# EXPRESSION OF INTEREST (EOI)

## Title of Consulting Service: CS 1/075/76

## Method of Consulting Service: National

**Project Name : DPR Preparation for construction of a dam and an artificial lake in Jiri and preparation of required plans**

**EOI : CS 1/075/76**

**Office Name: Jiri Municipality, Dolakha**

**Office Address: Jiri, Dolakha  Jiri Dolakha**

**Funding agency : Government Budget**

# Abbreviations

BD ... ..... Bidding Document

BDF ..... .. Bidding Forms

BDS ..... .. Bid Data Sheet

BOQ ... ..... Bill of Quantities

COF ..... Contract Forms

DP ... ..... Development Partners

DoLIDAR ..... Department of Local Infrastructure Development and Agricultural Roads

ELI ... ..... ... Eligibility

EEC... ..... .. Evaluation and Eligibility Criteria

GCC ... ..... .. General Conditions of Contract

GoN ..... .. Government of Nepal

ICC ..... International Chamber of Commerce

IFB ……. Invitation for Bids

ITB ... ..... Instructions to Bidders

JV ... ..... .. Joint Venture

NCB ... ..... National Competitive Bidding

PAN ... ..... .. Permanent Account Number

PPA ... ..... .. Public Procurement Act

PPMO ... ..... Public Procurement Monitoring Office

PPR ... ..... .. Public Procurement Regulations

SBD ..... .. Standard Bidding Document

SCC ... ..... .. Special Conditions of Contract

TS ... ..... Technical Specifications

VAT ... ..... .. Value Added Tax

WRQ ... ..... ... Works Requirements

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# A. Request for Expression of Interest

# Request for Expression of Interest

## Government of Nepal (GoN)

Name of Employer: Jiri Municipality, Dolakha

Date: 01-02-2019 15:20

Name of Project: DPR Preparation for construction of a dam and an artificial lake in Jiri and preparation of required plans

1. Government of Nepal (GoN) has allocated fund toward the cost of DPR Preparation for construction of a dam and an artificial lake in Jiri and preparation of required plans 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 Jiri Municipality, Dolakha now invites Expression of Interest (EOI) from eligible consulting firms ("consultant") to provide the following consulting services: DPR Preparation for construction of a dam and an artificial lake in Jiri and preparation of required plans
3. Interested eligible consultants may obtain further information and EOI document free of cost at the address Jiri Municipality, Dolakha,Jiri Municipality, Dolakha
   Jiri, Dolakha
   Jiri, Dolakha
   Nepal during office hours on or before 17-02-2019 12:00 or visit e-GP system www.bolpatra.gov.np/egp or visit the client's website www.jirimun.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 iri Municipality, Dolakha
   Jiri, Dolakha
   Jiri, Dolakha
   Nepal on or before 17-02-2019 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 40.0 %, and Capacity 20.0 % 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 2076-09-15. Expected date of commencement of the assignment is 21-03-2019.
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 DPR Preparation for construction of a dam and an artificial lake in Jiri and preparation of required plans.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

# TERMS OF REFERENCE *(ToR)*

1. **Background**

- Jiri municipality in Dolakha district, Province 3, is created by combining previous 4 VDCs namely Syama, Mali, Jiri, and Thulopataal. The municipality, with an area of 211.25 square km and population of 15,515 (census 2011), is located at an altitudinal extent between 1650m to 4514m. It is connected to the national highway network through the 188 km Kathmandu-Lamosangu-Jiri road and is about 6-8 hours drive under normal conditions. With ward wise population distribution varying from 1,158 to 2,000, and density varying from 0.11 to 2.77 pph, its settlements bear resemblances typical of the mountain settlements in Nepal.

- Jiri Valley, Yellung Valley, Pumpa Valley and Sikri Valley are three prominent small valleys in the municipality. The municipality bears locational and comparative advantage bestowed by its location, the comparative mountain environment and its sheer natural beauty. The municipality has also made tremendous efforts towards promoting sustainable local agriculture as evidenced from the livestock development farm established some 50 years ago that has extension programmes in crop and horticulture. In recent decades a number of initiatives in agricultural specialization are underway that include potato, vegetables, Akbare chillies, Kiwi, and initiatives in fisheries that include rainbow trout farming. The proliferation of agricultural cooperatives in the recent times further ensures economic growth and livelihoods. Jiri is well known for its cheese and dairy production too. The high mountain forests and pastures are also home to unique biodiversity, including herbs and medicinal plants.

- This natural abundance compounded with socio-cultural diversity provides Jiri with unique advantages and tourism opportunities. However, owing to the lack of commensurate employment and income opportunities locally, a continuous stream of outmigration is taking place. While opportunities for the growth of tourism, horticulture, livestock etc abound a development concept that ties all the potentialities and opportunities together has been wanting.

- Keeping in view of this context, the municipality aspires to promote tourism by constructing an artificial lake in Jiri Valley that could help bring together the development opportunities of the entire municipality. The Jiri Lake is presumed to be a new and novel tourism product for the Jiri valley and a source of unique attraction for tourists, both domestic and foreign. The idea is to create a lake approximately 1.3km in length and between 90-150 m in width in the lower Jiri valley by impounding the waters of the Jiri Khola through the construction of a dam (45-60m in height) that would also generate approximately 2.4MW of electricity and augment water to the hydel projects in the lower reaches during the dry season.

- The municipality therefore seeks a team of consultants to prepare the DPR of the proposed lake and dam along with geotechnical and environmental investigations. The DPR will be augmented with a comprehensive tourism development and management plan. The consultants will also provide inputs for the spatial planning of the valley from the perspective of the resident population as well as the tourists.

## 2. Objectives

2.1 **Primary Objective**:

- To prepare detail project report (DPR) which shall at core be comprised of among others the following things: (a) feasibility analysis of the construction of 45-60 m tall multi-purpose dam (as proposed in the initial pre-feasibility study) over Jiri Khola in Jiri Valley with the prospect to generate electricity and create a recreational lake in the upstream (b) assessment of potential risk and vulnerabilities (c) impact analysis of urbanization and tourism development on the natural resources and landscape including proposed lake and dam (d) recommendation on the viability of the proposed dam and lake including other viable alternative, and (e) blue print (plan) to execute, operate and manage the project.

2.2 **Secondary objective**:

- Based on the impact analysis undertaken above, propose long-term tourism development and management plan as well as spatial development framework of Jiri Valley. Such framework should also include regulatory instruments to alleviate uncontrolled conversion of land and environmental pollution, besides key development initiatives that are helpful to guide planned tourism and spatial development.

## 3. Scope of Work

- The scope of work shall broadly include two segments. The *first* includes preparation of detail project report (DPR) which comprises of feasibility analysis and execution plan for the construction of dam and recreational lake, and the *second* includes preparing plan framework to guide tourism and urbanization in Jiri Valley. Also, the extent of spatial analysis may extend beyond the functional boundary of Jiri Valley to include its surroundings. Jiri Municipality shall form an advisory team consisting of experts to provide orientation and guidance to the consulting team, and also to review the work. Initial orientation shall be provided prior to the commencement of feasibility study. The advisory team shall review the DPR, and the prepared plan framework also. The consulting team is required to incorporate any advice attached thereto.

- The consulting team shall carry out all the related works in close liaison with the municipality throughout the project completion period. It is required to establish an office and undertake the assignment in Jiri itself. To facilitate this, the municipality shall provide furnished working space for the team. This is intended to keep citizens

informed about the project and also solicit their participation and feedback as much as possible.

- The feasibility analysis has to thoroughly investigate and elaborate on soundness of the project in all aspects: technical, environmental, social, financial and economic. Considering the geological and ecological sensitivity of the region, several environmental tests and investigations might be required prior to site selection. Suitability of the project has to be rigorously demonstrated—taking into account of further analysis of all potential risks and vulnerabilities. These may arise from either natural sources such as seismic activity or historical water discharge flowing in Jiri Khola with severe implications leading to failure of dam and effect on downstream areas. All risks have to be identified, while also revealing intensity of risk (from low to high) including their mitigation measures.

- The revealed practicality and do-ability of the project including its alternative forms—demonstrated from the feasibility analysis needs to be the precondition to move to next phase of preparing execution plan. Such plan shall include (a) detail engineering design of dam and related physical infrastructures (b) list of project activities (c) cost estimate (d) implementation schedule (e) institutional arrangement to execute the project, and (f) project operational and management plan. Side by side, a development framework to guide planned tourism and spatial development of the Valley shall also be prepared.

- The *technical feasibility* should examine viability of the multipurpose dam—which enables power generation and also creates recreational lake. The consulting team is required among others to undertake the following key activities, but not limiting to them only. These includes to (a) examine suitability of site (b) gather all required information and undertake all geo-technical, hydrological, and topographical studies and/or tests (as mentioned in the method section of this ToR along with any other necessary tests as deemed fit by the consultant) to determine characteristics including bearing capacities and suitability of soil that hold dam and power house for electricity generation (c) propose suitable type of dam (d) examine slope failure around the proposed lake (e) undertake cadastral survey to assess land availability and also recommend methods for acquisition of land that is required for construction of dam and proposed lake. This feasibility study has to carefully examine on using participatory land techniques like land pooling for acquisition of land, so that all affected landowners are rehabilitated in the project area in fair and equitable manner. National documents comprising of *Guidelines for Study of Hydropower Projects* (HMG, Nepal, MoWR, Department of Electricity Development, 2003) and *Design Guidelines for Headworks of Hydropower Projects* (GoN, Ministry of Water Resources, Department of Electricity Development, 2006) should also be studied and followed.

- The *environmental feasibility* should examine the impact and its scale that the proposed dam and lake will have on existing flora and fauna including impacts to forest land, aquatic ecology, and natural landscape and resources—in and around the project site

including upstream and downstream areas and an area that the lake will submerge. The examination should also evaluate the impact of the project on micro-climatic condition of Jiri Valley.

- The *social feasibility* should examine in detail how many and in what way—that is directly (physical and economic displacement, loss of property) or indirectly (disturbance to social relations) households will be affected as a result of the proposed project? Such examination should clearly reveal whether the households will be entirely displaced from their current site or extent of property losses including land, houses, sheds, plantations, and other physical properties that they will suffer. The examination should also thoroughly chronicle extent of losses of public land, public properties, and cultural sites, and also carefully assess as how will these losses impact the social relations and culture of the area.

- The *financial feasibility* should examine as how the resources can be mobilized to implement the proposed project? Who are the likely sponsors for financing? What would be cash flows and how shall it be managed during the project period? What would be the interest rate, payback period and payback amount if the resources are burrowed from the financing institutions? What would be the pricing structure and income from the various built infrastructures and services? What would be the net financial return?

- The *economic feasibility* should examine in detail the overall profitability of the project beyond financial feasibility—that would accrue to Jiri Valley and in its surroundings. It should assess demand for water that consists of water for residential purposes, industrial water, agricultural water, instream flow requirements, and water to improve the environment. If deemed necessary, it should also examine water supply capacity of existing water resource facilities, and change in supply as a result of the project. Similarly, the benefits of this project in terms of irrigation, improved river environment, reduced flood damage, among others, shall be identified.

- Other aspects to assess include the likely scenario for the local and external private entrepreneurs to actually invest or come to invest in the tourism and hospitality sector infrastructures such as hotels, resorts, restaurants, and homestays as a result of the project. Similarly, other spillover benefits in other areas of production sector need to be analyzed. This may, among others, include agriculture comprising of organic food (potato, green vegetables, milk, cheese) and fruit (kiwi); fish, meat and livestock production; floriculture (orchids); and production of local arts and handicrafts (to be supplied to hotels and restaurants, and also for export). The economic feasibility should also make an assessment of the overall revenue—that may be generated from these various economic sub-sectors.

- Risk assessment: The feasibility study has to assess all potential risks and vulnerabilities in all aspects as shown below but not limited only to them. It has to

reveal intensity of risks from low to high and make recommendations for appropriate resolution including safety and mitigation measures against those risks following appropriate norms and standards—with revelation of detail justification, rationale, implementation instruments, and demonstrated implementability. The following types of risks should be assessed: -

- All possible events, which pose risks to foundational and structural safety of dams have to be identified and analyzed. Such risks may among others include seismic occurrence, flooding and overspill from extreme weather condition, foundational deficiencies, and inadequate maintenance.
- All potential risks posed to reservoir or by reservoir have to be identified and analyzed. The former may include risk of reservoir eutrophication due to nutrient loads, and sedimentation—thus leading to its reduced life. The latter may include social and environmental risks posed to the downstream areas in case of dam failure, or caused due to disruptions in water flow by the dam as well as rim failure around the slopes of reservoir.
- All potential social and political risks have to be carefully analyzed. These may take form of resistance, protest, and discontent of households and citizens. And these may arise from several incidences—that is due to submergence of properties and displacement from their land parcels and economic livelihoods, destruction and disruptions of cultural landmark and monuments, and even from the delayed execution of the project due to organizational weaknesses.
- All forms of financial risks have to be carefully analyzed. The aim has to be to ensure that sufficient cash flows are maintained throughout the project period so that project implementation is not disrupted due to inadequate fund. Also, it is pertinent to analyze and make appropriate recommendations so that timely payback of capital and interest are ensured to lenders (financial institutions).
- The potential risks of uncontrolled urbanization and tourism development on natural resources and landscape of the Jiri Valley including on proposed dam and lake have to be carefully analyzed. Implications of unregulated urban activities such as felling of trees specially in upstream and near proposed lakes, haphazard conversion of agricultural land or open space, and encroachment of natural streams from building constructions have to be carefully analyzed—as these may have detrimental impact in increasing run-off and causing scouring of natural streams—leading to sedimentation to the proposed lake. Also, implications of haphazard disposal of solid and liquid waste into natural streams or public spaces—therefore to proposed lake and acceleration of eutrophication process have to be carefully analyzed.

- In the blue print or execution plan, detail engineering design of dam and power houses and other related physical infrastructures including its type, choice of building materials, and structural dimensions has to be based on proven method of analysis and

design conforming to geological and experiential context of mountain region of Nepal. And design features of dam, power house and other associated infrastructures are shown with detail engineering drawings revealing plans and cross sections of all critical points. Accordingly, detail cost estimate has to be prepared including physical, social, and overhead cost conforming to requirement of government's procurement laws and guidelines and in consistency with the international practices outlined by FIDIC.

- The execution plan should also reveal project implementation model. This will have to reveal all key institutions and actions that will be taken during the project life cycle. Institutional arrangement must be depicted in flow chart revealing clearly all key institutions and agencies involved in the project implementation—indicating their roles, and flow direction of policies, implementation order and instructions. The institutional arrangement should also reveal project coordination institution such as Project Steering Committee (headed by municipal mayor) and project implementation institutions such as Municipality and dedicated Project Implementation Unit (PIU). The consulting team is required to investigate the usefulness of autonomous implementing agencies such as Special Purpose Vehicle (Public Limited Company) for implementing project in lieu of bureaucratic PIU, and propose accordingly. The role of central government, provincial government, financing institutions, private sectors, private citizens has to be carefully examined and revealed in institutional arrangement. Concurrently, implementation schedule will have to be prepared, revealing all key project milestones and time frame for their implementation shown in a stacked bar diagram.

- Similarly, project operation and management plan has to clearly reveal how the built infrastructure and services such as dam, electrical power, recreational lake, and other community amenities are maintained and operated. It should also reveal what the institutional arrangement to manage these infrastructure provisions will be, and what the staffing structure would be.

- Likewise, tourism development and management plan has to clearly reveal a roadmap for the development of the tourism potential and products and how the impacts of tourism are to be sustainably managed over the long run. The consulting team is required to explore potential tourism sites—which have not been explored thus far. These may include prospects such as developing new eco-trails connecting indigenous settlements, conservation and exposition to tangible and non-tangible cultural heritages, and fostering agricultural tourism associated with organic agriculture production farms. The Plan has to also make recommendations on viable alternatives to enhance accessibility to Jiri. Such alternatives could include improving both road and air connectivities. The Plan has to also explore other potential tourism sites.

- Spatial development framework is also sought for growth management of Jiri Valley—which would lead to its balanced development. The framework among others has to propose the vision and strategies guided future built structure of Jiri Valley comprising of land classification, hierarchy of activity nodes, and locations of key public facilities.

It is also required to foresee and prepare detail local area plan to manage probable urban sprawl (containing hotels, resorts, groceries, and housings) that may spillover around the rim of the proposed lake in the future. The analysis also needs to examine development prospect of nearby Yelun Valley (in East) and Sikri Valley (in West), besides Jiri Valley. The idea of growth management framework is to deal effectively with urbanization pressure and environmental fallout—that may occur from the development of proposed lake. Such framework should prioritize conservation of natural, cultural, and built assets at the core, while emphasizing on judicious and sustainable use of limited urban land. The framework should be prepared in a manner which prioritizes overall environmental management; preserves riparian eco-corridor along major rivers; and maintains adequate buffer space surrounding all important natural, religious and cultural sites.

**4. Expected Outputs**

Firstly, along with the inception report or preferably earlier than its submission, conceptual sketches of the entire project should be submitted by the consulting team. These visualizations will be critical to orient the stakeholders, and the general public about the scale, intention, and functions of the project. Subsequently, it will help to make all the stakeholders aware about the project thereby clearing any confusions and doubts.

The completed work should contain a complete report consisting of following major outputs:

Output 1: DPR of the proposed Jiri dam and hydro-project

- This output will contain two parts – **feasibility assessment** of the proposed lake and dam, and **execution plan**. The feasibility assessment will comprise of technical, environmental, social, financial, economic feasibility studies, and risk assessment. The technical feasibility assessment will provide recommendations on site suitability, geological condition, and type of the dam. As part of the feasibility assessment, an access route map should be prepared in accordance with the *Guidelines for the study of Hydropower Projects*. Likewise, a map showing physiographic regions, control survey maps showing benchmarks, drainage basin map, flow duration curve, reference hydrographs, regional geological maps (further extension to the map prepared during the pre-feasibility stage; Refer to 2016 report), site specific geological maps, seismicity map, and powerhouse switchyard layout are also required. The technical feasibility will also recommend development of serviced land for planned settlements for the beneficiaries using land pooling as an appropriate land development mechanism. As part of the final DPR, a detailed animated video should also be submitted to the client which should clearly show all aspects of the proposed development including miniscule details like the placement of trees, driveway, pedestrian walkways, etc.

- While the environmental feasibility study will include impacts of the project on the river ecology, land and cultural landscapes, social feasibility study will contain benefits and implications caused by the project on the beneficiaries and their livelihoods. Similarly, financial feasibility will outline means of accruing investment from various sponsors along with the net financial benefits for the municipality, and profitability and

cost-benefit analysis will be included in economic feasibility. The risk assessment will include norms and standards for safety, adaptation and mitigation measures against all the pertinent risks.

- The feasibility assessment report will thus have to contain recommendations on the viability of the project and also on alternative forms. Such recommendation shall form basis for the consulting team to proceed next to prepare execution plan. The execution plan will have to contain detailed engineering design of dam structure, detailed cost estimate, implementation model, implementation schedule, and institutional arrangement revealed in flow chart. This plan will also have to recommend an operation and management plan for effective operationalization of the built infrastructures, their repair and maintenance and delivery of services.

- The DPR will also need to contain reports of all the tests conducted for feasibility assessment. It is required to contain all engineering drawings including details of mitigation measures against potential risks. It is also required to contain a report comprising of detailed account of households and property losses including cadastral maps surveyed by the team showing areas that will be submerged (i.e. Water storage area map) and need to rehabilitated.

- Animated short film with final view of proposed project. And detail presentation about the process of project implementation after DPR.

- Final report should be both in english and Nepali language.

Output 2: Tourism Development and Management Plan

- The output in Tourism Development and Management Plan will contain recommendations on three major aspects. First, the Plan should include recommendation on transportation measures such as improving road quality and standard, and air service in order to enhance access to Jiri municipality. These measures need to be intended for both domestic and international tourists.

- Second, the Plan is required to identify major tourism potential sectors of Jiri apart from its natural environment and heritage with careful examination of other tourist attractions in the valley and the vicinity. Potential tourism sites should be depicted in maps. The Plan will have to integrate tourism products with overall local economy and employment opportunities to create greater synergy, thus reduce outmigration trend. Following thorough assessment of tourism market segment, the Plan should also devise strategies to attract domestic tourists mainly from Kathmandu and other regional urban centres, western trekkers interested in short treks, and high spending resort tourists.

- Finally, the Plan should duly emphasize on valley wide environmental conservation. This should include conservation of natural environment in the vicinity of the lake,

upstream and downstream, and also conservation of natural and cultural landscapes including promotion of traditional architecture and heritage.

- Animated short film with final view of proposed project. And detail presentation about the process of project implementation after DPR.

- Final report should be both in English and Nepali language.

Output 3: Spatial Development Framework for the Jiri Valley

- This output needs to include development framework, comprising of brief situation analysis, identification of opportunities and challenges, long-term development vision, goals and objectives, strategies, operational policies and instruments, and key development initiatives. The framework should also include concurrent spatial structure drawn in map—which reveals a hierarchy of activity nodes, connectivities, land classification (consisting of *growth promotion areas* including built area, future expansion area and *growth discouragement areas* including natural resource areas), special environmental management area such as eco-corridor and buffer space, and siting of key public facilities.

- The framework should also contain detail local area plan containing a planned layout and permitted land use around the rim of the proposed lake. Such plan should be prepared using land pooling technique, so that all landowners of the area are duly rehabilitated. Details on land contribution and tentative sites for serviced land parcels to rehabilitate affected landowners have to be also identified. The framework has to be augmented by appropriate planning and building bye-laws, environmental thresholds, and infrastructure norms and standards. Relevant graphs, charts, tables, photographs should also be included.

- The framework should also recommend key development interventions including basic urban amenities and facilities in nearby Yelun and Pumpa Valley (in East) and Sikri Valley (in West).

- Animated short film with final view of proposed project. And detail presentation about the process of project implementation after DPR.

- Final report should be both in English and Nepali language.

## 5. Methods

### Method for data collection and analysis

*Construction of dam, lake and powerhouse:*

- The study shall rely on both primary[1] and secondary data. Primary data includes geological data of the site where dam and power house shall be constructed and lake shall be created. The proven geotechnical method and instrument have to be used to investigate geological conditions and bearing capacities of soil for the construction of dam, lake and powerhouse. Accordingly, type of dam has to be proposed.

- Detail analysis has to be undertaken of rainfall, watershed, runoff, and river/stream water discharge that converges into reservoir and dam as well as to downstream areas. Historical rainfall and flood data has to be referred from the relevant statistics and archives of the national and international agencies and also gathered from the site—by interacting with local people from the region. The GIS aided hydraulic analysis has to be also carried out to evaluate the flow characteristics of the existing river/stream system. Information on trend of water-induced hazards and other risks shall be collected through rapid appraisals of the project area, consultations with the municipality and discussions with the local stakeholders.

- The relevant computer based modelling is required for the structure analysis of dam. All potential input forces—both static and dynamic have to be taken into account to ensure the stability of dam and other infrastructures at all conditions. This must be based on accepted standard code of analysis and design applicable to dam and related infrastructures. First-hand information on water demand for various purposes shall be collected by interacting with local citizens in the impact areas.

- Detailed topographical survey needs to be carried out and topo-sheets are to be studied. Topographical surveys and mapping that are expected to be carried out at pre-feasibility level correspond to the requirement of feasibility level. [Refer to HMG's Guidelines for Study of Hydropower Projects, 2003, Format A, 1.2]. Any steps to be conducted in the pre-feasibility stage as recommended by this guideline, if not conducted, then such steps should be covered during the feasibility stage. For example, consulting team should verify and confirm if steps d) to g) in Format A, 1.2 are required or not to begin the feasibility study.

- Some augmentation of survey works for selected alternative may be needed, e.g., for setting up of additional geotechnical exploration locations and seismic refraction lines. These additional surveys and mapping should be compatible with the recommendations made for further survey and investigation by prefeasibility level study. All the available maps, aerial photographs, section/profiles and maps prepared during previous level of studies particularly during the prefeasibility level survey should be referred compulsorily.

- In addition, hydrological and sedimentation studies need to be carried out. For hydrology, all the steps a) to o) should be done compulsorily along with the steps g) to

[1] Primary data is the one that does not exist prior, and has to be collected using relevant scientific method or instrument—which is reliable, replicable and verifiable.

l) mentioned under the 'pre-feasibility' heading because they were not conducted at that stage. Similarly, for sedimentation, refer to HMG's Guidelines for Study of Hydropower Projects, 2003 Format A, 2.2.

- Furthermore, geo-technical studies need to be conducted rigorously which comprises of regional geological study, general geology and geomorphology of the project area, detailed geology and geomorphology of particular sites, discontinuity survey, and geo-technical investigation. (Refer to Format A, 3.1)

- Construction Material Survey is also essential because it was not carried out during the pre-feasibility stage.

- Moreover, seismological studies are required which include analysis of tectonic setting, aerial photo and remote sensing interpretation, fault and paleo seismicity; earthquake catalogue, historical and instrumentally recorded earthquakes; seismic zoning, and seismic hazard analysis. (Refer to Format A, 3.3)

- Also, cadastral maps shall be studied along with field verification and survey to identify areas likely to be submerged by the project as well as to identify the losses of private and public properties and assets. Focused group discussions with the affected landowners have to be undertaken to know their views as well as to exchange project information. Site visits and inspections should be undertaken to collect information on flora and fauna, natural wildlife habitat, and ecologically sensitive areas. This shall be aided by cadastral maps, GIS and satellite images.

*Preparation of Tourism Development Plan and Spatial Development Framework:*
Primary data to identify potential tourism sites and development interventions shall be collected from site inspections. Information on land use pattern, spatial transformation trend, population growth trend, major investment areas, inherent and development potentials, environmental sensitive areas, ecological regions etc. shall be collected through site observation/interviews/opinion survey and/or group appraisals with the key officials and persons. Baseline data shall be extracted by secondary sources such as concept note, office records or archives, municipal reports, ward profile, published academic or professional reports, and data published by Central Bureau of Statistics (CBS) or other authorized agencies, maps, and aerial photographs but the data collected should be recent and reliable. Methods such as SWOT analysis and Logical Framework Approach (LFA) shall be used for analysis of the collected data. Land use and spatial transformation trend shall be analysed by using GIS and satellite images.

**Process involved**

- The consulting team has to work in accordance with TOR and guidance of the Steering Committee. Municipality shall also provide periodic advice and

support to the team to facilitate progress of the work, and it shall be obliged to heed to such municipal advice. It has to also work in close coordination with all relevant stakeholders including Advisory Committee and Users Committee described below. The consulting team shall also require to hold rounds of *focused group discussions* (FGD) and *consultative meetings* with the affected households, concerned stakeholders, agencies, and officials from the municipality. The consulting team shall be responsible to bear all logistics cost pertaining to such meetings—while municipality shall help with administrative support and arrangement to invite concerned stakeholders and hold such meetings and discussions.

- The consulting team will be attached with the municipality, which shall assign its senior engineer to liaise with the team in the field. Such liaison is intended mainly to facilitate knowledge and technology transfer from the consulting experts to the municipality, and enhance its technical capabilities.

- Municipality shall form a **Steering Committee** under the chairmanship of municipal mayor to forge stakeholder's coordination, offer policy guidance, and review progress of the work. Such committee shall contain (a) representatives from main political parties; (b) Federal Parliament and Provincial Assembly members representing Jiri (c) representatives of private entrepreneurs including hotel association, FNCCI (d) government agencies (e) provincial government and (f) relevant federal ministry/department. The Committee can also invite prominent personalities and members of technical advisory committee when required. Chief Administrative Officer (CAO) will work as a Member Secretary of the Steering Committee.

- An **Advisory Committee** comprising of three prominent members shall also be formed to offer technical advice to the consulting team and Steering Committee, and also review the DPR and plan reports prepared by the consulting team. The advisory committee shall comprise of Vice Chair of Provincial Planning Commission (of province 3) and experts from selected disciplines including hydropower and regional development planning. CAO will be responsible to facilitate the work of Advisory Committee. The consulting team shall be responsible to provide all logistic supports to engage the advisory committee members in and off the field.

- Municipality shall also form a **unified user's committee c**omprising of households living within the project area—especially those living in proximity to the proposed dam and lake. Such committee is formed so that the affected households can voice their views and grievances from the very outset of project planning.

## 6. Team Composition and Inputs

The consultant's planning team should comprise at least of the following personnel for given period.

| Specialist | Desired requirements | Person-Months | Key Tasks |
|---|---|---|---|
| Structural Engineer (Team Leader) | Expert is preferred to have a master's degree or PhD in civil engineering or equivalent and at least 12 years of experience in dam design. | 8 months | Responsible for layout, and structural design of proposed dam, and its optimization<br>Responsible for overall quality and timelines of deliverables<br>Manage team members<br>Provide guidance to all team members<br>Lead communications with municipal officials and ensure frequent and quality communications |
| Regional/Urban planner | Expert is preferred to have a master's degree in City and Regional Planning (and degree in architecture or civil engineering) with approximately 10 years of experience on spatial planning, strategic planning, structure planning and urban infrastructure planning at both regional and city level. | 6 months | Give inputs for spatial development plan<br>Work as a *Deputy Team Leader* and work closely with Team Leader and other team members to provide urban planning related inputs for all deliverables |
| Geo-technical Engineer | Expert is preferred to have a master's degree in Geology/ Geo-technical engineering with approximately 10 years of experience on geological studies or related field. Experience on dam related projects is preferred. | 6 months | Tasks as outlined and requested by the Team Leader |
| Institution Development Expert | Expert is preferred to have a master's degree in Management or Public Policy or similar with approximately 8 years of experience in | 4 months | Provide inputs into the preparation of operation manual of organizations as required |

| | | | |
|---|---|---|---|
| | organizational management and preparation of operation mechanisms | | Tasks as outlined and requested by the Team Leader |
| Tourism specialist | Expert is preferred to have a master's degree in tourism studies with approximately 8 years of experience on tourism development at both regional and city level. | 6 months | Provide inputs into the preparation of tourism development and management plan<br><br>Tasks as outlined and requested by the Team Leader |
| Economist/ Financial Analyst | Economist/Financial Analyst is preferred to have a master's degree or PhD in Economics/ Infrastructure Finance and approximately 5 years of experience with economic analysis for hydropower projects | 4 months | Undertake financial and economic analysis<br><br>Other related tasks as requested by the Team Leader |
| Environment Expert | The expert is preferred to have a master's degree in environmental science/engineering or related field and approximately 5 years of relevant professional experience preparing environmental impact assessments. Experience of large scale physical infrastructure projects is preferred. | 5 months | Tasks as outlined and requested by the Team Leader |
| Sociologist | The expert is preferred to have a master's degree in Sociology or other relevant social sciences and at least 5 years of relevant professional experience. Expert is preferred to have experience on social inclusion aspects in infrastructure planning, design, and implementation. | 4 months | Provide inputs in social rehabilitation and resettlement.<br><br>Other tasks as requested by the Team Leader |
| GIS Specialist | Minimum master's degree in Geo-information / Remote Sensing / GIS and having minimum 3 years of relevant experience after master's Degree. Should have | 4 months | Advice to team leader,<br>Prepare database/ apply GIS based system for the |

| | | | |
|---|---|---|---|
| | experience in designing and developing GIS and data base system in urban sector. | | preparation of plans, maps, drawings etc. |
| Hydraulic Engineer | Minimum master's degree in Hydraulic Engineering/Civil Engineering/ Water Resources Engineering or related degree and having a minimum relevant experience of 5 years. | 4 months | Hydraulic analysis and design<br>Other tasks as requested by the Team Leader |
| Electrical Engineer | Minimum master's degree in Electrical Engineering and having a minimum relevant experience of 5 years. | 4 months | Selection of electrical components, switchyard and connection design<br>Other tasks as requested by the Team Leader |
| Mechanical Engineer | Minimum master's degree in Mechanical Engineering and having a minimum relevant experience of 5 years. | 4 months | Selection and design of mechanical components<br>Other tasks as requested by the Team Leader |
| Civil Engineer | Bachelor's degree in civil engineering with 1-3 years of experience in urban infrastructure projects/ municipal projects. | 4 months | Other tasks as requested by the Team Leader |
| Architect | Bachelor's degree in Architecture with 1-3 years of experience in urban infrastructure projects/ municipal projects. | 4 months | Preparation of the Conceptual sketches and Final animated video of the entire project<br>Other tasks as requested by the Team Leader |
| Senior Surveyor | Diploma in Surveying with 5 years' experience or Bachelor's degree in | 4 months | Other tasks as requested by the Team Leader |

| | | | |
|---|---|---|---|
| | Geomatics Engineering with 1-3 years of experience in urban infrastructure projects/ municipal projects. | | |

**7. Deliverables**

The consultants will submit the following reports: (i) an inception report within one and half month of contract award; (ii) draft report within 5 months of contract award; (iii) draft final report with all the expected outputs 1 month after submission of draft report; and (vii) a final report, 1 month after receiving comments on the draft final report from the municipality. Reports should address all aspects of this TOR to an appropriate level of detail. The consultants shall have to make field presentations including wider stakeholders prior to submission of each report to the municipality and incorporate due feedback received from such presentation. These presentations are besides a series of meetings, focused group discussions, and interactions that will have to be taken during the study period.

**8. Work Plan/Schedule**

The total work period shall be of 8 months after the issuance of the work order. Detailed work schedule will be developed by consultant during proposal writing and inception report. Experts should be mobilized in the field as per the detailed work plan.

**9. Mode of Payment**

The payments shall be made in four installments. Each installment shall be paid only when the required report is submitted and accepted. Request for the payment should be accompanied by the progress/revised progress report and signed time sheets of members of the team. In each report, the contents, formats and copies to be submitted should be strictly as discussed above. The details of time period, payment percentage of bid amount, the report to be submitted are shown in the following table.

| No of Installment | Time period | Payment % of total bid amount | Report to be submitted |
|---|---|---|---|
| First | Within 1.5 months | 20% | Inception report (with conceptual sketches if not submitted earlier) |
| Second | Within 5$^{th}$ month | 30% | Draft report |
| Third | Within 6$^{th}$ month | 20% | Draft-final report |
| Fourth and Final | Within 8$^{th}$ month | 30% | Final report (with detailed animated video) |

**10. Management of Assignment**

It will require Domestic Consultants comprising of professionals as mentioned in section 6 of this ToR. To ensure that the design reflects the views of communities, all design work will be carried out by the consultant in close consultation with Jiri municipality. In order to accomplish the works in timely manner, the firm has to start the work immediately after the issuance of work order. The team leader is responsible for coordination with the municipality officials.

- **Working Arrangement**

All the experts under the consulting firm shall perform the task under the guidance of the Team Leader. All the experts will report to the Team Leader and the Team Leader is responsible for deputing other experts in the field and office. He is also responsible for coordination with Jiri Municipality, Organizing Presentations and reporting to the municipality. All the experts required to visit Jiri at least thrice while the junior professionals and support team will work in the office space designated and provided by Jiri Municipality. The team leader shall visit the field frequently as per the requirement.

- **Logistic Supports**

The consultant has to presume that the facilities and other logistic required for conducting the study, detail engineering design shall be managed by the firm itself.

## 11. Recruitment of the Consultant

Recruitment of the Consultant shall be carried out as per the Public Procurement Act, 2063, Public Procurement Regulation, of GoN.

## 12. Agreement

The Consultant will be required to enter into an agreement with Jiri Municipality. The terms and condition of the agreement shall be given with Request for Proposal if the firm shortlisted.

## 13. Indemnity

The consultant shall be responsible for any damage of life, property that may arise out of his works and he shall take all necessary insurance provision to indemnify any claims for compensation that may arise through his negligence.

## 14. Taxation

The Consultant shall be fully responsible for all taxes including VAT applicable as per the rules and regulations of Government of Nepal and for that the taxes except VAT shall be deducted at the source at the time of payment. The consultant shall be responsible for clearance of VAT. All payments shall be made after deducting taxes.

# 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 | |
| 3 | VAT/PAN Registration | |
| 4 | EOI Form 1: Letter of Application | |
| 5 | EOI Form 2: Applicantâ€™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 | |

## ii) EOI Evaluation Criteria

**A. Qualification**

| Sl. No. | Criteria | Minimum Requirement |
|---|---|---|
| 1 | Qualification of Key Experts | |
| 2 | Experience of Key Experts | |

**Score: 40.0**

**B. Experience**

| Sl. No. | Criteria | Minimum Requirement |
|---|---|---|
| 1 | General Experience of consulting firm | |
| 2 | Specific experience of consulting firm within last 7 years. In case of person, specific experience of the person within last 4 years. | |
| 3 | Similar Geographical experience of consulting firm | |

**Score: 40.0**

**C. Capacity**

| Sl. No. | Criteria | Minimum Requirement |
|---|---|---|
| 1 | Financial Capacity.[Average turnover required shall not exceed 150% of cost estimate] | |
| 2 | Infrastructure/equipment related to the proposed assignment.[This Evaluation criteria should be deleted if infrastructure/equipment are not the part of the proposed assignment] | |

**Score: 20.0**

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

# 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

# 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.[1]

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

[1] Applications by joint ventures should provide on a separate sheet, relevant information for each party to the Application.

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):**

## 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.)*

# 3. Experience

## 3(A). General Work Experience

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

| S. N. | Name of assignment | Location | Value of Contract | Year Completed | Client | Description of work carried *out* |
|---|---|---|---|---|---|---|
| *1.* | | | | | | |
| *2.* | | | | | | |
| *3.* | | | | | | |
| *4.* | | | | | | |
| *5.* | | | | | | |
| *6.* | | | | | | |
| *7.* | | | | | | |

## 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)[2]: |
| Country:<br><br>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):<br><br>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:<br><br>**Note: Provide highlight on similar services provided by the consultant as required by the EOI assignment.** | |

Firm's Name: _____

[2] Consultant should state value in the currency as mentioned in the contract

## 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)*

| ***No*** | ***Name of the Project*** | ***Location (Country/ Region)*** | ***Execution Year and Duration*** |
|---|---|---|---|
| ***1.*** | | | |
| ***2.*** | | | |
| ***3.*** | | | |
| ***4.*** | | | |
| ***5.*** | | | |
| ***6.*** | | | |
| ***7.*** | | | |

# 4. Capacity

## 4(A). Financial Capacity

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

| Annual Turnover | |
|---|---|
| **Year** | **Amount Currency** |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

- **Average Annual Turnover**

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

## 4(B). Infrastructure/equipment related to the proposed assignment[3]

| No | Infrastructure/equipment Required | Requirements Description |
|---|---|---|
| ***1.*** | | |
| ***2.*** | | |
| ***3.*** | | |
| ***4.*** | | |
| ***5.*** | | |

[3] *Delete this table if infrastructure/equipment for the proposed assignment is not required.*

## 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)*

| SN | Name | Position | Highest Qualification | Work Experience (in year) | Specific Work Experience (in year) | Nationality |
|---|---|---|---|---|---|---|
| 1 | | | | | | |
| 2 | | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |
| 5 | | | | | | |

(Please insert more rows as necessary)