

Economic incentives for water saving in Central Asia

N. Mirzaev

It is clear that one of causes of water deficit in Central Asia is the growth of water demand; and naturally reducing water demand facilitates water problems resolution. *Institutional measures*, including specially developed systems of regulations and incentives are used in the frame of demand management. The systems of regulations and incentives affect individual behavior of people forcing them to do those things which otherwise they would never do. These systems have different forms. One of them is a financial influence that envisages “*compulsion*” by means of payment for water services and penalties for water use in excess of the established limits and “*incentive*” through the right to sell saved irrigation water at market prices to other water users etc.

Only *penalties*, although with low effect, are active under the centralized water governance. Numerous unsuccessful efforts to introduce the *water charge principles* in the Soviet period have shown that it is difficult to provide successful reforms in the water sector without reforming the agricultural sector as a whole by means of transition towards market relations in rural areas.

After independence, Central Asian countries try to reform their economy, including water and agricultural sectors. Matters of saving water become more and more *economically important matters* in the course of reforming water and agricultural sectors. Since, under transition towards market relations, a major target of water users is a maximum income rather than a maximum possible crop yield at any cost (as in the Soviet time), water users are interested in water-saving methods in that extent in which they are profitable for water users under existing natural and economic conditions. Therefore, transition towards the decentralized methods of management, in particular in the water sector, as a rule, is accompanied by the introduction of water charges and granting the right to sell saved irrigation water that are the most important instruments for improving management of water use and water conservation.

At present, all Central Asian countries consider it necessary to introduce water charging, however, since the strategies of market reforms are different, the water charging system is operative only in three of five Central Asian countries.

Water use based on water services for a fee is not practiced in the agricultural sector in Uzbekistan and Turkmenistan. At present, the cost of water services is taken into account in the form of the water tax that is included in the land tax in Uzbekistan. In Kyrgyzstan and Kazakhstan, reforms were initiated during the period of 1992 to 1994 by introducing water charging.

Further, in 1995 to 1996, after issuing the appropriate decrees by Presidents, the mass privatization of land through its free of charge distribution was started. In Tajikistan, water charging was introduced later than in neighboring countries in 1996. In Tajikistan, liberalization of prices on agricultural output took place also later than in Kyrgyzstan and Kazakhstan after issuing the Decree of the President of the Republic of Tajikistan “On the Provision of Rights for Land Use” in 1998.

It is impossible to say definitely that the introduction of water charging has substantially increased the efficiency of water use in Central Asian countries but certain positive results and trends are already observed.

Effects of the introduction of water charging in Kyrgyzstan are the following (according to expert appraisal):

- Reducing water consumption;

- Reducing areas with pumped irrigation;
- Changes in the crop pattern (a share of crops that need less water has increased – cereal crops, tobacco, sunflower);
- Soil and hydrological conditions have become worse over the whole area insignificantly, but in some places they were even improved due to reducing water supply.

The above said about the introduction of water charging in Kyrgyzstan, although in the lesser extent, is true also for Tajikistan. With respect to Kazakhstan, it is still early to speak about positive affects of the introduction of water charging, but its necessity is beyond doubts.

The experience of economic stimulating of the rational water use in Central Asian countries shows that the introduction of water charging is the condition *necessary* but *insufficient* for improving the efficiency of water use. Additional conditions for improving the efficiency of water use are the following:

- Adequate water measurement and accounting, especially at the “bottom” level of water distribution. However, the all-out privatization of land in Kyrgyzstan and Kazakhstan has resulted in abrupt rise of the number of private and dekhkan farms (PFs and DFs), caused problems in establishing the adequate water measurement and accounting systems at the on-farm level and reduced the effect of introducing water charging.
- The financial sustainability of PFs that pay for water services of WUAs and WMOs (Canal Administration and District Water Authorities). Liberalization of the agricultural sector and strengthening the financial status of water users should precede the introduction of charging for water services. In practice, as shown above, the reverse sequence of reforms in Central Asian countries has led to incapacity of numerous water users to pay for water services of WUAs and WMOs. The financial inability of water users has resulted from the inability of authorities not only to support them but also to protect them from resellers under selling agricultural output.
- A proportionality of water tariffs and penalties to operational costs and damages due to infringement of the water discipline¹. A tariff policy should promote water saving and improve collecting fees for water services both at the level of main canals and at the level of WUAs.

This publication deals with problems of improving the tariff policy and was prepared on the basis of analyzing data collected under implementing the IWRM-Fergana Project. The project covers the pilot main irrigation canals in the Fergana Valley: the SFC (Uzbekistan), AAC (Kyrgyzstan), and KBC (Tajikistan), as well as WUAs in the command areas of these pilot canals.

The fee collection rates for water services

Two kinds of water services are considered in this publication:

- services related to water delivery by the Canal Administration to WUAs; and
- services related to water delivery by WUAs to farmers.

¹ The fact is that too low or high tariffs for water services and penalties cannot act as factors facilitating water saving

In the first case, a water supplier (WS) is the Canal Administration (CA), and in the second case – WUAs. At the same time, in the first case a WUA is a water user (WU), and in the second case – a private farm. However, it is necessary to keep in mind that the end water user that pays for services of the CA and a WUA is a private farm; and a WS's future depends on its financial status.

Diagrams that are presented in Figures 5.39 to 5.42 show that although the fee collection rate for water services is increasing from year to year in the command areas of the KBC and AAC where water charging was put in practice, however, the growth rates of fee collection are quite low due to the difficult financial situation in WUAs and adversely affect the financial status of the CA and correspondingly the quality of O&M.

One of the reasons of low growth rates of fee collection for water services (if to set aside the reasons related to the policy of transition towards the market relations in the water sector and the procedure for writing off WUAs' debts) is the fact that the computing method of tariffs for water delivery need to be improved.

Water users served by the KBC Administration (WUAs) don't hurry to pay as well because from time to time rumors about writing off of their debts that were "fastened" under restructuring the collective farms (on their territory WUAs were established) are being widespread among water users. In 2004, for example, all debts as of January 1, 2003 were written off. Writing off is a positive process, but the adverse fact is that, as a rule, among "winners" those who never paid. The collective farm that had only a 10% debt has lost. It comes to ridiculous things, after writing off of water users' debts the District Water Authorities became the debtor of non-payers.

Payment for services should be made on the monthly basis. The agreement envisages a penalty at the rate of one percent per each overdue day, but no more than 100%. This provision, as a rule, fails. A prepayment should amount to 40% but this provision, with the rare exceptions, are not also implemented². Water users, first of all, pay to the District Water Authorities that provide pumped water supply and according to the leftover principle to the KBC Administration. There is the following explaining of this fact: water users understand that without timely payments the District Water Authorities will not be able to repair pump units, affecting water supply immediately and adversely.

The agreement on irrigation water supply at the rate of 90% from the planned irrigation water supply is signed by the KBC Administration and water users (WUAs). There are two types of agreements that are signed depending on whether water users have investors (mediators) or not (most of water users have investors signing the futures agreements with them). Since 2007, if water users have the investor, the trilateral agreement (the KBC Administration - a water user - an investor) is signed. The agreement with an investor is concluded on water supply only for irrigation of cotton, at the same time, water users pay for water supply for irrigation of other crops. Specialists consider that there is some effect due to the trilateral agreement but insignificant.

The fact is the financial status of water users having investors is worsening from year to year, because these investors (mediators) mainly use the barter payment system (supplying fuel, fertilizers, etc., at that, at high prices) instead of the mutual settlement in cash. Therefore, in Tajikistan, the decision was made (Resolution No 10/13-3 issued by the Government) to finance farmers through the banks (preferential micro-credits). At present, transition towards the new system of financing is in progress.

(Sources: the minutes of KBC WC's meeting of 23.04.2008).

² Penalty per each overdue day is provided for but there are not incentives for prepayment.

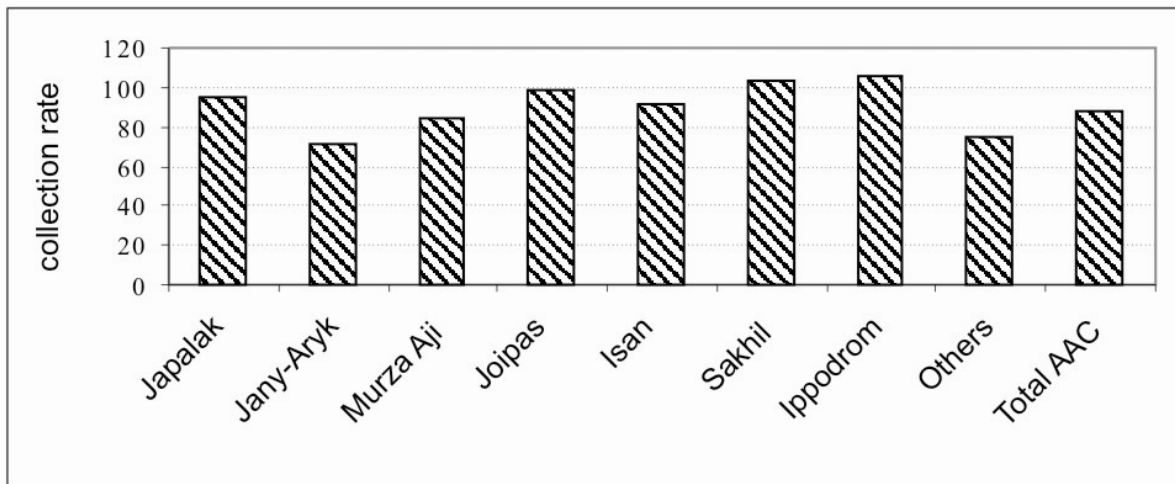


Figure 5.39 A Fee Collection Rate in the AAC Administration and WUAs
 (the progressive total over the period of 2003 to 2007)

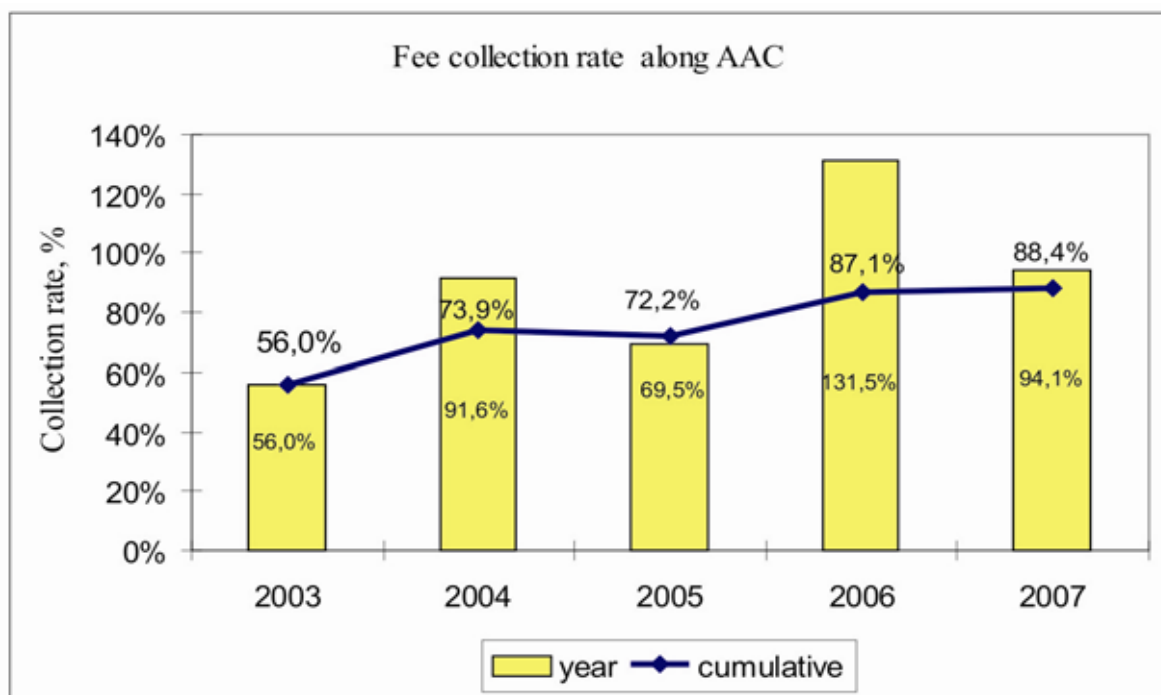
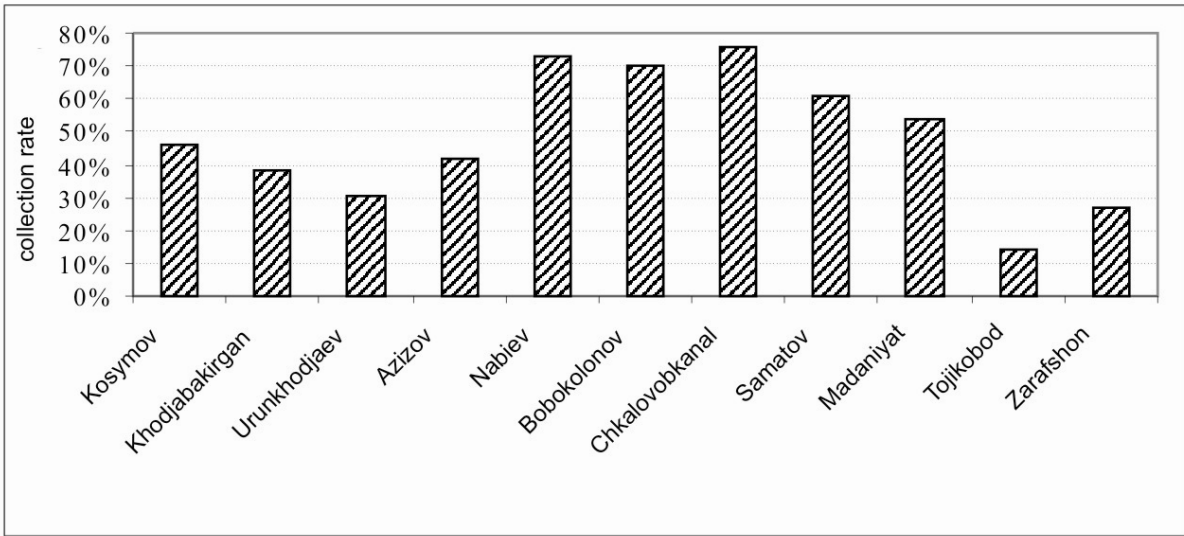


Figure 5.40 A fee collection rate in the AAC Administration over years



**Figure 5.41 A Fee Collection Rate in the KBC Administration and Water Users
(the progressive total over the period of 2004 to 2007)**

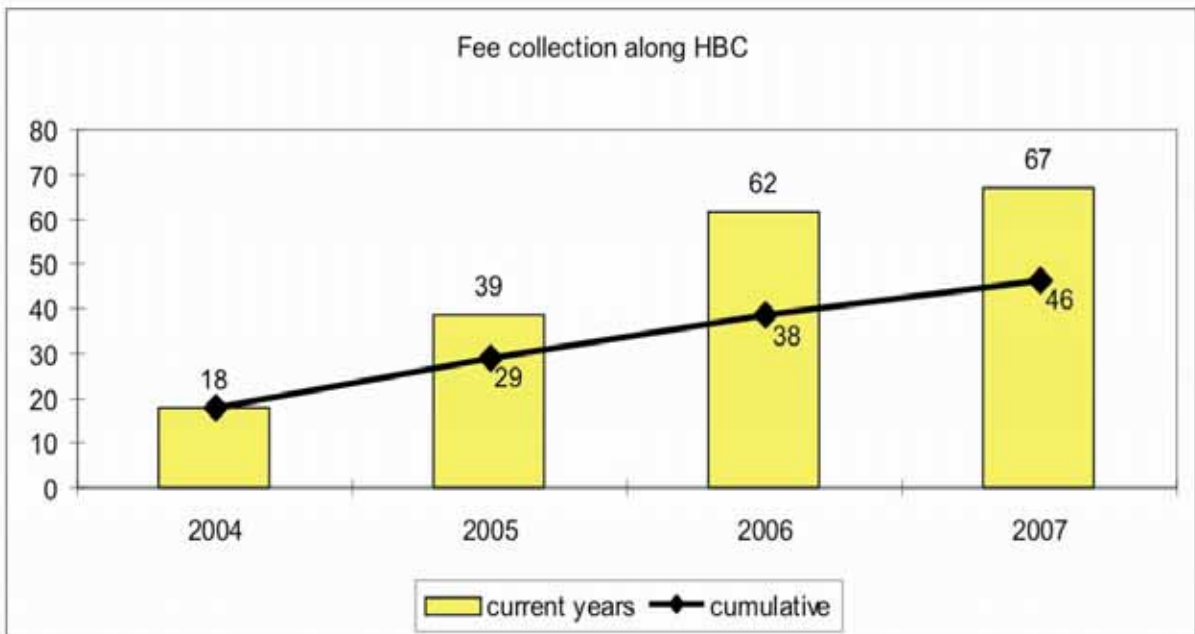


Figure 5.42 A Fee Collection Rate in the KBC Administration over Years

The methodology of adjusting water tariffs

Table 5.42 Tariffs for water services (per 1000 m³)³

| Country | Tariff | | Exchange rate |
|----------------------------------|-------------------|------|---------------|
| | National currency | US\$ | |
| Kyrgyzstan, Som | | | |
| Growing season | 30 ⁴ | 0.82 | 36.4 |
| Off-vegetation period | 10 | 0.27 | 36.4 |
| Tajikistan, Somoni ⁵ | | | |
| Water supply by gravity | 7.8 | 2.27 | 3.43 |
| Pumped water supply ⁶ | 12.5 | 3.64 | |

Analysis shows that tariffs in Central Asian countries differ by:

1. a rate (the highest tariffs in Tajikistan)⁷;
2. seasons (a growing season and off-vegetation period):
 - i. The differentiated approach under which tariffs in the off-vegetation period three times lower than during the growing season was employed in Kyrgyzstan;
 - ii. The single tariff that does not depend on seasons was established in Tajikistan (local specialists consider that the differentiated approach is more rational since it encourages water users to conduct water applications for land preparation during the off-vegetation period);
3. type of water supply:

³ As of April 2008

⁴ Tariff - 3 tiyin per 1m³ (plus 1 tiyin as the VAT) does not cover operational costs of the AAC Administration. In specialists' opinion, a tariff should be increased twice

⁵ Tariffs as of 10.06.2007 without VAT at the rate of 20%. Water management organizations were not included into the list of organizations that were exempted from VAT. In principle, the matter of the VAT correctness regarding water services should be discussed.

⁶ In Israel, tariffs were also differentiated depending on types of water supply (by gravity or pumped). However, that what is acceptable for the country with developed market economy may be unacceptable for Central Asian countries

⁷ According to the world practice, the realistic level of water charges is about US\$ 30 to 60/ha.

- i.by gravity;
 - ii.pumped;
4. procedures for developing and approval of tariffs. Tariffs are approved by:
- i.the Parliament (the Jogorku Kenesh) in Kyrgyzstan;
 - ii.the Government (the Ministry of Economy) in Tajikistan.

The existing normative tariffs, as shown above, do not take into account the market principles and, as a rule, do not stimulate the growth rates of fee collection for water services. Hence, the water suppliers, for example, the Canal Administration suffer from shortage of water and water saving; and, at the same time, it is not advantageous for water users to pay for water services in timely manner and, all the more, to make prepayment.

Therefore, the following approach of adjusting tariffs for water services was proposed.⁸

In general, the formula for computing a tariff can be presented as follows:

$$T_r = T_p * K \quad (5.5)$$

where

T_r = the calculated tariff for water services (hereinafter referred to as “tariff”)

T_p = normative (base) tariff

K = overall adjustment factor

$$K = \frac{K_f}{K_l * K_s * K_t} \quad (5.6)$$

where

K_f = factor of water users’ water availability relative to limited water supply (hereinafter referred to as “limit”)

K_l = limit factor

K_s = factor of collecting fees for water services (hereinafter referred to as “fee collection rate factor”)

K_t = factor of timely charges for water services (hereinafter referred to as “a timeliness factor”)

⁸ It is necessary to stress that the rates of normative tariffs for water services under computing of which the profitability of water users and their readiness to pay should be considered are not discussed in this publication.

1. **Computing the limit factor (to take into account water availability of current year)**

$$K_l = \frac{W_l}{W_p} \quad (5.7)$$

where

W_l = limit of water use⁹ for the current season

W_p = planned water supply to water users for the current season

2. **Computing the factor of water availability (to take into account actual water supply)¹⁰**

If to follow the proportionality principle (actual water supplies during ten-day periods are proportional to the limit water supplies):

$$K_f = \frac{W_f}{W_l} \quad (5.8)$$

If the proportionality principle was not observed (understated or overstated water use relative to limits take place):

$$K_f = \frac{\sum_{d=1}^m (K_d^f * W_{fd})}{W_f} \quad (5.9)$$

where

K_d^f = actual water availability relative to the limit in d-ten-day period

$$K_d^f = \frac{W_{fd}}{W_{ld}} \quad (5.10)$$

⁹ Limits of water supply for the growing season for irrigation systems, provinces etc. are formally established only in Uzbekistan since limited water use are employed here. In dry years, limits are also established in other countries. The term “limit” is traditionally used, although it is more correct to use the term “quota” that means the right for water.

¹⁰ Actual water supply should be taken into account under establishing tariffs for water services, for example in Israel where the cost of 1 m3 equals to \$0.60 if actual water supply is less than planned volumes by 50% then tariff equals \$0.14 (less by 77%) and if actual water supply is higher by 50% then tariff equals \$0.30 (i.e. less by 50%).

where

d = index of a ten-day period

m = number of ten-day periods over the period under consideration (in the case of the growing season **m** = 18)

W_{fd} = actual water supplies during a ten-day period

W_{ld} = limited ten-day period water supplies

3. *Computing the fee collection rate factor*

$$K_s = \frac{P_f}{P_p} \quad (5.11)$$

where

K_s = the fee collection rate factor

P_p, P_f = planned and actual amounts of collected fees for water services over the design period

$$P_p = T_p * W_f \quad (5.12)$$

4. *Computing the timeliness factor*

$$K_t = \frac{100 + F * R}{100} \quad (5.13)$$

where

F = a difference between the established and actual date of the payment for water services. For example, a date within the first ten-day period after ending the settlement month, i.e. from 1st to 10th day of each month can be considered as an established date.

For example:

- If a payment was made within established terms then $F=0$; and the tariff for the period under consideration (month) is not adjusted and equals to the normative tariff. If a payment for services granted in May was done before the established term, for example, on 25 May (prepayment) then $F=+5$ days (with the sign “+”)

- If a payment for services granted in May was done after the established term, for example, on 15 June then $F = -5$ days (with the sign “-”)

R = coefficient of adjusting daily tariff (in %) that depends on an actual date of payment (prepayment or delayed payment). Its value can be reasonably established taking into account the real situation, for example, from 0.5% to 1.5%.

Examples of computations

Example 1

Let us assume the following:

- $K_s = K_t = 1$, i.e. water users pay for water services in full and timely;
- planned water supply (W_p) by a supplier to water users during the growing season amounts to 20 mln. m³;
- different options of limited water supply (even such unlikely but possible option in principle when the limited water supplies are greater than the planned ones) are simulated;
- the principle of proportional readjustment of actual water supply over a ten-day period against limited water supply is observed.

Computing of tariffs is given in Figure 5.43 and Table 5.42. It is obvious that:

a) if $W_f = W_l = W_p$ then the calculated tariff equals to the normative one.

b) if $W_f = W_p$ and variable W_l :

- with decreasing W_l against W_p , the calculated tariff increases against the normative one, and vice versa when W_l exceeds W_p , the calculated tariff becomes lower than the normative one. Thus:
- The less amount of water resources (dry year) the higher tariffs; this approach corresponds to the market principles, and at that water suppliers do not suffer from water resources deficit, but water users need to employ water-saving measures: reducing the cropped areas; decreasing the land use intensity, exclusion of water-loving crops from the crop pattern (rice, onion etc.), use of shorter furrows, increase in the number of irrigators, introduction of new technologies etc.
- The greater amount of water resources, the lower tariffs; at that water suppliers do not have unearned profit due to the abundance of water, and water users have the opportunity to apply

additional kinds of irrigation (water applications for soil leaching, water application for land preparation, irrigations to trigger germination), to increase a share of water-loving crops and the land use intensity etc.

c) If $W_f = W_p$ and variable W_f :

- With decreasing W_f against W_p , the calculated tariff decreases against the normative one, and vice versa when W_f exceeds W_p , the calculated tariff becomes higher than the normative one. Thus, it becomes more profitable for water users to save water¹¹.

Example 2

Figure 5.43 and Table 5.42 present two options of actual intra-seasonal water distribution (by ten-day periods) relative to the limited water supply:

- proportional water supply;
- disproportionate water supply.

The table shows that in the case of the same value of seasonal water supply (16,000.000 m³) under the first (proportional) option of actual water supply during the growing season $K_{f1}=0.9$ and under the second option, when water abstraction less or greater the limited volumes of water supply, $K_{f2}=1.24$ i.e. under other things being equal, the tariff has increased by 34% due to the nonuniformity of water distribution per ten-day periods (due to water abstraction in the excess of limits).¹² At that, lesser water abstractions result in lowering the factor's value¹³, and water abstraction in the excess of limits in rising of the factor's value. Since a share of water abstraction in the excess of limits (relative and absolute values) was higher, rising of the factor's value leading to the growth of tariff rate takes place.

As a whole, after taking into account both coefficients the adjustment factors make up 1.0 и 1.38 respectively.

¹¹ Of course, the participants of the process of water distribution and other stakeholders can accept some reasonable and mutually acceptable limitations after their discussion

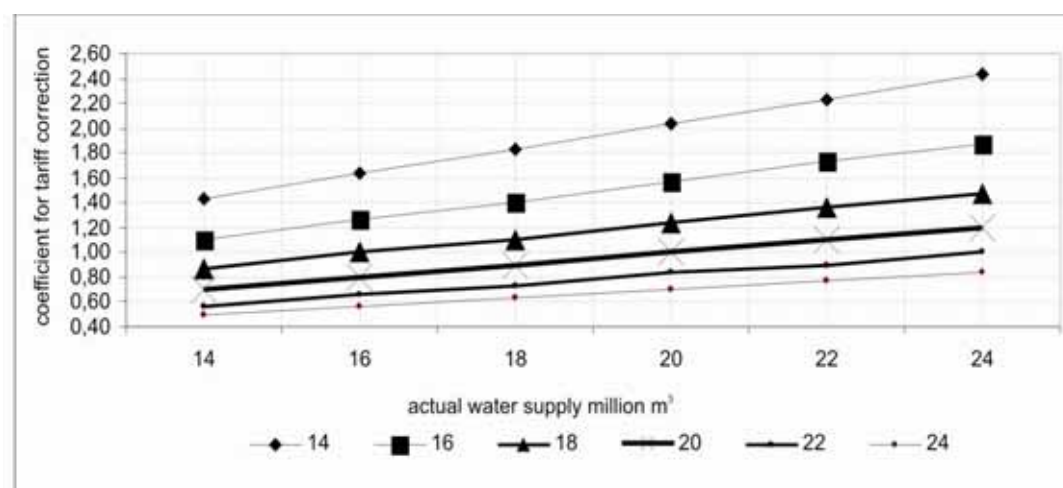
¹² Penalties for water abstractions in the excess of limited water supply (stoppage of water deliver or penalties) are envisaged, but these measures, as a rule, are not effective.

¹³ Lesser water abstractions can be caused: i) at will of water users (in our example just this case is considered); ii) due to force majeure circumstances; and iii) through a water supplier's fault. The agreement between water suppliers and water users foresee such circumstances, but it is difficult to recall the case when water supplier was punished because water supplier always can allege force majeure circumstances. In addition, it is possible that under using our method, lowering the tariff due to lesser water abstractions through a water supplier's fault can be insufficient to cover damage.

Table. 5. 42

**Computing the Tariff Adjustment Factors for Water Services Taking into Consideration
Limited and Actual Water Supplies**

| W_f , mln. m ³ | W_l , mln. m ³ | | | | | |
|-----------------------------|-----------------------------|------|------|------|------|------|
| | 14 | 16 | 18 | 20 | 22 | 24 |
| 14 | 1.43 | 1.10 | 0.87 | 0.70 | 0.57 | 0.50 |
| 16 | 1.63 | 1.27 | 1.00 | 0.80 | 0.67 | 0.57 |
| 18 | 1.83 | 1.40 | 1.10 | 0.90 | 0.73 | 0.63 |
| 20 | 2.03 | 1.57 | 1.23 | 1.00 | 0.83 | 0.70 |
| 22 | 2.23 | 1.73 | 1.37 | 1.10 | 0.90 | 0.77 |
| 24 | 2.43 | 1.87 | 1.47 | 1.20 | 1.00 | 0.83 |



**Figure 5.43 Chart for Computing the Adjustment Factors Taking
into Account Limited and Actual Water Supplies**

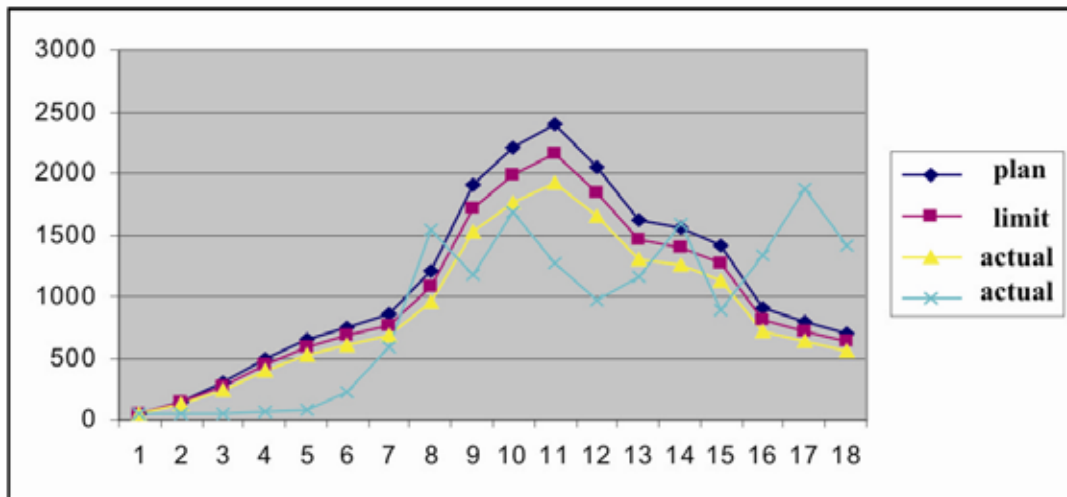


Figure 5.44 Water Supplies per Ten-Day Periods

Table 5.43.

**Computing the Water Tariff Adjustment Factors under Nonuniformity
of Water Distribution per Ten-Day Periods**

| Indicator | Unit | Growing season |
|-----------|---------------------|----------------|
| W_p | 000' m ³ | 20,000 |
| W_l | 000' m ³ | 18,000 |
| K_l | | 0.90 |
| W_{f1} | 000' m ³ | 16,000 |
| K_{f1} | | 0.90 |
| K_l | | 1.00 |
| W_{f2} | 000' m ³ | 16,000 |
| K_{f2} | | 1.24 |
| K_2 | | 1.38 |

Example 3

Let us assume that:

1. $W_f = W_l = W_p$, i.e. $K_f = K_l = 1$ and there are not any problems related to water distribution.
2. $R = 1\%$.

Computing of adjustment factors, taking into account a fee collection rate and its timeliness, is given in Table 5.44.

The method of adjusting tariffs can be applied on the monthly or seasonal basis. It is obvious that the seasonal approach, under which mutual settlements with water users taking into account above factors are made in the end of the growing season, is more acceptable during the initial period. Under these circumstances, if a water provider is found as a debtor then a water provider's debt is considered as the prepayment of a water user for the next growing season.

This approach can be employed at different levels of water sharing:

- at the main canal's level: relations of the Canal Administration and WUAs;
- at the WUA's level: relations of a WUA and farmers.

In principle, other economic incentives for rising of the level of fee collection rate and water savings are also possible. Only some of them were suggested for their discussion. It is talked of wide discussing not only among scientists but also among water professionals and water users. In the case of positive perception of this approach and after its improvement according to comments, its introduction at the WUA's level can be faster than at the main canal level since, in principle, a WUA can settle this matter at the general meeting of water users. At the main canal's level, it is necessary to arrange the discussion firstly at the CWUC's sessions and then at the enlarged sessions of the CWC with participating of all stakeholders and decision makers.

Table 5. 44

Computing the Adjustment Factors Taking into Account the Fee Collection Rate and Its Timeliness

| Indicators | Unit | Design month | | | | | | Total |
|------------|------|--------------|-----|------|------|--------|-----------|-------|
| | | April | May | June | July | August | September | |

| Indicators | Unit | Design month | | | | | | Total |
|---------------------|--------------------|--------------|---------|---------|-----------|--------------|--------------|--------|
| | | April | May | June | July | August | September | |
| Initial information | | | | | | | | |
| W_p | 000 m ³ | 1,750 | 2,750 | 3,950 | 5,000 | 4,250 | 2,300 | 20,000 |
| W_f | 000 m ³ | 1,750 | 2,750 | 3,950 | 5,000 | 4,250 | 2,300 | 20,000 |
| R | % | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Design information | | | | | | | | |
| P_p | US\$ | 3,973 | 6,243 | 8,967 | 11,350 | 9,648 | 5,221 | 45,400 |
| P_{f1} | US\$ | 3,973 | 6,243 | 8,967 | 11,350 | 9,648 | 5,221 | 45,400 |
| P_{f2} | US\$ | 1,230 | 5,000 | 5,750 | 8,700 | 7,700 | 3,400 | 31,780 |
| P_{f3} | US\$ | 1,230 | 5,000 | 5,750 | 8,700 | 7,700 | 3,400 | 31,780 |
| P_{f4} | US\$ | 5,164 | 8,115 | 11,656 | 14,755 | 12,542 | 6,787 | 59,020 |
| K_{s1} | | | | | | | | 1.00 |
| K_{s2} | | | | | | | | 0.70 |
| K_{s3} | | | | | | | | 0.70 |
| K_{s4} | | | | | | | | 1.30 |
| D_1 | | 25 May | 25 June | 25 July | 25 August | 25 September | 25 October | |
| D_2 | | 01 May | 01 June | 01 July | 01 August | 01 September | 01 October | |
| D_3 | | 25 May | 25 June | 25 July | 25 August | 25 September | 25 October | |
| D_4 | | 15 April | 15 May | 15 June | 15 July | 15 August | 15 September | |
| F_1 | day | -15 | -15 | -15 | -15 | -15 | -15 | |
| F_2 | | 0 | 0 | 0 | 0 | 0 | 0 | |

| Indicators | Unit | Design month | | | | | | Total |
|------------|------|--------------|------|------|------|--------|-----------|-------|
| | | April | May | June | July | August | September | |
| F_3 | | -15 | -15 | -15 | -15 | -15 | -15 | |
| F_4 | | 15 | 15 | 15 | 15 | 15 | 15 | |
| K_{t1} | | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 |
| K_{t2} | | 1 | 1 | 1 | 1 | 1 | 1 | 1.00 |
| K_{t3} | | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 |
| K_{t4} | | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 |
| K_1 | | | | | | | | 0.85 |
| K_2 | | | | | | | | 1.43 |
| K_3 | | | | | | | | 1.21 |
| K_4 | | | | | | | | 0.88 |

Note: D – a date of payment for water services in the calculated period – a month

Proposals for putting into practice

1. For mitigating the water crisis in Central Asia it is necessary to learn to manage water demand in the efficient manner;
2. According to the world practice, the most effective way to manage water demand is the method of economic incentives for water saving;
3. Economic incentives for water saving can be provided through transition towards water charging and improving the tariff policy;
4. Approaches to the adjustment of normative (basic) tariffs that are established by the government (at the main canal's level) or by the WUA general meeting are described in this publication with the purpose of initiating their discussion;
5. Under applying this approach, water suppliers and water users would have the economic incentives for water conservation and efficient use of water resources;

6. Water suppliers and water users should select the mutually acceptable approach and assume some rational and mutually acceptable limitations;
7. This approach to settling financial relations between water suppliers and water users can be used both at the main canal's level and the WUA's level;
8. The consensus is quite possible since the approach has attractive incentives both for water suppliers and water users;
9. This approach should derive encouragement from decision makers since it is directed at water conservation; and
10. This approach shouldn't be foisted on participants of the process of water allocation; on the contrary, it is very important to organize its discussion and improvement, taking into consideration their comments and wishes.