

Environmental Impact Assessment

Third Draft – May 2018

Environmental Impact Assessment of Section F2 of the Khevi-
Ubisa-Shorapani-Argveta Road (E60 Highway)
Republic of Georgia.

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Abbreviations and Acronyms

| | |
|-----------------|--------------------------------------------------------------------|
| AADT | Annual Average Daily Traffic |
| AASHTO | American Association of State Highway and Transportation Officials |
| AM | Accountability Mechanism |
| ADB | Asian Development Bank |
| AST | Above Ground Storage Tank |
| AT | Argveta - Tbilisi |
| AQP | Air Quality Plan |
| BAP | Borrow Pit Action Plan |
| BAT | Best Available Technology |
| BGL | Below ground level |
| BoQ | Bill of Quantities |
| BOD | Biological Oxygen Demand |
| BRI | Bridge |
| CAREC | Central Asia Regional Economic Cooperation |
| CAP | Corrective action plan |
| ccTV | Closed Circuit TV |
| CFC | Chlorofluorocarbon |
| CIS | Commonwealth of Independent States |
| CO | Carbon monoxide |
| COD | Chemical Oxygen Demand |
| CO ₂ | Carbon Dioxide |
| Cr | Chromium |
| dba | decibel |
| DD | Detailed Design |
| EA | Executing Agency |
| EAC | Environmental Assessment Code |
| EC | Electrical conductivity |
| EIA | Environmental Impact Assessment |
| EIB | European Investment Bank |
| EHS | Environmental Health and Safety |
| EMP | Environmental Management Plan |
| EM | Environment Manager |
| ERP | Emergency Response Plan |
| ES | Executive Summary |
| ESIA | Environmental and Social Impact Assessment |
| EU | European Union |
| EWB | East West Highway |
| EWHPs | East West Highway Improvement Projects |
| FE | Iron |
| FS | Feasibility Study |
| GAA | Georgian American Alloys |
| GDP | Gross Domestic Product |
| GEOSTAT | National Statistics Office of Georgia |
| GEL | Georgian Lari |
| GHG | Greenhouse Gases |
| GoG | Government of Georgia |
| GOST | Technical Standard |
| GRM | Grievance Redress Mechanism |
| GRCE | Grievance Redress Committee |
| ha | Hectare |
| H&S | Health and Safety |
| HC | Hydrocarbon |
| HP | Horse Power |

| | |
|------------------------------|----------------------------------------------------|
| HZ | Hertz |
| IBA | Important Bird Area |
| IBC | Intermediate bulk storage containers |
| IFC | International Finance Corporation |
| IFI | International Finance Institutions |
| IEE | Initial Environmental Examination |
| IES | International Environmental Specialist |
| in/sec | Inch per second (25.4mm/sec) |
| IUCN | International Union for Conservation of Nature |
| km | Kilometer |
| km/h | Kilometers per Hour |
| Km ² | Square kilometer |
| LARP | Land Acquisition and Resettlement Plan |
| LC | Least Concern |
| LCF | Local Consulting Firm |
| L _{eq} | Equivalent Continuous Level |
| MELT | Modified Eccentric Loader Terminal |
| mg/l | Milligram per liter |
| mg/m ³ | Milligram per cubic meter |
| mg/kg | Milligram per kilogram |
| m ³ /s | Cubic meters per second |
| m ³ /h | Cubic meters per hour |
| m ³ /d | Cubic meter per day |
| m | Meter |
| m ² | Square meter |
| m ³ | Cubic Meter |
| m ³ /s | Cubic meter per second |
| MAC | Maximum Allowable Concentrations |
| MCA | Multi-criteria analysis |
| MoEPA | Ministry of Environment Protection and Agriculture |
| MoESD | Ministry of Economy and Sustainable Development |
| MPE | Maximum Permissible Emission |
| MPC | Maximum permissible concentrations |
| MPD | Maximum Permissible Discharges |
| MSDS | Material Safety Data Sheet |
| MtCO ₂ e | Million tons of CO ₂ equivalent |
| NES | National Environmental Specialist |
| NGO | Non-Governmental Organization |
| NH ₄ ⁺ | Ammonium |
| Nm ³ | Normal cubic meter |
| NO _x | Nitrogen oxides |
| NO ₂ | Nitrogen Dioxide |
| NO ₃ | Nitrate |
| Ni | Nickel |
| NT | Near Threatened |
| OHS | Occupational Health and Safety |
| PA | Per Annum |
| PAP | Project Affected Person |
| PAH | Polycyclic aromatic hydrocarbons |
| PCR | Physical and cultural resources |
| PPV | Peak Particle Velocity |
| Pb | Lead |
| PM | Particulate matter |
| POPs | Persistent organic pollutants |
| PO ₄ | Phosphate |

| | |
|-------------------|----------------------------------------------------|
| PMU | Project Managing Unit |
| PPE | Personal Protective Clothing |
| PPTA | Project Preparatory Technical Assistance |
| PPM | Parts per million |
| PSC | Pre-stressed concrete |
| SPM | Suspended Particulate Matter |
| RD | Road Department |
| RoW | Right of Way |
| SFF | State Forest Fund |
| SniP | Construction Standards |
| STD | Sexually transmitted diseases (such as HIV/AIDS) |
| SEMP | Specific Management Plan |
| SO ₂ | Sulfur Dioxide |
| SPS | Safeguard Policy Statement |
| TA | Tbilisi - Argveta |
| TBP | Tunnel Blasting Plan |
| TEM | Trans-European North-South Motorway |
| TMP | Traffic Management Plan |
| TOR | Terms of Reference |
| TSP | Total Suspended Particulates |
| TSS | Total suspended solids |
| TUN | Tunnel |
| UNEP | United Nations Environment Program |
| USAID | United States Agency for International Development |
| USD | United States Dollar |
| UST | Underground Ground Storage Tank |
| VU | Vulnerable |
| WB | World Bank |
| WHO | World Health Organization |
| WMP | Waste Management Plan |
| °C | Degrees Celsius |
| µg/m ³ | Micrograms per cubic meter |

Currency Exchange Rates as of 13 January 2018
1 US\$ = 2.56 (GEL)
(\$ refers in this report to US-Dollars)