
DEVELOPMENT OF COOPERATION BETWEEN CENTRAL ASIAN COUNTRIES IN SOLVING ECOLOGICAL PROBLEMS OF THE ARAL SEA

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SUMMARY

The paper describes the activities of the new independent states of Central Asia which emerged as a result of the collapse of the Soviet Union to address catastrophic consequences to the drainage of the Aral Sea. It also describes how ways were found to reconcile the positions and interests of the countries of the region in achieving a political consensus about the aims and methods of solving common problems of improvement of the ecology in the sea basin.

1 INTRODUCTION

Before the sixties the Aral sea was the fourth largest reservoir of fresh water by size on the planet with the area of water surface of 66 thousand square meters. Its level was 53,4 m and the natural fluctuations of its level for many years were evaluated at the amplitude 1,5 – 2,0 m and were defined by the natural climate changes within its basin. The economic and political interests of the former Soviet Union and the practices of social policy to distribute labor between the republics of the Soviet Union required independent provision of cotton of the country. As a result a monocultural agricultural complex has developed in the Aral Sea basin on the basis of the irrigation of arable farming and agrarian orientation of the economy. Only for the period of 1970 through 1995, once the area of the irrigated land in the region has been increased from 4,6 up to 7,96 million hectares and the consumption of water for the irrigation from 68,4 cub. km. up to 110 cub. km. The average – multi -year drainage of the rivers of the basin of 104 cub. meters the consumption of water with the returning drainage, was 117 cub. km, (see figure 1) in addition to this 94 % of the water used for irrigation. At the same time the appropriate infrastructure to grow and refine the cotton was created. Up to 70 % of the Gross Domestic Product of Uzbekistan is tied up in the agricultural sector, the major part of which is cotton growing.

2 ECOLOGICAL CONSEQUENCES OF THE ECONOMIC POLICY

The Aral sea has not become an exception from the common rules of development of ecological catastrophes. As in all other cases known in the world practice, it has evolved through all the stages. During its initial stage in the sixties-seventies it was thought to be an insignificant ecological transformation, but in the course of the expanding irrigated areas and of unreturnable water consumption, the size of the sea was becoming more and more threatened until its changed character was irreversible.

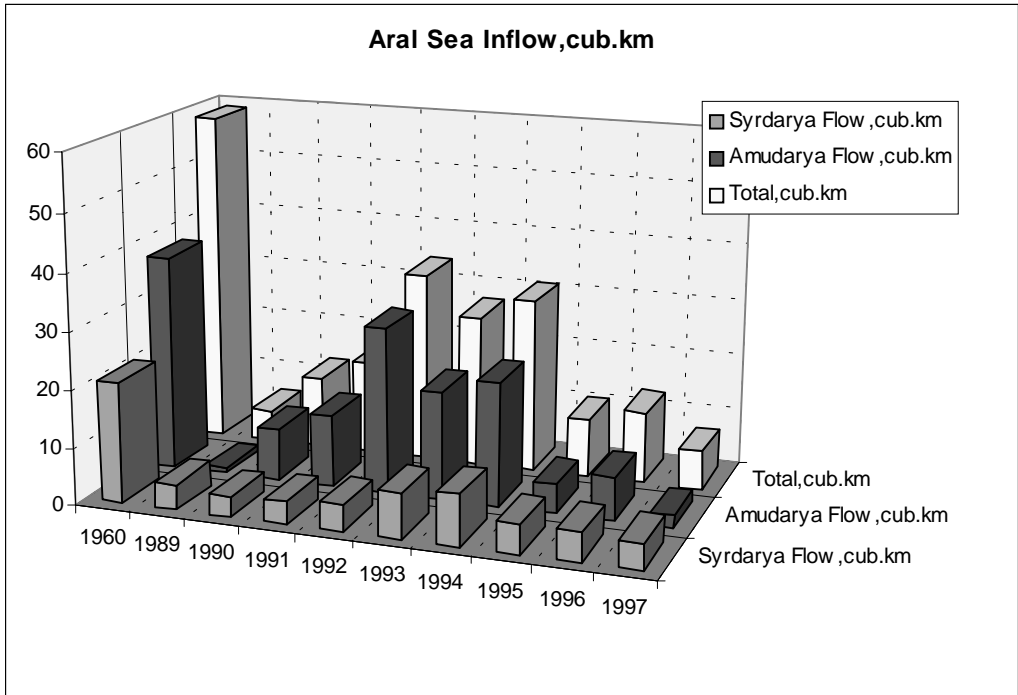


Figure 1 Aral Sea Inflow , cub.km

Already in the beginning of the eighties the tributary of the water into the Aral Sea from the rivers of Amudarya and Syrdarya had practically stopped. By the present time the sea has not received more than 1000 cub. km of water as a result of which its volume has decreased (see figure 2) and the level has fallen by 18 m. (see figure 3). After the drainage of the Aral Sea its bottom has become exposed at the area of approximately 40 thousand sq.. km (see figure 4,5), the surface with strongly salted soil is being intensively eroded by the winds. According to different evaluations, the total salt-dust removed from the dried sea bottom is 70-100 million tons annually. The shore line has moved back 60-80 km. The sea has lost its fish-economy, recreation and transport significance as well as smoothening effect on climate.

At the same time a rapid degradation and desertification process at the mouth ecosystems of Amudarya and Syrdarya rivers takes place. The social-economic conditions of the life of the population in the deltas of the rivers has been strained in connection with the worsening of the ecological situation and loss of the working places in the traditional areas of employment.

The cotton monopoly caused not only the break down of the ecological balance but also affected negatively the health of people. The pollution of the water sources with the fertilizers and with chemicals and their exhaustion has become one of the main reasons for the high level of illness amongst the population , especially in rural areas where 60 % of the citizens use water from the centralized sources of the water supply. Thus, the Aral crisis has become visible and sad evidence of the tragic consequences of the foolish economic policy towards the environment and use of the natural resources. Its consequences have touched not only 35 million people of the Aral Sea basin, but also has an indirect influence on the neighboring countries.

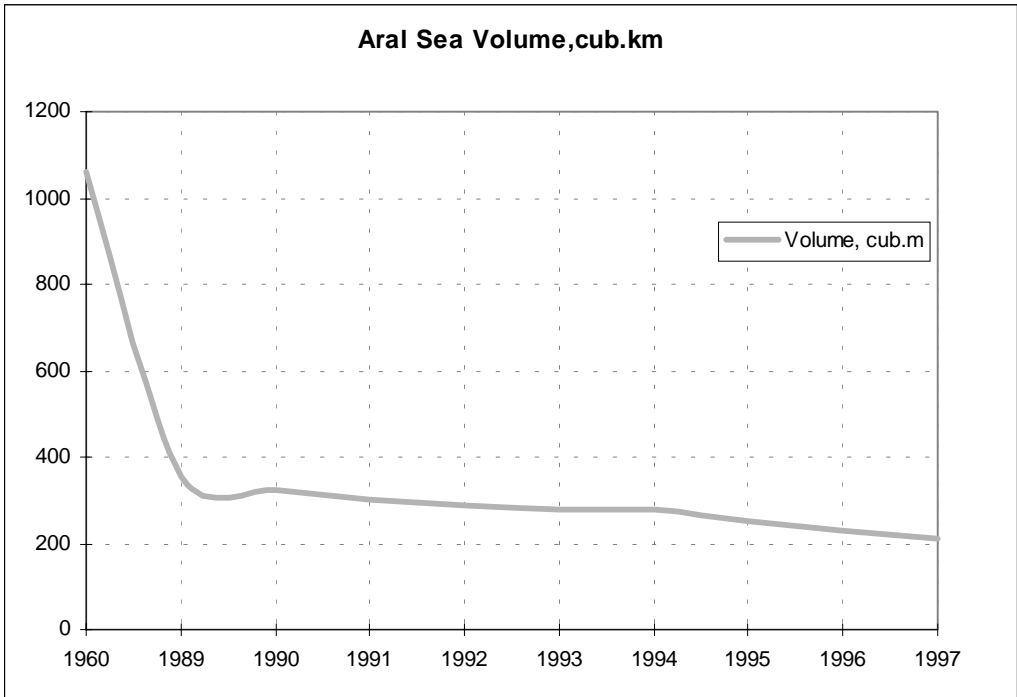


Figure 2

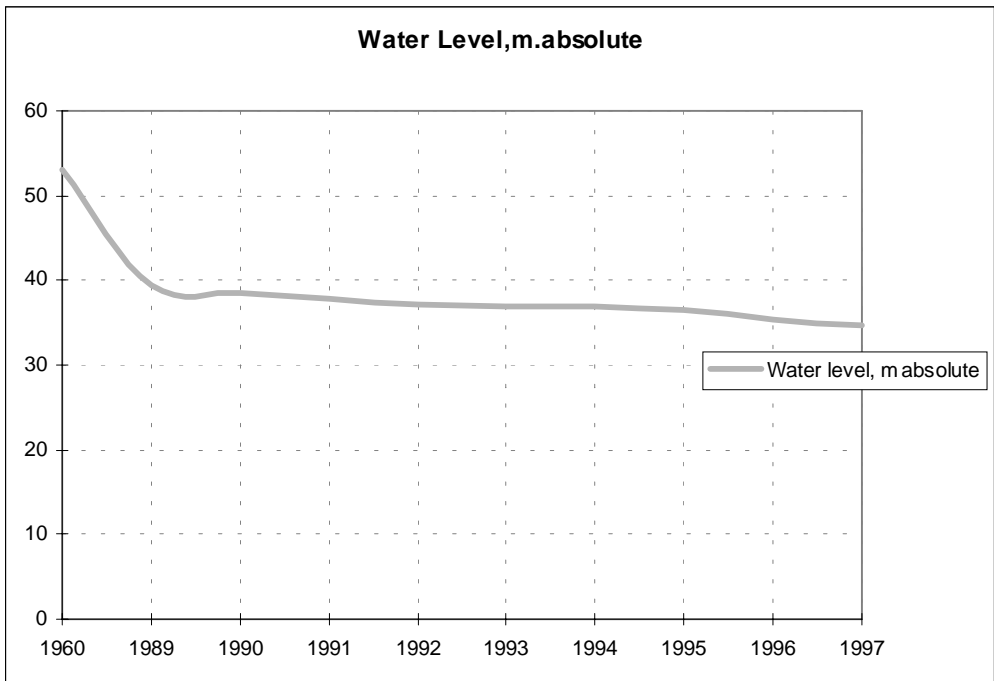


Figure 3

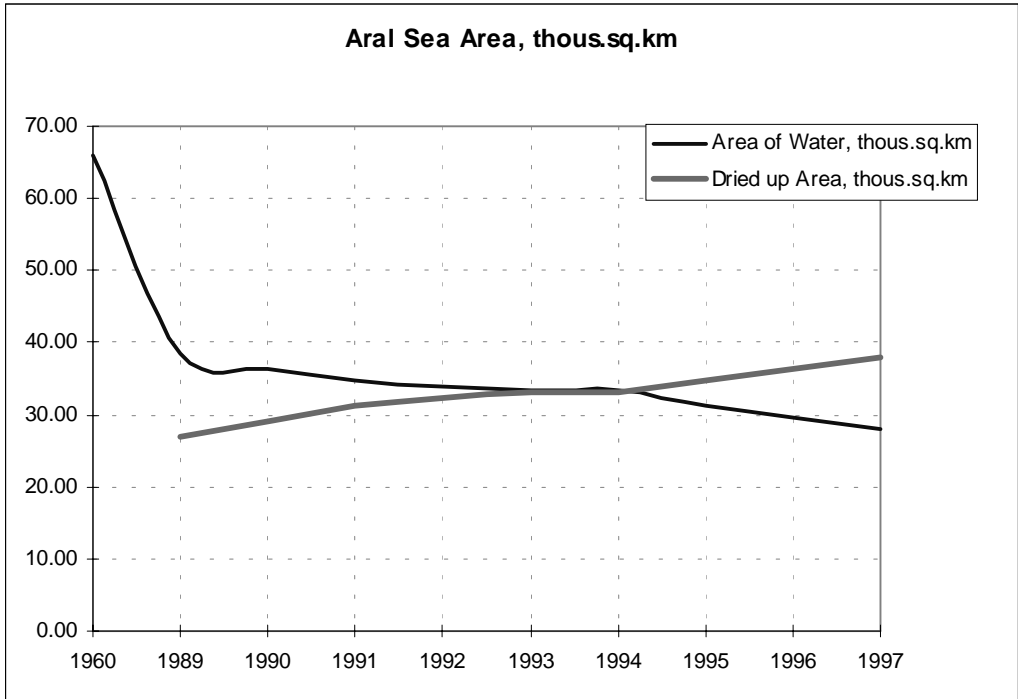


Figure 4

3 ARAL CRISIS AND REGIONAL COOPERATION

3.1. First Steps

First attempts to address the consequences of the Aral crisis and to restore the ecological balance in the Aral sea basin were undertaken at the end of the eighties. Large-scale creation of new irrigated lands has been prohibited in the region, and investments were assigned for the introduction of expensive water protection machinery and technologies.

Within the limits of the centralized planning economy each republic was subjected to strict limits for the use of water resources and received tasks for decreasing water consumption for irrigated arable farming. They have started wide-scale development projects and improving drinking water supply for the population.

However, in connection with the collapse of the Soviet Union the measures taken failed to bring the expected results. Besides this they had palliative character and were not directed to eliminate underlying reasons for the crisis which were hidden in the structural policy of the centralized state. Namely this policy required introduction of water-consuming monocultural agricultural economy and did not foresee any fundamental changes in the structure of the region economy.

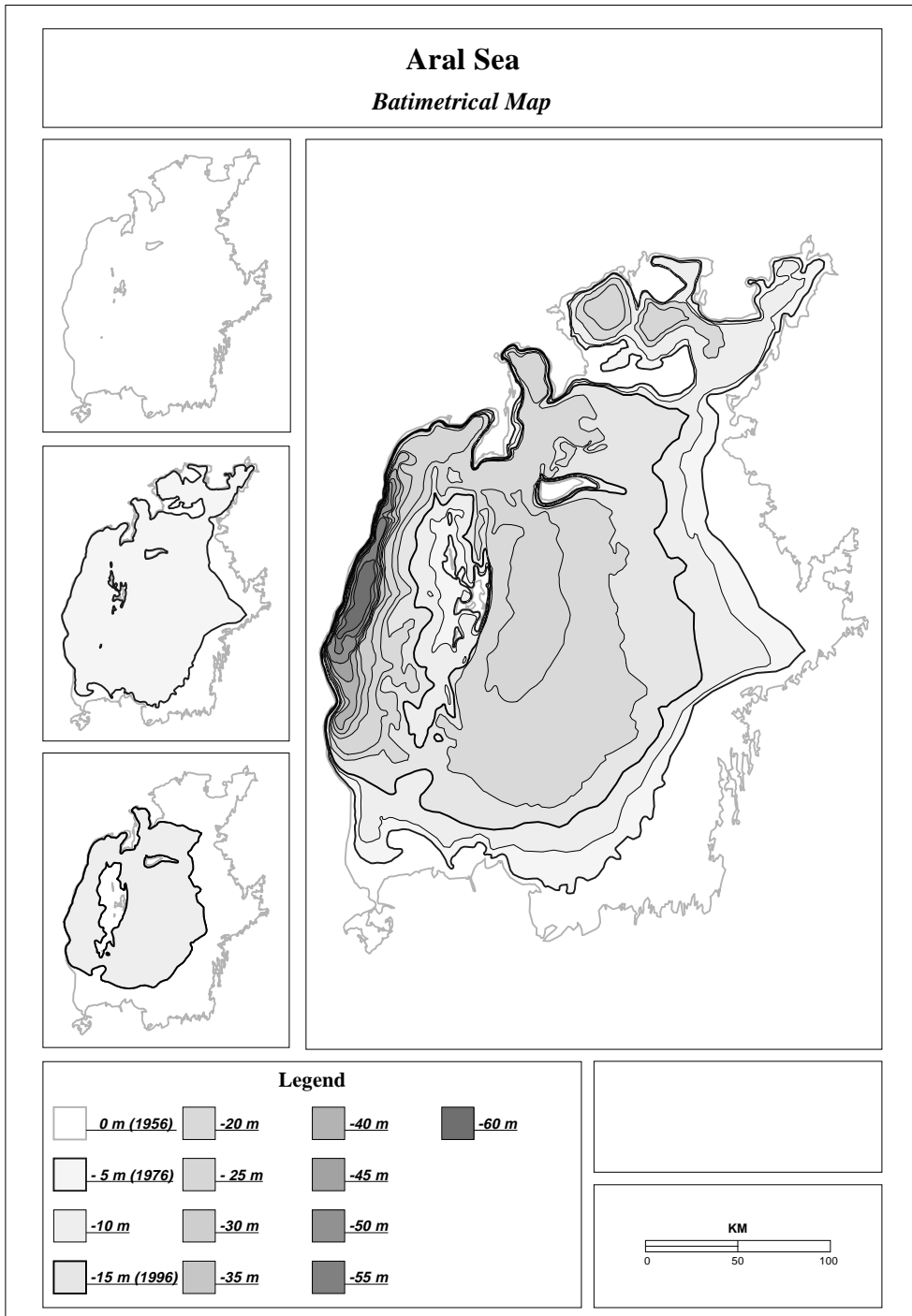


Figure 5

3.2 Illusions and Reality

On the wave of increased public awareness and openness (glasnost) the scientists and the public actively discussed different options for solving the problem of restoring of the Aral sea:

- immediate harmonization of all the reservoirs and decreasing irrigated lands area ;
- transfer a number of drainages of the Siberian rivers in order to replenish the water resources of the Aral Sea basin ;
- replenishment of the sea by way of transfer of some water from the Caspian Sea or from the mouth of the Volga river ;
- widespread introduction of expensive and technically complicated drop irrigation systems.

3.3 Realization of the Problem in New Political Conditions

All projects mentioned above were far from the reality and , of course, were not realized. They did not take into consideration the existing demographic situation, structure of the economy or consequences of the decisions.

However in the course of the problem discussion process one indisputable conclusion has been reached – this problem can not be resolved immediately and with separate efforts by the countries of the region. The situation has been aggravated by the deep differences of the interests of the countries of the region after gaining independence. After the formation of 5 independent states in the Central Asia some problems with the concerted management of the resources of the trans-border rivers of the sea basin and setting the regime of their usage arose. It is quite clear that the interests of the Republic of Kirgizstan and the Republic of Tadjikistan which are located in the area of the rivers upper reaches in the zone of the water resources formation are far removed from the problem of the Aral sea while Uzbekistan, Kazakhstan and Turkmenistan are subjected to its direct influence. Besides this, there are water reservoirs of many years regulation in the territory of the first two countries which were built earlier for the interest of irrigation use, whereas the main irrigated areas are in the territory of the last three countries. This fact (circumstance) has created paradoxical approaches of the countries of the region to the regime of water reservoir usage.

Kirgizstan and Tadjikistan work out water supplies at the time of peak electricity consumption during the winter period and as a result the other countries feel the deficit of water at the time of watering of agricultural products. The accumulation of such contradictions served an additional stimulus for searching of the mutually accepted decisions to achieve the balance of political and economical interests, requirements of the environment perseverance.

3.4 Political Decisions

A meeting of the heads of the Central Asia countries in Kizeel-Ordee city (Kazakhstan) in March 1993 could be considered a first step toward organization of regional cooperation in resolving the problems of the Aral Sea. In the course of this meeting there was an Agreement on joint actions for resolving the crisis of the Aral Sea. To realize this Agreement an Interstate Council the Aral Sea was set up along with an Aral Saving International Fund with their executing authorities.

3.5 From Politics to Practice

Practically at the same time the governments of the countries of the region have made a decision to set up an Interstate coordination for the water economy commission. The main function of which has become a definition of the limits of the water usage by the republics of the region from the transborder rivers. The Ministers of the Water Economy from all the countries of the region have become the members of this commission. The earlier principles of water division and proportions of the usage of the resources of the rivers were kept. The decisions taken by the commission are realized by the water economy associations "Amudarya" and "Syrdarya". The logical development of cooperation in the sphere of water economy activity is foreseen within the limits of the water-energy consortium which is being created now. The interests of the power industries will also be presented with the aim to achieve the balance of interests of the different branches of the economy in requirement for water.

During the second meeting of the heads of the countries in Nukus (Uzbekistan) in January 1994 a Concept for solving the Aral Sea problem and Aral Sea Region was approved and the Program of the Actual Actions for the Improvement of the ecological situation in the Aral Sea basin for the nearest 3-5 years was adopted taking into consideration the social-economical development of the region. For the first time in the history of the regional cooperation on problems of the economy and ecology have been united together by this decision, by its meaning it has become a first attempt to integrate the ecological priorities into the political and economical decisions on an intergovernmental level.

The program foresees resolving the following issues:

- effective use of water protection of the water resources in the sea basin;
- implementation common for the region, standardized systems of registration of water resources and their usage;
- improvement of the quality of water for the agricultural needs;
- working out events for the creation of the artificially irrigated ecological systems in the territory of the mouths of Amudarya and Syrdarya and on the plots of the dried bottom of the Aral Sea;
- realization of the interstate program "Clean water and health of the population: for the provision of the good-quality drinking water and improvement of the sanitary-epidemic situation;
- implementation of the automatic management system for the basins of Amudarya and Syrdarya rivers.

3.6 Transfer from the Regional to International Cooperation

The big event and stimulus for the further development of the regional cooperation and has become an International Conference for Sustainable Development of the Aral Sea Basin under the auspices of UNDP which took place in 1995 in Nukus city. This meeting has meant a transfer to the new international level of cooperation and it was the first time public attention had been attracted to the problem of the Aral Sea.

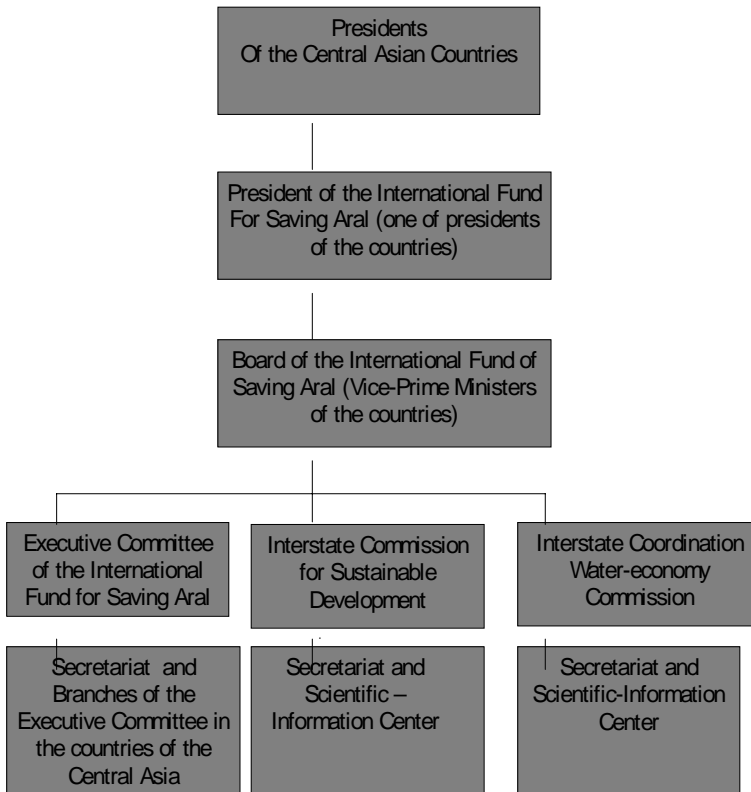
An Nukus declaration was accepted by the heads of the Central Asia states based on the results of the conference confirmed the commitments of the countries to cooperate on the regional level on the basis of the mutual respect, neighborliness and resolve to continue working

to overcome the consequences of the ecological crisis. There were measures defined for the development and realization of the strategy on sustainable development on the basis of full support of international conventions and treaties for these issues.

For these purposes it was recognized that it would be necessary to prepare an International Convention for Sustainable Development of the Aral Sea basin. The problems of the joint water use and unification of the ecological standards and the related legislation should be of priority significance in this Convention. At the same time there was taken a decision on development of the Interstate Commission for Sustainable Development.

These decisions created a normative basis for the organization and functioning of the interstate structures. However, with the development of cooperation the need for revisions has become evident. The Interstate council set up earlier for the problems of the Aral Sea and The International Fund for Saving Aral in fact duplicated each other, and in the course of their activities impeded the development of mutual programs, decreased the effectiveness of the use of state contributions for implementation and availability of donors.

Because of this at the regular meeting of the heads of the states in February 1997 in Alma-Atee, the Interstate Council was combined with The International Fund for Saving Aral. The President of Uzbekistan Mr. I. A. Karimov was elected as its President. Thus at the present time the following organization structure was formed for regional cooperation.



4 PERSPECTIVES ON COOPERATION

Any new forms of organization for these joint activities within the region can not be final and flawless. We can not say that the development of regional cooperation for addressing the problems of the Aral Sea is going on smoothly but there is political consent, valuable experience of solving problems of multilateral and bilateral consent is being gained, making complicated decisions, diminishes conflicts, the potential of an interstate organization has been created. The mechanisms for cooperation are being worked out. In the near future the most important tasks for increasing of the effectiveness of regional cooperation are:

- Preparation and realization of the programs and main joint projects of regional significance
- Preparation of the international Convention for sustainable development in the Aral Sea basin and creation of the mechanisms for its realization;
- Organizations for interaction of international and national instruments for the achievement of mutual goals.
- Involving non-governmental and public organizations in regional cooperation

5 CONCLUSION

The Aral crisis by its scale has not only regional but also of global significance. The development of the crisis has been going over a generation and during the transition of the economies of the countries of the region, and we can not expect immediate restoration of the ecological balance in the basin of the Aral Sea. However, understanding of the profound and communal aspects of the problem, political consent and unification of the efforts of all the countries of the region lets us hope for the subsequent realization of planned practical actions and significant lessening of the ecological situation.

