



EUROPEAID/119860/C/SV/MULTI
Framework Contract – Beneficiary
LOT N° 2: Transport and Infrastructure
REQUEST N°

SPECIFIC TERMS OF REFERENCE

Feasibility Study on Drinking Water Quality in Kosovo (UNSCR 1244)

1. BACKGROUND

In Kosovo only 65-70% of inhabitants are connected to the public water supply systems. The current drinking water standards for Kosovo are detailed in UNMIK Administrative Instruction (Health) 2/1999 attached as Annex A. These standards apply to all drinking water supplied in Kosovo including both urban and rural supplies (> 50 persons or 10m³/day) but reflect the earlier Yugoslav drinking water quality standards (No 33/1987 and No 13/1991) and are generally recognised as being out of date and in urgent need of updating. The current standards do not reflect modern WHO developments in relation to parameters to be tested, minimum and maximum limits, sampling regimes, analysis and reporting all as set out in the latest Drinking Water Directive 98/83/EC.

Responsibility for monitoring drinking water quality for all public supplies in Kosovo rests with the National Institute of Public Health (NIPH) which takes samples, carries out analyses and reports on quality compliance on a regular basis via six regional laboratories in Pejë/Pec, Gjakovë / Đakovica, Mitrovicë / Mitrovica, Prizren / Prizren, Gjilan / Gnjilane and Ferizaj /Uroševac as well as the main laboratory in Prishtinë/Priština. Due to limitations on sampling and analytical equipment and limited staff resources, most of the sampling analysis and reporting at present is concerned with microbiological compliance although some limited testing of chemical and physical parameters is undertaken.

Seven regional water companies provide drinking water to customers in Kosovo through the public water supply systems. The IPH monitors drinking water quality provided to customers by these publicly owned companies as well as Municipality managed supplies (generally in the smaller towns and rural areas). Most of the bacteriological failures occur in the small towns/ rural water supplies (typically shallow wells or springs) although reported drinking water quality non-compliance (mainly bacteriological failures) from the public water supply systems range widely from about 0.1% in Gjakovë / Đakovica, to 7.4% in Prizren / Prizren according to recently (2007) published figures¹. These publicly owned (POE) water companies are regulated by the Water and Waste Regulatory Office (WWRO). The WWRO reports annually on the results provided by IPH (but WWRO are not responsible for sampling or analysis of the water quality).

¹ See the Annual Performance Report of the Public Water and Waste Companies in Kosovo 2007 published by WWRO in July 2008.

According to the recent DFID funded study into drinking water quality standards in Kosovo the existing drinking water quality legislation (AIH 2/1999) differs in a number of important respects from Council Directive 98/83/EC (the Drinking Water Directive (DWD)). These main differences include:

- AIH 2/1999 has Maximum allowable concentrations (MAC) for the Indicator parameters (Part C of DWD) and for lead, nitrate, nitrite, ammonia, and fluoride of the Chemical parameters (Part B) although they do not correspond directly to the parametric values of the DWD;
- The AIH has no MACs for the remaining 21 chemical parameters (Part B) of the DWD
- There are differences between the microbiological standards of the AIH and those of DWD
- The monitoring requirements do not correspond exactly
- The AIH applies to all drinking water whereas supplies smaller than 10m³/ day or 50 persons (equivalent to a consumption of 200 litres/capita/day (lcd) are exempt from its provisions.

2. Regional Water Companies

The seven regional water companies supply water in total to 1.7 million people out of a total of approximately 2.4 million in their service areas. Raw water is mainly abstracted from surface waters (Pejë/Pec and Prizren/Prizren mainly use good quality ground water however) whilst smaller Municipality supplies outside the responsibility of the POEs rely mainly on ground or spring water of variable quality. Raw surface water (generally from large impounding reservoirs) is generally treated using conventional gravity settlement and rapid gravity sand filtration followed by chlorination. However, groundwater treatment is often limited to chlorination only. Rural supplies are normally not treated.

Water supply service delivery to customers suffer from frequent interruptions in parts of several service areas including Mitrovicë/Mitrovica, Prishtinë/Priština Ferizaj/Uroševac and Gjilan/Gnjilane where demand exceeds supply, leading to potential “back-siphonage” of contaminated water into the network.

Pipe networks serving the public supplies are often in poor physical condition in need of replacement or rehabilitation with high levels of physical losses (leaks). Commercial losses are also high as a result of illegal connections often with faulty plumbing which exacerbate the water quality problems.

Once EC drinking water quality standards are introduced in Kosovo through a revision of the drinking water quality standards, the level of drinking water quality non-compliance is expected to rise significantly with respect to a number of physical and chemical parameters (eg turbidity, iron, manganese, THMs) as well as the microbiological parameters and significant investment in additional raw water resources, water treatment technology, leakage control, and network renewal/ rehabilitation will be necessary in order to achieve satisfactory drinking water compliance levels.

There are currently no “Rules” issued by NIPH giving guidance to water companies on how to notify customers in the event of a water quality failure. Furthermore water companies in conjunction with other stakeholders (e.g. KNIPH) need to develop written emergency action plans setting out procedures in the event of an emergency (e.g. the contamination of a raw water source by chemicals).

2. DESCRIPTION OF THE ASSIGNMENT

➤ **Global objective**

To provide Kosovo citizens with a reliable supply of potable drinking water according to European drinking water quality standards.

➤ **Specific objective**

To facilitate the improvement of drinking water quality standards in Kosovo to European standards through the development of a feasibility study looking at all issues relating to drinking water quality in Kosovo and making recommendations with costs for an IPA 2010 project.

➤ **Requested services**

In general the services shall include:

The Consultants will be responsible for the full implementation of the project and his/her specific services will include, but not be limited to:

- Undertaking a review of all available literature on drinking water quality issues in Kosovo.
- Reviewing the current NIPH sampling, analysis and reporting² procedures, analytical equipment provision in the six regional laboratories and the Headquarters in Prishtinë/Priština, and staff resources
- Undertake a detailed review including meetings with all key stakeholders including water companies, WWRO, MESP, Association of Municipalities and prepare accurate costs and implications covering the various options for NIPH monitoring of drinking water quality in the future (including developing a “centre of excellence in Prishtinë/Priština for a full range of analytical equipment together with satellite offices in the six other regions to undertake sampling and routine analysis only) and make recommendations to optimise the arrangements including an outline programme and costs.
- Undertake a detailed review of each of the seven regional water companies regarding raw water supply/ demand issues, water resource issues, water treatment issues, network condition rehabilitation and NRW issues and any other issues which impact on drinking water quality and provide recommendations and budget costs:
 - Essential investments and outline schemes to allow all companies to supply water to customers in their service areas on a continuous basis
 - Essential investments to upgrade water treatment works to ensure that water leaving the plants complies fully with the DWD
 - Essential investments for rehabilitation of the existing networks to reduce physical losses to enable drinking water quality at customers taps to normally comply with the DWD
 - Cost implications for the regional water companies and impacts on tariffs in relation to paying NIPH charges for undertaking the drinking water quality monitoring activities associated with the DWD

² IPH monitor drinking water quality on a Municipality basis-not on a regional water company basis.

- Liaise with NIPH, the regional water companies and WWRO and develop NIPH guidance notes to water companies in line with good European practice setting out detailed procedures on how to notify customers in the event of a water quality failure
- Liaise with with NIPH, the regional water companies and WWRO develop Emergency Action Plans setting out what water companies

➤ Required outputs

- Detailed feasibility report with recommendations and costs including:
 - An overview of the current situation in Kosovo concerning drinking water quality for all inhabitants
 - Budget costs and implications covering the various options and proposed solution for NIPH re. future monitoring of drinking water quality including sampling and analytical equipment, transposition of the DWD into Kosovo legislation, staff training;
 - Provide recommendations and budget costs for each of the seven regional water companies regarding raw water supply/ demand issues, resource issues, water treatment issues, network condition rehabilitation and NRW issues and any other issues which impact on drinking water quality and which need to be addressed in order to achieve compliance with the DWD at customers' taps;
 - Develop NIPH "Guidance notes" to water companies in line with good European practice setting out detailed procedures on how to notify customers in the event of a water quality failure;
 - Develop Emergency Action Plans setting out what water companies should do in the event of a major incident/ emergency (e.g. the contamination of a raw water source by chemicals)
 - Prepare detailed TOR for an IPA funded technical assistance project and supply of equipment project

3. EXPERTS PROFILE

3.1 Number of requested experts as per category and number of man-days per expert.

One expert Category I and one expert Category III is required for a total of **176 working days**.

Two experts are required to carry out the services for total of 88 days. The Contractor shall ensure that all services are provided and where necessary supplementary support/expertise will be provided through backstopping and will be deemed to be included in the fees of the experts. All Experts that are required to provide the services shall be fluent in English language and have the appropriate skills, experience, qualifications and aptitude for the work required of them.

Note: The starting date and end date (Month/Year) of experience must be clearly specified in the CV. Civil servants and other staff of the public administration of the beneficiary country cannot be recruited as experts

3.2 Profile required (education, experience, references and category as appropriate)

➤ ***Expert, Category I (Team Leader) (for a total of 88 working days)***

Qualification and skills

- Education at least up to Master degree (where a university degree has been awarded on completion of four years study in a university or equivalent institution) with 15 years experience or bachelor's degree with 16 years experience or 18 years experience in environmental engineering, hydrology, activities related to drinking water quality standards, sanitation, or associated fields;
- Fluent in English;
- Computer literate.

General professional experience

Minimum 15 years of professional experience in the fields mentioned above.

Specific professional experience

- Experience in at least one, preferable two projects, dealing with preparation of feasibility study on drinking water standards
- Experience in water standards monitoring
- Experience in drafting or implementing guidelines and/or emergency action plans in regard to water quality failure and water emergency actions.
- Experience in preparation of technical specifications, terms of references and budget cost estimates for national and/or EU funded project
- Relevant experience in another Western Balkan or accession country will be considered as an advantage.

➤ ***Expert, Category III (Water supply expert) (for a total of 88 working days)***

Qualification and skills

- Education at least up to Bachelor degree (where a university degree has been awarded on completion of three years study in a university or equivalent institution) or 5 years experience in environmental engineering, hydrology, activities related to drinking water quality standards, sanitation, or associated fields;
- Fluent in English;
- Computer literate.

General professional experience

At least 5 years of professional experience in the fields mentioned above.

Specific professional experience

- Experience in at least one project dealing with assessment and/or equipping and/or monitoring of drinking water systems

- Experience in preparation of technical specifications, terms of references and budget cost estimates for national and/or EU funded project
- Relevant experience in another Western Balkan or accession country will be considered as an advantage.

4. LOCATION AND DURATION

➤ Starting period

The project is expected to commence on 9 March 2009.

➤ Foreseen finishing period

The project should conclude before 1 September 2009.

➤ Planning

The number of days for the assignment is the number of days spent on the place of the assignment, plus the days needed for briefing and debriefing (to be held at the beginning and at the end of the mission). Briefing and debriefing shall take place at the premises of ECLO in Prishtina, Kosovo.

A **total of 176 working days** is foreseen for this Project.

Provisional timetable: 176 calendar days (9 March 2009 – 1 September 2009).

➤ Location of assignment

All days shall be performed in Kosovo except maximum 3 working days per expert are foreseen at home office for preparation of the final report.

5. REPORTING

➤ Content

The Final Report shall reflect the findings of the tasks outlined above. The Reports shall be prepared according to a standard EC format, providing information on:

- Analysis in accordance with each of the required services listed above;
- Activities undertaken and project deliverables;
- Problems encountered (and solutions found or not found);
- Recommendations;

The reports shall include the following Annexes:

- Feasibility study on drinking water standards including recommendations and costs
- Term of References for an IPA project following EC template and PRAG guidelines;

The experts shall provide the draft final Report at the end of their mission in Kosovo, by email and in hard copy duly signed. The ECLO will provide comments to the report, if any, to the experts within two weeks of receipt of the report.

The final report shall be submitted not later than two weeks after receipt of Contracting Authority's comments.

➤ **Language**

The working language of this assignment will be English. However, a translation of some documents into Albanian and Serbian language may be required.

➤ **Number of report(s) copies**

The required report (see relevant section above) shall be submitted in one hard and one soft copy (CD), in English.

All documentation should be addressed to:

Ms. Iva Stamenova

Task Manager

Team: Natural Resources and Environment

EC Liaison Office to Kosovo

Address: 1, Kosovo Street, 10000 Pristina – Kosovo

Email: Iva.Stamenova@ec.europa.eu

Further copies (up to three) may be requested by the Contracting Authority if necessary.

6. ADMINISTRATIVE INFORMATION

➤ **Items to foresee under ‘Reimbursable’**

The framework contractor shall include the following provisions in their financial offers under Reimbursable costs:

- Per Diems for the experts, where applicable (based on the expert's residency) and according to these Terms of References requirements. For expert who is resident in the beneficiary country (Kosovo), the per diems, if proposed, shall be justified by the framework contractor
- Costs for return travels (economic class) for the Expert [in case proposed expert is not resident in Kosovo] – one return travel per mission;
- Interpretation and translation costs

Under reimbursable costs no lump sum costs are allowed.

➤ **Tax and VAT arrangements**

On the grounds of the specific Council Regulations governing the concerned EC external aid program, VAT and any other local taxes and duties are excluded from the Community financing.

➤ **Others**

Office-related costs which may include office rental, communications (fax, telecommunications, mail, courier etc.), and secretarial are considered to be included within the fee rates of the Expert. No costs of this nature may be charged in addition. Expert seconded under this contract should be equipped with laptop/notebook computer, and/or have access to relevant communication and report writing facilities.