

## **CHAPTER 8**

# **CONCLUSION AND RECOMMENDATIONS**



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### 8.1 Conclusion

The total investment cost of the project proposed in the Basic Plan discussed in Part I of this Report is enormous and its financial internal rate of return (FIRR) is negative even if government subsidies fully cover the construction cost. In order to implement the project in the Basic Plan, it is necessary to provide subsidy to the O&M cost as well as the construction cost from the government budget. Considering the prevailing economical and financial conditions of not only the Study Area, but also the country as a whole, it would be extremely difficult to implement the entire project within a short period. Even if financial assistance is to be sought from external sources, it is practically not possible to attract funding agencies for an investment of this scale. Project evaluation thus revealed that the project proposed in the Basic Plan can not be materialized in that form. However, considering the pathetic condition of the population in the Study Area whose health is affected due to lack of safe and reliable water supply, it is considered essential to take urgent measures to implement a project to improve the quality of drinking water.

Therefore in the feasibility study discussed in Part II of the Report, in the light of the results of project evaluation, the projects in the Basic Plan were re-examined with a view of materializing the project through readjustment.

First of all, a preliminary evaluation was conducted with respect to the project (Phase I up to year 2002) in the Basic Plan which had been originally identified for the feasibility study. It became clear from the results of this evaluation that implementation of even this part of the project is difficult. The FIRR of DOMIWP T-N was remarkably low.

Therefore taking the above into consideration, the project in question was rescheduled and its scale was reduced with a view point to cut down the cost which is partly to be achieved by;

- (1) Utilizing the existing Urgench Transgas water supply pipeline
- (2) Extending the treatment plant expansion program and water transmission plan by reducing water consumption through a rational use of water.

This rescheduled project was evaluated.

Evaluation of the Rescheduled Project indicated that the project needs considerable subsidies from the government budget. Construction cost should be fully subsidized since the current tariff level is kept. The feasibility of the first priority project (FPP) of the total Rescheduled Project is higher than that of total Rescheduled Project.

As a result of economic evaluation, economic internal rate of returns (EIRRs) of the total Rescheduled Project and FPP are estimated as 1.4% and 8.4%, respectively. Economic viability of the total Rescheduled Project is extremely low.

From the above results, the FPP is judged as viable and feasible financially and economically.

## 8.2 Recommendations / Suggestions

Based on the findings of the Basic Plan Study and Feasibility Study, the project must be implemented taking the following into consideration.

(1) A decision must be taken to utilize (borrow/lease) the existing Urgench Transgas water pipeline instead of constructing a new pipeline ( $\phi = 1,000$  mm) for the 111 km stretch between Takhiatash and Kungrad.

(2) Water meters should be installed for all consumers and appropriate and affordable water tariff system should be established to cover at least operation and maintenance cost. These measures will achieve effective utilization of water so that the expansion plan of water supply facilities can be cut down.

(3) The each management bodies, the Unit for Repair and Maintenance of Tuyamuyun Inter-Regional Water Pipeline or Vodokanal, are necessary to establish a sound management on a self paying basis so as to decrease the subsidies from central government. To achieve a sound management, institution, organization, operation and maintenance are to be strengthened. It is recommended to request for technical and management cooperation to external donors.

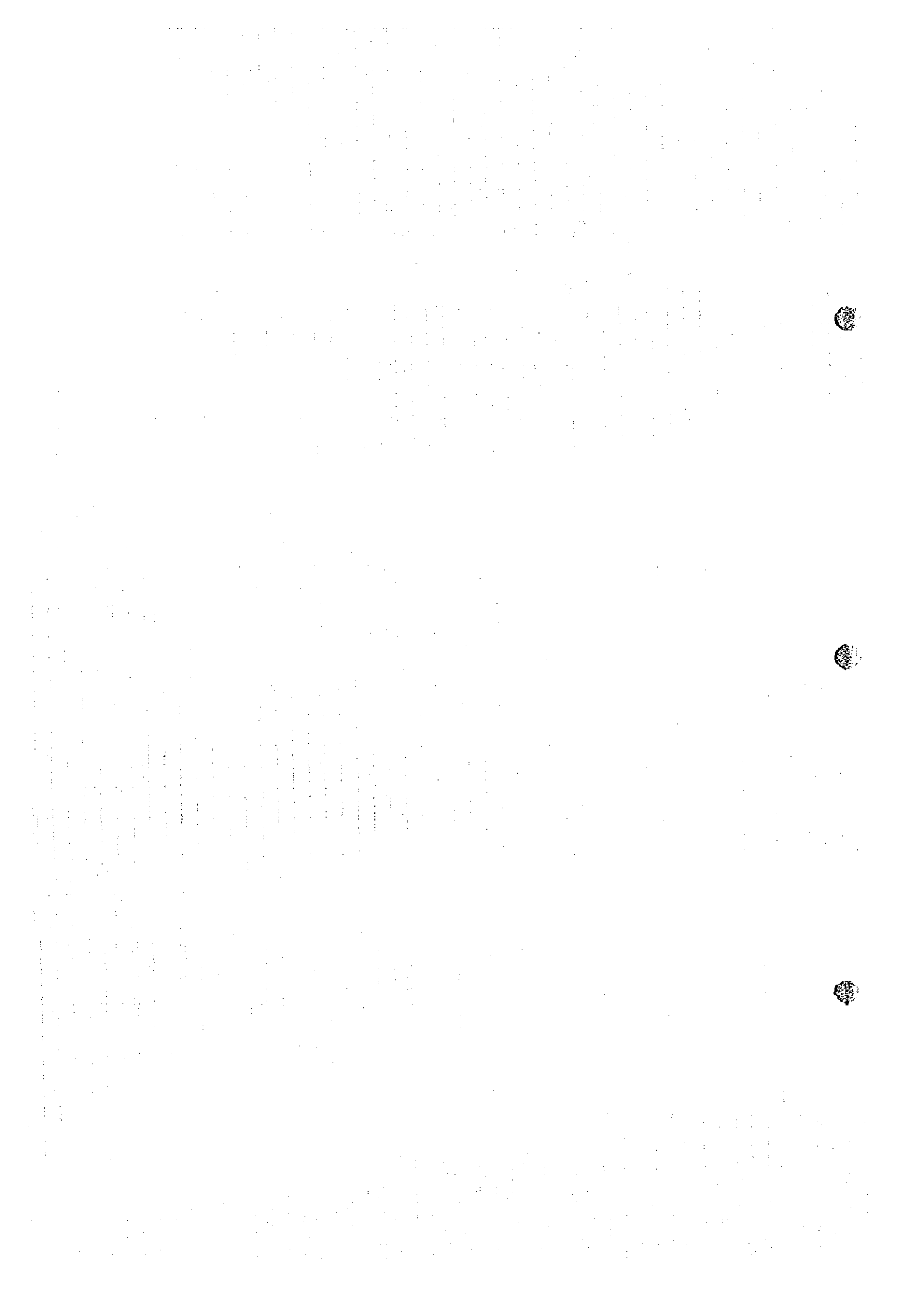
(4) Effective coordination among the agencies involved with the operation of Kaparas Reservoir must be established. Necessary relevant regulations and

operation guidelines must be drawn.

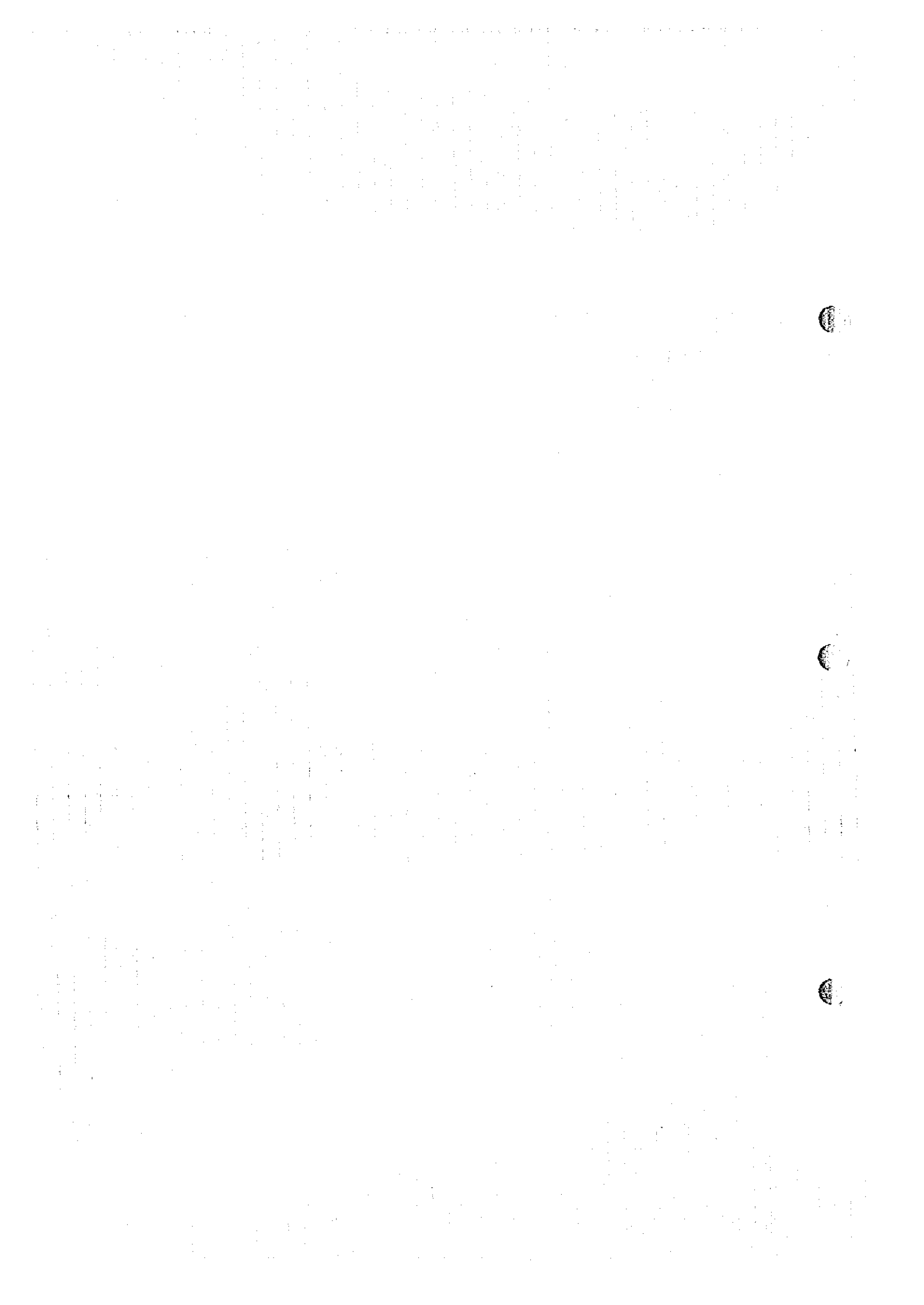
(5) Appropriate subsidies from the government budget must be considered to support the DOMIWPs and keep affordable water tariffs to the consumers.

(6) It would be desirable for the GOU to contact external funding agencies about the possibilities and conditions of lending for this project. In this connection it would be necessary to decide the cost component invested by the owned capital of the ROU.

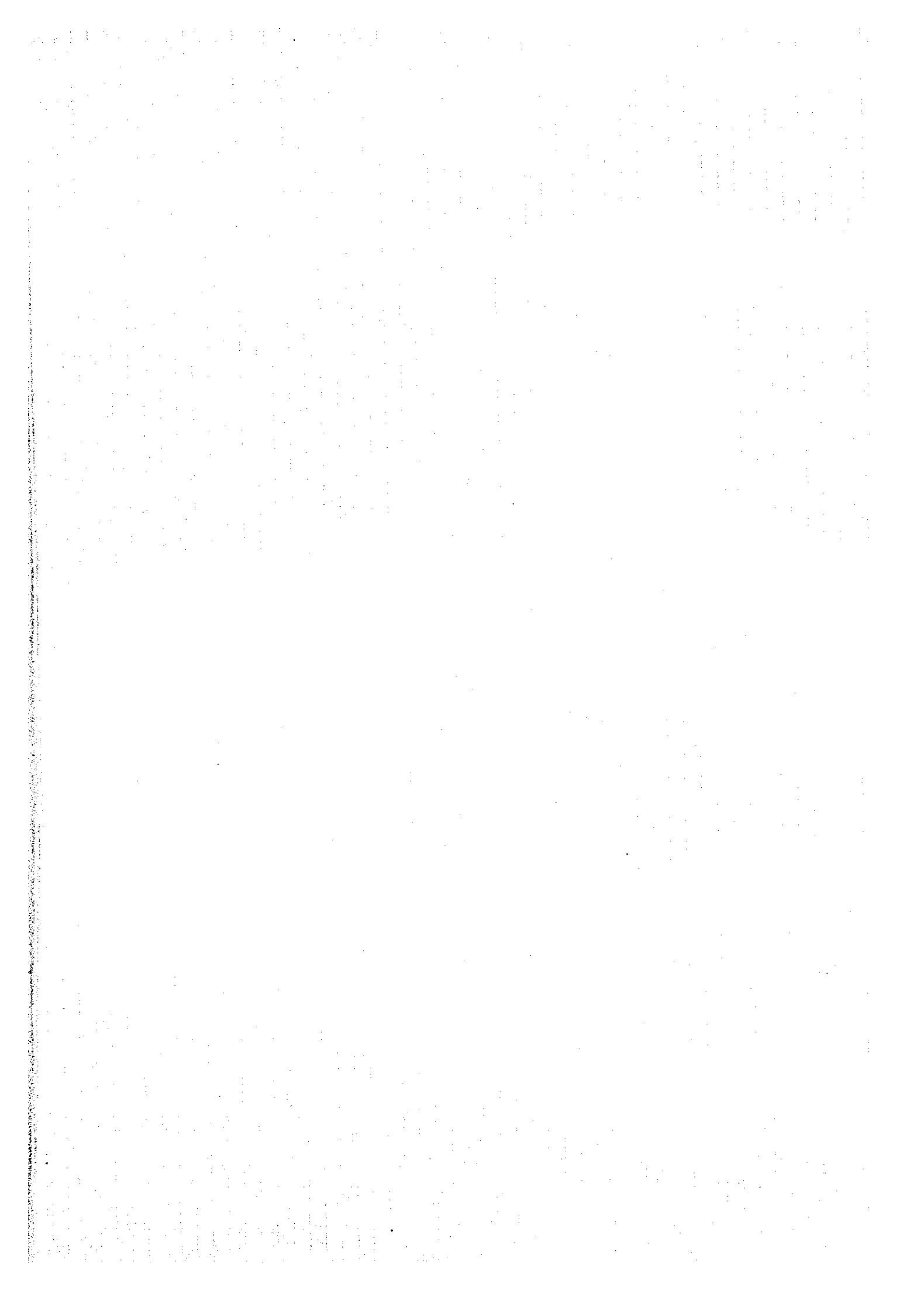
(7) The GOU must coordinate among the external donors concerned with this project by establishment of their policy on the water supply projects for the inhabitants in the Aral Sea Region.











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