusion of all members of the community and by creating supportive environments for all. This means researching to understand the local context, including prevailing gender and other social norms, and preparing project activities to proactively engage marginalised groups, particularly women and girls, in program processes in meaningful and safe ways. Program processes must be sensitive to the context and try to address social norms and power dynamics, particularly those that limit participation, agency and voice around WASH and IWM needs.

Understanding and supporting the WASH needs for the whole community allows boys, young men and men to engage with the WASH needs of young girls and women, such as privacy, accessibility and menstrual hygiene management, in a space where all community members are working together for shared benefits. More equitable decision-making around long-term WASH management strengthens families' coping mechanisms to deal with shocks and stressors.

Climate resilient WASH and IWM programs and projects can address the six key elements of Plan International's gender transformative approach<sup>172</sup>, which help accelerate change and tackle the root causes of gender inequality (see Table 1).

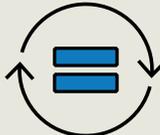
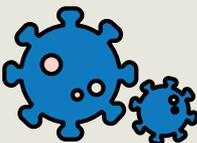
Monitoring of WASH and IWM project processes and outcomes needs to include data disaggregated by age, gender, disability status and other context relevant dimensions of disadvantage and marginalisation and also proactively consider unintended impacts from interventions. Adopting an open and accountable approach to project and

program implementation can contribute to fostering a supportive enabling environment for advancing gender equality.

WASH and IWM programs can help build social capital by bringing together communities for common goals and through empowering people, particularly women and girls, to meet their practical and strategic WASH needs. They can help develop people's skills, expertise, knowledge and information that are key for mitigating, reducing or adapting to risks. They can also support civil society organisation engagement which enable CSOs to be resilient and sustainable to provide support for communities particularly during climate disasters.

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17 Plan International – Getting It Right: A Guidance Note for Gender Transformative Programming and Influencing (2018)

Table 1: How climate resilient WASH and IWM approaches respond to the six elements of Plan’s gender transformative approach

	The six elements of Plan’s gender transformative approach	Key climate resilient WASH and IWM program approaches that respond
	<p>1. Understand and address how gender norms influence children throughout their life course, from birth through to adulthood.</p>	<p>Taking an intersectional and gender lens in researching the needs, knowledge and capabilities of the community.</p>
	<p>2. Work to strengthen girls’ and young women’s agency over the decisions that affect them, as well as by building their knowledge, confidence, skills and access to and control over resources.</p>	<p>Supporting children, girls, young people and women to take up opportunities to be involved in processes to develop understanding of, and identify approaches to strengthen, household and community water and WASH resilience.</p>
	<p>3. Work with and support boys, young men and men to embrace positive masculinities and to promote gender equality, while also achieving meaningful results for them.</p>	<p>Using whole of community collaborative analysis and decision-making processes that allow men and boys to understand and consider the WASH and IWM needs, roles and responsibilities for the whole community, including girls and women.</p>
	<p>4. Consider girls, boys, young women and young men in all their diversity when identifying and responding to their needs and interests.</p>	<p>Taking an intersectional and gender lens in researching the needs, knowledge and capabilities of the community and facilitating solutions that respond to various needs over time.</p>
	<p>5. Improve the conditions (daily needs) and social position (value or status) of girls and young women.</p>	<p>Adopting evidence-based, risk management and adaptive planning approaches to strengthen the resilience of WASH and IWM and maintain access to services for the whole community. Processes can allow girls and young women to meet their daily WASH needs and improve their social position.</p>
	<p>6. Foster an enabling environment where all stakeholders work together to support children and youth on their journey towards gender equality.</p>	<p>Taking a systems-thinking program approach to WASH and IWM that considers and strengthens the social/ cultural parts of the system as well as governance, economic and environmental aspects.</p>

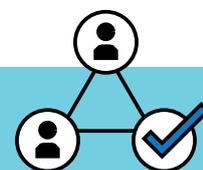
# RESILIENCE PATHWAY 5: POLICY AND LEGAL FRAMEWORKS

Overall objective: Policy frameworks are accountable to children, adolescents and youth and protect them from shocks and stressors

(Source: Resilience Pathways, 2020)

## WASH AND IWM PROCESS

- E). ADOPT A SYSTEMS-THINKING PROGRAM APPROACH THAT TAKES A HOLISTIC AND INTEGRATED VIEW OF HOW WASH AND IWM FIT INTO THE BIGGER PICTURE OF SECTORS, STAKEHOLDERS AND PROCESSES.
- F). ASSESS AND PLAN OUT HOW THE SERVICES WILL BE INCLUSIVE.



A systems-thinking approach to WASH and IWM recognises that people or stakeholders and broader factors, such as governance, the environment and cultural aspects, are all important to ensuring the long-term sustainability of services and infrastructure. Adopting a systems-thinking approach<sup>18</sup> to Plan's programs and projects can help deepen the understanding of the range of stakeholders that need to be involved in WASH and IWM processes to ensure long-term functioning of services and infrastructure.

It allows for a fuller recognition of the interconnected nature of risks, including from climate change, operations and maintenance, financing, institutional capacity and other aspects, and the need for multi-stakeholder, cross-sectoral, transdisciplinary collaboration to effectively address these risks.

<sup>18</sup> The systems-thinking approach described here draws on the Sanitation and Water for All (SWA) Collaborative Behaviours – enhancing government leadership of sector planning, strengthening and using country systems, mutual accountability based on common data, and sustainable financing – and Building Blocks see <https://www.sanitationandwaterforall.org/about/our-work/priority-areas/building-blocks>

Taking a systems-thinking approach to water security for all means working out how to work with major water users in a local area or catchment for shared outcomes - communities, governments, healthcare clinics, schools and other institutions such as those responsible for infrastructure, planning, and environment. It means building on existing processes or developing new or improved ones, to better plan for and develop more sustainable and resilient water and sanitation practices that deliver shared positive outcomes such as improved health and increased preparedness for climate hazards.

WASH, IWM, environment, health and sustainability need to be thought of together and integrated to ensure the best solutions are derived for communities and the environment. Conservation, wastewater management and initiatives for protecting the environment are also all parts of the water landscape.

A systems-thinking approach also means considering climate change and non-climate change causes of water availability and quality, which can be important contextual elements for project planning. These other factors include things such as:

- a growing population, and in many places changing demographics such as a youth 'bulge' or declining working age populations.
- increasing wealth and consumption and wealth inequality.
- urbanisation and mobile phone and internet adoption.
- cultural shifts such as changes in customs, traditions and religious practices.

Priority aspects of the systems that need to be considered for Plan's climate resilient WASH and IWM projects and programs are:

1. The environment - which includes the local environment and watershed and local-regional weather conditions to consider in the project's adaptive planning (see Resilience Pathway 4).
2. Governance / legislation / policy - which includes financing, monitoring, regulation, policy planning and management.
3. Economic aspects - which include the economic value of water for different stakeholders/users and the rising costs of maintaining water resources and services that are associated with climate change.
4. Cultural / social aspects - which includes gender and cultural norms and practices related to WASH and water, as well as other uses of water and watershed land.

Projects need to consider priorities for engagement or partnerships, such as with government departments and civil society or rights-holder organisations, which bring technical expertise, reach and resources

to strengthen the likelihood of positive, transformative outcomes. Taskforces, advisory committees, consultations for the adaptive planning process, and shared activities such as advocacy for inclusive climate policies are examples of engagement which strengthen the WASH and water management system.

### **Assess and plan out how the services will be inclusive.**

For WASH and IWM behaviours, services and infrastructure to be resilient and inclusive, an inclusive, multi-stakeholder approach to planning is essential. This means building relationships with and bringing together key actors including local organisations, community and religious leaders, civil society / rights-holder organisations and government agencies to co-develop desired program outcomes and to collaborate on identifying and implementing solutions.

Those affected by climate change impacts must be fully involved in all planning, implementation, monitoring and decision-making processes, particularly where WASH and water resources are managed by the community (see Box 5). Communities and individuals need to be actively involved in the development and implementation of solutions, and the solutions need to be pragmatic, inclusive and suited to local context. These processes may be intensive in the planning stage but should also be iterative and form part of ongoing monitoring efforts oriented towards long-term solutions.

In taking an inclusive approach to planning, substantial efforts should be made to note and incorporate all relevant sources of local knowledge and expertise, prioritizing and recognizing community-adapted solutions. It is also important that wherever possible children, young people, women and usually marginalised members of the community are supported and safeguarded to participate in processes to develop the understanding of the water,

WASH, climate change and gender and inclusion context. These stakeholders are also vital actors in identifying approaches to help address risks and strengthen individual, household and community water and WASH resilience in a context of climate uncertainty.

It is important that programs avoid promoting solutions and importing knowledge without first fully understanding the local context and deep needs of the community. This includes identifying and overcoming any barriers for women and young girls to participate and share in analysis and planning processes. In particular, the community's inherent resilience and needs may not be readily apparent to those who are not members of the community. For example, decisions around climate related migration to areas with better water security and choice of energy sources, such as low carbon options, should be determined by the community.

Actions to support resilient IWM and WASH services and infrastructure must also take a human rights-based approach<sup>19</sup>.

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19 A human rights-based approach means that all forms of discrimination in the realisation of rights must be prohibited, prevented and eliminated. It also means that priority should be given to people in the most marginalised or vulnerable situations who face the biggest barriers to realising their rights (Australian Human Rights Commission).

Climate change impacts people in different ways and those most at risk are often the most vulnerable. Protection and inclusion of the most affected, regardless of their status or background, must be the highest priority. Processes and outcomes need to ensure the inclusion, safeguarding and valuing of people at risk especially those facing multiple and intersecting forms of discrimination (gender, class, race, sexuality, age, disability etc.).

Processes should aim to “do no harm”<sup>20</sup> which means adopting appropriate, sensitive processes that account for the local context, tradition and culture. This includes being aware of people's experience with climate disasters and sensitive to the needs of marginalised groups, for example the practical needs for participation of people with a disability and other marginalised groups such as considering access to a location, timing, and resourcing. Plan's WASH and IWM work must also continue to advance children's rights and equality for girls by valuing

diversity, challenging and addressing the root causes of marginalization, such as

.....  
20 A Do No Harm approach for Plan means (we) must always consider the unintended consequences of our programs, and act to address those consequences.

## BOX 5 INCLUSIVE PLANNING

A key aim of inclusive planning is to value and utilise the knowledge and skills of community members to improve the management of WASH and water systems, particularly drawing on the skills and experience of women as primary knowledge holders about water and WASH. This means discussing drinking water needs and sources from both men and women's perspectives as well as sanitation needs in terms of space, privacy, proximity to the home and other factors.

Plans for toilets and handwashing stations benefit from inputs from all community members so that they ensure adequate sanitation that protects everyone's health.



stigma, discrimination and entrenched norms around roles and responsibilities, and by promoting gender equality.

Girls, boys and youth, when included in WASH and IWM processes, can provide important inputs around their specific priorities and needs and also solutions for their community. When supported through these processes, young people can have a voice in their community and a say in their future. This is particularly important in the context of climate change where they will be the ones who face the impacts and uncertainty in future and the consequences of continued inaction now. Therefore, their role as active leaders of change, for example participating in water committees or other governance structures, is critical to successful and sustainable WASH and IWM. Water security “for all” necessitates a focus on the quantity and quality of

drinking water, sanitation and hygiene and IWM services such that they limit their environmental impact and ensure no one is left behind without services. To do so includes valuing water and ecosystem health as critical assets to be preserved and to discourage waste and minimise contamination. It means valuing diverse perspectives because inclusive approaches lead to better WASH and IWM outcomes. Investments in better managing water resources and ecosystems can support the durability of WASH systems and their ability to anticipate, resist, absorb, cope with, adapt to, transform and recover from climate change hazards.



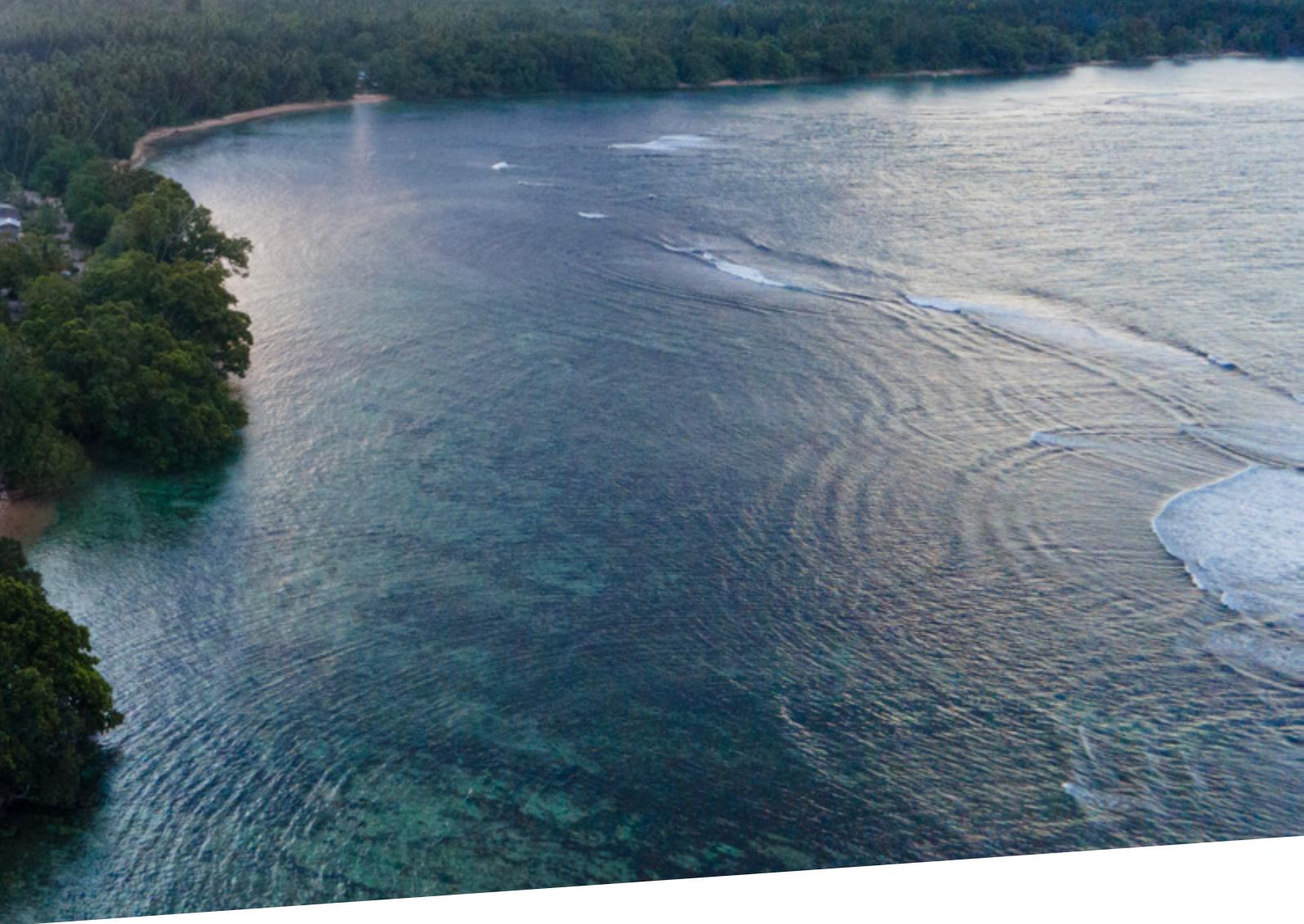


## CONCLUSION

Communities have a fundamental need for WASH and water resources, but ensuring that all people have access to these services and infrastructure in an ongoing way is often a complex and challenging task. In order to meet long-term needs, Plan's WASH and IWM programs must navigate not only the impacts of a changing climate but also cultural and social norms around power and marginalisation that affect people's ability to enjoy their right to drinking water, sanitation and hygiene and influence how their water resources are managed.

The framework above describes key principles and processes for Plan's WASH and IWM programs and projects that seek to ensure that these achieve 'water security for all' through approaches that are inclusive, gender transformative and climate resilient.

For further information see the list of resources and reading (Annex B) and the accompanying (forthcoming) Climate Resilient WASH and IWM Implementation Guide for Practitioners.



# ANNEXES

## ANNEX A: PLAN AREAS OF GLOBAL DISTINCTIVENESS AND WASH AND IWM

Plan International's six thematic priority areas, the Areas of Global Distinctiveness (AoGDs), are key entry points for achieving resilient development and water security. Resilience is one of three cross-cutting issues of the AoGDs alongside gender and civil society strengthening (Plan Resilience Framework, 2020).

The following table 2 shows how WASH and IWM contribute to Plan International's six AoGDs.

AOGD	How WASH and IWM contribute to the AOGD
1. Inclusive quality education	WASH and IWM make a significant contribution to children's ability to be healthy, attend school and concentrate during the school day. Plan's WASH in schools programs assist with providing these critical services in schools as well as instilling good habits in children, teachers and parents through hygiene promotion initiatives. Through menstrual hygiene management education and support, Plan programs address a significant aspect of inclusion for which research shows that girls often drop out of school when menstruating or to attend to water related duties. Research also shows that climate change can have a disproportionate effect on girls' education as they are required to seek scarce and often more distant water particularly during droughts, and they are the first to drop out of school if families cannot afford for them to continue under climate related pressures for example from floods, droughts, erosion, extreme weather events.
2. Skills and opportunities for youth employment and entrepreneurship	WASH and IWM support young people to be healthy which improves greatly their ability to build skills and seek employment and entrepreneurship opportunities. In addition, WASH and IWM provide the opportunity for work providing and managing services ranging from water supply, maintenance, selling parts, pit emptying etc.
3. Girls, boys and youth as active leaders of change	Girls, boys and youth, if included and supported to engage in WASH and IWM processes, forums, committees, and project can provide important inputs around their needs and also solutions for their community. When supported through these processes, young people can have a voice in their community and a say in their future. This is particularly important in the context of climate change where they will be the ones who face the impacts and uncertainty. Therefore, their role as active leaders of change is critical to successful and sustainable WASH and IWM.
4. Sexual and reproductive health and rights	WASH is critical to sexual and reproductive health. Maternal mortality from lack of basic hygiene is a crushing outcome from this lack of basic services. Girls, young women and women need to be empowered with information on hygiene and menstrual hygiene management and the basic services throughout their life cycle, from birth, through puberty, children bearing and beyond. Adequate, reliable, inclusive and sex-segregated WASH in healthcare facilities is critical to protect and ensure healthy outcomes for mother and child.
5. Early childhood care and development	A child's early years of growth and development are underpinned by supportive parental care, good nutrition, well-functioning health and WASH services, a non-discriminatory environment, opportunities for play and socialisation, and freedom from harm or violence. Lack of safe water or improved sanitation, and poor hygiene practices, compromise attainment of these objectives by contributing to a wide range of negative health outcomes, including diarrhoeal diseases, typhoid, cholera, polio, and malnutrition. Mothers and fathers need to have information and services to protect their young ones from WASH-related preventable diseases and access to basic sanitation is a key part of managing the spread of disease.
6. Gender responsive child protection / protection from violence	Research shows that young women are subject to violence during the course of meeting their most basic needs. Women and girls are vulnerable to physical threats including rape and other forms of sexual violence when collecting water, accessing latrines, or using bathing or changing facilities. In the absence of constructed sanitation facilities, open defecation is not only inconvenient and degrading for girls and women, but also can be physically dangerous as women may need to go far away from their homes to relieve themselves, or due to cultural norms they hold on to go at night. Provision of more localized, accessible and secure, WASH and IWM services and facilities, can help protect girls and women from these potential threatening situations.

Resources 1-40 were reviewed as part of the resource analysis. Individual summaries are provided in Airtable (see Annex C). Further reading is included.

## 1. WASH-IWRM-CLIMATE CHANGE-RESILIENCE-GESI FRAMEWORKS, APPROACHES, GUIDANCE MATERIALS AND TOOLS

1. World Health Organisation (2017) Climate-resilient water safety plans: managing health risks associated with climate variability and change, World Health Organization, Geneva
2. World Health Organization (2019) A guide to equitable water safety planning: ensuring no one is left behind, World Health Organization, Geneva
3. UNICEF Pacific (2018) Pacific WASH Resilience Guidelines: A practical tool for all those involved in addressing the resilience of water, sanitation and hygiene services in the Pacific, UNICEF Office for Pacific Island Countries, Fiji
4. UNICEF & Global Water Partnership (2014) WASH Climate Resilient Development: Strategic Framework, UNICEF & Global Water Partnership, New York & Sweden
5. Wetlands International (2017) WASH and Water Security: Integration and the role of civil society, Wetlands International, The Netherlands
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9. IWM (IWM) Introduction (2021) PowerPoint presentation by Paul Satur, Monash Sustainable Development Institute, Monash University
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20. Butterworth, J & Guendal, S (2012) WASH & climate change adaptation training module: facilitators guide, IRC International Water and Sanitation Centre for UNICEF and the National Water Resources Institute, Kaduna, available online

## 2. GESI TRANSFORMATIVE WASH GUIDANCE MATERIALS

21. Megaw, T, Kohlitz, J, Gero, A & Chong, J (2020) Understanding and responding to climate change impacts in inclusive WASH programs – a conceptual framework – Learning Paper, Institute for Sustainable Futures, University of Technology Sydney
22. Kohlitz, J, Megaw, T, Chong, J, Sugi, F, Palaipeni, P, Emanuel, Y, Brikman, H, Joman, Y, Landa, S, Talan, J, Leong, L, Kelleher, J & Gero A (2020) Climate Change Response for Inclusive WASH: A guidance note for Plan International Indonesia, prepared by ISF-UTS for Plan International Indonesia
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## PLAN INTERNATIONAL KEY DOCUMENTS

70. Plan International Gender Transformative Marker: User Guidance (2020) Internal document

### DISABILITY INCLUSION

71. Plan International – Disability Awareness Toolkit: Guidelines Introducing disability inclusion in our community (2016) Plan International available online

### SOGIESC AND DIVERSITY

72. Plan International - Gender and WASH Monitoring Tool available at: <https://www.plan.org.au/publications/gender-and-wash-monitoring-tool/>

73. Plan International - LGBTIQ+ inclusion and the Areas of Global Distinctiveness (2018) internal document

74. Plan International - Getting it right on SOGIESC: A Resource for Programming across Themes and Contexts (2020) internal document prepared with Edge Effect

### DISASTER RISK MANAGEMENT

75. Plan International - Disaster Risk Management: Strategic Review Final Report (2018) internal document prepared with Integrated Risk Management Associates and CIRDES

### SAFEGUARDING

76. Plan International – Safeguarding Children and Young People: our framework for keeping children and young people safe and protected (2017) one-pager

77. Plan International - Champions of Change: For Gender Equality and Girls' Rights, Process Description and 2-pager (2018)

### CLIMATE CHANGE

78. Plan International – Gender Transformative Climate Change Action in the Pacific, Framework and Guidance Tool (2018)

The review of resources has been captured in a custom-built online database using the software product Airtable. Airtable is a user-friendly cloud collaboration platform that provides a spreadsheet-database which is useful for storing and analysing data.

Airtable has been leveraged for this report and will be for other deliverables that refer to these resources. The resources are numbered in the order they appear in Annex A.

Airtable provides PIA and potentially project partners with a convenient, expandable and sharable repository of data that can remain a live document after the conclusion of the project. It is also possible to export the captured data into other formats including .csv, excel, word, pdf.

The project workspace titled: The project workspace titled: PIA I&I Grant Climate Resilient WASH Resources Review 2021 is available upon request.

The following terms are a selection from Plan's Pathways to Resilience Annex 1: glossary.

**Adaptation** is action that helps cope with the effects of climate change - for example construction of barriers to protect against rising sea levels, or conversion to crops capable of surviving high temperatures and drought.

**Climate** is the long-term average of weather and weather conditions (e.g. temperature, humidity, wind, precipitation), typically averaged over a period of at least 30 years.

**Climate change** refers to changes in regional or global climate patterns. This often refers to changes from the mid-20th century which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.

**Disaster risk management** is the application of disaster risk reduction policies and strategies to prevent new disaster risk, reduce existing disaster risk and manage residual risk, contributing to strengthened resilience and reduction of disaster losses.

**Disaster risk reduction** refers to the objective of preventing new and reducing existing disaster risk and managing residual risk, all of which contribute to strengthening resilience and therefore to the achievement of sustainable development.

**Hazard** is a process, phenomenon or human activity that may cause loss of life, injury or other health impacts, property damage, social and economic disruption or environmental damage.

**Mitigation** refers 1) to the lessening or minimising of the adverse impacts of a hazardous event. Annotation: The adverse impacts of hazards, in particular natural hazards, often cannot be prevented fully, but their scale or severity can be substantially lessened by various strategies and actions. Mitigation measures include engineering techniques and hazard-resistant construction as well as improved environmental and social policies and public awareness. 2) In climate change policy, "mitigation" is defined differently, and is the term used for the reduction of greenhouse gas emissions that are the source of climate change.

**Resilience** refers to the ability of a system, community or society exposed to hazards to resist, absorb, cope with, adapt to, transform and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions through risk management. As there is no universal definition of resilience, Plan International has adopted its own definition.

**Plan International's definition of resilience** is the capacity of children, adolescents, youth, caregivers, communities and institutions to overcome stresses and shocks that undermine their full and equal enjoyment of their human rights.

**Risk** is the potential loss of life, injury, and/or destroyed or damaged assets which could occur to a system, society, community, household or individual in a specific period of time, determined probabilistically as a function of hazard, exposure, vulnerability and capacity.

**Shocks and stressors** are commonly thought of in terms of their source or types, such as “natural” or “man-made”. Shocks are usually (but not always) acute (rapid onset, typically short duration) events, while stresses usually (but not always) described as chronic (slow onset, typically protracted duration), which refers to the onset and duration of the event.

**Transform** refers to the capacity to make intentional and fundamental changes to mitigate or reduce the underlying causes of risks and vulnerabilities, including changing structures and systems that cause risk and vulnerabilities. For example, the capacity of girls and boys, and women and men to engage in and generate long-term change processes that alters norms, values, beliefs, power structures and systems to support justice, equality and risk informed sustainable development.

**Vulnerability** refers to the conditions determined by physical, social, economic and environmental factors or processes which increase the susceptibility of an individual, a community, assets or systems to the impacts of hazards.





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