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**Development of a textbook and support to regional cooperation in Central Asia on the safety  
of hydrotechnical installations**

**PROJECT PROPOSAL**

**for a UNECE-led project supported by the  
Eurasian Development Bank**

**Rationale and background**

Large dams and their reservoirs are of great importance to the economy of the countries in Central Asia. They contribute to seasonal and long-term regulation of river flow in the interests of irrigation, hydropower generation and water supply. They also serve as efficient means protecting against floods, mudslides and droughts. These large dams pose a significant potential threat, because a dam accident or failure can lead to disastrous effects, including loss of life. Most Central Asian dams were built 50 to 60 years ago and due to limited resources for their maintenance and an inadequate legal framework for their safe operation, the risk of accidents is increasing. An accident on the Kzyl-Agash dam with some 40 fatalities in Kazakhstan (March 2010) has contributed to a sense of urgency of joint work on dam safety.

Central Asian countries have started to develop appropriate institutional and legal frameworks for dam safety but this work needs to be continued. For example, there are still no established procedures for notification of co-basin countries in case of accidents or emergency situations with dams. Implementation of legislation needs to be strengthened.

The UNECE and partners, including the Eurasian Development Bank, have implemented two project phases preceding this application: One preparatory phase investigating the issue thoroughly and setting up the objectives for the first implementation phase 2009-2011.

The outputs of the first preparatory phase are found in a UNECE publication where information on the national legislation and inspection systems, the first post-Soviet inventory of all large dams in the region, a model law and a model agreement are found. This information (<http://www.unece.org/index.php?id=11577>) has served as a strong foundation for the second phase.

Important achievements of the second phase 2009-2011 ([http://www.unece.org/env/water/damsafety\\_documents.html](http://www.unece.org/env/water/damsafety_documents.html)) were:

- Enactment of national legislation or its further enhancement in Kazakhstan, Tajikistan and Uzbekistan;
- A draft agreement on the safety of hydro-technical installations in Central Asia;

- Inter-State cooperation to increase the safety of individual dams such as a safety assessment on the Kirov dam by a joint Kazakh-Kyrgyz working group (see [http://www.youtube.com/watch?v=Q00p\\_xKH4NQ](http://www.youtube.com/watch?v=Q00p_xKH4NQ));
- Improved cooperation at the national level between agencies with responsibilities for dam safety;
- A model technical regulation on the safety of hydro-technical installations, and
- Increased capacity to deal with and awareness about dam safety issues owing to a number of UNECE-organized training activities.

The countries have formally expressed the need for continued work and support by international organisations and donors in this area at the national as well as regional levels. Dam safety is included as an important component of the Aral Sea Basin Programme 3.

The Executive Committee of the International Fund for the Saving of the Aral Sea (EC-IFAS) is an important partner with the necessary mandate needed for project implementation providing coordination at the regional level and political support. National institutions in Central Asia responsible for the safety of hydro-technical installations and partners in the project activities are:

- Committee on Water Resources, Ministry of Environmental Protection, Kazakhstan
- Department for Water Management and Melioration, Ministry of Agriculture and Melioration, Kyrgyzstan
- Ministry of Melioration and Water Resources, Tajikistan
- Ministry of Water Management, Turkmenistan
- Water Control Facilities Committee "Gozvodhoznadzor", Uzbekistan

### Objectives

The overall objective of the further efforts is to **develop region-wide cooperation as well as national capacity on dam safety in Central Asia.**

The specific objectives of the proposed effort of cooperation between EADB and UNECE described in this proposal are to:

- Strengthen capacities for training on dam safety in Central Asia by developing a textbook for the training of experts and students.
- Contribute to the further development of regional cooperation between the countries by supporting the organization of a regional meeting of experts and officials involved in the provision of safety for hydrotechnical installations.

### Expected value

The contribution of EADB will be important to improve the awareness with regard to the safety of hydro-technical installations on the regional as well as national levels. The specific effort to develop a textbook will provide a good basis for future training efforts that partly will be supported in the UNECE project. The support to the organization of a regional meeting will

contribute to an improved cooperation between the countries sharing the water resources in the Aral Sea basin.

There is a clear practical relevance and usefulness of the activities planned. The ownership of the activities of the countries is high as they are developed in close collaboration with the national authorities.

The envisaged main beneficiaries of the planned activities are policy makers, government officials and experts responsible for the safety of hydrotechnical installations.

By contributing to a better understanding of the needs at the national as well as regional levels, the project would support EADB work in this area. It also increases the international visibility of EADB-supported work.

### Work methods

The EADB support co-funding of a regional meeting will not only contribute to the development of regional cooperation but will also give a platform for EADB to promote its policies.

It is further a key condition for the effective implementation of state policies with regard to the safety of dams and other hydro-technical installations that there are legal acts in place and that experts and officials are properly trained. The Central Asian countries have reached different levels of development in this regard. The proposed textbook on the safety of hydro-technical installations is a cornerstone for the further development of legislation and regulation, safety declarations, methodology of inspections, establishment of registers of hydro-technical installations, instructions for criteria for safety, methodology with regard to observations of the technical status and safety monitoring. It will also be of considerable value for higher education and training of staff responsible for management of installations etc.

On the request of the Central Asia countries the development of the textbook is a priority direction of work in the third phase of the dam safety project implemented by UNECE in Central Asia. The textbook will be developed by a selected group of national experts from the region with the most valid experience for the task. This group will be supported by an international consultant hired by the UNECE Secretariat.

1. National consultants will be selected and as a first step discuss and agree on all basic issues including the structure of the textbook. A first draft structure of the textbook is found in annex 1. (Month 1-2)
2. National experts will develop the first draft of the textbook in accordance with the agreed on structure after which it is sent to the international consultant for comments. (Month 2-4)
3. The international consultant provides comments on the first draft including suggestions for corrections and additions to the document. (Month 4)
4. The group of national experts develops the first draft further taking into account the proposed corrections and additions. (Month 5-6)

5. The draft textbook will be presented during a regular regional meeting on dam safety in Central Asia in the framework of the UNECE project. This regional meeting is co-funded by the EADB grant. (Month 6-7)
6. After this review of the textbook, the final corrections are made by the national consultants and the textbook is published and distributed to training centres and other institutions in the region. (Month 8-10)

#### **Resource requirements**

The implementation of the envisaged project activities requires adequate financial resources. Annex II provides an estimate of the necessary extrabudgetary funding for co-funding a regional meeting as well as developing training material that will amount to USD 30,000 in total.

#### **Time schedule of the project**

The expected overall duration of the project from the date of transfer of extrabudgetary funds till conclusion of the activities is 10 months: 15 May 2013 to 15 March 2014.

A tentative time plan for the project is found above.

**Annex I****Tentative Outline of a textbook on the management of the safety of hydrotechnical installations**

Executive summary of main findings and recommendations

Introduction

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МЕТЕОРОЛОГИЧЕСКОЙ ИНФОРМАЦИИ, СВЯЗАННОЙ С  
ФУНКЦИОНИРОВАНИЕМ ГТС**

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Main conclusions and recommendation

**Annex II**

**Estimate of the necessary extrabudgetary funding for the grant from EADB**

The estimate is made under the assumption that five national and one international expert will be invited to participate in the work on the textbook. The cost estimates are made taking into account UN rules.

- 1. Consultancy fees for national experts: 5 experts x 3 months x 500 USD = 7 500 USD
- 2. Consultancy fees for international expert: 1 expert x 1 month x 3000 USD = 3 000 USD
- 3. Illustration, lay-out and publication: 4 000 USD
- 4. Co-funding of regional meeting: 11 600 USD
- 5. Programme support costs: 3 900 USD

Total extrabudgetary funds needed: 30 000 USD

Signed this.....day of.....

For the Eurasian Development Bank  
(EDB)

Vladimir A. Yasinsky  
Managing Director on Research and Strategy



Signed this *20* day of *June 2013*

For the United Nations Economic  
Commission for Europe (UNECE)

Leslie Cleland  
Executive Officer

*Leslie Cleland*



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