

German Financial Cooperation with Montenegro

**Water Supply and Sanitation Adriatic Coast Phase V
Component 2**

Tivat and Kotor

Terms of References

for

**Consulting Services for the Supervision of Construction
and Support during the Defects Liability Period for
the Implementation of Investment Measures**

Employer:
Vodacom d.o.o.
Luke Tomanovica 2
85320 Tivat
Montenegro

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LIST OF ABBREVIATIONS

CAD	Computer Aided Design
CAPEX	Calculation of investment cost
CoC	Conditions of Contract
DIN	Deutsche Industrienorm – German Industry Standard
DNP	Defects Notification Period
EIA	Environmental Impact Assessment
ESHS	Environment, Social, Health and Safety
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
EU	European Union
EUR	Euro
FC	Financial Cooperation
FIDIC	International Federation of Consulting Engineers
GC	General Conditions
HSE	Health Safety Environment
IC	Implementation Consultant
ICB	International Competitive Bidding
IFC	International Finance Corporation
ILO	International Labor Organisation
KfW	Kreditanstalt für Wiederaufbau
km	kilometer
m ³ /d	Cubic meter per day
MDB	Multilateral Development Banks
MoM	Minutes of Meeting
MPS	Monthly Progress Summary
O&M	Operation and Maintenance
OHS	Operational Health and Safety
OPEX	Calculation of O&M costs
p.a.	Per anno
PC	Particular Conditions
PDF	Portable Document Format
PDS	Proposal Data Sheet
PEA	Project Executing Agency
PoA	Power of Attorney
PQ	Pre-Qualification
QPR	Quarterly Progress Report
RAP	Resettlement Action Plan
SEA	Sexual Exploitation and Assault
SEP	Stakeholder Engagement Plan
SPD	Standard Procurement Document
TOC	Taking Over Certificate
USD	United States Dollar
WTP	Water Treatment Plant
WWTP	Wastewater Treatment Plant

LIST OF DEFINITIONS

Besides the definitions as listed in the General Conditions of the relevant FIDIC Conditions of Contract additionally the definitions below are applicable. Capitalized terms used in the Guidelines have the meaning ascribed to them in this Section

Appendix	Appendix to these Guidelines.
Applicant	Person who submitted an Application in a Pre-Qualification Phase of a Tender Process.
Application	Set of documents submitted by an Applicant in order to prove eligibility and qualification to perform the Contract.
Award of Contract	Legally binding signing of the Contract by the PEA and the Contractor or submission of a letter of formal acceptance of an Offer by the PEA, whichever is first.
Bid	Set of documents submitted by a Bidder in order to participate in a Tender Process for procurement of Non-Consulting Services, Works, Goods and Plant.
Bidder	Person who submitted an Offer in a Tender Process.
Consulting Services	Services of an advisory/professional nature, including the provision of expert/strategic advice, management services, coaching, policy development, implementation, and communication services as well as advisory and project-related services, e.g., feasibility studies, project management, engineering services, supervision of construction, finance, and accounting services, as well as training and organizational development.
Funding Agreement	Agreement between (a) KfW and a borrower (in the case of a loan) or (b) KfW and a recipient (in the case of a grant), setting out the terms and conditions pursuant to which funding is made available by KfW.
Guidelines	KfW's Guidelines for the Procurement of Consulting Services, Works, Plant, Goods and Non-Consulting Services in Financial Cooperation with Partner Countries.
Invitation to Bid ("ITB")	Set of documents inviting prequalified Applicants, interested or preselected Persons to submit a Bid.
Joint Venture ("JV")	Joint Venture (JV) means an association with or without a legal personality distinct from that of its members, of more than one Person where one member has the authority to conduct all business for and on behalf of all the members of the JV, and where the members of the JV are jointly and severally liable to the PEA for the performance of the Contract.
Key Expert	A single individual professional whose skills, qualifications and expertise are critical to the performance of the Contract and whose CV is considered during the evaluation.
KfW Competence Centre for Environmental and Social Sustainability (KCUS)	It provides services in the field of environmental and social sustainability for KfW. This includes inter alia the appraisal, implementation, and monitoring of environmental and social sustainability in KfW Projects.
KfW Competence Centre for Climate and Energy	It provides the services in the field of climate and energy for KfW.
Mandate	KfW may be given a Mandate to carry out project funding with financial means of a mandator (e.g., European Union) based on a mandate agreement.
Non-Consulting Services	Services which are not Consulting Services. Non-Consulting Services are normally bid and contracted based on performance of measurable outputs, and for which performance standards can be clearly identified and consistently applied, e.g., topographical, and geotechnical surveys, soil investigations, aerial surveys and remote sensing, drilling, aerial photography, satellite imagery, mapping and similar operations, transport, and distribution of Goods.
Offer	General term for Proposals and Bids.
Partner Country	Country of the PEA, in which the KfW financed Project/ Program is implemented.
Person	Any natural or legal person or an association of two or more of the foregoing.
Prequalification	First stage of a Two-Stage Selection to identify several eligible and qualified Applicants, who will then be invited to submit an Offer.
Procurement Plan	Document defined in Article 1.6.2 and set up by the PEA listing all Tender Processes for Contracts financed by KfW including key procurement related information.

Project Executing Agency ("PEA")	Entity in charge of implementing a Project, which directly or indirectly receives funds made available under the Funding Agreement.
Project Implementation Unit (PIU)	PEA's team in charge of implementing a Project, consisting of sector specific experts and commercial expert.
Proposal	Set of documents submitted by Bidders in order to participate in a Tender Process for procurement of Consulting Services.
Public Procurement Regulation	Law or legal regulation established by the state of the PEA for the public procurement of Consulting Services, Works, Goods, Plant, or Non-Consulting Services in the Partner Country.
Punch List	List of Deficiencies
Request for Application ("RfA")	Set of documents inviting potential Applicants to submit their evidence of qualification to perform the Contract.
Request for Proposal ("RfP")	Set of documents inviting prequalified Applicants, interested or preselected Persons to submit a Proposal.
Single-Stage Selection	Tender Process in which Persons submit their evidence of qualification together with their technical and financial Offer.
Tender Document(s)	RfA, ITB and RfP, including Draft Contract as well as any clarification or amendment thereof during the Tender Process.
Tender Procedure	Type of procedure (e.g., ICB, NCB, LCB Direct Award) undertaken to approach Persons for the procurement of Consulting Services, Works, Goods, Plant, or Non-Consulting Services.
Tender Process	Process carried out to procure Consulting Services, Works, Goods, Plant or Non-Consulting Services, starting with the publication of a tender notice/invitation to submit an Offer and ending with Award of Contract or cancelation of a Tender Process.
Terms of Reference ("ToR")	Description of the objectives, Scope of Work, activities, and tasks to be performed, respective responsibilities of the PEA and the Contractor, and expected results and deliverables of a Consulting Services Contract.
Two-Stage Selection	Tender Process which is divided into two consecutive stages with an upstream Prequalification.

1 PROJECT INFORMATION

1.1 Preface

All the services of the Consultant described in the following shall be performed in close coordination and cooperation with the Project Executing Agency (PEA) and KfW. It has been attempted to outline the Consultant's tasks during execution of his services as precisely as possible. However, the Consultant shall bear in mind that the list of tasks and activities can by no means be considered as a complete and exhaustive description of the Consultant's duties. It is rather the Consultant's responsibility, in cooperation with and with the approval of PEA and KfW, to verify critically the scope of services indicated and adapt his concept accordingly wherever he deems necessary according to his own professional judgement and the knowledge he will acquire during preparation of his proposal. In case the Consultant considers indispensably necessary to amend the scope of his services he shall offer these services in his technical and financial proposal; further additional services may be offered as optional. The Consultant additionally has the role of the FIDIC-Engineer according to the Pink Book "Conditions of Contract for Construction - MDB Harmonised Edition."

During the Consultant's assignment other consultants and advisors may provide services to him for this Project. It is the duty of the Consultant to coordinate his activities with the operation of others relevant to the Project. It is to be ensured that the proposed standards, system, methods, etc. are compatible as much as possible and to avoid duplication of effort

1.2 Background

The Bay of Kotor is an almost 30 km long, strongly winding fjord-like bay on the southeastern Dalmatian-Montenegrin Adriatic coast, lined by high and very steep mountain slopes. The bay is located in the northern part of the Montenegrin Adriatic coast (see red outline on the map of Montenegro in Figure 1-1). Kotor Bay consists of four separate basins connected by narrow accesses. The Risan Basin and the Kotor Basin form the inner part of the fjord-like system of the Bay of Kotor. The Bay of Kotor is a sensitive area with high ecological and cultural value. The inner parts of the Bay of Kotor are recognized by UNESCO as a World Heritage Site. Due to its picturesque landscape, cultural heritage, and many beaches, the Bay of Kotor is a very popular tourist destination and of utmost importance for the tourism economy in Montenegro.

The systems for water supply and wastewater disposal in the municipalities around the Bay of Kotor have been expanded in recent years with considerable investment (refer to Chapter 1.2.5). Nevertheless, the existing systems still have many bottlenecks and inadequacies. For example, the additional tourists in the summer months regularly lead to demand peaks in the drinking water supply, which cannot be met by the existing system. At the same time, the volume of wastewater is increasing, which the existing systems are also unable to cope with adequately.

In order to cope with the tourism-related demand peaks for drinking water in the summer months and to ensure ecologically and hygienically safe wastewater disposal around the outer and inner bay of Kotor, the Government of Montenegro has decided to expand and improve the existing water supply and wastewater disposal infrastructure of the municipality of Tivat and the municipalities around the Kotor basin, including the municipality of Kotor.



Figure 1-1: Location of the Bay of Kotor in Montenegro

Within the framework of the planned project, two large investment packages with 9 sub-packages each for the outer part of the Bay of Kotor and the Adriatic coast as well as for the inner Bay of Kotor are to be implemented.

The planned investment measures (sub-packages) to be implemented under the project are as follows:

Tivat:

- TV1 - Extension of the sewerage system in Gradišnica,
- TV2 - Extension of the sewerage system in Donja Lastva,
- TV3 - Construction of water distribution network for Gradišnica reservoir,
- TV4 - Partial replacement of water transmission main to Plavi Horizonti,
- TV5 - Extension of the secondary and tertiary sewer network in settlements Mazine, Tripovici, Gornja and Donja Zupa,
- TV6 - Extension of the secondary sewer network in higher zones of Gornji Kalimanj settlement,
- TV7 - Replacement of water distribution pipelines in Donja Lastva,
- TV8 - Supply of Tivat and Gradišnica reservoirs from Pod Kuk reservoir,
- TV9 - Replacement of water distribution pipes (pressure pipes) in Radovici settlement;
- TV10: Reconstruction of sewer collector in Donja Lastva and Seljanovo

Bay of Kotor:

- Project package 1 - Sewage networks in Risan,
- Project package 2 - Sewage networks in Perast,
- Project package 3 - Water supply networks in Risan,
- Project package 4 - Water supply networks in Perast,
- Project package 5 - Water supply Prcanj-Stoliv,
- Project package 6 - Main sewer transfer line Stoliv-Muo,
- Project package 7 - Wastewater transfer main from Stoliv-Perast,
- Project package 8 - Water transport line Risan-Perast incl. Risan pump station,
- Project measure KO14 - Extension of Capacity of Peluzica Pumping Station and Pressure Main
- Relocation and Supply and Installation of 2x10 Kv Cable Lines for CEDIS. Civil Works and Electrical Works

1.2.1 Project Area

The project area of the planned measures for the inner area of the Bay of Kotor includes the municipalities of Kotor, Muo, Stoliv, Perast, and Risan, as well as barely inhabited areas in the mountains around the bay (marked in red). The project area for the planned measures for the outer area of the Bay of Kotor includes the municipality of Tivat and two sites on the opposite peninsula south of Tivat (Przno and Radovici) (marked in yellow). The project area is thus limited to the settlements around the Bay of Kotor, where most of the population and tourist activities in the region are concentrated, and which are connected to the central water supply and sewage system.

The measures of the investment package for the outer part of the Bay of Kotor and the Adriatic coast are marked in yellow, while the measures of the investment package for the inner Bay of Kotor are marked in red (see the following Figure 1-2).



Figure 1-2: Project Area with individual Measures marked in yellow and red

1.2.2 Financing

For the expansion of the water supply and sanitation infrastructure on the northern coast of Montenegro, the German Government is providing an amount of up to EUR 28.8 million through KfW Entwicklungsbank (KfW) under the "Water Supply and Sanitation Program Phase V, Component 2". This amount has been increased by the EU Investment Fund for the Western Balkans with an amount of EUR 8.96 million.

1.2.3 Project Executing Agency (PEA) and Stakeholders

The project executing agency (PEA) for the implementation of the planned investment measures is **VODACOM** "Joint Service and Coordination Company for Water and Wastewater Service for the Montenegrin Coast and the Municipality of Cetinje" as a central utility in South Montenegro. Vodacom was established in 2005. The municipalities of Tivat and Kotor are full members of Vodacom. Vodacom also provides institutional support to the ViKs and Municipalities. It is funded by budget contribution from the shareholders.

Further major stakeholders in the water supply and sewerage sector at the local, regional, and governmental level are:

- **ViKs** (Vodovod i kanalizacija) are municipality-owned enterprises in charge of providing water supply and sewage disposal services in their area of responsibility;
- **Municipalities** who are owners of the public assets and financially responsible for system replacement and extensions. Municipalities also decide on tariffs, appoint the director, and supervise the business performance of the ViK;

- **Regional Water Supply Company of the Montenegrin Coast** (JP Regionalni vodovod Crnogorsko primorje) is responsible for the construction, operation, and management of the regional water supply system along the Montenegrin coast. The RWSS started supplying the coastal municipalities with drinking water in 2010. It supplies Budva, Tivat and Kotor, Bar, Ulcinj and Herceg Novi.
- **Ministry of Sustainable Development and Tourism** in Podgorica is the authority responsible at the government level.

1.2.4 Existing Infrastructure

1.2.4.1 Tivat

The **water supply system** of Tivat is operated by ViK Tivat. Water is extracted from local groundwater sources, mainly the Plavda spring, the Grbaljsko Polje well field and the Toplis spring, as well as from the regional water supply system (RWSS). In summer, local springs are low yielding and/or salinated, so Tivat relies heavily on the RWSS. On an annual average, almost 50% of the water is drawn from the RWSS. The network includes about 200 km of pipelines, 8 reservoirs with a total capacity of 5,480 m³ and 5 pumping stations. The share of NRW of the pumped volume is estimated at 57% (about 4,300 m³/d), with actual losses estimated at 45% (about 3,300 m³/d).

The first **sewerage network** in Tivat was built in the 1970s in the city center, with extensions in the 1990s. From 2009 onwards, major rehabilitation and extension works were carried out under Phases III and IV of the WSS Adriatic Coast program including the construction of the joint Tivat/Kotor WWTP, which was commissioned in 2016.

The wastewater network of the municipality of Tivat is a separate system with a length of about 50 km and two main branches:

- The northern branch disposes of wastewater from the center of Tivat. The network includes 12 pumping stations and two siphons with one main pumping station (PS Solila).
- The western branch disposes of wastewater generated on the Lustica peninsula and includes one main pumping station (PS 6 Djurasevici).

Wastewater from the two networks is pumped to the Tivat/Kotor WWTP near the village of Bogisici.

The connection rate of the population to the sewage system at the municipal level is about 31%. This low connection rate is due to the lack of a secondary sewerage network in many parts of the city. Currently, there is a secondary sewerage network only in the center of Tivat, Kalimanj, Seljanovo and Zupa. On the Lustica Peninsula, the sewerage network, installed as part of Phase III of the Adriatic Coast Program, was completed in 2016. However, connections to the system were not made until 2019. Once sewer connections to these new sewers are completed, the connection rate is expected to be 37%. In sewered areas, the connection rate is expected to exceed 90%.

One of the main problems of the existing sewage system are existing connections for the discharge of storm water into the sewer system. This situation usually leads to overflows in the pumping stations, which are usually not equipped with emergency overflows.

The new joint WWTP of Tivat and Kotor has a treatment capacity of 72,500 PE. The plant is designed for carbon elimination. The treatment process used is the SBR process. In a second expansion stage, the WWTP is to be upgraded for nutrient elimination. The treated wastewater is discharged into the Adriatic Sea via the existing sea outfall in the Bay of Traste.

1.2.4.2 Bay of Kotor

The **water supply system** around Kotor Bay is fed from five main local sources: Skurda Spring, Orahovac Spring, Vrmac Spring, Grbalj Spring and Spila Spring in Risan. In addition, Kotor is supplied with water from the RWSS, mainly to survive the summer season when the salinity of Skurda Spring - and sometimes Orahovac Spring - is high and the other local water sources provide little water. On an annual average, about one-third of the water distributed in Kotor is supplied by the RWSS. The water distribution network includes about 350 km of pipelines, 15 reservoirs with a total capacity of 11,490 m³ and 10 pumping stations. NRW's share in the production volume is estimated at 79% (about 15,000 m³/d), with actual losses estimated at 69% (about 13,000 m³/d).

The development of a comprehensive **sewerage system** in Kotor began in the late 1980s in the old town of Kotor and in the settlements of Dobrota and Skaljari. The measures included the construction of a transfer system to the Adriatic Sea through the Vrmac tunnel, the Grbalj culvert and the pipe tunnel. The Traste transfer system has been in operation since 1992 and has contributed significantly to improve water quality in the Bay of Kotor. The sewerage system has been further expanded, particularly under Phase III of the Water and Sanitation Program for the Adriatic Coast.

The current sewerage network has a length of about 50 km and consists of two main branches:

- The eastern branch serves the old town of Kotor and the settlements of Dobrota and Skaljari;
- The western branch, currently serving only Muo and part of the settlement of Prcanj.

The two main branches mentioned above flow into the Peluzica pumping station, which is the beginning of the Traste transmission system. In addition to the Peluzica pumping station, there are eight other sewage pumping stations in the sewer network.

The connection rate of the population to the sewerage system is estimated at 31% at the municipal level. This low connection rate is due to the lack of a secondary sewerage network in many parts of the city. Currently, there is a secondary sewerage network only in the Old Town of Kotor, Dobrota, Skaljari, Muo and a small part of the settlements of Prcanj. In the sewered areas, the connection rate is estimated to be 79%, indicating that improvements can be made by densifying the sewer system and adding sewer connections.

A critical issue in the existing sewer network is the connection of storm water to the sewer network, which leads to overflows in the pumping stations.

Wastewater from the municipalities around the Kotor basin is treated at the Tivat/Kotor WWTP.

1.3 Objectives of the Project

The overall objective of the project is to provide the population with a sustainable, year-round supply of clean drinking water and to improve wastewater management (in order to achieve an ecologically and hygienically safe disposal of wastewater into the Adriatic Sea), especially to meet peak demand in the summer months caused by tourism. The project will also help to manage the impacts of climate change in Montenegro. Changing rainfall patterns with an increase in extreme rainfall events exceed the existing capacity of urban drainage systems, leading to more frequent flooding in urban settlements. The project therefore includes measures to improve urban drainage in the Kotor and Tivat.

The objective of the Consultant's assignment is to provide expertise in engineering, design, and construction supervision to the PEA to ensure an effectual realization of the Project, and also to provide institutional expert support to ensure proper operation of the Project.

The expected results of the project include the successful implementation and subsequent operation of the planned investment measures.

1.4 Status of the Project

1.4.1 Current Status of Implementation

Regarding the implementation of the planned investment measures for the Bay of Kotor, preliminary design, detailed design, preparation of tender documents, and assistance during tendering and contract award has already been concluded. For the Municipality of Tivat, all services including detailed design has been concluded, while the tendering phase (preparation of tender documents, and assistance during tendering and contract award) is still not fully completed.

1.4.2 Existing Studies and Documentation

The following studies and documents have been carried out covering water and wastewater infrastructure investments in the area of Tivat and the Bay of Kotor. The documents will be made available to the Consultant.

Tivat:

- 1) DORSCH/PROING (2022): Water supply and sanitation Adriatic Coast V Component 2, Preparation of Final Design and Tender Documents for Tivat and Kotor, Project measure: TV1 Extension of the sewerage system in Gradiošnica.
- 2) DORSCH/PROING (2023): Water supply and sanitation Adriatic Coast V Component 2, Preparation of Final Design and Tender Documents for Tivat and Kotor, Project measure: TV2 Extension of the sewerage system in Donja Lastva.
- 3) DORSCH/PROING (2023): Water supply and sanitation Adriatic Coast V Component 2, Preparation of Final Design and Tender Documents for Tivat and Kotor, Project measure: TV3 Construction of distribution network for Reservoir Gradiošnica.

- 4) DORSCH/PROING (2023): Water supply and sanitation Adriatic Coast V Component 2, Preparation of Final Design and Tender Documents for Tivat and Kotor, Project measure: TV4 Partial replacement of transmission main to Plavi Horizonti.
- 5) DORSCH/PROING (2023): Water supply and sanitation Adriatic Coast V Component 2, Preparation of Final Design and Tender Documents for Tivat and Kotor, Project measure: TV5 Extension of the secondary and tertiary sewer network in settlements Mazine, Tripovici, Gornja and Donja Zupa.
- 6) DORSCH/PROING (2022): Water supply and sanitation Adriatic Coast V Component 2, Preparation of Final Design and Tender Documents for Tivat and Kotor, Project measure: TV6 Extension of the secondary sewer network in higher zones of settlement Gornji Kalimanj.
- 7) DORSCH/PROING (2022): Water supply and sanitation Adriatic Coast V Component 2, Preparation of Final Design and Tender Documents for Tivat and Kotor, Project measure: TV7 Replacement of distribution pipelines in Donja Lastva.
- 8) DORSCH/PROING (2022): Water supply and sanitation Adriatic Coast V Component 2, Preparation of Final Design and Tender Documents for Tivat and Kotor, Project measure: TV8 Supply of RE Tivat and RE Gradiosnica from RE Podkuk.
- 9) DORSCH/PROING (2022): Water supply and sanitation Adriatic Coast V Component 2, Preparation of Final Design and Tender Documents for Tivat and Kotor, Project measure: TV9 Replacement of pressure and distribution pipes in settlement Radovici.
- 10) DORSCH/PROING (2022): Water supply and sanitation Adriatic Coast V Component 2, Preparation of Final Design and Tender Documents for Tivat and Kotor, Project measure: TV10 Reconstruction of sewer collector in Donja Lastva and Seljanovo.

Bay of Kotor:

- 1) FICHTNER/IWA CONSALT (2023): Water supply and sanitation Adriatic Coast V Component 2, Addendum No. 4, Package 1: Detailed Design of Sewerage Networks in Risan.
- 2) FICHTNER/IWA CONSALT (2023): Water supply and sanitation Adriatic Coast V Component 2, Addendum No. 4, Package 2: Detailed Design of Sewerage Networks in Perast.
- 3) FICHTNER/IWA CONSALT (2023): Water supply and sanitation Adriatic Coast V Component 2, Addendum No. 4, Package 3: Detailed Design of Water Supply System in Risan.
- 4) FICHTNER/IWA CONSALT (2023): Water supply and sanitation Adriatic Coast V Component 2, Addendum No. 4, Package 4: Detailed Design of Water Supply Networks in Perast.
- 5) FICHTNER/IWA CONSALT (2020): Water supply and sanitation Adriatic Coast V Component 2, Addendum No. 4, Package 5: Detailed design of water supply Prcanj-Stoliv.
- 6) FICHTNER/IWA CONSALT (2020): Water supply and sanitation Adriatic Coast V Component 2, Addendum No. 4, Package 6: Detailed design of the main sewer transfer line Stoliv - Prcanj.
- 7) FICHTNER/IWA CONSALT (2020): Water supply and sanitation Adriatic Coast V Component 2, Addendum No. 4, Package 7: Detailed design of undersea wastewater transfer main from Perast to Stoliv, including main transfer pumping station.
- 8) FICHTNER/IWA CONSALT (2021): Water supply and sanitation Adriatic Coast V Component 2, Addendum No. 4, Package 8: Detailed Design for Wastewater Transmission Line Risan-Perast, including Main Pumping Station in Risan.
- 9) DORSCH/PROING (2022): Water supply and sanitation Adriatic Coast V Component 2, Preparation of Final Design and Tender Documents for Tivat and Kotor, Project measure: KO14 Detailed Design for Extension of Capacity of Peluzica Pumping Station and Pressure Main.
- 10) Relocation and Supply and Installation of 2x10 Kv Cable Lines for CEDIS. Civil Works and Electrical Works.

1.4.3 Permissions

Necessary approvals, permits and licenses for construction and operations of proposed investment measures have been applied for with the submission of the detailed design. The consultant shall support the PEA in obtaining all the necessary permits and approvals.

2 SCOPE OF CONSULTING SERVICES

2.1 Objective of the Assignment

The objective of the Consultant's assignment is to support the PEA in the physical implementation of the project components and facilitate the achievement of the project objective. The total expected project duration is **36** months. The Consultant is expected to maintain a permanent project office in Tivat or Kotor during the construction and the defect Notification period.

The requested consulting services mainly include the following items:

- 1) Assisting the PEA with overall program management including financial and quality management, EHS and OHS management, contractual and disbursement procedures, and reporting.
- 2) Provision of engineering services for construction supervision obtaining the following tasks:
 - Ensuring that construction works are carried out, completed, measured, and handed over in compliance with the contractual deadlines, the allocated budget, and the required quality.
 - Taking over including commissioning/decommissioning, test and trial operation, performance test, etc. until end of defects notification period.
 - Assisting the Construction Manager in reporting and correcting defects and deficiencies, and in the acceptance of individual work sections.
- 3) Assistance to the PEA in applying for, facilitating, and obtaining the following:
 - All necessary permits, licenses and approvals related to the consulting services, including all costs incurred for the same.
 - All required license fees and similar licenses for the equipment included in the scope of work during the design period.
 - All required approvals for designs and/or technical data from third parties such as power utilities, etc.
- 4) Review and approval of the ESMP and grievance mechanism submitted by the contractor prior to commencement of construction. Continuous review of compliance with the ESMP and grievance mechanism during construction.
- 5) Continuous verification of compliance with ESHS specifications by the contractor during the construction phase.
- 6) Monitoring the final acceptance of works and achievement of operational performance indicators (e.g. compliance with wastewater treatment requirements);
- 7) A strategy to increase **visibility** of the measures financed by KfW and the EU has to be designed and implemented by the Consultant. This has to be accompanied by the required communication strategy.

2.2 Scope Related to Overall Project Management

The essential goals of overall project management are to continuously meet the required quality of the results, the time frame, and the budget. Another important challenge is to continuously optimize the use of the required resources and use them to achieve the specified goals.

In this context, the following tasks apply to the Consultant's entire assignment:

- Organization of kick-off and midterm workshops;
- Coordination with PEA, and all other stakeholders;
- Assistance to the PEA in fulfilling their reporting requirements;
- Support to the PEA in project management regarding all technical and financial matters;
- Public Relations/Public Awareness Activities and Visibility Measures.

2.3 Scope Related to Construction Work

During the construction phase the Consultant shall support the PEA in the supervision of the physical construction works and installation of electro-mechanical supplies. To this end, the Consultant is expected to assume the role of Engineer as defined in the FIDIC Pink Book and provide management, administrative, and technical support, and advice during the entire implementation period.

2.4 Scope Related to ESHS

The Consultant shall perform the detailed tasks related to the management of environmental, social, health and safety (ESHS) impacts and risks, in accordance with KfW's national regulations and requirements. This shall consider the ESHS related analysis of the documentation prepared during the preparation phases for the project (refer to Chapter 8).

Regarding the management of ESHS-related impacts and risks, the Consultant must continuously ensure that the following requirements are met:

- ESHS provisions are to be consistent with national requirements and international good practice standards, and put forward to contractors, subcontractors, and to suppliers, in particular those for major supply items;
- Project documents are following the Fundamental Conventions of the International Labor Organization (ILO);
- The measures and actions required in the project documents are implemented diligently and completely.

The Project is categorized in line with KfW Development Bank's Sustainability Guideline as category **B** according to its associated environmental and social impacts and risks, irrespective of the anticipated mitigation measures. During the contracting phase ESHS impacts and risks of individual project components and specific contracts shall be classified by the Consultant into appropriate ESHS levels based on specific associated ESHS impacts and risks, and particular contracts may therefore differ from the overall categorization of the Project. For details refer to Annex 1 of the Terms of Reference.

As with the other scopes of work, services related to ESHS are to be compensated on a time basis.

2.5 Scope Related to Assistance in Operation

During the Defects Notification Period (DNP) the Consultant shall support the PEA in completion of outstanding work and remedying defects as well as in the issuing of the Performance Certificate after final acceptance of the works. Regarding operation and maintenance of the implemented works, the Consultant is expected to monitor the achievement of performance indicators (e.g. compliance with drinking water standards or wastewater treatment requirements). Accompanying Measures are not to be provided.

All required consulting services are to be remunerated on a time-based basis. The Consultant will be remunerated under the direct payment procedure.

3 DESCRIPTION OF TASKS

The description of the consultant's tasks follows the structure presented in the previous chapter and covers all activities required to achieve the project objectives. Therefore, it has been attempted to describe the consultant's tasks as comprehensively and in as much detail as possible in order to match his work as closely as possible to the requirements of the program. However, the consultant should keep in mind that this list is not exhaustive in all details. Therefore, it is the consultant's responsibility to describe in its technical proposal activities that need to be added to, adjusted, modified, or reduced from the scope of work to achieve the desired results.

The overarching tasks are presented at the beginning, and the subsections are followed by the specific tasks. Each task description is followed by milestones and key deliverables.

The following tasks apply to the consultant's entire assignment:

- 1) Assist the PEA in managing each project package in all technical, financial, and reporting matters and in obtaining required approvals;
- 2) Coordinate with PEA, Vodacom, municipal governments, and all other relevant local institutions and organizations, as well as KfW;
- 3) Coordination with other consultants working in the project area for activities related to the project;
- 4) Preparation and follow-up of project planning (time, budget, quality control);
- 5) Reporting (refer to the relevant chapter for details);
- 6) Monitoring of the project objective and achievement of indicators.

The tasks to support the PEA in managing the program must be carried out in parallel with the provision of services for the various components described in detail below. The cost of these services is included in the cost of each component.

3.1 Overall Project Management

The tasks to be performed within the scope of overall project management apply to the entire assignment of the consultant (phases 1 - 4). Overall project management shall at least comprise the following tasks:

- 1) Organization of kick-off workshop including introduction to FC procedures (disbursement, procurement);
- 2) Financial management;
- 3) Establishment of Stakeholder Coordination Mechanisms and communication matrix;
- 4) Assistance to the PEA in order to fulfil their reporting requirements (reporting requirements towards KfW, internal reporting, etc.);
- 5) Support to the PEA in the management of the project regarding all technical and financial matters;
- 6) Coordination with Vodacom and all other relevant local and international institutions and organizations as well as with KfW;
- 7) Review, adjustment, and design of proposed project measures;
- 8) Elaboration and follow up of the project planning and progress (time, budget, quality control);
- 9) Initiation and implementation of Public Relations/Public Awareness Program and Visibility Measures.

3.2 Supervision of Construction Works and Installation of Supplies

Construction supervision includes general construction supervision and on-site construction supervision, preparation for commissioning, ongoing project management and supervision, regular reporting, and participation in pre-acceptance. The Consultant shall provide comprehensive and professional consulting services during construction supervision and final acceptance of construction contracts. The Consultant shall generally perform all the duties of the "Engineer" as specified in the FIDIC Conditions of Contract (Pink Book) through the end of the DNP.

General construction supervision and construction supervision of the work are performed on a continuous basis. When calculating the resources (personnel, offices, transport, etc.) required to provide the required services, the Consultant shall consider the number of construction sites and contracts in parallel. In addition, the Consultant shall specify the working time per week or per working day. Upon Substantial Completion of the Work, the Consultant will prepare a Project Completion Report summarizing the work and activities performed and schedules and expenditures, and a Final Report at the end of the DNP.

3.2.1 Coordination and Liaison

The Consultant shall prepare a planning matrix and coordinate and liaise with PEA, the Contractor, the VIKs, Municipalities and all other relevant institutions. During the Consultant's assignment, other consultants and advisors may provide services to the PEA and other local authorities. It is the duty of the Consultant to carry out and coordinate his activities with the operations of others relevant to the Project. It has to be ensured that the proposed standards, systems, methods, etc. are compatible as much as possible to avoid duplication of efforts.

Tasks:

- 1) Preparation of a planning matrix
- 2) Organization of regular site meetings with Contractor, PEA, and other relevant stakeholders;
- 3) Preparation and circulation of minutes of meetings;

3.2.2 Assumption of the Role of the Engineer in accordance with FIDIC Pink Book

The Consultant shall assume the role of Engineer in accordance with the FIDIC Pink Book and perform all corresponding duties, including but not limited to:

- 1) Contract and claims management;
- 2) Control of the validity of the Contractor's documents including insurance policies, bank guarantees, transport documents, etc.;
- 4) Quality and quantity control for all work and supplies by daily inspection of Contractor's work;
- 5) Provide guidance to the Contractor to comply with specifications;
- 6) Ensure that the Contractor uses only permanent and temporary construction materials that meet the technical specifications and requirements of the work;
- 7) Time and expenditure control;
- 8) Review and approve Contractor's invoices and issuing of corresponding "Certificates of Payment" to the PEA;
- 9) Reporting on project progress and risks in accordance with KfW reporting requirements;
- 10) Assisting the PEA in dealing with variation orders to the construction contract;
- 11) Ensuring visibility as per KfW's and EU's requirements;
- 12) Review Contractor's reports, shop drawings, as-built drawings, operations manuals, maintenance schedules, etc.;
- 13) Supervise Contractor's testing and commissioning of constructed works and supplies;
- 14) Prepare a list of defects (Snag list) and assist the PEA in preparing for preliminary acceptance;
- 15) Participation in the acceptance of the works.
- 16) Examine whether the arrangements applicable to the disbursement procedure agreed between the PEA and KfW, are fulfilled.

ESHS related tasks:

- 1) Inform the Contractor that relevant sub-work may not begin until the Consultant has approved and is satisfied with the appropriate measures to address ESHS risks and impacts;
- 2) Due diligence and approval of the Contractor's Project Area Environmental and Social Management Plan (PA-ESMP). If necessary, the Contractor shall be instructed to update the PA-ESMP during the execution of works. The revised version shall highlight the new elements of the document;
- 3) Monitor the Contractor's implementation of the PA-ESMP and report on Contractor's compliance with the ESMP and ESHS requirements including health and safety performance and compliance with labor and employment standards. In the case of serious violations of ESHS requirements (and when human life is at risk), the Consultant shall suspend work (partially) until the Contractor has remedied the situation;
- 4) Review and approve the Contractor's proposals for remedial action(s) and their timeframe for implementation. Follow-up on correction/remediation;
- 5) Follow-up on results of inspections/audits by labor, health and safety, environmental authorities;
- 6) Check if the Contractor provides instructions and trainings to workers, subcontractors, and suppliers (in particular those for major supply items) to assure that they understand the relevant ESHS requirements and that the Contractor complies with the Code of Conduct;
- 7) Advise the Contractor on ESHS risks and impacts of any design change proposals and the implications for compliance with ESIA, ESMP, consent/permits and other relevant project requirements;
- 8) Review contractor's progress reports and verify that any nonconformities identified are documented and analyzed and addressed through corrective action (documentation shall include a digital photograph with captions for visual illustration that specifically identifies the location, date of inspection, and nonconformity in question);
- 9) Follow-up on the resolution of any complaints or grievances in relation to ESHS;
- 10) Inform the employer of any ESHS-related situations that could jeopardize the successful completion of the project. Include such situations in periodic reporting.
- 11) Monitor that nonconformities are addressed through actions appropriate to the severity of the situation, including suspension of (partial) work and/or payments under the contract.
- 12) Check supply chain regarding any shortcomings regarding ESHS standards.

Key deliverables:

- Progress Reports

3.2.3 Specific Services during Supervision

- 1) Contract administration including continuous control of time and cost schedules, monitoring and acceptance of supplies which are included in the construction contracts, organisation of weekly progress meetings attended by the PEA, the Contractor(s), the Consultant, Municipalities and ViKs Tivat and Kotor, and the DAB, if applicable;
- 2) Review of Contractor's programmes, issue of acceleration orders as the case may be;

- 3) Review of Contractor's plant and construction drawings, equipment and systems to be incorporated into the works for conformity with design requirements and amendment of any specific design details, if so required. Preparation of any complementary plans and drawings, which are necessary for the execution of the works, e.g. in case of Variations;
- 4) Direction of supervision site staff for the day-to-day-inspection of construction works, monitoring, the execution and quality of work and tolerances for compliance with contract specification, quality control to be carried out by the supervisor on the site; in case of non-compliance instructing contractors to ensure fulfillment of contracts. Preparation of variation orders (VO) where applicable;
- 5) Carry out the engineering supervision in accordance with Montenegrin Law on Spatial Planning and Construction of Structures, (Official Gazette of Montenegro 064/17 of 6th October 2017, 044/18 of 6th July 2018, 063/18 of 28th September 2018, 011/19 of 19th February 2019, 082/20 of 6th August 2020, 086/22 of 3rd August 2022, 004/23 of 13th January 2023) and Rulebook on the Method for Performing Engineering Supervision (Official Gazette of Montenegro 048/18 of 12th July 2018), i.e. in accordance with current regulations. The Consultant needs to fulfill all legal requirements which are needed in order to perform the supervision according the valid Law on Spatial Planning and Construction of Structures. This, among other things, means that licenses for performing engineering supervision for legal entity and site engineers are to be certified or issued by Montenegrin Ministry of Ecology, Spatial Planning and Urbanism or competent authorities;
- 6) Receive, analyse, comment and determine Contractor's claims, in close cooperation with the PEA and KfW, if applicable;
- 7) Supervise safety procedures for workers and environmental protection measures;
- 8) Maintain quality control records as well as photographic records of the sites and work progress until issuing the Performance Certificate; arrangements for Tests on Completion and reporting on acceptance. Monitoring and quality control of on-site training to be provided by suppliers of technical equipment or any other contractors;
- 9) Reviewing Contractor's statements and issue Interim Payment Certificates to be signed by the Consultant before forwarding to the PEA. Preparation of requests for disbursements in the name of the PEA according to KfW Guidelines to be signed by the Consultant and approved by the PEA before being submitted to KfW.
- 10) Initiate and supervise the tests defined in the Conditions of Contract and issue the Taking-Over Certificate and the Performance Certificate, based on the Conditions of Contract and following the national regulations of Montenegro;
- 11) Assistance to the PEA and co-signing of the report on provisional acceptance tests of the works through the Taking-Over Certificate.
- 12) Take care of Contractor's compilation of as-built drawings and operation and maintenance manuals.

3.3 Provision of Services During Defects Notification Period

During the Defects Notification Period (DNP) and Closure of Project, after the issuance of the Taking Over Certificate, the Consultant shall address all post-construction activities up to the final acceptance of works through the Performance Certificate. The Consultant shall carry out regular inspections during the DNP in order to ensure the proper execution of all remedial works by the Contractor.

Prior to Project Completion the Consultant shall check that also all ESHS related tasks of the Contractor are completed and the areas of activities have been reinstated by the Contractor. On expiry of the DNP the Consultant shall assist the Employer in issuing a Certificate confirming that the constructions/installations were completed successfully in accordance with the specified performance level (Performance Certificate).

The Consultant shall assist the PEA and the ViKs during the Defects Notification Period according to the Conditions of Contract and the Montenegrin regulations (in general one year) securing all post-construction activities up to the final acceptance of works and services at the end of the Defects Notification Period, by issuing the Performance Certificate. The duties of the Consultant shall include without being limited to:

- 1) Supervision of project completion;
- 2) Supervision of defects remediation;
- 3) Supervision of preparation of as-built drawings;
- 4) Final testing and inspection;
- 5) Verification of project results;
- 6) Finalisation of schedules;
- 7) Assistance to the PEA and co-signing of the report on final acceptance tests of the works through the Performance Certificate;
- 8) Issue of the Performance Certificate;
- 9) Checking Contractor's final statement and issuing Final Payment Certificate;
- 10) Preparation of the Final Project Report.

During Closure of the Project the Consultant shall prepare the Final Project Report.e

Key deliverables:

- Progress Reports;
- Completion Reports for respective works contracts;
- Final Project Report.

4 REPORTING AND DELIVERABLES

The Consultant will submit the below mentioned reports in the English language. Reports shall be prepared in DIN A4 format, plans and drawings in DIN A3 format. All documents (reports and drawings) must be provided in digital format, e.g., Word, Excel, AutoCAD, and additionally converted into PDF-format. Time for comments and approval shall be up to two weeks after submission. Final reports shall be submitted 2 weeks after receiving comments on the draft, unless otherwise agreed.

Reports and Deliverables to be submitted under the different project packages are shown in the following table.

Table 4-1: Reports and Deliverables

Report	Delivery	Total Time after start	No. of copies (soft/hard)		Municipalities	ViKs
		(months)	PEA	KfW		
Monthly Progress Summaries (MPS)	Within 5 working days from the end of the respective month	n.a.	1 / 2	1 / 0	1/1	1/1
Quarterly Progress Reports (QPR)	1 month after the quarterly reporting period	n.a.	1 / 2	1 / 0	1/1	1/1
MoM Kick-Off Meeting	1 week after the meeting	n.a.	1 / 2	1 / 0	1/1	1/1
Project Manual	1 month after project start	1.0	1 / 2	1 / 0	1/1	1/1
Minutes of Meeting (MoM) on regular site management meetings ¹	Weekly	n.a.	1 / 2	1 / 0	1/1	1/1
Project Completion Report	After finalization of construction activities	24.0	1 / 2	1 / 0	1/1	1/1
Final Project Report	After end of the DNP	36.0	1 / 2	1 / 0	1/1	1/1

In general, the reporting requirements are an essential part of proper and transparent contract and project monitoring and as such are to be elaborated and quality-assured in a way that both senior and executive levels of the contracting parties are conveniently provided with concise, reliable, sound, and relevant data and analysis. A qualified presentation with maps, tables, graphs, and photographs is preferred over long-winded narrative elaborations.

Detailed requirements (structure, contents, etc.) for the above-mentioned reports are attached to these ToR, see Annex 3.

¹ To be annexed to the Quarterly Reports to be submitted to KfW

5 PROJECT IMPLEMENTATION SCHEDULE

It is anticipated that the duration of the entire assignment including 20 sub-packages will be in total approx. 42 months.

It can be assumed, that the works contract for Kotor will be awarded first as tendering and evaluation has already been completed. The total time for completion of this contract will be 24 months while for some sections of mandatory or optional works it will be less. The tender documents contain the following times for completion, which might be adjusted during contract negotiations.

Mandatory Measures KO2, KO4, KO5, KO6, KO7 and CEDIS:	730 days,
Mandatory Measure KO14:	730 days, up to 365 days after commencement,
Optional Measures KO1:	550 days, up to 180 days after commencement,
Optional Measure KO3:	550 days, up to 180 days after commencement,
Optional Measure KO8:	550 days, up to 180 days after commencement.

The works and supplies for Tivat shall be tendered soon so that it is anticipated that these works will be awarded up to 6 months later. The total time for completion shall be 24 months while for some sections it will be less. The tender documents contain the following times for completion:

Mandatory Measures TV2, TV4, TV6, TV7, TV9, TV10:	730 days
Optional Measures TV1, TV3, TV5, TV8:	550 days, 180 days after commencement

In his technical proposal the Consultant shall prepare a provisional time table showing main activities and milestones of the project. The Consultant shall state on the overall implementation period and if applicable on periods of the different sub-packages.

6 LOGISTICS

The Consultant shall perform all services in close co-operation with the PEA, with the ViKs and Municipalities of Tivat and Kotor, and with KfW. It will be the Consultant's duty to maintain close contact with VODACOM and Municipalities / ViKs Tivat and Kotor on all aspects of work. As a matter of principle all formal communications related to the work will be directed to PEA's attention.

The Consultant shall be continuously present in Tivat and Kotor in order to ensure that the local authorities are deeply involved in the project. It is up to the Consultant to present in his technical offer a coherent organizational set-up for all stages.

The Consultant shall arrange for an adequately furnished office in Tivat and Kotor, in order to ensure the presence in each municipality, whenever required. The Consultant is expected to attend the meetings in the PEA premises in Tivat, whenever required.

The home office of the Consultant shall maintain continuous support to the team in Montenegro and must be duly justified.

The Consultant has to provide his own office space, furniture and equipment as well as all necessary transport facilities to carry out all services and the supervision of construction works. The Consultant shall be entirely responsible for all living accommodation and insurances required for his staff in Montenegro throughout the duration of the services including international and local transport from and to the country of origin to Montenegro.

Equipment, office furniture and vehicles purchased for the performance of the Consultant's services and fully paid under the Contract shall be handed over to the PEA or Beneficiaries after completion of the services.

Therefore, during the project period, the Consultant shall be responsible for:

- Provision of related office equipment, office supplies, hardware, and software equipment in order to make the office fully operational;
- Provision of suitable number of vehicles;
- Provision of suitable number of mobile phones;
- Provision of appropriate equipment for site recording (digital camera/videos);
- All necessary communication expenses (fax, e-mail, phone, etc.);
- Provision of secretarial (and if needed for translation) services;
- Any cost incurred in document reproduction and printing;
- All accommodation and insurances required for his staff in Montenegro throughout the duration of the services;
- Transport from and to the site and to the country of origin.

7 STAFFING

The Consultant must demonstrate that he has suitably qualified and experienced experts among its personnel, who have the appropriate level of academic and professional qualifications and expertise gained in similar projects and countries to recognize and to deliver with respect to the management requirements, both, the technical requirements, and the Environment, Social, Health and Safety (ESHS) aspects. Similar projects are defined as projects for construction supervision for works and supplies and comprising the role of “the Engineer” according to FIDIC conditions of contract (Pink Book or Red Book) in Montenegro, preferably at the Montenegrin Coast including the municipalities of Tivat and Kotor.

In addition to the key experts, the Consultant shall provide a backstopper in its team. The backstopper shall take care of project coordination and controlling, and of quality assurance of the Consultant's services and clarification of technical issues in the home office. The cost of the backstopper may be budgeted separately. The backstopping staff is expected to supervise and support the team both at home and abroad.

International experts shall be considered for key-positions (Team leader, Chief Resident Engineer and as further specified below). The years of experience, qualification, country experience and number of projects are the key indicators to assess the points awarded for each expert. Man-months of supporting staff such as secretaries, drivers, etc. shall be presented in the technical proposal and presented in the cost tables of the financial proposal.

7.1 Staffing Requirements

It is suggested that the Consultant may include in his team amongst others the following key staff: Depending on the qualifications and experience of the personnel offered, it is possible for a key person (with the exception of the Chief Resident Engineer) to cover more than one area of expertise, e.g., Deputy Chief Resident Engineer and Site Supervisor. Due to his prominent leadership position, the Chief Resident Engineer (CRE) may not assume any other duties. It is assumed that one CRE can handle the construction contracts for Kotor and Tivat in parallel while separate Site Engineers will be required for both contracts.

The Consultant shall include in his team amongst others at least the staff with qualified expertise/experts as indicated in the table below.

Table 7-1: Staffing Requirements (Construction and DNP)

Position	Task	Nationality
Key Experts		
Chief Resident Engineer	Project management/administration, overall site supervision, contracts & claims management, quality & quantity control for all works, etc.	International
Mechanical Engineer	Supervision of installation of mechanical works.	International
Electrical Engineer	Supervision of installation of electrical works.	International
ESHS Expert	ESHS/OHS related tasks	International
Backstopper (Project Director)	Project coordination and controlling, and quality assurance of the Consultant's services and clarification of technical issues	International
Non-key Experts		
Deputy Chief Resident Engineer	Project management/administration, overall site supervision, contracts & claims management, quality & quantity control for all works, etc.	National
Civil Engineer	Supervision of civil works	National
Mechanical Engineer	Supervision of installation of mechanical works.	National
Electrical Engineer	Supervision of installation of electrical works.	National
Site Engineers / Inspectors	Site Supervision	National
ESHS Expert	ESHS/OHS related tasks	National

The Consultant has to assess the final staffing requirements according to his proposed work programme and time schedule, local conditions, project requirements, his work regime and other relevant conditions, in order to provide good quality services and performance, which are entirely the responsibility of the Consultant. That means, the Consultant has to determine the necessary number

of qualified personnel and thereby guarantee that the Consultant's professional team will be able to perform engineering supervision over the structure in a high-quality manner and in accordance with applicable laws and secondary legislation. Therefore, the Consultant has to meticulously examine all the elements of the offer, because any subsequent appointment of additional members of the professional team for the works provided for in this ToR, will be at the cost of the Consultant and not the Employer. For this purpose he may include other experts/engineers such as:

- Other experts/engineers: surveyor, geo-technical expert, structural engineer, GIS/CAD specialist, etc. in accordance to needs and if deemed necessary by the Consultant;
- Adequate number of local engineers supporting the team of international experts;
- Since for most of the documents timely submission in Montenegrin language is relevant, it is suggested that Consultant include in the team sufficient number of translators, and
- Local support personnel.

It is suggested that Consultant determines the necessary number of qualified staff so that the minimum requirements of:

- Law on Spatial Planning and Construction of Structures, (Official Gazette of Montenegro 064/17 of 6th October 2017, 044/18 of 6th July 2018, 063/18 of 28th September 2018, 011/19 of 19th February 2019, 082/20 of 6th August 2020, 086/22 of 3rd August 2022, 004/23 of 13th January 2023)
- Rulebook on the Method of Performing Engineering Supervision (Official Gazette of Montenegro", no. 048/18 of 12th July 2018.)
- and other relevant regulations for design and supervision of this type of structures are fulfilled.

If a member of Consultant's staff has to be replaced, the replacement shall have at least the same qualifications and experience as staff member to be replaced. Any replacement shall be subject to approval by PEA and KfW.

Each part of design (hydro technical, electrical, mechanical, process, structural, etc.) and corresponding type of work which need to be supervised should have its responsible supervision engineer. During the implementation of the consulting contract, the company (international company, local partner company or sub consultant) as well as responsible supervision engineers shall have certified or issued/notified licenses by Montenegrin institutions and fulfil the requirements of the Montenegrin regulations, especially the relevant articles of the current Law on Spatial Planning and Construction of Structures which is presented in Appendix B. In the Law the minimum qualification requirements of responsible supervision engineers are stipulated.

7.2 Qualification Requirements

The following tables list the minimum qualification requirements for the individual to receive the maximum number of points assigned.

Table 7-2: Chief Resident Engineer

Education and qualification: Master's degree in civil engineering; experience in construction supervision. General professional experience: 15 years of professional experience; experience as resident engineer responsible for development of sites and facilities, construction supervision of laying of media pipes, experience in OHS. Specific professional experience: Expertise in managing FIDIC-based contracts both on the contractual side and on the construction supervision side; solid experience in working in teams composed of international and national professionals; in addition, solid experience in handling change orders and resolving disputes. Good command of the English language. The CRE shall demonstrate experience as a team leader of comparable projects for a minimum of 5 projects. The CRE should have experience of 5 projects of similar complexity.
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Table 7-3: Mechanical Engineer

Education and qualification: Bachelor's degree in mechanical engineering; experience in supervision of installation of mechanical works. General professional experience: 10 years of professional experience. Specific professional experience: Experience as mechanical engineer responsible for the physical development of sites and facilities, installation of all kind of mechanical supplies (pump stations, penstocks, gate valves, etc.). Good command of the English language. The ME should have experience of 5 projects of similar complexity.

Table 7-4: Electrical Engineer

Education and qualification: Bachelor's degree in electrical engineering; experience in supervision of installation of electrical works. General professional experience: 10 years of professional experience. Specific professional experience: Experience as electrical engineer responsible for the design of the physical development of sites and facilities, and installation of electrical supplies (pump stations, electrical drives, SCADA, etc.). Good command of the English language. The EE should have experience of 5 projects of similar complexity.

Table 7-5: ESHS Expert

Education and qualification: Master's degree in environmental science or civil engineering; General professional experience: 10 years of professional experience. Sound know-how in ESIA and ESHS related tasks including occupational health and safety preferably in water supply and wastewater projects. Specific professional experience: Sound experience in checking of OHS rules and regulations according to World Bank Standards. Experience in working with teams composed of international and national experts. Good command of English. The ESHS expert will be responsible to check available ESIA studies. The ESHS Expert should have experience of 5 projects of similar complexity.

Table 7-6: National Experts

Additional experts for the specific tasks with profound experience in the relevant fields: ➤ Deputy Chief Resident Engineer, ➤ Civil Engineer, ➤ Mechanical Engineer, ➤ Electrical Engineer, ➤ Site Engineers, ➤ ESHS Expert. General professional experience: At least 10 years of professional experience in the relevant fields; substantial input in at least 1 project of similar nature. Expertise in managing FIDIC-based contracts.
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8 RELEVANT DOCUMENTS

8.1 Applicable Contractual Standards

The following contractual standards are to be applied:

FIDIC (2010): Conditions of Contract for Construction - MDB Harmonized Edition (Pink Book). Published by International Federation of Consulting Engineers, Geneva, Switzerland.

8.2 Applicable Environmental and Social Standards

During construction, compliance with the environmental and social standards of the Republic of Montenegro, the European Union, and the World Bank Group is mandatory.

KFW (2019): Sustainability Guideline. Assessment and management of Environmental, Social, and Climate Aspects: Principles and Procedures. KfW Development Bank, Frankfurt am Main, Germany.

BMZ (2013): Guidelines on Incorporating Human Rights Standards and Principles, including Gender, in Program Proposals for Bilateral German Technical and Financial Cooperation; Federal Ministry for Economic Cooperation and Development (BMZ), Division 304, Bonn, Germany.

EU (2018): Best Available Techniques (BAT) Reference Document for Waste Treatment, European Integrated Pollution Prevention and Control Bureau (EIPPCB) at the European Commission's Joint Research Centre, Directorate B: Growth and Innovation, Brussels, Belgium.

EU (2021): Reference Document on Best Available Techniques for Energy Efficiency, European IPPC Bureau at the Institute for Prospective Technological Studies, February 2009 (corrected version as of 09/2021), Sevilla, Spain.

Furthermore, the following guidelines are to be applied:

- World Bank Safeguard System through applicable Environmental and Social Standards (ESS); e.g.:
 - ESS1 Assessment and Management of Environmental and Social Risks and Impacts,
 - ESS2 Labour and Working Conditions,
 - ESS3 Resource Efficiency and Pollution prevention and management,
 - ESS4 Community Health and Safety,
 - ESS5 Land Acquisition, Restrictions on Land Use and Involuntary Resettlement.
- World Bank Group's EHS General Guidelines,
- World Bank Group's EHS Guidelines for Energy Conservation,
- World Bank Group's EHS Guidelines for Water and Sanitation.
- IFC Labour and Working Conditions (PS 2),
- IFC Resource Efficiency and Pollution prevention (PS 3),
- IFC Community Health, Safety and Security (PS 4)
- The Core Labour Standards of the International Labour Organization (ILO) as set out in the ILO Fundamental Conventions. In case the ILO Fundamental Convention has not been fully implemented in Montenegro, the PEA shall take appropriate measures in the scope of the Project to safeguard the conditions for workers in the spirit of the said ILO declaration.

ANNEXES

ANNEX 1: ESHS Classification of Contracts

Projects financed by KfW are categorized in Environmental and Social (E&S) categories A, B+, B or C depending on their adverse E&S risks and impacts. This categorization takes place at an early stage and applies to the overall Project. However, Projects typically comprise several components and specific individual Contracts are awarded to Consultants, Contractors, firms, or suppliers. The categorization of these individual Contracts which may have different Environmental Social and Health and Safety (ESHS) risks and impacts compared to the overall Project (e.g. a separate supply Contract for computers, or a separate Small Works Contract for the rehabilitation of a guard house may have low risks and impacts, whereas the overall Project may be a large hydro power project categorized as high-risk A).

Therefore when designing the Requirements for the Bidders or the ESHS Specifications for each particular Contract of a Project, the potential ESHS risks and impacts of this individual Contract need to be taken into account. This is particularly relevant for the occupational health and safety aspects (OHS) on the construction site and, if relevant, in worker camps during Contract implementation.

Depending on the potential ESHS risks and impacts and the estimated Contract size, ESHS Requirements for Bidders might be classified as low, medium, or high and thus the Requirements need to be adjusted accordingly.

In the context of this section the ESHS classification levels are defined as follows:

Level **1** low = relevant to Contracts with low ESHS risks and impacts

Typically for Contracts with minor ESHS construction related risks and impacts. During the implementation of the Works only limited ESHS measures are required, e. g. minor Works and small scale rehabilitation measures; few workers; minimal transport requirements; no worker camps required; no hazardous wastes; no working at heights or confined spaces; no heavy construction machinery; no external environmental risks like flooding.

Level **2** medium = relevant to Contracts with medium ESHS risks and impacts in addition to **1**

Typically for Contracts with moderate ESHS impacts and risks. During the implementation of the Works standard ESHS measures are required, e. g. approximately less than 100 workers; transport of hazardous material; general OHS risks (welding, hazardous material); working at one to two story buildings.

Level **3** high = relevant to contracts with high ESHS risks and impacts in addition to **2**

Typically for Contracts with significant or long term ESHS risks and impacts. During the implementation of the Works extensive ESHS measures are required, e. g. approximately more than 100 workers; worker camp(s) required; significant risks at complex work sites(s); increased heavy load traffic.

ANNEX 2: Structure for Works / Employer's Requirements of the Bidding Documents

Not applicable

ANNEX 3: Reporting Requirements

KfW Reporting Requirements

Content

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1. General

With loans financed by KfW the Borrower commits to provide substantial reporting to KfW. This document, the “KfW Reporting Requirements”, represents a collection of particular reporting requirements stated in various guidelines and documents of KfW. To such an extent the “KfW Reporting Requirements” are a standard Annex to the Separate Agreement to Loan Agreements and to the Terms of Reference (ToR) for Consultancy Services.

The “Reporting Requirements” are the general and basic Reporting Requirements of KfW towards the Borrower/PEA. The reports shall be countersigned by the Implementation Consultant, if applicable. In case another party (e.g. Implementation Consultant) is charged to write the necessary reports, any report not drafted by the Borrower itself but delegated to another party, shall be commented on or approved by countersigning of the Borrower.

It is the purpose of this attachment to give guidance for any type of reporting towards KfW, so it cannot be tailor-made to any particular project and type of services. It needs to be used as appropriate, i.e. the chapters are to be utilised to the extent to which they may be applicable. This document is a recommendation on what to include and how to structure reports. It consists of a standard table of contents with essential aspects per chapter, a list of possible annexes and examples for graphical illustrations. The following types of reports are covered in particular sections:

- Application / Offer Opening and Evaluation Report;
- Inception Report;
- Project Planning Report;
- Progress Report;
- Incident Report

This document shall remain unchanged. If the requirements stipulated in this document are deemed insufficient, necessary additional and more detailed requirements and limitations may be specified in the Separate Agreement / ToR / ... (as applicable).

2. Common Requirements

A Report is to be understood as Documented Information being distributed to all relevant stakeholders. Its preparation shall follow basic documentation quality as stated in ISO 9001 Clause 7.5 Documented Information. All reports shall be prepared in a highly professional manner, in terms of content, comprehension, conciseness and format.

Reports shall contain at least a cover sheet, a table of content, a list of abbreviations and an executive summary.

A cover sheet shall contain key information and data as applicable:

- Client / Partner and Financier (name, contact person);
- Project Title;
- Project No. / BMZ No.;
- Consultant (name, contact person);
- Contractor / Supplier / Subcontractor (name, contact person);
- Reporting title, report number and reporting period;
- Main contractual dates (date of Contract Agreement, start of construction works, completion date, [if applicable]);
- Time elapsed / remaining;
- Header / Footer;
- Revision Index, date of issuance, prepared / approved by.

All subsequent pages including any annexes shall be provided with header and footer containing the following minimum information:

- Legal owner;
- Document reference;
- Revision index;
- Page number;
- Number of pages.

A report shall be laid out and formatted in a neat and uniform manner. Readability is of utmost importance.

- Reports shall generally be formatted onto DIN A4 size portrait format. If the Client's country commonly uses other portrait paper formats (e.g., US Legal), those formats may be used;
- Illustrations and Annexes may use DIN A4 or DIN A3 size portrait and landscape formats;
- Any colours used for formatting shall give sufficient contrast for monochrome printing, main text shall be in deep black colour;
- The text shall have left-and-right justification together with hyphenation;
- Text font size should be 11-12 points. For foot-/end notes, headers and footers, 9 point font size may suffice;
- Character spacing other than Normal should be avoided;
- Left and right page borders should not be less than 2.5 cm on each side. With the amount of data to be put into headers and footers, 3 cm are advisable for the top and bottom borders;
- Line spacing shall generally be 1.15 lines. Paragraphs shall be visibly separated by adequate spacing;
- Common typefaces shall be used to ensure readability across platforms; alternatively all fonts used in the document shall be embedded.

Submission of reports shall be done preferably in MS-Word format for easier annotation; submission in pdf-format shall have enabled text capture functionality.

3. Application / Offer Opening and Evaluation Report

The PEA (supported by Consultant / Tender Agent) shall provide KfW with a report of the opening of Applications (minutes of Application / Offer opening) and of the evaluation of Applications (Prequalification evaluation report) and of the evaluation of Offers (Proposal / Bid evaluation report) as defined in the Guidelines.

3.1 Minutes of Application / Offer Opening

This report shall contain in general the following information and shall be provided for No-Objection:

1. Names of persons in charge of Application / Offer opening (Application / Offer opening committee);
2. Names of other participants (e.g. representatives of Applicants / Bidders);
3. Date, time and venue of Offer opening;
4. Statement on the status of the envelopes:
 - Timely or delayed delivery;
 - Number of Application / Offer originals / copies;
 - Envelope(s) sealed properly;
5. Short description of opening procedure:
 - envelopes being opened, outer / inner envelope, envelope containing qualification documents, Technical Offer and / or Financial Offer;
 - Envelopes remaining closed;
 - For Financial Offer opening: price as per price sheet to be stated;
6. Date of preparation of the report;
7. Signature of all members of the Application / Offer opening committee.

For paperless e-procurement Tender Processes equivalent evidence of Offer opening needs to be provided.

3.2 Prequalification and Offer Evaluation Reports

These reports shall be provided for No-Objection.

On completion of the Application / Offer evaluation KfW shall be furnished within three weeks after the bid closing date with a detailed report on the evaluation and comparison of the Applications / Offers and with a substantiated recommendation for the invitation of prequalified Applicants (Request for Proposal / Instruction to Bidders [RfP / ITB]) or Award of Contract, as the case may be, that must be coordinated with any government agencies of the Partner Country whose involvement may be required.

3.2.1 Table of Contents

The general table of contents of evaluation reports looks as follows:

Chapters to be included in the report
Cover Page
1. Introduction
2. Results of Preliminary Evaluation
3. Application / Offer Evaluation Process
4. Conclusion
Annexes

3.2.2 Sample of Content

Disclaimer: The list of issues to be presented in the reporting sections mentioned below is to be read as a general guidance, in no way concluding and shall be adapted according to the needs of the Project and the recipients of the reporting.

Cover Page: Key Data

- Content as indicated above under Common Requirements.

1. Introduction

- Short information on project and Contract content;
- Tender Procedure (e.g. International- National Competitive Bidding [ICB, NCB]), Single- or Two-Stage Selection, One- or Two-Envelope Submission undertaken;
- What / which stage / envelope is being evaluated in the present report (e.g. Prequalification evaluation, technical Offer evaluation, financial Offer evaluation, combined evaluation);
- Names of persons in charge of Application / Offer evaluation (members of Application / Offer evaluation committee);
- Start and end of Application / Offer submission period, including any extensions thereof with reasoning and proof of its publication;
- Date and medium of publication of tender notice and in the case of Two-Stage Selection PQ-result notice, or when and how took place the invitation to interested / preselected Persons (evidence of publication to be attached as annex to the report in the case of an ICB and an NCB);
- In the case of a pre-bid meeting: date, time and venue; participants and minutes of discussion (minutes of meeting to be attached as annex to the report);
- Clarifications / addenda to Tender Documents during the Application / Offer submission period (any clarifications with Applicants / Bidders during the Application / Offer submission period and during the evaluation phase to be attached as annex to the report).

2. Results of Preliminary Examination

- Names of all Applicants / Bidders (minutes of Application / Offer opening to be attached as annex to the report);
- If the Application / Offer fails preliminary acceptance, the reasons must be clearly explained and comprehensible (since rejection at this stage puts the Application / Offer out of any further considerations, it has to be ensured that the decision to reject is justifiable);

- Applications / Offers which have been considered for further evaluation.
3. Application / Offer Evaluation Process
- Basis for evaluation (e.g. KfW's Guidelines, Tender Documents, Public Procurement Regulations);
 - Results of evaluation (usually a summary is provided in the report and details are provided as annex to the report)
 - pass / fail criteria: have they been met or not?
 - scoring criteria: every score needs to be justified in accordance with the evaluation criteria and matrix.
4. Conclusion
- List of Applicants proposed to be invited to submit an Offer (Prequalification evaluation report), or which Bidders have submitted a technically responsive Offer and can be considered for financial evaluation (technical Offer Evaluation Report), or which Bidders have submitted a responsive financial offer (financial Offer Evaluation Report);
 - List of identified errors, omissions, deficiencies or other subject matter for each Offer substantially compliant with the requirements of the RfP / ITB and which will be subject to clarifications before Award of Contract;
 - Which Applicants / Bidders are rejected and for what reason;
 - Final ranking (final / financial Offer Evaluation Report), which Offer is first ranked / has the lowest evaluated price and thus is proposed for Award of Contract;
 - Signature of all members of the Application / Offer evaluation committee.

In order to assess the provided reports KfW reserves the right to ask the PEA for further documents, e.g. complete Offers or extracts thereof.

3.2.3 List of Annexes

(examples)

- evidence of publication of Tender notice / Result notice in the case of an ICB and an NCB
- minutes of pre-bid meeting
- clarifications with Applicants / Bidders during the Application / Offer submission period and during the evaluation phase
- minutes of Application / Offer opening
- Details of results of evaluation tables with pass / fail criteria and scoring criteria

4. Inception Report

The inception report is to be prepared by the Consultant to document the activities of the Consultant during the inception phase of a project, but it also shall give a preview how the project is intended to be managed and executed. The inception report shall include:

- A detailed Work Plan for the implementation of the project;
- An outline of Section 1 of a Project Planning and Design Report (PPR, see below), if applicable;
- Suggestions for changes that would enhance and improve performance of the system and / or project;
- Project schedule and detailed cost estimates;
- Identification of additional required studies if necessary;
- Condition assessment of existing equipment / facilities;
- Outline specifications for all plant and equipment for PEA review / approval.

5. Project Planning Report

A project planning report shall be a continuation of the inception report. Therein the concept and the technical solutions shall be described in all necessary details to allow preparation of Tender Documents in the next step of a project. The project planning report shall include:

- A validation of the project concept, including measures to improve the performance of the system and / or project;
- Detailed project schedules and cost estimates, which shall include post-commissioning maintenance requirements, if any;
- Proposals for additional studies, if necessary;
- An assessment of the existing equipment;
- An outline of the specifications for all new and replacement equipment, including post-commissioning maintenance requirements, if any;
- Review of PEA's overall Procurement Plan, showing the structure of Project Contracts / Lots, budget lines, ESHS classifications, ...

6. Progress Report

Progress Reports are prepared to document the implementation of a project during a certain period. Generally the reports shall be submitted quarterly - monthly and/or (bi-)annual submissions are possible if stipulated in the respective ToR - from the date of contract effectiveness until the completion of the consulting services.

The Progress Report for the final reporting period shall be replaced by a Project Completion Report. Nonetheless, it is important that all content required for a shorter-period progress report is included in a longer-period progress report, as these reports may have different focus.

A progress report shall override the respective progress reports of the shorter reporting period (e.g. quarterly report replaces monthly reports of that period).

The frequency of reporting should be adapted to the needs of the partners and co-financing institutions, but generally quarterly reports would be sufficient during Project implementation. Thus, not all of the reports presented in the table below eventually will be required. The requirements for reporting should also be in line with the stipulations of the Separate Agreement defining the information needs of KfW.

If not determined otherwise in the ToR, the main text of monthly reports should be limited to 1-2 pages, of quarterly reports to minimum 20 pages and annual reports to minimum 50 pages. Additional and more detailed information is to be presented in annexes. The main text should not be a copy and paste of the previous report with some amendments, but a concise report of the key information required.

6.1 Table of Contents

The table of contents of Progress Reports shall include the items listed in the chapters below. Not all items might be applicable, depending on the type of Consulting Services:

Chapters to be included in report	Monthly*	Quarterly	Annual	Feasibility	Implementation
Cover Page		x	x	x	x
1. Executive Summary		x	x	x	x
2. Project Background		x	x	x	x
3. Sector Environment / Borrower / PEA			x		x
4. Consultant's Activities, Staffing and Time Schedule	x	x	x	x	x
5. Progress of Services and Works		x	x		x
6. Financial Information	x	x	x	x	x
7. Quality Management		x	x		x
8. ESHS		x	x		x
9. Deviations from Project Concept and Contracts	x	x	x	x	x
10. Risk Assessment and prospect of Achieving the Overall Project Goals		x	x	x	x
11. Monitoring of Achievements and Impacts			x		x
12. Outlook / Recommendations	x	x	x	x	x
Specific requirements to be reported by PEA to KfW, e.g. financial status, capacity development, etc.				x	x

* Specific template of a monthly progress report is presented at the end of the document.

6.2 Sample of Content

Disclaimer: The list of issues to be presented in the below-mentioned reporting sections is to be read as a general guidance, in no way concluding and shall be adapted according to the needs of the respective Project and the recipients of the reports.

Cover Sheet: Key Data

- Content as indicated above under Common Requirements.

1. Executive Summary:

to be written in an easily understandable and non-technical language, understandable also to non-experts

- Max. 2-3 pages;
- Status of design/planning and (if applicable) construction progress;
- Contract Value and disbursement status/ cash-flow level (in %);
- Listing of important project milestones, compliance with time schedules and planned completion date, state of estimated costs/current costs and expected costs at completion;
- Major changes to project concept or main components;
- Specific problems / highlights.

2. Project background

to be the only copy and paste chapter for all time quick project reference with a short description of:

- Objectives;
- main measures;
- construction site description with e.g. map, coordinates, general layout plan, ... (if applicable);
- target group;
- involved parties (Financing institute(s), PEA, Consultant, Contractor(s), Main Subcontractor(s), ...) with
 - contact person;
 - organization chart;
- short description on the OH&S Organisation, Institutional set up of the Environmental, Social, Health and Safety Implementation Organisation.

Any reported items of earlier reports should be shifted / stated here to form a project history.

3. Sector Environment/ Borrower/ PEA

- Information on developments / changes of the general economic and sector conditions which are relevant for the successful implementation of the Project;
- E.g. changes in regulations of the sector; changes in the national sector strategy, e.g. planning of high voltage transmission lines and construction of power plants; development of prices and tariff reforms; further data depending on the individual case: sector-specific or project-type related data (e.g. regional population development, market share, development of world market price), etc.;
- Assessment of PEA's capability to implement and operate the project. Touch upon financial and organisational aspects (liquidity, outstanding accounts, losses, production costs, new fields of operation).

4. Consultant's Activities, Staffing and Time Schedule

- Staffing, comparison of actual with target figures, on-site/ back-office staffing, reporting & next period, remaining man-months;
- Main activities (e.g. of construction supervision, performed services);
- Target / actual comparison of activities;

- Time Schedule;
- Preparation and approval of documents, together with a listing of concerned documents including submission and approval dates;
- Listing of meetings prepared (with project executing agency, construction meetings) and brief narration of content;
- Table of letter correspondence concerning time, cost and ESHS issues;
- Report on audits performed.

5. Progress of Services and / or Construction Works (per lot / component)

to be presented per services / lot / component. In case of Joint Ventures (JV) and in case of Sub-contractors items are applicable to any related party

- Contractual Information (e.g. Consultants Services, list of Contractor(s) and Subcontractors incl. brief description of each Contractor's tasks, contract volume and results, appendices);
- Consultant's / Contractor's Resources (Staff and Equipment);
- Progress update on rendering of services and / or supply of goods as applicable:
 - Goods:
 - type and volume, delivery times, guarantees given, final inspection by manufacturer, acceptance;
 - Transports:
 - type and volume; duration; insurance; storage on construction site;
 - Construction work:
 - type and volume, machinery used, manpower employed; acceptance of construction work;
 - Installation work:
 - type and volume, machinery used, manpower employed, personnel of suppliers;
 - Staff instruction:
 - type and scope, number, qualification of operating staff, advanced training at the equipment supplier's;
 - Commissioning:
 - final acceptance, test runs, operating results; rectifications. Guarantee events (type and scope, consequences);
 - Other activities:
 - preliminary studies, awarding, type and scope, deadlines, personnel, material, external training, acceptance;
- Progress of Works / Time Schedule (give details to above-listed items wherever applicable)
 - Comparison of contractual schedule and actual performance dates (start of construction, date of completion) (visualized in a tableau);
 - Information on the stage of completion for the main services / components of the project;
 - Percentage progress of the works compared with the latest approved program schedule, together with a description and percentage estimate of the work programmed for the following periods;
 - Reasons for deviations / delays, assessment of impact of deviations on time of commissioning and / or financial planning and project completion;
 - Updated time schedule, including expected completion date by component;
 - Description of risks to meet the planned / updated time schedule;
 - Claim management:
 - pending / settled / potential claims by the contractor.

6. Financial Information

- Cash Flow:

- State of disbursements by the end of the reporting period per service / contract;
- Table with the billing report, summarizing;
 - Invoices from all services / contracts (identification number, date, amount, currency, payment status);
 - Total amount of each contract including amendments (if applicable);
 - Remainder of each contract (incl. amendments, including the difference between the total amount of the contracts and the sum of all invoices being paid, per currency [if applicable]);
- Table with overall state of disbursements of total project volume by the end of the reporting period;
- Table with forecast of disbursements for the next reporting period(s), with estimated time and amount of disbursement requests, as well as a preview of the payment schedule until the end of the project;
- In case of Disposition Fund: Table with total volume, remaining funds, state of disbursements, required funds for the next reporting period;
- In case of Interest Differential Funds: report on accrued amount and usage;
- Report on any circumstances jeopardizing the full financing of the project throughout its duration resp. maximum budget available;
- Status of Advance Payment and Performance Guarantees.

7. Quality Management (as applicable)

- Description of (services / construction) quality issues during reporting period including all details and measures taken, Consultant's assessment and recommendation;
- Status of other open quality issues;
- Recommendation for improving overall construction quality.

8. ESHS

- Short description whether local and international occupational health and safety standards were met and whether environmental and social management plans (and relevant sub-plans) were adhered to during construction and which additional measures were taken where necessary;
- Report on Occupational Health and Safety during
 - Construction (Contractors incl. contractual and daily wage labourers) and;
 - Ongoing / extended Operation and Maintenance.

This subsection should contain

- i. Human Resources Management status, table with project staff and Contractors, other contractual labourers, ESHS responsible(s) (month, number of employees, number of H&S Staff);
- ii. key indicator figures, statistics and summaries
 - number of inspections carried out per day / week / month;
 - number of near misses;
 - first aid;
 - incidents with 3 days of absences;
 - incidents with more than 3 days of absence;
 - fatalities;
 - work hours lost;
 - accident frequency rate.

Distinguish the main reasons for the accidents (e.g. falling from height, struck by objects, contact with machinery, electrical accidents, no PPE, etc.) and provide a table containing the 10 main categories of accidents and the no. of people.

To improve health and safety it is necessary to analyse the accidents and to implement corrective actions. Describe the corrective actions which have been taken for severe accidents.

Incident reports of the accidents shall be stated and enclosed in the Annex (see separate section of this document);

- Documented grievances (workforce, project affected persons) and conflict resolution activities;
- Report on stakeholder engagement activities;
- Report on Corporate Social Responsibility (CSR) / Community Development Activities: provide a brief summary of activities (as applicable);
- Energy and Resource Consumption and Electricity Output (if any): provide key figures for the reporting period;
- Annual GHG Emissions and Reductions: provide operation greenhouse gas emission figures from power generation on site and from grid electricity emissions and compare against EHS sector guidelines benchmarks;
- Implementation Status of Environmental and Social Mitigation Measures:
The report shall make clear reference to the respective requirements and report on compliance with the conditions of permits, local, EU and relevant Worldbank General EHS Guidelines and Sector Guidelines, the Environmental and Social Management Plan (ESMP) requirements, incl. any changes or difficulties and corrective actions the Borrower / PEA may have taken; in case corrective actions were identified for the previous reporting period, report on implementation progress / completion status;
- Table with training and qualification;

Trainings (examples, please adapt accordingly)	No. of employees	Hours
Induction Training		
Environmental trainings		
Waste Management		
Spillage contingency		
etc.		
OH&S		
1st aid training		
scaffolding		
crane operation		
welding		
etc.		

9. Deviations from Project Concept and Services / Contracts

Consequences have to be considered on project schedule and project costs

- Description and reasons for major deviations from original project concept during appraisal;
- Description and reasons for major deviations from planned man-months / quantity structure of the main components;
- Recommendations and reasoning for future changes / modifications and deviations from the project concept;

- Claim / Cost variation management: pending / settled / potential claims by the contractor.
10. Risk Assessment and Prospect of Achieving the Overall Project Goals
 - Analysis of (potential) risks;
 - Information on progress and status of achieving the financial, schedule and technical project goals and project objectives as well as outputs (as defined in LogFrame (if applicable));
 - Reasons for deviations or current problems (if any);
 - Assessment of consequences for sustainable project success, and measures to be taken / proposed solutions, information on any developments that might jeopardize the success of the project; if so, proposition of additional activities which should be included into the project;
 - State of solutions of previous problems;
 - Table with Project Indicators, as defined in the Separate Agreement.
 11. Monitoring of Achievements and Impacts
 - Indicator baseline (according to indicators defined in Separate Agreement / LogFrame) and progress / achievements;
 - Monitoring of impacts.
 12. Outlook and Recommendations
 - Outlook for the next reporting period (planned activities and results);
 - Recommendations and need for action to be taken by project participants.

6.3 List of Annexes

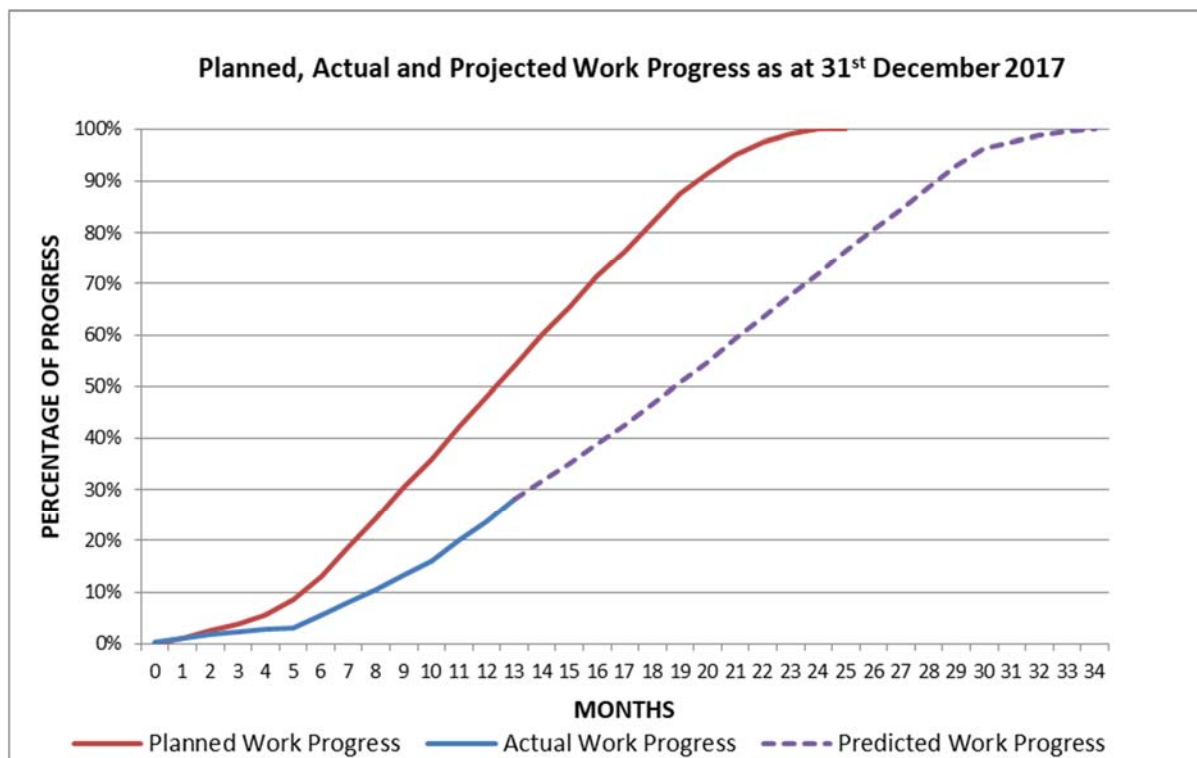
(examples, not necessarily required for each kind of report)

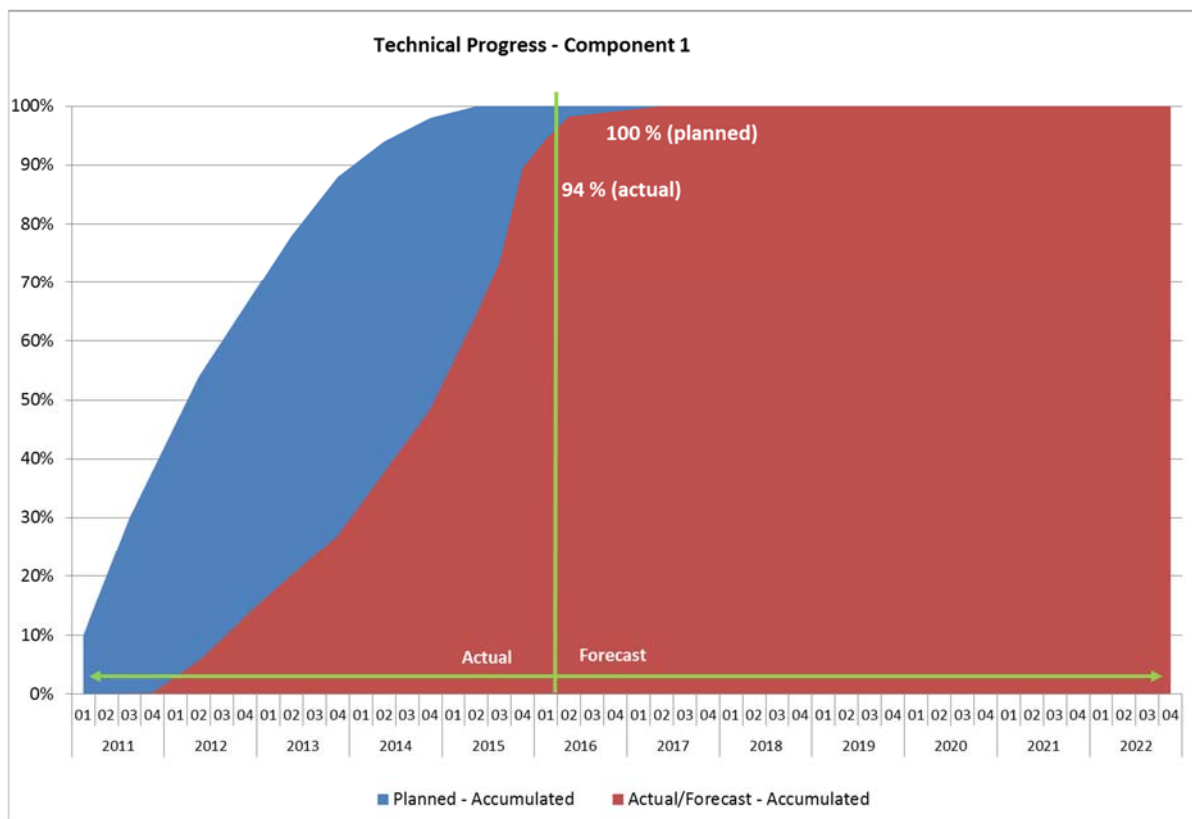
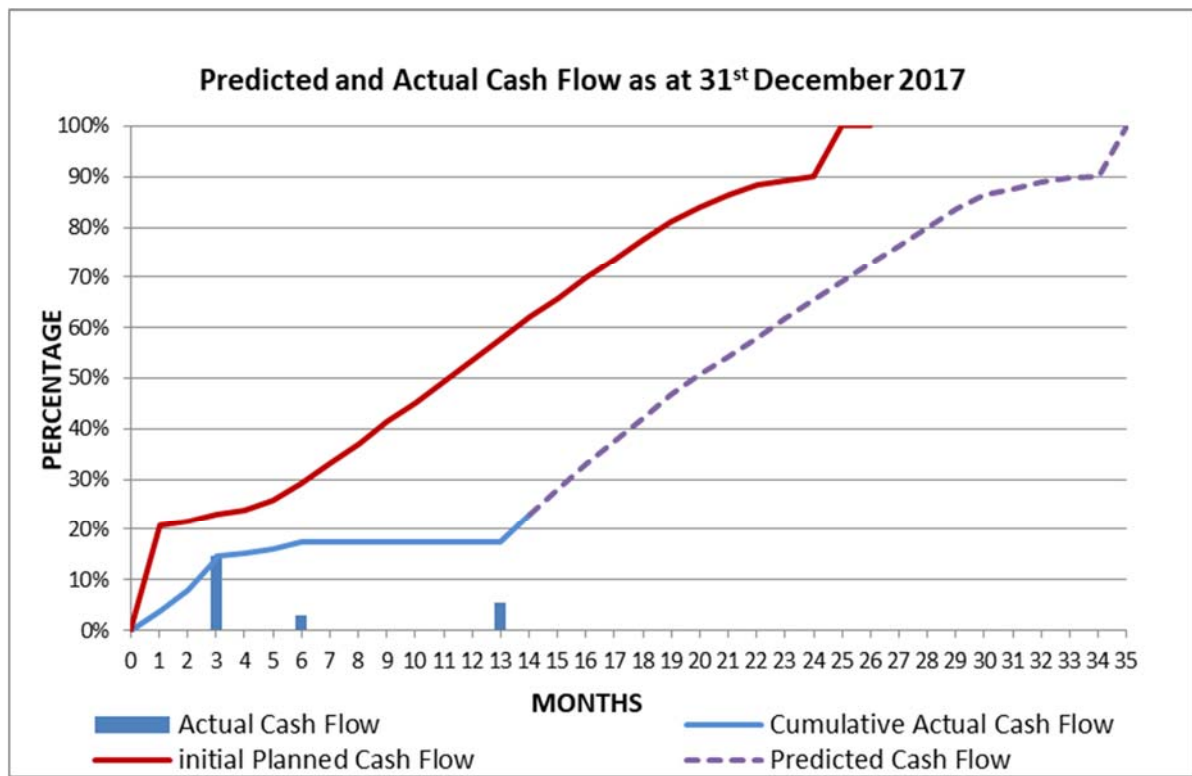
- a) **Tool for financial monitoring**
 - Tool funding;
 - Expenses per term;
 - Financial details;
 - Details of execution;
 - Status of indicators;
 - Timeframe.
- b) **Staffing Schedule**
 - Description for each person / position;
 - man-months available of each person / position;
 - required man-months by person / position so far / up to now;
 - remaining man-months by person / position;
 - Visualization of actual operating time compared to planned.
- c) **Time Schedule**
 - for consulting and construction / delivery;
 - Contractual / actual.
- d) **Milestone List**
 - for each contractual component;
 - planned / expected / actual date of completion;
 - delays.
- e) **Contracts**
 - List of construction and supply contracts;
 - Short description of deliveries and services;
 - Contract volume;
 - Contractual dates: start of works, planned / actual overall completion.

- f) **Cost Control / Cash Flow**
 - List of main components / contracts;
 - estimated costs;
 - contract value;
 - forecasted billing sum (incl. expected addenda);
 - state of disbursement and forecast;
 - short reason for deviations.
- g) **Disposition Fund**
 - total funds available;
 - funds transferred;
 - sum of disbursements;
 - expected disbursements and transfer of funds required for next reporting period.
- h) **ESHS instruction and site inspection protocols**
- i) **Minutes of Meeting**
- j) **Important Correspondence**
- k) **Photo Documentation**

About 10 photos resp. 5 photos per construction site, additionally small incident photos (if applicable).
- l) **Photo Accident and Incident Reports**

6.4 Examples for Figures:





6.5 Template for Monthly Report

One to two pages, sent by email

Month/Year

Project name		Client	
Financing Agreement No.		Financing	
Project Region		Reporting Period	
Consultant			

Personnel in the field			
Principal activities	• •		
Progress of Works			
Funds disbursed (approx.)	Principal Items	Reporting Period €	Total €
ESHS incidents	a) b)		
Problems encountered	a) b)		
Suggested solutions	a) b)		
Status of previous problems	a) b)		
Activities planned	• •		
Schedule			
Other			

7. Incident Report

7.1 General

An Incident Report shall be promptly provided to KfW, but in any case within three working days of the occurrence of any of the events as set out in this Sub-clause.

- i. details of
 - a) any incident of an environmental or occupational health and safety nature including (without limitation) any explosion, spill or workplace accident which results in death, serious or multiple injuries or material environmental contamination, accidents of members of the public / local communities, resulting in death or serious or multiple injuries, sexual harassment and - violence involving project workforce);
 - b) or any incident of a social nature including (without limitation) any labour strike or violent labour unrest or dispute with local communities, occurring on or nearby any site, plant, equipment or facility of the Project-Executing Agency which has or is reasonably likely to have a material negative impact on the environment, the health, safety and security situation, or the social and cultural context, together with, in each case, a specification of the nature of the incident or accident and the on-site and off-site effects of such events or;
 - c) any actions by the competent authorities / regulators leading to partial or complete stop of project activities, and;
- ii. details of any action the Project-Executing Agency proposes to take in order to remedy the effects of these events, and shall keep KfW informed about the progress in respect of such remedial action.

or

After becoming aware of a significant social grievance or protest, promptly notify KfW of any significant community or worker-related protest directed to the Project which can potentially have a material adverse effect on the Project or can potentially result in national or international media attention.

A particular guidance for an Immediate Incident Notification is attached hereto, further support concerning the format can be made available on special request.

7.2 Types of Reportable Injury

The death of any person

All deaths to workers and non-workers, with the exception of suicides, must be reported if they arise from a work-related accident, including an act of physical violence to a worker.

Specified injuries to workers

- fractures, other than to fingers, thumbs and toes
- amputations
- any injury likely to lead to permanent loss of sight or reduction in sight
- any crush injury to the head or torso causing damage to the brain or internal organs
- serious burns (including scalding) which:
 - covers more than 10% of the body
 - causes significant damage to the eyes, respiratory system or other vital organs
- any scalping requiring hospital treatment
- any loss of consciousness caused by head injury or asphyxia

- any other injury arising from working in an enclosed space which:
 - leads to hypothermia or heat-induced illness
 - requires resuscitation or admittance to hospital for more than 24 hours

7.3 Attachment 1: Guidance for Accident and Incident Reporting

Guidance for Accident and Incident Reporting

1. Basic Information

- date, time, weather / lighting / conditions;
- statement of facts;
- details of deaths, injuries, damage, immediate losses;
- details of witnesses;
- details of whether scene was secured / photographed;
- details of any item tested / sampling / sent for testing / removed from scene;
- details of person leading investigation;
- time lapse between accident and investigation.

Basic data should be clear, unambiguous, and factual (i.e. free from interpretation). Any gaps in the data should be highlighted and addressed in the investigation.

2. Investigation

- reconstructed timeline of events, with the incident / accident in the mid-point, and linked events streamed either side, with clear identification of individuals / teams / third parties (e.g. contractors) that are linked and therefore require interviewing;
- robust but sensitive questioning of witnesses and linked individuals / third parties to;
- clarify facts, assist with timeline reconstruction and advance the investigation. Statements / notes of interviews to be included.

The investigation must follow the facts, witnesses and linked individuals / third parties and the timeline, and not be constrained by the incident / accident event in isolation.

In case publications on the event are available, these should be attached to the report (e.g. press articles, online articles, radio and TV- spots).

3. Analysis

- using basic data, interview outcomes and reconstructed timeline, identification of:
 - immediate causes;
 - underlying causes (actions in the past that have allowed or caused undetected unsafe conditions / acts);
 - root causes (generally organisational / management failings, sometimes not directly / obviously in relation to accident/incident regarding location / time);
 - identification of absent / inadequate / failed / unused risk identification, management and control measures, reference / gap analysis against relevant national legislation and against the international standards as applicable and agreed upon for the Project;
- conclusions and summary of root causes and underlying causes for the accident / incident.

Analysis must be sufficiently rigorous to go wherever the investigation has led. Identification of root, underlying and immediate causes must be sufficiently credible and robust to withstand third-party scrutiny.

4. Way forward

- for EACH root cause, underlying and immediate cause, a corrective / preventive action is required (these may be numerous and interlinked);
- for EACH action, a named person with sufficient resource to deliver upon it and a clear timeline (action plan) is required. In addition, a named person should have overall responsibility for monitoring / reporting on progress (with timelines);
- demonstration, that all actions together will prevent recurrence; evidence that current risk assessments / procedures have been revised to reflect this;
- details of communications to stakeholders, to include a concise summary of the investigation, including the action plan, and lessons learned;
- details of ongoing support and assistance to those impacted directly or indirectly by the accident.

ANNEX 4: Presentation of Staff Characteristics

The following data have to be indicated for the key experts proposed for the different positions. They have to be backed unambiguously by details in the CV. In case of contradictions found during evaluation, details of the CV prevail. Tables may be adjusted according to the proposal and to the number of proposed key staff.

Chief Resident Engineer

Criteria	Min. requirement	
Professional education / University degree	<i>Master or Dipl. Ing. Degree (FH/TH/TU) in Engineering</i>	
Professional experience as an engineer and/or project manager	<i>15 years</i>	
International experience, experience with IFI-funded projects	<i>No. of projects with > 12 months input (min. 3)</i>	
Regional experience	<i>No. of projects in the region with > 12 months input (min. 1)</i>	
Experience in managing similar projects with similar tasks	<i>No. of projects with > 12 months input (min. 4)</i>	
Employment status with firm (no associate or freelancer will be accepted)	<i>> 5 years</i>	
PoA to fully represent the Consultant throughout the project within the scope of his role	<i>PoA (disqualification of the candidate if not presented)</i>	
Experience of working in a team with the offered staff for positions PD/PM/SM	<i>No. of projects with > 12 months input (min. 3)</i>	
Leadership experience (team leader, project manager) in firm	<i>> 3 years</i>	
Effective English verbal and writing skills	<i>Degree of skill: fluent/very good</i>	

Key Staff (international and local)

Criteria	Min. requirement	
University degree	<i>Min. Bachelor degree</i>	
Professional experience	<i>8 years</i>	
International experience, experience with IFI-funded projects	<i>No. of projects with > 6 months input (min. 1)</i>	
Regional experience	<i>No. of projects in the region with > 6 months input (min. 3)</i>	
Experience in the implementation of similar projects with similar tasks	<i>No of projects with > 6 months input (min. 3)</i>	
Employment status with firm (associate or freelancer will be accepted)	<i>> 3 years (associate or freelancer will get less points as employee)</i>	
Ability to work in multi-disciplinary teams	<i>Must have</i>	
Effective English verbal and writing skills	<i>Must have</i>	

Support Team (international and local)

Criteria	Min. requirement	
University degree	<i>Bachelor degree</i>	
Professional experience	<i>5 years</i>	
Regional experience	<i>No. of projects in the region</i>	
Experience in performing similar projects with similar tasks	<i>No. of projects with > 6 months input (min. 2)</i>	
Employment status with firm (associate or freelancer will be accepted)	<i>> 2 years (associate or freelancer will get less points as employee)</i>	
Ability to work multi-disciplinary teams	<i>Must have</i>	
Effective English verbal and writing skills	<i>Must have</i>	

Backstopper (international)

Criteria	Min. requirement	
University degree	Min. Bachelor degree	
Professional experience	8 years	
International experience, experience with IFI-funded projects	No. of projects with > 6 months input (min. 1)	
Regional experience	No. of projects in the region with > 6 months input (min. 1)	
Experience in the implementation of similar projects with similar tasks	No of projects with > 6 months input (min. 3)	
Employment status with firm (no associates or freelancer will be accepted)	> 3 years	
Ability to work in multi-disciplinary teams	Must have	
Effective English verbal and writing skills	Must have	

