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REPUBLIKA E MAQEDONISË SË VERIUT
МИНИСТЕРСТВО ЗА ЗЕМЈОДЕЛСТВО, ШУМАРСТВО И ВОДОСТОПАНСТВО
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СКОПЈЕ - SHKUP

Terms of Reference

Consulting Services for the Preparation of Environmental and Social Impact Assessment (ESIA) and Environmental and Social Framework (ESF) Instruments

Phases 2 – Irrigation and Phase 3 - Hydropower of the Zletovica Hydrosystem-North Macedonia

A. Project Background and Information

The Zletovica Hydrosystem (HS Zletovica) is a multipurpose water infrastructure system located in the northeastern and eastern parts of North Macedonia, within the municipalities of Probištip, Kratovo and Kumanovo. The system was designed to harness the water and hydropower potential of the Zletovska River for the integrated benefit of six municipalities: Kratovo, Probištip, Zletovo, Štip, Karbinci, Sveti Nikole, and Lozovo, serving a population of approximately 100,000 people.

The project is structured in three sequenced phases:

- Phase I (Completed): Construction of the Kneževo dam and reservoir, access roads, and regional transmission mains for drinking water supply. This phase is fully operational.
- Phase II (Planned): Modernization and expansion of irrigation over approximately 4,500 hectares of agricultural land in the municipalities of Probištip (3,606 ha) and Kratovo (957 ha), involving construction of primary and secondary irrigation infrastructure, conveyance pipelines, pumping stations, and distribution networks.
- Phase III (Planned): Development of hydropower generation capacity of approximately 9–9.5 MW (totaling ~45.5–48 GWh/year) through the construction of small hydroelectric power plants (HPPs) integrated into the existing water system.

The Government of North Macedonia, through the Public Enterprise "Hydro System Zletovica" (PE HS Zletovica), is preparing a World Bank-financed investment operation for Phase 2 Irrigation and Phase 3 Hydropower project. The Project preparation is being supported through a Grant Facility for Project Preparation (GFPP) grant. A separate Detailed Design Consultant will reassess and update the Feasibility study, confirm or refine the preferred investment solutions, and prepare construction-ready final detailed designs, including obtaining construction permit and technical bidding-package components for both phases.
This ESIA/ESF assignment shall proceed as a fully coordinated and concurrent project-preparation workstream, using the same controlled project description, alternatives, design bases, hydrology and water balance, footprints, contract packaging, implementation schedule, costs, and operating assumptions as the detailed-design assignment. The two consultants shall exchange information through agreed review gates and shall promptly reconcile any inconsistency that could delay feasibility decisions, appraisal design preparations, construction permitting, procurement, or construction readiness.
An Environmental Impact Assessment (EIA) was previously prepared for Phases II and III under WBIF (Western Balkan Investment Fund) technical assistance arrangements (2014–2018). This earlier EIA was prepared in compliance with national legislation and European Investment Bank (EIB) Environmental and Social Standards. It covered key environmental components including hydrology, geology, soils, biodiversity, air quality, noise, and socio-economic conditions, as well as a Resettlement Policy Framework (RPF) and a Stakeholder Engagement Plan (SEP). The present assignment builds upon and updates this existing documentation to meet current World Bank ESF requirements.

B. Objectives

The overall objective is to prepare the environmental and social assessment, instruments, design inputs, permit-support documentation, and procurement provisions required for the accepted Phase 2 Irrigation and Phase 3 Hydropower investments to reach World Bank appraisal and financing readiness and to proceed to national permitting, procurement, and construction. The Consultant shall work iteratively with the engineering consultants so that environmental and social risks, constraints, mitigation measures, land requirements, stakeholder inputs, and permit conditions are incorporated into alternatives assessment, the selected solution, construction-ready final

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detailed designs, cost estimates, implementation arrangements, and bidding documents—not treated as stand-alone documentation prepared after design decisions.
Specifically, the consultancy will deliver an environmental and social workstream synchronized with the Detailed Design Consultant's six review gates, which foresees: inception and gap analysis, by Month 1; feasibility, alternatives assessment, and preferred-option recommendation by Month 3; draft detailed designs for both components by Month 5; coordinated detailed designs and readiness review for both components by Month 7; final detailed designs submitted for construction permit and technical bidding packages by Month 9; and consolidated completion by Month 10. Environmental and social inputs shall be issued early enough to influence each gate, and the ESIA/ESF instruments shall be updated after any material change in scope, footprint, operating rules, construction method, packaging, schedule, or cost.

- Update the 2014–2018 EIA into a project-specific ESIA compliant with the World Bank ESF and additional version an EIA applicable North Macedonian requirement, based on current baseline data and the evolving engineering design.
- Preparation of Screening and Scoping report under the WB ESF, as well as Notification letter for intention to implement the Project with accompanied documents, following national EIA procedure requirements.
- Provide timely environmental and social screening criteria and constraints for the feasibility update, alternatives analysis, siting, layout, technology selection, water-allocation and operating rules, construction methods, access, spoil disposal, camps, ancillary facilities, and contract packaging.
- Prepare the ESMP, SEP, land-acquisition and resettlement instrument(s), LMP, ESCP inputs, and any topic-specific plans required by the final risk assessment and agreed project scope.
- Translate accepted mitigation and monitoring requirements into measurable design criteria, drawings, bills of quantities, cost estimates, technical specifications, Employer's Requirements, contractor obligations, and bidding-document clauses for each works package.
- Support World Bank appraisal and compliance with OP 7.50 by providing the environmental and social baseline, impact, cumulative-impact, mitigation, monitoring, consultation, and disclosure inputs required for the transboundary-water assessment and Project Details; review the documentation prepared under the detailed design assignment for consistency with the ESIA and ESF instruments; and support responses to environmental and social questions arising during the riparian-notification process. The ESIA/ESF Consultant shall not be responsible for leading the engineering and water-resources technical assessment or for undertaking the formal notification of riparian states.
- Identify land requirements and affected persons as the design footprint is fixed and prepare site-specific RAPs where sufficient design information is available; use an RPF only for residual components whose footprints cannot reasonably be defined during the assignment.
- Define practical measures and monitoring indicators for equitable access to irrigation benefits, labor and community safety, gender and vulnerable groups, and project-supported employment, consistent with the project's jobs contribution and results-reporting framework.
- Maintain full consistency across the ESIA/ESF instruments, engineering deliverables, economic and financial analysis, implementation schedule, procurement strategy, permits, and final bidding documents.

C. Scope of Services

The Consultant shall carry out the following tasks:

Task 1: Inception and Screening

The Consultant shall review all existing documentation, including the 2014–2018 EIA study, feasibility studies, project design documents, and GFPP materials. The Consultant shall prepare an Inception Report that includes:

- A gap analysis of the existing EIA and related instruments against the World Bank ESF, applicable national requirements.
- Undertake environmental and social screening and scoping for Phase 2 Irrigation and Phase 3 Hydropower, including relevant Phase 1 interfaces, associated and ancillary facilities, cumulative developments, and proposed contract packages.
- Prepare a Screening and Scoping Report defining the project's area of influence; applicable national requirements and World Bank Environmental and Social Standards; key environmental and social risks and impacts; assessment methodology; baseline data and seasonal survey requirements; alternatives to be assessed; stakeholder engagement requirements; and the scope of the ESIA/EIA and associated instruments.
- Prepare the Notification letter of intention to implementation the Project and other documentation required to initiate the national EIA procedure and support determination of the scope of the EIA Study, in accordance with the National legal requirements.

- Review and confirm the applicability and current status of transboundary EIA requirements under national legislation and applicable international obligations, including the status of any previous transboundary EIA procedure with Greece and whether it requires updating or renewal. Where applicable, the Consultant shall prepare the relevant technical E&S inputs and supporting documentation, while the formal transboundary procedure remains the responsibility of the competent authorities.
- Perform seasonal monitoring on a base of a consolidated data-needs and field-investigation plan identifying seasonal survey requirements, critical-path information, responsibilities, dependencies on engineering surveys, and dates by which information must be available to avoid delaying design decisions.
- A single coordinated ten-month work plan aligned with the Detailed Design Consultant's review gates at Months 1, 3, 5, 7, 9, and 10, including shared data dates, seasonal surveys, consultations, E&S review periods, land and permit dependencies, bidding-document inputs, decision dates, and escalation procedures for critical-path issues.
- A design-interface and responsibility matrix identifying each environmental and social input, the originating deliverable, responsible party, required design or procurement response, due date, and evidence of closure.
- A stakeholder-engagement and disclosure plan linked to decisions on alternatives, land footprint, affected communities, water users, downstream users, permitting, and appraisal.
- A preliminary determination of applicable ESSs and a list of required instruments, with justification for any framework-level rather than site-specific instrument.

Task 2: Updated Environmental and Social Impact Assessment (ESIA)

The Consultant shall prepare a comprehensive ESIA for Phase 2 irrigation and Phase 3 hydropower, based on the latest accepted project description and design information provided through the detailed design assignment. The ESIA shall use updated baseline data, cover pre-construction, construction, operation and decommissioning, and be updated at agreed design-review gates so that its assessment, mitigation measures, land requirements, costs and implementation arrangements remain consistent with the selected solution, final project footprint and bidding packages. The Consultant shall also prepare a stand-alone Non-Technical Summary (NTS) of the ESIA, presenting the key project information, significant environmental and social risks and impacts, proposed mitigation measures, and relevant consultation information in a clear and accessible format suitable for public disclosure and consultation, consistent with applicable World Bank and national requirements.

Specifically, the ESIA shall:

2.1 Updated Legal and Regulatory Framework. Provide an updated review of the applicable national legislative and regulatory framework of North Macedonia, relevant EU Directives, and World Bank ESF requirements. Address Water Framework Directive (WFD) compliance.

2.2 Updated Project Description. Document the accepted scope and evolving design of Phase 2 irrigation and Phase 3 hydropower, including all components, infrastructure footprints, water intake and conveyance systems, hydropower facilities, grid connections, access works, construction areas, associated and ancillary facilities, operating rules, implementation schedule and proposed contract packages. The description shall be reconciled at each agreed review gate with the controlled project description maintained by the Detailed Design Consultant.

2.3 Analysis of Alternatives. Provide the environmental and social assessment of feasible alternatives identified through the engineering-led feasibility update, including the no-project alternative, and assess siting, layout, technology, water-allocation and operating scenarios, construction methods, ancillary facilities and contract packaging. The Consultant shall apply the mitigation hierarchy, incorporate stakeholder inputs, and provide a documented environmental and social recommendation before the preferred solution is accepted; the Detailed Design Consultant remains responsible for the integrated technical and economic alternatives analysis and final engineering recommendation.

2.4 Updated Environmental Baseline Collect, and document updated baseline data on:

- Topography, geology, and soils
- Hydrology and water resources (surface and groundwater), including updated flow data for the Zletovska River
- Air quality and noise
- Biodiversity (habitats, flora, fungi, fauna[1], aquatic ecosystem services, Red List species, protected areas)
- Landscape and visual environment

[1] mammals, birds, herpetofauna, fish, aquatic macroinvertebrates, terrestrial insects

- Climate and climate change projections

2.5 Updated Socio-Economic Baseline Collect and document updated baseline data on:

- Population and demographics of affected municipalities
- Land use and land tenure
- Livelihoods, agriculture, and economic activities
- Infrastructure and public services
- Health conditions
- Cultural heritage and physical cultural resources
- Gender and vulnerable groups

2.6 Environmental and Social Impact Assessment Identify, predict, and evaluate direct, indirect, and cumulative environmental and social impacts across all project phases for the following aspects:

- Air quality and dust
- Climate change and GHG emissions
- Noise and vibration
- Surface water and groundwater quality and quantity
- Environmental flows (E-Flows) downstream of water intakes and HPP facilities
- Soils and land degradation
- Biodiversity and natural habitats, including aquatic ecosystems and ichthyofauna
- Landscape and visual impacts
- Waste management
- Land use and land acquisition
- Livelihoods and economic displacement
- Cultural heritage
- Community health, safety, and security
- Labor and working conditions
- Gender and social inclusion
- Cumulative impacts (in conjunction with Phase I and other planned interventions in the basin)

2.7 Dam Safety; The ESIA shall reference World Bank Good Practice Note (GPN) for Dam Safety and address the safety implications of existing and planned infrastructure, including:

- Review of dam safety status of the Kneževo dam (Phase I) and any new hydraulic structures under Phases II and III.
- Community health and safety considerations related to dam operations, including flood risks.
- Coordination with dam safety documentation being separately prepared under the GFPP.

2.8 Transboundary Water. Assess the potential environmental and social implications of transboundary water effects of Phases II and III on downstream water users, livelihoods, ecosystems, biodiversity, water quality, and cumulative basin conditions. The Detailed Design Consultant shall lead preparation of the engineering and water-resources technical assessment and Project Details required to support the Client and the World Bank in complying with OP 7.50, based on the accepted feasibility study, water balance, hydrological and hydraulic analyses, selected project configuration, operating rules, environmental-flow requirements, and construction and operation scenarios. The ESIA/ESF Consultant shall provide relevant environmental and social baseline, impact, mitigation, monitoring, consultation, and disclosure inputs; review the technical assessment and Project Details for consistency with the ESIA and ESF instruments; identify and reconcile discrepancies; and support preparation of responses to environmental and social questions arising during the notification process.

Formal communications with the eventually affected neighboring states by the implementation of the project activities will be performed through the Espoo Convention technical focal point (MoEPP) and Espoo Convention Political Focal Point (MFA).

2.9 Mitigation Measures Propose a comprehensive mitigation hierarchy (avoid, minimize, mitigate, offset/compensate) for all identified significant impacts. Mitigation measures shall be feasible, time-bound, and costed.

2.10 Cumulative and Induced Impacts Assess cumulative impacts of Phases II and III in conjunction with Phase I operations and any other foreseeable projects or activities in the Zletovska River basin. The assessment shall specifically consider potential cumulative impacts on existing water-supply services and water users and identify measures to avoid or minimize disruption, reduced water availability, or deterioration of water quality during construction and operation.

Task 3: Environmental and Social Management Plan (ESMP)

The Consultant shall prepare a project-level ESMP, with package-specific measures and procurement requirements for Phase 2 and Phase 3. The ESMP shall distinguish between measures to be incorporated into detailed design and bidding documents, measures to be implemented by the Client or operator, and plans to be prepared and implemented by works contractors before relevant activities commence. It shall cover:

- Package-specific environmental and social mitigation requirements to be incorporated into the designs, technical specifications, bills of quantities, cost estimates and bidding documents.
- Requirements and minimum contents for Contractor Environmental and Social Management Plans (C-ESMPs) and subordinate method statements to be prepared by each works contractor and approved before the relevant works commence. The detailed Construction ESMP (C-ESMP) and related method statements will be prepared by the respective Contractor prior to commencement of the relevant works.
- Operational environmental and social management measures, procedures and institutional arrangements for PE HS Zletovica and other responsible operating entities.
- A monitoring plan specifying parameters, methods, locations, thresholds, frequency, responsibilities, reporting and corrective-action requirements.
- Institutional arrangements, staffing and capacity-building requirements for implementation, supervision and enforcement.
- Itemized cost estimates and funding responsibilities for all design, construction, operation, mitigation, monitoring, land, engagement and capacity-building measures.

Task 4: Stakeholder Engagement Plan (SEP)

The Consultant shall prepare an updated SEP in compliance with ESS10, covering:

- Identification and mapping of all project-affected parties and other interested parties, with specific attention to women, youth, elderly, and other vulnerable groups.
- A communication and engagement strategy, including mechanisms for information disclosure in Macedonian and other applicable local languages.
- A project-level Grievance Redress Mechanism (GRM), including procedures for receiving, registering, tracking, and resolving complaints.
- A schedule of stakeholder engagement activities throughout project preparation and implementation.
- Documentation of consultations conducted during ESIA preparation, including consultation records and responses to comments raised.

The Consultant shall organize and facilitate at least two major rounds of public consultation in the project-affected municipalities: one during scoping and alternatives assessment, early enough to influence selection and design of the preferred solution, and one following disclosure of the draft ESIA and associated instruments and before their finalization. Additional consultations shall be undertaken where required by the SEP, ESS10, ESS5, national procedures, material design changes, or the needs of affected and vulnerable groups.

Task 5: Resettlement Policy Framework (RPF)

The Consultant shall determine land requirements iteratively as the design footprints are defined. For components with sufficiently defined footprints, the Consultant shall prepare site-specific Resettlement Action Plans (RAPs), including the required census, socio-economic survey, asset inventory, valuation, entitlements, livelihood-restoration measures, implementation schedule and budget, in compliance with ESS5 and national law. A site-specific RAP shall be finalized once the project footprint and land requirements are confirmed and the census and asset inventory are completed. An RPF shall be prepared only for residual components whose locations or footprints cannot reasonably be finalized during the assignment, with the justification and affected components clearly identified. The RPF shall:

- Describe the legal framework for land acquisition and resettlement in North Macedonia and its consistency with ESS5.
- Define principles, policies, and procedures for compensation, resettlement, and livelihood restoration.

- Provide a framework for conducting socio-economic surveys and census once project footprints are confirmed.
- Include procedures for a cut-off date, eligibility criteria, and entitlement matrix.
- Address both physical and economic displacement.
- Include a Grievance Redress Mechanism for displaced persons.
- Provide cost estimates and financing arrangements for resettlement activities.
- Address gender-sensitive approaches to resettlement and livelihood restoration.

Task 6: Labor Management Procedures (LMP)

The Consultant shall prepare an LMP in compliance with ESS2, covering:

- Assessment of the project workforce (direct workers, contracted workers, primary supply workers, and community workers).
- Applicable national labor legislation and alignment with ESS2.
- Policies and procedures for labor and working conditions, including non-discrimination and equal opportunity.
- Occupational Health and Safety (OHS) procedures.
- A worker-level Grievance Redress Mechanism (GRM).
- Procedures to prevent and address child and forced labor.
- Contractor management requirements related to labor.

Task 7: Specialized Management Plans

Based on the ESIA findings, the Consultant shall prepare the following stand-alone or ESMP-integrated management plans, as applicable:

- Biodiversity Management Plan (BMP): Addressing impacts on natural habitats, aquatic ecosystems, fish passage, and Red List species, with specific attention to E-Flows requirements.
- Water Quality Management Plan: Addressing impacts on surface and groundwater quality during construction and operation.
- Waste Management Plan: Covering construction and operational waste streams.
- Traffic Management Plan: For construction phases affecting local roads and communities.
- Cultural Heritage Management Plan (CHMP): Including a chance-find procedure.
- Occupational Health and Safety (OHS) Plan: Detailing construction-phase OHS measures.
- Gender Action Plan (GAP): Mainstreaming gender considerations into project design and implementation, with specific attention to women's access to irrigation services and employment opportunities.

Task 8: Environmental and Social Commitment Plan (ESCP)

The Consultant shall prepare draft inputs to the Environmental and Social Commitment Plan (ESCP) for review and agreement by the Client and the World Bank. The draft shall consolidate the material measures and actions required to address environmental and social risks and impacts, including preparation and implementation of instruments, permit and land actions, staffing, capacity building, monitoring and reporting, with clear responsibilities, resources, timeframes and links to project and procurement milestones. The ESCP inputs shall remain consistent with the final ESIA/ESF instruments, the accepted implementation arrangements and the residual-action register.

Task 9: Public Consultation and Disclosure Support

The Consultant shall support PE HS Zletovica and the PIU in:

- Preparing public consultation materials (presentations, summaries, information leaflets) in Macedonian language throughout the contract cycle
- Organizing and facilitating public consultation events.
- Preparing a Public Consultation Report documenting the process, participants, issues raised, and how these have been addressed in the final instruments.

- Supporting the Client in disclosure of the environmental and social instruments through the channels and in the languages required by the World Bank ESF and applicable national procedures.

Task 10: Environmental Impact Assessment (EIA) under National Legislation

The Consultant shall prepare a separate Environmental Impact Assessment (EIA) Study in accordance with the Law on Environment and all applicable secondary legislation governing Environmental Impact Assessment procedures in the Republic of North Macedonia. The EIA shall be prepared as a standalone document separate from the ESIA prepared under the World Bank Environmental and Social Framework, while ensuring consistency between both assessments. This will include:

- Review the applicability of EIA requirements to Phase 2 and Phase 3.
- Prepare all documentation required for the national EIA procedure, including screening and scoping documentation where required by the competent authority.
- Assess impacts on air quality, climate, noise, vibration, water resources, soil, biodiversity, landscape, cultural heritage, waste management, human health and socio-economic conditions.
- Assess project alternatives, including location alternatives, technology alternatives and the no project alternative.
- Assess cumulative environmental impacts.
- Define mitigation measures, environmental monitoring requirements and environmental management obligations.
- Prepare a complete EIA Study in accordance with national legal requirements.
- Support HS Zletovica during consultations with the competent authority.
- Support the organisation and implementation of public consultations required under national legislation.
- Revise and finalise the EIA documentation in response to comments received from the competent authority and stakeholders.

Task 11: Integration with Detailed Design, Permitting and Bidding Documents

The Consultant shall establish a continuous working interface with the Detailed Design Consultant and review all material feasibility, design, permit-support, and technical procurement submissions. Environmental and social review shall be completed before the corresponding engineering gate is authorized and shall not be deferred to final-document checking. The Detailed Design Consultant shall remain responsible for engineering surveys, investigations, hydrology and water-resources modelling, alternatives integration, final design, quantities, costs, Phase 2 and Phase 3 statutory and permit-support documentation, and technical bidding-package components. The ESIA/ESF Consultant shall remain responsible for environmental and social baseline work, impact assessment, instruments, consultations, land and livelihood instruments, and package-specific E&S requirements. Neither consultant may rely on an unresolved interface as grounds for an incomplete submission; each shall notify the Client promptly, document the issue in the interface register, and propose a time-bound resolution. At a minimum, the Consultant shall:

- provide environmental and social exclusion criteria, constraints maps, sensitivity mapping, land and access constraints, environmental-flow requirements, and stakeholder-derived design criteria for the alternatives assessment and selection of the preferred solution;
- review the engineering consultant's feasibility-stage recommendation and document whether the preferred solution is acceptable from an environmental and social perspective, including cumulative impacts, climate resilience, dam safety interfaces, transboundary considerations, affordability, inclusion, and implementation risk;
- provide E&S review of the draft and final detailed designs for both Phase 2 and Phase 3, and the consolidated package; maintain a package-specific comment-response and closure matrix; and advise the PIU/Client of any unresolved environmental or social hold point before the Client authorizes the corresponding engineering gate;
- review, from an E&S perspective, whether that land requirements, temporary occupation, access roads, camps, borrow areas, quarries, spoil-disposal areas, transmission or grid connections, irrigation service areas, and other ancillary or associated facilities are consistently defined across the ESIA, drawings, cadastral information, cost estimates and permit applications; Any identified discrepancies shall be reported to the PIU/Client and the Detailed Design Consultant for resolution;

- define the mitigation and monitoring measures into package-specific and work with the Detailed Design Consultant to ensure that these are appropriately reflected in technical specifications, drawings or notes, bills of quantities, priced items, implementation schedules, qualification requirements, method-statement requirements, reporting obligations, and contractual provisions;
- prepare an Environmental and Social Requirements Schedule for each bidding package and check its consistency with the applicable World Bank Standard Procurement Document and proposed contract conditions;
- support the permitting process for Phase 2 Irrigation and Phase 3 Hydropower through the preparation of the required E&S documentation. The formal permitting procedure shall remain the responsibility of the PIU/Client and the competent authorities;
- the dam-safety work led under the Detailed Design Consultant's assignment, including the review of Knezhevo Dam the updated Construction Supervision and Quality Assurance Plan, Instrumentation Plan, Operation and Maintenance Plan, and Emergency Preparedness Plan will be assessed as part of ESIA/ESF assessment to identify and incorporate the associated community health and safety, emergency preparedness, downstream-risk, stakeholder-engagement, land, labor, biodiversity, and disclosure requirements, while avoiding duplication of the engineering dam-safety analyses and instruments;
- provide the environmental and social inputs required for the OP 7.50 technical assessment and Project Details led by the Detailed Design Consultant, including relevant baseline conditions, downstream and cumulative environmental and social impacts, environmental-flow and mitigation requirements, monitoring measures, and consultation findings; review the resulting documentation for consistency with the ESIA and ESF instruments; support responses to environmental and social questions raised during the riparian-notification process; and provide consistent inputs to the economic and financial assessment, implementation planning, and the jobs contribution and results framework, without assuming responsibility for the engineering and water-resources technical assessment, formal riparian notification, or the responsibilities of the engineering or economic consultants;
- issue, with each final design and bidding-document package, a design-integration statement identifying incorporated requirements, any residual actions, responsible parties, deadlines, and consequences for procurement or works commencement and
- support the approval process through the preparation of the required E&S documentation and technical clarifications, as needed. The formal ESIA approval procedure shall remain the responsibility of the PIU/Client and the competent authorities.

D. Applicable World Bank Environmental and Social Standards

The following World Bank ESS are considered relevant to the project and shall be addressed in the ESIA and associated instruments:

Standard	Relevance
ESS1 – Assessment and Management of E&S Risks and Impacts	Core requirement; governs the ESIA and ESMP
ESS2 – Labor and Working Conditions	Construction and operational workforce; LMP
ESS3 – Resource Efficiency and Pollution Prevention	Water energy, raw materials use, geology, geomorphology, soil, hydrology and water quality, waste, air quality, GHG emissions and climate changes and impacts, noise, vibration, etc.
ESS4 – Community Health, Safety and Security	Dam safety, flood risk, community exposure to construction
ESS5 – Land Acquisition and Involuntary Resettlement	Land acquisition for irrigation and HPP infrastructure; RPF/RAP
ESS6 – Biodiversity Conservation	Aquatic ecosystems, fish, E-Flows, natural habitats
ESS8 – Cultural Heritage	Physical cultural resources in project area
ESS10 – Stakeholder Engagement and Information Disclosure	SEP, GRM, public consultations

E. Deliverables and Timeline

The assignment for preparation the ESIA study under WB ESF shall be completed within ten (10) months from the Commencement Date, and finalized no later than end of March, 2028 on a base of prepared Commitment plan, prepared by WB officers and synchronized with the Detailed Design Consultant's programme. Within fourteen (14) days of commencement, the two consultants shall submit a single coordinated baseline schedule for the Client's approval. The schedule shall align the ESIA/ESF outputs with engineering Gates G1–G6 at Months 1, 3, 5, 7, 9, and 10; preserve sufficient time for seasonal surveys, consultations, Client and World Bank review, national procedures, and incorporation of accepted environmental and social requirements before each relevant design or procurement milestone; and identify all information dependencies, review periods, decision dates, and responsible parties. A deliverable is not complete solely upon submission: acceptance requires satisfactory incorporation of consolidated comments and demonstrated consistency with the latest accepted design basis.

Deliverable / review gate	Indicative timing or trigger	Minimum acceptance basis
1. Inception, gap analysis and interface package	Month 1 and half	Approved scope, instrument list, data and survey plan, integrated schedule, stakeholder plan, responsibility matrix, design-interface register, permit matrix and risk register.
2. Baseline, constraints and feasibility-stage E&S package	Month 4 (with earlier issue of critical constraints as required)	Validated baseline; constraints and sensitivity maps; land and social screening; applicable ESS determination; seasonal-survey status and data-gap plan; and timely E&S inputs to the integrated feasibility study, hydrology and water balance, climate assessment, existing-assets review, and alternatives analysis.
3. Preferred-solution E&S assessment and Gate G2 recommendation	Month 4 (with earlier issue of critical constraints as required)	Comparative E&S assessment of feasible alternatives; documented stakeholder inputs; mitigation hierarchy; consistency with water allocation, environmental flows, climate resilience, dam safety, OP 7.50, land, and cumulative-impact considerations; and a formal E&S recommendation on the preferred Phase 2 and Phase 3 solutions and their sequencing.
4. Environmental and Social seasonally appropriate baseline surveys	Month 5 and 7- Key baseline surveys to be completed before the Draft ESIA, where feasible. Any remaining surveys should be scheduled and reflected in the ESCP	Site investigation of biodiversity (terrestrial and aquatic) during appropriate seasons, water quality and hydrological assessments, noise and air quality monitoring (PM10), and socio-economic surveys, as needed based on identified data gaps
5. Draft appraisal-stage ESIA and ESF instruments	Month 6 Aligned with the appraisal-stage engineering design	Draft ESIA package, draft SEP, LMP, draft ESCP, site-specific RAPs for defined footprints and an RPF only for justified residual components, together with any required specialized plans; all internally consistent with the accepted project scope, cost estimate, implementation arrangements, procurement strategy and OP 7.50 environmental and social inputs.
6. Draft-design E&S integration memorandum	Month 6 with engineering Gate G3-Draft Detailed Designs for Hydropower and Irrigation – Pre-Stakeholder Consultations	Package-specific review of the draft detailed designs for Phase 2 and Phase 3; updated interface and comment-response matrices; evidence that accepted requirements are incorporated in drawings, specifications, quantities, costs, schedules, land plans, and consultation materials; and identification of unresolved hold points before stakeholder consultation and final design.
7. Consultation and disclosure package	Month 7, at scoping and draft-instrument stages, and as required by national procedures	Proposed/draft disclosure materials, consultation records, issues-and-responses matrix, evidence of engagement with affected and vulnerable groups, and documented design or instrument changes.

8. Draft E&S, permit-interface and bidding package	Month 7, before engineering Gate G4 – Final Hydropower Detailed Design and Gate D5 – Final Irrigation Detailed Design	Draft Phase 2 Irrigation and Phase 3 hydropower-related ESIA/ESF content; E&S inputs to statutory and permit-support documentation; confirmed land footprint and site-specific RAP where required; package-specific ESMP and bidding requirements; final design-integration statement; and closure or clear assignment of all residual actions affecting hydropower procurement or works commencement.
9. Consolidated draft ESIA/ESF and completion package under the WB ESF	Month 10, with engineering Gate G6 – Consolidated Final Assignment Package	Draft disclosed instruments in required languages with consultation and review comments addressed; draft OP 7.50 environmental and social inputs and consistency record; draft package-specific bidding requirements; consolidated design-integration, permit-interface, land, monitoring, and implementation records; residual-action register with owners and deadlines; and complete handover of editable files, GIS data, registers, and cost schedules.
10. Draft ESCP Inputs and Outstanding Actions	Month 10, revised based on Client and World Bank comments and aligned with the final ESIA, project design and implementation schedule.	Final ESCP inputs identifying the remaining actions required to meet World Bank ESF and national EIA requirements, including responsible parties and timelines

All deliverables, related to the WB ESF shall be submitted in English in searchable PDF and fully editable native formats, together with models, databases, GIS files, drawings, registers and calculation or costing files used to prepare them. Documents required for national procedures, disclosure, consultation, land acquisition, permits or implementation shall be provided in Macedonian and, where necessary for meaningful engagement, other locally used languages. Each submission shall include quality-assurance certification, a revision history, document register, assumptions and risks register, interface register, and comment-response matrix.

F. Team Composition and Qualifications

The Consultant shall field a multidisciplinary team comprising the following key and non-key experts:

Key Experts

KE 1 – Team Leader / Lead Environmental Expert University degree in environmental engineering, civil engineering, or related field; minimum 10 years of general professional experience; minimum 7 years of experience leading ESIA/EIA assignments for large-scale infrastructure project; experience with at least 2 ESIAs prepared under World Bank ESF or equivalent multilateral bank standards; strong knowledge of North Macedonia's regulatory framework desirable.

KE 2 – Lead Social and Resettlement expert / Deputy Team Leader University degree in social sciences, anthropology, or related field; minimum 10 years of experience in social impact assessments for large infrastructure projects; demonstrated experience in preparing RPFs and RAPs with World Bank ESS5 (resettlement) and ESS10 (stakeholder engagement); experience in the Western Balkans region is an advantage.

KE 3- Environmental expert - University degree in environmental engineering, biology (ecology), civil engineering, or related field; minimum 10 years of general professional experience; minimum 7 years of experience leading ESIA/EIA assignments for large-scale infrastructure project; experience with at least 2 ESIAs prepared under World Bank ESF or equivalent multilateral bank standards; strong knowledge of North Macedonia's regulatory framework desirable.

KE 4 – Hydrology, Environmental Flows and Water-Related Impact Expert. University degree in hydrology, water resources engineering, environmental engineering, or a related field; minimum 10 years of relevant professional experience, including environmental-flow assessment and evaluation of water-quantity, water-quality, downstream and cumulative impacts of major water infrastructure. The expert shall lead the ESIA/ESF Consultant's water-related environmental inputs, review hydrological and hydraulic information supplied by the Detailed Design Consultant, and support consistency review of the OP 7.50 technical assessment and Project Details. The expert shall not duplicate or assume responsibility for engineering design, water-resources modelling,

the integrated technical assessment, or formal riparian notification. Experience with the EU Water Framework Directive and comparable assignments in the Western Balkans is desirable.

KE 5 – Ecology and Biodiversity Expert University degree in ecology, biology, or related field; minimum 8 years of experience in ecological assessments, biodiversity management plans, and aquatic ecosystem assessments for large infrastructure projects; familiarity with North Macedonian flora and fauna, natural and critical habitat assessment, aquatic biodiversity, biodiversity baseline surveys and application of the mitigation hierarchy, preferably with experience under World Bank ESS6 or equivalent international standards.

KE 6 – Stakeholder Engagement and Communications Expert University degree in communications, social sciences, or related field; minimum 7 years of experience in designing and implementing stakeholder engagement strategies for large infrastructure projects; experience with GRM design and implementation.

KE 7 – Labor and OHS Expert University degree in occupational health and safety, labor relations, or related field; minimum 7 years of experience in LMP preparation and OHS assessments for large construction projects.

Non-Key Experts

The Consultant shall also provide, as needed, non-key experts including: environmental expert, agronomist, GIS/mapping specialist, water quality specialist, geologist, geomorphology expert, biodiversity experts on habitats, flora, fungi, mammals, birds, herpetofauna, fish, aquatic macroinvertebrates, terrestrial insects and ecosystem services, climate change analyst, and local language experts/interpreters, gender expert and cultural heritage expert.

G. Consultant Qualifications and Eligibility

The consulting firm shall demonstrate:

- A minimum of 7 years of institutional experience in preparing ESIAs and ESF instruments for World Bank- or other multilateral-financed infrastructure projects and minimum 2 projects related to water use
- Prior experience with water sector projects (irrigation, dams, hydropower) in the European or Western Balkan region is strongly preferred.
- Demonstrated capacity to mobilize the required team of experts and deliver high-quality ESF instruments on time.
- Financial and organizational capacity to manage an assignment of this scale.

Joint ventures or associations between firms are permitted and may be advantageous in demonstrating the required expertise.

H. Reporting and Working Arrangements

The Consultant shall work under the supervision arrangements established by PE HS Zletovica and the PIU, in coordination with the PIU environmental and social specialists and other designated technical counterparts. The Consultant shall:

- Work under the supervision arrangements established by the Client and PIU and participate in at least monthly coordination meetings with the engineering consultant, relevant specialized consultants, and the World Bank task team.
- Nominate a senior interface manager authorized to coordinate day-to-day exchanges, consolidate comments, manage dependencies, and escalate decisions affecting scope, cost, schedule, permits, procurement, safeguards, or financing readiness.
- Use the same controlled project description, design basis, component list, nomenclature, coordinates, drawings, implementation schedule, contract packaging and cost baseline as the Detailed Design Consultant, and reconcile any inconsistency before submission.
- Maintain live decision, assumption, risk, permit, land, stakeholder, design-interface and comment-response registers and submit them with each progress report.
- Provide written environmental and social inputs within the review periods established in the coordinated schedule and promptly identify any matter that could prevent acceptance of a preferred alternative, design package, permit application, bidding document or appraisal submission.
- Apply documented internal quality assurance and interdisciplinary review. No principal deliverable shall be submitted without certification by the Team Leader that it is complete, internally consistent, and coordinated with the latest engineering information.

- Incorporate consolidated comments from the Client, PIU and World Bank and provide a response matrix showing where and how each comment was addressed; unresolved comments shall be clearly identified and shall not be deemed accepted by silence.
- Recognize that World Bank review or no-objection does not replace the Consultant's professional responsibility, the Client's statutory responsibilities, or approvals required under North Macedonian law.

I. Appendices

The following appendices shall be attached to these Terms of Reference:

- Appendix 1: Outline of the ESIA, including design integration and transboundary environmental and social assessment
- Appendix 2: Outline of the SEP and project-level GRM
- Appendix 3: Outline of the RPF and site-specific RAPs
- Appendix 4: Outline of the LMP and worker GRM
- Appendix 5 Applicable World Bank Environmental and Social Standards and relevant guidance
- Appendix 6: Map of the Zletovica project area, including Phase 1 interfaces and proposed Phase 2 and Phase 3 components

Appendices: Outlines of Environmental and Social Safeguard Instruments

Appendix 1: Outline of the ESIA (Detailed Table of Contents)

An Environmental and Social Impact Assessment (ESIA) Study focuses on the significant environmental and social issues of a project. The Study scope and level of detail should be commensurate with the project's potential impacts. The ESIA should be tailored to the specific project and to the legal requirements, environmental and social conditions where it is situated.

Abbreviations, Acronyms and Glossary

Chapter 1 – Introduction

1.1 Background and Context

1.2 Purpose and Structure of the ESIA Report

1.3 Environmental and Social Screening Outcome

Chapter 2 – Project Description

2.1 Project Overview and Objectives

2.2 Project Components and Activities

2.3 Project Location (with maps of the project site and area of influence)

2.4 Project Phases (construction, operation, decommissioning)

2.5 Supporting Infrastructure Requirements

2.6 Project Implementation Schedule

Chapter 3 – Legal, Policy and Institutional Framework

3.1 Applicable National Environmental and Social Laws, Regulations and Policies

3.2 Permitting and Authorization Requirements

3.3 Relevant International Environmental Agreements

3.4 World Bank Environmental and Social Framework (ESF) — ESSs 1–10

3.5 Gap Analysis Between National Framework and World Bank ESSs

3.6 Environmental and Social Requirements of Co-financiers (if applicable)

3.7 Institutional Responsibilities

Chapter 4 – ESIA Approach and Methodology

4.1 Scoping Process

4.2 Impact Assessment Methodology

4.3 Data Collection Methods (field surveys, stakeholder consultations, scientific review)

4.4 Key Data Gaps and Uncertainties

Chapter 5 – Analysis of Alternatives

5.1 Alternative Project Locations

5.2 Alternative Technologies and Design Configurations

5.3 Alternative Construction/Operation Methods

5.4 "No-Project" Alternative

5.5 Rationale for Selected Option

Chapter 6 – Environmental and Social Baseline

6.1 Physical Environment

- Air quality and noise
- Hydrology and water quality
- Geology, Soils and Geomorphology
- Geohazards and other natural risks
- Climate and climate change

- Waste

6.2 Biological Environment

- Habitats (terrestrial and aquatic)
- Flora
- Fungi
- Mammals
- Birds
- Herpetofauna
- Fish
- Aquatic macroinvertebrates
- Terrestrial insects
- Ecosystem services
- Protected areas and ecosystem services
- Valorization of species and habitats

6.3 Socioeconomic Environment

- Demographics and livelihoods
- Land tenure and economic activities
- Health services, education and infrastructure
- Gender roles and vulnerable groups
- Physical cultural resources

6.4 Existing and Reasonably Foreseeable Developments

- Existing and reasonably foreseeable developments relevant to the cumulative impact assessment

Chapter 7 – Stakeholder Consultation and Participation

7.1 Stakeholders Identified and Engagement Methods Used

7.2 Summary of Issues Raised and Responses

7.3 How Consultation Results Influenced Project Design

7.4 Engagement with Disadvantaged and Vulnerable Groups

Chapter 8 – Identification and Assessment of Environmental and Social Impacts

8.1 Impact Assessment Criteria (magnitude, duration, reversibility, likelihood, significance)

8.2 Environmental Impacts During Construction

8.3 Environmental Impacts During Operation

8.4 Environmental Impacts During Decommissioning

8.5 Social Impacts (involuntary resettlement, labor, community health and safety, SEA/SH, cultural heritage, etc.)

8.6 Cumulative Impact Assessment

8.7 Residual Impacts

Chapter 9 – Mitigation Measures

9.1 Mitigation Hierarchy (avoidance, minimization, restoration, offset)

9.2 Mitigation Measures for Environmental Impacts

9.3 Mitigation Measures for Social Impacts

9.4 Residual Negative Impacts That Cannot Be Fully Mitigated

9.5 Enhancement Measures for Positive Impacts

9.6 Differentiated Measures for Vulnerable Groups

Chapter 10 – Environmental and Social Management Plan (ESMP) and Monitoring Plan

10.1 Mitigation and Monitoring Matrix

10.2 Institutional and Reporting Arrangements

10.3 Implementation Schedule

10.4 Capacity Development Requirements

10.5 Budget for ESMP Implementation

Chapter 11 – Grievance Redress Mechanism (GRM)

11.1 Objectives and Principles

11.2 GRM Structure and Procedures

11.3 Handling of SEA/SH-related Grievances

11.4 Monitoring and Reporting of GRM

Chapter 12 – Conclusions and Recommendations

Chapter 13 – References

Annexes:

• 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.

Appendix 2: NTS as a standalone document

Containing short description of the content of the ESIA Study- Concise discussion of significant findings and recommended actions (non-technical language; not more than 15 pages)