# THE REPUBLIC OF MOLDOVA

# STATE ROAD ADMINISTRATION

# **ROAD SECTOR PROGRAM SUPPORT PROJECT**

ENVIRONMENTAL MANAGEMENT PLAN

Chisinau – Orhei Project

FINAL DRAFT

January 2008

#### ABBREVIATIONS AND ACRONYMS

AADT	Average Annual Daily Traffic
ADT	Average Daily Traffic
EBRD	European Bank for Reconstruction and Development
EHS	Environmental, Health & Safety
EIA	Environmental Impact Assessment
EIB	European Investment Bank
EMP	Environmental Management Plan
GoM	Government of Moldova
MENR	Ministry of Ecology and Natural Resources
MTRI	Ministry of Transport and Road Industry
OP/ BP/ GP	Operational Policies, Bank Procedures and Good Practices
QA/QC	Quality Assurance/Quality control
RoM	Republic of Moldova
SEA	Sectoral Environmental Assessment
SEI	State Ecological Inspectorate
SRA	State Road Administration
TRL	Transport Research Laboratory
UK	United Kingdom
vpd	Vehicles per day
WB	World Bank

#### 1 INTRODUCTION

#### 1.1. General

The Government of Republic of Moldova has sought assistance from international donors to improve key sections of its road network. The Republic of Moldova (Moldova) is a small, landlocked country in Eastern Europe located to the east of Romania and to the west of Ukraine, as shown on Figure 1.

Figure 1 – Location Map



Under an Agreement dated 11<sup>th</sup> June 2007 Roughton International of UK in association with TRL of UK and Blizzard Design of Romania undertook to provide consultancy services required for the first phase of the Road Sector Program Support Project with services commencing on 27<sup>th</sup> June 2007. On behalf of the GoM, the project is administered by the project office of the State Road Administration.

The project is intended to provide a holding action, which will prevent further deterioration of two principal trunk road routes within Moldova:

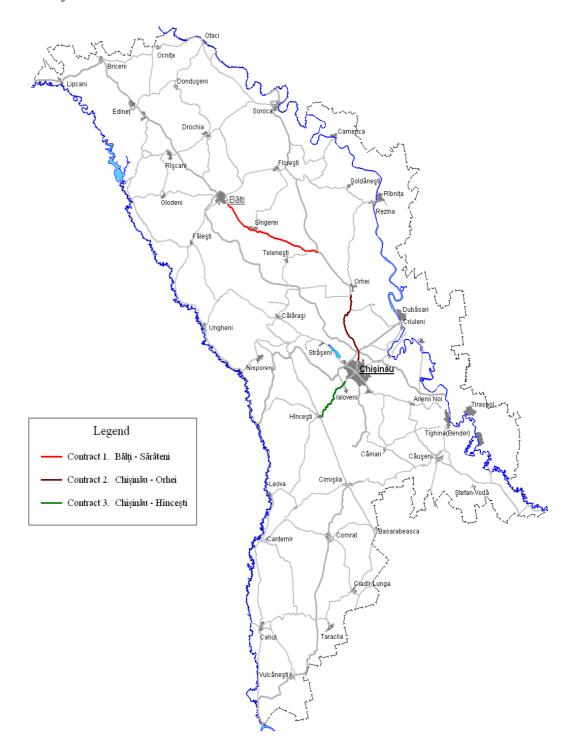
- Chisinau Orhei Sarateni Balti; and
- Chisinau Hincesti.

Initially the project is to examine the feasibility of rehabilitating these routes and then is to prepare final designs and documentation works to be carried out by tender.

Using finance from European Bank for Reconstruction and Development, European Investment Bank and the World Bank this project aims to rehabilitate as much as possible of three sections of the routes examined; (i) Balti – Sarateni (56 km) funded by WB; (ii)

Chisinau – Orhei (approx 40 km) funded by EBRD; and, (iii) Chisinau – Hincesti (25 km.) funded by EIB as shown in fig. 2 below

Figure 2 – Project Roads



It is intended that the subsequent construction work will be arranged in three contracts corresponding to the sections defined above, with each contract being funded by the agency indicated above. The proposed construction work does not currently include the section Orhei – Sarateni.

The preliminary phase of the project requires the Consultant to examine the feasibility of about 225 km of roads (Balti – Sarateni, Orhei – Sarateni, Chisinau – Orhei and Chisinau – Hincesti).

The second phase of the project will comprise the final design of the selected sections, complete with tender documentation for the three proposed contracts. The final design and contract definition will take into account the available funding and will tailor the extent of the proposed contracts to suit.

# 1.2. The Project

The Chisinau - Orhei road comprises the first section of the M2 north of Chisinau and runs roughly northwards to Orhei, which is bypassed. The route does not enter Orhei town and ends at the start of the bypass. The northern section of the road runs mainly through undeveloped agricultural land and forested area, the road does, however, run through a series of substantial settlements, mainly in the first half of the route.

Traffic counts were carried out at Km 8 and at Km 13 to take account of the change in traffic levels resulting from the M2's junction with the eastbound M21 at Km 11. These counts show a substantial reduction in M2 traffic across the junction. Further counts were carried out just before and just after the Orhei Bypass to take account of traffic leaving the M2 for Orhei town.

An axle load survey was carried out at Km 13 and the results of this survey were applied to traffic between Chisinau and Sarateni.

The project road commences at the northern municipal boundary of Chisinau at Km 5.733 (immediately after the permanent police post) and runs northwards as a 6 lane highway, divided in parts by a central white line and in others by a central reserve, to Km 10.430 where it reduces to a 4 lane road with central reserve in the approach to the roundabout intersection with the M21. At the end of the roundabout area the road continues as 5 lane road with no reserve (a 4 lane road with a climbing lane provided for the southbound carriageway) for a distance of 3.56 kilometres, reduces to 4 lane alternating between reserve and no reserve for a length of 16.85 kilometres, reduces to 2 lane for 1.2 kilometres, and then alternates between 3, 4 and 5 lane sections over a length of 9.93 kilometres to rech the start of the bypass at Km 43.03.

Much of the northern part of this section was rehabilitated under the failed 1997 contract. The effects of the 1997-2000 works are evident in the roughness measurements with roughness almost uniformly below 3 IRI from Km 31 onwards although parts of this section are far from perfect with patching, raveling, defective joints and edge failures all being present in various places together with some areas of quite extensive cracking, much of which appears to be reflective cracking from the underlying old asphalt. There are two areas (Km 28.600-30.450 and Km 31.900-33.250) where particularly serious deterioration and deformation has occurred and partial or total pavement reconstruction is required.

In all, it appears from available records that resurfacing, strengthening and reconstruction works were completed to wearing course level from Km 32.420 to the end of the section.

The Chisinau – Orhei section does not generally require works beyond the existing sealed section where the works will include resealing, overlaying with asphalt, re-marking, and formation of shoulders; limited areas noted above require pavement reconstruction. The terrain is quite flat and this section does not require any additional climbing or passing lanes for trucks. Furthermore, for most of its length this section four lane, and intermittent three lane carriageway, already wide enough to accommodate any passing vehicles.

This project requires construction works such as:

- laying a foundation of gravel and crushed stone layers on top of which asphalt is laid using specialised equipment, on the reconstruction sections.
- asphalt laying using specialised pavement equipments.
- provision of warning traffic signs, marking the road centreline and the road sections where overtaking is forbidden with reflectorised paint or thermoplastic.
- cleaning and refurbishment of side drainage.

Environmental Assessment policy (WB OP/BP 4.01) is triggered due to the potential for localized site-specific impacts from road rehabilitation and maintenance project. These potential impacts are quite limited, for example dust and noise emissions, and some increase in suspended solids in run-off water down gradient from the project areas during the construction phase (since runoff controls may not be fully effective in all situations). Short-term impact from noise, dust, vibration, and traffic congestion, particularly during execution of road works cannot be avoided. Noise emissions will increase significantly due to movement and operation of construction machinery and vehicles.

No new roads segments will be financed and no permanent works will be carried out beyond the existing right-of-way. Hence, no land acquisition is foreseen and the involuntary resettlement safeguard will not be triggered. For the same reason the activities supported by the project will not trigger the cultural heritage safeguard (though provisions for "chance finds" are placed in construction contracts should unexpected artifacts be encountered).

Long-term impacts may result from increased traffic and increased traffic speed. For roads sector in some cases restored road infrastructure may result in increased rate of certain categories of road accidents. Adopting proper design including adequate signs and traffic calming measures will mitigate this. A traffic safety expert has reviewed the existing road and his recommendations incorporated into the designs.

## 1.3. Environmental setting. Points of interest/significance

No significant point of interest could be noted on biological and physical environment, socio-economic environment and cultural/historic environment in the setting of the mentioned project.

Several environmental issues of general concern have to be mentioned, as follows:

• The relief has an important influence on the microclimate, landscapes and soil conditions and to a great extent determines specific road safety measures, already incorporated in the analyzed project.

- Location of geologic deposits, available for local building materials (sand, clay, gravel) may influence selection of different sites temporarily required for the road rehabilitation; a decision in this sense should be produced by the Contractor.
- Most of the internal rivers are canalized, with regulating dams and flood protection dykes, built in cascade and regulated by weirs. Those reservoirs have been designed to trap sediments, provide water for irrigation, domestic and industrial needs, and support fishery. Local surface water resources (ponds, reservoirs, small rivers) are strongly affected by soil erosion, contaminated runoff from the earth surface, waste water discharges and unauthorized waste disposals/dumps.
- The floodplains of several small rivers might be exposed to flooding, due to climate and landscapes characteristics, poor technical status of weirs and inadequate dam safety management, as several cases of severe floods on small rivers have been reported over the last decade.
- Apart from the project road crossing the surface water network in several places, no sensitive surface water related issue, as well as no critical contamination of waters and sediments was reported along the analyzed routes.
- Shallow groundwater is a major source of drinking water for rural population: about 50% of the country population relies on simple shallow dug wells. The shallow groundwater is highly vulnerable to anthropogenic impacts and sources of water contamination are mainly linked with rural areas. While no baseline assessment was carried out, the existing information determines us to consider that the range of natural and man-induced present contaminants includes nitrates and microbiological indices.
- The good condition of the soil is crucial for agriculture and is a basis for development of a productive export-oriented agriculture and food-processing industry. No critical soil contamination areas and deep erosion by ravines has to be noted in the implementation area of the project.
- Due to the slope landscapes, clay soil profile and groundwater level, landslides are quite a common feature of Moldova's nature. Landslides most commonly occur during the winter and spring months due to increased precipitation rates, snow melt and soil saturation. No landslides observed in the road rehabilitation area.
- No critically polluted areas are noted along the analyzed road. Average annual concentrations exceeding the national standards (maximum allowable concentrations) are reported for: particulates (in Balti), nitrogen dioxide (in Chisinau) and formaldehyde (in Balti and Chisinau).
- This project is proposing normal rehabilitation/maintenance works to be carried out within the existing right of way, without permanent land expropriation and/or building any new bridges. The proposed works do not pose a significant risk to the neighbouring environment and no significant impact on flora and fauna is expected to occur, as all existing migration patterns would be maintained.

- No areas of protective interest were reported along the analyzed road sections. Awareness signaling along the roads is to be proposed as mitigation for any natural heritage site located near to the route, as requested by various stakeholders.
- There will be no impact on existing agricultural land or other productive land, or housing or other structures (including kiosks and small commercial enterprises).
- The project will avoid the permanent taking of land or affecting structures during the works. The road is already wide enough to accommodate three lanes and future predicted traffic volumes.
- Temporary occupation of land might be required for borrow pits and waste (soil) disposal areas (for slides), and contractor's working areas. No more detail possible until appointment of a contractor(s).
- Therefore there is no requirement for preparation of a resettlement framework for the project or preparation of resettlement plans for this contract.
- While no cultural heritage site is reported along the route, special mitigation is proposed in cases where any artifacts are encountered during project implementation. Awareness signaling along the roads is proposed as mitigation for any cultural heritage, tourist (including craftsmen traditional areas) and landscape sites of interest, located near the route, as requested by various stakeholders.
- Proper road signaling and traffic safety measures should be considered along the route
  as the present vertical and horizontal signaling status is considered poor. Special
  attention should be paid to speed limitation areas, to road curvature signaling, to
  pedestrian crossings and to the village name posts which actually constitute speed
  limit areas.
- Usage of road surroundings areas for cattle grazing was observed to be a common practice. In some circumstances specific warning signs should be provided to draw attention to the dangers posed by this practice.

#### 2. MITIGATION PLAN

The mitigation plan consists mainly of good management and construction practices that have to be monitored by all relevant stakeholders, as presented in the following table. It should be noted that the World Bang EHS General Guidelines already enforces most of those measures, as it does the local legislation (the stringer between them will imposed by the EMP and works contract). All remaining measures are part of the proposed construction works.

118	Pha	_	10 50		True of	Supervision Porformance (		Commence			Institutional Responsibility									
P	C	0	SD	Issue/Impact	Mitigation measure			indicator	moment	Install	Operate	Install	Operate							
						Physical and l	uman Environme													
				Soil	Soil	Soil	Soil	C -:1	C -:1	Soil	Soil	Re-vegetation of embankments	Monitor	Earthworks areas	Visual/ Construction Works	Works	work	N/A	Designer/ Contractor/ Engineer	N/A
				3011	Prevent soil compaction	implementation	Temporary occupied areas	Visual/ Remedial Works	completion	specs	IV/A	Contractor/ Engineer	IN/A							
				Water	Scheduling construction activities near waterways for seasonably dry periods, wherever possible	Monitor	Construction sites located near	Visual/ Construction	Works forecast	work	N/A	Contractor/ Engineer	N/A							
				and water quality	Waste oils and other liquids must be disposed off in a proper manner	implementation	waterways	Works	Permanent	specs		_								
				Air quality	Traffic speed should be reduced (in the villages) and regular application of water on unpaved roads may be required to prevent high dust emission All trucks carrying fine material should be covered Construction machinery must be well maintained to minimize emissions	Monitor	Construction sites located near villages  Construction road	Visual/ Construction Works	Permanent	work specs	N/A	Contractor/ Engineer	N/A							
				Nuisance	Activities producing excessive noise levels (asphalt and concrete plants, borrow pits and dump sites, site management) should be normally restricted to the day time and equipment normally producing high levels should be suppressed	Monitor implementation	Asphalt and concrete plants, borrow pits and dump sites, site management	Visual/ Construction	Permanent	work specs	N/A	Contractor/ Engineer	N//							
				noise	working during night  Protection the critical surrounding areas (kindergardens, schools, hospitals) with temporary noise barriers		Construction road	Works				Contractor/ Engineer	N/A							
					Creation of green screens with shrubs and bushes on embankments >3m height		High embankment areas					Designer/ Contractor/ Engineer								
				Construction site	Consultations with local officials before locating and building the camps, including discussions on appropriate sites, resources, dispute resolution procedures and rights and responsibilities of various parties  Restore vegetation immediately after end of works  Assess vector ecology in work areas and avoid	Monitor implementation	All areas temporary occupied during construction	All legally required permits and agreements are valid and in place Visual/Remedial Works	Before/during construction works Works completion	work specs		Contractor/ Engineer								
					resation of undesirable habitats (e.g. stagnant water)  Proper storage of the hazardous materials by the construction camps and during their use in construction (vehicles, asphalt plants etc.). Install and operate proper disposal system as not to harm environment.		All construction areas	Visual. No of fines paid	Before/during construction works		N/A	Designer/ Contractor/ Engineer	N/A							

	Phas	se*		7 /7 /	Mar. c	Supervision	т ,	Performance	Commence	Co	ost	Institutional Respon	sibility
P	С	0	SD	Issue/Impact	Mitigation measure	requirement	Location	indicator	moment	Install	Operate	Install	Operate
					·	Physical and human Environment							
				Natural vegetation	Maximum care should be taken in selection of access routes to all areas temporary occupied during construction		All areas	All legally required permits and agreements are valid	Before/during construction			Contractor/ Engineer	
					Minimize destruction of trees and vegetation Restore vegetation immediately after the end of	Monitor	temporary occupied during	and in place Visual.	works	work		Designer/ Contractor/ Engineer	
					works	implementation	construction	Permits in place Visual/Remedial	Works	specs	N/A		N/A
					Forbid project staff to fish, hunt, kill, injure or		A 11	Works	completion Before/during			Contractor/ Engineer	
					poach fauna		All construction areas	Visual; No. of complaints	construction works				
					Pit or quarry location and access arrangements	Monitor implementation		Permits and agreements are valid				Contractor/ Engineer	
				Borrow pits,	A working plan giving an outline of the direction, phasing and depth of working		All areas temporary occupied during construction	and in place Working plan	Before/during	work			N/A
				quarries and waste dumps	A restoration plan giving details of final grading, drainage and sediment control, re-soiling and revegetation measures			approved by Owner's Engineer Restoration plan approved by Owner's Engineer	works	specs	N/A		
						Socio-econo	mic Environment						
Social	struc	ture a	nd cul	tural values									
				Social disturbance by construction camps	Respect local regulations for construction of plants and camps	Monitor observation of rules	All construction areas	Permits are valid and in place	Before/during construction works	work specs	N/A	Designer/Contractor/ Engineer	N/A
				Impacts on cultural heritage sites	Specify rules and means regarding preservation and recovery of cultural remains	Monitor observation of rules	All new construction areas	Training on legal requirements	Before/during construction works	work specs	N/A	Designer/Contractor/ Engineer	N/A
Prope	rty va	lues			·								
				Temporary loss of land	Oblige contractor not to interfere unnecessarily or improperly with access to, use and occupation of properties	Monitor observation of rules	All areas	Visual; No. of complaints	L construction I		N/A	Designer/Contractor/ Engineer	
					Oblige contractor to select, arrange for, and if necessary pay for storage sites and/or other temporary uses	Monitor implementation	temporary occupied during construction	No. of complaints; Legal contracts in place		work specs			N/A
					Oblige contractor to clean up and restore areas used	promonation	Tonou detroit	No. of complaints					

		Phas	se*			Issue/Impact	Mitigation measure	Supervision Leasting		Performance	Commence	Cost		Institutional Responsibility	
1	P	C	(	o	SD			requirement	Location	indicator	moment	Install	Operate	Install	Operate
	Physical and human Environment														

Road safety										
		Determine safety measures for construction sites through contract obligations		Monitor mplementation All construction	Safety measures part of contract	construction			Designer/Contractor/ Engineer	
		Post traffic signs and warning in advance			obligations	works			Contractor/ Engineer	
	Accidents during road construction	Inform adjacent population in advance about scheduling of planned works	Monitor		Visual; No of complaints Visual;			I N/A		
	period due to	construction  Exprains of quarries and horrow pits	implementation		No of complaints					N/A
	construction traffic and				Visual;	1	work			
	machinery and due to	Exclusion of the public where heavy machinery is working			No of accidents Visual	construction	specs			
	interferences	Appropriate EHS training for workers			Visual;	works				
	with local roads	Regulation of storage and construction activities	Monitor observation of rules		No of incidents Visual; No of trainees Visual;					
					No of incidents					

<sup>\*</sup> P – Planning/Project Preparation; C – Construction; O – Operation; SD – Site Decommissioning

#### 3. MONITORING PLAN

During construction phase, as well as during decommissioning of each site occupied by Contractor, if the case, monitoring of the following environmental indicators is recommended to be completed by an independent company that will contracted by the Contractor.

| Cost (if significant) | Passonsibility

					Cost (if	significant)	Respor	sibility
Phase	What?	Where?	How?	When?	Install	Operate	Install	Operate
Baseline				Not required				
Construction	Air	Most affected residential areas	NO <sub>x</sub> , CO, SO <sub>2</sub> , VOC, PM <sub>10</sub>					
	Water Most vulnerable areas to pollutant	vulnerable	pH, solid suspensions, Ca <sup>2+</sup> , Mg <sup>2+</sup> , SO <sub>4</sub> <sup>2+</sup>	Occasional de la constantina della constantina d			Not applicable	
	Soil	Most vulnerable areas to fuel discharges	Total hydrocarbons from oil products	Quarterly, by a specialised company	Not applicable	1000 USD/quarter		Contractor
	Noise	Most affected residential areas	Noise levels – dB(A)					
	Vegetation Most Dust deposition affected areas							
Operation	Noise	Residential areas	Noise levels – dB(A)	Periodic, together with traffic census	SRA	SRA	SRA	SRA
Decommission			tion project, but for all temporar issued for the usage of each site				l perform it, by t	aking into

#### 4. INSTITUTIONAL STRENGTHENING

## 4.1. Equipment Purchases

Not directly applicable. In order to monitor the quality of the environmental factors and activity, the Contractor should sub-contract a specialised company to monitor environment-related activities. That company's contract may need to include purchase of equipment.

# 4.2. Training/Study Tours

Not directly applicable. In order to assess training needs the SRA might contract a specialised company to evaluate requirements. The same company may subsequently be used to organise the relevant training.

#### 4.3. Consultant Services

In order to monitor compliance with the terms of the contracts, the quality of the environmental factors and the acceptability of the work methods, it is considered necessary that the Contractor sub-contract a specialised company, to monitor all environment-related activities on a quarterly basis, during the whole construction period, as well as during decommissioning of each site occupied by Contractors.

# **4.3.1** Scope

The environmental effects in the project area can be generated by traffic, construction equipment, site management, asphalt and concrete plants, temporary storage of construction materials and of fuel, borrow pits and waste dump areas, temporary occupation of agricultural land for works.

Monitoring is carried out to assess any disturbance or degradation to the environment and to protect both State Road Administration and the affected parties from false allegations of environmental damage.

#### 4.3.2 Methodology

It is considered that the monitoring campaigns can be performed quarterly, based on a predefined scheme. This approach will reveal the maximum values and the exceptions, as the results will be presented as diagrams compared with the background and limit values.

This methodology will clearly show the lacks and mistakes in the site management or in the equipment maintenance. The reports will also show the need for corrective actions, such as mandatory actions enforced by Moldavian environmental legislation, by World Bank EHS Guidelines and/or any mitigation measures imposed by agreements and permits in place, issued by relevant stakeholders.

For reducing the costs and necessary time for study elaboration, the following approach is proposed:

• Establishing of the most affected residential areas by the working sites, regarding the air and noise pollution

- Establishing the most vulnerable areas regarding the soil pollution with oil products, such as heavy oil or diesel fuel, and VOC released in the atmosphere:
  - Fuel tanks for heavy oil or diesel fuel;
  - Ramp for charging or discharging of oil products
- Establishing on each quarter the relevant pollutants released in the activity:
  - NO<sub>x</sub>, CO, SO<sub>2</sub>, PM<sub>10</sub>, volatile organic compounds (VOC) (as air pollutants);
  - Total hydrocarbons from oil products (as soil contaminants) if necessary
  - pH, solid suspensions, Ca<sup>2+</sup>, Mg<sup>2+</sup>, SO<sub>4</sub><sup>2+</sup> (as surface water pollutants).
- Establishing the Moldovan regulations (presented in Annex A) and the World Bank EHS general guidelines that impose limit values for the mentioned pollutants, in ambient air, water, residential areas and soil;
- Measurements of air pollutants concentrations, noise levels, soil and surface water contaminations in the vicinity of the working sites;
- Comparison of the measurements results for the specified pollutants with the regulated limits such as:
  - Limit values
  - Alert thresholds for sensible utilities (residential areas or agriculture areas)
  - Intervention thresholds for sensible utilities (residential areas or agriculture areas).
- Proposal of corrective actions in order to mitigate the environmental issues identified on the working sites.
- Issuing a hard copy report.

## 4.3.3 Reporting

A monitoring report should be produced on a quarterly basis. The proposed structure is:

- General data
- Methodology
  - Investigations over environmental media (noise, air, soil, water, vegetation)
  - Assessment criteria
- Results of the site investigation.
- Management of construction materials, of deleterious substances and of waste
- Conclusions and recommendations
  - Corrective actions required to mitigate the environmental issues

#### 4.4. Special Studies

Not applicable. There is no need for special studies.

#### 5. SCHEDULE

Project Implementation Plan from SRA suggests contract signature around April/May 2008. Duration 24 months. No more detail will be available until appointment of a contractor(s) and agreement on his working schedules and planning.

#### 6. INSTITUTIONAL ARRANGEMENTS

Adherence of construction workers to environmental requirements is a major aspect of environmental protection in road projects. This adherence is best achieved through training and contract stipulations, as outlined in tender documents. Monitoring and enforcement of the requirements are necessary aspects of the process.

Contractor will be requested to present a Quality Management System, and appoint a QA/QC Director and an Environmental, Health & Safety Officer, both with relevant training and experience in the field. Contractor shall provide to all employees general environmental awareness training, as part of their standard environmental, health & safety training.

In line internal communication should include reporting of any incident to the Environmental, Health & Safety Officer, QA/QC Director and Site Manager. The Owner's Engineer would be presented with a written report on any incident. SRA Environmental Coordinator and other relevant authorities shall be informed, if the case.

A monitoring report should be presented on a quarterly basis to the Owner's Engineer that would hand-over a copy of this report to the SRA Environmental Coordinator, in order to have an independent perspective on the environmental performance of the Contractor. Corrective Action Request or Non-Conformity Report might be issued and Competent Environmental Protection Authorities informed, if the case.

Any problem requiring immediate attention should be noted by monitors and brought IMMEDIATELY to the attention of the Owner's Engineer who is responsible for ensuring that the Contractor complies with the contract.

# 7. CONSULTATION WITH LOCAL NGOs AND PROJECT-AFFECTED GROUPS

No public information and participation can be reported to date.

Public information, by announcements in the mass-media, and public participation in the EIA process will be documented and attached to the present report by Roughton International / SRA, as they will be requested within decision making process by the relevant GoM environmental authorities.

# ANNEX A - LEGAL AND REGULATORY FRAMEWORK FOR ENVIRONMENTAL AND ROAD SECTOR

RoM environmental and road sector policy and regulatory frameworks were analyzed in the SEA in terms of (i) legislation and (ii) specific by-law regulations (standards, requirements, rules). While compiling the following list, emphasis was placed on relevant EIA requirements and procedures - valid at the time present document was drafted, however, several other primary and secondary regulations might pose interest in terms of environmental legislation and performance - during execution. The list therefore is not meant to be relied on entirely, and for a correct and complete understanding of the whole legal framework, it might be necessary for the Contractor to hire an Environmental, Health & Safety Officer with good knowledge of the Moldavian code of law

## 1. Basic legislation (Laws)

- Law on Environmental Protection, 1993, amended in 1997
- Water Code, 1993, revised and amended in 2003
- Land Code, 1991 revised in 1993, 1996, 1997, 1998, 1999, 2000
- Forest Code, 1996
- Law on Air Protection, 1997
- The Law on Regime of Harmful Products and Substances, 1997, amended in 2002
- Law on Wastes of Production and Consumption, 1997
- Law on State Land-Tenure Regulations, State Land Survey and Land Monitoring, 1992
- Law on the Payment for Pollution of the Environment, 1998.
- Law on Sanitary-Epidemiological Protection of the Population, 1993, amended in 1996, 2004.
- Law on Permitting of Certain Kinds of Activities, 2001
- Regulation on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters, 2000.
- Law on Quality in Construction, 1996.
- Law on Roads, 1995
- Law on Transport, 1997
- Motor Transport Code, 1998

# 2. Government Decision, Instructions, Standards

 Government Decision on Approval and Introducing of the State Sanitary-Epidemiological Rules and Standards for enterprises producing asphalt-concrete mixtures, 2006.

- Government Decision on increasing of exploitation safety of buildings and constructions, installations and pipe-lines which are sources of a heightened risk, 1996.
- Government Decision on verifying of projects and executing of construction works, technical expertise of projects and constructions, 1996..
- Government Decision on state sanitary-epidemiological supervision in the Republic of Moldova, 1995
- Sanitary Rules on atmospheric air pollution prevention in localities, 1998.
- State Standard GOST 17.2.3.01-86. Nature protection. Atmosphere. Air quality control regulations for settlements.
- Temporal Construction Norms 9-79. Guide for environment and land tenure protection measures for reconstruction of motor roads in Moldova, 1979.
- Construction Rules D.02.01-96. Road and bridges: Requirements for environmental protection during design, construction, rehabilitation, repair and maintenance of roads and bridges, 1996.
- Temporary Construction Norms 18-74. Instructions on architectural and landscape design of roads, 1975.
- Construction Norms and Rules 2.05.02-85. Motor roads.
- Construction Norms and Rules 3.06.03-85. Motor roads.