Assessing the Gender Performance of the Water Users Associations of Central Asia: Case study from IWRM Fergana Project

Iskandar Abdullaev[1] and Murat Yakubov[2]

Abstract

The institutional causes of the global water crisis include the gender biased water resources management. The elaboration of the solutions to the gender issues is including the assessment of the women's role in the water management. The especial interest should be paid to the Water Users Associations. The building the capacity of the WUAs staff and management for participatory water management is the crucial for the successful transformation of the water management from centralized systems to user owned ones. The inclusion of the women into water resources management in the WUA level is one of such transformations required. This paper presents the results of the application of Gender Performance Indicators for Irrigation (GPII), developed by IWMI, for assessing the 3 pilot WUAs of the Integrated Water Resources Management for Fergana Valley Project (IWRM Fergana)[3]. The analysis of the gender situation in the pilot WUAs indicated existence of the gender related problems in the on-farm level. It is due to the social structure of the agriculture and society. The rural areas of the Central Asia overwhelmingly man society and there is unwritten taboo on women attending public meetings, which is very strong in Tajikistan, less strict in Kyrgyzstan and moderately strong in Uzbekistan. The situation can be changed through deliberately inviting women to the forums, by initiating women component of Social Mobilization and Institutional Development component of the IWRM Fergana project. It could be done by including 1-2 young, active women into mobilizer group. Other extreme solution can be devoting the quotas for women in the WUA membership, management and governance structures.

Key words: gender, water management, WUAs, Central Asia

[1] Water Management Specialist, International Water Management Institute, Central Asia and Caucasus
[2] Research Officer, International Water Management Institute, Central Asia and Caucasus
[3] IWRM Fergana project is carried out by International Water Management Institute and Scientific Information Center of Interstate Coordination on Water Commission. The project funded by Swiss Development Cooperation (SDC). The IWRM Fergana project activities cover territorially Kyrgyz, Uzbek and Tajik part of Fergana Valley.

Introduction

The water crisis is perceived mainly as increasing pressure on water resources. The engineers, scientists and policy makers are suggesting the better use and management of water resources as ways out from the water crisis. The pressure on water resources and increased charge to environment due to growing demand from industries, food production, and energy can be counted as causes of the global water crisis. However, not only the increased demand on water resources caused the global water crisis, but inefficient water institutions, exclusion of the stakeholders from the planning and management processes were among the causes of the water problems around the world.

The IWRM is widely accepted as way out from the water crisis. The IWRM approach includes among other tools, the participatory approach, involving civil society and local communities in water management process at all levels (GWP ?.) However, frequently community is considered as a collection of people with equal wishes and needs. Nevertheless, this is different people, women and men, with different level of well-being, concerns and needs. Applying gender approach helps to reveal gender groups' needs and address them adequately. There are three elements in an approach to gender and IWRM (UNDP, 2003):

1) In every initiative, programmers and analysts should take steps to understand the differences and relations among and between women and men in each specific context under consideration (in other words, carry out a gender analysis). Ideally this should be done in a participatory fashion and both women and men should be involved.

2) Based on this analysis, all initiatives should incorporate women's and men's perspectives, needs and interests and, where possible, promote the advancement of women (in other words, reduce gender inequalities).

3) Participatory approaches that facilitate the equitable participation of women and men (especially at decision-making levels) should be used

It has been accepted that water development and management policies and programs that exclude women as actors, and as an interesting groups, bypass half the population and are lower in efficiency and effectiveness (Francis et.al.2001).A review of 271 World Bank projects by IFPRI shows that when the needs of both men and women are addressed, sustainability of projects increased by 16 per cent (Global Population and Water Access and Sustainability? Year and Publisher). Gender inequality hampers economic growth, the progress of sustainable water resources management and poverty reduction.

Water and gender issues are extremely acute for Central Asia countries where water availability predetermines all agricultural activities and 70% of population lives in rural areas. The major policy change in agriculture for the last decade was privatization of the agricultural land. The private farmership after 70 year-long collective land use resulting both positive and negative changes. The increases of land and water productivity, innovative approaches, conservation of resources are best outcomes from the private farming systems in Central Asia. However, exclusion of huge number of former collective farm workers from the access to the land and water resources, stratification of the rural society are avoidless consequences of the new changes. The farm restructuring marginalized women's access to the land and water. As competition for land increased, both formal hurdles (of qualifications and examinations) and informal ones (of connections and patronage) marginalized women even further (PP SPD.2002).

Women played, and continue to play after independence a role of secondary earners, employed in less strategic and non-productive sectors (Alimdjanova, 2002). They are integrated into the workforce either as unpaid family labourers or as casual wage-workers. However, many studies in different countries have shown that, in poor regions, food security is often dependent on women's agricultural work. They account for about 65 percent of household food production in Asia. Manual cotton picking was (and still is today) a female job and in the cotton-growing areas of Central Asia, 50 to 75% of family's income came from female labour. (Alimdjanova, 2002) At the same time, due to differences in occupation, the salaries of men exceed the salaries of women, for example, in the Kyrgyz Republic in 2001 the salaries of male employees exceeded the salaries of female employees by 1.6 times. (UN. 2003).

Thought the number of women farmers is small, in some areas male migration forced women to deal with all agricultural activities themselves. As a result, women assume greater burdens in terms of irrigating and harvesting, in addition to the more traditional gender roles of household chores and caring for children. While this rural reality could act as a catalyst for women to play a greater role in local decision-making, tentative studies show that this is not yet happening: men retain the dominant voice in most communities, while the majority of women interviewed were not members of water user associations (where they existed) and often were not aware of the laws pertaining to water use (UNIFEM.2000 and UNDP.2000).

The water users associations (WUAs) in Central Asia are relatively new body on water management. After privatization of the agricultural land, for filling the vacuum in on-farm water management first in Kyrgyzstan and Kazakhstan, later in Uzbekistan and Tajikistan WUAs started to be created (not formed). This paper is not targeting the approach and way of WUA

formation; the details of strategy on WUAs in Central Asia are described in detail in Ul Hassan and et.al.2003, Horinkova and Abdullaev.2003.

However, the existing water users associations are far from being organization of the water users. The building the capacity of the WUAs staff and management for participatory water management is the crucial for the successful transformation of the water management from state hands to the users. The inclusion of the women into water resources management in the WUA level is one of such transformations. The paper is first attempt on assessing the women's participation in the agricultural water management through WUAs.

Research Methods

Research goal was to apply Gender Performance Indicators for Irrigation (GPII), developed by IWMI, for assessing the 3 pilot WUAs under the Integrated Water Resources Management for Fergana Valley Project (IWRM Fergana). The good gender performance was given, if the gender based differences are absent (+). If there are limited differences (mild) exist it is categorized as moderate performance (+/-). If there is women excluded by all means from the system it is identified as low gender performance (-).

The research methods applied in this study are: surveys, rapid appraisal, data collection and process documentation. The survey comprised of all households living and working their land parcels and/or backyard gardens within the service areas of the 3 pilot WUAs set up during spring - early summer of 2003. The survey involved a random sample of *60 agricultural water users* at each of the 3 pilot WUAs making a total of *180 farmers* in all the 3 sites

The data collection and survey was performed by IWMI staff, Social Mobilization and Institutional Building (SMID) Team of IWMI, under IWRMFV project. The data sources are: WUAs documents, statistical department of each province, local government offices and water management units of the canal or basin.

Gender Performance Indicator for Irrigation (GPII)

During the last 10 years policy makers, researchers and local irrigation professionals recognized role of gender issues in water management for irrigation (Merrey and Baviskar.1998, Cosgrove and Rijsberman.2000). The recognition of the gender issues by irrigation sector was the partially due to broader movement of gender mainstreaming in agriculture and rural development. This movement was taken up by a wide range of people and organizations, women NGOs, international financing and development agencies (Grameen Bank. 1998, SEWA. 2000, World

Bank.2000, UNDP.2000; IFPRI.2001). Thank to these active lobbying today gender is a priority issue on international policy setting. However, in the regional setting, especially in field of irrigated agriculture still considerable gap between good intentions and concrete actions on gender equity.

Gender Performance Indicator for Irrigation (GPII), developed by Barbara van Koppen of IWMI, (Van Koppen, B. 2002). The GPII assesses performance by identifying the absence or presence of gender-based differences in the irrigation system. The good gender performance means that gender based differences are absent (+). If there are limited differences (mild) exist it is categorized as moderate performance (+/-). If there is women excluded by all means from the system it is identified as low gender performance (-).

In any particular irrigation system the GPII seeks to have answers two questions: 1) the gender of farm decision-makers, analyzing of the gendered nature of local farming in the systems, the system is classified into male, dual or female farming systems (Safiliou.1988). If a minority of the farm decision makers (less then 1/3) is female the system called a male farming system, if majority of farm decision makers are female (2/3) then it is called female farming systems. If the number of male and female farm decision makers are roughly equal then system called dual farming systems. The second question relates to inclusion or exclusion of the women into processes in irrigation institutions. The gender specific differences, if any, are identified at different levels, mentioned earlier: access to water at farm level, inclusion in forums and inclusion in leadership positions.

Project Area - The Ferghana Valley

The Ferghana Valley is located in the southeast of the Central Asian region and the eastern part of the Aral Sea Basin. It is almost entirely surrounded by mountains (the Ala-Tau Range in the North, the Tian Shan Mountains in the East and the Alai Mountains in the South), with the exception of the narrow western opening through which the Syr Darya River drains into the lower basin of the Aral Sea. The larger central part of the valley falls within the Republic of Uzbekistan, while the northern and eastern fringe is located in the Kyrgyz Republic. A small area in the valley's west and southwest belongs to the Republic of Tajikistan.

The Ferghana Valley forms the upper to mid-reach of the Syr Darya River Basin. The confluence of the Naryn and Kara Darya rivers, the Syr Darya's main tributaries, is located in the Ferghana Valley.

The average temperature in the valley is 13.1°C, with a range from -8°C to 3°C in January and 17°C to 36°C in July. The annual precipitation ranges from 109 mm to 502 mm. Evaporation ranges from 1133 mm to 1294 mm throughout the Ferghana valley.

Results and Discussions

Case of WUAs in Fergana Valley: Gender Performance

Within the IWRM Fergana project scope there were 2 pilot WUAs initiated and formed, one in Tajikistan and one in Uzbekistan. The WUA Japalak, operating since 1996 was included into project activities in Kyrgyzstan.

The pilot WUAs can be classified into two groups on their sizes: large and medium, WUA Akbarabad, in Uzbekistan, WUA Japalak, in Kyrgyzstan are large WUAs, having 2820 ha and 2012 ha respectively. The WUA Zarafshan is medium size WUAs (table 1).

Table 1. Major Agro-Social Indexes of Pilot WUAs

#	**Indexes**	**WUA Zerafshan, Tajikistan**	**WUA Akbarabad, Uzbekistan**	**WUA Japalak, Kyrgyzstan**
1	Population	4165	16855	25084
2	Irrigated area	1050 ha	2820 ha	2012 ha
3	Number of women	2100 (50%)	8398 (50%)	12792 (51%)
4	Agricultural workers	2065(50% of total population)	5091 (30%)	18562 (74%)
5	Women working in agriculture	1065 (52% of agricultural workers)	2647 (52%)	10234 (55%)
6	Number of Farm units	15	40	104
7	Women Farm Leaders	0	5 (12.5%)	18 (17%)
8	Women, leading farm for husband	0	0	15 (14.4%)
9	Number of WUA members	1966	40	639
10	Women WUA members	1056	3	18
11	Number of meetings, forums in year 2003	5		12
12	Number of people attended in meetings and forums	4200		4000
13	Number of women attended in meetings and forums	500 (12%)		180 (4.5%)
14	Number of WUA Council and Committee members	23	7	5
15	Number of women WUA Council and Committee members	0	1	0

16	Number of grievances from water users in 2003	11		5
17	Number of grievances from women water users in 2003	0		2

The pilot WUAs has differences in number of population, having from 4165 people in WUA Zarafshan up to 25084 people in WUA Japalak. The women are almost everywhere consisting 50% of the population. The population, directly working in agriculture fluctuates between 30% in Akbarabad WUA up to 74% in WUA Japalak, from which 50-55% are women. Overall, the women are 50% of the population and they are equally represented in the agriculture works. However, in all WUAs mainly man lead farming systems are prevailing. The WUA Japalak is exception, where the women farm leaders and women, who leads farm for their man equals to 31.4% and can be counted as dual systems. In the WUA Zarafshan there no farms led by women, in the WUA Akbarabad- 12.5% farms are led by women leaders

In the Uzbek and Tajik WUAs the leaders of the farms are elected as WUA Council members, in Kyrgyzstan local heads of the administration can be included as members. However, in none of the WUAs in Tajikistan and Kyrgyzstan women were elected as Council or Committee members. In WUA Akbarabad, one woman was elected as Council member. The inclusion of the women into different forums can be assessed as low, e.g., maximum 16% were women in the forums, conducted in 2003 in the pilot WUAs.

The analysis of the survey results indicates that land, membership rights, inclusions women as leaders in the pilot WUAs clearly indicates gender inequalities. The performance of all WUAs on categorized and concretized land rights can be rated as moderate (table 2).

Table 2. Gender Performance of the Pilot WUAs

WUAs	***Categorical and concretized land rights***	***Categorical membership rights***	***Concretized water rights at farm level***	***Concretized inclusion in forums***	***Concretized inclusion as leaders***	***Ability to function as leaders***
WUA Zerafshan, Tajikistan	+/-	+/-	+/-	-	-	-
WUA Akbarabad, Uzbekistan	+/-	+/-	+/-	-	+/-	+/-
WUA Japalak, Kyrgyzstan	+/-	+/-	+/-	-	-	+/-

In the all 3 pilot WUAs there mild discrimination on land rights and WUA membership rights. The land rights are provided by the legal documents, but not implemented or ignored in the implementation. Nor of WUA bylaws in the all 3 pilots is not excluding women from membership. However, the membership is based on land ownership, in the practice only the agriculture water users are members of the WUAs. The membership to the WUAs in reality strictly related to leadership role in farming system. The representation in the WUA General Assembly also based on farm leadership, which discriminates women.

The most sensitive issue of the gender balance is division of the job between women and man. Similarly to other man prevailing societies in the pilot WUAs women are entitled with low paid, house related jobs. According to the survey, in all 3 WUAs, where survey conducted milking, weeding, cotton picking are major works, which are performed only by women (table 3).

Table 3

Agricultural jobs performed only by women of the household by WUAs

		WUA of respondent					
		Akbarabad		Zarafshon		Kerme-Too Akburasy	
		Cases	Subtable Response %	Cases	Subtable Response %	Cases	Subtable Response %
Jobs performed by women	Milking	56	93,3%	60	100,0%	57	95,0%
	Weeding	20	33,3%	55	91,7%	6	10,0%
	Picking cotton	6	10,0%	59	98,3%		
	Livestock and poultry care	5	8,3%	55	91,7%	21	35,0%
	Sowing	9	15,0%	31	51,7%		
	Picking fruits, vegie, grapes	2	3,3%	8	13,3%	6	10,0%
	Selling goods at the market					25	41,7%
	NA	322	536,7%	152	253,3%	305	508,3%

IWRM-Ferghana - 2003

However, it may be only cursory look into very complicated issue. In the family the internal issues are not shared with strangers. There are indications that women are behind most financial decisions in Central Asian families. But, it is important to underline that women are working in the labor intensive, low paid and secondary works in the agriculture. It is indication of gender bias attitude in the agriculture.

The water distribution is another gender bias issue in the WUAs. In principle, the water distribution in on-farm level should be based on water use plans. However, no instruments on implementation of the water use plans. Outlets are not equipped with measuring devices or clear daily recording of water distribution is not practiced for canal. Initially, water use plans were prepared only for the tertiary canals, but not for the outlets and water distributed by request of the users. Each user should warn canal mirab 3 days prior to irrigation. Mirab should register all requests and then start to release water. However, due to large numbers of the requests falling the same time duration, mirabs are not able to set up order. As result almost all outlets are open and water constantly flowing into the fields. The small fields are filled quickly and extra water drained into the drainage network. The bigger plots never fully irrigated during the irrigation season. The women are more affected on unequal water distribution then man in the on-farm level (Abdullaev and Ul Hassan.2004).

Conclusions

The analysis of the gender situation in the pilot WUAs indicated existence of the gender related problems in the on-farm level. It is due to the social structure of the agriculture and society. The rural areas of the Central Asia overwhelmingly man society and there is unwritten taboo on women attending public meetings, which is very strong in Tajikistan, less strict in Kyrgyzstan and moderately strong in Uzbekistan. The situation can be changed through deliberately inviting women to the forums, by initiating women component of Social Mobilization and Institutional Development component of the IWRM Fergana project. It could be done by including 1-2 young, active women into mobilizer group. Other extreme solution can be devoting the quotas for women in the WUA membership, management and governance structures.

???????? adding

References

1. Abdullaev I.; and Mehmood Ul Hassan. 2004. Feasibility of time based water distribution principles in Central Asian Tertiary Canals. Draft of article. 18 pp.
2. Ahluwalia, M.S., 1978. "Rural Poverty and Agricultural Performance in India", Journal of Development Studies, 14(3):298-323
3. Beck, Tony. 1995."The Green Revolution and Poverty in India: A Case Study of West Bengal", Applied Geography, 15(2): 161-181
4. Carney, J.1988. Struggles over land and crops in an irrigated rice scheme: The Gambia. In Agriculture, women and land: The African experience, ed. J.Davision.Boulder, Colorado: Westview Press: 59-78 pp.
5. Cosgrove, W.J,; and F.R.Rijsberman.2000. World Water vision: Making water everybody's business. London: Earthscan Publications
6. Datt, Gaurav and Martin Ravallion., 1998.Farm Productivity and Rural Poverty in India, Food Consumption and Nutrient Division Discussion paper #42, International Food Policy Research Institute, Washington DC
7. Dey, J.1980. Women and rice in the Gambia: The Impact of irrigated rice development projects on the farming system. PhD. Thesis, University of Reading
8. Grameen Bank. 1998. Annual Report. Dhaka, Bangladesh: Grameen Bank
9. GWA.2003. The Gender and Water Development Report 2003: Gender Perspectives on Policies in the Water Sector
10. Global Population and Water Access and Sustainability?
11. Hanger, J.; and J.Morris. 1973.Women and the household economy. In Mwea: An irrigated rice settlement in Kenya, ed. R.Chambers and J.Moris. Munchen:Weltforum, Verlag
12. Haggblade, S., P.B.R.Hazell, and J.Brown, 1987. Farm –Non-Farm Linkages in Rural Sub-Saharian Africa, World Development, 17(8)
13. Horinkova V.; and I.Abdullaev.2003. Institutional Aspects of Water Resources Management in Central Asia: Water Users Associations. Water International. June, 2003, Vol 28, № 2. 237-245 pp
14. Illo, J.F.; I. Susan; E.Leons; G.C.Ignacio; K.H.Jacob; and V.R.Pineda.1988.The Philippine communal irrigation program. In Gender issues in rural development. Ed.

J.Frances and I. Illo. Workshop Report. Institute of Philippine Culture.Quezon City: Ateneo de Manila University

15. IFPRI.2001.Focus 6: Improving women to achieve food security, ed. A.Quisumbig and R.Mienzen –Dick.Focus Briefs 2020Vison Conference, Washington D.C
16. Merrey, D. 1997.Expanding the frontiers of irrigation management research: Results of research and development at the International Irrigation Management Institute 1984 to 1995. Colombo, Sri Lanka: International Irrigation Management Institute
17. Merrey, D.J., and Shirish Baviskar, eds.1998. Gender analysis and reform of irrigation management: Concepts, cases and gaps in knowledge. Proceedings of the Workshop on Gender and Water, September 1997.Colombo, Sri Lanka: International Water Management Institute
18. PP SPD. 2002.Agrarian Reform, Gender and Land Rights in Uzbekistan, Deniz Kandiyoti
19. SEWA (Self-employed Women's Association). 2000. Annual report. Ahmedabad, India: Self-Employed Women's Association
20. UNDP.2000. Human Development report 2000.New York: Oxford University Press
21. Van Koppen, B.1998. More jobs per drop: Targeting irrigation to poor women and men. Ph.D. thesis, Wagenengen Agricultural University
22. Van Koppen, B. 2002. A gender performance indicator for irrigation: Concepts, tools, and applications. Research Report 59. Colombo, Sri Lanka: International Water Management Institute
23. World Bank.2001.Engineering development-through gender equality in rights, resources and voices. World Bank Research report. Washington D.C: World bank and Oxford Press
24. Zwarteveen M.; and N.Neupane.1996. Free riders or victims: Women's non-participation in irrigation management in Nepal's Chhattis Mauja scheme. IIMI Research Report 7. International Irrigation Management Institute. Colombo, Sri Lanka: International Irrigation Management Institute
25. Francis Jennifer, Jahn Sybille. Integrating Gender Perspectives: Realizing New Options for Improved Water Management. International Conference on Freshwater. Bonn 2001
26. UN.2003. Common Country Assessment. The Kyrgyz Republic.
27. UNIFEM.2000. Needs Assessment of Rural Women on Land Tenure Rights in Tajikistan, Dushanbe
28. UNDP.2000. Tapping the Potential: Improving Water Management in Tajikistan