

Seminar: Understanding the gender dimension of water and waste



ABSTRACT VOLUME

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Water and waste: reduce and reuse

Seminar: Understanding the gender dimension of water and waste

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Are new water interventions gender neutral? A study of Pani-Panchayat in Odisha, India



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Highlights

Households tend to use women for 'labour smoothing' and 'consumption smoothing in agriculture and rural areas. Inadequate availability and access to water and poor water management affect gender relations and halt gender neutrality. New water interventions should make wider access to and use of water by women with other critical inputs like land, credit, markets etc. which Pani-Panchayat in India seems fails.

Introduction and objectives

Water has been increasingly linked with gender and progressive feminisation of agriculture and food production. Though access to and use of water remain key development policy issues but much is not known about impact of new water interventions like Pani-Panchayat initiated in India to counter drought and improve community level access, use and management of water. Our objective is to discuss role of Pani-Panchayat on gender and water use with focus on

- impact of pani-panchayat on water governance and management with focus on gender,
- changes in household resource uses, risk coping and gender relations
- how to improve efficiency and gender neutrality in water

Methodology approach

A three-stage approach was followed to assess household and community participation in Pani-Pnachayat in Odisha. To understand the new water intervention better our focus is on its impact on gender at household level to argue whether it improves access to and use of water across regions and social groups. We also try to analyse the changes in gender relations in the context of local adaptations and practices in water arrangement and use. Selection of study areas for survey was made on the basis of area based resources approach and on the scale of regional development.

Analysis and results

Intervention of Pani-Panchayat in India seems ignores changing farming, resource uses, gender relations, socioeconomic set up and it fails to improve access to and use of water by women who are disproportionately affected by water distribution. Dominance by few upper castes, rich large land owners and male farmers followed by lack of group dynamics, exclusion of local institutions, ill-defined property rights, constraints in input supply such as credit and extension services, not only discourage participation of women in water management and use but push them harder into distress during water scarcity period.

Our results show gender inequity in water access and use further lead to unequal intra-household risk sharing, poor water management and loss of production and earning opportunity. It also lead to reduction in food production and returns of other land based activities where involvement of women found rising in recent years. It has serious implication on intra-household gender relations and overall gender equity which remains after new intervention like Pani-Panchayat. Water induced distress like loss of crop production and farm income, labour migration, multiple informal borrowing evident in study areas found associated with the access, use and management of water by women that pose tough challenges for rural livelihood and gender equity.

Conclusions and recommendation

Households tend to use women members for 'labour smoothing' and 'consumption smoothing', inadequate availability and access to water and other resources affect intra-household gender relations and halt gender neutrality. Pani-Panchayats try to make wider access and better use of water fail to arrest gender bias in the absence of access to land, credit, other farm inputs and markets by women. The paper suggests that strengthening existing local institutions and reforming the role and functioning of women in new water institutions will be crucial for better water access and use along with existing public water and irrigation system to play the role of facilitator.

BRAC's gender-inclusive approaches for successful implementation of WASH interventions



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Highlights

Village WASH Committees were integral to enhancing gender parity.

BRAC conducted monitoring and research over an 8-year period to assess gender equitable outcomes.

Results show equitable access to WASH for women and men; hygiene behaviour change including menstrual hygiene management; and social transformation, e.g. men and women taking decisions together.

Introduction and objectives

A gender-inclusive approach to WASH implementation is based on the understanding that for WASH interventions to succeed, everyone in a community must play a positive role. Prevalence of traditional gender roles leads to women being disproportionately affected by lack of access to water supply and sanitation services. Women play a critical role in household decisions on water, sanitation and hygiene but often lose out on wider decision-making, especially relating to finances, which are most often controlled by men. This approach is necessary to achieve gender-transformative changes, and thus improve the power balance in WASH-related decision-making between men and women.

Methodology approach

BRAC seeks to transform gender roles and empower women by involving them in the decision-making processes. The WASH programme has done this to a great extent through the introduction of Village WASH Committees (six women and five men from various socioeconomic groups in the community), which involve women to meaningfully contribute to decision-making. The programme's behaviour change communication has been tailored according to the needs of men, women, adolescent boys, adolescent girls and children, with messages to influence gender-transformative changes in the community. Schools are supported to build gender-segregated WASH facilities, including menstrual hygiene management facilities for girls.

Analysis and results

According to the programme's outcome monitoring data, 99% Village WASH Committees (VWCs) in areas which received 8 years of intervention and 100% VWCs in areas which received 3 years of intervention were existing and functional. All female members attended and participated in the meetings in 100% of these VWCs in the 8-year intervention areas, and in 94% VWCs in 3-year intervention areas.

In the 8-year intervention areas, 78% of the households have access to hygienic latrines; and in 3-year intervention areas, 57% have access to hygienic latrines. In 97% of these households in the 8-year intervention areas, men, women, adolescent boys, adolescent girls and children (above 6 years) use the latrine regularly. For 3-year intervention areas this figure stands at 98%.

Among the BRAC WASH-supported schools, 91% of schools in the 8-year intervention areas, and 100% in the 3-year intervention areas, had separate latrines for girls that are used only by girls. Menstrual hygiene management facilities were available at 71% and 96% of these schools, respectively. In the first five years of the programme's interventions, the school absenteeism rate of girls during menstruation dropped from 44% to 33%.

Conclusions and recommendation

Through this approach, BRAC has contributed to increasing access to WASH in a gender-equitable manner. The VWCs, which were formed in every village throughout the programme areas, have been a great example of improving gender relations and empowering women. When the programme began in 2006, it was highly uncommon for men and women in a rural setting to be meeting and taking decisions together, or to be openly discussing issues like menstrual hygiene. Considering this fact, it is clear that great progress has been made over the years; not just for the WASH sector, but in society as a whole.

Enhancing women capabilities in wastewater management: beginning from schools



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Highlights

Study conducted for 5 years in 4 schools regarding wastewater management revealed that incidence of diseases reduced by 22.2% in boys and 65.0% in girls, indicating a high imbibing nature of the latter. The girl students who had undergone training became good decision makers, household keepers and managers.

Introduction and objectives

Biologically, men and women have different health needs, but lifestyles and socially ascribed roles arising from prevailing social and cultural patterns also play a part. Social factors, such as the degree to which women are excluded from schooling, or from participation in public life, affect their knowledge about health problems and how to prevent. Environmental conditions arising from inadequate or non-existing wastewater management pose significant threats to human health and economic activity. A study was conducted to enhance the capability of girl students to wastewater management and water, sanitation and hygiene (WASH) to make them responsible in their settled life.

Methodology approach

A study was conducted for five years in four schools, imparting education up to matriculation. The population size was 100 students (50 each boys and girls) from each school, out of which 25 each were placed in two categories. Category A, imparting training regarding wastewater management and water sanitation and hygiene (WASH) and category B, without any training. Lectures were arranged and practical conducted to make these students aware of wastewater management to overcome scarcity situation and WASH issues. The parameters studied were; per cent students passing matriculation, annual incidence of diarrhea, cholera, malaria, typhoid, headache and attitude.

Analysis and results

Study conducted revealed that in category A, among boys; there was a decrease of 25%, 0%, 33%, 0% and 20% in the incidence of diarrhea, typhoid, malaria, cholera and headache, respectively, after five years of undergoing training. The corresponding decrease was 66%, 0%, 50%, 66% and 60%, respectively, in case of girls. The incidence of typhoid remain unchanged, both in boys and girls. The overall incidence of diseases reduced by 22.2% in boys and 65.0% in girls, indicating a high imbibing nature of the latter. The attitude of the boys which was moderately positive in the beginning became positive after 5 years, while in girls it changed from positive to highly positive. There was no significant change in the category B students, both in boys and girls, however, the disease incidence decreased slightly and attitude improved in this category. This could be attributed to contacts between category A and B students after school hours as well as change with the time. The study showed that interventions made enhanced the women capabilities in wastewater management and reuse as well as encouraged them to have better career in management positions. The girl students who had undergone training became good decision makers.

Conclusions and recommendation

The subordination of women by men results in a distinction between roles of men and women and their separate assignment to domestic and public spheres. In developing countries, most studies show preferential food allocation to males over females. Due to menstruation, girls cannot clean themselves due to scarcity of water. Girls become prone to diseases. Under such conditions, the training on WASH becomes absolutely necessary. In India, a majority of the school drop-out children are girls from marginalized families. There is strong need to invest in girls' sanitation and hygiene infrastructure for learning, wastewater management and toilets in schools.

From practical to strategic change: enabling gender transformation in Vietnam



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Highlights

- Empirical research case study from Central Vietnam demonstrating how water, sanitation and hygiene (WASH) programs can influence gender and power relations between men and women.
- Provides examples of addressing and supporting women's strategic interests and capabilities (in addition to practical needs) through inclusive WASH programming and participatory monitoring.

Introduction and objectives

Contributing to improved gender equality is an important aspiration for WASH programming and monitoring. A twelve-month empirical study in 2016 was undertaken by ISF-UTS, Plan International Australia, Plan Vietnam and Vietnam National University through innovation funding from the Australian Government. The research was designed to determine the extent to which Plan International's innovative Gender and WASH Monitoring Tool (GWMT) contributed to achievement of strategic gender outcomes. The research revealed the strategic (as opposed to practical) gender equality outcomes experienced by women and men in Central Vietnam and explored contribution of the GWMT and Plan's WASH programming to those outcomes.

Methodology approach

The research utilised a quasi-experimental design and mixed method approach to compare experiences of different groups of people with varying degrees of exposure to the GWMT. The GWMT comprises a participatory, dialogic tool to assist participants assess changes in gender dynamics. A peer-reviewed framework on gender outcomes resulting from WASH initiatives underpinned the research and analysis. Semi-structured interviews with 48 people and participatory pocket voting with 139 people in 7 villages in Central Vietnam were used to uncover strategic gender changes as experienced by women and men across stratifying variables of age, ethnicity, and including people living with disabilities.

Analysis and results

Significant strategic gender changes were revealed. The majority (81%) of participants had experienced strategic gender outcomes with minor differences between men and of women and between age and ethnic groups. Experiences of change at household level were more common than those at community level. Changes could be traced to both WASH programming as well as wider societal change dynamics. Of all reported changes 31% could be attributed to WASH programs, although not necessarily specifically to the GWMT. Key reasons for change included:

- women accessing information and knowledge, either through formal education or community meetings (confidence of women was enhanced with greater opportunities to participate in meetings and community activities)
- authority figures providing an initial trigger to encourage women to participate more often and more actively;
- peer learning and example setting (raising gender awareness of key individuals through meetings and activities had a positive flow-on effect)

- use of public information to contribute to awareness-raising about gender equality.

The results also demonstrated that norms set in a local setting or in broader media and society influenced people's values and attitudes, even in the face of traditional gender norms which could provide considerable barriers to change.

Conclusions and recommendation

This research in the Vietnamese context revealed that WASH programs can positively influence power relations between women and men, and can be intentionally designed to do so. Wider societal dynamics need to be carefully taken account of by WASH practitioners and have potential to reinforce or to undermine improvements in gender equality. Enabling women's active participation, facilitating conducive roles for authority figures and conducting activities that can influence gender norms were found to be important. Participatory monitoring tools designed to monitor strategic gender changes, such as Plan International's GWMT, are valuable in identifying and reinforcing gender equality changes.

Indigenous Kichwa women lead community water and sanitation management in Ecuador



Presenting Author: Ms. Deborah Payne, United States, MedWater

Co-Authors:

Highlights

- Gender mainstreaming was incorporated into collaboration between MedWater and rural, indigenous Kichwa communities in Ecuador to promote community led water, sanitation, and hygiene management.
- Institutionalized gender mainstreaming has ensured both women and men are incorporated into community water councils, both women and men serve as health promoters, and has informed programming.

Introduction and objectives

MedWater, a non-profit WASH organization, collaborates with communities and other institutions to create sustainable water and sanitation programming with rural Kichwa communities in the Napo province of Ecuador.

MedWater established institutional policies to promote gender mainstreaming within five pilot communities between 2014 and 2016. This practice ensured a balance of men and women on community water councils as well as the selection of female community health promoters. Objectives for this case study included:

Observation of continued engagement of women leaders in WASH management

Observation of relationships between WASH outcomes and the engagement of women in leadership positions.

Methodology approach

MedWater created an institutional policy that at least one third of a community's water management council be comprised of women, and both women and men should be considered equally when selecting community health promoters.

Five pilot communities were observed for successes and challenges in community led WASH management.

MedWater observed the level of engagement of women in WASH management as well as the level of implementation of project goals including successful use of a water chlorination system as well as construction of latrines within the community.

MedWater documented anecdotal evidence of impacts of gender mainstreaming on WASH activities.

Analysis and results

Within the five pilot communities, all communities maintained a minimum of one third female leadership and all selected community health promoters continue to operate in their selected positions.

By incorporating gender mainstreaming in water management techniques, MedWater observed both the continued leadership of women in water and sanitation programming as well as positive outcomes in water and sanitation programming.

Examples of the benefits of women as community health promoters include the following:

One health promoter, a matriarch in a household of 17, was strongly aware of the need for toilets due to the care she had provided for her granddaughter's chronic infection of worms. This woman helped champion the addition of 10 additional "dry" latrines in her community, cutting the level of open defecation.

Another female health promoter championed for stronger provisions for girls in schools to be able to manage female hygiene concerns.

A third female health promoter, aware of the standard lack of hand washing facilities in the home, installed tippy tap hand washing stations at each household where she trained. This practice led to the installation of over 75 additional hand washing stations in four communities.

Conclusions and recommendation

Establishing institutional policies regarding gender mainstreaming in the creation of water and sanitation committees and the selection of community health promoters can ensure women are engaged in WASH management in indigenous Kichwa communities. Rural indigenous women are frequently overlooked for leadership roles due to limited education. Alternately, life experiences of these women in care taking roles provides a highly contextualized skill set that is invaluable to the informed development of appropriate WASH programming. Engaging both women and men in the development of water and sanitation management activities ensures that goals are achievable and appropriate to the values of the community.

Mainstreaming gender into IWRM; a catchment learning approach



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Co-Authors:

Highlights

IWRM is the official instrument for improving water resources in the Great Ruaha River Catchment. The NAWAPO and WRM Act of 2009 recognize the importance of mainstreaming gender in water resources management but it doesn't explain how should be implemented at the ground. Sustainable Water Access, Use and Management (SWAUM) pilot identified the need to adopt the catchment learning approach (MSP) for mainstreaming gender into water management. The pilot project made a recommendation on how best to improve gender mainstreaming in water resource management.

Introduction and objectives

The Great Ruaha River Catchment (GRR) in Tanzania is critical to the lives of 2 million people dependent upon its freshwater ecosystem services; including livelihood such as agricultural activities and hydropower which provides almost half the country's electricity, and the Ruaha National Park as an important tourist attraction. Upstream over-abstraction has led to annual drying of GRR. Earlier initiatives failed to restore the year round flow, among other failures is none inclusion of all stakeholders especially women and girls to the only thought technical solution. Women often have a wealth of knowledge on the subject, but are often overlooked in the formulation of solution/projects and policies due to their lack of inclusion in water governance processes.

Methodology approach

SWAUM's approach has been to pilot a multi-stakeholder catchment learning process (2011-16). Our premise was that spaces/opportunities can be created which both bring all stakeholders together and enable them (i) to address existing conflicts and reduce disagreements (ii) to identify knowledge gaps and prepare for uncertainty, and (iii) to mitigate capacity constraints through better collective working. The approach is appropriate to integrating genders issues with water resources issues; it addresses; lack of practices efforts on the ground and meaningful integration of gender into the effort of water resources management - restoration of river flows. Furthermore, the methodology is in alignment with the principles of national water legislation.

Analysis and results

The SWAUM pilot methodology mainly consisted several workshops and collaborative initiatives (CIs); involved all stakeholder groups; men and women of different age group and classes through a facilitated dialogue and debates. The process of mainstreaming gender starts from proposal writing, planning for the workshop and pre-interviews to the communities before inviting them to the workshop. For effective mainstreaming gender issues, most cases the first day of the workshop focused on hearing and learning from local stakeholders – women and men including tail enders and individuals, while the second days onwards, the local participants were joined by other stakeholders. Furthermore, specific interviews; situation and stakeholder analysis; institutional relationship interview – trying to understand norms, values and behavior; monitoring and evaluation; online communication (the use of project basecamp); and training of staff in different aspects both provided better understanding of gender dimension on water resources management. The CIs identified and championed by some members of the communities enhanced gender mainstreaming.

According to Land use planning CI, realized that women are negatively affected, as they cannot access decision-making structures for land issues as easily as their male counterparts. Land issues are heavily influenced by customary and traditional practices, which give low priority to women.

Conclusions and recommendation

The process of demonstrating gendered approach to effective water resources management is difficult. The multi-stakeholder process (catchment learning approach) is demand – driven approach; allowing free dialogue and debate for all stakeholders, has showed its potential to improves mainstreaming gender issues to effective water resources management. The approach if adopted by the basins/catchments; improves dimension of integration: - the working relation within and cross sectors, integrate freshwater ecosystem conservation with WASH, engage and involve all the stakeholders – upstream and downstream users, and integrate practices, research and policy-making for improved decision making. Therefore, gender mainstreaming efforts is possible through working to those dimensions of integration, with well facilitated MSP by gender and water experts.

Participatory approach for ecologically sustainable sanitation



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Highlights

Alternative sanitation solution adapted with the variety of situations with a focus on small communities.

A gender perspective, which seeks to ask for the best way to adapt the wastewater treatment systems for small communities.

Managerial, socio-economic and technical innovations aspects for adapt the wastewater treatment systems for small communities.

Introduction and objectives

Lack of sewerage system, control and environmental awareness are the main factors that cause the spread of disease, environmental degradation and gradually bacterial contamination of groundwater surface. Therefore, the sewage treatment is the ideal solution to this problem. The wastewater treatment system by an on-site could be beneficial to the rural Morocco.

The objectives of the project are to propose a scheme covering the different technical aspects, management and institutional innovation, to meet the various constraints that characterize the rural areas. The project asks for the best way to adapt the wastewater treatment systems for small communities in MENA region.

Methodology approach

Village Talat Marghen, Subject of our study, located a few km from Marrakech.

- Managerial and institutional aspect

In order to plan the major guidelines of our project to the time scale on the one hand, and identify solutions that respond most effectively to different problems and needs identified and the actions and resources needed to achieve these results, on the other hand. A methodology was followed taking into account the involvement of the population and gender approach (participants who benefited of all events with 50% are women), to analyze and identify the main actors and their roles in the field of planning and management of sanitation the site subject to our project.

The current approach involves a series of steps, including:

- Step 1. Diagnosis and description of the inventory knowledge of the environment.
- Step 2. Identification of problems and solutions.
- Step 3. Education / awareness of the people of the environmental challenges and opportunities to act on the environment.
- Step 4. Organization management and programming of actions, by strengthening the capacity of non-governmental organizations (NGO) working in the field of the environment in general and in particular sanitation.

During the companion of awareness for programming of the main lines of our project, training on the design and operation of our wastewater treatment system (multi-soil-layering), the woman was present during the holding of the project activities. Through this approach, women have been able to participate in decision-making and in the success and sustainability of this project.

- Technical aspect

In order to complete a part of our objectives two pilot scale MSL systems have been installed in order to adapt the MSL in the Moroccan rural context.

Analysis and results

The companion of awareness was crowned by the acceptance of the entire project by the people. The result of planning the technical, institutional, and managerial aspect phase for this project is built upon two fundamental principles: direct involvement of stakeholders in the approach used to decide between various alternatives and the sustainability of the sanitation service as it stems from the previous principle of direct involvement.

The results of the statistical analysis showed the benefits of setting up an association for the management and operation of the sewer system.

Moreover, and in relation to the technical aspect, the results show, that multi-soil-layering technology successfully used in the pilot-scale and full-scale. In effect, excellent efficiency was obtained in the pilot and full-scale fed with real wastewater. Multi-soil-layering system could be feasible to apply in full-scale systems at rural area in Morocco, if sufficient conditions were supplied.

We have tried throughout this project based on a participatory approach of the population and especially of the woman for the realization of the different phases of the project. After the completion of the project, we anticipate that women will benefit from the implementation of this project through the development of handicraft associations using treated wastewater by the MSL system and reeds.

Conclusions and recommendation

The results emerging from this pilot case can be extrapolated for national use. According to our results, the implementation of rural sanitation projects should be based on a participatory approach, organized in an integrated manner so as to involve decision makers and users. The basic principles of this approach are: Participation, integration, the organization of populations, the organization of populations and the partnership and contractual relationships.

The results show also, that multi-soil-layering technology successfully used in the pilot-scale and full-scale. In effect, excellent efficiency was obtained in the pilot and full-scale fed with real wastewater.

Safe drinking water: does community participation in decision-making affect impact?



Presenting Author: Dr. Anna Tompsett, Sweden, Stockholm University

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Highlights

Evidence from a randomized experiment in Bangladesh shows that delegating decision-making authority to communities increases the impact of a program to improve access to safe drinking water, relative to a top-down approach, but only when the intervention mandates the involvement of women and the poor; and controls the influence of elites.

Introduction and objectives

Many believe that participation in decision-making by intended beneficiaries of programs to improve access to safe drinking water, particularly women, leads to better outcomes: improving project targeting; increasing 'buy-in'; and generating a 'sense of ownership' over project assets. However, participation is expensive and time-consuming, and programs in which communities participate in decision-making may be more susceptible to 'capture' by powerful community members. Much of the early evidence in support of this hypothesis is probably biased, since the choice of a decision-making structure is likely to be correlated with other project characteristics that also influence project impact. Our study uses a randomized experiment to provide causal evidence on this question.

Methodology approach

We randomly assigned different decision-making processes to communities receiving an otherwise identical intervention, a package of subsidies and technical advice to improve access to safe drinking water. The decision-making processes assigned included one top-down process and two participatory processes. Under the top-down process, project staff took all decisions, using information from the community. Under one participatory process, the 'community participation approach', the community took all decisions using their own internal decision-making processes. Under the other, the 'regulated community participation approach' the community took all decisions by consensus at a meeting at which women and the poor had to be represented.

Analysis and results

Access to safe drinking water increased by 14 percentage points in villages that used the top down approach, 15 percentage points under the community participation approach, and 26 percentage points, (67% more than under the other two treatments), in villages which were assigned to the regulated community participation approach. The top down process uses local information less effectively, and installs fewer sources than under the two participatory processes. Under the community process, elite control constrains access to safe water sources. The regulated community process expands and diversifies the group of people who participate in decision-making relative to the other two approaches, including with respect to gender, and it results in bargaining that limits the influence of elites.

Conclusions and recommendation

Our results confirm that involving communities in decision-making can lead to greater project impacts, in terms of access to safe drinking water. However, the results also suggest that these greater impacts may not be realized, when communities are involved in decision-making without measures to avoid co-option of the decision-making process by influential groups or individuals, and without ensuring the representation of the poor and women.

Women as agents of change in faecal sludge management



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Highlights

Faecal Sludge Management as a men's domain? While women are highly underrepresented in the sector, the case of Devanahalli show that women can be at the core of an innovative and technology-focused project on city scale. The case study presents key factors and recommendations for women's involvement in wastewater management.

Introduction and objectives

Sustainable faecal sludge management is imperative for sustainable urban development. But developing economies are lacking significant numbers of water professionals. As countries face the overwhelming demand for professionals, the numbers of female water professionals remains low. There is a need to acknowledge women as agents of change in the sector. The objective of the case study is to not only give an overview of the data on gender representation in the sector, but also explore how women in a specific case became key drivers for change. The objective is to identify the enabling factors for women to become wastewater champions.

Methodology approach

The case study draws its learnings from a pilot project funded by the Bill and Melinda Gates Foundation and carried out by BORDA and CDD in India 2014-2015. The aim of the project is to ensure efficient treatment of faecal sludge in the town of Devanahalli, to ensure safe reuse of treatment by-products, and demonstrate possible business opportunities with by-products. The case study focuses on the role of women in project development, implementation and now in the operation phase. Main stakeholders have been and still are local women, the case study identifies key factors and obstacles for women's involvement.

Analysis and results

Many recognize the role of women in the water sector mostly as recipients of services or at an unpaid rural community management level. In an IWA study covering 15 developing countries, only an average of 16.7% of the workforce were female professionals. This is not only a matter of inclusion but also about increasing quality and sustainability. Various studies show companies with a higher percentage of women on all levels performed significantly better than their all-male counterparts. With the diverse customer base of the water sector, a gender-diverse staff structure is a business advantage. The importance of women for professional management of water and sanitation is slowly getting recognized on a global level. Despite these acknowledgements, the numbers of female water professionals worldwide remains low. Main obstacles lie not only within local socio-cultural norms but within gender-based discrimination, unequal opportunities, and lack of representation in professional environments. However, the Devanahalli women's professional understanding of the technical, political, and managerial project aspects, the ability to take risks, the ability to identify with the problem, empathy and human connectedness, and the ability to see the larger environmental and public health benefits are key factors for the project success.

Conclusions and recommendation

The case study highlights how women can be the key to successful wastewater management on town scale. The women's professional understanding of the subject and their knowhow to provide inputs from design to implementation, management and governance, their relatedness and empathy with all stakeholders involved in the matter, their ability to sustain behaviour change, and the acknowledgement of the importance of relationships are an example of how the sector could look like if women are given the opportunity to be water professionals. The main obstacles need to be addressed by all involved stakeholders, from government to utilities and implementing partners.

Women as agents of change in transboundary water and wastewater governance



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Highlights

- Analyses how women generate behavioural and institutional change in transboundary water and wastewater governance
- Contributes case studies on women as agents of change in water governance around the world
- Provides recommendations for monitoring and support of actions of women in transboundary water and wastewater governance

Introduction and objectives

This paper analyses how women play key roles in generating behavioural and institutional change in transboundary water and wastewater governance, at multiple levels and scales. Using evidence from practice and data around the world, this work will illustrate and analyse the role of women as agents of change in transboundary water and wastewater governance. The study will conclude with recommendations to help increase women's active involvement in transboundary water resources and wastewater planning and policy making through targeted interventions and improved monitoring tools.

Methodology approach

The study will use (1) literature review; (2) secondary data collection and analysis; (3) case study preparation including field visits and key informant interviews; and (4) expert practitioner and policy-maker interviews. Cases and data will be sourced from organisations active on the ground and at regional and global levels in supporting or researching transboundary cooperation and women's inclusion in water governance. The cases include examples from India/Bangladesh, Honduras/El Salvador, and Cambodia/Vietnam.

Analysis and results

The dimension of gender is not commonly associated with transboundary water governance because transboundary issues are often tackled with reasoning at state-to-state levels and in terms of "national interests." In fact, women act as major users of the resource through their productive and domestic activities, as knowledge holders about the resource and how it is managed locally and across borders, as champions for the resource and the ecosystem services it provides now and for future generations, and as decision-makers around the resource in local to national and regional roles. Yet prevailing cultural and political practices in many countries mean that their roles are often overlooked, misunderstood, or constrained. Drawing from theory and practice on systemic change processes and gender inclusion, and using evidence from the case studies, interviews and data described above, the analysis will delve into each of these dimensions: women's use, knowledge, leadership and decision-making around water and wastewater. It will shed light on the levers that women can access to effect change in water and wastewater management at the level of their communities, nations and regions and across sectoral boundaries, and on the enabling conditions for accelerating women's drive for change.

Conclusions and recommendation

The paper will conclude with a set of recommendations on how the roles and leadership of women in transboundary water governance can be monitored and supported, making reference to the kinds of indicators, project design and institutional design measures that will be most gender-responsive. Improved recognition of the role of women as agents of change in TB water governance will help to accelerate the desired changes that translate to a more sustainable resource for all humans and for nature.

Poster: Better wash services lead to educational progressions for girls



Presenting Author: Dr. Dorice Agol, Kenya, Independent Consultant

Co-Authors: Peter Harvey
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Highlights

The presence of water and sanitation facilities in schools can increase female-to-male enrolment ratios and reduce repetition and drop-out-rates for girls. This is because more girls are likely to enrol and are less likely to repeat grades and drop-out in schools with water and sanitation facilities.

Introduction and objectives

Poor water, sanitation and hygiene (WASH) is a common barrier to educational progression in developing countries. This paper highlights the need for WASH facilities in schools, as an important aspect of promoting quality education for girls. The paper aims to explore the relationship between water and sanitation facilities and educational progression, mainly for girls. It shows that improved water and sanitation in schools can increase learning and educational proficiency for girls. The analyses were conducted on linkages between female-to-male enrolment ratios, repetition and dropout rates with sanitation and water supply situation in schools and were disaggregated by gender and grade.

Methodology approach

Datasets were obtained from the national Education Management Information System (EMIS) for approximately 10,000 schools. The most relevant variables were selected for the analysis, including numbers of students enrolled, numbers who repeated and numbers who dropped out, number of toilets and whether considered adequate or not, and number and type of available water sources.

Prior to the analysis, the datasets were sorted and cleaned to remove irregularities. The analysis was disaggregated by gender and grade (1-12)

Analysis and results

Lack of WASH facilities negatively influenced girls' enrolment in schools. Female-to-male ratios were lower in schools with no toilets compared to schools with 20 or less students per toilet. At grade 8 more girls had enrolled in schools with good toilet provision, most likely due to the critical need for adequate toilet facilities during their menstrual cycle. Further results confirmed significant gender differences in drop-out rates, particularly between schools with inadequate WASH and those with adequate WASH. Certainly, without adequate WASH facilities, girls during their menstrual cycle are more likely to drop out if they repeatedly experience difficulties in managing their hygiene every month. Significant disparities were quite obvious in grades 6, 7, 8 and 9. Practically, it would be difficult for girls who experience their menstrual cycle to remain in class or school and queue up for crowded toilets with no water and most would choose to remain at home to manage their personal hygiene.

Conclusions and recommendation

The benefits of improved WASH in schools have been proven and include better-quality education and improved health. To build a good evidence base for WASH interventions in schools, a monitoring system should include detailed WASH information on quality of the facilities and services provided. Additional information such as proximity of the facilities to schools, whether they are seasonal/permanent (e.g. water sources) are very useful. An analysis of WASH facilities gives understanding of its critical role especially for girls who need to manage their menstrual hygiene. Certainly, WASH programmes requires serious considerations of gender at all levels of learning.

Poster: Gender awareness in water and waste in Central Asia



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Highlights

The goal of the study is to visualize the comprehensive assessment of the survey results on gender awareness of organizations and projects in water sector of Central Asia (CA) using a geographic information system (GIS).

Introduction and objectives

- An analysis of the current state of gender sensitive issues in the management of water and land resources has been undertaken by the Scientific Information Center of the Interstate Coordination Water Commission of Central Asia;
- The interpretation of the results of the survey aimed at identifying gender awareness of representatives of organizations and projects in the water sector of CA has been made, as well as a comparative analysis of the countries.

This particular case study has shown how gender is incorporated in water in CA.

Methodology approach

To what extent water professionals of CA are competent in gender-sensitive aspects of water management? Women are recognized as important actors in water management and gender mainstreaming is an integral part of IWRM.

Since gender is a socially constructed definition of women and men, social survey on gender awareness of water specialists in the region was chosen. The survey results are presented visually using GIS which allowed to carry out a comparative analysis of the data. GIS is the most effective and innovative means of analysis, evaluation and visualization of sociological studies based on demographic and other data.

Analysis and results

Thus, research has shown that water management organizations of CA countries are aware of the gender dimension in the management of land and water resources, and most of them supported the need to integrate gender issues into the work of the water management organizations, as well as agree on the lack of information on gender issues in water resources management. At the same time, gender according to the respondents, are being underplayed, with the exception of Kyrgyz Republic. In general, there is the active position of the representatives of Kazakhstan and Kyrgyz Republic in the promotion of gender issues in the water sector and the relatively passive of the representatives of Turkmenistan.

Conclusions and recommendation

Analysis of the current state of gender mainstreaming in the management of water and land resources showed that, along with the existing problems of gender equality in the water CA sector, expressed by women's limitations in decision-making, access to resources, there is a trend change in the situation for the better, in particular by carrying out joint projects aimed at increasing awareness of gender issues in water resources management at the macro and micro levels.

This issue needs further research with a focus on gender mainstreaming in water management that will be implemented by the UNESCO Tashkent Office within the EU Programme “Sustainable management of water resources in Uzbekistan”.

Poster: Mainstreaming gender in WASH programmes for social transformation and empowerment



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Co-Authors: Mr. M.M. Ahidul Islam Kazal, Program Manager, Max Foundation
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Highlights

- Women can be key agents for change when involved in sanitation management. Their involvement is crucial for human health and national socio-economic development.
- Empowering women means increasing their economic, social, political and physical strength.
- The process of social transformation needs more research at the individual and structural level.

Introduction and objectives

Poor sanitation management impacts women's health, dignity, safety and socio-economic status. Max Foundation addresses these challenges in the coastal areas of Bangladesh together with technical advice from the Gender and Water Programme Bangladesh in order to streamline gender issues in its WASH programmes. In Bangladesh, there is limited research on the social exclusion of women in WASH initiatives and most of the research fails to incorporate gender-disaggregated data. This results in a lack of recognition for the challenges women face. This case study demonstrates that the integration of multiple dimensions of women's empowerment into WASH management leads to sustainable and advanced development, poverty reduction and human rights for all.

Methodology approach

This case study addresses the following research question: How we can catalyse transformative change that enables women and girls to empower themselves effectively and sustainably in partnership with men and the wider community? Women in Bangladesh are the primary users, providers, and managers of water and hygiene in their households. Their empowerment in sanitation can serve as a mechanism for grounding deep and broad-based social transformation. In order to ensure in-depth understanding of the specific challenges faced by women, a participatory method of rapid rural appraisal was applied to collect data through key informant interviews and focus-group discussions.

Analysis and results

Max Foundation's project interventions show how women leaders strive to overcome physical, economic, political and socio-cultural discrimination through their participation in Community Support Groups (CSGs). Women are placed at the core of WASH planning, implementation and operations via this village-based platform chaired by women in cooperation with male members. The CSG advises union-based government committees that oversee progress towards universal latrine and water coverage in the union, thereby engaging women at the beginning of the water project cycle and truly improving their political empowerment. Improved health (physical empowerment) extends from the women's individual level to the entire village. Latrine construction results in decreased diarrhoea and open defecation and the spread of messages on menstrual hygiene management increase the physical empowerment of adolescent girls. The women in CSGs have created an environment where women's leadership is now more socially accepted (socio-cultural empowerment). Although economic empowerment is also considered an important factor, it

has not yet been fully incorporated into this project; nevertheless, the time spent by women on water collection has been significantly reduced, thus allowing women more time to develop economic activities. At present, Max Foundation is developing a women-led social entrepreneur programme to market health commodities.

Conclusions and recommendation

One of this study's main conclusions is that in WASH interventions, it is essential to include gender analysis and women's (economical, physical, political and socio-cultural) empowerment in the needs-assessment in order to provide appropriate solutions that are effective, sustainable and safe and that restore and promote dignity for women. The cooperation with men and local government institutions also needs to be emphasised. Although the scope of our project is limited to three Bangladeshi unions, its implications are widely applicable given that women's empowerment is vital to sustainable development and the achievement of safe water for all.