

## **Generic Terms of Reference (ToR) for Consulting Services for Environmental Impact Assessment (EIA) and Preparation of Environmental Management Plans (EMPs) for Transport Sector (Bridge and/or Road) Projects<sup>1</sup> under the Second Bridges Improvement and Maintenance Program (BIMP-II) [ Review by GESU]**

*(Please refer to separate ToR for Social Impact Assessment-SIA and preparation of social management plans including Resettlement Action Plans -RAPs and Vulnerable Community Development Plans-VCDPs.*

*The EIA and SIA will be undertaken in parallel complementing each other; and EIA and SIA together form Environmental and Social Impact Assessment of a proposed intervention, road or bridge, under BIMP II. The EIA and SIA will also be coordinated with technical feasibility and detailed design studies under a separate parallel consultancy.)*

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<sup>1</sup> These terms of reference have been prepared as a general guideline for Assessment of Environmental risks and impacts and preparation of relevant management plans as may be required adhering to relevant policies and procedures of the World Bank and those of the Government of Nepal. The ToR will be customized and detailed for each road or bridge intervention (when the location is known) during implementation of the TA under BIMP II.

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## **1. INTRODUCTION AND BACKGROUND**

Government of Nepal (GON) is preparing the second Bridge Improvement and Maintenance Program (BIMP-II) under the Ministry of Physical Infrastructure and Transport (MoPIT)/Department of Roads (DoR) with assistance from the World Bank.

The proposed BIMP II is a hybrid operation which includes PforR Component and IPF Component. The IPF component is TA for preparations of future projects, and its scope includes preparation of engineering designs/detailed project reports for potential bridge and road projects on the Strategic Roads Network as well as preparation of relevant Environmental Impact Assessment (EIA) and Social Impact Assessments (SIA), including environmental and social management plans. DoR (as Implementing Agency, IA) intends to apply portion of the proceeds for payments under the contract for Consulting Services.

DoR (Implementing Agency, IA) in Nepal manages Strategic Road Network (SRN) including, but not limited to, the East West Highway, several North-South corridor roads, Postal roads and Mid-Hill highway. As some of the roads/highways traverse through legally designated protected areas, settlements, religious/cultural sites – *inter alia* – and bridge/road works may involve inherent risks and impacts at various levels from environmental and/or social perspectives, site-specific EIA and preparation of required environmental and social management plans (EMPs) is required adhering to the World Bank safeguard policies and procedures and to those of GoN (Executing Agency, EA/Implementing Agency, IA). The feasibility and detailed design studies will be completed under a separate parallel consultancy, while the present Terms of Reference is for the EIA studies and preparation of required management plans.

Consultancy service is intended to be procured under the “World Bank Procurement Regulations for IPF Borrowers”.

*Ancillary works and linked activities:* For the implementation of the proposed sub-projects (new bridge construction or road upgrading works), ancillary works, for example, includes construction of access road, labor camps, contractor camps, diversion of traffic from existing road, sourcing of construction materials like sand and aggregates, borrow area and solid waste disposal respectively. Aforementioned, and any other activities associated with the project that could be considered “linked activities” as defined in World Bank policies – e.g., activities which are directly related, necessary to achieve the Project objectives, and planned to be carried out contemporaneously – shall also be covered under this assignment, regardless of the source of financing on the circumstances where such activities are financed by the country or other donors. The Consultant will consult and discuss with DOR/Bridge Branch and World Bank to identify all such ancillary works and linked activities under the screening and scoping stage of the consultancy, and ways to address them in the EIA and EMP.

## **2. OBJECTIVES OF CONSULTANCY:**

The overall objectives of the proposed consultancy are to:

- i. Carry out Environmental Impact Assessments, for proposed bridge and/or road construction works.
- ii. Prepare Site-Specific Environmental Management Plans (EMPs and other plans as may be required) based on Assessment findings.
- iii. To ensure that all positive and adverse impacts associated with construction and operation of the Project, including all associated/ancillary works and linked activities if any, are taken into account.
- iv. To comply World Bank Safeguard Policies including on Environmental assessment (OP 4.01), Natural Habitat (4.04); Physical Cultural Resources (OP 4.11); Forest (OP4.36); GoN Environmental Protection Act and Rules, Land Acquisition Act and Rules, DoR Environmental and

Social Management Framework (ESMF); and other environmental legislations of the World Bank and those of GoN applicable to this assignment.

Specific objectives of the consultancy include:

- To carry out Environmental Screening, identify and assess potential positive and adverse environmental impacts as well as environmental settings for detail investigations, and recommend further Environmental assessment including direct, indirect, and induced impacts in terms of magnitude, extent and duration that may be expected to occur due to Project/ Project activities.
- To carry out project site visit to collect primary data and review all available relevant secondary data to establish a comprehensive environmental baseline (including physical, biological, social, cultural and economic environments) for the Project Area of Influence; (analyze and include the issues and recommendation identified from Environmental Screening).
- To develop proposed measures to avoid, reduce, mitigate, manage and/or compensate for such impacts, including the institutional arrangements and required capacity for the implementation of all such measures and monitor their effectiveness and suggest changes to the arrangements (as per new Federal structures) as well as capacity strengthening measures, if necessary.
- To identify and carry out a comparative analysis on “Project Alternative Analysis” with or without project in terms of project location (such as upstream/downstream or no change of location), project design, technology and construction methodology to avoid, minimize or reduce environmental risks associated with site locations and propose potential opportunities and design appropriate measures to minimize environmental impacts and maximize complementary environmental and enhancement measures of the Project.
- To conduct a public consultation process that ensures that Project affected people and other stakeholders are informed about the Project and its possible impacts, as well as offered the opportunity to share their opinions and feedback so as to input into the environmental assessment, planning and design studies and their implementation.
- To document all of the above mitigation and development interventions in appropriate forms and formats to be further discussed and agreed upon with DOR/Bridge Branch and in line with World Bank standards.
- To prepare intervention specific Scoping Report and ToR to meet GoN environmental requirements; and support DoR in their approval. The Scoping Report and ToR, for each intervention (bridge or road), will identify intervention specific and relevant issues, define potential influence area, identify the priority or most significant issues/ subjects to be covered in the assessment, and confirm applicable policies, requirements and standards.

The Consultant shall ensure that the environmental assessment, planning and design outputs of this assignment will comply with and meet the legal and technical requirements of the Government of Nepal and World Bank Safeguard Policies. This assignment is considered complete only upon approval and clearance of the final versions of the required environmental assessment and planning documents by the Government of Nepal, with concurrence from the World Bank.

### **3. SCOPE OF WORK<sup>2</sup>**

The Consultant shall fulfill the objectives of the consultancy services, as detailed below. However, the detailed description of services is not an exhaustive list but rather indicative of the overall tasks to be performed by the consultant. The Consultant needs to perform professionally to achieve the objectives as defined above.

The EIA consultant/ team shall also coordinate and interface with the SIA consultant/ team and Social Impact Assessment and preparation of social management plans including Resettlement Action Plan (RAP),

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<sup>2</sup> Screening/Assessment tools, and reports/plans prepared shall be reviewed and cleared by the Bank and approved – wherever applicable - by relevant GoN authority.

Vulnerable Community Development Plan (VCDP) as well as consulting team under the project carrying out technical team including feasibility study/Detailed Design team(s) to ensure that environmental and social issues are appropriately factored into decisions about the scope of works and their detailed designs, to minimize negative impacts and maximize positive impacts, as well as to make sure that the environmental and social assessments are based on relevant and current information about the works and their designs. The two consulting assignments shall be expected to interact and share data, analyses and recommendations as relevant to the other's assignment in a timely manner. DoR will facilitate the interaction between these consulting assignments and teams.

The EIA Consultant/team's tasks shall include, but not be limited to, the following:

**Task 1: Initial Environmental Assessments (Screening, Scoping and Terms of Reference)**

During the feasibility stage for the proposed road and/or bridge works:

1. Develop environmental risk and impact screening/assessment tools in close coordination with DoR/GESU.
2. Determine applicable GoN legislative provisions and the World Bank safeguard policies triggered at least OP 4.01 on environmental assessment, amongst others.
3. Publish public notice for scoping study purpose as may be required.
4. Carry out inception-stage site-specific environmental impact assessment/screening by visiting each potential site/project area together with the feasibility and detailed design consultant team, and in consultation with local communities to identify key social and environmental features, issues and risks in the project area relevant to the project, to get to know the alternatives under consideration from the site perspective, and to determine the level, extent and type of environmental investigation needed.
5. Conduct thorough analysis of the assessment findings and prepare screening stage assessment and categorization report, including categorization and alternative analysis for the proposed bridge or road. The World Bank will review and clear each of the screening and categorization reports for Category 'A' interventions.
6. Where such interventions are screened as Category 'A' Interventions, each Category 'A' EIA ToR will be subject to consultation and disclosure as required by the World Bank safeguard policies as well as clearance from the Bank.
7. Review the environmental screening and initial alternatives analysis sections of the feasibility reports (being carried out by the separately contracted feasibility and detailed design consultants) and provide an independent assessment of the adequacy of consideration of environmental aspects in the selection of the preferred road and bridge improvement alternative. This should include a review of the appropriateness of the expected approximate costs of environmental mitigation and management measures (including resettlement and rehabilitation for displaced people and livelihood activities) for each alternative, as well as social acceptability considerations. Assess whether the mitigation hierarchy (e.g., avoid, minimize, mitigate, compensate) is being followed in the process of ranking alternatives from environmental perspectives. Assess whether stakeholder feedback received during consultations has been adequately reflected in decision making. Document findings and recommendations in a summary report and presentation for DOR.
8. Carry out scoping of the detailed environmental assessment and planning studies to be undertaken. Based on this, prepare (i) Scoping report including a detailed work plan for carrying out further assessments and studies as required, and (ii) EIA ToR and scoping world bank document based on the issues identified during the scoping process.
9. The Scoping Report will contain, but not be limited to:
  - i. Brief Project description and definition of overall Project Area of Influence;
  - ii. The detailed scoping process followed to determine the influence area/define boundaries of the project for Environmental Impact Assessment (EIA);
  - iii. Identify the priority or most significant issues/ subjects to be covered in the assessment process and related methodology;

- iv. Key social and environmental issues, baseline aspects and potential impacts, including an indicative assessment of scale and severity, which should be included for further study in the environmental and social assessment and planning studies;
  - v. Confirmation on the applicable World Bank safeguard policies, Environmental Health and Safety requirements, as well as EPR 1997 and other national standards and regulations which apply to the Project;
  - vi. A detailed outline and work plan for the EIA to be carried out (including extended consultation plan for the assessment process); and
  - vii. Detailed ToR customized/ specific to the proposed bridge or road, and a detailed outline and work plan for the assessment (including consultation plan for the assessment process).
10. Share the draft Scoping and detailed ToR documents with the DoR/Ministry of Forest and Environment and the World Bank for their reviews.
11. Disclose the draft Scoping and detailed ToR documents, and support DoR to carry out consultations with stakeholders on the draft ToRs/ documents. The comments and suggestions received from the participants shall be collected and incorporated in Scoping and ToR documents. Consultant shall document the consultation process, including feedback received, and update the ToR and Scoping Report taking the feedback into account.
12. As per the requirements of the GoN, make presentation on the findings of the Scoping report with detailed plan for the EIA studies and detailed ToR document to DOR/Ministry of Forest and Environment.
13. Finalize Scoping and TOR documents based on feedback received from World Bank and stakeholder consultations, DoR and Ministry and submit them to DOR and World Bank for required clearances, and for approval from the Ministry of Forest and Environment.

**Key expected output of Task-1:** Initial environmental screening / assessment and categorization of a proposed specific road or bridge work, clearly defined scope for detailed assessments of the proposed specific road or bridge work, and customized ToRs for specific assessments. Consultant shall carry out Scoping and ToR Study adhering to policies and procedures of the GoN and those of the World Bank. Process of approval of Terms of Reference, study, and report preparation shall be carried out as described above and in accordance with World Bank safeguard policies and, applicable legislations of GoN including Environmental Protection Act and Regulations 1997, DoR ESMF, etc. Final Scoping and ToR shall be submitted to the DOR. In the approval process of Scoping and ToR report, the Consultant is required to present their findings and recommendations to the DOR, World Bank, and Ministry level committee for necessary review and comments. The World Bank will review and clear each of the screening and categorization reports for Category ‘A’ interventions as well as ToR for each Category ‘A’ EIA. The ToR for category will be subject to consultation and disclosure as required by the World Bank safeguard policies. Task 2 will commence based on the Task 1 findings and recommendations.

## **Task 2: Detailed Environmental Impact Assessments and Planning Studies**

This activity should be carried out for each road or bridge intervention in parallel to detailed Social Impact Assessment (SIA)/preparation of Resettlement Action Plan (RAP) and Vulnerable Community Development Plan (VCDP); and to the separately commissioned detailed design/DPR preparation so that the findings and outputs / actions from the EIA process and product can inform the technical design and be fully incorporated into cost estimates and bid documents. The Consultant shall perform all public information and disclosure functions, and facilitate and make presentations wherever applicable in completion of the EIA process. The specific assessments are described below.

**Environmental Impact Assessment (EIA) and Plan Preparations:** Based on the final detailed TOR and outline for the EIA for road or bridge works from # Task 1, the consultant shall carry out detailed EIA, as required by World Bank safeguard policies and EHS Guidelines, and covering also any separate or additional EIA/IEE requirements as per national laws of the GoN.

The overall objectives of the EIA study are to:

- Collect baseline data on environmental conditions of the project influence/ impact area
- Identify environmental risks and impacts in terms of magnitude, extent and duration that may be expected to occur during construction and operation
- Identify the critical environmental problems that require further studies and/or monitoring.
- Carry out and document alternative analyses from the environmental point of views including "No Project Alternative" (or with and without project comparison)
- Suggest mitigation measures for the adverse impacts and enhancement measures for the beneficial impacts
- Develop Environmental Management and Monitoring Plan, including site-specific Environmental Management Plan(s) (EMPs) as appropriate.
- Assess the institutional arrangements and capacity for the implementation of Environmental Management and Monitoring Plans, and suggest changes to the arrangements as well as capacity strengthening measures, if necessary.
- Develop information dissemination and consultation strategy for the implementation of the environmental mitigations and enhancement measures during project implementation
- Publish public notice for EIA purpose as may be required
- Consult and inform the project affected people, parties and other stakeholders, and ensure active people's participation
- Advise decision makers regarding the environmental implications of the project

The EIA should cover at minimum the following:

- i. Full *environmental baseline assessment* of the project area of influence, consisting of approximately 2km around the proposed road or bridge, to be adjusted during the scoping as needed to reflect local topography and land uses. This should build on the Task 1 process (initial environmental assessment or scoping/screening carried out in the feasibility study stage), and should include the following:
  - a. *Physical environment*, including topography, geology and geomorphology, slope stability inventory (to include identification of landslide or erosion-prone areas), hydrology and water resources, unique features (rocks, waterfalls etc.), air quality, surface water/ ground water quality, noise level etc.
  - b. *Existing land uses*, including areas for cultivation, grazing areas, hilly areas, forested areas, industrial areas, urbanized areas, common properties etc.
  - c. *Climate Conditions and projected climate change*: Compile all available historical and present-day data on average annual and monthly temperature and precipitation, as well as record highs and lows, and available information on flood levels and areas of influence (including flood maps where available, identification of areas susceptible to flash floods from runoff, etc.) in the study area for storm events of various intervals (for example, 5-year, 20-year, and 100-year storm events). Compile available information on climate change projections for the area of study. Make a conclusion on the potential effects of temperature/rainfall and storm intensity variations – from both present variability and with the anticipated effects of climate change -- along the route which may be relevant to the design of road segments and bridges.
  - d. *Biological environment*, including flora and fauna in the project area (both aquatic and terrestrial, and identification of any endangered, threatened or legally protected species as well as species of economic or cultural importance), areas of natural habitat and critical natural habitats as per World Bank OPs (including but not limited to legally protected areas, and areas of particular significance to species of conservation importance), forest cover and quality, and description of aquatic or terrestrial wildlife habitat and movement including any zones or locations of known wildlife crossings along the existing alignment and/ or within project's area of influence.
  - e. *Physical Cultural Resources* (OP 4.11), historical, religious, or architectural as well as socially sensitive areas (School, Bazar etc.) within or near the potentially affected area
  - f. *Summary of socioeconomic and cultural baseline* from Social Impact Assessment (SIA) undertaken in parallel to the environmental assessment, such as demographic and population information; income and livelihoods based on household survey data; land holding and tenancy, agricultural and

- subsistence activities, and use of forest resources; identification of any Indigenous Peoples/ ethnic groups in area of influence, identification of vulnerable groups, household socioeconomic survey data for communities along the route; land acquisition and resettlement needs, etc.
- ii. *Environmental alternatives analysis*, including (a) summary of analysis of upgrading options carried out during feasibility stage, (b) a summary of additional adjustments to design and alignment aspects to minimize environmental risks and impacts carried out during detailed design studies; (c) alternatives for construction techniques/timing and technology selection, and (d) the “no project” alternative. Alternatives shall be compared in terms of potential environmental impacts; expected capital and recurrent costs for mitigation and/or management of impacts (including training and monitoring aspects), economic and social benefits of each option, and social acceptability;
  - iii. Overview of environmental *legal and regulatory framework* applicable to the project (including national requirements as well as World Bank safeguard policy requirements);
  - iv. *Impact Assessment* for pre-construction, construction and post-construction/ operation of the road, or bridge covering direct, indirect, induced and cumulative impacts, related to key issues identified through the scoping and initial assessment process (Task1). The issue, for example, could be related to the following (but not limited to):
    - a. construction impacts such as noise, waste and wastewater management and disposal, quarry, crusher plant and spoils management, use of explosives and other hazardous materials, contractor / labor camp management, impacts to water sources, etc.
    - b. Environmental impacts during operational e.g. air pollution, noise, traffic safety, and impacts on wildlife, etc
    - c. occupational health and safety risks and issues during construction and operation
    - d. traffic safety during construction and operation
    - e. Construction and operation stage impacts to natural habitats and wildlife (including aquatic and terrestrial species, migratory species known to exist/move in the project’s area of influence),
    - f. Deforestation (both direct but also indirect/induced through project influx, changes to land use, etc. along improved road)
    - g. Slope stability and erosion
    - h. induced land use changes (especially around rest stops, etc.), with implications for forests, biodiversity, etc.
    - i. Cumulative environmental impacts, if any
    - j. Summary of safety concerns and risks, considering increased speed and traffic volumes and community/pedestrian safety issues<sup>3</sup>
    - k. community health and safety risks and issues
    - l. Summary of additional social impacts identified through social assessment and planning studies (from SIA)
  - v. *Environmental Management Plan (EMP)*, based on the findings of the impact assessment and feedback from public consultations. For each impact identified, feasible and cost effective mitigation measures should be proposed to reduce potentially significant adverse environmental impacts to acceptable levels. The capital and recurrent costs of the measures, and institutional, training and monitoring requirements to effectively implement these measures shall be determined. The EMP shall also outline different environmental enhancements including landscaping around proposed project, considerations to aesthetical appeal, provision pathways for species, greening the area, and development of cultural properties or improving access. In addition, the EMP should identify the need for further environmental studies or

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<sup>3</sup> consultant to draw from the Road Safety Audit undertaken in Nepal, and supplement as needed to ensure adequate treatment from a community safety perspective.

detailed plans for issues that cannot be fully dealt with during the project preparation stage, but should be undertaken during project implementation. The EMP should be divided into two sections:

- a. A “project owner’s” version containing the comprehensive set of mitigation, management and monitoring measures, requirements, and institutional responsibilities for both construction and operation stages to fully address all identified impacts:
  - i. Each mitigation and management measure should be briefly described regarding the impact to which it relates, as well as an appropriate timeline for its implementation, indicators for measuring success, and budgetary requirements. In addition to environmental management measures, an occupational health and safety plan, community health and safety plan (including traffic safety), and emergency management plan, if necessary, should be prepared, among others to be identified by the consultant during the assessment process.
  - ii. The EMP shall also include specific or sample plans, such as for management and redevelopment of quarries, borrow areas and construction camps.
  - iii. The EMP shall include detailed specification, bill of quantities, execution drawings and contracting procedures for execution of the environmental mitigation and enhancement measures suggested, separate for pre-construction, construction and operation periods.
  - iv. In addition, the EMP shall include good practice guides related to construction and upkeep of plant and machinery.
  - v. Responsibilities for execution and supervision of each of the mitigation and enhancement measures shall be specified in the EMP.
  - vi. A plan for continued consultation, communications, and grievance management to be conducted during implementation stage of the project shall also be appended.
  - vii. All mitigation and management measures shall be consistent with national requirements, applicable World Bank safeguard policies, and World Bank Group Environment, Health and Safety (EHS) Guidelines.
  - viii. Summary of the grievance management, consultation and communications aspects) shall also be included.
  - ix. A monitoring program including indicators, parameters/thresholds, and locations, frequency and methodology for monitoring should also be included, to enable verification that mitigation measures have been successful.
  - x. Institutional arrangements and responsibilities for carrying out, monitoring, supervising and reporting on compliance with each mitigation and monitoring measure, as well as the arrangements for coordination between the various agencies responsible for implementation and management of the project.
  - xi. Assessment of institutional capacity of the agencies responsible for EMP implementation, and recommendations for capacity-strengthening, training programs, etc. as needed.
  - xii. This version would also include a summary of recommended design adjustments or measures which have been integrated into the detailed design studies being carried out in parallel.
- b. A series of Site-Specific Environmental Management Plans (EMPs) tailored specifically for construction contractors for each of the bid packages, developed to be directly annexable to bidding documents and contracts. The EMPs shall be based on the full EMP and shall contain:
  - i. Site-specific measures pertaining to each road or bridge bid package
  - ii. All other general construction-related environmental, health and safety management measures which are the responsibility of the contractor to implement
  - iii. Specific cost estimate for EMP measures required of the contractor, to be included as a line item in the BOQ of the bid document;
  - iv. Requirements for environmental management staffing and training by the contractor.
- vi. *Documentation of consultations:* As part of the assessment process, disclosure of the draft report and consultations with local communities and with other stakeholders shall be carried out. The consultant shall support the client in the disclosure and consultation process. The consultant shall full document the process and all consultation events, including a list of participants, photo log, summary of presentations

made and feedback received, and indication of how feedback was considered in the assessment and detailed design process.

**Social Impact Assessment.** Separate ToR for Social Impact Assessment (SIA) and preparation of social management plans including Resettlement Action Plans (RAPs) and Vulnerable Community Development Plans (VCDPs) has been prepared. The EIA and SIA will be undertaken in parallel complementing each other; and EIA and SIA together form Environmental and Social Impact Assessment of a proposed road or bridge under BIMP II.

The EIA and SIA will also be coordinated with technical feasibility and detailed design studies under a separate parallel consultancy.

Department of Roads will facilitate interaction, coordination, data/ information sharing, and analysis of the findings in a timely manner.

**Key expected outputs of Task 2:** Detailed EIA and EMP. The Bank will review and clear each of the draft EIA Report of Category ‘A’ interventions. The Consultant shall carry out EIA Study adhering to policies and procedures of the GoN and those of the World Bank. Process of approval of EIA report shall be carried out as described above and in accordance with World Bank safeguard policies and, Environmental Protection Act and Regulations 1997 of Government of Nepal. Final EIA report shall be submitted to the DOR. In the approval process of EIA report, the Consultant is required to present their findings and recommendations to the DOR, World Bank, and Ministry level committee for necessary review and comments.

#### 4. REPORT SUBMISSION

Reports required to be submitted by the Consultant during the course of his services are as follows:

##### **Task 1: Initial Environmental Assessments (Scoping/Screening Report and Terms of Reference Document)**

- a. *Inception cum Screening and categorization report:* initial environmental assessment of the specific road or bridge, environmental categorization, and summary presentation on independent assessment on alternative analysis considering environmental and social aspects in the selection of the preferred bridge construction alternative (Six copies each in paper and electronic soft copy in original version). The Consultant shall make presentation of findings to DOR, which may also include the feasibility and design consultants at DOR’s discretion. The Bank will review and clear each of the screening and categorization reports for Category ‘A’ interventions.
- b. *Draft Terms of Reference and Scoping Report* (Six copies each in paper and electronic soft copy in original version). Within one month after finalization of the proposed road or bridge, consultant shall submit the draft ToR and Scoping Report including findings of the scoping stage, definition of area of influence, priority/ key issues for the proposed road or bridge, guidance on the information needed and methodology to be followed, details of the specific/ customized ToR, and detailed outline/work plan for undertaking environmental assessment studies, in a content and format acceptable to DoR.
- c. Where such interventions are screened as Category ‘A’ Interventions, each Category ‘A’ EIA (and SIA) ToR will be subject to consultation and disclosure as required by the World Bank safeguard policies as well as clearance from the Bank
- d. *Final scoping and TOR*, reflecting feedback received from stakeholders, Ministry and Bank. (Six copies each in paper and electronic soft copy in original version), within one month after receiving feedbacks/ comments.

## **Task 2: Environmental Assessment and Planning Studies**

(a) Monthly Progress Reports (Six copies each in paper and electronic soft copy in original version)

The Consultant shall prepare a monthly progress reports on the Task 2 project activities. The reports shall include the Consultant's detail activities and progress status with the content and format acceptable to DoR.

(b) Environmental Impact Assessment (6 copies Draft and 10 copies Final Report each in paper and electronic soft copy in original version)

The Bank will review and clear each of the draft EIA and SIA Report of Category 'A' interventions.

The Consultant is to carry out EIA Study adhering to policies and procedures of the GoN and those of the World Bank. Process of approval of Terms of Reference, study, and report preparation shall be carried out as described above and in accordance with World Bank safeguard policies and, Environmental Protection Act and Regulations 1997. Final EIA and other plans/reports shall be submitted to the DOR. In the approval process of EIA report, the Consultant is required to present their findings and recommendations to the DOR, World Bank, and Ministry level committee for necessary review and comments. The Consultant shall prepare and present the report in close coordination with Geo-Environmental and Social Unit (GESU) of DOR. After receiving the comments the Consultant shall finalize the report and submit for final approval from the Ministry. Each contract package must have a Site-Specific Environmental Management Action Plan (SS-EMP) prepared based upon the overall project-level Environmental Management Plan but tailored to each contact package. The EMPS must have corridor/stripe-maps or areal map showing spots of environmental impacts or risks/hazards and provide site-specific information/data as well as designed mitigation and management measures, in addition to all generic / general environmental, health and safety related management measures which pertain to the contractor.

## **5. TIME FRAME AND OTHER MINIMUM REQUIREMENTS**

The tentative total duration of consulting services for all parts is twelve months. It is to be noted that the Environmental Assessment, Social Impact Assessment, plan preparation/approvals will be undertaken in tandem with the technical feasibility studies and design/DPR preparation/approval works for each road or Bridge project.

The consulting firm should be familiar with the transport sector assessments and shall possess the following qualifications: i) Registered in Nepal and in good legal status recognized by the Nepal Government, enabling the organization to perform the tasks mentioned above; ii) Demonstrated experience of organizing large scale surveys and EIA studies within the past ten years); iii) Demonstrated capacity and experience in planning and organizing survey logistics; iv) Good network of experienced enumerators, supervisors, and data entry clerks; and v) Demonstrated strong capacity in data management and statistics. The contracted entity shall engage in a multi-disciplinary team comprising of relevant professionals covering at last the following disciplines for this assignment: environmental safeguard, bio-diversity, geotechnical.

During the overall period, it is estimated that at least 24 person-months of professional level technical staff input will be required. In addition to the Key technical professional staff outlined below, the consultant is expected to have additional specialist expertise in the team to cover aspects such as wildlife migration and biodiversity, hydrology, geology, cultural resources, GIS mapping, stakeholder engagement and consultation, cultural heritage, occupational health and safety, community health, etc. Incorporation of appropriate required

support staff resources for baseline fieldwork, administrative and office support, logistics, etc. are also the full responsibility of the consultant and are not included in this initial estimate.

The estimated key consulting team requirements for performance of the services specified in the scope of work for each Road or Bridge project will be determined for each intervention during implementation of the TA (once the location is known and site screening and scoping is completed). Following is an indicative assessment of the possible requirement.

#### **Estimated Team Composition**

<b>Key Professional Staff</b>	<b>Number of Staff</b>	<b>Estimated Person-Month</b>	<b>Remarks</b>
<b>Environmental Safeguard Specialist and Team Leader</b> , with at least the following qualifications: <ul style="list-style-type: none"> <li>(a) Master's degree or equivalent in environmental science, environmental engineering, environmental planning, or other related disciplines.</li> <li>(b) At least 15 years of experience on environmental impact assessment and/or environmental management aspects of development projects including road and bridge projects.</li> <li>(c) experience of preparing environmental assessments and environmental management plans, including for two or more World Bank or other donor funded projects. Full knowledge of the World Bank's operational policies/directives, guidelines, and procedures related to environmental assessment and management is essential.</li> <li>(d) Prior experience in Nepal is strongly desired.</li> </ul>	1	12	KEY PERSONNEL
<b>Biodiversity Expert</b> <ul style="list-style-type: none"> <li>(a) Master's degree or equivalent in environmental science, bio-diversity, natural resources, forestry/ wildlife/ aquatic life etc.</li> </ul>	1	For each intervention, define during screening and scoping	

	<p>(b) At least 10 years of experience on bio-diversity aspects of environmental assessment and/or environmental management of development projects including road and bridge projects.</p> <p>(c) experience of preparing bio-diversity assessment, bio-diversity management plan, environmental assessments and environmental management plans, including for two or more World Bank or other donor funded projects. Full knowledge of the World Bank's OP on natural habitat, forest, and environmental assessment as well as countries requirements related bio-diversity, natural habitat, forest, wildlife/ aquatic life etc.</p> <p>(d) Prior experience in Nepal is essential</p>		of the intervention.
	<p><b>Geotechnical Expert</b></p> <p>(a) Master's degree or equivalent in Geotechnology, applied geology, geotechnical engineering, geology, etc. or other related disciplines.</p> <p>(b) At least 10 years of experience on geotechnical assessment of physical infrastructure projects, geotechnical expert in environmental assessment and/or environmental management aspects of development projects including road and bridge projects.</p> <p>(c) experience of preparing geo-technical assessment, environmental assessments and environmental management plans, including for two or more World Bank or other donor funded projects. Full knowledge of the World Bank's Environmental Assessment Policy, geotechnical aspects of EHS Guidelines etc as well as relevant aspects under country's requirements.</p>	1	For each intervention, define during screening and scoping of the intervention.

(d) Prior experience in Nepal is essential.			
<p>Additional specialist-level expertise, such as in wildlife migration and biodiversity, hydrology, geology, cultural resources, GIS mapping, stakeholder engagement and consultation, cultural heritage, occupational health and safety, community health, etc.</p> <p>Social development, social surveys, Gender Equality and Social Inclusion, Citizen Engagement, Outreach and Communication, etc are covered under SIA. Short input from Social Development Specialist<sup>4</sup> may be needed only for coordination with SIA purpose.</p>	<b>Various, as needed</b>	Up to 10 additional Team members for appropriate duration of engagements	

**Note:**

- a. The above key staff composition and estimated total key staff man-month is Client's estimate at this stage. More detailed and specific requirements need to be defined in the detailed and customized ToR that will be an outcome of the Task 1. The consultants are advised to assess their own requirement and propose their own staff composition and staff input requirement for efficient performance of their job as per the Terms of Reference. If the proposed consultant's team is found inadequate or not sufficient during the performance of the services then additional staff shall be provided by the consultant at their own cost.
- b. A Technical Proposal shall be considered unsuitable and shall be rejected for further evaluation if it does not respond to important aspect of TOR.

## 6. CONSULTANT'S FACILITIES

It should be noted that the consultant will need to provide all the administrative, technical professional and support staff needed to carry out their services efficiently. The Consultants will also be responsible for providing all other necessary facilities and logistical support for its staff/teams engaged, including accommodation, vehicles/transportation, office equipment, field survey and investigation equipments, laboratory testing, communications, utilities, office supplies and other miscellaneous requirements wherever applicable to render their services.

## 7. EMPLOYER SUPPORT

The following shall be provided to the Consultant by the Employer/DOR:

- Access to relevant documents and data available which may be supportive to the Consultant;
- Letter (s) introducing the Consultant wherever required in performing the assignment.

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<sup>4</sup> To be coordinated with Social Impact Assessment and social management plan preparations including RAP and VCDP; to be carried out in parallel.

## **8. PAYMENT METHOD**

The Consultant shall be paid as below:

- a. after submission of inception report: up to 10 % of the contract amount.
- b. after submission of finalized survey instruments, recruitment and training to field staff and approval of scoping and ToR documents by concerned ministry: up to 25 % of the contract amount.
- c. after submission of draft EIA reports/plans acceptable to the Employer/DoR: up to 30 % of the contract amount.
- d. after submission of the final EIA/approved EIA/management Plans/reports and accepted by the Employer/DoR: remaining (full and final payment) of the contract amount.

## **9. TAXATION**

The consulting firm shall be fully responsible for all taxes imposed by Government of Nepal. The firm must be registered in VAT.

## **10. CONTRACTUAL ARRANGEMENT**

The Consultant's contract will be with Government of Nepal, Department of Roads, Second Bridge Improvement and Maintenance Program (BIMP-II) and will be based on a contract agreement consistent with the World Bank guidelines for consultancy services contracts.