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Water Justice, Gender and Disability



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Editorial: Knowing where everyone is...

Alan Nicol, Sylvie Cordier and Floriane Clement

Development interventions typically emerge and are implemented in silos. The Millennium Development Goals (MDGs) are a good example of this. However, as the global community shifts to implementation of the Sustainable Development Goals (SDGs) (a far more participatory process), the *Leave No One Behind* paradigm has emerged and become a strong theme. Highlighting the inequalities faced by different – and often the hardest to reach – population groups this approach recognises the intersection of multiple forms of discrimination related to gender, age, ethnicity, religion, caste, disability and geography.

This presents an opportunity to take issues affecting the most marginalized within development into the mainstream and to drive real change, pushing for the voices, resources and support that these groups need and ensuring paper commitments become real actions. In particular, the sub-category of women and persons with disabilities – including girl children – often 'drop off' the design, development and delivery of key service provision, the results of which leave them unable to access such services and having to scratch together other ways of meeting their needs, sometimes at great personal risk and cost.

Now the SDGs have begun implementation it is time to put the targets and indicators to use, ensuring that this includes the 'left out' groups and in the process strengthening their own agency to effect change in their lives. As editors of this volume on gender, disability and WASH, we argue that a critical starting point lies in the achievement of SDG Goal 1 on poverty, Goal 5 on gender equality, and Goal 6 on universal access to water and sanitation. These can and should be connected to Goal 10 on reducing inequalities, within which is the challenge of supporting more inclusive development involving the specific needs of persons with disabilities.

Important legally-binding United Nations Conventions on Human Rights exist to support this, including the Convention on the Elimination of All Discrimination Against Women (CEDAW, 1979) and the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD, 2006). Under these instruments governments are obliged to report on measures and policies they have adopted to

eliminate discrimination. Yet, whilst undoubtedly important documents in their own right, they are but a necessary and not sufficient condition to effect real change that improves the quality of people's lives.

The papers in this volume on gender, persons with disabilities and WASH in South Asia help to illustrate why and provide important pointers on ways forward. A common thread throughout the four articles is that a constellation of challenges still exists, from 'exclusion' through prejudice at different levels, to institutional realities that render policy and other instruments ineffective in practice. In some cases, even, there remains a complete absence of key legal and policy instruments.

In Nepal, Hoffman, Yakami and Dhakal note the lack of practical implementation of international conventions and the persistence of exclusion, often based on deep-seated prejudices within local communities. They argue that governments and other development agents in effect systematically neglect these most vulnerable groups which allows for the persistence of discrimination. Far more needs to be done to breach resulting social and institutional exclusion, including providing information and knowledge, and tailoring physical structures to the needs of these groups. In Sri Lanka (Jaffna), Hanley et al reflect on the complexity of exclusion, but also the very real possibilities that exist to improve inclusion. These include more explicit acknowledgement by government of the difficulties persons with disabilities face in accessing WASH facilities and, for implementers, turning more comprehensive understanding into more early consultation, planning and design with these specific groups involved.

Buisson, Curnow and Naz, in examining Bangladesh stress the importance of power dynamics. They argue for a more targeted approach that not simply seeks inclusivity but moves to the establishment of more specialised institutions, including creating female-only water management sub-committees. Finally, in India, Mekala similarly notes how institutions – as well as development actors – are key to change. Institutions that are tailored to persons with disabilities and particularly those that intersect

gender and disability are critical, including providing mentoring and training to support real capacity development with an emphasis on strengthening agency. What is common here is the need for institutional and policy set-up to recognize the need for less general and more specialised and tailored change. This is also the story of Utthan and of her director, Nafisa Barot. As Ahmed highlights, effective and inclusive interventions start with on-the ground knowledge that not only addresses water scarcity issues but also challenges entrenched inequalities in social and economic structures, above all those rooted in patriarchal and feudal systems. Complacency and acceptance that business as usual is working will not deliver decency and human dignity in the face of resistance and continued social and institutional barriers.

Where to go next? The answer appears two-pronged: to enforce what exists already through the use of international legal instruments, but avoiding complacency in the face of 'general attempts at inclusion'; whilst using more targeted, directed and tailored activism that can seek more specific change as part of the drive to achieve the SDGs. In what is still a very patriarchal world this specific action should actually demonstrate (and not just promote) practical change, starting with effectively listening to and engaging key groups, and combining this with monitoring and indicator frameworks that can demonstrate progress and the achievement of results for these groups. Whilst the SDGs are a crucial starting point, the editors of this volume call on all involved to ensure that disaggregation of data on gender and persons with disabilities is mainstreamed across all goal monitoring so that the *Leave No-one Behind* paradigm starts with *knowing where everyone is*.

Planning for inclusion: exploring access to WASH for women and men with disabilities in Jaffna District, Sri Lanka

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Abstract

While Sri Lanka has made significant progress over the last decade in improving rates of access to Water, Sanitation and Hygiene (WASH), this improvement has not been uniform across the country. People living in the conflict-affected Jaffna District have substantially lower rate of access to WASH services than the national average. Hence, efforts are being made to improve WASH coverage in this region. World Vision is one such organisation working to improve access to safe drinking water and sanitation in Jaffna District, with funding from the Australian Government. This program includes a specific focus on reaching the most vulnerable groups in the community, including people with disabilities. In 2015, World Vision completed a baseline assessment to inform project implementation, and establish an evidence base for measuring change. Given the focus on disability inclusion, a key part of this was to identify the extent to which people with disabilities had access to WASH in project areas. To supplement this baseline, in early 2016, World Vision funded an in-depth assessment of disability, to further explore the experiences and perceptions of people with disabilities in accessing WASH. Findings from both these studies are presented, which highlight the complex and interacting barriers faced by people with disabilities in accessing WASH facilities and the impact this has on their lives. The different experiences of women and men with disabilities are also explored, and recommendations to strengthen inclusive WASH practice in Sri Lanka are provided.

Keywords: Disability, Gender, Sri Lanka, WASH, Inclusion

Introduction

In 2010 the UN Human Rights Council declared access to water and sanitation as a basic human right. This was strengthened in 2015, when the UN General Assembly further recognised the distinction between the human right to water and the human right to

sanitation. In Sri Lanka the rates of access to improved drinking water and sanitation are well above the regional average, with 96% and 95% access to improved water and sanitation respectively (WHO and UNICEF, 2015). However, these statistics mask inequalities in access between urban and rural areas, and across geographic regions, with people in

the conflict-affected Jaffna district experiencing substantially lower rates of access. This is due to a combination of factors: (i) damaged sanitation facilities and lack of access to water; (ii) weak water resource coordination and planning, and lack of essential policies for managing water resources; (iii) poor institutional capacity of water and sanitation authorities; and (iv) inadequate awareness about water conservation, environmental protection, and hygiene among users (WHO and UNICEF, 2015).

Within particular geographic areas, improvements in access to Water, Sanitation and Hygiene (WASH) have also been inequitable. In South Asia, studies have shown that better access to sanitation has primarily been enjoyed by the wealthiest in society, while the poor and marginalised (such as people with disabilities) are often left behind (Narayanan et al., 2012). Environmental barriers limit the extent to which people with disabilities can benefit from efforts to increase community access to WASH. These include attitudinal barriers that create stigma, shame and discrimination; physical barriers such as inaccessible infrastructure designs; and communication barriers (Narayanan et al., 2012). Institutional barriers including a lack of specific policies and strategies to increase accessibility (such as a specific commitment to accessible design in public infrastructure) can further perpetuate these issues.

The 2012 National Census identified 1.62 million people with disabilities in Sri Lanka, aged 5 years and over (8.7% of the population) (Department of Census and Statistics, 2012). This included 43% males and 57% females. The most common impairment reported was vision (5.4%), followed by mobility (3.9%), hearing (2.1%) and cognition (1.8%). In Jaffna District, disability prevalence was found to be higher than the national average at 9.6%. Anecdotal evidence suggests disability rates in Jaffna are substantially higher than recorded in the Census, as a result of the extended conflict.

People with disabilities are amongst the poorest of the poor in Sri Lanka (Ministry of Social Welfare, 2003). The National Policy on Disability for Sri Lanka reports that the employment rate for people with disabilities is low (estimated at 16%), resulting in many people with disabilities being dependent on others for the duration of their life (Ministry of Social Welfare, 2003). Social exclusion and negative attitudes towards people with disabilities are

widespread, resulting in their exclusion from family outings and social celebrations such as weddings, community activities and festivals (Ministry of Social Welfare, 2003). Cultural beliefs associating disability and individuals who have disability with misfortune, and perceiving them as omens of bad luck also contribute to exclusion. Women with disabilities are often further disadvantaged compared to men with disabilities – education and employment rates are lower and poverty rates are higher (Ministry of Social Welfare, 2003). Women with disabilities also encounter stronger negative attitudes, leading to families becoming protective and in many cases over-protective, thus further limiting their inclusion in society.

Policy context

The Government of Sri Lanka acknowledges the potential discrimination faced by people with disabilities and has enacted a range of laws, policies, and regulations to help overcome this. These include the Protection of the Rights of Persons with Disability Act, No 28 in 1996, the National Policy on Disability for Sri Lanka in 2003, and the National Action Plan for Disability in Sri Lanka in 2013. In February 2016, Sri Lanka also ratified the United Nations Convention on the Rights of Persons with Disabilities (CRPD). Article 28 of the CRPD focuses on the right of people with disabilities to an adequate standard of living for themselves and their families; including access to clean water services (United Nations, 2006). While the national disability law and policy include a broad commitment to accessibility, there are no specific commitments in relation to WASH.

With regards to physical accessibility, the Disabled Persons (Accessibility) Regulation No. 1 (Ministry of Social Welfare, 2006) stipulates that all public buildings and places be made accessible within three years of the operation of the regulations. This includes designs for accessible toilets. However, implementation of this regulation has been limited, particularly in relation to improving accessibility of existing buildings. In 2013, the Ministry of Health also released Design Considerations on Accessibility for Persons with Disabilities to address some gaps in implementation (Ministry of Health, 2013).

While there are a range of laws and policies in place to protect disability rights, implementation has been an issue. UNDP Resident Representative in Sri Lanka, Subinay Nandy (2015) notes that the absence of

institutional mechanisms to coordinate policy implementation, and absence of institutional monitoring processes are key contributing factors.

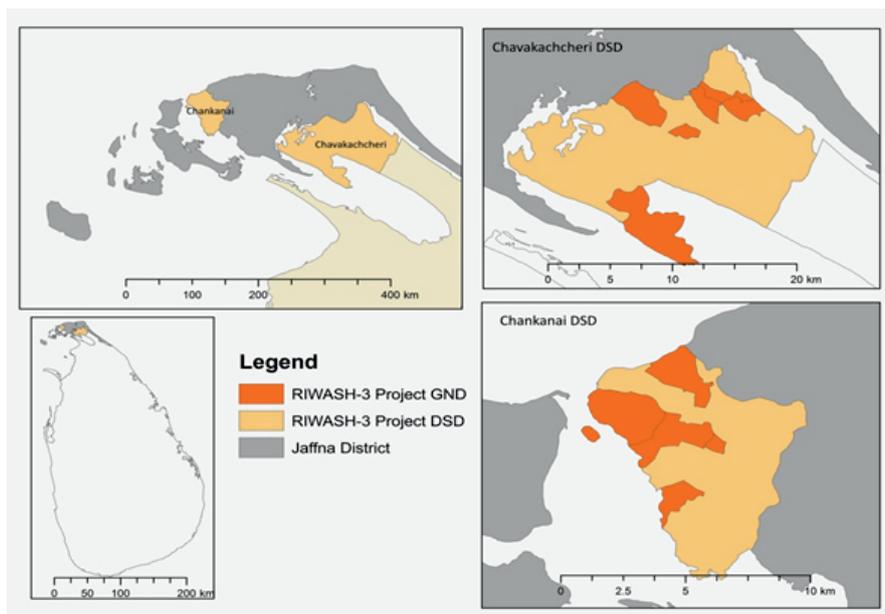
Within the WASH sector, the National Policy for Rural Water Supply and Sanitation (RWSS) and the National Drinking Water Policy both recognise that access to safe drinking water and sanitation are basic human rights and commit to supporting activities that lead to access for all citizens (Ministry of Urban Development, Construction and Public Utilities, 2001). While not specifically referring to disability, these policy commitments provide a good basis for inclusive and accessible design. The National Action Plan for the Protection and Promotion of Human Rights 2011-2016 (which focuses primarily on internally displaced people) also acknowledges that the environment, including water and sanitation, should be accessible to all, including people with disabilities (Government of Sri Lanka, 2011).

World Vision Rural Integrated WASH 3 Project

World Vision is a Christian development organisation, with a long history of community empowerment and development in Sri Lanka including supporting large-scale rural WASH programs. World Vision has a strong commitment to social inclusion and seeks to ensure integration of marginalised and neglected members of the community into development programs.

Its approach to WASH is to work in partnership with local authorities and community organisations to support implementation of the RWSS policy. This includes providing capacity building support to district and local governments, the National Water Supply and Drainage Board, Disabled People's Organisations (DPOs), schools, and community based organisations. The support provided to these organisations includes resources, training, infrastructure, influencing, and advocacy to improve access of poor and vulnerable communities to water points, toilets and hygiene information.

The Rural Integrated WASH 3 (RIWASH 3) project is being implemented in Jaffna District, in the Northern Province, funded by the Australian Government's Civil Society WASH Fund 2. The five year project commenced in 2014, and aims to improve the performance of WASH actors to sustain services, increase adoption of improved hygiene practices, and increase equitable use of water and sanitation facilities of target communities from 11 Grama Niladari Divisions (GNDs) in Jaffna District in the Divisional Secretariats of Chankanai (CHK) and Chavakachcheri (CHV). The project focuses on the most vulnerable groups, including female-headed households and people with disabilities, to address inclusion issues in WASH design, implementation and management.



Source: Nagayam, N. 2013. *Rural Integrated Water, Sanitation and Hygiene 3 (RI-WASH 3) Baseline Assessment Report*, World Vision

Figure 1: Map of RIWASH 3 Project Location

To support disability inclusion within the project, World Vision has partnered with CBM Australia, an international Christian development organisation committed to improving the quality of life of people with disabilities in the poorest countries of the world. Within the project, CBM Australia has focused on building capacities of partners for disability inclusion, fostering connections with local DPOs, and providing technical guidance on disability inclusion within planned activities. World Vision is also partnering with the Northern Province Consortium of Organizations for Differently Abled (NPCODA) for disability assessment, technical support and capacity building on inclusion of people with disabilities in the project.

The project conceptualises disability using a rights based approach, guided by the CRPD. Article 3 of the CRPD states that people with disabilities include 'those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others' (United Nations, 2006). The project recognises that people with disabilities are citizens and rights holders, who must have the same opportunity to participate in society as others. Therefore, the society needs to change in order to eliminate physical, communication, attitudinal and institutional barriers.

Context in the project area

Jaffna Peninsula is over 1100 km² in area and has a coastline of 160 km. The district's economy is predominantly based on agriculture. Ground water is the main water source and is used for domestic, agricultural and industrial purposes. Although 70% of households in the project area have toilets, up to 50% of them are not used due to lack of water, maintenance and habits. Open defecation is therefore common, however this poses privacy and security concerns, particularly for women at night (World Vision, 2013).

The social fabric of the district is enriched by cultural values, religious beliefs and traditions. Caste and the related divides in the social structure play a key role in influencing the community relationships within this district. This research did not set out to understand the barriers related to caste and how they intersect with other inequalities, although it is acknowledged that this is an area where further

research would be beneficial.

A gender analysis conducted by World Vision in 2014 in CHK Division found that women are commonly responsible for domestic work and childcare, while men are primarily responsible for economic activities. Although the onus of fetching water generally falls on women, in some families this responsibility is shared by men (World Vision, 2014). People often need to walk 1-2 km to reach a water source, sometimes further. During rainy season, water sources are much more difficult to access due to muddy roads.

There are a large number of female-headed households in the north of Sri Lanka as a consequence of the recent civil war. In these households women are responsible for both economic and domestic activities, placing them at increased risk of poverty (World Vision, 2014). Decision makers in families tend to be fathers and male children. Males also tend to dominate village committees, although the introduction of separate women's development committees has increased women's participation and has supported their empowerment. However, these measures are not without risks as gender based violence is common. Some incidents have been reported of husbands assaulting their wives for participating in village committees as this takes them away from other domestic or economic work (World Vision, 2014).

A baseline assessment was completed by World Vision in March 2015 to inform project implementation and establish an evidence base for measuring change. Given the project's focus on disability inclusion, a key part of it was to assess the policy context, and identify the extent to which people with disabilities had access to WASH in project areas and whether this required assistance from family or special arrangements to be made. To supplement this baseline, in early 2016, World Vision funded an additional in-depth assessment of disability, which was completed by NPCODA. This aimed to explore the opinions and experiences of people with disabilities, community members and government officers in relation to access to WASH for people with disabilities. This article reports on the results of both these studies in relation to people with disabilities and draws some conclusions and recommendations to inform inclusive WASH practices in Sri Lanka.

Methodology

Baseline assessment

The RIWASH 3 baseline assessment adopted a mixed methods approach, collecting both qualitative and quantitative data from primary and secondary sources. This sought to: identify current practices for WASH coordination, management and governance in the project areas (supply); identify current

community participation, capacity and ownership in the WASH sector (demand); and conduct an analysis of social inclusion, environmental factors and knowledge management. Table 1 provides an overview of the data collection methods and sample size.

The household questionnaire was administered in Tamil using mobile technology. Questionnaires were

Table 1: Baseline assessment data collection method description, type and sample size

Description	Type	Sample size
Literature review	Qualitative	-
Key informant interviews with change agents (individuals identified by the project who are committed to provide hands-on support for health, sanitation and hygiene promotion in their communities) representing the supply side aspects of WASH	Qualitative	14
Workshops with change agents and community representatives (one each in Jaffna, CHK and CHV)	Qualitative	3
Face-to-face household questionnaire with households in the project target locations – rural and urban populations	Quantitative	810
Face-to-face household questionnaires in non-project locations representing both rural and urban populations (control group)	Quantitative	165

Source: Compiled from Nagayam, N. 2013. Rural Integrated Water, Sanitation and Hygiene 3 (RI-WASH 3) Baseline Assessment Report, World Vision Australia

designed, field tested and fine-tuned prior to use. Purposive quota sampling was adopted for the project locations (11 GNDs) based on lists obtained from Government of Sri Lanka officials. Random sampling was used for the control group. Data collection was conducted by 25 enumerators (including six enumerators with disabilities) and 16 research assistants, who completed comprehensive training prior to field work. Field work was undertaken from January – March 2015.

The questionnaire included questions related to household demographics, access to water and sanitation, and hygiene behaviour. The Washington Group Short Set of Questions on Disability,¹ which focuses on difficulty in performing six basic functions such as seeing, hearing and walking, was used to

identify people with disabilities within the household. An additional question regarding difficulty with using hands was added to the standard Short Set, given the relevance of this to WASH access. Questions were then asked as to whether each person identified as having difficulty performing a basic function was able to access the water and sanitation facilities used by other household members and if yes, whether they required assistance to do so. Key informant interviews and workshops also included questions on disability – specifically regarding awareness of the National Disability Policy, level of acceptance of disability and level of awareness about disability in WASH design, implementation, and management. Only results related to disability are reported here.

¹ See <http://www.washingtongroup-disability.com/> for more information

Limitations

Field work was not entirely independent as enumerators were recruited, managed and quality checked by World Vision and were from the target GNDs. The Washington Group Short Set of Questions on Disability and other questions related to WASH access were answered by one household member (the survey respondent) on behalf of other household members. This may have affected the results as subsequent studies (Danquah and Wilbur, 2016) have shown that questions asked alone to the household head in a household survey may not provide an accurate reflection of the needs of vulnerable members of the household. In addition, the structure of the survey was such that not all survey questions could be disaggregated by disability status, which limited the extent of analysis possible.

In-depth disability assessment

The in-depth assessment was carried out from January – May 2016. Its goal was to explore the opinions of people with disabilities and other community members on inclusion of people with disabilities within WASH activities and the accessibility of WASH facilities. This helped increase understanding of current levels of accessibility to WASH services by people with disabilities and the barriers and enablers for this. Five workshop discussions were conducted in Tamil, involving people from the 11 GND of CHK and CHV where the project will be implemented. This included a total of 141 people (see Table 1), including 63 people with disabilities and 78 people without disabilities, including both males and females, and parents of people with intellectual or psychosocial disabilities. The workshops were facilitated by both people with and without disabilities. Ten government officers

Table 2: Demographics of sample for in-depth assessment workshops

Workshop	Grama Niladari Divisions	Women with disabilities	Women without disabilities	Men with disabilities	Men without disabilities	Total
1	Karampaikurichchi Navatkadhu Varani Iyattalai	3	15	10	2	30
2	Thanankilappu	5	10	4	2	21
3	Mattuvil East Sarasalai North	3	9	9	7	28
4	Ponnalai Chulipuram East	6	13	8	3	30
5	Moolai Vattu West Arali West	11	4	5	12	32
	Total	28	51	36	26	141

Source: Northern Province Consortium for Differently Abled (NPCODA). 2016. In-depth assessment on disability. Unpublished report.

working on issues related to WASH and disability in the project areas were also purposively selected for key informant interviews. These key informant interviews were conducted by a person with

disability.

A questionnaire involving 48 questions was used to guide the workshops. This was developed in English

(with technical input from CBM Australia) and then translated into Tamil. An interview guide was prepared with 11 questions to guide the key informant interviews. Qualitative data analysis was led by NPCODA, which involved analysing the most common opinions and alternative opinions of the workshop participants in relation to each question. CBM Australia facilitated a supplementary thematic analysis with NPCODA representatives in November 2016, to assist in drawing key findings and themes from the research, and in exploring gender-related findings in more detail.

Limitations

The workshops were large in size, and no discussions were split into gender-specific groups, which may have affected what women and men were willing to share. In addition, gender-specific questions were not directly asked during workshops, which led to limited information on gender being recorded in the assessment. Reflection on the gendered nature of findings was therefore, primarily done through discussions between CBM Australia and NPCODA during the thematic analysis.

Results

Baseline assessment

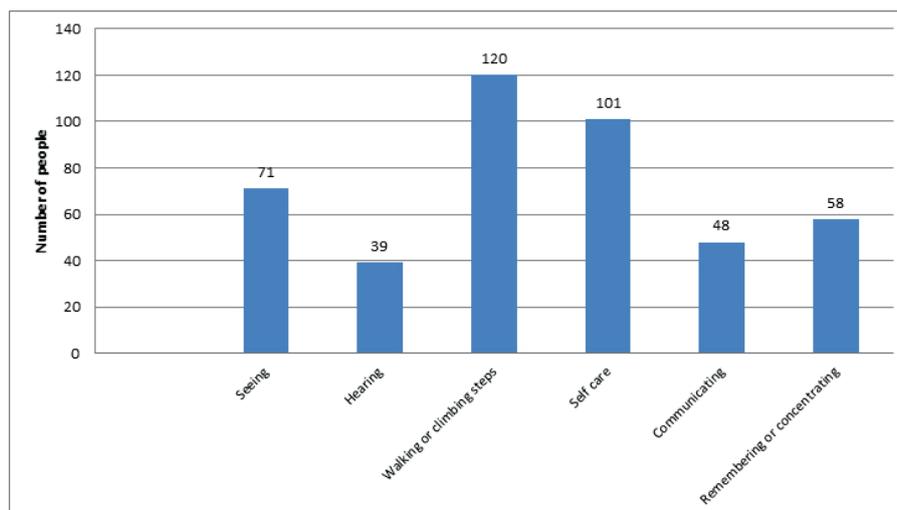
Household survey

810 households participated in the survey in project

areas. Surveyed households (with and without people with disabilities) reported very high levels of access to secure/clean water (91% in CHK and 78% in CHV). The extent to which water accessed is “secure or clean” needs further investigation as the most common source of drinking water was an unprotected common well, which was classified by the WHO/UNICEF Joint Monitoring Programme (JMP) for Water Supply and Sanitation (2015) as an unimproved water source and 52% report not treating drinking water before consumption.

A majority of the surveyed households (75%) claim to have flush/pour-flush toilets. Nevertheless, discussions revealed that in most houses, the existing toilets do not meet acceptable toilet standards as reflected in national and international regulations. These toilets are not maintained in terms of cleanliness and the solid waste generated is not managed properly. Rates of open defecation were reported to be quite low at 4.81%, however discussions revealed that people might be hesitant to report this due to potential impact on caste or community rejection.

There were 388 people with disabilities identified among the households surveyed, including 174 in CHK and 214 in CHV, and some of those who were identified had multiple difficulties.² Of those reporting difficulties, the most common type of difficulty reported was walking or climbing steps



Source: Compiled from Nagayam, N. 2013. *Rural Integrated Water, Sanitation and Hygiene 3 (RI-WASH 3) Baseline Assessment Report*, World Vision Australia

Figure 2: Number of people with disabilities identified within the 11 Grama Niladari Divisions

² Note: people were classified as having a disability if they reported “yes – very difficult” or “cannot do at all” to at least one of the Washington Group Short Set questions.

(22.35%), using hands (22.35%), followed by self-care (18.8%), seeing (13.22%), remembering and concentrating (10.8%), communicating (8.94%) and hearing (7.26%) (See Figure 2). Rate of difficulty also increased with age, with 290 people (75%) out of those identified with disabilities over the age of 55 years.

In relation to access to WASH, many people with disabilities required family members to provide assistance in order to facilitate their access. In some cases special provisions were made to enable access (more so in CHK than CHV) however this was uncommon (see Table 3).

Table 3: Method of accessing WASH for people with disabilities

	A member of the family helps	Special arrangements are made for easy access	No difference, access same as others³	Other	Total
Access to water	40.7% (158)	3.1% (12)	54.4% (211)	1.8% (7)	388
Access to sanitation	23.7% (92)	4.1% (16)	69.8% (271)	2.3% (9)	388
Access to hygiene (handwashing)	27.1% (105)	1.8% (7)	70.9% (275)	0.3% (1)	388

Source: Compiled from Nagayam, N. 2013. Rural Integrated Water, Sanitation and Hygiene 3 (RI-WASH 3) Baseline Assessment Report, World Vision Australia

Key informant interviews and workshops

Key informant interviews and workshops were held with government representatives, school officials, community based organisations and community

representatives. These covered a broad range of topics relevant to the supply and demand of WASH. A range of issues relevant to gender and disability were highlighted during these discussions. Those of most relevance are outlined in Table 4.

Table 4: Perceptions of people with disabilities and issues related to WASH access

Topic	Perceptions
Women's role	The role of women includes family care, involvement in income generating activities and water collection. Most women work, and this is not restricted to female -headed households. There are also a few who have to work as the husband has a disability or is unable to work.
Collecting water	Sometimes people need to walk for longer distances in order to collect potable water, which is sometimes even collected from the agro well. This was reported to be difficult for people with disabilities. Standing in queues at the water source was also reported to be difficult for people with disabilities. In addition it was felt that it is not safe for women to go far from their homes to collect water.

³ Note: this does not necessarily mean access to safe water, sanitation or hygiene as in many cases, the household may still practice open defecation or access from an unimproved source.

Sanitation – lack of accessible latrines	<p>A case study was provided where both husband and wife had mobility impairments and were provided an inaccessible toilet by an external project. The wife uses that toilet with great difficulty and the husband opts for open defecation.</p> <p>With regards to school latrines, according to the government policy, all new school buildings are designed to be accessible for people with disabilities but many toilets still remain inaccessible. In some cases it was reported that teachers help students where accessible facilities are not available.</p>
Sanitation – gender differences	<p>Culturally, it is not acceptable for women and girls to practice open defecation, and therefore those with disabilities try to manage with inaccessible toilets.</p> <p>Men with disabilities tend to manage (open defecation) alone, but women find it difficult to go to the forest, as they need support from the family members. Due to these reasons there are incidents where women avoid food.</p>
Hygiene – impact on family	<p>At times, members of the family have to care for those with disabilities by attending to all their hygiene needs. For rural communities, this has had an impact on their income, as everyone in the household is required to work to sustain the family.</p>
Knowledge of hygiene practices	<p>Self-care knowledge is lacking in most instances. A lack of training programs in this area is a gap in the system of social and medical rehabilitation.</p> <p>Training programs for children are available, which include use of soap, hand washing and toilet use, however it is unclear whether children with disabilities are included in these. Care givers require training on how to support people with disabilities.</p>
Attitude towards people with disabilities	<p>People with disabilities should be included in all development activities: not only those who acquired disability during the war, but also those who are born with disabilities. It was stated that the former have a higher status and gain more attention.</p> <p>There is rejection of people with disabilities at many levels, including within their own families. For example, it was noted that a mother will support a child born with a disability, but no one else in the family would do the same.</p>

Source: Compiled from Northern Province Consortium for Differently Abled (NPCODA). 2016. In-depth assessment on disability. Unpublished report.

In-depth disability assessment

Through conducting a thematic analysis of the data from the in-depth disability assessment report, NPCODA arrived at the following key findings:

1. Almost all women experience challenges in accessing WASH facilities and services, however women with disabilities experience increased and additional barriers in enjoying their WASH rights.

Women with disabilities are at an increased risk of mockery, sexual harassment and sexual abuse while accessing WASH facilities that are located outside their household premises.

2. People with disabilities experience many challenges accessing WASH facilities. It is particularly difficult to access WASH facilities in public places, but difficulties at home in accessing WASH facilities are still very

significant.

People with disabilities have little or no access to WASH facilities when out in public. In addition, most people with disabilities do not have accessible toilets at home. There are some cases where people with disabilities have made small modifications to their toilets, but where this is not possible, they defecate in the open. Due to an increased risk of falling over on the way to the WASH facility, it is common for some people with disabilities to be escorted by others.

It was reported that only some people with disabilities have good hand washing habits. The assessment also found that people with disabilities had difficulties accessing hygiene information. In some cases, family and community members block information from reaching them.

3. Providing inclusive WASH environments is a collective responsibility.

It is the view of Government and people with disabilities that Non Government Organisations (NGOs), Community Based Organisations (CBOs), Health Sector Officers, teachers (both preschool and school) and families all have a role to play in supporting disability inclusive WASH.

4. There are institutional gaps relating to disability inclusion, in particular the promotion of inclusive WASH at the Grama Niladari Division, District Secretariat Division and provincial level.

The assessment found that there are no disability inclusion policies, strategic plans or action plans at GN and DS divisions, districts or provincial levels. Similarly, there are no policies on disability inclusive WASH.

5. People with disabilities have less access to their rights and to opportunities. In particular, they are not involved in decision-making processes.

The assessment found that people with disabilities found it hard to participate in decision-making activities related to WASH at the family and community level. In addition, people with disabilities experience

discrimination due to the perception of the community that they have lower physical and intellectual abilities than others in the community.

6. People with disabilities experience challenges to meaningful participation in their community. In particular, women with disabilities experience more barriers to social inclusion than men with disabilities.

While some community members felt that people with disabilities should be active participants in community events, there was still a cultural stigma according to which they were considered inauspicious. As a result, they are often ridiculed at public events.

It was also noted that women with disabilities face increased barriers to participating in community events. This is due to lack of self-confidence, not being invited frequently, the distance and transportation required to attend the event, and the presence of very few accessible public toilets.

Discussion

The findings from the studies have helped in developing an understanding of the complex interaction of factors preventing people with disabilities from accessing WASH in northern Sri Lanka, and its impact on their lives. By understanding and addressing these barriers, policy-makers and WASH programs can have a real impact on improving the lives of people with disabilities.

The impact of not having access to WASH facilities

While some people with disabilities require assistance due to the nature of their impairments, the baseline study reported that these high rates of family assistance could be a direct result of the low rates of modifications to WASH infrastructure enabling easy access. This reduces the autonomy and dignity of people with disabilities and perpetuates the perceptions of family members that people with disabilities have low capacity. It was also reported that assistance and caring responsibilities restricts family members from engaging in economic activities or other tasks.

The impacts of not having access to WASH facilities were found to be different for men and women, and appeared to be more pronounced for women. The

studies revealed that in some cases where people with disabilities are unable to access the household latrine they are forced to practice open defecation, which was deemed to be particularly inappropriate and unsafe for women. In some instances, this has led to women using inaccessible latrines despite the difficulties encountered, and in one case not consuming food in order to prevent the need to defecate. When people with disabilities ventured outside the household to undertake WASH related tasks, they reported being subject to teasing and ridicule. While this was reported for both women and men with disabilities, women were more often subjected to sexual harassment or abuse.

The studies also reported low community participation and inadequate involvement of people with disabilities in decision-making processes which is consistent with what has been reported in the National Policy on Disability. Lack of accessible public toilets and negative community attitudes resulted in people with disabilities staying within their homes thus contributing to their low community involvement. This further results in people with disabilities not being able to share their needs with the community or contributing to decision-making with regard to the location and design of WASH facilities. This is a major institutional barrier, which needs to be addressed in order to strengthen accessibility. Lack of accessible WASH facilities within schools was also reported to be a significant factor in children with disabilities not attending school.

In relation to hygiene, lack of information sharing by families on hygiene issues with people with disabilities along with their lack of community participation suggests that they are likely to be missing out on important health promotion messages. This suggests that WASH programs need to specifically target people with disabilities for hygiene promotion activities to ensure they are included.

RIWASH 3 interventions

Through World Vision's partnership with CBM Australia and NPCODA, the project has been able to implement a disability inclusive approach. This has focussed on strengthening the capacity of NPCODA, advocating about the importance of disability inclusive WASH in divisional, district and provincial level governments, creating awareness of disability rights with stakeholders, and supporting the provision of public and household accessible toilets

to selected people with disabilities.

Representatives from NPCODA have been included in district and local government steering committees and WASH civil society organisation committees, where they are able to draw attention to the needs of people with disabilities and share their perspectives. World Vision has also committed to ensuring hygiene promotion material is available in accessible formats (such as audio, large print etc), and recently partnered with DeafLink to produce a hand washing video that features sign language.

To date, 22 accessible household toilets have been built for people with mobility impairments, with an additional 16 toilets built for people with non-mobility related impairments. In addition, three accessible public toilets have been built in the districts. RIWASH aims to build 65 toilets for people with disabilities by the end of the project period. RIWASH 3 will continue to seek opportunities for further inclusion of people with disabilities in response to these studies and monitor their involvement in the project.

Recommendations

While the findings from these two studies are specific to a local area in Sri Lanka and were designed primarily as a baseline for the RIWASH 3 project, many of the actions needed to respond to the barriers identified require involvement and commitment from multiple stakeholders at local, district and national levels. Findings from these studies can also be used to inform the design of other WASH programs in Sri Lanka and more broadly in other under-resourced settings.

In order to address the barriers identified, governments, WASH programs, DPOs and other community organisation need to work together. Priorities include improving the physical WASH infrastructure, challenging negative community attitudes and ensuring that people with disabilities are targeted for hygiene promotion messaging and that messages are presented in accessible formats.

Government policy makers and institutions

- There is already broad policy level commitment to inclusive WASH in Sri Lanka through statements that highlight the importance of access to all citizens. This should be strengthened by explicitly acknowledging the difficulties faced by

people with disabilities in accessing WASH facilities, and should be accompanied by a commitment to universal design of public WASH infrastructure. This would also benefit other members in the community such as the elderly, pregnant women and children.

- There is a need to revise existing 'guidance on requirements for accessible design' in Sri Lanka and differentiate between the required approach for public WASH facilities (which should adopt universal design principles) and private facilities (where a more targeted design is appropriate). This should include considering the cost-effectiveness of design options, as the cost of current approved accessible designs are sometimes prohibitive for households.
- Specific budget allocation should be made at sub-national/district levels to cover the costs of universal design features in public WASH facilities, to provide support for construction of accessible household latrines (designed in consultation with families) and to ensure public-funded hygiene awareness activities are accessible for people with disabilities.
- In line with the CRPD, DPOs should be consulted and involved in the development of policies and government action plans to ensure that their perspectives are included. This should include representation in WASH planning or steering committees at division, district, provincial and national levels.
- Existing data collection processes used to monitor access and use of WASH at a household level should be adapted to pay particular attention to intra-household differences in access to WASH and be disaggregated by disability. The Washington Group Short Set of questions on disability can be used for this purpose but they ideally should be asked to individuals within households rather than heads of households.

WASH program implementers

- Community-based WASH programs should be designed with the goal of reaching all people within a community, acknowledging that some will have specific requirements in order to enable their access to WASH, which need to be identified and addressed. This should include a commitment to universal design of public WASH infrastructure.
- WASH programs should specifically seek to identify people with disabilities in communities so that targeted support can be provided throughout the program. This can be achieved through partnering with DPOs, using baseline surveys to identify people with disabilities (see discussion above on use of the Washington Group Short Set) and through snowball sampling.
- Once identified, programs should specifically invite people with disabilities to participate in WASH community consultations and planning processes, which can also be used to raise awareness of the importance of ensuring all people in the community benefit from the program. In addition, given that people with disabilities often do not participate in community events, budget and time should be allocated for staff to travel to their homes to seek their involvement and to distribute information. This can also be used as an opportunity to refer people to relevant health or rehabilitation services, if needed.
- Wherever possible, people with disabilities should be encouraged and supported to actively contribute to program implementation. This could include for example, participating in WASH management committees, as enumerators for baseline and endline surveys, and in hygiene promotion activities. This not only ensures their perspectives are considered, but also demonstrates the capacity of people with disabilities, which can be a powerful way of challenging negative attitudes.⁴
- The additional needs of women with disabilities should be considered and

⁴ People with disabilities were engaged as enumerators in the baseline assessment for the RIWASH 3 Project. They reported that this increased their self-confidence and helped to challenge attitudes that people with disabilities were not capable.

prioritised throughout WASH programs. Ensuring active consultation with women with disabilities on the design and location of WASH facilities will ensure that they are not forced to undertake unsafe sanitation and hygiene practices.

Conclusion

These studies have highlighted the complex range of barriers faced by people with disabilities, and particularly women, in accessing WASH facilities in northern Sri Lanka and the impact it is having on their lives.

By investigating these challenges and partnering with people with disabilities to develop culturally appropriate and cost effective solutions, the RIWASH 3 Project is working hard to ensure no one is left behind in benefiting from increased access to WASH in the project areas. However, the majority of people with disabilities in Sri Lanka are not living in the RIWASH 3 project target areas and broad systemic change is needed to address these issues at a national level. While broad policy commitment exists to ensure that all people in Sri Lanka have access to WASH, government institutions and community programs must work together to ensure these commitments become a reality across Sri Lanka.

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Breaking down Barriers: Gender and Disability in Access to Agricultural Water Management in Nepal

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Abstract

A huge gap persists in studies and development work in examining the intersection between gender and disability in the field of agriculture and water management. Meantime, feminist and physical disability literature (studies about physical disabilities) as well as analyses between the two have contributed to further insights; however, these have failed to integrate dimensions of agricultural water management to improve gender balanced and disability friendly programmes for Nepal's agriculture dependent population. This paper examines the challenges faced by persons with disabilities due to leprosy and by marginalised women in accessing water for agriculture, by focusing on the way in which gender and disability intersect, the combined influence they have on access to water for agriculture, and the extent to which improved access to water for agriculture leads to improved gender and disability inclusion. Data collection was done through primary research methods and techniques. The results of the research show that the barriers that women and persons with disabilities encounter in agriculture and water management intersect at the point of exclusion. In terms of the social, for both women and persons with disabilities, there is a stigma; and in terms of developmental exclusion, government and development agents either entirely neglect these vulnerable groups or are incapacitated to appropriately address and facilitate change. Decision-making and participation in agriculture and water management depend on several drivers such as, the distribution of authority and responsibilities, ownership of land and access to water, and participating in irrigation. This study argues that access to information and participation is paramount for the inclusion of vulnerable groups in rural areas of Nepal in the social, environmental (physical), and institutional dimensions and can reduce stigma and neglect.

Keywords: Physical disability, Gender, Water access, Agriculture, Nepal

Introduction

The Universal Declaration of Human Rights was adopted in 1948 to underline that all persons are born free and equal in dignity and rights. Yet, everyday experiences tell a different story (Gostin and Gable, 2004). The fact that certain vulnerable groups launched their own conventions to protect their rights, underscores the fact that not every person's rights and dignity are respected equally. The United Nations Convention on the Rights of Persons

with Disability (UNCRPD) and the United Nations Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) are examples of conventions that should protect, respectively, the rights of people with disabilities and women (UN, 2009; NFD-N, 2015). Evidently then specific vulnerable groups require specific attention in the protection of their rights.

Similar to other vulnerable groups, people with disabilities and women are often excluded from

mainstream social, economic, and cultural development initiatives (Barnes and Mercer, 2005; Foley and Chowdhury, 2007). In a competitive market for scarce resources, the most vulnerable people are often first to be excluded from services, facilities, information, and other types of resources. In countries highly dependent on agriculture, such as Nepal, these people are also hindered in their access to water, land, markets, and essential information about agricultural and water management practices. Mainstream development workers, NGOs, and other actors, such as the community and the government involved in the agriculture and water sector rarely research and include tools that benefit vulnerable groups, for example, build knowledge regarding disability or about health conditions causing impairment such as leprosy. Stigma and cultural beliefs result in exclusion from participation in different domains of life. As a result, vulnerable groups are rarely included in development programmes, the persons with disabilities being particularly excluded (Bruijn et al., 2012). However, with regard to gender, since a decade or so donors have focused on including gender in all programmes. The question is how effective has this inclusion of gender been and how has this focus in development programmes worked out. Moreover, lack of political commitment and research has made vulnerable groups low priority on the government's plans and policies. Not only do these social and institutional barriers exclude people from access to water, but physical barriers may also be problematic, especially for those who have difficulty moving or using their hands, those who cannot read, or those who cannot perform heavy labour.

Although Nepal is endowed with significant water resources, access to water remains challenging for many people (vulnerable and non-vulnerable), due to the large variations in geology, topography, and precipitation patterns. In most areas of Nepal, the rains are concentrated within a period of three to four months per year. The need for water buffering or water conservation practices, which can ensure a sustained supply for most of the year, is therefore, a crucial aspect of sustainable (agricultural) water management. The development of water buffers demands investment in land, water, and vegetative cover (Steenbergen et al., 2011). A central concept is the approach called 3R (Recharge, Retention and Reuse), which “explores how to maximise the use of groundwater and rain water for development and

climate change adaptation” (Steenbergen and Tuinhof, 2010, pg. 2) – a collection of all the techniques and management options to ensure proper buffer management. Also, because land ownership is an increasingly challenging factor, water buffering enables people to have access to water close to their homesteads, which helps, for instance, in cultivating high-value crops on limited small parcels of land. In addition, increased migration (especially of young men to the cities and the Middle East) causes a decline in the size of households, which increases pressure on those who stay behind making them even more vulnerable. The ones who stay behind are often women, elderly, sick people, or people with disabilities and as they struggle to work in their fields they eventually fall deeper into poverty (Cornielje et al., 2015). Moreover, research by Zwarteveen (1997) describes that the allocation of water rights is not equal between men and women, and in South Asia generally, female participation is low in water user associations due to the formal and informal membership criteria that ignore women (Meinzen-Dick and Zwarteveen, 1998).

If people in Nepal are able to produce better quality, quantity, and high-value crops, this will have a positive impact on their income, nutrition, and health. Improved access to water for agriculture may lead to better wellbeing and is likely to increase the status of people, which ultimately may foster more social inclusion (Ebenso et al., 2007; CA, 2007). For this to happen, it will be necessary to identify and define strategies to break down social, physical, and institutional barriers in agricultural water management. The aim of this paper is to explore the differences and similarities between gender and disability-related challenges to accessing water for agriculture. By understanding the challenges, we may be able to 'break down barriers' that prevent people from leading a dignified life and obstruct an important source of income in Nepal. This paper is a part of two years research project, led by Enablement-Nepal as well as together with Enablement-Netherlands and Netherlands Leprosy Relief Nepal, on better access of water in agriculture for the well being and inclusion of people with physical disabilities and their families. The project is financed by the Leprosy Research Initiative and the Netherlands Organization for Scientific Research. This study may also help to understand barriers that other vulnerable groups encounter, such as ethnic

and religious minorities and elderly. The article aims to answer the following questions: what are the challenges faced by people with physical disabilities and marginalised women in accessing water for agriculture? In what way do these challenges for people with physical disabilities and for marginalised women intersect and what is their combined impact/influence on access to water for agriculture? To what extent will improved access to water for agriculture lead to improved gender and disability inclusion?

Theoretical framework

The World Health Organisation (WHO) defines disability, according to the framework of the International Classification of Functioning (ICF), as the umbrella term for impairments, activity limitations and participation restrictions. Key to the ICF definition is the understanding that disability results from the interaction between a person with an impairment and the society. Disability is not so

much an attribute of the person, but rather a result of discriminatory and exclusionary environments (WHO, 2011). A person with a visual impairment would, for example, hardly experience his or her disability when society would be completely adapted and inclusive towards people with visual impairments. The fact that communication is not offered in Braille, that traffic lights do not use sounds, and that people may treat this person with pity, causes the actual disability. In this study, we use the same definition of disability, but focus specifically on people with physical disabilities who are willing to perform agricultural labour.

The United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) is a legal instrument protecting the rights of people with disabilities (UN, 2015). The government of Nepal ratified both this convention and the optional protocol on 7 May 2010 (NFD-N, 2015). This obliges the government to respect and enable certain rights (see box 1).

The UNCRPD justifies our search to understand and

Article 9 – Accessibility: the state shall take appropriate measures to enable people with disabilities to live independently and participate fully in all aspects of life, through ensuring access to services and facilities, including information and communication. This requires identification and elimination of barriers and obstacles.

Article 19 – Living independently and being included in the community: the state recognises the right to live in the community, to full inclusion, and to participation in the community. Specifically, community services and facilities are available on an equal basis to all.

Article 27 – Work and employment: the state recognises the right of people with disabilities to work on an equal basis with others, including an inclusive and accessible work environment. People with disabilities have the right to access general technical and vocational guidance programmes and continuing training, and states shall promote their opportunities for self-employment.

Article 28 – Adequate standard of living and social protection: the state recognises the right to an adequate standard of living, which includes the continuous improvement of living conditions, equal access to clean water services, access to appropriate and affordable services and assistive devices, and access to social protection programmes and poverty reduction programmes

Source: NFD-N, 2015

Box 1: Actions required to enable disability rights in the UNCRPD 2010, Nepal

seek strategies to improve access to water for agriculture in many respects.

Across the globe men and women are assigned different tasks, rights, advantages and opportunities

in the activities they do, in order to gain control over decision-making proceedings and resources (Social Watch, 2012). The Gender Equity Index (2012) report published by the Social Watch points out that worldwide, women are trying to achieve equity in

education, and economic and political empowerment as they do not get a fair share (ibid). Signifying that the gender gap needs more dedicated attention, practicable alternative approaches to attain equity are needed. Also, according to the African Development Bank (AfDB) current research and practice suggests that “well-designed, appropriately located and affordably priced infrastructure can be a powerful tool to accomplish gender equality” (AfDB, 2009). The gender gap in South Asia scores 0.39 of 1.00, and in the case of Nepal, the score is 0.47 (Social Watch, 2012). While this may seem promising, both

scores are below the global average 0.56 (ibid). According to Social Watch (2012), adequate policies can potentially reduce gender disparities regardless of a country's income level. Drawing from this, it is essential to encourage inclusive and participatory approaches, as these are basic rights for gender equity. Those rights are expressed in different forms in various instruments. The United Nations CEDAW is an example of such an instrument (UN, 2009). The following articles (see box 2) in the convention are of specific interest. Conceptualising equity from a broader perspective, Sen (1995) reasons that equity

Article 3 – States Parties shall take in all fields, in particular in the political, social, economic and cultural fields, all appropriate measures, including legislation, to ensure the full development and advancement of women, for the purpose of guaranteeing them the exercise and enjoyment of human rights and fundamental freedoms on a basis of equality with men.

Article 11 – States Parties shall take all appropriate measures to eliminate discrimination against women in the field of employment in order to ensure, on a basis of equality of men and women, the same rights.

Article 14 – States Parties shall take into account the particular problems faced by rural women and the significant roles which rural women play in the economic survival of their families, including their work in the non-monetized sectors of the economy, and shall take all appropriate measures to ensure the application of the provisions of the present Convention to women in rural areas. States Parties shall take all appropriate measures to eliminate discrimination against women in rural areas in order to ensure, on a basis of equality of men and women that they participate in and benefit from rural development.

Source: UN, 2009

Box 2: Actions required to enable women rights in the CEDAW 1979

cannot merely be measured conforming to the distribution of primary goods or income. It generally involves a combination of drivers of overall wellbeing. Therefore, an equal distribution of resources in itself does not inevitably guarantee equity, and the physical presence of women in institutions also does not imply that their actual needs are scrutinised or voices are being fully heard. From an equity perspective, a relevant matter is whether people have the capability to use the resources. Therefore, development interventions focusing on agricultural water management, gender and/or disability, aiming to achieve equity, need to be specific in their interventions to people's different capabilities, and control over resources.

We do not only aim for equal distribution of resources for agricultural water management but, in fact, aim to study how removing barriers may result

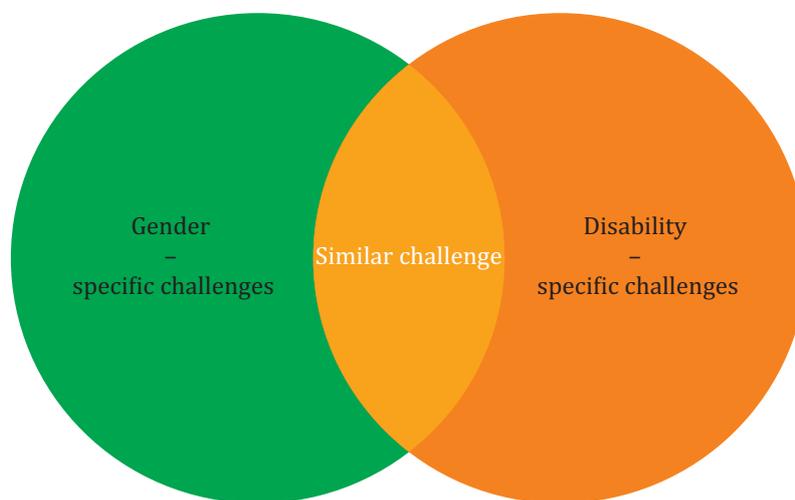
in improved inclusion as well as wellbeing. Our hypothesis is that improving physical, social, and institutional access to water for agriculture will lead to better inclusion and wellbeing of vulnerable and marginalised populations. Inclusion and wellbeing are generally understood in either objective or subjective concepts (Cough and McGregor, 2007). While there are many arguments for why a subjective approach may do more justice to the populations we study, here we choose to use objective measures of both inclusion and wellbeing for the purpose of statistical comparison between 'vulnerable' and 'non-vulnerable' groups.

Bruijn et al. (2012) outlined three types of barriers that women, people with disabilities, and other vulnerable groups encounter in their everyday experiences - social (or attitudinal), environmental (or physical), and institutional barriers. Social

barriers occur when people are excluded because of prejudice, shame, and discrimination from either society or from a person. People with disabilities are often thought of as incapable, contagious, or cursed. Women may not be allowed to do 'men's work' or may be treated as inferior to men. Physical barriers are often most easy to detect; nevertheless there may be an unwillingness or unawareness among people to recognize the physical barriers. Poor roads, steps, and inaccessible information for people with visual or hearing impairments are examples of this. Women may find it difficult to use heavy machinery for agriculture or to perform heavy labour, such as ploughing the land. Institutional barriers hamper participation through discriminatory laws, lack of government support, or neglect by development

organisations. While we may be able to distinguish the various barriers that prevent inclusion of vulnerable populations, it should be noted that one type of barrier generally interacts and exacerbates another barrier. For example, women may not have access to essential information/knowledge about irrigation, water distribution, repair and maintenance (environmental barrier/institutional) because governments do not promote literacy programmes for women (institutional barriers), as society does not acknowledge the need to educate women (social barrier).

Figure 1 visualises how we will identify and discuss gender-specific, disability-specific, and overlapping challenges in agricultural water management in Nepal.



Source: Compiled by the Authors

Figure 1: Specific and shared barriers to agricultural water management

Methodology

According to the World Fact Book, 83 percent (FAOSTAT, 2010) of the Nepalese population lives in rural areas, of which 68 percent are involved in the agricultural sector (USAID, 2016). The two study locations, Gorkha (*Mid-hills*) and Morang (*'Terai'*¹ – plains) district were selected on the assumption that the issues in terms of access to water and water management may vary as per topographic region. For comparative reasons and verification of (3R) water harvesting technique in different agro-ecological zones, a district from the mid-hills and Terai plains

were selected. According to the Government of Nepal (GoN) Department of Health Service (2013), Gorkha and Morang district have a high leprosy case detection rate in the country, accounting for 0.49 and 2.20 per 10,000 people, respectively (GoN, 2013). The study focused specifically on people with physical disabilities due to leprosy, as leprosy is still a highly stigmatised condition.

The research used two types of data collection methods: primary and secondary data. Primary data was collected using quantitative and qualitative methods, and secondary data was collected from documents and reports from various government

¹ It is a lowland region that lies in the southern part of Nepal. It extends from the foot hills of Siwalik range up to the border of India

and non-government offices in the districts and of publications of various organisations working in the field. For the primary data collection, we used a mix of quantitative and qualitative methods to establish a baseline to determine how to approach the situation for the targeted communities in the two locations: Gorkha and Morang district. Two Village Development Committees (VDCs) from each district were selected, each containing approximately 20,000 people. The selection of VDCs (Chhoprak and Gorkha municipality) in Gorkha and (Patthari-Sanischare and Urlabari) in Morang was based on meetings with the district health office departments, the regional agricultural office department and several other relevant NGOs working with disability and leprosy in the research areas. The sample selection of the research included households with people with physical disabilities (including physical disability due to leprosy) and households with people without any disability. A sampling frame list of households, including people with disabilities was developed focussing on the least and medium level affected people.² The needs assessments and interviews were conducted with 20 people with some physical disability, including those affected by leprosy (not exceeding one from each household) and 20 people without any disability, from each district. Thus, the total number of respondents for the study in Gorkha and Morang district was 80. The collected data was further processed and analysed using SPSS.

A transect walk and a needs assessment survey were conducted at the field level. First, a transect walk was conducted to determine the feasibility for the needs assessment survey in the particular areas. The transect walk included a systematic walk across the research areas with local people to explore 3R conditions through observation, dialoguing, and producing transect diagrams. Second, a needs assessment was conducted to determine the difference between the current situation and the desired situation. The needs assessment survey was complemented using various tools, comprising: (1) quality of life by WHOQOL-BREF scale; (2) social participation using the Participation-Scale; and (3) in-depth interviews.

The WHOQOL-BREF scale was used to measure the quality of life in both Gorkha and Morang district. The tool assesses individuals' perceptions under the conditions of their cultural and value systems, norms and concerns, as well as personal goals (WHO, 2016). It measures various domains including social relationships, physical health, psychological health and environment. The concept of social participation is an important driver that can generate valuable insights into a given situation of a targeted community. Therefore, Participation-Scale was used, as previous studies had demonstrated this as suitable for use with people affected and stigmatised, by leprosy (Brakel et al., 2008; Stevelink et al., 2012; van der Zee, 2013).

In-depth interviews were conducted with respondents to study their perspectives, values, experience on present situation of agriculture, barriers/obstacles in agriculture and water management/use, existing water conservation and management techniques and lastly their expectations from the research. The interviews were used to provide further context to data collected on specific issues. Individual or household level interviews were favoured compared to focus group discussions due to possibility of potential participants not being included and/or may not feel comfortable to express in a group.

Study constraints and limitations

This project is one of the few studies that researches, implements and evaluates the impact of improving agricultural water management for the vulnerable groups in Nepal. The study has some limitations that may have influenced the findings. First, it was difficult to include people with physical disabilities, particularly those afflicted with leprosy, because of existing stigmatisation³. Also the figures provided by the NGOs, and the health department were different. Most of the affected people change their names during treatment or go to another district for treatment. Second, we relied on data provided by the government health departments, agricultural office departments, and NGOs. People who are extremely

² This study has not taken into account highly affected people assuming that they may not be able to engage in agriculture water management.

³ Due to the following reasons

- People with leprosy feel uncomfortable in participatory work and socializing process. They do not want to let others know about leprosy in them (leprosy is a hated impairment).
- There is still a belief in the society that Leprosy is a very bad disease. Even when it is known that the affected people are under medication, others fear to come in contact with them.

marginalised and 'hidden' may have not been included in this data. Third, the prevalence of stigma in the communities may have influenced the answers given by respondents and thus led to underreporting. Nonetheless, we tried to minimise this by guaranteeing the respondents' confidentiality and privacy. Lastly, the study has not addressed the access and information needs of a broader range of people with disabilities, such as blind or deaf people and those with cognitive and mental health difficulties who could well be involved in agriculture and water issues.

Results & Discussion

The result of the needs assessment details the current situation of households, community agricultural activities and 3R techniques in the research areas. This research looks at the household level as the unit of analysis given that it is the chief element in which rural people live. Before exploring the barriers faced by people with physical disability and marginalised women in accessing water for agriculture, the challenges experienced in the agricultural sector need to be understood.

According to the Ministry of Agricultural Development (MoAD) the national GDP depends majorly on agriculture which was 33.1% in 2015. The dependency on agriculture was 36.8% in 2013 (MoAD, 2015). This indicates that the contribution of agriculture is decreasing. The survey undertaken in two villages in each district i.e. Urlabari and Pathari-sanischare in Morang and Chhoprak and Gorkha Municipality in Gorkha brought forth some challenges experienced by farmers in crop production. According to the field survey (2016), in total, 67.5 percent of the respondents mentioned that accessing input materials for agriculture was their main challenge. This commonly resulted in delays in cropping. Other challenges mentioned were the lack of irrigation and extension services, increased pest infestation, and unpredictable precipitation. Lack of adequate marketing facilities for selling the harvest was found to be another barrier. This barrier was found to be more common in the mid-hill region compared to Terai (plains). This was established through the field survey where 70 percent of the respondents in Gorkha district reported marketing is still a major challenge, as against only 7.5 percent in Morang district (Field survey, 2016).

Barriers faced by persons with disabilities in accessing water for agriculture

Agriculture itself is a labour intensive occupation requiring huge amounts of endurance and mobility. Though some people with physical disabilities are involved in agriculture, they are not content with the kind of agricultural work they participate in due to lack of disability-friendly activities, tools and infrastructure in agriculture, and lack of irrigation technologies and facilities that are sensitive to the specific needs of people with disabilities. Depending on the individuals impairment and access needs they may not be able to attend trainings or workshops that are held by development agents.

Education, social security, and relevant employment are the hindering factors for persons with disabilities that contribute to slow improvement and progress. The underlying causes are attributed to or influenced by poor security, poor social security allowances, low enrolment rate in higher education due to lack of facilities, lack of extension service programmes focusing on people with disability. For persons with disabilities this translates to having a small chance to participate in agricultural and water management trainings and workshops, depending on the severity of their disability. Even when persons with disabilities get a job they are mostly earning a low-income, making it difficult for them to invest in agriculture. Lack of government plans and programmes that are friendly and inclusive for people with disabilities, particularly in the agricultural sector, further deters their progress.

The agriculture sector in the two study districts faces several challenges, such as inadequate water for irrigation from nearby sources and the lack of money to invest in irrigation water sources that are farther away. Some of the surrounding community members and respondents from relevant local NGOs claimed that persons with disabilities became more marginalised in their access to agricultural water management projects and programmes due to their inability to move long distances.

Family members and neighbours further reduced the access of persons with disabilities to agricultural and water related projects. For instance, some family members opposed social mobility of both females and members with disability in the house and restricted their contact with water, especially for those with a disability related to leprosy as they

believed that leprosy could transmit through water. People with physical disability due to leprosy said that leprosy worsens by handling agricultural water (Field interview, 2016). Furthermore, the respondents highlighted that they are disliked, as many non-disabled people show a sense of (latent) animosity because they are perceived as being unproductive, with little to no income. Other respondents with disability observed that their neighbours' discriminating behaviour has led to the feeling of social exclusion for being impaired. For example, neighbours diverting water in their field in their absence as a person with disability cannot frequently visit the field due to their physical condition. The respondents also revealed that as much as they were interested in participating in group meetings, committees or events that would benefit them too, they were not informed/invited or involved in the construction work and use of micro irrigation projects that intend to benefit the whole community.

Poor access to water for people with disabilities is further exacerbated by a lack of reservations for them in the development committee or any membership thereof. With regard to training courses, awareness raising programmes, and income generating activities, many respondents, emphasised that they are informed late about such events, if at all.

Barriers faced by women in accessing water for agriculture

In Nepal, land and water rights are closely related, although water is often a public good. According to the Central Bureau of Statistics (CBS), in Nepal, 18 percent of the land is female owned (CBS, 2011). The decision-making and participation in agricultural water management (water access) also depends on the following factors:

I. The distribution of authority and responsibilities between men and women: Women are mainly responsible for or restricted (socially) to household chores followed by agricultural tasks, while men are mostly responsible for tasks other than domestic tasks (i.e. outdoor tasks like agriculture, marketing, etc.). This situation is similar in both study areas. In such cases, respondents acknowledged that women have a lesser chance of being involved in other related agricultural activities i.e. knowledge and

information platforms and trainings; or they receive late information regarding such activities as they are busy performing domestic tasks.

ii. Ownership of land and access to water (or participation in water management): In general, participation in water users associations or access to water for agriculture is strongly linked to ownership of land. Findings indicated that land is mainly owned by male-headed households (Field observation and discussion, 2016). This is further supported by some respondents confirming that although women "own" the land on paper, they still do not have control over it due to the social and gender norms and practice. This diminishes the chances of women's access to and control over water for agriculture. Moreover, women in the communities revealed that they constantly find themselves excluded from social and development networks dominated by males.

iii. Unequal treatment: Even if women participate in irrigation schemes, there are differences in timing and promptness of water delivery. This is also supported by Zwartveen (1997) describing that the allocation of water rights is not equal between men and women. Findings by Meinzen-Dick and Zwartveen (1998) also indicated that in South Asia female participation is low in water user associations as part of this is due to the formal and informal membership criteria that ignore women. Women are mostly busy with household tasks. This indicates that irrigation timing is a challenge for them as they have to balance household tasks and water for land. Findings further revealed that night irrigation is difficult for female-headed households due to social norms and security (Field survey, 2016). In such cases, women also reported that they either hire or seek help from other men during peak irrigation season.

Intersection between gender and disability in agricultural water management

During the survey, the participation-scale and interviews of respondents revealed that gender and disability intersect in several ways. The main commonality for both groups is with regard to the

access to information (information related to development activities in agriculture and irrigation), and when and how information is delivered. Majority of the respondents reported that the root cause of the challenges they face have to do with how development programmes are designed and planned, or in other cases non-inclusion and lack of targeting women and people with disabilities in farmer groups and cooperatives. Moreover, in some

cases, information does not reach the marginalised. According to the disability-scale, a comparison of participation restrictions of various groups of people in Morang and Gorkha district, revealed that people with disabilities (1.4)⁴ are more restricted from socio-economic development programmes or initiatives as compared to the non-disabled (0.3) (Field survey, 2016). Notably, people with disabilities indicated that having an equal opportunity to find

Table 1: Average of score used in construction of participation scale by categories of households

Participation indicators	Categories of household	
	Able	Disable
Equal opportunity to find work	1.08	3.63
Doing work as hard as others	0.45	3.20
Economic contribution to the household	0.00	1.98
Visit outside the village	0.13	2.05
Socially active	0.23	1.83
Good respect in the community	0.23	1.78

Source: Field survey, 2016

work and doing work as hard as others ranked as highly restricted, while non-disabled people ranked these indicators at 1.1 and 0.5, respectively (ibid). Also, the comparison between non-disabled and people with disabilities regarding economic contribution to the household, travelling outside the village being socially active, and good/high respect in the community were scored high by people with disabilities in both, Morang and Gorkha district. However, Gorkha district experiences slightly higher participation restriction.

In contrast, the participation-scale indicates that females scored lower than males in factors such as equal opportunity to find work. However, factors such as doing work as hard as others were scored slightly higher by women compared to men. This indicates the level of inequality between men and women within the community and household level. Some of the common aspects of gender and disability intersecting in agricultural water management are mentioned below:

- Lack of access to information and participation in farmer information events;
- Women and people with physical disabilities are not involved in meetings and decision-making;
- Lack of access to infrastructure, facilities and services; and
- Extension officers lack the capability (skills and knowledge) and are not sensitized to include the people with physical disabilities.

Furthermore, to increase participation in mainstream development, the respondents made the following suggestions:

- Creating awareness on different social, economic and health aspects;
- Providing credit facilities;
- Commercialising agriculture;
- Disability-friendly infrastructures, supporting departments and programmes;
- Providing 'in-situ' employment opportunities

⁴ The higher the average value the higher the restriction in participation

(home gardens, food processing, cottage industries); and

- Women empowerment.

Although there are common aspects in agriculture and water management when it comes to being female or being a person with disability the reasons are different as the research has also found. Women are stuck in household chores, whereas the people with disabilities may not be, but both are equally unable to attend meetings, participate in casual recreation and lack social activeness. So, there are common challenges but the reasons for these challenges to prevail differ.

Based on the aforementioned factors, gender and disability face similar type of barriers of being excluded or a lack of access to information. Whereas the reasons behind exclusion as explained are different, similar dimensions can be identified, which are social, physical (environmental) and institutional. First is the social dimension of exclusion from groups and committees related to development; women and people with disabilities are not invited, or involved in the user groups, especially when speaking about agricultural water or irrigation schemes. Mostly, senior men or head of the households that have access to land attend group meetings and committees, i.e. land is mainly under the name of a male member of household or family. Second, the institutional dimension is that development related entities undertaking projects and conducting training programmes linked to agricultural water management need to acknowledge and integrate gender and disability in their extension services, which is currently lacking. Third, the environmental (physical) dimension of exclusion is the unwillingness of people to engage or recognize the barriers related to inaccessibility of information about agriculture and water for the people with disabilities and women. In some cases respondents mentioned that when a person is not in a users' committee then: (1) a person is not aware of the activities about agricultural water management practices; and (2) a person is excluded from information related to scheme, irrigation activities, training programmes, etc. (Field survey, 2016).

Considering these barriers and commonality of exclusion for these vulnerable groups the role of providing information and including them in different activities related to agriculture water management could be crucial to improve access to

water for agriculture and for creating opportunities for improving their livelihoods.

These opportunities, which are also found in this studies' field survey, on increasing and improving the role of women and people with disabilities in agricultural water management can be considered at different levels of intervention. At the field level, techniques to improve soil moisture and levels of organic matter by mulching, green manuring, and composting were mentioned to be effective as well as feasible opportunities for vulnerable groups. Specially designed soil tillage and farming tools could help them become more emancipated as well as generate employment.

At water systems level, water harvesting and recharge structures such as water buffering techniques can reduce the walking distance to water points; also the institutions running these schemes (irrigation and domestic water) can offer ample opportunities for women and people with disabilities to work as accountants and book/record keepers.

Conclusion and way forward

This research has described the current situation of gender and disability related barriers and challenges experienced in agricultural water management in both Gorkha and Morang district. The UNCRDP and CEDAW conventions have already existed for a long time; however, implementation in practice is often not seen. Therefore, this research provides information to support more detailed research into the types of challenges people with disabilities face, their implications and the forms of governance, development, technical, and societal mechanisms through which these challenges can be faced.

Concluding from the research, some general points can be made.

With regard to the barriers that women and people with physical disabilities encounter in agriculture and water management, this study has shown that they intersect at the point of exclusion. The reasons for exclusion may be social, environmental (physical) or institutional. In terms of social exclusion, for both women and people with disabilities, there is stigma and in terms of environmental and institutional factors, government and development agents either entirely neglect these vulnerable groups or are not sensitized to appropriately address and facilitate change.

This research project will continue looking at how women and people with physical disabilities can be ensured household food security and how improved rural livelihoods can be accessed through increased participation and acceptance in group meetings and committees, farmer information events, and relevant development projects. Furthermore, it will also study inclusive approaches to upscale existing water harvesting and soil and water conservation techniques and provide broader access to development services. Finally, it is thought that by improving agricultural water management and through participation and involvement of all stakeholders, the discrimination of women and people with physical disabilities can be reduced in the study area.

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The Gender Gap between Water Management and Water Users: Evidence from Southwest Bangladesh

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Abstract

Water management in Bangladesh is guided by an intended integrated and inclusive approach enshrined in government legislation since the late 1990s. Based on qualitative and quantitative data collected in the coastal zone, we assess the implementation of these policies with regard to women water users. First, the analysis of reproductive and productive roles of women establishes that men have a significant role to play in domestic supply, and women use water extensively for small-scale agriculture and aquaculture, the scope of which has been underestimated. However, when considering women's inclusion in community water management and more specifically in Water Management Organizations (WMOs), we demonstrate that women face diverse forms of social barriers resulting in systematic exclusion and self-exclusion from these institutions. Water Management Organizations focus on large-scale productive use of water and are rarely addressing the small scale productive and reproductive uses of water. This creates a gap between water users and water managers, which is exacerbated by class and power relations. The creation of community based water management organisations in the coastal zone of south west Bangladesh has so far not challenged women marginalisation especially in terms of activity limitations and participation restrictions. We conclude by recommending a shift from the inclusiveness policy, which is unable to achieve its goals to a more targeted approach that is relevant in the socio-cultural context of rural Bangladesh.

Keywords: Gender, Water management, Community based natural resource management, Bangladesh

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Introduction

Southwest Bangladesh is a deltaic region, low-lying and subject to floods and salinity intrusion through tidal movement and impacted by cyclones and other climatic events. In response to these constraints, embankments were built in the 1960s and 1970s in

the entire coastal zone of Bangladesh. Called polders, these embankments enclose low-lying tracts of land to form artificial and independent hydrological entities where water flow is controlled via sluice gates. Polders were first built in the southwest region in the 1960s and construction on a variety of scales continued into the 2000s. Over time, management

has been transferred from government employed sluice gate operators to unremunerated community water management groups (Dewan, Mukherji, and Buisson, 2015). The policy developed to underpin community based natural resources management promotes inclusive management of water and encourages the participation of all the stakeholders, and specifically women (Ministry of Water Resources, 2001).

It is now well established that the dynamics of gendered relations have a direct impact on water use, access and management which is linked to the differential social status and roles of women and men (Cleaver, 1998; Giordano et al., 2006; Jackson, 1998; Jordans and Zwartveen, 1997; Van Koppen and Mahmud, 1995; Zwartveen et al., 2012). Gender, the arbitrary socio-culturally constructed norms of behaviour and roles attributed to women and men, is variable yet present in all known human societies. Most frequently men dominate positions of power and authority, hence gender analysis tends to focus on the dynamics of relations with the less powerful – women. The role of women as water users and water managers, and how to increase women’s participation in male dominated decision making and governance has been on the development agenda for many years. What has this meant for women in remote and rural agricultural areas of southwest Bangladesh? How has the intended inclusive policy of participatory water management in place in Bangladesh been able to enhance women participation in water management and fulfil their water needs? Based on empirical data we argue that, reflecting women’s secondary status in Bangladesh society, the creation of community based Water Management Organisations (WMOs) in the coastal zone of south west Bangladesh has done little to increase female representation or influence in decision making and has so far not challenged women marginalisation resulting in activity limitations and participation restrictions.

Bangladesh is classified as a low income country with a population of 154.7 million. The country has met some of the Millennium Development Goals most notably halving the number of people living below the poverty line, but still 63 million people, 31% of the population, are considered as poor (UNDP, 2014). In spite of progresses, notably in terms of education, the gender gap is still existing with Bangladesh

ranked 68 out of 142 countries (World Economic Forum, 2014). Indeed, generally Bangladesh society is characterized by the “...intense subordination of women” (Crow and Sultana, 2002). Recent measures of women’s empowerment in rural areas have recorded women’s limited access to resources and mobility constraints (Mahmud, Shah, and Becker, 2012). Yet, agriculture, aquaculture and garment manufacturing provide subsistence and/or wage labour with the garment industry employing a disproportionately high number of women and giving them empowering means (Kabeer, 1997). Gendered wage discrimination is economically crippling for women and at the national level Bangladesh ranks 119 out of 136 countries for wage parity (World Economic Forum, 2014). This is in line with our research which found women from rural areas earned approximately 100 taka¹ less per day than men, constituting one fourth to one third less pay.

Traditionally, in rural areas, patriarchal socio-cultural practices and religious uses locate women in the private space of the home and surrounds, and public spaces are the domain of men. These practices are derived from the purdah, consisting of women’s veiling and confinement to home. While public-private boundaries may be blurred and often are for various reasons, they can also be maintained through cultural and material practices with regard to water (Sultana, 2009) and recent upsurge of the Tablighi Jamat Islamic reformist movement, which emphasises behaviours dictated by morality (Devine & White, 2013) strengthens restrictions of some women mobility. Restrictions on women’s movement outside the home have repercussions for their reproductive and productive use of water, and their ability to engage in community water management. Yet, poverty is an opposite driving force, moving women out of their homes and out of the traditional norms to seek wage labour to support their household needs (Murshid & Yasmeen, 2004). As a result, the behaviour of women is being determined by their class rather than by their religion.

Women are further disadvantaged by inheritance norms which limit women’s control and access to productive resources (Agarwal, 1994). Under Islamic inheritance laws, daughters receive half of what sons receive. However confirming the findings of Hatcher, Meggiolaro & Ferrer (2005), in our research we identified that females do not always claim their

¹ USD 1= 77 Taka (BDT) in July 2015.

rights in order to maintain good relations with male siblings whom they may rely on, in the male dominated public sphere. Moreover, according to customs, Hindu women are not entitled to inherit any land. The economic ramifications of these practices are detrimental to women in myriad ways who, for example, compared to men have less access to credit based on land as a capital asset. Similarly, land ownership is important not just as capital but also as a productive asset for agriculture and increasingly for aquaculture. However, analysis in the coastal zone by Murshid and Yasmeed (2004) has shown that even when women from non-poor households get access to the resource through inheritance or land bought in their name, they rarely have the authority to decide the allocation of the asset.

Women's access and management of water is also impacted by recent economic changes, which spread over the coastal zone of Bangladesh. The conversion of large tracts of land into shrimp farms commenced in the 1980s with instances of wealthy individuals buying out small landholders to construct large-scale saline aquaculture ponds, which afterwards, transformed these people into landless labourers. Wage labour in large-scale ponds (as opposed to small scale discussed below) is primarily performed by women and children, who collect and process shrimp while men are responsible for transporting and marketing. So, from one side, aquaculture created employment opportunities for women (Halim, 2004; Gammage et al. 2006) but, from the other side, livelihoods have also been badly impacted with a reduction in home gardens and domestic livestock and a drop in the diversity of women's income sources (Crow and Sultana, 2002; Halim, 2004; Pouliotte et al. 2009). Another effect of this change in land use has been the increased salinity of groundwater and the distance that women and men, now, have to walk to access potable water.

In Bangladesh, water management was initially led by the central government through implementing agencies and field level staff, but from the 1990s the responsibility has steadily been transferred to communities. This shift began to occur when participation and community driven projects became mainstream in the donor community (Dewan, Buisson, & Mukherji, 2014). From a legislative

perspective, this resulted in the formulation of the Bangladesh National Water Policy (Ministry of Water Resources, 1999) in 1999, which was operationalized in 2001 with the Guidelines for Participatory Water Management (Ministry of Water Resources, 2001). These guidelines clearly establish that communities are the main stakeholders and that water management organizations have to be formed in order to lead operations and maintain water infrastructure. Subsequently, all the implementing agencies and projects are directed to follow these guidelines.

Community based organizations and WMOs², have been created, and are entrusted with the full responsibility for the operation of water infrastructure and part of the maintenance duties. Previous analysis has nevertheless established the complexity of the institutional framework of water management in the coastal zone which creates both gaps and overlaps in the assigned duties (Naz and Buisson, 2015). This complexity is exacerbated by the WMOs themselves, which are frequently dysfunctional. Further, WMOs reflect and reproduce existing power structures in the water sector and society more generally despite attempts to create more inclusive institutions. The Guidelines for Participatory Water Management note that WMO membership is open to "women and men belonging to the households of farmers, fishermen, small traders, craftsmen, boatmen, aqua-culturist, landless people, destitute women, project affected person, etc" (Ministry of Water Resources, 2001) from the project or sub-project area. Effectively, this means that all residents of an area can be members of the group, irrespective of their interests or level of water usage. The guidelines also indicate that an Executive Committee (EC) is to be elected by WMO members for two years term. The EC consists of twelve members; three seats are reserved for landless people, fishers and destitute women and must be comprised of at least 30% women.

In addition to WMOs, Union Parishad, which is the lowest level administrative unit in Bangladesh, is also an important institution in terms of local water management. In spite of not having any formal role beyond providing support, facilitation and assistance to the WMOs, the Union Parishad members are

² Water Management Organization is the generic term but three tiers actually exist: Water Management Groups (WMGs) usually formed at the village level, Water Management Associations (WMAs) at the polder level and Water Management Federations (WMFs). In this article most of the discussion and data refer to the lowest tier of WMOs.

commonly involved in water management, especially where no WMO has been formed. It is worth mentioning that Union Parishad does have quotas for women which have increased the representation of women but whether this has been translated into more women involved in making decisions is not clear (Pandey, 2008). Both WMOs and Union Parishad are physically proximate in the community but elite capture can be an issue leading to the question of how representative these organisations are of the broader community. A distinction has to be made between membership and attendance on one hand, and active participation on the other.

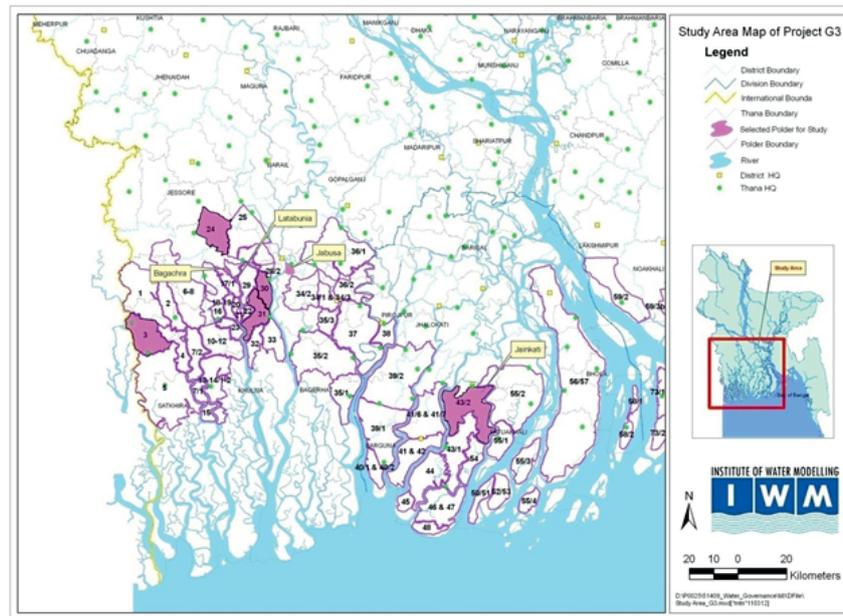
In this paper, we present data on the implementation of Bangladesh government policies and guidelines on community water management organisations in relation to the differential impact this has on women and men. What has come to light in the analysis is that women are systematically (and at times self-) excluded from WMOs. These organisations are rarely functional, so participation is not necessarily beneficial or desirable for either men or women. Systemic institutional or self-exclusion is not simply based on sex but also on class, religion and political affiliation with women cumulating various factors of exclusion. We establish that water management organizations focus on large scale productive water use and argue that small scale productive and reproductive water use is largely, though not completely, the domain of women, but the WMOs that they are ostensibly being encouraged to participate in, do not address these spheres. This results in a disconnect between WMOs that are directed by policy to include women, and these same women who consider that WMOs do not respond to their requirements as small scale water users.

The paper is based on primary qualitative and quantitative data collected in 2012 and 2013 in nine locations of southwest Bangladesh. Of the nine locations in the study, five were large polders (polder 3, polder 31, polder 30, polder 24G and polder 43-2F) and spanned a number of villages, and four were smaller sub-projects and included only one or two villages (Jainkathi, Jabusha, Bagachra-Badurgacha, and Latabunia). Figure 1, provides a map of the study area. Those locations were selected to cover different institutional arrangements for water management and three different agro-ecological zones of coastal Bangladesh (Ganges Tidal Floodplains, Young Meghna Estuarine Floodplains and Gopalganj-Khulna Hills).

The quantitative survey designed to analyse water management in different institutional setups targeted 1,000 households from 44 villages. For the sub-projects, 40 households were surveyed in Jainkati and Labaunia and 80 in two villages of Jabushabeel. Then, the household survey focussed on three polders only, one from each of the agro-ecological zones, polder 3, polder 30 and polder 43-2F. For a comparison purpose, the sample size was the same in each polder with 280 households surveyed in each. The villages were randomly selected in each polder and 20 households per village were then selected using a random displacement method. From the household survey, 30% of respondents were women and 3% were female-headed households. In all the surveyed villages, a water management questionnaire was also administered to an informed community member who was a member of the WMO.

In parallel, the qualitative survey conducted 57 Focus Group Discussions (FGDs) of which eight were female only groups, and 92 Key Informant Interviews (KIIs) of which 16 informants were women. The qualitative data was collected in all the nine study locations. FGDs were first conducted with a general group of community members and then separately with the executive committees of WMOs and with Labour Contracting Societies. Local government officials (male and female, respectively), project field staff, executive chairs of WMOs, women WMO members, paddy farmers, shrimp farmers, women household heads and the landless (men and women, respectively) were then targeted for KIIs.

Our analysis of the primary data is organized around two analytical tools, used widely in work on gender and development; Moser's framework (Moser, 1993) and the social relations approach (Kabeer, 1994). Moser's framework highlights what is described as the triple role of women: reproductive, productive and community management. This framework provides the overarching organizing principle for the paper and the following three sections correspond to each of these roles. This gender framework introduced by Moser is useful to describe gender inequalities but fails to address evolutions in gender relation and especially negotiation, conflict and power dynamics, which are essential in managing water. Kabeer's social relations approach is therefore, used as a complementary conceptual guide in the section on community management to highlight five distinct, yet, inter-related dimensions



Source: Institute of Water Modelling for the G3 project

Figure 1: Map of the study areas

of gendered social relations in institutions in this case, WMOs: rules; resources; people; activities; and power.

The gap between water management and water users, which is highlighted in this analysis, illustrates the gendered marginalisation faced by women in coastal Bangladesh. This social construct of gendered marginalisation closely relates to the social construct of disability, understood as per the Preamble of the United Nations Convention on the Rights of Persons with Disabilities (2006) as “an evolving concept [...] that [...] results from the interaction between persons with impairments and attitudinal and environmental barriers that hinders their full and effective participation in society on an equal basis with others.” Disability, is therefore, not only about impairments but also includes activity limitations and participation restrictions (WHO and World Bank, 2011). Beyond a medical perspective centred around health problems and physical restrictions, disability can be defined through a social perspective in which disability arises from the society rather from bodies (Oliver, 1990). As per the social model of disability, disability is not defined in functional terms but as the barriers to activity caused by a social organization (Shakespeare, 2006). In the context of rural Bangladesh, being a female, which is initially a physical characteristic, is associated with social stigma and results in marginalisation. Gender as well as disability constrain the access and decision-making related to agriculture and to water

management in particular. When combined, gender bias and disability create double barriers (Mehrotra, 2006; Thomas and Thomas, 2002).

As mentioned below in the context of water, this marginalisation is caused by gender norms, inequality in access to education, restrictions on access to public sphere, inequitable property rights as well as inequitable access to assets and to economic opportunities. But this gendered marginalisation is also exacerbated by intersectionality with other norms and identities related to class, caste, religion or demographic status (age, status in the household). In this paper gendered marginalisation is explored with an intersectional perspective, we believe this analysis will offer useful lessons on how to address water insecurity for men and women with disability.

Water and Reproductive Roles

Development discourse identifies supplying of water to the home as the work of women. The mundane daily task of ensuring availability of water for drinking, cooking, bathing and cleaning is primarily, if not absolutely, ascribed to women. Domestic water supply is fundamental to human health and well-being and is one of the triple roles of women.

The reproductive role comprises the childbearing/rearing responsibilities and domestic tasks undertaken by women, required to guarantee the maintenance and

reproduction of the labour force. It includes not only biological reproduction but also the care and maintenance of the workforce (husband and working children) and the future workforce (infants and school going children). (Moser, 1993)

Overwhelmingly, this is understood to be the case particularly in low and middle-income countries such as Bangladesh. However, this blanket assumption which may be useful for policy, planning and advocacy for women's rights and allocation of resources, can creep into the realm of gender blindness if understood as static and representing all lived realities. Our research found that men are also involved in the reproductive role of supplying water³ to the household to the tune of an average of 10.6% of men being primarily responsible. Previous studies in Bangladesh have focused on the female burden of water collection in terms of time and distance, and associated risks and health impacts (Shamin and Salahuddin, 1994, quoted in Crow and Sultana, 2002). For example, it is stated that men do not participate in fetching water for domestic purposes (Sultana, 2009a). Several explanations can be advanced, including recent changes in the gender roles and in the environment requiring men to now complete this task when water sources are not adjacent to home.

Covering long distances to access drinking water may also be on the rise due to degradation of the environment in the form of increased salinity and declining water tables, especially in the dry season. Indeed, we noted that the percentage of men involved in fetching drinking water is higher when the source of water is more remote. The average distance from home to the source of water is 260 meters when women fetch water as against 930 meters for men; men, consequently, spend more than double the amount of time fetching water compared to women. Hence, when men do share the task of providing potable water, their workload in terms of time and effort is disproportionately higher than that of women. But, the transfer of this reproductive task from women to men in the cases long distances need to be covered is not a sign of women empowerment and translates on the contrary several perceived physical abilities of women and social norms: lower physical strength as compared to men, non-distance

from home and lower technical capacity⁴. Our findings thus indicate that men's role in collecting water is not always as insignificant as previously thought and notions of the respective roles of women and men have to be challenged. This is not insignificant and alerts us to the importance of a nuanced understanding of gender roles and disabilities, which change over time. Not all reproductive work is women's work; likewise the framing of productive water use as predominately the domain of men's work is similarly misleading.

Water and Productive Roles

Productive roles are those which generate income, either cash or in kind and include subsistence; hence, all forms of farming are conceptualised as part of the productive role (Moser, 1993). Income generating work is frequently done outside the home but, particularly, in the case of women, may also be carried out in the home in the form of agro-processing activities like rice un-husking; handicraft activities like sewing, embroideries or any bamboo related works or finally in the form of any small scale production. Water is fundamental to the productive roles of women and men in southwest Bangladesh. Commercial agriculture and large-scale aquaculture are the biggest consumers of water by volume but in addition, homestead gardening, small pond aquaculture, poultry and livestock husbandry are also productive activities requiring water and adequate management of resources.

Agriculture and aquaculture

Agriculture and arguably to an even greater extent, aquaculture, in Bangladesh are understood to be the domain of men. While conducting the household survey, we noted that women respondents were well versed in the agricultural practices led by the male from the household. Women are knowledgeable about crops, yields, the sources and costs of irrigation. Even when women are publicly marginal in agriculture and aquaculture decision-making, women are informed and take part in discussions about agriculture and aquaculture. Second, our data highlighted that while men are frequently the primary decision makers and control large-scale production, women are involved as family or wage labourers.

³ Our research did not investigate other reproductive aspects noted by Moser (2003).

⁴ Men fetching water often go with cycle rickshaws or motorbikes while women walk and carry the cans themselves.

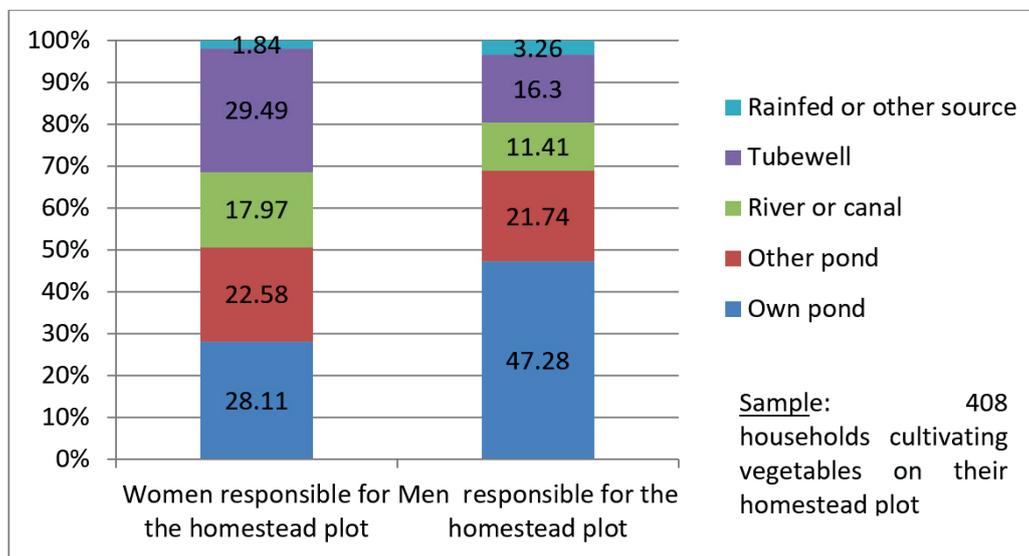
Women’s productive role on family plots is grossly underestimated in national statistics. According to the Census of Bangladesh, 2011, only 1% of the women are classified as working in coastal Bangladesh. But, our research found that in the study areas where agriculture predominates, labour is drawn mostly from within the family. For example, in Barguna and Patuakhali districts, 34.7% of the crops are cultivated solely with family labour, i.e. both men and women from the household. Similarly, a survey conducted in north Bangladesh showed that women contributed 31% of the labour force for rice production in Muslim households and 54% in Hindu households⁵.

Women working as daily labourers is also quite widespread. In agriculture and especially for paddy, which is labour intensive, women are hired for transplanting and harvesting rice. In aquaculture, women are hired to collect and process shrimp and to clean large-scale ponds. We found that each gher⁶ hires an average of 20 people of which 5 are women. In our survey, 17.5% of landless women work as daily labourers as opposed to 2.9% when the household owns land. Hence there is a clear economic imperative that trumps social norms of female seclusion and perceived disabilities when it comes to

the productive role of women. This is despite gendered wage disparity with men receiving 250 to 300 taka per day⁷ as opposed to women who are paid 150 and 200 taka. From our findings, these differences are internalized by individuals and do not appear to be contested.

Homestead vegetables and aquaculture

Homestead production of vegetables is a common practice in rural Bangladesh. A small plot near the house, within the bari⁸, is dedicated to vegetable cultivation. The vegetables produced on these plots are mainly consumed by the households and are important for food security and the provision of diversified food intakes. From the sampled households, women are responsible for the homestead garden in 53.9% of the cases. No gendered difference was found in relation to the size of the plot and the number of months the plot is farmed; however, the percentage of the harvest kept for consumption is significantly different. Women responsible for the homestead garden keep on an average 92.5% of the harvest for the household whereas; men keep on an average 82.2%. This finding is consistent with the literature on transfers showing that women allocate a higher part of their



Source: Authors' calculations from G3 household survey

Figure 2: Source of water for vegetable irrigation, by gender

⁵ This difference apparently based on religion can be misleading: following the partition better-off Hindus families left Bangladesh and Muslim households are now in general in a better economic situation than Hindu household. The difference here is therefore likely to be based on class rather than religion.

⁶ A gher is a piece of land surrounded by raised dyke and used for fish cultivation. By extension, a gher is also an aquaculture farm.

⁷ Depending if the lunch is provided or not.

⁸ The bari is the homestead area of an household, it may include several houses, a piece of land and eventually a pond.

income for the well-being of the household (Duflo, 2003; Lundberg et al. 1997). Gendered difference is also evident in the water sourced for irrigating homestead plots. While 47.3% of the men irrigate their vegetables with water from their own pond within or adjacent to their home, only 28.1% of women do so. The data collected establishes that women are more likely than men to use water from ponds they do not own and from canals, rivers or tube wells (figure 2). Women are consequently using sources of water beyond their own bari. Discourses of social norms that locate women as being secluded in the home belies the actual practice, as women leave the home to source water for productive purposes.

In this context, where 31.9% of the households own a small-scale pond, homestead aquaculture also makes a productive contribution to the household. An earlier survey conducted in the same area establishes that 45.5% of women are involved in homestead aquaculture (Bloomer, 2012). However for agriculture and productive use of the ponds, women's access to the resource and authority over water is constrained by property rights which largely remain with men (Nathan and Jahan, 2013). Inequality in accessing property rights on the land and water resources is still a prevailing barrier for women in spite of their actual involvement in homestead production and this perpetuates the gendered disability faced by women.

Poultry and livestock

As with homestead vegetable cultivation and homestead aquaculture, livestock and poultry breeding is also women's work. From the sampled households, all own either poultry or livestock: 60.3% own cattle, 25.7% own goats or sheep and 80.5% own poultry. Eggs, milk, and in some cases meat, is bartered or sold to neighbours. The importance of water management for successful breeding emerged in focus group discussions where women underlined their difficulty with feeding livestock due to a decline in the availability of fodder as a result of change in land use and salinity. They also attribute the declining health of poultry to salinity, increased water scarcity, and the poor quality of water in the ponds. This has significant livelihood implications as 57.5% of women reported that in cases of hardship the first assets they would sell is livestock or poultry. Thus, water related issues have an impact on one of the traditional safety nets available to women.

Water and Community Management Roles

Women have little authority and are significantly under-represented in the management of water (Meinzen-Dick and Zwarteveen, 1998). Here we investigate women's role in community water management, which is characterised and defined as follows;

This [community management] is to ensure the provision and maintenance of scarce resources of collective consumption, such as water, health care and education. It is voluntary unpaid work, undertaken in 'free time'. The community politics role in contrast comprises activities undertaken by men at the community level organizing at the formal political level. It is usually paid work, either directly or indirectly, through wages or increases in status and power. (Moser, 1993)

There would be little resistance to classifying WMOs as community organisations but interestingly Moser further differentiates between the unpaid voluntary work for an organisation, which is typically non-profit, and political side, which can deliver remuneration in many forms. While in theory, participation in WMOs serves social benefit in allocating water to the community members, the politics is not entirely absent and indirect personal benefits are also likely.

In order to analyse WMOs, we augment this analytical classification with the work of Kabeer to elucidate how the institution reproduces broader societal gender relations. The term social relations as used by Kabeer (1994) describe the structural relationships that create and reproduce systemic differences in the positioning of different groups of people. Social relations define an individual's position in the structure and hierarchy of their society; yet relations are not fixed or immutable and account for the dynamic, ever changing nature of society. The social relation approach distinguishes five distinct, but inter-related dimensions of institutions: rules, resources, people, activities, and power. These dimensions are significant to the analysis of social inequality in general, and gender inequality in particular. Examining these dimensions of WMOs helps us to elucidate the different positions of women and men vis-a-vis these institutions.

Rules

Rules are defined as how things are to be done

(Kabeer 1994). Institutions are governed by rules, and distinct institutional patterns of behaviour are evident in official and unofficial norms, values, traditions, laws and customs. These rules constrain or enable what is to be done, how it is done, by whom and who will benefit. However, it is not unusual to find a significant gap between the directives of written rules and actual practices. This is the case with community water management in Bangladesh: whereas the rules are defined by law, the implementation largely reshapes the law. As per the Guidelines for Participatory Water Management (MoWR, 2001), all community residents are encouraged to become members of the Water Management Organizations. Yet, from our survey, we identified only 11.3% of the households with a member in a WMO. Considering the sex of WMO members, 17% are women according to the household survey. When the same question was asked to WMOs representatives, on average they reported 24% female membership. This difference can be interpreted as a lack of engagement hence, under-reporting of membership by individuals in the household survey and/or an overestimation of the number of women by WMOs. In any case, contrary to the policy intents, WMOs rarely encompass the entire community.

WMO guidelines establish a quota of 30% of women in the managing committee of the WMO. From the survey, we found that 80% of the 40 WMOs surveyed have less than three women in their executive council, 15% have three and 5% have four women. In addition, no woman holds the high ranking position of president or treasurer and it was only in one case that a woman held the position of secretary of the WMO. Qualitative insights identify a lack of information and discrepancies between guidelines and actual practice as contributing factors. Many women who are actively involved in agriculture and aquaculture revealed that they were not aware that they can become members of the WMO. Also women who are members frequently mentioned that they have no say in the WMO meetings hence, they consider themselves as non-active members and do not engage in the decisions. Further, competing with men in elections for the managing committee is not even considered an option. If the rules set by law proactively support the involvement of women in WMOs, the practice still faces gendered disabilities in the form of limitations in the community activities and restrictions to participation. Reported

dysfunction in WMOs, patriarchal norms and elite capture (discussed below) lead us to also consider that membership is neither sought after nor desirable for women.

People

When referring to people we are following Kabeer's distinction of who is in, who is out and who does what, as part of an institution. This encompasses institutional patterns of inclusion, exclusion, and placement, which often dovetail with class, gender and other social variables. Previously, we mentioned that even if the quotas defined by the guidelines are not entirely fulfilled, still women could be found in WMOs. Moving beyond just numbers, here we demonstrate that WMOs are not representative or responsive to female water users and that women are a heterogeneous group (Mohanty, 1988) with diverse interests.

In the entire sample, 35% of the households have less than half acre of land holding, hence can be considered as marginal farmers. However, when considering households with a women member in the WMO, only 21% of them are marginal farmers. This contrasts with the female headed households which are predominantly (68%) marginal farmers operating on very small pieces of land. Female members of the WMOs are consequently from households with larger land size ownership, which define both their social status in the community and their economic wealth. We previously pointed out that women involved in productive water uses and especially in daily wage job in agriculture and aquaculture are mostly from marginal households, it is consequently unlikely that female members of the WMOs are representatives of the breadth of female water users or the poorest members of society. Similarly, the qualitative data also confirm that women members of WMOs are often from families of the political elite and usually do not have any direct interest in water management nor are they representative of the majority of female water users as articulated by a focus group discussion; "These women who are members [of the WMO] do not know anything about water management, as they are not cultivators and do not have any productive use of water".

Women inclusion in WMO is running the risk of being dismissed as tokenism. Female members are from elite families; discussions with key informants

highlight that they are often wives, sisters or close relatives of men holding office-bearing positions in the community, and they are unable to carry the voice of the disabled minority they are supposed to represent.

At the same time, women with interest in water management, related both to their domestic and small scale productive uses, exclude themselves from the community water management organisations. Various reasons can be emphasized to explain this self-exclusion. First, many women under-estimate their capacity because they are illiterate and poor. Many women do not perceive themselves as able to contribute to collective decision-making as that is the privilege of male, literate and wealthier community members. Quite a few women have also mentioned that being a part of the WMO is a waste of time as they are fully aware that their voice will not be heard. Others are the sole income earners of the house and do not want to waste time by attending meetings in which they do not contribute. Quite a few women are also of the opinion that WMOs deal with technical problems, which have to be dealt by men and therefore consider that women should not participate. Finally, due to notions of appropriate feminine behaviour, some women will not consider participating in public meetings and even less consider intervening in the discussion. In all these cases, women internalize the stigma of gendered disabilities to exclude themselves from the community water management organizations in spite of being active water users for their productive and reproductive tasks.

Activities

Kabeer defines activities as what is done by an institution. These activities can be productive, distributive or regulative, but their rule-governed nature means that institutions can generate routinized patterns of practice.

Since the 1990s, water management in Bangladesh has seen a shift from government to community-based responsibility. The shift was partly driven by a structural adjustment process requiring the Bangladesh Water Development Board (BWDB) to change its approach to water management but referred also to the international trends toward decentralization and community driven

development (Dewan et al., 2015). Thus, this transition to community-based management now sees unremunerated local people responsible for water management via WMOs. In the coastal zone, this means that WMOs are entirely responsible for the operation of sluice gates which may include negotiations required to reach a consensus on the required operation and partially responsible for the maintenance of the water infrastructures (Dewan et al., 2014). When considering the contributions of men and women to these activities and their respective roles in the routine practices established to perform these responsibilities, the role of men is preponderant. This is the case for activities involving physical labour like opening the sluice gates but also for administrative activities of the institution. Here again, the ability of women in terms of strength and education perceived by the society and by the women themselves results in exclusion and self-exclusion from performing the activities required by a community organization. This situation clearly brings back to the definition of disability created by the society and not by the objective abilities of the individual and which prevent a group, here women, of prevailing some activities.

One exception, worth noting is the role of women in maintenance activities through Labour Contracting Societies (LCS) or social safety nets programs. The main objectives of the LCS are to provide employment and income generating opportunities to the rural poor, to ensure fair wages and achieve high quality construction work. As per the government guidelines (MoWR, 2001), at least 25% of the maintenance work of public water project has to be given to LCS hence, WMOs are encouraged to contract LCS groups for maintenance work. By rule, at least, 30% of the LCS members have to be women. In the study area, several groups are female only, which attract destitute women, and those who own small land plots or are landless. Similarly, social safety nets programs hire most vulnerable household members for earth work and pay them either in cash or in kind. From our surveyed sample, 14% of the households had at least one member involved in these programs in 2012 but only 5% of them were women. In this particular case, we suspect an under-reporting bias explained by the fact that women's work is not socially recognised and also does not indicate the poverty of the household whose women have to

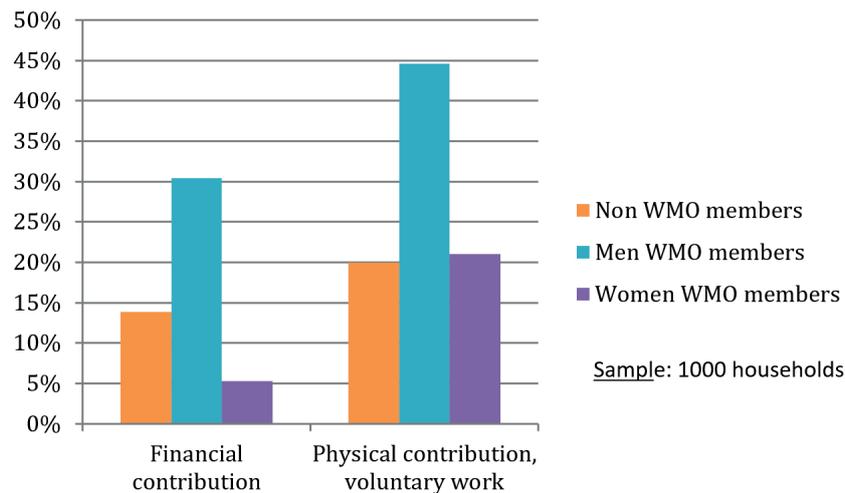
⁹ These three types of resources are different in the decision process of the community members even if all the three can be estimated in monetary units.

work. For these reasons, respondents often carefully avoid mentioning this point when discussing with the enumerators.

Resources

According to Kabeer (1994), resources are, what are used and what is produced. Three types of resources contribute to the functioning of water management organizations and support the provision of the activities previously mentioned: resource in kind,

resource in cash and finally resource in time⁹. The gap between men and women's contributions to the resources of the WMOs is quite important. Thus, in terms of financial contribution towards maintenance of the water infrastructure, only 5% of the women members of the WMO contribute in comparison to 30% by their male counterparts. Even for voluntary work, corresponding to the time allocated to the community organization, 21% of the women members give time as compared to 45% of the men



Source: Authors' calculations from G3 household survey

Figure 3: Physical and financial contribution for water infrastructure maintenance

(figure 3) and women also give a lower amount of time.

These figures indicate women's lack of engagement with WMOs. For women who do have an interest in the WMO, the requirement to pay a monthly membership fee to the WMO can be a hindering factor, which contributes to exclusion and self-exclusion. Indeed, during focus group discussions, women emphasized their limited access to financial resources and decision-making power over household cash reserves. Women questioned as to why they should contribute to the WMOs when this institution does not represent their interest or provide any benefits to them. The same argument applies to the voluntary contribution of time for WMO activities – little of the work is directed towards areas of primary concern to women hence attract limited attention from women.

Power

Kabeer (1994) defines power as who decides and whose interests are being served. The distribution of

power impacts the four previously mentioned dimensions: rules, people, activities and resources. Unequal access to resources and positions of authority in WMOs is linked to an individual's position in society, which in turn can legitimize inequality in the distribution of power creating a feedback loop. There is little incentive for institutional actors who have authority and control to promote practices that potentially erode their privileged positions within the institutional hierarchy. For women who are members of WMOs, or of the managing committees, decisions are largely determined by broader societal gendered power relations that subordinate them to men. This is exemplified by the following quote from a focus group discussion: "Women do not get an opportunity to participate. It is only gher owners, powerful and influential persons who can get access to the decisions. Women have no scope, influential persons only are involved".

Creating a committee and having meetings in the presence of all community members might not be

sufficient to overcome existing power inequities, prevailing social norms (Sultana, 2009b; Krishnaraj, 2011) and gendered disabilities. Fieldwork data reveals that female members of WMOs were very often local elites. Their participation consequently reinforces prevailing class power structures in society thwarting the efforts of policy to increase equity. Further, interviewees reported that elites rarely attended WMO meetings and hence were distanced from current water issues and concerns of other sectors of society. As such, when considering power relations within WMOs and decision making processes, gender is not the only dividing line. In addition to class and wealth, the distribution of power within the WMOs is also influenced by religious or political affiliation, which is a major determinant in decision-making power. In some cases local political affiliation is so pervasive that it determines who is eligible for membership and executive committee positions in the WMO. In concert with the dominant patriarchy of public life, this can further serve to exclude women from participation and decision making in WMOs.

Conclusion

In southwest Bangladesh, WMOs are dominated by men and most have not achieved the 30% female membership quota in the executive committee. To analyse why this is the case, we have investigated the reproductive, productive and community management roles of women with respect to water. Our research provides a more nuanced analysis of the provision of water for reproductive use. Just over ten percent of domestic water is collected by men who on average must commute longer distances to water sources than women. However, the provision of water for reproductive purposes is still primarily the responsibility of women who also require water for productive use in small-scale agriculture, aquaculture, homestead cultivation, and poultry and livestock. Hence, women have a significant stake in the way water is managed by the community yet this is not reflected in institutional membership or decision-making power. The analysis of the roles of women in WMOs identifies that women are systematically excluded and self-excluded from these organizations. WMOs focus on large-scale water use and largely ignore domestic and small-scale productive water use. We consequently identify a gap between the interest of WMOs and the interests of female water users. These gaps largely result from unchallenged gendered disabilities, created by the

society and internalized by both men and women. This contributes to current water management policy failing to reach its objective of inclusion and equity. Whereas a special focus is given to women in WMO guidelines, this alone has not been sufficient to boost women's participation and involvement in decision-making. On the contrary, WMOs reflect and reproduce gender and class inequalities. Written guidelines for WMOs have not driven change in the status of women in WMOs, which reflects women's lack of opportunities more broadly in Bangladesh society. In a situation where environmental changes, male out-migration and induced feminization of agriculture or spread of Non Government Organizations activities lead to a constant evolution in the gendered relationships, it seems essential that the policy become more proactive towards inclusion of women and fill the gap between water management and water uses.

Considering the failure of the quota and legislation to promote women participation in water management, we recommend a shift in the policy. The policy should first acknowledge the existing differences in Bangladeshi society and seek a better fit between the legislation and the prevailing socio-cultural context which operationalize the management of water and other natural resources (Singh, 2008). With the same objective of equity and improved access to water, a targeted, incremental approach might be more effective than the current inclusiveness approach. This could mean, for example, creating female only water management sub-committees, with an allocation of WMO resources, to deal with the specific water issues of primary concern female members. The importance here will be to group members on the basis of shared interests and to strengthen the willingness of female water users to participate by enhancing incentives and benefits arising from participating in water management organizations. Provided that coordination between the different sub-committees is facilitated by the governance structure, there is through this targeted approach the potential to empower women (and other marginalised groups), improve access to water and ultimately sustain coastal zone livelihoods.

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Are policies enough to mainstream gender in water and sanitation programs?

Experiences from community managed drinking water supply schemes in India

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Abstract

This paper attempts to understand the efforts required in translating policies into practice to mainstream gender in implementing water and sanitation programs. The analysis is based on the data collected from community water plus project¹ using 20 case studies from India on how women are being integrated and how they are performing in their roles as planners, implementers and managers. The findings reveal that in a majority of the case studies women are still being discriminated on the basis of sex, caste, disability, social, economic, and political status. However, if there are intentional and designed efforts by programs backed up by relevant policy then it is possible to achieve gender balance. Evidences from the case studies reveal that given an opportunity, women can manage water supply programs successfully at par with men overcoming barriers, be it is technical, administrative, or financial. Case studies also reveal that to demonstrate success there has to be an intensive and continuous support from both Government and Non Government organizations through continuous trainings and hand holding support. It is evident that the mere presence of policies might earn a membership for women in local bodies, but they will not be able to perform their roles effectively unless they are being trained and mentored continuously. Though the paper does not have specific data on integrating persons with disabilities but field observations and focused group discussions bring out that the strategies for integrating women could also be applied and adopted for integrating persons with disabilities and the elderly into mainstream programs with special provisions and specialized professional support. Finally, it can be concluded that if the implementing organizations ensure an enabling environment supported by policy with clear guidelines, then it is certain that gender equity and inclusion can be attained for creating a just society.

Keywords: Gender, Mainstreaming, Women, Policies, Water supply, Disability, Community management

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Introduction

Gender is a concept that refers to socially constructed roles, behavior, activities and attributes that a particular society considers appropriate and ascribes to men and women (WHO,2009). These distinct roles and the relations between them may give rise to gender inequalities where one group is systematically favored and holds advantages over another, stereotyping the roles and behaviors. Gender equality and empowered women are catalysts for multiplying development efforts. Investments in gender equality yield the highest returns of all development investments (OECD, 2011). Women are most often the users, providers, and managers of water in rural households and are the guardians of household hygiene. If a water system breaks down, women, not men, will most likely be the ones affected, for they may have to travel further for water or may have to find other means to meet the household's water and sanitation needs (WSP 2010). Though it is important to discuss the role of both men and women equally as part of gender mainstreaming, more focus is given to the latter, as they have been suppressed and oppressed for time eternally. Women perform 66 percent of the world's work, and produce 50 percent of the food, yet earn only 10 percent of the income and own only one percent of the property. Whether the issue is improving education in the developing world, or fighting global climate change, or addressing nearly any other challenge we face, empowering women is a critical part of the equation (Clinton 2009).

Similar to women, another group that is deprived of being in the mainstream is "Persons with Disabilities". It is not just the personal impairment, which causes the difficulty but the discrimination or denial by the society barring them from being a part of the development process. This denial is categorized as the "social model of disability" which sees the issue of "disability" as a socially created problem and a matter of the full integration of individuals into society. In this model, disability is not an attribute of an individual, but rather a complex collection of conditions, many of which are created by the social environment (Disabled World 2010). The issue is both cultural and ideological, requiring individual, community, and large-scale social change. Similar to the case of women, persons with disabilities often lack access to the committees or local bodies due to myths about non-performance and social stigma attached to the disability status.

The disabled and the elderly are disproportionately under-represented. Over one billion people globally have some kind of impairment (WHO 2011), and are more likely to be poor than the general population (Hosseinpoor et al, 2013). For the last three decades many policies and programs have been dovetailed to bring these suppressed stakeholders to be a part of the mainstream, however the field reality shows a slow progress.

After attaining independence, the Government of India, initially decided to pave a path to bring about social change based on three major areas, viz., constitutional and legal reforms, planned development based on mixed economy, and state support to social welfare activities. All these three policies are expected to create a democratic, just, and prosperous society. All these three steps have an impact on the status of women. Framing of the Five Year Plans was the first major step taken in the direction of women's development. The initial Five Year Plans were focused more on welfare and viewed women as beneficiaries. For the first time, the Eighth Five Year plan focused on ensuring that the benefits of development from different sectors did not bypass women and special programs were implemented to complement the general programs. The approach of the Eighth Plan saw a definite shift from development to empowerment, extension of qualitative and quantitative services to women and suppression of categories directly. Further there has been a progressive increase in the plan outlays from rupees four crores in the First Five Year Plan (1951 – 56) to rupees 2000 Crores in the Eighth Five Year Plan (Pal 2013). Complementing the Eighth Plan the 73rd and 74th Constitutional Amendment Act is a major milestone and a turning point for women in India, as the historic date of 24 April 1993 witnessed reservation of 1/3 of seats for women in all elected offices of local bodies, in rural and urban areas (Planning Commission 1992). In the rural areas, women have thus been brought to the centre-stage in the nation's efforts to strengthen democratic institutions. The Tenth Plan (2002-2007) emphasized on Women Component Plan (WCP) and gender budgeting, which is complementary to each other in securing women's interest all over the world. While the Eleventh Five Year Plan focused on lowering the gender gap in literacy to 10 percentage point by increasing the percentage of each cohort going to higher education from the present 10% to 15% (Desai 1986). With reference to water, the

Ministry of Drinking Water Supply and Sanitation through National Rural Drinking Water Program (NRDWP) guidelines made a provision that all the Village Water & Sanitation Committees (VWSC) formed should have 50% women & proportionate representation for SC, ST & Minorities as a standing committee of the *Gram Panchayat*² for all villages in the District. Through this policy it is made clear that both men and women have distinct roles to play and it is important to fully involve both in demand-driven water and sanitation programs, where communities decide what type of systems they want, willingness to contribute to and management of service delivery.

Similarly there are provisions for the Persons with Disability as per the Equal Opportunities, Protection of Rights and Full Participation Act of 1995 which brought sharp focus to the State's responsibility in empowering the disabled with equal opportunities, protection of rights, and equal participation in the development process of the nation. It clearly lays down that education and employment opportunities must be created for the disabled by providing three per cent reservation. Five Year Plans mention that policies and programs should focus on making the disabled as active (as possible), self-reliant, and productive contributors to the national economy through the enactment of the Disability Act. Ministry of Social Justice & Empowerment (MSJE) while collating comments from the draft National Policy for Persons with Disability in 2005, stated that a policy and supporting structure of services to ensure that disabled people have equal opportunities for productive and gainful employment would be adopted. But nothing has happened so far. The very fact that disabled people are looked on as a "special group" by MSJE segregates them from the mainstream, and reiterates the charity view rather than a development perspective, wherein there is no scope for "empowerment", as reported by Shankar (2006).

However, translating these policies into practice seems a distant reality as revealed by Udas (2006). However, the mere existence of the policy seems to have contributed to (or perhaps been part of) a change in the dominant discourse, gradually changing the idea that 'public decision making is a men-only affair', making it less normal and accepted.

There are also documented instances where women have made use of the quota system and their participation to voice their water concerns. However, in many cases, women members of WUAs seemed to be members on paper only, with meeting the quota being the sole aim of their attendance (Chhetri 1999). Another important barrier appears to be the caste factor. While analyzing the rhetoric reforms of drinking water sector Joshi (2011) found that a complex entwining of caste and gender consistently defined water allocation and access among users and entrenched fractures in the structure and culture of the policy-implementing and regulatory institutions. Further she states that the drinking water sector is an excellent example of flawed policies, which have sustained the convenient fractures of a divisive society.

On the other hand, there are many islands of success in gender mainstreaming by NGOs and Projects with targeted approaches. In an urban resettlement project funded by Asian Development Bank where women were deemed to benefit from the project equally with men, but it was only possible in the resettlement plan where women were specifically targeted and the benefits were accrued by empowering them into groups and by allocating the flats on their names (ADB 2011). In another example PRIA, an NGO working intensively on gender mainstreaming, revealed that concerted efforts on the part of employing organizations could go a long way in ensuring gender sensitivity in the workplace. If heads of teams endorse the need for gender awareness and equality, these concepts will percolate down to all the employees and reiterate the importance of this concern (UNDP 2008).

As discussed above, the Governments and Non Government Organizations are making enormous efforts to convert the policies into practice but there are mixed results on the ground and only few organizations, few programs, and few villages are able to witness the success. Keeping this background in view an attempt has been made to understand the key issues of how men and women were involved in the process of planning and implementing the water supply schemes implemented by various organizations and what key roles they have been playing in sustainable service delivery as part of the

⁹ Gram Panchayat is a decentralized local institution at the village level which received funds from the Government and is responsible to implement all the Government programs through its elected representatives.

community water plus³ project. Further the paper focuses on the specific strategies and activities that were designed to mainstream gender while implementing the programs. Though the paper lacks specific data on the inclusion of persons with disabilities and the elderly but during the discussions these issues were covered and hence discussed in the findings.

Research design and methodology

Through its research partners in India, Cranfield University developed the conceptual framework and research protocols to study the enabling environment (policies and organizations at national, state, and district), performance of community service providers (village/Panchayat/community level organizations), and the quality of service received by the households. The research was conducted by selecting 20 successfully managed community water supply programs across the seventeen States in India after scanning over 161 community-managed rural water supply programs

in consultation with sector stakeholders and desk review using a stratified purposive sampling approach. The covered states were selected based on low, middle and high-income categories, social development indicators, and a range of hydro geological conditions. To understand each of the cases in detail, four villages were selected (one failure and three success villages) and in-depth surveys were conducted to elicit data combining qualitative and quantitative research methods. Thus the total sample included 80 villages (60 success and 20 control villages) and 2355 households (30 households from each village). Focused Group Discussions (FGDs) were conducted to assess the participation and involvement of women in Village Water and Sanitation Committees (VWSCs) and individual interviews were conducted with selected women to understand the issues of gender mainstreaming more clearly (272 key informant interviews and 130 FGDs). The table below provides a snap shot of the total sample covered under the research.

Table 1: Total Sample covered

Number of case studies	Number of States covered	Number of Villages covered	Number of FGDs with VWSCs and communities	Number of Households
20	17	80 (60 success and 20 control)	130	2355

Source: Data collected for the community water plus project during 2013-15

Findings and discussion

The main findings of the study have been discussed at length in the following sections detailing the efforts made by the NGOs and Governments to ensure gender mainstreaming in implementing the water supply programs. The findings have been categorized under various headings of project implementation so as to enable easy understanding and clarity in presenting the data. The research was more focused on gender, however an attempt was made to collect data on persons with disabilities but in most cases the records did not have the disaggregated data to know the specific details hence could not be

presented but the field observations and FGDs covered some of these issues. Hence where applicable the possible interventions needed for mainstreaming the persons with disabilities were also discussed.

Women as office bearers and members in VWSCs

The case studies clearly bring out that across all 20 cases the reserved seats for women are being diligently filled up without violating the Government norms. It is encouraging to see that in some successful cases the VWSCs had 100 percent women members as office bearers and members. In the case

³ Please note that the Community water plus project findings and conclusions have been submitted as a book to Earth scan and it is in the process of getting published into book very soon. Hence some content and analysis will be reflected in the upcoming book.

of the committees where men were present, women were denied of the leadership roles except for women *sarpanches*⁴ who had become the presidents of the VWSCs by default due to the Government order. Discussions reveal that in general women are discriminated against but if they belong to weaker/poorer sections or lower castes or are persons with disabilities then the discrimination is doubled fold. The women belonging to elite sections get preference in choosing their positions while the

other categories have to satisfy themselves with whatever is offered within the 33 percent. The power politics dominates and certain caste groups, elder persons, and persons with disabilities get intentionally suppressed or left out and the benefits get diverted to undeserving beneficiaries.

It could be seen from the table below that 15 out of the 20 case studies followed the Government norms and 30 percent seats have been occupied by women while men occupied 70 percent, except in five cases

Table 2: Percentage representation of men and women in the water and sanitation committees

Name of the case	% of women in VWSCs	% of Men in VWSCs	Name of the case	% of women in VWSCs	% of Men in VWSCs
Gujarat:WASMO(Gandhinagar)	80- 100	0-20	Tamilnadu I	30	70
Gujarat: WASMO (Bhuj)	70-50	30-50	Tamilnadu II	30	70
AP/Telangana (RO)	20	80	Uttarakhand	30	70
Maharashtra	70	30	West Bengal	60	40
Kerala I- (Kodur)	0-20	80-100	Odisha (Gram Vikas)	50	50
Kerala II-(Nenmeni)	50	50	Chatthisgarh	30	70
Sikkim	30	70	Jharkhand	50	50
Meghalaya	0	100	Rajasthan	0-30	70 -100
Madhya Pradesh	30	70	Himachal Pradesh	No data	No data
Karnataka	30 -50	70-50	Punjab	30	70

Source: Community Water plus Project 2013-15

the percentage is 50 to 100 given the intensive efforts of the implementing agencies.

In Gujarat, WASMO⁵ provided women with a platform to voice their issues by making it mandatory to have at least one third of women members in the Pani Samitis (VWSCs). In Gandhinagar District, Motipura

Veda village had 100% women, while in Amarpura Kherna 96% members and leaders were women indicating the efforts of WASMO in mobilizing women to demand and create space for themselves. While in control villages women were confined to 33% reservation by filling four out of eleven positions. While in Kutch district, two villages had

⁴ Sarpanch: The local elected leader of the grass root level decentralized government organization (Panchayat) responsible for the implementation of development programs at the village level.

⁵ WASMO is an independent organization created by the Government with autonomous operational responsibility to exclusively work on empowering the people in Gujarat to own the water and sanitation programs ensuring sustainability.

50% women and one village had 100% while the control village had only 30percent women. The States of Odisha (*Gram Vikas*⁶), Jharkhand (Public Health Engineering Department), West Bengal(Water For People) had 50%-60% women in the VWSCs which could be attributed to the intensive and innovative efforts of the implementing agencies to motivate women to be the members of the committees. The World Bank assisted projects in Karnataka and Kerala also had women representation at 50%, which is due to the mandatory guidelines and is a pre requisite for VWSC formation as per the World Bank rules. These special efforts by the GOs and NGOs not only empowered women but also ensured efficient and effective functionality of the water committees as women took it as a challenge to demonstrate their capabilities of providing better services.

In Maharashtra, Rajasthan, Chhattisgarh, Sikkim, Madhya Pradesh, and Tamil Nadu the Government norms of 30% were followed, however women in these committees were just passive observers who just sign the registers while most of the times their husbands/sons/brothers participate in the meetings. Detailed enquiries reveal that “women are still not allowed to go and sit along with men”, “discussions are dominated by men with no choice or voice for women”, “do not understand the discussions as they involve money and technical matters”, “ no time given the household chores”, “not interested” etc. The elderly and people with disabilities expressed similar views and most of them said they are not aware of the meetings and committees being formed. The study did not collect specific data due to non-availability; even the records at the Panchayat level lack data on persons with disabilities.

Though women empowerment index values are high in Kerala, the Kodur Panchayat (Public Health Engineering Department implemented case study) reflects low participation of women. But in the same state wherever World Bank assisted water supply programs were implemented (Nenmeni) the participation is very high with women occupying 50 percent membership. Women from these committees act as Executive Committee Directors, members of zonal committees, and are slowly entering local politics indicating the necessity of

special efforts from implementing agencies. In the case of the North East state of Meghalaya, the traditional structure “Durbar” (equal to that of Panchayat) takes care of the drinking water supply systems apart from their traditional local administrative responsibilities and women are not part of these committees. Women have a separate committee to perform cultural activities and celebrate community festivals limiting and confining their role to home based activities rather than being part of the mainstream development.

The discussion above clearly indicates that if the implementing organizations intentionally design strategies to integrate women, with special efforts to mobilize, motivate, and build their capacities, then they are able to perform effectively as VWSC office bearers and members on par with men. Some of the NGOs and World Bank assisted programs had 100 percent women committees, as they were able to sensitize the men to provide an opportunity for women to completely take over the committees and some of the implementing organizations felt that women when given power can independently run the water committees giving space to their voices and choices. Social mobilizers were front line workers and women staff members were the main catalytic change agents in bringing in this warranted change process breaking all the barriers and myths. Similar strategies need to be adopted if we have to bring the persons with disabilities or elders into mainstream development.

Women as “planners and implementers” of the water schemes

The myth that only men can understand the technical nitty-gritties seems to dominate in most of the Rural Water Supply and Sanitation Department /PHED implemented case studies while the NGO and World Bank promoted case studies did reveal that women can also actively contribute to the designing of the water schemes and they do have knowledge about the water sources, slopes, seasonal variations of the source, and could effectively suggest locations for erecting stand posts or hand pumps. The lessons from the experiences of the NGOs reveal that by consulting women they could bring more innovations to their schemes. For eg. Gram Vikas developed gender sensitive designs and provided

⁶ Gram Vikas is an NGO with a Head office in Orissa working in seven states, more about Gram Vikas can be seen following the link <http://www.gramvikas.org/>

three taps, one in the toilet, one in the bathroom, and one in the kitchen according to the choices of women at the household level. WASMO had taken extra efforts in creating an enabling environment during the planning stage of the project (lasted for six months) by involving women in Focus Group Discussions and in preparation of Village Action Plans to find out the needs and preferred choices of women to integrate into the technical plans. The World Bank assisted programs made participatory plans involving all the stakeholders and specific needs of women were taken into consideration at each stage. Since women were made part of the program from the planning through to implementation, the ownership on the assets had been automatically developed leading to better operation and maintenance ensuring sustainable service delivery.

In the case of Kerala, women in general have an overall understanding of the issues on water and have a strong voice to raise their concerns or give opinions due to their education status and also being a part of a matriarchal society⁷. The people's participation in Kerala actually originated with women's participation in planning and development activities, through the 'ayalkoottams' (neighborhood committees). Further continuous trainings imparted by the local institutions to make them understand their roles and responsibilities of being the members in the various committees. Though the reservation system entails only 33% of women in elected bodies, but due to their proactive participation many committees have more than 60 percent women in the local bodies, be it the Panchayats, VWSCs, Forest Committees, Health Committees, or Village Development Committees. This indicates that the policy coupled with intentional efforts could yield better results and it is important for the implementing agencies to understand these local dynamics for making women effective planners and implementers.

In Meghalaya women's role is not visible and they are confined to household chores. Traditionally, the women are kept away from participating in any administration/implementation of development programs for the reason that the men see it as their

domain to make decisions. When enquired, the male leaders said "we do take the views of women informally at home and that is enough, they need not be part of the committees" and "as per our tradition women participating in the meetings or attending common forum along with men is not permitted". The discussions with women revealed that since they know their limitation they stay away willingly from the committees to avoid conflicts but if given a chance to participate they are ready to explore and prove their potential by managing the water committees. Further, women added, "When we can perform the cultural activities and village fests successfully why not the other programs which involve similar tasks? And if we receive trainings like our men do then we sure will be able to deliver similar or better results". Women also revealed that even now we influence the VWSC and get our activities done without participating in the meetings. In Sikkim, Women are participating in discussions and are part of the planning process mainly through the ward committees as part of the decentralized governance. The discussions with them revealed that they are aware of all the activities of water committees and they do participate at par with the men and solve the problems as and when they arise.

The lessons learnt from above could also be applied in case the persons with disabilities, elderly, and people with special needs as they also require specific strategies, activities, and trainings to make them a part of development programs. As women could identify their specific needs and choices, even these groups need to identify their own needs which could be addressed and integrated into the plans to improve their access to and use of resources making them self reliable. In fact bringing persons with disabilities into the mainstream development requires special attention and they have to be consulted in a sensitive manner and counseled in a professional way to break their psychological and physical barriers.

Women as decision makers

In majority of the cases, especially the PHED implemented water schemes, women's role was confined to membership on paper and their participation in decision making seems a distant

⁷ Matriarchy is not just about descent and inheritance being traced through the female line. The matriarchal system means a system where women have power in "all activities relating to allocation, exchange and production, as well as socio-cultural and political power. (<https://nitawriter.wordpress.com/2008/03/19/meghalaya-and-kerala-status-of-women/>)

dream. Women hardly attend meetings and some of them simply sign the registers without even attending the meetings. Most of the times the husbands/sons act as phantom leaders and attend the meetings on behalf of their wives/mothers leaving them with no opportunities for awareness, learning, and participation. FGDs with women reveal that they do not demand or claim their position as they are scared of the consequences of acting against the wish of their fathers, husbands, or sons and some of them claim to be busy with their household chores or agricultural operations while others simply say “why do we need it?”. Further zooming in brings out that women from poor families, lower caste, and were illiterate were not even informed or invited to the meetings while the elite got the information through their networks. However there are exceptional cases such as Gujarat, Odisha, Karnataka, and Kerala where women act as key decision makers in both technical and administrative matters. Women from these committees revealed that they were very scared in the beginning to express their views but continuous training, mentoring, and interaction with officers, villagers, and NGO staff has taught them how to assess various factors before taking decisions. Interactions with WASMO and NGO officials revealed that appointing women training coordinators and social mobilizers did reap fruits, as with their support rural women were able to express their inhibitions freely and the same could be resolved with proper counseling. In Kerala all the ward members, executive committee members, and governing body members follow a consultative decision making process and this could be attributed to the advanced decentralized Panchayat system and high literacy levels. However, in the second case from Kerala, the woman Sarpanch is very active but somehow the water committees do not have women attending meetings or participating in decision making due to the lack of external agencies supporting them, unlike in World Bank Assisted Program.

The case study findings reveal that it is not easy to break the stereotypes of men dominating the water domain and breaking these myths requires intensive and rigorous efforts by the experienced professionals. A well designed strategy with enough opportunities and time for women to learn can make

them good decision makers to complement their roles while implementing water supply programs. This analysis and suggestions can be easily applied and adopted for mainstreaming the persons with disabilities, the elderly, and people with special needs. It takes intensive efforts and negotiations to make them part of the committees in the absence of a clear policy about their reservations; making them active decision makers requires handholding support and continuous mentoring. The organizations working specifically for persons with disabilities can play an important role in providing these services and prepare them to be part of the committees. However, it might be difficult given that there is no clear provision in the policy.

Women as financial managers and book keepers

Financial management and book keeping is one area where women are hardly involved. In most cases all financial transactions are dealt by men and women do not get any space or opportunity to interact about the transactions. Though women have vast experience in Self Help Group management, their skills are not valued enough and women are confined to passive attendance and simple signatures. However, wherever they are given such responsibility they are able to perform very well. In Gram Vikas, where women are appointed as secretaries/cashiers, the committee members expressed that they are better custodians of accounts given their experience of managing the household expenses. In Singhpura village of Punjab (World Bank project) a woman accountant meticulously manages all the registers including the cash books, measurement records, minutes register, visitors register etc. Women members in both Gandhinagar and Kutch district are able to process the information and communicate effectively to the Gramsabha,⁸ including all the financial details, keeping the principles of transparency and integrity as central. In Shinay village, a woman was recruited for the position of computer operator though she doesn't have an educational background in the subject. But her interest encouraged her to learn the subject and she managed to computerize all the records in the office and generates receipts for the water bills. In the Andhra Pradesh and Telangana case studies women are being trained as technicians for operation and maintenance of the Reverse Osmosis Plants, apart

⁸ Gramsabha is the general body meeting of the village where all the households participate to make decisions with consensus.

from managing the finances. They are efficiently managing the customer relations, the collection of water user charges, and expenditure detail, keeping all the records intact. In case of Jharkhand, *jalsahiyas*⁹ are trained as secretaries and are managing both finances and administrative work. These examples are only islands of success from individual cases but it is not same across all the case studies.

It could be understood from the cases that financial management portfolio has not been integrated or designed to promote women's participation across the cases even in those cases where they are actively participating. This component requires special strategies as men strongly consider it to be their domain of expertise. To bring more women into this forte a well structured and concentrated efforts are needed to identify the women who have an aptitude for numbers to manage the finances. They need to be specifically trained, while the rest of the committee's members can be given general orientation and awareness on financial management.

Women office bearers - trainings and capacity building by implementing agencies

In general there are no specific guidelines to train the women who become members through the 30 percent reservation and there is no focus on providing them handholding support, at least in the beginning, clearly explaining their roles and responsibilities. They get exposed to the program along with men through mobilization and awareness building that men are accustomed to but not the women. The Government/PHED led case studies show that there were no trainings given; hence the functionality of the VWSCs is jeopardized. Only in the case of Jharkhand, the *jalsahiyas* were trained extensively to enable them in record keeping and water quality testing. In order to retain the trained persons within the village, the *bhahus* (daughters in law of the village) are selected as *Jalsahiyas* so that there is lesser chance of them leaving the villages, unlike daughters who may move away after marriage. This effort of PHE department resulted in building awareness among women and they are now able to maintain the records on par with men.

WASMO has been a forerunner in enhancing the capacities of women by facilitating training programs for women empowerment; and in the year 2012-13, a

total of 133 such programs have been organized in the entire state of Gujarat. Apart from this, WASMO also takes the water committees to the best performing villages for exposure visits for cross learning and to instill motivation among the women to perform better after witnessing the success of their counterparts in other villages. In World Bank assisted programs of Karnataka, Kerala, and Punjab, the water committee members are trained; however, there are no specific trainings for women. In most of the cases the trainings are limited to raising awareness and there are no efforts to boost the morale of women for participation in water supply management.

The case studies reveal that trainings and handholding support are the most essential component and there is a need for more structured and focused training programs for women who are participating in the water supply programs. Further the training programs must cover various themes ranging from technical, administrative, financial, asset management etc. The training venues and locations have to meet gender sensitivity ideals and should be safe and protective. The same analysis is applicable when persons with disabilities and the elderly have to be made part of the training programs. Specialized training programs need to be designed and the venues should be equipped with disabled-friendly infrastructure and facilities such as railings, smooth surfaces, wheel chair tracks etc. As observed in the field most of the training venues lack such facilities especially the bathrooms, path ways, dining rooms etc., making it difficult for persons with disabilities and the elderly to skip or avoid attending the training programs.

Women in review and monitoring of the service delivery

It is very important to monitor the water service delivery everyday for ensuring continued supply of good quality and quantity of water. In majority of the cases the men are taking the responsibility for, or employing an attender, to check the water supply and monitor the O&M. However, since only one individual is responsible for these, people find it difficult to lodge a complaint or report any concern about the water supply status if the responsible person can't be found. To overcome such scenarios in the case of

⁹ *Jalsahiyas* are the daughter in laws of the village who are trained in accounts and book keeping for VWSCs

Karnataka, women came up with an innovative idea. They distributed the areas of the village among themselves according to their house location to monitor the services regularly. This process was less cumbersome and took less time. The effort for each individual was reduced as the work got distributed among all the committee members and everyone learned in the process. Every fortnight the service delivery issues were discussed and if there were any emergencies then the problems were addressed immediately, meeting the expenses from the funds of the committee. In majority of the success cases the water quality testing kits have not been used properly and there is no regular quality testing done by the department. Further, the monitoring methods should be simple and accessible for every individual to administer. The same suggestions hold good if we are dealing with persons with disabilities and those with special needs; the simpler the methods the easier it is for everyone to participate.

Sanitation is a bonus when women take the lead in VWSC

It is interesting to note that wherever women were active in the committees the sanitation component had been automatically addressed. Women could easily mobilize the households for construction of toilets and the continuous vigilance on open defecation ensured regular usage of these toilets. Further the NGOs supported women and complemented their efforts in achieving the open defecation free villages.

However, the daunting issue is that most or all of the toilets (community/individual/school/hospital) built did not support its usage by persons with disabilities and by the elderly due to the lack of technical knowledge about how simple infrastructure like handles, railings, floor with grips, etc. could make these toilets accessible for all. One of the reasons for this situation could be that the elders, persons with disabilities, and people with special needs are never part of the planning process. They are always discriminated and not given information or technical details hindering their participation

Do women staff members matter in implementing agencies?

After analyzing the success cases, it was found that having women staff members/field coordinators is one of the key criteria to mobilize women as in rural areas they could easily share and empathize with the women staff members. Even men felt that it is safe for their women to interact with women employees rather than the male staff members. Though there are benefits in having women staff, especially as engineers, in the implementing organizations but the reality of field statistics are very discouraging. Staffing patterns across RWSS/PHED reveal that in the state of Chhattisgarh there is only one woman engineer for the entire state. In many of the other states women engineers made up 0.5 to 1% of all engineers in the state, as indicated in table 3. This finding clearly supports the fact that there are restrictions for women even in education and they are being discouraged to take up technical fields, or

Table 3: Percentage representation of men and women in the water and sanitation committees

State	Total Engineers	Women Engineers	% of women engineers
Uttarakhand	337	5	1
Punjab	879	9	1
Rajasthan	2281	397	17
Manipur	287	33	11
Nagaland	211	10	5
Mizoram	85	10	12
West Bengal	784	17	2

Source: As reported by the RWSS officials during the Community Water Plus S project workshop, 2015

for that matter any higher degree, due to complex social and cultural contexts limiting their career growth.

When enquired about, some of the officers cited reasons such as, “women do not prefer field based positions”, “field trips cause disturbance to their household chores hence avoid”, “preference to stay near to the towns”, “traditions and cultural norms and discouragement from family members” etc. Further, some of the women officers expressed that they prefer to work in administrative positions, which do not require travel. Further the women officers perceived that it is not always easy to talk to the politicians, local leaders and contractors to get the works done. However they expressed that the younger generations are proactive and more women engineers are enrolling into the department as part of the new recruitment. There is an urgent need to train these young officials on the importance of mobilizing women to be part of water supply schemes.

Strategies for bringing gender balance in water supply and sanitation programs

Based on the learnings from case studies and the literature review the following suggestions need to be considered for designing effective strategies to bring gender balance that includes the people with disabilities, people with special needs, and the elderly.

Government policy is a prerequisite

Having policies in place is crucial for bringing women, differently abled, and people with special needs into mainstream development. It is these policies that direct the efforts of various governments and provide individuals the authority and direction on how to achieve the desired goal of gender balance, and the larger inclusion of every category of people.

Translating the policy into practice

Once the right policy is in place, the next step is to translate it into simplified steps that percolate from national to village level duly touching state, district and block levels. Often the policies are not translated up to the beneficiary level leaving a huge gap between policy and practice. Brief policy orientations need to be conducted at various levels to bring the desired attitudinal changes creating enabling environments. Further, repeated changes/amendments should not

be encouraged until the policy is properly ingrained at the beneficiary level. Continuous modifications delay the whole process and leave people confused regarding what and how to adopt.

The essential 3 Ms (Mobilizing, Motivating, Mentoring)

Learning from the case studies, it's very important to carefully structure and design the sequence of activities to achieve gender balance by making women and men equal partners. First M is about Mobilization, and these activities need to be planned with two aims; one is to break the barriers for women to participate in programs while the second aim is to sensitize men to support and encourage their women to open up new windows of opportunities. The second M is about Motivating women to gain self-confidence while targeting men to change their behavior to accept the change process. Finally the third M is about mentoring the women through and through with handholding support in day-to-day operations of the committees till they gain command over the subject. Similarly when we target to include people with disabilities and special needs we need to mobilize and motivate them to be a part of the programs with continuous mentoring and counseling while the other people (men and women) need to be sensitized on the need to accept them and agree on the changes to be made to the regular program if need be.

Trainings and Capacity building

Continuous and updated trainings need to be planned and implemented for both men and women using gender sensitive training platforms, venues and themes. Specific training sessions need to be organized separately for men and women on how to handle the change process respecting each other's space and choices. Similarly there has to be specialized training components to integrate persons with disabilities, elderly or people with special needs. This can be made possible by involving organizations specially working for the disabled as they are professionalized to cater to the needs of the elderly.

Women coordinators/ engineers/ facilitators as catalysts

Having women as catalysts of change in gendering process will ease women to freely express their inhibitions and will help them express their doubts easily. Similarly in order to deal with the disabled and

the elderly there is a need to involve trained professionals who understand the physical and psychological barriers of the persons with disability and guide, supervise, motivate and inspire them while also explaining how they could make a difference in participating in the development programs.

Conclusions and Policy Implications:

Reforms that can transform entrenched inequities require a drastic political overhaul, not only in the formulation of implementable policies, but equally in the structure and culture of policy and in implementing and regulatory institutions (Joshi D 2011). Gender balance and equitable opportunities for all the sections of the society can be achieved only when there are appropriate policies designed and putting place supported by intentional efforts of the implementing organizations to demonstrate and achieve results on the ground. Based on the successful cases, one can conclude that there is a need for special efforts both in staffing patterns and strategies to mainstream women, persons with disabilities and elderly by providing special platforms to express their opinions, voices, choices and preferences. Having mere reservations might earn them a membership status but do not yield expected results unless it is supported by mentoring, counseling, training and hand holding with the support from NGOs, special drive organizations and institutes designed for training and capacity building. Various innovative programs and trainings are needed to break the barriers and obstacles of passive participation of women into active performance exploring their potential and skills by closely monitoring their performance and building their capacities where required. Evidence from field reveals that women are better book keepers, water tariff collectors and custodians of the assets hence, these capacities of women have to be carefully harnessed and nurtured for future program designing. Similarly the capacities of the persons with disabilities needs to be explored and efforts should be made to bring the policies and practices to mainstream them especially in the water supply programs. Further to bridge the participation gaps highly skilled and specialized professionals need to be hired to guide, supervise, motivate and inspire these disadvantaged groups without hurting their sensitive feelings for achieving a just society.

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Engendering Change: Overcoming Difference and Disability

A profile of Nafisa Barot

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Nafisa smiles broadly, gets on to the sofa, puts her two crutches to one side, and says, "Let's start this conversation!" This is how I've known Nafisa Barot for more than twenty years, as a friend, as the director of the Gujarat-based NGO, Utthan, a champion of women's rights to water, and a global voice on gender justice and sustainable development. She passionately pushes aside all sorts of adversity, from being a Muslim facing social discrimination in Gujarat to a multitude of health challenges including being declared a paraplegic and fighting breast cancer, to persevere day after day on the issues she holds dear to her heart. For the countless times that I have travelled with Nafisa to the field, her crutches and her wheelchair carefully packed away, I have watched her being lifted by her team and carried for meetings in remote hamlets, and seen her enjoy the singing of her life partner and renowned theatre personality, Rajoo Barot. Humbled by her conviction and her courage, this is her story.....

Early years

Born in 1952 to a lower middle class Bohri Muslim family, in the small town of Mahu in Madhya Pradesh, Central India, Nafisa was a middle child, sandwiched between two brothers. As her father was a government-appointed radio engineer, she grew up in small towns across Gujarat, accompanying him to villages where he was tasked with fixing local community radios, one of the principle sources of

communication and information dissemination in the region.

"The first primary school I remember going to was the Madrassa Taheria in Jamnagar," Nafisa recounts, "it was a co-ed school, nothing like the idea of madrassas we have these days. I learned to swim and dance, and I was very good in gymnastics. I lived the life of a princess, encouraged by my mother to be bold and fearless." As a Bohri Muslim from a family with royal lineage Nafisa's mother used to wear the rida (like the hijab), drove the family's Dodge car and often travelled with her husband to local villages, despite warnings from community members that this was not appropriate behaviour for women.

By the early 1960s the family came to Ahmedabad and Nafisa was sent to a Hindu majority school. She was not comfortable there and had few friends, not only because of her religion, but also because she was perceived to have come from a small town and did not speak the city lingo.

"My father was not happy in the government information department either. He was being harassed by his colleagues, and one day he overheard them say that if they had a gun they would shoot him. So my father began to live in fear, his health suffered, and my mother started to stitch and sell clothes for additional income. I used to help with the housework whenever I could."

But her mother also wanted Nafisa to have quality education, like her older brother who had gone to study in Bombay. She approached Mt. Carmel, a convent school, to get Nafisa admitted. As there was no place in any of the Gujarati medium classes, Mother Bernard, the principal and later, a close mentor, insisted that Nafisa join the English medium class. Her mother was a little wary as Nafisa had always stood first and had never seen failure. While Nafisa continued to shine, it was during the communal riots of 1969 that she again realized what it meant to be a Muslim. Her best friend at school

came from a wealthy family and would have her car pick up and drop off Nafisa every day to and from school, a time together the young girls enjoyed very much. But after the riots Nafisa's best friend was forbidden to interact with her, and to this day, despite having lived in the same city, Ahmedabad, they have not met.

"I wanted to be a doctor when I finished, but we could not afford it so my mother forced me to study nutrition at MSU, Baroda (Maharaja Sayajirao University). I developed kidney problems while I was at university, and I had to take a break. And, then because of my financial situation, I gave private tuitions." She took seven years to complete her degree, and in the last semester, looking for a room to rent, Nafisa again realised what it meant to be a Muslim. She changed rooms eight times because no one wanted a Muslim tenant. It was during this time that Nafisa and Rajoo Barot met, both members of the university theatre group, and he became her life partner complementing her development work with his folk songs on water, plays on issues of justice and brilliant photography.

Facilitating Utthan

On her return to Ahmedabad in 1979, Nafisa joined the Ahmedabad Study Action Group (ASAG) as a nutritionist – recalling her first visit to villages in Dholka block (taluka) to talk to women about the importance of dietary diversity and eating green vegetables, she said, "The women looked at me, with my university degree, and just laughed. 'We have no water for drinking, or cooking vegetables, our children are not going to school, what on earth are we going to do with your notions of good nutrition', they asked".

Deciding that she needed practical knowledge, Nafisa joined Penelope Lane, Padma Chougale, and Indu Mishra, colleagues at Ahmedabad Study Action Group (ASAG), who were completing a participatory planning exercise in another block, Dhandhuka taluka, in the coastal semi-arid Bhal region. Nafisa was invited to use her good communication skills to facilitate dialogues with the government and the four women gradually built rapport and trust amongst themselves. Influenced by Ravi Matthai's Jawaja project on community centred processes of change and self-reliance in Rajasthan, the women decided that they needed to take forward the implementation of the plan they had worked on. They left ASAG in

1981 to form Utthan, which in Hindi means upliftment or rising.

The Bhal region, in coastal Gujarat, with its windy, bleak landscape, dotted with large areas of salt-pans, provided Nafisa with her real learning. This was a land of mirages, with not a drop to drink, describes Nafisa, recounting how they used to walk for 25 km a day with women, learning from them how they survived in such harsh conditions. In one of her first experiences of the brutality of water scarcity, Nafisa remembers seeing a little girl, extremely dehydrated, in the village of Jhanki - "I wanted to give her some OHT salts and asked the mother for a glass of water. She brought me half a glass of water which was turbid. I asked for more water, and again she brought me another small glass, and again....till women around me explained that this was from her drinking water quota for tomorrow. The girl never survived."

Men looked at all the unproductive land and told the team that they needed employment, while women talked about the (drinking) water problem as the priority issue, which was leading to daily conflicts and migration. Besides stark gender inequality and violence, there was also the exploitative money-lending system run by the powerful upper castes, the Darbars, which was further crippling families. So, after several meetings Utthan identified local leaders and facilitated the formation of Mahiti (which means information), as an engine of change. Together, and through interaction with local communities, Utthan-Mahiti sought alternatives for making saline land productive, provided women with income generating opportunities through self-help groups, and looked for sustainable solutions for the water crisis. All this was accomplished through a process of empowerment, challenging patriarchy, feudalism and economic exploitation. Building on traditional knowledge and community management systems, Utthan-Mahiti facilitated the construction of lined village ponds in 20 'no-source' villages, to harvest and store water, primarily for drinking purposes. These ponds were lined with polyethylene sheets, which were obtained for free from Indo-Petrochemicals Limited. The plastic prevented the seepage of saline water, and the water collected was then passed through a slow sand filter before being distributed.

Apart from lined ponds, reverse osmosis and roof water harvesting, Utthan highlighted a number of

low-cost decentralised water solutions as an alternative to centralised planning which was largely focused on dams and the tapping of groundwater for delivery through long pipelines prone to leakage or forcibly broken. Not only did they have to mediate between engineers and local communities about location and design of various alternatives and their contributions, there were also differences between opinions of men and women within the community, sometimes from within the same household. By the mid-90s, as Mahiti became more independent with the committed leadership of a Dalit woman, a trained team, and the ability to raise its own funds, Utthan moved on to cover other parts of Gujarat – the coastal districts of Bhavnagar and Amreli, and the tribal areas of Dahod and Panchamahals in eastern Gujarat, addressing issues of natural resources management, access to safe water, sanitation, good governance and gender justice. The practice of purdah (seclusion) made it difficult for Utthan's male staff (engineers) to talk to women, so a conscious effort was made to engage more women and to provide them with a gender sensitive and safe work environment, including transport to the field.

The communal violence of 2002 marked a watershed in Utthan's work, encouraging it to focus more critically on questions of diversity within the organisation and on inclusion of minorities in its livelihood and peace-building programmes. Networks were formed with other civil society organisations in Gujarat (e.g. Citizens for Justice) and globally to address issues of conflict at all levels, from water and resource rights (women and land) to democratic values and human rights.

Accidental changes

In 1998, Nafisa faced a challenge that was going to transform her life forever. While returning from the field late one night, her car was hit by a truck and the head on collision left her with irreversible damage to her spinal cord, according to doctors in Ahmedabad and later Bombay, where she went for treatment.

“I was told that I will never be able to walk again, and that I should go to Birmingham for rehabilitation. Though friends helped, we had no money in our bank account, and then I declared that my rehab will happen where my heart is. So I tried parallel/ayurvedic medicine in Kottaakal, Kerala. At that time, my left arm was in a sling as my collarbone was broken, and I could not move either of my hands.

From 1999, a year after my accident, I started to go to Kerala for a month each year and gradually with all the various massages, etc. I regained the use of my hands. Although I was still on a wheelchair, I never stopped working or travelling. I used to travel to the field and the team would carry me to see something or the other. But, it was when I went for meetings, in India or overseas, often on my own, that I realised what it meant to be 'disabled' or 'a paraplegic' as my doctors described me. Few buildings have any access or ramps, toilets are not constructed for people with disabilities – though this is changing slowly now in public places like airports.”

At the Water Supply and Sanitation Collaborative Council's regional meeting in Bangkok in 2000, where the WASH needs of people with disability was first raised, I realised how our own work on social inclusion and gender had not been inclusive. Later, on a flight to The Hague for the 2nd World Water Forum (WWF), I was a victim myself of insensitive flight crew who did not allow me to keep my portable wheelchair on the flight with me. My legs were still not strong enough for walking on crutches so Rajoo, who was coming to perform at the WWF, had to carry me each time to the toilet. At The Hague, while there was a lot of talk on finding local solutions to water problems, there was little focus on people with disability.”

Over the past two decades Nafisa has learned to live with her physical challenges, raising awareness through a range of networks and advocacy platforms such as the Global Sanitation Fund and the South Asia Conference on Sanitation (SACOSAN) on the WASH priorities of people with disabilities, particularly vulnerable women, already marginalised by mainstream water discourses. She travelled to Kutch to advise on the design of homes from the perspective of women who had become paraplegic because of the massive earthquake of 2001.

With Wateraid India, she and fellow colleagues worked on a strategy for addressing the rights of the people with disabilities to WASH. Whether its taps inside toilets or the appropriate design of toilets, we need to look at all our WASH related infrastructure with this awareness of and sensitivity towards those who are physically challenged. But it's not enough to just make training manuals, or put a handle on a toilet; we need to sensitize our decision-makers.

“There is so little recognition, or even funds, it's as if

our disabilities are invisible. When you look at other people suffering and surviving – I draw my inspiration from that; from my early years in the Bhal region, living on rotla and lassuni sabzi (flat bread and a dish made from garlic and red chillies), from the strength of my mother and how she stood up with dignity as a Muslim woman. Empowerment is a process of facilitating energy of other women, and in the process it empowers you too...and there are women stronger than me.”

In 2010, Nafisa was diagnosed with breast cancer and within a year she had had a double mastectomy. Last year (June 2016) she stepped down as the executive director of Utthan, but still continues to mentor the new leadership and is a part of the board (executive trustee)¹. “I want to travel, to visit new places and cultures without the tension of making presentations, to explore my creative talents in art and theatre, and to never stop learning,” she says in closing.

¹ Nafisa Barot is also an executive member of the Governing Board of SaciWATERS

Gender Issues in Water and Sanitation Programmes: Lessons from India

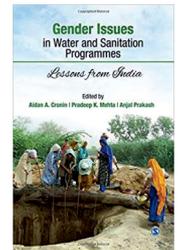
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The shortcomings of water and sanitation programmes in India are well-known: despite national efforts to provide access to safe drinking water and sanitation facilities, the coverage of rural households with latrines is as low as 31% (Government of India, 2012). This leads to an estimated national economic loss of 6.4% of India's GDP in 2006 (2.44 trillion INR, according to the World Bank, 2010). What have been the gaps between policy and programme intentions on one hand, and the implementation practices and actual benefits for local communities on the other? The authors of this book provide evidence on how a gender-sensitive approach to Water, Sanitation and Hygiene (WASH) can improve equal access to water and sanitation facilities. This gender lens entails a better understanding of practical approaches to increase meaningful participation of women in planning, designing and implementing WASH interventions. Acknowledging a lack of sex-disaggregated data in the WASH sector, as well as limited gender analyses on women and men's differential needs and roles in WASH, this edited volume is an important milestone in documenting failures and success stories of gender outcomes in water and sanitation programmes. 16 chapters provide evidence and learnings for WASH practitioners, researchers, policy makers and students.

In the book, analytical frameworks, policies, intervention programmes and education, and capacity building initiatives focusing on water and sanitation are reviewed from a gendered perspective. Case studies present barriers and opportunities for a gender-sensitive programme design in different rural contexts of India, covering states such as Maharashtra, Andhra Pradesh, Uttar Pradesh, Madhya Pradesh, Jharkhand and Haryana. The book's title of "Gender Issues" might evoke negative connotations, but the case studies focus on solutions and recommendations useful to policy makers and

practitioners. Issues addressed tackle dominant technologically driven, gender-blind and sectorial WASH interventions detached from ground realities. Bottlenecks such as the important role of water professionals and practitioners, the need for more women in these positions, and water education and training approaches are examined on the basis of gender-sensitivity. Contributors advocate and provide evidence for participatory principles and community-led, capacity building intervention approaches to involve women in the decision-making at local, district and state level.

The book is divided into four sections. Section 1 provides conceptual underpinnings, section 2 discusses water case studies, section 3 talks about sanitation case studies, and section 4 gives a conclusion. In section 1, Lala et al. review seven gender analysis frameworks on their value to the Indian WASH sector by examining how they address participation, access to services, control over water, land and household decisions, benefits to women, governance and operation, maintenance, and management. By developing a hybrid approach from selected concepts of these established frameworks, women's participation in intervention phases of planning, capacity building, implementation and monitoring, and evaluation can be assessed. Kabir et al. develop a household-level Multiple Use Water Systems (MUWS) vulnerability index covering gender-relevant aspects such as an indicator to measure the distance to fetch water and water quality. The index was applied in three villages in Maharashtra to assess both domestic and productive water needs of vulnerable households based on family occupation, social profile, institutional linkages, water resource endowment, climate and drought susceptibility, and financial stability. Prakash and Goodrich present evidence of how few women professionals are in the water sector. They emphasize the effect of stereotyping and resentment

of women in leadership roles, as public speaking and greater mobility is not in line with expected gendered behavior. Furthermore, they identify barriers such as absent sanitation facilities for women and the lack of financial and structural support such as study and research fellowships for women, childcare support and maternity leave. The authors demonstrate a success story of gender-sensitive Integrated Water Resource Management (IWRM) education and research: through the Crossing Boundary Project Initiative, techno-centric water resource engineering curricula were reshaped through an interdisciplinary approach in which new teaching modules on gender and water, field research methodology, and IWRM were introduced.

The chapter by Sinha identifies limited effectiveness of capacity building programmes, curricula and training material. She critically reviews capacity building initiatives of the Government of India, NGOs and international agencies and presents evidence for gender mainstreaming failures in WASH, e.g. in the National Rural Drinking Water Programme (NRDWP), the India's Total Sanitation Campaign (1999-2011), and its successor, Nirmal Bharat Abhiyan (NBA). Representation of women as low as 6.9% in the Swajaldhara and Total Sanitation Campaign in 2005 demonstrates the need for gender balance of water bureaucracy staff. She advises capacity building needs assessments, resource persons, and monitoring and evaluation of trainings. She recommends to review training materials on their inclusion of separate sections on water- and sanitation-related issues for women, as well as revisiting whether gender stereotyping and patriarchal norms are not reinforced.

In the second section on water case studies, the case study on integrating gender in watershed management in Andhra Pradesh by Wani et al. demonstrates that needs assessments, participatory methods, and policy support have to go hand-in-hand to promote collective action and strong female leadership. The chapter by Bastola provides an in-depth gender analysis by critically examining the effectiveness of the Jalswarajya Project in Maharashtra. He identifies how project interventions bypassed and reproduced the patriarchal norms and local power relations based on class and caste discrimination. The author convincingly criticizes the over-emphasis on women's representation through "non-negotiable principles", e.g. 50%

participation in Village Water and Sanitation Committees (VWSC), which is often channeled through influential husbands without women being aware of their membership. In practice, the 50% women's representation requirement was merged with the 30% marginalized caste representation, leading to the caste category being represented only by women. Women could voice practical, reproductive water needs, as these do not challenge patriarchal power structures to the extent that strategic needs and gaining more influence in decision-making would.

With the example of Samyukta Mahila Samiti (SMS), a component within the Watershed Organisation Trust (WOTR) in Maharashtra, Kale and Zade demonstrate how an institutional space for women with financial autonomy, capacity building opportunities and well-defined decision-making processes strengthen women's bargaining position in watershed communities, as compared to nominal participation in Village Development Committees (VDCs) and self-help groups (SHGs). Additionally, at the institutional level, Prasad et al. identified that a strong functional relation between Self-Help Groups (SHGs) and VWSCs increased women's participation in groundwater management.

From Mehta and Saxena we learn how women and men's knowledge, choice and use of water sources differ in the water-scarce region of Mewat in Haryana. Because men are primarily involved in the decision making on the construction, maintenance and use of water resources, they have the advantage of more knowledge, e.g. of the number of water tanks and ponds in the village. This affects the source type and effort women spend in procuring water. Preferences of water sources also differ: men prioritize sources with greater water quantity and closer distance; women prioritize water quality and accept longer walks for better quality. In some cases, women reported physical abuse by their husbands, if they walked to a source further away. Men's decisions on water sources of lower quality, however, lead to higher incidences of water-borne diseases. The tendency of women suffering from higher rates of water-borne disease is evidenced by the study of Chakma et al. in Seoni district of Madhya Pradesh, which demonstrates greater prevalence of fluorosis for women. The authors suggest an integrated fluoride mitigation approach linked to safe drinking water and nutritional supplement.

The third section of the book covers case studies in the field of sanitation. Learning from the criticism of the Total Sanitation Campaign, Medeazza et al. present a new approach to address open-defecation. The Community-Led Total Sanitation (CLTS) focuses on collective behavior change, rather than solely constructing toilets. The study emphasizes the involvement of Accredited Social Health Activists (ASHAs) and Anganwadi workers, the importance of demand generation for toilets, the monitoring of toilets used, and not the number of toilets constructed, and a post-incentive for Open-Defecation-Free (ODF) communities.

Similarly addressing the gaps of the NBA (former Total Sanitation Campaign), Saxena et al. present an innovative and comprehensive WASH awareness raising approach based on behavioral change communication. As previous trainings were often off-site in a classroom, not adapted to the participants' learning capacities, knowledge and work schedule, the "Pan in the Van" approach engages a team of women travelling by van to villages to mobilize the communities' interests in WASH issues through visual material and interactive games. The activities are locally conducted at convenient times, to wage laborers, for example, with women-centric topics, e.g. on household chores, and an approach that also targets school children and the physically challenged. Important for success, as mentioned in many studies, are follow-up activities.

Similar principles are mentioned in the study by Mehrotra and Singh, who highlight in a case study of an ASHA worker in Uttar Pradesh how demonstration of a latrine and awareness raising on the hygiene, health, convenience, social stress and safety impacts of open defecation can lead to a cascading effect. The authors stress the overlaps between sanitation and health, and the need to institutionalize sanitation trainings and to make material such as pictorial booklets available in local languages. Successful training and community engagement approaches are also presented in the chapter by Mani et al. These involve women in technical data collection by offering trainings to couples, husband and wife, and include gender trainings for men, and ensure that data is made available to the users in real-time.

Finally, the editors of the volume conclude by stressing the need for documenting evidence on the

quality, scalability and sustainability of programme interventions addressing the gender-WASH-nexus.

This edited volume addresses in convincing detail the contradiction of women being responsible for WASH without being involved in its decision-making: on the one hand, studies demonstrate the heavy burden on women for fetching water, often at the expense of health, education, income-generating activities and social, cultural and political involvement. On the other hand, studies highlight key opportunities to involve women as change agents through participatory processes and capacity building on WASH. Particularly the strong focus on education, communication and bottom-up planning and monitoring of intervention approaches should truly convince the last skeptic to place gender at the core of the WASH agenda.

Several contributions focusing on women's participation reflect the difficulty of applying gender theory in practice. Despite stressing the importance of gender intersecting with class, caste and other social discriminations, and introducing Moser's definition of gender as a social construct and a socially relational concept (1993) in the introduction, some authors run the risk of falling back to generalized statements on "women". Specifically, there are instances of grouping women without disaggregating according to other social divides such as age, caste, class, disabilities etc. Similarly, limiting "gender issues" on women may enforce their depictions as victims, and, if overcoming their situation, as heroes. This entails essential notions ascribing gender traits and roles without engaging with wider patriarchal structures and complex power relations, which need to be addressed for social change. A relational analysis, as done in the chapter by Bastola, helps focus on gender norms and power relations shaped by social discrimination. This is important, as water and sanitation interventions are embedded within these, and need to be linked for effective WASH interventions. The criticism of water education and research being a masculine field with mostly male water professionals, is also reflected in the contributors of the book: of 37 authors, only 8 are female, and only 6 of 16 chapters have a female author. This, however, underlines the message of the book: promoting women's active involvement in education, research, intervention planning, and monitoring and evaluation. In conclusion, "Gender

Issues in Water and Sanitation Programmes” presents a rich collection of lessons from India in the form of facts, case studies and examples of how gender in WASH interventions at community level, and in education and research can have both intended and unintended consequences.

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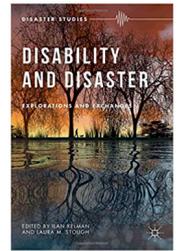
Disability and Disaster: What is the link?

Ilan Kelman and Laura M. Stough. Springer. 2015

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Disasters are constantly in the news. This broad label covers a wide range of events. Some disasters are caused by people, like the ongoing war in Syria, the Boko Haram insurgency or the crisis in Yemen. Others come about through natural phenomena, such as the recent earthquakes in Italy and New Zealand, or the chaos caused by Hurricane Matthew. Often, disasters have their roots in both human and natural causes. Disasters may be short-lived or persist over decades; they can be localized or widespread. Two things are clear, disasters will become increasingly common in the face of climate change and global population growth, and disasters will inevitably include people with disabilities.

The WHO estimates that there are one billion people with disabilities in the world (WHO, 2011). This section of population is, on average, older, more likely to be poor, and face a range of exclusions, such as from jobs, education, and health care (WHO, 2011). This means that people with disabilities will be particularly vulnerable in disaster situations, with a greater chance of being injured during a disaster and facing more difficulty in accessing disaster relief programmes. It is therefore important to explore the challenges facing people with disabilities in disasters, in order to ensure that they are protected at such crucial times, and are fully included in relief efforts. This is the central theme of "Disability and Disaster; Explorations and Exchanges", edited by Ilan Kelman and Laura M. Stough. (Kelman and Stough, 2015)

The first section of the book describes frameworks for considering the vulnerabilities that people with disabilities face in disasters and the ways in which these can be mitigated. The chapter by Alexander discusses what is meant by disability, why people with disabilities may be vulnerable in disasters, and what legal safeguards are in place to protect them during disasters. The chapter by Phillips provides a useful framework for emergency management, and

how it can be made more inclusive for people with disabilities, providing rich concrete suggestions, though mostly focussed on USA. Alexander and Phillips both emphasise the importance of thinking about disability before the disaster, rather than in the midst of a crisis. Their job is hindered, however, by a lack of data required in this area to show the level of vulnerability and exclusion of people with disabilities in disasters, as well as a lack of evidence on what works to mitigate their susceptibility.

The book shifts gear in the second part, which is a string of strong narratives of people with disabilities about disasters. These very human stories provide a range of examples of the challenges they face in times of disasters. The narratives are provoking and feature the voices of strong people trying to live the lives they wanted - rather than passively accepting what is on offer. The different voices tell stories of an array of challenges and experiences. These stories include a woman's experience of escaping a forest fire in Texas, narratives about the impacts of Hurricane Katrina in New Orleans, and on to the tale of a young Vietnamese boy in the midst of the war, which ultimately ends well... in Norway of all places. The perspectives shared are both of people who had developed their disability as a result of disaster, as well as of people with disabilities who had lived through disasters.

The vignettes are not only of people who have experienced disasters, but also of people who have shared their fear of potential disasters and their views on how they believed they would cope in such dire situations. Others reflected on the day-to-day realities of living with disabilities, and the great need to be organised and prepared, without which they would be a lot more vulnerable in face of disasters, even apparently minor ones. As one author notes "I do not have to wait for the killing disasters to strike me. Being in public spaces is already disastrous." These narratives seemed less relevant to the general

theme, as they focussed more on general life rather than on disasters, but still offered some important insights.

There were common messages across the narratives. Vulnerability of people with disabilities in disasters arises from both their physical and social susceptibility. Physical impairments can make evacuation more difficult during emergencies, whether from a fire in a Brazil nightclub or from rebels in Colombia; a lack of money can further their vulnerability by making it difficult for them to cope with disasters. The account of the boy in Vietnam described his vulnerability not only as a result of his physical impairments, but also because of the fact that he had been abandoned by his family. There are also important lessons regarding the means to include people with disabilities in disaster response. The changes needed to make disaster response more inclusive are often small, and start with creating awareness of disability in the disaster sector. Preparation is clearly the key. The stories repeatedly confirm the importance of thinking about disability before the disaster rather than in the midst of it and demonstrate that drills and other provisions are vital. The narratives conflicted, however, on whether this preparation was the responsibility of the person with disabilities or of the service providers. Designs of inclusive emergency plans should ensure that appropriate accommodations are made so that people with disabilities can be included in emergency response, as is their right, rather than making them dependent or infantilising them. The narratives also make it clear that people with disabilities need to be included within the planning process in order to make it inclusive. An important subsequent step is to ensure that the rebuilding process is taken as an opportunity to make societies more accessible, though this is not considered in detail in the book.

There were some gaps in the narratives. Many of the examples were from the USA, and the voices of people with mental health conditions or intellectual impairment were not prominent. What was also brought out is that there are key gaps in the evidence, regarding both the vulnerability of people with disabilities in disasters, as well as what is to be done about it. Most of the statistics cited were from USA and Japan, with little quantitative data available from the poorer parts of the world. The book provides a clear call to action to focus on disability and disaster.

More research is now needed to fill the evidence gaps and move the theory into positive action.

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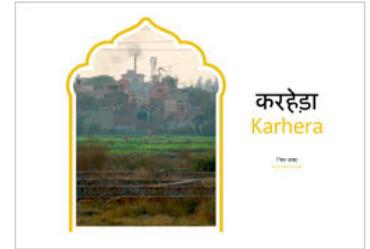
Karhera – A Photo Book

Ramila Bisht, Linda Waldman, Nathan Oxley and Adi Bhonagiri. 2016

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Sometimes, it is just not enough to record the changes that occur in a project area in terms of straightforward numbers and data projections. These dynamics are better captured through stories and individual perceptions of the people directly affected by the changes. A photo book on 'Karhera' attempts to do just that. This book is an outcome of a research project in Karhera, a peri-urban village in Ghaziabad, Uttar Pradesh, a part of the National Capital Region.

Peri-urban areas across the globe are home to an endless orgy of activities that simply gobble up open spaces, fields and breathing areas in their wake. Areas that act as a buffer zone and add to the sprawling city's resilience, no longer exist. Karhera, an agricultural village adjoining Delhi, the country's capital, too faces these issues. The agricultural activities in Karhera have been majorly affected. The pictures in this section bring forth how cereal crops have been slowly replaced by the more lucrative spinach vegetable. Not only is there lesser land left for irrigation, but the traditional water sources have become extremely polluted. Comparison maps bring out the reduced area under agricultural fields clearly, and pictures of water tankers on the roads speak volumes of the degraded condition of the Hindon river.

Changing landscapes feature the property boom in this rural agricultural village - high rise building, malls, and an upcoming metro line. Today the village is a heady mix of the old and the new, where the buffalo cart shares road space with a fancy car on the newly tarred roads. An interesting picture is of the recently created City Forest, which was earlier a communal area, but today, stands fenced and guarded.

What has this change brought for the people of Karhera? Snippets of their views and changed lifestyles are presented in the photo book. It brings forth the problems and the inherent aches of a community that has been thrust into an urbanisation

mode, and how for others it translates to better opportunities.

To understand how a peri-urban area is affected by a frenzy of unplanned growth, this photo book provides a quick, easy to comprehend, visual aspect. And these pictures could be true for other such peri-urban spaces across the country too.

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