## Ministry of Economy of the Republic of Armenia



## ENVIRONMENTAL MANAGEMENT PLAN FOR NATIONAL INSTITUTE OF METROLOGY OF ARMENIA

for

**Trade Promotion and Quality Infrastructure Project** 

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## PART A: GENERAL PROJECT AND SITE INFORMATION

INSTITUTIONAL & ADMINISTRATIVE					
Country	Republic of Armenia				
Project title	Trade Promotion and Quality Infrastructure Project (TPQIP)				
Scope of site-specific activity	Site specific activity is the refurbishment of premises for the National Institute of Metrology (NIM), including offices and laboratory space. Works will include:				
	<ul><li>(i) replacing of the damaged metal sheet roofing;</li><li>(ii) constructing of the new partition walls;</li></ul>				
	<ul> <li>(iii) replacing of floor, partial replacing of doors, installing of external doors;</li> <li>(iv) plastering and painting of the entire interior;</li> <li>(v) replacing of internal piping for water supply and sewage system, and replacing of internal wiring for power supply system;</li> <li>(vi) installing of internal heating, ventilation, and low-temperature systems;</li> <li>(vii) Installing of communication and information technology systems, and automation and control systems for the building.</li> <li>The land plot allocated for the NIM building carries an old garage, which will be demolished. Instead, a new one-story building of about 60 m² will be built to house a boiler of the heating system, the emergency power supply device, and the electrical main distribution frame. This ancillary building will also provide some pace of parking vehicles.</li> </ul>				
Institutional	Task Team Leader: Safeguards Specialist:			ards Specialist:	
arrangements (WB)	Feyi Boroffice		Darej	an Kapanadze	
Implementation	Implementing entity:	Wo	rks supervisor:	Works contractor:	
arrangements (RoA)	Ministry of Economy	(tbd)		(tbd)	
SITE DESCRIPTION					
Name of institution whose premises are to be rehabilitated	whose premises are to be				
Address and site location of institution whose premises are to be rehabilitated	0031 Yerevan				
Who owns the land? Who uses the land (formal/informal)?	following documents:				
- Agreement on land rental No. 1-587 as of 13.02.2002				·	

- Decree of RA government No. 771 as of 28.08.2001

Property right certificate register No. 19022013-01-2232

Land register No. 01-001-0375-0010-001-000 (scientific-research institute)

Land register No. 01-001-0375-0010-002 (annex)

The land plot allocated for the building makes 1,757.7 m<sup>2</sup> that includes:

- Main building 388.1 m<sup>2</sup>
- Annex 72.9 m<sup>2</sup>
- Garages 75.6 m<sup>2</sup>

#### Description of physical and natural environment around the site

NIM building is located not in very densely population district and has good vehicles access from all sites. On-site storage of materials and waste is not challenging either. The area around the NIM building is permissive for parking of construction vehicles and temporary storage of construction materials and waste. The building does not meet the national standards of seismic stability. The main building is classified for earthquake protection at "Class 7". According to the regulations of the national Armenian authorities, buildings in the whole of Yerevan have to be upgraded to "Class 9".

NIM building is connected to the municipal supply of power, natural gas, water, and waste water collection.

Locations and distance for material sourcing, especially aggregates, water, stones? The necessary aggregates and other construction materials will be purchased from vendors in Yerevan city.

Water required for construction works is available inside the building, provided through the municipal service.

#### **LEGISLATION**

National & local legislation & permits that apply to project activity

The following Armenian legislation defines a legal framework applicable to project activities:

- Law on Atmospheric Air Protection of RoA (1994).

The purpose of Law on Atmospheric Air Protection is to define main principles of the RoA, directed to provision of purity of atmospheric air and improvement of air quality, prevention and mitigation of the chemical, physical, biological and other impacts on air quality and regulation of public relation.

According to this law contractor shall undertake repairs as well as transportation and temporary storage of wastes the way to minimize dust and other emissions to the air.

- Law on Waste of RoA (2004).

The law provides the legal and economic basis for collection, transportation, disposal, treatment, re-use of wastes as well as prevention of negative impacts of waste on natural resources, human life and health. The law defines the roles and responsibilities of the state authorized bodies as well as of waste generator organizations in waste management operations.

According to this law, the waste generated during renovation of the building should be recycled as appropriate, or disposed of in designated locations.

- Law on Environmental Impact Assessment of RoA (1995).

The law defines types of activities which are subject to environmental impact assessment and ecological expertize.

According to this law, works for the rehabilitation of premises for the Institute are not subject to the ecological expertize.

- Law on Urban Development of RoA (1998).

The law defines types of activities which are subject to construction permitting. According to this law, works planned at Institute do not require obtaining of the construction permit.

#### PUBLIC CONSULTATION

When / where the public

Present site-specific EMP was disclosed on the web site of the MoE (www.mineconomy.am). The public consultation meeting will be held on

consultation process will	03.04.2014.
take /took place	Brief information on the planned works, and contact information of contractor for
	addressing questions and grievance will be placed at the work site and/or in its
	immediate surroundings.

#### **ATTACHMENTS**

Attachment 1: Proposal for renovation of NIM building with allocation of laboratories and basic requirements Attachment 2: Photo documentation on the status of premises before repair

#### **PART B: SAFEGUARDS INFORMATION**

ENVIRONMENTAL /SOCIAL SCREENING						
	Activity/Issue	Status	Triggered Actions			
	A. Building rehabilitation	[ Yes [ ] No	See Section A below			
	B. New construction	[] Yes [✓] No	See Section A below			
Will the site	C. Individual wastewater treatment system	[] Yes [✓] No	See Section <b>B</b> below			
activity include/involve	D. Historic building(s) and districts	[] Yes [✓] No	See Section C below			
any of the	E. Acquisition of land <sup>1</sup>	[] Yes [✓] No	See Section <b>D</b> below			
following?	F. Hazardous or toxic materials <sup>2</sup>	[] Yes [✓] No	See Section E below			
	G. Impacts on forests and/or protected areas	[] Yes [✓] No	See Section F below			
	H. Handling / management of medical waste	[] Yes [✓] No	See Section G below			
	I. Traffic and Pedestrian Safety	[✓] Yes [] No	See Section H below			

Land acquisitions includes displacement of people, change of livelihood encroachment on private property this is to land that is purchased/transferred and affects people who are living and/or squatters and/or operate a business (kiosks) on land that is being acquired.

Toxic / hazardous material includes but is not limited to asbestos, toxic paints, noxious solvents, removal of lead paint, etc.

#### **PART C: MITIGATION MEASURES**

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST				
0. General	Notification and	(a) The local construction and environment inspectorates and communities have been notified of upcoming activities				
Conditions	Worker Safety	(b) The public has been notified of the works through appropriate notification in the media and/or at publicly accessible sites (including the site of the works)				
		(c) All legally required permits have been acquired for construction and/or rehabilitation				
		(d) The Contractor formally agrees that all work will be carried out in a safe and disciplined manner designed to minimize impacts on neighboring residents and environment.				
		(e) Workers' PPE will comply with international good practice (always hardhats, as needed masks and safety glasses, harnesses and safety boots)				
		Appropriate signposting of the sites will inform workers of key rules and regulations to follow.				
A. General	Air Quality	(a) During interior demolition debris-chutes shall be used above the first floor				
Rehabilitation		(b) Demolition debris shall be kept in controlled area and sprayed with water mist to reduce debris dust				
and /or		(c) During pneumatic drilling/wall destruction dust shall be suppressed by ongoing water spraying and/or installing dust screen enclosures at site				
Construction		(d) The surrounding environment (sidewalks, roads) shall be kept free of debris to minimize dust				
Activities		(e) There will be no open burning of construction / waste material at the site				
Activities		(f) There will be no excessive idling of construction vehicles at sites				
	Noise	(a) Construction noise will be limited to restricted times agreed to in the permit				
		(b) During operations the engine covers of generators, air compressors and other powered mechanical equipment shall be closed, and equipment				
		placed as far away from residential areas as possible				
	Water Quality	(a) The site will establish appropriate erosion and sediment control measures such as e.g. hay bales and / or silt fences to prevent sediment from				
		moving off site and causing excessive turbidity in nearby streams and rivers.				
	Waste management	(a) Waste collection and disposal pathways and sites will be identified for all major waste types expected from demolition and construction				
		activities.				
		(b) Mineral construction and demolition wastes will be separated from general refuse, organic, liquid and chemical wastes by on-site sorting and stored in appropriate containers.				
		(c) Construction waste will be collected and disposed properly by licensed collectors				
		(d) The records of waste disposal will be maintained as proof for proper management as designed.				
		(e) Whenever feasible the contractor will reuse and recycle appropriate and viable materials (except asbestos)				
B. Individual	Water Quality	(a) The approach to handling sanitary wastes and wastewater from building sites (installation or reconstruction) must be approved by the local				
wastewater		authorities				
treatment system		(b) Before being discharged into receiving waters, effluents from individual wastewater systems must be treated in order to meet the minimal quality criteria set out by national guidelines on effluent quality and wastewater treatment				
		(c) Monitoring of new wastewater systems (before/after) will be carried out				
		(d) Construction vehicles and machinery will be washed only in designated areas where runoff will not pollute natural surface water bodies.				
C. Historic building(s)	Cultural Heritage	(a) If the building is a designated historic structure, very close to such a structure, or located in a designated historic district, notification shall be made and approvals/permits be obtained from local authorities and all construction activities planned and carried out in line with local and national legislation.				
		<ul><li>(b) It shall be ensured that provisions are put in place so that artifacts or other possible "chance finds" encountered in excavation or construction are noted and registered, responsible officials contacted, and works activities delayed or modified to account for such finds.</li></ul>				

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
<b>D</b> . Acquisition of land	Land Acquisition Plan/Framework	<ul><li>(a) If expropriation of land was not expected but is required, or if loss of access to income of legal or illegal users of land was not expected but may occur, that the Bank's Task Team Leader shall be immediately consulted.</li><li>(b) The approved Land Acquisition Plan/Framework (if required by the project) will be implemented</li></ul>
E. Toxic Materials Asbestos management		<ul> <li>(a) If asbestos is located on the project site, it shall be marked clearly as hazardous material</li> <li>(b) When possible the asbestos will be appropriately contained and sealed to minimize exposure</li> <li>(c) The asbestos prior to removal (if removal is necessary) will be treated with a wetting agent to minimize asbestos dust</li> <li>(d) Asbestos will be handled and disposed by skilled &amp; experienced professionals</li> <li>(e) If asbestos material is stored temporarily, the wastes should be securely enclosed inside closed containments and marked appropriately. Security measures will be taken against unauthorized removal from the site.</li> <li>(f) The removed asbestos will not be reused</li> </ul>
	Toxic / hazardous waste management	<ul> <li>(a) Temporarily storage on site of all hazardous or toxic substances will be in safe containers labeled with details of composition, properties and handling information</li> <li>(b) The containers of hazardous substances shall be placed in an leak-proof container to prevent spillage and leaching</li> <li>(c) The wastes shall be transported by specially licensed carriers and disposed in a licensed facility.</li> <li>(d) Paints with toxic ingredients or solvents or lead-based paints will not be used</li> </ul>
F. Affected forests, wetlands and/or protected areas	Protection	<ul> <li>(a) All recognized natural habitats, wetlands and protected areas in the immediate vicinity of the activity will not be damaged or exploited, all staff will be strictly prohibited from hunting, foraging, logging or other damaging activities.</li> <li>(b) A survey and an inventory shall be made of large trees in the vicinity of the construction activity, large trees shall be marked and cordoned off with fencing, their root system protected, and any damage to the trees avoided</li> <li>(c) Adjacent wetlands and streams shall be protected from construction site run-off with appropriate erosion and sediment control feature to include by not limited to hay bales and silt fences</li> <li>(d) There will be no unlicensed borrow pits, quarries or waste dumps in adjacent areas, especially not in protected areas.</li> </ul>
G. Disposal of medical waste	Infrastructure for medical waste management	<ul> <li>(a) In compliance with national regulations the contractor will insure that newly constructed and/or rehabilitated health care facilities include sufficient infrastructure for medical waste handling and disposal; this includes and not limited to:         <ul> <li>Special facilities for segregated healthcare waste (including soiled instruments "sharps", and human tissue or fluids) from other waste disposal; and</li> <li>Appropriate storage facilities for medical waste are in place; and</li> <li>If the activity includes facility-based treatment, appropriate disposal options are in place and operational</li> </ul> </li> </ul>
H Traffic and Pedestrian Safety	Direct or indirect hazards to public traffic and pedestrians by construction activities	<ul> <li>(a) In compliance with national regulations the contractor will insure that the construction site is properly secured and construction related traffic regulated. This includes but is not limited to</li> <li>Signposting, warning signs, barriers and traffic diversions: site will be clearly visible and the public warned of all potential hazards</li> <li>Traffic management system and staff training, especially for site access and near-site heavy traffic. Provision of safe passages and crossings for pedestrians where construction traffic interferes.</li> <li>Adjustment of working hours to local traffic patterns, e.g. avoiding major transport activities during rush hours or times of livestock movement</li> <li>Active traffic management by trained and visible staff at the site, if required for safe and convenient passage for the public.</li> <li>Ensuring safe and continuous access to office facilities, shops and residences during renovation activities, if the buildings stay open for the public.</li> </ul>

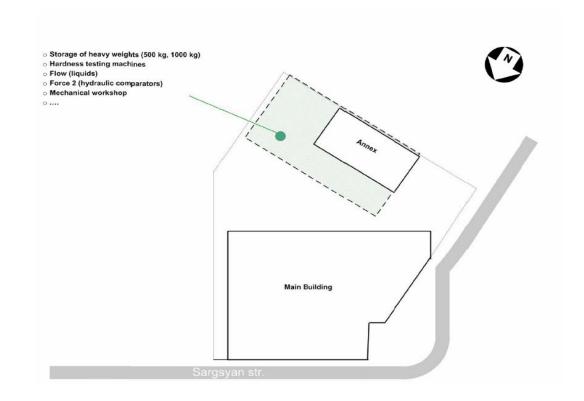
### **PART D: MONITORING PLAN**

	What	Where	How	When	XX7	Who
Activity	(Is the parameter to be monitored?)	(Is the parameter to be monitored?)	(Is the parameter to be monitored?)	(Define the frequency / or continuous?)	Why  (Is the parameter being monitored?)	(Is responsible for monitoring?)
		(	CONSTRUCTION PHA	SE		
1. Provision of reconstruction materials	Purchase of reconstruction materials from the registered providers	Provider's office or warehouse	Verification of labels of the materials and/or certificates if any	During conclusion of supply contracts	Ensure reliability of construction materials and their safety for human health	МОЕ
2. Generation of construction waste	- Temporary storage of construction waste in especially allocated areas - Timely disposal of wastes to the formally designated locations	Work site	Inspection	Periodically during reconstruction and upon its completion	- Prevent pollution of territory - avoid accidents at construction site due to scattered fragments of construction materials and debris - retain esthetic appearance of the reconstruction site and other floors	МОЕ
3.Transportation of construction materials and waste	- Technical condition of vehicles and machinery - Confinement and protection of truck loads with lining - Respect of the established hours and routes of transportation	- Construction site - Routes of transportation of construction materials and wastes	Inspection of roads adjacent to the construction object in the direction of the movement route	Selective inspections during work hours	- Limit pollution of soil and air from emissions; - Limit nuisance to local communities from noise and vibration; - Minimize traffic disruption.	Traffic Police
4. Workers' health and safety	- Provision of constructors with working clothes and PPE - Strict compliance with the rules of construction equipment operation and usage of PPE - Presence of fire extinguishing and medical aid kits at work site	Work site	Inspection of activities	Entire period of works	Reduce probability of traumas and accidents	МОЕ
	OPERATION PHASE					
Operational waste management	Organized collection of household waste generated during office operation inside NIM building     Arrangements in place and operational for removal of household waste from NIM building	NIM building	Inspection of office area	Entire period of office operation	Ensure sanitary safety and favorable conditions for NIM staff	NIM administration
2. Maintenance of internal communication systems	Electric wiring and water/waste water pipes maintained in good operation condition	NIM building	Inspection of building area	Entire period of office operation	Exclude risks of electric shocks, short circuits, and leakage of pipes	NIM administration
3. Maintenance of heating system	Heating system maintained in good operation condition	NIM building	Inspection of building area	Entire period of office operation	Ensure favorable temperature conditions for NIM staff and laboratories.	NIM administration

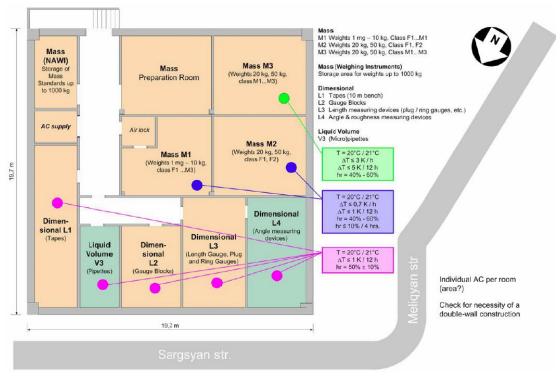
#### Attachment 1.

#### Proposal for renovation of NIM building with allocation of laboratories and basic requirements

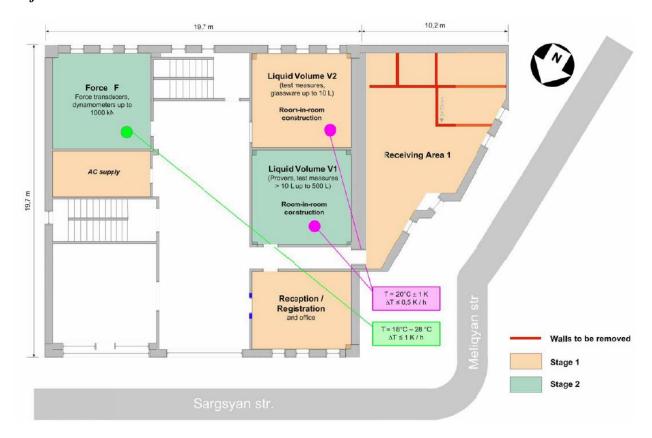
#### Terrain Plot



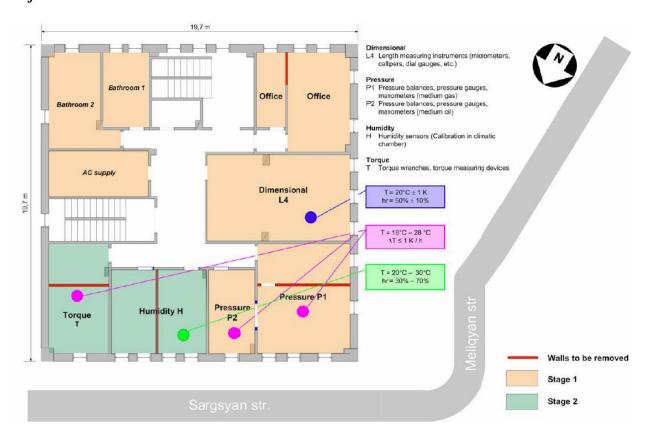
#### Basement



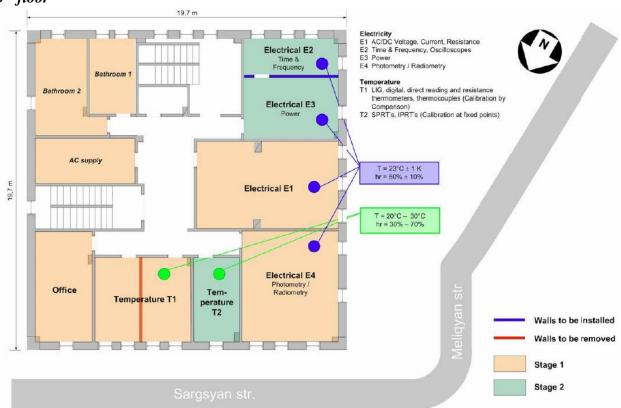
## 1<sup>st</sup> floor



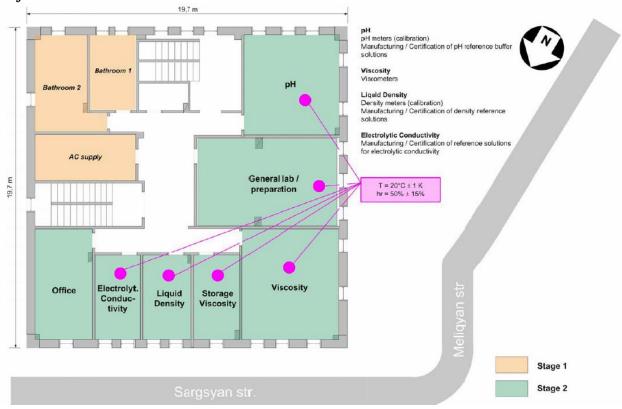
### 2<sup>nd</sup> floor



## 3<sup>rd</sup> floor



## 4<sup>th</sup> floor



# Attachment 2. Photo documentation on the status of premises before repair

Main building side of the street (north side)
Sargsanyan's-Street



Main building side of the street (west side) with extension and driveway Meliqyan-Street



View yard with garage



Main building 1. floor, Aisle with a large glass element



Main building 1. floor, Aisle



Main building 1. floor, Staircase eastside



Main building 1. floor, Inner wall with subsidence on lintel of wood (Reception)



Main building 1. floor, Large laboratory room with flaking on the ceiling and beams (Force F)



Main building 1. floor, Sanitary- / toilet room (AC supply)



Extension 1. floor,

Moisture damage and flaking on the ceiling

(Receiving Area 1)



Main building 2. floor, Stairwell south side with damage on the staircase



Main building 2. floor, View office (Bathroom 2)



Extension 1. floor, Moisture damage and flaking on the ceiling and outer wall (Receiving Area 1)



Main building 2. floor, Office with damage to the floor covering (Bathroom 2)



Main building 2. floor, Office with cracks on wall and ceiling (Bathroom 2)



Main building 2. floor, Seminar room with tear-off woll to support (Dimensional L4)



Main building 3. floor, Center aisle toward stairwell south side



Main building 4. floor, Stairwell east side Roof hatch with concrete damage to the roof elements



Main building roof, Flat roof with ventilation elements



Main building basement, Side corridor (east side)



Main building basement, Workshop room street side with a damp external wall (Liquid Volume V3)



Main building basement, Electric service connection (Mass)



# Attachment 3. Minutes of the public consultation meeting

Minutes of the public consultation meeting
On the Environmental and Social Management Framework,
Resettlement Policy Framework and Environmental Management Plan for the Trade Promotion and
Quality Infrastructure Project

Date: 03 April, 2014

Venue: Conference hall on the 3<sup>rd</sup> floor of the Ministry of Economy of Armenia

Time: 14:30 - 16:30

#### Agenda

1. Presentation of Trade Promotion and Quality Infrastructure (TPQI) Project.

Speaker – Mr. Paruyr Jangulyan Head of Regulatory Management Division

Ministry of Economy of Armenia

2. Presentation and discussion of the Environmental and Social Management Framework (ESMF) and the Environmental Management Plan for the renovation of the National Institute of Metrology (NIM).

Speaker – Mr. Paruyr Jangulyan Head of Regulatory Management

Division

Ministry of Economy of Armenia

3. Presentation and discussion of the Resettlement Policy Framework (RPF).

Speaker – Mr. Paruyr Jangulyan

Head of Regulatory Management

Division

Ministry of Economy of Armenia

4. Questions and answers

Public consultation meeting of TPQI Project started at 14:30 with 13 participants. Among participants were representatives of divisions of Economic Policy Development, IT and Innovation, Quality Infrastructure, Business Environment Improvement and SME Development of the Ministry of Economy, representatives of Inspection Reform team of the Ministry of Economy, NIM, Enterprise Incubator Foundation, and environmental and social NGOs.

Mr. Paruyr Jangulyan made a power point presentation on the main concept of the Project, the understanding of disbursement linked indicators, four components of the project and its implementation agencies. Special emphasis was made on component 2 of the Project with its sub-components. "Export oriented industrial policy" of the Government of Armenia was also highlighted in order to make participants understand

precisely the importance of those branches in Armenian economy that can be supported under the TPQI Project in general and under sub-components 2.2 and 2.3 in particular.

After the presentation, Mr. Jangulyan answered the questions from participants.

- Mrs. Tamara Abrahamyan from "Araza" NGO asked about the mechanism of Public-Private-Partnership (PPP) and the export-oriented grants scheme. She highlighted the importance of clearly defined criteria and a transparent selection committee on these issues for a real increase of the local companies' competitiveness in international markets and fully elimination of possible side effects during decision making process.
  - Mr. Paruyr Jangulyan briefly introduced the draft activity plan as an annex to the Project appraisal document, mentioning that three separate and detailed manuals will be developed and adopted by responsible implementing agencies. The PPP grant manual will be one of them that will describe grant application revision, selection and decision making process and criterion of eligibility for the companies.
- A question was raised by Mr. Sasun Nersisyan from "Social integration and development" NGO on the
  economic effectiveness of cluster PPPs, particularly on calculations that were made on the payback of these
  investments.
  - Mr. Areg Gevorgyan, representing EIF, replied to the questions bringing some figures on calculations. He explained the main principles of establishment of clusters, investments that are required as operational costs, and mechanisms for bringing businesses to clusters.
  - Mr. Paruyr Jangulyan presented the draft ESMF prepared for TPQI Project. The purpose, objectives, and main principles of ESMF were explained. EMP for NIM was covered to demonstrate how site-specific EMP for individual investment under component 3 will be developed within TPQI Project. Participants welcomed draft ESMF document and site-specific EMP for the renovation of NIM and had no objections to accept them.
- Questions from Mr. Sasun Nersisyan from "Social integration and development" NGO was raised on those
  risks that had been already identified by the Ministry of Economy and the World Bank experts thus far in the
  framework of ESMF and site-specific EMP.
  - Mr. Kamo Movsisyan, the first deputy director of NIM, replied to the questions referring to the scope of site-specific activity for NIM renovation and mentioned that all those activities will be carried out according to mitigation measures and monitoring plan that are specified in the draft EMP. He added that as far as no new construction was planned under the NIM renovation activities, there would be no harmful environmental and resettlement side effects.
  - Mr. Paruyr Jangulyan presented draft RPF outlining purpose, objectives, main principles and logic of the document. Participants welcomed the draft RPF and accepted it with no objections.
- Participants had general interest in what might the role of civil society be during the Project implementation
  mentioning their readiness to raise public awareness of the Project and share the information about the
  Project implementation and results within their professional network. At the same time, academia-oriented
  NGO representatives offered to consider mechanisms of NGOs' and civil society's involvement in "industry-

academia" collaboration and also agreed to study international best practices and success stories on these types of cooperation and come up with ideas.

The suggestions made by participants were discussed and changes introduced in the ESMF (chapter 9, page 12) to indicate opportunities to involve NGOs in the Project's awareness raising and information-sharing activities.

Participants highlighted the importance of a well-organized awareness raising campaign for the Project. All of them agreed that not all projects that aim to strengthen institutional capacities, improve business environment or promote foreign investment are strong in awareness rising using mass media. Thus, maximum transparency and participation at all stages of the project should be considered properly.







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«Առևտրի խթանում և որակի ենթակառուցվածքներ» վարկային ծրագրի գնահատման փաստաթղթի, վերաբնակեցման քաղաքականության փաստաթղթի (RPF) և բնապահպանական ու սոցիալական կառավարման շրջնակի (ESMF/EMP) նախագծերի քննարկման մասնակիցների 03.04.2014 թ.

	Անուն, ազգանուն	Գերատեսչություն	Պաշտոն	ել. Փոստ
	Name	Institution	Position	e-mail
1	naira Nikoghosyan	Ministry of Econone	Position Head thent	nni kos hos y an Q mineconomy am
2	Shage Methlunyan	Ministry of Reenouse	Chief & pecialist	nich economy com
3	Quelenu Grudupperte	74 florensflyugh Europe.		abosyan@mineconomy.am
4	Whit Opneyach	Rh Strendfugt Eccufe	speech dip h gette Goit.	aobosyan@mineconomy.am
5	Justa d'algufufuly	Just in athanish to the delight	I hapsyoneogh	WMOVKad6, mai Ch
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	Mef Alte Leure Upu h	a herelywyth ywhy »	zreoptili	maryalex 1984 @gmail.com
8	Enquelen Upperfactly cuts	se helende propagais to gy >> 19	us hyperthy	sirahanyan shushanala gmail.com
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12	Hark Agrazzan		Min Leonomy	hayivaryan Quine woung o
13	Hark Agraryan Bayane Gevergyan	Inspection Reform expert	Min Economy Chief civil servant	ggevergy an a mineconomy am
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