

Patterns of Domestic Water Use in Rural Areas of Zhangye, China: Based on Gender Difference

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Abstract This paper presents practical experiences into the pattern of domestic water use and management based on gender difference. The study was undertaken in Ganzhou District of Zhangye city, China. The study aimed to assess the patterns of domestic water use and management activities derived from the opposite gender groups. Methodology for participatory assessment (MPA) was used for data collection and was done in a participatory manner. The survey established that women and men usually play different roles in domestic water use and management. Women are playing more important role in access to water, such as cooking, washing and teach children to use water which influent the sustainable water use and management and the healthy of their family members. Men play an important role in irrigation, household water facility maintenance and community activities. The assessment demonstrated the active role of women in domestic water use, however it was evident that men play a greater role than women in public decision making.

Key words: domestic water use; rural areas; gender difference

1. Introduction

Improving access to water has been the thrust of most governments, UN agencies and other organizations dating back to the 1980s which saw the declaration of the water and sanitation decade. The pace of efforts during this decade in the field of water supply increased resulting in at least 780 million people gaining access to clean water by 1994 (UNICEF, 1995). Despite the huge investments in water supply and sanitation in the past decades millions of people still lack access to safe water supply and proper sanitation facilities. The United Nation/UNICEF estimates that currently 1.2 billion people lack access to clean water and two billion lack access to proper sanitation and Africa is the region in most need. As the crisis of poverty deepens, grossly inadequate sanitation and water services to the poor remain among the most serious challenges facing the developing world. The need for increased capacity to deliver appropriate and sustained services is urgent. This challenge lead to the United Nations Millennium declaration in 2000, which has a framework of 8 goals, 18 targets and 48 indicators to measure progress towards the Millennium Development goals. The objective of the Declaration is to promote “a comprehensive approach and a coordinated strategy, tackling many problems simultaneously across a broad front. Among the goals,

goal number 7 addresses the issues of water supply and sanitation. The goal’s target is to “Halve by 2015 the proportion of people without sustainable access to safe drinking water and proper sanitation”(GWA, 2003).

Safe and secure water is essential to poor people’s survival and health, however meeting basic needs is not just about health and hygiene. Providing water security can play a wider role in poverty reduction and improving livelihoods. It has been noted that improved domestic water supplies and improved institutions around communities enhance food security, strengthen local organizations and build cooperation between people (IRC, 2003). Until recently the multiple benefits of domestic water supplies had not received as much attention as they deserved. The view that domestic water is largely a public health benefit persisted even beyond the 1980s when international agencies continued to focus on “clean drinking water and adequate sanitation” as a key right and development goal. This supply focused approach based on upon traditional norms that do not take account of productive water uses has been dominant in water and sanitation sector over the recent decades. In the new thinking a broader range of non-health benefits have started to be recognized and targeted in an increasing number of studies. Linkages between water and livelihoods are being explored and some of the wider

benefits such as better health, time saving and empowerment have been noted.

The beginning of the 1990s saw a shift to a new approach in the Water Supply and Sanitation sector. It stressed the consideration of water as an economic good and the importance of demand as the driving force. The water and sanitation sector is undergoing a process of rapid transformation, with a number of new approaches

sanitation, women invariably have to ensure that the family has water. Yet, despite their numbers and their roles and responsibilities, women often have had no voice and so no choice in decisions about the kinds of services--water supply, sanitation, health--that are provided to protect their family's well being.

During the International Drinking Water Supply and Sanitation Decade (1981-90), the development

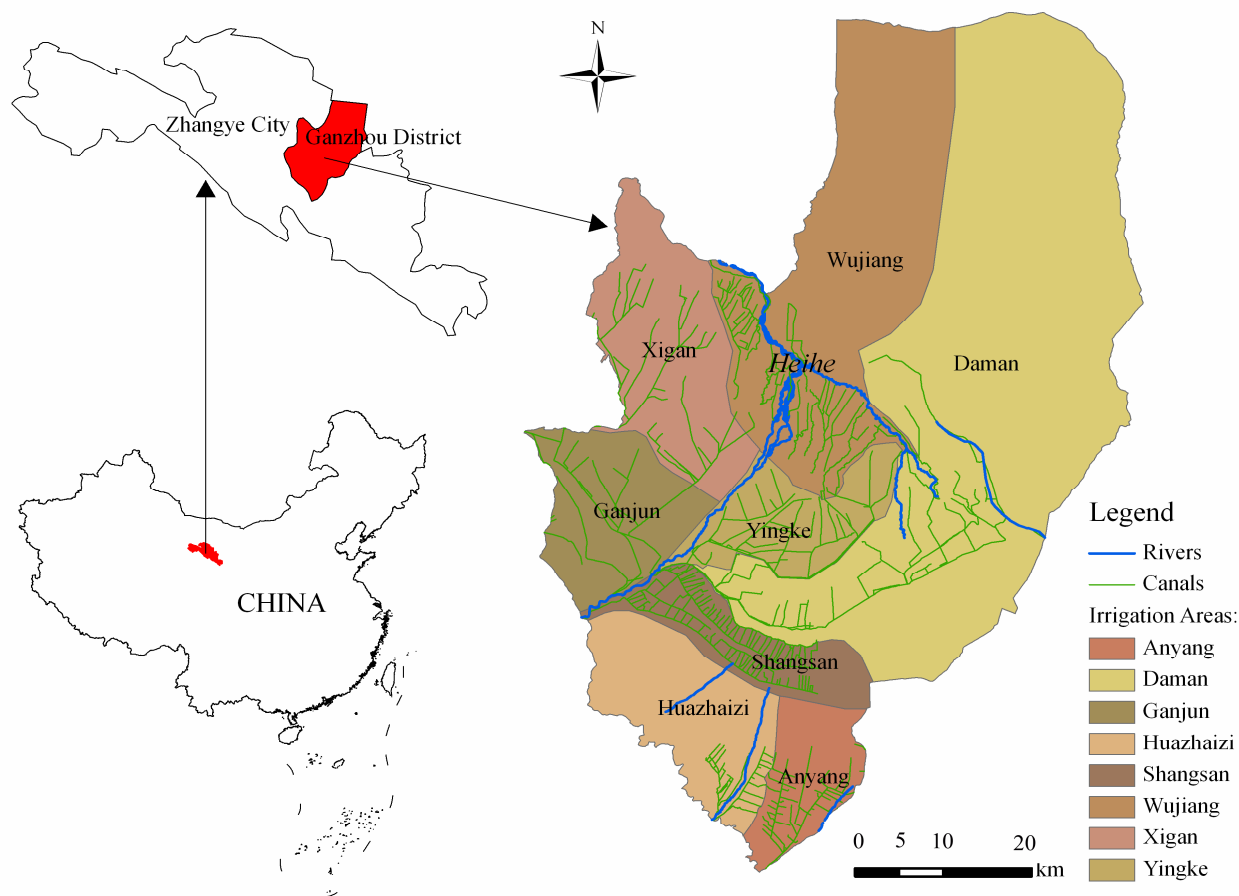


Fig.1. Irrigation wards of Ganzhou District, Zhangye City

and paradigms being implemented around the world. Addressing the productive uses of domestic water and adopting a livelihoods based approach to these supplies is both compatible with and can add value to many of these approaches (Fungai S.te al. 2004).

Women constitute half the world's population. They are the caretakers of children, the guardians of family health and well being, and frequently the managers of household resources. In the developing world, where millions of families still lack clean water and adequate

community recognized that greater women's involvement was a critical element in reaching the Water Decade's targets of water for all. New programs were launched by the United Nations system and bilateral agencies that targeted women and sought to broaden their involvement in the planning and implementation of water supply and sanitation services. Women were trained as hand pump caretakers and latrine builders. Their participation was mandated in water committees. Busy women became even busier.

From the experiences of the Water Decade and the preparation for the 1992 Earth Summit in Rio de Janeiro, a set of principles emerged that is bringing dramatic changes to water supply and sanitation sector development. As an economic good, water has value and users need to pay. If users pay, services have to respond to demand. Women, as well as men, are water users, and so must be able to express their demands for services. At the same time the water sector was learning that services should respond to demand, advocates of women's participation were learning that promoting women's involvement was not sufficient and perhaps not always desirable. They shifted their focus from women to gender--to looking at roles and responsibilities of women and men and how decisions are made.

We now understand that gender-balanced approaches converge with demand-responsive approaches: when service improvements are considered, all users must be consulted about the kinds of services they want and are willing to pay for, including about how those services will be managed and financed once installed (IRC,1998).

2. Methods

Patterns of domestic water use was assessed through surveys conducted in Ganzhou District of Zhangye city, which is located in east longitude 100°06'-100°52', north latitude 38°37'-39°24', in the arid area of China, total area 4241km². It is surrounded by high mountains, and Gobi Desert. The terrain is high in the southeast and low in the northwest with the highest altitude of 1400-3100m. 14.4% of the total area is mountains, 51.1% are plains and 34.5% is barren desert area. The rainfall amount averages 129mm one year, but the annual evaporation is 2000-2350mm, 16 times of the rainfall amount. The climate is quite dry. The average water resources amount is 1350m³, only 60% of the national average level. By 2006, the total population was 506,600, with the agricultural population of 322,300, 63.62% of the total population. Total GDP was 15,698,500 yuan, agricultural output value was 3,698,000 yuan, 23.56% of GDP,(Ganzhou Statistic Bureau, 2008). Agriculture is the main industry of Ganzhou District. At present, there are eight irrigation wards, Yingke, Xigan, Daman, Ganjun,

Wujiang, Shangsang, Anyang and Huazhai (Fig.1). Water scarcity is the main issue of agricultural development of it, as well as outstanding problem of fragile ecological environment. Slow economic development in gathering water resources and poverty, restricts sustainable development of local social economy and eco-environment construction.

The methodology for participatory assessment was used to assess these patterns among men and women. Questionnaire and interview questions were prepared and administered to the sampled respondents, farmer of Ganzhou District, in January 2009, about their water resources utilization and management. 385 questionnaires were sent out and 348 valid ones were returned. Additionally 223 respondents were randomly selected to be interviewed (see tab.1). Gender analysis required separating data by sex and understanding how labor was divided and valued (Manase. G, et al. 2007). The investigation considered family as units and choose husband or wife to participate.

Table.1. Distribution of interview and questionnaires

Interview		
Total	Male	Female
223	118	105
Questionnaire		
Total	Male	Female
348	186	162

3. Results

The water supply and sanitation committee implementation plan emphasized community participation, gender and community contribution of locally available material. For example it was recommended that a least 50% of Water Point Committee (WPC) members should be female.

On uses of domestic water it was interesting to note that women demonstrated their involved in using water for cooking (100%), washing (100%) and teaching children (100%), while men are significant lower (Fig.2). All of women participant these housework but men are rarely, which in reality are women dominated activity. Accessing to water (87.90%) and turning water fees

(82.96%) were majority undertaken by women. The survey also established that, men played important roles

User Association Represents, which is community activity and held within community or far away, women

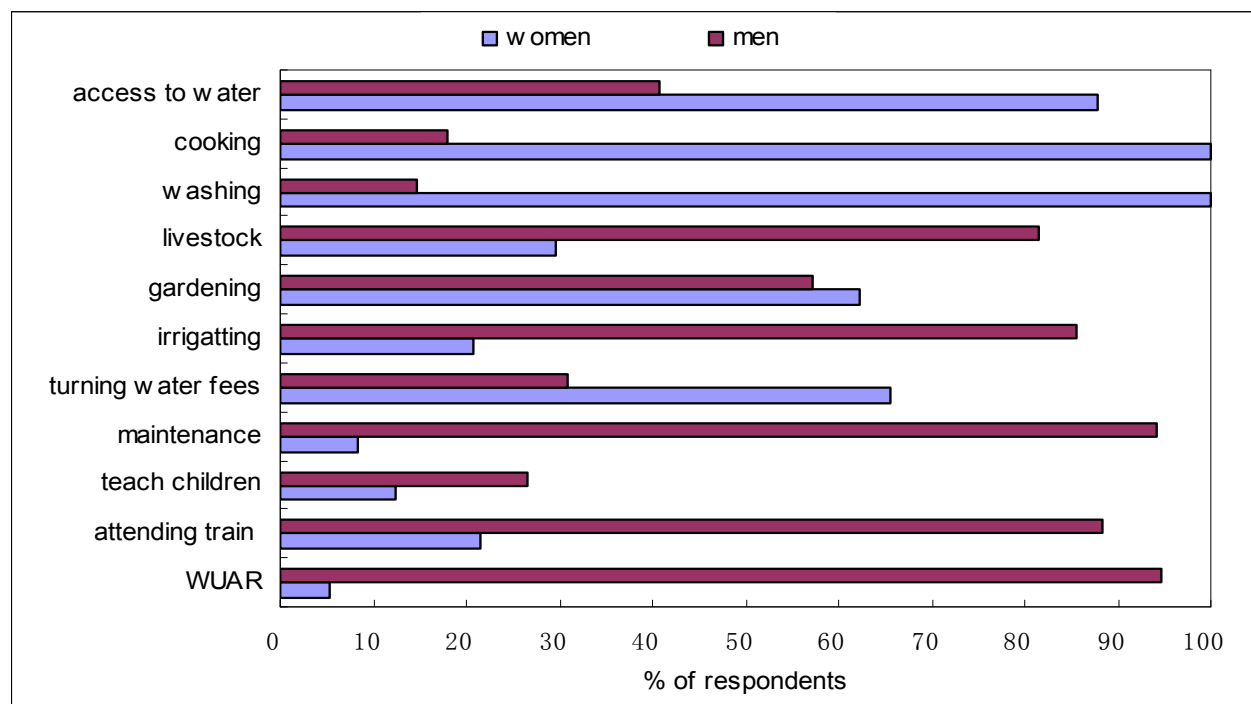


Fig.2 Pattern of domestic water use in rural of Ganzhou District

in using water for irrigation (85.58%), household water facility maintenance (94.18), while women did not. The fact that both women and men involved in livestock watering and gardening, these housework has a little difference between women and men. Obviously, irrigating, household water facility maintenance, participating water training and Water Users Association Represents are men dominated activities.

In the rural area, housework such as cooking, washing clothes, looking after the family is the women's duty, but all these activities were closely related to water use and health of family members. Additionally, children get more influenced by mothers than fathers in water use and reuse, water conservation, health and sanitation, etc. Women played a core role in accessing to water, utilization and protection of domestic water within the household and had important influence on the sustainable utilization and management of water resources. But women were seldom involved in the other aspects of water resources management, such as water facility maintenance, especially, training of water use and Water

without time or chance to participate, and also because of the traditional discrimination against women and their own lack of technology, knowledge, and to a certain capability.

4. Discussion and conclusion

Most research on water supply and sanitation in rural areas tend to focus on water for human health. In this changing environment understanding domestic water use patterns improve the ability to respond to demands for sustaining facilities. In the context of domestic water use people have for the millennia used water for a range of activities for their livelihoods as demonstrated from this survey. Reliable domestic water services have multiple benefits as alluded to earlier by the communities that it improves health and reduce walking distances. The reduction in walking distances is an important factor in development and livelihood improvement. Research from elsewhere has shown that time saved in fetching water is put to use for other activities that are income generating such as gardening that bring earnings to the

household (Peter G, 2007).

The apparent universal responsibility by women in water management at the domestic level is pointer to water and sanitation practitioners that future programmes need to target women as one of the strategies for improving livelihoods and sustainability of water resources management. The reality is that women has an active role in resources utilization, existing environment protection as well as the health status of their family members. What's more important, they had influence on the cognition to water resources utilization and management of their families. Men had greater power of resources decision-making and eminent domain than women. But surprisingly they have no much say in public decision making for implementing water supply and sanitation programmes. Equally participation in decision-making process is more important than using resources. The participation and utilization of resources are all less important than controlling. Equality means men and women would control the capital goods and benefit distribution equally, women have consciousness of controlling decision process. Nevertheless in the new mind set of attempting to achieve the Millennium Development Goals a comprehensive approach and a coordinated strategy tackling many problems simultaneously across a broad front taking into account all potential strategies.

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