

A Study on
**Female Farmers in Egypt:
Their Water Management Interests and
Coping Mechanisms**

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ACRONYMS

ABU	Agricultural Base Unit
BCWUA	Branch Canal Water Users Association
CDA	Community Development Association
ENGOSC	Egyptian NGO Support Center
FWMP	Fayoum Water Management Project
IIP	Irrigation Improvement Project
MOALR	Ministry of Agriculture and Land Reclamation
MWRI	Ministry of Water Resources and Irrigation
PWM	Participatory Water Management
RBU	Residential Base Unit
WB-IIIMP	Water Boards – IIIMP Project
WUA	Water Users Association

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1. Introduction

1.1 “All canals are the same”

A research student paid a visit to one of the irrigation districts in a Delta governorate. He was studying the extent of the water shortage problem in Egypt and wanted to present suggestions for solving this problem.

Driving along the tail end of a number of canals, he noted that the water level in many of them was very low. So he concluded that the water shortage problem in that area was serious, and recommended that it receive a greater water share.

Is this conclusion valid? Evidently, no.

To those who are not experienced in water management, one canal may not look much different than another. Doesn't water flow in all of them? If this water is not plentiful in some of them, then an obvious solution would be to pump more water into them.

Those who work in the field of water management would quickly dismiss this as a simplistic solution. It is based on a generalization – that one solution can work for all canals. But they know that each canal has different characteristics and limitations requiring different water management remedies.

For example, one of the canals could have been dry on that day because it was not on the “off” rotation; the water flow in the other canals may have been reduced or blocked altogether due to poor maintenance, dumping of waste at the head or middle, poorly constructed canal covering at the head or middle, etc.

Therefore, it is not safe to conclude that there is water shortage in all of these canals and that the solution is to pump more water. That would be an inaccurate conclusion based on generalization.

1.2 “All farmers are the same”

When we look at the case of female farmers in Egypt, and their situation with respect to water management, we are apt to find similar generalizations.

Women do farm in Egypt. This is a well-known fact. They can be seen in most rural areas – even in Upper Egypt – weeding and harvesting along with the men. True, their numbers may be fewer than male farmers. But they do exist and cannot be ignored.

A study undertaken by the Ministry of Agriculture and Land Reclamation (MOALR) confirms this:

According to official statistics, women constitute 20% of the economically active population in Egyptian agriculture. Recent surveys, however, show that more than 50% of rural women are involved in farm activities, including fertilizing, weeding, harvesting, sacking, marketing and storage. Some also undertake plowing and irrigation.¹

The Ministry of Water Resources and Irrigation (MWRI) is implementing a nationwide policy whereby water users of every category are called upon to play an active role in water management through Water Users Associations (WUOs). All water users should be involved, and for the category of farmers, this means both men and women.

But what do we know about female farmers with respect to water use? Can we safely group them with male farmers and call this a homogeneous group? If this is done, wouldn't it be another generalization like the one that the research student made for all canals (i.e. if they both farm, then they must have the same interests).

In actual fact, not much is known about female farmers and water management. According to a study undertaken by the Agricultural Policy Reform Project, "women have always played a critical role in Egyptian agriculture, but their contribution has remained invisible, and they are not accounted for in national statistics."²

Indeed, one of the main limitations of this study has been the absence of available statistics on female farmers in Egypt (see *Limitations*).

¹ Mansour, Kamla. *Egyptian Women in Agriculture*, in Nagat El-Sanabary et al. *The impact of liberalization and privatization on women in agriculture in Egypt: Employment, incomes and participation*, January 1999, p. 7.

² Nagat El-Sanabary et al, January 1999, p. ix.

But the lack of statistics is only part of the problem. Even qualitative knowledge on the role, interests, and knowledge of female farmers in the field of water management is lacking. As Soumaya Ibrahim concluded:

Many studies on the impact of irrigation development, irrigation agriculture and irrigation management have neglected women's involvement and thus neglected the importance of gender issues in planning, designing and managing irrigation systems. Because women are not seen as irrigators, their needs within irrigated agriculture as well as their interest with regard to irrigation are not identified.³

This problem may take on serious proportions as agriculture in Egypt becomes more and more "feminized." Agriculture is no longer seen by the men in rural Egypt as a lucrative means of livelihood. As Ibrahim states, more and more men from the rural areas are migrating or taking up permanent jobs in order to receive regular salaries, leaving the women behind to take care of the land.⁴

This means that more and more women will inevitably be involved in water management. And yet, we know little about these women.

With few empirical data to provide support, it is easy to make generalizations, and this is risky. We cannot, for example, conclude that the status and interests of female farmers are the same as those of the male farmers. On the other hand, we cannot include that they are different, or that the situation of women is *worse* than those of the males. Yet, in order for the MWRI's policy – mirrored and implemented by projects such as Water Boards-IIIMP – to reflect the interests of *all* water users, the status of female farmers needs to be clarified and recorded. This study is an attempt to fulfill this need.

1.3 Questions that need to be answered

Of course, experience within the MWRI has shown that the situation of female and male farmers is not as simplistic as the case of the canals mentioned above. But there are important questions that should be asked: are women the only ones

³ Ibrahim, Soumaya. *Discussion and Reflections about gender roles and responsibilities in irrigation activities and water resource management*, November 1998, p. 2.

⁴ Ibid.

to experience certain water management problems, or do male farmers in the same position face them as well? And how do the women and men cope with these problems? Are the means and mechanisms used by both the same? Are they effective?

An equally important question is: How do the interests and needs of female and male farmers affect their participation in WUAs? A basic requirement for the success of the MWRI's policy for participation in water management is that all water users should benefit from it and for this to happen, they should all be given equal opportunities to participate. But we do not know if all of them (male and female) have the same capabilities, access to information, and willingness to participate. In other words, when we talk about the category of "farmers," we obviously refer to both men and women, but we do not have enough knowledge about the situation of one with respect to the other.

This situation is mirrored in the policy of the Water Boards-IIIMP. Agricultural Base Units (ABUs) have been set up to represent the interests of "the farmers." Of course, there is a general, unproved feeling that the water management interests of female farmers may be different than those of male farmers. So the doors for ABU elections are kept open for both to become members. Yet, the Project management realizes that this approach on its own is not enough to represent the interests of female farmers.

So what are those interests? Who are those female farmers and what is their situation? What are their problems and how do they deal with them? And do they experience these problems because of the fact that they are women and therefore disadvantaged or do male farmers like them also have to deal with similar problems?

2. Purpose of the Study

The MWRI supports a nationwide policy of Participatory Water Management (PWM) in which water users play an active role in managing water resources in partnership with MWRI staff. This participation of water users takes place through WUOs that are mandated to represent their interests and participate actively with the MWRI in improving the water management situation in their command areas.

The Branch Canal Water Users Association (BCWUA) is the organization that represents the interests of water users in managing publicly owned waterways at the lowest grassroots level⁵, and is the unit of focus for this study.

The purpose of the study is to provide an insight of the situation of female farmers in Egypt with respect to water management, notably their interests, problems and coping mechanisms.

The information obtained from this study supports the Water Boards-IIIMP's integrated approach for water management in which WUOs - particularly BCWUAs – effectively represent and address the interests of all categories of water users.

In addition to providing information, the study proposes recommendations that the MWRI in general and the Water Boards-IIIMP in particular can implement to support the BCWUAs in representing the interests of female farmers.

3. Target Groups

Evidently, the principal target group for this study is the Egyptian female farmer. But this target group includes a whole range of categories, and these are classified Table 1 below.

As stated before, one of the main aims of this study is to investigate whether there are major differences in the needs and problems of female and male farmers, and whether such differences are determined by gender or other considerations. For this reason, the study has included a "control" sample of male farmers.

#	Female Farmers		Male Farmers	
	Type	Description	Type	Description
1	<i>Women who own land and who directly manage</i>	In the old lands these include female farmers who own land through	<i>Men who own land and who directly manage</i>	In the old lands, these include male farmers who own land through

⁵ Water Users Associations exist at a lower level than that of the BCWUA: namely the level of the *mesqa* or tertiary canal. The *mesqa* is considered privately owned infrastructure to be managed and financed by the farmers independent of any MWRI interference. Since the MWRI's policy is focused on publicly owned infrastructure and requires participation by the MWRI, the *mesqa* Water Users Association has been excluded from this study.

#	Female Farmers		Male Farmers	
	<i>Type</i>	<i>Description</i>	<i>Type</i>	<i>Description</i>
	<i>and farm their lands</i>	inheritance or purchase. In the new lands these include graduates and investors. In all cases, the women directly manage and farm their lands either individually or with assistance from others.	<i>and farm their lands</i>	inheritance or purchase. In the new lands, these include graduates and investors
2	<i>Women who directly and independently manage and farm lands owned by male relatives.</i>	These include widows, divorcees, and wives of men who farm outside the command area or hold salaried jobs (in Egypt or abroad).	<i>Men who directly and independently manage and farm lands owned by relatives</i>	These include widowers, divorcees and others who manage / farm lands owned by relatives who farm outside the command area or hold salaried jobs (in Egypt or abroad). This group also includes men who have been formally delegated by female landowners to manage and farm their lands (through powers of attorney).
3	<i>Women who assist their male relatives in managing and farming lands owned by the latter.</i>	These include farmers' wives, daughters, etc who actively participate with their male relatives in managing and farming the land.	<i>Men who assist their male relatives in managing and farming lands owned by the latter.</i>	These include men who do not own the lands but who assist other male relatives by managing and farming them
4	<i>Female wage laborers</i>	These are women who farm land owned by others for daily or weekly wages.	<i>Male wage laborers</i>	These are men who farm land owned by others for daily or weekly wages.
5	<i>Female landowners who delegate land</i>	These are women who are legal landowners but who have formally delegated	<i>Male landowners who delegate land</i>	These are men who are legal landowners but who have formally delegated

#	Female Farmers		Male Farmers	
	<i>Type</i>	<i>Description</i>	<i>Type</i>	<i>Description</i>
	<i>management / farming to male relatives or others.</i>	land management and farming to others, through powers of attorney.	<i>management / farming to male relatives and others.</i>	land management and farming to others, through powers of attorney.

Table 1: Target Group Categories

4. Scope of Study and Selected Areas

To promote the participation of water users, the MWRI has established WUOs at the level of the *mesqa* or tertiary canal (Water Users Associations), branch canal / drain (BCWUAs) and district (District Water Boards).

The scope of this study only covers water management issues at the *branch* level. The main reason for this is that the branch level is the lowest grassroots level of PWM in which both the MWRI and the water users can participate together as partners with a common interest in a publicly owned waterway.

Within this water management scope, it has been essential to select sample areas from different regions in Egypt where water management issues may vary according to the type of infrastructure, its use, the existence of BCWUAs, the relationship between farmer and agricultural cooperative, poverty levels, social hierarchies, etc. The study has therefore selected its samples from the old lands in the Delta and Upper Egypt and reclaimed lands in Nubareya.

The branch canal command areas covered by the study have been selected within the following governorates:

Governorate	Irrigation District	Name of Branch Canal	Length of Branch Canal	Command Area Size	Type of Irrigation	Type of Drainage
<i>The Delta</i>						
Beheira	Abou Homos	Kamahin Herfa	10 km 15 km	5,500 fed. 6,000 fed.	IIP IIP	Surface & Sub-surface
	Etc	El-Bareya	2.5 km	2,500 fed.	Surface	Surface
	Menufiya	Tokh	Tokh Tanbasha	4.3 km	900 fed.	IIP
B. El-Sab'		El-Deesa	4.45 km	1,590 fed.	IIP	
B. El-Sab'		El-Tawil	1.9 km	392 fed.	IIP	
B. El-Sab'		El-Atf	47 km	33,000 fed.	IIP	
Sharqiya	Ibrahimeya	Ibrahimeya	3.8 km	670 fed.	Surface	Sub-surface
	Abou Kebir	El-Sababa	4.8 km	1,100 fed.	Surface	Sub-surface
<i>Upper Egypt</i>						
Qena	Esna	Nogoo' Bahari	4.9 km	340 fed.	Surface	No drainage*
		Ganabeyet Asfoun	18.88 km	6,550 fed.	Surface	Sub-surface
		Sahel El-Mata'na	17 km	7,220 fed.	Surface	No drainage*
<i>Old Reclaimed Lands</i>						
Nubareya	Bustan	Aysar El-Bostan	19 km	55,000 fed.	Drip and sprinkler	Surface
	El-Nasr	Moghazi El-Aleya	8 km	10,000 fed.	Surface	Sub-surface

Table 2: The Canals Selected for the Study

* The drainage of these lands is channeled directly into the branch canal.

The selection of these particular governorates over others has been primarily based on the availability of contacts and easy access to the required target groups, through the Egyptian NGO Support Center and the Water Boards-IIIMP. This easy access ensures proper selection of target groups that comply with the sample criteria.

5. Methodology

5.1 A personalized Approach

The aim of this study is to provide an in-depth personalized picture of the needs of female farmers, the problems they face, and the mechanisms they apply to address these problems.

Such information has been acquired through intense discussions held with separate groups of female and male farmers. Each group did not exceed five members, to ensure an in-depth quality of the information gathered.

For each farmer category (male and female), two types of meetings were conducted (and hence, two types of forms filled – see Appendix 1): a group discussion for each farmer category and an individual interview with each member of the group. The outputs of the group discussions provided a general insight on each group's interests, needs and coping mechanisms. The outputs of the individual interviews contributed to the statistical results of the study.

In addition, one-on-one interviews with individual cases of female and / or male farmers that "stand out," that is, those that reveal particularly useful information. The outputs of the interviews are presented in the findings as single noteworthy cases under the title: *A Case in Point*. In general, heavy emphasis has been provided on cases and examples that provide a detailed and personalized picture of the water management situation of female farmers.

Yet, although this is mainly a qualitative study, it was necessary to include quantitative assessment elements in the analysis, based on the sample size and criteria, as well as figures and other data obtained from authoritative sources and that support the findings and conclusions.

Sample areas for this study were not taken randomly. Since priority was placed on locating farmers with the characteristics required for analysis and comparison – i.e. landowners, tenants, farmers assisting others, and wage laborers - emphasis was placed on locating both male and female farmers within these categories and in the same areas (i.e. using the same water resources) in order to avoid misleading conclusions that are affected by differences in water use.

Once the sample areas were selected and the target groups identified, the research team set out to collect the information required, with the help of the two forms designed for the study. Comprised of 12 data collectors, the research team – half of which were females to facilitate communication with female farmers – worked in all the areas simultaneously.

5.2 Criteria for Sample Selection

The study did not take as a basis the simplistic assumption that the situation of female farmers is determined by their gender status, and that their needs and problems may be different from those of male farmers for the mere reason that

they are women. While gender aspects have certainly been recognized, other factors may also have an equal or even greater impact on the water management situation of female farmers, and these needed to be identified and analyzed. Of these factors, the following have been considered as important criteria for the study:

- Water Distribution
- Relationship between the Farmer and Agricultural Cooperative
- Presence of BCWUAs
- Rice cultivation

5.2.1 Water Distribution

The distribution of water amongst agricultural lands and the location of these lands on the waterway determines to a large extent the water management needs and problems of those who manage and farm them. Thus, for example, tail-end farmers may encounter more urgent and frequent problems of water shortage than head-end farmers. The mechanisms employed by male farmers to cope with such a problem are more or less known through the MWRI's experience. This study sheds light on the (lesser known) mechanisms that female farmers resort to, and analyzes the extent to which they are different than those of male farmers.

5.2.2 Relationship Between Farmer and the Agricultural Cooperative

Egypt's agricultural liberalization policies have given farmers a free hand to manage and farm their lands with little interference from the agricultural cooperative. However, in some old reclaimed lands, the cooperative continues to control land management and farming.

The study has taken into account the impact of this relation between farmer and cooperative on water management interests as well as how this impact affects the coping mechanisms of female and male farmers. These mechanisms may differ between areas where there are "reclamation" (*islah*) cooperatives (which have been known to control land distribution and farming decisions) and others where there are "credit" (*i'timan*) cooperatives (which under Egypt's liberalization policies may or may not have direct control over farming decisions).

5.2.3 Presence of BCWUAs

The mandate of the BCWUA is to represent the interests of the water users within its command area, and to provide them with a mechanism through which they can fulfill their interests and solve their problems. For this study, it is assumed that in an area in which a BCWUA is active, the interests and problems of farmers (male or female) are addressed through that organization, and that this mechanism for water management is different than that employed in areas where BCWUAs do not exist. The study will examine these different mechanisms and their impact on female and male farmers.

5.2.4 Rice Cultivation

The types and variety of crops that are irrigated by the same source may affect the use of this source and its management. This study has taken into consideration the effect of rice cultivation on the use and management of the waterway at the branch level. The reasons for selection of rice as opposed to other crops are that: a) rice is a major cash crop; b) it consumes large quantities of water relative to most crops; c) decisions related to licensing, quotas and violations may have a direct, noticeable impact on water management interests and decisions.

Rice cultivation usually exceeds the permitted areas and therefore increases the water demand. Since the system capacity has not been designed for such demands, this is likely to exacerbate the inequity in water distribution, which in turn may amplify potential inequality between male and female farmers. The study has therefore examined the impact of rice cultivation on the water management interests of both female and male farmers, with special emphasis on highlighting discrepancies that may be observed between them.

6. Limitations

6.1 This is not a comprehensive survey

This study has been commissioned by the Water Boards-IIIMP, and since the Project operates in the Delta areas (Beheira and Kafr EL-Sheikh), most of the sample areas have been selected from Delta governorates. To be sure, an area in

Upper Egypt (Qena) and another in the old reclaimed land (Nubareya) have also been selected. But this does not make this a representative study of all of Egypt.

Moreover, the selection of the target areas and groups has not depended on the conventional random sampling method. This is because the principal focus has been on studying the situation of the different categories of female farmers (i.e. landowners, tenants, farmers assisting landowners, and wage laborers). These categories are not present in equal proportions in the different rural areas and may be left out if random sampling is applied.

These considerations have been acknowledged and accepted by the Water Boards-IIIMP upon commissioning of the study. Representative studies are indeed important and cannot be denied. But in our case, the need to obtain an in-depth personal insight of the status of female farmers is more important than a comprehensive survey, for two reasons: a) to provide the Project staff with a first-hand feel of this not-so-well-known topic; and b) to highlight the pressing issues that can later be researched thoroughly in a more representative manner through comprehensive studies.

6.2 Statistics are Not Available

One of the aims of the study was to measure the *magnitude* of the problem investigated. It is essential to obtain information on the percentage of female farmers – especially female landowners – in Egypt in general and in the selected areas in particular. If this percentage is found to be sizeable, then it would be safe to conclude that the interests of female farmers require greater attention in water management policy. But if it is found to be low or insignificant, then such attention would not be worth the extra resources, time and effort put into it.

Unfortunately, statistics on female farmers are rare, and if available, incomplete. Indeed, one of the major limitations of this study has been the difficulty in obtaining data on the overall percentage of female landowners and tenants in the selected governorates.

Even nationwide and other macro data are not available. The research team consulted the web sites of the Central Authority for Public Mobilization and Statistics (CAPMAS) as well as the MOALR but no gender specific data were found. Thus, it was not possible to obtain figures on the number of landholdings owned by women in Egypt.

The situation is not any better on the level of the governorate. At most, the agricultural departments at the selected governorates possess data only on the total size of landholdings and no gender segregated data were found.

The best and probably the only method of acquiring such data involves visiting all the agricultural cooperatives in each command area and consulting their registers on land ownership. But even such data cannot be taken to be accurate. The reason for this is that the registers of the cooperatives are not updated when the female landowners die or sell their lands to others.

However, within these limitations, and with the help of a sizeable research team, the registers of land ownership at the cooperatives within each of the selected command areas have been consulted and verified and updated through field visits. The findings are presented below in Table 3.

This, however, has been a laborious process and cannot be taken as an approach in a comprehensive survey. This report strongly recommends the necessity of conducting a statistical survey on the number and proportion of female landholdings in the areas covered by the Water Boards-IIIMP (see *Recommendations*).

7. Organization of the report

This report has been organized in a way that makes it easy for the reader to identify the main points and conclusions without having to go through the entire text. In addition to the Executive Summary, the findings of the study are summarized in Table (i) at the beginning of the report.

The reader can choose to read only those parts of interest to him by following the outline of the report; for example, those who are interested only in the statistical output, or farmers' discussions, etc. can consult the relevant sections.

The analysis for this study revolves around seven parameters that have been investigated, for female and male farmers separately, and comparatively. These are:

- The role of female farmers in agriculture;
- The role of female farmers in irrigation;
- The Water Management Interests of Female Farmers;

- Female Farmers' knowledge of water management issues;
- The Coping Mechanisms of Female Farmers;
- Treatment of the Female Farmers by the Men;
- Participation of Female Farmers in the BCWUA.

For each of the above issues, the findings and conclusions have been classified and presented in the following sections, for easy and quick reference:

- The questions that should be asked are ...
- A case in point ...
- The facts indicate that ...
- The female farmers say that ...
- In sum ...

For quicker reference, Table i (following the Executive Summary) outlines the main conclusions arrived at under each of the above sections and sub-sections.

8. Characteristics of the Sample

This section portrays the general characteristics of the selected female and male farmers, with emphasis on their current water management situation.

8.1 The Size of Female Landholdings in the Selected Command Areas

As mentioned above, statistics on female landholdings in Egypt are almost non-existent. However, it was essential to obtain such data for the study. The research team, therefore, consulted the landholdings registers of the agricultural cooperatives in the selected branch canals. The data they obtained turned out to be only partially accurate, since many of the registered female landowners had died or sold their lands. The team was therefore obliged to check the data in the field and update it.

Table 3 presents the actual number of female landowners in the selected branch canal command areas and based on field data obtained and verified by the research team.

Governorate	Irrigation District	Name of Branch Canal	Landowners				
			Female	%	Male	%	Total
<i>The Delta</i>							
Beheira	Abou Homos	Kamahin	202	18.1%	910	81.8%	1112
		Herfa	376	12.6%	2609	87.4%	2985
	Etco	El-Bareya	50	6.25%	750	93.8%	800
Menufiya	Tokh Berket El-Sab'	Tokh Tanbasha	113	16.1%	587	83.9%	700
		El-Deesa	65	13%	435	87%	500
		El-Tawil	73	17.3%	350	82.7%	423
		El-Atf	157	12.1%	1143	87.9%	1300
Sharqiya	Ibrahimeya	Ibrahimeya	13	2.8%	449	97.2%	462
	Abou Kebir	El-Sababa	120	12.7%	822	87.2%	942
<i>Upper Egypt</i>							
Qena	Esna	Nogoo' Bahari	27	9.7%	251	90.3	278
		Ganabeyet Asfoun	78	2.5%	2995	97.5	3073
		Sahel El-Mata'na	74	4.8%	1479	95.2	1553
<i>Old Reclaimed Lands</i>							
Nubareya	Bustan	Aysar El-Bostan	20	7.9%	232	92.1%	252
	El-Nasr	Moghazi El-Aleya	86	4.6%	1784	95.4%	1870

Table 3: Lands Owned by Men and Women in the Study Areas

As Table 3 indicates, the percentage of female landowners in the selected command areas is considerably lower than that of the males. Indeed, the highest concentration of female landowners does not exceed 18.1% (Kamahin Canal – Beheira), and in some areas may be as small as 2.5% (Ganabeyet Asfoun Canal – Qena).

Based on this, it may be argued that the size of female landowners is too small to merit attention and research. However, landowners are not the only women who farm in Egypt. In fact, as will be shown in the findings, many female landowners rent out their lands and do not farm or manage them.

A sizeable number of women from the selected command areas work as tenants and/or wage laborers. Another considerable proportion assists relatives in farming. Together with the landowners, these women form the focus of the study and their water management situation is also considered to be reflective of the situation of female farmers as a whole.

8.2 Summary of Characteristics

To better understand the situation of women and find out about gender relations between farmers, it was essential that the study include male farmers as well. This allows for a comparison of the interests and coping mechanisms of both groups and leads to sound conclusions on the situation of each. Based on this, care was taken to ensure a balance between the number and characteristics of the male and female farmers selected for the study.

The characteristics of the sample, are summarized as follows:

- Overall, the sample size is balanced, including almost the same number of female and male farmers.
- The sample size is also balanced for each category – i.e. almost the same number of women and men within each farming category were covered
- Most of the lands owned by the selected farmers (male and female) are located at the tail end of their respective branch canals.
- Most of the selected farmers (male and female) own and /or farm small plots of land.
- Most of the crops grown in the selected command areas are standard crops, although a sizeable proportion includes rice cultivation.
- Most of the selected farmers are between the ages of 40 and 50.
- Most of the selected farmers are either illiterate or have diploma certificates, but it has been noticed that majority of the illiterate farmers are female.
- Most of the selected farmers are not connected to well-known families.
- Almost all of the selected farmers (with an exception of 2) have little or no involvement in community activities

8.2.1 Sample size

Overall, the sample size is balanced, including almost the same number of female and male farmers.

The study covered a total sample of 210 farmers, of which slightly more than half were females (107 – 51%). As Table 4 indicates, the sample size is also balanced within and between the governorates, including more or less the same number of females and males interviewed. An exception to this in Nubareya, where the number of male farmers (9 – 27.3%) is lower than female farmers (24 – 72.7%).

Gender	Governorate					Total
	Qena	Sharqiya	Nubareya	Beheira	Menufiya	
Females	24 49.0%	22 52.4%	24 72.7%	17 42.5%	20 43.5%	107 51.0%
Males	25 51.0%	20 47.6%	9 27.3%	23 57.5%	26 56.5%	103 49.0%
Total	49 100%	42 100%	33 100%	40 100%	46 100%	210 100%

Table 4: Sample Size

8.2.2 Categories of Farmers

The sample size is also balanced for each category – i.e. almost the same number of women and men within each farming category were covered, as shown in Table 5. Of these, the category of landowners – those who manage their lands and those who do not – form a total of 98 farmers (46.7%).

Farming Category	Gender		Total
	Females	Males	
Landowners who manage	24 22.4%	23 22.3%	47 22.4%
Landowners who do not manage	25 23.4%	26 25.2%	51 24.3%
Tenants	22 20.6%	22 21.4%	44 21.0%
Farmers who help relatives	14 13.1%	13 12.6%	27 12.9%
Wage laborers	22 20.6%	19 18.4%	41 19.5%
Total	107 100%	103 100%	210 100%

Table 5: Categories of Farmers

8.2.3 Location On the Branch Canal

Most of the lands owned by the selected farmers (male and female) are located at the tail end of their respective branch canals.

As Table 6 indicates, 131 (62.4%) of the selected farmers own land at the tail end, and of these, 67 (62.6%) are female and an almost equal number (64 - 62.1%) are male.

This arrangement has been partly intentional. Experience has shown that farmers at the tail end of the branch canal confront greater water management problems (notably water shortage) and this makes them more expressive of their interests.

Location on the Canal	Gender		Total
	Females	Males	
Head	8 7.5%	4 3.9%	12 5.7%
Middle	32 29.9%	35 34.0%	67 31.9%
Tail	67 62.6%	64 62.1%	131 62.4%
Total	107 100%	103 100%	210 100%

Table 6: Location on the Branch Canal

8.2.4 Land Size

Most of the selected farmers (male and female) own and /or farm small plots of land.

As Table 7 indicates,⁶ a total of 197 (93.8%) of the selected farmers own and /or farm lands that are smaller than 8 feddans. Of these, 101 (94.4%) are female and 96 (93.2%) are male. These total numbers are more or less evenly distributed amongst the selected governorates.

⁶ Data is available for all the characteristics of the sample areas and farmers, sorted for each governorate. However, most of the output has been found to be balanced for all governorates, with no noticeable differences between them. Only when differences between governorates exist are they presented.

Land Size	Gender			Governorate					
	Females	Males	Total	Qena	Sharqiya	Nubareya	Beheira	Menufiya	Total
Less than 8 feddans	101 94.4%	96 93.2%	197 93.8%	49 100%	40 95.2%	26 78.8%	38 95.0%	44 95.7%	197 93.8%
Between 8-17 feddans	5 4.7%	5 4.9%	10 4.8%		2 4.8%	6 18.2%		2 4.3%	10 4.8%
More than 17 feddans	1 0.9%	2 1.9%	3 1.4%			1 3.0%	2 5.0%		3 1.4%
Total	107 100%	103 100%	210 100%	49 100%	42 100%	33 100%	40 100%	46 100%	210 100%

Table 7: Land Size

8.2.5 Type of Crops Cultivated

Most of the crops grown in the selected command areas are standard crops, although a sizeable proportion includes rice cultivation.

As Table 8 indicates, 92 (43.8%) of the farmers work in lands where standard crops are grown.

But a large percentage also works in rice paddies, making up a total of 100 farmers (47.1%). This has been intentional, since one of the factors that have been taken into account was the extent of rice cultivation in the selected areas (see *Methodology* above).

In the governorate of Qena, 26 out of the 49 (53%) selected farmers own and/or farm lands where sugarcane – another water consuming crop – is grown.

It is interesting to note that the number of female and male farmers cultivating the different crops shown in the table are more or less balanced, indicating that women grow more or less the same type of crops as men (i.e. that they are not confined only to the cultivation of vegetables and other “lighter” forms of farming).

Type of Crops Grown	Gender		Total
	Females	Males	
Does not grow crops	8 7.5%	3 2.9%	11 5.2%
Standard crops	51 47.7%	41 39.8%	92 43.8%
Orchards	3 2.8%	5 4.9%	8 3.8%
Water consuming crops (e.g. rice, sugar cane, bananas, etc)	26 24.3%	30 29.1%	56 26.7%
Standard and water consuming crops	15 14.0%	17 16.5%	32 15.2%
Water consuming crops and orchards	1 0.9%	3 2.9%	4 1.9%
Standard and water consuming crops and orchards	3 2.8%	4 3.9%	7 3.3%
Total	107 100%	103 100%	210 100%

Table 8: Types of Crops Cultivated

8.2.6 Farmers' Ages

Most of the selected farmers are between the ages of 40 and 50.

As Table 9 indicates, 71 (33.8%) of the total number of farmers are within this age category; of these 43 (41.7%) are male, and 28 (26.2%) are female. The largest percentage of female farmers interviewed (34 – 31.8%) were between the ages of 30 and 40.

AGE	Gender		Total
	Females	Males	
60 and above	6 5.6%	10 9.7%	16 7.6%
Between 40-60 years	25 23.4%	20 19.4%	45 21.4%
Between 40-50 years	28 26.2%	43 41.7%	71 33.8%
Between 30-40 years	34 31.8%	24 23.3%	58 27.6%
Between 20-30 years	14 13.1%	6 5.8%	20 9.5%
Total	107 100%	103 100%	210 100%

Table 9: Farmers' Ages

8.2.7 Farmers' Education

Most of the selected farmers are either illiterate or have diploma certificates.

As Table 10 indicates, almost equal proportions of the selected farmers are either illiterate (84 - 40%) or possess diploma or university degrees (80 – 38.1%). The rest (46 – 21.9%) can barely read and write.

It is interesting to note that *the majority of the illiterate farmers are female* (61 - 57%). This observation may be due to the fact that women rural Egypt have weaker access to education when compared to men.

Education	Gender		Total
	Females	Males	
Illiterate	61 57.0%	23 22.3%	84 40.0%
Can read and write	13 12.1%	33 32.0%	46 21.9%
Diploma certificate or higher	33 30.8%	47 45.6%	80 38.1%
Total	107 100%	103 100%	210 100%

Table 10: Farmers' Education

8.2.8 Farmers' Connections to Influential Families

One of the coping mechanisms that farmers can rely upon is their relations with well-known families or popular figures within the community.

According to the sample results, however, *most of the selected farmers are not connected to influential families or individuals.*

The selected farmers were asked if they belonged to well-known families in the area or had family ties with any of the following individuals: the *Omdah*, *Sheikh El-Balad*, members of the Local Popular Council, Peoples' Assembly, Agricultural Cooperative, and BCWUAs.

As Table 11 indicates, 130 (61.9%) of the total number of selected farmers do not have connections with well-known families. According to the responses received,

there are two reasons for this: a) the respondents belong to poorer families; and b) large or well-known families do not exist in the selected command areas.

Of the total, the number of female and male farmers is almost equal.

Social connections	Gender		Total
	Females	Males	
Low	67 62.6%	63 61.2%	130 61.9%
Medium	33 30.8%	33 32.0%	66 31.4%
High	7 6.5%	7 6.8%	14 6.7%
Total	107 100%	103 100%	210 100%

Table 11: Farmers' Connections to Influential Families

8.2.9 Participation in Community Activities

Another coping mechanism that could be resorted to by farmers is involvement in community activities, mainly through membership in Community Development Associations, charity organizations, youth centers, and others. The list, of course, includes BCWUAs.

As Table 12 indicates, however, *almost all of the selected farmers* (with an exception of 2) *have little or no involvement in community activities*.

Level of Community Participation	Gender		Total
	Females	Males	
Low	106 99.1%	102 99.0%	208 99.0%
Medium	1 0.9%	1 1.0%	2 1.0%
Total	107 100%	103 100%	210 100%

Table 12: Participation in Community Activities

In sum, the sample size for the study includes a balanced number of female and male farmers owning and/or farming small plots of land at the tail ends of their respective branch canals, where they grow standard crops and – in some areas – rice and sugarcane. Most of them are middle-aged and their education varies from illiteracy to higher education. The majority does not belong to influential families and do not participate in community activities in their areas.

9. Findings and Conclusions

The situation of the female farmers in the selected areas has been analyzed using the following seven parameters:

- The role of female farmers in agriculture;
- The role of female farmers in irrigation;
- The water management interests of female farmers;
- Female farmers' knowledge of water management issues;
- Coping mechanisms of female farmers;
- Treatment of female farmers by the men;
- Participation of female farmers in the BCWUA.

These parameters provide an indication of the situation of female farmers in water management, with respect to their actual roles, knowledge, interests, coping mechanisms, and willingness to participate in the BCWUA. Evidently, the parameters have also been applied to the men.

9.1 The Role of Female Farmers in Agriculture

The water management situation of the female farmers is not only confined to their role in irrigation. Since water management is a comprehensive concept, and since we are dealing with farmers, it is important to find out the agricultural tasks of the selected women. This sheds more light on their status, role and interests in the water management domain. This parameter therefore examines the farming tasks of the selected women, according to each farming category (i.e. landowner, tenant, wage laborer, etc).

9.1.1 The questions that should be asked are ...

- What are the agricultural activities that women perform?
- Are these activities different than those performed by men?

9.1.2 A Case in Point

One day, a man was passing by the 7 kirats of land owned by Fatma Mohamed Khalil, 47, at the end of Al-Sababa Canal (Sharqiya). He stopped and looked closely at her rice paddy. He did not look pleased.

Fatma saw him from a distance and went up to him. She knew him well. He was her neighbor who always helped her out with advice.

“Your crop doesn’t look well,” he remarked. *“It’s dirty.”*

Fatma understood what that meant: that her crop was riddled with weeds. *“I was challenged,”* she says, remembering the incident with a smile. *“I rolled up my sleeves, got down on my knees and weeded my land. I also went to the cooperative to buy more fertilizer. You should see my land now. It has brought more yield than his,”* she said, pointing to her neighbor, who was sitting at a corner, smiling at her submissively.

A widow in her late 30s, Fatma inherited the land from her husband and is also a sharecropper on 12 kirats at the end of the same canal. Although her two sons help, she does almost all the work on the lands, from planting the seeds to harvesting.

9.1.3 The facts indicate that ...

Most of the selected farmers (male and female) participate in agriculture, especially landowners, tenants and wage laborers. Of these, female farmers constitute the majority.

Degree of Participation	Gender			Farming Category					
	Females	Males	Total	Landowners Who Manage	Landowners who Do Not Manage	Tenants	Farmers Who Help Relatives	Wage Laborers	Total
Low	35 32.7%	46 44.7%	81 38.6%	10 21.3%	43 84.3%	8 18.2%	10 37.0%	10 24.4%	81 38.6%
Medium	67 62.6%	52 50.5%	119 56.7%	34 72.3%	7 13.7%	32 72.7%	16 59.3%	30 73.2%	119 56.7%
High	5 4.7%	5 4.9%	10 4.8%	3 6.4%	1 2.0%	4 9.1%	1 3.7%	1 2.4%	10 4.8%
Total	107 100%	103 100%	210 100%	47 100%	51 100%	44 100%	27 100%	41 100%	210 100%

Table 13: Degree of Participation in Agriculture

The selected farmers were asked if they performed the following agricultural tasks:

- Preparing the land (ploughing, leveling, etc)
- Planting of seeds / seedlings
- Adding fertilizer
- Harvesting
- Transport of harvest
- Spraying of insecticides
- Other (eg. weeding)

As Table 13 shows, a total of 119 farmers (56.7%) perform many of these tasks (i.e medium participation). Of these, the majority are, surprisingly, female (67 - 62.6%). Indeed, with the exception of preparing the land, most of the female selected farmers have indicated that they perform all the stated farming tasks.

A study on women and irrigation undertaken by the Fayoum Water Management Project in Abu Sir, Fayoum, revealed similar results: of all the women covered by the study, 62% performed two or more tasks in agriculture, of which weeding (52%), marketing (52%) and harvesting (47%) were the main activities.⁷

Understandably, those who participate most in farming are the landowners who manage (34 – 72.3%), tenants (32 – 72.7%) and wage laborers (30 – 73.2%).

Table 13 also shows a high percentage of farmers (81 – 38.6%) whose participation in agriculture is low. This may be attributed to the fact that the sample includes landowners who do not manage as well as those who help their relatives and may thus not perform all the tasks themselves.

⁷ Fayoum Water Management Project. *Women in Irrigation*, October 1997, p. v.

9.1.4 The female farmers say that ...

They perform most of the agricultural activities themselves.

Shaimaa Mahmoud, 37, a female landowner from the command area of Sahel El-Mata'na (Qena) – states: *“Women do everything, from weeding to harvesting to adding fertilizer. I am married and my husband farms my 8 kirats of land. But I farm with him too. I put fertilizer and plough with the hoe like a man. This is normal. Isn't it our source of livelihood?”*

The general understanding – supported by several studies – is that the tasks performed by women in agriculture do not exceed weeding, harvesting of “easy” crops such as cotton and vegetables, and other minor work. However, most of the selected women who farm perform many more tasks such as planting seeds and seedlings, adding fertilizer, spraying insecticides, and even helping to prepare the land.

In Nubareya, where agriculture is largely mechanized, many women are solely responsible for ploughing their lands. Since this is done with the help of machines, it is easy for women to supervise the process on their own.

In the Delta, especially in Beheira and Menufiya, the participation of women in agriculture is particularly high. This has not only been noticed by the research team, but has been confirmed by the selected male and female farmers.

In Beheira, where a large percentage of the lands is cultivated with cotton and where vegetables are also grown extensively, female labor is in high demand during the harvesting period. Female input in agriculture is also noticeable in Menufiya where vegetable cultivation is intense. In fact, several farmers in Menufiya told the research team that women are important decision makers with respect to the type of vegetable crops grown. Since much of the landownership size in that governorate is small, vegetables are grown abundantly, and female landowners not only select the type of crops to be grown but also sell their produce themselves in the local weekly markets.

In another Delta governorate – Sharqiya – the research team noticed the existence of many women who are “labor contractors,” responsible for recruiting female wage laborers and hiring their services to landowners.

With the exception of Qena, it was found that most female landowners who have rented out their lands still play a role in farming supervision. For example, a group of such landowners in the command area of Kamahin Canal (Beheira) have stated that they need to supervise the fertilization process themselves. *“We have all rented out our lands and we don't bother much about the planting and harvesting; that's the tenant's problem,”* one of the women said. *“But when it*

comes to putting fertilizer in our lands, we have to be present to see whether the tenants do it properly, otherwise they would damage the soil and that would affect the value of our lands.”

The majority of the selected female landowners and tenants – even in Qena – do not experience any difficulties in visiting and dealing with the agricultural cooperative. *“My father owns the land and I help him, but if he’s not free, I go to the cooperative to buy fertilizer and insecticides,”* says Hend, 18, who helps her father farm his land at the end of Sababa Canal (Sharqiya). *“Most of the people at the cooperative know me and other women, and we can go there at any time.”*

Even the common stereotype that women do not participate in the planting of rice because the process would involve raising their garments is no longer prevalent. Many of the selected female farmers in Sharqiya and Beheira – where rice is grown – have stated that they take part in rice planting without embarrassment, since, as one female tenant in Sharqiya said: *“there is no shame in earning your daily bread.”* This reality is also present in Fayoum:

“It is often stated that there is a strict gender division in tasks in the Fayoum: women work in the house, men work outside the house, earn money and take the decisions. When observing daily life and talking with women, exceptions to the rule appear. Officially, women do not work in rice cultivation, because it is unacceptable that women show their bare legs in the knee-high water. In actual fact, women do work in rice cultivation.”⁸

9.1.5 In Sum ...

Most of the selected female farmers have a sizeable input in agriculture. In many cases, this input extends beyond weeding and harvesting to heavier tasks such as planting of crops (including rice), adding fertilizer, and spraying insecticides. Even women who have rented out their lands were found to be involved in supervision of certain tasks such as adding fertilizer.

9.2 The Role of Female Farmers in Irrigation

It is almost impossible to analyze the water management situation of female farmers without gaining an insight of their role in irrigation. It is important to obtain a clear answer to the fluctuating debate within the MWRI about whether women irrigate or whether this is a strictly male domain. This parameter therefore

⁸ Ibid, p. 23.

investigates whether the selected female farmers do in fact irrigate and whether they realize that they play this role.

9.2.1 The questions that should be asked are ...

- Do female farmers irrigate?
- If so, what irrigation tasks do they perform?
- Are female farmers obliged like men to irrigate their lands at night?
- If so, do they encounter the same problems as men?

9.2.2 A Case in Point

Ma'zouza Mohamed El-Baz is one of many female farmers in the Delta who irrigate their lands themselves. An illiterate woman in her 40s, Ma'zouza owns 7 kirats at the end of Ibrahimeya Canal (Sharqiya) where she grows rice. But her small plot is not enough to feed her five children, so she also works as a wage laborer.

“Operating the pump is not difficult,” she says. “I just call anyone of my neighbors [in the field] and he does it for me.” She switches the pump off herself (an easier task than switching it on) and channels water to the *mesqa* and *merwas*.

Whether for her own land or those of others for whom she works, she knows when it is time to switch the irrigation pump on and off. *“When I need to irrigate, I just call anyone passing by,”* she says. *“Switching the pump on is the last of my worries. The water shortage problem is what bothers me.”*

9.2.3 The facts indicate that ...

The participation of female farmers in irrigation is relatively low.

Degree of Participation	Gender			Farming Category					
	Females	Males	Total	Landowners Who Manage	Landowners who Do Not Manage	Tenants	Farmers Who Help Relatives	Wage Laborers	Total
Low	45 42.1%	52 50.5%	97 46.2%	10 21.3%	44 86.3%	14 31.8%	12 44.4%	17 41.5%	97 46.2%
Medium	27 25.2%	22 21.4%	49 23.3%	18 38.3%	6 11.8%	10 22.7%	5 18.5%	10 24.4%	49 23.3%
High	35 32.7%	29 28.2%	64 30.5%	19 40.4%	1 2.0%	20 45.5%	10 37.0%	14 34.1%	64 30.5%
Total	107 100%	103 100%	210 100%	47 100%	51 100%	44 100%	27 100%	41 100%	210 100%

Table 14: Degree of Participation in Irrigation

The selected farmers were asked if they performed the following irrigation tasks:

- Operating the pump
- Switching the pump off
- Channeling the water to the *mesqa*
- Channeling the water to the *merwa*
- Other

As Table 14 indicates, the majority of the selected farmers have registered a low degree of participation in irrigation (97 – 46.2%). There are two reasons for this: a) this percentage includes farmers who do not manage their lands (44 – 86.3%), which means that they also do not irrigate them themselves; b) a sizeable proportion of the selected farmers are located in areas where irrigation takes place through a central pump station as in Nubareya (33 – 69.3%) and in the command areas selected in Beheira (40 – 84%), where IIP has installed pump stations. In these areas, irrigation is a central process controlled by the pump operator, and the farmers – according to their statements - have little to do with it.

Table 14 also shows a relatively low participation of the selected female farmers in irrigation (45 – 42.1%). However, when compared to the participation of males, the number female farmers whose input has been registered as “high” is greater (35 – 32.7% of women compared to 29 – 28.2% of men).

What do all these statistics mean? At first glance, the results in Table 14 show that women play a medium to low role in the irrigation process, even if their numbers are greater than men in the domain of “high” participation. However, their opinions and statements reveal a different picture (see *What the Farmers Say* below).

In a word, women do not *realize* that they play an important role in irrigation. They take their irrigation tasks for granted, perceiving them as part of their daily routine activities.

In a field study of female farmers in Menufiya and Minya, Soumaya Ibrahim points to the significant role played by them in the irrigation process:

“In Menufiya, women perform more than half of the entire labor process (56%) related to water management on the field level, (which include fetching water, opening water to the field, supervising water in the field, arranging and paying day laborers, cleaning the ditch). In Minya, cases in this sample, female farmers perform 40% of the water management labor process”⁹

The FWMP study conducted in Abu Sir (Fayoum) shows that 27% of the sampled women are involved in irrigation tasks, most of which are at the field level, like letting water on the land (23%) and cleaning canals (21%).¹⁰

9.2.4 The female farmers say that ...

The do not irrigate; but upon further probing, it appears that they take part in many activities and decisions related to irrigating their lands.

When a female farmer is asked the direct question: “do you irrigate?” her most likely response, as that of many of the selected women, is “no, that’s the man’s job.” But upon further probing into the different irrigation tasks, different responses come out. The following interview with a group of female landowners in the command area of Ibrahimeya Canal (Sharqiya) is a telling example:

Researcher: Can you operate the pump?
First woman: No, it takes strength. Only a man can do it.
Researcher: So who operates it for you?
Second woman: Our husbands, or sons, or anyone passing by in the field.
Third woman: In any case, the hose [connecting the pump to the *mesqa*] stays in the canal and we don’t pull it out. We just move the pump. So it’s easier for the men to switch the pump on for us.
Researcher: Can you switch off the pump?
Second woman: Yes, that’s easy.
Researcher: Do you channel water in the field?
[The women giggle and murmur amongst themselves]
Researcher: What are you smiling about?
Fourth woman: You’re asking us very strange questions: of course we channel water in the field! Or should we just leave it to

⁹ Ibrahim, Soumaya. *Gender Concerns in the Egyptian Water Management Sector*, Oct. 1999, p. 4.

¹⁰ Fayoum Water Management Project. *Women in Irrigation*, Oct. 1997, p. v.

flood the *mesqa*?

Most of the selected farmers (with the exception of those who do not manage or farm their lands) stated that they channel water in the field and can switch off the pump themselves after they have finished irrigation. More importantly, as the results above indicate, most of them know perfectly well when and for how long they should irrigate their lands. A group of women who assist their male relatives in Qena said: “we go to buy the gasoline for the pump and open the *mesqa* and *merwa* channels, so our husbands can irrigate. We also clean the channels of weeds and other waste so that the water can flow well.”

Even the male farmers admit that women irrigate. One such farmer is Selim Abdel Hamid, 43, a sharecropper working 12 kirats of land at the end of Sababa Canal (Sharqiya), where he grows rice: “I am a sharecropper, but to make ends meet, I work for a daily wage on other lands. If I’m working on a land close to mine, I operate the pump to irrigate both lands. But if I’m working far away, my wife rents a pump from another farmer and he switches it on for her. She is the one who then channels the water through the land.”

So, if women irrigate, why does this not appear in the study’s statistics? The answer is best expressed in the comments made by the FWMP’s study:

...it appears that women tend to ignore to mention certain tasks they perform. Irrigating the land is ... a task which in certain cases is not perceived by the as a separate activity. Also, they tend to mention only those activities for which they feel responsible (eg. household and animals). In this manner, women undervalue their own work and their contributions to agriculture and irrigation because they regard it as ‘no work’ or ‘helping out.’”¹¹

9.2.4.1 Night Irrigation

Night Irrigation		Gender			Farming Category					
		Females	Males	Total	Landowners Who Manage	Landowners who Do Not Manage	Tenants	Farmers Who Help Relatives	Wage Laborers	Total
Do you irrigate at night?	Yes	29 50.9%	28 49.1%	57	13 22.8%	15 26.3%	12 21.1%	5 8.8%	12 21.1%	57
	No	15 48.4%	16 51.6%	31	6 19.4%	12 38.7%	6 19.4%	4 12.9%	3 9.7%	31
Do you face problems?	Yes	25 58.1%	18 41.9%	43	10 23.3%	12 27.9%	10 23.3%	2 4.7%	9 20.9%	43
	No	5 33.3%	10 66.7%	15	3 20%	4 26.7%	2 13.3%	3 20%	3 20%	15

Table 15¹²: Problems in Night Irrigation

¹¹ Ibid, pp. v & 15.

¹² This table has been derived from the Group Discussions Form (Shown in Appendix 1). In contrast to the Individual Form (which is filled for each of the selected farmer), the total statistics for this one do not add

Night irrigation is a task in which female farmers sometimes find difficulties. Indeed, according to Table 15 above, 25 of the responses of the female farmers (58.1% out of the total responses of 43) demonstrate that this activity is burdensome to them, compared to 18 of the male responses (41.9% of the total responses). *“My husband is working abroad and I have two small children,”* says Azima Ahmed El-Shabrawi, 34, who works as a tenant cultivating rice and black-eyed beans on 1.19 feddans at the end of Ibrahimeya Canal (Sharqiya). *“The land needs to be irrigated for several days and when there is not enough water, I have to irrigate at night. I just lock the door behind my children and hope for the best. What else can I do?”* When asked if she can take a male relative with her, she replies: *“No, each person has his own problems and nobody has time for me.”*

Other women who are more fortunate than Azima do indeed take along male relatives with them. Om Hashem, an investor in the command area of Aysar El-Bustan Canal (Nubareya) takes her 15-year-old son with her when she opens the valves of drip irrigation in her field. Her neighbor, Om Kareem, who is also an investor, sends her two sons to the pump operator and stands by the pump in her field, ready to switch it off if the water supply weakens, so it does not break down.

Many more of the female farmers acknowledged that night irrigation is a cumbersome task, as it involves convincing male relatives to accompany them. In the rural areas of Egypt, this practice is essential, as women are not supposed to go to the fields at night unaccompanied by male relatives, or else they would risk their moral reputation.

But there are technical problems as well. The most common complaint amongst the selected female farmers, as well as the men, is the shortage of water in the canals, even at night. *“Sometimes, I go at night to irrigate, only to find no water. Other times, I find that the pump doesn’t work and I can’t find anyone to fix it at night,”* a female landowner in Menufiya (Al-Tawil Canal) said. With the exception of Nubareya, the majority of the farmers (male and female) stated that this is the biggest setback that they face during night irrigation.

Yet, some problems are particular to women. *“I can’t operate the pump on my own, so I search for a neighbor to do it for me. But sometimes, he leaves me and goes away and it’s not proper for a woman to be alone in the fields at night,”* says Fawzeyya Mohamed Ismail, 40, who owns and manages 5 kirats at the end of Ibrahimeya Canal (Sharqiya), where she grows rice. *“It’s no use taking another*

up to the total number of farmers since obviously, a Group Form covers more than one person (in the study, most Group Forms cover an average of 5-7 farmers each).

woman with me. It has to be a husband, son or father. Otherwise, people would start talking about me.”

In the command areas selected in Sharqiya, women face an additional problem. Some of them cannot afford to buy pumps and therefore have to rent them from other farmers. Others who do have pumps also find the need to rent extra ones to irrigate their rice paddies. Aside from other difficulties (see *Female Farmers’ Coping Mechanisms* below), these women cannot drag the rented pumps to their fields on their own, a problem made all the more difficult at night when there are few male farmers to help them.

9.2.5 In sum ...

Female farmers underestimate their role in irrigation. They do not realize that by deciding when to switch the pump on and off, by asking the assistance of men to switch on the pump for them, and by channeling water in the fields, that they are in fact irrigating the land. Most of them share the misconception that the person who irrigates is the one who operates the pump, and that all other tasks – which are perhaps more important – are secondary.

This observation points to the need for a clear definition of “he who irrigates.” This requires a clear distinction between the physical task of operating the pump and the decision making over irrigation, which includes knowledge of when to water the land and when to stop, knowledge of water management issues (eg. rotation cycle, maintenance) and deciding when to irrigate, for how long and how.

9.3 The Water Management Interests of Female Farmers

To obtain a clear understanding of the water management situation of the female farmers, it is essential at first to know what their needs and interests are and if these differ from those of the men. This parameter examines the water management interests of the selected female farmers as well as the way in which they express those interests.

9.3.1 The questions that should be asked are ...

- What are the needs and interests of female farmers in water management?
- Are female farmers capable of expressing these needs adequately?
- Are the water management interests of female farmers different than those of male farmers?

9.3.2 A Case in Point

A group of women and men who own and manage their lands on Kamahin Canal (Beheira) were asked the same question: What are your water management needs? Both groups complained of water shortage, but when compared, their responses reveal striking differences.

The response of the women:

“Our needs are simple: Bring us more water. Our crops are dying and there is not enough water in the canal. We don’t know why this is so. We just want the Ministry to give us more water.”

The response of the men:

“Our canal is 13 kms long an its diameter is only 1m, which is not enough for the smooth flow of water. The canal needs to be maintained. There are also five violations on its banks. But the biggest problem is that the IIP works on the canal have not been finished, and some farmers irrigate directly from the canal. What we want is for the IIP works to be completed and for the canal to be maintained.”

9.3.3 The facts indicate that ...

The main water management interest of all the selected farmers is to obtain more water for irrigation, especially during peak times.

Water Management Problems	Gender			Farming Category					
	Females	Males	Total	Landowners Who Manage	Landowners who Do Not Manage	Tenants	Farmers Who Help Relatives	Wage Laborers	Total
Water Shortage	30 52.6%	27 47.4%	57	12 21.1%	17 29.8%	13 22.8%	4 7.0%	11 19.3%	57
Maintenance	67 54.0%	57 46%	124	28 22.6%	36 29.0%	24 19.4%	17 13.7%	19 15.3%	124
Rotation system is not known	23 50%	23 50%	46	10 21.7%	14 30.4%	11 23.9%	3 6.5%	8 17.4%	46
Violations	22 51.2%	21 48.8%	43	10 23.3%	12 27.9%	8 18.6%	5 11.6%	8 18.6%	43
Pollution of waterways	48 48.5%	51 51.5%	99	26 23.9%	27 24.8%	25 22.9%	13 11.9%	18 16.5%	109
Farmers cultivating water crops at the canal head	21 75%	7 25%	28	4 14.3%	11 39.3%	5 17.9%	4 14.3%	4 14.3%	28
Farmers using more than their water share	45 73.8%	16 26.2%	61	11 25.6%	10 23.3%	9 20.9%	5 11.6%	8 18.6%	43

Table 16¹³: Farmers’ Water Management Interests

¹³ This table has been derived from the Group Discussions Form.

The selected farmers were asked to list the most salient water management problems in their respective command areas. As Table 16 above indicates, the most serious problems mentioned by them are: maintenance; pollution of waterways; farmers using more than their share of water; and water shortage.

The results in Table 16, however, are slightly misleading, since in the Group Discussion Form, the farmers responded *more than once* to questions related to maintenance, pollution of waterways, farmers using more than their share. Thus, several group responses were scored for these problems. However, only one question on water shortage was included in the form and therefore only one set of responses were tabulated.

However, through the group discussions, it was noted that the issue of water shortage was regarded by the farmers (male and female) as the most serious water management problem and the one that they complained about most frequently.

9.3.4 The female farmers say that ...

The biggest problem they suffer from is that of water shortage.

This is not a unique observation. In fact, the experience of Water Boards-IIIMP and other MWRI projects and activities have shown that the problem of water shortage is the most commonly stated by farmers. For example, in a focus group study of 55 women in Kafr El-Sheikh and Beheira, Sohair Yousef pointed out that the women mostly complained of the lack of adequate water for irrigation, especially during peak times. These complaints were felt most strongly from those who owned land at the tail ends of the *mesqas*.¹⁴

In almost all the selected command areas – especially the rice growing governorates of Sharqiya and Beheira - the farmers complained that the lack of sufficient water has given rise to low productivity on their lands. For example, the male and female farmers in Beheira stated that they could not pay their agricultural debts in 2006 on account of the low productivity caused by insufficient water. “*Can you imagine, we are farmers in Beheira, a leading rice producer, and we can’t grow rice at all, even though our lands are at the head of the [Kamahin] canal. All this is because there’s not enough water for us to grow rice,*” lamented Hanaa Hilal Abou Howash, 38, a woman who owns but does not manage her 2 feddans of cotton and vegetables.

¹⁴ Yousef, Sohair Kamal. The Role of Women In Irrigated Agriculture & Irrigation Improvement Project, p. 6.

Low productivity caused by water shortage could be a reason obliging farmers in the selected command areas to take on additional farming work (eg. to work as tenants, to farm more than one land, to work as wage laborers). This, however, could not be quantified in the study, although most farmers admitted that the low income obtained from farming only one piece of land forces them to take on additional farming work.

However, one effect that *has* been recorded in the study is the effect of the water shortage problem on the category of wage laborers. In the Kamahin Canal command area (Al-Gezira Village - Beheira), the selected female wage laborers said that they had to plant the rice seedlings twice because the first time the water supply was inadequate for their growth. Others in the neighboring command area of Herfa Canal (Ezbet Anwar Amer Village, Beheira) stated that they could not work for three consecutive days in June because of the lack of water. *“This may not seem like a long time, but because we depend on a daily wage, each day counts. We went to the fields on those days expecting to work, but the landowners told us to go back,”* one of them said. *“Our husbands [who are also wage laborers] together with the landowners wrote complaints to the Ministry and went to see the officials in Damanshour about the problem.”*

The same situation was recorded in Sharqiya, the other governorate selected for the study where rice is grown. In fact, in the Sharqiya command areas, the problem of water shortage forces landowners to pay extra fees to rent pumps. *“The shortage of water that we have suffered from this year has really reduced my income, because when the water is not enough, the landowners are forced to rent additional pumps at LE 20 an hour. Do you think that after they pay this extra money that they would have more left over to pay for a wage laborer like me?”* said Gehan Mohamed, 26, who works as a wage laborer on lands in the command area of Sababa Canal (Sharqiya).

For those with debts to pay, the problem of water shortage can have serious repercussions. *“One of the men in our area had to marry off his daughter,”* said Sa’eeda Ibrahim Eissa, 52, a female landowner from Ezbet Hafez El-Wakil (Herfa Canal, Beheira) who inherited 2.16 feddans from her deceased husband. *“He bought all her furniture and other requirements on debt. When the harvest was poor because of the lack of water, he could not pay his debts and he’s now in jail.”* Sa’eeda herself has not been spared the problem of water shortage; when productivity on her land is low, she sells her jewelry to pay off her debts. The other women present in the discussion – all of them widows like her - had other means: one of them has sent her son to work as a construction worker in Alexandria. Another one tells a strange story: *“The lands we have inherited from our husbands are reclaimed. This means that the islah [reclamation] cooperative controls what we farm and gives us the seeds and other inputs. I wanted to grow cotton on my land. So I went to the cooperative to receive my sac of seeds. They*

gave me an obligatory sac of wheat seeds with it. But I didn't want to plant wheat. So I sold it for LE 75 to pay for my share for repairing the [IIP] pump that irrigates my land."

The other major problem expressed by most of the selected farmers (male and female) is that of poor or lack of maintenance on the canal and/or drain. This problem has two dimensions, according to their responses: a) the waterway has not been maintained for long periods of time, extending beyond two years; b) the maintenance works are deemed by the farmers to be unsatisfactory. *"The workers don't bother to dig deep into the bottom of the drain, so in the end we don't feel much improvement,"* said Howeida Rashad, 35, a graduate who owns 5 feddans in the command area of Aysar El-Bustan Canal (Nubareya).

Whereas most farmers complained of too little water, some in Nubareya suffer from too *much* water. In the command area of Moghazi El-Aleya Canal, male and female farmers grow rice although this is legally prohibited and they are fined for it. The reason for this, according to them, is that the sub-surface drainage network in their area is blocked and needs to be rehabilitated. *"Hajj Arafa [a male landowner in the area] went to the District Engineer about this problem and he told him it was us who blocked these drains so we could grow rice,"* said Soheir Gomaa, 28, who owns and farms 1.12 feddans at the head of the canal. *"But this isn't true. The drainage pipes need to be renewed, and we have told the drainage department this but nothing has happened. Sometimes they send flushing machines but that doesn't work. In the end, we bought pipes for LE 2000 but that is not enough for the whole network because the area is large and not everybody wants to contribute."*

The other water management interest expressed by most farmers – especially those in the command areas of Qena and Menufiya – is the need to remove the agricultural and domestic solid waste that reduces the water flow in the canal. Here, it was the female farmers who placed more emphasis on the residential impacts of this problem (i.e. diseases caused by solid waste pollution),¹⁵ whereas the principal complaint of the male farmers is that such waste blocks the hoses of the irrigation pumps, which forces them many times to go down into the *mesqa* to clear them. Some women – especially the tenants and wage laborers – also spoke of this problem and stated that in the absence of men, they too are also obliged to go down into the *mesqa* to remove the waste.

Overall, it was observed that both the selected male and female farmers spoke of the same water management problems and expressed the same interests, with no

¹⁵ In fact, the research team noted that for all the selected areas – except in Qena where the problem of solid waste dumping is acute and where men were just as concerned about it as the women - it was usually the female farmers who were more expressive and vocal about the pollution hazards caused by irrigating from the drain and dumping solid waste in the canal.

variations. One such interest in the command area of El-Bareya Canal (Beheira) is the need for a bridge to connect the residents of the farmers (who reside in Village 1) to their lands on the other side of the canal. *“We all suffer from this problem, whether we are men or women,”* said Sanaa Ibrahim, 30, who assists her male relatives on 7.5 kirats of land at the head of the canal. *“We can’t take our animals to our houses to stay at the end of the day because we can’t take them across the canal. So we are forced to leave them at the field, but they get stolen.”*

9.3.5 In Sum ...

The main water management interest of the majority of the selected farmers is the availability of enough water for irrigation, especially during peak seasons. It was observed with almost no variation that the interests of the selected males and females were identical, although male farmers were more eloquent and precise in expressing their problems and needs than the females.

Besides water shortage, the farmers complained of lack of proper maintenance, the restriction of water flow owing to the dumping of solid waste, and the need for infrastructure such as bridges.

9.4 Female Farmers’ Knowledge of Water Management

Issues

The fact that the selected farmers complain about water management problems does not mean that they are knowledgeable about water management issues. This parameter investigates whether the female farmers are aware of their water management situation, and compares this knowledge to that of the men.

9.4.1 The questions that should be asked are ...

- How much do female farmers know about the water management situation in their respective command areas?
- Does this knowledge differ from that of the male farmers?
- Do the female and male farmers know about the BCWUA in the areas where it exists?
- Does the knowledge of female farmers about the BCWUA differ from that of the male farmers?

9.4.2 A Case in Point

An interesting discussion was held with a group of women in Tafnis Village, Qena, who own land but do not farm. At first glance, they do not appear to know much about water management issues. But this, as it turned out, is not the case.

- Researcher:* All of you own land. Do you farm?
First woman: No, we don't, and we don't know anything about farming or irrigation. It is the men who do.
Second woman: Each one of us has her husband, children or [male] family member to take care of her land for her. So we don't know anything.
Third woman: We're just concerned with raising poultry and taking care of the house.
Researcher: But don't you know if there are any problems with your lands?
First woman: Of course. There are many problems. We know that the men sit together to talk about them. In the end, they either solve them or go to an irrigation official.
Second woman: We also know that our neighbors suffer from the same problems.
Researcher: So what do you think these problems are?
First woman: Water doesn't flow well in the canal. The canal needs to be regularly maintained
Second woman: Also, the rotation cycle needs to be fixed and known by the farmers, so that the men can know when to irrigate.
Researcher: So you *do* know about farming and irrigation.
First woman: [*laughing*] Of course we do! What did you think? Don't we all live in the same area?
Second woman: But irrigation and all those other issues are the concern of the men, not us.
The other women: Yes, of course. It's their domain.

9.4.3 The facts indicate that ...

The selected farmers possess a high degree of knowledge of water management topics, and this was observed equally for women as well as men.

Degree of Knowledge	Gender			Farming Category					
	Females	Males	Total	Landowners Who Manage	Landowners who Do Not Manage	Tenants	Farmers Who Help Relatives	Wage Laborers	Total
Low	13 12.1%	12 11.7%	25 11.9%	3 6.4%	3 5.9%	3 6.8%	3 11.1%	13 31.7%	25 11.9%
Medium	44 41.1%	34 33.0%	78 37.1%	14 29.8%	19 37.3%	19 43.2%	9 33.3%	17 41.5%	78 37.1%
High	50 46.7%	57 55.3%	107 51.0%	30 63.8%	29 56.9%	22 50.0%	15 55.6%	11 26.8%	107 51.0%
Total	107 100%	103 100%	210 100%	47 100%	51 100%	44 100%	27 100%	41 100%	210 100%

Table 17: Knowledge of Farming Categories of Water Management Issues

The selected farmers were each asked if they knew of the following water management topics:

- The name of the branch canal within the farmer's command area;
- The name of the main canal;
- The name of the District Irrigation Engineer;
- The rotation cycle on the branch canal;
- The name of the BCWUA Chairman (in the areas where BCWUA exists);
- The best times for irrigation of the farmer's crops;
- Who determines that time for irrigation;
- When to operate and when to switch off the pump;
- The name of the District Drainage Engineer;
- The type of drainage system in the farmer's land;
- The entity responsible for maintenance of the waterway;
- When the maintenance is performed;
- The name of the *bahari* for the command area (if exists).

As Table 18 indicates, the majority of the selected farmers (107 – 51%) possess a high degree of knowledge of these topics, and almost half of these are females (50 – 46.7%). Even amongst those whose knowledge is rated at a medium level (78 – 37.1%) and those whose knowledge is low (25 – 11.9%), the number of females is close to that of the males, indicating that there is no gender discrepancy.

Evidently, the farming category that has revealed the highest knowledge of the above-mentioned water management topics is that of the landowners who manage their lands (30 – 63.8%). This is understandable given their direct and frequent involvement in farming.

The farming category that knows least about water management topics is that of wage laborers (13 – 31.7%). This observation is also plausible because (as will be explained in detail below), wage laborers in many areas are not confined to one plot of land but may work in different locations. For this reason, they may not be

able or interested to know of all the water management characteristics of each area.

An interesting observation appears when the levels of knowledge are compared between the selected governorates. As Table 18 below indicates, the greatest number of farmers who recorded a high knowledge are those from Qena (36 – 73.5%) of which (50 – 46.7%) are female. This fact negates the statements of most of the female farmers in Qena, who claimed that they knew little of water management issues, these being the domain of the men only.

Degree of Knowledge	Gender			Governorate					
	Females	Males	Total	Qena	Sharqiya	Nubareya	Beheira	Menufiya	Total
Low	13 12.1%	12 11.7%	25 11.9%	4 8.2%	2 4.8%	11 33.3%	4 10.0%	4 8.7%	25 11.9%
Medium	44 41.1%	34 33.0%	78 37.1%	9 18.4.8%	17 40.5%	10 30.3%	19 47.5%	23 50.0%	78 37.1%
High	50 46.7%	57 55.3%	107 51.0%	36 73.5%	23 54.8%	12 36.4%	17 42.5%	19 41.3%	107 51.0%
Total	107 100%	103 100%	210 100%	49 100%	42 100%	33 100%	40 100%	46 100%	210 100%

Table 18: Farmers’ Knowledge of Water Management Issues – by governorate

9.4.4 The female farmers say that ...

Their knowledge of water management topics is limited. Yet, further probing during discussions with them revealed a higher degree of knowledge than what they are willing to admit.

9.4.4.1 Knowledge of Water Management Topics

The majority of the selected female farmers are knowledgeable about the aspects directly related to irrigation, namely when to switch the pump on and off, the best times for irrigation, and the entity responsible for maintaining the waterway. Many of them – especially those who farm – also knew the name of the branch canal.

Apart from these aspects, most of the female farmers were not familiar with the rest of the above mentioned water management topics. But then again, neither were many of the male farmers. The following topics were not known by the majority:

- The rotation cycle on the branch canal;
- The name of the District Drainage Engineer;
- When the maintenance is performed;

What the men *did* know more than the women were the following topics:

- The name of the main canal;
- The name of the District Irrigation Engineer;
- The name of the BCWUA Chairman (in the areas where BCWUA exists);
- The type of drainage system in the farmer's land;

At face value, the female farmers would appear to have limited knowledge of their water management environment. But through intense discussions, a different picture emerges.

Farid Abdo Ziad, 50, is an illiterate who owns and farms 18 kirat of land at the end of Ibrahimeya Canal (Sharqiya) where she cultivates rice with the help of her two older sons. *"I don't know about anything except my house and my land,"* she states. Yet, upon further probing, she admitted that she knew about the type of drainage in her land, when the waterways are maintained, who maintains them, and the most suitable times for irrigation. Apparently, she knows more than she is willing to admit.

In Qena, where many female farmers emphatically claimed not to know much about water management issues, the results of the intense discussions contradicted these statements. A typical example was Nagwa Fakhry Fahmy, 30, who helps her brother cultivate tomatoes, *molokheya* and okra in 1.12 kirats of land at the end of Nogoo' Bahari Canal. *"I don't know much about farming or irrigation,"* she claims, *"but I hear my brothers saying 'it's time to irrigate tomorrow' or 'we have irrigated the land today.'"* However, when asked about the topics mentioned in the study forms, she responded that she knew about them *all*, except for the name of the District Engineer and the rotation cycle.

Similarly, in Nubareya (as in most of the selected command areas), most of the female graduates who do not manage their lands demonstrated a deeper knowledge than what they professed. *"We gave the responsibility of managing our lands to our relatives, and they know more about the problems of the land and irrigation more than we do."* Such was the initial response of a group of female graduates (Om Yasser, Hoda, Ragaa' and Nafisa) who live in Naguib Mahfouz village and own lands served by *Mesqa* 10, Aysar El-Bustan Canal (Bustan District). Later on in the discussion, however, Ragaa' spoke of the true picture: *"We know that our lands suffer from lack of water, and that our relatives are constantly visiting officials at the Ministry about it, and that nothing much changes. We also know that there is a BCWUA in our area and that it is trying to solve our problems. It is normal that we know all this because we all live in the same village and share information."*

To a large extent, this last statement is true for the female farmers in all of the selected command areas. They are not as isolated from information as outsiders may think. In one way or another, information trickles down to them, whether

through a spouse, cousin, or neighbor; and when the topic of conversation involves issues of bread winning like the status of the land, most of them are well aware of what goes on. In fact, many of them make it a point to know. Again in conservative Qena (Nogoo' Bahari Canal), a female landowner made the following statement: *"I find no problem in asking my neighbor about when the water will come next in the canal [i.e. the rotation cycle]. He in turn asks the District Engineer and then tells me. Also, if I finish my turn early, I tell him so that he can start irrigating his land. There's nothing wrong with that. It's our daily bread [akl eish]."*

Even the female landowners who do not manage their lands revealed a deeper knowledge of water management issues than expected. Most of them stated that they acquire this knowledge from their neighbors, spouses, relatives, and even passersby in the village. *"Although I have rented out my land and have very little to do with it, in the end I am the wife of a graduate and live in the same village [El-Shaarawi] as the rest of the farmers. So I know all there is to know about agriculture, irrigation, drainage and all the problems that the graduates face,"* said Mervat El-Sayed Ibrahim, 32, who owns 5 feddans of peach orchards at the end of Aysar El-Bustan Canal (Nubareya).

In the nearby village of Abou Taleb and within the same command area, another graduate – Souma Abdallah Mohy Eddin, 35, who owns 5 feddans where peanuts and maize are grown – spoke of the situation of most of the absentee female graduates in Bustan District: *"I am from Cairo and own land here. I have rented it out to someone from the village and he takes care of all the farming, irrigation and drainage. But I call him from time to time and know about all the problems of the lands here. We all try to solve them between ourselves. For example, just several months ago, we all collected money to maintain our field drains."* When asked if she knew about the water management issues mentioned in the study, Souma responded with a prompt "yes" to all except the names of the Drainage Engineer and the BCWUA chairman.

It is important to note, however, that the knowledge of female farmers is not as deep and comprehensive as that of the male farmers. Indeed, it was unanimously observed that the selected male farmers were more articulate and described their water management situation in more detail and with greater accuracy than the women. Nevertheless, the women are not ignorant of water management topics. Although their knowledge may be sketchy and their mode of expression ambiguous, the selected female farmers do not conform to the commonly held stereotype that women are unfamiliar with water management issues. At first glance, the following responses from the female farmers may seem superficial; nonetheless, these responses indicate that they do have some access to information on water management:

- *“I don’t know what the drainage system in my area is. All I know is that when we irrigate, and if there is excess water, it goes off into that drain over there where everybody dumps their garbage. Also, every few years, I see the maintenance machines. I also know that the best time to irrigate is before the sun becomes too hot, which means early in the morning or at sunset.”*

Ateyat Mohamed Al-Nabawi, 60, an illiterate landowner who lives in Asfoun Village and cultivates okra, chickpeas and tomatoes in 2.3 feddans along Ganabeyet Asfoun Canal (Qena).

- *“The canal is not pitched in some areas and badly needs maintenance. I see the men going off to the District Engineer, but nothing gets solved. In the end, we have to irrigate from the drain, but the water there is bitter and is bad for the crops.”*

Female landowner who does not manage her land, Kamahin Canal (Behira).

- *“In real life, the man who controls the distribution of water in our area is not the District Engineer. It is the bahari. He is the one closest to our lands.”*

Om Alaa’, female graduate who does not manage her land along Aysar El-Bustan Canal (Nubareya).

- *“Our lands have these underground pipes for drainage. People call them “covered” or “sub-surface” or something like that. Anyway, they are not good because they suck the water faster than we put it in. That’s because we put in little water [from a groundwater source] since there’s not enough to go around. And I see the farmers dumping waste in the collectors. This is bad because it blocks the pipes.”*

Hend Mohamed, 18, who helps her father cultivate 7 kirat at the end of Al-Tawil Canal, (Menufiya).

It cannot be denied, therefore, that most female farmers – those who farm and even those who do not – have at least a fair knowledge of the water management characteristics and issues in their areas. But why do these women hesitate to admit their level of knowledge? This observation was noted in the FWMP study and the reasoning behind it is aptly stated:

“An important observation was made: some women did not mention to be working in irrigation when being asked for their daily work. However, in the quantitative survey, they indicated to irrigate in the field. Their reaction was: ‘when I am working in the field in weed control, I just open the dikes and let the water in while I am working. This is not something special or a separate activity. Just something small. I did not see it as important to mention...Another notice made by one of the women organizers was that women seemed only to mention those activities which fall under their responsibility. Thus excluding ‘helping’ on the land.”¹⁶

When it comes to the category of wage laborers, however, the degree of knowledge varies from one governorate to another.

¹⁶ Fayoum Water Management Project. *Women in Irrigation*, October 1997, p. 15.

In Qena, wage laborers are mostly hired from distant locations. Like construction workers, they sit in public areas like markets or on bridges, waiting to be recruited by landowners. Consequently, few of them stay long enough in one area to obtain a deep knowledge of its water management situation. Indeed, most of the selected wage laborers (male and female) from Qena registered negative responses when asked if they knew of the water management topics mentioned by the study.

At the other extreme, the majority of the wage laborers in Nubareya have shown a high degree of knowledge, even exceeding that of the landowners. As one of them who works in the district of Ashar Talaf put it: *“In our area, most landowners are employees and don’t know much about farming. But because we go to different lands and they are all not so distant from each other, we know more about the situation of each land, even more than it’s landowner.”*

In the other Delta governorates, the level of knowledge of wage laborers varies from these two extremes. For example, some wage laborers who only worked in one branch canal command area were found to be extremely knowledgeable of its water management situation. Others who worked in several command areas were unfamiliar with water management issues and only cared about earning their daily bread.

9.4.4.2 Knowledge of the BCWUA

When it comes to knowledge of the BCWUA, a discrepancy was observed between the selected male and female farmers. The majority of the female farmers had no idea of the existence of the BCWUA even in the areas where this organization has been established, and by extension, they have no knowledge of its activities, benefits and members. In contrast, almost all of the selected male farmers knew this information and were able to describe the activities of the BCWUA lucidly.

The following two responses typify the degree of knowledge of female farmers:

- *“I don’t even know the name of the canal, so how do you expect me to know of this organization?”*
Fawzeya Mohamed Ismail, 42, an illiterate landowner who cultivates rice in 5 kirats at the end of Ibrahimeya Canal (Sharqiya).
- *“I have never heard of this BCWUA before. I have never seen it work. In any case, I don’t read nor write, so I don’t know much.”*
Khatra, 60, a female landowner who doesn’t manage her 15 kirats at the head of Ibrahimeya Canal (Sharqiya).

Even the female members of the BCWUA were not familiar with the organization’s activities, and some of them did not even know the Chairman. One of the selected female farmers in Sharqiya is an ABU representative. That a

woman should be selected as an ABU representative is a rare phenomenon. However, that woman, Karima Mohamed Ahmed, 33, has very scant knowledge not only of the BCWUA but of the water management situation in her area. Married with no children, Karima owns 1 feddan at the head of Ibrahimeya Canal, where she cultivates rice and maize; she also assists her father-in-law in farming the same crops in his 1.2 kirats of land, also at the head of the canal. She does not know the other ABU representatives, nor even the name of the Chairman. Part of the reason, however, is the inactivity of the BCWUA. *“Since they elected us two years ago, I haven’t seen anyone nor has anyone from the BCWUA contacted me,”* Karima said. Another female ABU representative of the same BCWUA – Ibtisam El-Sayed Metwalli, 35, who owns 11 kirats at the head of the canal and grows rice – gave a similar response: *“I don’t even know if the Chairman is alive or dead. I haven’t seen him for so long.”*

When these responses are compared with those of a *male* ABU member of the same BCWUA, a gender discrepancy is immediately observed. Tharwat Mohamed Baz, 51, owns 1.12 feddans at the end of the canal gave the following response when asked the same question as the females about the BCWUA: *“Since we were elected, we have been communicating the problems and the needs of the farmers within our base unit to the Executive Committee. We try to solve some of these problems internally within the BCWUA. Otherwise, we communicate them to the District Engineer.”*

To be sure, not all the ABU representatives within that BCWUA are as knowledgeable and active as Tharwat. For example, El-Shahat Mohamed Ibrahim, 53 (who owns and farms 1 feddan of rice and maize at the end of the same canal) confessed that as an ABU representative, *“I haven’t done anything.”* But he at least knows the name of the Chairman and other information which his female colleagues were unfamiliar with.

9.4.5 In Sum ...

Intense discussions with the female farmers revealed that their knowledge of the water management characteristics and issues in their areas is far from minimal. Most of the selected farmers had a reasonable knowledge of irrigation aspects such as when the pump should be operated and switched off, the best time for irrigation, and the entity responsible for maintaining the waterway. When compared to the level of knowledge of the men, this seems small. In fact, it was observed that most of the selected male farmers not only knew of most of the water management topics proposed to them, but were able to express their water management needs and problems more accurately than the women.

However, the results of the group discussions have shown that female farmers – even those who do not manage their lands – are not ignorant of the water management situation in their areas. Their knowledge, however scanty and superficial, is not inconsiderable. This means that women are not barred from information and do have access to it. Such access, however, needs to be developed and increased (see *Conclusions*).

Although the knowledge of the female farmers could be clearly discerned, they were not convinced or willing to admit of this knowledge. The simple, but not-so-obvious reason for this is the following: women do not realize or accept that they irrigate. This important observation leads to conclusions that are explained later, for consideration by the Water Boards-IIIMP and the MWRI decision makers in general (see *Conclusions*).

The gender discrepancy in the domain of knowledge is even more noticeable when it comes to the BCWUA. In those areas where BCWUAs have been established, only a handful of female farmers were aware of this organization in terms of its activities and members. This contrasts heavily with the knowledge of the male farmers.

Indeed, it was noticed for almost all of the selected female farmers that whatever knowledge they possessed seemed general and in many cases, incomplete. Upon further probing it was discovered that most of them obtain their information from other sources, and not directly. These sources are usually men – i.e. relatives, neighbors, and other villagers. This clearly points to a gender discrepancy. Although the women are not totally ignorant, their sources of information are second hand, as opposed to the men who obtain their information directly from the sources concerned. This is a gender gap and points to the fact that women have weaker access to information than men.

These observations point to the need for revisiting the gender policies adopted within the BCWUAs, especially in the realm of communication to its female members (see *Recommendations*).

9.5 The Coping Mechanisms of Female Farmers

A major aim of this study is to investigate the coping mechanisms that female farmers employ to address their water management interests and solve their problems. It is also important to compare these mechanisms with those used by the men, in order to determine whether there are gender differences or biases. This parameter therefore examines the coping mechanisms employed by both genders, with particular emphasis on the female farmers.

9.5.1 The questions that should be asked are ...

- What means or mechanisms do the female farmers resort to if they have needs to address or problems to solve?
- Do these mechanisms include resorting to the BCWUA (in the areas where it exists?)
- Are the female farmers satisfied with the coping mechanisms that they employ?
- Are the coping mechanisms of the male farmers different?
- Are the male farmers satisfied with the coping mechanisms that they employ?

9.5.2 A Case in Point

The following two examples demonstrate a clear discrepancy in the coping mechanisms employed by women and men:

Example 1:

Shadia Saleh Awadallah, 30, lives in Kashmiri village (Sharqiya) with her husband and four children. Her husband is disabled by illness and can no longer work the 12 kirats of land at the tail end of El-Sababa Canal.

So Shadia has no choice but to farm the land herself. Like most farmers in her area, Shadia cannot find enough water in the canal to irrigate her rice paddy during the peak season. So she goes to the pump pit to rent a pump. But this is not always an easy solution for her.

“I don’t know the owners of the pumps well,” Shadia says. “Their lands are not near mine. Once I went to one of them who was standing at the nasba [pump pit] and asked him to sell me a couple of hours on his pump. He told me ‘don’t even think of it. There are three others before you.’ I didn’t know what to do. My crops needed water. I went crying to one of my neighbors [in the field] and he came with me to that man. He told him ‘shame on you! Can’t you see that she’s a helpless woman farming the land on her own?’ The man’s face went red with embarrassment and he agreed to let me rent his pump right away. He dragged it over to my land and switched it on for me. I channeled the water to my merwas and felt relieved.”

Example 2:

“Because we are farmers, we always meet each other in the field,” says one of a group of male tenants in the command area of Kamahin Canal (Beheira). “If we

don't meet in the field, we see each other at the mosque, café, at funerals or weddings. When we see each other, we always talk about the land and the canal. If there are problems, we talk about them. If we can't solve these problems ourselves, we delegate one or more of us to go to the District Engineer. We can also go to other officials we need to.

“We also help each other. We lend one another [agricultural] tools , we give each other advice on farming. In short, we share everything, and we try to solve our problems together.”

9.5.3 The facts indicate that ...

The majority of the selected farmers (male and female) cannot solve their water management problems themselves as individuals and resort to various coping mechanisms.

Coping Mechanisms		Gender			Farming Category					
		Females	Males	Total	Landowners Who Manage	Landowners who Do Not Manage	Tenants	Farmers Who Help Relatives	Wage Laborers	Total
Do you seek support from others to solve your problems?	Yes	38 56.7%	29 43.3%	67	16 23.9%	19 28.4%	13 19.4%	8 11.9%	11 16.4%	67
	No	6 28.6%	15 71.4%	21	3 14.3%	8 38.1%	5 23.8%	1 4.8%	4 19.0%	21
In the end, do the problems get solved?	Yes	19 65.5%	10 34.5%	29	4 13.8%	8 27.6%	7 24.1%	5 17.2%	5 17.2%	29
	No	22 41.5%	31 58.5%	53	15 28.3%	18 34.0%	10 18.9%	4 7.5%	6 11.3%	53

Table 19¹⁷: Farmers’ Coping Mechanisms

As Table 19 indicates, 67 of the farmer group responses indicate that they do not solve their problems themselves but seek support from other channels. Of these, 38 (56.7%) of the responses are those of the women. The responses are equal for all farming categories; that is, they all seek support from others.

However, most of the farmers (53) admit that these coping mechanisms are not effective in solving their problems. This opinion is shared almost equally by the men (31 – 58.5%) and the women (22 – 41.5%).

¹⁷ This table has been derived from the Group Discussions Form.

9.5.4 The female farmers say that ...

They almost always resort to the men to help them solve their water management problems.

These men are either well-known and respected people (or neighbors in the field) who help them with individual issues or men delegated by the rest of the community to contact the concerned officials at the MWRI or other institutions.

In contrast, the coping mechanisms of the male farmers mostly involve consulting each other about the problems and attempting to solve them between themselves; most of the male farmers also directly contact officials at the local MWRI departments.

In short, the coping mechanisms employed by the men are more direct and formal than those employed by the women. Following are the most commonly used mechanisms used by the women, out of which some are also resorted to by the men:

9.5.4.1 Delegating community leaders

Most of the selected female farmers have stated that when it comes to problem solving of water management problems, it is the responsibility of the men and not the women.

“Our problem is that the canal is wide at the head and narrow at the tail,” said Om Mohamed who helps her relatives farm land along Nogoo’ Bahari Canal (Qena). *“The men take important people like members of the Local Popular Council or the Agricultural Cooperative and they all go to the offices of the Ministry. These important people also organize the irrigation turns between us.”* Another group of women from the same area also mentioned that people from the community *“whose words are heard in the village”* like the mosque imam, *Omdah* and *Sheikh El-Balad* *“are very good at resolving conflicts between us by calming this one and that one.”*

This coping mechanism is not adopted by the women only. In fact, most of the male farmers stated that they do not contact officials individually but prefer to delegate community leaders who can speak on their behalf. In fact, some of the male farmers (landowners and those who help their relatives) in the command area of Ibrahimeya Canal (Sharqiya) stated that they prefer to seek the *Omdah* rather than the BCWUA when they encounter water management problems.

Previous studies have shown that the *Omdah* is an important community leader in rural Egypt who is frequently consulted for conflict resolution and problem solving. In her study of female farmers in Minya, Assiout and Sharqiya, Soumaya Ibrahim concluded that “there is no direct contact between villagers and the institutions as all communication is performed by the village mayor [i.e. *omdah*]. In fact, he solves all the problems by himself and only those problems he is not able to solve he refers to the concerned departments. Sometimes he asks villagers to sign their petition and then he transfers it over to the institutions.”¹⁸

In short, most of the selected farming communities prefer to address their water management problems by gathering together to discuss them and then to contact the concerned officials through written complaints and/or visits. All of these coping mechanisms are performed by the men. “*We [women] rarely get together in formal meetings. Yes, we see each other almost everyday and we talk about our problems, but [not in an organized fashion] like the men,*” said a female landowner from the command area of Kamahin Canal (Beheira).

In some ways, this statement is not entirely accurate. In most of the selected areas, it was discovered that women *do* get together in formal meetings, when the topic concerns a domain that is considered by the community to be their responsibility, notably health. For instance, many of the selected female farmers in the governorates of Beheira, Sharqiya and Menufiya stated that they attended several meetings in the health clinics to learn about the dangers of avian flu and the precautions to be taken to guard against it. These women also admitted that they frequent the health clinics to attend seminars and sessions on vaccinations, reproductive health and other issues that directly concern them.

In short, therefore, women are not restricted from participating in community gatherings and other activities; and they do so willingly, as long as the issue concerns them. But when it comes to domains like water management which is the *de facto* responsibility of the men, the participation of women is not easily sanctioned, either by the men or by the participating women themselves. This conclusion will be expounded on later (see *Conclusions*).

It comes as no surprise, therefore, that when it comes to water management activities like maintenance for example, it is again the men who take the lead. “*The men in our village collect money for maintenance of our mesqas,*” said Nadia, a female landowner in the command area of El-Sababa Canal (Sharqiya). “*They go and do the job themselves. As for us [women], we hire a man for LE 20 and he maintains the mesqa for us. The most that we are expected to do is to help the men collect the money from the female landowners. But we can’t do anything beyond that, and why should we? It’s the men’s job; let them take care of it!*”

¹⁸ Ibrahim, Soumaya. *Towards a Gender Policy in Water Management*, August 2002, p. 12.

The majority of the selected women also stated that they have never gone by themselves to the offices of a local official to seek help in addressing their water management problems, for the same reason that such an activity is best delegated to a male member of the community. *“Do you think an engineer from the Ministry would listen to someone like me?”* said Om Mahmoud, a tenant from the command area of Birket El-Sab’ (Menufiya). *“I don’t even know where his office is. Who is more suitable to talk to him, a helpless woman like myself or a man whom we all respect and listen to in the village?”*

9.5.4.2 *Waiting for the next turn*

As mentioned before, the most serious problem for the selected farmers is the lack of sufficient water during the peak season. Most of them (male and female) can do nothing but wait for the next turn if they missed the previous one or did not irrigate sufficiently.

In some areas like in the command area of Al-Bareya Canal, farmers agree amongst themselves to give a day or two extra from the rotation cycle to those who have missed their turn. In Nubareya and Beheira, this rearrangement is performed by the pump operator. *“When I don’t find water during my turn, I wait for it again or I go to ask my neighbor who has water to give me a few hours or so from his time. Both of us make this arrangement with the pump operator,”* said a female landowner from the command area of Kamahin Canal (Beheira).

Such coping mechanisms are not uncommon in most rural areas in Egypt. Field studies conducted by the Water and Stability Project in Bani Saleh area (Fayoum) revealed that *“women alternate with one of the village men in case her irrigation turn is scheduled late at night, which is an act of chivalry from the villagers.”*¹⁹

9.5.4.3 *“Negotiating” with the Bahari or Pump Operator*

In some areas, the *bahari* or pump operator has to be “cajoled” by the farmers to give them extra water. This problem is more pronounced in Nubareya, where both the female and male farmers complained of the need for closer supervision by the MWRI engineers on the pump operators at the *mesqas*. *“Sometimes, when we can’t find enough water because of power cuts, we are forced to give money to the bahari [i.e. the pump operator] so he could give us more water. What else can we do? It’s better than watching our crops die, isn’t it?”* said Mostafa Ali Morsi, 32, a graduate who farms his land along Aysar El-Bustan Canal (Nubareya). Another graduate from the same group – Ibrahim Nasrallah, 36 - added: *“It’s of no use to go to the irrigation department. We did go once but they told us the problem was*

¹⁹ Water and Stability Project. *Situational Analysis of the Irrigation Water in Fayoum*, March 2007, p. 12.

out of their hands, that there are others along other canals who are in the same situation as us, and that it is a bigger problem of water distribution in the entire area.” The female graduates who were selected from the same area also gave the same response.

In the command areas selected in Beheira, where there is improved irrigation, the female and male farmers expressed the same complaint. *“Sometimes I give the bahari some money and he promises to pump water to my land by the time I go back to it. But then his shift for the day ends and the one who comes after him doesn’t give me water;”* lamented a woman who owns land by Hirfa Canal (Beheira).

This problem has been highlighted by other studies such as that of Soumaya Ibrahim who noted that farmers in Minia, Assiut and Shariqiya were obliged during times of water shortage to give money to the *bahari* to obtain extra water.²⁰

9.5.4.4 Digging wells

In the selected command areas in Menufiya, Sharqiya and Nubareya, many of the farmers have resorted to digging wells as a coping mechanism to obtain extra water. Most of them dig private wells in their fields. But some, like the residents of Qorein village (Berket El-Sab’ District – Menufiya) have dug community wells. More than a decade ago, around 30 landowners contributed money (LE 50-100 per 10 kirats of land), and formed an informal organization responsible for collecting fees for maintenance and repairs, which they pay willingly.

Although this coping mechanism has saved their yields from dropping, most of these farmers are not satisfied, stating that the groundwater – which has a high mineral concentration is *“too bitter for our crops”* and *“paralyzes them.”* To get around this problem, some investors in Nubareya like Om Hashem (Aysar El-Bustan Canal) choose to irrigate only certain crops with groundwater. Om Hashem uses her well to irrigate her orange orchards and saves the water coming from the canal for her peaches, grapes and apples.

9.5.4.5 Renting Pumps

In the governorates of Sharqiya and Menufiya, farmers resort to renting pumps during periods of water shortage. For some female landowners in Sharqiya who

²⁰ Ibrahim, Soumaya. *Towards a Gender Policy in Water Management*, August 2002, p. 15

cannot afford to buy their own pumps, renting pumps is their coping mechanism for irrigating their lands.

The practice of renting pumps has been observed amongst both male and female farmers. For instance, in the command area of Al-Tawil Canal (Menufiya), this (along with groundwater) is their main coping mechanism in dealing with water shortage. The water flow in the canal has been drastically reduced as a result of poorly executed covering at the head, along with the dumping of household waste. Consequently, farmers rent pumps which they place directly on the canal and which they rent for LE 6 per hour.

While this coping mechanism is not favored by all, the female farmers were noted to experience greater problems than the men. One of them is the difficulty in finding a farmer willing to rent out his pump. *“When water is not enough, I ask the men to rent out their pumps and they refuse, giving excuses like the pump is too old. But the real reason is that they too need their pumps to irrigate their own lands, because with so little water, all our crops are thirsty,”* said Sa’deya Mahmoud, 45, a woman who owns 12 kirat along Sababa Canal. *“But I have the feeling that if I were a man, they wouldn’t hesitate to let me use their pumps. Men have more respect for each other than for women.”*

The second, more tangible problem is that of physically dragging the rented pump to the land that needs to be irrigated, a task that can only be done by men. Aleya, a female landowner from the command area of El-Sababa Canal (Sharqiya) is one of those affected: *“Usually, the farmers who are willing to let me use their pumps are far from my land. Since the pump is too heavy for me to drag over to my land, I have to use their pumps while they are on their lands. By the time the water reaches my land, the flow is weak. Also, the farmers who own lands between the rented pump and my land complain that they are getting water when they don’t want it.”*

Despite all these difficulties, however, many of the female farmers seem to prefer the *status quo* and are not keen on changing their situation. For example, a suggestion was made to the female farmers in Sharqiya who complained of their inferior status compared to that of the men when renting pumps:

Researcher: There is quite a number of you [female landowners] in the same area. Why doesn’t one of you apply for a loan to purchase a pump which she can then rent out to the rest of you? That way, you won’t be subject to the will of the men who refuse to rent out their pumps.

[the women exchange glances and start to giggle]

First woman: This will never work out. How will that woman switch on the pump on her own?

Researcher: But you said that that is no problem. Any passerby can do

that for her.

Second woman: Let's be frank. If it were left up to us women alone, it would be a disaster. We would be continuously fighting amongst ourselves. At least with the men, they can't shout back at us. But if it were women only, the fighting would never end.

9.5.4.6 Renting out the land

As mentioned before, one of the main water management problems expressed by the selected farmers is that of water shortage. One of the most commonly observed coping mechanism that they employ to avoid dealing with this problem is by renting out their lands. *"We are all fed up with the lack of sufficient water and going to the officials to complain about this each time. That's why we have all rented out our lands,"* said Sa'ad Ibrahim, a male landowner from the command area of Toukh Tanbasha Canal (Menufiya).

In Nubareya, this coping mechanism is used by most of the male and female farmers. Indeed, it is a common phenomenon in the Bustan and other districts that the shops selling groceries, insecticides and other items are owned by graduates, many of whom have rented out their lands and have instead chosen this means of livelihood.

Although renting out the land seems like an easy and effective coping mechanism, most of the farmers are not satisfied. The reason for this is that the low yields brought about as a result of water shortage have caused the rental price of their lands to decrease. Hence, the benefits incurred from renting out their lands have made this coping mechanism more of an escape route than a solution.

In some of the selected areas, those who have rented out their lands have preferred to leave all matters in the hands of the tenants, not caring to know about the water management problems or anything else except the rent money. However, a large part of them cannot afford to be passive. As Mona Ibrahim, a female landowner who has rented out her land along El-Nasr Canal (Nubareya) explains: *"It is true that we have rented out our lands, but that doesn't mean that we are not concerned with their problems. After all, if there are water shortages, this will affect the rental price of our lands. In the end, it's our property, so we sometimes accompany the tenants to the officials when there are problems."*

9.5.4.6. Using tears

The large majority of the selected female farmers rely on a strong and apparently highly effective coping mechanism: crying.

In a society where females are perceived as the weaker sex that must be protected and not violated, the sight and situation of a woman in tears causes shame and disturbance for some men and submissive irritation for others. In the end, if there is conflict between a female and male farmer, the woman almost always succeeds in gaining the upper hand through this unconventional, but powerful coping mechanism.

The female landowners in the command areas of Shraqiya who are obliged to rent pumps to irrigate their lands admit to using this technique often. One of them is Samia Mohamed Hassan, a woman in her thirties who owns 4 kirat at the end of El-Sababa Canal: *“I grow rice and many times, I can’t find enough water. So I go to one of the men to rent a pump from him. But none of the men wants to rent me his pump because he wants it for himself. Like me, the other farmers also can’t find enough water. But in the end, I go on crying till one of them gives up and agrees to rent me his pump.”*

Similarly, Shadia, another female landowner from the same area admits that *“I go crying from one farmer to another till they agree to rent out their pumps for me. What else can a helpless [ghalbana] woman like me do?”*

“Once I cried from afternoon till sunset because one of the men refused to let me rent his pump. But he still refused. Eventually, another man came along, saw me crying and shamed him into changing his mind,” recalls Nawal, another female landowner.

In Qorein Village, Menufiya, a female tenant named Hanan recounts her experience with amusement: *“Once I rented a pump and the owner turned it on and left it for me to switch it off, which I did. But later, I needed it again and I couldn’t switch it on myself. So I waited for a passerby and as soon as I saw him, I started crying heavily. He switched it on for me.”*

As Hanem, a female wage laborer from Hafez Al-Wakil Village (Hirfa Canal - Beheira) stated: *“The men become afraid when they make a woman cry. They are afraid others might accuse them of bothering or harming us. Some men become irritated and let us have our way, just so we would shut up. That’s because we cry loudly, enough to wake the neighbors. I know of several women who use this trick. It always works!”*

Some studies have noted the indirect power wielded by women in rural Egypt. For example, the results of the study undertaken by the Water and Stability Project

demonstrated that “women’s role in conflicts is merely limited to shouting out and asking for help....A male farmer may engage in the acts of assault or aggression against another male farmer. However, he would fear assaulting a woman because of the prevailing customs and traditions, as well as the fines or penalties that will be imposed against him, as a result.” In fact, the study report mentions the case of a farmer in El-Fahmeya Village who was ordered by a local council (the “customary council”) had to pay a fine of LE 1,500 for beating a woman during a conflict over irrigation water. On the other hand, if a woman engages in an act of violation on the canal, the police report is filed in the name of one of her male relatives, “in order for her to avoid going to the police, as per the customs and traditions.”²¹

9.5.4.7 *Doing Nothing*

A large majority of the selected farmers (both male and female) stated that they are unable to solve their problems and do not know who can help them. They feel that these problems are too complex for them to solve. Indeed, as the facts have shown, the most commonly mentioned problems deal with the dumping of waste, canal coverings that have been improperly executed at the head and middle of the canal, and water shortages affecting the entire district (and governorate) during peak seasons. In the end, many farmers have opted to do nothing and merely adapt themselves to the water management situation as it is.

If this is true for male farmers, it is even more manifest among the women. As a group of female tenants from the command area of Herfa Canal (Beheira) commented: “*If the men themselves can’t solve our problems, how can we?*”

Even those who are members of the BCWUA admitted their helplessness. One of them is Azima Ahmed El-Shabrawi, a member of the Executive Committee for the BCWUA of Ibrahimeya Canal (Sharqiya) and who also owns 1.19 feddans at the tail end. Like most of the selected command areas, Ibrahimeya Canal is almost blocked with household waste. Through the BCWUA, Azima asked the District Engineer to assist her in contacting the City Council to provide the villagers with tractor-trailers to collect the garbage. Nothing has transpired. The BCWUA proposed that the canal be covered near the residential areas, but the District Engineer responded that the irrigation department did not have the required budget. In the end, Azima and the rest of the BCWUA members gave up and the problem persists.

²¹ Ibid, p. 13.

9.5.4.8 Taking the bull by the horns

Passiveness is not the motto of some farmers. Some of them have taken matters in their own hands. Below are some cases:

- Om El-Sayed is a female graduate in her late 30s. Like all the other farmers in the command area of Aysar El-Bustan Canal (Nubareya), she suffers from continuous water shortages. In the village of Naguib Mahfouz where they all live, the conversation always turns to this problem and everyone proffers a reason. In sheer frustration, one day she decided to pay a visit to the pump station and see for herself. She was surprised when she found out that not only were the pumps old, but that they were not all operating at the same time. She went back to the village and told the men about this. They contacted the District Engineer who explained that since the pumps were old, they are operated in turns, to prolong their use. *“These pumps must be renewed; there’s no other solution,”* said Om El-Sayed.
- In Nubareya, where many of the women are educated and have no difficulties in communicating with men, female landowners sometimes contact the District Engineer themselves to seek assistance in solving their water management problems. Of these, a group of women, each of which owns 1.5 feddans along El-Nasr Canal (Nubareya) stated that they pay frequent visits to the District Engineer during times of water shortage.
- Halima, 42, lives in Nogoo’ Al-Farseya Village where her house is located directly on the banks of Nogoo’ Bahari Canal (Qena). Like all the other residents, she is troubled by the pollution caused by the dumping of waste, and the frequent accidents involving children and adults falling into the canal. She is a member of the BCWUA for the canal, but said that the BCWUA could not solve this problem. She is also a member of a local NGO but even that organization has not helped her. So one day, she surprised the villagers by bringing in workers herself to cover 10 ms of the canal in the area facing her home. As they found out later, she contacted the District Irrigation Engineer through a member of the Local Popular Council in the village, who happened to be his cousin. The District Engineer gave her the permission for the covering. Without the aid of her husband (who is a school headmaster), she made the arrangement with the contractor herself and bought the pipes. *“Now,”* she says confidently *“I don’t have to worry about my children falling into the canal on their way to and from school.”*
- Hajja Fatma, 45, used to help her father farm their land along Ibrahimeya Canal (Sharqiya). Before her father died, a man who owned land before theirs on the canal decided to add more floors to his house, located by the canal. When her father was alive, there were no problems with this. After his death, however, the construction turned into a careless process. *“They would dump their material and waste on the canal’s banks and this would sometimes block the water reaching me and the road to my land as well. They would never have dared to do this while my father was alive because they would have had*

to answer to him.” Yet, Hajja Fatma’s neighbor underestimated her clout. Without hesitation, she went to the local police station and filed a report against him. The issue is still being investigated at the time of writing of this study.

9.5.5 In sum ...

The selected female and male farmers resort to similar coping mechanisms to address their water management needs. These involve delegating community leaders, waiting for the next rotation cycle, negotiating with the *bahari* or pump operator to obtain extra water, digging wells, renting pumps, renting out their lands, or simply doing nothing.

However, two coping mechanisms have been noted to be used only by the men or women. For the male farmers, the mechanism of contacting officials and making collective decisions about a common water management situation is strictly their domain and women are happy to leave that responsibility to them. For the female farmers, tears and incitement of pity is a mechanism that they commonly resort to (intentionally or out of sheer helplessness).

For both genders, however, all these coping mechanisms are judged as unsatisfactory. What they seek is direct and frequent intervention from the MWRI. Although this point will be elaborated later (see *Conclusions*), it is important here to mention that the farmers do not regard the coping mechanisms that they use as *solutions*. To them, they are just a means of survival, and in some cases, of preventing their water management situations from worsening. In other words, the farmers do not perceive themselves as active role players and participants in water management improvement.

9.6 Treatment of the Female Farmers by the Male

Farmers

If the coping mechanisms employed by the men and women are the same, then the question that should be asked is whether there is competition over them. The selected female and male farmers were asked if there are gender preferences or hostilities between them over water management issues. This section presents the opinions of the female farmers on their treatment by their male counterparts.

9.6.1. The questions that should be asked are ...

- Do the female farmers feel that they are being discriminated against by the men?
- Are the male farmers given priority attention or preferential treatment over the women in the domain of water management?
- If the female farmers feel that they are being treated in an inferior way by the men, is this because they are *women* or are there other reasons?

9.6.2 A Case in Point

Shadia, a female landowner from El-Kashmiri Village (El-Sababa Canal - Sharqiya) cannot afford to be absent when the maintenance workers show up near her land. *“If I’m not there, they would dump all the soil they dig out of the canal on my land and ruin it. They would never do this to a man, because they would hear from him afterwards. They would do this to me because they know I’m a ghalbana [helpless woman],”* she says. *“So I have to be present and shout and yell at them. In the end, they dump it somewhere else.”*

Shadia, however, does not seem to be upset about this. *“This is normal,”* she says smiling. *“I don’t expect the men to treat me in the same way as a man. Besides, when it comes to akl el-eish [our means of livelihood] each one only cares for himself.”*

9.6.3 The facts indicate that ...

Most of the selected farmers have complained of the same water management problems; they admit that they are all in the same boat and that, with the exception of competition over water during times of shortage – there are no hostilities or conflicts between the men and women.

All of the selected male and female farmers (100%) have indicated that they are not the only ones to suffer from their water management problems, and that they know that their neighbors are in the same situation.

It was decided not to include direct questions in the study forms about whether any sort of discrimination exists between men and women. However, when indirectly asked through the group discussions, most of the farmer stated that there is no intentional mistreatment of one gender against the other.

9.6.4 The female farmers say that ...

They are not being treated unjustly by the men and that if there are any conflicts, they are not based on gender bias.

Of course, the situation is not that of ideal harmony between the two sexes. Indeed, some female farmers did admit that they suffered from male predominance. For instance, some female farmers in Menufiya complained that their male neighbors are insensitive to their fragile situation as women. *“Once a neighboring farmer said that he would take my turn to irrigate and that I could instead irrigate at night,”* said Nadia Ibrahim who owns land along El-Atf Canal. *“I started shouting angrily at him and told him ‘how can you say this when you know that it’s not proper for a woman to be out on her own at night?’”*

The most obvious cases of preferential treatment of men over women were noted in the command areas of Sharqiya, where female farmers are obliged to rent pumps from other male farmers. In many cases, the men refuse to rent out their pumps to them. Aleya Ibrahim, 40, is a widow with 9 children who lives in El-Kashmiri village (El-Sababa Canal) and farms 8 kirats of land that she bought with her husband’s pension money. Speaking for the other women in the area, Aleya recounts her experience: *“I can’t afford to buy a pump so I have to rent it from others. But the men refuse to let me use their pumps. When some of them see me coming towards them, they hide. Others give me all sorts of excuses like the pump is too old, there is not enough gas, they are too busy, and so on. Once I had put fertilizer on my land and went to find a pump to rent. No-one would let me use their pumps, and my crops almost died. And I’m not using their pumps for free. I pay LE 5 for each hour.”*

However, Aleya adds a comment which summarizes the situation between men and women in the selected areas: *“If the men don’t treat me fairly, it’s not because I’m a woman. It’s because they too need their pumps. Like me, they need more water. It’s a question of maslaha [personal interest.]”*

Indeed, most of the selected female farmers acknowledge that unequal treatment exists between *all* farmers during times of crises, and that it is not a gender issue. During periods of water shortage, it’s every man for himself. *“Sometimes, we almost kill each other over water,”* said Sa’eeda Ibrahim Eissa, who owns 2.16 feddans along El-Sababa Canal (Sharqiya). *“But in the end, we’re all ghalaba [helpless people], and each one wants to save his crops from dying. Nobody takes advantage of the other because we are all in the same situation. Our problem is that of water shortage, not of men against women.”*

This opinion is corroborated by the statements of the male farmers. As one of them – El-Shahat Mohamed Ibrahim, 54, who owns 1 feddan at the end of Ibrahimeya Canal (Sharqiya) – put it: *“In general, I have good relations with my neighbor. But they turn sour when there is not water. At that time, we forget everything but our lands. We argue with each other and many times we don’t speak to one another because of the water. If the canal is dry, then we all suffer.”*

In general, the female farmers did not feel that they were being mistreated by the men. In fact, many of them stated that the men help them and give them preferential treatment over other men. This is most manifest in the domain of farming. Most of the selected female farmers said that they freely consult their male neighbors over the crops that they should grow and other farming issues. “I ask my neighbor, whose land is after me (on the canal) ‘what will you plant this season?’ If he says ‘rice,’ then I also plant rice otherwise the water going to his land from the canal would drown my crops,” said Fatma Mohamed Khalil, 47, a tenant and sharecropper from the command area of Ibrahimeya Canal (Sharqiya). *“Once one of them told me ‘if you want to plant wheat instead of rice, just shore up your field banks so the water does not overflow to your crops’. He even offered to help me.”*

Almost all of the selected female wage laborers said that they experience no difficulties farming beside men, and that in fact, they are being treated “more gently” by them.

The same is true, and even to a greater extent, for widows who farm their lands themselves. Lawahiz El-Shafei, 43, who owns 2 feddans at the end of Ganabeyet Asfoun Canal (Qena), sums up the situation of widows like herself: *“My neighbors [on the land] always stand by me because they know that I am alone and that nobody helps me.”* Samia Abdel Hamid, 25, a female tenant who farms land along El-Atf Canal (Menufiya) added: *“I can easily go to my [male] neighbor and tell him if I notice a problem in his land. There is no shame in akl el-eish.”*

In the worst of cases, women are treated like other farmers and not with any gender hostilities in mind. For example, Fatma (the widow who works as a tenant and sharecropper along El-Sababa Canal – Shraqiya) recalls that she once dumped agricultural waste from her land along the canal, thereby blocking the water flow to the land of her neighboring farmer after her. He asked her to remove the waste otherwise he would have to bring in laborers to do the job and would charge her the LE 20 for their fees. *“I wasn’t angry,”* said Fatma. *“He was right and it was I who had to remove the waste.”* In the end, she removed it and the issue was over.

“If the men don’t help us or try to steal the water, that bothers us, but in the end, we know that they are suffering just as we are from water shortage,” said a female landowner from Hafiz Al-Wakil Village, whose land is located along Herfa Canal

(Behiera). *“Some of the men tell us ‘if you can’t farm the land yourselves, why don’t you sell them?’”*

In any case, the women stated that the men cannot mistreat them because they know that the women would always seek out other men or key leaders to help them. As 18-year-old Hend who helps her father farm his land along El-Atf Canal (Menufiya) said: *“No man can dare to yell at me or steal my water because they know I have male relatives who can protect me.”* But Hend also added: *“Most of the men in the rural areas are kind, not like those in the cities. Many of the men in my area help the widows. They give them their turns so that they can irrigate their lands and go home to take care of their children.”*

In fact, most of the selected farmers admitted that women are given preferential treatment by the community and local officials. One of the male graduates from the command area of Aysar El-Bustan Canal (Nubareya) adequately summarized the opinions of most of the men contacted for this study: *“The women are better off than us. The officials take pity on them and help them more than they help us.”* Fatma, the widow from Sharqiya, corroborated this: *“I buy my fertilizer from shops in the village, but once I went to the cooperative to buy it. The man there asked me about the size of my land. When I told him I don’t own land, he took pity on me and asked someone from the cooperative to carry the sac of fertilizer all the way to my land. I was very touched and grateful.”*

9.6.5 In sum ...

Conflicts and rivalries between male and female farmers are not absent. Indeed, some of the female farmers have complained of the predominance of men, especially in cases where women have to rent pumps from them and they refuse to oblige. However, as the women themselves admit, there is no hostility or gender bias in such treatment.

If women are being sidestepped or bothered, it is because of overall water management problems that force everyone to seek their interests over others, without regard to gender differences. In fact, female farmers in most cases are given preferential treatment by the community and by local officials because of their fragile status and owing to social traditions that require men to assist women in need.

9.7 Participation of Female Farmers in the BCWUA

All the above findings show that there are few if no gender discrepancies, and that in the daily life of farming and irrigation, the situation of female farmers is more or less the same as that of the men. However, when it comes to the participation of these female farmers in the BCWUA, a different picture emerges. It is here that gender discrepancies are most manifest.

This parameter presents the opinions of the selected farmers on the participation of women in water management through the BCWUA, and examines whether the BCWUA is regarded by them to be an effective coping mechanism.

9.7.1 The questions that should be asked are ...

- Do the selected farmers (male and female) think that the BCWUA is a useful mechanism to address their water management needs and solve their problems?
- Do the female farmers want to participate in the BCWUAs? If not, why not?
- What do the male farmers think about the participation of women in the BCWUA? Do they welcome this idea or oppose it?

9.7.2 A Case in Point

Fawzeyya Mohamed Ismail, 43, owns and farms 5 kirats at the end of Ibrahimeya Canal (Sharqiya), where she grows rice and okra. A BCWUA has been set up in the area, but she knows nothing of it, and is not interested in being a member.

“Only men should be members of this organization because they are more free to go here and there and attend meetings,” said Fawzeyya. *“If I were to do it, people would start talking. They would keep asking themselves ‘where is she going all the time?’ So why should I bother risking my reputation with the men in the village, who in any case can do this job better than I can?”*

9.7.3 The facts indicate that ...

Most of the selected farmers have no knowledge of the BCWUA. However, the female farmers for the most part regard it as an organization that could be useful to them; yet, most of these women would not like to be members of the BCWUA.

Participation in the BCWUA		Gender			Farming Category					
		Females	Males	Total	Landowners Who Manage	Landowners who Do Not Manage	Tenants	Farmers Who Help Relatives	Wage Laborers	Total
Do you have an idea of BCWUA?	Yes	16 41.0%	23 59.0%	39	5 12.8%	15 38.5%	8 20.5%	3 7.7%	8 20.5%	39
	No	23 59.0%	16 41.0%	39	10 25.6%	9 23.1%	7 17.9%	7 17.9%	6 15.4%	39
Do you know its tasks?	Yes	15 41.7%	21 58.3%	36	5 13.9%	12 33.3%	10 27.8%	3 8.3%	6 16.7%	36
	No	9 52.9%	8 47.1%	17	3 17.6%	8 47.1%	2 11.8%	2 11.8%	2 11.8%	17
Do you think it is useful?	Yes	17 54.8%	14 45.2%	31	4 12.9%	14 45.2%	6 19.4%	3 9.7%	4 12.9%	31
	No	8 38.1%	13 62.0%	21	5 23.8%	5 23.8%	5 23.8%	2 9.5%	4 19.0%	21
Are you a BCWUA member?	Yes	5 41.7%	7 58.3%	12	3 25%	5 41.7%	3 25%	1 8.3%	0 0%	12
	No	19 45.2%	23 54.8%	42	6 14.3%	15 35.7%	8 19.0%	4 9.5%	9 21.4%	42
Would you like to be a BCWUA member?	Yes	11 57.9%	8 42.1%	19	8 42.1%	2 10.5%	3 15.8%	4 21.1%	2 10.5%	19
	No	20 66.7%	10 33.3%	30	6 20%	12 40%	5 16.7%	3 10%	4 13.3%	30

Table 20²²: Participation in the BCWUA

Most of the selected farmers do not have an idea of the BCWUA, even if it exists in their areas. Surprisingly, as Table 20 indicates, the farmers who knew the most about the BCWUA are those that do not manage or farm their lands (15 – 38.5%). This is explained when the statistics for each governorate are consulted. These statistics show that the majority of landowners who do not manage are from the command area of Kamahin Canal in Beheira, where the BCWUA is active and where the Chairman (Hajj Rabi’) is well-known and respected by all those met. It was also the same category of farmers – landowners who do not manage – who largely considered the BCWUA to be useful (14 – 45.2%).

Moreover, the majority of the female farmers do not know of the BCWUA (23 – 59%) as opposed to the men, the majority of whom (the same percentage: 23 – 59%) did have an idea. Although Table 20 shows that most of the farmers know of the tasks of the BCWUA (36 responses), this result cannot be considered accurate because the researchers for the study (most of whom work at the MWRI)

²² This table has been derived from the Group Discussions Form.

inadvertently prompted the farmers to provide this response by explaining these tasks to them.

Most of the farmers (31 responses) do not consider the BCWUA to be useful to them. However, when the gender data are consulted, it appears that the majority of the female farmers (17 – 54.8%) does regard the BCWUA to be a useful organization.

However, when asked whether they would like to be members of the BCWUA, most of the farmers responded negatively (30 responses), and of these, the majority is female (20 – 66.7%). In any case, only a few of the selected farmers (12) are actual members of their respective BCWUAs and a handful of these (5 – 41.7%) are women.

9.7.4 The female farmers say that ...

The BCWUA could be an effective coping mechanism for them, but they prefer that their water management interests in the BCWUA be represented by men. In other words, the female farmers would not like to be members of the BCWUA committees. Although resistance to participation of women was recorded among the men, it is the female farmers themselves who expressed the strongest hesitation.

Many of the farmers stated that the BCWUA can be an effective channel through which their water management interests can be represented. For instance, both the male and female farmers in the command area of Ganabeyet Asfoun (Qena) stated that the BCWUA (which exists in the area) is a good communication tool between the water users and the MWRI officials. The men also added that through the BCWUA, they were able to prioritize their water management needs in a systematic manner.

As for the women, Nagwa Fakhry Fahmy, 30, who is a member of the BCWUA's Executive Committee, summarized their opinions: *“Now, it is easier for us women to speak of our problems and to communicate with someone like the District Engineer and the Undersecretary, whom we hardly knew before. Also, through the BCWUA, we have managed to do things that would have taken years without it, like pitching the collapsed banks on the canal.”*

Many of the male farmers stated that they have communicated their problems to the MWRI officials to no avail. According to them, the BCWUA is a more legitimate of communication. The reason, best expressed by Mohamed Mostafa, a tenant in the Toukh Tanbasha command area (Menufiya) is that *“being a*

[committee] member of the BCWUA will make me a sort of official. I will be a partner with the MWRI officials and they won't be able to ignore me."

Some of the female farmers even expressed readiness to participate in the BCWUA. "Last year, I sold my maize harvest for one quarter of what I used to get for it," said Howeida Rashad, a female graduate who farms her 5 feddans along Aysar El-Bustan Canal (Nubareya). "I would do anything, and join any organization, if it means that I would get more water." In the Delta, Wafaa Mahrous, 36, a woman who assists her relatives in the command area of Al-Bareya Canal (Beheira) concurs: "As long as I know that I can solve my problems and those of my neighbors, I wouldn't be afraid to join any organization. There is no shame in looking after your interests."

Readiness by the women to participate in the BCWUA was also noted in other areas. In a study undertaken in Fayoum by Leila El-Shennawy and Iman El-Ghoul, women who owned less than 1 feddan each expressed positive attitudes towards participation in the BCWUAs in the hope that agricultural productivity can be maximized from their small plots. These women, the authors found, were highly enthusiastic and vocal about water management issues. In addition, females between the ages of 35 and 50 expressed greater keenness to participate in the BCWUA. The reason – according to the authors – is that they are free from the responsibilities of breastfeeding and taking care of children, factors that have been noted to be major obstacles in the participation of rural women in community activities.²³

For the most part, however, the selected female farmers prefer that BCWUA committee membership be reserved to the men. Several reasons have been noted for the reluctance of the female farmers to partake an active role in water management:

9.7.4.1 Lack of confidence

Most of the selected farmers did not feel that they were capable of changing their water situation, much less that of the rest of the community. A common remark made by them, as seen earlier is: "I am *ghalbana* [a helpless woman]."

Safaa Saleh notes that one of the major obstacles preventing the participation of women in community activities – even if they are educated – is their shyness and feeling that they lack the appropriate capability and skills.²⁴

²³ El-Shinnawy, Leila Hammad & Iman El-Ghoul. *Rural Women's Attitudes Towards Participation in Water Boards in Some Villages in Fayoum Governorate*, 2005, p. 115.

²⁴ Saleh, Safaa. *The Role of Rural Women in Water Conservation*, p. 16.

9.7.4.2. Preference to Male Membership

The large majority of the selected female farmers have stated that men are more capable and suited to formal participation in water management. The following responses summarize their stance:

- *“I won’t be of any use to this BCWUA. Things like that are more suitable for men, not women.”*
Hafiza Mahmoud, a female landowner who farms her land along Sahel El-Mata’na Canal (Qena).
- *“To get more water, I would do anything. But I trust my male neighbors to speak on my behalf”*
Om Shehta, an investor who farms her land along Aysar El-Bustan Canal (Nubareya).
- *“Why should I bother to participate? Have we run out of men in the village?”*
(Samia, who helps her relatives farm their land along El-Sababa Canal (Sharqiya).

Such responses are not unique to the study areas. For example, Sohair Youssef noted in her study that the female landowners prefer to delegate their male relatives to join the BCWUAs and to contact MWRI project teams.²⁵

9.7.4.3 Fear of Community Rejection

In the rural areas of Egypt, it is not customary for females to participate in activities that the community defines as the responsibility of the men. The domain of water management is considered by the selected farmers to be a male domain especially as far as decision making is concerned.

In the FWMP study, 36-42% of the sampled women in Abu Sir stated that they are “not allowed” to present themselves as candidates for a community organization. For this reason, none of the institutions in the area for which candidates need to be elected or appointed – namely WUAs, Local Popular Council and agricultural banks – include female members. As the report states, “tradition prescribes that it is not accepted when there is a husband who can be a member [instead of the woman].” It is perhaps for this reason that 20-27% of the women said they were not interested to be members of these organizations.²⁶

A discussion with Wafaa Abdel Moneim, a female wage laborer in the command area of Al-Tawil Canal (Menufiya) further elucidates this point:

²⁵ Youssef, Sohair. *The Role of Women in Irrigated Agriculture and Irrigation Improvement Project*, p. 3

²⁶ Fayoum Water Management Project. *Women in Irrigation*, October 1997, p. 11

- Researcher:* Why wouldn't you want to become a member of the BCWUA?
- Wafaa:* How can I can go to a meeting and leave my husband at home to take care of the house like a woman?
- Researcher:* What if your husband is also a member? Then you can go out together.
- Wafaa:* If my husband is a member, then the problem would be solved. Let Him attend the meetings! Why should I bother? He would be Enough, wouldn't he?

9.7.4.4 Lack of time

It is a commonly known fact that women in rural Egypt are responsible for tasks that leave them with little time to devote to community work. These tasks include taking care of the house, children, and other duties like animal husbandry or raising poultry.

For housewives, a busy daily schedule is an obstacle to participation in community work. This fact is even more burdensome for women who farm. The daily schedule of these women is increased with the extra burden of farming and they are not exempt from their household duties. *"We are already loaded with farming the land and housework. We have no energy left over for any other activity,"* said Om Dalia, Om Salma, Om Abdallah and Om Fawzy, all graduates in the command area of Aysar El-Bustan Canal (Nubareya).

It is true that the times when women are free during the day are not similar as those for men, and this is a main reason for the absence of women from BCWUA meetings and other organized gatherings. However, with female farmers, a further obstacle is that they are simply not free to take party in any activity because of their farming as well as household tasks.

Some women – notably a group of tenants in the command area of Herfa Canal (Beheira) – mentioned that they would not be able to afford the transportation fees required to attend BCWUA meetings.

9.7.4.5 Lack of Trust in the BCWUA as a Coping Mechanism

Like the male farmers, the majority of the women do not feel that the BCWUA is an effective coping mechanism. When asked why they would not like to become BCWUA members, the men and women gave similar responses as follows:

The responses of the men:

- *“We don’t like to put ourselves in the middle of conflicts between people. Besides, what can the BCWUA do if the Ministry itself hasn’t solved our problems?”*

Tenants from the command area of Sahel El-Mata’na (Esna District – Qena).

- *“If I became a member, I’d be the laughing stock of the whole village, for not being able to do anything to solve their problems.”*

Atef Abdel Gawad, a tenant from the command area of Tawil Canal (Menufiya).

- *“We chose to rent out our lands to escape from the problem of water shortage. Do you want us to go back to these problems again by becoming members of the BCWUA?”*

Abdel Razeq Hussein, graduate from the command area of Aysar El-Bustan Canal (Nubareya).

- *“We wrote a letter asking the government to cover our canal because people keep throwing wastewater in it. We even went to the police station. Nothing has been done. The idea of the BCWUA is just a trick by the government to prevent us from complaining.”*

A group of farmers assisting their relatives in the command area of Ganabeyet Asfoun (Qena).

- *“I’m a daily bread earner. I have five children to feed and send to school. The day I’m called to participate in the BCWUA is better spent working in the field earning LE 10 for my children.”*

Wage laborer from the command area of Al-Deesa Canal (Menufiya).

The responses of the women:

- *“We have heard of the BCWUA but all we know is that it exists. We haven’t seen it do anything. Our problems [of water shortage] are still there. If the District Engineer himself can’t solve the problem, do you think a BCWUA can?”*

- Ikram, Fardous, Iman, Nawal and Inas, a group of graduates from the command area of Aysar El-Bustan Canal (Nubareya).

- *“My husband is a BCWUA member. I listen to him and the others talking for a long time but nothing gets done in the end. Why should I bother myself to become a member? If anything, these meetings of theirs cost me one kilo of sugar for the tea I serve them each time.”*

Hanaa Hilal Abou Howash, a female landowner who does not farm her land along Kamahin Canal (Beheira).

- *“We elect candidates for the People’s Assembly and they haven’t done anything for us. So what can a BCWUA do?”*

Iman, who assists her relatives farm their land along Al-Deesa Canal (Menufiya).

- *“The BCWUA is like a doctor. You go to complain to him of your illness and he prescribes medicine. But he doesn’t have the medicine himself.”*

Sa’eeda Aly Mahmoud, a landowner from the command area of Herfa Canal (Beheira).

These reasons explaining the reluctance by women to participate in the BCWUA are not only particular to the study areas. Indeed, the above observations have also been noted by other researchers. From their random sample of 210 women in three villages in Fayoum (Beahmo, Garfas and Tersa), Leila El-Shinnawy and

Iman El-Ghoul outline the following obstacles to the participation of women in Water Boards:

- Husband does not approve (35.7%)
- Not enough time to attend Water Board meetings (32.9%)
- Times of meetings are not suitable (24.3%)
- Traditions prevent women from sitting with men in meetings (23.3%)
- Meeting place is far from home (20.5%)²⁷

Similarly, Safaa Saleh and others who investigated the obstacles preventing 164 educated women from participating in community activities in Tanta and Zefta Districts (Gharbeya governorate) came up with the following:

- Shyness and timidity (64%)
- Community does not appreciate the role of women in community activities (60.4%)
- Going out of the house frequently is *eib* (not proper) (56.1%)
- Fear of failure (54.3%)
- Responsibility of community work is huge (50.6%)
- Women lack the information on community issues and activities (45.1%)²⁸

9.7.5 In sum ...

The BCWUA is not a coping mechanism that is favored by most of the selected female farmers, mainly because they regard water management decision making and participation as a male domain. Moreover, the participation of women in community activities is in general not looked upon favorably by rural society, which is not used to such a phenomenon.

The MWRI experience has shown that rural men oppose the concept of gender equality in community participation. However, the results of this study show that many of the women themselves contribute to this resistance, through their own reluctance to participate. For the most part, they are not to blame. After all, why should they risk their social standing and choose to be looked down upon and alienated by the rest of society? Is it not better and easier to leave such matters in the hands of men?

²⁷ El-Shinnawy, Leila Hammad and Iman El-Ghoul. *Rural Women's Attitudes Towards Participation in Water Boards in Some Villages in Fayoum Governorate*, 2005, p. 116.

²⁸ Saleh, Safaa et al. *Obstacles to Social Participation of Educated Women in Some of the Villages in Tanta and Zefta*, pp. 1493-4.

These attitudes explain the fact that even when the men accept the participation of women in the BCWUAs, the female members continue to be shy, uneasy and non-confident.

Previous studies undertaken by the Water Boards-IIIMP have shown that when it comes to *residential* issues – which are more or less accepted as a domain in which rural women can have a role – women do not favor to be represented by men in the BCWUA. They want membership of the Residential Base Units to be confined exclusively to them, and they feel comfortable with that since it is sanctioned by the community to be a female concern.

However, with respect to women *farmers*, the situation is different. Farming and decisions related to it are looked upon by rural communities as a domain and responsibility of the men. To avoid alienation from the community, female farmers accept this and prefer the option of representation through men. Moreover, in many cases, the women do not accept male representation reluctantly; most of the selected female farmers insisted that they *trust* the men to speak for their farming interests.

10. Conclusions

10.1 A Case in Point

It is the day of elections of the Executive Committee of the BCWUA of Al-Bohayra Al-Tahtaneyya Canal (Ibrahimeya District – Sharqiya). A surprise is in store for the male candidates present at the meeting: Hanem Mohamed Ahmed, a female farmer in her 40s, has decided to nominate herself for Chairmanship of the BCWUA.

As soon as she presented her nomination, there was an uproar. The men looked at each other in disbelief; some jeered; most of them began to protest loudly. Chaos reigned and the MWRI field teams organizing the elections panicked. But Hanem was insistent. She refused to withdraw her nomination.

Two hours of confusion broke up the elections. In the end, some of the men took Hanem aside. They told her that not one of the men would give her his vote, and since they are the majority, she would never win. Having no other choice, Hanem accepted their “offer” to nominate herself as Secretary of the EC. This is her current position in the BCWUA.

10.2 Summary of Conclusions

The results of this study indicate that:

- ***Women play a significant role in agriculture.*** This role is not only confined to traditional “feminine” tasks such as weeding and harvesting of easy crops, but also includes helping to prepare the land, planting of seeds and seedlings, fertilizing, and spraying of insecticides.
- ***Women do irrigate,*** if the definition of irrigation is not limited to the physical act of operating the pump. Indeed, female farmers play a significant role in matters requiring decision making, such as when to operate and switch off the pump, the duration of irrigation, channeling water in the fields, etc.
- ***Female farmers have the same water management interests as the men.*** The most frequently stated are the need for more water, maintenance, and better water quality.
- ***The knowledge of female farmers on water management issues does exist, but is noticeably inferior and less articulate than that of the male farmers.*** This reveals a gender gap in information access.
- ***The coping mechanisms resorted to by female farmers are not entirely similar to those adopted by their male counterparts.*** While the male farmers employ direct and formal mechanisms – such as organizing meetings, contacting officials, writing complaints and collecting local contributions – the women mostly prefer to delegate men for problem solving, and willingly abide by their decisions. They also adopt coping mechanisms that are employed by the majority – notably renting out lands, renting pumps, and digging wells. In addition, some female farmers may resort to emotional methods such as crying in order to invoke sympathy and shame from the male members of the community.
- ***In general, female farmers are not mistreated by their male counterparts.*** If the women complain of being shunned or favored over other men in farming and irrigation, they do not attribute this to a gender bias. Rather, situations of difficulty such as water shortage periods create a conflict of interest and during those times, it is every man for himself. In other words, if women are not being treated equally as men, it is not because they are women. In fact, most of the selected female farmers acknowledged that they are generally given preferential treatment by the men in their communities because of their gender. This is due to local traditions that require men to assist women whose circumstances oblige them to take up tasks in domains like agriculture and water management – domains that are regarded by the community to be the responsibility of the men.
- ***Most of the female farmers do not wish to participate in the BCWUA.*** While this is also true for the majority of the male farmers, the reason

presented by the women is that such an activity is best suited to men. The main reason for this is that water management participation is regarded by rural communities to be a male domain.

From the above, it can be seen that, with minor exceptions, the situation of female farmers is not much different from their male counterparts. They face the same problems, employ more or less the same coping mechanisms, and generally get along well together. At face value, therefore, the daily life of men and women in the field shows no major gender inequalities or bias.

But is the situation as ideal as the farmers would like all to believe? The findings of the study point that this is not the case. To be sure, there are no gender hostilities and the female farmers bear no grudges and have not complained of male superiority.

But in fact, gender inequality *does* exist. The most obvious proof – among others - is the lack of proper and adequate access of information to the female farmers, when compared to the male farmers. One example suffices to clarify this point: when discussing their situation and treatment by the male farmers (see *Treatment of Female Farmers by the Male Farmers*), the women stressed that they are not bypassed or ignored. Several female farmers pointed out that their male neighbors at the field inform them of the crops they intend to grow, especially if they are water consuming such as rice, so that their lands do not become inundated if their neighbors in the lands after them draw the abundant quantities of water required to irrigate this crop. However, it should be asked: have these women taken part in the decisions arrived at by the men to grow rice? Were they consulted when the male farmers made this decision, or were they (and this is the case for most) presented with a *fait accompli*?

Nuances such as this underline an important fact: that although male farmers deny that there are gender differences and female farmers do not complain of any, these differences in fact do exist. The fact that those who are in the disadvantaged position (the women) have come to accept and submit to this situation does not mean that it is the best situation. The women either do not know any better or would rather accept the *status quo* in order to avoid the problems brought about by change.

10.3 Where is the Gender Bias?

When the male farmers were asked if they objected to the role of women in farming and irrigation, the great majority of them replied that women are required to perform these roles to earn their daily bread. In other words, male farmers do

acknowledge the fact that women play a role in farming and irrigation and do not object to this role.

Why is it, however, that so much resistance and gender hostility appears when BCWUAs are set up? Why is it so difficult for MWRI officials and field staff to promote the participation of women in water management? From the study results, the following reasons and conclusions are made:

10.3.1 Resistance to New Interventions

The situation before any MWRI or other intervention appears to be that of gender balance: men and women both work the land, irrigate it, suffer from the same problems, and try to solve them together. But when new interventions are brought in, that is when the imbalance occurs.

These interventions require the women to play a role that they are not used to, and which society may not favor. MWRI representatives come into these areas with ideas and policies that require the farmers to change the way they have always been thinking and working. When these ideas require them to grant permission to the women to participate in activities outside the domain of the home and land, then the men immediately become resistant; even the women themselves are reluctant to take part in activities that may alienate them from the rest of society.

This situation may be likened to that of a driver who has always been used to following a certain route and who does not want to risk trying a new one that may be better or shorter. His reaction may be: "I am afraid of getting lost and not finding my way properly." This is exactly the feeling that female BCWUA members share: if the election process wasn't hard enough, they find themselves confronted with situations that are unfamiliar and uncomfortable to them – namely, sharing the same meeting table with men.

It may be asked: "why do women readily participate in community activities related to issues like health, reproduction and child care?" The answer is simple: these domains are sanctioned by the community as the responsibility of women. The following conversation with a field staff member of the Water Boards-IIIMP is a perfect example:

- Project Cairo staff member:* Would you accept your wife to participate in a BCWUA?
- Field staff member:* [with some hesitation] No.
- Project Cairo staff member:* Why not? You're Project staff and you should be the one to know most about the benefits of women's participation.
- Field staff member:* I know all that. But it's difficult for me as a man to

let my wife go off freely to a BCWUA meeting. The rest of the village will look at me as a man who can't control his wife.

Project Cairo staff member: Let me ask you this: if there was to be a seminar at the village health clinic about vaccination of children, would you let your wife attend.

Field staff member: [without any hesitation] Of course!

Project Cairo staff member: Why would you say 'yes' to this and 'no' to BCWUA membership?

Field staff member: The two are different. The health of the family is the responsibility of the woman and no-one can blame her or her husband for trying to improve it. But irrigation and all those water management topics have always been the concern of men, not women.

10.3.2 Fear of Women's Role in Decision Making

Are the men unfavorable to women's participation for the simplistic reason that they should not attend meetings with other men? Obviously, the answer is 'no.'

The reason for the resistance of male water users to female membership in the BCWUA is much deeper. Because water management is considered by rural society to be a male domain, men do not accept that women take part in decisions that the men in turn will have to abide by, through the BCWUA.

As one farmer in Beheira put it: "*If I see a woman in the field who needs help in farming or irrigation, I would not hesitate in helping her. But if that same woman sits in a BCWUA and makes decisions for me, I would be the first to oppose her.*" (The case outlined above of Hanem – who nominated herself for BCWUA chairmanship – also supports this point).

In other words, rural men do not object to the participation of women in farming and irrigation activities. To them, this is *akl eish* [the earning of daily bread] and involves no shame or taboos. However, when it comes to women playing a role that provides them with a measure of authority over the men, this is where all the gender resistance and disparities become manifest.

10.3.3 *The Passiveness of Women*

In most of the study areas, the women were not resentful of male dominance in water management. In fact, many of the female farmers were more than willing to leave water management issues and decision making to their male counterparts. Passive submission to the *status quo* is the attitude of most of the selected female farmers.

For the women, the costs of participation in water management are greater than the benefits accrued to them. Skepticism or rejection from the community is a big price to pay. This price is felt more acutely by female members of BCWUAs who are inactive or powerless at improving their water management situations.

10.3.3 *Lack of access to information*

As the results have shown, the female farmers have less access to information and weaker knowledge of water management issues than the men. This is an important factor that leads to the passiveness of women and their reluctance to participate. If they do not know enough about their water management situation, how can they feel confident to become BCWUA members and discuss water management issues with their male peers?

It is a well-known fact that access to information and proper knowledge are essential pre-requisites for effective participation. In most rural areas, however, these pre-requisites are not present for the women.

Owing to their relative immobility vis-à-vis the men, women have fewer chances to obtain first-hand information of the issues in their areas. This gives rise to their reluctance and incapability to assume an active role in water management. It also makes them unable to express their water management interests effectively.

So they choose the easy way out: they let the men speak for them and make all the necessary decisions.

11. Recommendations

The following recommendations all require the execution of certain steps and activities, which should not only be undertaken by the Water Boards-IIIMP, but by the MWRI as a whole.

- 11.1 *Collect data on female landholdings in the Water Boards-IIIMP areas.***
As mentioned at the beginning, hardly any information is available on the number and size of lands owned by women in Egypt. Whatever information exists is cumulative for males and females, and is not updated.

There is an imperative need for the acquisition of accurate data on female landholdings, at least in the areas of the Water Boards-IIIMP. This is the first and most important activity that needs to be undertaken to strengthen the Project's gender policy and its knowledge of the female farmers within its areas.

- 11.2 *Set up a gender-sensitive information dissemination system***
Since its inception, the Water Boards Project has always emphasized in its policies on the importance of ensuring proper information flow to all the water users within its areas, both male and female. Indeed, efforts have been made to provide information channels between the MWRI (including the Project) and the water users.

This, however, is not enough. What is needed is the design of alternative systems through which the BCWUAs themselves can communicate and receive information from the water users, with special emphasis on the women (since they are more deprived of information access). If female farmers have easier and greater access to water management information, they will be encouraged to participate; at the very least, they will not be alienated or isolated.

In setting up such an information system, Project staff should consider cooperation with other local institutions such as agricultural extension or NGOs. If properly supported, they can continue to provide information to the water users after the Project ends.

- 11.3 *Accurately define the concept of "irrigation"***
Within the MWRI and amongst the water users, the notion of "irrigation" is commonly misunderstood as the physical process of operating an irrigation pump. This definition needs to be redefined to include the *decision making* aspect. Once this definition is agreed upon, there would be little disagreement over the fact that women in rural Egypt *do* irrigate.

With this understanding, the MWRI should not spend more time trying to prove that women irrigate and thereby should participate in water management. Instead, the efforts of the MWRI should now concentrate on *how* to promote this participation without causing gender friction and uneasiness within the rural communities.

11.4 Strengthen the role of BCWUAs in water management

The results of the study show that the majority of the selected male and female farmers are disillusioned with the BCWUA as a coping mechanism that addresses their water management needs.

This observation has more serious ramifications for the women: to begin with, their participation in BCWUA membership is not an easy activity and they have reached this situation through much difficulty. However, *preserving* their membership and credibility in the eyes of the community is an even harder task if they are unable to realize their goals through the BCWUA.

On the other hand, the Water Boards-IIIMP's previous experience has shown that if the BCWUA plays a successful role and participates as an active partner with the MWRI in water management, all the skepticism and opposition from the water users – especially towards the female members – gives way to ready acceptance and support. In other words, if the BCWUA proves to be an effective water management coping mechanism for the water users, the objection against women's participation in this institution will decrease. In the words of a male farmer from Menufiya: *"We need to see change with our own eyes. If we do, then we would be willing to give and accept anything."*

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