

This position paper is the result of a WASH stakeholders' roundtable convened by WaterAid Canada. The following organizations and experts from across Canada participated in contributing their knowledge and expertise:

Amref Health Africa in Canada

CARE Canada

Centre de cooperation internationale en sante et developpement (CCISD)

Centre for Affordable Water and Sanitation Technology (CAWST)

CowaterSogema International

One Drop

Plan International Canada

Right to Play

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Executive Summary

The Canadian water, sanitation and hygiene (WASH) sector welcomes Canada's new Feminist International Assistance Policy, a bold rights-based framework to guide Canada's international development efforts that places gender equality and the empowerment of women and girls at the heart of poverty reduction. Based on the contributions of 17 organizations and individuals, this position paper presents the business case for WASH as a critical pathway to realizing the ambitions of Canada's Feminist International Assistance Policy. It draws on examples from the WASH sector and demonstrates how the sector takes an evidence-based, innovative, gendered and rights-based approach to transforming the lives of women and girls, and the communities in which they live.

10 Reasons WASH is a Pathway to Gender Equality and the Empowerment of Women and Girls

- Women and girls are empowered when they have control over the resources to meet their WASH needs and participate in the provision of WASH services. Water and sanitation are fundamental human rights and integral to a human rights-based approach to development.
- 2. WASH is a pillar of public health. WASH is key to the development and growth of every individual, and contributes to achieving positive maternal and child health outcomes. It is key to alleviating the burden of disease, reduces death in health care facilities and contributes to a productive workforce.
- 3. WASH is a determining factor for nutrition outcomes. Lack of clean water and inadequate sanitation leads to diarrhea and worm-related infections which account for 50% of all childhood malnutrition. Poor WASH conditions, especially from conception to a child's second birthday, can significantly increase the risk of undernutrition.
- 4. Investments in WASH contribute to reducing sexual and gender-based violence. The daily task of collecting water and the lack of adequate and gender-sensitive sanitation services puts women and girls at risk of harassment or sexual and gender-based violence when they have to travel long distances for water, use shared toilets or have no alternative to practicing open defecation.
- 5. Investments in WASH reduce the burden of unpaid work on women and girls, and facilitate participation in education, employment, leisure activities and decision-making. In sub-Saharan Africa, women and girls carry water containers on their heads, hips or backs for an average of 5 km each day, spending 40 billion hours per year on water collection.

- 6. Appropriate water and sanitation facilities in schools leads to better education and health outcomes for girls and boys and supports girls' menstrual hygiene management. In Bangladesh, the establishment of appropriate sanitation facilities in schools increased girls attendance by 11%.
- 7. Water and sanitation services provide economic opportunities for women. WASH facilities in places of employment enable women to fully participate in the workforce. WASH services also enable women to seize local entrepreneurial opportunities, including WASH-related income generating activities that improve their livelihoods.
- 8. WASH is an important entry point to build national and local government capacity to meet the needs of women and girls. National and local institutional, regulatory and financial arrangements determine the safe management of water and sanitation. WASH is a concrete, critical area on which local governments and development partners can take action to benefit all citizens.
- WASH services are critical for meeting the basic needs of women and girls in humanitarian and fragile contexts. In crises, outbreaks of WASH-related diseases such as cholera are among the most common causes of death.
- 10. The impact of climate change will increasingly test the resilience of sanitation systems and the availability of safe water owing to floods, droughts and extreme weather patterns, impacting vulnerable communities around the world. The global water crisis represent one of the biggest threats facing the planet over the next decade. Roughly one-third of the world's population currently lives in water-stressed areas and this is predicted to increase to 2.9 billion by 2025, while floods threaten lives, livelihoods, and infrastructure.

The bottom line

WASH empowers people and communities. It serves as a critical pathway to transforming gender relations and supporting women and girls as agents of change to lead healthy lives and participate in social, economic, and political activities.

Global Affairs Canada should integrate WASH throughout its efforts to realize the full potential of the Feminist International Assistance Policy. Specific recommendations are provided throughout this position paper and summarised at the end.

WASH and Canada's Feminist International **Assistance Policy Priorities: The Facts**

Peace and Conflict

In crises, outbreaks of water-borne diseases are among the most common causes of death. Diarrhoeal diseases cause over 40 percent of the deaths in disaster and refugee camp settings.10

Gender Equality and the **Empowerment of Women and Girls**

Access to WASH services closer to home means that women and girls avoid sexual and gender-based violence on long journeys to collect water and access sanitation facilities.1

Inclusive Governance

When women participate in decision-making on WASH services, their rights to water and sanitation are more likely to be fulfilled through services that are accessible, safe and affordable.9



Human Dignity

Universal access to water, sanitation and hygiene has the potential to prevent at least 9.1% of the global disease burden and 6.3% of all deaths.2 Roughly 2,200 children die every day as a result of diarrheal diseases.3

Lack of clean water and inadequate sanitation leads to diarrhoea and worm infections accounting for 50% of all childhood malnutrition.4

Children lose 443 million school days each year as a result of illnesses due to contaminated water.5

Environment and Climate Action

Global water crisis represents one of the biggest threats facing the planet over the next decade. Roughly one-third of the world's population lives in water-stressed areas.8

Growth that Works for Everyone

According to the WHO, for every US\$ 1.00 invested in sanitation in 2012, there was a return of US\$ 5.50 in lower health costs, more productivity, and fewer premature deaths.6

Universal access to WASH in sub-Saharan Africa would give women and girls back 40 billion hours per year that they currently spend on water collection for their families,7 freeing up time to pursue education and economic opportunities.



Introduction

The Canadian WASH sector welcomes Canada's new Feminist International Assistance Policy (FIAP). The policy sets out a bold framework to guide Canada's international development efforts through a rights-based approach that places gender equality and the empowerment of women and girls at the heart of poverty reduction and humanitarian response.

This position paper presents a business case for WASH as a critical pathway to realizing the ambitions of Canada's FIAP. Drawing on inputs and experience from 15 organizations, the paper outlines how WASH empowers people and communities, and serves as a critical pathway to transforming gender relations and supporting women and girls as agents of change to lead healthy lives and participate in productive social, economic, and political activities. Explicitly integrating WASH into Canada's international development efforts is a good investment for reaching the poorest and most marginalized women, girls, men and boys and supporting gender equality.

The paper identifies 10 reasons why WASH is a pathway to realizing the goals of Canada's FIAP. The 10 reasons are presented as one page entries that can be read together or standalone. Each reason is unpacked through a brief overview of the key issues, the business case for WASH, an illustrative example as well as recommendations to Global Affairs Canada for advancing the FIAP through WASH. The FIAP priorities that relate to the reason are also listed.

In presenting these examples, this position paper shows how the WASH sector effectively contributes to development outcomes. The sector works with women and girls, and the communities in which they live, to deliver WASH services through rights-based programming. WASH organizations are no strangers to multi-stakeholder partnerships and innovation. The Canadian WASH sector looks forward to working with Global Affairs Canada and their partners to realize the ambitions of Canada's FIAP.

Realizing Rights, Empowering Women and Girls

FIAP Action Areas

- Gender Equality and the Empowerment of Women and Girls
- Inclusive Governance

THE REASON WASH MATTERS

Water and sanitation are fundamental human rights and integral to a human rights-based approach to development that recognizes the importance and indivisibility of all rights. Adopted by the International Covenant on Economic, Social and Cultural Rights in 2002 and reconfirmed in Resolution 64/292 at the United Nations in 2010, the right to water and sanitation requires that services are sufficient, safe, acceptable, accessible, and affordable without discrimination, and are generally considered "indispensable for leading a life in human dignity" and a "prerequisite for the realization of other human rights." Access to water and sanitation takes on particular importance for women and girls given their traditional role as stewards of water, their sexual and reproductive health needs and their role in caring for children. In this context, gender-centered WASH programming supports women to take on leadership roles and participate in decision making. It encourages them to exercise their role as rights-bearers and calls on duty-bearers to deliver on their obligations to provide WASH services. When women are excluded from decision-making on WASH issues, resultant services tend to be less accessible and appropriate, and key issues, such as menstrual hygiene management, are seen as niche issues and taboo.

THE BUSINESS CASE FOR INVESTING IN WASH

Women and girls are empowered when they have control over their WASH needs as rights-holders and participate in the planning and provision of WASH services. Realizing WASH related rights contributes to the realization of rights in other areas. For example, women contribute to better health outcomes in their families when they have control over the quality of water used in their homes. When women participate in decision-making on WASH, they experience better and safer access to WASH, more respect from other members of community, and increased confidence, which contributes to changes in women and men's attitudes towards women's leadership. Involvement by men and boys is important in this context to ensure due consideration for how they may react to changing gender roles and support progress towards gender equity. WASH can serve as a strategic entry point to further women's interests by supporting their leadership and participation.



Recommendation

Prioritize WASH in the promotion of the rights of women and girls as part of international advocacy efforts and support the meaningful participation and leadership of women and girls in the management of water and sanitation resources in their communities by working with women and women's organizations.

Improving Health Outcomes

FIAP Action Areas

• Human Dignity



THE REASON WASH MATTERS

The essential role of WASH for health-promoting conditions and hygienic environments is well established. Yet, research continues to show that in low- and middle-income countries, 38% of health care facilities lack an improved water source, 19% do not have improved sanitation, and 35% lack water and soap for handwashing. Globally, 15% of patients develop an infection during a hospital stay, with the proportion much greater in low-income countries. Women and children remain at risk of WASH-related diseases and death, with mothers and newborns particularly vulnerable. WASH is also critical to effective menstrual hygiene management including reducing risks of bacterial infections.

THE BUSINESS CASE FOR INVESTING IN WASH

Safe water and adequate sanitation lead to significant gains in health outcomes. The UN estimates that nearly half of all patients in hospital beds in developing countries are a result of illnesses preventable through appropriate access to WASH. For mothers and newborns, WASH is a key contributor to health. Simple hygiene practices during antenatal care, labor, and birth can reduce the risk of infections, sepsis, and death for infants and mothers by up to 25%. A study in Nepal found that handwashing by birth attendants and mothers increased newborn survival rates by 44%.

Promoting maternal and newborn health in sub-Saharan Africa

A consortium led by Amref Health Africa in partnership with Christian Children's Fund of Canada, the Hospital for Sick Children's Centre for Global Child Health and WaterAid Canada is working to reduce mother and newborn deaths in remote, rural and fragile communities. These communities face the greatest risks owing to lack of access to basic, life-saving health care and everyday infrastructure, such as clean water and sanitation, that are so important for healthy living. From 2016-2020, the initiative is bringing together Canadian and African expertise to tackle key contributors to poor health, including: poor access to family planning and other sexual and reproductive health services; lack of clean water; inadequate sanitation; shortage of trained health workers; gaps in information for parents about basic child health; malnutrition and under nutrition; overcrowded and poorly equipped health facilities; lack of systems to track vital health data; and gender inequality. The initiative will train health workers in reproductive, newborn and child health services as well as best practices in sanitation and hygiene, refurbish health facilities, deliver essential equipment and medicines to health facilities, and enable comprehensive health education - including nutrition, clean water, sanitation and hygiene - in communities throughout East Africa. Over 1.7 million people are expected to benefit directly from the project, including 1 million women of reproductive age and more than 650,000 children under the age of five. More than 1.4 million additional people are expected to benefit indirectly.

Source: Amref Health Africa 2015, 2017.

NaterAid / Sam Vox

Recommendation

Integrate WASH interventions into health system strengthening programs that directly address the health of women and children, including in the priority areas of maternal, newborn and child health, and sexual and reproductive health and rights.

WHO and UNICEF, 2015b; UNDP, 2006; WHO, 2017; Benova et al, 2014a, b; Gon et al, 2014; Blencowe et al. 2011; Brocklehurst and Bartram, 2010; Rhee et al, 2008.

Better Nutrition Outcomes

FIAP Action Areas

- Human Dignity
- Growth that Works For Everyone

THE REASON WASH MATTERS

WASH is directly linked to nutrition outcomes. Lack of clean water and inadequate sanitation leads to diarrhea and worm infections accounting for 50% of all childhood malnutrition. Approximately 25% of stunting can be attributed to five or more episodes of diarrhea before age two. Chronic undernutrition has also been linked to fecal-contaminated environments, which leads to health issues that reduce the ability to utilize essential nutrients. Poor nutrition in girls and women is the result of inadequate quantities and quality of food, as well as nutrition insecurity, which has many causes including lack of safe WASH and unsafe food preparation practices.

THE BUSINESS CASE FOR INVESTING IN WASH

In WASH and nutrition sectors, there is a growing consensus that WASH is an essential component of strategies to reduce undernutrition and improve children's nutritional status and women's nutrition needs. Experts agree on the need to focus on WASH from conception to a child's second birthday. WASH is essential for preventing infectious diseases and ensuring healthy environments, including in terms of food resources. In addition to improving nutrient absorption, treated human waste can be used as a fertilizer to improve access to food through increased crop productivity and diversity. Consumption of improved water quality can reduce diarrhea significantly between 28% and 45%, depending on the type of water supply. WASH is a critical component for attaining large-scale impact on nutrition, particularly for mothers and children, and should be part of a multi-sectoral approach that addresses direct and indirect causes of poor nutritional status.

Southern African Nutrition Initiative: A comprehensive approach

Because of widespread malnutrition, Malawi, Zambia, and Mozambique continue to have some of the highest child mortality rates in the world. Through its Southern African Nutrition Initiative, CARE aims to reach over 575,000 beneficiaries through comprehensive, evidence-based nutrition solutions over 2016-2020 that will contribute to the reduction of under-nutrition in women and children. The initiative includes individual and group nutrition counselling for women and men and training health care workers to provide nutrition education for pregnant and nursing women and their families as well as children under five. To meet immediate needs, it will provide therapeutic feeding to severely malnourished children and improve access to nutrition and psycho-social support for mothers and families living with HIV and AIDS. The initiative also supports community and backyard gardens by providing seeds, tools, equipment and training to produce a healthy and diverse range of food for families and building wells and water systems in collaboration with community members to ensure safe access to clean drinking water. Finally, village savings and loans associations will be supported to empower women and expand their economic opportunities, strengthening women's economic status and autonomy and their ability to generate an income. The Southern African Nutrition Initiative serves as a multi-sectoral approach to nutrition including provisions related to health, education, WASH, gender equality and income generation.

Source: Excerpt from CARE Canada, 2017.

VaterAid / Dennis Lupenga

Recommendation

Integrate WASH into nutrition programs to improve the effectiveness of interventions in the areas of nutrition and child survival.

Reducing Sexual and Gender-Based Violence

FIAP Action Areas

• Gender Equality and the Empowerment of Women and Girls

THE REASON WASH MATTERS

Women and girls are put at risk of harassment and sexual and gender-based violence when they have to travel long distances for drinking water or have inadequate access to sanitation services, such as having to use shared toilets or no alternative to practicing open defecation. Inadequate water and sanitation in urban settings similarly puts women and girls at risk. Research on the experiences of slum-dwelling women in India has documented how inadequate provision and maintenance of public and community toilets, and continued use of open defecation sites, puts women at risk of violence and harassment. A study looking at WASH related genderbased violence in East Africa found that pregnant women and young girls are particularly vulnerable. In emergency contexts, WASH-related risks of sexual and gender-based violence are heightened. Taboos regarding women's sexual and reproductive health, including menstruation, and dominant social norms that condone violence against women and girls mean that issues related to WASH and sexual and gender-based violence are often not discussed by governments, communities, women and men. Moreover, fear and humiliation mean that sexual and gender-based violence often go unreported by women and girls.

THE BUSINESS CASE FOR INVESTING IN WASH

WASH and gender equality experts agree that WASH interventions can help reduce the risk of harassment, and sexual and gender-based violence experienced by women and girls in the context of inadequate water and sanitation. Engaging women and girls in the planning and delivery of WASH services, and ensuring that WASH facilities are built appropriately and in safe locations are important in this context. An opportunity exists for Canada to be at the forefront in addressing stigmas and breaking down barriers that contribute to WASH-related sexual and gender-based violence.



problems between couples. Husbands did not believe that so much time was needed for the task. They accused their wives of being with other men, leading to genderbased violence in the home with women reporting being beaten by their spouses. With support from Plan International Canada, new and closer water points were developed in the village. According to the village office, bringing water services closer to home has meant a sharp decrease in gender-based violence cases.

Source: Example provided by Plan International Canada, 2017.

Recommendation

Canada should take on a bold leadership role globally by addressing WASH-related violence as a part of international advocacy and diplomacy efforts aimed at reducing sexual and gender-based violence. Ensure that WASH policies and programs supported by the Canadian government prioritize the safety of women and girls and that programs aimed at reducing violence against women address WASH related factors.

Reducing the Burden of Unpaid Work

FIAP Action Areas

- Human Dignity
- Growth that Works for Everyone
- Inclusive Governance

THE REASON WASH MATTERS

In 71% of households worldwide, the responsibility for the daily task of water collection falls to women and girls. In sub-Saharan Africa, women and girls carry water containers on their heads, hips or backs for an average of three miles each day, spending 40 billion hours per year on water collection. As a result of time spent on water collection, many women and girls are unable to attend school, take on income earning opportunities, carry out leisure activities or engage in decision-making.

THE BUSINESS CASE FOR INVESTING IN WASH

Seventy percent of the estimated economic benefits of WASH are related to time saving. When the burden of water collection is reduced, research shows that women and girls increase their participation in a wide range of activities, such as wage labour, entrepreneurship, education, community and social activities, awareness-raising and community mobilization activities, leisure, and additional care work for children, the elderly and the sick. Reducing the burden of water collection also creates health benefits. A review of nearly 200,000 Demographic and Health Surveys in 26 countries found that a 15 minute decrease in one-way walk time to a safe water source is associated with a 41% average relative reduction in diarrhea prevalence, improved child nutritional status, and a 11% relative reduction in under-five child mortality.

Reducing the burden of unpaid labour and empowering women: Florence of Amuria

With the support of the Centre for Affordable Water and Sanitation Technology (CAWST), the Global Women's Water Initiative (GWWI) works to develop WASH-related capacity in partner countries and support women as community WASH leaders. In 2012, Florence, a woman from the remote community of Amuria in Uganda, attended a GWWI training where she learned to install and operate domestic rainwater harvesting systems. As a result, Florence built a rainwater harvesting system and storage tank at her home and at a girls' dorm at a primary school. She supplemented water from the local water point with the rainwater she harvested, freeing up more of her time for productive activities, including further training with GWWI. Her initiative at the primary school increased girls' attendance as they felt more comfortable attending school during times of menstruation with improved access to safe water.

Training on household water treatment and safe storage reduces the burden of water collection as women can feel safe collecting water from closer - but perhaps more contaminated - water sources that they can treat, as opposed to distant designated safe water points. Training also empowers women with technical knowledge and skills, boosting their confidence and increasing their potential for employment. After her success implementing rainwater harvesting systems, Florence continued her professional development and now earns an income selling hygiene products.

Source: Example provided by CAWST, 2017.

WaterAid / Dennis Lupenga

Recommendation

Ensure WASH-related time constraints faced by women and girls are addressed in education, employment and inclusive governance programming.

Enabling Girls' Education

FIAP Action Areas

- Human Dignity
- Growth that Works for Everyone

THE REASON WASH MATTERS

WASH in schools impacts the education and health outcomes of girls and boys. Lack of privacy, suitable infrastructure for cleaning and washing and good hygiene in school toilets contributes to school absenteeism, particularly when girls menstruate. Moreover, inadequate WASH facilities in schools are a key contributor to childhood illnesses, namely diarrhea. Children lose 443 million school days each year as a result of illnesses due to contaminated water. In 2011, only 45% of schools in least developed and low-income countries had adequate sanitation facilities. Lower education outcomes for women in turn affects their economic opportunities, family size and family health.

THE BUSINESS CASE FOR INVESTING IN WASH

According to UNICEF, WASH in schools increases student attendance, contributes to dignity, respect and gender equality and significantly reduces hygiene-related disease. In Bangladesh, girls' attendance increased by 11% when sanitation facilities were made available. Improved WASH in schools in Kenya resulted in nearly 50% reduction in diarrheal illness. WASH programming can play a critical role in raising awareness of gender issues in schools and contribute to improving gender equality by ensuring that girls have access to separate and appropriate washroom facilities, and systems to help manage menstrual hygiene.





Recommendation

Provide dedicated funding to address inadequate WASH provisions in schools. Ensure that Canada's development partners integrate WASH in efforts to lower and eliminate perceived and actual barriers to girls' education, including those preventing safe and healthy menstrual hygiene management.

Promoting Economic Opportunities for Women

FIAP Action Areas

Growth that Works for Everyone

THE REASON WASH MATTERS

Lack of suitable water and sanitation facilities in the workplace undermine women's access to decent work, affecting livelihoods and productivity. In most lower-middle income countries, WASH guidelines and standards that support menstrual hygiene management are limited or do not exist. Assuming absenteeism for one day per month due to lack of workplace WASH facilities during menstruation, a 2008 World Bank study estimated that the Philippines and Vietnam see 13.8 and 1.5 million workday absences and USD 13 and 1.28 million in economic losses per year respectively. The challenge of addressing WASH issues in places of employment is exacerbated by women's status in society, social taboos related to menstruation and fear of losing employment among women who wish to speak up. Limited access to WASH in homes and communities also undermines income generating opportunities for women, particularly in rural locations where agricultural activities depend on water availability.

THE BUSINESS CASE FOR INVESTING IN WASH

Better workplace WASH provisions improve worker health, reduce absenteeism, increase productivity and support the dignity and inclusion of female employees. The private sector is working to address these issues. "WASH4WORK" is a multi-stakeholder international initiative that promotes WASH in the workplace and across supply chains, and is working to ensure that business operations do not negatively impact WASH in surrounding communities. WASH can also support women's economic empowerment by providing women with access to relevant resources in the home or community, control over means of production and economic independence.

Women's economic empowerment through WASH at home

With the support of the Millennium Challenge Corporation, Cowater International implemented the Water Smart Homes Activity to improve home water systems and reduce water costs for the poorest households in the third largest city in Jordan. The project included a pilot income generation program for women, especially those from poorer households. It was designed to help women start sustainable small home businesses to complement their family income, taking into account cultural, market and environmental constraints. With the help of community based organizations, the "Women Plumbers Program" was launched. Participants received extensive theoretical and on-the-job training in vocational training centers where they developed the skills to become plumbers and to market their business. The use of women plumbers allowed for repairs to be conducted in homes with only women present, meeting the needs of many households; traditionally, another male had to be present for repairs to be conducted by a male plumber. Most of the women in the pilot program opened their own plumbing businesses or developed other types of small businesses. Owing to the success of the pilot, the Jordanian Minister of Water and Irrigation plans to roll out the program in other cities.

Source: Excerpt provided by Cowater International.

WaterAid / Alexia Webster

Recommendation

Connect WASH issues to Canada's efforts to promote of women's economic participation internationally and include WASH in programming aimed at improving economic opportunities for women. Partner with the private sector and development stakeholders to improve the availability of WASH facilities in places of employment and to support local entrepreneurial, business and employment opportunities for women, including in the WASH sector.

Strengthening National and Local Governments to Meet the Needs of Women and Girls

FIAP Action Areas

Inclusive Governance

THE REASON WASH MATTERS

In many countries, responsibility for WASH is delegated from national to local governments. This means that they have a primary responsibility for meeting the WASH needs at the local level. However, local governments lack the capacity to independently meet WASH needs and require capacity and support to successfully deliver WASH, often working in partnership with the private sector and civil society. National governments, often with support from the international community, play an important role in building local government capacity through strong national planning, dedicated budgets for institutional support and provision of capacity development and training. In this context, local government capacity for gender-based analysis, gender-sensitive programming and engagement with women as decision-makers and leaders in planning, implementation and accountability processes impacts the effectiveness of WASH service delivery.

THE BUSINESS CASE FOR INVESTING IN WASH

The availability and quality of WASH services is a basic yet useful indicator of government functionality at national and local levels. The full potential of investment in WASH is realized through the establishment of effective, accountable and inclusive institutions that support equity and inclusion for the poorest and most vulnerable, including women and girls. Strengthening decentralized WASH institutions and processes supports gender equality and contributes to the long-term sustainability of service delivery, health and economic systems. Genderresponsive budgeting is an important tool in this context to ensure that commitments and policies that support the WASH needs of women and girls are put into practice.



In Senegal, water supply networks are managed by local rural water users' associations (ASUFOR). ASUFORs, upon obtaining a license from the Directorate of Operations and Maintenance, signs a management contract with a private operator for daily operations of the network, and sets water tariffs. The Directorate of Operations and Maintenance is responsible for overall exploitation and maintenance of assets, validation of technical specifications of pumping systems, rehabilitation, renewal and extension of pumping systems, and oversight of the ASUFORs. The government has applied strict gender representation quotas to the associations. The management committees are composed of user representative delegations. Each delegation must have two members with at least one woman and a woman must serve as one of the two vice-presidents of the association. Further, at least one third of all members of ASUFOR management committees must be women. The government also advocates that water sellers at standpipes should be women.

This system has led to a significant increase in coverage, production and population served since 2004, though network extension remains a challenge. Strong capacity building for planning of maintenance, rehabilitation and extension of network; strong regulation, oversight and control of management contracts; and a sound asset management policy and investment planning work to ensure the sustainability of the model.

Adapted from Naughton, 2013; WSP, 2010.

NaterAid / Basile Ouedraogo

Recommendation

Support national and local governments to improve their capacity to plan and deliver quality WASH services and meet the needs of women and girls.

Meeting the Needs of Women and Girls in Humanitarian and Fragile Contexts

FIAP Action Areas

- Human Dignity
- Peace and Security

THE REASON WASH MATTERS

In the aftermath of disasters and emergencies of all kinds, water supplies are often contaminated or destroyed along with sanitation facilities. Outbreaks of WASH-related diseases, including cholera and other diarrheal diseases, are among the most common causes of death. Women and girls are disproportionally affected by emergencies, including their needs around WASH. They face difficulties accessing water and sanitation facilities necessary for menstrual hygiene management, healthy pregnancies and births, and overall health. Moreover, the political, economic and social stresses of fragility, exacerbated by stresses of climate change, present significant risk factors to the sustainability of WASH interventions in such environments.

THE BUSINESS CASE FOR INVESTING IN WASH

WASH interventions are essential to build resilient health systems, economies and services, especially for the poorest and most vulnerable in fragile and conflict- and disaster-affected areas. Providing WASH services in a timely manner is an essential first step in re-building communities and re-establishing or strengthening local government systems and creating an enabling environment for long-term sustainable development. As a gateway to rebuilding country systems, humanitarian WASH interventions address the immediate human need for water and sanitation - critical for women and girls - while providing a short-term common goal to encourage and mobilize collaborative behaviours toward conflict resolution. WASH interventions can help bridge immediate humanitarian needs with longer term development efforts.



One Drop and Oxfam-Quebec implemented Project Haiti to support reconstruction and rehabilitation efforts in the Léogâne municipality, one of the areas hardest hit by the January 2010 earthquake. The majority of Léogâne's water infrastructures were annihilated, jeopardizing the communities' access to water, food security and overall health. The project improved access to safe water for consumption and agricultural production, significantly improving the lives of the women and girls reached. The rehabilitation of irrigation canals revived farming activities led by women such as livestock and plant production. The construction of solar energy-powered community water centers provided access to water related infrastructures such as showers and laundry facilities, reducing the burden of the work. These community centers also became a gathering place for the population, which enhanced social cohesion and women and girls' participation. The light emanating from the centers enabled students to do their homework at night. Moreover, a multidisciplinary play was written with the words of the populations gathered through workshops and created a space to facilitate the communities' grieving process, and for women to express their concerns. The play toured the region to encourage the reconstruction process and inspire new ways of thinking and relating to water, and promoting women's involvement in water user committees.

Source: Excerpt from One Drop, 2017.

VaterAid / Jordi Ruiz Cirera

Recommendation

Integrate gender-inclusive WASH interventions into humanitarian programming and in fragile contexts as an entry point in the transition towards longer term development efforts and to meet the basic needs of women and girls.

Meeting the Needs of Women and Girls in the Context of Climate Change

FIAP Action Areas

Environment and Climate Action

THE REASON WASH MATTERS

Climate change is having a significant impact on the world's water resources. In the past two decades, natural disasters have increased from approximately 200 to over 400 per year with floods and cyclones rising dramatically. By 2025, 1.8 billion people will live in countries or regions facing absolute water scarcity. The impacts of climate change will increasingly test the resilience of sanitation systems and the availability of safe water supplies, thereby having a significant impact on the health and livelihoods of women and girls, and men and boys, particularly in regions of the world with limited capacities. Moreover, women and girls and marginalized communities are more vulnerable to the effects of climate change given their lack of control over productive resources and limited access to coping mechanisms such as formal credit facilities and insurance. Extreme weather events have a number of impacts on women and girls, including increased time spent on unpaid work, loss of assets and entitlements, greater health risks, increased conflicts owing to water scarcity, and greater risks of gender-based violence when WASH resources are not readily and safely available.

THE BUSINESS CASE FOR INVESTING IN WASH

At the 2015 United Nations Climate Change Conference (COP 21), Canada committed to enhanced action on adaptation, and promoting collaborative approaches to climate action, including through the use of bottom-up approaches by sub-national governments. Canada is also supporting local capacity development and enhancing resilience on the ground through its climate finance commitments. Strengthening the capacities of government, service providers and decentralized institutions to improve the resilience of WASH services in the context of climate resilience is critical to meeting the current and future needs of women and girls and an important means through which Canada can realize its climate commitments. WASH interventions are part of efforts to build climate-resilient health systems, economies and services for the poorest and most vulnerable. Ensuring equitable access to sustainable safe water sources and improved sanitation also contributes to addressing the socio-economic water scarcity, which occurs when there is insufficient investment, skills and political will to keep up with growing demands for water, preventing access to the resource.



In 2003, 42% of households in Bangladesh overall did not have a latrine. The Government of Bangladesh responded by developing a national sanitation strategy designed to eliminate open defecation by 2010. This approach was integrated, multi-sectoral and multi-stakeholder in scope, with NGOs being utilized to facilitate community involvement. Decision-making was decentralized to the local level through Water and Sewerage Authorities and the absolute poor, schools and mosques are subsidized through the program. NGOs and the private sector served as important partners. A significant amount of the overall investment was allocated to 'soft' sanitation (awareness and education campaigns, training etc.). The approach also incorporated resilience against natural disasters, particularly floods. In the 2007 floods, about 90-100% of the sanitary latrines were submerged. Provision of secure sanitation arrangements for women and children was very limited, available only in a few flood centers. Women and adolescent girls sometimes used plastic bags for defecation and stored them until dark when they could dispose of them privately but with some risk to their security. To address this issue, sanitation facilities were built above the flood levels; designated evacuation centres had adequate sanitation facilities; mobile sanitation facilities were available to transport to flooded regions; and media messages were developed to promote good sanitation and hygiene behavior in emergency situations.

Source: Adapted from UNU-INWEH, 2010; DER, 2007.

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Recommendation

To support Canada's COP 21 commitments, strengthen the capacity of local WASH institutions to respond to climate change and provide WASH to the poorest and most marginalized, in particular women and girls.



Conclusion

WASH empowers people and communities. It helps to transform gender relations and support women and girls as agents of change. The business case for WASH as a key contributor to development outcomes is incontrovertible. Innovative and sustainable WASH is a foundation for healthy, productive, inclusive and climate resilient societies. As demonstrated through the interlinkages presented in this paper, investing in gender-inclusive WASH will greatly enhance Canada's other priority investments in international development.

Canada is well-positioned to integrate WASH programming into its FIAP's six action areas – gender equality and the empowerment of women and girls, human dignity, growth that works for all, environment and climate action, inclusive governance, and peace and security. Canada also has an opportunity to take on a leadership role by bringing the feminist perspective to global WASH discussions. The Canadian WASH sector is ready to partner with Global Affairs Canada as it moves forward on translating the FIAP into sustainable results.

Given the vital role of WASH in supporting gender equality and the empowerment of women and girls "towards a more peaceful, inclusive and prosperous world," Global Affairs Canada should integrate gender-inclusive WASH throughout its efforts to implement the FIAP.

This can be achieved by following these specific recommendations:

- Prioritize WASH in the promotion of the rights of women and girls as part of international advocacy efforts and support the meaningful participation and leadership of women and girls in the management of water and sanitation resources in their communities by working with women and women's organizations.
- Integrate gender-inclusive WASH interventions into health system strengthening programs that directly addresses the health of women and children, including in the priority areas of maternal, newborn and child health, and sexual and reproductive health and rights.
- Integrate gender-inclusive WASH into nutrition programs to improve the effectiveness of interventions in the areas of nutrition and child survival.
- ✓ Take on a bold leadership role globally by addressing WASH-related violence as a part of international advocacy and diplomacy efforts aimed at reducing sexual and gender-based violence. Ensure that WASH policies and programs supported by the Canadian government prioritize the safety of women and girls and that programs aimed at reducing violence against women address WASH related factors.
- Ensure WASH-related time constraints faced by women and girls are addressed in education, employment and inclusive governance programming.

- Provide dedicated funding to address inadequate WASH provisions in schools. Ensure that Canada's development partners integrate WASH in efforts to lower and eliminate perceived and actual barriers to girls' education, including those preventing safe and healthy menstrual hygiene management.
- Connect WASH issues to Canada's efforts to promote women's economic participation internationally and include WASH in programming aimed at improving economic opportunities for women. Partner with the private sector and development stakeholders to improve the availability of WASH facilities in places of employment and to support local entrepreneurial, business and employment opportunities for women, including in the WASH sector.
- Support national and local governments to improve their capacity to plan and deliver quality WASH services and meet the needs of women and girls.
- Integrate gender-inclusive WASH interventions into humanitarian programming and in fragile contexts as an entry point in the transition towards longer term development efforts and to meet the basic needs of women and girls.
- To support Canada's COP 21 commitments, strengthen the capacity of local WASH institutions to respond to climate change and provide WASH to the poorest and most marginalized, in particular women and girls.



VaterAid / Eliza Powell

References

Ahrari, S. and Van Galen, E. 2017. Gender and empowerment through WASH based on cases from Bangladesh. Paper presented at the 40th WEDC International Conference, Loughborough UK.

Amref Health Africa. 2017. Partnering to Create Better Health for Moms and Babies in Ethiopia, Kenya, Malawi and Tanzania. Accessed 1 September 2017. https://www.amrefcanada.org/why-africa/why-africa/partnering-to-create-better-health-for-moms-and-babies-in-ethiopia-kenya-malawi-and-tanzania/

-----. 2015. "Amref Health Africa in Canada Awarded \$24.9 million Grant to Improve Mother and Child Health in sub-Saharan Africa." Accessed 1 September 2017. https://www.amrefcanada.org/media-centre/news-releases/amref-health-africa-in-canada-awarded-249-million-grant-to-improve-mother-and-child-health-in-subsaharan-africa/

Benova, L., Cumming, O., Gordon, B.A., Magoma, M., and Campbell, O. 2014a. Where There Is No Toilet: Water and Sanitation Environments of Domestic and Facility Births in Tanzania. *PLOS One* 9(9), pp. 1-10. http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0106738

Benova, L., Cumming, O. and Campbell, O. 2014b. Systematic Review Systematic review and metaanalysis: association between water and sanitation environment and maternal mortality. *Tropical Medicine & International Health*, 19(4), pp.368-387. http://onlinelibrary.wiley.com/doi/10.1111/tmi.12275/abstract

Blencowe, H., Cousens, S., Mullany, L., Lee, A., Kerber, K., Wall, S., Darmstadt, G., and Lawn, J. 2011. Clean birth and postnatal care practices to reduce neonatal deaths from sepsis and tetanus: a systematic review and Delphi estimation of mortality effect. *BMC Public Health*, 11(Suppl 3), S11.

Boulenouar, J. 2015. Capacity support to local governments. *Briefing Note, March*. IRC, The Hague. https://www.ircwash.org/sites/default/files/084-201502triple-s_bn08defweb.pdf

Brocklehurst, C. and Bartram, J. 2010. Swimming Upstream: why sanitation, hygiene and water are so important to mothers and their daughters. *Bulletin of the World Health Organization*, 88, p. 482. http://www.who.int/bulletin/volumes/88/7/10-080077/en/

CARE Canada. 2017. Healthy Moms, Healthy Babies. Southern African Nutrition Initiative (SANI). Accessed 1 September 2017. https://care.ca/healthy-moms-healthy-babies

Carrard, N. 2012. Water, Sanitation and Hygiene (WASH) and Women's Leadership: Insights from Pacific Research. Water Safety Conference, Kampala. http://www.operationandmaintenance.net/uploads/IWA%20Toolboxes/WSP/WS%20conference/preconference%20workshops/Naomi%20Carrard%20Womens%20Leadership%20in%20WASH13Nov.pdf

Checkley, W., Buckley, G., Gilman, R., Assis, A., Guerrant, R., Morris, S., Mølbak, K., Valentiner-Branth, P., Lanata, CF., Black, RE., Childhood Malnutrition and Infection Network. 2008. Multi-Country Analysis of the Effects of Diarrhoea on Childhood Stunting. *International Journal of Epidemiology*, 37(4): pp. 816–30.

de Waal, D. 2015. Delivering WASH in Fragile States: Double Dividends. University of North Carolina Water and Health Conference Presentation. https://waterinstitute.unc.edu/files/2015/11/Fragile-states-for-UNC.pptx

DER (Disaster and Emergency Response DER Sub Group). 2007. *Draft Post Flood Needs Assessment Summary Report*. DER. http://www.lcgbangladesh.org/DERweb/flood2007/Assessment%20 Findings/DER%20Flood%202007%20Assessment%20Report_DRAFT.pdf

Dodos, MPH. J., and Lapègue, J. 2017. Improving nutritional impact through the integration of WASH and nutrition interventions: a practical guidebook. Paper presented at the 40th WEDC International Conference, Loughborough, UK.

European Commission, 2014. Water, hygiene and sanitation (WASH). *ECHO FACTSHEET*. http://ec.europa.eu/echo/files/aid/countries/factsheets/thematic/wash_en.pdf

Fisher, J. 2006. For Her It's The Big Issue. Geneva: WSSCC. http://wsscc.org/wp-content/uploads/2016/04/For-Her-Its-the-Big-Issue-Putting-Women-at-the-centre-of-Water-Supply-Sanitation-and-Hygiene-WASH-Evidence-Report.pdf

Gon, G., Monzon-Llamas, L., Benzova, L., Willey, B., and Campbell, OM. 2014. The contribution of unimproved water and toilet facilities to pregnancy-related mortality in Afghanistan: analysis of the Afghan Mortality Survey. *Tropical Medicine & International Health*, 19(12): pp.1-12.

Graham, J., Hirai, M., and Kim, S. 2016. An analysis of water collection labour among women and children in 24 sub-Saharan African Countries. *PLoS ONE*, 11(6).

Grassi, F., Landberg, J., and Huyer, S. 2015. *Running out of time: The reduction of women's work burden in agricultural production*. Rome: FAO. http://www.fao.org/3/a-i4741e.pdf

GWA and UNDP. 2006. Mainstreaming Gender in Water Management. New York: UNDP. http://www.undp.org/content/dam/aplaws/publication/en/publications/environment-energy/www-ee-library/water-governance/resource-guide-mainstreaming-gender-in-water-management/IWRMGenderResourceGuide-English-200610.pdf

Halcrow, G., Lala, S., Sherbrune, T. T, and Griffiths, M. 2017. Integrating WASH and nutrition to reduce stunting in Cambodia: from discourse to practice. Paper presented at the 40th WEDC International Conference, Loughborough, UK.

Jalan, J. and Ravallion, M. 2003. Does piped water reduce diarrhea for children in rural India? *Journal of Econometrics*, 112 (1): pp. 153-73.

Jansz, S., and Wilbur, J. 2013. Women and WASH. Briefing Note. Geneva and London: Water Supply & Sanitation Collaborative Council and WaterAid.

Jury, W.A. and Vaux, Jr., H.J. 2007. The Emerging Global Water Crisis: Managing Scarcity And Conflict Between Water Users. *Advances in Agronomy* 95: pp. 1-76.

Kulkarni, S., O'Reilly, K. and Bhat, S. 2017. No relief: lived experiences of inadequate sanitation access of poor urban women in India. *Gender & Development*, 25(2): pp. 167-83.

Leahy, C., Winterford, K., Nghiem, T., Kelleher, J., Leong, L. and Willetts, J. 2017. Transforming gender relations through water, sanitation, and hygiene programming and monitoring in Vietnam. Gender & Development, 25(2), pp. 283-301.

Mills, J., and Cumming, O. 2016. The impact of water, sanitation and hygiene on key health and social outcomes: review of evidence. DFID *Evidence Paper*. UK: DFID.

Naughton, M. 2013. "3 Innovative Ways to Manage Rural Water Supply." Accessed 4 October, 2017. http://blogs.worldbank.org/water/3-innovative-ways-manage-rural-water-supply

Okeke, E. 2014. Women show the way in water, sanitation and hygiene (WASH). Thomas Reuters Foundation News. 21 March 2014. http://news.trust.org//item/20140320171632-1j6lw/

One Drop. 2017. "Haiti." Accessed 1 September 2017. https://www.onedrop.org/en/project/haiti/

Pickering, A., and Davis, J. 2012. Freshwater Availability and Water Fetching Distance Affect on Child Health in sub-Saharan Africa. *Environmental Science & Technology*. 46: pp. 2391-97.

Pommells, M., Schuster-Wallace, C., Watt, S., and Mulawa, Z. 2017 forthcoming. Gender Violence as a Water, Sanitation, and Hygiene Risk: Uncovering Violence Against Women and Girls as it Pertains to Poor WaSH Access. *Violence Against Women*.

Prüss-Ustün, A., Bartram, J., Clasen, T., Colford, JM. Jr., Cumming, O., Curtis, V., Bonjour, S., Dangour, AD., De France, J., Fewtrell, L., Freeman, MC., Gordon, B., Hunter, PR., Johnston, RB., Mathers, C., Mäusezahl, D., Medlicott, K., Neira, M., Stocks, M., Wolf, J., Cairncross, S. 2014. Burden of disease from inadequate water, sanitation and hygiene in low- and middle-income settings: a retrospective analysis of data from 145 countries. *Tropical Medicine & International Health*, 19(8): pp. 894-905.

Rhee, V., Mullany, L., Khatry, S., Katz, J., LeClerq, S., Darmstadt, G., Tielsch, J. 2008. Maternal and birth attendant handwashing and neonatal mortality in South Nepal. *Archives of Pediatrics and Adolescent Medicine Journal*, 162: pp, 603-8

Sommer, M., Chandraratna, S., Mahon, T., and Phillips-Howard, P. 2016. Managing menstruation in the workplace: an overlooked issue in low- and middle-income countries. *International Journal of Equity in Health*, 15(86).

Subramanian, S.V., Mejia-Guevara, I., and Krishna, A. 2016. Rethinking policy perspectives on childhood stunting: time to formulate a structural and multifactorial strategy. *Maternal & Child Nutrition*, 12, pp. 219-36.

UNDP. 2006. Human Development Report; Beyond Scarcity: Power, poverty and the global water crisis. New York: UN. http://www.undp.org/content/dam/undp/library/corporate/HDR/2006%20 Global%20HDR/HDR-2006-Beyond%20scarcity-Power-poverty-and-the-global-water-crisis.pdf

UNICEF. n.d. "Gender and Nutrition." Accessed 18 September 2017. https://www.unicef.org/esaro/7310_gender_and_nutrition.html

UNICEF. 2012. Raising even more clean hands: Advancing health, learning and equity through WASH in schools. New York: UN. https://www.unicef.org/wash/schools/files/Raising_Even_More_Clean_Hands_Web_17_October_2012(1).pdf

UNICEF. 2014. Maintaining the Momentum: Advancing Health, Learning and Equity through WASH in Schools. New York: UN. http://www.unicef.org/wash/schools/files/WASH_in_Schools_Maintaining_the_Momentum.pdf

UNU-INWEH. 2010. Sanitation as Key to Global Health: Voices from the Field. United Nations University Institute for Water, Environment and Health. http://inweh.unu.edu/wp-content/uploads/2015/05/Sanitation_as_a_Key_Global_Health.pdf

Ward, J. and Lafrenière, J. 2015. Guidelines for Integrating Gender-Based iolence Interventions in Humanitarian Action. Water, Sanitation and Hygiene. ISAC. http://gbvguidelines.org/wp/wp-content/uploads/2015/09/TAG-wash-08_26_2015.pdf

Water Governance Facility. 2014. Mainstreaming Gender in Water Governance Programmes: From Design to Results. *WGF Report* No. 4, SIWI, Stockholm.

WaterAid. 2013. *Disasters Framework*. London: WaterAid. http://www.wateraid.org/what-we-do/our-approach/research-and-publications/view-publication?id=666038e3-e71d-41b5-94bd-cb406605ece2

WaterAid Canada. 2017. "Students in Uganda lead the way in making periods affordable and smashing taboos." Accessed 1 September 2017. https://www.wateraid.org/uk/media/students-in-uganda-lead-the-way-in-making-periods-affordable-and-smashing-taboos

WaterAid, SHARE and London School of Hygiene & Tropical Medicine. 2013. Under-nutrition and water, sanitation and hygiene. London: WaterAid. http://www.wateraid.org/~/media/Publications/undernutrition_and_water_sanitation_and_hygiene.pdf

WEDC and Loughborough University, n.d. Violence: Gender & WASH, A practitioner's toolkit. http://violence-wash.lboro.ac.uk/

WHO. 2017. "Drinking-water." Accessed 19 August, 2017. http://www.who.int/mediacentre/factsheets/fs391/en/

WHO. 2014. Preventing diarrhoea through better water, sanitation and hygiene: exposures and impacts in low- and middle-income countries. Geneva: WHO. https://apps.who.int/iris/bitstream/10665/150112/1/9789241564823 eng.pdf

WHO and UNICEF. 2015a. Joint Monitoring Program for Water Supply and Sanitation – 2015 Update. New York: UN. http://www.unwater.org/publications/whounicef-joint-monitoring-program-water-supply-sanitation-jmp-2015-update/

WHO and UNICEF. 2015b. Water, Sanitation and Hygiene in Health Care Facilities: status in low- and middle-income countries and way forward. New York: UN. http://www.who.int/water_sanitation_health/publications/wash-health-care-facilities/en/

World Bank. 2008. Economic impacts of sanitation in Southeast Asia: a four-country study conducted in Cambodia, Indonesia, the Philippines and Vietnam under the Economics of Sanitation Initiative (ESI). *Research Report February 2008*. Jakarta: The World Bank. http://www.wsp.org/sites/wsp.org/files/publications/Sanitation_Impact_Synthesis_2.pdf.

WSP (water and sanitation program). 2010. *Gender in Water and Sanitation*. World Bank. https://www.wsp.org/sites/wsp.org/files/publications/WSP-gender-water-sanitation.pdf

INFOGRAPHIC REFERENCES

- 1 See WEDC/Loughborough University, n.d. "Violence, Gender & WASH." http://violence-wash. lboro.ac.uk/.
- 2 Prüss-Üstün A., Bos, R., Gore, F. & Bartram, J. 2008. Safer water, better health: costs, benefits and sustainability of interventions to protect and promote health.[PDF 60 pages] World Health Organization, Geneva.
- 3 Liu L, Johnson HL, Cousens S, Perin J, Scott S, Lawn JE, Rudan I, Campbell H, Cibulskis R, Li M, Mathers C, Black RE; Child Health Epidemiology Reference Group of WHO and UNICEF. Global, regional, and national causes of child mortality: an updated systematic analysis for 2010 with time trends since 2000. Lancet. 2012 Jun 9;379(9832):2151-61.
- WaterAid, SHARE and London School of Hygiene & Tropical Medicine. 2013. Under-nutrition and water, sanitation and hygiene. London: WaterAid. http://www.wateraid.org/~/media/Publications/undernutrition_and_water_sanitation_and_hygiene.pdf
- 5 UNDP, 2006. Human Development Report; Beyond Scarcity: Power, poverty and the global water crisis. Retrieved from http://www.undp.org/content/dam/undp/library/corporate/HDR/2006%20Global%20HDR/HDR-2006-Beyond%20scarcity-Power-poverty-and-the-global-water-crisis.pd
- 6 WHO, 2012. Global costs and benefits of drinking-water supply and sanitation interventions to reach the MDG target and universal coverage. http://apps.who.int/iris/bitstream/10665/75140/1/WHO_HSE_WSH_12.01_eng.pdf?ua=1
- 7 UNIFEM (now UN Women), 2009. Progress of World's Women. Who Answers to Women? Gender and Accountability. p. 36. http://www.unifem.org/progress/2008/media/POWW08_Report_ Full_Text.pdf
- 8 World Economic Forum, 2015. *Global Risks 2015*. http://reports.weforum.org/global-risks-2015/?doing_wp_cron=1502631709.0160350799560546875000
- 9 Jansz, S., & Wilbur, J., 2013. Women and WASH. *Briefing Note*. Water Supply & Sanitation Collaborative Council and WaterAid.
- 10 Isidore, K. K., Aljunid, S., Kamigaki, T., Hammad, K., and Oshitani, H., 2012. Preventing and controlling infectious diseases after natural disasters. United Nations University. https://unu.edu/publications/articles/preventing-and-controlling-infectious-diseases-after-natural-disasters.html#info