

Annex 4 Five-Criteria Evaluation Grid

1. Relevance			Remarks
Topics	Questions	Information/data to be collected	
Needs	Are the Project Purpose and the Overall Goal relevant to the needs of Romania?	Record of seismic damage in Romania and information on its vulnerability to the seismic risk. Challenges and possible solutions.	There is a serious need of seismic risk reduction in Romania. Promotion of retrofitting and earthquake-resistant buildings is a priority.
	Are the Project Purpose and the Overall Goal relevant to the needs of the target groups?	Needs of the target group (citizens in Bucharest)	The need of earthquake-resistant buildings is urgent for the citizens, not only in Bucharest but also other regions in Romania. The structure engineers were more direct target group aiming at improvement of techniques.
Priority	Is the Project relevant with the development policy of Romania?	National development policy and seismic risk-related policies in Romania	The National Development Plan 2007-2013 (December 2005) refers seismic risk in several sections such as environmental protection, public safety in emergency situations, and social inclusion (people living in vulnerable buildings).
	Is the Project relevant to the Japan's country assistance policy for Romania?	Japan's development assistance policy (ODA charter, etc.), JICA's assistance policy for Romania and priority areas.	JICA's Country Assistance Program in Romania (drafted in 2005) identifies seismic risk reduction as one of their programs in development of social and economic infrastructure in order to promote industries, trade and investment.
Strategy	Has the Project taken up a good strategy to reduce the seismic risk in Romania?	Whether the project is appropriate as a strategy to reduce the seismic risk. How the accumulated know-how in Romania and Japan has been utilized. Whether the Project applied methods and techniques that were relevant to the situation of Romania.	The Project approaches the issue of seismic risk reduction through promotion of earthquake-resistant buildings from two directions: development and dissemination of techniques, and awareness building on retrofitting. Application of the techniques is beyond the structure of the Project/Center (actually the Project is involved in retrofitting design of two buildings to strengthen the application side). It depends on the political will to promote retrofitting by overcoming obstacles.

	Was the Project structure made up logically?	Whether the structure from Activities to Outputs to Project Purposes and to Overall Goal was logically constructed.	The Project was logically designed to contribute to the technical development in this area for diffusion. However, it had limitations in political and social influences, which are necessary to accelerate the pace of retrofitting.
	Does Japan have comparative advantage in this technical area?	Japanese technical competences. History and achievement of JICA's assistance in similar areas.	Japan has a strong comparative advantage in this area. The Project/Center has chosen or mixed either of Japanese, European, or American techniques for the best application in Romania. BRI and JICA have implemented similar projects in Turkey, Peru, Mexico, etc. These were also projects to develop manuals with research institutes.
	Was the selection of the Romanian Counterpart organization and target groups right?	Selection process of the Counterpart organizations and the target groups	The creation of Center (with collaboration of UTCB and INCERC) was the best approach in terms of technical competence within the framework as a project of a national organization. It has institutional limitations in the area of application. Financial constraints make it difficult to employ and retain staff members.
Others	Was there any change in the environment of the Project (political, economic and social conditions) since the Mid-term Evaluation (March 2005)?	Information on change of political, economic and social conditions.	Recognition of seismic risk reduction in the policy remains.
2. EFFECTIVENESS			
	Topics	Information/data to be collected	Remarks
Achievement of the Project Purpose	Will the "Project Purposes" be achieved by the end of the Project based on the inputs, outputs and the progress of the activities?	Project performance. Degree of achievement of the Project Purpose	The Project Purpose is likely to be achieved; the technology has been improved and disseminated by the Center, and the products mentioned by the two Indicators will be completed.
Causality	Were the four "Outputs" only prerequisites for the achievement of the "Project Purposes"? Are there any other activities that would have been necessary for achievement of the "Project Purposes"?	Consequences between the Output and the Project Purposes	Although the definition of "dissemination" was not very clear, the Project has successfully introduced the new techniques to be available (as agreed at the beginning of the Final Evaluation). If the Project aimed at higher level of dissemination (i.e. increase of retrofitting), it would not be achieved by the Project.

<p>Are there any factors that particularly contributed to achievement of the Project Purposes?</p>	<p>Contributing factors</p>	<p>These were contributing factors: Competence of the Project members and good relationship. Japanese technology and skills. Trust in those. High quality equipment.</p>
<p>Are there any factors that particularly impeded achievement of the Project Purposes?</p>	<p>Impeding factors</p>	<p>There were no serious impeding factors.</p>
<p>Did the Project do detailed designs of retrofitting work to utilize the new technology developed by the Center? (Recommendation 1, Mid-term evaluation)</p>	<p>Record of the Project</p>	<p>Phase I and II were completed (structural design and calculation). Phase III is ongoing (detailed design drawings, working drawings) Presentations to the residents and bidding will follow.</p>
<p>Did the Project issue Certificates to the participants of the seminars and training courses (Recommendation 2). Did it motivate the participants?</p>	<p>Record of this activity Reaction of participants. Change of numbers of participants.</p>	<p>The Center does not issue certificates to participants of seminars, which are only for few hours-one day. They do not organize training courses.</p>
<p>Has MTCT staff been involved in the Division 4 activities? (Recommendation 3)</p>	<p>Record of this activity</p>	<p>MTCT staff has not been involved in Division 4 activities.</p>
<p>To what extent these issues were relevant to achievement of the Project Purposes? • The Romanian government continues its seismic risk reduction policy.</p>	<p>Effect of the Important Assumptions and other factors</p>	<p>It was relevant. The Romanian government keeps seismic risk reduction among its policy.</p>
<p>3.EFFICIENCY</p>		
<p>Topics</p>	<p>Information/data to be collected</p>	<p>Remarks</p>
<p>Input</p>	<p>Record of Input</p>	<p>(See the record of Input). They were appropriate. Problems: Shortage in number of Romanian counterparts. The dispatch of the current Japanese CA was not timely: too close to the end of the Project (only one year).</p>

	Are the equipment actively utilized?	How the equipment utilized (record of experiments etc.)	Equipment is fully utilized. Some equipment has not been utilized due to delay in obtaining car number plate.
Achievement of Outputs	Were the Outputs achieved?	Achievement of Outputs	All Outputs are highly likely to be achieved by the end of the Project. Most manuals are still in draft.
Capacity building of the Romanian project members	Has the capacity of the Romanian project members been developed?	Record of Activities Opinion of Romanian and Japanese project members	Technical capacity has been well developed, so there is no problem in project activities and use/maintenance of equipment. Professionalism were also developed through the Project activities. Capacity in policy-related work and public awareness raising needs to be further strengthened.
Causality	Were the "Activities" sufficient for the achievement the "Outputs"?	Record of Activities and achievement of the Outputs	Activities were directly related to production of Outputs.
	Did the factors described as the "Important Assumptions" occur? If they did not. (i.e. the economic condition deteriorated; or some project staff left), how did the Project approach the issue? • "the economic condition of Romania and Japan remains stable." • "Romanian staff do not leave the Project after training and transfer of technology."	Record of Activities	The economic condition of both countries has not changed. Some staff left the Center mainly due to low level of salary after CP training.
Timing	Were the "Activities" carried out timely?	Record of Activities	They have been carried out timely on the whole. Activities are planned in the manner that most Outputs are finalized in the last stage of the Project.
Others	Has the current project management system worked well for the Project? Did the Project use lessons learned from other similar projects in other countries managed by the Japanese partner organizations?	Record of Activities Lessons from other similar projects	Within the Project, management was all right. MTCT was involved in the management as necessary. The Building Research Institute in Japan has collaborated with JICA in similar projects in other earthquake-prone countries. These were mainly development of manuals with existing research institute. This Romanian project is different from other projects in these points: 1) the implementing organization (Center) was created for the

4. IMPACT		Questions	Information/data to be collected	Remarks
Achievement of the Overall Goal "Measures against earthquake-induced disasters in Romania are strengthened."	Will the Overall Goal be achieved within five years after the end of the Project based on the result of inputs, outputs and activities, and achievement of the Project Purposes? Did the Project publish its Outputs to make the Project known to the public according to the recommendation by the Mid-term Evaluation? (Mid-term evaluation Recommendation 4) Did MTCT propose the Ministry of Culture to review the criteria of the list of "the buildings of architectural importance" (to promote retrofitting work), which was recommended by the Mid-term evaluation? (Recomm.5)	Achievement, Effect of Important Assumptions, contributing and impeding factors Achievement Achievement	The measures will be strengthened. But the number of retrofitted buildings will not increase rapidly due to several obstacles, which is beyond the scope of the Center or the Project. The Center has had opportunities to present the achievement in seminars, in international conferences, through publications.. MTCT has not proposed the Ministry of Culture to review the list. (This recommendation was not realistic).	
Causality	Has the awareness of Romanian citizens about retrofitting work been raised? Are there any factors that would impede achievement of the Overall Goal? Is the consequence from the Project Purposes to the Overall Goal logically designed?	Contributing factors Achievement, Effect of Important Assumptions, contributing and impeding factors Structure of the Project, Effect of Important Assumptions, contributing and impeding factors	People are more aware of the needs of retrofitting. However, it does not necessarily lead to acceptance of retrofitting of their apartments. Strong political will is required to promote retrofitting. Strategy has to be developed to overcome obstacles, particularly practical ones to convince the residents in vulnerable buildings. There is a gap between Project Purpose and Overall Goal. Promotion of retrofitting requires actions of the government.	

	<p>Are the Important Assumptions valid? If not, how does the Project solve the problem?</p> <ul style="list-style-type: none"> • "Residents and users' consensus on retrofitting works will be obtained." • "Building structure is properly maintained by the residents." • "Other concerned ministries owning 1st class importance buildings finance retrofitting works." <p>(other Important Assumptions" proposed)</p> <ul style="list-style-type: none"> • "The Romanian authority continues to promote retrofitting of buildings." • "Design and construction companies apply the technologies developed by the Center to actual retrofitting work." 	<p>Record of Activities and the process</p>	<p>The government policy on seismic reduction continues, but retrofitting does not progress so much:</p> <p>The Project is successful in raising general awareness of citizens in earthquake damage prevention and retrofitting, but actual consensus of residents is something the Project cannot work on.</p> <p>Once the techniques are introduced as manuals and Codes, they will be widely used by structural engineers. Codes are enforced.</p>
Impact	<p>Are there any positive and negative impacts on political, social or cultural aspects, except for the Overall Goals?</p> <p>Did the Project equally benefit people from different background (social class, ethnicity, gender, etc.)</p> <p>Are there any negative effects brought about by the Project? Does the Project take measures to mitigate them?</p>	<p>Examples</p> <p>Examples</p> <p>Examples</p>	<p>Increased awareness on earthquake damage prevention. The Project on its own is not able to accelerate the pace of retrofitting work.</p> <p>The Project benefits all categories of people, especially those living in vulnerable buildings.</p> <p>The Project created high expectations on the new techniques. They are not able to offer solutions for practical inconveniences to the residents.</p>
5. SUSTAINABILITY			
Political aspects	<p>Questions</p> <p>Will the political support by the Romanian government for reduction of seismic risk continue after the end of the Project?</p>	<p>Information/data to be collected</p> <p>Policy and strategy of the Romanian government</p>	<p>Remarks</p> <p>The needs for and the policy on seismic risk reduction remain. But the political support for the Center is not fully guaranteed.</p>

Organizational and financial aspects	Does the Center have capacity to continue its activities after the Project? (Support from the government, legal framework, center's mission, staff, budget, offices and equipment, etc.)	Center's mission and position, staffing and budget, working plan	The Center has technical competence with level of skills and equipment of high grade. Challenges: How to apply and implement the techniques. How to differentiate the Center from possible competitors. How to liaise with the private sector. How to generate income (from independent contracts?) How to employ and retain staff members.
Technical aspects	Has the capacity of the Romanian project members been developed to the extent that the Center could continue the activities after the Project ends? Are the equipment provided by the Project actively utilized and maintained? Are the techniques and manuals developed by the Project utilized in actual retrofitting-related work? Has the awareness of the engineers/construction companies/citizens about retrofitting been raised?	Technical and management capacity of the Center staff How the equipment is utilized and maintained. Number of buildings to which the technique developed by the Center was utilized for retrofitting work. How the engineers and construction companies utilize the manuals developed by the Center. How engineers and citizens participate in the seminars organized by the Center. Awareness of engineers and citizens about the retrofitting work.	The technical capacity has been well developed. Competence in policy-related work and dissemination needs to be further strengthened. The staff acquired enough skills to maintain the equipment. The low budget could cause a problem in maintenance after the project ends. After the manuals are published (expected by the end of the Project), there will be more impact on actual application. The Codes are compulsory Awareness of engineers and citizens of the issue in the seismic risk reduction and needs of retrofitting has been improved. Regarding the citizens, awareness does not necessarily lead to acceptance of retrofitting due to economic and other reasons. The unpredictable nature of earthquake is an important factor that prevents citizens from investing in retrofitting.

Annex 5 List of Experts

Long-term experts			
Technical Area	Function/Areas in charge in the Project	Period of service	Name
Ground motion	EQ observation & Soil Testing	2002.10.01-2004.09.30	HURUKAWA Nobuo
Structure	Seismic Retrofitting & Design	2002.10.01-2005.09.30	MIKAME Akihiko
		2005.09.14-2007.09.13	SEKI Matsutaro
	Seismic Retrofitting	2004.09.21-2006.09.30	KAMINOSONO Takashi
		2006.09.14-2007.09.30	KATO Hiroto
	Coordinator	2002.10.01-2005.06.30	TOJO Isao
		2005.06.15-2007.06.14	MIYARA Koichiro

Short-term experts			
Structure	Seismic Evaluation and Retrofitting	2003.04.06-04.24	FUKUYAMA Hiroshi
		2004.05.12-05.30	FUKUYAMA Hiroshi
		2005.05.29-06.18	MUKAI Tomohisa
		2006.06.09-06.24	KATO Hiroto
	Seismic Code, Disaster Recovery	2003.04.06-04.24	KUSUNOKI Koichi
		2004.05.08-05.26	SAITO Taiki
		2005.05.29-06.18	KATO Hiroto
		2006.09.10-09.24	SAITO Taiki
	Assistance of MTCT Retrofitting Activity	2003.03.18-05.11	YOSHIHARA Teiichi
		2004.02.21-03.21	KOBAYASHI Shinya
		2005.02.14-04.09	KITAJIMA Hideaki
		2006.03.14-04.16	KOBAYASHI Shinya
	Seismic Retrofitting Techniques	2004.09.07-09.21	TESHIGAWARA Masaomi
		2006.11.25-12.17	OKADA Tateyoshi
RC Specimen Making Technique & Structural Experiment Technique	2005.11.30-12.23	FUJIMOTO Isao	
Ground motion	Collection & Analysis of Seismic Information Data	2003.07.05-07.20	KASHIMA Toshihide
		2005.09.12-09.30	YAMANAKA Hiroaki
		2007.02.25-03.11	KASHIMA Toshihide
	Database for Ground Condition & Structure	2003.11.22-12.14	OYAMA Shin
	Input Earthquake Ground Motion - Draft Manual	2005.02.19-03.06	OKAWA Izuru
2006.03.14-03.26		IIBA Masanori	
Soil testing	In-Situ Soil Testing and Investigation	2004.06.13-07.11	TAKAHASHI Toshiyuki
		2004.07.03-08.01	TAGUCHI Masaaki
		2006.06.12-07.06	FUKUMOTO Shunichi
	Indoor Soil Testing and Investigation)	2004.09.07-10.31	TAKEHARA Naoto
		2006.10.22-11.05	TAMURA Masahito

Public awareness	Public awareness and dissemination	2006.03.14-03.26	FUKUWA Nobuo
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Installation of equipment			
Structure	Installation of Reaction Frame	2004.04.17-05.23	KUROKAWA Hiroshi
		2004.04.17-05.09	MARUKADO Toshio
		2004.05.08-05.23	FUJUMOTO Isao
Ground motion	Installation of S-Motion Observation Equip.	2003.07.05-08.02	KANEHIRA Takayuki KOBAYASHI Tomotaka
		2004.06.05-06.13	KOBAYASHI Tomotaka YAMANAKA Masayuki
Soil testing	Installation of Ground Investigation Equip.	2003.06.21-07.13	KAZAMA Hiroharu
	Installation of Soil Testing Equip.	2003.07.12-07.31	ITO Masao SOYAMA Akira

Annex 6 List of Counterpart Personnel

NCSRR staff

#	F/P	Family Name	First Name	Div.	Field	Title
1	F	Vacareanu	Radu	I	Structure	Director
2	P	Postelnicu	Tudor	I	Structure	Head, Div I
3	P	Popa	Viorel	I	Structure	
4	P	Cotofana	Dragos	I	Structure	
5	F	Chesca	Basarab	I	Structure	
6	P	Aldea	Alexandru	II	Seismic network	Head, Div II
7	P	Demetriu	Sorin	II	Seismic network	
8	F	Poiata	Natalia	II	Seismic network	
9	P	Albota	Emil Florin	II	Seismic network	
10	F	Arion	Cristian	III	Soil Testing	Head, Div III
11	P	Pavel	Constantin	III	Structure	
12	P	Iancovici	Mihai	III	Structure	
13	P	Stefanescu	Bogodan	III	Structure	
14	P	Lozinca	Eugen	III	Structure	
15	P	Calarasu	Elena	III	Soil Testing	
16	F	Neagu	Cristian	III	Soil Testing	
17	P	Pavel	Mihai	III	Structure	
18	F	Ursei	Ion	III	Soil Testing	Driver
19	F	Ispas	Gheorghe	III	Soil Testing	Worker
20	P	Georgescu	Emil-Sever	IV	Structure	Head, Div IV
21	F	Matis	Caterina	Ado		Chief Accountant
22	F	Gheorghe	Maria	Ado		Accountant
23	F	Beldiman	Ionut	Ado		Administrator
24	F	Ghimis	Marcela	Ado		Human Resources
25	P	Sonia	Laurentiu	II	Seismic network	Technician
27	P	Pirvan	Ion	III	Structure	Technician
28	F	Munteanu	Mioara	Ado		Secretary

Former NCSRR staff

#	F/P	Family Name	First Name	Div.	Field	Title	Start time	End time
1	P	Chiriazzi	Christian	I	Structure		02.09.30	02.11.29
2	F	Torok	Liviu	Ado		Accountant	02.11.17	03.01.30
3	F	Cozac	Adriana	Ado		Accountant	02.11.10	03.07.30
4	P	Oprea	Felix	I	Structure		03.09.30	04.01.30
5	F	Pascu	Alexandra	Ado		Secretary	03.04.17	04.09.21
6	P	Bucataru	Aurora	III	Soil Testing		02.11.11	05.11.01
7	F	Vladescu	Cristina	Ado		Human Resources	02.11.10	06.01.01
8	F	Iftimescu	Roxana	II	Seismic network		02.10.13	06.01.03
9	P	Negulescu	Caterina	II	Seismic network		03.03.31	06.01.10
10	P	Radoi	Raluca	II	Seismic network		03.03.31	06.04.03
11	F	Ionescu (Ghica)	Raluca	I,IV	Structure		04.09.09	06.06.19

Other counterparts

Nr.	Family Name	First Name	Institution	Position
1	Borbely	Laszlo	MTCT	Minister Delegate for Public Works
2	Bara	Iuliu	MTCT	Personal Adviser in Minister Delegate's Office
3	Petrescu	Stela	MTCT	Director, PMU HRMEP
4	Stamatiade	Cristian	MTCT	Director , DRC
5	Dumitrescu	Sorin	MTCT	Dept. of Intl Relations
6	Neacsu	Petre	MTCT	Dept DGERB(Economics)
7	Stematiu	Dan	UTCB	Rector, UTCB
8	Patrut	Petre	UTCB	President, UTCB
9	Lungu	Dan	UTCB	Director General, INMI;former General director of INCERC
10	Constantinescu	Dan	INCERC	Director General
11	Georgescu	Dan-Paul	INCERC	Director, Structural safety and earthquake engineering dept.
12	Nistorescu	Mihai	UTCB	Network eng.
13	Badea	Dragos	Proiect Bucuresti	Design engineer
14	Mironescu	Mrcea	MIRO	General Director
15	Tomescu	Sanda	MTCT	DRC
16	Ionescu	Adrian	MTCT	Media Division
17	Tureanu	Ileana	MTCT	Ex-State Secretary
18	Stanescu	Ion	UTCB	former DG, DGTC, MTCT
19	Zamfirescu	Dan	UTCB	Assoc. Prof.

Annex 7 List of Counterpart Trainings in Japan

Field	Title of training	Training term	Name
Structure	JP 1st & 2nd Screening Method	2002.10.02-12.25	Eugen Lozinca
	JP Strength Method in Seismic Retrofit, Quick Inspection	2002.10.02-12.25	Bogdan Stefanescu
	Structural Testing Facilities & Retrofitting	2002.08.18-10.05	Radu Vacareanu
		2003.06.08-10.03	Dragos Cotofana
	Seismic evaluation & Retrofitting	2003.06.08-10.03	Viorel Popa
	Seismic Evaluation Draft Manual	2004.12.05-2005.03.26	Basarab Chesca
		2005.10.06-12.17	Radu Vacareanu
	Earthquake Resistant Design Draft manual	2005.01.10-03.30	Dan Zamfirescu
		2006.01.24-03.23	Eugen Lozinca
2007.02.01-03.14		Viorel Popa	
RC specimen making techniques and Structural experiment techniques	2005.07.03-09.15	Mihai Pavel	
Seismic Ground Motion	Database for Ground Condition & Structure	2003.08.11-11.01	Alexandru Aldea
	Input Earthquake Ground Motion Draft manual	2004.08.21-12.18	Caterina Negulescu
		2005.10.06-12.17	Alexandru Aldea
		2006.10.15-12.16	Alexandru Aldea
Soil Testing	In-Situ Soil Testing & Investigation	2003.03.25-11.29	Elena Calarasu
		2004.01.18-06.30	Cristian Arion
	Indoor Soil Testing & Investigation	2004.08.21-12.18	Raluca Radoi
		2005.10.06-2006.03.18	Cristian Neagu
Public awareness	Public awareness and education	2005.01.10-01.29	Emil-Sever Georgescu Ana Maria Bitu
		2006.01.16-02.25	Raluca Ghica
		2007.01.21-02.03	Radu Vacareanu
Legislation	Administrative training on Legislation & Dissemination	2003.01.26-02.08	Stela Ageta Petrescu Alexandrin Papadachi Alina Carmen Crihan
		2005.01.10-01.23	Tudor Postelnicu
		2006.01.11-01.28	Dan Lung Iuliu Bara
		2007.01.21-02.03	Cristian Stamatiade Dan Stematiu
Others	IISEE Training Course	2002.08.27-2003.07.20	Felix Dan Oprea
		2003.08.26-2004.07.18	Mihai Pavel
		2004.09.20-2005.09.10	Natalia Poiata
		2006.09.29-2007.09.15	Ovidiu Bogdan
	Seminar in Turkey	2003.01.20-01.30	Caterina Negulescu
		2003.10.13-10.23	Raluca Radoi Aurora Bucataru
		2004.06.21-07.01	Elena Calarasu Cristian Neagu Basarab Chesca

Annex 8 List of Equipment

<Provided equipment>

Arv Date	Description	Qty	Unit	Price	FY
Apr.9, 2003	GEODAS-10-12 (12 ch) Data Processor	1	unit	¥5,044,000	2002
Apr.9, 2003	SPUM Type Receiver with cable	1	unit	¥990,000	2002
Apr.9, 2003	Pneumatic System	1	unit	¥550,000	2002
Apr.9, 2003	Power Winch	1	unit	¥1,050,000	2002
Apr.9, 2003	Power Unit for Winch	1	unit	¥279,000	2002
Apr.9, 2003	GEODAS-10-3 (3ch) Data Processor	6	units	¥2,967,000	2002
Apr.9, 2003	Tangent Cable, 50m	18	pcs.	¥49,500	2002
Apr.9, 2003	Extension Cable, 50m	2	pcs.	¥34,600	2002
Apr.9, 2003	CR4.5-1 (H) Constant Tangent Sensor (1 sec.)	13	pcs.	¥148,300	2002
Apr.9, 2003	CR4.5-1 (V) Constant Tangent Sensor (1 sec.)	8	pcs.	¥148,300	2002
Apr.9, 2003	CR2-5 (H) Constant Tangent Sensor (5 sec.)	13	pcs.	¥257,000	2002
Apr.9, 2003	CR2-5 (V) Constant Tangent Sensor (5 sec.)	8	pcs.	¥277,000	2002
Apr.9, 2003	DTC-367 Triaxial Testing Apparatus Main Unit	1	unit	¥20,600,000	2002
Apr.9, 2003	DTC-250001 Vender Element Measuring Apparatus	1	unit	¥1,680,000	2002
Apr.9, 2003	NLP-W-35 Air Compressor	1	unit	¥97,900	2002
Apr.9, 2003	PST-150H Auxiliary Tank	1	pc.	¥151,300	2002
Apr.9, 2003	TSW-20 Vacuum Pump	1	unit	¥1,096,000	2002
Apr.9, 2003	UE-15N Step-down Transformer (15A)	3	pcs.	¥96,900	2002
Apr.9, 2003	IBM Desk-top Type Computer	1	unit	¥534,000	2002
Apr.9, 2003	LCD Display	1	pc.	¥143,000	2002
Apr.9, 2003	A/D Converter	1	pc.	¥484,500	2002
Apr.9, 2003	Laser Printer	1	pc.	¥24,700	2002
Apr.9, 2003	Step-down Transformer	1	pc.	¥317,650	2002
Apr.9, 2003	Data Processing Software	1	pc.	¥69,200	2002
Apr.9, 2003	Testing Sieve DH-13	2	sets	¥51,400	2002
Apr.9, 2003	A&D Electronic Balance Model ET-300W	1	unit	¥147,300	2002
Apr.9, 2003	Desicator	3	pcs.	¥31,600	2002
Apr.9, 2003	Vacuum Pump DA-20D	1	pc.	¥49,000	2002
Apr.9, 2003	Liquid Limit Testing Apparatus	2	units	¥55,400	2002
Apr.9, 2003	Plastic Limit Tester Model DH-23	2	units	¥132,500	2002
Apr.9, 2003	Hydrometer Jar Model DH-302	10	pcs.	¥91,200	2002
Apr.9, 2003	Mechanical Analysis Stirrer	1	unit	¥84,000	2002
Sep.30, 2003	Truck	1	unit	USD64,000	2002
Sep.30, 2003	Drilling Rig	1	set	USD194,000	2002
Mar. 3, 2004	Main Frame	1	Set	¥40,256,400	2003
Mar. 3, 2004	Sliding Support	1	Unit	¥2,883,000	2003
Mar. 3, 2004	Parallel Restriction Device	1	Set	¥1,889,000	2003
Mar. 3, 2004	Counter Weight	4	Unit	¥325,000	2003
Mar. 3, 2004	Cart	1	Set	¥248,000	2003
Mar. 3, 2004	Chine Hoist	2	Unit	¥62,000	2003
Mar. 3, 2004	Chine Hoist	6	Unit	¥117,000	2003
Mar. 3, 2004	Chine Hoist	4	Unit	¥46,700	2003
Mar. 3, 2004	Chine Hoist	4	Unit	¥106,000	2003
Mar. 3, 2004	Geard Trolley	2	Unit	¥55,500	2003
Mar. 3, 2004	Tool 1	1	Set	¥965,000	2003
Mar. 3, 2004	Tool 2	1	Unit	¥462,500	2003
Mar. 3, 2004	Tool 2	1	Unit	¥65,000	2003
Mar. 3, 2004	Tool 2	1	Pcs	¥41,300	2003
Mar. 3, 2004	Pin Jig	1	Set	¥2,715,000	2003
Mar. 3, 2004	Test Pcs.	2	Set	¥1,048,000	2003
Mar. 3, 2004	Oil Pressure Device	2	Unit	¥7,218,000	2003
Mar. 3, 2004	RS Adapter		Box	¥248,000	2003
Mar. 3, 2004	Strain Device	6	Unit	¥218,200	2003
Mar. 3, 2004	PC Software	1	Set	¥5,953,000	2003
Mar. 3, 2004	PC	1	Box	¥376,900	2003
Mar. 3, 2004	Hydraulic Oil Jack	1	Unit	¥2,568,000	2003
Mar. 3, 2004	Road cell	1	Unit	¥2,115,600	2003

Mar. 3, 2004	Displacement Scale	1	Box	¥93,500	2003
Mar. 3, 2004	Oil Pressure Jack	2	Unit	¥2,185,000	2003
Mar. 3, 2004	Road cel	2	Unit	¥1,294,000	2003
Mar. 3, 2004	Displacement Scale	2	Box	¥110,200	2003
Mar. 3, 2004	Oil Pressure Hose	6	Pcs	¥33,800	2003
Mar. 3, 2004	Other Parts 2	1	Set	¥166,200	2003
Mar. 3, 2004	Switch Box	1	Box	¥1,300,000	2003
Mar. 3, 2004	Strain Gauge (Sensor - 1)	10	Unit	¥60,000	2003
Mar. 3, 2004	Strain Gauge (Sensor - 1)	5	Unit	¥68,900	2003
Mar. 3, 2004	Strain Gauge (Sensor - 1)	5	Unit	¥94,400	2003
Mar. 3, 2004	Strain Gauge (Sensor - 2)	1	Box	¥110,200	2003
Mar. 3, 2004	GPIB Interface	1	Box	¥149,500	2003
Mar. 3, 2004	Softwarer	1	Set	¥446,700	2003
Mar. 3, 2004	PC	1	Box	¥376,900	2003
Mar. 3, 2004	Printer	1	Box	¥185,000	2003
Aug. 11, 2004	2000KN	1	Set	¥8,564,000	2004
Aug. 26, 2005	Tri-Axial Broad-Band Seismometer	2	Pcs	¥1,497,300	2005
Feb.22,2006	Microtremor Broadband sensor	7	Pcs	¥3,179,750	2005
Feb.22,2006	Export packing	1	Pcs	¥46,000	2006
Feb.22,2006	Handling, Airfright and insurance cost	1	Pcs	¥172,500	2007
Nov. 28, 2005	Wagon for Boring Equipment	1	Pcs	¥1,455,608	2005
Nov. 28, 2005	Drag Bits, Sampler, Auger pipe	1	set	¥2,246,518	2005
Dec. 6, 2005	Concrete Vibrator (Form work type)	1	Pcs	¥82,500	2005
Dec. 6, 2005	Mortal Pump	1	Pcs	¥150,000	2005
Dec. 6, 2005	Steel mold for concrete cylinder	30	Pcs	¥225,000	2005
Dec. 6, 2005	Steel mold for concrete cylinder	12	Pcs	¥74,400	2005
Dec. 6, 2005	Equipments for Steel mould	1	set	¥49,500	2005
Dec. 6, 2005	Test equipments for concrete slump	1	set	¥45,000	2005
Dec. 6, 2005	Air meter for concrete	1	set	¥150,000	2005
Mar.28,2006	SPUM Type Receiver with cable (repaired)	1	unit	¥990,000	2005
Jan.27.2007	PS logging sensor	1	Pcs	¥585,400	2006
Jan.27.2007	Extension single cable L=100m	1	Pcs	¥348,000	2006
Jan.27.2007	Input signal cable to GEODAS L=5m	1	Pcs	¥94,000	2006
Jan.27.2007	Distplacement transducers CDP-50	10	Pcs	¥551,000	2006
Feb.01,2007	Filter cartridge kit	4	Pcs	¥221,056	2006
Feb.01,2007	Liner	4	Pcs	¥150,092	2006
Feb.01,2007	Complete piston	4	Pcs	¥197,820	2006
Feb.01,2007	Complete rod	4	Pcs	¥162,024	2006

<Accompanied equipment>

Arv Date	Equipment	Qty	Unit	Price	FY
2002/10/28	Personal computer	1	pcs.	309.00	2002
2002/10/28	Digital camera	1	pcs.	79.00	2002
2002/10/28	Software, Project2002	1	pcs.	75.00	2002
2002/10/28	Software, Visio2002	1	pcs.	23.00	2002
2002/10/28	Puncher	1	pcs.	20.00	2002
2002/10/28	Paper cutter	1	pcs.	28.00	2002
2003/3/14	Test anvil	1	pcs.	74.00	2002
2003/3/14	Schmidt concrete test hammer	1	pcs.	204.00	2002
2003/3/14	Case for test hammer	1	pcs.	20.00	2002
2003/3/14	Personal computer	1	pcs.	278.00	2002
2003/3/14	Software, Power point2002	1	pcs.	26.00	2002
2003/3/14	Software, Super build	1	pcs.	866.00	2002
2003/3/14	Software, Super build	1	pcs.	206.00	2002
2003/3/24	Data logger	1	pcs.	1,306.00	2002
2003/3/24	Displacement transducers	10	pcs.	555.00	2002
2003/3/24	Displacement transducers	5	pcs.	323.00	2002
2003/3/24	Displacement transducers	5	pcs.	453.00	2002
2003/6/25	Personal computer	2	pcs.	566.00	2003
2003/6/25	Software, SMA	1	pcs.	400.00	2003

2003/11/5	Software, Visual fortran6.6ProE	1	pcs.	136.00	2003
2003/11/5	Software, Visual studio, Net pro E	1	pcs.	125.00	2003
2003/11/5	Software MS Office XP Pro E	2	pcs.	133.00	2003
2003/11/5	Media Projector	1	pcs.	160.00	2003
2003/11/5	Digital camera	1	pcs.	57.00	2003
2003/11/5	GPS	1	pcs.	39.00	2003
2004/4/16	Digital indicator	1	pcs.	29.00	2004
2004/4/16	Crack meter	2	pcs.	76.00	2004
2004/5/7	Exchange meter	6	pcs.	348.00	2004
2004/5/7	Exchange meter	3	pcs.	204.00	2004
2004/5/7	Compressor meter	1	pcs.	375.00	2004
2004/5/7	Center hole compression load cell	1	pcs.	338.00	2004
2004/5/7	Portable data logger	1	pcs.	773.00	2004
2004/7/22	SPT tool	1	pcs.	1,048.00	2004
2004/9/4	Oil Jack	1	pcs.	151.00	2004
2004/9/4	Oil pressure pump	1	pcs.	195.00	2004
2004/9/4	High pressure hose	1	pcs.	42.00	2004
2004/9/4	Date logger	1	pcs.	755.00	2004
2004/9/4	Portablehard disk	1	pcs.	33.00	2004
2004/9/4	Displacement transducers	4	pcs.	252.00	2004
2004/9/8	Loadcell	1	pcs.	178.00	2004
2004/9/8	Analog input board	1	pcs.	115.00	2004
2004/9/8	Electrical balance	1	pcs.	104.00	2004
2004/9/8	Miter box	1	pcs.	23.00	2004
2004/9/8	Trimmer	1	pcs.	92.00	2004
2004/9/8	Software, Column-base	1	pcs.	198.00	2004
2004/9/8	Software, Section-base	1	pcs.	250.00	2004
2004/9/8	Amplifier	1	pcs.	53.00	2004
2004/9/8	Notebook computer	1	pcs.	230.00	2004
2004/10/23	Network camera	1	pcs.	62.00	2004
2004/10/23	Harddisk Drive	1	pcs.	30.40	2004
2004/10/23	Digital Still Camera	1	pcs.	54.00	2004
2005/2/20	KINEMATRICS	1	pcs.	850.00	2004
2005/2/20	Interface cable	20	pcs.	800.00	2004
2005/5/24	Displacement transducers	6	pcs.	516.00	2005
2005/5/24	Displacement transducers	2	pcs.	110.00	2005
2005/6/20	Laser Perpendicular	1	pcs.	208.00	2005
2005/6/20	Software MS-Windows XP Pro SP2	1	pcs.	35.80	2005
2005/6/20	Software MS-Office Professional 2003	1	pcs.	32.90	2005
2005/6/20	Software Dreamweaver MX 2004 (J)	1	pcs.	45.60	2005
2005/6/20	Software Fireworks MX 2004 (J)	1	pcs.	37.80	2005
2005/6/20	Software EYB Flash MX 2004 (J)	1	pcs.	55.10	2005
2005/11/2	Compressiva Load Cell	1	pcs.	404.00	2005
2006/1/19	Handy Vibration Kit (BURURU)	1	pcs.	318.80	2005
2006/1/19	Vibration Kit (Daisha BURURU)	1	pcs.	354.00	2005
2006/1/19	Falling down model for furniture (for inner)	1	pcs.	198.00	2005
2006/1/19	Shaking Kit (small BURURU)	1	pcs.	52.60	2005
2006/5/9	Seismometer E-catcher	2	pcs.	493.00	2006
2006/6/5	Tremor Meter CR2-5s	1	pcs.	150.00	2006
2006/6/9	Handheld control unit	1	pcs.	154.98	2006
2006/6/9	Handheld control unit	1	pcs.	154.98	2006
2006/8/2	Sanko Techno D-chuck DCH-set-B	1	pcs.	77.00	2006
2006/12/5	TML Load Cell TCLP-500KNB-D	1	pcs.	810.00	2006

<Purchased equipment in local activity budget>

Date	Equipment	Qty	Unit	Price (RON)	FY
02/10/21	Printer	1	pcs	19,269,800	2002
02/10/30	Printer	1	pcs	13,563,600	2002

02/11/22	Radio Casset	1	pcs	10,236,380	2002
02/12/09	Computer	1	pcs	19,389,711	2002
02/12/13	Mibile phone	1	pcs	13,481,212	2002
03/01/30	Meeting table	1	pcs	16,964,640	2002
03/03/18	CDR driver	1	pcs	12,039,825	2002
03/03/25	Video camera	1	pcs	59,235,296	2002
03/03/25	Printer	1	pcs	8,075,000	2002
03/06/11	Battery for camera	1	pcs	9,525,141	2003
03/07/25	Steel door	1	pcs	10,750,000	2003
04/01/27	UPS	1	pcs	7,800,307	2003
04/03/27	CF memory	1	pcs	6,664,000	2003
04/03/27	MS Office (Soft ware)	1	pcs	7,806,400	2003
04/03/29	Video deck	1	pcs	15,755,600	2003
04/03/30	FrontPage(Soft ware)	1	pcs	6,711,000	2003
04/03/30	UPS (for DivIII PC)	2	pcs	14,390,351	2003
04/03/30	Hard Disk (External)	1	pcs	6,064,062	2003
04/03/31	Primier (Soft ware)	1	pcs	32,419,000	2003
04/03/31	Visio (Soft ware)	1	pcs	7,901,600	2003
04/03/31	Web tool (Soft ware)	1	pcs	10,015,000	2003
04/03/31	Battery for camera	1	pcs	7,952,770	2003
04/03/31	Screen	2	pcs	28,417,200	2003
04/03/31	Video camera	1	pcs	65,973,600	2003
04/04/29	Vacum cleaner	1	pcs	12,599,000	2004
04/08/26	Grinder	1	pcs	10,700,000	2004
04/10/04	LCD	1	pcs	19,516,500	2004
05/02/09	Fax machine	1	pcs	16,693,500	2004
05/03/04	Pump (for DivIII)	1	pcs	36,401,000	2004
05/03/11	Modem (for DivII)	1	pcs	32,786,500	2004
05/03/24	Camera	1	pcs	13,750,000	2004
05/03/25	Generator	1	pcs	24,918,500	2004
05/03/25	Bookshelf	1	pcs	10,753,000	2004
05/03/29	Copy machine	1	pcs	64,204,500	2004
05/03/30	Shelf frame (for DivII)	1	pcs	38,000,000	2004
05/03/30	White board	2	pcs	16,426,500	2004
05/03/30	Micro wave cleaner	1	pcs	26,332,500	2004
05/03/31	White board	1	pcs	7,840,000	2004
05/04/29	Mother board	1	pcs	9,297,000	2005
05/05/10	Hard Disk (External)	1	pcs	8,550,000	2005
05/08/22	Additional Hard Disk	1	pcs	6,547,500	2005
05/08/25	Concrete mixer	1	pcs	12,500,000	2005
05/12/08	Concrete Bucket	1	pcs	8,639,500	2005
05/12/09	Speed cutter, Handdrill, scale	1	pcs	9,504,000	2005
06/03/20	Structural program soft ware	1	pcs	202,500,000	2005
06/03/30	Projector	1	pcs	61,130,000	2005
06/12/15	Hard Disk (Structure calculation)	1	pcs	7,499,000	2006
06/12/19	Modem for Seismic station	8	pcs	58,471,800	2006