



## **Village Mirzaani road (Dedoplistskaro Municipality)**

### **Rehabilitation Sub-Project**

### **Environmental Management Plan**

**WORLD BANK FINANCED**

**SECOND REGIONAL AND MUNICIPAL INFRASTRUCTURE DEVELOPMENT PROJECT  
(RMIDP II)**

**Tbilisi, Georgia**

**July 2014**

## PART A: GENERAL PROJECT AND SITE INFORMATION

| <b>INSTITUTIONAL &amp; ADMINISTRATIVE</b>                                       |  |  |                            |
|---|--|--|----------------------------|
| Country   | Georgia  |  |                            |
| Project title   | Regional and Municipal Infrastructure Development  |  |                            |
| Sub-Project title   | Village Mirzaani roadrehabilitation  |  |                            |
| Scope of site-specific activity   | Rehabilitation of the road and installation of the concrete ditches (110,5m <sup>3</sup> ). Total length of the road to be rehabilitated within the SP is about 0,89 km.   |  |                            |
| Institutional arrangements (WB)   | Task Team Leader:<br>Ahmed Eiweida,<br>Co-Task Team Leader:<br>Xiaolan Wang  | Safeguards Specialist:<br>DarejanKapanadze |                            |
| Implementation arrangements (Borrower)  | Implementing entity:<br>Municipal<br>Development Fund of<br>Georgia  | Works supervisor:<br>(tbd)                 | Works contractor:<br>(tbd) |
| <b>SITE DESCRIPTION</b>   |  |  |                            |
| Name of institution whose premises are to be rehabilitated                      | Dedoplistskaro Municipality  |  |                            |
| Address and site location of institution whose premises are to be rehabilitated | 44, Kostava street, Dedoplistskaro;<br>Tel: 0356 22 55 34;<br>E-mail: <a href="mailto:dedoplistskaro.mun@gmail.com">dedoplistskaro.mun@gmail.com</a><br><a href="mailto:info@dedoplistskaro.ge">info@dedoplistskaro.ge</a><br><br>The SP site is located in eastern Georgia, Kakheti region, in Dedoplistskaro municipality. Village Mirzaani is located about 120 km away from Tbilisi.   |  |                            |
| Who owns the land?<br>Who uses the land (formal/informal)?                      | Municipal property   |  |                            |
| Description of physical and natural environment around the site                 | Village Mirzaani is located in Zemo Machkhaani community (Dedoplistskaro Municipality) on the south-east slope of Gombori range on 770 m above sea level. Distance from town Dedoplistskaro is 22 km. Population of village Mirzaani is 672 inhabitants.<br><br>The road to be rehabilitated is located in urban area. The road has a touristic importance during whole year, as connects to the house-museum of the famous Georgian painter Niko Pirosmani. The road is bordering private houses from both sites. Two small |  |                            |

|  |  |
|--|--|
|  | <p>shops, kindergarten and church are located along the road.</p> <p>Due to narrow width of the road (about 5 m average) between private properties (residential yards) no arrangement of the sidewalk is possible. Rather, the use of new shallow, low-slope, concrete swales along each side of the road provide some space for “informal” use as pedestrian way/ parking (due to singular road in village, no alteration of traffic patterns appears possible to avoid the lack of sidewalks). Speed bumps to reduce vehicle speed and appropriate signs will be arranged to increase pedestrian safety.</p> <p>Storm water will be discharged into the ravine located at approximately 80 m distance from the road end.</p>  |
| <p>Locations and distance for material sourcing, especially aggregates, water, stones?</p> | <p>Water will be available at the construction site from the municipal water supply system.</p> <p>Distance to the nearest licensed borrow pit is approximately 50 km.</p>   |
| <b>LEGISLATION</b>   |  |
| <p>National &amp; local legislation &amp; permits that apply to project activity</p>       | <p>The SP has been classified as low risk Category B according to the World Bank policies and the ESMF.</p> <p>Dedoplistskaro municipal authority approved the SP.</p> <p>Georgian legislation does not require any type of environmental review, approval, or permitting for the SP. Though according to the national regulatory system:</p> <ul style="list-style-type: none"> <li>(i) construction materials must be obtained from licensed providers,</li> <li>(ii) if contractor wishes to open quarries or extract material from river bed (rather than purchasing these materials from other providers), then the contractor must obtain licenses for extraction,</li> <li>(iii) if contractor wishes to operate own asphalt or concrete plant (rather than purchasing these materials from other providers), then the contractor must obtain an environmental permit with an established ceiling of pollutant concentrations in emissions and technical report on inventory of atmospheric air pollution stationary source agreed with Ministry of Environment and Natural Resources Protection.</li> <li>(iv) Permanent placement of the inert material (cut ground and sedimentary soil) generated in the course of earth works in a selected location must be approved by local (municipal) governing bodies in written;</li> <li>(v) Construction waste must be disposed on the nearest</li> </ul> |

|  |  |
|--|--|
|  | <p>municipal landfill in accordance with written agreement with the Solid Waste Management Company of Georgia Ltd. under the Ministry of Regional Development and Infrastructure;</p> <p>Copies of extraction licenses (if applicable), permits for operating asphalt/concrete plants (if applicable) and waste disposal permits will be attached to this EMP once the contractor is selected and mobilized to the works site.</p> <p>GOST and SNIP norms must be adhered.</p> |
| <b>PUBLIC CONSULTATION</b>   |  |
| <p>When / where the public consultation process will take /took place</p>  | <p>EMP will be discussed with beneficiary community prior to the commencement of works.</p>  |
| <b>ATTACHMENTS</b>   |  |
| <p>Attachment 1: Site map and pictures<br/> Attachment 2: Record on public consultation (to be provided)<br/> Attachment 3: Agreement on waste disposal (to be provided)</p> |  |

**PART B: SAFEGUARDS INFORMATION**

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

<sup>1</sup> 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.

<sup>2</sup> 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 Conditions                                     | Notification and Worker Safety | <ul style="list-style-type: none"> <li>(a) The local construction and environment inspectorates and communities have been notified of upcoming activities</li> <li>(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)</li> <li>(c) All legally required permits have been acquired for construction and/or rehabilitation</li> <li>(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.</li> <li>(e) Workers' PPE will comply with international good practice (always hardhats, as needed masks and safety glasses, harnesses and safety boots)</li> <li>(f) Appropriate signposting of the sites will inform workers of key rules and regulations to follow.</li> </ul>   |
| A. General Rehabilitation and /or Construction Activities | Air Quality                    | <ul style="list-style-type: none"> <li>(a) Demolition debris shall be kept in controlled area and sprayed with water mist to reduce debris dust</li> <li>(b) During pneumatic drilling/wall destruction dust shall be suppressed by ongoing water spraying and/or installing dust screen enclosures at site</li> <li>(c) The surrounding environment (sidewalks, roads) shall be kept free of debris to minimize dust</li> <li>(d) There will be no open burning of construction / waste material at the site</li> <li>(e) There will be no excessive idling of construction vehicles at sites</li> <li>(f) <u>Truck loads should be confinement and protected with lining.</u></li> </ul>   |
|   | Noise                          | <ul style="list-style-type: none"> <li>(a) Construction noise will be limited to restricted times agreed to in the permit</li> <li>(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</li> <li>(c) The machinery should move only along the preliminarily agreed route;</li> <li>(d) The maximum allowed speed should be restricted;</li> <li>(e) Proper technical control and maintenance practices of the machinery should be applied;</li> <li>(f) <u>No-load operations of the vehicles and heavy machinery are not allowed. Proper mufflers will be used on machinery.</u></li> </ul>   |
|   | Water Quality                  | <ul style="list-style-type: none"> <li>(a) Contractor will be required to organize and cover material storage areas. The material storage sites should be protected from washing out during heavy rain falls and flooding through covering by impermeable materials. Appropriate erosion and sediment control measures will be established 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;</li> <li>(b) Contractor will plan all excavations, topsoil and subsoil storage so as to reduce to a minimum any runoff;</li> <li>(c) Revision of vehicles will be required to ensure that there is no leakage of fuel and lubricating materials. All machinery will be maintained and operated such that all leaks and spills of materials will be minimised. Daily plant checks (Vehicle Maintenance Procedure) will be undertaken to ensure no leaks or other problems are apparent. Vehicle maintenance, cleaning, degreasing etc will be undertaken in designated areas, of hard-standing, not over made ground. Maintenance points will not be located within 50m of any watercourse;</li> <li>(d) Lubricants, fuel and solvents should be stored and used for servicing machinery exclusively in the designated sites, with adequate lining of the ground and confinement of possible operation and emergency spills. Spill containment materials (sorbents, sand, sawing, chips etc.) should be available on construction site;</li> <li>(e) Wet cement and/or concrete will not be allowed to enter any watercourse, pond or ditch.</li> </ul> |

|  |   |  |
|--|---|--|
|  | Waste management  | <p>(a) Waste collection and disposal pathways and sites will be identified for all major waste types expected from demolition and construction activities.</p> <p>(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.</p> <p>(c) Construction waste will be collected and disposed properly by licensed collectors</p> <p>(d) The records of waste disposal will be maintained as proof for proper management as designed.</p> <p>(e) Whenever feasible the contractor will reuse and recycle appropriate and viable materials (except asbestos)</p>  |
|  | Material supply   | <p>a) Use existing plants, quarries or borrow pits that have appropriate official approval or valid operating license.</p> <p>b) Obtain licenses for any new quarries and/or borrowing areas if their operation is required;</p> <p>c) Reinstate used sections of quarries and/or borrowing areas as extraction proceeds on or properly close quarries if extraction completed and license expired;</p> <p>d) Haul materials in off peak traffic hours;</p> <p>e) Place speed regulating, diverting, and warning signs for traffic as appropriate.</p>   |
| <b>H</b> Traffic and Pedestrian Safety | Direct or indirect hazards to public traffic and pedestrians by construction activities | <p>(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</p> <ul style="list-style-type: none"> <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> <li>▪ To arrange speed bumps to reduce vehicle speed and appropriate signs (road narrows/mind pedestrians) in agreement with local traffic police.</li> </ul> |

**PART D: MONITORING PLAN**

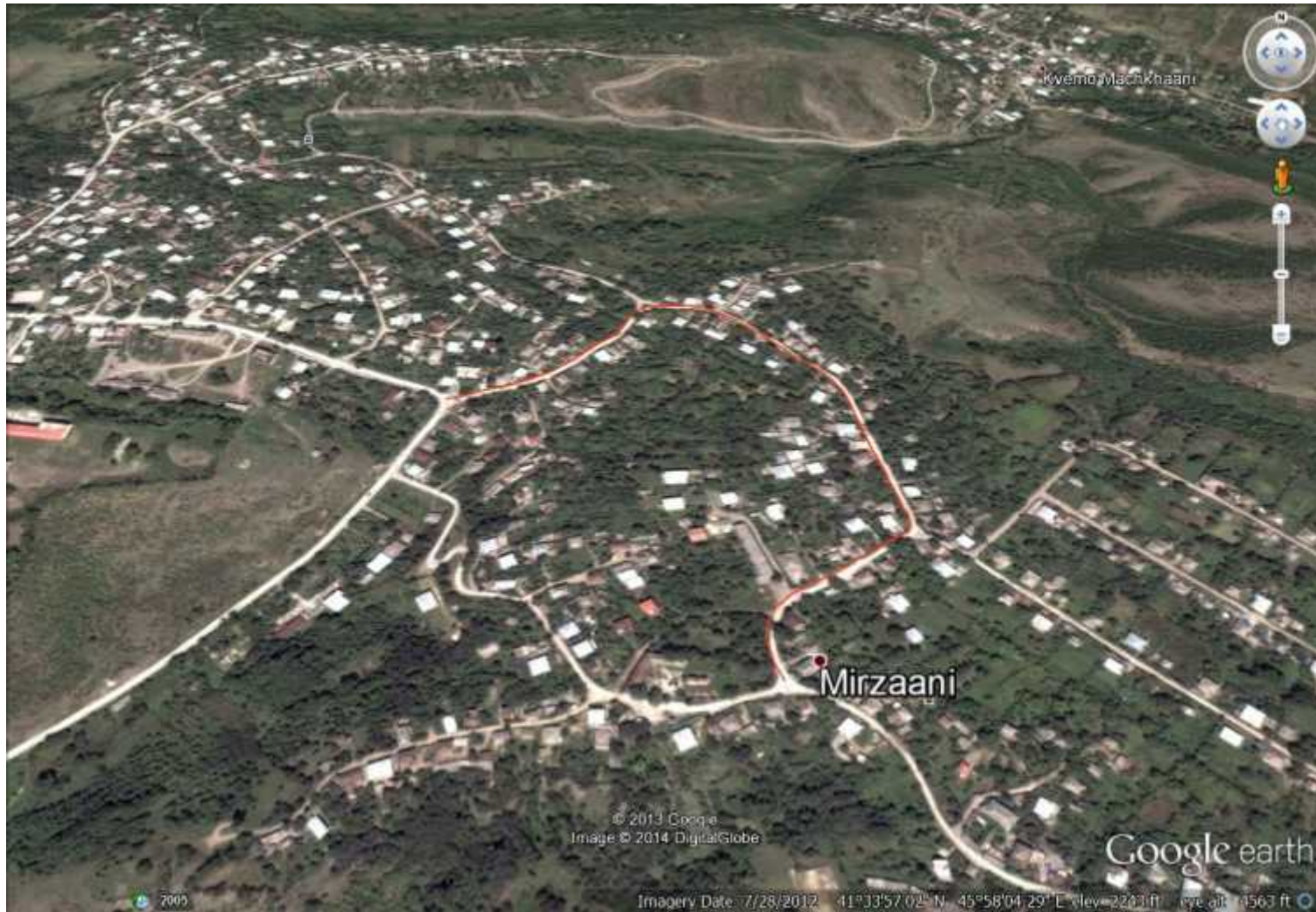
| <b>Activity</b>  | <b>What</b><br>(Is the parameter to be monitored?)  | <b>Where</b><br>(Is the parameter to be monitored?) | <b>How</b><br>(Is the parameter to be monitored?) | <b>When</b><br>(Define the frequency / or continuous?) | <b>Why</b><br>(Is the parameter being monitored?)  | <b>Who</b><br>(Is responsible for monitoring?) |
|--|---|---|---|--|--|--|
| <b>CONSTRUCTION PHASE</b>  |   |   |   |  |  |  |
| Supply with construction materials   | Purchase of construction materials from the officially registered suppliers   | In the supplier's office or warehouse               | Verification of documents                         | During conclusion of the supply contracts              | To ensure technical reliability and safety of infrastructure   | MDF, Construction supervisor                   |
| Transportation of construction materials and waste<br>Movement of construction machinery | Technical condition of vehicles and machinery;<br><br>Confinement and protection of truck loads with lining;<br><br>Respect of the established hours and routes of transportation   | Construction site                                   | Inspection  | Unannounced inspections during work hours and beyond   | Limit pollution of soil and air from emissions;<br><br>Limit nuisance to local communities from noise and vibration;<br><br>Minimize traffic disruption. | MDF, Construction supervisor, Traffic Police   |
| Earthworks   | Temporary storage of excavated material in the pre-defined and agreed upon locations;<br><br>Backfilling of the excavated material and/or its disposal to the formally designated locations;<br><br>In case of chance finds immediate suspension of | Construction site                                   | Inspection  | In the course of earth works                           | Prevent pollution of the construction site and its surroundings with construction waste;<br><br>Prevent damage and loss of physical cultural resources   | MDF, Construction supervisor                   |



|                                  |  |  |   |  |  |                              |
|----------------------------------|--|--|---|--|--|------------------------------|
|                                  | works, notification of the Ministry of Culture and Monument Protection, and resumption of works exclusively upon formal consent of the Ministry.   |  |   |  |  |                              |
| Sourcing of inert material       | <p>Purchase of material from the existing suppliers if feasible;</p> <p>Obtaining of extraction license by the works contract and strict compliance with the license conditions;</p> <p>Terracing of the borrow area, backfilling to the exploited areas of the borrow site, and landscape harmonization;</p> <p>Excavation of river gravel and sand from outside of the water stream, arrangement of protective barriers of gravel between excavation area and the water stream, and no entry of machinery into the water stream.</p> | Borrowing areas                                      | <p>Inspection of documents</p> <p>Inspection of works</p> | In the course of material extraction                 | <p>Limiting erosion of slopes and degradation of ecosystems and landscapes;</p> <p>Limiting erosion of river banks, water pollution with suspended particles and disruption of aquatic life.</p> | MDF, Construction supervisor |
| Generation of construction waste | <p>Temporary storage of construction waste in especially allocated areas;</p> <p>Timely disposal of waste to the formally designated locations</p>   | <p>Construction site;</p> <p>Waste disposal site</p> | Inspection  | Periodically during construction and upon complaints | Prevent pollution of the construction site and nearby area with solid waste  | MDF, Construction supervisor |

|  |   |                                     |            |   |   |                                 |
|--|---|-------------------------------------|------------|---|---|---------------------------------|
| Traffic disruption and limitation of pedestrian access | Installation of traffic limitation/diversion signage;<br><br>Storage of construction materials and temporary placement of construction waste in a way preventing congestion of access roads   | At and around the construction site | Inspection | In the course of construction works           | Prevent traffic accidents;<br>Limit nuisance to local residents | MDF,<br>Construction supervisor |
| Workers' health and safety                             | Provision of uniforms and safety gear to workers;<br><br>Informing of workers and personnel on the personal safety rules and instructions for operating machinery/equipment, and strict compliance with these rules/instructions              | Construction site                   | Inspection | Unannounced inspections in the course of work | Limit occurrence of on-the-job accidents and emergencies        | MDF,<br>Construction supervisor |
| <b>OPERATION PHASE</b>                                 |   |                                     |            |   |   |                                 |
| Maintenance of rehabilitated road                      | Maintenance of relevant speed limiting bumps and road signage for traffic safety;<br><br>Demarcation of the sections of streets under repair;<br><br>Disposal of asphalt and or other waste from the repair works to the designated landfill. | Rehabilitated sections of roads     | Inspection | During maintenance works                      | Prevent road accidents and disruption of traffic                | Dedoplistskaro municipality     |

**Attachment 1. Map and pictures of the road to be rehabilitate in v. Mirzaani**









**Attachment 2: Documents of public consultation**

**Attachment 3: Agreement on waste disposal**