

Gender Equality & Goal 6: The Critical Connection



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1 Introduction

‘The lack of water, sanitation and hygiene facilities that meet women and girls’ needs can be largely attributed to the absence of women’s participation in decision-making and planning.’ (Mr Léo Heller – second Special Rapporteur on the human rights to safe drinking water and sanitation, 2016.)¹

Sustainable Development Goal 6 (Goal 6) to ‘ensure availability and sustainable management of water and sanitation for all’ requires explicit attention to gender equality and inclusion. Universal access to safely managed water, sanitation and hygiene (WASH) and appropriate management of water resources will only be achieved if the rights of women and marginalised people are fulfilled. Inequality, discrimination and social exclusion can be found within water governance and WASH policies, strategies and access to services. Social exclusion is often experienced by women, cultural minorities, youth, people with disabilities, the elderly, transgender and intersex people, the poorest of the poor, people considered low-caste, and indigenous peoples. The human right to water and sanitation (UN Resolution 64/292) as well as the Sustainable Development Goals (SDGs), call for the inclusion of all, and equal rights for women, and the elimination of discrimination between people based on their age, gender, disability, race, ethnicity, origin, religion or economic or other status. It also requires attention to multiple dimensions of discrimination, or ‘intersectionality’: for instance, women from a particular ethnic group suffering exclusion due to both their sex and their ethnicity.

The integrated SDGs present a timely opportunity for all actors, at all levels, to explicitly address gender discrimination and inequality, and to proactively facilitate women’s voice, participation and empowerment. As explored in this Discussion Paper, implementation of Goal 6 and the High Level Panel on Water Action Plan can significantly contribute to gender equality in both water resources management and WASH, and by doing so they will contribute to more sustainable and effective water management outcomes for all people, while decreasing the inequalities prevalent in many societies.

1.1. Key messages

- **Proactive and deliberate participation of women and gender-discriminated people is needed at all stages:** Water governance and WASH issues affect gender-discriminated people differently, and these differences need to be identified and understood at all stages of the management of WASH and water resources. The best way to address the needs of women, men, transgender and intersex people in all planned actions, including legislation, policies and programs, is to include them in decision-making, so that decisions about water resource management and access to WASH services promote inclusion. Meaningful participation is required at micro, meso, and macro levels.²
- **Integration across the SDGs leads to more equitable and sustainable outcomes:** The 17 SDGs call for an integrated approach to strategies, policies and implementation at the global and national levels. There is enormous potential in the WASH and water governance targets of Goal 6 (including domestic access to services, transboundary water management, reducing water pollution, increasing water efficiency and restoring water-related ecosystems) to mutually reinforce positive outcomes of gender equality (Goal 5) and reduce inequality overall (Goal 10). Research demonstrates that projects

The difference between sex and gender

Gender and ‘gender roles’ refers to the characteristics and behaviours that different cultures attribute to the sexes. **Sex** refers to biological differences; chromosomes, hormonal profiles, internal and external sex organs.

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designed and run to be socially inclusive and gender-sensitive are more sustainable. Increasing gender-discriminated people's voices at all levels (global, national, local) can help to achieve these integrated SDG targets, serving multiple goals simultaneously.³

- **Good data underpins good practice:** Improving water data systems underpins good water governance and WASH, but such systems ought not to be 'gender blind'. Sex-disaggregated data can (at a minimum) contribute to gender-inclusive policy formulation. Data on gender inequalities in WASH initiatives and in water governance initiatives is also critical. For example, research and data collection can uncover barriers to women owning land and accessing finance, which may undermine their ability to participate in water allocation programs and integrated water resource management. Similarly, data on the economic and social consequences of women and girls lacking access to improved sanitation and menstrual hygiene facilities, underpins increased and targeted investment in these areas of need.

2 Structure and content of this paper

This discussion paper is intended to contribute to the implementation of the High Level Panel on Water (HLPW) Action Plan. It should be read alongside other framing notes commissioned by the Australian Water Partnership.⁴ The key points of intersection with the High Level Panel on Water Action Plan are shown in Figure 1. This Discussion Paper identifies and explains key areas of action for the High Level Panel on Water and other international development actors and governments. The paper provides a range of case studies, and the implications for improving policy and practice are outlined. This paper focuses primarily on the HLPW Action Plan's 'Water Governance' and 'Universal Access to Safe Water and Sanitation' themes.

Appendix 1 outlines the connections between Goal 5 ('Achieve gender equality and empower all women and girls') and Goal 6 ('Ensure availability and sustainable management of water and sanitation for all') of the Sustainable Development Goals (SDGs).

Appendix 2 outlines the key actors working to advance Sustainable Development Goal 6 and gender equality, and some of the initiatives they are undertaking.

A summary version of this Discussion Paper ('Gender and SDG 6: Framing Paper') is available at: <https://waterpartnership.org.au/wp-content/uploads/2016/08/HLPW-Gender-SDG6.pdf/>

2.1. The High Level Panel on Water Action Plan

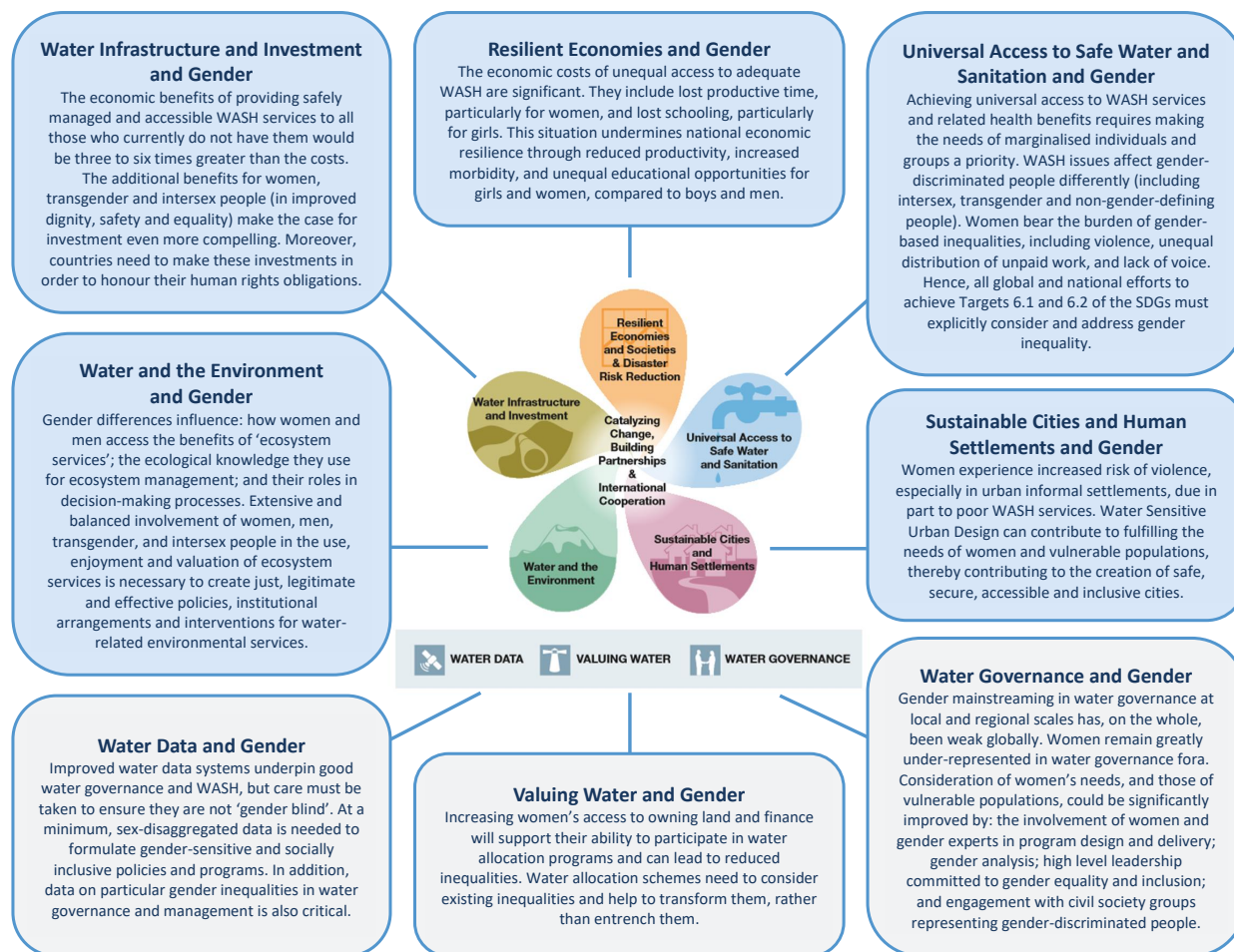
The HLPW has given prominence to the issue of gender equality by incorporating gender-equality goals across the Action Plan. The Plan makes 21 references to the importance of women and girls, and of inclusion. This recognition that 'Inclusive and gender-sensitive project design will strengthen sustainability' is testament to the fact that water resource management and WASH are no longer considered as irrelevant to gender equality at the global level, and are recognised as being key to reducing inequality overall, and to improving outcomes. This discussion paper is aimed at supporting this high level agenda by providing evidence, case studies and examples, and by discussing their implications for policy and practice to support the development of how gender-equality goals will be realised through the HLPW Action Plan, in support of the Sustainable Development Goals.

For the High Level Panel on Water Action Plan (21 September 2016), see: https://sustainabledevelopment.un.org/content/documents/11280HLPW_Action_Plan_DEF_11-1.pdf/

3 Gender and the High Level Panel on Water Action agenda

There are five key areas of action in the agenda of the High Level Panel on Water, and three underpinning priorities. Each of these has important gender-equality dimensions (see Figure 1) and provides important opportunities to accelerate progress towards Goal 6, while advancing gender equality and women’s empowerment.

Figure 1. Key intersection points: gender and the HLPW agenda⁵



4 What does success look like?

Gender equality in water resource management, sanitation and hygiene



All global forums dedicated to water resource management and WASH will be socially inclusive and provide platforms for women and gender-discriminated peoples to provide input and influence.

Women will have access to land, water rights and finance at the same level as men.



Gender disparities in each cultural context will be revealed from the outset, and all decisions around water governance and WASH will be made to work through and beyond these constraints.

Women, particularly in developing contexts, will be taking up more places in the fields of engineering, government, law and science to support their engagement in the water and sanitation governance sectors.



All water governance and WASH programming will pay special attention to the most vulnerable people in our societies.



Women and gender-discriminated people will hold positions of leadership and power in water and sanitation focused organisations.

Women's organisations will be engaged and consulted.

Women and girls, boys and men will all be working together after a natural disaster, including those resulting from climate change.



Men will be champions of equality and involved in all levels of gender mainstreaming so that change is owned by men and women alike.

Women and children will no longer bear the burden of carrying heavy water from far away.



Women, children, transgender and intersex people will no longer be raped or suffer sexual harassment as they travel to the toilet outside of the home.

There will be fewer babies dying as a result of mothers giving birth in unhygienic environments.



Every girl and woman will have access to appropriate information about sexual and reproductive health and rights and appropriate menstrual hygiene management products and services.

5 Opportunities and challenges of addressing gender in Goal 6

5.1. Introduction

Gender equality: refers to the **equal rights, responsibilities and opportunities** of women and men, transgender, intersex people, girls and boys. Gender equality implies that the interests, needs and priorities of all people are taken into consideration, recognising the diversity of different groups of women and men (for example, women belonging to ethnic minorities and women with disabilities). Gender equality is both a human rights principle and a precondition for sustainable, people-centred development (adapted from UN Women).⁶

The human right to water and sanitation requires services to be available in an acceptable, adequate, affordable, appropriate and safe manner to all.⁷ Sustainable Development Goal 6 (Goal 6) to ‘ensure availability and sustainable management of water and sanitation **for all**’ has explicit gender dimensions. Water and sanitation issues affect women, men and transgender people differently; hence all global and national efforts to achieve Goal 6 must explicitly consider and address gender inequality. Applying universal design principles⁸ to all WASH facilities ensures that they are accessible to everyone.

Put simply, water and sanitation issues disproportionately affect women and girls due to biological needs (such as menstrual hygiene management and maternal health); social norms (responsibility for water collection); and particular risks (such as sexual assault).⁹ For this reason there is explicit mention of women and girls in the Goal 6 Target on sanitation. This target draws attention to the need to enable women to adequately manage their needs with dignity and safety, including in public settings (schools, workplaces and health-care facilities).¹⁰ Globally, women are more likely to live in poverty than men and they are disproportionately affected by HIV. Moreover, girls are less likely to finish school than boys.¹¹ Disability can affect access to water and sanitation for both women and men, but women with disabilities are often more disadvantaged than their male counterparts.

Yet, gender discrimination and exclusion exist at all levels of water and sanitation policies, strategies and programs. Moreover, women are rarely adequately represented in ministries responsible for decision-making about water resources, and are generally not found in technical water management roles.¹² National water and sanitation policies rarely take account of women-specific water and sanitation needs such as menstrual hygiene management¹³, and they seldom consider the needs of women with disabilities.

Women are under-represented in technical and managerial water management roles for a variety of reasons linked to educational opportunities, and societal norms and expectations. To make the water sector more inclusive, men have important roles to play in how their perceptions and responses to women’s needs and inputs affect women’s full participation. It’s important for men to be involved in (and champion) all aspects of gender mainstreaming so that change is owned by women and men alike.

Globally, there is enormous potential for water governance and WASH to better promote equality, and for contributions towards achieving Goal 5 and Goal 6 to be mutually reinforcing. Women are also key to achieving improvements in access to, and sustainability of, water resources management and WASH services. Research shows that projects designed and run with the full participation of women (compared to non- or partial participation):

- are more sustainable;
- improve women’s and girls’ access to education and work;

- improve gender relations, and position women as role models who can change men’s attitudes;
- improve women’s health outcomes, with flow-on benefits for men, girls and boys;
- promote inclusion when women and men with disabilities are part of decision-making around WASH, which can change attitudes towards disability within communities, as well as address the specific gender-related needs of people with disabilities.¹⁴

Acknowledgement of the critical connection between gender and ‘water and sanitation governance’ is gaining traction internationally. For example, in 2016, the Special Rapporteur on the human rights to safe drinking water and sanitation presented a report to the United Nations Human Rights Council on the role of gender equality in the realisation of the human right to water and sanitation.¹⁵ Nevertheless, the evidence base on the connection between gender and water management is still weak and additional analytical work is required – globally, nationally and locally. There are significant gaps in our understanding of the issues that transgender and intersex people experience with regards to WASH, and the barriers they may face in participating in water resources management decision-making forums. Data collection and lessons from practical experience on this specific topic are needed.

Box 1. What is gender?

It is important to note that gender affects everyone; it is not just about women. Gender identity is not only about ‘men’ and ‘women’, but includes people who are transgender and intersex. For example, transgender girls and boys are highly vulnerable to bullying, harassment and assault in schools, and this is compounded when they are prevented from using the toilets of their choice.¹⁶

Transgender people often also experience discrimination in accessing suitable rental housing. For example, in India transgender people are often forced to live in remote slum areas where they do not have adequate WASH facilities.¹⁷ Gender is an acquired and or self/defined identity (as opposed to ‘sex’ which is biological) and refers to the attributes and roles that are assigned to people as part of the society or culture to which they belong. The resulting expectations, roles and relationships lead to unequal power relations, and affect the extent to which different genders enjoy freedom, status and access to resources and assets.¹⁸

A useful framework for understanding gender equality’s relationship to water (and its governance) examines *practical/material* gender needs (e.g. accessible and safely managed water and sanitation facilities) and compares these to more *strategic* gender outcomes (e.g. women having a greater voice and influence in decision-making on water and sanitation issues). This framework was refined and popularised by Moser (1989).¹⁹ Supporting *practical gender needs* is about changes that assist women (and other gender-discriminated people) within the realm of *existing* gender norms. Contributing to *strategic gender outcomes or interests* is about changing social norms, through changing status or changing power relations, particularly between women and men. It is also about addressing the causes, and not just the consequences, of existing inequality (see Table 1). Simultaneously addressing both Goal 6 and Goal 5 requires a strong emphasis on strategic gender interests and redressing existing inequalities in power and status, not just addressing practical needs.

Table 1. Examples of practical and strategic gender dimensions of Goal 6²⁰

Practical gender needs	Strategic gender outcomes
<ul style="list-style-type: none"> • The ability to perform existing duties more easily through water being available closer to home. • Increased safety, dignity and privacy, particularly with respect to access to sanitation facilities. 	<ul style="list-style-type: none"> • Changes in gender roles as a result of a shift in power relations, such as men helping more with domestic chores, water collection, and caring for children. Men’s recognition of women’s burdens which results in negotiations and power shifts.²¹ • Women have an increased voice and are better listened to; men increasingly listen to and respect women. • Increased diversity of roles for women, including gaining higher status roles (at all levels from household to national to global). • Women have increased confidence and ability to demand greater recognition for their contribution and its value. • Recognition (by women and men) that women have rights and different water and sanitation needs.

5.2. Gender and intersectionality

The SDGs call for the recognition of the needs of all people, including women, and a reduction in the disparities between people due to age, gender, disability, race, ethnicity, origin, religion and economic status (SDG 10).²² The disparities which arise due to all these factors have implications for the ways water resources are managed. One of these implications is the need to give attention to intersectionality, which is the interaction of multiple dimensions of discrimination. For instance, women from a particular ethnic group may suffer exclusion due to both their sex and their ethnicity.

Intersectionality needs to be considered if we are to understand people’s experiences of multiple forms of discrimination. Intersectionality is the interconnection between the effects of social categories such as race, class and gender as they apply to a given individual or group. These interconnections create a system of oppression which manifests in the ‘intersection’ of multiple forms of discrimination.²³ This means that women are thought of not just as ‘women’ but also as black, white, rich, poor, homosexual, heterosexual, old or young.²⁴ These multiple aspects of identity and status in a society are critical to understanding the power imbalances that exist within cultures that may lead to inequality. This paper does not attempt to address every aspect of intersectionality. Instead, it adopts the approach articulated by Gunnarsson (2011):

Gender is not a global monolith, but must be studied and theorised in all its local variations. Nevertheless, it is possible to think of women as a group on a global level, because although the gender structure looks different in different locations, it possesses so much internal coherence so as to deserve to be thought of as one (differentiated) whole.²⁵

5.3. Interconnected challenges: gender and the SDGs

Universal access to water and sanitation (Targets 6.1 and 6.2) is a prerequisite to reducing multi-dimensional poverty, and to meeting Goal 5. This section explores the interconnections between Goal 5 and Goal 6 in addressing discrimination, violence, unpaid and domestic work, women’s participation, sexual and reproductive health, rights to economic resources and multiple dimensions of inequality.

5.3.1 Increasing full and effective participation

Despite women playing multiple roles in water management, their representation at the domestic, catchment and global levels does not match that of men. Many factors lead to women's exclusion from decision-making forums. Moreover, research indicates that it is not only the number of women on committees, boards, community organisations or water management institutions that is important, but also the power dynamics at play within these organisations. Where these dynamics mirror exclusionary socio-cultural norms, they may serve to undermine women's voices.²⁶ Such barriers need to be made explicit, and the involvement of women, transgender and intersex people in decision-making forums needs to be supported so that their participation is equitable and effective.²⁷

A recent McKinsey Global Institute report, *The power of parity: How advancing women's equality can add \$12 trillion to global growth*, focuses on the economic implications of the lack of parity between women and men.²⁸ The study maps 15 gender-equality indicators for 95 countries, and finds that 40 of

40 countries have been found to have high or extremely high levels of gender inequality on at least half of the indicators included in the 2015 McKinsey Global Institute report, resulting in economic losses for these countries

the countries have high or extremely high levels of gender inequality on at least half of the indicators, resulting in economic losses for these countries. The study identifies key issues which contribute enormously to these losses and inequalities, including: diminished economic potential; time spent in unpaid care work; fewer legal rights; political under-representation; and violence against women.²⁹

In addition, there is evidence from the United Nations that meaningful involvement of women in peace negotiations increases the likelihood of achieving resolutions and sustainable peace, and of accelerating economic recovery.³⁰ It has also been found that the participation of women with disabilities, and of the carers of people with disabilities, in decision-making forums improves the effectiveness of efforts to address barriers to accessing WASH for women and men with disabilities.

5.3.2 Ending discrimination

Ending all forms of discrimination against women and girls everywhere (Target 5.1 in Goal 5) requires water and sanitation efforts to intentionally address the power imbalances between women and men. Women and girls overwhelmingly experience discrimination and inequality in the enjoyment of the human right to water and sanitation. For vulnerable groups such as women with disabilities, the level of inequality is even greater. In order to reach substantive equality, water governance regimes and institutions must take affirmative action.³¹ They must be conscious of the existing inequalities in all societies, and they must bear in mind that decisions about water allocation and access to services can either challenge, or further embed, these inequalities. Otherwise, improvements in WASH risk perpetuating gender discrimination. WASH policies and processes can also be leveraged to transform gender relations, and to strengthen women's and girls' practical and strategic interests to benefit all people.

A study found that improving public sanitation services in South Africa's townships could reduce sexual violence by up to 30%

5.3.3 Ending WASH-related violence

Eliminating all forms of violence against all women and girls in both public and private spheres, including trafficking and sexual and other types of exploitation (Target 5.2 in Goal 5) must address WASH. Any need to travel long distances alone to fetch water, defecate in the open or use unsafe public toilets, especially if the trip is during the night, increases the vulnerability of women and girls to rape, harassment³² and sexual violence.³³ A study found that improving public sanitation services in South Africa's townships could reduce sexual violence by up to 30%.³⁴

5.3.4 Addressing unpaid care and domestic work

WASH involves key areas of labour inequality, particularly in terms of unpaid care and domestic work. A meta-analysis of household surveys across 45 developing countries found that 72% of daily household water-related tasks were done by women and girls.³⁵ This is attributed to socially constructed norms that position women and girls as responsible for household water collection. Given this primary responsibility for collecting water and determining whether it is safe for consumption; many women need timely information and targeted communication about water quality. They also typically bear the brunt of caregiving for family members who become sick due to waterborne contaminants (such as cholera and Ebola) and therefore need information on prevention, management and treatment.

72% of daily household water-related tasks are done by women and girls

WASH policies and programs that embed gender considerations can help to change gender norms rather than perpetuate them. A more equitable division of labour between women and men means women can devote time to other aspects of life such as livelihoods and education. The impact of the inequality in labour distribution has an even greater impact on women with disabilities and on women who are carers for family members with support needs such as the elderly, children and people with disabilities.

5.3.5 Sexual and reproductive health and rights

Women's and adolescent girls' poor sexual and reproductive health and rights, including in relation to lack of appropriate access to WASH, results in high maternal and newborn mortality rates. A 2014 study in Tanzania found that only 44% of births took place at health-care facilities and only 24% of delivery rooms have safe drinking water and adequate sanitation.³⁶

There should be no argument with the fact that women worldwide are entitled to clean, safe, and dignified environments during pregnancy, childbirth, and the postpartum period. (Velleman et al., 2014)³⁷

Facilities should be safe places for women to give birth and receive health care. Health-care facilities should not serve as hotspots for life-threatening infections. Improved WASH in facilities tailored to safe birthing are required to improve the health of women. Menstrual hygiene management³⁸ efforts must also include post-birthing care for women, who may experience incontinence and bleeding after child birth.

Menstrual hygiene management is also a core part of realising the sexual and reproductive health rights of women and girls.³⁹ For women and adolescent girls to safely and effectively manage menstruation each month, they require access to private, safe and functioning WASH facilities as well as adequate sanitary products and disposal systems.⁴⁰ Menstrual hygiene management impacts adolescent girls' access to education and attainment of good health outcomes. There is also an emerging body of evidence

that indicates that women who have to ‘hold on’ (to go to the toilet) or reduce food and drink intake (due to socio-cultural norms and the lack of private toilets) are more prone to giving birth prematurely.⁴¹

5.3.6 Equal rights to economic resources

Women often face barriers to owning land, accessing finance, and generating incomes as a result of discriminatory practices within their communities, or expectations that they will assume traditional family-caring roles. For instance, laws or customs in 102 countries still deny women the same land access rights as men.⁴² These imbalances in access to economic resources impact on women’s abilities to engage in markets, such as water markets (or allocation regimes) and WASH utilities and enterprises. Such inequalities need to be made evident so that they are not deepened with the advent of pricing and valuing of water, or other water governance decisions.

Poor sanitation is linked to repeated incidents of diarrhoea, and can result in poor absorption of nutrients over the immediate and long term, and this can in turn cause anaemia and stunt growth. Stunting affects the brain and results in long-term negative economic impacts for individuals and countries.⁴³

Appendix 1 summarises connections between SDG 5 (‘Achieve gender equality and empower all women and girls’) and SDG 6 (‘Ensure availability and sustainable management of water and sanitation for all’).

6 Water governance and gender

Sector studies have shown that equal involvement of men and women is positively correlated with improved sustainability of water supplies, as well as improved transparency and governance in management (Narayan, 1995).⁴⁴

Although women play significant roles in managing water resources at the household and community levels, in farming, and at the catchment scale, their role in water governance forums and institutions has been hindered by gender-related barriers.⁴⁵ Gender considerations have largely been seen as irrelevant or marginal in decisions around ‘big water’ issues such as: large-scale water supply options (dams, desalination, recycling schemes); catchment management; integrated water cycle management; water allocations; and water trading. ‘Big water’ has largely been ‘gender neutral’ or ‘gender blind’ as a result of a range of barriers including women’s reduced access to education (especially in engineering, law, government and science); and women’s lack of access to resources, services and political influence. Women with disabilities can be doubly disadvantaged due to exclusion related to both their gender and their disabilities.

These barriers remain despite some high-level efforts to address them. For instance, the influential 1992 ‘Dublin Principles’ (see Box 2) identify women’s equal participation in water management as constituting a foundational integrated water resource management principle. Likewise, the UN Inter-Agency Task Force on Gender and Water (2003–2009) sought to promote gender mainstreaming in the implementation of the Millennium Development Goals (MDGs) relating to water and sanitation. The 2002 Johannesburg Plan of Implementation at the global, regional, national, local and utility levels also specifically referenced the importance of taking account of gender in achieving sustainable development.⁴⁶

Box 2. Dublin Principles: Setting the agenda for gender in Integrated Water Resource Management

In 1992, the International Conference on Water and the Environment was held in Dublin, Ireland, culminating in a conference report framed around four principles, known as the ‘Dublin Principles’. These principles acknowledge that the pivotal role of women (as providers and users of water and guardians of the living environment) has seldom been reflected in institutional arrangements for the development and management of water resources. Principle 3 states that women play a central part in the provision, management and safeguarding of water, and that ‘[a]cceptance and implementation of this principle requires positive policies to address women’s specific needs and to equip and empower women to participate at all levels in water resources programmes, including decision-making and implementation, in ways defined by them’.⁴⁷

While research on the relationship between ‘big water’ and gender is limited, there are examples to be found, such as a study conducted by the United Nations Development Programme in 2014. This study, led by the UNDP Water Governance Facility at the Stockholm International Water Institute, examined 11 water governance programs supported by the Millennium Development Goals Achievement Fund and found that gender mainstreaming in the design of the programs was ‘generally weak; lacking relevant high-level goals and adequate integration in the monitoring framework’.⁴⁸ It also found that the two most critical factors that led to effective implementation of gender strategies were: high-level leadership in support of gender equality; and the involvement of people with gender expertise in project design, implementation and evaluation. Gender expertise, in this context, is defined as the promotion and design of gender-equality measures from the beginning of a program to its end. Additionally, structural barriers were found to be challenged more successfully through collaboration with women’s

organisations, creating more opportunities for women to affect the processes and outcomes of local water management.⁴⁹

Inclusive decision-making must also include women and other gender-discriminated people as water managers, knowledge holders, and stakeholders in order bring about well-informed and holistic decision-making processes. These processes need also to incorporate and uphold the knowledge and rights of indigenous peoples (see Box 3). While gender equality is not explicitly mentioned in The *OECD Principles on Water Governance*,⁵⁰ the principles do acknowledge that '[t]here is now an enhanced recognition that bottom-up and inclusive decision-making is key to effective water policies'.⁵¹ As gender equality is a key tenet of inclusion, the Principles are thereby acknowledging the benefits of inclusive practice including efficiency through the capture of opportunities and knowledge; and building trust and engagement with the community as a whole.

Box 3. Indigenous water rights

'While indigenous peoples own, occupy or use a quarter of the world's surface area, they safeguard 80% of the world's remaining biodiversity.'⁵² The World Bank reports that 'some of the most biologically important lands and waters are intact as a result of Indigenous Peoples' stewardship'.⁵³ Indigenous peoples face challenges such as: customary access and rights to water being seldom recognised by state and corporate actors; pollution of, and extraction from, significant water bodies undermining cultural and spiritual knowledge and connections; and their knowledge not being drawn upon or valued in water management decision-making. The report of the World Commission on Dams (2000) gave prominence to the land and water rights of indigenous peoples and endorsed the principle that they need to give their 'free prior and informed consent' before they are displaced from their traditional lands and homes.⁵⁴ While it is important to build from existing indigenous knowledge and local institutions, care must be taken when broader tribal authorities or community leadership structures do not reflect gender equality. For example, in sub-Saharan Africa few rural women own land.⁵⁵

6.1. Gender mainstreaming in water governance

To achieve inclusive decision-making that takes into account women's perspectives, the World Bank's Water and Sanitation Program (WSP) identifies four levels at which gender mainstreaming⁵⁶ needs to occur, as summarised here.⁵⁷

- **Policy:** This will involve establishing goals to reduce gender inequalities, and a plan for how to achieve these goals. To inform policy, a gender analysis of the issues on the ground needs to be conducted, and this analysis needs to be repeated at regular intervals to inform decision-making. Policy-makers should collaborate with gender experts, and allocate resources to a process of continual engagement with these experts including women's organisations.
- **Operational:** Gender issues will need to be identified and acted upon within sector agencies themselves, and agencies will need to ensure that staff are equipped to mainstream gender throughout project cycles.
- **Monitoring and Evaluation:** Data collection that is disaggregated by sex and disability status should make better information available to assess the positive or negative impacts of programs on women and men. Disaggregated data can be used to inform decisions. Sector gender monitoring should be integrated with national monitoring frameworks rather than separate processes being created.
- **Citizen Voice:** Women and marginalised citizens, including persons with a disability, need to be

included in decision-making forums, and they should be supported with the skills and opportunities to shape programs and services so that water governance outcomes are enhanced. Multiple barriers to women's involvement in decision-making include: being time-poor due to household responsibilities; cultural barriers to women's participation; and inferior education levels and opportunities. These barriers need to be revealed so that water governance processes and programs can be made more inclusive.⁵⁸

6.2. *Untapped expertise*

In general, women's expertise in water resource management is not utilised or harnessed effectively by water governance institutions. The Asian Development Bank (ADB) found that women are often excluded from water governance realms as a result of: perceived deficiencies in their technical skills and experience; restricted career paths; lack of transparency around promotions and appointments; and informal male networks that exclude female membership.⁵⁹ Similarly, a study of female water professionals revealed that in South Asia the percentage of technical posts occupied by women is only 5%, and that almost all women interviewed felt that their skills were highly under-utilised.⁶⁰

One approach to address this imbalance has been to set quotas or implement affirmative action policies to attract more women into influential positions.⁶¹ While this is a critical first step, equal representation of women may not be sufficient to shift power dynamics between men and women. Women need to have not only increased visibility but also equal power within decision-making forums.⁶²

The benefits of women's and girls' education, in terms of human rights and economic benefits, are well documented.⁶³ For example, UNICEF has found that investing in girls' primary education yields national economic benefits. It calculated that a 1% increase in the number of girls receiving an education raises the average gross domestic product (GDP) by 0.3% and raises annual GDP growth rates by 0.2%.⁶⁴

Furthermore, water resource management and WASH-related disciplines can ensure that gender-sensitive awareness and expertise are mainstreamed through school curriculums, which would provide opportunities for boys and men to be educated and trained, as well as girls and women.

6.3. *Equal rights to economic resources*

In many societies, women experience reduced opportunities to acquire economic resources. Land ownership and financial management systems and customs, and differences in education and employment opportunities, all impact on women's abilities to access economic resources. The laws or customary practices of 102 countries still deny women the same rights to access land as men.⁶⁵ This also has significant impacts on women's ability to use and manage water resources for small-scale farming and other agricultural activities.

One area of increasing attention is the extent to which women are able to become entrepreneurs in the water and sanitation sector.⁶⁶ Research has found that women and men have different perceptions about the possibility that women could take up roles such as becoming sanitation masons. One study found that women thought it would be easy for them to take up such roles, but men thought it would be difficult for them to do so because of their housework and family duties.⁶⁷ This research illustrates why women, and transgender and intersex people, should be represented at all levels of decision-making.

There is now an enhanced recognition that bottom-up and inclusive decision-making is key to effective water policies.

OECD Principles on Water Governance (2015)

The laws or customary practices of 102 countries still deny women the same rights to access land as men

OECD (2014)

Another challenge faced by women who want to become masons was that they often had less access to capital and were more economically stressed than men, which was an obstacle to entrepreneurship.⁶⁸ This aligns with research which found that in Viet Nam women face challenges accessing finance if land is only registered in their husband's name, rather than jointly.⁶⁹ To address barriers like these, organisations such as WaterSHED Cambodia are recruiting rural Cambodian women to be supported in water and sanitation entrepreneurship, through a series of training workshops and a system of mentorship and peer coaching.⁷⁰

Reliable and adequate water and sanitation services facilitate the establishment of small business as a whole, which can have flow-on benefits to female entrepreneurs. In Indonesia, for example, 60% of micro and small enterprises are owned by women (across all sectors), representing almost a quarter of the active labour force.⁷¹

6.4. Gaps between policy and action

Improving policies to make them sensitive to gender differences requires actions and resources to deliver and track progress on these policies. Research conducted on trans-boundary water management in the Mekong has found that there is a critical gap between policy and implementation.⁷² Supported by the Australian aid program, Oxfam Australia's 'Balancing the Scales' initiative promotes the use of gender impact assessment in hydropower schemes in the Mekong region.⁷³ An understanding of how hydropower development differently impacts women and men helps developers ensure their projects minimise harm, and potentially enables them to see how they can play a positive role in addressing gender inequality. The Gender Impact Assessment Manual produced by this initiative includes a step-by-step gender impact assessment process for hydropower dam development. The manual is designed to be used by hydropower and consulting companies involved in social and environmental impact assessment. It also gives guidance to business for considering gender across the project cycle.⁷⁴ Box 4 provides a case study showing how important it is to consider gender issues at the beginning of a water resource management program, in this case, in the context of Lesotho and the development of a large dam.

Box 4. Case study: Why predicting and mitigating impacts on women is critical. The case of Lesotho dam construction.⁷⁵

The different impacts of a 'big water' decision on men and women can be seen in the case of the first phase of the Lesotho Highlands Water Project (LHWP). The construction and community displacement resulting from the building of a dam led to women experiencing: increased poverty; higher rates of infection from HIV through sexual contact with construction workers; and loss of garden plots used to sustain their families. These impacts were gendered in that they were not experienced equally by men and women, and an understanding of these potential impacts on women from the outset could have led to a mitigation of impacts through a reduction of sexual violence and improvements in women's livelihoods which would in turn have improved their nutrition and that of their families.

6.5. Recommendations for improving policy and practice

The following recommendations are provided to guide policy and practice to improve gender outcomes in water governance:

- Research has found that the most critical actions for achieving gender equality in water governance policies and programs are: engaging **gender expertise at all stages of a program's development**, strong **leadership** driving gender equality, and **collaboration with women's organisations**.
- Meaningful participation of women, and persons with a disability, is needed for engagement in water governance policy and programs; this involves ensuring **opportunities to influence**, and **support** for women to be leaders.
- Countries can **consider adopting a quota system for female professionals, managers or decision-makers** in ministries and water-managing institutions in order to increase female participation in these influential water governance realms.
- When implementing the **OECD Water Governance Principles**, stakeholders need to be mindful of gender-related issues and they need to **target and mainstream gender considerations** at each step of the process.
- Tools (such as Oxfam's **Gender Impact Assessment Manual** or other related tools such as the World Bank Group gap analysis process⁷⁶) can be utilised in **'big water' interventions**, including river basin planning, and integrated water resource management.
- Water resource management and WASH-related disciplines can ensure that **gender-sensitive awareness and expertise are mainstreamed through the curriculum** – reaching boys, men, women and girls.

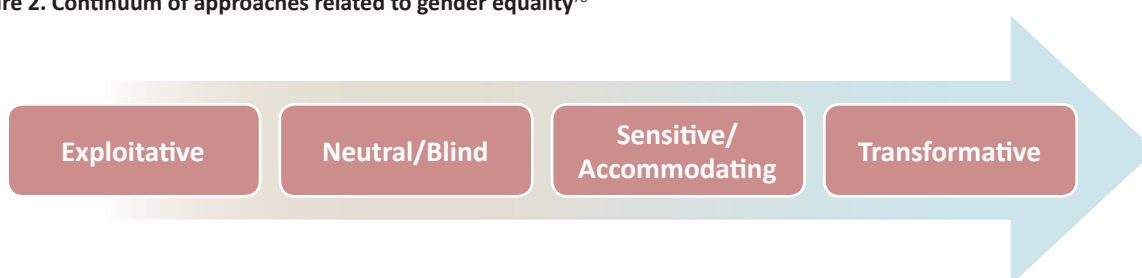
7 Gender and universal access to safe water and sanitation

The human right to water and sanitation requires that services are available in an acceptable, adequate, affordable, appropriate and safe manner to all.⁷⁷ The SDGs bring renewed global momentum for leaders, policy-makers and advocates to deliver gender-transformative water, sanitation and hygiene (WASH) interventions.

7.1. Gender-transformative WASH

Gender equality in water and sanitation cannot be achieved by improving access to water and sanitation facilities alone. Gender-transformative WASH uses water and sanitation processes as a pathway to shift the social norms that contribute to gender inequality, as shown in Figure 2.

Figure 2. Continuum of approaches related to gender equality⁷⁸



Water-quality, sanitation and health policies and processes can be leveraged to transform gender relations and to strengthen and address women's and girls' practical needs and strategic interests to benefit all. Embedding gender considerations in WASH has the potential to bring greater equality and dignity to women's and men's lives.

7.2. Meeting women's and girls' strategic interests through full and effective participation

Goal 5 of the SDGs has a target of ensuring 'women's full and effective participation and equal opportunities for leadership' (Target 5.5), which is deemed critical for addressing gender inequalities in WASH. There is increasing evidence of the ways in which WASH offers a strategic entry point to empower women and girls and increase gender equality.⁷⁹ Since WASH issues are closely associated with women's traditional roles, WASH programs and policies can provide fertile ground to promote women's voices, participation and leadership and at the same time shift men's and societal attitudes.⁸⁰ This can begin a process of change in gender relations and roles both at the community level and in government.

In Bangladesh, a WASH program deliberately went beyond the standard aspiration of having at least 50% of WASH management committee roles filled by women: findings from a review of this program showed increases in women's skills, confidence in leadership roles, and capacity to advocate on their own behalf with decision-makers.⁸¹ Research of gender outcomes in WASH programs in Vanuatu and Fiji found positive gender-equality outcomes went beyond the practical level (improved access to services) and led to changes in women's power and status (see Box 5).⁸²

Currently 38% of health-care facilities in low- and middle-income countries have no access to safe water

WHO and UNICEF (2015)

Box 5. Case study: A breadth of positive gender outcomes documented in Fiji⁸³

Research across two communities in Fiji sought to identify positive gender outcomes as a result of WASH programs. The research found key positive outcomes included: an increased sense of community unity through women and men working together; women's efforts to increase community sanitation are recognised; women are working together and supporting each other; women are more respected by men and feel more valued; women have an increased voice at the community level and men participate more in household water collection duties. The research found that enablers of positive gender outcomes included: community engagement processes that utilise inclusive learning circles; holding the meetings at times and places that suited women; and encouraging meaningful participation by women. The project used water as an entry point to discuss leadership, governance and inclusion.

7.3. Sexual and reproductive health outcomes

Achieving universal WASH and improving women's sexual and reproductive health outcomes means making sure all births occur at health-care facilities that have sufficient safe water and where unsafe sanitation and hygiene practices no longer exist. Women and their newborns are at risk of life-threatening infections when their only option is delivery in facilities with unsafe WASH. Currently, 38% of health-care facilities in low- and middle-income countries have no access to safe water. Almost one in five do not have improved sanitation facilities and 35% do not have facilities for hand hygiene.⁸⁴ Rural, remote health centres are the worst affected. They pose potentially deadly infection risks for staff working at the facilities. Female nurses, midwives and community health workers are often the frontline health workers in such facilities. Addressing the water, sanitation and hygiene services at health centres not only improves the health of mothers and newborns by providing safe and dignified places to give birth but also supports safe work conditions for female health workers, thus contributing to gender equality.

Menstrual hygiene management is a key element of meeting women's and girls' practical WASH needs, as well as their sexual and reproductive health rights. Neglecting menstrual hygiene management is a missed opportunity for safely supporting a vital element of women's and girls' development and reproductive health.⁸⁵ At the strategic level, addressing menstrual hygiene management creates an enabling environment for women and girls to achieve their full potential in work, school and home life.⁸⁶ It is particularly important that efforts to address menstrual hygiene management engage men and boys in order to change attitudes and break taboos.⁸⁷ Yet menstrual hygiene continues to receive limited attention in policies, research priorities, programs and resource allocation in all sectors: education, gender, health, WASH and sexual reproductive health.⁸⁸ In recent years the WASH sector has taken action to break the silence on this issue. For example, there is more awareness that school WASH facilities must be designed to be menstrual hygiene management-friendly, with safe disposal mechanisms.⁸⁹ While this action from WASH actors has been effective, Goal 6 efforts require menstrual hygiene management to be addressed more holistically. The WASH sector has a key role to play in continuing to harness action across other sectors to address the underlying causes of inequality and discrimination in relation to poor menstrual hygiene management.⁹⁰

7.4. Eliminating violence against women and girls

As noted above, evidence shows that poor access to water and sanitation facilities increases exposure to risks of violence for women and girls⁹¹, and people with disabilities have even greater risk of experiencing violence.⁹² Increased stresses linked to poor water and sanitation access have been found to increase domestic violence and beatings for which the women are then blamed (see Box 6). When women with

disabilities are unable to fulfil traditional water and sanitation roles such as collecting water, or when they take longer to perform these tasks, they can become targets of domestic violence. To date the WASH sector has not addressed issues of violence particularly well. While this is starting to change, concerted effort is required to build capacity in the WASH sector.

Box 6. Case study: Increasing harmony and reducing conflict and violence through WASH programs⁹³

Research linked to a WaterAid Community-Led Total Sanitation WASH program in Timor-Leste explored the changes women and men had experienced in terms of gender relations. Many women reported experiencing increased harmony in the home as an outcome of having a domestic water source closer to the home. The research also found that ‘domestic disharmony had been a common and significant experience for women in relation to their task of collecting water’. The participatory research process itself also led to greater awareness of gender. One male participant of the WASH program said ‘Husbands have shifted – when we come home, there is more happiness, less conflict and less violence in the house. We’re happy. We like it.’ Men reported that they helped women to collect water because it was closer to their home.

7.5. Unpaid care and domestic work

Improvements in WASH can reduce the burden for women and girls and encourage men and boys to share household work (a target of Goal 5). As described above, socially constructed norms position women and girls as being responsible for household water collection. Women are also primarily responsible for the care of children and of sick, disabled and elderly family members – roles that are generally unpaid. This burden is often exacerbated during natural disasters or humanitarian emergencies, and risks to personal safety are heightened due to the chaos and disorder that follows such events.⁹⁴ Well-designed WASH programs and policies can help to shift these gender norms and create a more shared division of labour between women and men.

7.6. Recommendations for improving policy and practice

The following recommendations are provided to guide policy and practice to improve gender outcomes in water quality, health and sanitation.

- Create the space for **women’s decision-making, ownership and leadership**, including through women-only spaces and by building women’s and girls’ capacity in leadership roles.
- WASH and health sectors must collaborate to achieve universal access to safe water, sanitation and hygiene in **health-care facilities**, and they must eliminate preventable maternal and newborn mortality and morbidity.
- Create opportunities for women take on **economic roles in managing WASH infrastructure**, with ongoing support to mitigate backlash and negotiate new gender roles.
- **Menstrual hygiene management** should be integrated into education systems, including as part of plans, budgets, services and performance monitoring, and as part of delivering an inclusive educational service to all children and adolescents, including girls with disabilities.
- **Apply existing resources and tools** to integrate gender into WASH programming, monitoring and practice.⁹⁵

8 Resilient economies, societies and disaster-risk reduction and gender

Resilient economies are underpinned by safely managed water and sanitation, with between US\$3 and US\$6 gained annually for every dollar invested (global average).⁹⁶ Access to safely managed water and sanitation underpins economic resilience, since significant losses are incurred through reduced productive time, health-care costs and mortality. The World Bank's Water and Sanitation Program found that 18 African countries lose around US\$5.5 billion every year due to poor sanitation (primarily as a result of health impacts and lost productivity), with annual economic losses of between 1% and 2.5% of GDP.⁹⁷ Women's economic resilience is undermined by their unpaid work managing water and sanitation services within the home, especially in carrying water.⁹⁸ Additionally, time lost at school by girls who do not have access to adequate menstrual hygiene management facilities reduces the girls' education and therefore their economic potential.⁹⁹ Global estimates of the benefits of improvements in water access must track benefits and burdens which are gender-disaggregated in order to better understand how investments in 'economic resilience', including investments in major assets, affect men and women differently.

US\$5.5 billion
p.a. is lost across
18 African
countries due to
poor sanitation

World Bank, WSP

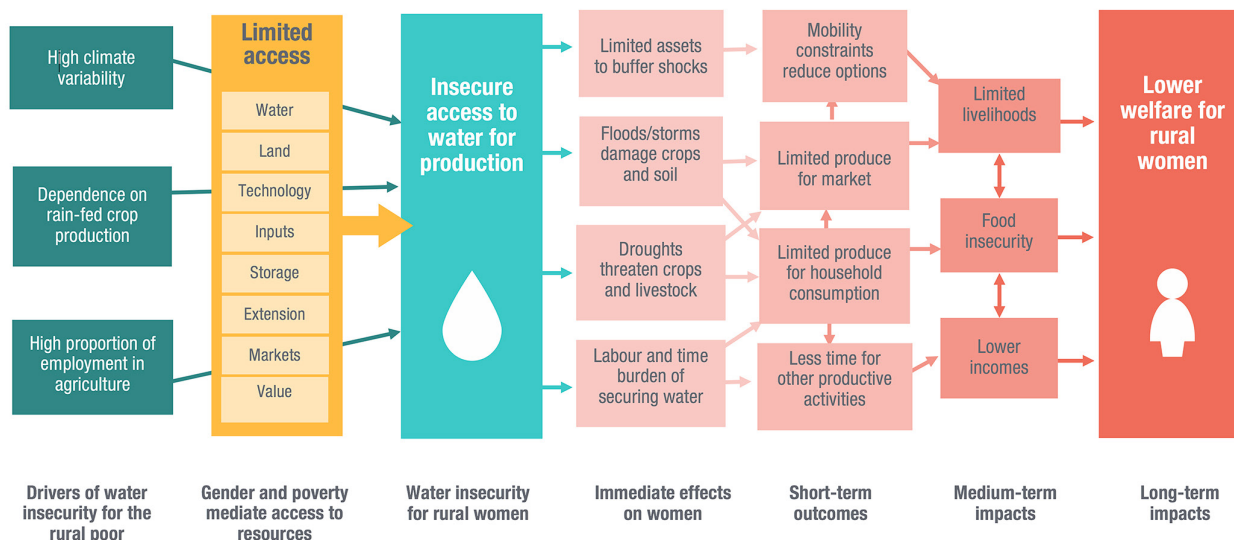
8.1. Responding to shocks

As the primary water collectors worldwide, women are disproportionately affected by the scarcity of adequate resources (Caruso et al, 2015).¹⁰⁰

While there is no universally agreed definition of 'resilient economies' in economics or social science,¹⁰¹ the term can be understood to refer to the ability of the economy to cope, recover and reconstruct following a shock or disaster.¹⁰²

The traditional water management roles that women play in many societies have strong links to economic resilience, or lack thereof, making such societies more vulnerable to economic shocks resulting from climate change and natural disasters. Figure 3 illustrates the cumulative effects of water insecurity for rural women as a result of limited access to resources (water, land and technology, etc.), compounded by climatic events, resulting in women experiencing a range of negative short-term impacts leading to limited livelihoods, food insecurity, and lower incomes. Research has shown that disasters affect women and men differently because of women's roles in crop and livestock management, their involvement in carrying water during drought, and their family hygiene roles.¹⁰³ While the impacts of climate change and natural disasters are not experienced uniformly across and within communities, it is important not to depict women only as disproportionate "victims" of climate change. Women and girls are also knowledge holders and change agents, and are able to help adapt to the impacts of climatic shocks, in part due to their experiences and knowledge of how to support families and communities in disaster situations.

Figure 3. Conceptual framework for rural women’s water insecurity



Source: Parker et al. (2016)¹⁰⁴

8.2. Recommendations for improving policy and practice

The following recommendations are provided to guide policy and practice to improve gender outcomes for resilient economies.

- A resilient economy is one that **invests adequately in universal access to safely managed water and sanitation**, with economic benefits being between three and six times the investment.
- Investment decisions are improved when **men and women are included using gender-sensitive participatory tools**, and when **data is gender-disaggregated** to provide an understanding of how investments affect men and women differently.
- The **impacts of disasters**, including those associated with drought, floods and climate change, are experienced by men and women differently, and the economic impacts of these events have severe flow-on effects for women, including health impacts and decreased educational opportunities. This needs to be better understood, and taken into account in disaster-risk reduction interventions.
- **Inclusive approaches** to draw on the knowledge and experience of all members of society should be used to **develop disaster risk reduction strategies**.

9 Sustainable cities, human settlements and gender

Urban spaces are used differently by men and women – and this needs to be taken into consideration, especially around issues of utility and safety. Among the urban poor, women tend to have the lower-paid, less secure jobs, while men may retain more of the decision-making power within households and take on only a small share of domestic tasks.¹⁰⁵ This leaves women both cash- and time-poor, and means that their workload, both paid and unpaid, is generally heavier than men's.¹⁰⁶ This has implications for the extent to which women can participate in community engagement initiatives in support of planning and designing urban spaces; therefore, urban planning may not capture the needs of women in the urban environment. Human settlements need to be developed on an inclusive basis, not only to account for these aspects of women's experiences, but also to account for the diverse needs of the community, including people with disabilities (see Box 7).

Box 7. Equality dimensions of 'leapfrogging' from the drainage city to the water sensitive city

The quality of life that a city offers varies greatly for different social groups.¹⁰⁷ Within an urban environment, individuals and social groups are disaggregated along many divisions including gender, ethnicity, class and age. Disaggregation also occurs according to ways in which they use the city (e.g. different modes of transport) and a person's geographical location with respect to the city. Leapfrogging, in this context, is the process whereby a city/town may draw from the lessons and experiences of other jurisdictions and 'leapfrog' to the latest technologies, knowledge and understandings in total water cycle management rather than repeating the mistakes of the past.

Johnstone et al. (2012) point out that 'In order to assure equity and social justice, there needs to be an even geographical distribution of benefits and access to them across society, in order to avoid the marginalisation or the exclusion of the benefits of societal systems. Socio-economic factors can have a major influence on equity if one's ability to pay, or affordability, make it difficult for sectors of the community to access the benefits of Integrated Urban Water Management (IUWM) and Water Sensitive Urban Design (WSUD). In addition, geographic characteristics can cause some parts of a city to be more vulnerable to poor performance or system failures – for example, elevated areas may be more dependent on pumping for water supply while low-lying areas may present challenges to effective drainage.'¹⁰⁸

9.1. Informal settlements present additional dangers

Informal settlements characteristically have insecure dwellings and lack WASH services, and as a result they face a range of health and safety challenges. Gender-discriminated people face additional dangers with respect to accessing toilets safely, carrying and managing water resources, and menstrual hygiene management in unclean environments (see Box 8). Research has demonstrated that inadequate access to water and sanitation is linked to psychosocial stress, especially among women, forcing them to navigate social and physical barriers during their daily sanitation routines.¹⁰⁹ Issues of accessibility may have a greater impact on women with disabilities.

More broadly, urban sanitation is one of the most significant issues for urban areas in developing contexts, and it is one that presents major issues of safety, vulnerability and distress for women.¹¹⁰ The SDG focus on the full service chain (beyond simply attention to toilet installation) is very important for reducing health risks to both women and men in informal settlements where exposure to untreated

domestic waste is often high. The Goal 6 target around water reuse (halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally; Target 6.3) presents a strong policy driver for cities to ‘leapfrog’ towards the creation of water sensitive cities. However, women’s safety in informal settlements is a problem that needs immediate attention.

Box 8. Case study: Gender-based violence in informal settlements suffering lack of services

In its Safe Cities report, ActionAid (2014) notes that ‘In Cambodia, poor informal settlements in the capital Phnom Penh, home to hundreds of thousands of the city’s poorest inhabitants, are routinely cleared out and residents pushed further out to the edges of the city. In the last 20 years, hundreds of thousands of people have been forcibly evicted to make way for shopping malls, cafes and apartment buildings. This “beautification” of the city and the massive construction that follows it, leads to an ever increasing displacement of poor women and men. This in turn leaves them starved of access to even the most basic of services – it is estimated that over 70% of all relocation sites have poor or non-existent infrastructure and 43% have no access to utilities such as water and sanitation. This leaves women stuck in poorly serviced areas and exposed to higher levels of violence and insecurity.’¹¹¹

9.2. Recommendations for improving policy and practice

The following recommendations are provided to guide policy and practice to improve gender outcomes through water and sanitation management initiatives in human settlements.

- **The needs of women and children in urban environments must be prioritised** along with water management planning to enable cities to ‘leapfrog’ and become safe and inclusive water sensitive cities. Urban planners, local governments and city authorities must include all people to inform and shape urban development to ensure that all public spaces, including streets and parks, are safe for all.
- Public and private investments in water and sanitation services in informal settlements must **consider the safety and security needs of women and girls (and all users)**. This can be achieved by allocating resources to privacy features (good lighting, lockable doors) and consultation with girls and women about the location and design of all facilities. Accessibility features, such as ramps, handrails and spacious cubicles, can improve access for a greater number of people, including pregnant women, people with disabilities and elderly or chronically ill people.
- **Sanitation is a major issue for growing cities.** The SDG 6 target for improving water quality by reducing pollution, eliminating dumping and minimising the release of hazardous chemicals and materials (Target 6.3)¹¹² should act as an additional policy driver for improving urban waterways and surrounding environments. This could have positive implications for women who currently rely on these water sources.

10 Water data and gender

The HLPW has recognised the power and value of good quality and timely data for water management decision-making processes. And yet, sex-disaggregated data on global access to water and sanitation has never been reported in a standardised fashion.¹¹³ Additionally, the economic benefits of providing women and girls with safely managed WASH services and facilities globally have not yet been calculated.

As has been identified throughout this Discussion Paper, water users are not a homogenous group, and are made up of women, men, children, people with disabilities, youth, the elderly, etc.¹¹⁴ All these water users have slightly different water needs and responsibilities with respect to water management. This can be better understood through quantitative and qualitative data collection and analysis processes.

Intra-household variation in water use and access is an area not yet understood. Current national monitoring initiatives, such as those supported by the WHO/UNICEF Joint Monitoring Programme (JMP), focus at the household level, not the individual level. New approaches to examining intra-household deprivation will be needed in the future to identify inequalities between household members. This is currently being explored by the JMP in relation to indicators developed for the SDGs.¹¹⁵

Disaggregated data (by sex and disability status) is therefore required to understand how water management decisions affect men, women, boys and girls differently.¹¹⁶ For example, women's access to and ownership of land has strong links to water rights and access to water. This is a data gap that needs to be filled in order to understand how, for example, water trading schemes may affect men and women differently. In addition, national-level monitoring could include collecting data on access to water and sanitation by female-headed households; and impacts of more women being involved in governance of WASH and water, in a range of capacities.¹¹⁷

Data can be a tool for empowerment, but it can also hide disparities when data is not disaggregated. These nuances need to be considered so that data collected truly assists in the fulfilment of multiple SDGs, including those aimed at ending gender-based inequalities and assessing whether basic human needs are being met. The UNESCO World Water Assessment Programme has initiated a project on gender-sensitive water monitoring, assessment and reporting. The project includes guides to support this process, including suggestions of a range of key indicators that may be considered for water governance programs.¹¹⁸ There is a need for improved qualitative data on lessons learned in efforts to increase gender mainstreaming in water governance institutions and in water-related services and systems, in order to inform evidence-based practice.

10.1. Recommendations for improving policy and practice

The following recommendations are provided to guide policy and practice to improve gender outcomes for improving water data collection and management.

- Monitoring of Goal 6 **requires data disaggregated on the basis of sex and disability**, and it requires sex-specific indicators and dedicated impact assessment methods to assess whether improvements in access to water truly benefit women and girls. The UNESCO 'Sex-disaggregated indicators for water assessment, monitoring and reporting' is a tool which can be used to guide this process.
- In support of Goal 6 and the emphasis on 'safely managed' services, data is needed not only on the **existence of infrastructure and systems but also on how these services are used and by whom**.
- Data is needed on **lessons learned to increase gender mainstreaming** in water governance institutions and water-related services and systems.

11 Valuing water and gender

Understanding the value of water for a variety of uses, as well as the costs of pollution, can support more transparent and better informed decision-making through an understanding of the full costs and benefits of using water resources for different purposes, including domestic supply, agriculture, industry and services.

The valuation of water and pollution expressed in financial terms needs to be considered in light of the Human Right to Water and Sanitation¹¹⁹, to ensure that basic human needs are met for all people. By placing an economic value on water and sanitation for health, agriculture, economic productivity, environmental services and educational opportunities, we can obtain a better understanding of the total value of water and sanitation to inform investments and water allocation regimes.

Women are a critical component of agriculture in developing countries, comprising an average of 43% of the global agricultural workforce

FAO (2011)

Three common mechanisms for revealing the value of water, as outlined in the *Valuing Water Framing Paper* for the HLPW¹²⁰, have significant implications for women and men. They highlight the need for gender-sensitive thinking and assessment in order to reveal the true value of water. These mechanisms are: cost-reflective pricing of water-related services and infrastructure; pricing of pollution; and secure tradable water rights. Each of these is discussed below with reference to gender equality issues.

11.1. Cost-reflective pricing of water-related services and infrastructure

Cost-reflective pricing can signal the costs of water provision to the end user, thereby supporting water conservation behaviours.¹²¹ The price of water is usually passed on to the end user to pay in a monthly tariff. However, in some contexts, user-pays and full cost recovery mechanisms put in place by operators have resulted in people not being able to afford increased water bills, and as a result, other essential services (such as food, health and education) may have to be sacrificed in order to access water and sanitation services.¹²² This can have particular impacts on women who may prioritise the health and needs of other family members at the expense of their own needs. People with disabilities may have increased need for water (e.g. for washing due to incontinence or use of hands for mobility), leading to higher water costs, further impacting on women within these households. Research conducted by ISF-UTS has explored upfront finance and other 'lumpy' finance mechanisms for initial investment or replacement of sanitation assets, and has suggested that there is little scope in developing countries for utilities to charge high enough tariffs to achieve full cost recovery, and that government and donor funding is an essential component.¹²³

11.2. Pricing of pollution

In many countries women bear the primary burden of collecting water for household use, and this is often from untreated surface-water sources such as rivers and streams. Women engage in washing clothes in these water bodies and come into contact with the water which is often of very poor quality. As a result, and because women during pregnancy are immune-suppressed, they are more susceptible to water-borne diseases.¹²⁴ Women therefore have a lot to gain from reduced pollution in waterways. Putting a price on pollution, forcing polluters to consider the negative value (i.e. costs) of surface and groundwater degradation, is therefore a measure that would sit alongside gender mainstreaming if it decreased overall levels of pollution and resulted in potential health improvements for people coming into contact with surface water.

11.3. Secure and equitable water allocations

In situations where water rights are attached to land rights, gender-discriminated people are at a disadvantage given their unequal access to land ownership due to long-term discriminatory practices and cultural traditions. At the same time, women are a critical component of agriculture in developing countries, comprising an average of 43% of the global agricultural workforce.¹²⁵ The number of women responsible for farming and food production for the family is increasing with the shift from agriculture-based economies to those based on remittances as men move to cities to find employment.¹²⁶ This ‘feminisation’ of agriculture is resulting in additional farming responsibilities being placed upon women who are managing their families and caring for children.¹²⁷ Therefore, women have a huge stake in the valuing of water, and they have intimate knowledge of water security issues in relation to agriculture, yet they are often excluded from decision-making forums related to water security.¹²⁸ Water user associations (which are self-governed organisations of farmers who pool their financial, technical and human resources for the use and maintenance of a defined watershed (or catchment), including irrigation agriculture, livestock production and fisheries¹²⁹) can be a good entry point to encourage balanced participation and decision-making for both men and women. Women’s limited access to water resources and membership of agricultural and water user associations can be closely tied to their limited access to land. Any water allocation scheme must therefore: understand existing inequalities in resource ownership, including land and access to finance/capital¹³⁰; and the extent to which women are meaningfully participating in water user associations and relevant industries (such as mining, agriculture and manufacturing). It is critical that water allocation schemes take steps to ensure that existing inequalities are not deepened.

11.4. Recommendations for improving policy and practice

The following recommendations are provided to guide policy and practice to improve gender outcomes related to valuing water.

- **Cost-reflective pricing** needs to take into account the specific impacts on poor women who may not be able to afford water connection fees and tariffs.
- **Pricing of pollution** could have a positive impact on women who perform water-related duties in untreated surface water bodies (such as cleaning clothes and collecting water) if it reduced the total level of pollution.
- Women’s access to finance and land must be understood prior to water allocation schemes being implemented so that existing **inequalities and discrimination are not perpetuated** by water allocation and/or trading schemes or pricing policies.

12 Action plan

The High Level Panel on Water can drive and galvanise integrated approaches to Goal 5 (gender equality), Goal 6 (sustainable water and sanitation management for all) and Goal 10 (reduce inequality), and thus improve the sustainability and effectiveness of water governance and WASH investments, and contribute to gender equality. The Panel can do so through:

- **amplifying and drawing on a diverse range of voices in decision-making forums** by proactively seeking the views of women and gender-discriminated people, providing meaningful platforms for them to offer input and influence;
- **championing a transformative agenda for inclusive and gender-sensitive water resources management** and safely managed sanitation within the context of the Panel's Action Plan. This would involve gender considerations being incorporated in every initiative supported by the Panel.
- **seeking commitment from national government stakeholders** to ensure that all water resources management and WASH investments **undertake gender analysis and planning from the outset** to inform program development. This will involve including female stakeholders as well as gender experts throughout the project cycle. Additionally, resources can be allocated to meet gender-equality objectives within water management and WASH policies and programs.
- working to promote the use of **sex-disaggregated and disability-disaggregated data** to contribute to gender-inclusive policy formulation and to help assess the impact and effectiveness of policies aimed at mainstreaming gender equality;
- **working with multilateral development banks** (such as the World Bank, the Asian Development Bank, the African Development Bank, and the Inter-American Development Bank) in line with their development financing roles, to support the **Panel's gender-equality objectives**;
- supporting the uptake and use of ***Realising the human rights to water and sanitation: A handbook*** (produced by the first UN Special Rapporteur on the human rights to safe drinking water and sanitation), including the checklists and other related resources, as a tool for sector specialists and policy-makers and local governments to formulate and evaluate proposed investments and how they integrate inclusion objectives, including advancing gender equality.

Appendix 1: Key intersection points between SDGs 5 and 6

SDG 5: Achieve gender equality and empower all women and girls (selected Goal 5 targets)	Critical intersections with SDG 6: Ensure availability and sustainable management of water and sanitation for all
<p>End all forms of discrimination against all women and girls everywhere.</p>	<ul style="list-style-type: none"> • Women are not given the same opportunities as men to participate in water governance-related institutions, and are therefore, not equally represented. • Inequalities exist with respect to access to water and sanitation facilities and services, resulting in detrimental health impacts for those without safe and secure supplies/services, undermining of dignity, and gender-based violence which in some instances leads to physical disabilities. • Women take on most of the water carrying and water management work within the home, resulting in unequal work burdens between men and women, lost productive time, and health impacts. These challenges have a greater impact on women with disabilities when compared to women in general. • Girls and women lack adequate menstrual hygiene management facilities and products in many countries, and experience discrimination during the time of menses, sometimes resulting in time lost from schooling. • Women are excluded from a range of water and sanitation management decisions, resulting in gender inequalities being further entrenched. • Transgender and intersex people experience harassment when appropriate toilet facilities are not available to them. • Women, especially those in poverty, are more vulnerable in the face of natural disasters.¹³¹ Yet women also have huge potential to support disaster mitigation and climate-resilience planning, given their knowledge and expertise related to managing water and sanitation services and resources. This knowledge is largely untapped.
<p>Eliminate all forms of violence against all women and girls in the public and private spheres.</p>	<ul style="list-style-type: none"> • Transgender people and women face increased dangers and risks of violence in informal settlements as a result of inadequate WASH facilities. • Women and children are at greater risk of experiencing sexual violence when appropriate toilet facilities are not available. • Women have reported greater levels of harmony within the home (and lower levels of violence) when gender imbalances were addressed through shared roles in water, sanitation and hygiene (WASH) between women and men in Timor-Leste.

SDG 5: Achieve gender equality and empower all women and girls (selected Goal 5 targets)	Critical intersections with SDG 6: Ensure availability and sustainable management of water and sanitation for all
<p>Recognise and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household.</p>	<ul style="list-style-type: none"> • Women bear the burden of water management in the home, including collecting water and managing household hygiene in many contexts. • Women play significant unpaid roles in recovery efforts following natural disasters and climate-change-related disasters, especially within the home. • Female small-scale farmers have less access to irrigation and farming technologies, tools and training than their male counterparts, resulting in significant impacts on livelihoods and health in the face of climate-change-related changes and disasters.
<p>Ensure women’s full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life.</p>	<ul style="list-style-type: none"> • Women are excluded from decision-making forums related to water and sanitation governance as a result of time constraints (related to family caring roles), different education opportunities, and socio-cultural barriers. • Research has found that while increasing the number of women involved in boards and committees is a first step, the ways in which women are able to participate and influence are of critical importance. • In order for women to participate effectively, support may be required to increase the skills, confidence and capacity of women to engage in water governance forums. This may take a range of forms including education, mentoring, affirmative action policies, and training.
<p>Ensure universal access to sexual and reproductive health and reproductive rights.</p>	<ul style="list-style-type: none"> • A lack of menstrual hygiene products and services has been found to lead to infections which impact on the reproductive health of women and girls. • At least 38% of health-care facilities in developing countries lack access to even rudimentary levels of water, sanitation and hygiene (WASH). This has an impact on maternal mortality rates, and newborn sepsis which, along with other severe infections, are estimated to cause 430,000 deaths annually.¹³²
<p>Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws.</p>	<ul style="list-style-type: none"> • Barriers to women owning land and accessing finance could undermine their ability to participate in water allocation and trading schemes and lead to greater inequalities. • Women comprise 43% of the agricultural workforce in developing countries, but do not have an equivalent share of ownership of land or water, and nor do they have an equal voice in the decisions governing these resources. • Barriers to accessing finance and business development knowledge and skills limit women’s involvement in water and/or sanitation enterprises.

Appendix 2: Actors and activities advancing gender equality within Goal 6

The key actors working to advance Sustainable Development Goal 6 and gender equality, and some of the initiatives they are undertaking are outlined below.

Table 2. Key actors working to advance SDG 6 and gender equality

Organisation category	Organisation	Area of focus (related to gender and Goal 6)
Multilateral organisations	Special Rapporteur on the human rights to safe drinking water and sanitation, Mr Léo Heller	In 2016 the Special Rapporteur on the human rights to Safe drinking water and sanitation, Mr Léo Heller, provided a report to the Human Rights Council's 33rd session on the role of gender equality in the realisation of the human right to water and sanitation. This report highlights areas that need particular attention in order to prevent and respond to gender inequalities in WASH, as well as gender-based violence and barriers to the realisation of the human right to water and sanitation.
	Sanitation and Water for All (SWA)	SWA is a global partnership of over 100 national governments, external support agencies, civil society organisations and other development partners working towards a common vision of universal access to water, sanitation and hygiene (WASH). SWA identifies that women and girls who trek kilometres for drinking water miss out on productive work or school education. For those children who do attend school, about 443 million school days are lost each year due to water-related illnesses.
	World Bank's Water and Sanitation Program (WSP)	The WSP is a multi-donor partnership which forms part of the World Bank Group's Water Global Practice. Its aim is to support poor people in obtaining affordable, safe and sustainable access to water and sanitation services. In November 2010, WSP released a working paper on 'Gender in water and sanitation'.
	United Nations Development Programme (UNDP)	The UNDP has produced 'Mainstreaming gender in water management: a practical journey to sustainability' (2006), which presents case studies and practical methodologies, consolidates available materials and gives a quick guide to accessing existing information.
	Joint Monitoring Programme for Water Supply and Sanitation (JMP)	The Joint Monitoring Programme (formulated by WHO and UNICEF) monitors inequalities in access to WASH and equality indicators including non-discrimination efforts, and is currently developing global indicators on menstrual hygiene management.
	Water Governance Facility	The UNDP Water Governance Facility at Stockholm International Water Institute has conducted research on gender practice in water governance programs. In 2014, the Water Governance Facility published a report titled 'Gender practice in water governance programmes – from design to results'.

Organisation category	Organisation	Area of focus (related to gender and Goal 6)
Multilateral organisations	Water Supply and Sanitation Collaborative Council (WSSCC)	WSSCC programs and partnerships address gender inequality, disability and social exclusion in the WASH sector. Specific attention is given to the needs of women and adolescent girls, with a specific focus on menstrual hygiene management. In 2015, WSSCC published 'Leave no one behind', which summarises 'the sanitation and hygiene hopes and aspirations of thousands of women and men of different ages and physical abilities, across rural and urban areas in eight South Asian countries'.
	Global Water Partnership (GWP)	The GWP provides tools and resources to support integrated water resource management (IWRM). The GWP has identified gender as a key cross-cutting issue, and in 2014 released its gender strategy. A range of other resources related to gender mainstreaming in water resource management are available on the GWP website.
	UN Food and Agriculture Organization (FAO)	The FAO has developed a booklet to help field staff mainstream gender issues in the design, implementation, operation and maintenance of water management projects for agricultural production. See 'Passport to mainstreaming gender into water programmes' (2012), which includes key questions for interventions in the agricultural sector.
	UN Women	UN Women is the United Nations entity responsible for promoting women's empowerment and gender equality. It was established to accelerate progress to meet the needs of women and girls worldwide. UN Women asserts that access to water and sanitation is necessary for women's empowerment. In 2016 UN Women released a discussion paper titled 'Towards gender equality through sanitation access'.
	UNICEF	UNICEF is major driver of menstrual hygiene management research and action globally, particularly initiatives focusing on girls in schools. UNICEF's advocacy campaign 'menstrual hygiene management in ten' aims to have menstrual hygiene management-friendly WASH in all schools by 2024.
	World Health Organization (WHO)	The WHO is leading global advocacy on WASH in health-care facilities and safe birthing for women. Working through offices in more than 150 countries, WHO staff work side by side with governments and other partners to ensure the highest attainable level of health for all people.
	International Labour Organization (ILO)	The primary goal of the ILO is to promote opportunities for women and men to obtain decent and productive work in conditions of freedom, equity, security and human dignity. Thus, ILO considers gender equality as a key element in its vision of 'decent work for all women and men' for social and institutional change to bring about equity and growth. The ILO's 'mandate on gender equality' is to promote equality between all women and men in the world of work. The ILO publishes the 'Global employment trends for women' report (2012) which includes a range of recommendations to support women to participate equally in the workforce.

Organisation category	Organisation	Area of focus (related to gender and Goal 6)
Multilateral organisations	Asian Development Bank (ADB)	The ADB reports that ‘empowering women economically and socially and giving them “voice” is crucial for achieving ADB’s goals of poverty reduction and inclusive development’. The ‘ADB’s Strategy 2020 highlights gender equity as one of five drivers of change for promoting and achieving inclusive and sustainable growth, reducing poverty, improving living standards and achieving the MDGs’.
Research institutions	Institute for Sustainable Futures, University of Technology Sydney (ISF-UTS)	ISF-UTS provides evidence and knowledge leadership in the area of gender and water, including applied research, evaluation, guidance materials and global sector engagement. ISF-UTS has partnered on gender and water and sanitation with: International Women’s Development Agency (IWDA); WHO; the Australian Department of Foreign Affairs and Trade (DFAT); WaterAid; SNV; and Plan International. The Institute’s ‘Enterprise in WASH’ initiative includes research on gender aspects of entrepreneurship in the water and sanitation sector. ISF, in partnership with IWDA and DFAT, developed ‘Researching Gender Aspects of Water, Sanitation and Hygiene Projects with Pacific Communities’ which includes guidance materials on integrating gender into water and sanitation programming.
	Overseas Development Institute (ODI)	The ODI has conducted research on gender, agriculture and water security and advocates that the Sustainable Development Goals (SDGs) for sustainable agriculture (SDG 2) and sustainable water management (SDG 6) will not be achieved without supporting the agency of rural female farmers. In 2016, ODI published a report ‘Gender, agriculture and water insecurity’.
	International WaterCentre (IWC)	The IWC provides education and training, applied research and knowledge services to implement a whole-of-water cycle approach and to develop capacity in integrated water management. IWC has conducted work on Gender in WASH: Communication and Sustainability.
Civil Society organisations and networks	WaterAid	WaterAid has teams in 37 countries across the world, working with partners to improve access to safe water, toilets and hygiene. WaterAid is a leading global advocacy organisation on WASH in health-care facilities and safe birthing for women, as well as menstrual hygiene management. WaterAid, with the International Women’s Development Agency (IWDA) published ‘Now we feel like respected adults: positive change in gender roles and relations in a Timor-Leste WASH program’, in 2012. WaterAid has also developed a program ‘Menstrual hygiene matters’, which includes a training guide.
	Plan International	Plan International helps ensure that water and environmental sanitation programs and projects help end gender-based inequalities by ensuring that gender is addressed in all of their work. Plan International (Australia) has developed a ‘Gender and WASH monitoring tool’ to help explore and monitor gender relations in WASH projects.

Organisation category	Organisation	Area of focus (related to gender and Goal 6)
Civil Society organisations and networks	Oxfam International	Oxfam works and campaigns with partners in over 90 countries worldwide. Oxfam’s WASH programs are delivered in rural and urban areas, camps for refugees and internally displaced persons, and host communities in 35 countries. Oxfam’s ‘Gender Impact Assessment’ manual for hydroelectricity development in the Mekong has adapted many proven gender impact tools to the context of Mekong hydropower development. Oxfam’s ‘Urban disaster response and recovery: gender-sensitive WASH programming in post-earthquake Haiti’, and ‘What works for women: Proven approaches for empowering women smallholders and achieving food security’ reports were developed with eight other international development agencies to share the lessons learned from decades of promoting gender equality and working with women smallholders and rural women. These reports address the role of women in irrigation management.
	International Women’s Development Agency (IWDA)	The IWDA partners with organisations in the Asia–Pacific region to advance women’s human rights. IWDA believes that although the lack of access to appropriate WASH services is not the root cause of violence, it can lead to increased vulnerabilities to violence of varying forms. IWDA co-developed ‘Now we feel like respected adults: positive change in gender roles and relations in a Timor-Leste WASH program’.
	Women for Water Partnership (WfWP)	The Women for Water Partnership (WfWP) is a partnership of women’s organisations and networks, uniting women in positions of leadership in around 100 predominantly low- and middle-income countries. The 25 member organisations are active in the areas of WASH, sustainable development, women’s participation and empowerment. WfWP emphasises the importance of linking the implementation of SDG 5 (achieve gender equality and empower all women and girls), with the implementation of SDG 6.
	AquaFed (International Federation of Private Water Operators)	AquaFed (and the Women for Water Partnership) are contributing to the ‘Gender equality’ report of the Office of the High Commissioner for Human Rights (OHCHR). AquaFed and WfWP shed light on gender equality, on how to combat gender stereotypes, and on the role of men and women.
	Voice.Global	Voice is a grant facility that supports people most marginalised and discriminated-against in Mali, Niger, Nigeria, Uganda, Tanzania, Kenya, Laos, Cambodia, Philippines and Indonesia. Grants are provided to organisations which are working to improve access to (productive) resources (finance, land and water) and employment for the most marginalised people in society. Voice focuses on: people living with disability; lesbian, gay, bisexual, transgender and intersex persons; indigenous peoples and ethnic minorities; women facing exploitation, abuse and violence; and age-discriminated people.

Organisation category	Organisation	Area of focus (related to gender and Goal 6)
Civil Society organisations and networks	Bremen Overseas Research & Development Association (BORDA)	BORDA's mission is to improve the living conditions of disadvantaged communities and to keep the environment intact through the expansion of 'basic needs services' in the decentralised supply of sanitation, water and energy, as well as wastewater and solid waste disposal. BORDA's work explores gendered dimensions of corruption in the water sector.
	Rural Water and Sanitation Network (RWSN)	RWSN is an active Community of Practice in the WASH sector, working on equality, non-discrimination and inclusion. 'RWSN strives to make sure that everyone is reached and everyone has a voice in the process of providing basic water services.'
	Inter-agency Network on Women and Gender Equality (IANWGE): Inter-agency Gender and Water Taskforce (2003–2009)	In 2003, the Inter-agency Network on Women and Gender Equality (IANWGE) established an Inter-agency Gender and Water Task Force. The Task Force's objectives were to promote gender mainstreaming in the implementation of the Millennium Development Goals (MDGs) related to water and sanitation, and the Johannesburg Plan of Implementation (JPOI) at the global, regional, national, local and utility levels.
	Gender and Water Alliance (GWA)	GWA promotes 'women's and men's equitable access to and management of safe and adequate water for domestic supply, sanitation, food security, and environmental sustainability. GWA believes that equitable access to and control over water is a basic right for all, as well as a critical factor in promoting poverty eradication and sustainability.'
	WaterSHED (Water, Sanitation and Hygiene Enterprise Development)	According to WaterSHED, it 'engages local enterprises and government in the development of sustainable market-based approaches that empower households to be active and informed consumers of WASH products and services'. WaterSHED, which works in Cambodia, Laos and Vietnam, launched a program to get more women into the toilet industry. Wework is a first-of-its-kind program to increase small business opportunities for women in WASH-related industries.
	WASH Reference Group	The Australian WASH Reference Group comprises organisations working on WASH programs, including non-government organisations, academic institutions and consultants. The WASH Reference Group has experience in multiple countries across the Asia-Pacific region, undertaking: WASH and water resource management programs; policy design and implementation; monitoring and evaluation; capacity and skills development; and the integration of WASH with intersecting issues, including gender, disability and health. Led by WaterAid Australia, in collaboration with the WASH Reference Group, the Inclusive WASH project aims to provide practical skills and evidence to support practitioners' implementation of WASH projects in an equitable and inclusive way. The website contains reference material, practical tools, case studies, webinars and archived forums, all with a strong focus on gender as a key dimension of inclusion and equality.

References & Notes

- ¹ United Nations (2016) Report of the Special Rapporteur on the human right to safe drinking water and sanitation. A/HRC/33/49, 27 July 2016, page 15. http://ap.ohchr.org/documents/alldocs.aspx?doc_id=26940/
- ² Ibid.
- ³ Gender-discriminated people are those who are treated unequally based upon their gender. Gender-discriminated people include women, girls, transgender, intersex, and non-gender-defining people.
- ⁴ Framing papers commissioned by the Australian Water Partnership can be found at: <https://waterpartnership.org.au/>
- ⁵ Section on environmental services and gender has been adapted from: Kelemen E., et al. (2016) Ecosystem services: A gender perspective. In Potschin M. and Jax K. (eds) OpenNESS Reference Book. EC FP7 Grant Agreement no. 308428, page 1. Available via: <http://www.openness-project.eu/library/reference-book/>
- ⁶ UN Women. Accessed at: <http://www.unwomen.org/en/>
- ⁷ On 28 July 2010, through Resolution 64/292, the United Nations General Assembly explicitly recognised the human right to water and sanitation and acknowledged that clean drinking water and sanitation are essential to the realisation of all human rights. For more information, see: http://www.un.org/waterforlifedecade/human_right_to_water.shtml/
- ⁸ 'Universal Design' makes water and sanitation infrastructure safer, easier and more convenient for everyone. Universal Design evolved from Accessible Design, a design process that addresses the needs of people with disabilities. Universal Design goes further by recognising that there is a wide spectrum of human abilities. Everyone, even the most able-bodied person, passes through childhood, periods of temporary illness, injury and old age. By designing for this human diversity, products can be designed so they are more inclusive and easier for all people to use. For more information, see: <http://www.universaldesign.com/>
- ⁹ Tarrass F. et al. (2012) The effects of water shortages on health and human development. *Perspectives in Public Health* 132(5) (Sep 2012), 240-244.
- ¹⁰ Target 6.2 states: 'By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations'.
- ¹¹ UN Women, 2013, 'About', Gender Equality & HIV/AIDS. Accessed at: <http://www.unwomen.org/en/what-we-do/hiv-and-aids/>
- ¹² Maharaj (date not specified) *Mainstreaming gender in water resources management: Why and how*. Accessed at: <http://www.un.org/womenwatch/daw/forum-sustdev/francis%20paper.pdf/>
- ¹³ Winkler I.T. and Roaf V. (2015) Taking the bloody linen out of the closet: menstrual hygiene as a priority for achieving gender equality. *Cardozo Journal of Law & Gender* 21(1), 1–37.
- ¹⁴ Gross B., van Wijk C., and Mukherjee N. (2000) *Linking sustainability with demand, gender and poverty: A study in community-managed water supply projects in 15 countries*. Delft: Water and Sanitation Program. Accessed at: https://www.wsp.org/sites/wsp.org/files/publications/global_plareport.pdf/
- ¹⁵ United Nations (2016), op. cit.
- ¹⁶ Human Rights Watch, Submission to the Special Rapporteur. Accessed at: <https://www.hrw.org/news/2016/02/14/human-rights-watch-submission-gender-equality-special-rapporteur-human-right-safe/>
- ¹⁷ WSSCC and FANSA (2016) Sanitation and Hygiene in South Asia. *Leave no one behind: voices of women, adolescent girls, elderly, persons with disabilities and sanitation workforce*. FANSA and WSSCC, Hyderabad. <http://wsscc.org/wp-content/uploads/2016/08/Leave-no-one-behind-Equality-and-non-discrimination-in-sanitation-and-hygiene-Archana-Patkar.pdf/>
- ¹⁸ Global Water Partnership (2014) *GWP Gender Strategy*. Accessed at: <http://www.gwp.org/globalassets/global/about-gwp/strategic-documents/gwp-gender-strategy.pdf/>

- ¹⁹ Moser, C., (1989) Gender Planning in the Third World: Meeting Practical and Strategic Gender Needs. In *World Development*, Vol. 17. pp 1799 – 1825.
- ²⁰ Source: Authors
- ²¹ It should be noted that sometimes men doing more work may come from a practical need rather than a strategic shift, for example if a woman is ill or has just given birth.
- ²² For SDG 10 (Goal 10: Reduce inequality within and among countries) see <https://sustainabledevelopment.un.org/sdg10/>
- ²³ Source: Oxford Dictionary
- ²⁴ Gunnarsson L. (2011) A defence of the category ‘women’. *Feminist Theory* 12(1), 23–37.
- ²⁵ Ibid., page 34.
- ²⁶ Nang P. and Ouch C. (2014) *Gender and water governance: women’s role in irrigation management and development in the context of climate change*. Phnom Penh, CDRI. Accessed at: <http://www.fao.org/3/a-i5877e.pdf/>
- ²⁷ The Gender in Pacific WASH Project proposes four principles to guide practice: Principle 1: Facilitate participation and inclusion; Principle 2: Focus on how decisions are made; Principle 3: See and value differences; Principle 4: Create opportunities and support for women and men to experience and share new roles and responsibilities. For more information, see: <http://goo.gl/uRO9ZZ/>
- ²⁸ McKinsey Global Institute (2015) *The power of parity: How advancing women’s equality can add \$12 trillion to global growth*. Accessed at: <http://www.mckinsey.com/global-themes/employment-and-growth/how-advancing-womens-equality-can-add-12-trillion-to-global-growth/>
- ²⁹ Ibid., page 8.
- ³⁰ See United Nations (2015) *Preventing conflict, transforming justice, securing the peace*. United Nations Women (UN Women). Accessed at: <http://reliefweb.int/report/world/preventing-conflict-transforming-justice-securing-peace-global-study-implementation/>; and Stone L.A., *Women transforming conflict: A quantitative analysis of female peacemaking* (May 13, 2014, <http://dx.doi.org/10.2139/ssrn.2485242>); and Paffenholz T., et al. (2016) *Making women count – not just counting women: assessing women’s inclusion and influence on peace negotiations*. Geneva: Inclusive Peace and Transition Initiative (The Graduate Institute of International and Development Studies) and UN Women, April 2016. <http://www.inclusivepeace.org/sites/default/files/IPTI-UN-Women-Report-Making-Women-Count-60-Pages.pdf/>
- ³¹ UN Water (2015) *Eliminating discrimination and inequalities in access to water and sanitation*. Geneva: UN Water. Accessed at: http://www.unwater.org/fileadmin/user_upload/unwater_new/docs/UN-Water_Policy_Brief_Anti-Discrimination.pdf/
- ³² This includes taunting and harassing comments as experienced by women for example in the Pacific and PNG. See for example, UNESCO (2014) *School related gender based violence in the Asia-Pacific Region*. Accessed at: <http://unesdoc.unesco.org/images/0022/002267/226754E.pdf/>
- ³³ World Bank (2015) *Unsettled: water and sanitation in urban settlement communities of the Pacific*. World Bank-PRIF. Kiringira J., Atekyereza P., Niwagaba C. and Günther I. (2014) Descending the sanitation ladder in urban Uganda: evidence from Kampala Slums. *BMC Public Health* 14, 624. DOI: 10.1186/1471-2458-14-624
- ³⁴ Gonsalves G., Kaplan E.H. and Paltiel A. (2015) Reducing sexual violence by increasing the supply of toilets in Khayelitsha, South Africa: A mathematical model, *PLOS ONE* 10.4.
- ³⁵ WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation (2010) *Progress on sanitation and drinking-water: 2010 update*. Geneva: WHO/UNICEF. Accessed at: <http://www.unicef.org/eapro/JMP-2010Final.pdf/>
- ³⁶ Benova L., Cumming O., Gordon B.A., Magoma M. and Campbell O.M.R. (2014) Where there is no toilet: water and sanitation environments of domestic and facility births in Tanzania. *PLOS ONE*, published online 5 Sept 2014 DOI: 10.1371/journal.pone.0106738. Accessed at: <http://researchonline.lshtm.ac.uk/1917899/1/pone.0106738.pdf/>

- ³⁷ Velleman Y., Mason E., Graham W., Benova L., Chopra M., Campbell O.M.R., et al. (2014) From joint thinking to joint action: a call to action on improving water, sanitation, and hygiene for maternal and newborn health. *PLOS Medicine* 11(12): e1001771. doi:10.1371/journal.pmed.1001771
- ³⁸ Menstrual hygiene management requires 1) access to accurate and pragmatic information about menstruation and how to manage it hygienically, 2) water, sanitation and hygiene facilities that are suitable for menstrual hygiene management and for disposing of menstrual hygiene materials such as disposable pads, and 3) the supply, use and disposal of safe, appropriate, affordable and sustainable menstrual hygiene materials.
- ³⁹ Huggett C. and Macintyre A. (2016) How can the international development sector effectively address menstrual hygiene management? *Development Bulletin* 77, page 78. Available at: <https://crawford.anu.edu.au/rmap/devnet/devnet/db-77.pdf/>
- ⁴⁰ Winkler I. and Roaf V. (2015), op.cit.
- ⁴¹ Padhi B.K., et al. (2015) Risk of adverse pregnancy outcomes among women practicing poor sanitation in rural India: a population-based prospective cohort study. *PLOS Medicine* 12(7), Accessed at: <https://doi.org/10.1371/journal.pmed.1001851/>
- ⁴² OECD (2014) *Social institutions and gender index 2014*, page 9. Accessed at: <http://www.genderindex.org/sites/default/files/docs/BrochureSIGI2015.pdf/>
- ⁴³ Chase C. and Ngure F. (2016) Multisectoral approaches to improving nutrition: water, sanitation and hygiene. Accessed at: <https://www.wsp.org/sites/wsp.org/files/publications/Multisectoral00itation00and0hygiene.pdf/>
- ⁴⁴ Narayan (1995) in WSP (2010) *Gender in water and sanitation*. Water and Sanitation Program working paper, World Bank, page 9. Accessed at: <https://www.wsp.org/sites/wsp.org/files/publications/WSP-gender-water-sanitation.pdf/>
- ⁴⁵ Water Governance Facility (2014) *Mainstreaming gender in water governance programmes: from design to results*. WGF Report No. 4 SIWI, Stockholm; see also Zwartveen, M., Ahmed, S., and Gautam, S., (eds.) (2012) *Diverting the Flow: Gender Equity and Water in South Asia*. New Delhi: Zubaan Publishers.
- ⁴⁶ United Nations (2002) Plan of implementation of the World Summit on Sustainable Development. Accessed at: http://www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/WSSD_PlanImpl.pdf/
- ⁴⁷ Dublin Principles (1992) <http://www.wmo.int/pages/prog/hwrp/documents/english/icwedece.html/>
- ⁴⁸ Water Governance Facility (2014), op. cit., page 25
- ⁴⁹ Ibid.
- ⁵⁰ With the exception of page 12 of *OECD Principles on Water Governance* where, in the section on stakeholder management, it is stated that special attention should be paid to ‘under-represented categories (youth, the poor, women, indigenous people, domestic users)’, in stakeholder engagement.
- ⁵¹ *OECD Principles on Water Governance*, page 3. Accessed at: <http://www.oecd.org/governance/oecd-principles-on-water-governance.htm/>
- ⁵² World Bank: Accessed at: <http://www.worldbank.org/en/topic/indigenouspeoples/overview/>
- ⁵³ Ibid.
- ⁵⁴ World Commission on Dams Report (2000). See also, *Dams and development: A new framework for decision-making*. http://hqweb.unep.org/dams/WCD/report/WCD_DAMS%20report.pdf/
- ⁵⁵ World Bank. Investment Note 10.2. *Gender and indigenous institutions in agricultural water management*. Accessed at: <http://documents.worldbank.org/curated/en/970091468184457266/pdf/103538-BRI-PUBLIC-AWM-NOTE.pdf/> and Food and Agriculture Organisation, Accessed at: <http://www.fao.org/docrep/005/Y4311E/y4311e04.htm/>
- ⁵⁶ Gender mainstreaming is a process whereby the implications for women and men of any planned action, including legislation, policies and programs in all areas and at all levels, are assessed and addressed, and gender inequalities are not perpetuated, in Alston M. (2014) Gender mainstreaming and climate change. In *Women’s Studies International Forum* 47, p. 287 – 294. Accessed at: <http://www.walker.ac.uk/media/1234/gender->

[mainstreaming-and-climate-change_2014.pdf/](#)

- ⁵⁷ WSP (2010) *Gender in water and sanitation*. Water and Sanitation Program Working Paper, World Bank. <https://www.wsp.org/sites/wsp.org/files/publications/WSP-gender-water-sanitation.pdf/>
- ⁵⁸ Women's lack of participation and influence in decision-making was seen as the greatest gender-related problem for women in the water governance programs studied by the Water Governance Facility (2014) in *Mainstreaming gender in water governance programmes: from design to results*. WGF Report No. 4 SIWI, Stockholm.
- ⁵⁹ Jalal I. (2014) *Women, water, and leadership*. Asian Development Bank (ADB) Briefs, No. 24 December 2014. Accessed at: <http://www.adb.org/publications/women-water-and-leadership/>
- ⁶⁰ SaciWATERs (2009) *Situational analysis of women water professionals in South Asia*. August 2009. <https://www.soppecom.org/pdf/SituationalAnalysisofWomenFULL7.pdf/>
- ⁶¹ Pande R. and Ford D. (2011) Gender quotas and female leadership. In *World Development Report 2012: Gender equality and development*.
- ⁶² Earle A. and Bazilli S. (2013) A gendered critique of transboundary water management. *Feminist Review* 103, 99–119.
- ⁶³ Chaaban J. and Cunningham W. (2011) Measuring the economic gain of investing in girls: the girl effect dividend. *World Bank: Policy Research Working Papers*, August 2011.
- ⁶⁴ UNICEF (2015) *The investment case for education and equity*. Accessed at: http://www.unicef.org/publications/files/Investment_Case_for_Education_and_Equity_FINAL.pdf/
- ⁶⁵ OECD (2014), op. cit.
- ⁶⁶ For example, WaterSHED's Women's Empowerment Program seeks to create greater opportunities for women to succeed in the rural markets for water, sanitation and hygiene in rural Cambodia.
- ⁶⁷ Gero A., Murta J., Doan Trieu Thanh, Bui Ha Ly and Willetts J. (2015) Motivators and barriers for sanitation enterprises in Vietnam. *Enterprise in WASH – Research Report 5*, Institute for Sustainable Futures, University of Technology Sydney, page 42.
- ⁶⁸ Ibid.
- ⁶⁹ Ibid., Hampel-Milagrosa (2010), page 42.
- ⁷⁰ WaterSHED (2016) Many women are interested in running their own WASH business, but they face real challenges in turning this interest into profit. Accessed at: http://www.watershedasia.org/women_empowerment_launch/
- ⁷¹ Asia Foundation (2013) *Access to trade and growth of women's SMEs in APEC Developing Economies: Evaluating the business environment in Indonesia*. The Asia Foundation, Jakarta.
- ⁷² MRC Initiative for Sustainable Hydropower (2013) *Regional scoping workshop on gender and sustainable hydropower*. Workshop Report 20–21 June 2013, Bangkok, Thailand.
- ⁷³ Simon, M., (2013) *Balancing the Scales - Using gender impact assessment in hydropower development*. Oxfam Australia. Accessed at: <http://resources.oxfam.org.au/pages/view.php?ref=1210&k=/>
- ⁷⁴ Ibid.
- ⁷⁵ Earle A. and Bazilli S. (2013), op. cit., page 103
- ⁷⁶ The World Bank Group Gender Strategy (2015) recommends that programs identify what gaps exist between women and men in a given sector and use this information to inform the project design or sector approach. The Strategy aims to enhance operational effectiveness through a results chain that links gender gaps identified in analysis to specific actions that are tracked in the project / program results framework. Accessed at: <http://documents.worldbank.org/curated/en/820851467992505410/World-Bank-Group-gender-strategy-FY16-23->

[gender-equality-poverty-reduction-and-inclusive-growth/](#)

- ⁷⁷ On 28 July 2010, through Resolution 64/292, the United Nations General Assembly explicitly recognised the human right to water and sanitation and acknowledged that clean drinking water and sanitation are essential to the realisation of all human rights. For more information, see: http://www.un.org/waterforlifedecade/human_right_to_water.shtml/
- ⁷⁸ Adapted from Gupta G. (no date) *Gender integration continuum*. Accessed at: http://www.igwg.org/igwg_media/Training/FG_GendrIntegrContinuum.pdf/
- ⁷⁹ Willetts J.R., Halcrow G., Carrard N.R., Rowland C. and Crawford J. (2010) Addressing two critical MDGs together: gender in water, sanitation and hygiene initiatives. *Pacific Economic Bulletin* 25(1), 162–176.
- ⁸⁰ Carrard N.R., Crawford J., Halcrow G., Rowland C. and Willetts J.R. (2013) A framework for exploring gender equality outcomes from WASH programmes. *Waterlines: International Journal of Water, Sanitation and Waste* 32(4), 315–333.
- ⁸¹ Wilbur J. and Huggett C. (2015) *WaterAid Bangladesh Equity and inclusion review: a review of the rights, equity and inclusion work of WaterAid Bangladesh*. London: WaterAid. Accessed at: <http://www.wateraid.org/policy-practice-and-advocacy/equality-and-non-discrimination/resources/>
- ⁸² Willetts J., Halcrow G., Carrard N., Rowland C. and Crawford J. (2009) *How do we better address gender in Pacific water and sanitation initiatives?: Vanuatu Case study and Fiji Case Study*. Accessed at: www.genderinpacificwash.info/ See also, Halcrow G., Rowland C., Willetts J., Crawford J. and Carrard N. (2010) *Resource Guide: Working effectively with women and men in water, sanitation and hygiene programs: Learnings from research on gender outcomes from rural water, sanitation and hygiene projects in Vanuatu and Fiji*. International Women’s Development Agency and Institute for Sustainable Futures, University of Technology Sydney, Australia.
- ⁸³ Ibid.
- ⁸⁴ WHO & UNICEF (2015) *Water, sanitation and hygiene in health care facilities: Status in low- and middle- income countries and way forward*. Geneva: WHO. http://www.who.int/water_sanitation_health/publications/wash-health-care-facilities/en/ and http://apps.who.int/iris/bitstream/10665/154588/1/9789241508476_eng.pdf/
- ⁸⁵ Huggett C. and Macintyre A. (2016) How can the international development sector effectively address menstrual hygiene management? *Development Bulletin* 77, 78–80. Accessed at: <https://crawford.anu.edu.au/rmap/devnet/devnet/db-77.pdf/>
- ⁸⁶ UNICEF (2016) *Supporting the rights of girls and women through menstrual hygiene management (MHM) in the East Asia and Pacific Region*. February 2016. Accessed at: http://www.unicef.org/eapro/MHM_Realities_Progress_and_OpportunitiesSupporting_opti.pdf?platform=hootsuite/
- ⁸⁷ WaterAid (2012) *Menstrual hygiene matters*. Accessed at: <http://www.wateraid.org/what-we-do/our-approach/research-and-publications/view-publication?id=02309d73-8e41-4d04-b2ef-6641f6616a4f/>
- ⁸⁸ Winkler I.T. and Roaf V. (2015), op. cit.
- ⁸⁹ Sommer M., Caruso B.A., Sahin M., Calderon T., Cavill S., Mahon T. and Phillips-Howard P.A. (2016) A time for global action: addressing girls’ menstrual hygiene management needs in schools. *PLOS Med.* 13(2): e1001962. doi:10.1371/journal.pmed.1001962
- ⁹⁰ Ibid.
- ⁹¹ WaterAid (2013) *Violence, gender and WASH: A practitioner’s toolkit*. Accessed at: <http://violence-wash.lboro.ac.uk/co-publishers/>
- ⁹² Hughes K., Bellis M.A., Jones L., Wood S., Bates G., Eckley L., McCoy E., et al. (2012) Prevalence and risk of violence against adults with disabilities: a systematic review and meta-analysis of observational studies. *Lancet* 379(9826), 1621–1629. doi:10.1016/S0410-6736(11)61851-5
- ⁹³ International Women’s Development Agency and WaterAid (2012) *Now we feel like respected adults: Positive change in gender roles and relations in a Timor Leste WASH programme*. ACFID.
- ⁹⁴ Briefing Note 2: Improving WASH programming and services 2014. *Violence, gender and WASH: a practitioner’s*

toolkit. Accessed at: <http://www.wateraid.org/what-we-do/our-approach/research-and-publications/view-publication?id=5cfb752f-1929-41f9-9aa7-a69409bbad71/>

- ⁹⁵ Halcrow G., Rowland C., Willetts J.R., Crawford J. and Carrard N.R. (2010) *Working effectively with women and men in water, sanitation and hygiene programs: Learnings from research on gender outcomes from rural water, sanitation and hygiene projects in Vanuatu and Fiji*. pp. 1–68. International Women's Development Agency (IWDA) and Institute for Sustainable Futures, UTS, Sydney, Australia. For information on Plan International's Gender and WASH Monitoring Tool (GWMT) see <https://prezi.com/8gr43bqrzkfg/the-gender-and-wash-monitoring-tool-gwmt/>
- ⁹⁶ Hutton G. (2015) *Benefits and costs of the water sanitation and hygiene targets for the post-2015 development agenda. Post-2015 consensus*. World Bank. Accessed at: http://www.copenhagenconsensus.com/sites/default/files/water_sanitation_assessment_-_hutton.pdf/
- ⁹⁷ Water and Sanitation Program (WSP). *Africa: Economics of Sanitation Initiative*. Accessed at: <http://www.wsp.org/content/africa-economic-impacts-sanitation/>
- ⁹⁸ United Nations (2015) *The world's women 2015 trends and statistics*, page 167. Accessed at: http://unstats.un.org/unsd/gender/downloads/WorldsWomen2015_report.pdf/
- ⁹⁹ Jasper C., Le T. and Bartram J. (2012) Water and sanitation in schools: a systematic review of the health and educational outcomes. *International Journal of Environmental Research and Public Health* 9, 2772–2787.
- ¹⁰⁰ Caruso B.A., Sevilimedu V., Fung I.C., Patkar A. and Baker K.K. (2015) Gender disparities in water, sanitation, and global health. *Lancet* 386(9994), 650–651.
- ¹⁰¹ Simmie J. and Martin R. (2010) The economic resilience of regions: towards an evolutionary approach. *Cambridge Journal of Regions, Economy and Society* 3(1), 27–43.
- ¹⁰² Hallegatte S. (2014) Economic resilience: definition and measurement. *World Bank Policy Research Working Paper No. 6852*. Accessed at: <http://ssrn.com/abstract=2432352/> or http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2432352/
- ¹⁰³ Tripathi R., et al. (2012) *What works for women: proven approaches for empowering women smallholders and achieving food security*. March 2012. <http://policy-practice.oxfam.org.uk/publications/what-works-for-women-proven-approaches-for-empowering-women-smallholders-and-ac-216769/>
- ¹⁰⁴ Parker H., Oates N., Mason N. and Calow R. (2016) *Gender, agriculture and water insecurity*. ODI Insights. Accessed at: <https://www.odi.org/sites/odi.org.uk/files/resource-documents/10533.pdf/>
- ¹⁰⁵ UN Women (2015) *Progress of the world's women 2015–2016: Transforming economies, realizing rights*. Accessed at: <http://www.unwomen.org/en/digital-library/publications/2015/4/progress-of-the-worlds-women-2015#sthash.w5yr99Tp.dpuf/>
- ¹⁰⁶ Institute for Environment and Development (IIED) (2012) *Urban poverty's hidden dimensions threaten development, new research reveals*. Accessed at: <http://www.iied.org/urban-poverty-s-hidden-dimensions-threaten-development-new-research-reveals/>
- ¹⁰⁷ Herington C.A., et al. (2006) in Johnstone P. et al. (2012) *Liveability and the water sensitive city – science-policy partnership for water sensitive cities*. Melbourne, Australia. CRC for Water Sensitive Cities, Aug 2012, page 6.
- ¹⁰⁸ Johnstone P., et al. (2012) *Liveability and the water sensitive city – science-policy partnership for water sensitive cities*. Melbourne, Australia. CRC for Water Sensitive Cities, Aug 2012, page 26.
- ¹⁰⁹ Hulland K.R.S., Chase R.P., Caruso B.A., Swain R., Biswal B., et al. (2015) Sanitation, stress, and life stage: a systematic data collection study among women in Odisha, India. *PLOS ONE* 10(11): e0141883. doi:10.1371/journal.pone.0141883
- ¹¹⁰ Ibid.
- ¹¹¹ Action Aid (2014) *Safe cities for women: From reality to rights*. Accessed at: http://www.actionaid.org/sites/files/actionaid/safe_cities_final_report.pdf/
- ¹¹² Target 6.3 states: 'By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally'.

- ¹¹³ UNICEF and WHO (2015) *Progress on sanitation and drinking water: 2015 update and MDG assessment*.
- ¹¹⁴ Winterford K., Ross K. and Willetts J. (2014) *Water safety planning equity study: synthesis report of four case studies in Asia*. Prepared for the World Health Organization by the ISF-UTS.
- ¹¹⁵ WHO/UNICEF Joint Monitoring Programme for water supply and sanitation (2016) *Task Force on Monitoring Inequalities for 2030 Sustainable Development Agenda*. Accessed at http://www.wssinfo.org/fileadmin/user_upload/resources/JMP-Taskforce-on-monitoring-inequalities_meeting-report.pdf/
- ¹¹⁶ Caruso B.A. et al. (2015), op. cit.
- ¹¹⁷ As recommended by the JMP Equity and Non-Discrimination Working Group: <http://www.wssinfo.org/post-2015-monitoring/working-groups/equity-and-non-discrimination/>
- ¹¹⁸ Seager J. (2015) Sex-disaggregated indicators for water assessment monitoring and reporting. Technical Paper. Gender Series. *WWAP Gender Toolkit*. Paris: UNESCO.
- ¹¹⁹ UN Human Right to Water and Sanitation commitments are outlined at: http://www.un.org/waterforlifedecade/pdf/human_right_to_water_and_sanitation_milestones.pdf See also *The Rights to Water and Sanitation*, <http://www.rightttowater.info/>
- ¹²⁰ Pohlner H., et al. (2016) *Valuing Water: A framing paper for the High Level Panel on Water*. Australian Water Partnership. Accessed at: <https://waterpartnership.org.au/>
- ¹²¹ OECD (2010) *Pricing water resources and water and sanitation services*. OECD Studies on Water. Accessed at: http://www.oecd-ilibrary.org/environment/pricing-water-resources-and-water-and-sanitation-services_9789264083608-en/
- ¹²² Bakker K.J. (2001) Paying for water: water pricing and equity in England and Wales. *Transactions of the Institute of British Geographers, New Series* 26(2), 143–164.
- ¹²³ ISF-UTS (2014) *Financing sanitation for cities and towns: learning paper*. Prepared for SNV Netherlands Development Organisation by Institute for Sustainable Futures, University of Technology Sydney.
- ¹²⁴ Lemanski C. and Marx C. (eds) (2015) *The city in urban poverty*. Springer.
- ¹²⁵ FAO (2011) *The role of women in agriculture*. ESA Working Paper no. 11-02. Accessed at: <http://www.fao.org/docrep/013/am307e/am307e00.pdf/>
- ¹²⁶ Craven L.K. and Gartaula H.N. (2015) Conceptualising the migration–food security nexus: lessons from Nepal and Vanuatu. *Australian Geographer* 46(4), 455–471.
- ¹²⁷ Sugden F. (2014 presentation) Feminisation of agriculture, out-migration and new gender roles: an imperative to change conventional engagements with women water users. International Water Management Institute.
- ¹²⁸ Jalal I. (2014), op. cit.
- ¹²⁹ Guo L., Bo Z., Zhao Y and He X. (2011) Farmer's attitude to water user association participation management, based on gender analysis. In *ISWREP 2011: Proceedings 2011 International Symposium on Water Resource and Environmental Protection*, 20–22 May 2011, Xi'an, China, pp. 2543–2546. Accessed at: http://ieeexplore.ieee.org/xpl/mostRecentIssue.jsp?punumber=5871806&filter%3DAND%28p_ISNumber%3A5893368%29&pageNumber=2/
- ¹³⁰ Cleaver F. (1998) Choice, complexity, and change: gendered livelihoods and the management of water, *Agriculture and Human Values* 15(4), 293–299.
- ¹³¹ A study has shown that more women than men die from climate related hazards (such as windstorms) as a result of women waiting at home for family members to accompany them, and also due to restrictive clothing such as the Sari. World Health Organization (2011) *Gender, Climate Change, and Health*. World Health Organization (WHO), Switzerland, page 11. Accessed at: <http://www.who.int/globalchange/GenderClimateChangeHealthfinal.pdf/>
- ¹³² WHO & UNICEF (2015), op. cit.

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water partners for development

The Australian Water Partnership is an Australian Government aid initiative bringing together public and private organisations from the Australian water sector with development partners in the Asia-Pacific.