

## **IMPROVING ACCOUNTING AT WATER CONSUMERS ASSOCIATION**

**YuldashevaInoyat\***

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**Abstract:** This scientific article is devoted to the research of water supply issues in the efficient implementation of agricultural reforms because the productivity of agricultural crops is directly related to the water supply utilized for irrigation of plants. In addition, the article justifies the significance of determining the cost of irrigation services for each cubic meter of water, the essence of accounting standards, as well as the opinions on accounting and its quality in water economic entities. Moreover, the article presents a comprehensive study of the international experience of accounting in water economic entities.

**Key words:** Water Consumers Association(WCA), norm of water consumption, irrigated hectare, quality of accounting, International Accounting Standards, financial reporting quality verification.

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**\* senior teacher of “Accounting and audit” department of Tashkent Institute of Irrigation and Melioration**

**Introduction.**

Currently, successful implementation of reforms in the agrarian sector of the Republic of Uzbekistan mainly depends on the creation of necessary conditions required for normal functioning of farmers and dehqan entities, as well as other agricultural commodity producers. Thus, the issue of the efficient use of water and the cost savings is considered to be a crucial aspect. That is why President of the Republic of Uzbekistan Sh. Mirziyoyev has emphasized that “Another important objective is a comprehensive use of water-saving irrigation technologies. In this regard the Cabinet of Ministers is assigned to develop a Road Map on this issue within two months” [1.2-3p.]. One of the prerequisites for creating such conditions is the sustainable and timely supply of water and its accurate accounting. Nowadays the issue of developing the performance of farmers and producers of other goods who deal with water consumption has become a crucial problem in the scope of reforms in agriculture. In compliance with the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan №8 as of January 5, 2002, Water Consumers Associations were established and as of November 1, 2014 their number constituted 1496 [2. 2p.].

As the results of the analysis illustrate, as of November 1, 2014, 1496 Water Consumers Associations are operating in the Republic of Uzbekistan and the area of services rendered amounts to 3864,7 thousand hectares, the volume of performed work accounts for 43705 million UZS. The amount of money debited in the WCA accounts constitutes 25669 million UZS or 59%. Such conditions negatively affect accurate planning of expenditures by those WCA which adequately perform their activities and provide required volumes of irrigation.

The principal and sustainable source of funding for the WCA is the fee imposed on irrigation services. The fee for irrigation services (FIS) is a charge paid for the WCA services by all water users, including members of an association (mostly farmers) for using all the irrigation and drainage systems in the community and keeping them in good working order at all times.

In compliance with Resolution №8 of the Cabinet of Ministers as of January 5, 2002, the WCA implements its activities at the expense of its members’ monetary and material costs. According to this Resolution, the charges imposed from the water users include:

- Use and repair of irrigation and drainage networks;
- Encourage the WCA to provide better service to water utilizers;
- Farmers are expected to use water resources for targeted purposes.

As the foreign experience illustrates, the fee for irrigation services is mainly used for the following purposes: the removal of channels from drippers; digging channels; repairing sidewalls; grass cleaning; replacement of outdated fixed assets; communication costs; procurement of fuel and lubricants for pumps and heavy equipment; installation and repair of water measuring devices; pumps and office energy costs; remuneration for the WCA staff; purchase of stationery for the office and etc.

### **Literature review.**

Researches demonstrate that under the same natural and economic conditions, but in the farms using different irrigation systems, the prime-cost of production does not depend on farmers' labor. In addition, the pump costs can account for from 45000 to 170000 UZS depending on the type of pumps, the level of water lifting, as well as the height of water. However, it is a great financial burden for farmers, especially in the areas where productivity is low. Therefore, it is desirable to apply the following approach depending on the amount of pump costs associated with the financial support of farmers who used drainage systems to water crops.

According to the opinion of Ibragimov (2018) The following measures of financial incentives can be applied for farmers irrigating crops with the use of pumps.

1. Farm entities performing government contractual works and using pumps should be divided into groups on the basis of pump costs by one hectare of area under crops. Meanwhile it is necessary to introduce the mechanism of encouraging the farmers with the least pump costs with paying a single land tax system (this mechanism has been foreseen in the taxation system, but it is not effective due to the low number of such farmers yet).

2. Farmers should be encouraged and exempted from paying a single land tax provided that the pump costs for one hectare of land are over 50 per cent of the total land tax payable by the farmer.

3.It is recommended to introduce the mechanism of deducting pump costs from the government land subsidies on the land plot for pumping costs that are not covered by the single land tax, with the exemption from the single land tax for agricultural entities (cotton and wheat crops only) that are not covered by the single land tax.

4.Each district department of agriculture and water management should determine the following information necessary to be taken into account:

- the area of cultivated cotton and wheat sown in a separate farm and irrigated with pumps and ball-bonitet of the soil;

- pump type, water height level, normative costs for pump water irrigation ;

- the amount of the single land tax payable by farmers who use pump irrigation of crops in the current year;

- the land plots for cotton and grain crop areas are determined by the pump costs of farms which use pump irrigation through the single land tax and the amount of subsidies allocated for this purpose. The total amount of subsidies allocated to farmers irrigating the land plots with pumps is determined with the account of these calculations.

5Regional Boards of Agriculture and Water Management summarize the amount of subsidies required by the districts and submit them to the Ministry of Agriculture and Water Management.The Ministry of Agriculture and Water Management submits the information on the amount of subsidies required to cover pump costs to the government.

It is recommended to expand foreign investment opportunities to finance the construction, modernization of internal and inter-farm irrigation and melioration facilities.In this regard the following issues are to be solved:

- ensuring stability of the legal framework that will enhance investment activity in agriculture;

- simplifying customs and taxation procedures for modern equipment, introduction of targeted taxes and customs privileges;

- enhancing legal culture in the process of attracting foreign investments and their use, as well as regular monitoring over eliminating bureaucratic barriers;

- improving institutional, economic and legal framework for the development of infrastructure facilities serving the agricultural sector plays a crucial role.

Contracts represent a document compiled on the voluntary basis between water consumers and WCA and constitute the basis of their relationships. However, the following relationships are concerned with the freedom of the parties to conclude a contract for water use:

- while the parties are fully free to set up their contracts and express their own interests, even if it is a general requirement, these conditions in the activities of the WCAs are somewhat limited due to their inability to choose;

- entire understanding of the parties within the scope of the activities of the WCA is of a relative character, even though this entire understanding of the parties to the agreement is a general requirement because land plots of farmers being an irrigation network is located in various conditions;

- although the equality of the parties to the execution of the agreement is a general requirement for all, the fact that farmers are actual founders of the WCA and this fact considerably modifies the equality issue;

- although the law prohibits the local authorities to give instructions regarding contract compilations, the WCA' activities may require partial administrative intervention of local governance authorities.

Therefore, while improving the contractual relationships in supplying water, it is important to pay a particular attention to the following aspects:

- in addition to the government supervision, necessity to establish public control over the implementation of the terms of the contract;

- despite the agreements on water supply, the decline in the amount of water, due to weather changes, the impact of rainfall on water supply, and the state of irrigation networks have a strong impact on water supply should be taken into consideration;

- if agricultural entities incur losses due to their use of services of monopoly organizations, in these cases the government aid is required;

- water users should be provided with a lawyer.

The measures currently undertaken by the WCA should turn into a compulsory document that needs to meet the requirements of water users in the area. However, in practice, the decisions of the WCA do not have such a status, or the absence of a mechanism to require execution of this decision by the WCA causes problems with water distribution.

They have been developed without taking into account the existing realities of management decisions made by the WCA; lack of participation of farmers (founders) in decision-making on regulation of water use by the WCA; the fact if the WCA does not entirely understand its rights and responsibilities, it may interpret them as a governing body and make a directive and alienate farmers from the WCA as founders; absence of the problem solution of installing water metering devices used for land irrigation by the WCA; absence of the opportunity for the WCA to supply water in time and in adequate volume to consumers; shortcomings at the WCA with water use schedules, limited water distribution schedule and forecast of water volumes change; in the majority of cases absence of participation of farmers at the WCA performance, as well as poor performance of representatives of founders in the councils and meetings held.

In order to solve the problem with water distribution the following measures must be undertaken:

- it is necessary to take into account payments for the WCA services under current conditions;

- farmers are considered to be founders of the WCA and in this regard they have the right to participate in decision-making and to express his or her views on the protection of their interests;

- organization of regular training seminars for the WCA personnel aimed at enhancing their professional skills and competencies;

- necessity to find regional sources for financing construction of gauging station and appropriate water meters;

- need for a precise forecast based on the change in water volume with the account the state of the leak channels;

- water use planning, ensuring the elaboration of conducting analysis of the single water waste system at the WCA within the republic;

- in addition, it is important to involve farmers in communication outreach, as well as to attract farmers in the WCA activities.

The WCA should determine and impose economic sanctions on the inefficient water consumers, and encourage consumers to use water efficiently. Water management entities conclude contracts with the WCA for the supply of water, and subsequently the WCA concludes contracts with farmers. Under the contract, the “Suvnazorat” (“Water Inspectorate”) may charge a

fine for excessive water fees, and may charge a farmer for excess water. However, there is no mechanism of fines for the WCA. Meanwhile, the WCA controls the amount of water distributed to farmers at the established limit and at the same time it implements water allocation.

In our opinion, if all the mechanisms are based on current legislation, the farm should only have access to the limit of water, and the WCA should be responsible for excessive water consumption by the farmer because the WCA can allocate water in the inappropriate field of any farmer. In this case the WCA, not a farmer must be imposed fines or penalties. However, the WCA does benefit from paying a penalty as a non-profit organization, although it is theoretically justified to deduct these fines from the wages of the WCA employees. In this regard it would be efficient to introduce in the practice legal solution and the mechanism for practical implementation in practice.

Irrigation costs may vary depending on the complexity of irrigation and drainage networks. The value of irrigation costs for pumped irrigated areas is slightly higher as the costs of electricity or fuel and lubricants consumed by the pumps are taken into account. In such cases, the total cost of irrigation depends on the amount of electricity or diesel fuel consumed by the pumps. Other key factors that are taken into account in calculating the total cost of irrigation include irrigation and drainage repairs. The following three main techniques for calculating the total cost of irrigation are used:

1. Payment based on the land plot.
2. Payment based on the crop type.
3. Payment based on the amount of water consumed.

The above three techniques used to determine the amounts of payments for water use in the WCA in our republic cannot be considered to be efficient because even the most advanced and objective technique “Payment based on the amount of water consumed” demonstrates the following disadvantages:

1. Absence of availability of water metering devices at each water consumer;
2. Water meters do not cover the costs for their installation or operation, or the lack of a need to install them due to the small area of irrigated lands;

3. Absence of the ability to measure the actual amount of water consumed by all users at all times.

It is desirable to analyze recent experience of the WCA in our country, and basing on the research of domestic and foreign scientists on the use of water resources for irrigation purposes to introduce special charges on the water spent [3. 145p.]. In performing these activities, users of the WUA services will use the following information on irrigated land and their cultivated crops:

1. Indicators of the ball-bonitet of the land productivity of each water user;
2. Data on crops sown on the irrigated land;
3. Irrigation rate for types of crops (Hydromodules);
4. Determination of the amount of water used for irrigation at the irrigated land area for each crop in the same area.

The data in the first, third and fourth points are determined by the results of researches conducted in the agronomic and soil sciences of the republic for each region. In addition, it's not an exaggeration to say that all districts of the republic have competent research institutions.

### **Analysis and results.**

Regarding the second point, the information on the types of crops to be planted on the irrigated land is provided by each member of the WCA at the end of the year for the next year.

Once the above indicators are available, the amount of water required by the WCA, each individual and the user of the WCA service will be determined.

For these purpose the following calculations are implemented and it is recommended to calculate the need for water for each individual user according to the following formula:

$$W_n = (Ca_1 \times Csw_1 \times Cn_1) + (Ca_2 \times Csw_2 \times Cn_2) + \dots (Ca_n \times Csw_n \times Cn_n)$$

where,  $W_n$ - necessity for water of each water user;

$Ca_1$ -area of the first type of crop;

$Csw_1$ -water spent on the first type of crop (in m<sup>3</sup>);

$Cn_1$ -irrigation norm for the first type of crop, (times);

$Ca_2$ -area of the second type of crop;

$Csw_2$ -water spent on the second type of crop (in m<sup>3</sup>);

$Cn_2$ -irrigation norm for the second type of crop,(times);

$Ca_n$ -area of the n-th type of crop;



$Csw_n$ -water spent on the n-th type of crop (in m<sup>3</sup>);

$Cn_n$ -irrigation norm for the n-th type of crop,(times), etc.

As a result, the remaining crops are determined by the requirement of each user for water resources by adding them all.

**Table 1**

**Analysis of the distributing expenses on water efficient use at farmer entities**

№	Indicators	Crop acreage (in hectares)	Water spent	Irrigation norm	Water spent	Distributio n of expenses
<b>“Omad” farmer entity</b>						
1.	Cotton	100	40 m <sup>3</sup>	4	160 m <sup>3</sup>	1 472 000
2.	Grain	50	12 m <sup>3</sup>	2	24 m <sup>3</sup>	220 800
3.	Corn	40	3,6 m <sup>3</sup>	2	7,2 m <sup>3</sup>	66 240
4.	Potatoes	10	2,4 m <sup>3</sup>	2	4,8 m <sup>3</sup>	44 160
	Total	x	x	x	196 m <sup>3</sup>	1803200
<b>“Umid” farmer entity</b>						
1.	Cotton	150	60 m <sup>3</sup>	4	240 m <sup>3</sup>	2 208 000
2.	Grain	20	4,8 m <sup>3</sup>	2	9,6 m <sup>3</sup>	88 320
3.	Potatoes	20	4,4 m <sup>3</sup>	2	8,8 m <sup>3</sup>	80 960
	Total	x	x	x	258,4 m <sup>3</sup>	2 377 280
	All				454.4 m <sup>3</sup>	4 180 480

As can be seen from this table, it is obvious that the number of irrigations and the volume of water resources spent on 1 hectare have increased proportionally with the costs incurred and For example, “Umid” farmer entity has an area for cotton-growing which constitutes 150 hectares, and as a result, the amount of water consumed was 20 m<sup>3</sup> more than in “Omad” farmer entity and the costs accounted for 736 000 UZS (20 m<sup>3</sup> \* 4 \* 9200 UZS). On the basis of this plan, a water consumption plan for the WCA will be drawn up based on the total water demand for all water users.

## Conclusion

In this case-study the costs have conditionally been allocated depending on the amount of water consumption per 1 m<sup>3</sup>. However, these costs are determined by the distribution of irrigation hectares and irrigation numbers. It should be noted that in some cases the second irrigation can be less costly and requires less water than primary irrigation because costs and water consumption can be less than that.

Therefore, we think that it is necessary to take into consideration various factors in the distribution process. After determining the amount of planned costs it is possible to determine the amount of charge for using 1 m<sup>3</sup> or 10 m<sup>3</sup> or 100 m<sup>3</sup> of water resources spent. However, the amount of water actually consumed differs from the planned indicator. In our opinion, according to the decision of the WCA, it is necessary to adjust the amount of charge for water consumed with the account of the amount of water spent by the WCA, as well as the actual costs. In this case, the WCA members must pay the initial payment in the amount fixed in the plan. The next payments should be based on the actual water distribution. In our opinion, this method which is recommended for determining the amount of the WCA fees will enable to have an objective estimation of the amount of the costs of using the services of the WCA in our country.

## REFERENCE:

1. Message of the President of the Republic of Uzbekistan Sh.Mirziyoyev to the OliyMajlis of the Republic of Uzbekistan. //Xalqso'zi newspaper as of December 29, 2018. p. 2-3.
2. Resolution of the President of the Republic of Uzbekistan № 5330 "On the organizationla measures to radical improvement of the public administtraion of agriculture and water management system" as of February 12, 2018.
3. Ibragimov A., Karimov A., Rizayev N., Imamova N. "International Financial Reporting Standards" - T: "Moliya", 2018.p.- 296.
4. Ibragimov A., Khasanov B., Rizayev N. Practical Management Accounting. Tashkent. Iqtisodiyot, 2016. -321p.
5. Rizaev N. Methodological Issues of Analyzing Intellectual Property Objects/ International journal of research in social sciences/ ISSN 2249-2496/ International Journals of Multidisciplinary Research Academy (IJMRA)/ Impact Factor (IJRSS) 6.278 for 2015 and 7.081 for 2016/. December 2018 Volume-8, Issue-12.
6. [www.ziyonet.uz](http://www.ziyonet.uz).