

Republic of North Macedonia  
Ministry of Agriculture, Forestry, Water Economy  
Agriculture Modernization Project

TERMS OF REFERENCE (TOR)

**Consulting Services for establishment of a sustainable system for Animal By-  
Products Management**

**December 2022**

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**Abbreviation and acronyms**

ABPs: Animal By-Products

AFP: Agri-Food Platform

CBA: Cost Benefit Analysis

CW: Civil Works

EPC: Engineering, Procurement and Construction

ESF: Environmental and Social Framework

ESMF: Environmental and Social Management Framework

ESMP: Environmental and Social Management Plan

ESSs: Environmental and Social Standards

EU: European Union

IPARD: Instrument of Pre-Accession Assistance for Rural Development

MAFWE: Ministry of Agriculture, Forestry, Water Economy

FVA: Food and Veterinary Agency

PMC: Procurement Management Contract

PMT: Project Management Team

WB: World Bank

## Terms of Reference

### Agriculture Modernization Project

#### Terms of Reference for Consulting Services for the establishment of a sustainable system for the Animal By-Products (ABPs) Management

## 1. BACKGROUND

### A. Agriculture Modernization Project (AMP)

The Agriculture Modernization Project funded by the World Bank through a loan of EUR 46 million and co-financed by the EU with a grant of EUR 4 million, is supporting the Government of North Macedonia to improve the competitiveness in targeted agricultural sub-sectors and strengthen agricultural public sector readiness for EU accession. The MAFWE is the lead project Implementing Agency and has overall responsibility for project management and implementation.

The AMP has three main components:

- **Component 1: Agriculture Sector Competitiveness**, to enhance farm-level competitiveness and fostering agricultural produce aggregation and market integration of farmers.
- **Component 2: Institutional Capacity for EU Accession**, to enhance public support services, including the capacity to design and deliver effective support to the agriculture sector.
- **Component 3: Project Management** to support MAFWE in the efficient implementation of the project.

**Sub-component 2.3 - Safe Disposal of Animal By-Products** aims to establish of an ABP safe disposal system compliant with the provisions stipulated in the EU negotiations Chapter 12 Food safety, veterinary and phytosanitary policy.

### B. Safe Disposal of Animal By-Products

Animal by-products (ABPs) not intended for human consumption are a potential source of risks to public and animal health. In order to protect human health, control animal diseases and protect the environment, safe management of animal by products should be established as part of the horizontal food safety system in the country. In addition, according to the relevant European Union (EU) legislation on ABP, the Republic of North Macedonia is required to establish efficient national system for management of ABP, in compliance with the criteria and requirements covered under the EU legislation. This is a pre-condition for successful completion of the negotiations within Chapter 12 – food safety, veterinary and phytosanitary policy, in the process of accession of the Republic of North Macedonia to the membership into the EU.

The main purpose of a system for the management, collection and processing of ABP is to provide rules for handling and processing of ABP, their circulation, safe removal and utilization, as well as a satisfactory degree of protection of public health, animal health protection, safety of food and animal feed and environmental protection.

The national system should provide institutional and operational capacity for management and non-harmful removal of ABP and at the same time, protection of public health and the environment.

In the Republic of North Macedonia, this area is regulated by the Law on by-products of animal origin and 15 by-laws - Regulations, which derive from it and regulate the collection, transport, removal,

procedure, processing, processing, conversion, storage, placing in trade, distribution, use and non-harmful disposal of by-products of animal origin. These national rules are aligned with European rules.

Currently, there is no organized system for the collection, disposal or use of ABP. Almost all ABPs are disposed by burying in landfills or pits. These also include ABP that are generated from food production facilities and from dead livestock.

Operators with food of animal origin who are also generators of ABPs in their own facilities have established an internal system of selection by category of by-products during the production process, but due to the absence of a complete system, the selected categories of by-products are mixed in one category when leaving the facility where they are generated. The removal from the facilities is carried out by the Public Utility Companies with which the operators have concluded a contract for collection and disposal. This waste eventually ends up as municipal waste in city landfills.

In view of overcoming the situation with the method of collection and non-harmful disposal of animal by-products in Republic of North Macedonia, the Food and Veterinary Agency in cooperation with the Project "Building the capacities of the veterinary services for the implementation of the EU Acquis" EuropeAid/128546/C/ SER/MK within the IPA 2008 program, prepared the Strategy for the establishment of a national system for the management of by-products of animal origin and appropriate technical documentation for the implementation of a national a management system for ABP.

The Strategy for the establishment of a national system for the management of by-products of animal origin focuses on ensuring an economical, sanitary and environmentally friendly methods for handling of Animal by products. This includes finding the best available technology that will have the least impact on the environment (pollution, odor and sustainability), provide the most opportunities for reuse of waste material (from waste to raw material) and operate in the most economical way.

In terms of fulfilling the requirements of the Strategy, the competent authority has:

- Determined the method of processing with prior sterilization and production of meat-bone meal and processed fats as energy (method 1. Regulation 142/2011);
- Prepared a new law on animal by-products harmonized with two European Regulations (EC) no. 1069/2009 and (EU) no. 142/2011. It is in the final stage of adoption;
- Trained Official veterinarians for the management of ABP system;
- Prepared Checklists to help the official veterinarians during the implementation of controls of ABP system;
- Carried out Categorization of animal by-products in slaughterhouses;
- Updated on a regular bases the quantities of animal by-products in the Republic of North Macedonia generated by the approved facilities;
- Mapped with GPS coordinates of the slaughter facilities in the Republic of North Macedonia as the largest generators of animal by-products;
- Selected a municipality for the construction of the central unit for processing animal by-products.

## 2. OBJECTIVE OF THE ASSIGNMENT

The objective of this assignment is to support the relevant authority in the establishment of an official, comprehensive system for the safe disposal and/or processing of ABPs in accordance with EU, national legislation and Strategy on ABPs.

The envisaged system would consist of the Central Unit (rendering plant) for processing animal by-products located in the Municipality of Rosoman, from which, through determined transport routes, vehicles would be directed to collect the by-products from the ABP generators from the entire territory of the Republic of North Macedonia. Regional collection centers are not planned.

## 3. SCOPE OF WORK

The Scope of Work for this Assignment is divided in three phases:

Phase I: Site selection, Development of Feasibility Study and Environmental & Social Impact Assessment (ESIA)<sup>1</sup> and Urban Planning;

Phase II: Detailed Design Development and Finalization of Environmental & Social Impact Assessment (ESIA) together with Environmental and Social Management Plan and Feasibility Study;

Phase III – Technical Assistance during bidding documents preparation and Civil Works Contract Management.

Certain phases are pre-conditioned from successful implementation of the previous phase.

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*Phase I: Site selection, Development of Feasibility Study & Business Plan, Environmental & Social Impact Assessment and Urban Planning*

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***Note: Several activities under this Phase shall be conducted in the same time due to efficient and effective activity completion.***

### ***Specific objective***

The specific objective of this phase is the selection of appropriate site for the construction of the ABP disposal and processing plant (rendering Plant) in Rosoman Municipality, development of feasibility study, strategic and business plan and service manuals for the operations of the rendering Plant, environmental and social impact assessment and completing the Urban planning procedure.

### ***Specific Scope of work***

Under this phase, a selection of an appropriate site will be completed, based on the locations, presence of environmental and social sensitivities, category of land, available infrastructure, etc. Once selected, a procedure for Urban planning and transformation of the land will have to be conducted. In the same

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<sup>1</sup> Although the Feasibility Study and ESIA are envisaged during the same phase, please note for the ESIA to start the FS should be at an advanced stage, so that ESIA can assess the site, the construction impacts, the proposed processing methodology, etc.

time the Consultant should initiate the process for development of feasibility study and business plan as well as conduct environmental and social impact assessment of the future rendering Plant.

❖ **Activity 1.1: Site selection**

The Consultant will organize local site visits in order to inspect potential locations provided by the Municipality and will work closely with the Food and Veterinary Agency (FVA) and local authorities in order to select the most suitable location for the rendering Plant. The tasks to be delivered under this activity include, but are not limited to the following:

- Organize local site visits and inspections of potential location;
- Discuss with the FVA and local authorities the suitability of each proposed site;
- Collect all relevant data regarding the proposed sites from the competent authorities, including but not limited to cadastral data;
- Organize consultations with the neighboring villages and businesses in Rosoman Municipality;
- Select and propose appropriate site location;
- Coordination with the Project Management Team on Completion of the Environmental and Social screening checklist;

❖ **Activity 1.2: Development of Feasibility Study and Business Plan, Schematic Design and Initial Environmental and Social Impact Assessment/Environmental and Social Management Plan**

A. *Development of Feasibility Study and Business Plan*

To establish an official, comprehensive system for safe disposal and/or processing of ABPs, it is important to prepare the detailed and comprehensive Business plan that will cover all activities related exclusively to the schematic design of the ABPs rendering plant and collection system, equipment and financial/administrative/operational modalities of the ABPs rendering plant. The Business Plan shall take into consideration the Strategy for the establishment of a national system for the management of by-products of animal origin and appropriate technical documentation for the implementation of a national a management system for ABP as well as the EU legislation. The Business Plan will be developed in close collaboration with the Client (MAFWE and FVA) and will elaborate in details all activities to be implemented. Further, the Business Plan shall include relevant documents, specifications and terms of references, including a provisional list of equipment with market research, an appropriate management model for the ABPs facility along with the most suitable management model.

i. **Tasks**

The first task is to assess the feasibility of each of the options:

- The aimed outputs (volumes and price) of the ABPs rendering plant which may include feeding and/or pet-food outputs (proteins, fat), bio-fuel, fertilizer, etc. for all categories of ABPs.
- The aimed collection structure of ABPs.
- The aimed processing methods for the ABPs rendering plant which may include separation, drying, renewable energy generation, etc.
- The aimed ownership structure of the ABPs rendering plant: government, private, public-private partnership.

The next task of this assignment is to prepare the Business Plan for the selected disposal facility (rendering plant), and to develop a comprehensive ABP Management Plan.

The Business Plan shall be composed of following elements, divided into the indicated sections:

**a. Strategic orientation, Market assessment and Feasibility**

- Analysis of current situation in production, separation, collection, transport, processing and management of ABPs, and proposals for revision of the relevant documents with an update on activities foreseen in the Strategy for the establishment of a national system for the management of by-products of animal origin, and elaborate further recommendations for the Country;
- The strategic assessment of the ABPs Management Plan indicating the feasibility of the mentioned business options, processing methods and ownership models;
- A SWOT analyses (the strengths, weaknesses, opportunities, threats) or other appropriate tools to assess the feasibility of the options for the ABPs Management Plan according to the Strategy for the establishment of a national system for the management of by-products of animal origin;
- Description of the business environment – current and forecasted – including legal framework, administrative and operational procedures, bilateral trade relations, etc. for ABPs;
- Market analysis – current and forecasted – including description of the potential ABP products, trade volume, prices, profile of clients, partners and competitors. The market analysis should provide insight in the benefit potential on future trade flows and patterns and propose a cost/efficient spatial deployment and development of the ABPs facility and its capacity;

**b. Technological/Technical plan**

- Logical plan of functioning of the ABPs establishments (rendering plant and operational modalities) as well as cost – benefit analyses;
- Schematic design and description of necessary parts of the facility (rendering plant) and recommendations for the design with description of its function and spatial arrangement in the location, taking in consideration all technological, technical and environmental issues.
- Technological plan with technical features and design of the establishments, and all of activities, arrangement of subunits and premises, equipment, supplies routes for staff and ABPs materials, etc. The technological plan shall be supported by following documents:
  - o Logical and flexible design including a phasing-plan for future extensions (products, technology, etc.);
  - o Lay out of the establishments with identification of spatial distribution of production areas, equipment, floor drainage channels, rendering technology, hygiene and sterilization equipment, system of tracks, as needed, premises for employees (wardrobes, toilets, showers and laundries) and marked paths for the movement of employees, raw materials and products, including the ways of movement of waste from food or ABPs (in different colors as appropriate for clear identification of the ABP categories);
  - o List and functions of all rooms in the establishments (rendering plant), their surface area, capacity and required temperatures (where needed for controlled temperature regime);
  - o List and functionalities of equipment and tools used in the establishments;
  - o Description of activities to create extra storage and processing capacity in case of notifiable/transmissible animal diseases according OIE regulations;
  - o Description of all activities carried out in the establishments, i.e. description of the production processes and flow diagrams for each production line (product specifications);
  - o Description of options for renewable energy and assessment of their feasibility;
  - o Types of ABPs/ final products produced and/or stored in the establishments;
  - o Projected capacity of production and storage in relevant timeframes;
  - o Number of people working with ABPs (indefinitely and for a fixed amount of time);
  - o Required energy supply (electricity, high pressure steam);
  - o Water supply and waste water control/discharge options;



- Technical specifications and detailed description of ABP processing line.
- The specifications should be adequate for the next phases: the design and engineering of the rendering plant and should allow for procurement of the equipment according to World Bank procurement rules. Thus, technical features of the processing line should be clearly defined;
- Comprehensive ABPs Management Plan for the sustainable ABPs management system in the Country, in accordance with the Strategy for the establishment of a national system for the management of by-products of animal origin and national and EU legislation, accepted and approved by the Client;
- Operational plan for establishment of ABPs system with list of all activities related to the establishments of the overall management system of ABPs, to be implemented in the Country by different entities;
- Description of needs for official veterinarians and assessment of necessary equipment and an assessment of costs for the official control when the establishments are operational.

### **c. ABPs Business Plan including financial projections**

- Financial business plan for the ABPs management system, which will include operational, fixed and other calculations of revenues (e.g. per kg of ABP) and costs (for collection, transport, processing) in accordance with the National Plan, with projections over a period of 10 years:
  - Sales revenues of the ABPs items,
  - Cost of Sales (inputs, collection costs, direct wages),
  - Gross margin,
  - Operational expenses (management, energy, packaging, maintenance, insurance),
  - EBITDA,
  - Depreciation,
  - EBIT,
  - Interest,
  - Income tax,
  - Net profit,
  - Balance sheet,
  - Performance indicators (IRR, ROI, Payback period, Return on Investment/Equity, Solvency),
  - Sensitivity assessment of volumes/prices.
  - Risk analysis.
- Report of analysis of potential needs for governmental financial support for management of ABPs, including assessment of annual incentives and long-term sustainability in the new context of ABPs management, with a report on Cost-Benefit analysis for the different options, and selection of the most efficient solution;
- Based on the outcome of the financial business calculations, explore/assess the possibilities/options for involvement of the private sector in financing and the operation/management of the rendering plant (from the beginning on or later), for example a public private partnership (PPP).

The previous mentioned parts “Strategic orientation, Market assessment and Feasibility” and “Technological/Technical plan” together compose the Business Plan and include overall Recommendations and an Executive Summary.

It is required that close consultations, discussions, and surveys of potential users/stakeholders be conducted to ensure the market designs are practical to the users’ purposes, and the operation has high likelihood of sustainability.

## ***B. Development of Schematic Design***

### *Specific objective*

As part of this activity, the Consultant will be responsible to develop the schematic design with revision for the construction phase “Architecture” for the ABPs Plant, including 3D drawings of the building.

### *Scope of Work*

The schematic design should include following parts as a minimum:

- ABPs Facility Process Flow Plan & Layout

A logistics flow/business flow plan of the facility will need to be developed to illustrate how ABPs will be handled once they arrive at the facility, as they move through the different facilities of the plant. Similarly, design of the building layout will be required to determine the extents/size of the facility, truck marshalling areas and operational flows.

- ⇒ Preparation of Process Flow Plan
- ⇒ Preparation of Building Layout Design
- ⇒ Based on the results of the Market Study (activity 1.2), the consulting firm shall develop a few viable options for the internal layout (Process Flow Plan) of the facilities to accommodate all service offerings, including value added services as disclosed in the Market Study. The options must provide the Client with sufficient flexibility to allow for minor modifications as early customer commitments get firmed up.
- ⇒ Prepare economic and financial analysis.
- ⇒ Further to the preparation of Building Layout Design, identification and layout of all major equipment required for the facilities and their key service offerings, including value added services. Options shall be presented on the equipment types, manufacturers, specifications and costs. The recommendations must take into consideration local operating conditions and future users’ needs to improve quality and competitiveness of their products.
- ⇒ Assessment and development of operations and maintenance strategy and budget including, but not limited to, staffing, equipment needs, IT systems, inventory management systems, consumables, security, utilities, etc. The assessment must take into consideration a 15-year estimate of operating costs and factor in expansion plans.
- ⇒ Preparation of +/- 15% detailed cost estimate of at least three layout options, one of which shall be used in the financial analysis.

### *C. Development of Environmental and Social Impact Assessment*

The Consultant shall perform initial environmental and social assessment and outline for an Environmental and Social Impact Assessment (ESIA) and Environmental and Social Management Plan (ESMP) for the construction and operation of the ABPs Rendering Plant, considering environmental and social baseline information, specific features of the site in Rosoman area, proposed for the location of ABPs Rendering Plant, identifying sensitive receptors within or in the vicinity of the proposed sites, and assessing any potential adverse impacts on those receptors, that would require reconsideration of the site or can be avoided, minimized or mitigated. The initial environmental and social assessment shall be undertaken in accordance with the provisions of the project Environmental and Social Management Framework (ESMF), and should be in compliance with the requirements of the relevant ESF ESSs, World Bank Environmental Health and Safety Guidelines (EHSGs), Good International Industrial Practices (GIIP), and national regulations and procedures. The indicative outline for the initial environmental and social assessment environmental and social management plan is presented in Annexes 1 and 2. The finalization of the ESIA/ESMP shall be further elaborated under Phase II as part of the detailed design assignment, as per the provisions of the project Environmental and Social Management Framework (ESMF) and the workflow from the schematic designs to functional facilities.

Note: the ESIA/ESMP should inform the design at each stage of its development, i.e. both schematic and detailed, which will require synchronization of these processes, and finalization of the detailed design based on the findings and recommendations of the ESIA and ESMP.

**In this phase, the Consultant will organize consultation meeting with the local stakeholders presenting the schematic design for the selected site.**

### ❖ **Activity 1.3: Urban planning of the site**

Considering that the ABPs Rendering Plant will be constructed on what is currently state-owned agricultural land, the Consultant will be responsible for conducting the procedure for urban planning and transformation of the land, as a pre-condition to constructing the facility. This will entail as a minimum:

- Development of Urban Plan(s) and/or Urban Projects with Revision from licenced firm for the appropriate sites, depending on the needs of the specific location;
- Traffic Project (in and out of zone);
- Transformation of the agricultural land into construction land, as per the national legislation and relevant procedures, if needed;
- Submit documents to the competent authorities for urban planning process on behalf of the Ministry (Local Authorities);

The second phase being conditional to approval of the first phase deliverables by the Client.

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## *Phase II: Detailed Design Development and Finalization of Environmental and Social Impact Assessment/Environmental and Social Management Plan*

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### *Specific objectives*

Under this Phase, the Consultant will be responsible for managing the entire process for development of the detailed design including incorporation of the ESIA/ESMP provisions and recommendations, finalization of ESIA/ESMP for the ABPs Rendering Plant and obtaining the building permit in accordance with national legislation. This will entail developing detailed construction design, obtaining all necessary elaborates and studies required under the positive national legislation.

### *Scope of work*

The Consultant will be engaged to develop the Detailed design for the future ABPs Rendering Plant in Rosoman Municipality, containing all phases, and in accordance with the current legislation in the Republic of North Macedonia which is harmonized with the EU legislation. Also, the Detailed Design must include technical specifications and a detailed project billing - calculation that will be part of the bidding document for CW Contractor selection and must be prepared, covering, but not be limited to, the following aspects:

## ❖ **Activity 2.1: Development of Detailed Design according to national legislation and FIDIC standards**

Many of the key inputs including size of the overall facility and the various service offerings will be taken from the schematic design proposal (e.g. Market Study). The technical design shall address all components of the ABPs Rendering Plant, both interior and exterior, and how they fit together. The prepared design and associated specifications will be inputs for the Bidding documents required for the selection of the CW contractor(s).

The Consultant will be engaged to conduct the Development Design as per national legislation and FIDIC standards for the future ABPs Rendering Plant.

The Detailed Design will duly incorporate respective provisions and recommendations from the finalized ESIA/ESMP.

The study shall cover, but not be limited to, the following aspects:

- ABPs Rendering Plant Structural Design

A structural design of facility up to FIDIC level shall be undertaken by the Consultant. The structural design shall take into consideration the civil engineering components of the projects and investigate the stability, strength and rigidity of the structures. The design shall also take into consideration local environmental conditions in order to engineer a sustainable design.

- Enabling Infrastructure Design

The enabling infrastructure surrounding the ABPs Rendering Plant will need to be examined and appropriately considered in the FIDIC level design. Characteristics such as traffic movements and impact to surroundings are of primary importance to the Client and Project fundamentals.

ESF including the Environmental and Social Standards' requirement to be added as necessary to comply with The Republic of North Macedonia and World Bank requirements.

### *Tasks*

- ⇒ The Consultant shall identify and take into consideration the possible impacts to the surroundings and how they can be mitigated through the facilities design.
- ⇒ The Consultant will be responsible for FIDIC and specifications of all required enabling infrastructure of the facility, including but not limited to access roads, drainage, utilities, power supply, HVAC, refrigeration, security, etc. Once again, it is critical that local environmental conditions be taken into consideration for the design.

- Facility Energization Design

The ABPs Rendering Plant is slated to be energized through the use of electric power distribution stations. In parallel, the Client would like to explore the opportunity to maximize energy efficiency and power the facility through the use of renewable energy sources. Although local climate conditions may not allow renewable energy to power the facility 24/7 there is consideration that a combination with renewables power may be implemented.

### *Tasks*

- ⇒ The Consultant shall conduct a prospective power demand audit of the facilities based on the schematic design, and determine the sizing and specifications of the power distribution stations, which will provide sufficient power to energize the facilities keeping in mind the various service offerings (cold, ambient, general).
- ⇒ As part of the finalized ESIA/ESMP, the Consultant shall develop an energy efficiency measures for the facilities, aimed at the minimization of energy consumption and avoidance of energy losses

(i.e. wall, window and roof isolation, maximum natural lighting, load shedding, scheduled outages, energy efficient equipment and machinery, etc.) and ensure power reliability without compromising operational efficiency.

- Renewable Energy Sources

The Consultant will have to explore options other than power distribution stations to energize the facility. The study will assess various system combinations with renewable energy sources such as solar to determine the most suitable solution.

*Tasks*

- ⇒ Using results of the study, the Consultant shall incorporate the preferred facility energization solution into its technical design. A technical documentation and associated specifications in line with national legislation and FIDIC standards shall be prepared for the preferred power solution.
- ⇒ The preferred technical solution considering the use of renewable energy sources for generating electricity to supply the facilities, shall be considered within the scope of finalized ESIA/ ESMP, in terms of identification of environmental and social risks and mitigation.
- ⇒ The design shall provide for a +/- 10% cost estimate for the options of usage of renewable energy sources and associated mitigation.

The ultimate output of the Detailed Design package shall be containing the full suite of drawings and specifications and respective Bills of Quantities with included cost for implementation of the ESMP) in accordance with the national legislation and should elaborate the following stages (design phases) organized in separate books:

1. Phase: Architecture, including:

- Technical Specification for execution of the Works;
- Drawings for execution of the Works;
- Bill of Quantities and Bill of Quantities with cost estimates;

2. Phase: Statics, including:

- Geo-mechanical Elaborate with laboratory tests, if needed;
- Technical Specification for execution of the Works;
- Drawings for execution of the Works;
- Bill of Quantities and Bill of Quantities with cost estimates;
- Positive opinion of the Static design by the Institute of Earthquake Engineering & Engineering Seismology.

3. Phase: Civil works (infrastructure, drainage and dewatering), including:

- Technical Specification for execution of the Works
- Drawings for execution of the Works
- Bill of Quantities and Bill of Quantities with cost estimates;

4. Phase Mechanical works, including:

- Technical Specification for execution of the Works
- Drawings for execution of the Works
- Bill of Quantities and Bill of Quantities with cost estimates;

5. Electro-technical Design, including:

- Technical Specification for execution of the Works
- Drawings for execution of the Works
- Bill of Quantities and Bill of Quantities with cost estimates.

6. Fire, Explosion and Hazardous Materials Protection elaborate;
7. Environmental and Social Impact Assessment / Environmental and Social Management Plan;
8. Energy Efficiency Elaborate;
9. Occupational Safety and Health Elaborate;
10. Total Bill of Quantities and Bill of Quantities with cost estimates with included cost for implementation of the ESMP;
11. Other required documentation according to the national legislation, if needed.

- Design Review

The Consultant shall provide services during the design review process in terms of incorporation of all the comments and recommendations of the Design Review Consultant. Only detailed designs with positive opinion/reports from the Design Review Consultant/s can be considered relevant for acceptance by the Client for obtaining the application for building permit as required by the national legislation.

- Obtaining of building permit and conducting the administrative process

The Consultant, on behalf of the Client, will be responsible to conduct all necessary administrative procedures in order to obtain the building permit for the ABPs Rendering Plant according to applicable national legislation, and ensure smooth realization of the next construction phase. The deliverance of the building permit and other authorizations for the construction of the facility will be mandatory to the achievement and the final payment of phase II by the Client.

❖ **Activity 2.2: Finalization of site-specific ESIA/ESMP based on the detailed design**

Based on the project ESMF, initial environmental and social assessment, and detailed engineering design, preparation and finalization of the site-specific Environmental and Social Impact Assessment (ESIA) and Environmental and Social Management Plan (ESMP), to incorporate the technical provisions of the detailed design, and inform the detailed design accordingly. The finalized draft ESIA/ESMP shall address both construction and operation stage of the ABPs Rendering Plant, and be duly disclosed and publicly discussed before the finalization of the detailed design, to ensure that any meaningful feedback from the public consultations is reflected in the final site-specific ESMP and addressed through the finalized development design. Indicative outline for site-specific ESIA/ESMP is presented in Annexes 1 and 2.

Close communication with the Client will be essential to this phase of works in order to reflect the Client's intentions and project specific requirements into the Detailed Design Package.

### *Specific Objectives*

Input and support for the preparation of the whole tender package/Bidding Documents for the construction works procurement and during the civil works realization;

### *Scope of work*

#### ❖ **Activity 3.1: Technical Assistance during the preparation of the bidding documents for construction of the ABPs Rendering Plant**

The Client will engage an CW contractor(s) to build the ABPs Rendering Plant based on the consulting firm's design and assessment works undertaken as a part of the assignment. The Consultant will support the Client during the preparation of the bidding documents to provide technical input, provide clarifications on technical aspects to the respective queries submitted by potential bidders, assist Client during bids' evaluation, and on an as needed basis during the procurement process. Technical input to the bidding documents will be required from the Consultant. In case clarifications are requested by potential bidders, the Consultant is obliged to provide responses (in English language) to the Client within two working days the latest from the receipt of the queries by the Client. It is the Client's intention to break ground on the ABPs Rendering Plant by the end of 2023.

### *Tasks*

- ⇒ The Consultant will be required to draft necessary sections of the construction works bidding documents/tender package as it relates to technical components of the Project, including but not limited to design, specifications, bill of quantities, construction schedule and technical evaluation criteria. These shall be easily translated from the technical design works completed in the assignment.
- ⇒ The consulting firm will be required to provide guidance and input on certain sections of the construction works contract as it relates to technical components of the Project.
- ⇒ The Consultant will incorporate relevant Environmental and Social Health and Safety (ESHS) provisions, as well as contractor's Code of Conduct, into the bidding documents. The cost for the implementation of the respective site-specific ESMP shall be duly considered within the Bill of Quantities (BoQ). Such site-specific ESMP shall be an integral part of the bidding documents and civil works/goods contracts.

#### ❖ **Activity 3.2: Technical Assistance – Extended Design Services**

The Consultant is required to provide technical assistance – extended design services to the Client during the implementation of the respective civil works contract for the ABPs Rendering Plant.

### Construction Works Contract Input

The Consultant is required to be available during implementation of the civil works contracts and to provide extended design services for any changes in the prepared design documents in case of need during the implementation of the civil works for the ABPs Rendering Plant until technical acceptance of the performed civil works. The need for changes and/or supplementary drawings, shall be initiated and approved by the supervisor.

#### 4. REPORTS

The Consultant shall submit the following reports:

*i. Reports Phase 1*

- (i) **Project Review Brief:** A Project Brief shall be submitted after review of existing project information and completion of field visit. The purpose of the brief is to flag any issues or red flags based on an initial assessment of the project. It will also include information on the selection of the site in Municipality of Rosoman. The brief shall be submitted to the Client before the study is undertaken.
- (ii) **Progress Briefs:** The Consultant will include a progress briefs (checklist) that will be updated on monthly basis consisted of activities and timeline to be performed.
- (iii) **Market study report:** presenting in particular the strategic orientation, Market assessment and Feasibility, value proposition, SWOT, regional and international benchmarking, technological/technical plan and business plan.
- (iv) **Intermediate report:** introducing conceptual scenario with draft project goals and strategy, concept, draft schematic design, with first estimation of costs, functionalities, and management.
- (v) **Final Report:** schematic design (including plans, profiles, elevations, perspectives and details) with phase “Architecture” with revision, business model, business management and maintenance plan, business plan and proposed procurement method for contracting in the following project development phase, for each selected option.
- (vi) **Initial Environmental and Social Impact Assessment Report (ESIA)/Environmental and Social Management Plan (ESMP).**

*ii. Reports Phase 2*

(ii) **Draft Detailed Design Package:** it will present the results of the Detailed Design phases of works. The packages shall clearly present analysis on the Project’s viability focusing on technical design and specification.

The Draft Development Design Package can be submitted electronically. The Client will endeavor to provide comments and feedback within three weeks of submission.

(iii) **Final Detailed Design Package:** The Final Development Design Packages will address any comments made on the Draft Development Design Package.

(iv) **Site-specific ESIA and ESMP** finalized based on the Development Design.

*iii. Reports Phase 3*

(i) **Final Report** including inputs required during the issuance of the construction works bidding documents and civil works contract management



**All reports are expected to be in English language.**

## 5. DELIVERABLES & TIMELINE

<b>Phase 1 – Site Selection, Feasibility Study and Business Plan, Initial Environmental and Social Assessment/Environmental and Social Management Plan, Schematic Design and Urban Planning</b>			
<b>D. No</b>	<b>Deliverables</b>	<b>Deadline submission*</b>	<b>Approval by the Client*</b>
D1	Site selection report	10 days after signing of the contract	2 days after submission
D2	Market study report	60 days after signing of the contract	14 days after submission
D3	Intermediates report with Business Plan	120 days after signing of the contract	14 days after submission
D4	Completed urban planning process for the location, confirmed with a complete set of documents and property list issued by the Cadaster, providing the construction conditions for the future ABPs Rendering Plant;	150 days after signing of the contract	5 days after submission
D5	Final report with Schematic Design, phase “Architecture” with revision		14 days after submission
D6	Internal environmental and social assessment and ESMP outline		14 days after submission

\* Calendar days

<b>Phase 2 – Detailed design Development and finalization of Environmental and Social Impact Assessment/Environmental and Social Management Plan</b>			
<b>D. No.</b>	<b>Deliverables</b>	<b>Deadline Submission*</b>	<b>Approval by the Client*</b>
D7	Final Detailed Design with Bill of Quantities (with cost estimates) with obtained building permit	120 days after approval of phase 1	21 days after submission
D8	Final ESIA and Environmental and Social Management Plan	130 days after approval of phase 1	14 days after submission

\* Calendar days

<b>Phase 3 – Technical assistance during bidding documents preparation and civil works contract management</b>			
<b>D. No.</b>	<b>Deliverables</b>	<b>Deadline Submission</b>	<b>Approval by the Client*</b>
D9	Final Report with included inputs required during the issuance of the construction works bidding documents and civil works contract management	30 April, 2025	14 days after submission

\* Calendar days

Final approval of all deliverables will be provided 14 days after the receipt of the version which fully addresses comments by the Client and has been cleared by the Client.

The Consultant will be evaluated on strategy and creativity in achieving the key Project milestones. Many tasks will need to be undertaken concurrently, as such timing and planning will be essential in preparing the Project for construction before the last quarter - 2023.

## 6. CONSULTANT QUALIFICATION

The contract will be awarded following a quality-based selection procedure in accordance with the Procurement Regulations. The Consultant may associate with other Consultants in the form of a joint venture or of a sub-consultancy agreement to complement their respective areas of expertise, strengthen their technical responsiveness of their proposals, make available bigger pool of experts, provide better approaches and methodologies.

### *i. Firm Qualifications*

The Consultant shall be a firm or group of firms with following minimum qualifications:

- Proven experience in projects for management of ABPs or for processing and/or collection establishments that comply with EU requirements;
- Turnover of more than € 1.000.000 (one million euros) in the last 3 years and a sound current ratio. In case of a consortium this criterion must be fulfilled by at least the leader of consortium.
- For the technical assistance experience related to contracts concluded within the last 10 years in at least 2 but preferably 3 or more technical assistance projects in the Candidate/Potential Candidate country in the field of animal health and/or food safety with a budget of at least € 200.000 each;
- For the technical assistance experience in at least 2 but preferable 3 or more projects involving reorganization and/or organization of new function of national veterinary services and involving design of an ABP management system and/or rendering plant in a Member State or Candidate/Potential Candidate country
- Proven experience in the execution of Business Planning including business calculations, adequate for bankable financing.
- License for preparing Design documentation for 1<sup>st</sup> category (License A) issued according to the national legislation of the Republic of North Macedonia. Foreign Consultant companies can get more information about confirmation of their licenses on the following link: <http://mtc.gov.mk>;
- License for preparing Urban Planning Documentation (License A) issued according to the national legislation of the Republic of North Macedonia. Foreign Consultant companies can get more information about confirmation of their licenses on the following link: <http://mtc.gov.mk>;
- Experience in development of ESIA/ESMP for similar types of projects;

The credibility of mentioned experience shall be presented in a list of the required similar project/contracts as required above, including description of services provided (including information on contract value, contracting entity/client, project location/country, duration, assignment budget, percentage carried out by consultant in case of association of firms or subcontracting and main activities) and accompanied by certificates/confirmation of orderly fulfilment of the contracts verified by other party from such contracts.

It is required to provide examples of assignments of similar nature.

### *ii. Key Experts*

It is expected that the core Consultant's core team shall comprise of following key experts:

- Team Leader - Project Management Expert
  - Degree in food-/feed processing technology and/or veterinary medicine,
  - Proven knowledge of the ABPs business on EU standards;
  - Past experience in at least 2 technical assistance or similar projects in EU Member State or EU candidate countries in the field of food safety as Team Leader, RTA (twinning project) or similar position with a duration of at least 18 months;
  - Professional experience working in the field of official controls in the livestock- and/or meat- and/or food sector of a Member State or EU Candidate country with a duration of at least 5 years but preferably 7 or more years;
  - Experience in at least 2 technical assistance projects in the ABPs and/or veterinary field in the Western Balkans with an input of at least 50 working days in each project;
  
- ABP management expert
  - Degree in food technology, chemical technology or technical engineering
  - Professional experience in setting-up or upgrading and managing an ABP system in a Member State or EU Candidate country with a duration of at least 5 years but preferably 7 or more years;
  - Experience in technical assistance missions in the field of ABP to EU Member States or EU Candidate countries;
  - Professional experience in the sector of animal feeding stuff;
  - Experience in technical assistance and or professional experience in the Western Balkans;
  
- Veterinary public health, animal health expert
  - Degree in veterinary medicine or animal science;
  - Past experience in at least 2 technical assistance or similar projects in the field of animal health/disease control, or veterinary public health, and animal identification, as project expert with a duration of at least 1 year in EU Member State or EU Candidate country;
  - Experience in technical assistance missions in the field of ABP to EU Member States or EU Candidate countries;
  - Experience in technical assistance and or professional experience in the Western Balkans;
  - Professional experience working as official veterinarian in the veterinary service and EU and OIE standards;
  
- Expert for development of technical specifications for rendering plant
  - Degree in mechanical engineering and/or feed processing technology;
  - Professional experience in setting-up or upgrading and managing an ABP system in a EU Member State or EU Candidate country with a duration of at least 5 years but preferably 7 or more years;
  - Experience in technical assistance and or professional experience in design/engineering of civil works and equipment in the food industry/feed industry/ABPs rendering;
  - Experience in technical assistance missions in the field of ABP to Member States or Candidate countries;
  - Professional experience in the food and/or animal feed sector;
  
- Finance and economics expert
  - At least Master Degree in finance – economics;
  - Past experience in at least 2 projects in business planning and/or economic analysis as project expert in EU Member State or EU Candidate country;
  - Professional experience in business planning; preferable in the agri/food business;

- Professional experience working as finance expert; preferable with execution of bankable business calculations;
- Professional experience in the Western Balkans;
- Urban Planner
  - At least Bachelor's Degree in civil engineering or architecture;
  - Certified Urban Planner (Authorization);
  - At least 10 (ten) years of proven working experience in urban planning;
  - At least four (4) assignments for preparing urban planning documentation;
- Design Engineer
  - At least a Bachelor's Degree in civil engineering or architecture;
  - Certified Designer (Authorization A);
  - At least 10 (ten) years of proven working experience with designing similar or related facilities;
  - At least four (4) assignments for warehouse design where at least two (2) assignments in a position of Main Designer;
  - Worked under FIDIC design standards;
- Environmental Specialist
  - Bachelor degree in environmental engineering, environmental science, environmental management or any related science;
  - 10 years working experience in environmental assessment in emerging countries and has experience in the Balkan region. Experience in similar types of projects is an advantage;
  - Familiarity with the WB safeguard policies and Environmental and Social Framework (ESF);
- Social Development Specialist (national)
  - At least a Master's Degree in social sciences, sociology, anthropology, or other relevant disciplines for the assignment;
  - At least 10 years of experience in social development and/or gender development;
  - Familiarity with WB policies on social safeguards, gender development, and core labor standards is preferable; Working experience in agriculture and natural resource sector in Balkan region is highly preferred.

The substitution of Key Experts during Contract execution may be considered only based on the Consultant's written request. In such case, the Consultant shall provide as a replacement a person of equivalent or better qualifications and experience, and at the same rate of remuneration. Any change in Key expert positions shall take effect only after receiving written confirmation by the Client.

### **Backstopping/Home Office Support**

The Consultant should have additional resources available as needed with experience working on similar projects to support the key experts as required throughout the assignment.

## Annexes

### Annex 1. Indicative content for the initial environmental and social assessment

#### 1. Executive summary

- Concisely discusses significant findings and recommended actions.

#### 2. Legal and institutional framework

- Analyzes the legal and institutional framework for the project, within which the environmental and social assessment is carried out, including the issues set out in ESS1, paragraph 264.
- Compare the Borrower's existing environmental and social framework and the ESSs and identify the gaps between them.
- Identifies and assesses the environmental and social requirements of any co-financiers.

#### 3. Project description

- Concisely describes the proposed project and its geographic, environmental, social, and temporal context, including any offsite investments that may be required (e.g., dedicated pipelines, access roads, power supply, water supply, housing, and raw material and product storage facilities), as well as the project's primary suppliers.
- Through consideration of the details of the project, indicates the need for any plan to meet the requirements of ESS 1 through 10.
- Includes a map of sufficient detail, showing the project site and the area that may be affected by the project's direct, indirect, and cumulative impacts.

#### 4. Baseline data

- Sets out in detail the baseline data that is relevant to decisions about project location, design, operation, or mitigation measures. This should include a discussion of the accuracy, reliability, and sources of the data as well as information about dates surrounding project identification, planning and implementation.
- Identifies and estimates the extent and quality of available data, key data gaps, and uncertainties associated with predictions;
- Based on current information, assesses the scope of the area to be studied and describes relevant physical, biological, and socioeconomic conditions, including any changes anticipated before the project commences.
- Takes into account current and proposed development activities within the project area but not directly connected to the project.

#### 5. Environmental and social risks and impacts

- Takes into account all relevant environmental and social risks and impacts of the project. This will include the environmental and social risks and impacts specifically identified in ESS2 – 8, and any other environmental and social risks and impacts arising as a consequence of the specific nature and context of the project, including the risks and impacts identified in ESS1, paragraph 28.
- Within the ESIA cumulative impacts will also be considered and analyzed

#### 6. Mitigation measures

- Identifies mitigation measures and significant residual negative impacts that cannot be mitigated and, to the extent possible, assesses the acceptability of those residual negative impacts.
- Identifies differentiated measures so that adverse impacts do not fall disproportionately on the disadvantaged or vulnerable.

- assesses the feasibility of mitigating the environmental and social impacts; the capital and recurrent costs of proposed mitigation measures, and their suitability under local conditions; the institutional, training, and monitoring requirements for the proposed mitigation measures.
- specifies issues that do not require further attention, providing the basis for this determination.

#### **7. Analysis of alternatives**

- systematically compares feasible alternatives to the proposed project site, technology, design, and operation--including the "without project" situation--in terms of their potential environmental and social impacts;
- assesses the alternatives' feasibility of mitigating the environmental and social impacts; the capital and recurrent costs of alternative mitigation measures, and their suitability under local conditions; the institutional, training, and monitoring requirements for the alternative mitigation measures.
- For each of the alternatives, quantifies the environmental and social impacts to the extent possible, and attaches economic values where feasible.

#### **8. Design measures**

- sets out the basis for selecting the particular project design proposed and specifies the applicable ESHGs or if the ESHGs are determined to be inapplicable, justifies recommended emission levels and approaches to pollution prevention and abatement that are consistent with GIIP.
- Summarizes key measures and actions and the timeframe required for the project to meet the requirements of the ESSs. This will be used in developing the Environmental and Social Commitment Plan (ESCP).

#### **9. Appendices**

- List of the individuals or organizations that prepared or contributed to the environmental and social assessment.
- References—setting out the written materials both published and unpublished, that have been used.
- Record of meetings, consultations and surveys with stakeholders, including those with affected people and other interested parties. The record specifies the means of such stakeholder engagement that were used to obtain the views of affected people and other interested parties.
- Tables presenting the relevant data referred to or summarized in the main text.
- List of associated reports or plans.

## Annex 2. Indicative content for site-specific Environmental and Social Management Plan (ESMP)

### **1. Mitigation**

- The ESMP identifies measures and actions in accordance with the mitigation hierarchy that reduce potentially adverse environmental and social impacts to acceptable levels. The plan will include compensatory measures, if applicable. Specifically, the ESMP:
  - i. identifies and summarizes all anticipated adverse environmental and social impacts (including those involving indigenous people or involuntary resettlement);
  - ii. describes with technical details each mitigation measure, including the type of impact to which it relates and the conditions under which it is required (e.g., continuously or in the event of contingencies), together with designs, equipment descriptions, and operating procedures, as appropriate;
  - iii. estimates any potential environmental and social impacts of these measures; and
  - iv. takes into account, and is consistent with, other mitigation plans required for the project (e.g., for involuntary resettlement, indigenous peoples, or cultural heritage).

### **2. Monitoring**

- The ESMP identifies monitoring objectives and specifies the type of monitoring, with linkages to the impacts assessed in the environmental and social assessment and the mitigation measures described in the ESMP 6. Specifically, the monitoring section of the ESMP provides (a) a specific description, and technical details, of monitoring measures, including the parameters to be measured, methods to be used, sampling locations, frequency of measurements, detection limits (where appropriate), and definition of thresholds that will signal the need for corrective actions; and (b) monitoring and reporting procedures to (i) ensure early detection of conditions that necessitate particular mitigation measures, and (ii) furnish information on the progress and results of mitigation.

### **3. Capacity development and training**

- To support timely and effective implementation of environmental and social project components and mitigation measures, the ESMP draws on the environmental and social assessment of the existence, role, and capability of responsible parties on site or at the agency and ministry level.
- Specifically, the ESMP provides a specific description of institutional arrangements, identifying which party is responsible for carrying out the mitigation and monitoring measures (e.g. for operation, supervision, enforcement, monitoring of implementation, remedial action, financing, reporting, and staff training).
- To strengthen environmental and social management capability in the agencies responsible for implementation, the ESMP recommends the establishment or expansion of the parties responsible, the training of staff and any additional measures that may be necessary to support implementation of mitigation measures and any other recommendations of the environmental and social assessment.

### **4. Implementation schedule and cost estimates**

- For all three aspects (mitigation, monitoring, and capacity development), the ESMP provides (a) an implementation schedule for measures that must be carried out as part of the project, showing phasing and coordination with overall project implementation plans; and (b) the capital and recurrent cost estimates and sources of funds for implementing the ESMP. These figures are also integrated into the total project cost tables.

### **5. Integration of ESMP with project**

- The Borrower's decision to proceed with a project, and the Bank's decision to support it, are predicated in part on the expectation that the ESMP (either stand alone or as incorporated into the ESCP) will be executed effectively. Consequently, each of the measures and actions to be implemented will be clearly specified, including the individual mitigation and monitoring

measures and actions and the institutional responsibilities relating to each, and the costs of so doing will be integrated into the project's overall planning, design, budget, and implementation.

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