

COMPLETION REPORT COVER PAGE

Partner country (project site): Kazakhstan		Project number: ACU/2005/04/KZ/03	
Project title: Groundwater Management and its Transboundary Aspects in Kazakhstan			
Sector or sub-sector and type of intervention: <input type="checkbox"/> Landscaping, protection of the environment, agriculture, food and safety and use of raw materials			
Start date: Planned: October / 2005 Actual: October 2005		End date: Planned: October / 2006 Actual: November / 2006	
Total ODA budget (USD): <i>without cost-sharing from other funds</i> Planned: 100 000,- Actual: 86 689,56		Total cost-sharing confirmed (USD): <i>inputs from implementing institution</i> Planned: 10 000,- Actual: 9098,4 <i>inputs from partner institutions</i> Planned: Actual:	
Implementing institution / project manager (name, address, contacts): Slovak Hydrometeorological Institute, public institution Jeseniova 17, 833 15 Bratislava, Slovak Republic www.shmu.sk Mr. Pavol Čaučík, hydrologist and project manager Tel.: +421259415358 Fax: + 421259415393 E-mail: pavol.caucik@shmu.sk			
Partner institution in the recipient country (name, address, contacts): Committee of Geology and Subsoil Use, Ministry of Energetics and Mineral Resources, public service institution Satpaev str. 1, Kokshetau, Kazakhstan Mr. Daut A. Kasymbekov Tel: + 7 3162 25 42 64 Fax: + 7 3162 25 24 81 E-mail: dkasimbekov@koksh.kz			
Place, date, names, signatures:			
Project manager: Mgr. Pavol Čaučík Place and Date: Bratislava, 08/01/2007	Statutory representative of the proponent: Ing. Peter Rončák, CSc. Place and Date: Bratislava, 08/01/2007	Received by ACU/UNDP: Place and Date:	Secretary of Trust Fund: Place and Date:

BASIC FORMAT OF THE COMPLETION REPORT

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PROJECT SYNOPSIS

The main objective of the project is to enhance the integrated management of the transboundary groundwater bodies in Kazakhstan. The principal purpose of the project is mapping and identification of the groundwater management issues in selected transboundary region in Kazakhstan. In particular it means following three major outcomes:

- Assessment of the groundwater state (both quantity and quality) in the selected transboundary region, which will help to identify the main groundwater management issues with transboundary aspects.*
- Specification of the information needs and design of the stepwise groundwater monitoring programme and assessment methods.*
- Strengthening and enlargement of knowledge of experts in the field of groundwater monitoring and assessment.*

The main results of the project are outgoing from the outcomes of the project:

- a) The main groundwater management issues in the selected transboundary region of Kazakhstan identified;*
- b) The state of groundwater monitoring and assessment programmes reflecting transboundary aspects in Kazakhstan assessed;*
- c) Guidelines for stepwise approach monitoring and assessment of groundwater bodies prepared;*
- d) Staff of relevant institutions trained to implement Water Convention requirements in the part of the groundwater monitoring and assessment.*

Following activities are to be performed to achieve above mentioned outputs:

- a.1 Analysis of the current situation in the management of transboundary groundwaters in Kazakhstan (including selection process of transboundary water bodies);*
- a.2 Specification of the core elements as functions and uses of the groundwater bodies;*
- a.3 Setting up a list of the main water management issues in the selected transboundary region (focused on groundwater) using the Open Planning approach;*
- a.4 Identification of the main stakeholders as users of information (decision makers and managers in transboundary groundwater management) – List of stakeholders;*
- a.5 Seminar on the gaps in groundwater management in Kazakhstan with involvement of main stakeholders;*
- b.1 Review of the existing groundwater monitoring programmes in Kazakhstan;*

- b.2 Establishment of the information needs to set up the proper monitoring and assessment programme of groundwater bodies;*
- c.1 Identification of gaps in the capability to monitor groundwater bodies;*
- c.2 Development of the methodology to assess the groundwater bodies in the selected transboundary region of Kazakhstan;*
- d.1 Training workshop for the relevant staff of the institutions in Kazakhstan dealing with transboundary waters;*
- d.2 Study visit of the core decision makers in water management of Kazakhstan in the Slovak Republic;*

Total budget of the project is 110 000,- USD (100 000,- from Slovak ODA and 10 000,- co-financing from implementing institution).

The main input in the project is represented by personnel:

Slovak project leader – experienced expert in the field of hydrology and water management and its transboundary aspects;

Kazakh project leader – experienced expert in the field of water management;

Three Slovak experts in hydrology, groundwater monitoring and assessment, risk assessment and water management and its transboundary aspects;

Three Kazakh experts in groundwater management, monitoring and assessment and transboundary aspects.

Slovak experts should perform missions to Kazakhstan to fulfil the activities of the project, which include also seminar, training workshop for the relevant experts from Kazakhstan (in Kazakhstan). Also a study visit for Kazakh experts in the Slovak Republic is to be realized.

1. SUMMARY OF PROGRESS SINCE THE START

1.1 Achievement of objectives

Objectives of project:

- 1. Assessment of the groundwater management state in Kazakhstan in order to identify the main groundwater management issues in the country with its transboundary aspects*

The first objective (outcome) of the project was achieved. In the activity a.1 the current situation in groundwater management in Kazakhstan in close cooperation with the Kazakh experts was analysed, and a pilot transboundary water body (Pre-Tashkent artesian basin) was selected. In the activity a.2 the functions and uses of the individual groundwater bodies and especially of the selected groundwater body was specified. A list of the main water management issues in the selected transboundary region was set up in the activity a.3. The existing groundwater monitoring programmes for quantity and quality in Kazakhstan, and in particular in the selected transboundary region, were analysed and reviewed

2. *Specification of the information needs and design of the stepwise groundwater monitoring programme and assessment methods*

The second objective was achieved. In the part b.2 were identified the gaps in the capability to monitor groundwater and developed and established the information needs for setting up the proper monitoring and assessment programme of groundwater bodies with emphasis to the selected pilot transboundary groundwater body. In the part c.2 were elaborated and summarized the recommendations for monitoring and assessment of groundwater in the selected transboundary region in Kazakhstan.

3. *Strengthening of knowledge of Kazakh experts in the field of groundwater monitoring and assessment*

This objective was achieved, the knowledge of Kazakh experts was strengthened and enlarged and moreover, also the knowledge of participating Slovak experts was enriched through new experience during this project. In March 2006 a seminar on the groundwater monitoring and assessment programmes and gaps in them took place in Kazakhstan with participation of 11 Kazakh experts. In October a study visit of 3 Kazakh experts in Slovak Republic took place, where the experts were acquainted with the groundwater monitoring and assessment programmes and practice in Slovakia. In November a workshop with presentation of the project results and discussion on the future of the groundwater management in Kazakhstan and future cooperation with 17 Kazakh experts took place.

1.2 Measuring the results

The project performance has contributed to the long term outcome through enhancement of the integrated management of transboundary groundwater bodies in Kazakhstan. In particular, the individual performed activities have fulfilled the immediate and mid term effects, the groundwater state in the selected transboundary region was assessed and the main groundwater management issues were identified. The information needs were specified in order to recommend the design and potential approaches and methods for the proper monitoring and assessment of groundwater in the selected transboundary region. The knowledge and skills of Kazakh experts in groundwater monitoring and assessment were enlarged and strengthened. As result a proposal was prepared for follow-up of the project, which should deal with the reassessment and apportioning of the groundwater resources in the Pre-Tashkent transboundary region with help of the mathematical model and design of the groundwater monitoring.

1.3 Review of activities and outputs

Performance, especially the time schedule of individual project activities was affected by the overall delay in the start of project, explained in detail in the part Assumptions, which caused repeated changes in the workplan and timetable.

Since the project start, the following activities were performed:

Activity a.1: Analysis of the current situation in groundwater management in Kazakhstan.

The activity, which should formerly start in November 2005 and finish in March 2006, started in December 2005 and finished in July 2006, according to the revised workplan and timetable.

First part of the report on this activity contains a review of the legal framework and institutional setting in water management in Kazakhstan. Then was the selected transboundary region described (geology, hydrogeology, climatology, hydrology and flow conditions etc.). The current situation of groundwater potential and areal distribution of groundwater resources on the Kazakh side of the pilot area was described as well as the interrelations between the two countries with present situation in international cooperation in groundwater management and.

The report on this activity is in Technical Reports in Appendices.

*Participating experts: SK – Eugen Kullman
KZ – Alexander Kuchin*

Activity a.2: Specification of the core elements as functions and uses of the groundwater bodies.

The activity, which should formerly start in March 2006 and finish in May 2006, started in May 2006 and finished in July 2006, according to the revised workplan and timetable.

In this activity report the legal framework for groundwater uses in Kazakhstan was reviewed and the main functions and uses of groundwater, evaluation of groundwater status and description of methodology used for groundwater quantity and quality assessment in the selected transboundary region were examined.

The report on this activity is in Technical Report in Appendices.

*Participating experts: SK – Eugen Kullman
SK – Róbert Chriaštel'
KZ – Alexander Kuchin*

Activity a.3: Setting up a list of the main water management issues in the selected transboundary regions.

The activity, which should formerly start in May 2006 and finish in July 2006, started in July 2006 and finished in August 2006, according to the revised workplan and timetable.

First part of this activity report is analysis of the main groundwater management issues in selected pilot area and the second part is development of the basic principles of groundwater apportioning in this transboundary region.

The report on this activity is in Technical Report in Appendices.

*Participating experts: SK – Eugen Kullman
KZ – Sergey Rachkov*

Activity a.4: Identification of the main stakeholders as users of information.

The activity, which should formerly start in October 2005 and finish in November 2005, started in February 2006 and finished in June 2006, according to the revised workplan and timetable and is included in the activity a.1.

*Participating experts: SK - Róbert Chriaštel'
KZ - Sergey Rachkov*

Activity a.5: Seminar on the Gaps in Groundwater Management in Kazakhstan.

The seminar, which should formely take place in November 2005, took place back to back with the first visit of Slovak experts in Kazakhstan in March 2006, aiming on the project organization and performance. The seminar was attended by 11 Kazakh experts and decision makers from Committee of Geology and Subsoil Use (Ministry of Energetics and Mineral Resources) and Committee of Water Resources (Ministry of Agriculture), dealing with water management in Kazakhstan.

The themes covered by the seminar:

- Slovak Hydrometeorological Institute and its role in water management in Slovakia*
- Analysis of the groundwater management in Kazakhstan*
- Information needs on the monitoring and assessment of groundwater*
- Stakeholder analysis – Open Planning approach*
- Groundwater management in transboundary areas in the Slovak Republic*
- Groundwater management in transboundary areas in Kazakhstan*

*Participating experts: SK – Pavol Čaučík
SK – Peter Rončák
SK – Eugen Kullman
SK – Róbert Chriaštel'
KZ – Daut A. Kasymbekov*

KZ – O. Podolny

Activity b.1: Review of the existing groundwater monitoring programmes in Kazakhstan.

The activity, which should formerly start in April 2006 and finish in June 2006, started in June 2006 and finished in July 2006, according to the revised workplan and timetable.

In this activity report was examined current state of groundwater monitoring in Kazakhstan, especially in the selected transboundary region on the Kazakh side, including:

- legal framework in groundwater monitoring*
- groundwater quantity monitoring programme (monitoring network, parameters, frequency of monitoring, data collection, data assessment)*
- groundwater quality monitoring programme (monitoring network, parameters, frequency of monitoring, data collection, data assessment)*
- water users (data collection)*

The report on this activity is in Technical Report in Appendices.

*Participating experts: SK – Eugen Kullman
KZ – Sergey Rachkov*

Activity b.2: Establishment of the information needs to set up the proper monitoring and assessment programme in selected groundwater transboundary region.

The activity, which should formerly start in June 2006 and finish in August 2006, started in August 2006 and finished in September 2006, according to the revised workplan and timetable.

In this activity report were analysed the requirements of the Water Convention on groundwater monitoring and assessment and the current state of the groundwater monitoring and assessment in selected transboundary region was compared with the requirements of the Water Convention. Next, the gaps in the capability to monitor groundwater in selected transboundary region (technical, financial, institutional) were identified

The report on this activity is in Technical Report in Appendices.

*Participating experts: SK – Eugen Kullman
SK – Róbert Chriaštel'
KZ – Sergey Rachkov
KZ – Alexander Kuchin*

Activity c.1: Identification of gaps in the capability to monitor groundwater bodies.

The activity, which should formerly start in June 2006 and finish in July 2006, started in August 2006 and finished in October 2006, according to the revised workplan and timetable. The results on this activity are included in the report on activity b.2.

*Participating experts: SK - Róbert Chriaštel'
KZ – Alexander Kuchin*

Activity c.2: Development of the methodology to assess the groundwater bodies in the selected transboundary regions in Kazakhstan.

The activity, which should formerly start in June 2006 and finish in October 2006, started in August 2006 and finished in November 2006, according to the revised workplan and timetable.

In this activity report there is a review of the potential approaches, that can be used for groundwater resources assessment in selected transboundary region and recommendations of the follow-up activities linked to the applicable methodologies concerning with available data and information, back to back with the proposal preparation of the follow-up project.

The report on this activity is in Technical Report in Appendices.

*Participating experts: SK – Eugen Kullman
SK - Róbert Chriaštel'
KZ – Sergey Rachkov*

Activity d.1: Workshop for the relevant staff of the institutions in Kazakhstan dealing with transboundary waters.

Workshop, formerly planned in September 2006, took place in November 2006 in Kazakhstan. In the workshop were presented the results of the project activities and was discussed the relevance of the project and the follow-up with specification of the needs of Kazakh side. The workshop was attended by 17 Kazakh experts and decision makers dealing with water management in Kazakhstan, from Committee of Geology and Subsoil Use (Ministry of Energetics and Mineral Resources) namely the Chairman of the Committee Mr. Uzhkenov and Mr. Kasymbekov, Vice-Chairman of the Committee responsible for groundwater issues, and Committee of Water Resources (Ministry of Agriculture).

*Participating experts: SK – Eugen Kullman
SK - Róbert Chriaštel'
SK – Pavol Čaučík
KZ – Oleg Podolny*

Activity d.2: Study visit of the core decision makers in water management of Kazakhstan in the Slovak Republic.

The visit of Kazakh experts, formerly planned on March 2006, was realized in October 2006. The study visit was attended by two decision makers from Committee of Geology and Subsoil Use (Ministry of Energetics and Mineral Resources) namely the Chairman of the Committee Mr. Uzhkenov and Ms. Khussainova, Head of the Subsoil Usage Results Analysis Division. Also participating was the Kazakh project leader Mr. Podolny (KazHYDEC). Mr. Kasymbekov after misunderstanding on the Frankfurt airport should have returned to Kazakhstan on the journey to Slovakia. During this visit Kazakh experts were acquainted with the groundwater management in Slovak Republic, in particular with the monitoring programmes and assessment of groundwater.

*Experts: SK – Eugen Kullman
SK – Róbert Chriaštel'
SK – Peter Rončák
SK – Pavol Čaučík
KZ – Oleg Podolny*

2. ASSUMPTIONS

The project progress was in the introductory phase affected by slowdown of the process of the visa issue for Slovak experts for their visit in Kazakhstan. The problem with visa was fixed, visa were finally issued in March 2006. As was seen, the first visit in Kazakhstan was essential for the successful start and performance of the project. Another problem was, that the main partner - Committee of Geology and Subsoil Use as a state organisation is not able to sign a contract with a financial source from other country. The problem was solved by signing of an Agreement with the Committee of Geology and Subsoil Use, the main partner, on the project activities performance in the frame of a subcontractor under the supervision of the Committee of Geology and Subsoil Use. As a subcontractor was chosen KazHYDEC, a hydrogeological company in Kazakhstan, which created a new Project team and continued with the project activities performance, according to the revised workplan and timetable, which have been developed after the delayed start of activities. The performance of activities was since that time in progress smoothly and all necessary activities have been finished successfully.

The protection of the water resources and their sustainable development to ensure their proper use especially in transboundary regions is the essential topic for the society development in Kazakhstan. Due to limited resources on the national level is this project very welcomed and accepted through the relevant state institutions in the country. The recipient of the assistance is Committee of Geology and Subsoil Use (Ministry of Energetics and Mineral Resources of the Republic of Kazakhstan), the competent state body on problems of groundwater regulation, one of which

function is the state geological study (evaluation of reserves and quality), resource management and monitoring of groundwater (monitoring of mode, quantity and quality of groundwater), state water assessment and control of their rational use, creation of unified computer system for monitoring of groundwater condition on the territory of Kazakhstan.

Great advantage of the successful project performance was the personnel of the Slovak (Slovak Hydrometeorological Institute) and Kazakh (KazHYDEC, executing company) project teams, experts on both sides were experienced in the field of hydrology and water management, groundwater monitoring and assessment and risk assessment. Both Slovak and Kazakh experts were employees in institutions with experience from former international projects. Strong co-ordination and continuous monitoring and control of all activities between the two national teams was essential assumption for successful achievement of the project targets and results.

3. FINANCIAL REPORT

The complete financial table with project expenses is in Appendices. There was an overall surplus in project, caused by not using of some individual items or not full using of other items from planned budget. Some of the deficits in individual items are caused mainly by the fact, that formerly planned missions of Slovak PL or experts to Kazakhstan were due to overall delay in project reduced to 2 missions, which were combined missions of more activities.

4. SELF EVALUATION

The project progress was decelerated in the beginnings by the problems with visa issue procedure and then by problems with signing of the contract, however the activities were finished successfully and the outcomes were achieved as expected.

The partner institution, Committee of Geology and Subsoil Use at Ministry of Energetics and Mineral Resources in Republic Kazakhstan, and partner institution KazHYDEC were from beginning interested in the project, its realization and outcomes, which shall bring benefit for them and all relevant institutions in Kazakhstan through enhancing of the integrated groundwater management in the country. For the project performance was designated the hydrogeological company KazHYDEC. In the close cooperation between both project teams, the current situation in the groundwater management in Kazakhstan, especially in transboundary regions, was analysed and the main functions and uses of the transboundary groundwater bodies were specified. The pilot transboundary region, Pre-Tashkent artesian basin, was chosen after consultations with the recipient organisation. The main groundwater management issues in the selected pilot area were determined. A comprehensive review of the current groundwater monitoring programmes in Kazakhstan and specifically in the Pre-Tashkent basin was done. The information needs for proper monitoring and assessment in the pilot

transboundary region were established. The methodology of groundwater assessment approaches and recommendations and proposals on the modification of the groundwater monitoring programmes in transboundary regions in Kazakhstan and especially, Pre-Tashkent pilot area were developed. The knowledge of the Kazakh experts on groundwater management was enriched and strengthened through the Seminar on the gaps in groundwater management in Kazakhstan and Slovak Republic (March 2006 in Kazakhstan) and the Final workshop (November 2006 in Kazakhstan) as well as through the visit of 3 Kazakh experts in Slovak Republic (October 2006).

The Committee of Geology and Subsoil Use as beneficiary institution has during the final workshop approved and adopted the results of the project. Furthermore, partner institutions want to exceed the cooperation in future to prepare more detailed assessment of the groundwater resources, including potential use of mathematical model and other assessment methods, on selected pilot transboundary groundwater body of Pre-Tashkent artesian basin and next also on other transboundary groundwater bodies in Kazakhstan.

After the very slow starting-up of the project it was very satisfying to experience the serious work on the individual activities with the Kazakh partners, which was very enriching and valuable for members of both project teams. In this sense we have to point out, that the first visit and project kick-off meeting was extremely useful and inevitable to clear out the visions, attitudes and expectations in this project. Generally we should state, that the personal meetings are of utmost importance and they cannot be replaced by the electronic correspondence or even telephonic discussions, which can be sometimes affected by possible unclarities and misunderstandings. It was also extremely satisfying to see changing of the attitude of high positioned decision-makers in Kazakhstan towards this project and to hear from them their willingness to continue and extend the mutual cooperation in the future.

5. CONCLUSIONS AND RECOMMENDATIONS

The performance of this project was successful in achievement of its objectives and outcomes. The state of groundwater management in Kazakhstan was assessed, the groundwater monitoring programmes were reviewed and the main groundwater management issues in the transboundary regions were identified. The information needs for the proposals to redesign the groundwater monitoring programmes and assessment methods were specified and methodology of groundwater assessment approaches and recommendations and proposals on the modification of the groundwater monitoring programmes in transboundary regions in Kazakhstan and especially, Pre-Tashkent pilot area were developed. The knowledge of Kazakh experts and decision makers in groundwater management were enlarged and strengthened through the Seminar and Final workshop, taken in Kazakhstan and through the study visit in Slovak Republic.

The results of the project were approved and adopted by the beneficiary institution. Project results will be used in work of the Committee of Geology and Subsoil Use to cope with requirements of UN ECE Water Convention in transboundary groundwater management, as the Committee represents the state body ensuring transboundary groundwater management, development and ratification of the instructions and other normative documents concerning evaluation of groundwater reserves and resources, state monitoring and groundwater assessment.

The results of the project will be utilised for the co-operation with neighbouring countries in the field of monitoring and assessment of transboundary water bodies and will contribute to the establishment of common monitoring and assessment programmes with these countries.

The outputs of the project will contribute to the sustainable use of the transboundary water resources and their protection. At the ministries and other partner organisations are allocated such managerial capacities, which ensure continuity in activities after implementation of the project, which will assist the national and local decision makers and water managers to assess properly the transboundary groundwater bodies. The recipients are the public service organizations (Ministries), what will ensure, due to their society status and financial sources, sustainability of the project after its implementation.

On the final workshop also the possibilities of the follow-up of this project were discussed. From the Kazakh side, represented also by high positioned decision-makers, there is real willingness to continue and extend the successful cooperation and exchange of knowledge between Slovak and Kazakh side. A proposal was prepared for a follow-up project, aiming on the more detailed assessment of the groundwater resources, including use of mathematical model and other assessment methods, on selected pilot transboundary groundwater body of the pilot area of Pre-Tashkent artesian basin and next also on other transboundary groundwater bodies in Kazakhstan. Considering the proposed cost-sharing of participating institutions in Slovak Republic and also Kazakhstan and in the case that the priorities of Slovak ODA assistance will be not changed, there is willingness to realize the upcoming project in the frame of Slovak ODA.

APPENDICES

Financial tables

Technical Reports (individual volume)