

# **EXPRESSION OF INTEREST (EOI)**

**Title of Consulting Service: Study of Water Pollution  
of River System of Nepal: First Phase Koshi River  
Basin Area**

**Method of Consulting Service: National**

**Project Name : Study of Water Pollution of River System of Nepal: First Phase  
Koshi River Basin Area**

**EOI : WECS/EOI/03/079/80**

**Office Name: Water and Energy Commission Secretariat**

**Office Address: Singh durbar Kathmandu**

**Funding agency : Government Budget**

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## **A. Request for Expression of Interest**

# Request for Expression of Interest

## Government of Nepal (GoN)

Name of Employer: Water and Energy Commission Secretariat

Date: 26-12-2022 01:00

Name of Project: Study of Water Pollution of River System of Nepal: First Phase Koshi River Basin Area

1. Government of Nepal (GoN) has allocated fund toward the cost of Study of Water Pollution of River System of Nepal: First Phase Koshi River Basin Area and intend to apply portion of this fund to eligible payments under the Contract for which this Expression of Interest is invited for National consulting service
2. The Water and Energy Commission Secretariat now invites Expression of Interest (EOI) from eligible consulting firms (“consultant”) to provide the following consulting services: Study of Water Pollution of River System of Nepal: First Phase Koshi River Basin Area
3. Interested eligible consultants may obtain further information and EOI document free of cost at the address Water and Energy Commission Secretariat, Water and Energy Commission Secretariat  
Singh durbar  
Kathmandu  
Bagmati Province  
Nepal during office hours on or before 10-01-2023 12:00 or visit e-GP system [www.bolpatra.gov.np/egp](http://www.bolpatra.gov.np/egp) or visit the client’s website [www.weecs.gov.np](http://www.weecs.gov.np)
4. Consultants may associate with other consultants to enhance their qualifications.
5. Expressions of interest shall be delivered online through e-GP system [www.bolpatra.gov.np/egp](http://www.bolpatra.gov.np/egp) on or before 10-01-2023 12:00
6. In case the last date of obtaining and submission of the EOI documents happens to be a holiday, the next working day will be deemed as the due date but the time will be the same as stipulated.
7. EOI will be assessed based on Qualification 40.0 %, Experience 50.0 %, and Capacity 10.0 % of consulting firm and key personnel. Based on evaluation of EOI, only shortlisted firms will be invited to submit technical and financial proposal through a request for proposal.
8. Minimum score to pass the EOI is 60

## **B. Instructions for Submission of Expression of**

# Instructions for Submission of Expression of Interest

1. Expression of Interest may be submitted by a sole firm or a joint venture of consulting firms.
2. Interested consultants must provide information indicating that they are qualified to perform the services (descriptions, organization and employee and of the firm or company, description of assignments of similar nature completed in the last 7 years and their location, experience in similar conditions, general qualifications and the key personnel to be involved in the proposed assignment).
3. This expression of interest is open to all eligible consulting firm.
4. In case, the applicant is individual consultant, details of similar assignment experience, their location in the previous 4 years and audited balance sheet and bio data shall be considered for evaluation.
5. The assignment has been scheduled for a period of 18 months. Expected date of commencement of the assignment is 25-02-2023.
6. A Consultant will be selected in accordance with the QCBS method.
7. Expression of Interest should contain following information:
  - (i) A covering letter addressed to the representative of the client on the official letter head of company duly signed by authorized signatory.
  - (ii) Applicants shall provide the following information in the respective formats given in the EOI document:
    - EOI Form: Letter of Application (Form 1)
    - EOI Form: Applicant's Information (Form 2)
    - EOI Form: Work Experience Details (Form 3(A), 3(B) & 3(C))
    - EOI Form: Capacity Details (Form 4)
    - EOI Form: Key Experts List (form 5).
8. Applicants may submit additional information with their application but shortlisting will be based on the evaluation of information requested and included in the formats provided in the EOI document.
9. The Expression of Interest (EOI) document must be duly completed and submitted in sealed envelope and should be clearly marked as "EOI Application for Short-listing for the Study of Water Pollution of River System of Nepal: First Phase Koshi River Basin Area. The Envelope should also clearly indicate the name and address of the Applicant. Alternatively, applicants can submit their EOI application through e-GP system by using the forms and instructions provided by the system.
10. The completed EOI document must be submitted on or before the date and address mentioned in the "Request for Expression of Interest". In case the submission falls on public holiday the submission can be made on the next working day. Any EOI Document received after the closing time for submission of proposals shall not be considered for evaluation.

## **C. Objective of Consultancy Services or Brief TOR**

# **Objectives of study or Brief Terms of Reference**

## **Terms of Reference**

### **For**

#### **1. Project Title**

Study of Water Pollution of River System of Nepal: First Phase Koshi River Basin Area

#### **2. Implementing Agency**

Water and Energy Commission Secretariat (WECS) in collaboration with identified relevant stakeholders.

#### **3. Background**

Water is the most essential commodities for all life and enough accessibility of clean water helps protect public health and promote sustainable human development as well. Despite its indispensability for human survival and human development, this finite resource is continuously dwindling due to excessive exploitation and unjust transgression over the water resources by human being. At present, out of the total quantity of water available in the earth, only 2.3% of it is in the form of freshwater. Surface water, one of the important components of hydrologic cycle, is the most vulnerable. Water bodies and current clean water data shows that out of the total 2.3% clean water available in the earth, surface water contributes only 1% of it.

Rivers play a vital role in shaping up the natural, cultural, and economic aspects of any country. Rapid growth of population and unplanned urbanization is major cause of water pollution as the amplified requirement of water, deficiency of sewage facilities, and scarce wastewater treatment facilities rigorously affect the water resources, and change the environment and ecology. Water pollution is now a national and global issue. Proper and timely management can reduce the degradation of rivers. The measurement of the quality of water can be done by water quality assessment.

As the surface waters of rivers is used for variety of purposes such as drinking, irrigation, constructional, industrial, recreational and hydropower generation. Regardless of its wide applications for various purposes, the quality of water used for different purposes are not same. Identification of nature and extent of water quality parameters are essential to identify the impacts of water pollution. Water quality monitoring and testing is the activity of investigating physical, chemical and microbiological water quality of water bodies and to assess whether these water bodies are fit for intended uses. A systematic water quality monitoring not only identifies the existing water quality of the water bodies and their fitness for intended uses but also help find the potential hazards and provides adequate information



for the preparation of sustainable water resource management plan. The quality water is the basis for determining how much the receiving water bodies have been polluted, has impacted and can lead to the development of effective means for controlling the pollution. So, in order to establish database of water quality of river basin of Nepal, WECS has planned to carry out the study on water pollution of major rivers of all river basins in Nepal. In first phase, the WECS intends to carry out the study on water pollution of major rivers and its major tributaries and surroundings of Koshi River basin.

Water and Energy Commission Secretariat (WECS) is a central planning and coordinating agency for water resources. The primary responsibility of WECS is to assist GoN, different ministries relating to Water Resources and other related agencies in the formulation of policies and planning of projects in the water and energy resources sector. WECS has gained its recognition from both national and international institutions for the works it has done so far in the water and energy sector. It has conducted many research and study programs related to water and energy sector development. The formulation of the National Water Resources Strategy and National Water Plan with the main objectives to develop a set of specific short, medium and long term actions plans for the water sector including programs and projects, investments and human resources for the short term (5 years), medium term (15 years) and long term (25 years) including the environmental management plan was one the major achievement of WECS. Beside the strategy and national plan, WECS has carried out many studies in water resources and energy sector.

#### 4. Introduction

Water Pollution is commonly caused by diffuse sources and point sources. Diffuse sources like river sedimentation, dissolved elements and metals, soil erosion, haphazard development activities such as unplanned road construction, fertilizers, pesticides from agricultural fields, open defecation, and from improper wastewater management are responsible to pollute the river system. Diffuse source pollutions are mostly common in rural areas, where majority of people are dependent on agricultural activities and have lack access to basic sanitation facilities. Similarly, there is excessive use of chemical fertilizers and pesticides in agricultural system. In the urban areas and rural settlements, the pollutions originate from both point- and diffuse sources. Direct discharges of domestic and industrial wastewater and dumping of solid wastes, dead animals etc. into natural water bodies (rivers, lakes, and ponds), unplanned urban development and deficiency of waste management facilities are major creator of water pollution problems.

Koshi River water basin is one of the major water basins of the country. Surface waters of this basin have been used for variety of purposes such as drinking, irrigation, construction, industrial, recreational and hydropower generation. Water for these different purposes must full fill different characteristics, for example the water bodies used for irrigation purposes must have the low salinity and SAR value within the defined limit, the total dissolved solids, pH and hardness could be important characteristics for industrial water, temperature, turbidity and faecal load could be important criteria for recreational water, total hardness could be the decisive parameter in laundry whereas temperature, DO, BOD, COD, TSS and ammonia could be critical parameters for aquatic lives and ecological water. Most importantly all water quality detriments (26 physical, chemical and microbiological parameters) defined by National Drinking Water Quality Standard (NDWQS) are important for drinking water. Since the denizens of this basin have been using surface water in variety of uses, monitoring of a wide range of water quality parameters are crucial for assessing the water quality of the basin against their intended uses and identifying potential sources of hazards and preparing best water resource management plan. As stated earlier, a systematic

water quality study helps find the potential hazards of surface water resources and assess appropriate control measures for improving the water quality, however many factors should be carefully considered and incorporated while preparing a monitoring plan.

As Social, Economic and Environment Division of WECS is involved in environment management plan for implementation of sustainable environment and natural resources from its establishment, this division has been assigned to carry out this study. The study is planned to be carried out from GoN Fund. WECS intends to conduct this study through competent National Consulting Firm(s).

## 5. Rationale of the Study

It is very necessary to manage the water quality to make the water appropriate for all the water users (drinking and household, irrigation and animal husbandry, power generation, industry, recreation, religious and social, navigation etc.), and for ecology, ecosystem and biodiversity. And similarly it is better to manage the pollution at its sources as far as possible. The study is very necessary to identify the pollution sources and river water quality thus to propose an appropriate management mechanism. And the study will help to enhance the national water quality data. And also the study will help to manage watersheds appropriately and river basin with the approach of integrated river basin management.

## 6. Objectives of the Study

The main objective of this study is to identify location of the different sources of pollutions and assess the water quality of the major tributaries of Koshi River Basin and near the major potential pollution influencing areas.

## 7. Scope of the Study

The scope shall include but not be limited to following activities and the explanations thereafter:

- ✚ Collect available past water pollution and quality data, information and reports of study area and perform their review
- ✚ Identify the location of various pollutant sources of the selected river basin and nearby area
- ✚ Identify the sources of pollutions of identified location of the selected river basin and nearby area
- ✚ Identify the type and kinds of pollution in the river basin and the nearby area
- ✚ Identify or estimate the extent and/or quantity pollution and make comparison with the allowable standards.
- ✚ Make detailed analysis of the present pollutants and its consequences.
- ✚ Collect water samples from each designated point on seasonal basis (summer, winter and autumn) for the period of 1 year, as per the standard methods available.

- ✚ Adopt the preservation of the collected samples and carry out their safe delivery into the laboratory for testing within stipulated time frame, and standard methods.
- ✚ Carry out laboratory testing of water quality parameters as per international standards for which national standards in not available.
- ✚ Analyze data and information obtained and collected.
- ✚ Identify the indigenous and traditional method and technologies to manage the watershed, water pollution and water quality.
- ✚ Identify the advanced and future method and technologies to manage the watershed, water pollution and water quality
- ✚ Analyze the prevailing policies, legal instrument, standards, directives, regarding water and related resources, water pollution and water quality
- ✚ Suggest appropriate mechanism for watershed management and integrated river basin management in regards to pollution free water available for all the sectors of its utilization.
- ✚ Propose the appropriate and applicable management mechanism and management related resources and activities for water pollution and water quality.
- ✚ Make comparison of allowable pollutant in the river system as at least four international standards and suggest the most cost effective and relevant pollution reduction systems.
- ✚ Prepare comprehensive water quality report and submit to the client.

For the main purpose of the study and the activities as mentioned above, the detailed study has to carry on one of the major river basins of Nepal originating from Himalaya and leaving the Nepalese boarder to India at south (proposed river basin: Koshi River Basin) within the Nepalese political boundaries are to be considered for the study and analyses. But the incoming pollution and flows from the upstream of the country's boundary also have to be taken into considerations.

The water quality study and analyses shall cover all the major tributaries of the Koshi River basin particularly in the specified influencing points based on the given criteria.

Sampling season: Autumn, summer, winter

Sample test: In situ and lab

Sampling locations: 7 tributaries (at least 5 points and maximum 10 locations in a tributary including Saptakoshi) total 50 locations minimum. Confluence point and influence points. The sample points should cover head to tail of the tributary. Confluence points (where two or more tributaries meet), sample may be taken in tributaries before confluence and after confluence. Influence points (sewage whether treated or untreated disposal points, tailrace disposal of power projects, mills, water abstraction points for water supply and other uses, water drainage points from other water uses, locations at end of dense forest, at ends of settlements, grazing points, cattle cross points, cattle drinking points, before and after waterfalls, big storage/impounding areas, drainage points of agricultural areas, bath and

washing areas, significant landslide areas, upstream and down streams of industrial and commercial areas. Heads and tails of each tributary, upstream and downstream of traditional cremation locations.

In addition, human activities have an important influence in the environment which concerns the water resources and their quality. So major settlement along the riverside of the basin should also be considered as point source of pollution and samples should be collected at both upstream and downstream of the settlement.

The list of water quality parameters to be tested and analyzed is given in table below.

The list of water quality parameters to be tested and analyzed

S.N	Water Quality Parameter Category	Specific Parameters
1	Physical	Temperature, pH, Conductivity, Turbidity, Color, Taste & Odour TSS, TDS, Dissolve Oxygen etc.
2	Chemical	Total Hardness, Calcium, Magnesium, Total Alkalinity, Ammonia, Nitrogen, Phosphorus, Nitrate, Nitrite, Fluoride, Total Phosphate, Chloride, Sulphate, Sodium, Potassium, Iron, Magnesium, Lead, Cadmium, Copper, Zinc, Aluminum, Mercury, Arsenic, Chromium,
3	Biochemical	Total Organic Carbon (TOC), Biochemical Oxygen Demand (BOD) and Chemical Oxygen Demand (COD)
4	Microbiological	Total Coliform, Faecal Coliform, Faecal streptococci bacteria
5	Biological indicators	Fish
6	Others	Chlorophyll, Organic micro pollutants (pesticides, chemical substances used in industrial process, products, and households), concentration of chemical fertilizer used in agriculture.

## 8. Approach and Methodology of the Study

The clear, precise and comprehensive detailing of the approach, methods and the methodology for the completion of the work will be the responsibility of the firms.

Nevertheless, the study has to be done with the intensive participatory and interactive approach. Participation of personnel of implementing agency has to be done in all the stage of the study process. Participations with interactive discussions with community stakeholders of local, basin and national level have to be done.

The study should be carried out in participatory approach in interaction of gauge reader, people involved at gauging stations, local people and other concerned stakeholders. The process of water quality sample collection, its preservation, in-situ testing, transferring sample lab and lab testing should be as per WMO guidelines. The samples collected should be representative of the sample collected site. The methodology and process of sample collection and testing in order to execute all tasks specified by the scope of work should be presented properly in the reports. The report should cover all the tasks assigned for this study. The lab testing of the collected sample should be done in the nationally registered laboratory. The list of water quality parameters tested and analyzed should be compared with national and international standards, if any.

The methodology of the study will be based, but not limited, to the following factors.

- I. Comprehensive review of the available literature and past studies
- II. Collection of necessary primary, secondary, tertiary data, map, images, satellite images and/or data etc. from different sources
- III. Modeling: with already developed model/s and/or by developing model/s (e.g. Sediment transport, etc.)during the study
- IV. Field visit and observation
- V. In situ quality assessment and lab testing of water quality parameters as per standards.
- VI. Structured and/or semi-structured and unstructured interviews, meetings, interaction and discussions with the stakeholders, seminars etc
- VII. Quantitative analysis: estimation or quantification of meteorological parameters, hydrological parameters, water resources, pollution type and kind, sediment volume and rate,
- VIII. Qualitative analysis
- IX. Workshops and Consultations
  - a. First workshop in Kathmandu(inception and concept dissemination)
  - b. Workshops for the field reports and interim reports presentation and interaction
  - c. Necessary consultation and interactive discussion with stakeholders, local and affected people in basin level
  - d. Final workshop in Kathmandu and expert panel workshops after Draft Final Report Submission
- X. Feedback and final analysis, synthesis and report finalization

#### Field visit

S. N.	Visitors	Purpose	Remarks
1	Key professionals (8 persons) Max. 15 days (half month) including travel	Site visits, verification of proposed sample location (location may be changed after this site visit upon judgment of team, however the changes shall be endorsed by WECS), finding out the key issues of river pollution and its implications, consultation and coordination with stakeholders about the ongoing study and its purpose.	The site visit is expected to conduct immediate after the approval of inception report and before mobilizing for the first sample collection.

		The visit may not cover all the proposed locations physically.	
2	Key persons including Team leader (1 day workshop, 2 days preparation, 2 days travel= 5 days total)	Necessary consultation and interactive discussion with stakeholders, local and affected people in basin level	Basin level stakeholders (Governmental & non-governmental agencies, private sector, users committees, academic and research professionals/institutions working in the basin in the relevant field. The workshop shall be conducted in presence of WECS team as well.
3	Chemical/lab assistants (4 persons/Technical assistants and field assistants 8 persons.( max. 30 days for each group, each visit)	Data collection, water sample collection, in situ test, data recording, sampling handling and transportation with standard as instructed.	3 times visit in 3 seasons, 4 team shall work simultaneously in 4 different clusters of 7 tributaries and main river.

## 9. Proposed Human Resources

The proposed human resources, their minimum qualification and minimum experience for the study are as in table below.

S.N	Title	Person-months	Experience	Qualification
Key Professionals				
1	Team Leader (Water management, or water development, or water quality,	9	Minimum 15 years as Manager/Team leader/coordinator or senior officer level)	Minimum Masters Degree

	water pollution or or water treatment or relevant to any one of these background)			
2	Water Quality or water treatment or water pollution Expert	3	Minimum 15 years experience in water quality or water treatment/pollution or related sector	Minimum Degree Masters
3	Environmentalist	2.5	Minimum 10 years in water related sector	Minimum Degree Masters
4	Socio-economist	2	Minimum 10 years experience in water related sector	Minimum Degree Masters
5	Chemist	3.5	Minimum 10 years experience in water related sector	Minimum Degree Masters
6	Remote Sensing and GIS expert	3	Minimum 10 years in water related relevant assignment	Minimum Degree Masters
Support staff and others				
7	Office Manager	12	Minimum 3 years experience in administration service	Minimum 12 standards
8	Chemical/lab assistants /Technical assistants(4 persons)	16	Minimum 3 years experience in chemistry or other lab, and minimum 1 year experience in water lab/water test	Minimum 12 standards
9	Field assistants (4 persons)	16	Able to work in field level, Physically fit	Minimum 10 standards (SEE/SLC)
10	Computer operator	9	Minimum one year experience related area	Minimum 12 standards with computer training

Field team for sample collection and testing:

3 seasons, 4 team for each season, team composed of 1 Chemical/lab assistants (4 persons)/Technical assistants and 1 field assistant, each team assigned 2 River/Tributaries, 30 days in each visits including travel and 10 days office preparation/training and field briefing, sample handling),

Chemical/lab assistants (4 persons)/Technical assistants and field assistants  
 $\{(30 \times 3 + 10 \times 3) \times 4\} / 30 = 16$  person months

### 10. Transfer of Knowledge and Training

It is plan to transfer the knowledge on use of existing and/or developed (developed during the study) computer software and/or models, used methods and/or other relevant special feature of the study. And it is proposed to train at least 5 numbers of personnel of the WECS and/or personnel of other identified stakeholder for the period of 2 days in a single or divided schedule.

### 11. Time Schedule

Total time for the study will be of 18 months. And it is expected to commence the study from February 2023. It is the responsibility of the consultant to plan in detail the work schedule and expert man months schedule to complete the assigned work within the assigned time frame.

S. N.	Activities	Month																		
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
		F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A
1	Contract agreement	█																		
2	Desk Study		█	█																
3	First National (Inception and concept dissemination) Workshop			█																
4	Inception Report			█																
5	Detailed study and analysis with necessary field visits and verification				█	█	█	█	█	█	█	█	█	█	█					
	Water quality test in situ and lab		█	█				█	█		█	█								
6	Interim Report I						█													
7	First Workshop for Field and Interim Reports Presentation and Interaction						█													
8	Interim Report II												█							
9	Second Workshop for Field and Interim Reports Presentation													█						



	and Interaction																		
10	Draft Final Report																		
11	Consultation and discussion with local people and experts																		
12	Knowledge transfer and training																		
13	Expert Panel Workshop																		
14	Final Report Submission																		
15	Project Completion																		

## 12. Provisions by the Client

WECS can provide the books, publications and literatures etc. which are available in the WECS library. The borrowing can be made as per the prevailing rules of the WECS library.

## 13. Property Rights

WECS will have the sole authority on all data (primary and analyzed), texts, pictures, maps, images (satellite and other), letters, analysis, questionnaires (filled and unfilled) and other information and materials collected during the study. Therefore, the consultant should include a letter indicating the transfer of copyright on information. The consultant should refrain from using any of the information in any other studies without receiving prior approval from WECS. Failing to get prior approval from WECS in such cases may result in black listing of the consultant in WECS works and publication of such act of the consultant in national daily newspapers.

## 14. Payments

The payments schedule will be as mentioned in the table below.

S. No	Payments	Payment % of total contract amount	Preconditions for payment
1	First Installment	20.00	Submission and approval of

			Inception Report
2	Second Installment	20.00	Submission and approval of Field Reports and Interim report I
3	Third Installment	20.00	Submission and approval of Field Reports and Interim Report II
4	Fourth Installment	20.00	Submission and approval of Draft Final Report
5	Fifth and Final Installment	20.00	Submission, review and approval of the Final Report with the project completion

## 15. Deliverables

The consulting firm will deliver the following reports:

- a) Inception Report within two month from the date of agreement (two hard copies and one soft copy)
- b) Workshops' reports (report's of each workshop), within two weeks from the date of workshops (Two hard copies and one soft copy)
- c) Interim Report (I), after two and within three month after the approval of Inception Report (two hard copies and one soft copy)
- d) Interim Report (II), after six and within seven month after the approval of Interim Report (I) (two hard copies and one soft copy)
- e) Field Visit Reports, within three weeks of the completion of all the field visits (two hard copies and one soft copy)
- f) Draft Final Report (Ten hard copies and one soft copy)
- g) Final Report (Three hard copies and one soft copy)

The contents (table of contents) and the organization of reports have to be done according to standard practices of the corresponding reports, and have to be approved prior.

The final report has to be synthesized and organized with main report, used data, images, information, results, mathematical formula, models, model inputs, model results, graphs, hydrographs, tables, maps, photographs etc. in different volumes, appendixes, annexes etc. The aspects under the title of objectives, scope, approach and methodology, background and introduction and other applicable part of these terms of reference along with geophysical and socio-economical parameters of the study area are expected to cover under the report.

The consultant has to submit the electronic version of all the reports in PDF as well as in workable format such as word, excel, power point etc. in pen drive. Soft copies shall contain all contents as in the hard copies submitted in addition to supporting presentation slides, movies or videos, photographs, charts and figures data tables, information and analyses that were carried out and collected for the study. Each report should be supported with the photographs of gauging station. Each report should cover at least following aspects:

### **Inception Report**

The inception report should cover at least findings of desk study & literature review, detail approach and methodology to conduct each task, work schedule, manning seclude, list and details of sampling locations based on given criteria. *It is also compulsory to demonstrate the detailed plan of water quality testing (in situ and lab) with proposed locations of taking sample from Rivers. Justification and rationale for the proposed location shall be justified. WECS may suggest reviewing the proposed plan of testing with sampling locations.*

### **First Interim Field Report**

The first interim field report should cover at least findings of the field work, water quality data and test reports completed within in this period. It should also contain the list of people contacted and photographs taken.

### **Final Field Report**

The final field report should cover at least findings of all the field works, water quality data and test reports completed within the period of field work. It should also contain the list of people contacted and photographs taken.

### **Draft Final Report**

The draft report should cover finding of study, pertinent information of monitoring station, water quality report, analysis of water quality parameters, comparison the parameters with national and international standards (if any). It should cover all aspects mention in the scope of work. It should also describe the methodology adopted for the study. The Consultant shall provide all data (raw and processed), field data, laboratory result and supporting analysis used in this study alone with report including photographs.

### **Final Report**

The final report should be prepared addressing and incorporating comments and suggestions provided by the client on Draft Report. The final report must be submitted within the three months of the completion of Field Work.

## **15. Expert Review of Reports**

WECS may appoint experts as Technical Support Group (TSG) member for reviewing the reports prepared by consultant and submitted to WECS. Consultant shall cooperate the TSG and it is mandatory to address the comments and feedbacks recived from the TSG. Selection of TSG members shall be sole authority of WECS. All reports or reports of only some stages/phase may be reviewed based on necessity. The terms and conditions for the TSG shall be governed by agreement made between WECS and the concern member.

## **16. Language of the Report:**

All the reports shall be prepared and submitted in English. In addition to English version, the consultant should include executive summary of the final report in Nepali language too.

## **17. Technology Transfer**

Consultant shall organize 2 working days training program under technology transfer. This shall include 10 participants covering technical officers involved in the study from WECS and related government organization. Consultant shall prepare detail training manual.

### **18. Property Rights**

Property rights WECS shall have the sole authority on all data (primary, secondary and analyzed), database files, model executable file with input, parameter and output files, results, finding, texts, map, photographs, image and supporting information collected during the survey. The consultant shall refrain from using any of the information in any other studies without receiving prior approval from WECS. Failing to get prior approval from WECS in such cases may result in black listing of the consultant in WECS future works.

## **D. Evaluation of Consultant's EOI Application**

# Evaluation of Consultant's EOI Application

Consultant's EOI application which meets the eligibility criteria will be ranked on the basis of the Ranking Criteria.

## i) Eligibility & Completeness Test

Sl. No.	Criteria Title	Compliance
1	Corporate Registration	
2	Tax Clearance/Tax Return Submission for fiscal year 2078/079	
3	VAT/PAN Registration	
4	EOI Form 1: Letter of Application	
5	EOI Form 2: Applicant's Information Form	
6	EOI Form 3: Experience (3(A) and 3(B))	
7	EOI Form 4: Capacity	
8	EOI Form 5: Qualification of Key Experts	
9	In case of a natural person or firm/institution/company which is already declared blacklisted and ineligible by the GoN, any other new or existing firm/institution/company owned partially or fully by such Natural person or Owner or Board of director of blacklisted firm/institution/company; shall not be eligible consultant.	
10	If the corruption case is being filed to Court against the Natural Person or Board of Director of the firm/institution /company or any partner of JV, such Natural Person or Board of Director of the firm/institution /company or any partner of JV shall not be eligible to participate in procurement process till the concerned Court has not issued the decision of clearance against the Corruption Charges.	

## ii) EOI Evaluation Criteria

### A. Qualification

Sl. No.	Criteria	Minimum Requirement
1	Team Leader	Masters degree (Water management, or water development , or water quality, water pollution or or water treatment or relevant to any one of these background) and minimum 15 years of experience as manager/team leader /coordinator or senior officer level)
2	Water Quality or water treatment or water pollution Expert	Minimum Masters Degree in relevant field and Minimum 15 years experience in water quality or water treatment/pollution or related sector
3	Environmentalist	Minimum Masters Degree in relevant field and Minimum 10 years in water related sector
4	Socio-economist	Minimum Masters Degree in relevant field and Minimum 10 years in water related sector
5	Chemist	Minimum Masters Degree in relevant field and Minimum 10 years in water related sector
6	Remote Sensing and GIS expert	Minimum Masters Degree in relevant field and Minimum 10 years in water related relevant assignment

Score: 40.0

### B. Experience

Sl. No.	Criteria	Minimum Requirement
1	General Experience of consulting firm	General Work Experience of the firm in the Water sector/ /Modeling/water statistics or any other study related to water

Sl. No.	Criteria	Minimum Requirement
		sector having consulting fee more than NRs. 1 million
2	Specific experience of consulting firm within last 7 years. In case of person, specific experience of the person within last 4 years.	Work experience of the firm in Water Quality or Water Treatment or Water Water Pollution or Waste water treatment ore relevant studies or closed to proposed study. The completed projects/tasks having contract amount/value less than NRs. 1 million shall not be considered for evaluation.

**Score: 50.0**

**C. Capacity**

Sl. No.	Criteria	Minimum Requirement
1	Financial Capacity.[Average turnover required shall not exceed 150% of cost estimate]	Financial Capacity of the Firm in NRs 16 (Average Annual Turnover (AAT) in million NRs in last five consecutive fiscal years)

**Score: 10.0**

**Minimum score to pass the EOI is: 60**

Note : If the corruption case is being filed to Court against the Natural Person or Board of Director of the firm/institution /company or any partner of JV, such Natural Person or Board of Director of the firm/institution /company or any partner of JV such consultant's proposal shall be excluded during the evaluation.

## **E. EOI Forms & Formats**



## **E. EOI Forms & Formats**

Form 1. Letter of Application

Form 2. Applicant's information

Form 3. Experience (*General, Specific and Geographical*)

Form 4. Capacity

Form 5. Qualification of Key Experts

**Standard EOI Document**

**1. Letter of Application**

*(Letterhead paper of the Applicant or partner responsible for a joint venture, including full postal address, telephone no., fax and email address)*

Date: .....

To,

Full Name of Client: \_\_\_\_\_

Full Address of Client: \_\_\_\_\_

Telephone No.: \_\_\_\_\_

Fax No.: \_\_\_\_\_

Email Address: \_\_\_\_\_

Sir/Madam,

1. Being duly authorized to represent and act on behalf of (hereinafter "the Applicant"), and having reviewed and fully understood all the short-listing information provided, the undersigned hereby apply to be short-listed by **[Insert name of Client]** as Consultant for **[Insert brief description of Work/Services]**.
2. Attached to this letter are photocopies of original documents defining:
  - a) the Applicant's legal status;
  - b) the principal place of business;
3. **[Insert name of Client]** and its authorized representatives are hereby authorized to verify the statements, documents, and information submitted in connection with this application. This Letter of Application will also serve as authorization to any individual or authorized representative of any institution referred to in the supporting information, to provide such information deemed necessary and requested by yourselves to verify statements and information provided in this application, or with regard to the resources, experience, and competence of the Applicant.
4. **[Insert name of Client]** and its authorized representatives are authorized to contact any of the signatories to this letter for any further information.<sup>1</sup>
5. All further communication concerning this Application should be addressed to the following person,  
  
*[Person]*  
  
*[Company]*  
  
*[Address]*  
  
*[Phone, Fax, Email]*
6. We declare that, we have no conflict of interest in the proposed procurement proceedings and we have not been punished for an offense relating to the concerned profession or

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<sup>1</sup> Applications by joint ventures should provide on a separate sheet, relevant information for each party to the Application.

**Standard EOI Document**

business and our Company/firm has not been declared ineligible.

7. We further confirm that, if any of our experts is engaged to prepare the TOR for any ensuing assignment resulting from our work product under this assignment, our firm, JV member or sub-consultant, and the expert(s) will be disqualified from short-listing and participation in the assignment.
8. The undersigned declares that the statements made and the information provided in the duly completed application are complete, true and correct in every detail.

**Signed** :

**Name** :

**For and on behalf of (name of Applicant or partner of a joint venture):**

**Standard EOI Document**

**2. Applicant's Information Form**

*(In case of joint venture of two or more firms to be filled separately for each constituent member)*

1. Name of Firm/Company:
2. Type of Constitution (*Partnership/ Pvt. Ltd/Public Ltd/ Public Sector/ NGO*)
3. Date of Registration / Commencement of Business (*Please specify*):
4. Country of Registration:
5. Registered Office/Place of Business:
6. Telephone No; Fax No; E-Mail Address
7. Name of Authorized Contact Person / Designation/ Address/Telephone:
8. Name of Authorized Local Agent /Address/Telephone:
9. Consultant's Organization:
10. Total number of staff:
11. Number of regular professional staff:

*(Provide Company Profile with description of the background and organization of the Consultant and, if applicable, for each joint venture partner for this assignment.)*

**Standard EOI Document**

**3. Experience**

**3(A). General Work Experience**

*(Details of assignments undertaken. Each consultant or member of a JV must fill in this form.)*

<b>S. N.</b>	<b>Name of assignment</b>	<b>Location</b>	<b>Value of Contract</b>	<b>Year Completed</b>	<b>Client</b>	<b>Description of work carried out</b>
1.						
2.						
3.						
4.						
5.						
6.						
7.						

**Standard EOI Document**

**3(B). Specific Experience**

**Details of similar assignments undertaken in the previous seven years**

*(In case of joint venture of two or more firms to be filled separately for each constituent member)*

Assignment name:	Approx. value of the contract (in current NRs; US\$ or Euro) <sup>2</sup> :
Country: Location within country:	Duration of assignment (months):
Name of Client:	Total No. of person-months of the assignment:
Address:	Approx. value of the services provided by your firm under the contract (in current NRs; US\$ or Euro):
Start date (month/year): Completion date (month/year):	No. of professional person-months provided by the joint venture partners or the Sub-Consultants:
Name of joint venture partner or sub-Consultants, if any:	Narrative description of Project:
Description of actual services provided in the assignment:  <b>Note: Provide highlight on similar services provided by the consultant as required by the EOI assignment.</b>	

Firm's Name: \_\_\_\_\_

<sup>2</sup> Consultant should state value in the currency as mentioned in the contract

**Standard EOI Document**

**3(C). Geographic Experience**

**Experience of working in similar geographic region or country**

*(In case of joint venture of two or more firms to be filled separately for each constituent member)*

<b>No</b>	<b>Name of the Project</b>	<b>Location (Country/ Region)</b>	<b>Execution Year and Duration</b>
1.			
2.			
3.			
4.			
5.			
6.			
7.			

**Standard EOI Document**

**4. Capacity**

**4(A). Financial Capacity**

*(In case of joint venture of two or more firms to be filled separately for each constituent member)*

<b>Annual Turnover</b>	
<b>Year</b>	<b>Amount Currency</b>

- **Average Annual Turnover**

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*(Note: Supporting documents for Average Turnover should be submitted for the above.)*



**Standard EOI Document**

**4(B). Infrastructure/equipment related to the proposed assignment<sup>3</sup>**

<b>No</b>	<b>Infrastructure/equipment Required</b>	<b>Requirements Description</b>
<b>1.</b>		
<b>2.</b>		
<b>3.</b>		
<b>4.</b>		
<b>5.</b>		

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<sup>3</sup> Delete this table if infrastructure/equipment for the proposed assignment is not required.

**Standard EOI Document**

**5. Key Experts** *(Include details of Key Experts only)*

*(In case of joint venture of two or more firms to be filled separately for each constituent member)*

<b>SN</b>	<b>Name</b>	<b>Position</b>	<b>Highest Qualification</b>	<b>Work Experience (in year)</b>	<b>Specific Work Experience (in year)</b>	<b>Nationality</b>
1						
2						
3						
4						
5						

(Please insert more rows as necessary)

## D. Evaluation Criteria (Evaluation of Consultant's EOI Application)

*Consultant's EoI application which meets the eligibility criteria will be ranked on the basis of Ranking Criteria as detailed below.*

<b>i) Eligibility &amp; Completeness Test</b>	<b>Compliance</b>
Copy of Registration of the company/firm	
Tax Clearance/Tax Return Submission for Fiscal year 2078/79	
VAT/PAN Registration	
Power Of Attorney	
Self-Declaration	
EOI Form 1: Letter of Application	
EOI Form 2: Applicant's Information Form	
EOI Form 3: Experience (3(A) and 3(B))	
EOI Form 4: Capacity	
EOI Form 5: Qualification of Key Experts	

Note: Only the Firms or JV(s) fulfilling the Eligibility & Completeness Test criteria mentioned above shall be eligible for further evaluation. The EoI application of those Firms or JV(s) which do not fulfill the above criteria shall not be evaluated further.

<b>ii)</b>	<b>EOI Evaluation Criteria</b>		
<b>SN</b>	<b>Description</b>	<b>Weightage</b>	<b>Marks</b>
<b>1</b>	<b>Proposed Key Professionals for the Study (Qualification &amp; Experience)</b>		<b>40</b>
<b>I</b>	<b>Qualification of the Key Personnel in relevant Discipline:</b> Marks will be equally distributed among the list of key Personnel /Professionals	8 marks	
A	Ph. D. or Higher Qualification	100 %	
B	Master's Degree	90%	
C	Bachelor's Degree In case the min. qualification is Master's degree, Professionals with Bachelor's degree will not be awarded the mark under this criterion.	80 %	
<b>II</b>	<b>Experience of the Key Professionals:</b>	32 marks	

Study of Water Pollution of River System of Nepal: First Phase Koshi River Basin Area

A	<p>Team Leader</p> <ul style="list-style-type: none"> <li>Should have min. qualification of Master degree in relevant subject (Engineering or Chemistry or relevant subject to water quality/water pollution).</li> <li>Should have min. 15 years of experience after graduation.</li> </ul>	1X7 = 7	
B	<p>Other Key Professionals</p> <ol style="list-style-type: none"> <li>Water Quality or water treatment or water pollution Expert</li> <li>Environmentalist</li> <li>Socio-economist</li> <li>Chemist</li> <li>RS/GIS Expert</li> </ol> <ul style="list-style-type: none"> <li>Should have min.15 years of experience after graduation for Water Quality or Water Treatment or Water Water Pollution expert and 10 years for others.</li> <li>Should have min. qualification of Master's Degree in relevant subject</li> </ul>	5X5 = 25	
<b>2</b>	<b>Work Experience of the Firm (Only study completed projects will be considered for evaluation)</b>		<b>50</b>
<b>2a</b>	<b>General Work Experience of the firm in the Water sector/ /Modeling/water statistics or any other study related to water sector having consulting fee more than NRs. 1 million</b>	20 marks	
A	5 or more than 5 project	100%	
B	3 or less than 5 project	90%	
C	2 projects	80%	
D	Less than 2 Projects	0%	
<b>2b</b>	<b>Specific Experience of the firm in last 7 years</b>		
	<b>Work experience of the firm in Water Quality or Water Treatment or Water Water Pollution or Waste water treatment or relevant studies or closed to proposed study. The completed projects/tasks having contract amount/value less than NRs. 1 million shall not be considered for evaluation.</b>	30 marks	
A	5 or more than 5 projects	100 %	
B	3 or less than 5 projects	90 %	
C	2 projects	80 %	
D	Less than 2 Projects	0%	

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<b>3</b>	<b>Financial Capacity of the Firm in NRs (Average Annual Turnover (AAT) in million NRs in last five consecutive fiscal years)</b>		<b>10</b>
	More than 18	100 %	
	More than 16 and upto 18	80 %	
	Less than 16	0%	
<b>TOTAL MARKS</b>			<b>100</b>

Note: Curriculum Vitae (CV) of the key professionals shall be submitted with expert's original signature in blue indelible ink along with the notarized copy of the Nepal Engineering Council (NEC)'s certificate of the professionals required to be registered as per NEC Act, 2055 and Regulation, 2057, and Academic qualification Certificates shall also be submitted for each expert. Notarized copy of certificates of projects completed by the firms shall be submitted. The notarized copy of work completion certificate of Firms shall be submitted. The certificate of Specific experience of the Firm and Personnel shall be submitted.