

Table: Revised ESAP (updated March 2018 with completed actions removed)

NO.	ACTION	ENVIRONMENTAL & SOCIAL RISKS (Liability / Benefits)	REQUIREMENT (Legislative, EBRD PR, Best Practice)	RESOURCES, INVESTMENT NEEDS, RESPONSIBILITY	TIMETABLE	TARGET & EVALUATION CRITERIA FOR SUCCESSFUL IMPLEMENTATION
CORPORATE LEVEL						
1	Prepare and submit reports on status of this Environmental and Social Action Plan, resolution of grievances and EHSS performance of the project.	Monitoring of ESAP implementation and EHSS performance	EBRD PR1-10	Regia Autosalubritate	Annually	Submit reports on progress of implementation of ESAP, grievance resolution & EHSS performance (to EBRD)
2	Disclose the draft SEP, address comments and suggestions after the disclosure period, finalise the SEP, implement SEP and regularly update the document as new information becomes available. SEP will include a grievance mechanism that should be implemented if there are complaints.	Ensure that people are informed and consulted about environmental and social issues related to the Project and that grievances are addressed in a transparent and timely manner.	Best practice EBRD PR 10	Regia Autosalubritate, PIU social manager	Final SEP disclosed August 2017 Revised Final SEP disclosed March 2018 Implementation throughout project implementation period	Stakeholder Engagement Plan Grievance log and grievance management reports
3	Appoint a social manager in the PIU to implement the SEP and report to the lenders.	Ensure the implementation of the LFR and SEP	EBRD PR 1	Regia Autosalubritate	Prior to Project becoming effective	PIU social manager appointed and regularly reports on the Project progress to the Bank.
4	Develop a Project Implementation Unit (PIU) with the company involved as required.	Management capacity	EBRD PR 1	City and Regia Autosalubritate	Prior to Project becoming effective	PIU team appointed
5	Assign staff with EHS management responsibilities, provide training and undertake recruitment as required. Update corporate EHS organisational structure. Ensure site level EHS management responsibilities for all the investment sites namely Tintareni landfill, Ciocana dump site and the transfer station and new facilities that will be built i.e. a new waste sorting facility and a new digestion plant.	Clear management of EHS issues	Best practice EBRD PR1 and PR2	Regia Autosalubritate, staff resources	Prior to Project becoming effective	Staff employed, trained and appointed roles. CVs provided
6	Compensate any damages made to land surrounding the Ciocana waste dump site during construction works for the closure of the waste dump site and fully reinstate land.	Ensure that no economic displacement occurs for owners / users of land surrounding the Ciocana waste dump	EBRD PR 1 and 5 Best practice	Regia Autosalubritate, PIU social manager	During and after construction works for the Ciocana waste dump.	Any damages to land outside of the Ciocana waste dump site are compensated and land is restored. Monitoring reports on ESAP implementation.
7	Ensure that all community benefits for residents of Tintareni village are implemented, as agreed with the community.	Ensure that the local community accepts the Project and the re/opening of the Tintareni landfill	EBRD PR 1 Best practice	City of Chisinau Regia Autosalubritate, PIU social manager	Prior to Project becoming effective and throughout Project implementation.	Monitoring reports on ESAP implementation.

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8	Develop an approved supplier list. As part of the tendering process, an assessment of the EHS management policies, procedures and management capacities should be undertaken. All future contractors should have a Construction, Environmental Management Plan (CEMP) that should also include a Transport Management Plan. There should be periodic inspections of the subcontractors to ensure that there is compliance with national laws and EBRD's PR2.	Minimise Health and Safety risks Reduce injuries	Best practice EBRD PR1, EBRD PR2,	Regia Autosalubritate	On issue of tenders Inspections on-going thereafter	Tender specification Inspection reports
9	Develop and implement an Environmental and Health and Safety management system in line with best practice outlined in ISO 14001 and OHSAS 18001 This should include an audit program for the EHS management system and legal compliance to be undertaken by an external consulting company to identify gaps and opportunities for Improvement.	Improvement of EHS performance	Best practice EBRD PR1, paragraph 1,2 EBRD PR 2 paragraph 15	Regia Autosalubritate and external resources	October 2018	EMS
10	Prepare and adopt a medium-term investment programme for developing a separate waste / recyclable collection system and a waste minimisation, recycling and re-use scheme. This should investigate alternative waste treatment methods, such as mechanical-biological waste treatment. Options and solutions for the segregation and management of hazardous waste should also be considered.	Compliance to EU legislation and guidance	Waste Framework Directive Landfill Directive EBRD PR3	Regia Autosalubritate and external resources	Within 2-5 years Secure loan for EU compliant landfill for design and construction and operations to commence – by end of 2019	Investment programme Report on options, assessment and outcomes Recycling figures and targets
SITE SPECIFIC (all sites unless specified)						
11	Ensure that all environmental permits are in place at the appropriate stage of development for Tintareni Landfill or closure for the temporary dump site. This should include but not be limited to operational, building and closure permits. This should also include obtaining the necessary permits from the Ministry of Environment for the discharge of treated leachate from the proposed leachate treatment plants at both the Ciocana dumpsite and Tintareni landfill site. A permit for the reopening of Tinterani landfill should also be obtained	Compliance to EU guidance and National legislation	EBRD PR1 Moldova Permitting Regime	Regia Autosalubritate and external resources	Prior to commencing activities for which permits are required	Permits
12	Health and safety arrangements should be reviewed as part of H&S risk assessment for all sites to include: <ul style="list-style-type: none"> <li>Robust training to ensure competent staff are used on site who are fully conversant with operational procedures, risk assessments and control measures necessary;</li> <li>Personal Protective Equipment provided should be appropriate for the task and worn by all staff and contractors (e.g. sharps gloves, dust masks and eye protection);</li> <li>Visitors to be provided with PPE;</li> <li>All pedestrian walkways and vehicle access areas should be clearly marked;</li> <li>All portable electrical equipment should be assessed for condition and signs of wear and damage and suitability for use;</li> <li>The location and number of first aid kits required;</li> <li>The location and number of fire extinguishers required;</li> </ul>	Compliance to EU and National legislation Minimise injuries/fatalities due to accidents	EBRD PR 2	Regia Autosalubritate	Interim system considering key risks associated with the current activities on site to be put in place immediately. Full documented system covering all current and future activities on site should be implemented as part of detailed design and operating procedures prior to commencement of any new activities on the site, and commencement of work of any contractors.	Report on findings of the review along with any remedial measures and timescales for their implementation

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	<ul style="list-style-type: none"> <li>• Sun protection and drinking water for workers; and</li> <li>• Development of procedures for working in confined spaces;</li> </ul> <p>Specifically for Tinternai Landfill Site: The Construction Health and Safety Plan should incorporate additional measures for effective communication and management of health and safety across the whole site. Where possible, there should be segregation of construction activities and landfill activities, to reduce the health and safety risks to all workers on the site.</p> <p>The H&amp;S risk assessments should also consider the risk of air quality impacts from Tintareni landfill on the construction workers, who will now be working adjacent to an operational landfill site (as it is assumed that the site will continue to accept waste whilst being engineered).</p> <p>The Construction Traffic Management Plan should include measures to regulate the flow of construction and waste vehicles.</p>					
13	<p>Ensure the design and operating procedures are in full compliance with the Landfill Directive to cover:</p> <ul style="list-style-type: none"> <li>• Security;</li> <li>• Accident Management Plan;</li> <li>• Waste characterisation, handling, acceptance, inspection and quarantining. Ensure contract in place detailing waste acceptance criteria and periodic sampling of wastes;</li> <li>• Control of dust and aerosols including monitoring, suppression and early restoration;</li> <li>• Stability risk assessment;</li> <li>• Site traffic management;</li> <li>• Litter Control Plan;</li> <li>• Prevention of mud on road;</li> <li>• Odour control;</li> <li>• Noise and vibration control;</li> <li>• Pest control;</li> <li>• Surface Water (run-off) Control Plan;</li> <li>• On-going monitoring of leachate (raw and treated leachate), groundwater, surface water and landfill gas (results should be independently audited and be made available in the public domain);</li> <li>• Develop monitoring plans of all the above that details objectives, standards, locations, frequency, required monitoring infrastructure and response to any significant impact events. Adopt a risk based approach to determine if monitoring plans are required for noise and odour</li> <li>• These should include a design control process and an Operational Environmental Management Plan (OEMP)</li> </ul>	Design and operation standards, E&S monitoring	Landfill Directive EBRD PR3	Regia Autosalubritate and Design contractor(s)	Interim procedures covering the current activities on site to be put in place immediately – management and monitoring plans for landfill gas, leachate, groundwater and surface water are essential. Full documented procedures covering all current and future activities on site should be developed as part of detailed design and operating procedures prior to commencement of any new activities on the site. Interim procedures, management and monitoring plans should be reviewed, updated and finalised.	Detailed Design and Develop Landfill Operating Manual

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	(Tintareni Landfill Site).					
14	<p>Disclose the draft HRA.</p> <p>Following completion of the HRA undertake:</p> <ul style="list-style-type: none"> <li>• Installation of additional boreholes on the downgradient side of the site (north) which penetrate into the underlying mid-Sarmatian Limestones;</li> <li>• Regular leachate and groundwater quality monitoring from existing boreholes and proposed boreholes; and</li> <li>• Review of the conceptual site model and update to the quantitative risk assessment model, if required on completion of at least three monitoring events.</li> </ul> <p>(Tintareni Landfill Site)</p>	Design and operation standards, E&S monitoring	Landfill Directive EBRD PR3	Regia Autosalubritate and Design contractor(s)	As part of detailed design and operating procedures prior to commencement of operations	Detailed Design and Develop Landfill Operating Manual
15	<p>Incorporate into the detailed design the following:</p> <ul style="list-style-type: none"> <li>• Interim lining specification to be supported by geotechnical assessment;</li> <li>• Detailed design required for lining and drainage;</li> <li>• Detailed design for leachate treatment plant including full BAT assessment;</li> <li>• In relation to the proposed reverse osmosis leachate treatment plant identified during the November 2017 site visit: <ul style="list-style-type: none"> <li>○ Undertake an assessment of the proposed treated leachate quality and compare against relevant Moldovan and EU Environmental Quality Standards / Water Quality Standards;</li> <li>○ If Moldovan / EU Environmental Quality Standards / Water Quality standards will not be met, assess additional treatment stages required;</li> </ul> </li> <li>• Prior to capping, remediate if evidence of uncontrolled release of leachate or landfill gas;</li> <li>• Detailed design of gas engine plant to meet ELVs if it falls under the MCPD and minimisation of GHG emissions; and</li> <li>• Strengthen dam and dam slope using Geogrid and install sealing liner (this requirement should be undertaken as soon as possible due to the fact that the landfill has already re-opened for the acceptance of waste).</li> </ul> <p>(Tintareni Landfill Site)</p>	Design and operation standards, E&S monitoring	Landfill Directive EBRD PR3	Regia Autosalubritate and Design contractor(s)	As part of detailed design and operating procedures prior to commencement of operations	Detailed Design and Develop Landfill Operating Manual
16	Measures should be developed for the transport of waste to prevent risk to public with regards to dust nuisance, falling out litter and leakage of waste leachate from vehicles. Vehicle loads should be sheeted and dampening down of access roads should be undertaken if conditions are dusty (Tintareni Landfill Site, transfer station and sorting station)	Reduce potential accidents for employees and the public	EBRD PR2	Internal resource	Prior to commencement of operations	Report on the measures to be implemented
17	Ensure the tariff structure for waste collection from households is set at an appropriate level of average income per capita (no more than 2%). Monitor income and tariffs. Develop a monitoring protocol for monitoring affordability with data collection to	Socio-economic impacts	EBRD PR1	PIU	Develop income and tariff monitoring procedure as prior to start of landfill operation, implement	Reports on tariff procedure, monitoring on affordability, collection rates, incentivisation

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	<p>assess affordability and the performance of the tariff collection system. Develop a procedure for setting and adjusting of the tariffs, billing and collection of payments. Introduce incentivisation schemes to encourage payment and enforcement actions for non-payment / illegal dumping. Implement targeted public awareness campaigns and education activities. (Tintareni Landfill Site)</p>				during landfill operation	schemes and penalties
18	<p>Disclose the draft ESIA, address comments and suggestions after the disclosure period, finalise the ESIA. Implement all mitigation measures identified in the ESIA as detailed in the ESMP, a live document that should be used to document and monitor the implementation of mitigation measures in the ESIA. It should cover:</p> <ul style="list-style-type: none"> <li>• Air quality and climate change;</li> <li>• Noise and vibration;</li> <li>• Biological and ecological resources;</li> <li>• Cultural heritage;</li> <li>• Landscape and visual;</li> <li>• Geology, soils, material and waste;</li> <li>• Water environment;</li> <li>• Traffic and transportation;</li> <li>• Community Health and safety;</li> <li>• Occupational Health and safety; and</li> <li>• Social and population.</li> </ul> <p>(Tintareni Landfill Site)</p>	Environmental Impact Assessment	International ESIA Expertise EBRD PR1	WSP   PB has developed an ESIA & including ESMP and other component studies	Draft ESIA Disclosure - March 2017 Final ESIA - December 2017 Implementation throughout project implementation period – design, construction and operation	ESIA
19	<p>Submit and obtain approval of a revised and separate ESIA following national EIA requirements according to the Moldovan procedure (Tintareni Landfill Site)</p>	Environmental Impact Assessment	Moldovan EIA Expertise EBRD PR1	WSP   PB has developed an ESIA & including ESMP and other component studies	Prior to start of construction	Approval for EIA obtained from SEE
20	<p>Investigate stability of previously deposited waste/clay and new waste to ensure the integrity of any new lining system will be maintained (Tintareni Landfill Site) Review waste slopes and the degree of re-profiling required to achieve a stable landfill slopes and a suitable landform on which to place capping materials (Tintareni Landfill Site and Ciocana Dump Site)</p>	Design and operation standards, E&S monitoring	Landfill Directive EBRD PR3	Regia Autosalubritate and Design contractor(s)	As part of detailed design prior to commencement of operations	Detailed Design
21	<p>Provide more detailed design information on leachate collection system, particularly of how Phase 1 leachate collection system will be maintained. Due to the fact that the landfill has already been re-opened for the acceptance of waste, this should consider leachate collection from all landfilling phases, i.e. original waste landfilled, waste currently being landfilled and future waste to be landfilled within the fully engineered site.</p>	Design and operation standards, E&S monitoring	Landfill Directive EBRD PR3	Regia Autosalubritate and Design contractor(s)	As part of detailed design prior to commencement of operations	Detailed Design
22	<p>Provide more detailed design information on landfill gas collection system, particularly of how Phase 1 landfill gas collection system will be maintained (noting</p>	Design and operation standards, E&S monitoring	Landfill Directive EBRD PR3	Regia Autosalubritate and Design contractor(s)	As part of detailed design prior to commencement of	Detailed Design

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	<p>that the updated Fichtner feasibility study proposes abandonment of this system and installation of a new system).  The gas collection system was not operational during the recent site visit (Nov 17) and, therefore, proposed measures to re-commission / replace the current system should be included.  Due to the fact that the landfill has already been re-opened for the acceptance of waste, the design information should consider landfill gas collection from all landfilling phases, i.e. original waste landfilled, waste currently being landfilled and future waste to be landfilled within the fully engineered site.</p>				operations	
23	<p>Develop and implement the Closure Plan that covers the mitigation measures detailed in the ESIA, Appendix A - Review of Ciocana Closure Plan. In addition it should address:</p> <ul style="list-style-type: none"> <li>• On-going monitoring of leachate, groundwater, surface water and landfill gas (results should be made available in the public domain). Review the frequency and duration of the monitoring including action / trigger levels for monitoring. Consider monitoring for lateral migration and surface emissions. Landfill gas monitoring from gas wells to include flow rate and pressure plus ambient meteorological conditions. Also undertake trace gas monitoring to assess potential odour / health risks and also qualitative odour monitoring (sniff tests). Undertake monitoring of flare gas emissions to compare to emission limits;</li> <li>• Investigate base of waste mass and if leachate is being intercepted. Leachate collected should be sent to on site leachate treatment plant;</li> <li>• Undertake a Stability Risk Assessment;</li> <li>• Review the final sealing cap to create the 'impermeable layer';</li> <li>• Implement Construction Quality Assurance testing;</li> <li>• Design spacing of waste gas extraction wells for optimal collection efficiency. (Ciocana Dump Site)</li> </ul>	Design and operation standards, E&S monitoring	Landfill Directive EBRD PR3	Regia Autosalubritate and Design contractor(s)	As part of detailed design prior to commencement of operations	Detailed Design
24	<p>Include in tendering documents the requirement for contractors to develop procedures/method statements for the project to manage the EHSS issues and mitigation measures identified including but not limited to the below, adopting international best practice in line with Moldovan legislation and the EBRD PRs:</p> <ul style="list-style-type: none"> <li>• EHSS procedures;</li> <li>• Labour, working and worker accommodation conditions;</li> <li>• Community safety and security;</li> <li>• Supply chain sustainability;</li> <li>• Grievance mechanism;</li> <li>• Consultation and information disclosure requirements in line with the SEP.</li> </ul> <p>As part of the selection process, an assessment of EHS management policies, procedures and management capacities and previous performance should be</p>	Minimise Health and Safety risks Reduce injuries	Best practice EBRD PR1 and PR2	PIU,	During preparation of tender specifications/dossiers	Tender dossiers

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	undertaken.					
25	Prepare and implement a program for raising public awareness and changing behaviour on the following issues: new regional waste management system, waste tariffs for households and other customers, protection of water bodies and irrigation systems from waste dumping and littering, collection of recyclable waste fractions, management of construction and demolition waste, chemicals, asbestos containing materials.	Public outreach program as part of SEP	EBRD PR10	PIU	Prepare prior to start of operation, implement during landfill operation	SEP including public outreach program in place
26	Implement regular contractor inspections / audits and meetings with contractors at least annually to review compliance and advise on corrective actions	Minimise Health and Safety risks Reduce injuries	Best practice EBRD PR2	PIU	During construction phase	Audit reports