MONTENEGRO
BIJELO POLJE REGIONAL SOLID WASTE MANAGEMENT PROJECT

PRE-FEASIBILITY & FEASIBILITY STUDY
TERMS OF REFERENCE

1. BACKGROUND

The municipality of Bijelo Polje belongs to hilly and mountainous area of north-eastern Montenegro, on the river banks of Lim, surrounded by high mountains. It stretches over 924 km² and is located between mountains Bjelasica, Lise and Pester plateau between 43.04°N 19.75°E. The main municipality centre is the town of Bijelo Polje situated in the central part of the municipality.

Figure 1: Map geographical location.

Unfavourable demographics trend is among other northern Montenegrin municipalities also characteristic to Bijelo Polje. The city population is constantly growing up until 1981 and after that was decreasing constantly. According to the 2011 Census the total population in the municipality of Bijelo Polje is 46,051 which are 7.43 % of the total population of Montenegro. The whole region of eleven municipalities has around 175,000 residents and covers an area of 5,721 km².

The economic development of the municipality and the region is based on the small and medium enterprises in the manufacturing industry, tourism, trade and service industries. The economy of
the region is underdeveloped compared to the central and coastal area of the country and is at between 40% - 75% of the national average.

The Municipality has never had a proper sanitary landfill. Currently it uses a temporary waste dumpsite situated in Kumanica, 18km north from the town. Closure of the existing dumpsite and construction of the new sanitary landfill complying with the country’s Ecological Code and best international standards must be undertaken to deal with the pressing environmental concerns.

Significant improvements to the solid waste management (“SWM”) system are also strongly required. Currently, the generated municipal solid waste (“MSW”) is collected and simply dumped at landfills. In addition, Montenegro will have to separately collect and recycle valuable materials (recyclables) such as paper, glass, and plastics. The objective is to recycle 60% of the solid waste until 2030. Therefore the introduction of sorting and processing facilities is the top priority for the Municipality. In addition, none of remaining 10 municipalities has a proper sanitary landfill and all of them dump waste at certain dumpsites.

In light of the above, the Municipality of Bijelo Polje, with the support of the Ministry of Sustainable Development and Tourism, has approached the European Bank for Reconstruction and Development (the “Bank” or the “EBRD”) with a request to assess the possibility of financing building of the landfill and modernization of the SWM system.

The project involves on the one hand the construction and operation of a regional, EU-compliant regional sanitary landfill (“RSL”) at Chelinska Kosa, 20km south-eastern of Bijelo Polje, and the closing of an old dumpsite including a recycling yard, a facility for processing construction and demolition waste (“C&D waste”), and a facility for storing and dismantling e-waste (Waste electrical and electronic equipment (“WEEE”)) and on the other hand a waste transfer station that will serve eleven municipalities (Bijelo Polje, Berane, Pljevlja, Rozaje, Plav, Andrijevica, Petnjica, Gusinje, Mojkovac, Kolasin and Zabljak) in the Northern Region of Montenegro (the “Project”). In addition, the municipality seeks solutions for both medical and animal waste and sewage sludge that is generated in the region. Another part of the project in terms of investment is related to the purchase of waste collection equipment (bins and vehicles) and equipment at the landfill (e.g. compactor, bulldozers etc.). The recycling facility, the C&D waste processing facility and the e-waste dismantling facility should be located at the site of the RSL – the site was already selected. The location has already been selected in the original Feasibility study done in 2008 and confirmed by the Municipality, Ministry of Sustainable Development and Tourism.

The Project would be financed by an EBRD loan, amount to be defined after the study and co-financed with an investment grant. The EBRD sovereign guaranteed loan will be provided to the Municipality of Bijelo Polje.

The Bank wishes to commission a suitably qualified consultant (the “Consultant”) to prepare (Phase 1) information required as a pre-feasibility study in order to determine whether to proceed with the Project and, depending on the results of Phase 1, a comprehensive feasibility study (“FS”) to determine a priority investment programme (the “PIP”) and evaluate its benefits, including assessing its environmental and social feasibility; and to prepare a detailed financial model for the Project as part of technical and financial due diligence.
The Assignment will be split into two phases. Phase 1 will comprise tasks 3.1-3.1.8 as set out below with Phase 2 comprising 3.2 -3.7. The Consultant will only begin work on Phase 2 of the Assignment with the prior written authorisation of the Bank.

2. OBJECTIVES

The Consultant for this assignment (the “Assignment”) will review the detailed requirements, verify whether a bankable project meeting the objectives below can be prepared, and prepare such a project to achieve these objectives. This Project will be based on an effective least cost investment programme. The investment plan will be justified on the basis of thorough technical, legislative, financial and economic analysis. Furthermore, the Consultant will develop an efficient Project Implementation Plan, including a procurement schedule, and carry out an assessment of the resource efficiency opportunities (including energy efficiency, renewable energy potential and the impact on greenhouse gas (“GHG”) emissions) and environmental and social impacts of the investment programme.

The main objective of the Project is to improve the service, efficiency and the environmental and social compliance of the municipal SWM system in the Northern municipalities of Montenegro and in parallel to reduce the environmental impacts on human health and environment.

The specific objectives of the assignment shall include, inter alia:

- Review the needs of the municipalities.
- Review the specific needs\(^1\) for solid waste management in the area.
- Review the applicable legislation at local, national and international level (including planning and strategy documents) in place regarding waste (e.g. targets on material and energy production from waste), and assess the implications on the Project.
- Review and analyse the current system of solid waste separation, collection and further processing for recycling and, if appropriate, make recommendations on how this could be improved, taking into consideration international best practices in waste management (e.g. BAT/BREFs) and following the EU waste hierarchy options to the maximum extent. Identify potential (industrial) users of separated materials / recyclables and barriers existing to the development of a market for such products.
- Review and analyse the current situation of the waste collection/separation/recycling/treatment/disposal (e.g. landfilling) practices in the area in terms of condition of major equipment and facilities, recent past years performances, operation and maintenance (“O&M”) practices, capacity of the municipalities to manage and address all relevant environmental and social risks and impacts, compliance with national laws and regulations and any liability issues.
- Based on an assessment of the current situation, needs and future trends, the consultant shall plan and design the necessary infrastructure (facilities and equipment). A study on the feasibility of waste transfer stations has to be conducted as well.

\(^1\) Assess needs of all relevant stakeholders, presenting any differentiated needs and priorities according to gender and age.
• Once the waste management option and site selection has been confirmed, screen the project against the EBRD’s Environmental and Social Policy (2014, “ESP”) and associated Performance Requirements (“PRs”) to propose, and agree with the EBRD, the project category (A or B) and confirm the environmental and social due diligence required.

• Estimate potential reductions in greenhouse gas (“GHG”) emissions (see also Annex 1 + 2) arising from the possible closure of any old landfills, and the construction of new sanitary landfills as well as to assess the possible utilisation of biogas (landfill gas (LFG)) from existing and planned landfill sites, and the impact on climate change mitigation. Other technical options (e.g. improved collection efficiency due to improved fleets, routing, transfer stations etc.), have also to be considered regarding their contribution to reduced GHG emissions and resource efficiency.

• Based on the results of the above, draw up a detailed priority investment programme (“PIP”), including but not limited to collection vehicles, recycling stations, wells, piping, and in case future use of the exiting dumpsite is not recommended, closure of the existing landfill and opening of a new sanitary landfill.

• Based on the results of the above, draw up a detailed priority investment programme (“PIP”), including but not limited to source separation options (e.g. recycling stations etc.), collection infrastructure (vehicles, bins, containers, transfer station(s)), closure of the existing landfill and opening of a new sanitary landfill and the necessary equipment, a recycling yard, a facility for processing C&D waste, a facility for dismantling of e-waste and options for treatment/disposal of both medical and animal waste and sewage sludge generated in the municipalities. To the extent possible the Consultant shall take into account the potential impacts of climate change on the project in order to build in resilience to climate change related risks.

• Make necessary recommendations for organisational, legal and institutional changes (organisation of solid waste management, changes in laws or institutional changes (including human resources)) regarding solid waste management in the municipalities.

• Prepare a strategic and operational plan to enable improvements in the collection (and if appropriate, recycling) services, including route optimisation, and attain maximum service coverage in the municipalities.

• Conduct a financial analysis of the project and create a business plan over the lifetime of the loan with detailed calculations of realistic capital expenditures (“CAPEX”), revenues, operational expenditures (“OPEX”), debt service coverage ratio and Internal Rates of Return (“IRR”) (both economic and financial).

• Prepare prudent technical and commercial assumptions on the Company’s revenues and expenditures to be used in the financial model (to be prepared by the Bank) and confirm correctness of inputs and technical parameters. The inputs/assumptions shall be fully consistent with the proposed PIP. Financial projections shall include annual balance sheets, income and cash flow statements.

• Design a general timetable of the implementation of the Project for each potential scenario.
• Review the potential for private sector participation (“PSP”) in waste collection, treatment and disposal (and if appropriate, recycling) (e.g. design-build-operate for any part of the Project, privatisation of collection in parts of the City, operation of the landfill, etc.).
• Review other grant financing options for specific facilities at the landfill.
• Support discussions on the Project proposal between the EBRD and the relevant stakeholders as necessary.
• Calculation of the Bank’s standard measuring indicators and GET impact indicators (Annex 2). Calculation should also be provided in Excel format with all inputs/assumptions easily traceable and verifiable. Calculated impacts should be linked to the PIP with a concise explanation on where any particular impact comes from.
• When preparing the Study, the Consultant can use the Feasibility Study done in 2008.

3. **SCOPE OF WORK**

The Assignment can be categorised into the following seven tasks:

**PHASE 1**

3.1 Baseline Study and future SWM system

**PHASE 2**

3.2 Project proposal
3.3 Legal and institutional set up
3.4 Operational efficiency
3.5 Financial and economic analysis
3.6 Project implementation plan
3.7 Environmental and social screening

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3.1 **Baseline study and future SWM system**

This task involves the review of the present status of the waste management services in the Project area. This analysis shall allow the Bank to better understand the present situation in institutional, legal and financial, as well as technical and environmental terms. The following shall, inter alia, be addressed:

3.1.1. **Assess demand for SWM services**

The Consultant shall, *inter alia*:

Define the catchment area and assess the number of households and customers covered by the SWM services in the municipalities, and to this end:
• Prepare a map detailing the areas that are currently covered by the SWM services in the project area;
• Assess the number of residents – waste generators within the current and perspective catchment area (including actual and registered residents in high-rise and private houses) and distinguish between urban and rural inhabitants;
• Describe other waste generators that are serviced within the municipal waste management system (e.g. main commercial entities, institutions, schools, small businesses etc.) in the current and perspective catchment area;
• Calculate current MSW collection service coverage rates.

Review the current MSW generation in the project areas (distinguishing between municipalities, urban & rural settlements), to this end:

• Perform a reliable review of the current quantities of MSW generated (MSW that is formally collected plus other disposal practices) by each category of waste generators - households (high-rise and private houses)) and other generators (e.g. commercial entities, institutions, schools, small businesses etc.). The quantities of MSW generated should be presented as total (tonnes per year) and relative quantities (kg per capita per year). The quantities of MSW generated (tonnes per year) by large commercial waste generators should also be presented separately.
• Assess quantities of specific waste streams generated, such as C&D waste, e-waste, medical waste, animal waste and other hazardous waste categories. Any potential biodegradable waste streams such as sewage sludge, agricultural waste, market waste, waste from food processing industry; kitchen and restaurant waste etc. should also be assessed.
• Provide a reliable and detailed composition analysis of municipal solid waste generated for each category of waste generators (households and other generators) and per municipality (distinguishing as well between urban and rural settlements). Ensure that the sampling strategy covers different areas, income levels, etc. The composition analysis should also identify recyclables, organic waste and combustible fractions.
• The above mentioned specific waste streams should be also assessed (as far as possible) regarding their composition (especially the e-waste stream).

Remark: for a reliable estimation of MSW generation and composition, the consultant shall make necessary field investigations, including waste sorting campaigns. As a guideline the European Commission methodology for the analysis of solid waste (SWA-tool)² should be used.

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3.1.2. Current SWM practices

- **Waste collection.** Assess current quantities of MSW collected by the formal waste management system (for all waste streams within MSW and other specific waste streams such as C&D waste, e-waste, medical / animal waste and sewage sludge. Describe the collection systems in place for different waste generators and waste types.

- **Waste disposal.** The Consultant will study the waste disposal practices at the existing dumpsites; compare them to international practices and identify areas for improvement (if appropriate, including a comment on how to capture the potential for recycling).

- **Other disposal practices.** Estimate other waste disposal practices for all waste streams (illegal disposal (dumping), backyard burning, home composting, animal feeding, informal sector waste picking at the level of waste generators, etc.) predominant in the region.

- **Source separation of recyclables.** Describe existing (and/or past) experience with waste separation at the source (household and businesses/institutions/industries), relevant regulatory requirements and targets as well as enforcement standards. Describe the market for separated materials (types, quantities, achievable prices (and the associated qualities)) and potential off-takers (buyers) and their location and demands (quantities and qualities) for recyclables and other key players.

- **Recycling.** Describe existing (and/or past) experience with recycling (household and businesses/institutions/industries), relevant regulatory requirements and targets as well as enforcement standards. Describe results, how it is/was organised, ownership of implementing entities, financial and payment details.

The Consultant will describe how waste is taken to the collection points from the household and by whom (men, women or children) and how often. Any concerns and /or priorities for improvement of the services will be described and differentiated according to gender where applicable. The Consultant will identify if there are any informal waste collection activities taking place in the City. If so, the numbers of people involved, how it is undertaken and paid for, a socio-economic description of those carrying this out and whether these informal activities take place on the dumpsite or in different areas of the city should be provided.

An assessment of current waste collection, recycling and disposal habits of residents, tendency to separate waste, littering and general public awareness regarding the current waste management systems will be appraised by visual inspections of collection points, site visits to the dumpsite, research carried out by local team members and information provided by the client.

3.1.3. Organization of the SWM services

The Consultant will study the organisation of SWM in the City, the historic background for the structure of the sector, the governance structure and compare its findings with best practices in solid waste operations and identify areas for improvements. To this end the Consultant shall, *inter alia*:

Describe and assess how **waste collection and transportation** is currently organised, *inter alia*:
List and describe all market participants in the waste collection sector. For each company, provide the following information:

- Ownership (private or public) of these companies.
- Type of service provided: industrial waste and/or households and/or commercial waste collection.
- Which assets does the entity have; age and state of the assets?
- Who do the collection points belong to?
- Who controls/manages the entity?
- Which areas/waste generators does the entity serve?
- What types and quantities of waste are handled per entity?
- How is the entity paid – officially and unofficially? Describe flow of funds from the waste generator generators (or directly from the City as the case might be) to the entity.
- Who supervises the performance of the entity (if any)?
- Outline the entity’s key economic incentive drivers in the system.
- Quality of service provided.
- Any available financial statements.

Evaluate the market size for solid waste collection and transportation (assess revenues, operational costs and profitability of this subsector).

Assess the level of competition. Give an opinion about the optimal number of market participants.

Assess potential for private sector participation in waste collection and transportation and outline potential transaction and contractual structures for such participation.

Describe and assess how waste recycling, treatment and final disposal is currently organised, *inter alia*:

List and describe all market participants and stakeholders in the waste treatment, recycling and final disposal sector. For each company and stakeholder, provide the following information:

- Who owns the entity?
- History of the entity (organisational and structural).
- Which assets does the entity have; age and state of the assets?
- Who controls/manages the entity?
- How is the entity paid – officially and unofficially? Describe flow of funds from the waste generators and/or waste collectors (or directly from the City as the case might be) to the entity.
- What types and quantities of waste are handled?
- Who supervises the performance of the entity?
- Outline the entity’s key economic incentive drivers.
- Service provided / environmental compliance.
- Any available financial statements.

Evaluate the market size for solid waste recycling, treatment and disposal (assess revenues and operational costs and profitability of this subsector).
• Assess the potential for private sector participation in waste treatment and disposal operations and outline potential transaction and contractual structures for such participation.

3.1.4. Paying for and Funding of SWM System

Describe and assess how the current MSW system in the City is funded / financed. Describe the system in terms of, *inter alia*:

• Direct payments (budgeted and actual) made from the cities/municipalities, regional or national budget (from where to where).
• Payments (billed and actual) made by households and the proportion this comprises of their monthly expenditures.
• Payments (billed and actual) made by commercial and other entities served with MSW and other specific waste collection services.
• Other funding sources.

Prepare a payment “flow chart” for each of the payments made by waste generators and describe the roles and responsibilities of each of the “intermediaries” which the payment passes through and describe how the funds are allocated to different functions (collection, transportation, separation, treatment, recycling, final disposal as appropriate). Describe how the waste management financing and payment system provides financial incentives to the various stakeholders.

If data is available, the Consultant shall examine payment differences at both individual and household level (i.e. women and men; single-headed households, elderly; people living with disabilities, ethnic minorities and vulnerable groups in the community, etc.) in different municipalities.

3.1.5. Regulatory framework and contractual arrangements

The Consultant shall review the regulatory framework (including national, regional and local legislation and local / national waste management plans) that may have an impact on the Project and use this as basis for work concerning the development of future institutional arrangements.

As part of the legal and regulatory review the Consultant shall, *inter alia*:

• Identify the respective roles of central, regional, and local authorities in financing and management of the solid waste sector including for example: the method and responsibilities for setting of waste tariffs and “green” energy tariff; control over the assets and SWM services (including waste collection, waste disposal, sale of separated waste (recyclables), and sale of energy produced from waste-sourced facilities (e.g. landfill gas utilisation, waste-to-energy facilities), regulatory responsibilities of various organisations that exist and the nature of their relationship with the Company and other players in the waste management sector of the project region.
• As a part of this work the Consultant shall collect, translate (the relevant parts) and outline the main contents of relevant laws and regulations governing these relations. The Consultant will provide a functional map showing all the stakeholders and their roles, responsibilities and rights in respect to regulation, management, licensing and control of SWM services.

• Review the existing contractual arrangements in the project region for waste collection, transportation, waste separation and sale of separated wastes (recyclables), waste treatment and waste disposal. The Consultant shall, inter alia:
  
  o describe the nature of licencing, duration of contracts, award format, tendering procedures (if any) and price setting mechanism:
    ▪ for solid waste collection and transportation services and include contracts with the waste generators and the municipalities (if applicable);
    ▪ for waste separation, recycling, treatment and disposal and include contracts with the waste generators (if any), waste collectors and the municipalities.
  
  o describe how the municipalities currently manage the provision of SWM services (e.g. can the municipalities impose any qualifying requirements on the companies providing SWM services, “auction” catchment areas for solid waste collection, supervise service provision, etc.).

• Analyse all existing local and national strategies and planning documents related to SWM service and identify main development goals and specific objectives, including the level of recovery and recycling of waste over the horizon of the Project.

• Identify room for improvements in terms of: (i) tendering process/procedures; (ii) licencing requirements and; (iii) the contents of the legal contracts (also advise on the optimum duration of the contracts) separately for provision of each of the SWM services.

3.1.6. Waste Tariff Setting
The Consultant will evaluate current tariff setting policies, and recommend improvements. To this end, the Consultant will, inter alia:

• Examine the current billing and collection methodologies and prepare recommendations in accordance with the industry best-practices.

• Evaluate the current tariff formulae, determine to what extent all recurrent costs are included.

• Assess if under current tariff setting mechanism the Company can achieve a full cost recovery as well as if the inclusion of the debt service under the proposed Bank’s loan.

• Analyse if costs and benefits are shared among the SWM market players in the project region and customers in an equitable and transparent manner.

• Recommend changes to the tariff setting formulae that ensures that the tariff sends appropriate signals to market players to avoid waste generation and support waste separation at the source.
• Identify cross-subsidies (if any), if feasible, and establish a plan for the orderly phasing-out of cross-subsidies over a three to four year period, ensuring that customer tariffs remain affordable.

3.1.7. Affordability assessment

Based on information readily available (data generated by the municipalities and municipal companies) the Consultant will compile and present the demand and socio-economic data of relevance to the Project including, *inter alia*:

a) Population data including historical development (number of people, general spatial distribution), trends, growth rates, and any information useful for population projections;

b) Disposable household incomes, household sizes, number of household members in employment (disaggregated by gender and other relevant socio-economic and demographic characteristics), average expenditures for essential goods etc.

The Consultant shall, *inter alia*:

a) Assess the level of tariffs (waste collection including separate waste collection if applicable and green electricity) that would be affordable for customers, particularly mid- and low-level income households, without causing a socially or politically unacceptable financial strain. The Consultant will assess the affordability and willingness to pay of both domestic and other customers served (small businesses, institutions, schools, commercial entities etc.) taking into account the improved services and current customer perception of service quality. The Consultant will assess affordability and willingness to pay of men and women as well as people from other social and demographic groups (i.e. elderly, youth and the disabled). The Consultant will liaise with EBRD to provide an affordability assessment in line with the EBRD methodology. Document and explain the research and analyses carried out that support the opinions offered and state methodological assumptions. Examine the issues over the life of the project, making assumptions about how real income will increase, how attitudes may change, etc. Present comparisons with other countries/cities.

b) Evaluate whether non-residential users have any particular reason to object to the new tariff levels. Assess whether there could be any impact on industrial or business location decisions.

c) Assess whether there are other factors that could lead to serious objections by users, municipalities or other politicians, or particular interest groups to the Project and SW tariff revision.

3.1.8. Analysis of the future MSW supply and demand

The consultant shall assess the future needs for SWM services in the City. To this end the Consultant shall, *inter alia*:
Prepare likely future scenarios of the MSW generation (including the consideration of potential changes in the waste collection service coverage rate and other specific waste streams such as C&D waste, e-waste, medical/animal waste and sewage sludge) in the project region and demand for disposing of waste materials based on:

- Clearly defined boundary conditions (including perspective catchment area) and the timeline for the Project and assets life.
- Changes in the size of the population in the project region and within the perspective catchment area.
- Potential changes in the relative waste quantities (per capita generation) due to socio-economic changes (e.g. increased per capita waste quantities due to increasing household consumption expenditures).
- Changes of other non-household waste generators (small businesses, institutions, schools, commercial entities etc.) and
- Other technical aspects.

Assess potential changes in the MSW composition (e.g. recycling targets aligned with national and/or regional waste management plans), share of recyclables that will be diverted (i.e. less waste to be landfilled) and display the expected quantities and shares of the different MSW fractions.

Assess potential changes in the composition of other specific waste streams and display the expected quantities and shares of the different specific waste streams (C&D waste, e-waste, medical/animal waste and sewage sludge).

Assess organic (biodegradable) waste availability (incl. estimation of quantities / composition) and proposal(s) for separate organic waste collection mechanisms, including, inter alia:

- Potential bio-waste separation at household level;
- Potential sources (sectors) for providing suitable input material, e.g. from markets, supermarkets, hotels, restaurants, food processing industry etc.) and high level market sounding to gauge appetite of the private sector;
- Possibilities for financial or other incentives to stimulate separate collection of organic waste from different SW generators.

Review of local markets for recyclables with respect to probable output and residues:

- Provide an inventory of the potential recyclable waste streams (paper and cardboard/glass/plastics/ferrous and non-ferrous metals/organic (biodegradable) fraction, refuse derived fuel and other specific waste streams (C&D waste, e-waste)).
- Assess indicatively the potential users (buyers of recyclables) and demand for those materials taking into account the distance to the users, the quantity available, quality requirements and the market value (achievable prices per tonne). In particular, assess the scope for commercial utilisation of the following waste:
  - Cullet for local glass industry.
  - Ferrous and non-ferrous metals.
- Waste paper and cardboard.
- Different plastic types (e.g. PET, PP, foils etc.)
- For the production of different types of refuse-derived fuel (RDF) as a feedstock for the cement industry or other off-takers such as plastics, wood, tyres etc.
- For the production of compost produced out of source separated organic waste.
- C&D waste.
- E-waste and dismantled fractions of e-waste.

- The Consultant will review alternative collection systems for recyclables including:
  - Door-to-door collection.
  - Recycling stations (e.g. shared collection points).
  - A combination of the two options.

In this analysis the Consultant will assess capital assessment requirement for collection and treatment and profitability for municipalities (e.g. special trucks/dedicated bins(sorting facilities)).

- Residual waste streams generated should be considered regarding their destination.
- Study and confirm the possibilities of off-take contractual arrangements between the Company and existing and/or potential buyers of these materials, volumes and terms of such off-take contracts. This will include meetings with potential off-takers to discuss existing and future capacity and probable tariffs.

3.2 Project proposal

Based on the findings of the assessment of the status-quo, the needs and future forecast of waste quantities and composition, the Consultant shall carry out a comprehensive technical-economic analysis to select the best waste management option for the City. It is expected that the following tasks will be completed:

The Consultant shall, taking into account the EBRD’s environmental, technical and procurement policies and procedures, identify those investments that fit best within the scope of the Project and within the estimated project budget. The Consultant shall prepare a report with justified recommendations of the optimal SWM option for consideration by the Bank and the City. The report should also contain a project map and a public description of the Project. The Consultant shall also prepare a presentation that will summarise key findings of the report.

3.2.1. Resilience to climate change

Where appropriate and deemed necessary by the EBRD following its standard screening procedure to identify projects that are sensitive to the impacts of climate change, the Project Proposal should take account of the current climatic conditions and projected climate change in
so far as they have the potential to affect the Project. In particular, the Consultant shall assess the implications of climate change that are relevant to solid waste management services and infrastructure and suggest measures to reduce vulnerability.

In conducting this analysis and other climate resilience tasks set out elsewhere in these Terms of Reference, the Consultant shall use as a methodological guide the Technical Note entitled “Integrating Climate Change Information and Adaptation in Project Development”, which has been developed by EBRD and other financing institutions belonging to the European Financing Institutions Working Group on Adaptation to Climate Change (EUF IWACC). The EUFIWACC Technical Note can be found using this link. The guidance topics of this Note that are especially relevant to the Baseline Study are Assessment Scoping and Climate Information and Impacts.

The Consultant shall work closely with the EBRD in applying this technical guidance in the analysis. In case there are any affordability concerns, the Consultant shall suggest possible mitigation measures. Please also note that the time period for assessing climate change impacts is to be the lifetime of the project and not just the lifetime of the loan.

3.2.2. Investment plan and preliminary design of SWM facilities

Based on the outcomes of the Baseline study and future SWM system performed under Section 3.1, the Consultant shall prepare the priority investment programme (“PIP”) for the optimal SWM system in the City.

For the PIP the Consultant shall summarise in appropriate maps the location, capacities, and staging of major infrastructure components and explain and justify the proposed course of action.

The Consultant should estimate the initial CAPEX along with providing detailed operating costs and capital maintenance of the facilities for the whole Project period.

For each of the sub-components of the PIP selected, reasonable estimates of quantities and costs based on applicable previous bidding experience in the country shall be prepared. Potential cost savings upon implementation of the Project shall be identified and estimated. An operational costs review shall be prepared and costs specified as either fixed or variable for each sub-component of the PIP.

It is important that due care is shown in preparation of these cost estimates. Taxes, duties, technical and financial contingencies are to be considered and specified. Financial contingencies are to be calculated based on an investment schedule translating the Project implementation timing (see below under financial analysis section) into investment figures during the loan maturity period.

For the suggested design of the SWM system the Consultant will address international standards applicable to solid waste management, including EU framework legislation on waste, EU waste management policies and hierarchy, EU directives on landfill, and legislation on waste management operations and specific waste streams such as IPPC BAT/BREF documents.
3.2.3. PIP: assessment of the selected site for the SWM facilities

The Consultant shall perform a gap analysis with the original landfill Feasibility Study done in 2008 related to the following topics:

A. General data
To get a solid foundation on which to develop and evaluate the project, the assertions of the Technical Assessment and Site Selection exercise must be confirmed by field studies. The geological and hydrogeological characteristics of the site of the future landfill are the key-point. The Consultant shall carry out a risk assessment for the site.

B. Topography
The land of the site of the new landfill and the peripheral area (defined as between the road and the crest line) must be mapped with the level curves each 1-meter. The coordinates of the points measured during the survey must be registered in an electronic file (Excel).

C. Geology and Hydrogeology
The land of the site of the new landfill and the peripheral area (defined as between the road and the crest line) must be studied as:

- 3 deep non-destructive boreholes reaching the deep watertable and equipped as piezometers; the cores are carefully identified and preserved;
- 8-10 non-destructive boreholes (>20 m depth); the cores are carefully identified and preserved;
- 20-30 (if necessary) low depth (1-2 m) destructive boreholes for the recognition of the limits of the geological layers.

D. Geotechnical
The materials of the different geological layers of the new landfill must be analysed and specifically must be checked:

- Permeability;
- Limit of plasticity (limit of Atterbergh);
- Tri-axial compression.

E. Hydrology
The waters sampled underground and on surface (brook, ponds) must be analysed. Considering the hydrology of the site, the consultant shall as a minimum analyse:

- Near surface waters speed and flow, turbidity, and water level;
- Location and extent of aquifers, typical groundwater flow speed, and variations in water levels in local wells;
- near drinking water intake points;
- near rivers and their flow flows;
- drainage basin;
- nature and frequency of flooding.

F. Weather conditions
The beneficiary should provide the meteorological data of the region. As soon as possible, an automatic meteorological station must be implemented on the site of the new landfill.

G. *Environmental/technical, legal and social analysis of the site:*

- Assess if the location is acceptable from an environmental/technical and social point of view and assess which permitting procedures have been/need to be carried out including details of any environmental studies and public participation activities.
- Based on the sanitary protection zone is any physical or economic resettlement foreseen?
- Outline which permissions have been received for the proposed site/design (include copies of permits and translations to English).
- Review and elaborate on possibilities and systems for handling and storage of different categories of hazardous wastes at the new cite.

3.2.4. **PIP: Preliminary design of the new regional sanitary landfill (RSL) / recovery ready landfill**

For the selected site and according to the topographical, geological and hydrogeological data, the Consultant will design the landfill (in line with international best-practices, standards and the EU Directive on the landfill of waste), including:

- the assessment of remediation needs and preparatory works of the selected development area (if applicable);
- the general layout and geometry of the landfill cells;
- the structure of the base lining system;
- the leachate drainage (collection) and storage system and leachate treatment system components;
- surface water runoff and collection system;
- the landfill gas (LFG) collection and pumping system;
- the LFG utilisation options and necessary infrastructure;
- temporary covers
- capping and closure of cells;
- the necessary road network;
- facilities for the operator (waste reception, weighbridge, vehicle and wheel washing facility, sanitary facilities, buildings, garages, fence, signage, storage etc.) and required equipment (e.g. specialised vehicles such as bulldozers, compactors, leachate spreader in case of leachate recirculation etc.);
- other associated infrastructure as considered necessary;
- required civil & electromechanical works;
- operational procedures for landfilling and the necessary equipment and staff;
• arrangement of the landfill surrounding zones, security measures, roads and other infrastructure needed;
• A programme for the works.

The consultant shall verify and if necessary, adjust the necessary landfill space needed (and estimate the lifetime of cells) based on the information and calculations (including compaction, settlement and cover material) and in addition:

• Plan the construction and design of the waste disposal (operational) zones including
  o base lining (sealing) system;
  o temporary cover / capping;
  o management of surface water runoff and storage, leachate collection and treatment system (including leachate treatment options based on an estimation of leachate quantities over time);
• Reworking the operational procedures for landfilling and the necessary equipment and staff;
• Reviewing the arrangement of the landfill surrounding zones, security measures, roads and other infrastructure needed.

The design of the LFG utilisation (flaring or electricity production) is based on a LFG generation modelling that is carried out by the Consultant. Similarly, the design of the leachate collection and treatment is based on an underlying model on leachate generation carried out by the Consultant.

The Consultant will provide a detailed cost estimate for the construction and the equipment (CAPEX) and annual operational costs. The Consultant will also assess costs of the detailed design. The Consultant will take into consideration the regulatory framework for preparing the detailed design and the formal procedure for the detailed design approval.

The Consultant will prepare a list of the international standards applicable to the construction of the landfill, specifically for the geotechnical issues and for the use of geomembranes (HDPE lining system) and geosynthetics.

To ensure the highest possible environmental standards and that the Project is bankable from a technical point of view, the new sanitary landfill shall comply with relevant EU and Montenegrin standards.

3.2.5. **PIP: closure of the existing dumpsites**

The Consultant shall provide design and detailed cost estimates for the closure / rehabilitation of the existing dumpsites (if confirmed necessary and according to international best practices, standards and the EU Directive on the landfill of waste).

As every municipality has its own dumpsite, the consultant should apply the following procedure. Based on site visits, interviews with municipality officials and under consideration of existing documentation the consultant shall:
• Assess the dumpsites in the eleven municipalities and prepare a full inventory of all sites, including (amongst others) the exact location, photo documentation, size and estimated disposed of volume, types of waste disposed of, operational years, yearly disposal rate, underground situation, technical components installed etc.

• Based on the inventory conduct a risk assessment for all sites alongside different (to be defined) risk factors, e.g. how close the dump is to a river or surface water, specific impermeable soil types, landfill gas production potential, how close settlements are, location in a specific touristic or protected area etc.

• The combined inventory with the risk assessment leads to an assessment of priorities. The consultant shall provide a ranked list of the dumpsites including different closure / rehabilitation measures that are appropriate (different options might include amongst others) covering it with soil or more complex capping systems, with or without surface water runoff installations, with or without landfill gas collection system (plus e.g. flaring of the gas or even electricity production out of it, excavation and transport to the RSL etc.).

• Provide an estimate of the CAPEX for the closure /rehabilitation of all eleven dumpsites.

For specific (to be defined with the municipality) dumpsites, the Consultant shall, inter alia:

• Provide 3D topographical model of the landfill;
• Design of embankments protecting the landfill from erosion (if applicable);
• Assess slope and general stability of the landfill body and in case necessary, provide reshaping and slope stabilisation measurements;
• Design of vertical barriers (if feasible);
• Design (if feasible) of a draining system for the leachate collection, storage and treatment;
• Design (if feasible) of a network of landfill gas collection and utilisation;
• Cover and capping of the landfill;
• Surface water runoff system;
• Groundwater monitoring wells;
• Design other necessary monitoring aspects and the related infrastructure;
• Other important infrastructure (fences etc.);
• A cost estimate for CAPEX;
• Required civil & electromechanical works;
• A programme for the works.
To ensure the highest possible environmental standards the rehabilitation and closure activities should comply with the relevant EU and Montenegrin standards.

### 3.2.6. PIP: Biogas Production and Utilisation

The Consultant will assess and document the current and anticipated levels of landfill gas production and emission both from the existing dumpsites and the new RSL. The consultant will investigate measures to be taken to control (through flaring or any type of capture) or utilise (for energy production) these emissions.

The Consultant will undertake a high-level economic and technical feasibility study of landfill gas recovery systems on the RSL. The Consultant will assess the climate change mitigation impact (i.e. greenhouse gas (“GHG”) emission reduction) of all control measures by calculating and documenting the expected GHG reduction volume against the baseline emissions.

Based on this assessment, the Consultant shall assess potential electricity generation capacity for a landfill gas utilisation plant, suggest optimal technology and provide detailed design and cost estimates for the plant. The Consultant shall also estimate the required level of “green” electricity tariff that would allow full cost recovery of biogas electricity generation and/or assess level of required subsidies / grant co-financing.

Options to combine CHP from LFG utilisation shall be assessed. If this is reasonable, the Consultant shall perform an assessment on regulatory process for the grid connection and power purchase agreement with the electricity utility company and relevant authorities. Cost estimates for the CAPEX and associated OPEX including revenues from electricity production shall be provided.

To the extent possible, the Consultant will complete Annex 1 and 2 of the ToR and assess the potential GHG emission reduction potential and impact on climate change mitigation. The Consultant will use the UK Waste & Resources Assessment Tool for the Environment (WRATE) or similar approach to calculate carbon emissions associated with landfill.

### 3.2.7. Estimation on GHG emissions reductions

The Consultant will, inter alia:

- Estimate potential reductions in greenhouse gas (“GHG”) emissions for all waste management infrastructure (see also Annex 1 + 2) arising from
  - the closure of any old landfills (dumps);
  - the construction of new sanitary landfills and the possible utilisation of landfill gas;
  - other technical options (e.g. improved collection efficiency due to improved fleets, routing, transfer stations etc.).
d. the improvement of energy production efficiency from the replacement of existing energy generation by new more efficient technology (i.e. energy recovery from waste).

The GHG emission reductions have to be calculated and displayed on yearly basis and expressed in carbon dioxide equivalents. The Consultant will assess the climate change mitigation impact (i.e. greenhouse gas (“GHG”) emission reduction) of all measures by calculating and documenting the expected GHG reduction volume against the baseline emissions.

3.2.8. PIP: recycling centre (recycling yard)

In addition to the RSL, at the proposed site it is also planned to establish a recycling centre. The consultant shall assess (in coordination with the municipality) the options for the design and purpose of a recycling centre. Such recycling centre could be a specially designed facility for after-sorting of already source-separated recyclables and the temporary storage of certain wastes, i.e. recyclables and other hazardous and non-hazardous waste types, such as paper / cardboard, glass (straight and packaging), scrap metals (ferrous and non-ferrous), metal and plastic packaging, bulky waste, tyres, waste electrical and electronic equipment (WEEE), Styrofoam, construction and demolition waste and others.

The consultant shall provide, inter alia:

- A concept of a recycling centre including the planning of a design and layout of the recycling centre aiming at pre-sorting, sorting, processing and temporary storage of recyclables, and other hazardous and non-hazardous wastes based on the expected future quantities;
- Plan and describe different zones of the recycling centre;
- Assess the necessary equipment, staff and other important infrastructure for all zones;
- Provide information on the required civil & electromechanical works and on the programme for the works;
- A cost estimate for CAPEX.

Remark: the design and size shall be adjusted with future expected quantities being handled / processed, and this is based on the adjustment of specific targets described in national / regional waste management plans / strategies.

3.2.9. PIP: facility for processing construction and demolition waste (“C&D waste”)

In addition to the RSL, at the proposed site it is also planned to establish a facility for processing C&D waste. This specially designed facility for sorting, processing (crushing, sieving) and the temporary storage of C&D waste.

The consultant shall provide, inter alia:

- A concept of a C&D waste processing facility including the planning of a design and layout of such a facility aiming at pre-sorting, sorting, processing (crushing, sieving) and...
temporary storage of different fractions of processed C&D waste, and other hazardous and non-hazardous fractions from that waste stream based on the expected future quantities;

- Plan and describe different zones of this recycling centre;
- Assess the necessary equipment (crushers, sieves, conveyor belts etc.), staff and other important infrastructure for this area;
- Provide information on the required civil & electromechanical works and on the programme for the works;
- A cost estimate for CAPEX.

Remark: the design and size shall be adjusted with future expected quantities being handled / processed, and this is based on the adjustment of specific targets described in national / regional waste management plans / strategies.

3.2.10. PIP: facility for processing and dismantling E-waste (Waste Electrical and Electronic Equipment (WEEE))

In addition to the RSL, at the proposed site it is also planned to establish a facility for processing and dismantling WEEE. This is a specially designed facility for sorting, processing, dismantling and the temporary storage of e-waste and the fractions after dismantling.

The consultant shall provide, *inter alia*:

- A concept of an e-waste processing and dismantling facility including the planning of a design and layout of such a facility aiming at sorting, processing, dismantling, and the temporary storage of different fractions of processed e-waste, including valuable and non-valuable (hazardous and non-hazardous fractions) from that waste stream based on the expected future quantities;
- Plan and describe different zones of this recycling centre;
- Assess the necessary equipment for dismantling of different e-waste categories, the necessary staff and other important infrastructure for the facility;
- Provide information on the required civil & electromechanical works and on the programme for the works;
- A cost estimate for CAPEX;
- An estimate of potential costs for disposal of different residues from the dismantling of different WEEE categories;
- An estimate of potential revenues from the selling of valuable materials coming from the dismantling of different WEEE categories.

Remark: e-waste dismantling leads to valuable materials (such as metals, printed circuit boards but also to materials (residues) that have to be disposed of (e.g. plastics from casings, cathode ray tube TV sets etc.).

Remark: this has to be done according to the different categories for WEEE (as outlined in the Directive 2012/19/EU on waste electrical and electronic equipment) and the estimated quantities of the categories.
3.2.11. PIP: Options for treatment and disposal of selected, specific waste streams

In addition, the municipality seeks solutions for both medical waste, animal waste from a meat processing facility and sewage sludge.

The consultant shall provide, inter alia:

- Options / solutions for the treatment and disposal for medical waste, animal waste from a meat processing facility and sewage sludge based on estimated quantities;
- Review different treatment / disposal plants and the distance to the project region;
- Assess potential transport and treatment/disposal costs for the above mentioned waste streams.
- Assess potential technical solutions for processing or disposal of these wastes on-location and estimate the related CAPEX.

3.2.12. PIP: design of MSW collection and transportation system

The Consultant will review the waste collection arrangements in the City and assess requirements for the collection and transportation of MSW considering objectives (if any) for separate collection of specific waste streams.

Based on the above assessment the Consultant shall, inter alia:

- Prepare functional zoning of the collection according to the structure of the project area;
- Suggest collection options for different waste types, for each type of zone and types of equipment required, such as truck and container types and capacities, collection frequencies etc.
- Make recommendations for new collection points and/or remediation of existing ones;
- Assess the needs for transfer stations;
- Develop routing assessment to optimise collection and transportation of MSW and suggest optimal allocation of service zones between MSW collectors;
- Provide cost estimates (OPEX and CAPEX) of recommended improvements and scenarios.

Based on the completed assessment the Consultant shall identify priority investments for the Company collection and transportation of MSW and other specific waste streams (C&D waste, e-waste etc.) and provide detailed cost estimates and design (special trucks, dedicated bins, etc.) of such investments.

**MSW collection vehicles**

For any proposed vehicles the Consultant will provide information on the number of waste collection trucks required, the expected lifetime of these trucks and vehicle specifications, associated investment and operational cost estimates.
Transfer stations (if required) Based on an assessment of the current situation, needs and future trends, the consultant shall assess the necessity of transfer stations.

For any suggested transfer station(s) the Consultant shall provide following information:

- Are the locations of transfer stations acceptable from an environmental/technical point of view?
- Is the technical design acceptable from a technical/environmental and social point of view? Based on the sanitary protection zone is any physical or economic resettlement foreseen?
- Describe the permitting procedure which has been carried out (or is needed) including details of any studies and public participation activities;
- Which permissions have been received for the proposed site/design?
- Which permissions or activities (according to national, regional and local regulations) are still required before the facility can be constructed and can start operation?
- Review investment cost and annual operational cost estimate for transfer station(s).

A. Design
The Consultant will propose the sites for the implementation of the transfer stations in the project region. The consultant conducts an assessment (based on the regional distribution of catchment areas for waste collection and the treatment/disposal sites and based on the vehicle fleet and collection intervals) in order to assess the necessity of transfer stations. Graphical documents (maps, drawings) of these sites will be collected. The transfer stations will be either newly built or fitted out in existing premises. The Consultant will provide a general design of the transfer stations.

B. Equipment
The Consultant will prepare the list and the specifications of the technical equipment and mobile equipment. The transportation of the waste between the transfer stations and the RSL will be done with specialized trucks. The Consultant will calculate the necessary parking garage and repair and maintenance facilities needed for the proposed trucks, containers and establish the type, quantity and specifications of these trucks and containers.

C. Costs
The Consultant will make an estimation of costs for the construction of the transfer stations and for the equipment.

This assumes that the information stated above will be provided by the municipalities. However, whenever the information requested is not available, the Consultant will make very best effort, outside of the prescribed sources, to obtain the information required. Where no information is available, the Consultant will make an assumption based on past experience and the information that is available.

Transfer Trucks and Containers (if required)
The Consultant will provide a basic specification for the transfer trucks and containers based on supplier information as well as the number of trucks required and their expected lifetime. The Consultant will also review investment and annual operational cost estimates. The information obtained will be used in the calculation of the appropriate fee for the waste transfer service (under financial assumptions to be agreed with the EBRD).

3.3 Legal and institutional set up (the Company / SWM sector)

The Consultant will propose the legal status of the Company and the institutional and contractual framework in which the project should operate after commissioning of the facilities. To this end, the Consultant will, *inter alia*:

- Describe the legal status of the Company and opine if the Company has the required rights, permits and licences (if applicable) to implement the Project and describe the procedure for obtaining missing permits. Prepare a list of all required licenses/permits (including environmental) with an overview of procedures and timing required for obtaining such approvals, as well a list responsible authorities (national and local).

- Make necessary recommendation for institutional changes (organisation of the Company in charge of the service, changes in law or institutional changes) regarding the solid waste management in the covered area, appropriate incentive structures, and any contractual agreements required. Applicability of EU Directives and standards should be considered, including a detailed comparison with national and regional solid waste management and environmental regulations. Consideration should be given to effective regulation and monitoring of the sector.

- Outline key principles and develop key terms for contractual agreements with the municipalities and other market players for SWM services, whereby the Client can source and repay its debt from own resources, whether obtained from tariff revenues, sales income, regular payments from municipal or regional authorities, or other sources. These should be in line with national legislation.

- Provide recommendations on the relationship between the Company and the municipalities for the waste services. These recommendations shall include a specification of the rights and responsibilities of the Company in order to operate at an “arms-length” basis from the municipalities (i.e. are the objectives of the Company clearly defined, to which extent does it operate flexibly and freely in pursuit of those objectives, and the degree of accountability that characterises the relationship).

- If applicable and not implemented yet, identify legal/political issues or problems, which would prevent the Company from evolving into the autonomous entity. Consider specifically issues related to ownership and control of assets, the establishment of tariffs, management independence, investment and personnel decisions, etc.

- The Consultant will provide a plan for institutional development, with the aim of the Company moving towards a fully commercial entity. This plan should include intermediate options, for example, making use of performance based service contracts,
and/or management contracts. The plan should take into account the abilities of the local private investors in the sector.

3.4 Operational efficiency assessment of the Company

The Consultant will provide recommendations as to the structure of the Company and its organisation in terms of the corporate, financial and management structure and staffing. In particular, the Consultant will evaluate the options to carry out the Project and prepare a recommendation for the optimal corporate structure for the Project implementation.

The Consultant will, *inter alia*:

- Assess the current and propose a more efficient form of the organisational structure and management that will be optimal to successfully manage the Project: number, skills and attributes of employees; major departments; policies and practices relative to strategic planning, project preparation and implementation, operational planning and control, allocation of tasks, supervision of task execution, and related matters, human resources development policies and practices, including training and incentive schemes.

- The Consultant shall make an assessment of the operational efficiency of the Company and define benchmarks of operation efficiency. Comparison should be made with best practice from other comparable cases.

- Propose financial and operational improvement plan on how to address the key financial and operational areas in which the Company could consolidate or strengthen its performance and its underlying creditworthiness.

3.5 Financial and economic assessment

3.5.1. Analysis of the Company’s existing operations

The Consultant shall perform detailed analysis of the Company’s existing activities. To this end the Consultant shall review the Company’s financial statements and management reports and provide a detailed breakdown of all revenues and expenditures. The breakdown shall clearly indicate all key drivers and assumptions for revenues and expenditures (both operating and capital).

3.5.2. Calculate new tariff for MSW services

On the basis of its cost model and under financial assumptions agreed with the EBRD, the Consultant shall develop and outline the tariff structure(s) which would better fit into the frame of the Project investment, *inter alia*:

- Calculate the appropriate tariff and gate fees for the MSW facilities in the project area (separately for each SWM service) and, specifically for the Company, that would be (1) adequate to enable the Company to achieve a full cost recovery including the debt service
under the proposed Bank’s loan; (2) affordable to various categories of the population; (3) compliant with the existing tariff setting methodology.

- Calculate alternative waste and green electricity tariff for different sales scenarios, including value recovery, and determine an appropriate tariff adjustment policy, which will ensure the financial viability of the Project. Foreign currency and debt service components shall be specifically identified in the proposed tariff structure.
- Identify potential financial incentives, rebates, and tax credits that may apply and assess their viability in close collaboration with the City to affordability of the tariffs.
- Detail steps to be undertaken by the Company/municipalities to get the required new MSW / green tariffs approved.

3.5.3. Financial and commercial assumptions for the Project

The consultant shall prepare and provide technical and economic assumptions related to the Project that will be used to prepare a financial model (to be prepared by the Bank) of the Project covering a period of at least 15 years.

The Consultant will prepare and provide inputs to the financial model that will include, but shall not be limited to:

- Cost table, giving best estimates of the costs of project preparation including preparation of detailed design documentation, construction/implementation, works supervision costs for each elements of the Project and required contingencies;
- Timing for construction and payment schedule for each element of the Project;
- Depreciation rates for each category of assets;
- Operation, repair and maintenance costs (with underlying cost drivers and assumptions);
- Working capital needs;
- Revenue assumptions that would include all revenue streams and revenue drivers (tariffs, MSW volumes, collection rates, revenues from the sale of recyclables / energy, etc.);
- Tariffs for all and each SWM services that would be cost recovery and within affordability limits;
- Assessment of the optimal capital structure and additional funding needs and its sources (city, regional, national or other);
- Any other input / assumption / estimate that would be necessary to assess bankability and feasibility of the Project as may be requested by the Bank.

The consultant shall review all technical, commercial and financial assumptions used in the financial model (to be prepared by the Bank) to confirm correctness of inputs, technical parameters and commercial assumptions. The operational assumptions of the model should be independently verified, and benchmarked to existing waste collection / operations in the project area.
3.5.4. Economic assessment

The Consultant will assess the economic cost-benefit of the proposed components to be financed via the Project and calculate the Economic Internal Rate of Return based on the Project’s expected outputs and benefits for the population.

The analysis should identify any quantifiable economic benefits and estimate non-quantifiable benefits to obtain an economic internal rate of return calculation for the project, including but not limited to environmental benefits from more secure disposal of waste and carbon savings from production of energy based on biogas extracted from the waste. Based on the above assessment and financial projections calculated as part of Task 3.5.3, the Consultant will calculate the economic rate of return (EIRR) of the Project, inclusive of all costs (whether grant or loan financed) and all benefits (whether financial or accrued through positive externalities).

3.6 Project implementation plan

The Consultant shall prepare a Project implementation plan for the Project (also in Excel format), which will cover all aspects of project implementation, and include, *inter alia*:

- In case the analysis reveals a necessity for transfer station(s), in close cooperation with the local authorities and other relevant stakeholders, the Consultant will select the sites for the transfer stations. The graphical documents (maps, drawings) of these sites will be collected.

- Project programme - a detailed Project programme (using appropriate presentation format: e.g. linked activity programmes, etc.) for completion of the whole Project - showing all activities and key events and timing (by week) for design, approvals, construction, commissioning, completion, etc.

- Project budget - a detailed cost budget for the whole Project. This should be based on existing proposals of cost estimates.

- Procurement – the Project procurement plan. The plan shall be organised so as to minimise the number of contracts. The Consultant shall consider the possibility of a turnkey contract for the facilities.

- Project risk matrix - a risk matrix outlining the key challenges and risks associated with the Project and the measures proposed to deal with them.

3.7 Environmental and Social (E&S) Assessment

The Consultant will carry out an Initial Environmental and Social Examination of the Project to gain a better understanding of the environmental and social issues associated with the project and locations of the project components and categorise the Project against the EBRD’s Environmental and Social**4**
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Policy (“ESP”) (2014)\(^5\) and associated Performance Requirements (“PRs”) to determine the project category (A or B) and the E&S assessment that would be required for the project.

The Consultant will undertake the following work:

1) site visit to locations of project components and the surrounding areas;
2) review of existing environmental and social information in order to gain a better understanding of the environmental and social issues associated with the project;
3) based on the site visit and the review of the documents, decide on the most appropriate categorisation (A or B);
4) define the associated facilities for the project;
5) verify the screening procedures that has been applied to the project by the national authorities particularly, the EIA procedure that has been followed; public participation process that has been carried out; their compliance with EU Directives;
6) define the scope of E&S due diligence including milestones and timing requirements.

4. IMPLEMENTATION ARRANGEMENTS AND DELIVERABLES

The duration of the assignment will be 16 weeks. The Consultant shall report to the EBRD whilst liaising with representatives of the Company and the City. The Consultant shall continuously report to EBRD Operation Leader. For E&S Assessment (ESDD) part of the work the Consultant should be in contact with EBRD’s Environmental and Social Specialist.

The Municipality of Bijelo Polje will provide the Consultant with working space, necessary furniture and telephone connections.

The Municipality of Bijelo Polje will designate senior officials to be the primary contact persons with specific responsibility for assisting the Consultant and co-ordinating activities.

The Municipality of Bijelo Polje will make available all of their records, plans, reports, designs and other documents as appropriate, but it will be the responsibility of the Consultant to translate these documents, if necessary.

The Municipality of Bijelo Polje will provide access to all of their facilities and employees for questioning or assistance relative to an understanding of the functioning of system facilities.

The Consultant shall be responsible for paying for all international telephone connections, office supplies, external printing. The Consultant shall pay for all local transportation required by the Consultant’s staff throughout the duration of the assignment.
The Consultant shall be responsible for providing suitably qualified interpreters/translators to work with their staff.

The Consultant shall produce in the course of the assignment the following reports:

- **Inception Report**: Within 6 weeks of the assignment commencement, and following the site visit, initial data review and initial opinion as to a project proposal, the Consultant shall present to the Bank an Inception Report presenting the initial findings, with an emphasis on findings having an impact on the time schedule and factors affecting these Terms of Reference. The Bank will provide comments on the inception report to the Consultant.

- **Draft Financial Analysis Report and draft Financial Model**: Within 12 weeks of the assignment commencement, the Consultant shall submit to the Bank a draft financial analysis report and draft financial model, which shall generate preliminary financial projections for the Company operations.

- **Draft E&S Assessment report**: The Consultant shall submit to the Bank
  - Draft Environmental and Social Audit and Assessment Report, which includes a PR compliance table (see E&S Guidance 1 & 2 of the E&S guidance pack) – within 10 weeks of the Assignment Start Date
  - Draft Environmental and Social Action Plan (ESAP) (see E&S Guidance 3 of the E&S guidance pack) - within 10 weeks of the Assignment Start Date
  - Draft Stakeholder Engagement Plan (SEP) (see E&S Guidance 4 of the E&S guidance pack) – within 10 weeks of the Assignment Start Date
  - Draft Non-Technical Summary (NTS) for disclosure to the public (see E&S Guidance 5 of the E&S guidance pack) – within 10 weeks of the Assignment Start Date
  - Final documentation - within 2 weeks of receiving the Bank’s comments on the draft versions. The final versions of the ESAP, SEP and NTS will be translated into the local language(s).

- **Draft Final Report**: Within 14 weeks of the assignment commencement, the Consultant will submit a draft Final Report. This shall include: (i) an assessment of the existing situation and facilities; (ii) proposals for components to be included in the PIP with cost estimates; (iii) an overview of cost savings to be achieved after implementation of the Project, by component; (iv) inputs for the financial model of the Company; (v) a procurement strategy and procurement plan; (vi) the scope of work for the project implementation team. The Consultant shall distribute the draft Final Report in Serbian and English to the Bank and the Company for comments and shall organise a joint meeting to present the Final Report (“Presentation”) with all parties in the City within two weeks after distribution of the Report.

- **Final Report**: To be submitted within two weeks after the Presentation date by the Consultant, elaborating and reflecting all comments addressed during the Presentation, and including summary information on the Project.
Both versions of reports (English and Serbian) shall be provided in electronic-readable format, in both Word and PDF. Supporting data in the Serbian language in the appendices need not be translated for English versions of the documents.

4.1. **Donor visibility**

Given the assignment is funded through the EBRD’s donor funded technical cooperation programme, the Consultant will be required to support the Client to ensure visibility of these resources. Support on these visibility aspects can be obtained from the Bank’s Communications Department. Measures could include but not be limited to:

- All documents produced by the Consultant should mention donor support and bear the logo of the donor, when appropriate.
- Donor support to the project should be acknowledged in any public communication (press releases, launch of facilities).
- Local representatives of donors should be invited to any public event organised to promote the project (press conferences, inaugurations, possibly stakeholder participation programmes).
# ANNEX 1
RESOURCE UTILISATION AND GHG EMISSIONS TABLE

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Comments</th>
<th>Current Operation</th>
<th>Estimated Performance Post-Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel Used</td>
<td>Include any quality parameters available, e.g. calorific value, sulphur content, etc</td>
<td>Amount Unit</td>
<td>Amount Unit</td>
</tr>
<tr>
<td>Oil</td>
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<td>Gas</td>
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<tr>
<td>Coal</td>
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<td>GJ / year</td>
<td>GJ / year</td>
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<tr>
<td>Lignite</td>
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<td>Heat Purchased</td>
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<tr>
<td>[Other]</td>
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<td></td>
<td></td>
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<tr>
<td>Raw Materials and Resources Used</td>
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<td></td>
</tr>
<tr>
<td>Total quantity of water consumed</td>
<td>Process, cooling and sanitary water</td>
<td>m³ / year</td>
<td>m³ / year</td>
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<tr>
<td>Product Output</td>
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<tr>
<td>[Name]</td>
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<td>tons / year</td>
<td>tons / year</td>
</tr>
<tr>
<td>[Name]</td>
<td></td>
<td>tons / year</td>
<td>tons / year</td>
</tr>
<tr>
<td>Solid Waste</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total solid wastes recovered/recycled</td>
<td></td>
<td>tons / year</td>
<td>tons / year</td>
</tr>
<tr>
<td>Total solid wastes for final disposal</td>
<td></td>
<td>tons / year</td>
<td>tons / year</td>
</tr>
<tr>
<td>Total hazardous wastes for final disposal</td>
<td></td>
<td>tons / year</td>
<td>tons / year</td>
</tr>
<tr>
<td>Waste Water</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total waste water generated</td>
<td></td>
<td>m³ / year</td>
<td>m³ / year</td>
</tr>
<tr>
<td>BOD</td>
<td>Average for the year</td>
<td>mg/l</td>
<td>mg/l</td>
</tr>
<tr>
<td>COD</td>
<td>Average for the year</td>
<td>mg/l</td>
<td>mg/l</td>
</tr>
<tr>
<td>Suspended Solids</td>
<td>Average for the year</td>
<td>mg/l</td>
<td>mg/l</td>
</tr>
<tr>
<td>Phosphorous</td>
<td>Average for the year</td>
<td>mg/l</td>
<td>mg/l</td>
</tr>
<tr>
<td>Nitrates</td>
<td>Average for the year</td>
<td>mg/l</td>
<td>mg/l</td>
</tr>
<tr>
<td>Air Emissions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SO₂</td>
<td></td>
<td>tons / year</td>
<td>tons / year</td>
</tr>
<tr>
<td>NOₓ</td>
<td></td>
<td>tons / year</td>
<td>tons / year</td>
</tr>
<tr>
<td></td>
<td>tons / year</td>
<td>tons / year</td>
<td></td>
</tr>
<tr>
<td>--------------------</td>
<td>-------------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td>Particulates</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO₂</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CH₄</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N₂O</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HFCs</td>
<td>Specify</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PPCs</td>
<td>Specify</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SF₆</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CO₂ Allowance (EU ETS) - EU Member States Only</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
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<td></td>
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<tr>
<td>2009</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>GHG Saving Opportunities</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Describe any planned or identified potential opportunities</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Annex 2: Standard measuring indicators and GET impact indicators

GET impact indicators:

<table>
<thead>
<tr>
<th>Sector</th>
<th>Indicator</th>
<th>Data point to be collected</th>
<th>Baseline and Projected after implementation completion*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid Waste</td>
<td>Total population benefitting from solid waste management services.</td>
<td>Number of persons with improved solid waste management services.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Number of beneficiaries living below the poverty lines</td>
<td>Number of persons (and/or %)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Annual reduction in tonnes of CO₂ equivalent due to diversion of solid waste from landfill disposal.</td>
<td>Tonnes and type (metals, paper, glass, plastic, organic etc.) of waste diverted from landfill. Avg. CH₄ (CO₂ equivalent) content of solid waste materials by type.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total tonnes of waste disposed of.</td>
<td>Tonnes of waste disposed on new and/or improved waste disposal plants.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Direct employment: construction phase</td>
<td>Number of persons</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Direct employment: operations and maintenance</td>
<td>Number of persons</td>
<td></td>
</tr>
</tbody>
</table>

* measured two years after projected full loan disbursement

GET impact indicators (as applicable):

<table>
<thead>
<tr>
<th>SRI indicator</th>
<th>impact</th>
<th>Unit</th>
<th>Data point to be collected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary energy saved</td>
<td>GJ/yr</td>
<td>Project energy use compared to baseline energy use.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Primary energy includes:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1. Direct use of fossil fuels</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. Direct use of biomass.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3. Use of electricity, multiplied by a loss factor to take into account</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>country average generation efficiencies and electricity grid losses</td>
</tr>
<tr>
<td>CO₂ emissions reduced</td>
<td>ton CO₂e/yr</td>
<td>Project CO₂ emissions compared to baseline CO₂ emissions.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CO₂ emissions include:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1. Emissions as a result of direct use of fossil fuels</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. Indirect emissions as a result of the use of electricity</td>
</tr>
</tbody>
</table>

6 The baseline is defined as the expected conditions without the project two years after full loan disbursement. The baseline is compared to the conditions projected with implemented project two years after full loan disbursement.

7 For example, with an average electricity generation efficiency of 40% and grid losses of 7%, the primary energy use (MWh) is 2.7 x the direct electricity use (MWh).

8 The CO₂ emissions as a result of the use of electricity are determined by multiplying the use of electricity (MWh) with the country specific grid emission factor (ton CO₂/MWh) in line with the joint MDB list of grid emission factors.
<table>
<thead>
<tr>
<th>Water saved</th>
<th>m³/yr</th>
<th>Project water use compared to baseline water use. Water savings must be determined for the following project activities:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1. Water recycling projects that recover wastewater streams for reuse or alternative use.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Application of technology or management actions that lead to effluent water quality improvements in regions with water scarcity¹⁰</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Water loss prevention and water demand management</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Material savings</th>
<th>ton/yr</th>
<th>Material use compared to baseline material use. Material savings must be determined for project activities aimed at waste minimisation:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1. Minimisation of waste streams by integrated measures (i.e. improvement of existing installations, processes or procedures/management)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Waste recycling projects that reuse waste as inputs into new products or as a resource</td>
</tr>
</tbody>
</table>

⁹ Tons of methane emissions (ton CH₄) can be converted to tons of CO₂ equivalents (ton CO₂e) by applying the a factor of 28 (ton CO₂e/ton CH₄)

¹⁰ Qualifying for ‘water saved’: treated waste water with an effluent quality at or exceeding internationally accepted effluent water quality standards.
Annex 3: Definition of “Recovery Ready” landfill

Recovery Ready (RR) landfill is a facility which could, and is intended to, be retrofitted/combined with waste sorting/recycling/recovery technology when the necessary financing and/or regulatory drivers are in place. The aim of building new facilities or modifying existing facilities to be Recovery Ready is to reduce the risk of waste lock-in or of being unable to fully utilise the facilities in the future without recycling (stranded assets). Recovery Ready is not a waste minimisation option, but a way to facilitate waste minimisation in the future.

**Essential Requirements of a Recovery Ready facility**

The essential requirements represent the minimum criteria that should be met before a facility can be considered RR. The project developer should:

1. Carry out a site-specific study in sufficient engineering detail to ensure the facility is technically capable of being integrated with waste sorting, recycling and/or recovery facilities, using one or more choices of technology which are proven or whose performance can be reliably estimated as being suitable, considering financial, economic, health, safety and environmental viability.
2. Demonstrate that there will be sufficient space available to construct and safely operate sorting, recycling and/or recovery facilities. This will notably include sufficient storage areas for recycled materials.
3. Identify realistic off-takers that could possibly use recycled materials/recovered energy.
4. Identify other known factors, including any additional water/energy requirements that could prevent installation and operation of a waste sorting, recycling and/or recovery facilities, and identify credible ways in which they could be overcome.
5. Estimate the likely investment cost of establishing the waste sorting, recycling and/or recovery facilities including transport and storage.
6. Periodically review and report RR status.
Annex 4: Guidelines for financial modelling and summary of financial information

The Consultant must ensure that the financial model and analysis is accurate, structured, flexible and transparent, and in line with the specific requirements laid out in the Terms of Reference. The use of the FAST financial modelling standard (http://www.fast-standard.org) is preferred, however not obligatory.

The Consultant is expected to present a financial model for the Project that fulfils the following non-exhaustive conditions:

<table>
<thead>
<tr>
<th><strong>Accuracy</strong></th>
<th></th>
</tr>
</thead>
</table>
| Terms        | The model accurately matches all financial and operational assumptions presented in the available DD information. The model accurately matches all terms proposed to date in the Term Sheet, including, but not limited to:  
- Facility size, tenor, grace, interest, tranching, currency;  
- Financial covenants as contractually defined. |
| Historical   | The model includes the last 3 years of (audited) historical financial statements (not applicable if a green field). |
| Projections  | Projections for the running year are in accordance with latest available estimates / interim results. |
| Currency     | Summary table is in the loan currency or as agreed. Impact of forex variations over time on Financial Statements has been modelled correctly. |
| Balance Sheet| The model Balance Sheet is balanced under any variation of inputs. |
| Accounting Standards | Financial Statements is modelled correctly as per IFRS (or local GAAP if agreed). |
| Summary Sheet| The first output sheet of the model is the Summary Sheet set up in line with the below instructions. |
| Check sheet  | The model includes a separate check sheet, where all model calculation checks are summarised and presented on an aggregate basis. |

<table>
<thead>
<tr>
<th><strong>Structure and Flexibility</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Columns/time ruler</td>
<td>All sheets maintain a consistent column structure and time ruler throughout the model.</td>
</tr>
<tr>
<td>Sheet order</td>
<td>Sheets are arranged so that calculation order flows from left to right.</td>
</tr>
<tr>
<td>Inputs</td>
<td>All inputs are separated in a specifically denominated sheet, with no inputs (hard coded) outside them. The input sheet links through the model, enabling a fully integrated, flexible model. The source of each particular input shall be clearly stated in a comment</td>
</tr>
</tbody>
</table>
(e.g. Feasibility Study, EBRD information, etc.).

<table>
<thead>
<tr>
<th>Outputs</th>
<th>Outputs are presented in specifically denominated sheets, with no calculations in them.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formatting</td>
<td>Use consistent format styles to improve readability of the model. Colour coding for inputs, link imports/exports across sheets, etc. are consistently applied.</td>
</tr>
<tr>
<td>Simplicity</td>
<td>Complex calculations are avoided by breaking them down into more basic steps. No use of excel names.</td>
</tr>
</tbody>
</table>

**Transparency**

| Circularity | The model does not have any circularity. |
| Macros | The use of macros has to be kept to a minimum. Macros are short, concise and easily traceable. |
| External links | No links to external worksheets outside the model. |
| Hiding | The model has no hidden worksheets, rows or columns that include data, whether material or immaterial. Grouping is allowed. |
| Offset accounts | The model does not have any unexplained "offset" account or entry to offset mismatches. |

**Summary Sheet:**

The model includes a clear, consistent one page summary to facilitate the understanding of the financial aspects and drivers of a loan or investment as well as the degree of vulnerability to identified risks.

The Summary Sheet is to be included as the first sheet in the model in the format shown below.

The Summary Sheet shall include:

1. 3 years of historic information (none if a green field);
2. At least the first five years of projected performance (or until beginning of principal repayment, or the life of the loan if it fits on one page);
3. Key assumptions / drivers;
4. Related to a particular input can be precisely written;
5. Ratios (covenanted and others with standard definitions);
6. Breakeven Sensitivities (e.g. DSCR=1 or as agreed);
7. Income statement;
8. Balance sheet;
9. Cash Flow;
10. Any additional assumptions, sensitivities, and ratios if considered essential should be included and fitted on the page.
## Summary Sheet for Municipalities:

<table>
<thead>
<tr>
<th>Ratios History</th>
<th>Historic (A)</th>
<th>Budget (F)</th>
<th>Budget (F)</th>
<th>Budget (F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S&amp;P</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moodys</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fitch</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Financial Summary (€ million)</th>
<th>Historic (A)</th>
<th>Budget (F)</th>
<th>Budget (F)</th>
<th>Budget (F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Own Revenues</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share of State Taxes (Legally entitled to)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other State Transfers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Revenues</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Performance</th>
<th>Historic (A)</th>
<th>Budget (F)</th>
<th>Budget (F)</th>
<th>Budget (F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Revenues</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Non-discretionary Expenditure</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Discretionary Expenditure</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest Paid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Surplus/Deficit</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Debt Ratios</th>
<th>Historic (A)</th>
<th>Budget (F)</th>
<th>Budget (F)</th>
<th>Budget (F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Debt / Current Revenues</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Debt / Current Surplus</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Debt Service / Total Revenues</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Surplus / Debt Service</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Revenue Ratios</th>
<th>Historic (A)</th>
<th>Budget (F)</th>
<th>Budget (F)</th>
<th>Budget (F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Own Revs+Share of State Taxes) / Current Revs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Revenue / Total Revenues</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Expenditure Ratios</th>
<th>Historic (A)</th>
<th>Budget (F)</th>
<th>Budget (F)</th>
<th>Budget (F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-discretionary Expenditure / Current Revenues</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Surplus / Capital Expenditure</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capital Revenue / Capital Expenditure</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Debt / Capital Expenditure</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Debt Redemption (€ million)</th>
<th>Historic (A)</th>
<th>Budget (F)</th>
<th>Budget (F)</th>
<th>Budget (F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loans</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Bonds</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Debt Redemption</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Interest</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Debt Service</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guarantees</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Debt Stock (€ million)</th>
<th>Historic (A)</th>
<th>Budget (F)</th>
<th>Budget (F)</th>
<th>Budget (F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short Term Local Currency</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Short Term Foreign Currency</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Short Term Debt</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long Term Local Currency</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Long Term Debt</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Debt</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guarantees</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Payables</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash &amp; Liquid Assets</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Summary Sheet for Corporates:

### Key Drivers / Assumptions

<table>
<thead>
<tr>
<th>(IFRS unless marked)</th>
<th>Historic</th>
<th>Projected</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2012</td>
<td>2014</td>
</tr>
<tr>
<td></td>
<td>(A) ...</td>
<td>(A)</td>
</tr>
</tbody>
</table>

#### Revenues
- Volumes (units)
- Prices per unit (€)
- Other Revenues

#### Operating Expenses
- Fixed Costs (MM€ or % Rev.)
- Var. Costs (MM€ or % Rev.)
- Labour
- Electricity (MM€ or % Rev.)
- Other key raw material
- Other relevant costs …
- Til costs (MM€ or % of Rev.)
- Total Cost/unit (€)

#### Macroeconomic
- Exchange Rate
- Inflation
- Growth rate
- Other …

### Income Statement

<table>
<thead>
<tr>
<th></th>
<th>Historic</th>
<th>Projected</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2012</td>
<td>2014</td>
</tr>
<tr>
<td></td>
<td>(A) ...</td>
<td>(A)</td>
</tr>
</tbody>
</table>

#### Balance Sheet

<table>
<thead>
<tr>
<th></th>
<th>Historic</th>
<th>Projected</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2012</td>
<td>2014</td>
</tr>
<tr>
<td></td>
<td>(A) ...</td>
<td>(A)</td>
</tr>
</tbody>
</table>

#### Ratio Analysis

<table>
<thead>
<tr>
<th>(Ratio/Covenants levels)</th>
<th>Historic</th>
<th>Projected</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2012</td>
<td>2014</td>
</tr>
<tr>
<td></td>
<td>(A) ...</td>
<td>(A)</td>
</tr>
</tbody>
</table>

#### Cash-Flow Statement

<table>
<thead>
<tr>
<th></th>
<th>Historic</th>
<th>Projected</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2012</td>
<td>2014</td>
</tr>
<tr>
<td></td>
<td>(A) ...</td>
<td>(A)</td>
</tr>
</tbody>
</table>

### Entry Valuation (Company) M€
- Decrease in Volume xx%
- Increase in Fixed Costs xx%
- Increase in Variable Costs xx%
- Increase in Capex xx%
- Implementation Delay month
- Local Devaluation xx%
- Mix (+% price +%costs ) xx%

### Exit Valuation (Company) M€
- Decrease in Volume xx%
- Increase in Fixed Costs xx%
- Increase in Variable Costs xx%
- Increase in Capex xx%
- Implementation Delay month
- Local Devaluation xx%
- Mix (+% price +%costs ) xx%
**Annex 4: Project and result matrix [only for projects with potential Sida co-financing]**

This matrix is designed to serve as a guide and checklist for the assessment of projects proposed to be admitted to benefit from the above mentioned co-financing arrangement.

<table>
<thead>
<tr>
<th>General Project Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project name</td>
</tr>
<tr>
<td>Country</td>
</tr>
<tr>
<td>Sector</td>
</tr>
<tr>
<td>Borrower/Client</td>
</tr>
<tr>
<td>Brief Project description</td>
</tr>
<tr>
<td>Total Project Cost M€</td>
</tr>
<tr>
<td>Proposed funding structure including all funding sources</td>
</tr>
<tr>
<td>Ratio EBRD/Sida funding/other donors/other IFIs/cost-sharing with client</td>
</tr>
<tr>
<td>Misc. Comments</td>
</tr>
<tr>
<td>EBRD preparation and approval timetable</td>
</tr>
<tr>
<td>Is the project found to meet the requirements of the criteria and thus eligible for funding support?</td>
</tr>
<tr>
<td>Sida Endorsement history</td>
</tr>
</tbody>
</table>
## Eligibility Assessment for all Projects

<table>
<thead>
<tr>
<th>Eligibility Criteria</th>
<th>yes/no</th>
<th>Expected results &amp; Achievements/Comments</th>
<th>Baseline data</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU-Integration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additionality of the Sida support</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental benefits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Institutional Reforms and Sustainability of services</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Corporate Development Programme (with budgeted gender efforts and gender inclusive activities)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Introduction of demand side measurements</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Public Awareness and consumer orientation (including men, women, boys and girls)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender perspective applied both internally in the company and for customers.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affordability for men and women secured and implementation of City Social Support Program</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job opportunities created by the project</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

11 Reduced emissions to the environment and/or sustainable use of natural resources
12 Opportunities for strengthening the local accountability from the project to the client towards citizens and other stakeholders should be explored and reported on
**Solid Waste Management**

<table>
<thead>
<tr>
<th>Principal Eligibility Assessment Solid Waste Management</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Principal Criteria</strong></td>
</tr>
<tr>
<td>Solid waste management services are improved.</td>
</tr>
<tr>
<td>Indicator: Increased total population benefitting from improved solid waste management services.</td>
</tr>
<tr>
<td>Solid waste disposal by landfill is reduced.</td>
</tr>
<tr>
<td>Indicator: Annual reduction in tonnes of CO₂ equivalent due to diversion of solid waste from landfill disposal.</td>
</tr>
<tr>
<td>Solid waste disposal capacity is increased.</td>
</tr>
<tr>
<td>Indicator: Tonnes of waste disposed on new and/or improved waste disposal plants.</td>
</tr>
</tbody>
</table>
Annex 5: Definition of “Recovery Ready” landfill

Recovery Ready (RR) landfill is a facility which could, and is intended to, be retrofitted/combined with waste sorting/recycling/recovery technology when the necessary financing and/or regulatory drivers are in place. The aim of building new facilities or modifying existing facilities to be Recovery Ready is to reduce the risk of waste lock-in or of being unable to fully utilise the facilities in the future without recycling (stranded assets). Recovery Ready is not a waste minimisation option, but a way to facilitate waste minimisation in the future.

Essential Requirements of a Recovery Ready facility

The essential requirements represent the minimum criteria that should be met before a facility can be considered RR. The project developer should:

7. Carry out a site-specific study in sufficient engineering detail to ensure the facility is technically capable of being integrated with waste sorting, recycling and/or recovery facilities, using one or more choices of technology which are proven or whose performance can be reliably estimated as being suitable, considering financial, economic, health, safety and environmental viability.
8. Demonstrate that there will be sufficient space available to construct and safely operate sorting, recycling and/or recovery facilities. This will notably include sufficient storage areas for recycled materials.
9. Identify realistic off-takers that could possibly use recycled materials/recovered energy.
10. Identify other known factors, including any additional water/energy requirements that could prevent installation and operation of a waste sorting, recycling and/or recovery facilities, and identify credible ways in which they could be overcome.
11. Estimate the likely investment cost of establishing the waste sorting, recycling and/or recovery facilities including transport and storage.