
3. JCC M/M (第一回~第三回)

**MINUTES OF MEETINGS
BETWEEN
JAPAN INTERNATIONAL COOPERATION AGENCY,
STATE MONITORING SERVICE FOR HAZARDOUS GEOLOGICAL PROCESSES,
AND INSTITUTE HYDROENGEIO OF THE REPUBLIC OF UZBEKISTAN
ON
SECOND JOINT COORDINATION COMMITTEE
FOR
THE PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE MONITORING
IN THE REPUBLIC OF UZBEKISTAN**

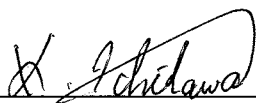
Mr. Kensuke Ichikawa Expert of Japan International Cooperation Agency (hereinafter referred to as "JICA") for the Project on Capacity Development for Landslide Monitoring in the Republic of Uzbekistan (hereinafter referred to as "the Project") on 4th December 2008, held 2nd Joint Coordination Committee Meeting with the specialists of SE State Monitoring Service for Hazardous Geological Processes (hereinafter referred to as "SMS"), SE HYDROENGEIO, representative of State Committee of Geology and Mineral Resources of the Republic of Uzbekistan to present, explain current situation of the Project and to make necessary corrections to PDM 3. It was followed by a series of discussions on the current activities of the project, solutions and actions, requirements and recommendations for the project between both Japanese and Uzbekistan sides. In general, implementation of the project is going smoothly, but several problems exist, which can be resolved with the support of both parties.

It was concluded that for smooth implementation of the next stage of the project it is necessary to resolve following issues:

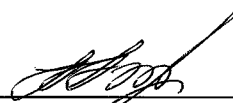
1. Safety of the devices in the field should be improved
2. Shortage of labor should be covered by Uzbekistan Side.
3. PDM3 should be revised into PDM4 (sub-item 1-2)

Written in duplicate in English and Russian languages, each text shall be equally authentic. In case of any divergence of interpretation, the English text shall prevail.

Tashkent, December 4th, 2008



Mr. Kensuke Ichikawa
Chief Advisor for the Project
Japan International Cooperation Agency
(JICA)



Mr. MAVLONOV Aslon A.
Director
SE Institute HYDROENGEIO
The Republic of Uzbekistan



Mr. BAZAROV Sherdonakul B.
Director
SE State Monitoring Service for Hazardous
Geological Processes (SMS)
The Republic of Uzbekistan

ATTACHED DOCUMENT

Annex I Contents of Discussion

A. Project Status of Phase II

1. Project Outline and Role of the JCC (Mr. Ichikawa /Chief Advisor)
2. Current Status of the Project (Measuring Device) (Mr. Tsukamoto)
3. Current Status of the Project (Drilling) (Mr. Ichikawa /Chief Advisor)
4. Summary of the activities on phase II and plan for phase III (Mr. Ichikawa /Chief Advisor)

B. Discussion

Contents: The project team explained the activities and progress of the project on part A, and raised some issues to be solved.

1. Security of measuring devices

- 1) Measures on security of the devices such as extensometers and guide pipe for inclinometers shall be taken to protect the equipment from thieves and mischief.
- 2) Assistance of community to secure the equipment.

2. Drilling and coring of loess soil

- 1) In the cause of drilling, it was acknowledged that in the loess soil the core was unable to be sampled due to its high moisture content and unconsolidated nature. Furthermore, identification of the sliding plane is visually impossible because the homogeneous soil mass distribution.
- 2) The drilling using a Japanese machine has advantage at the slope side and hilly sites where the truck cannot approach. However, if the truck can be mounted at the site, truck mounted rig owned by C/P organization has advantage for the inclinometer guide casing installation.
- 3) Accordingly, the description in the PDM3 "2-1 identify the position of the sliding surface by the examination of core samples" shall be modified to "2-1 identify the position of the sliding plane by the geological condition and result of inclinometer measurement"

3. C/P member's personnel assignment

- 1) Since the project started, a couple of C/P members transferred to other organizations and posts. The technical transfer was taken over by the new personnel, but this change is interrupting the smooth implementation of technical transfer.
- 2) C/P promised that for providing enough and continuous task force with securing enough budget

1. Questions and Answers for the current activities

Q: When will the two other monitoring sites be decided?

A: Additional two sites will be determined on March – May 2009, and the landslides monitoring plan shall be made by C/P. Immediately after the discussion of the plan, device installation shall be made, followed by the measuring and collecting of data.

2. Solutions and Actions

For the security of the devices, Uzbekistan side mentioned that they will be responsible for this issue, and they will make two actions immediately. The actions are 1) to protect the devices by covering these by the concrete and steel plates, and 2) Ask cooperation for security of devices to the local community.

3. Requirements and Recommendations for the Project

No particular issue was raised by both parties.

C. Project Summary and Evaluation by JCC

1. Comment from the Committee of Geology and Mineral Resources
2. Comment from the JICA Uzbekistan Office

Annex II. PDM4

Project Period Oct/2007-Sep/2010 Target sites: Bostanlyk, Angren Target Group: Staff of SMS HYDROENGE

Date issued 4/12/09

Narrative Summary	Objectively Verifiable Indicators	Means of Verifications	Important Assumption
<p><input type="checkbox"/> Overall Goal</p> <ul style="list-style-type: none"> Prediction and warning about landslide and their effects are issued in a timely and an adequate manner and loss of human lives as well as the economic damages are reduced. <p><input type="checkbox"/> Project Purpose</p> <ul style="list-style-type: none"> SMS and HYDROENGE enhance its technical capacity of landslide monitoring risk assessment 	<ul style="list-style-type: none"> Loss of human lives and economic damages by landslide decrease on long term bases Counterparts become capable of applying the new techniques of landslide monitoring and risk assessment to landslide sites elsewhere on their own. 	<ul style="list-style-type: none"> Record of SMS Results of landslide monitoring and risk assessment on their own at landslide sites elsewhere produced by the time of the final and ex-post evaluation of the project Technical assessment of counterparts by Japanese experts at the time of the final evaluation of the Project. 	<ul style="list-style-type: none"> SMS and HYDROENGE continuously receive new staff to maintain the present number of staff SMS and HYDROENGE continuously receive sufficient financial support from the Uzbek Government for the extension of similar activities to other landslide sites.
<p><input type="checkbox"/> Outputs</p> <p>0 The preparation for the implementation of the Project is completed.</p> <p>1 The techniques for the subsurface exploration and monitoring landslide sites are improved</p> <p>2 The techniques of monitoring of the ground surface movement at landslide sites are improved.</p> <p>3 The techniques of landslide risk assessment are improved.</p>	<p>0 Three monitoring site has selected and the monitoring plan is formulated. The items, specifications and amount of necessary procurement equipment is determined.</p> <p>SMS and HYDROENGE has at least two engineers who can;</p> <p>1-1 handle and maintain a drilling machine properly</p> <p>1-2 identify the position of the sliding surface by the geological condition and the result of inclinometer result</p> <p>1-3 install guide pipes for borehole inclinometers and monitor the subsurface movement</p> <p>2-1 install and maintain the new ground surface movement monitoring equipments</p> <p>2-2 monitor the ground surface movement with new equipments</p> <p>3-1 investigate the landslide mass extent</p> <p>3-2 predict time of landslide occurrence, and</p> <p>Assess the landslide run-out area</p>	<ul style="list-style-type: none"> Project record Record of SMS and HYDROENGE Technical assessment of counterparts by Japanese experts at the time of the final evaluation of the Project 	<ul style="list-style-type: none"> The counterparts who acquired the new techniques remain in SMS and HYDROENGE
<p><input type="checkbox"/> Activities</p> <p>0-1 To undertake field surveys of candidate pilot monitoring sites and determine the monitoring sites</p> <p>0-2 To prepare a monitoring plan for each monitoring site and an equipment procurement plan</p> <p>1-1 To provide lectures on the drilling techniques for landslide investigations and subsurface monitoring at landslide sites</p> <p>1-2 To undertake the geological investigation by drilling</p> <p>1-3 To install equipments in boreholes and undertake monitoring</p> <p>2-1 To provide lectures of monitoring of ground surface movement at landslide sites</p> <p>2-2 To decide the measurement items and the location of equipment installation</p> <p>2-3 To install equipments and undertake monitoring</p> <p>3-1 To provide lectures on landslide risk assessment</p> <p>3-2 To analyze the data obtained by the monitoring and investigations</p> <p>3-3 To evaluate the landslide risk at the pilot monitoring sites</p>	<p><input type="checkbox"/> Input</p> <p><u>Japanese side</u></p> <ol style="list-style-type: none"> JICA expert team. Chief Adviser/ Landslide monitoring and analysis, Landslide monitoring technique Drilling technique Equipment Supplemental expenses <p><u>Uzbek Side</u></p> <ol style="list-style-type: none"> Counterparts Administrative personnel Necessary infrastructure for the Project including: <ul style="list-style-type: none"> Office facility equipped with office furniture, electricity supply and direct telephone line for the Project Team Budgets for the Project such as <ul style="list-style-type: none"> Expenses for SMS and HYDROENGE staff to attend lectures and participate in field activities Salaries and other allowances for counterparts Costs of power electricity, water, gas, fuel and other contingencies Operational expenses for customs clearance, storage, domestic transportation and installation of equipments Expenses to maintenance of the Project facilities and equipments Other necessary local expenses of the Project Data and information necessary for the implementation of the Project 	<ul style="list-style-type: none"> SMS and HYDROENGE receive resources to maintain necessary facilities, equipment, and materials for implementation of pilot monitoring The Pilot can obtain support and advice from related organizations 	<p><input type="checkbox"/> Precondition</p> <ul style="list-style-type: none"> The Uzbek Government approves the Project

List of participants of the JCC meeting

Uzbekistan side

(1) HYDROENGEO

Mavlonov Aslon, Director

Niyazov Rustam, Consultant

Minchenko Vyacheslav, Head of laboratory of geodynamic

Abdullaev Shavkat, Head of laboratory of hydrophysics

Shodiev Davron, Drilling operator

(2) SMS

Bazarov Sherdanakul, Director of SMS

Ahunzhanov Alimjon, Chief Geologist

(3) State Committee of geology and mineral resources

Begmatov, Head of Monitoring department

Japanese side

(1) JICA Expert Team

Kensuke Ichikawa, Chief advisor / Expert in landslide monitoring and analysis

Satoru Tsukamoto, Expert in monitoring techniques

Olga Shvay, Translator / Interpreter

Tanya Tsoy, Translator/Interpreter

(2) JICA Uzbekistan Office

Yukihiko Ejiri, Chief Representative of JICA Uzbekistan Office

Yuka Sonoyama, Representative of JICA Uzbekistan Office

Eiji Asami, Advisor, Central Asia and Caucasus Division, East and Central Asia and Caucasus Department, JICA..

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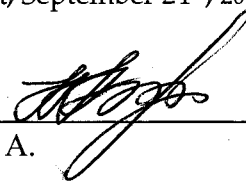
Mr. Kensuke Ichikawa Expert of Japan International Cooperation Agency (hereinafter referred to as "JICA") for the Project on Capacity Development for Landslide Monitoring in the Republic of Uzbekistan (hereinafter referred to as "the Project") on 24th September 2010, held 3rd Joint Coordination Committee Meeting with participation of the specialists of SE State Monitoring Service for Hazardous Geological Processes (hereinafter referred to as "SMS"), SE HYDROENGEIO, to wrap up the Project. It was followed by a series of discussions on the comments of C/P and Experts. During the Meeting the Explanation of Draft Final Report, Explanation and Handover of Manuals the Manuals consist of three portions - Landslide Drilling Survey Manuals, Landslide Monitoring Manuals and Landslide Movement Analysis and Hazard Evaluation Manual have been done. It was concluded, that implementation of the project was implemented smoothly and almost all targets were achieved by the contribution of both parties.

The Minutes of Meeting is written in duplicate in English and Russian languages, each text shall be equally authentic. In case of any divergence of interpretation, the English text shall prevail.

Tashkent, September 24th, 2010



Mr. Kensuke Ichikawa
Chief Advisor for the Project
Japan International Cooperation Agency
(JICA)



Mr. MAVLONOV Aslon A.
Director
SE Institute HYDROENGEIO
The Republic of Uzbekistan



Mr. TURABBAEV Akmal B.
Director
SE State Monitoring Service for Hazardous
Geological Processes (SMS)
The Republic of Uzbekistan

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Annex I Contents of Discussion

1. WRAP UP MEETING OF THE PROJECT

- 1) Explanation of Draft Final Report (Mr. Ichikawa /Chief Advisor) . Greeting to members of JCC and briefly outline about the results of joint work during 3 years of implementation of the Project. Further explanation was made in accordance with the contents of Draft Final Report.

Questions and comments regarding the Explanation of Final Report:

- (1)Mr. Niyazov noticed that Draft Final Report wording “risk” is better to change into “hazard” in geological understanding have different meanings. Mr. Kuwano agreed that “risk” and “hazard” have different meanings.

- 2) Explanation of Manuals (Mr. Ichikawa /Chief Advisor) . There are 3 sets of manuals all translated into Russian and they are ready to be handover to Counterpart.

No particular issue was raised by both parties.

2. HAND OVER MANUALS

- 1) Mr. Ichikawa with Mr. Totsuka handover 3 sets of manuals: Landslide Drilling Survey Manuals, Landslide Monitoring Manuals and Landslide Movement Analysis and Hazard Evaluation Manual to Mr. Mavlonov.

3. COMMENT FROM THE BOTH SIDES

1. Mr. Mavlonov (Director of HYDROINGEO and Director of the Project) was satisfied with the realization of the Project and that overall goal as prediction and warning about landslide and their effects are issued in a timely and an adequate manner, and reduction of the loss of human lives as well as the economic damage has been reached.
2. Mr. Niyazov (Consultant of HYDROINGEO) was also satisfied with the results of the Project and expressed possibility of future continuation of cooperation
3. Mr. Turabaev(Director of SMS) joined to the comments of Mr. Niyazov about successful realization of joint Project
4. Mr. Ichikawa(Chief Concultant) was satisfied with the results of joint cooperation of the Project..
5. Mr. Totsuka(Deputy Chief Representative of JICA Uzbekistan Office) was also pleased with the results of joint cooperation and initiative from Counterpart.

All the participants of JCC hope for the future cooperation.

4. OTHERS

(Mr. Ichikawa)Date of returning the office is assigned in the contract as November 1. 2010.
On the date of returning the office, all equipment like PC, Printer will be handover to
Counterpart as well.

Annex II. PDM4

Project Period : Oct/2007 ~ Sep/2010 Target sites : Bostanlyk, Angren

Target Group : Staff of SMS, HYDROENGE

Date Issued : 24/09/2010

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List of participants of the JCC meeting

Uzbekistan side

(1) HYDROENGEO

Mavlonov Aslon, Director

Niyazov Rustam, Consultant

(2) SMS

Turabbaev Akmal, Director of SMS

Ahunzhanov Alimjon, Chief Geologist

Japanese side

(1) JICA Expert Team

Kensuke Ichikawa, Chief advisor / Expert in landslide monitoring and analysis

Takaheshi Kuwano, Expert on landslide analysis and hazard evaluation

Olga Shvay, Translator / Interpreter

Tanya Tsoy, Translator/Interpreter

(2) JICA Uzbekistan Office

Seiji Totsuka, Deputy Chief Representative of JICA Uzbekistan Office

4. キャパシティアセスメント（結果、シート）

第一回キャパシティアセスメントの結果（回答者 16 名）

1 ボーリングについて

質問	A (見たことない)	B (知っている)	C (手伝った)	D (作業経験あり)	E (熟練)	無回答
ボーリング機械について (質問 1-1)	2	6	1	1	5	1
Mud rotary circulation (質問 2-1)	0	10	1	1	4	1
All core drilling (質問 2-2)	2	8	1	0	2	3
標準貫入試験 (質問 3-1)	3	6	1	1	3	2
Thin wall sampling (質問 3-2)	4	6	2	0	2	2
垂直ボーリング (質問 4-1)	1	9	1	1	3	1

地すべり地でのボーリングの特徴 (質問 5-1)

アクセス困難、ロータリーコアボーリング、孔径と掘削深度、地下水位の確認、すべり面の確認など

地すべり地でのボーリングの目的 (質問 5-2)

地質断面図作成、すべり面の特定、土質試験サンプリング、土質特性把握、地下水位の確認、計器の設置など

計器のメンテナンスの責任 (質問 5-6)

SMS タシケント、各観測所、GOST、現地部隊

2 地すべり調査一般について

質問	A (見たことない)	B (知っている)	C (手伝った)	D (作業経験あり)	E (熟練)	無回答
地形図による調査 (質問 1-1)	1	5	1	4	3	2
航空写真による調査 (質問 2-1)	2	3	1	5	2	3
現地地質調査 (質問 2-2)	1	1	1	6	4	3
地形の異常調査 (質問 3-1)	1	3	1	3	4	4

3 モニタリング機材について

質問	A (見たことない)	B (知っている)	C (使った)	D (設置した)	E (データを取得)	無回答
孔内傾斜計 (質問 2-1)	1	5	5	2	0	3
パイプひずみ計 (質問 2-2)	2	3	1	6	0	4
伸縮計 (質問 2-3)	2	1	2	5	2	4
ロングスパン伸縮計 (質問 2-4)	4	3	3	1	0	5
傾斜計 (質問 2-5)	1	6	4	2	0	3

地下水水位計 (質問 2-6)	0	3	2	5	5	2
GPS (質問 2-7)	2	5	2	1	3	3

その他の機材の経験 (質問 2-9~12)

Girkon 土塊変位計、電気式タコメータ、測地計、間隙水圧計などの使用経験がある。

4 データ収集について

質問	A (やったことがない)	B (知っている)	C (マニュアル)	D (マニュアル+PC)	E (PC を使用)	無回答
データの編集 (質問 2-1)	2	2	1	6	1	4
データの分析 (質問 2-2)	2	2	3	5	2	3

5 機材の設置について

モニタリング計画の立案 (質問 5-1)

16人中10人が経験有

機材の設置における重要なポイント (質問 5-2)

適切な設置場所、正しい機械設置、マニュアルに基づく設置など

メンテナンスの責任 (質問 5-5)

管理者、ハイドロジオロジストなど

メンテナンスの場所 (質問 5-7)

SMS タシケント、各観測所、サイト、Leika ワークショップなど

地すべりモニタリングの目的 (質問 6-1)

先進的な地すべりモニタリング、保全対象物への地すべりの限界パラメータ、地すべりのダイナミクス、警報体制、地すべりの評価、人的・物的被害の削減など

地すべりモニタリング機材の修理 (質問 6-6)

小さな修理はサイト・大きな修理は SMS タシケント、Gidrogeotehnica Co.,Ltd.、教育を受けた専門家を雇う、ほか

地すべりモニタリング機材の安全確保 (質問 6-7)

地中埋設、適切な操作と適度なメンテナンス、正しいポジショニング、地域社会の理解、いたずら防止策、住民による安全確保

6 地すべり安定解析について

質問	A (見たことない)	B (知っている)	C (手伝った)	D (作業経験あり)	E (熟練)	無回答
Minimum safety facto (質問 1-1)	4	4	1	0	1	5
Circular slip analysis (質問 1-2)	4	3	0	1	1	4
Simplified method (Fellenius' method) (質問 1-3)	8	2	0	1	0	4

Bishops Method (質問 1-4)	10	0	0	1	0	5
Jambu's simplified method 現地地質調査 (質問 1-5)	10	0	0	1	0	5
FEM (finite element method) 地形の異常調査 (質問 1-6)	10	0	1	0	1	4
3D FEM (質問 1-7)	10	0	1	0	0	5

その他の安定解析の経験 (質問 1-8~10)

circular cylindrical surface Vnimu method、Maslov-Berer、slope equal-in-strength method Maslov の経験・知識がある技術者がいる。

7 地すべり対策について

質問	A (見たことない)	B (知っている)	C (手伝った)	D (作業経験あり)	E (熟練)	無回答
Groundwater lowering method (質問 2-1)	0	7	1	2	3	3
Slope protection (質問 2-2)	2	8	2	1	2	2
Crest excavation (質問 2-3)	2	4	0	4	4	2
Toe embankment (質問 2-4)	2	6	0	2	4	2
Piles (質問 2-5)	2	9	1	0	1	3
Anchors (質問 2-6)	2	5	1	0	1	7

その他の対策の知識・経験 (質問 2-7~10)

擁壁、テラス化、植林など

8 リスクアセスメントについて

地すべりのリスクとは (質問 3-1)

地すべりの大きさと被害の可能性、人的損失、斜面状態のチェック、モニタリングの実施、地すべりの現状を基にした地すべりの発達ダイナミクス、地すべりのプロセスとその結果

リスクアセスメントのシステムはあるか (質問 3-2)

16名中、8名が yes、2名が no、6名が無回答

経済的リスクはどのように計るか (質問 3-3)

経済損失・人的損失・施設被害程度、予想される施設被害程度など

9 緊急事態対応について

地すべりの緊急事態とはいつか (質問 4-1)

限界値を超えた動き、住民の認知、地すべり活動度の非常な高まり、公共への影響が懸念される時、被害発生、異常降雨、地下水位の急上昇、湧水の増加、秋から冬にかけての雨量が

400mm を超えた時・3,4 日雨量が 30-40mm になった時、家が壊れ人的影響が出る可能性が出た時

地すべりの緊急対応のために優先すべき行動とは（質問 4-2）

警報システムの常時メンテナンス、装置を正しく設置し保護すること、夜間は照明・昼間は音声での警報、警報装置を適切な場所に設置すること

地すべりの緊急事態に求められる行動とは（質問 4-4）

住民への避難呼びかけ、落ち着くこと、住民・地方自治体・MES への報告、文書連絡、勧告に従うことなど

10 電気探査について

質問	A (見たことない)	B (知っている)	C (手伝った)	D (作業経験あり)	E (熟練)	無回答
Wenner method (質問 1-1)	7	0	0	0	2	7
Shulumberger method (質問 1-2)	7	0	0	0	2	7
dipole-dipole method (質問 1-3)	7	0	0	0	2	7
2D Resistivity Tomography(質問 1-4)	7	1	1	0	0	7
手計算 (質問 2-1)	4	2	0	1	7	3
ソフトによる解析 (質問 2-2)	4	2	3	0	2	5

その他の電気探査手法の知識・経験（質問 1-5～6）

X-ray dosimetry、penetration、caliper logging など

COMPARISON TABLE of CAPACITY ASSESMENT (2008)

Drilling section

1) Instruments

	2007:	2008
1 (never seen)-	38,18%	8,18%
2 (know mechanism)	27,27%	73,63%
3 (assisted)	9,09%	1,81%
4 (operated)	9,09%	7,27%
5 (experienced)	10,09%	9,09%

2) Methods

	2007:	2008
1 (never seen)-	14.77%	2,27%
2 (know mechanism)	36.36%	51.13%
3 (assisted)	6,81%	0
4 (operated)	4,54%	9.09%
5 (experienced)	7,95%	5.68%

3) Test and Sampling

	2007:	2008
1 (never seen)-	18,18%	1.13%
2 (know mechanism)	43.63%	50.9%
3 (assisted)	10.9%	5.45%
4 (operated)	0	10.9%
5 (experienced)	16.36%	14.54%

4) Operation

	2007:	2008
1 (never seen)-	13.63%	2.27%

2 (know mechanism)	31.81%	52.27%
3 (assisted)	4.54%	4,54%
4 (operated)	2.27%	6.81%
5 (experienced)	4.54%	2.27%

5) General question

General investigation

1) Interpretation

	2007:	2008
1 (never seen)	3.03%	0
2 (know mechanism)	15.15%	53.03%
3 (assisted)	3.03%	4.54%
4 (operated)	31.81%	25.75%
5 (experienced)	24.24% ¹⁶	15.15% ¹⁰

Landslide monitoring section

2) Instruments

	2007:	2008
1 (never seen)-	3.78%	0.75%
2 (know mechanism)	12.87%	41.66%
3 (used)	12.87%	21.21%
4 (installed)	21.96%	12.87%
5 (data collected)	6.06%	8.3%

3) Data collection

	2007:	2008
1.(never done)-	0	0
2 (know mechanism)	18.18%	15.9%
3 (manually)	15.9%	18.18%

4 (manually+PC)	43.18%	20.45%
5 (downloaded to PC)	2.27%	9.09%

4) Frequency of data treatment

	2007:	2008
1 (never seen)-	2.27%	0
2 (yearly)	34.09%	38.63%
3 (monthly)	25%	38.63%
4 (weekly)	34.09%	2.27%
5 (daily)	13.63%	18.18%

5) Installation of instruments

6) General question

Landslide risk assessment section

1) Stability Analysis method

	2007:	2008
1 (never seen)-	31.4%	18.18%
2 (know mechanism)	9.91%	23.96%
3 (assisted)	2.47%	0
4 (operated)	3.3%	5.78%
5 (experienced)	5.78%	2.47%

2) Countermeasure

	2007:	2008
1 (never seen)-	2.72%	0.9%
2 (know mechanism)	31.81%	35.45%
3 (assisted)	4.54%	4.54%
4 (operated)	8.18%	14.54%
5 (experienced)	10.9%	1.81%

- 3) Risk assessment
- 4) Emergency

Resistivity Sounding

1) Method

	2007:	2008
1 (never seen)-	24.24%	30.30%
2 (know mechanism)	6.06%	24.24%
3 (assisted)	3.03%	0
4 (operated)	0	0
5 (experienced)	9.09%	1.51%

2) Analysis

	2007:	2008
1 (never seen)-	12.12%	15.15%
2 (know mechanism)	15.15%	21.21%
3 (assisted)	6.06%	6.06%
4 (operated)	9.09%	6.06%
5 (experienced)	27.27%	12.12%

QUESTIONNAIRE		Abdullaev Sh. H		Ahunjanov A.		Bazarov Sh. B.		Bimurzaev A. Z		Bimurza	Dalimov	Shodiev	Fasidinov		Hamraev	Kamalev	Mavlonov A. A.		Minchenko		Niyazov R. A		Sobkina		Turabbaev A. T		Urabboev	Tashpulat	Ubaydul	Mingboev	Uralov I. F.			
ITEMS	TITLE	Chief of Hydrogeophisic		Chief geologist of SMS		Chief of SMS		Chief of topogeodetic section of SMS		Hydro geologist	Chief of drilling	Drilling Operator	Key hydro geologist of Bostanlik SMS		Chief Engineer of	Key hydro geologist of	Director of HYDROINGEO		Chief of Geodynamic Laboratory		HYDROINGEO Consultant		Key hydro geologist of Angren MS		Chief of Bostanlik MS		Technic Al Bostanlik	Geologist II Category	Chief of Angren MS	Chief of Hydrogeop	Chief of Angren MS			
		2007	2008	2007	2008	2007	2008	2007	2008	2007	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008		
Drilling	1 Instrument	1 Drilling machine	2	2	2	2	4	3	2	2	2	5	4	1	2	5	5	5	5	1	2	5	2	2	2	2	2	2	5	1		2	3	2
		2 Plat form for drilling machine	1	1	2	2	4	3	2	2	2	2	5	4	1	2	5	5	5	5	1	2	5	2	2	2	2	2	5	1		2	3	2
		3 Mud mixer	1	1	2	2	4	4	2	2	2	2	5	4	1	2	5	5	5	5	1	2	5	2	2	2	2	2	5	1		2	3	2
		4 Water pump	1	1	2	2	4	4	2	2	2	2	5	4	1	2	5	5	5	5	1	2	5	2	2	2	2	2	5	1		2	3	2
		5 Mud pump	1	1	2	2	4	4	2	2	2	2	5	4	1	2	5	5	5	5	1	2	5	2	2	2	2	2	5	1		2	3	2
		6 Core tube	1	1	2	2	4	4	2	2	2	2	5	4	1	2	5	5	5	5	1	2	5	2	2	2	2	2	5	1		2	3	2
		7 Drilling bit (metal crown)	1	1	2	2	4	4	2	2	2	2	4	2.4	1	2	5	5	5	5	1	2	5	2	2	2	2	2	5	1		2	3	2
		8 Drilling bit (diamond bit)	1	1	2	2		4	2	2	2	2		2.4	1	2	1	5	5	5	1	2	5	2	2	2	2	2	5	1		2	3	2
		9 Drilling bit (tricorn bit)	1	1	2	2	4	4	2	2	2	2	5	4	1	2	1	5	2	5	1	2	5	2	2	2	2	2	5	1		2	3	2
		10 Recovering method (if the drilling tools jammed in the hole)	1	1	2	2	4	4	1	2	2	2	5	4	1	2	5	5	2	5	1	2	5	2	2	2	2	2	5	1		2	3	2
	2 Methods	1 Mud rotary circulation	2	2	2	2	4	4	2	2	2	5	4	2	2	2.5	5	2	5	2	2	5	2	2	2	2	2	5	1		2	3	2	
		2 All core drilling	2	2	2	2		4	2	2	2	2	4	2	2	2	5	5	5	1		5	2	1	2	2	2	5	1			3	2	
		3 Down the hole hammer (DTH)	1	1	2	2		2	1	2	1			1	2	1	1		5	1		5	2	1	2	2	2	5	1		2	3	2	
		4 Wire line	1	1	2	2	4	4	2	2	2	2	1		2	2		E	5	1	2	5	2	1	2	2	2	5	1		2	3	2	
		5 Tricorn bit mud circulation			2	2	4	4	2	2	2	2	5	4	2	2	1	2	5	1		5	2	2	2	2	2	5	1			3	2	
		6 Other drilling method (please specify)			2:non-core drilling	2		4		1: impact drilling	2			E: impact drilling	4	2:non-core drilling	E: impact drilling	E:non-core drilling			E:static penetration	4		2			2:non-core drilling			1			1: impact drilling	
		7 Other drilling method (please specify)			2:reverse circulation drilling	2		4			2			4	2:reverse circulation drilling	C: auger drilling	E: reverse circulation drilling			2:dynamic penetration	4		2			2:reverse circulation drilling			1					
		8 Other drilling method (please specify)			2:manual drilling, auger drilling	2		4		2				4	C: manual drilling, auger drilling	C: combination drilling	E: manual drilling, auger drilling			E: auger drilling			2			D: manual drilling, auger drilling			1					
	3 Tests & Sampling	1 Standard penetration test	4	4	2	5	3	3	1	2	2	1	4	2	2	1	5	5	5	4	5	2	2	2	2	2	2	4	1		1	2	2	
		2 Thin wall Sampling	3	4	2	5	3	3	1	2	1	1	4	2	2	1	2	5	5	5	1		5		2	3	2	2	4	1		2	2	2
		3 Rock chip sampling	2	2	2	5	3	4	1	2	1	1	4	2	2		5	5	5	1		5		2	2	2	2	4	1		2	2	2	
		4 All core sampling	2	2	2	5	3	4	1	2	1	1	4	2	2	2	5	5	5	1		5				2	2	4	1		2	1	2	
		5 Core logging (columnar section)	4		2	2	3	4	1	2	2	1	4	2	2	2	5	5	2	1		5				2	2	4	1		2	1	2	
	4 Operation	1 Vertical Drilling	2	2	2	2	4	4	2	2	2	5	4.5	2	2	5	2	2	5	1	2	5	2	2	3	2	2	4	1		2	3	2	
		2 Horizontal Drilling		1	2	2	3	3	2	2	2	2	4	1	2	1	1		2	1	2	5	2			1	2	4	1		2	2	1	
		3 Other drilling operation (please specify)			2:manual, pneumatic, rotary core drilling	2			A: impact drilling	2			E: impact drilling	2	B: manual, pneumatic, rotary core drilling	2	2: impact drilling	5: manual, pneumatic, rotary core drilling				4				B: manual, pneumatic, rotary core drilling	2	4	1				1: impact drilling	
		4 Other drilling operation (please specify)			2: auger drilling	B				B				2: auger drilling	2	2: auger drilling	5: auger drilling				4		2			B: auger drilling	4	1						
	5 General Question	1 What is the main characteristic of drilling in landslide area?			rotary core drilling, measurements of loss, geophysical logging		observation of ground water level, installation of inclinometers		determination of ground water level, sliding plane, chemical analysis		determination of ground water level, sliding plane		control and data collection		rotary core drilling, measurements of loss, geophysical logging		difficult access by drilling machine	rotary core drilling, measurements of loss, geophysical logging	diameter and drilling depth	core drilling up to basement rock	diameter 50 - 110 mm, drilling depth 20 - 60 m	depth up to 100m, diameter 50m, coring	diameter of drilling, drilling depth, selection of drilling machine for the landslide area	geological cross section	examination of movement (by equipment), stop structure, physical-mechanical properties	rotary core drilling, measurements of loss, geophysical logging			lithological composition of soil	difficult drilling because of fluid leakage on cracks	investigation of geology, GWL, sliding plane and depth of basement rock	difficult drilling because of fluid leakage on cracks	difficult drilling because of fluid leakage on cracks	

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		determination of geological cross section, sliding plane, physical mechanical properties of	Determination of geological cross section, physical mechanical properties of soil	determination of sliding planes, physical mechanical properties of soil	various, GWI, cross section, sliding plane	determination of ground water level, sliding plane, chemical analysis	determination of physical mechanical properties of soil	physico chemical properties, examinations of cross section	various, GWL, cross section, sliding plane	determination of sliding plane, physical mechanical properties of soil	determination of sliding plane, physical mechanical properties of soil	investigation of landslide body and installation of tools	determination and confirmation of cross section	investigation of lithological composition of soils	investigation of landslide and installation of tools and investigation equipment	soil testing, geological cross section	determination of sliding plane, ground water level, geology	determination of sliding plane, ground water level, geology	sliding plane, physical-mechanical properties of soil	determination of sliding plane, physical-mechanical properties of soil	determination of ground water level	GWL, cross section, chemical composition of soil and physical-mechanical properties of soil	coring and investigation by inclinometer	investigation of geological cross section, determination of ground water level	investigation of geological cross section, determination of ground water level	investigation of geological cross section, determination of sliding surface	investigation of geological cross section, determination of sliding surface
5 General Question	2. What is the purpose of drilling in the landslide area?	determination of geological cross section, sliding plane, physical mechanical properties of	Determination of geological cross section, physical mechanical properties of soil	determination of sliding planes, physical mechanical properties of soil	various, GWI, cross section, sliding plane	determination of ground water level, sliding plane, chemical analysis	determination of physical mechanical properties of soil	physico chemical properties, examinations of cross section	various, GWL, cross section, sliding plane	determination of sliding plane, physical mechanical properties of soil	determination of sliding plane, physical mechanical properties of soil	investigation of landslide body and installation of tools	determination and confirmation of cross section	investigation of lithological composition of soils	investigation of landslide and installation of tools and investigation equipment	soil testing, geological cross section	determination of sliding plane, ground water level, geology	determination of sliding plane, ground water level, geology	sliding plane, physical-mechanical properties of soil	determination of sliding plane, physical-mechanical properties of soil	determination of ground water level	GWL, cross section, chemical composition of soil and physical-mechanical properties of soil	coring and investigation by inclinometer	investigation of geological cross section, determination of ground water level	investigation of geological cross section, determination of ground water level	investigation of geological cross section, determination of sliding surface	investigation of geological cross section, determination of sliding surface
	3. What is the important factor when drilling in the landslide area?		100% Coring	water horizon	core sampling	determination of sliding plane depth	determination of hydrogeological conditions at drilling	safety factor for implementation of drilling	water horizon	safety measures and meet the specific conditions	water horizon	coring and logging	100% coring		coring, water sampling for laboratory testing	weak areas	safety measures	composition of soil	water horizon		responsibility, following instructions	condition of landslide area works	fulfill the rules of safety	condition of landslide area	specify sliding surface depth and its characteristics		
	4. Who will be responsible for the maintenance of operation?	responsible, executor, geologist	hydrogeologist, drilling operator, technician		drilling operator	drilling operator and geologist	hydrogeologist, drilling operator	assigned manager	Drilling Operator	hydrogeologist, drilling operator, technician	responsible manager and chief of section	hydrogeologist, drilling operator, technician	chief of the section	drilling operator	drilling operator, geologist	drilling operator	responsible manager	chief of station	hydrogeologist, drilling operator, technician	drilling operator	geologist, drilling operator	chief of station and drilling operator	chief of drilling section	chief of station and drilling operator	chief of station and drilling operator		
	5. What action will be made if instruments are not functioning?	repair at the site or at the MS	disassembly of tool and its reassemble		drilling operator	repairing	check and in case of serious damage do necessary repair	repair works in accordance with maintenance manual	repairing	disassembly of tool and its reassemble	maintenance will be done by the specialist	disassembly of tool and its reassemble	repairment	repairing on place or at the MS	maintenance, change type of drilling	disassembly of tool and its reassemble	maintenance of the equipment	maintenance of equipment	disassembly of tool and its reassemble	it is necessary to invite qualified specialist	repair of equipment	detailed check	repair of equipment	find the reason of damage of equipment and repair			
	6. Where the instruments will be maintenance?	at the MS	at the bases of the SMS in Tashkent		at the base of expedition	repairing at the factory	in Tashkent at the special workshops	will be confirmed	repairing at the factory	at the bases of the SMS in Tashkent	at the bases of the SMS in Tashkent	at the bases of the SMS in Tashkent	at the bases of the SMS in Tashkent	at the special workshops	at the MS	in accordance with GOST standard at the respective workshop	at the Control instrumentation laboratory	at SMS	at the bases of the SMS in Tashkent	repairing at the special workshop in Tashkent	repairing at the factory	at the base of SMS, at the base of the MS	at the base of SMS, at the base of the MS	at the base of MS	at the base of MS		
	7. What is your future use of drilling machine?		dry core drilling	URB-2A, URB-3AM, BA-15, machine and manual drilling	on the requirements		for geological investigations	for geological works, sections etc.	will be used for the specific purpose	URB-2A, URB-3AM, BA-15, machine and manual drilling	effective use at the landslide areas	drilling of boreholes at landslide areas	URB-2A, URB-3AM, BA-15, machine and manual drilling	portable	high speed dry drilling	investigation of geological structure, installation of tools	will be implemented horizontal and vertical drilling and installed gauges	horizontal drilling will be implemented boreholes and drilling at the other landslid	drilling at the other landslide areas	URB-2A, URB-3AM, BA-15, machine and manual drilling	at the hazardous landslide areas	at the landslide areas	drilling at the new big landslide sections	drilling at the new big landslide sections	drilling at the new big landslide sections		

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		General Landslide Investigation	1 Topographical	2	4	5	4	3	5	2	4	1	4	2	2	3	4	2	5	4	2	5	5	2	2	2	2	4	4	2
2 Aerial photograph (Stereoscopic interpretation)	2		2	4	3	1	2	3	1	4	4	2	2	5	4	2	5	4	2	2	2	4	2	2	2	4	4	4		
3 Satellite image	2		2	4	3	1	2	3	1	4	4	2	2	4	2	5	4	2	5	2	2	4	2	2	2	4	3	2		
4 Field geological reconnaissance	2		2	4	4	4	4	2	4	1	4	2	2	5	4	5	5	4	5	5	E	5	4	2	2	2	5	3	4	
5 Landslide area surface anomaly investigation	2		2	4	4	4	4	2	3	1	4	2	2	5	4	2	5	4	5	5	2	2	4	2	2	2	5	5	2	
6 Cross sectional	2		2	4	4	4	5	2	4	1	4	2	2	5	4	2	5	4	5	5	5	4	2	2	2	2	5	5	4	
Instruments	1 Borehole Incliner	4	3	3	4	4	1	2	2	2	4	2	2.4	2	3	3	3	3	2.3	2	2	3	2	2	3	5	3	3		
	2 Pipe strain gauge	4	2	5	4	4	2	1	1	4	4	2.4	2	4	2	2	3	3	2.3	2	5	4	2	2	2	2	2	4	4	
	3 Extensometer	4	2	5	4	4	4	2	2	1	4	4	2.4	1	5	2	5	3	3	3	3	4	2	2	2	2	2	3		
	4 Long span extensometer	4	2	5	4	4	1	2	2	1	4	2	2.4	1	2	2	3	3	3	3	3	3	2	2	2	2	2	1	2	
	5 Incliner	3	2	3	4	4	1	2	2	2	4	4	2.4	2	2	4	2	3	3	3	3	2	3	2	2	C	5	2	2	
	6 Groundwater measurement	3	3	4	4	4	4	2	4	2	4	2	2.4	2	5	4.5	5	5	3	3	3	5	5	5	2	2	2	4	3	
	7 Global Positioning System (GPS)	2	2	2.4	4	4	5	2	5	1	4	2	2	1	2	2	5	5	3	2	3	2	2	2	2	5	3	3		
	8 Nuk-ita (Wooden Extensometer)	3	3	4	3	4	4	2	3	1	4	2	2	1	5	2	5	3	3	4	3	1	5	2	2	2	2	4	3	
	9 Other devices			4:Girkon deformatometer CPT	5			5:electronic tachometer	2			2:Girkon deformatometer CPT			3				3	3:	deformatometer						2	3:electronic tachometer	3	
	10 Other devices			4:pore pressure gauge	5			5:topographic tools	2			2: pore pressure gauge			3:pore pressure gauge				3								3:topographic tools	3		
	11 Other devices			4:deep-well reference point	5				2			2:deep-well reference point			3:deep-well reference point														4	
	12 Other devices			4:"Volday" deformatometer	5				2			2:"Volday" deformatometer			3:"Volday" deformatometer													A:rock movement	4	
3 Data Collection	1 Data collection from devices (specify above No)	2	4	5	4:above No 1,2,5,6	2	4:above No3,6,7,8,9,10	2	5:above No 1,3,6,7,8,9	1	2	2	2	1	4	4	2	partially	4	4	3			3	2	2	2	5	3	3
	2 Data compilation from devices	2	4	5	4:devices regular data compilation depending on requirements	2	D	2	5	1	2	2	2	1	4	4	4	partially	4	4	3			4	2	2	2	5	3	3
	3 Data analysis	2	4	5	4	2	4	2	5	1	2	2	2	1	3	4.5	4	partially	4	4	3		4	3	2	2	2	2	3	3
	4 Data drawings	2	4	5	4	2	4	2	5	1	2	2	2	1	4		4	partially	4	4	3		4	3	2	2	C	2	3	3
4 Frequency of Data Treatment	1 Data collection	2	4	5	4	2	3	2	3	1	2	2	2	1	3.4	5	3.5	2.3	3	5	5		4	2,3,4	2	2	2	4	3	
	2 Data compilation	2	4	5	4	2	4	2	3	1	2	2	2	1	3	5	3.5	2.3	3	4	3		4	2,3	2	2	2	4	3	
	3 Data analysis	2	4	5	4	2	5	2	3	1	2	2	2	1	3	5	3.5	2.3	3	4	3		3	2,3	2	2	2	3	3	
	4 Data drawings	2	4	3	4	2	3	2	3	1	1	2	1	2	5	3.5	2.3	3	4	2	3		3	2	2	2	2	3	3	
	1 Have you formulated monitoring plan before?		yes, on the plan of operation from 1970	monitors	yes	yes	preparation of project	yes, at the sections	yes, formulated plan of operation	yes	yes, formulated plan of operation, have experience from 1970	yes, at the sections	no	yes, formulated plan of operation experienced from 1970	yes	yes	yes	yes, I have formulated monitoring plan	yes	no	yes, formulated plan of operation experienced from 1970	yes, for the sections	yes, within recent five years	no	yes	no	yes	yes		

QUESTIONNAIRE		Abdullaev Sh. H	Ahunjanov A.	Bazarov Sh. B.	Bimurzaev A. Z	Bimurza	Dalimov	Shodiev	Fasidinov	Hamraev	Kamalev	Mavlonov A. A.	Minchenko	Niyazov R. A	Sobkina	Turabbaev A. T	Urabboev	Tashpulat	Ubaydul	Mingboev	Uralov I. F.										
ITEMS	TITLE	Chief of Hydrogeophysical	Chief geologist of SMS	Chief of SMS	Chief of topogeodetic section of SMS	Hydro geologist	Chief of drilling	Drilling Operator	Key hydro geologist of Bostanlik SMS	Chief Engineer of	Key hydro geologist of	Director of HYDROINGEO	Chief of Geodynamic Laboratory	HYDROINGEO Consultant	Key hydro geologist of Angren MS	Chief of Bostanlik MS	Technic At Bostanlik	Geologist II Category	Chief of Angren MS	Chief of Hydrogeop	Chief of Angren MS										
		Landslide Monitoring	2 What is the important factor on install instruments?	correct installation on point	correct installation and location	specify dynamic part of landslide	set in required interval	accuracy			accuracy on assembly	technology			correct installation and selection of correct location	correct installation	correct installation and location	correct location and installation depth	installation on point	installation technology	place and settings interval	knowing of geological structure	correct selection of installation position	accuracy	installation position, assembly procedure	correct installation and location	accuracy on assembly	accuracy on assembly	do not know	Correct installation used manuals	follow the instructions
3 How do you plan data collection interval?			in spring time daily, in summer, autumn and winter monthly	depend on changes in landslide mass	on the circumstances	in accordance with design	daily, monthly, yearly		weekly, monthly		in accordance with design	in spring time daily, in summer, autumn and winter monthly	in accordance with the target	in spring time monthly	daily, monthly	from 4 hours to 24 hours		daily, weekly, monthly	from 5 to 15 days in spring and 30 days in summer	depend on movement at the section	daily in spring	in spring time daily, in summer, autumn and winter monthly				weekly			weekly	weekly	
4 How often you make the maintenance of instruments?			once per 2 - 3 yaers, and on the breakdown	after autumn and spring seasonal observations	every time when read a data	annually	yearly, GPS and electronic tachometer		yearly		once per 2 - 3 yaers, and on the breakdown	under the necessity	once per 2 - 3 yaers, and on the breakdown	yearly per month	once per month	once per month	annually before settings	after completion of spring monitoring cycle	after completion of spring monitoring cycle	depend on the lifetime of equipment	once per year	once per 2 - 3 yaers, and on the breakdown				1 - 2 times per year	before and after operation	1 - 2 times per year	twice per year		
5 Who will be responsible for the maintenance of operation?			key hydrogeologist responsible for this section	responsible engineer at the section	responsible engineer of the section	responsible engineer	manager, chief geologist and key hydrogeologist	responsible technician	chief of the section, hydrogeologist		responsible engineer	key hydrogeologist responsible for this section	responsible technician	key hydrogeologist responsible for this section	responsible person	engineer-geologist	geologist	engineer	key hydrogeologist responsible for this section	chief of station	responsible person	chief of station, geologist of SMS	key hydrogeologist responsible for this section	responsible technician	drilling operator		key hydrogeologists	chief of section	key hydrogeologists	chief of M.S, key hydrogeologist	
6 What action will be made if instruments are not functioning?			repairing works at the base of the station or at SMS	immediate repairing	repairing	repairing		test for defects		repairing	repairing works at the base of the station or at SMS	disassemble and check	repairing works at the base of the station or at SMS	repairing works	repairing works	repairing works	replacement, repair, resetting	testing and repairing at the workshop	will be dismantled and moved to another position	disassemble and check	detailed check	repairing works at the base of the station or at SMS				find the reason and repair	repair at the special workshop	find the reason and repair	find the reason and repair		
7 Where the instruments will be maintenance?			at the bases of the stations or at SMS in Tashkent	at the site or at the station	at the station	on the "Leika" workshop	service center		at the station	at the bases of the stations or at SMS in Tashkent	repairing works in Tashkent	at the bases of the stations or at SMS in Tashkent	at the bases of the stations or at SMS in Tashkent	at the bases of the stations or at SMS in Tashkent	at the bases of the stations or at SMS in Tashkent	at the bases of the stations or at SMS in Tashkent	in the laboratory and construction department GIDRO TEHNIK 'A	at the respective workshops	at the respective workshops	Control instrument laboratory	in SMS	at the bases of the stations or at SMS in Tashkent	at the special workshops in Tashkent	in Tashkent		at SMS or at the base of the MS		at SMS or at the base of the MS	at the base of MS		

QUESTIONNAIRE		Abdullaev Sh. H.	Ahunjanov A.	Bazarov Sh. B.	Bimurzaev A. Z.	Bimurza Dalimov	Shodiev	Fasidinov	Hamraev	Kamalev	Maylonov A. A.	Minchenko	Niyazov R. A.	Sobkina	Turabbaev A. T.	Uraboev	Tashpulatov	Ubaydullov	Mingboev	Uralov I. F.									
ITEMS	TITLE	Chief of Hydrogeophisic	Chief geologist of SMS	Chief of SMS	Chief of topogeodetic section of SMS	Hydro geologist	Chief of drilling	Drilling Operator	Key hydro geologist of Bostanik SMS	Chief Engineer of geologist	Key hydro geologist of HYDROINGEO	Chief of Geodynamic Laboratory	HYDROINGEO Consultant	Key hydro geologist of Angren MS	Chief of Bostanik MS	Technic At Bostanik	Geologist in Category	Chief of Angren MS Hydrogeop	Chief of Angren MS	Chief of Angren MS									
		6 General Question	1 What is the purpose of monitoring landslide?	advanced determination of landslide movement	determination of critical landslide parameters for protection of facilities		warning and protection works	reduction of danger and economic damage from landslide disaster	early prevention of movement		determination of critical landslide parameters for protection of facilities	prevention of human loss and economic damage	reduction of human loss and economic damage	determination of critical landslide parameters for protection of facilities	assessment and warning	timely prevention	landslide movement warning	prevention, timely use counter measures for mitigation of disaster	determination of landslide propagation mechanism, secure public safety	investigation of landslide prevention	investigation of landslide prevention	determination of critical landslide parameters for protection of facilities	prevention of landslide against disaster	forecast the place and prevention of landslide	dynamic mechanism of landslide	study of landslide dynamic use counter measures for mitigation of landslide formation and development regularly	prevention of landslide dynamic use counter measures for mitigation of landslide formation and development regularly	study of landslide dynamic use counter measures for mitigation of landslide formation and development regularly	study of landslide dynamic use counter measures for mitigation of landslide formation and development regularly
2 Related to Q1, who will be happy by monitoring?			for people, for organizations and for local authorities	for people, for organization	villagers who live at the landslide area	citizens, state and private companies	citizens, state and private companies	people, for organizations and for local authorities	people, for organizations and for local authorities	people, for organizations and for local authorities	people, for organizations and for local authorities	people, for organizations and for local authorities	people, for organizations and for local authorities	people, for organizations and for local authorities	people, for organizations and for local authorities	people, for organizations and for local authorities	people, for organizations and for local authorities	people, for organizations and for local authorities	people, for organizations and for local authorities	people, for organizations and for local authorities	people, for organizations and for local authorities	people, for organizations and for local authorities	people, for organizations and for local authorities	people, for organizations and for local authorities	people, for organizations and for local authorities	people, for organizations and for local authorities	people, for organizations and for local authorities	people, for organizations and for local authorities	people, for organizations and for local authorities
3 Is your activity will be the benefit of the public?			yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
4 Related to Q1, why you think it will be benefit to the public?			we can make warning to the people on time	safe life, property	the activity is related to life safety	because I do monitoring and evaluate risk	because I'll take part in monitoring process		we can make warning to the people on time	we can make warning to the people on time	for ability of evacuation	we can make warning to the people on time	for their safety	for safety of citizens	timely counter measures, disaster forecast	because I'm experienced in monitoring field	life safety	timely warning will reduce human loss	reduction of human loss	we can make warning to the people on time	we can avoid human loss	landslide monitoring	it is main purpose of our work	landslide monitoring	to make possible warning inform about disaster				
5 Do you have high intention to work on monitoring?			yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
6 If the instruments broken, how do you repair the instruments?			small repair works at the site, other in SMS in Tashkent	please see item 5, q. 7	by specialist	by responsible labor	small repair works at the site, other in SMS in Tashkent		small repair works at the site, other in SMS in Tashkent	in workshop in Tashkent	by specialist	small repair works at the site, other in SMS in Tashkent	small repair works at the site, other in SMS in Tashkent	by specialist	small repair works at the site, other in SMS in Tashkent	by specialist	small repair works at the site, other in SMS in Tashkent	by specialist	small repair works at the site, other in SMS in Tashkent	by specialist	small repair works at the site, other in SMS in Tashkent	by specialist	small repair works at the site, other in SMS in Tashkent	by specialist	small repair works at the site, other in SMS in Tashkent	by specialist	small repair works at the site, other in SMS in Tashkent	by specialist	small repair works at the site, other in SMS in Tashkent
7 How do you assure the security of instruments?			by digging of it into the soil		I do not know	correct operation and timely maintenance	correct operation and timely maintenance	correct operation and timely maintenance	I do not know	by digging of it into the soil	it is necessary to use guard	correct maintenance	by digging of it into the soil	by correct positioning and public relations	by correct positioning and public relations	vandalism arrangement, inspection	by correct maintenance	metal enclosure	guard	by digging of it into the soil	control and check	control and check	good	the equipment will be safed by the local	it is very safe	the equipment will be safed by the local	information to local people		
Risk Assessment	1 Minimum safety factor			3	2	2	2	1	2	2	1	5	1	4	1.5	4	5			2	2	2		2	1	1	1		
	2 Circular slip analysis			5	4	2	5	2	2	1	5	1	2	1	4	5			5	2	2	2		2	2	1			
	3 Simplified method (Fellenius' method)			2	4	2	1	1	1	1	2	2	1	5	2	1	4	1	2	2	2	2		1	1	1			
	4 Bishops Method			2	4		1	1	1	1	1		2	1	4	1	2	1	2	1	2	2		1	1	1			
	5 Jambu's simplified method			1	4		1	1	1	1	1		2	1	1	1	1	2	1	2	2		1	1	1	1			
	6 FEM (finite element method)			2	3	2	1	1	1	1	1		2	1	1	1	2	1	1	1	2		1.2	1	1	1			
	7 3D FEM			2	3	2	1	1	1	1	1		2	1	2	1	1	1	1	1	2		2	1	1	1			



QUESTIONNAIRE			Abdullaev Sh. H	Ahunjanov A.	Bazarov Sh. B.	Bimurzaev A. Z	Bimurza	Dalimov	Shodiev	Fasidincev	Hamraev	Kamalev	Mavlonov A. A.	Minchenko	Niyazov R. A	Sobkina	Turabbaev A. T	Urabboev	Tashpulatov	Ubaydullov	Mingboev	Uralov I. F.						
ITEMS	TITLE		Chief of Hydrogeophisic	Chief geologist of SMS	Chief of SMS	Chief of topogeodetic section of SMS	Hydro geologist	Chief of drilling	Drilling Operator	Key hydro geologist of Bostanlik SMS	Chief Engineer	Key hydro geologist of	Director of HYDROINGEO	Chief of Geodynamic Laboratory	HYDROINGEO Consultant	Key hydro geologist of Angren MS	Chief of Bostanlik MS	Technic AI Bostanlik	Geologist II Category	Chief of Angren MS	Chief of Hydrogeop	Chief of Angren MS						
	3 Risk Assessment	4: How do you calculate risk economically?		by calculating of possible economic damage, human loss, damage of							correct risk assessment			by calculating of possible economic damage, human loss, damage of	by calculating of possible economic damage, human loss, damage of	by calculating of possible economic damage, human loss, damage of	by calculating of possible economic damage, human loss, damage of	by calculating of possible economic damage, human loss, damage of			scale of possible facility damage	by update technology	scale of possible facility damage	determination of possible facility damage				
5: How do you count the degree of the risk?			low, middle, high, very high depend on the landslid		baesed on the geologic al conditio ns					we calculat ie material risk degree only			low, middle, high, very high depend on the landslid	low, middle, high, very high depend on the landslid	low, middle, high, very high depend on the landslid	possible economic damage, human life loss	no				by complex analysis of data							
4 Emergency	1 When do you define as emergency situation?		on the landslid e movement more than critical range, citizens awarnes s		when the conditio ns for activatin g of landslide are very high	on clear observat ion of hazardo us geologic al process		when the movem ent started	when the landslid e movem ent is very high		on the landslid e movement more than critical range, citizens awarnes s	landslid e movement	on the landslid e movement more than critical range, citizens awarnes s	hazard to public safety	by increase ment of landslid e movem ents	high activity of landslide, big damage		when the amount of precipitatio n increase norms, sudden rising of ground water level, raising of spring consum		amount of percipitatio n in autmn-winter period more than 400mm, rainfalls during 3 to 4 days in the amount of 30 -		on the landslid e movement more than critical range, citizens awarnes s	by existance of cracks, deformations, movem ents	when possible collapse of houses with human losses	based on visual observatio ns and compyle d analysis of data	when possible collapse of houses with human losses	when possible collapse of houses with human losses	
	2 For effective emergency alert, what is the priority action?		perman ent mainten ance of the alert system is required , and repairin g on time is		correct installati on and protecti on	I do not know		regular monitori ng	correct mainten ance		perman ent mainten ance of the alert system is required , and repairin g on time is	light in the night time and soundin g in the daytime	perman ent mainten ance of the alert system is required , and repairin g on time is	correct installati on the positioni ng	informat ion to the public	landslid e movem ent		correct selectio n of installati on position		not effective		perman ent mainten ance of the alert system is required , and repairin g on time is	I do not know	I do not know		safety of the device		
	3 For how long it takes to notice the people in danger?		depend on the location of facility and on difficulty		depend on the scale of disaster	depend on scale of area to be noticed		depend on scale of disaster and awarnes s of MS staff	depend on the local conditio ns		depend on the location of facility and on difficulty		depend on the location of facility and on difficulty	begining hours	begining hours	several hours		before impleme ntation of spring service the hazardo us areas will be determi nd and will be issued evacuati		evacuati on		depend on the location of facility and on difficulty	depend on results shown by device	depend on results shown by devices, one our before, 24 hours before	30 minutes	10 to 15 minutes after hazard identific ation	I do not know exactly	10 to 15 minutes after hazard identific ation

QUESTIONNAIRE			Abdullaev Sh. H.	Ahunjanov A.	Bazarov Sh. B.	Bimurzaev A. Z.	Bimurza	Dalimov	Shodiev	Fasidinov	Hamraev	Kamalev	Mavlonov A. A.	Minchenko	Niyazov R. A.	Sobkina	Turabbaev A. T.	Urabboev	Tashpulat	Ubaydul	Mingboev	Uralov I. F.					
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			4 What do you require for the emergency action?			awarnes s of citizens for evacuation	control the temper		timely evacuation	early evacuation of people		awarnes s of citizens, local authorities, MES	evacuati on of people	awarnes s of citizens, local authorities, MES	smooth coordin ation of villagers	issue of official letter, informat ion to relative organiz ations and	follow the issued orders	timely evacuati on of people	awarnes s of citizens, local authorities, MES	depend on difficulty and remoten ess of the area			immedia te warning and evacuati on of people by local authoriti	upon circumst ances and evacuati on of people by local authoriti	immedia te warning and evacuati on of people by local authoriti	immedia te warning and evacuati on of people by local authoriti	
	5 Do you think that emergency alert is effectively functioning?		yes	difficult to answer		yes	yes			yes (CPT1)	yes	yes (CPT1)	yes	yes	there is no example	yes in correct mainten ance	no	yes (CPT1)	yes	yes	yes	yes	on the adequat e mainten ance the equipm ent will	think so	on the adequat e mainten ance the equipm ent will	yes, but preferab ly install sound alarm	
Resistivity Sounding	1 Method	1 Wenner method	5		2		1	1	1		1	2	1	1		2	1		1	1	5	2	2		5	1	
		2 Shulumberger method	5		2		1	1	1		1	2	1	1		2	1		1	1	5	2	2		5	1	
		3 dipole-dipole method	5				1	1	1		1	2	1	1		2	1		1	1	5	2	2		4	1	
		4 2D Resistivity Tomography					1	1	1		1	2	1	1		2	1		1	1	2	2	2		4	3	1
		5 Other					1				2: X-ray dosimet ry	2		2: X-ray dosimet ry			5		1			2: X-ray dosimet ry			5	3: penetrat ion	1
		6 Other					1				B: caliper loading	2		2: caliper loading				1						5		1	
	2 Analysis	1 Manually	5		5	5	4	3	1	2	1		yes	2	2	1	5	5		1	5	2	2		5	1	
		2 by use of software	5		3	4		3	1	2	1		yes	2	2	1	3	5	5		1	4	2	1	3	2	2
3 Other				D: E: graphing								2: graphing	2		E: graphing				1		4: data graphing			5			

5. ミーティング議事録 (2007～2010)

**THE PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE
MONITORING
IN THE REPUBLIC OF UZBEKISTAN**

Minutes of Meeting

Counterpart:	Signature 
Chief Expert:	

Subject: Weekly Meeting

Date: 28 December, 2007

Time: 10: 00 – 10: 45 AM

Location: JICA Expert Team Office in Tashkent

Attendance:

Counterpart: Mr. Mavlonov. A: Director of the Project

Mr. Bazarov Sh: Chief Manager of the Project

Mr. Niyazov R.: Chief Consultant

Mr. Ahundjanov A.: Chief Engineer

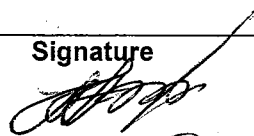

Experts: Mr. S. Tsukamoto Monitoring Techniques Specialist
Ms. O. Shvay: Interpreter

Item	Minutes	Action
1	Installation of Extensometer For Uchterek and Bedrenget landslide sites will be used above ground installation method (regular way of installation), and for Tekstilshik landslide area it is necessary to find installation method before installation procedure.	SMS HYDROENGE Experts
2	Installation method in Tekstilshik landslide area Prepared by Mr. Tsukamoto drawings showing installation method of extensometer have been submitted to C/P as an alternative. It was concluded that before installation of instruments appropriate installation method should be confirmed by both sides by experts and by C/P.	SMS HYDROENGE Experts

3	<p>Materials for Extensometers</p> <p>The required materials for extensometer confirm with the attached paper, all the expenses for procurement of the materials will be responsibility of Experts side.</p>	<p>SMS HYDROENGE Experts</p>
4	<p>Capacity Assessment</p> <p>The remaining capacity assessment sheets will be provided by the C/P to liaison officer Olga.</p>	<p>SMS HYDROENGE</p>
5	<p>Schedule for the next year</p> <p>For training in Japan in May 2008 will go following specialists:</p> <ol style="list-style-type: none"> 1. Mr. Mavlonov (Director of HYDROINGEO) 2. Mr. Bazarov (Chief of SMS) 3. Mr. Turabbaev (Chief of Bostanlik MS) 4. Mr. Dalimov (Drilling operator) 	<p>SMS HYDROENGE Experts</p>
6	<p>Request from Uzbekistan side in training in Japan</p> <p>The requests from C/P have been already submitted to JICA and copy of this document will be provided to the Experts through liaison officer Olga.</p>	<p>SMS HYDROENGE Experts</p>
7	<p>Other issue</p> <p>Mr. Niyazov would like to confirm what kind of instrument will be installed in bore hole for ground water level measurements. The expert will provide technical specification of the instrument and after translation specification the instrument will be submitted to C/P.</p>	<p>SMS HYDROENGE Experts</p>

**THE PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE
MONITORING
IN THE REPUBLIC OF UZBEKISTAN**

Minutes of Meeting

Counterpart:	Signature 
Chief Expert:	

Subject: Initial Meeting

Date: 31 October, 2007

Time: 9:00 AM

Location: HYDROINGEO Office in Tashkent

Attendance:

Counterpart: Mr. Mavlonov. A: Director of the Project

Mr. Bazarov Sh: Chief Manager of the Project

Mr. Niyazov R.: Chief Consultant

Mr. Ahundjanov A.: Chief Engineer

Experts: Mr. K. Ichikawa: Chief Advisor of the Project

Mr. H. Funaoka: Drilling Specialist



Ms. O. Shvay: Interpreter

Item	Minutes	Action
1	<p>Visit of Tashkent Expedition Depot According to initial schedule, the visit of Tashkent Expedition Depot has been planned on 31 of October, 2007 however, it has been delayed to 2 of November, 2007 at 10 AM, for the reason of absence of the Key specialist of the Depot.</p>	SMS Experts
2	<p>Weekly Meetings It was concluded, that on the beginning stage of the Project, Weekly Meetings will be held on every Friday at 10 AM in the Expert's Office, in order to discuss the activities made on the previous week and plan the activities for the following week.</p>	SMS Experts HYDROINDEO
3	<p>Site visit schedule Visit of Angren site has been planned on 1 of November, 2007, jointly</p>	SMS Experts

4	with Mr. Niyazov R., Chief Scientific Consultant. Next Meeting 9 of November, 2007, in the Expert's Office in Tashkent.	SMS Experts HYDROINDEO
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**THE PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE
MONITORING
IN THE REPUBLIC OF UZBEKISTAN**

Minutes of Meeting

Counterpart:	Signature 
Chief Expert:	

Subject: Weekly Meeting

Date: 9 November, 2007

Time: 9:00 AM

Location: JICA Expert Team Office in Tashkent

Attendance:

Counterpart: Mr. Mavlonov. A: Director of the Project

Mr. Bazarov Sh: Chief Manager of the Project
 Mr. Niyazov R.: Chief Consultant
 Mr. Ahundjanov A.: Chief Engineer
 Mr. Dalimov K: Drilling operator
 Mr. Hamraev R.: Chief Engineer of Tashkent Expedition

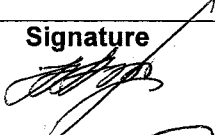

Experts: Mr. K. Ichikawa: Chief Advisor of the Project
 Mr. H. Funaoka: Drilling Specialist
 Ms. O. Shvay: Interpreter

Item	Minutes	Action
1	<p>Procurement of equipment & machinery</p> <p>On the discussion of technical specifications for the equipment, prepared by JICA team, counter part has no objections about technical characteristics and quantity of the equipment except item 6. Extensometer, amount of sets reached 20 and also 3 sets of alert systems, and item 10. Computers, the counter part requested JICA team to increase number of desk top computers up to 3 and 2 lap top computers. However, after further explanation and discussions by JICA Expert team, the specification and amount of procurement equipment and machinery were accepted by the participants</p>	<p>SMS HYDROENGEO Experts</p>

2	<p>Necessary things for preparations</p> <p>Preparation of international telephone line and arrangement of additional office facilities will be resolved within next week.</p>	SMS
3	<p>Activities for the next week</p> <p>Meeting with Mr. Niyazov on 14.11.2007 at 10 AM.</p>	HYDROENGEO Experts
4	<p>Arrangement of Seminar</p> <p>It was concluded to postpone discussion of this matter on the next weekly meeting.</p>	SMS HYDROENGEO Experts
5	<p>Next Meeting</p> <p>16.11.2007, 10AM at the Expert's office</p>	SMS HYDROENGEO Experts

**THE PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE
MONITORING
IN THE REPUBLIC OF UZBEKISTAN**

Minutes of Meeting

Counterpart:	Signature 
Chief Expert:	

Subject: Weekly Meeting

Date: 16 November, 2007

Time: 9:00 AM

Location: JICA Expert Team Office in Tashkent

Attendance:

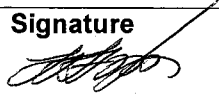

Counterpart:	Mr. Mavlonov. A:	Director of the Project
	Mr. Bazarov Sh:	Chief Manager of the Project
	Mr. Niyazov R.:	Chief Consultant
	Mr. Ahundjanov A.:	Chief Engineer
	Mr. Dalimov K:	Drilling operator
	Mr. Hamraev R.:	Chief Engineer of Tashkent Expedition
	Mr. Minchenko V.:	Chief of Laboratory (HYDROENGEО)
	Mr. Abdullaev Sh.:	Chief of geophysical investigation laboratory
 Experts:	Mr. K. Ichikawa:	Chief Advisor of the Project
	Mr. H. Funaoka:	Drilling Specialist
	Ms. O. Shvay:	Interpreter

Item	Minutes	Action
1	<p>Requirements for the JICA Experts Office and Project</p> <p>.It was concluded that Experts will make the topo map from Satellite Imaginary (15-30m accuracy), because for counter part it is difficult to provide required maps. Most recent organization chart of State Committee of Geology and Mineral Resources will be provided within next week. Specific issues such as drilling will be discussed between Mr. Funaoka and Mr. Hamraev, at the drilling site.</p>	<p>SMS HYDROENGEО Experts</p>

2	<p>Arrangement of Technical Seminar</p> <p>It was concluded that Seminar will be held on 7 of December 2007, from 9 AM till 1 PM. Person in charge for necessary preparations from counter part is Mr. Ahunjanov.</p>	<p>SMS HYDROENGEO Experts</p>
3	<p>Capacity Assessment</p> <p>Questionnaire for the capacity assessment will be provided on the next week.</p>	<p>SMS HYDROENGEO Experts</p>
4	<p>Schedule for the next week</p> <p>Tuesday 20 of November 2007, at 9 AM, Mr. Ichikawa will have quick tour around facilities and departments of HYDROENGEO</p> <p>Wednesday 21 of November 2007, at 9 AM, Mr. Ichikawa will have quick tour around facilities and departments of SMS.</p> <p>Wednesday 21 of November 2007, at 9 AM, Mr. Funaoka will visit drilling site. Visit of garage is impossible, because in Tashkent expedition there are no heavy machine such as winch, crawler.</p>	<p>SMS HYDROENGEO Experts</p>
5	<p>Next Meeting</p> <p>23. 11. 2007 at 9 AM, at Expert's office in Tashkent.</p>	<p>SMS HYDROENGEO Experts</p>

**THE PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE
MONITORING
IN THE REPUBLIC OF UZBEKISTAN**

Minutes of Meeting

Counterpart:	Signature 
Chief Expert:	

Subject: Weekly Meeting

Date: 23 November, 2007

Time: 9:00 AM

Location: JICA Expert Team Office in Tashkent

Attendance:

Counterpart:

Mr. Ahundjanov A.:	Chief Engineer
Mr. Dalimov K:	Drilling operator
Mr. Hamraev R.:	Chief Engineer of Tashkent Expedition
Mr. Minchenko V.:	Chief of Laboratory (HYDROENGEО)

Experts:

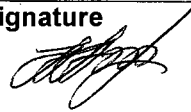

Mr. K. Ichikawa:	Chief Advisor of the Project
Mr. H. Funaoka:	Drilling Specialist
Ms. O. Shvay:	Interpreter

Item	Minutes	Action
1	<p>Re assessment of PDM sheet</p> <p>It was decided to postpone discussion of this issue to next Weekly Meeting.</p>	SMS HYDROENGEО Experts
2	<p>Arrangement of Technical Seminar</p> <p>It was concluded that JICA Expert Team will be responsible for preparation of invitation letters, envelopes and program of the Seminar and the counter part will submit invitation letters to the invited persons.</p>	SMS HYDROENGEО Experts
3	<p>Capacity Assessment</p> <p>Within next week the counter part will be able to return filled</p>	SMS HYDROENGEО Experts

<p>4</p>	<p>questionnaire.</p> <p>Schedule for the next week</p> <p>Mr. Ichikawa will be busy for the preparation of documents for procurement, full following week.</p> <p>Wednesday 28 of November 2007, at 9 AM, Mr. Funaoka will visit Bostanlik station and one of the sub station, jointly with Mr. Niyazov.</p> <p>Thursday 29 of November 2007, at 9 AM, Mr. Funaoka will have field excursion at the Angren area to see other landslides with different field? Jointly with Mr. Niyazov.</p>	<p>SMS HYDROENGEO Experts</p>
<p>5</p>	<p>Other issue</p> <p>Recent 10 years meteorological data will be provided within next week.</p>	<p>SMS</p>
<p>6</p>	<p>Next Meeting</p> <p>30. 11. 2007 at 10 AM, at Expert's office in Tashkent.</p>	<p>SMS HYDROENGEO Experts</p>

**THE PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE
MONITORING
IN THE REPUBLIC OF UZBEKISTAN**

Minutes of Meeting

Counterpart:	Signature 
Chief Expert:	

Subject: Weekly Meeting

Date: 30 November, 2007

Time: 10:00 AM

Location: JICA Expert Team Office in Tashkent

Attendance:

Counterpart: Mr. Mavlonov. A: Director of the Project

Mr. Bazarov Sh: Chief Manager of the Project
 Mr. Niyazov R.: Chief Consultant
 Mr. Ahundjanov A.: Chief Engineer
 Mr. Hamraev R.: Chief Engineer of Tashkent Expedition
 Mr. Minchenko V.: Chief of Laboratory (HYDROENGENO)

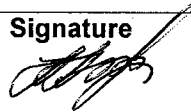
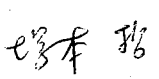
Experts: Mr. K. Ichikawa: Chief Advisor of the Project
 Mr. H. Funaoka: Drilling Specialist
 Ms. O. Shvay: Interpreter

Item	Minutes	Action
1	<p>Arrangement of Technical Seminar</p> <p>The counter part will provide presentation materials to the Experts.</p>	<p>SMS HYDROENGENO Experts</p>
2	<p>Re assessment of PDM sheet</p> <p>It was concluded, that for Risk assessment Section will be assigned</p> <ol style="list-style-type: none"> 1. Mr. Mavlonov A. A. 2. Mr. Minchenko V. D 	<p>SMS HYDROENGENO Experts</p>

	<p>3. Mr. Ahunjanov A</p> <p>For Landslide Monitoring Section will be assigned</p> <ol style="list-style-type: none"> 1. Mr. Bazarov 2. Mr. Turabbaev 3. Mr. Uralov 	
3	<p>Capacity Assessment</p> <p>Within 3 days the counter part will submit capacity assessment sheet.</p>	<p>SMS HYDROENGEO</p>
4	<p>Schedule for the next week</p> <p>Because the Experts will be busy for preparation of necessary arrangements for the Technical Seminar, visits of sites are not planning. Mr. H. Funaoka, Drilling Techniques Specialist will go back to Japan on 7 of December, after the seminar, and on 4 of December, 2007 Mr. S. Tsukamoto, Monitoring Techniques Specialist will come to Tashkent.</p>	<p>SMS HYDROENGEO Experts</p>
5	<p>Other issue</p> <p>Experts will provide to the counter part certain task to complete it during expert's absence. For the next meeting it is necessary to prepare list of task.</p>	<p>Experts</p>
6	<p>Next Meeting</p> <p>11. 12. 2007 at 10 AM, at Expert's office in Tashkent.</p>	<p>SMS HYDROENGEO Experts</p>

**THE PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE
MONITORING
IN THE REPUBLIC OF UZBEKISTAN**

Minutes of Meeting

Counterpart:	Signature 
Chief Expert:	

Subject: Weekly Meeting

Date: 24 December, 2007

Time: 10 15 – 11: 15 AM

Location: JICA Expert Team Office in Tashkent

Attendance:

Counterpart: Mr. Mavlonov. A: Director of the Project

Mr. Bazarov Sh: Chief Manager of the Project
 Mr. Niyazov R.: Chief Consultant
 Mr. Ahundjanov A.: Chief Engineer
 Mr. Minchenko V.: Chief of Laboratory (HYDROENGE0)



Experts: Mr. S. Tsukamoto: Monitoring Techniques Specialist
 Ms. O. Shvay: Interpreter

Item	Minutes	Action
1	<p>Provision and handling issues of large scale maps</p> <p>It was concluded, that C/P will provide clear topographic plans of Uchterek landslide area, and for Tekstilshik and Bedrenget landslide areas the C/P will implement topographic profile survey, next year.</p>	<p>SMS HYDROENGE0 Experts</p>
2	<p>Safety of the installed measuring devices in the field</p> <p>For two monitoring sites Uchterek and Bedrenget there are no problems for regular installations of instruments, because its locate on the territory of the villages, and before installation procedure the villagers will be educated by workshops, but for Tekstilshik landslide area it is very difficult to use above ground installation method, Mr. Tsukamoto proposed both type of installation, buried type and regular type as well.</p>	<p>SMS HYDROENGE0 Experts</p>

	<p>The locations of extensometers will be adapted to the movement of landslides and landform in Tekstilshik. It is necessary to discuss deeply on the location of the instruments, when the equipment will be installed, emphasized Mr. Niyazov. It was concluded that before arrival of equipment and instruments appropriate installation method should be confirmed by both sides by experts and by C/P.</p>	
3	<p>Capacity Assessment</p> <p>Within 3 days the counter part will submit capacity assessment sheet.</p>	<p>SMS HYDROENGEО</p>
4	<p>Publishing of Newsletter</p> <p>The Newsletter has been published and distributed among relevant organizations as SMS, HYDROINGEO, State Committee of geology and mineral recourses, JICA and Embassy of Japan in the Republic of Uzbekistan.</p>	<p>SMS HYDROENGEО Experts</p>
5	<p>Schedule for the next week</p> <p>Mr. S. Tsukamoto, Monitoring Techniques Specialist will go back to Japan, on 28th of December, 2007.</p>	<p>Experts</p>
6	<p>Other issue</p> <p>The counter parts have no objections against assignment of Ms. Olga Shvay, to be a liaison officer during Expert's absence.</p>	<p>SMS HYDROENGEО Experts</p>
7	<p>Next Meeting</p> <p>28. 12. 2007 at 10 AM, at Expert's office in Tashkent.</p>	<p>SMS HYDROENGEО Experts</p>

**THE PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE
MONITORING
IN THE REPUBLIC OF UZBEKISTAN**

Minutes of Meeting

Counterpart:	Signature 
Chief Expert:	

Subject: Bi-weekly Meeting

Date: 11 January, 2008

Time: 10: 00 – 11: 00 AM

Location: JICA Expert Team Office in Tashkent

Attendance:

Counterpart: Mr. Mavlonov. A: Director of the Project

Mr. Bazarov Sh: Chief Manager of the Project
Mr. Niyazov R.: Chief Consultant
Mr. Ahundjanov A.: Chief Engineer



Experts: Ms. O. Shvay: Liaison officer

Item	Minutes	Action
1	<p>Capacity assessment sheet</p> <p>Remaining Capacity assessment sheets will be submitted by C/P, before next bi-weekly meeting.</p> <p>Acknowledged</p>	<p>SMS HYDROENGE0</p> <p>Experts</p>
2	<p>C/P schedules</p> <p>The C/P will prepare personal schedules and will submit it at the next bi-weekly meeting.</p> <p>Acknowledged</p>	<p>SMS HYDROENGE0</p> <p>Experts</p>

<p>3</p>	<p>Risk assessment method used in Uzbekistan</p> <p>The C/P will try to prepare and submit at the next bi-weekly meeting Risk assessment method used in Uzbekistan as well as Stability analysis method used in Uzbekistan on the example of Tekstilshik landslide area. In return, the C/P request experts to provide risk assessment method used in Japan as well as the risk maps, for better understanding.</p> <p>We are preparing the so called “Carte on Disaster Prevention” as and sample of risk map. We anticipate the C/Ps samples of risk assessment and stability analysis.</p>	<p>SMS HYDROENGE0</p> <p>Experts</p>
<p>4</p>	<p>Ground water level meter</p> <p>At the meeting have been submitted technical specifications for ground water level meter. The C/P interested, whether fixed type ground water level meter is provided to use in this Project or not, the C/P emphasized that in case if portable type of ground water level meter will be used for monitoring it will be difficult to get data simultaneous with data from other instruments and compare it.</p> <p>As already explained in the meeting held on 9th November 2007, we are in the position that most of the procurement equipment was explained to the C/P members and it was agreed with the handy type measurement X 2 sets. Therefore the procurement procedure is in progress in to the phase of purchasing. We are wondering why you emphasize about the procurement equipments in this late time period. However, as you mentioned, it is better to have continuous data by data logger. I will try to include in the project cost at the next phase (we cannot promise)</p>	<p>SMS HYDROENGE0</p> <p>Experts</p>
<p>5</p>	<p>Request from Uzbekistan side in training in Japan</p> <p>For smooth and successful implementation of training in Japan the C/P request to provide tentative schedule of the training program as soon as possible.</p> <p>However it is early to fix all the programs as many concerned agencies and organization will be relate to this matter, we agree. Therefore, we are proceeding to formulate the draft plan and will circulate to the first draft within this month. The draft schedule will be set at the end of March the earliest. We anticipate your patient.</p> <p>Next meeting</p>	<p>SMS HYDROENGE0</p> <p>Experts</p> <p>SMS HYDROENGE0 Experts</p>
<p>6</p>	<p>25. 01. 2008, in Expert’s office in Tashkent.</p>	

**THE PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE
MONITORING
IN THE REPUBLIC OF UZBEKISTAN**

Minutes of Meeting

Counterpart:	Signature 
Chief Expert:	

Subject: Bi-weekly Meeting

Date: 25 January, 2008

Time: 10: 00 – 11: 00 AM

Location: JICA Expert Team Office in Tashkent

Attendance:

Counterpart:

Mr. Bazarov Sh: Chief Manager of the Project
Mr. Niyazov R.: Chief Consultant
Mr. Ahundjanov A.: Chief Engineer



Experts: Ms. O. Shvay: Liaison officer

Item	Minutes	Action
1	<p>C/P schedules</p> <p>C/P personal schedules will be submitted within several days.</p> <p>Acknowledged</p>	<p>SMS HYDROENGE0</p>
2	<p>Risk assessment method used in Uzbekistan</p> <p>For Tekstilshik landslide area preparation of new terrain profile in 1: 2000 scales is on going.</p> <p>Topographic plan in 1: 2000 scale of Tekstilshik landslide area consisted of upper and lower territories has been selected and provided to the Experts.</p> <p>Geodetic measurements data on several monitoring reference points for the period from 1977 to 2007 (30 years) under the compilation.</p>	<p>SMS HYDROENGE0</p>

<p>3</p> <p>4</p>	<p>Within the February 2008, the C/P will finalize all data concerned and compiled data will be provided to the Experts.</p> <p>Thank you very much for your effort to do so. We anticipate your compiled data</p> <p>Ground water level meter</p> <p>The C/P request to provide brochures and catalogues of fixed type ground water level meter.</p> <p>We will prepare within next week and send it by mail</p> <p>Next meeting</p> <p>08. 02. 2008, in Expert's office in Tashkent.</p>	<p>Experts</p> <p>SMS HYDROENGE Experts</p>
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PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE MONITORING IN THE REPUBLIC OF UZBEKISTAN

Minutes of Meeting

Counterpart:	Signature 
Chief Expert:	

Subject: Bi-weekly Meeting

Date: 22 February, 2008

Time: 10: 00 – 10: 20 A.M

Location: JICA Expert's office in Tashkent

Attendance:



Counterpart: Mr. Mavionov A. A: Director of the Project
Mr. Bazarov Sh. B: Chief Manager of the Project
Mr. Ahunjanov A.: Chief Engineer

Experts: Mrs. Shvay O.: Liaison officer

№	Minutes	action
1	<p>Risk assessment method used in Uzbekistan</p> <p>Preparation of necessary data is on going.</p>	SMS HYDROENGE0
2	<p>Preparation for training in Japan</p> <p>The C/P has no objections on content of tentative schedule of training in Japan.</p>	SMS HYDROENGE0
3	<p>Next Meeting</p> <p>As far as the Advanced Readiness Period has been started and C/P is very busy in the field excursions, it was concluded to hold Monthly Meetings.</p> <p>Next Meeting will be held on 14 March, 2008 in JICA Expert's office in Tashkent.</p>	SMS HYDROENGE0 Experts

**THE PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE
MONITORING
IN THE REPUBLIC OF UZBEKISTAN**

Minutes of Meeting

Counterpart:	Signature 
Chief Expert:	

Subject: Bi-weekly Meeting

Date: 18 April, 2008

Time: 10: 00 – 10: 30 AM

Location: JICA Expert Team Office in Tashkent

Attendance:

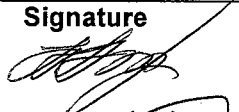

Counterpart: Mr. Mavlonov A. A Director of the Project
Mr. Bazarov Sh: Chief Manager of the Project
Mr. Ahundjanov A.: Chief Engineer

Experts: Ms. O. Shvay: Liaison officer

Item	Minutes	Action
1	<p>Risk assessment method used in Uzbekistan</p> <p>The C/P has submitted history of Tekstilshik Landslide area, data of GPS results, meteorological data and data of lithological composition of soil at the Tekstilshik Landslide area, for the period of twenty years. In Uzbekistan, landslide risk can be determined based on the above mentioned data.</p>	<p>SMS HYDROENGE0</p>
2	<p>Schedule of training program</p> <p>The C/P agreed with submitted schedule and contents of training program. Preparation of application forms for Japanese Embassy is on going.</p>	<p>SMS HYDROENGE0 Experts</p>
3	<p>Next meeting</p> <p>Next stage of the project in June.</p>	<p>SMS HYDROENGE0 Experts</p>

**THE PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE
MONITORING
IN THE REPUBLIC OF UZBEKISTAN**

Minutes of Meeting

Counterpart:	Signature 
Chief Expert:	

Subject: Bi-weekly Meeting

Date: 14 March, 2008

Time: 10: 00 – 10: 30 AM

Location: JICA Expert Team Office in Tashkent

Attendance:

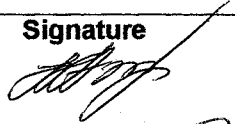

Counterpart: Mr. Mavlonov A. A Director of the Project
Mr. Bazarov Sh: Chief Manager of the Project
Mr. Ahundjanov A.: Chief Engineer

Experts: Ms. O. Shvay: Liaison officer

Item	Minutes	Action
1	<p>Risk assessment method used in Uzbekistan</p> <p>Preparation of necessary data is on going.</p>	SMS HYDROENGEО
2	<p>Draft schedule of training program</p> <p>As reported by Experts the dates in draft schedule may be changed. In response to Dr. Fukuoka's request the C/P would like to inform that they are interested to see the way of education in Kyoto University, they would like to visit Geology Faculty and attend lecture for students.</p>	SMS HYDROENGEО
3	<p>Next meeting</p> <p>18 April, 2008 in Expert's office in Tashkent.</p>	SMS HYDROENGEО Experts

**THE PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE
MONITORING
IN THE REPUBLIC OF UZBEKISTAN**

Minutes of Meeting

Counterpart:	Signature 
Chief Expert:	

Subject: Bi-weekly Meeting

Date: 20 June, 2008

Time: 10: 00 – 11: 30 AM

Location: JICA Expert Team Office in Tashkent

Attendance:

Counterpart:	Mr. Mavlonov A. A	Director of the Project
	Mr. Bazarov Sh:	Chief Manager of the Project
	Mr. Ahundjanov A.:	Chief Engineer
	Mr. Niyazov R. A:	Chief Consultant
	Mr. Dalimov:	Drilling Operator

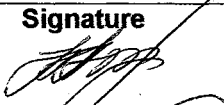

Experts:	Mr. K. Ichikawa	Chief Advisor/Monitoring and Analysis
	Mr. R. Matsumoto	Coordinator
	Ms. O. Shvay:	Interpreter

Item	Minutes	Action
1	<p>Custom Clearance of Procurement Materials</p> <p>Custom clearance procedure is on going smoothly, according to information received all material will be handed over to C/P within several days. SMS is responsible organization for the procurement material. Since all material will be transported to SMS warehouse it is necessary to have material inspection. The above mentioned inspection will be held by Mr. K. Ichikawa, Mr. Bazarov Sh. B. and Mr. Mavlonov A. A. It was concluded to postpone to the next meeting discussion on transportation method and timing to dispatch respective equipment to the sites.</p>	<p>SMS HYDROENGE0 Experts</p>
2	<p>Re-examination of the installation points</p> <p>In order to re-examine installation points, it was concluded to have site</p>	<p>SMS</p>

	visit on 26.06.08, by both parties C/P and Experts.	HYDROENGE0 Experts
3	<p>Installation Program at the Site</p> <p>Site preparatory works as of site clearing etc. will be responsibility of Mr. Turabbaev and Mr. Dalimov. Preparation of materials (core box, wooden piles, PVC pipes etc.) as well as preparations for drilling (platform, water tank, bentonite) was concluded to discuss at the next meeting.</p>	SMS HYDROENGE0
4	<p>Personnel Assignment of C/P (Uzbek side)</p> <p>The C/P will assign necessary personnel for each profession. Mr. Turabbaev will provide necessary labors for installation of instruments.</p>	SMS HYDROENGE0
5	<p>Seminar on Early Warning on 30th of June, 2008</p> <p>JICA is planning to hold Seminar on Early Warning on 30th of June, 2008, from the Expert's side Mr. Tsukamoto is going do the presentation the C/P are going to take part in the Seminar.</p>	SMS HYDROENGE0 Experts
6	<p>Next Meeting</p> <p>27.06.08 at 10:00 in Expert's office in Tashkent.</p>	SMS HYDROENGE0 Experts

**THE PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE
MONITORING
IN THE REPUBLIC OF UZBEKISTAN**

Minutes of Meeting

Counterpart:	Signature 
Chief Expert:	

Subject: Bi-weekly Meeting

Date: 27 June, 2008

Time: 10: 00 – 11: 30 AM

Location: JICA Expert Team Office in Tashkent

Attendance:

Counterpart:	Mr. Mavlonov A. A	Director of the Project
	Mr. Bazarov Sh:	Chief Manager of the Project
	Mr. Ahundjanov A.:	Chief Engineer
	Mr. Niyazov R. A:	Chief Consultant
	Mr. Dalimov:	Drilling Operator

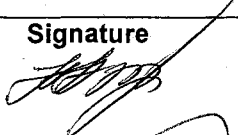

Experts:	Mr. K. Ichikawa	Chief Advisor/Monitoring and Analysis
	Mr. R. Matsumoto	Coordinator
	Mr. S. Tsukamoto	Landslide Monitoring Techniques
	Ms. O. Shvay:	Interpreter
	Ms. T. Tsoy	Interpreter

Item	Minutes	Action
1	<p>Current Situation of Procurement Materials</p> <p>Custom clearance procedure is delayed for reasons beyond control. Timing expectancy is next week.</p>	<p>SMS HYDROENGE Experts</p>
2	<p>Confirmation on activities for the following week</p> <ul style="list-style-type: none"> - Arrival of 2 other experts Two experts (drilling 2, monitoring 2) will arrive to Tashkent next Tuesday - Inspection of Procurement materials It was concluded to postpone the inspection of procurement material to one week, due to Custom clearance delay. 	<p>SMS HYDROENGE Experts</p>

<p>3</p>	<p>- Confirmation of the available materials</p> <p>Mr. Bazarov, already gave order to the respective workshop for fabrication of core boxes, steel boxes, to check the availability of PVC pipes, it was concluded to visit production plant after the Meeting, all expenses will be covered by C/P.</p> <p>Schedule of Experts and Project Office</p> <p>1) Mr. Ichikawa will go to Africa from 1st July until 9th July, 2008.</p> <p>2) Mr. Tsukamoto for the following week will act on behalf of Mr. Ichikawa and will be responsible for inspection of procurement materials</p> <p>3) Mr. Funaoka requires topographic map of Tekstilshik landslide area in the scale of 1:10000.</p> <p>4) From the project office – Mr. Matsumoto is going to Angren to check available accommodation for the Experts, next Wednesday.</p> <p>Next Meeting</p> <p>03.07.08 at 10:00 in Expert's office in Tashkent.</p>	<p>Experts</p> <p>SMS HYDROENGE0 Experts</p>
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**THE PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE
MONITORING
IN THE REPUBLIC OF UZBEKISTAN**

Minutes of Meeting

Counterpart:	Signature 
Chief Expert:	

Subject: Bi-weekly Meeting

Date: 4 July, 2008

Time: 10: 00 – 11: 30 AM

Location: JICA Expert Team Office in Tashkent

Attendance:

Counterpart:	Mr. Mavlonov A. A	Director of the Project
	Mr. Bazarov Sh:	Chief Manager of the Project
	Mr. Ahundjanov A.:	Chief Engineer
	Mr. Niyazov R. A:	Chief Consultant
	Mr. Dalimov:	Drilling Operator



Experts:	Mr. S. Tsukamoto	Landslide Monitoring Techniques
	Mr. H. Funaoka	Drilling specialist
	Mr. Nakayama	Drilling specialist (2)
	Mr. Ikemoto	Landslide Monitoring Techniques (2)
	Mr. R. Matsumoto	Coordinator
	Ms. O. Shvay:	Interpreter
	Ms. T. Tsoy	Interpreter

Item	Minutes	Action
1	2 experts arrived on Tuesday (Mr. Nakayama and Mr. Ikemoto) have been introduced to C/P.	
2	Current Situation on Procurement Material To release Procurement Material from customs it's required approval from Cabinet of Ministers of the Republic of Uzbekistan. All necessary documents have been already submitted to the Cabinet of Ministers.	SMS HYDROENGE Experts
3	Current Situation of Air Cargo (The additional material for drilling) Unfortunately Certificate of Origin for Air Cargo has not been included	SMS HYDROENGE

<p>4</p>	<p>into list of documents, the ITS has requested Senders to re-send necessary documents using international courier service.</p> <p>Preparation of other material by SMS</p> <p>It was concluded to have joint check of materials prepared by SMS after the Meeting.</p> <p>Confirmation on the activities for the next week 4 experts are going to move to Bostanlik on 6th July, 2008 and planning to visit Bostanlik Station Office on Monday. During next week experts are going to do the preparatory works as construction of drilling platform, it's necessary to involve specialists to do the job as part of technical transfer.</p> <p>When the procurement Material will be available in SMS it's necessary to do the Inspection of Procurement materials by the experts.</p> <p>Next Meeting</p> <p>11.07.08 at 10:00 in Expert's office in Tashkent.</p>	<p>Experts</p> <p>SMS HYDROENGEO Experts</p> <p>SMS HYDROENGEO Experts</p> <p>SMS HYDROENGEO Experts</p>
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**THE PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE
MONITORING
IN THE REPUBLIC OF UZBEKISTAN**

Minutes of Meeting

Counterpart:	Signature 
Chief Expert:	

Subject: Bi-weekly Meeting

Date: 8 August, 2008

Time: 10: 00 – 11: 30 AM

Location: JICA Expert Team Office in Tashkent

Attendance:

Counterpart:	Mr. Mavlonov A. A	Director of the Project
	Mr. Bazarov Sh:	Chief Manager of the Project
	Mr. Ahundjanov A.:	Chief Engineer
	Mr. Niyazov R. A:	Chief Consultant
	Mr. Dalimov:	Drilling Operator
	Mr. Turabbaev	

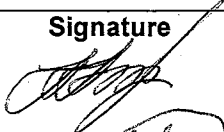

Experts:	Mr. K. Ichikawa	Chief Expert/ Monitoring and Analysis
	Mr. S. Tsukamoto	Landslide Monitoring Techniques
	Mr. H. Funaoka	Drilling specialist
	Mr. Nakayama	Drilling specialist (2)
	Ms. O. Shvay:	Interpreter
	Ms. T. Tsoy	Interpreter

Item	Minutes	Action
1	<p>Technical Transfer</p> <p>Monitoring Equipment</p> <p>Technical transfer in monitoring section under the leadership of Mr. Tsukamoto is achieving. At the Tekstilshik landslide area 4 Extensometers were installed and at the Uchterek landslide area 2 Extensometers were installed. The C/P specialists were trained to get the results from the instruments. Also, were installed two long-span Extensometers under the supervision of Dr. Fukuoka. Responsible specialists from the C/P side have to compile the results from devices not less than twice per month. Mr. Ichikawa introduced installation of Inclinometer and electric sounding machine. On the next step of the</p>	<p>SMS HYDROENGE Experts</p>

	<p>Project the detailed operation of the devices will be given by the Experts.</p> <p>Drilling</p> <p>On 21.06.08 the drilling machine was assembled at the site. On 22.06.08 the drilling works were started. For the period of three weeks at two drilling points were drilled 30 m, and at the third drilling point after 6 m the walls in the borehole were collapsed. At the next step of the Project drilling works will be continued.</p>	<p>SMS HYDROENGE Experts</p>
2	<p>Activities during Expert's absence</p> <p>During Expert's absence for Monitoring section is necessary to get the results from devices twice per week. As far as the drilling schedule was very tight it was concluded that C/P staff will take rest until 2nd of September, the drilling machine should be disassembled and transported to the Bostanlik MS.</p>	<p>SMS HYDROENGE Experts</p>
3	<p>Current Situation on Procurement Material (4 WD Vehicle)</p> <p>The procedure of registration of the vehicle is on going; also it is necessary to make Insurance of the vehicle.</p>	<p>SMS HYDROENGE Experts</p>
4	<p>Labor fee</p> <p>Mr. Turabboev A. was requested to prepare list of labors, who assisted during implementation of drilling works, including attendance and wages sheets.</p>	
5	<p>Others</p> <p>During implementation of drilling works the shortage of drilling operators as well as assistants to drilling operators were fund, the C/P was requested by the Experts to increase number of the above mentioned staff. Also, it is necessary to improve security system at the sites.</p>	
6	<p>Next Meeting</p> <p>On 19th of August, 2008 in the Expert's office in Tashkent.</p>	<p>SMS HYDROENGE Experts</p>

**THE PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE
MONITORING
IN THE REPUBLIC OF UZBEKISTAN**

Minutes of Meeting

Counterpart:	Signature 
Chief Expert:	

Subject: Tasks to the C/P during Expert's absence

Date: 15 August, 2008

Time: 10: 00 – 11: 30 AM

Location: JICA Expert Team Office in Tashkent

Attendance:

Counterpart:	Mr. Mavlonov A. A	Director of the Project
	Mr. Bazarov Sh:	Chief Manager of the Project
	Mr. Ahundjanov A :	Chief Engineer
	Mr. Niyazov R. A:	Chief Consultant
	Mr. Dalimov:	Drilling Operator
	Mr. Turabboev A.:	Chief of Bostanlik MS
	Mr. Minchenko V.:	Chief of Laboratory HYDROENGEO



Experts:	Mr. K. Ichikawa	Chief Expert/ Monitoring and Analysis
	Mr. S. Tsukamoto	Landslide Monitoring Techniques
	Mr. H. Funaoka	Drilling specialist
	Ms. O. Shvay:	Interpreter
	Ms. T. Tsoy	Interpreter

Item	Minutes	Action
1	<p>Extentiometer</p> <p>During Experts absence the C/P have to proceed discussion and preparation of technical transfer from the specialists of Bostanlik MS to Angren MS as well as arrangement of manpower. Also it's required to proceed preparation of Long Span Measurement Pully block and change temporary pully and wire for the installed Extensometers. Arrange security system and hire watchman for the device. It's necessary to collect the data from each device. The responsible persons from SMS is Mr. Abdulla, and from HYDROENGEO are Mr. Mingboev Kodirjon and</p>	<p>SMS HYDROENGEO Experts</p>

2	<p>Mr. Toshpulatov Mansur.</p> <p>Resistivity Sounding</p> <p>During Expert's absence the C/P will try to implement resistivity sounding at Tekstilshik, Uchiterek, Bedrenget using new equipment. The responsible person is Mr. Mingboev Kodirjon</p>	<p>SMS HYDROENGEО</p>
3	<p>Inclinometer</p> <p>Collection of Data is required. The responsible persons are Mr. Mingboev Kodirjon and Mr. Toshpulatov Mansur.</p>	<p>SMS HYDROENGEО</p>
4	<p>Drilling</p> <p>Mr. Funaoka will prepare instructions for rods recovery in Inclinometer pipe. It's necessary to proceed drilling works at Uchitelek Site (UB2, UB3). For safety of the equipment hiring of watchman (for night time) is required. After completion of drilling works, drilling equipment should be disassembled and transported to the Bostanlik MS. For the implementation of the next step of the Project number of manpower should be increased. The arrangement of manpower should be as follow: Drilling Foreman + 1 (Total 2) Drilling Assistant + 2 (Total 4).</p>	<p>SMS HYDROENGEО</p>
5	<p>Others</p> <p>Before next coming of the Experts necessary arrangements for the vehicle as of Insurance, employment of skilled driver should be completed.</p>	<p>SMS HYDROENGEО</p>

**THE PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE
MONITORING
IN THE REPUBLIC OF UZBEKISTAN**

Minutes of Meeting

Counterpart:	Signature 
Chief Expert:	

Subject: Weekly Meeting

Date: 17 October, 2008

Time: 10: 00 – 11: 30 AM

Location: JICA Expert Team Office in Tashkent

Attendance:

Counterpart:	Mr. Mavlonov A. A	Director of the Project
	Mr. Ahundjanov A.:	Chief Engineer
	Mr. Rashid	Chief Engineer of Tashkent Expedition
	Mr. Shodiev Davron:	Drilling Operator



Experts:	Mr. K. Ichikawa	Chief Expert/ Monitoring and Analysis
	Mr. H. Funaoka	Drilling specialist
	Ms. O. Shvay:	Interpreter
	Ms. T. Tsoy	Interpreter

Item	Minutes	Action
1	<p>CURRENT CONDITION OF THE PROJECT</p> <p>Installation of Extensometer at three sites has been completed (Tekstilshik 5, Uchiterek 3, Bedrenget 2 Total 10), however two extensometers were destroyed, after the event it was concluded to bury device into the ground, at the moment, one extensometer was buried at the Tekstilshik area, and very soon will be buried remaining one. Under the support of Uzbekistan side (three boreholes were drilled using Uzbekistan drilling machine URB 2) Inclinator guide pipe has been installed at 3 sites, remaining three, 1 at Tekstilshik, 2 at Uchiterek will be completed very soon.</p>	<p>SMS HYDROENGE Experts</p>
2	<p>DRILLING ISSUE</p> <p>For implementation of drilling works using YBM machine Drilling Expert</p>	

3	<p>Mr. Funaoka will prepare New Drilling Schedule and New Drilling Program and Construction Department of SMS will manufacture drilling bits different from used before in order to achieve success in loess drilling. Also it is necessary to arrange manpower, wagon-house for drilling operators or watchman to give good living condition during working period. Period for implementation of drilling works will be two weeks.</p> <p style="text-align: center;">SCHEDULE</p> <p>Next week Mr. Ichikawa will go to the Monitoring Stations to proceed technical transfer for installation of the devices – automatic rain and temperature recorders.</p>	<p>SMS HYDROENGE Experts</p>
4	<p style="text-align: center;">NEXT MEETING</p> <p>On 24 October, 2008 in the Expert's office in Tashkent.</p>	<p>SMS HYDROENGE Experts</p>

**THE PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE
MONITORING
IN THE REPUBLIC OF UZBEKISTAN**

Minutes of Meeting

Counterpart:	Signature 
Chief Expert:	

Subject: Bi-weekly Meeting

Date: 7 November, 2008

Time: 10: 00 – 11: 30 AM

Location: JICA Expert Team Office in Tashkent

Attendance:

Counterpart:	Mr. Mavlonov A. A	Director of the Project
	Mr. Bazarov Sh:	Chief Manager of the Project
	Mr. Ahundjanov A.:	Chief Engineer
	Mr. Niyazov R. A:	Chief Consultant
	Mr. Minchenko V. D	Chief of Laboratory HYDROENGE0
	Mr. Abdullaev Sh.	Chief of Laboratory HYDROENGE0



Experts:	Mr. K. Ichikawa	Chief Expert Landslide Monitoring
	Mr. H. Funaoka	Drilling specialist
	Ms. O. Shvay:	Interpreter
	Ms. T. Tsoy	Interpreter

Item	Minutes	Action
1	<p>CURRENT CONDITION OF THE PROJECT</p> <p>Installation of Extensometers is completed. As well as installation of Rain gauges, Thermometers in Bostanlik, Angren MS is completed. Installation of Inclinator guide pipe as follow: 3 sites left (Tikstilshik 1, Uchitelek 2).</p> <p>Drilling</p> <p>Drilling works using YBM machine at Uchitelek UB3 is on going smoothly. Drilling depth reached 18 m in loess.</p>	SMS HYDROENGE0 Experts
2	<p>EVENTS</p> <p>New Representative of JICA Mr Ejiri jointly with C/P and Experts will visit</p>	SMS HYDROENGE0 Experts

	<p>site on 11th November. This project was selected for Press Tour (Introducing JICA activity to the Uzbekistan journalists). JCC Meeting will be held on 4th December.</p> <p>3 SCHEDULE</p> <p>Installation, instruction and demonstration of Water Quality Tester are planned (by Ichikawa) on the next week: the person in charge for the device is Mr. Toshpulatov Mansur.</p> <p>4 OTHERS</p> <p>Mr. Ichikawa is planned to visit Central Asian Countries to discuss with the representatives of the countries issues related to the preparation of the International Seminar which will be held in 2010.</p> <p>5 NEXT MEETING (JCC)</p> <p>JCC will be held on 4th of December in Expert's office in Tashkent at 10:00 AM.</p>	<p>SMS HYDROENGEO Experts</p> <p>SMS HYDROENGEO Experts</p> <p>SMS HYDROENGEO Experts</p>
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**THE PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE
MONITORING
IN THE REPUBLIC OF UZBEKISTAN**

Minutes of Meeting

Counterpart:	Signature 
Chief Expert:	

Subject: Bi-weekly Meeting

Date: 20 February, 2009

Time: 09: 30 – 10: 30 AM

Location: JICA Expert Team Office in Tashkent

Attendance:

Counterpart:	Mr. Mavlonov A. A.	Director of the Project
	Mr. Ahundjanov A.:	Chief Engineer
	Mr. Niyazov R. A:	Chief Consultant
	Mr. Tashpulatov M.	Specialist of HYDROENGEO Institute



Experts:	Mr. K. Ichikawa	Chief Expert for Landslide Monitoring and Analysis
	Ms. O. Shvay:	Interpreter

Item	Minutes	Action
1	<p>CURRENT CONDITION OF THE PROJECT</p> <p>Measurements by using Extensometer, Inclinator and other devices are on going. Mr. Tashpulatov M. who is responsible for collecting of data from monitoring devices has compiled all data from the devices and transferred to the computer, also he tried to make graphing. Starting from 16. 02. 2009 Increased Readiness Cycle has been launched; collecting of data from monitoring devices will be continued. Unfortunately Continues ground water level meter was not installed at the sites, due to safety reasons, but soon device installation is planned, considering its' safety.</p>	<p>SMS HYDROENGEO Experts</p>
2	<p>SCHEDULE FOR NEXT WEEK</p> <p>Mr. Ichikawa is planning to go to the site on next Monday</p>	<p>SMS HYDROENGEO Experts</p>

<p>3</p>	<p>PREPARATION OF PLAN FOR THE NEXT STAGE OF THE PROJECT</p> <p>Considering that C/P is responsible for preparation of Monitoring Plan for the next stage of the Project it is necessary to select two additional landslide sites. In the Monitoring Plan is necessary to indicate drilling point and points for installation of monitoring devices, required time, labors and so on, and before next stage of the project submit to the Experts. Also, before start next stage of the project the C/P has to include necessary expenses for labors and drilling specialists into their financial offers.</p>	<p>SMS HYDROENGE Experts</p>
<p>4</p>	<p>NEXT MEETING</p> <p>Next meeting is planned on the next stage of the Project which will be started on late April, 2009.</p>	<p>SMS HYDROENGE Experts</p>

THE PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE MONITORING IN THE REPUBLIC OF UZBEKISTAN

Minutes of Meeting

Counterpart:	Signature 
Chief Expert:	

Subject: Bi-weekly Meeting

Date: 12 June, 2009

Time: 10: 00 – 11: 00 AM

Place: JICA Expert Team Office in Tashkent

Attendance:

Counterpart:	Mr. Mavlonov A. A	Director of the Project
	Mr. Bazarov Sh. B	Chief Manager of the Project
	Mr. Ahundjanov A.:	Chief Engineer
	Mr. Niyazov R. A:	Chief Consultant
	Mr. Tashpulatov M.	Specialist of HYDROENGEIO Institute

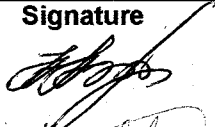

Experts:	Mr. K. Ichikawa	Chief Expert for Landslide Monitoring and Analysis
	Mr. S. Tsukamoto	Specialist for measuring devices
	Mr. H. Funaoka	Drilling specialist
	Mr. Y. Ishii	Coordinator of the project
	Ms. O. Shvay:	Interpreter

№	Minutes	Action
1	<p>CURRENT CONDITION OF THE PROJECT</p> <p>The drilling works on 120 km of Tashkent – Osh highway were implemented. Due to difficult geological conditions, depth of the first drilling point reached 6,5 m, second drilling point is 8 m in depth, both drilling holes will be used for Inclinomater measurements. However, it should be considered that, for reliable Inclinomater data the drilling holes should be 25 – 30 m in depth. The above issue will be concluded later, considering difficult geological conditions at the landslide area.</p> <p>All measuring devices were fully installed, for the short period and in accordance with technical requirements. Technical transfer between Bostanlik and Angren specialists sucessfully completed, with close cooperation of JICA Experts. However, the Extensometer previously installed at Bedrenget landslide was destroyed, repairing works will be done by Angren MS specialists.</p>	<p>SMS HYDROINGEO Experts</p>

<p>2</p>	<p>Plan of Operation will be developed by the specialists of HYDROINGEO.</p> <p>TECHNICAL SEMINAR ON 18.06.09</p> <p>Technical seminar is planned on 18. 06. 09 in Angren. The preparatory works will be done jointly with C/P. List of Participants will be confirmed and invitation letters will be timely distributed. On 18. 06. 09. at 8:00 in front of HYDROINGEO the bus for participants will stand by for further transportation to the seminar place.</p>	<p>SMS HYDROINGEO Experts</p>
<p>3</p>	<p>NEXT MEETING</p> <p>Next Meeting will be held on 29.06.09 at 10:00 in the Expert's office in Tashkent.</p>	<p>SMS HYDROINGEO Experts</p>

**THE PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE
MONITORING
IN THE REPUBLIC OF UZBEKISTAN**

Minutes of Meeting

Counterpart:	Signature 
Chief Expert:	

Subject: Bi-weekly Meeting

Date: 4 May, 2009

Time: 10: 00 – 11: 00 AM

Location: JICA Expert Team Office in Tashkent

Attendance:

Counterpart:	Mr. Mavlonov A. A	Director of the Project
	Mr. Bazarov	General Manager of the Project
	Mr. Ahundjanov A.:	Chief Engineer
	Mr. Niyazov R. A:	Chief Consultant

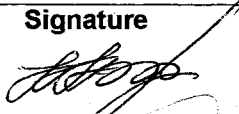
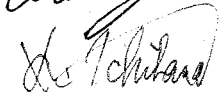
Experts:	Mr. K. Ichikawa	Chief Expert for Landslide Monitoring and Analysis
	Ms. O. Shvay:	Interpreter

Item	Minutes	Action
1	<p>OUTLINE OF PROJECT PHASE III</p> <p>Two additional sites for monitoring were already identified by the C/P; however, the C/P requires Expert's advice, before preparation of Measurement plan for the positioning of devices & drilling. The C/P is interested to use horizontal drilling on the new sites if possible. The sites locate along Tashkent – Osh high way, on 120 km, 121, 5 km 145 – 143 km, in Angren region.</p> <p>Ground water level measurement installation will be confirmed at the site.</p> <p>Based on the result of the devices, analyze mechanism of the occurrence of landslide will be introduced to the C/P during III phase of the project.</p> <p>The alert system will be determined and utilized on the III phase of the project.</p> <p>It is planned to held Technical seminar on 18 June 2009.</p>	<p>SMS HYDROENGE0 Experts</p>

2	<p>REQUIREMENTS</p> <p>The C/P already employed driver for JICA car, it can be used by the Experts.</p> <p>Preparation of contour maps will be started in the beginning of June for Tekstilshik landslide site, for other sites it will be confirmed by the C/P later.</p>	<p>SMS HYDROENGE Experts</p>
3	<p>SCHEDULE</p> <p>It is planned to visit Angren sites on 6. 05. 2009 and Bostanlik sites on 7. 05.2009 jointly with Mr. Tashpulatov and Mingboev from HYDROINGEO to make necessary measurements from the devices.</p>	<p>SMS HYDROENGE Experts</p>
4	<p>NEXT MEETING</p> <p>Next meeting will be held on 22 of May, 2009 in the Expert's office in Tashkent.</p>	<p>SMS HYDROENGE Experts</p>

THE PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE MONITORING IN THE REPUBLIC OF UZBEKISTAN

Minutes of Meeting

Counterpart:	Signature 
Chief Expert:	

Subject: Bi-weekly Meeting

Date: 29 June, 2009

Time: 10: 00 – 11: 00 AM

Place: JICA Expert Team Office in Tashkent

Attendance:

Counterpart:	Mr. Mavlonov A. A	Director of the Project
	Mr. Ahundjanov A.:	Chief Engineer
	Mr. Niyazov R. A:	Chief Consultant
	Mr. Tashpulatov M.	Specialist of HYDROENGEIO Institute


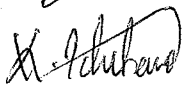
Experts:	Mr. K. Ichikawa	Chief Expert for Landslide Monitoring and Analysis
	Ms. O. Shvay:	Interpreter

№	Minutes	Action
1	<p>CURRENT CONDITION OF THE PROJECT</p> <p>Technical transfer in drilling works and assembly and maintenance of measuring devices from JICA Experts to the specialists of Angren and Bostanlik MS was successfully completed. JICA Experts are going back to Japan. However, due to shallow drilling holes on the new landsliding area in Angren region which located on 120 km of Tashkent – Osh highway, it is necessary to continue drilling works on the second stage of the landslide, drilling holes should reach 25 – 30 m in depth for Inclinator measurement purpose. Also on Tekstilshik landslide, one Inclinator borehole which located on the third stage of the landslide was collapsed by the landslide movement, the drilling hole should be re – drilled up to 30 m. It is necessary to complete these works up to mid of October, 2009.</p>	<p>SMS HYDROINGEO Experts</p>
2	<p>SCHEDULE FOR THE NEXT WEEK</p> <p>On 01.07.09 Mr. Ichikawa is planning to visit Bostanlik sites and on 02.07.09 is going to Angren jointly with Mr. Tashpulatov, who is responsible for collection and analysis of data from measuring</p>	<p>SMS HYDROINGEO Experts</p>

3	<p>devices. The purpose of the site visit is collection of measuring data. Mr. Ichikawa is going back to Japan on 10.07.09.</p> <p>NEXT MEETING</p> <p>Next Meeting will be held on next JICA Experts visit.</p>	SMS HYDROINGEO Experts
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THE PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE MONITORING IN THE REPUBLIC OF UZBEKISTAN

Minutes of Meeting

Counterpart:	Signature 
Chief Expert:	

Subject: Bi-weekly Meeting

Date: 02 October, 2009

Time: 10: 00 – 11: 00 AM

Place: JICA Expert Team Office in Tashkent

Attendance:

Counterpart:	Mr. Mavlonov A. A	Director of the Project
	Mr. Bazarov Sh. B	Chief Manager of the Project
	Mr. Ahundjanov A.:	Chief Engineer
	Mr. Niyazov R. A:	Chief Consultant


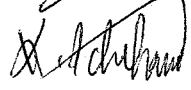
Experts:	Mr. K. Ichikawa	Chief Expert for Landslide Monitoring and Analysis
	Ms. O. Shvay:	Interpreter

№	Minutes	Action
1	<p>CURRENT CONDITION OF THE PROJECT</p> <p>Drilling issue will be resolved within next week. Re-assembly of fallen Extensometer is on going. Collection and compilation of measuring data are on going.</p>	<p>SMS HYDROINGEO Experts</p>
2	<p>EXPERTS SCHEDULE</p> <p>Mr. Ichikawa is going to stay in the Republic of Uzbekistan for one month. During this period it is necessary to implement landslide stability analysis, develop early warning system using C/P experience and start alarms operation. It was concluded to hold independent meeting to discuss the above issues in detail. On 7th and 8th of October, Mr. Ichikawa is going to visit sites in Angren and Bostanlik regions. On 9th of October Mr. Ichikawa is going to visit State Committee of geology and mineral resources of the Republic of Uzbekistan to discuss</p>	<p>SMS HYDROINGEO Experts</p>

	current condition of the project.	
3	<p>INTERNATIONAL CONFERENCE</p> <p>The International Seminar on landslide monitoring in Central Asia is planned on April 2010. It is necessary to start preparations, in particular to get the permission from Uzbekistan government for implementation of the Seminar the official letter shall be submitted to the Ministry of International Affairs of the Republic of Uzbekistan and Ministry of International Economic Relations of the Republic of Uzbekistan. Also, the interested parties shall be timely informed. The C/P is going to assign responsible person, who will assist JICA Experts for the preparation of the Seminar. All expenses for implementation of the Seminar will be covered by JICA.</p>	<p>SMS HYDROINGEO Experts</p>
4	<p>NEXT MEETING</p> <p>Next Meeting will be held on 13. 10. 2009 at 10:00 in the Expert's office in Tashkent.</p>	<p>SMS HYDROINGEO Experts</p>

PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE MONITORING IN THE REPUBLIC OF UZBEKISTAN

Minutes of Meeting

Counterpart:	Signature 
Chief Expert:	

Subject: Bi-weekly Meeting
Date: 13 October, 2009
Time: 10: 00 – 11: 30 AM
Place: JICA Experts office in Tashkent

Attendance:

Counterpart:	Mr. Mavlonov A. A	Director of the project
	Mr. Bazarov Sh. B	Chief Manager of the project
	Mr. Ahunjanov A.	Chief Engineer
	Mr. Minchenko V. D	Chief of Laboratory, HYDROINGEO
	Mr. Mingboev K.	Specialist of Laboratory, HYDROINGEO
	Mr. Uralov E.	Chief of Angren MS
	Mr. Turabboev A.	Chief of Bostanlik MS
	Mr. Tashpulatov M.	Staff of State Committee of geology

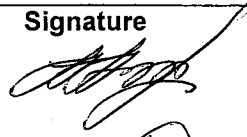

Experts:	Mr. K. Ichikawa	Chief Expert, Landslide monitoring And analysis
	Mrs. O. Shvay :	Interpreter

№	Minutes	Action
1	<p>CONFIRMATION OF STANDING POINT</p> <p>At present time, the project is on the III phase of its realization. For the period of I – III phases, due to concurrence of actions between C/P and JICA Experts almost all targets were achieved, i. e the required equipment was delivered to Uzbekistan and installed at the landslide areas, technical transfer for installation and operation of the equipment was completed as well as collection and compilation of data. At this stage is necessary to do analysis and early warning system, based on C/P experience and using data received. However, on C/P opinion, since the equipment installed very short time past and it's not enough to point critical criteria for early warning system and existing data is average value also can not be considered as correct.</p>	<p>SMS HYDROINGEO Experts</p>

2	<p>LANDSLIDE ANALYSIS, EARLY WARNING</p> <p>Responsible for analysis and early warning system are Mr. Niyazov, Mr. Minchenko, Mr. Ahunjanov, chief of the analysis team is Mr. Mavlonov. Collection and compilation of data will be continued by Mr. Tashpulatov and Mr. Mingboev, also it was concluded to involve specialists of MS for collection and compilation of data, compiled data will be transferred to HYDROINGEO Laboratory.</p> <p>The C/P has to prepare Plan of utilization of the devices and data applicable to the C/P activities and submit it for Expert's consideration. Mr. Ahunjanov is responsible for preparation of the Plan.</p>	<p>SMS HYDROINGEO Experts</p>
3	<p>SEMINAR IN CENTRAL ASIA</p> <p>The preparatory works will be done in accordance with Schedule prepared by Chief JICA Expert. Please see the attachment..</p>	<p>SMS HYDROINGEO Experts</p>
4	<p>NEXT MEETING</p> <p>Next Meeting will be held on 21.10.2009 at 10:00 in JICA Experts office, to discuss early warning system.</p>	<p>SMS HYDROINGEO Experts</p>

THE PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE MONITORING IN THE REPUBLIC OF UZBEKISTAN

Minutes of Meeting

Counterpart:	Signature 
Chief Expert:	

Subject: Weekly Meeting

Date: 21 October, 2009

Time: 10: 00 – 11: 00 AM

Place: JICA Experts office in Tashkent

Attendance:

Counterpart:	Mr. Niyazov R. A:	Chief Consultant
	Mr. Ahunjanov A.:	Chief Engineer
	Mr. Turabboev A.:	Chief of Bostanlik MS
	Mr. Bimurzaev:	Topographical surveyor

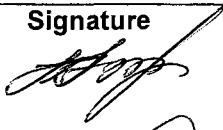
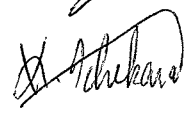
Experts:	Mr. K. Ichikawa	Chief Expert, Landslide Monitoring and Analysis
	Mrs. O. Shvay:	Interpreter

№	Minutes	Action
1	<p>PLAN OF OPERATION USING MEASURING DEVICES</p> <p>The C/P has prepared Plan of Operation using measuring devices and submitted for the consideration of JICA Experts, the Plan has been prepared on the example of landslide area located near the water reservoir, it should be considered that sequence of Plan implementation is subjected to change, depending on landslide location (highway, water reservoir etc.).</p>	<p>SMS HYDROINGEO Experts</p>
2	<p>TOPOPLAN OF TEKSTILSHIK LANDSLIDE</p> <p>The topographic survey of Tekstilshik landslide area has been completed. Finalized topoplan will be provided to the Experts on 01st of December, 2009.</p>	<p>SMS HYDROINGEO Experts</p>
3	<p>COMPILATION OF DATA FROM MEASURING DEVICES</p> <p>Measuring data will be compiled including graphs and on 01st of December 2009 and will be submitted for consideration of JICA Experts.</p>	<p>SMS HYDROINGEO Experts</p>

4	NEXT MEETING Next Meeting will be held on 01 st of December, 2009 at 10:00 in JICA Experts office in Tashkent.	SMS HYDROINGEO Experts
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THE PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE MONITORING IN THE REPUBLIC OF UZBEKISTAN

Minutes of Meeting

Counterpart:	Signature 
Chief Expert:	

Subject: Weekly Meeting

Date: 01 December, 2009

Time: 10: 00 – 11: 00 AM

Place: JICA Experts office in Tashkent

Attendance:

Counterpart:	Mr. Mavlonov A. A.	Director of the project
	Mr. Niyazov R. A:	Chief Consultant
	Mr. Minchenko V. D	Chief of Laboratory, HYDROINGEO
	Mr. Abdullaev	Chief of Laboratory, HYDROINGEO
	Mr. Ahunjanov A.:	Chief Engineer
	Mr. Turabboev A.:	Chief of SMS

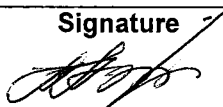

Experts: Mrs. O. Shvay: Coordination Officer/Interpreter

№	Minutes	Action
1	<p>MEASURING DATA</p> <p>On the devices installed on landslide areas collection and compilation of data implements regularly. The compiled data will be submitted to the Experts in the nearest future.</p>	<p>SMS HYDROINGEO Experts</p>
2	<p>TEKSTILSHIK TOPOPLAN</p> <p>Topoplan of the Tekstilshik landslide area has been completed. Топоплан оползнего участка Текстильщик подготовлен, электронный вариант топоплана будет передан экспертам в ближайшее время.</p>	<p>SMS HYDROINGEO</p>
3	<p>INTERNATIONAL SEMINAR</p> <p>From C/P side the responsible person for preparation to the International Seminar was assigned Mr. Niyazov R. A.</p>	<p>SMS HYDROINGEO Experts</p>

4	<p>PERSONNEL CHANGES IN C/P ORGANIZATION</p> <p>Due to retirement of Director of SMS Mr. Bazarov, the successor to the assignment of SMS Director and Manager of the project become Mr. Turabboev A.</p>	<p>SMS HYDROINGEO</p>
5	<p>NEXT MEETING</p> <p>Next Meeting will be held on arrival of JICA Experts.</p>	<p>SMS HYDROINGEO Experts</p>

THE PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE MONITORING IN THE REPUBLIC OF UZBEKISTAN

Minutes of Meeting

Counterpart:	Signature 
Chief Expert:	

Subject: Weekly Meeting

Date: 08 January, 2010

Time: 10: 00 – 11: 00 AM

Place: JICA Experts office in Tashkent

Attendance:

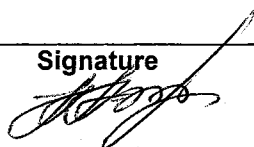
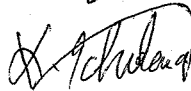
Counterpart:	Mr. Mavlonov A. A	Director of the project
	Mr. Niyazov R. A:	Chief Consultant HYDROINGEO
	Mr. Turabboev A.:	Chief of SMS
	Mr. Ahunjanov A.:	Chief Engineer SMS
	Mr. Mingboev K.:	Geophysical engineer, HYDROINGEO

Experts:	Mr. S. Tsukamoto:	Landslide monitoring techniques
	Mrs. O. Shvay:	Coordination Officer/Interpreter

No	Minutes	Action
1	<p>INTERNATIONAL SEMINAR IN SENTRAL ASIA</p> <p>Preparations for International Seminar in April current year are on going. The details of the International Seminar will be discussed upon Experts next visit.</p>	<p>SMS HYDROINGEO Experts</p>
2	<p>DATA COLLECTION</p> <p>For devices installed at the sites the C/P continuously implements observations, collection and compilation of data. For the Experts consideration the compiled data and topoplan of Tekstilshik landslide area were provided.</p>	<p>SMS HYDROINGEO Experts</p>
3	<p>NEXT MEETING</p> <p>Next Meeting will be held upon arrival of JICA Experts to Tashkent.</p>	<p>SMS HYDROINGEO Experts</p>

THE PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE MONITORING IN THE REPUBLIC OF UZBEKISTAN

Minutes of Meeting

Counterpart:	Signature 
Chief Expert:	

Subject: Weekly Meeting

Date: 09 February, 2010

Time: 10: 00 – 11: 00 AM

Place: JICA Experts office in Tashkent

Attendance:

Counterpart:	Mr. Mavlonov A. A	Director of the project
	Mr. Niyazov R. A:	Chief Consultant HYDROINGEO
	Mr. Turabboev A.:	Chief of SMS
	Mr. Ahunjanov A.:	Chief Engineer SMS
	Mr. Mingboev K.:	Geophysical engineer, HYDROINGEO
	Mr. Minchenko V.:	Chief of Laboratory, HYDROINGEO



Experts:	Mr. K. Ichikawa:	Chief Expert, Landslide monitoring and analysis
	Mr. Y. Gonai:	Coordinator of the project
	Mrs. O. Shvay:	Interpreter

№	Minutes	Action
1	<p>DATA COLLECTION</p> <p>Extensometers: For Extensometers installed at the sites the C/P continuously implements observations, collection and compilation of data.</p> <p>Inclinometer: Last measurements using Inclinometer were implemented in December 2009 all data provided to the Experts, for Tekstilshik landslide area it was concluded to continue measurement as follows: borehole № 1 – due to insignificant changes implement measurements twice per year, borehole № 2 – the Inclinometer guide pipe was bended on 30 m depth, it's recommended to continue measurement using current depth every three month, borehole № 3 – was collapsed, measurements are impossible. For Uchterek landslide area: for boreholes № 1 and 2 due to insignificant changes implement measurements twice per year, for borehole № 3 is recommended to continue measurements every three month.</p>	<p>SMS HYDROINGEO</p>

2	<p>Electric sounding: The C/P implemented measurements using Electric sounding machine on Tekstilshik landslide area, the data received were compiled manually, because of software absence. The C/P plans to implement measurements on other sites, compiled data is planned to be presented on International Seminar in April.</p> <p>Topoplans: Topoplans and geological cross sections of the Tekstilshik, Tanga Topdi and Mingchukur landsliding areas were prepared and provided to the Experts. Preparation of topoplans and geological cross sections of Uchterek, Bedrenget and Chetsu landsliding areas is on going.</p> <p>INTERNATIONAL SEMINAR IN CENTRAL ASIA</p> <p>The International Seminar in Central Asia is planned on 28 – 30 of April, 2010. The Seminar will be held in Grand Mir Hotel.</p> <p>The Experts are responsible for invitation of the participants from Russia, Káakhstan, Kyrgyzstan, Tajikistan, Ukraine and Japan, other subsidiary activities as communication, collection of presentations etc.</p> <p>The C/P is responsible for preparation of field excursion on 30th of April, 2010, preparation of the time table, explanatory materials of sites (Angren, Bostanlik), maps (large area map, detailed map of each sites).</p>	<p>SMS HYDROINGEO Experts</p>
3	<p>NEXT MEETING</p> <p>Next Meeting will be held when necessary during Experts absence.</p>	<p>SMS HYDROINGEO Experts</p>

THE PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE MONITORING IN THE REPUBLIC OF UZBEKISTAN

Minutes of Meeting

Counterpart:	Signature 
Chief Expert:	

Subject: Weekly Meeting

Date: 03 March, 2010

Time: 10: 00 – 11: 00 AM

Place: JICA Expert's office in Tashkent

Attendance:

Counterpart:	Mr. Mavlonov A. A	Director of the project
	Mr. Niyazov R. A:	Chief Consultant HYDROINGEO
	Mr. Ahunjanov A.:	Chief Engineer SMS
	Mr. Mingboev K.:	Geophysical engineer, HYDROINGEO
	Mr. Minchenko V.:	Chief of Laboratory, HYDROINGEO

Experts:

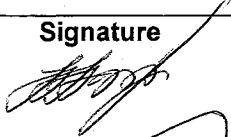

Ms. O. Shvay: Liaison officer

№	Minutes	Actions
1	<p>SCHEDULE OF THE INTERNATIONAL SEMINAR</p> <p>According to the preliminary schedule for International Seminar the date for its implementation concluded on 28/04/10 – 30/04/10, however, considering unexpected circumstances with participants accommodation and flight schedule, to resolve the issue, three options for Experts consideration and approval were concluded on the Meeting:</p> <ol style="list-style-type: none"> 1. Change of the Seminar date 27.04.10 – 29.04.10 2. Date of the Seminar remains unchanged 28 – 30 April, however, considering importance of the Field Excursion on the opinion of C/P, revise the schedule according to the followings: First Day 28.04.10 Indoor Seminar (9:00 AM – 6 PM) Second Day 29.04.10 Indoor Seminar (9:00 AM – 1:00 PM, 1:00 PM – 6:00 PM Field Excursion Bostonlik region) Third Day Field Excursion Angren region(8:00 AM – 1:00 PM) 3. Date of the Seminar remains unchanged: First Day 28.04.10 Indoor Seminar (9:00 AM – 6 PM) Second Day 29.04.10 Indoor Seminar (9:00 AM – 6 PM) 	<p>SMS HYDROINGEO Experts</p>

	<p>Third Day Field Excursion (8:00 AM – 1:00 PM) considering long distance trip and possible unexpected circumstances visit Tekstilshik landslide area only.</p>	
2	<p>PREPARATION OF EXPLANATION MATERIALS OF THE SITES</p> <p>Preparation of explanation materials will be started upon conclusion of the Seminar schedule.</p>	<p>SMS HYDROINGEO Experts</p>
3	<p>C/P PRESENTATIONS</p> <p>Tentative List of participants from Uzbekistan side will be prepared for the next meeting. The C/P assigned presenters and tentative titles of the presentations, as follows:</p> <ol style="list-style-type: none"> 1. Mr. Turabboev, Mr. Ahunjanov, Structure and Landslide Monitoring System in Uzbekistan 2. Mr. Bazarov, Extensometers results, Landslides of West region of the Republic of Uzbekistan, Surkhandarya, Kashkadarya regions. 3. Mr. Mingboev Kodirjon, Application of modern geophysical technologies and Inclinator measurements on study of subsurface landslide movement. 4. Mr. Niyazov, Mr. Nurtaev, Modern landslides formatted after Gindukush earthquake. 5. Mr. Minchenko, Landslide remote monitoring and assessment of impact scale in Uzbekistan. 	<p>SMS HYDROINGEO</p>
4	<p>NEXT MEETING</p> <p>Next Meeting will be held on 10.03.10 at 10:00 AM in JICA Expert's office in Tashkent.</p>	<p>SMS HYDROINGEO Experts</p>

THE PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE MONITORING IN THE REPUBLIC OF UZBEKISTAN

Minutes of Meeting

Counterpart:	Signature 
Chief Expert:	

Subject: Weekly Meeting

Date: 10 March, 2010

Time: 10: 00 – 11: 00 AM

Place: JICA Expert's office in Tashkent

Attendance:

Counterpart:	Mr. Mavlonov A. A	Director of the project
	Mr. Niyazov R. A:	Chief Consultant HYDROINGEO
	Mr. Ahunjanov A.:	Chief Engineer SMS
	Mr. Mingboev K.:	Geophysical engineer, HYDROINGEO
	Mr. Minchenko V.:	Chief of Laboratory, HYDROINGEO

Experts:



Ms. O. Shvay:	Liaison officer
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№	Minutes	Actions
1	<p>SCHEDULE OF THE INTERNATIONAL SEMINAR</p> <p>Considering Expert's and C/P's opinions following schedule for International Seminar was concluded on the meeting:</p> <p style="margin-left: 40px;">Date of the Seminar remains unchanged 28 – 30 April:</p> <p style="margin-left: 40px;">First Day 28.04.10 Indoor Seminar (9:00 AM – 6 PM)</p> <p style="margin-left: 40px;">Second Day 29.04.10 Indoor Seminar (9:00 AM – 1:00 PM, 1:00 PM – 6:00 PM Field Excursion Angren region)</p> <p style="margin-left: 40px;">Third Day Field Excursion Bostonlik region(8:00 AM – 1:00 PM)</p>	<p>SMS HYDROINGEO Experts</p>
2	<p>PREPARATION OF EXPLANATION MATERIALS OF THE SITES</p> <p>For preparation of explanation materials, it was concluded to hold joint site visit with Liasion officer and representative of C/P on 16th and 17th of March, 2010 to Angren and Bostonlik regions.</p>	<p>SMS HYDROINGEO Experts</p>

3	C/P PRESENTATIONS Tentative List of participants from Uzbekistan side as well as presentations abstracts will be prepared within shortest period.	SMS HYDROINGEO
4	NEXT MEETING Next Meeting will be held upon request in JICA Expert's office in Tashkent.	SMS HYDROINGEO Experts

THE PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE MONITORING IN THE REPUBLIC OF UZBEKISTAN

Minutes of Meeting

Counterpart:	Signature 
Chief Expert:	

Subject: Preparation of the international seminar

Date: 9 April, 2010

Time: 10: 00 – 10: 30 AM

Place: JICA Expert's office in Tashkent

Attendance:

Counterpart:

Mr. Mavlonov A. A	Director of the project
Mr. Niyazov R. A:	Chief Consultant HYDROINGEO
Mr. Ahunjanov A.:	Chief Engineer SMS
Mr. Mingboev K.:	Geophysical engineer, HYDROINGEO
Mr. Minchenko V.:	Chief of Laboratory, HYDROINGEO
Mr. Abdullaev	Chief of Laboratory, HYDROINGEO
Mr. Turabboev A.:	Chief of SMS

Experts:

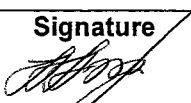

Ms. O. Shvay:	Liaison officer
Mr. Y. GONAI	Project coordinator

№	Minutes	Actions
1	<p>PROGRAM OF THE INTERNATIONAL SEMINAR</p> <p>C/P already considered the program. They will submit it to JICA expert team 9th April afternoon.</p>	<p>SMS HYDROINGEO Experts</p>
2	<p>PARTICIPANT OF THE INTERNATIONAL SEMINAR</p> <p>Draft Participant list was confirmed. C/P will submit the participant list that includes HYDROINGEO and SMS as soon as possible.</p>	<p>SMS HYDROINGEO Experts</p>
3	<p>FIELD EXCURSION OF THE INTERNATIONAL SEMINAR</p> <p>C/P, Ms. Olga and Mr. Gonai will carry out the preliminary field excursion of the field excursion. C/P will make the handouts for the field excursion After the preliminary field excursion.</p>	<p>SMS HYDROINGEO Experts</p>
4	<p>C/P'S ABSTRACT AND PRESENTATION FILES</p> <p>C/P's abstract and presentation files will be submitted 12 to 16 April.</p>	<p>SMS HYDROINGEO Experts</p>

5	NEXT MEETING Date & Place: 27 April 2010, 10:00-12:00AM Place: Meeting room in HYDROINGEO Attendance: HYDROINGEO, SMS, JICA expert team	SMS HYDROINGEO Experts
6	OTHERS Final meeting for preparation of the international seminar will be held 14th April. C/P will arrange the demonstration of drilling machine when the field excursion.	SMS HYDROINGEO Experts

THE PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE MONITORING IN THE REPUBLIC OF UZBEKISTAN

Minutes of Meeting

Counterpart:	Signature 
Chief Expert:	

Subject: Weekly Meeting

Date: 14 May, 2010

Time: 10: 00 – 11: 00 AM

Place: JICA Expert's office in Tashkent

Attendance:

Counterpart:	Mr. Mavlonov A. A:	Director of the project
	Mr. Niyazov R. A:	Chief Consultant HYDROINGEO
	Mr. Turabbaev A.:	Manager of the project
	Mr. Mingboev K.:	Geophysical engineer, HYDROINGEO
	Mr. Minchenko V.:	Chief of Laboratory, HYDROINGEO

Experts:


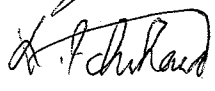
Mr. K. Ichikawa	Chief JICA Expert,
Mr. Y. Gonai	Coordinator of the Project
Ms. O. Shvay:	Liaison officer

№	Minutes	Actions
1	<p>INTERNATIONAL SEMINAR</p> <p>The International Seminar was successfully implemented. The outline of the seminar was reported to the HQ of Ministry of Foreign Affairs of Japan from Embassy of Japan. Many thankful e-mails received from the participants. The preparation of the News Letter № 5 is on going.</p>	<p>SMS HYDROINGEO Experts</p>
2	<p>PLAN OF OPERATION</p> <p>The C/P will submit the plan of operation for the installation of extensometers at new sites. The Mingchukur landslide site located in Bostanlik area already equipped by the 1 extensometer, another one extensometer is planned to be installed.</p>	<p>SMS HYDROINGEO</p>

3	<p>SCHEDULE OF PROJECT</p> <p>On the final phase of the Project activities are planned as follow: Analysis works will be continued until end of September 2010 All analysis in connection with early warning will be discussed Translated Manuals will be handed over The final technical seminar No 4 will be implemented</p>	<p>SMS HYDROINGEO Experts</p>
4	<p>NEXT MEETING</p> <p>Next Meeting will be held on the next phase of the project in September 2010.</p>	<p>SMS HYDROINGEO Experts</p>

THE PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE MONITORING IN THE REPUBLIC OF UZBEKISTAN

Minutes of Meeting

Counterpart:	Signature 
Chief Expert:	

Subject: Weekly Meeting

Date: 27 August, 2010

Time: 10: 00 – 11: 00 AM

Place: JICA Expert's office in Tashkent

Attendance:

Counterpart:	Mr. Mavlonov A. A	Director of the project
	Mr. Turabbaev A.	Manager of the Project
	Mr. Niyazov R. A:	Chief Consultant HYDROINGEO
	Mr. Mingboev K.:	Geophysical engineer, HYDROINGEO
	Mr. Minchenko V.:	Chief of Laboratory, HYDROINGEO

Experts:



Mr. S. Tsukamoto	Coordinator of the Project
Ms. O. Shvay:	Interpreter

№	Minutes	Actions
1	<p>PREPARATIONS FOR THE TECHNICAL SEMINAR</p> <p>The final Technical seminar on landslide monitoring will be held on 9th September, 2010 from 10:30 to 14:00. Venue of the Seminar is Grand Orzu Hotel. Contents of the Seminar Agenda confirmed by both parties – C/P and JICA Experts. It is necessary to complete List of Participants.</p> <p>The schedule of the Experts as follows: Mr. Kensuke Ichikawa, Chief Expert of the project and Takeshi Kuwano, Drilling Expert from 1st to 29th September, 2010</p> <p>Mr. Satoru Tsukamoto, Expert on landslide monitoring devices from 16th August to 13th September, 2010.</p> <p>Mr. Masahiko Takahashi, Coordinator of the project from 6th to 17th September, 2010.</p>	<p>SMS HYDROINGEO Experts</p>
2	<p>MONITORING ACTIVITIES AND PROBLEMS</p> <p>The broken Extensometer has been repaired and brought back from Japan; it can be installed at the new site. The Extensometer which recently installed at Substation landslide in Angren was stolen.</p>	<p>SMS HYDROINGEO Experts</p>

3	<p>One Inclinator was broken due to stuck of sensor inside a borehole at the Tekstilshik landslide during Inclinator measurements. The C/P is going to recover the broken part and will try to repair it by them.</p> <p>The UPS of one of Rain Gauges which installed at Angren MS was broken due to high voltage; it will be replaced by new one.</p> <p>NEXT MEETING</p> <p>Next Meeting will be held on 7th September, 2010 at 10:00 AM</p>	SMS HYDROINGEO Experts
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THE PROJECT ON CAPACITY DEVELOPMENT FOR LANDSLIDE MONITORING IN THE REPUBLIC OF UZBEKISTAN

Minutes of Meeting

Counterpart:	Signature 
Chief Expert:	

Subject: Weekly Meeting

Date: 07 September, 2010

Time: 10: 00 – 11: 00 AM

Place: JICA Expert's office in Tashkent

Attendance:

Counterpart:	Mr. Mavlonov A. A	Director of the project
	Mr. Turabbaev A.	Chief Manager of the project
	Mr. Niyazov R. A:	Chief Consultant HYDROINGEO
	Mr. Mingboev K.:	Geophysical engineer, HYDROINGEO
	Mr. Minchenko V.:	Chief of Laboratory, HYDROINGEO

Experts:

Mr. K. Ichikawa	Chief JICA Expert,
Mr. S. Tsukamoto	Expert on Landslide monitoring devices Mr.
Mr. T. Kuwano	Drilling Expert
Mr. M. Takahashi	Coordinator of the Project
Ms. O. Shvay:	Interpreter
Ms. T. Tsoy	Interpreter

№	Minutes	Actions
1	<p>PREPARATIONS FOR THE TECHNICAL SEMINAR</p> <p>Preparation of the technical seminar is completed; the invitation letters for the participants were delivered. All presentations completed.</p>	<p>SMS HYDROINGEO Experts</p>
2	<p>ACTIVITIES FOR WRAP UP THE PROJECT</p> <p>The C/P will prepare and submit Final achievement report including future plans for devices installation.</p> <p>Application for Early Warning, Analysis and Review will be done during Experts stay in Tashkent.</p> <p>The Manuals will be handed over to the C/P on the Final Meeting.</p> <p>The Experts will prepare Final Report and submit it on the Final Meeting.</p>	<p>SMS HYDROINGEO Experts</p>
3	<p>THE FINAL JCC MEETING</p> <p>The final JCC Meeting for the project will be held on 24th September, 2010 at 10:00 AM.</p>	<p>SMS HYDROINGEO Experts</p>

6. 技術移転セミナープログラム・参加者リスト（第一回～第五回）

Seminar on Landslide Monitoring Technology

The Project on Capacity Development for Landslide Monitoring in the Republic of Uzbekistan

Date: 7th December 2007

Place: Tashkent Palace Hotel, Tashkent Hall,

9:00 9:10 Opening Remarks: (Representative of State Committee of Geology and Mineral Resources)
9:10 9:20 Speech from JICA JICA Representative

Part 1 Presentation of JICA Experts

9:20 9:30 Introduction -Outline of the Project Mr Ichikawa
Team Leader of
9:30 10:00 Landslide Monitoring Instruments in JICA Expert Team Mr Tsukamoto
10:00 10:30 Drilling Technology Mr Funaoka
Expert on Drilling Technology
10:30 11:00 Landslide Analysis (Case Study in Indonesia) Mr Ichikawa
11:00 11:15 Coffee Break

Part 2 Presentation of Counterpart Personnel

11:15 11:45 Scientific-research works for investigation of landslides in HYDROENGEO Institute Chief of Laboratory (HYDROENGEO) Mr. Minchenko
11:45 12:15 Activity of State Monitoring Service for Hazardous Geological Processes Mr Bazarov
Chief of SMS
12:15 12:45 Main results of joint cooperation of Ministry for Emergency Situations (MES) and SMS Mr Zufarov
Representative from MES
12:45 13:00 Closing Remarks Mr. Mavlonov
Chairman

The Seminar on Landslide Monitoring Technology 7th December 2007
-The Project on Capacity Development for Landslide Monitoring-

November 27, 2007

Dear Mr.: _____

On behalf of the Expert team of Japan International Cooperation Agency (JICA), State Enterprise Institute of hydrogeology HYDROENGEO and State Monitoring Service for Hazardous Geological Process of the Republic of Uzbekistan (SMS) for **Project on Capacity Development for Landslide Monitoring** in the Republic of Uzbekistan, it is our privilege to invite you to attend a seminar on "Landslide Monitoring Technology" to be held in Tashkent at the **Tashkent Place Hotel on 7th December 2007**.

The program for this seminar will focus on presentations of the introducing the Japanese technology for drilling, measuring devices and some case study of application of the landslide monitoring technology in the country outside of Japan. Scientific activity of HYDROENGEO, Activities of SMS and the results of up to date activities of Ministry of Emergency Situation will be also presented at the seminar. The program for the seminar is attached herewith. We will highly appreciate your coming with one other person.

Please inform us your response at your very earliest convenience, and at the latest, on or before 5th December 2007.

Sincerely yours

Chief Advisor

JICA Expert Team

In Joint of HYDROENGEO and SMS

List of participants

1. Berdiev K. R. Minister, Ministry of Emergency Situations of the Republic of Uzbekistan
2. Shadimetov U. President of "ECOSAN" International Fund
3. Chub V. E. General Director of Hydrometeorological Center
4. Alihanov B. B. Chairman of the State Nature Conservancy of the Republic of Uzbekistan
5. Nurtave B. S. Executive Director of Uzbek branch of the Russian University of gas and oil named after Gubkin
6. Muhammedov G. E. Rector of Tashkent State University named after M. Ulugbek
7. Eshboev H. D. Dean of Tashkent State University named after M. Ulugbek
8. Shoabidov Sh. A. Rector of Tashkent Technical University named after Beruni
9. Mirsaidov G. M. Dean of Tashkent Technical University named after Beruni
10. Abdullabekov K. N. Academy of Sciences, Director of the Seismology Institute
11. Abdullaev U. V. Director of "UZGIP" Institute
12. Abdullaev M. A. Chairman of SJSRC "Uzavtoyul"
13. Ismailov H. D. Director of "Tashtemiryulloyiha" Institute
14. Ruziev R. V. Director of "Boshtransloyiha" Institute
15. Ramatov A. J. Chairman of SJSRC "Uzbekiston Temir Yullari"
16. Kahharov S. S. Chief Engineer of SJSRC "Uzbektemiryullari"
17. Kan V. S. General Director of JSC "Tunelspecproekt"
18. Krivenko U. N. Chief Engineer of "Angrenski" Coal Strip Mine
19. Madgazin E. A. Deputy of the Director of "Hydroproekt" Institute
20. Kamalov T. K. Chairman of State Inspectorate "Gosvodhoznadzor"
21. Hursandov H. P. Managing Director JSC "Ugol"
22. Holmatov E. M. General Director of "Sanoatkontehnadzor" Agency

Seminar on Technical Transfer for Landslide Monitoring

The Project on Capacity Development for Landslide Monitoring in the Republic of Uzbekistan

Date: 30th July 2008

Place: Bostanlik region, Tekstilshik landslide area, children health camp "Zangori olov"

Part 1

11:00	11:10	Introduction of the program :	Mr. Mavlonov Director of the Project
11:10	11:20	Welcoming Speech	Mr. Mavlyanov Chairman of State Committee of Geology and Mineral Resources (SCGMR)
11:20	11:30	Handing over ceremony	Mr. Hiraoka TSUTOMU The Ambassador of Japan in Uzbekistan Mr. Mavlyanov Chairman of State Committee of Geology and Mineral Resources (SCGMR)
11:30	11:35	Acknowledging Address	Mr. Mavlonov Director of the Project
11:35	11:40	Acknowledging Address	Mr. Eshonkulov Hokim of Bostanlik region
11:40	11:50	Responding Address	Mr. Hiraoka TSUTOMU The Ambassador of Japan in Uzbekistan
11:50	12:00	Responding Address	Mr. Noriaki NISHIMIYA Director of JICA Representative Office
12:00	12:10	Responding Address	Dr. Hirouki FUKUOKA JICA Consultant Team (Kyoto University)
12:10	12:20	Closing Address (Part 1)	Mr. Niyazov R. A Chief Consultant HYDROINGEO

Seminar on Technical Transfer for Landslide Monitoring

Part 2

12:20 12:30	Starting Remarks for Part 2	Mr. Bazarov Manager of the Project
12:30 12:40	Activity Explanation	Mr. Ichikawa Team Leader/JICA Expert
12:40 13:00	Field Excursion	Experts & Counterpart
13:00	Lunch	All Parties

The Seminar on Technical Transfer for Landslide Monitoring 30th July 2008
-The Project on Capacity Development for Landslide Monitoring-

July 25, 2008

Dear Mr.: _____

On behalf of the Expert team of Japan International Cooperation Agency (JICA), State Enterprise Institute of hydrogeology HYDROENGEO and State Monitoring Service for Hazardous Geological Process of the Republic of Uzbekistan (SMS) for **Project on Capacity Development for Landslide Monitoring** in the Republic of Uzbekistan, it is our privilege to invite you to attend a seminar on "Technical Transfer for Landslide Monitoring" to be held in Bostanlik region at the **Tekstishik Landslide area on 30th July 2008**.

The program for this seminar will focus on technical transfer of the Japanese technology for drilling, measuring devices, also at the seminar will be held Hand over Ceremony. The program for the seminar is attached herewith. We will highly appreciate your coming.

List of participants

1. Mavlyanov N. G Chairman of State Committee of geology and mineral resources of the Republic of Uzbekistan
2. Hiraoka Tsutomu Ambassador of Japan in the Republic of Uzbekistan
3. Nishimiya Director of JICA Representative Office in Uzbekistan
4. Muhammedov A.A Deputy of Chairman of State Committee of geology and mineral resources of the Republic of Uzbekistan
5. Eshonkulov K. T Hokim of Bostanlik Region
6. Rashidov A.A. Chief of Local Police Precinct of Bostanlik Region
7. Khalilov Sh. Chief of National Security Service of Bostanlik Region
8. Yuldashev O. Lieutenant Colonel, Chief of Emergency Situation Department of Bostanlik Region
9. Nurtaev B.C. Executive Director, Moscow University of Oil and Gaz
10. Muratov N. D Director, SE SRC «Geology of precious and colored metals»
11. Kadirhojaev A. F Director, SE SRC «Geology of hydro mineral resources»
12. Kuchuhidze T. V. Chief Engineer, SE SRC «Geology of hydro mineral resources»
13. Djararov R. A Deputy of the director, SE SRC «Geology of precious and colored metals»
14. Rustamov A. E. Chief Geologist, SE SRC «Geology of precious and colored metals»
15. Arifbaev Sh. H Chief Engineer, SE «Krasnogorskaya HGE»
16. Nuthojaev A. Chief of Ecological Department of SE «Urangologiya»
17. Rasulov M. B Chief Engineer, OJSC «Regional geologiya»
18. Eshonov E. T Acting Chairman of OJSC «Sharkii Kurama»
19. Mirhayatov Sh. K Drilling Engineer, OJSC «Sharkii Kurama»
20. Uldashev G. D. Chief Engineer, OJSC «Kimenmadangeologiya service»
21. Akbarov M. Sh. Chief Engineer, OJSC «Mirzachelgeologiya»
22. Kamilov M. Key Specialist of State Committee of geology and mineral resources of the Republic of Uzbekistan
23. Imamov N. Key Specialist of State Committee of geology and mineral resources of the Republic of Uzbekistan
24. Kurbankulov F. Chief of SIC Department «Altin geologiya»
25. Moshonov F. Chief of ITD, SIC «Altin geologiya»
26. Boyenov D. T. Chief geologist, SE «Qorakalpak HE»

27. Magdiev F. Vice Chief Engineer, SE «Qizilkum HGE»
28. Shorasulov Sh. Chairman of Hujaken Village Community
29. Nuriddinov U. Chairman of Koronkul Village Community
30. Raimov R. Director of school №15 of Koronkul village
31. Kholmetov Yu. Director of “Zangori olov” children health camp
32. Turobboev A. Director of “Yangi ovlod” children health camp
33. Turoboev A. Director of “Hojikent” Rest Home
34. Abdujalilov A. Director of State Ugam-Chatkal Conservation Area
35. Abdulvahobov T. Chief of Environment Control of Bostanlik Region
36. Mavlonov A. A. Director of Research Institute GIDROINGEO
37. Nazarov A. F. Director of “Gidrotehnika” Ltd.
38. Minchenko V.D. Head of GIDROINGEO Laboratory
39. Abdullaev Sh.M. Head of GIDROINGEO Laboratory
40. Niyazov R.A. Chief Research Officer of GIDROINGEO Research Institute
41. Bazarov Sh. B. Chief of SMS
42. Ahunjanov A. Chief Geologist of SMS
43. Turabbaev A. T. Chief of Bostanlik region MS
44. Uralov I.F. Chief of Angren MS
45. Bobonazarov B.A. Chief of Samarkand MS
46. Norkulov B.H. Chief of Shahrisabz MS
47. Boshirov U.U. Chief of Karshi MS
48. Anorbaev A.A. Chief of Surhandarya MS
49. Nishanov Sh.E. Chief of Fergana MS
50. Ubaydullaev K. Chief of Geophysical Site of SMS
51. Saydavov A. Chief Engineer of SMS
52. Bimurzaev A. Chief of Survey Site of SMS
53. Martemyanov V.I. Chief of Geological Department of SMS

Abbreviations:

HE-Hydro geological Expedition

SE-State Enterprise

SRC-Scientific Research Center

OJSC- Open Joint Stock Company

HE-Hydro Expedition

ITD-Industrial and Technical Department

SIC- Scientific Industrial Center

**The Project on Capacity Development for Landslide Monitoring in the
Republic of Uzbekistan**

TECHINICAL SEMINAR ON LANDSLIDE MONITORING PHASE III (Draft)

By SMS, HYDROENGEО, JCA EXPERTS

18th June 2009

At Angren (Ahangaranskaya St. "Saidkamol" cafe)

CHAired BY MR MAVLONOV (Project Director / Head HYDROENGEО)

A. INTRODUCTION -----10:30 – 11:00

1. Opening Remarks of the Seminar ----- by Chairman of the Seminar
2. Keynote Address by the Committee of Geology and Mineral Resource (10min)
3. Keynote Speech by the Ministry of Emergency Situation (10 min)
4. Keynote Speech by JICA Uzbekistan Office (10 min)

B. Part One – In House Seminar -----11:00 – 13:00

- 1 Outline of the Project Phase III (Mr Ichikawa/Chief Advisor)
2. Status on Technical Transfer: Monitoring Devices (Mr Tsukamoto/Expert for Monitoring Devices)
3. Status on Technical Transfer: Drilling Operation (Mr Funaoka/Expert for Drilling Operation)
4. Drilling Operation and its Application to the Landslide Area (Mr Bazarov/Head of SMS)
5. Current Situation of Data Analysis on Devices (Mr Toshpulatov/Engineer for HYDROENGEО)
6. Activities for the Future Monitoring and its Application to the Current Monitoring Method (Mr Niyazov/Consultant for HYDROENGEО)

C. Part Two – Site Visit -----13:00 – 14:00

Move by Bus from the Seminar hall to the Monitoring Site

LUNCH 14:00 – 15:00

Closing at the Site

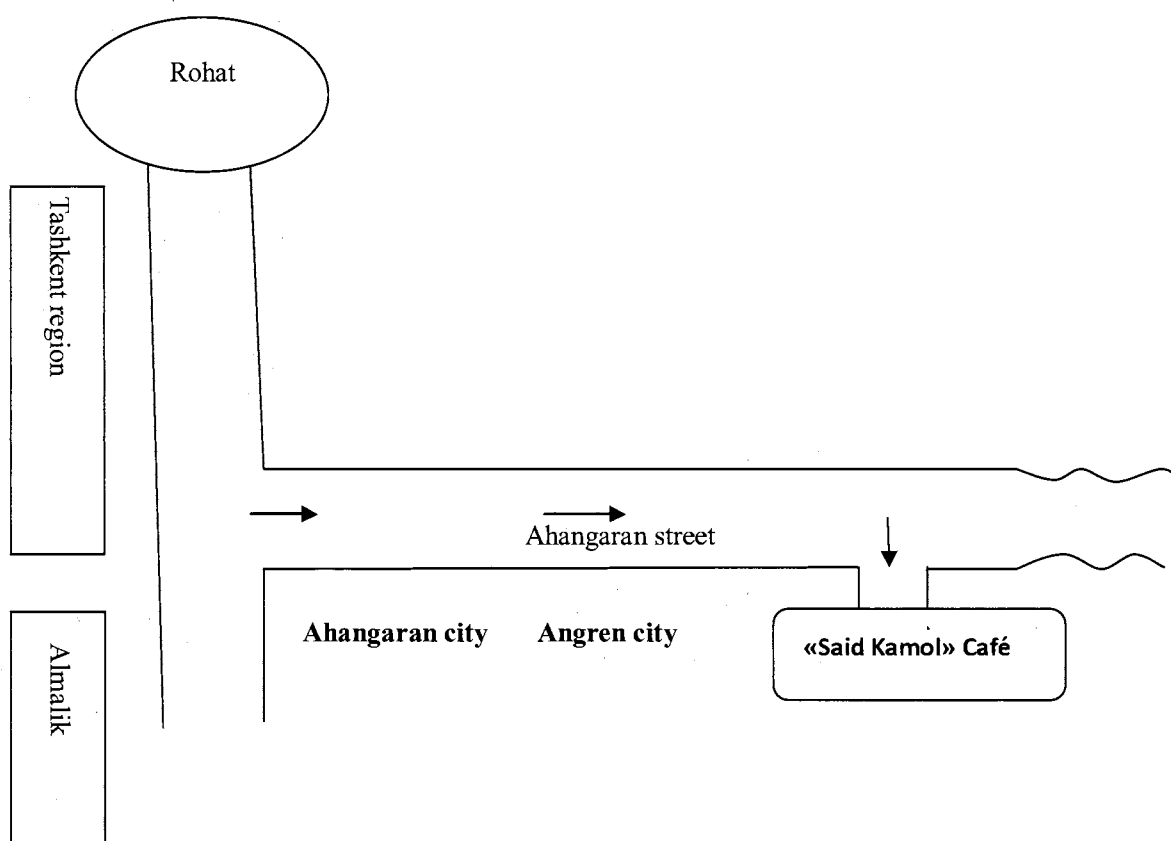
**The Seminar on Technical Transfer for Landslide Monitoring 18th June 2009
-The Project on Capacity Development for Landslide Monitoring-**

June 12, 2009

Dear Mr.: _____

On behalf of the Expert team of Japan International Cooperation Agency (JICA), State Enterprise Institute of hydrogeology HYDROENGEO and State Monitoring Service for Hazardous Geological Process of the Republic of Uzbekistan (SMS) for **Project on Capacity Development for Landslide Monitoring** in the Republic of Uzbekistan, it is our privilege to invite you to attend a seminar on "Technical Transfer for Landslide Monitoring" to be held in Angren city, Ahangaranskaya St., "Saidkamol" café and at the "Topdi Tanga" Landslide area on 18th June 2009

The program for this seminar will focus on technical transfer of the Japanese technology for drilling, measuring devices. The program for the seminar is attached herewith. We will highly appreciate your coming.



Tel: (+99890) 325 26 49 Mr. Hojohonov Saidolimhon Obiddinovich

List of participants

1. Turamuradov E. B Deputy of Chairman of State Committee of geology and mineral Resources of the Republic of Uzbekistan
2. (Hiraoka Tsutomu) Ambassador of Japan for the Republic of Uzbekistan
3. (Yukihiko Ijiri) Chief Representative of JICA Uzbekistan Office
4. Muhammedov A. A Deputy of Chairman of State Committee of geology and mineral resources of the Republic of Uzbekistan
5. Unusov A. T Hokim of Angren city
6. Akramov A. U Hokim of Ahangaran region
7. Bekjanov O. Y Chief of Local Police Precinct of Ahangaran Region
8. Didichenko A. G Chief of National Security Service of Angren Region
9. Akabaev O. M Chief of Emergency Situation Department of Ahangaran Region
10. Huseinov Sh. N Chief of Emergency Situation Department of Angren city
11. Dalimov Chief Engineer, SE «Krasnogorskaya HGE»
12. Eshonov E. T Acting Chairman of OJSC «Sharkii Kurama»
13. Mavlonov A. A. Director of Research Institute GIDROINGEO
14. Kurbanov A. Y Chief, Track division of UTY
15. Eshmatov Director of “Nazarbekavtoyul” Enterprise
16. Turdiev B. Chairman of «Chinar» Village Council
17. Ubaidullaev T. Chairman of «Koksaray» Village Council
18. Umirov E. Director of school №32
19. Saparov S. Director of school №20
20. Abdurahobov T. Chief of Environmental Protection Committee
21. Imamov N. Chief Engineer of SPC “Geology and Hydro Mineral resources”, State Committee of geology and mineral resources of the Republic of Uzbekistan
22. Niyazov R. A. Chief Research Officer of GIDROINGEO Research Institute
23. Yakubov M. M. Dean of Tashkent Technical University named after Beruniy
24. Kayumov A. D. Head of «Hydrogeology, geological engineering and geophysical exploration works» department
25. Tahirov N. T. Head of «Hydrogeology and geological engineering», Tashkent State National University
26. Minchenko V. D. Head of GIDROINGEO Laboratory
27. Abdullaev Sh. M. Head of GIDROINGEO Laboratory

28. Nazarov A. F.	Director of "Gidrotechnika" Ltd.
29. Bazarov Sh. B.	Chief of SMS
30. Ahunjanov A.	Chief Geologist of SMS
31. Fasitdinov K.	Chief of Bostanlik MS
32. Uralov I.F.	Chief of Angren MS
33. Nishanov Sh.E.	Chief of Fergana MS
34. Ubaydullaev K.	Chief of Geophysical Site of SMS
35. Saydavov A.	Chief Engineer of SMS
36. Bimurzaev A.	Chief of Survey Site of SMS
37. Martemyanov V.I.	Chief of Geological Department of SMS
38. Bimurzaev G.	Hydrogeologist, Bostanlik MS
39. Tashpulatov M.	Engineer, HYDROINGEO
40. Mingboev K.	Engineer, HYDROINGEO

Abbreviations:

HE-Hydro geological Expedition

SE-State Enterprise

SRC-Scientific Research Center

OJSC- Open Joint Stock Company

ITD-Industrial and Technical Department

SIC- Scientific Industrial Center

PROGRAM

Host: Mr. Mavlonov A. (Uzbekistan)
Mr. Ichikawa K. (Chief of JICA Expert)

Date	Time	Content
28	9:00 - 10:00	<p>OPENING</p> <p>SCOPE AND AIM</p> <ul style="list-style-type: none"> • Mr. Mavlonov A., Director of HYDROENGEO • Mr. Ichikawa K., Chief of JICA Expert <p>WELCOME ADDRESS</p> <ul style="list-style-type: none"> • Mr. Hiraoka T., Ambassador of Japan in the Republic of Uzbekistan • Mr. Turamuradov I. B., Acting Chairman of state Committee of geology and mineral resources of the Republic of Uzbekistan • Mr. Ejiri Y., Chief Representative of JICA Uzbekistan Office in the Republic of Uzbekistan
	10:10 - 13:00	<p style="text-align: right;">Moderator: Mr. Niyazov (Uzbekistan)</p> <p>KEYNOTE LECTURES</p> <p>Dr. Sassa K. – Japan, International Consortium on Landslides, Executive Director, Association of Disaster Prevention Research, Risk assessment of earthquake and rain induced landslides (30 min).</p> <p>PRESENTATION (State of each country on the landslide monitoring)</p> <ol style="list-style-type: none"> 1. Mr. Mavlonov A., Mr. Turabboev A, Mr. Kamaletdinov R – Uzbekistan, Scientific-research Institute HYDROENGEO, State Monitoring Service on Hazardous Geological Process SMS, Structure and system of hazardous geological processes investigation by SMS in the Republic of Uzbekistan (15 min). 2. Mr. Bahtdavatov R. – Tajikistan, Head Agency of Geology under the Government of the Republic of Tajikistan, Landslides in the Republic of Tajikistan, history and problems (15 min). 3. Mr. Ajibaev T. – Kyrgyzstan, Southern Department of the Ministry of Emergency Situations of the Republic of Kyrgyzstan, Current condition of landslide monitoring and forecast in the Republic of Kyrgyzstan (15 min). 4. Mr. Smolyar V., Mr. Salmenov E. – Kazakhstan, Ministry of Geology, Hydrogeology Department, Structure of landslide investigation and forecast in the Republic of Kazakhstan (15 min). 5. Dr. Abdul Kamal Azad – Bangladesh, Institute of Environmental Science Rajshahi University, An indigenous approach to landslide management in Bangladesh – a lesson for the Central Asian Countries (15 min). 6. Mr. Niyazov R., Mr. Nurtaev A. – Uzbekistan, Scientific-research Institute HYDROENGEO Role of Pamir-Gyndukush earthquakes on landslides formations in Uzbekistan (15 min). 7. Mr. Ahmedov S. – Tajikistan, Head Agency of Geology under the Government of the Republic of Tajikistan Monitoring, evaluation of landslide hazard and risk in the Republic of Tajikistan (15 min). 8. Mr. Usupaev Sh. – Kyrgyzstan, Central Asian Institute of Applied Geosciences, Engineering-geonomical features of landslides formation and development in the territory of Kyrgyzstan (aspects of georisks forecast and assessment) (15 min). <p style="text-align: center;">--- Lunch (13:00 -14:00)---</p> <p style="text-align: right;">Moderator: Mr. Bahtdavatov R. (Tajikistan)</p>
	14:00 - 15:45	<p>PRESENTATION (Landslide Monitoring)</p> <ol style="list-style-type: none"> 1. Dr. Fukuoka H. – Japan, Associated Professor, Disaster prevention Research Institute, Kyoto University, Satellite monitoring of precipitation and landslides under extreme weather condition (20 min). 2. Mr. Malikov A., Mr. Minchenko V, Mr. Pronin B. – Uzbekistan, Scientific-research Institute HYDROENGEO, Remote landslide monitoring and assessment of disaster impact (15 min). 3. Mr. Strom A. – Russia, Leading Researcher Institute of Geospheres Dynamics, Russian Academy of Sciences, Compilation of the Tien Shan Bedrock landslides inventory (15 min).

		<p>4. Mr. Torgoev I. – Kyrgyzstan, Scientific – Engineering Center GEOPRIBOR Devices and instruments for landslide monitoring in the Republic of Kyrgyzstan (15 min).</p> <p>5. Mr. Erohin S.– Kyrgyzstan, Scientific – Engineering Center GEOPRIBOR Hazardous landslide-failure processes its development activity in north Tien Shan mountain, observations and forecast methods (15 min).</p> <p>6. Mr. Ahunjanov A., Mr. Niyazov R., Mr. Norkulov B., Mr. Davlatov E., Merganov M. – Uzbekistan, Scientific-research Institute HYDROENGEO, State Monitoring Service on Hazardous Geological process SMS, Vulnerability assessment of mountain villages from landslide in mountain areas in the Republic of Uzbekistan (15 min).</p>
		--- Coffee brake (15:45 -16:00)---
16:00 - 17:30		<p style="text-align: right;">Moderator: Mr. Ajibaev T. (Kyrgyzstan)</p> <p>PRESENTATION (Landslide Monitoring)</p> <p>1. Mr. Karimov F.– Tajikistan, Institute of Seismology and Antiseismic Construction of the Republic of Tajikistan «Drop-model» and forecast of landslide (15 min).</p> <p>2. Mr. Zhdanovich A. - Kazakhstan, Institute of Seismology of the Republic of Kazakhstan, Seismic landslides danger assessment (15 min).</p> <p>3. Mr. Blaha P – Czech, GEOtestBRNO Co., Ltd, Tekstilshik and Mingchukur Landslides in course of time (15 min).</p> <p>4. Mr. Samiev M. – Tajikistan, The Information Analysis Center of Committee of Emergency Situations and Civil Defense under the Government of Republic of Tajikistan Landslides as emergency situation (15 min).</p>
17:30 - 18:00		OPENED DISCUSSION
		--- Preparation for welcome receptions (18:00 -20:00)---
20:00 -		WELCOME RECEPTIONS
09:00- 10:45	29	<p style="text-align: right;">Moderator: Dr. Fukuoka H. (Japan)</p> <p>PRESENTATION (Introduction of the project, results achieved, developed early warning system and measures for landslide)</p> <p>1. Mr. Bazarov Sh. – Uzbekistan, State Monitoring Service on Hazardous Geological Process SMS Usage of portable drilling machine (YBM) on landslide investigations (its advantages & disadvantages) (15 min).</p> <p>2. Mr. Niyazov, Islambaev N. U., Uralov I. F. – Uzbekistan, Scientific-research Institute HYDROENGEO, First results of high-precision instruments extensometers (Japan) installed on landslides (15 min).</p> <p>3. Mr. Mingboev K, Mr. Abdullaev Sh, - Uzbekistan, Scientific-research Institute HYDROENGEO, Application of modern geophysical technologies and inclinometer measurements on study of subsurface landslide movement (15 min).</p>
		--- Coffee brake (10:45 -11:00)---
11:00 - 12:00		<p style="text-align: right;">Mr. Mavlonov A. (Uzbekistan) and Mr K. Ichikawa (Chief of JICA Expert)</p> <p>Discussion of future cooperation between adjacent countries for landslide disaster prevention</p> <p>CLOSING</p>
		--- Lunch (12:00 – 13:00)---
13:00- 19:00		FIELD EXCURSION Angren Region
8:00 – 13:00	30	FIELD EXCURSION Bostanlik Region

**List of participants for International Seminar on landslide monitoring
in Central Asian Countries**

№	Name	Position, Organization
1	Turamuratov I. B.	Acting Chairman of State Committee of geology and mineral resources of the Republic of Uzbekistan
2	Hudoiberганov T.	Minister, Ministry of Emergency Situations of the Republic of Uzbekistan
3	Chub V. E.	General Director of Hydrometeorological Center
4	Umarov N. M.	Chairman of the State Nature Conservancy of the Republic of Uzbekistan
5	Ramatov A. J.	Chairman of SJSRC "Uzbekiston Temir Yullari"
6	Razikov O.	Cabinet of Ministers of the Republic of Uzbekistan.
7	Ismoilov B. J.	Cabinet of Ministers of the Republic of Uzbekistan.
8	Holmatov I. M..	General Director of "Sanoatkontehnadzor" Agency
9	Kamalov T. K	Chairman of State Inspectorate «Gosvodhoznadzor»
10	Hamraev Sh. M	Deputy of Minister of agriculture and water resources of Uzbekistan.
11	Ziyautdinov F.	Academy of Sciences , Director of the Seismology Institute
12	Talipov Sh.	Chief Specialist, State Inspection on Control and Supervision for technical State and safety operation of hydro-technical structures
13	Krivenko U.N.	Chief Engineer of SJC "Uzbekugl"
14	Abdullaev U. V	Director of "UZGIP" Co., Ltd
15	Jigarev S. D.	Director of SJC "Hydroproject"
16	Manjosov A. S.	Chief Geologist SJC "Hydroproject"
17	Madgazin E. A.	Deputy of the Director of "Hydroproekt"
18	Kayumov A. B.	Tashkent State Technical University, Department Chair.
19	Rajabov Sh. S	Head of «Geophysical investigation methods» Department of National University of Uzbekistan .
20	Tajibaeva N. R.	Chief of "Hydrogeology and engineering geology" Department of National University of Uzbekistan
21	Tohirov N. T.	Dean of "Hydrogeology and engineering geology" Department of National University of Uzbekistan
22	Kaumov A. D.	Chief of "Hydrogeology, engineering geology and geophysical investigations" Tashkent State Technical University
23	Atabaev D. H.	Chief Instructor of «Geophysical investigation methods» Department of National University of Uzbekistan.
24	Agzamov A. A	Chief Instructor of «Geophysical investigation methods» Department of National University of Uzbekistan.
25	Begimkulov D. K.	Chief Instructor of "Hydrogeology, engineering geology and geophysical investigations" Tashkent State Technical University
26	Ibragimov A. H	Chief of Seismic Station of Tashkent
27	Gataulin G. H	Senior Researcher of Tashkent State Technical University
28	Patarjinskiy M. G.	Chief of space geological investigation team SE
29	Kunov V. M.	Chief of engineering-ivestigation "Teploelektroproekt" Co. Ltd
30	Bimurzaev G. A	Assistant "Hydrogeology, engineering geology and geophysical investigations" Tashkent State Technical University
31	Begmatov R. M.	State Committee of geology and mineral resources of the Republic of Uzbekistan
32	Kamilova N.O.	State Committee of geology and mineral resources of the Republic of Uzbekistan

Embassy of Japan in the Republic of Uzbekistan / JICA Japan, JICA Representative
office in the Republic of Uzbekistan

№	Name	Position, Organization
33	Hiraoka T.	Ambassador of Japan in the Republic of Uzbekistan
34	Toyama M.	First Secretary of Ambassador of Japan in the Republic of Uzbekistan
35	Ejiri Y.	Director, JICA Representative office in the Republic of Uzbekistan
36	Totsuka S.	Deputy-director, JICA Representative Office in the Republic of Uzbekistan
37	Sato I.	Assistant Director, Disaster Management Division 2, Water Resources and Disaster Management Group Global Environment Department, JICA Head Office
38	Sassa K.	Executive Director, International Consortium on Landslides
39	Fukuoka H.	Associate Professor, Research Center on Landslides Disaster Prevention Research Institute, Kyoto University
40	Mardonov B.	Coordinator of the Project on capacity development for landslide monitoring in the Republic of Uzbekistan

Invited participants from other countries

№	Name	Country, Position, Organization
41	Torgoev I.	Kyrgyzstan, Director, Scientific – Engineering Center GEOPRIBOR,
42	Azhybaev T.	Kyrgyzstan, Head of Monitoring Division of Southern Department of the Ministry of Emergency Situations
43	Usupaev Sh.	Kyrgyzstan, Leading Researcher. Central Asian Institute of Applied Geosciences
44	Salmenov E	Kazakhstan, Chief of geological party «Almatihydrogeology»
45	Zhdanovich A.	Kazakhstan, Leading researcher, the candidate of geological and mineralogical science, Institute of Seismology
46	Bakhtdavlatov R.	Tajikistan, The First Deputy of Head, Head agency of geology under the government of the Republic of Tajikistan
47	Karimov F.	Tajikistan, The Director of Institute of Seismology and antiseismic construction of the Republic of Tajikistan.
48	Ahmedov S.	Tajikistan, The head of Hydrogeology and Engineering Geology Department, Head agency of geology under the government of the Republic of Tajikistan
49	Khudobakhshova S.	Tajikistan, Head of department for external affairs, Head agency of geology under the government of the Republic of Tajikistan
50	Samiev M.	Tajikistan, Specialist on analysis of geological-geophysical information in Information Analysis Center of Committee of Emergency Situations and Civil Defense under the Government of Republic of Tajikistan
51	Strom A.	Russia, Institute of geosphere dynamic
52	Blaha P.	Czech, Director of GEOTestBRNO Co., Ltd

SE Geology and hydromineral resources HYDROENGEО Institute

№	Name	Position, Organization
53	Mavlonov A. A.	Director of SE Geology and hydromineral resources
54	Umarov Sh. F.	Chief hydrogeologist
55	Beshkarova	Leading Researcher HYDROENGEО Institute
56	Minchenko V. D.	Chief of Laboratory HYDROENGEО Institute
57	Abdullaev Sh. H.	Chief of Laboratory HYDROENGEО Institute
58	Niyazov R. A.	Chief Scientist HYDROENGEО Institute
59	Mirsalanov M. M	Leading Researcher HYDROENGEО Institute
60	Mingbaev K.	Scientist HYDROENGEО Institute
61	Sovin S.	Technician of HYDROENGEО Institute
62	Malikov M.	Leading Researcher HYDROENGEО Institute
63	Pronin E.	Leading Engineer HYDROENGEО Institute

64	Basalamova E.	Engineer HYDROENGEО Institute
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State Monitoring Service for hazardous geological processes of the Republic of
Uzbekistan

№	Name	Position, Organization
65	Turabbaev A. T	Chief of SMS
66	Ahunjano A. M	Chief Geologist of SMS
67	Kamaletdinov R. D	Chief of Bostanlik MS
68	Fasidinov K.	Key hydrogeologist of Bostanlik MS
69	Ubaidullaev A. A	Chief of geophysical section of SMS
70	Ikramov Sh. A	Key Engineer of SMS
71	Botirov U. U	Chief of Karshi MS
72	Davlatov K. H.	Key hydrogeologist of Karshi MS
73	Uralov I. F.	Chief of Angren MS
74	Sobkina N.	Key hydrogeologist of Angren MS
75	Bazarov Sh. B	Key hydrogeologist of Surhandarya MS
76	Merganov M. R.	Key hydrogeologist of Surhandarya MS
77	Turabbaev E. T.	Key hydrogeologist of Bostanlik MS
78	Islomboev N.	Technician of Bostanlik MS
79	Djumanov E.	Technician of Bostanlik MS
80	Bobonazarov B.	Chief of Samarqand MS
81	Norkulov B.	Chief of Shahrisabz MS
82	Kodirov B.	Key hydrogeologist of Shahrisabz MS
83	Anorboev A. A	Chief of Surhandarya MS
84	Bazarov H. Sh.	Master National University of Uzbekistan
85	Ubaidullaev A. A	Student of Tashkent State Technical University
86	Sovin S.	Student of Tashkent State Technical University

Project Team

87	Kensuke Ichikawa K.	Chief Engineer of the PROJECT
88	Tsukamoto S.	Landslide Monitoring Expert of the PROJECT
89	Gonai Y.	Chief Engineer of the PROJECT
90	Takahashi M.	Chief Engineer of the PROJECT
91	Shavay O.	Assistant and Interpreter
92	Baisov F.	Interpreter
93	Djavon	Interpreter

Press

94	Yarkulova T.	“Yoshlar” State Radio Channel
95	Mumin	“Davr” State Television Company
96	Ibragimov R.	“Eco news” Magazine
97	Shivaldova N.	“Eco news” Magazine

**The Project on Capacity Development for Landslide Monitoring in the
Republic of Uzbekistan**

TECHINICAL SEMINAR ON LANDSLIDE MONITORING PHASE IV

By HYDROENGEEO, SMS and JICA

09th September 2010

Hotel GRAND ORZU (Tashkent)

**CHAired BY MR MAVLONOV, MR ICHIKAWA
(Project Director / Director of HYDROENGEEO, Chief JICA Expert)**

A. INTRODUCTION -----10:30 – 11:00

Opening Remarks of the Seminar ----- by Chairman of the Seminar, Mr.Mavlonov, Mr. Ichikawa
Keynote Address by the Committee of Geology and Mineral Resource (10min.) Mr.Turamuradov
Keynote Speech by the Ministry of Emergency Situation (10 min.) Mr.Hudoiberganov
Keynote Speech by JICA Uzbekistan Office (10 min.) Mr.Totsuka

B. Technical Reports of Landslide Monitoring -----11:00 – 13:00

- 1 Overall Activity through Project (15min.) Mr. Ichikawa/Chief Advisor
2. Activities and Achievements: Technical Transfer on Monitoring Devices and Measurements (15min.) Mr. Tsukamoto/Expert for Monitoring Devices
3. Analysis on Landslide (Case Study of Japan) (15min.) Dr. Kuwano / Expert for Drilling Operation
4. Wrap up of Overall Activities (Chief of SMS) (15min.) Mr.T Turabbaev
5. Recent Application of Landslide Devices and its Results (15min.) Mr. Mingboev K., Mr. Niyazov
6. Future Operation using the technology Introduced by JICA, future cooperation (15min.), Mr. Mavlonov, HYDROENGEEO Institute, Mr. Talipov Sh., State Inspection Gosvodhoznadzor.

Discussion

Closing Remarks

LUNCH 13:00 – 14:00

List of participants for Technical Seminar on landslide monitoring 09.09.2010

№	Name	Position, Organization
1	Turamuradov I. B.	Acting Chairman of State Committee of geology and mineral resources of the Republic of Uzbekistan
2	Hudoiberganov T.	Minister, Ministry of Emergency Situations of the Republic of Uzbekistan
3	Zufarov V. G.	Key specialist, Ministry of Emergency Situations of the Republic of Uzbekistan
4	Chub V. E.	General Director of Hydrometeorological Center
5	Umarov N. M.	Chairman of the State Nature Conservancy of the Republic of Uzbekistan
6	Ramatov A. J.	Chairman of SJSRC "Uzbekiston Temir Yullari"
7	Abdullaev M. A.	Chairman of SJSC "Uzavtoyul".
8	Ismoilov B. J.	Cabinet of Ministers of the Republic of Uzbekistan.
9	Holmatov I. M..	General Director of "Sanoatkontehnadzor" Agency
10	Kamalov T. K.	Chairman of State Inspectorate «Gosvodhoznadzor»
11	Talipov Sh. G.	Key specialist «Gosvodhoznadzor»
12	Irisboev Z. A.	Key specialist «Gosvodhoznadzor»
13	Ziyautdinov F.	Academy of Sciences , Director of the Seismology Institute
14	Abdullaev U. V	Director of "UZGIP" Co., Ltd
15	Jigarev S. D.	Director of SJC "Hydroproject"
16	Manjosov A. S.	Chief Geologist SJC "Hydroproject"
17	Madgazin E. A.	Deputy of the Director of "Hydroproekt"
18	Nurtaev B. S.	Deputy of scientific Director Institute of geology and geophysics of Academy of Science of the Republic of Uzbekistan
19	Tajibaeva N. R.	Chief of "Hydrogeology and engineering geology" Department of National University of Uzbekistan
20	Tohirov N. T.	Dean of "Hydrogeology and engineering geology" Department of National University of Uzbekistan
21	Kaumov A. D.	Chief of "Hydrogeology, engineering geology and geophysical investigations" Tashkent State Technical University
22	Atabaev D. H.	Chief Instructor of «Geophysical investigation methods» Department of National University of Uzbekistan.
23	Ibragimov A. H	Chief of Seismic Station of Tashkent
24	Kunov V. M	Chief of engineering-ivestigation "Teploelectroproekt" Co. Ltd
25	Bimurzaev G. A	Assistant "Hydrogeology, engineering geology and geophysical investigations" Tashkent State Technical University
26	Begmatov R. M.	State Committee of geology and mineral resources of the Republic of Uzbekistan
27	Kamilova N.O.	State Committee of geology and mineral resources of the Republic of Uzbekistan
28	Babushkin V. L.	Department Chief "UzGIP" Co., Ltd
29	Hursanov H. P.	Executive Director of "Uzbekugol" Co., Ltd
30	Haydarov A. D.	Director, Toshkentboshlan LITI Institute
31	Nijevskaya N. S.	Head of plot planning department of Toshkentboshlan LITI Institute
32	Mahmutov R. M.	Chief Engineer of Toshkentboshlan LITI Institute
33	Ushakov A. S.	Chief Engineer of Toshkentboshlan LITI Institute

Embassy of Japan in the Republic of Uzbekistan / JICA Japan, JICA Representative office in the Republic of Uzbekistan

№	Name	Position, Organization
34	Kinoshita Y.	Secretary of Ambassador of Japan in the Republic of Uzbekistan
35	Totsuka S.	Deputy-director, JICA Representative Office in the Republic of Uzbekistan
36	Mardonov B.	Coordinator of the Project on capacity development for landslide monitoring in the Republic of Uzbekistan

SE Geology and hydromineral resources HYDROENGEО Institute

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55	Uralov I. F.	Chief of Angren MS
56	Sobkina N.	Key hydrogeologist of Angren MS
57	Suvonov U.	Hydrogeologist of Angren MS
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61	Djumanov E.	Technician of Bostanlik MS
62	Nishanov	Chief of Fergana MS
63	Norkulov B.	Chief of Shahrisabz MS
64	Kodirov B.	Key hydrogeologist of Shahrisabz MS
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67	Ubaidullaev A. A	Student of Tashkent State Technical University
68	Davlyatov K. H.	Key hydrogeologist of Karshi MS
69	Beymurzaev	Geodezist
70	Nishanov Sh.	Key hydrogeologist of Fergana MS
71	Tuganov A.	Key hydrogeologist of Fergana MS
72	Inamov L.	Key hydrogeologist of Fergana MS
73	Nurlibaeva G.	Geological Department SMS

Project Team

74	Ichikawa K.	Chief Engineer of the Project
75	Tsukamoto S.	Landslide Monitoring Expert of the Project
76	Kuwano T.	Engineer of the Project
77	Takahashi M.	Engineer of the Project
78	Shavay O.	Assistant and Interpreter

79	Tsoy T.	Interpreter
80	Baisov F.	Interpreter
81	Teteyev R.	Interpreter

7. ニュースレター（第一号～第四号、C/P 自作のもの含む）

LSMP Newsletter

The Project on Capacity Development for Landslide Monitoring in the Republic of Uzbekistan

"LSMP" means Landslide Monitoring Project

December 2007,

"LSMP" have launched

The expected project on capacity development for landslide monitoring in the republic of Uzbekistan has just launched. This project has been prepared by both the republic of Uzbekistan and Japan for several years. Mitigation of landslide risk which threat safety of residents, assets, society and local economy has been important issue in Uzbekistan. For solving the serious and important issue, technical improvement, such as landslide research, monitoring and countermeasure is necessary, and the Government of the Republic of Uzbekistan requested to the Japanese Government for capacity development for landslide monitoring.

In February and March 2007, the Japanese Preparatory Study Team organized by the JICA(Japan International Cooperation Agency), headed by Mr. Noriaki Nishimiya visited Uzbekistan for the discussion on the framework with the authorities concerned of the Uzbekistan side, and agreed with the execution of the project.

In October 23rd, the Chief Advisor, Mr. Kensuke Ichikawa visited Uzbekistan, and made discussions and agreed with SMS (State Monitoring Service for Hazardous Geological Process) and HYDROENGEO(Institute of Hydrology and Geological Engineering), "the Project on Capacity Development for Landslide Monitoring in the Republic of Uzbekistan" has launched practically.



October 25th,2007, They agreed with the Inception Report of the project, and the project has started. Photo from the left, Mr. Mavlonov, Director of HYDROENGEO, Mr. Kensuke Ichikawa, Chief Advisor, Mr. Bazarov, Director of SMS

Project Schedule

Term of this project is 4 years, from 2007 to 2010.

YEAR	ACTIVITIES and EVENTS
2007	INITIATION WORK – Equipment plan and procurement, Pilot site determination (3 sites)
2008	TRAINING IN JAPAN JOINT WORK – Drilling operation, installation of equipments – Start of measurements, Other pilot site determination.
2009	COUNTERPART WORK ASSISTED BY EXPERT Drilling, installation, measurement and interpretation (landslide analysis and assessment)
2010	COMPILATION WORK Measurement continued, landslide analysis and assessment INTERNATIONAL CONFERENCE

JICA EXPERTS

Kensuke Ichikawa :
Chief / Landslide Monitoring



Satoru Tsukamoto :
Landslide Measuring



Hiroyuki Funaoka:
Boring Technique



“LSMP” seminar was held

On December 7th 2007, “LSMP” seminar was held at Tashkent Palace Hotel. “LSMP” seminar was held to inform the concerned issues, such as purpose, organizations, activities and schedule were informed and introduced landslide disaster prevention and monitoring technology of both country. Starting with the opening remarks by Mr. Mavlyanov, Chairman of State Committee of Geology and Mineral Resources and speech of Ms. Sonoyama, JICA Uzbekistan, project policy, drilling technology, landslide monitoring technology, activities of HYDROENGEО, SMS, and MES (Ministry for Emergency Situation). Through the presentations and discussion, most of the participants can understand the “LSMP”. In the seminar took part 70 representatives from relative organizations.



“LSMP” seminar on December 7th, 2007

Message for the “LSMP”

Mr. Mavlyanov, Chairman of State Committee of Geology and Mineral Resources:

1. The most important for us is to get more accurate information in landslide forecast about time and place by using new techniques in this Project, than we have now.
2. Realization of Japanese technology in our field of activity.
3. Further operation of new techniques at the other landslide areas in the Republic of Uzbekistan.

Mr. Mavlonov, Director of HYDROENGEО:

I wish successful implementation of this Project, and I hope that this Project will be basis for development relations between two countries and for establishment of future Projects.

Mr. Bazarov, Director of SMS:

This Project will give new positive impact in landslide monitoring; will improve techniques of landslide areas by new measuring devices, give ability to get correct information about landslide activity and prevent disaster by giving timely warning to the local residents.

Chief Advisor, Kensuke Ichikawa:

It is with great pleasure that I am able to participate in the project of the Capacity Development on Landslide Monitoring in the Republic of Uzbekistan. Through this Project, we aim for both Japanese and Uzbekistan experts to enhance their landslide analysis/monitoring skills and experiences to public safety. I believe personal relationships, good communication and understanding the culture of both countries are the key issues to success. We are at the first step of the project, however, the incentive of the joint team promises that the project goal will be achieved. With the support of the related government organization and Japanese representatives, we put forth our best efforts to accomplish the project objectives.

LSMP Newsletter

The Project on Capacity Development for Landslide Monitoring in the Republic of Uzbekistan
 "LSMP" is abbreviation of Landslide Monitoring Project August 2008

Second Phase of "LSMP" launches

"The project on capacity development for landslide monitoring in the Republic of Uzbekistan" started in October 2007, aims development of landslide monitoring capacity in Uzbekistan, by the Japanese technical cooperation.

The second phase of the project has launched from May 2008. In the second phase, landslide monitoring equipments are actually installed and monitoring works started. Three landslide sites – Tekstilshik landslide and Uchtelek Village in Bostanlik region and Bedrenget village in Angren region are selected as monitoring sites, two more sites will be selected in the second phase.

Mr. Bazarov, Director of SMS commented his opinion at the beginning of the second phase, "Our researches in landslide investigation field began in 1958, we have about 2000 landslide sections in Uzbekistan. I wish Japanese technology will help us to get good results and to make new era for landslide monitoring in Uzbekistan. We can exchange our experience and information between Central Asian countries"

Landslide Monitoring Equipments were handed over to Uzbekistan

Long-awaited equipment for landslide monitoring arrived to SMS on July 18, 2008.

Confirmation work of the material, number and conditions had done, all equipment comply with the requirements.

Main equipment are as follows: Drilling machine, Inclinometers, Extensometers, Four wheel drive vehicle, Electric sounding instrument, Rain gauge, Water level gauge, Personal computer etc.

Handing over Ceremony and Technical Transfer Seminar were held at the Tekstilshik monitoring site in Bostanlik Region on July 30, 2008.



Core participants from Uzbekistan side are – Chairman of State Committee of Geology and Mineral Resources, Mr. Mavlyanov, Director of HYDROENGEO, Mr. Mavlonov, Director of SMS, Mr. Bazarov, Representative from Cabinet of Ministers of the Republic of Uzbekistan, Mr. Razzakov O., Japanese side are Japanese Ambassador in Uzbekistan Mr. Hiraoka, JICA Representative Office in the Republic of Uzbekistan (Japan International Cooperation Agency) Director, Mr. Noriaki Nishimiya, Chief Advisor of the project, Mr. Kensuke Ichikawa, Kyoto University Associate Professor, Dr. Hiroshi Fukuoka.

The Ambassador Mr. Hiraoka expressed his gratitude and expectations;

"I appreciate the efforts of the person in charge for procurement of the equipment. I expect smooth implementation of the project by using procured equipment which will help to create safer system in Uzbekistan against landslide disaster, and also will be helpful for Central Asian countries, suffering from landslide.

The Chairman Mr. Mavlyanov said,

"We made an agreement between JICA and HYDROENGEO in 2007. Now, within the frames of this project we can start monitoring works. Japanese experts arrived to Tashkent in June, and also Japan side handed over to Uzbekistan side drilling machine, parts and devices to the amount of \$500,000 USD. These instruments will allow us to get good results. I would like to ask the Head of Bostanlik Region to explain about our important activities to local people. Thank you so much for the Japanese side"



Landslide monitoring starts at sites

Preparation for the monitoring works has started at the sites from June 2008. The Chief Advisor, Mr. Kensuke Ichikawa, Landslide Measuring Expert, Satoru Tsukamoto, Drilling Technique Expert Hiroyuki Funaoka, Landslide Measuring Expert Mr. Masahiko Ikemoto and Drilling Technique Expert Mr. Tetsuo Nakamaya, total 5 experts were dispatched from Japan.

On July 6, the Experts moved to Bostanlik region and did confirmation of the equipments and transportation

to the sites with SMS staff. Working teams separate to Extensometer team and Drilling team, and setting of equipment started, considering the observation methods and manner of operation. Despite communication problem, the work operation is going on in nice team work.



Owing by the instruction of Dr. Fukuoka who is in charge for monitoring technique, Long span extensometers were installed at the Tekstilshik monitoring site, accumulation of the data are expected.

Though there must be some difficulties at the sites, we expect to overcome these difficulties and to create safer system against landslide disaster in Uzbekistan.

We appreciate to the residents and persons concerned for the provision of their land and path to the site, we also expect their cooperation until the end of this project.

Four key persons visited Japan

Prior to starting the second phase of the project, four key person's visited Japan. Four key persons, Mr. Mavlonov, Director of HYDROENGEO, Mr. Bazarov, Director of SMS, Mr. Turrobaev, Chief of Bostanlik Monitoring Station, Mr. Dalimov, foreman of drilling visited Japan from May7 to May 29, 2008. The purpose of the visit was study of Japanese landslide investigation methods and its countermeasures, mainly monitoring technique, and to discuss this project. The specialists had opportunity to try to use

advanced monitoring techniques for landslide investigations. They visited several organizations in concern, and received explanations of landslide disaster and its countermeasures.

Furthermore, they visited Kokusai Kogyo Co., Ltd. Kyoto University, YBM Co., Ltd. etc. which are important organizations for this project.

Mr. Turrobaev described his impression of Japan as follows,

“I was deeply impressed by high standard knowledge of Japanese specialists in the landslide investigations field; during our stay in Japan, we visited several landslides which occurred following by earthquakes and learned advanced techniques for landslide investigations and countermeasures. I think that obtained knowledge could be adapted into our work, and this project will give us such opportunity”;



LSMP Newsletter

The Project on Capacity Development for Landslide Monitoring in the Republic of Uzbekistan

"LSMP" is an abbreviation of Landslide Monitoring Project June 2009

Third Phase of "LSMP" launches

"The project on capacity development for landslide monitoring in the Republic of Uzbekistan" has entered its third phase this May.

Based on the high technological level of Uzbekistani institutions and well-timed support by the Japanese team, most of the operations are going right. During the previous phase, 3 landslide sites were selected and monitoring on the ground and in boreholes in Bostanlik and Angren regions.

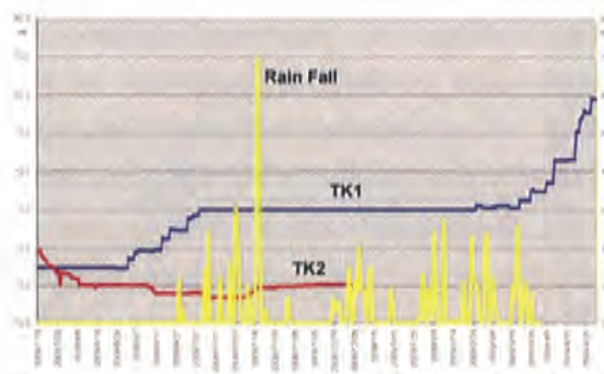
Fortunately, no big landslide movements or disasters occurred at those sites, monitoring activities continue by HIDROENGEО and SMS.

In this phase, 2 more landslides were selected for monitoring, and ground survey, geological investigation, and drilling have started in cooperation with UZB side and Japanese experts. New landslides located in **Tanga Topdi and Chetsu in Angren Region**, those landslides are active and have an extremely high impact on the economic development of Tashkent regions and Fergana valley, along Tashkent – Osh Highway, on Great Silk Road direction.



One new landslide study site (**Tanga Topdi**)

In the third phase, HIDROENGEО and SMSs experts study about methods of analyzing the data gained from extensometers, inclinometers, electric detectors and meteorological observation devices, and establish the monitoring system. Finally, landslide mechanism analysis methods and a basic framework for an early warning system are discussed by Uzbekistan institutions and Japanese experts.



Result of Analysis for the Extensometer

Preparation for the monitoring works started at the sites from May 2009. The Chief Advisor, Mr. Kensuke Ichikawa, Landslide Measuring Expert, Satoru Tsukamoto, Drilling Technique Expert Hiroyuki Funaoka and Mr. Tetsuo Nakamaya, total 4 experts were dispatched from Japan in this phase again.

Mr. Niyazov makes Presentation at The First World Landslide Forum in Japan

On 18-21 November, 2008, the First World Landslide Forum was held at the United Nations University in Japan. This forum aims at implementing the 2006 Tokyo Action Plan on the International Program on Landslide (IPL), many landslide researchers acting international level assembled in Japan and made presentations of their results of the researches.

Tokyo Action Plan proposed the global cooperation network of the IPL, and established the IPL Global Promotion Committee and IPL world center. The objectives of the Forum are the promotion of research and exchange the experiences, advances and achievements of IPL, and Designation of World Centers of Excellence on Landslide Risk Reduction.

Mr. Niyazov of HIDROENGEО made a presentation titled, "Tendency of Growth of Landslides Amount in the Boundary of 21st century and System of Geoindicators for the Stage-by-stage Landslide Hazard Warning System in the Republic of Uzbekistan, Central Asia". The growth of the number of landslides increased from the end of 20th Century and early 21st century is closely related intensive precipitation during the period, based on the monitoring of Geoindicators.



Contact telephone number: [+ 99871 2624757](tel:+998712624757)

Mr. Niyazov at the forum

International Seminar in Central Asia Region on Landslide, planed in Tashkent in 2010

In Kirgiz, Tadjikistan, Kazakhstan, Turkmenistan and Uzbekistan, each research organizations for landslide, emergency operation organizations and individual researchers have been tackled landslide and its disaster. Though the level of landslide countermeasure and monitoring technique are relatively high, no opportunities to discuss their actual situations and techniques have been held.

In "LSMP", International Seminar in Central Asia on Landslide in April 2010 in Tashkent is planed. Mr. Ichikawa, the project leader visited Kirgiz and Tadjikistan to explain the purpose and contents December 2008 and both country express their participation for the seminar with the upper organization and government agreement.

Mr. Ichikawa and Kirgiz's Landslide experts



Vice chairman Mr. Turamurador at the site
(center)

The Seminar on Technical Transfer for Landslide Monitoring held at new project site

The seminar on "LSMP" in phase 3 was held on June 12, 2009 at Angren city, Uzbekistan concerning organizations, landslide and hydrogeological engineers, local governors, JICA Uzbekistan representative, and Japanese experts participated to make mutual understanding about the process and chronology of the project and to learn technique of landslide monitoring. Mr. Mavlonov (Project Director / Head HYDROENGEEO) expressed his resolution for the success of 3rd phase of "LSMP", with good communication between Uzbekistan side and Japanese side. Mr. Turamurador, (Vice Charman of the Committee of Geology and Mineral Resource) commented on the landslide monitoring equipments and devices which were handed over from Japan to Uzbekistan, providing important data to the research organization. Those methods and analytical data provide useful information to the local population facing landslide danger, to take disaster countermeasures. At the new landslide site, Tanga Topdi, Japanese experts explained about the extensometer, inclinometer, and drilling machine.



Contact telephone number: + 99871 2624757

LSMP News Letter

LSMP Landslide Monitoring Project in the Republic of Uzbekistan

December 2009

LSMP third stage results

The Project on capacity development for landslide monitoring in the Republic of Uzbekistan commenced in October 2007. Activities of the project divided into four stages.

At present, the project is on the third stage of its realization.

In accordance with the approved Plan of Operation, five pilot landslide sites for monitoring were selected (Tekstilshik, Uchterek, Bedrenget, Tanga topdi, Chetsu), where 8 Inclinomater boreholes were drilled, all sites were equipped by automatic rain-gauges, groundwater measuring devices, Extensometers for continuous observations of landslide movements. HYDROINGEO specialists implement permanent observations on the devices installed; the data received are applied in SMS work.

Japanese Experts and their Uzbekistan C/P jointly resolve all problems to achieve overall goal of the project: "Reduction of human loss and economic damage».



At this moment could be assure that realization of the project is successful. Almost all aims of the project were achieved by joint cooperation of JICA Experts and SMS, HYDROINGEO specialists and they are ready to continue collaboration for the benefit of Uzbekistan people.

For the fourth stage of the project implementation of International Seminar for landslide in Central Asian Countries is included. HYDROINGEO and SMS specialists are going to exchange received experiences with the invited specialists from other countries on the Seminar.



During implementation of joint works, many memorable moments for participants occurred.

LSMP achievements

During implementation of the Project, due to strong support from JICA Experts Team the HYDROINGEO and SMS specialists could be familiar with analysis methods using data from Extensometers, Inclinoimeters, electronic gauges and meteorological devices.

At present time, HYDROINGEO and SMS specialists collect and compile measuring data by themselves.

On the fourth stage of the project, received measuring data will be used and applied into Early Warning System.



The devices installed at the sites, attract local people interest.

Reputable specialist's opinion

Mr. Mavlonov A. A, Director of HYDROINGEO

- First of all let me express my deep gratitude to JICA, and especially to JICA Experts, Mr. K. Ichikawa, Mr. S. Tsukamoto and other our partners and friends, who supported us to understand modern techniques.

Provided devices are fully justify our expectations, techniques of landslide areas is improved, that permit us to get reliable information on landslide activation for further actions to mitigate disaster.

We truly hope to extend our cooperation.

Mr. Turabboev A., Director of SMS

- Because of retirement of Mr. Bazarov, I become the successor to the assignment of SMS Director and Manager of the project. I fully agree with the opinions of my colleagues and would add for myself, we are ready to implement another project, ready for further operation of new techniques at the other landslide areas in the Republic of Uzbekistan, and hope that our Japanese C/P would support us.

Mr. Niyazov R. A, Chief Scientific Consultant, HYDROINGEO

- We thank JICA kindly for granted devices and equipment.

By virtue of high-precision devices we can obtain accurate data for the required period, because the devices equipped by self-recording unit.

That's sufficiently safe our time, time that sometimes so required to make a decision related to saving of human lives.

LSMP Newsletter

The Project on Capacity Development for Landslide Monitoring in the Republic of Uzbekistan

"LSMP" is abbreviation of Landslide Monitoring Project September 2010

"LSMP" is now on the final stage

"The project on capacity development for landslide monitoring in the Republic of Uzbekistan" "LSMP" which started October 2007 is about to finish next October. During implementation period of the "LSMP", six JICA experts, Mr.Ichikawa, Mr.Tsukamoto, Mr.Funaoka, Mr.Nakayama, Mr.Ikemoto, Dr.Kuwano and Professor Fukuoka of Kyoto University visited Uzbekistan to introduce Japanese monitoring methods and installed measuring devices for the research of landslide based on the experience and characteristics of landslide in Uzbekistan.

Various types of landslide monitoring devices were installed in Bostanlyk sites and Angren sites. Drilling work and installation of extensometer had continued in the open air without a shade at Tikstilshik and Tanga-Topdi sites and when it was snowing at Uchterek site. After the installation, experts of MS continued collection of the data and due to devices maintenance, most of them are in good condition.



Monitoring technology of SMS and HIDROENGEО has been improved with the help of Japanese cooperation. "At the end of implementation period of the "LSMP", a lot of interesting results were obtained", said Mr.Niyazov.

Regarding the activities out of Uzbekistan, four key persons of the "LSMP" visited Japan to study Japanese technology of landslide monitoring and countermeasures. Furthermore, the "International Seminar on Landslide Monitoring in the Central Asian Countries" was held in April 2010 in Tashkent to share the knowledge and experiences among countries and to create a human network. It became an opportunity to spread information about the "LSMP" results not only in Uzbekistan but also in neighboring countries.

Final technical seminar

The fourth technical seminar on "LSMP" in phase 4, which was final technical seminar of the project, was held on 9 of September, 2010 in Tashkent. Previously three technical seminars and one International Seminar were held step by step to introduce "LSMP". The fourth technical seminar focused on review all the "LSMP" activities, results and discussion about future prospects.

Senior Representative of JICA Representative Office in the Republic of Uzbekistan, Mr. Totsuka mentioned that, during the implementation period of the project

"LSMP" a great and fruitful work had been done and in general they had achieved positive results.

In the part 2 of the seminar, experts of the "LSMP" made their presentations.

Mr. Ichikawa, chief of JICA experts, made review on Overall Activities through "LSMP". After his presentation, Mr. Tsukamoto made presentation on Achievement of the Technical Transfer, and Dr. Kuwano presented Analysis of Landslide.

On the behalf of SMS and HIDROENGEО, Mr. Turabbaev, the director of SMS made presentation and expressed: after starting this project we have received from the Japanese side appliances and equipment such as: a small drilling machine, extensometers, inclinometers, raingauge and Nissan car. SMS and HIDROINGEO employees were trained to work with the equipment and it was successfully installed at sites of Bostanlyk and Angren regions. The Project has provided important measurements in landslide area. Beside observing sites in Tashkent area, there are several dangerous sites in other regions such as Korakishlak, Modmon, situated near the railroad station Aknazar and we wanted to continue further the surveillance support of government of Japan. I express my acknowledgements for cooperation to all the participants of the Project.

Mr. Niyazov and Mr. Mingboev made explanation about monitoring results and analysis that showed good and interesting relation between landslide movement measured by extensometers, rainfall and water level of water reservoir.

Finally, Mr. Mavlonov, Director of HIDROENGEО and Mr. Talipov, State Inspection Gosvodhoznadzor, made speech for future activities and phase 2, next proposing project to Japanese government. Mr. Mavlonov commented as follows: In fact SMS and HIDROINGEO, with the support of JICA experts

reached all the aims of the 1 stage LSMP Project. In order to enhance the monitoring of hazardous landslides processes it is necessary to transfer technical know-how to neighboring countries and SMS and HIDROINGEO are intend to continue the Project with the transition to II stage. It is planned to organize monitoring of landslides, prevention of their effects on the dams of water reservoirs in mountain area of Central Asia. The main objective of II stage is reduction of human losses and social-economic and ecological damage, improving technical skills of all concerned departments and the deepening of cooperation between Central Asian countries in the monitoring of landslides. Expected schedule of the project is from 2011 April -to 2014 September.

And, Mr. Talipov commented as follows: GOSHOZVODNADZOR employees conducted multi monitor of dam part of water reservoirs in mountainous area. In recent years, as a result of activity of landslides around water reservoirs, a lot of problems, such as threatening human life and enterprises. In the future I would like to extend the observations and install additional surveillance of the Akhangaran, Charvak and Gissarak Reservoir. Our organization in conjunction with HIDROINGEO and SMS applied for technical cooperation with Japan on this issue.



Finally, Ms.Shvay, JICA team assistant played an important part, and Ms.Tsoy, Mr. Titeyev, Mr.Baisov and Mr.Rakhimov, interpreters also became bridges between Uzbekistan and Japan.

“LSMP” Study team.

Contact telephone number: +99871 2624757

Toward the future cooperation between Japan and Uzbekistan

There are many landslides in Japan and Uzbekistan. The countries suffer from landslide disaster for long period and it is necessary to take measures. A lot of efforts have been done to avoid human casualties and damage of infrastructure in Japan. Technology and experience of Japan believe to contribute to Uzbekistan landslide research and disaster prevention. Uzbekistan’s experience and research of the landslide must be effective to Japan as well.

The most important part within frames of “Central Asia + Japan”, is the relation between Uzbekistan and Japan, and one of good examples of successful cooperation is landslide research.

Acknowledgements

During implementation of “LSMP”, we can get not only a lot of data and results, but also mutual understanding and friendship between Japanese people and Uzbekistan people. JICA and other Japanese government organization supported from Japanese side, a lot of organizations of Uzbekistan supported “LSMP” as well. We express our great gratitude.

