REPUBLIC OF IRAQ

KURDISTAN REGIONAL GOVERNMENT
MINISTRY OF HOUSING AND CONSTRUCTION

GENERAL DIRECTORATE FOR ROADS AND BRIDGES

EMERGENCY ROAD REHABILITATION PROJECT
(ERRP)

ENVIRONMENTAL AND SOCIAL SAFEGUARDS ASSESSMENT FRAMEWORK
(ESSAF)

November 30, 2005
Emergency Road Rehabilitation Project
Environmental and Social Safeguards Assessment Framework (ESSAF)

1. The Emergency Road Rehabilitation Project (ERRP) will be processed as an Emergency Recovery Operation. Considering the emergency situation and the current security conditions in Iraq, the Environmental and Social Screening Assessment Framework\(^1\) (ESSAF) designed for Iraq will be used for this project. The main components of the Project include the financing of:
   a) road rehabilitation;
   b) improvement of village access roads;
   c) rehabilitation and upgrading of the Erbil to Altun Kopri Road;
   d) replacement of existing pontoon bridges; and
   e) technical support.

2. The first two components are the largest in terms of budget (more than 50 percent). Considering the nature and magnitude of potential environmental impacts associated with the rehabilitation and reconstruction works, both components are classified as category “B” requiring the development of an Environmental Management Plan (EMP) including mitigation plan (control measures to reduce or eliminate to the extent possible the expected impacts), monitoring plan (consisting primarily of field visual inspections and photographic documentation should be implemented at the construction phase and be maintained at least one year after completion of construction activities), and institutional strengthening-capacity building (development of an environmental training course to be attended by personnel who will be involved in the construction, maintenance or monitoring activities during both construction and operation). The PMT will develop the EMPs for the road rehabilitation and village access roads within the context of ESSAF and with the assistance of the Bank. A proposed checklist of likely environment and social impacts to be filled out by the PMT for each subproject or group of subprojects is included in Appendix 8.1. The typical content of an EMP report is outlined below.

   Table 8-1. Typical EMP Report Outline

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of the project</td>
<td>Provides a description of the project using appropriately scaled maps and including site specific information such as location, general layout, size,</td>
</tr>
<tr>
<td>Description of the environment</td>
<td>Provides a general brief description of the physical, biological, and socio-economic environment</td>
</tr>
<tr>
<td>Environmental Impacts</td>
<td>Identifies and evaluates the positive and negative impacts likely to result from the project</td>
</tr>
<tr>
<td>Mitigation Plan</td>
<td>Recommends feasible and cost-effective measures to prevent or reduce potential negative impacts to acceptable levels.</td>
</tr>
<tr>
<td>Environmental Monitoring Plan</td>
<td>Presents a plan to conduct environmental monitoring of impacts associated with the proposed project during construction and operation.</td>
</tr>
<tr>
<td></td>
<td>Includes overall cost estimates of monitoring efforts.</td>
</tr>
<tr>
<td>Capacity Building</td>
<td>Provides an assessment of the environmental capacity on-site and identifies staffing and training requirements as well as budget estimates to meet the environmental needs of the project.</td>
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</tbody>
</table>

Appendix
Filled checklist and relevant photos

3. For components 3 and 4 namely, the rehabilitation and upgrading of the Erbil – Altun Kopri main road and replacement of existing pontoon bridges, a full EIA (category A) will be prepared. The Bank will assist in preparing Terms of Reference for an environmental consultant to conduct the full EIAs (Attachment 2). The main environmental issues that will be addressed in the full EIAs at the construction and operational phases are typically associated with air quality, noise, traffic, surface water, groundwater and soil, biodiversity, landscape, waste generation, resource use, health and safety, and socio-economics. Sensitive receptors shall be identified and each potential impact assessed separately. The typical content of an EMP report is outlined below.

\(^1\) As per the March 22, 2004 Memorandum to Mr. Shengman Zhang, Managing Director, MDS, which was subsequently approved on March 31, 2004.
## Table 8.2. Typical EIA Report Outline

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Summary</td>
<td>Provides a brief discussion of significant findings and recommended actions.</td>
</tr>
<tr>
<td>Policy, Legal and Administrative Framework</td>
<td>Describes the pertinent regulations and standards governing environmental quality with emphasis on traffic and noise guidelines.</td>
</tr>
<tr>
<td>Project Description</td>
<td>Provides a description of project using appropriately scaled maps and including site specific information such as location, general layout, size, capacity, pre-construction and construction activities, schedule, staffing and support, facilities and services, operation and maintenance activities, life span.</td>
</tr>
<tr>
<td>Description of the Environment</td>
<td>Provides a description of available baseline environmental data which are typically classified under three environments: Physical environment: geology, topography, soils, climate and meteorology, ambient air quality, surface and groundwater hydrology, existing sources of noise, air emissions, and water pollution discharges. Biological environment: ecological baseline in the marine and terrestrial environments, flora and fauna, and significant natural sites. Socio-cultural environment: population, land use, traffic, planned development activities, employment, recreation, population perception, aspirations and attitudes (public meetings).</td>
</tr>
<tr>
<td>Environmental Impacts</td>
<td>Identifies and evaluates the positive and negative impacts likely to result from the project while assigning economic values for these impacts when feasible. Characterizes the extent and quality of available data, explaining significant information deficiencies and any uncertainties associated with prediction of impacts.</td>
</tr>
<tr>
<td>Analysis of Alternatives</td>
<td>Describes alternatives that were examined in the course of developing the proposed project and identifies other alternatives, which would achieve the same objectives such as design, technology, construction techniques and phasing, and operation and maintenance procedures. Compares alternatives in terms of potential environmental impact, capital and operating costs, suitability under local conditions, and institutional, training, and monitoring requirements.</td>
</tr>
<tr>
<td>Mitigation Plan</td>
<td>Recommends feasible and cost-effective measures to prevent or reduce significant negative impacts to acceptable levels. Provides cost estimates to implement mitigation measures (not within the design proper) as well as an implementation schedule in phase with other project activities.</td>
</tr>
<tr>
<td>Environmental Monitoring Plan</td>
<td>Presents a plan to conduct environmental monitoring of impacts associated with the proposed project during construction and operation. Includes overall cost estimates of monitoring efforts.</td>
</tr>
<tr>
<td>Institutional Strengthening and Capacity Building</td>
<td>Provides an assessment of the environmental capacity on-site and identifies staffing and training requirements as well as budget estimates to meet the environmental needs of the project.</td>
</tr>
<tr>
<td>Stakeholders' participation</td>
<td>Provides a summary of public consultation activities.</td>
</tr>
<tr>
<td>Appendices</td>
<td>List of EIA contributors including individuals and organizations. References relied upon in the EIA particularly unpublished documentation. Record of interagency/forum/consultation meetings. Resettlement plan (if needed).</td>
</tr>
</tbody>
</table>

4. **OP 4.12 Involuntary Resettlement.** The need for involuntary resettlement or land acquisition in specific subproject will be ascertained during project implementation, when site-specific plans are available. In cases where acquisition of linear stretches of land is necessary, subprojects will be screened for triggering of the resettlement policy. Any subprojects involving involuntary resettlement or land acquisition will only be approved after preparation of a resettlement plan acceptable to the Bank. Procedures for identifying people who will be affected by the subprojects and for proper determination of appropriate compensation will be included when appropriate.
5. **OP 11.03 Cultural Property.** The need for Cultural Property assessment in specific subproject areas is highly unlikely with limited to no risks of damaging cultural property in the areas targeted by the sub-projects if excavations are required. Projects and subprojects will be reviewed for their potential impact on cultural property and clear procedures will be required for identification, protection of cultural property from theft, and treatment of discovered artifacts, and will be included in standard bidding documents. Procedures for the protection of cultural property, including the chance discovery of archaeological artifacts, unrecorded graveyards and burial sites will be included when appropriate.

6. **OP 7.50 Projects on International Waterways.** While the Project will include bridges across the Tigris and the Euphrates and/or their tributaries, there are no potential impacts in the international context and therefore the safeguard policy or OP 7.50 is not applicable.

7. **Capacity-Building:** As part of the capacity-building to be provided for implementation of the proposed project, the SCRB and the KRG-GDRB will be hiring consultants to prepare the EIAs which will be completed and reviewed by the Bank before construction activities. An environmental specialist will be hired to be part of the PMT throughout the project duration and an environmental consultant will be hired for a period of about 6 months to prepare the EIAs, assist in the implementation of EMPs of all project components, and train the environmental specialist within the PMT.
### Appendix 8.1: EMP Summary Checklist

<table>
<thead>
<tr>
<th>A.</th>
<th>Project Related Issues</th>
<th>Yes</th>
<th>No</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Will the project involve land expropriation or demolition of existing structures?</td>
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<td>2.</td>
<td>Will the project require that populations be resettled or compensation for resettlement provided?</td>
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<td>3.</td>
<td>Will the project involve widespread land disturbance or site clearance?</td>
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<td>4.</td>
<td>Will the project require large amounts of raw / construction materials?</td>
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<td>5.</td>
<td>Will the project generate large amounts of residual wastes and wasted construction materials or eroded soil?</td>
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<td>6.</td>
<td>Will the project require the setting up of ancillary production facilities?</td>
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<td>7.</td>
<td>Will the project affect land use zoning and planning or conflict with prevalent land use patterns?</td>
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<td>8.</td>
<td>Will the project result in potential soil contamination or ground and surface water contamination, e.g., from oil, grease and fuel from equipment yards, from herbicides for vegetation control and from chemicals, e.g., calcium chloride for dust control?</td>
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<td>9.</td>
<td>Will the project lead to an increase in suspended sediments in streams affected by road cut erosion, decline in water quality and increased sedimentation downstream?</td>
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<td>10.</td>
<td>Will the project involve the use of chemicals or solvents?</td>
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<td>11.</td>
<td>Will the project require blasting?</td>
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<td>12.</td>
<td>Will the project make significant demands on utilities and services, and require significant levels of accommodation or service amenities to support the workforce during construction?</td>
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<td>13.</td>
<td>Will the project increase the levels of harmful air emissions?</td>
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<td>14.</td>
<td>Will the project increase ambient noise levels?</td>
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<td>15.</td>
<td>Will the project involve the disturbance or modification of existing drainage channels (rivers, canals) or surface water bodies (lakes, lagoons)?</td>
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<td>16.</td>
<td>Will the project lead to the disruption / destruction or damage of terrestrial wildlife habitats, biological resources or ecosystems through interruption of migratory routes, disturbance of wildlife habitats, and noise related problems?</td>
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<td>17.</td>
<td>Will the project induce marred landscape (e.g., scars from road cuts) and lead to landslides, slumps, slips and other mass movements in road cuts?</td>
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<td>18.</td>
<td>Will the project lead to long-term or semi-permanent destruction of soils in cleared areas not suited for agriculture?</td>
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<tr>
<td>19.</td>
<td>Will the project lead to the destruction of vegetation and soil in the right-of-way, borrow pits, waste dumps, and equipment yards?</td>
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<td>20.</td>
<td>Will the project lead to environmental and social disturbance by construction camps?</td>
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<tr>
<td>21.</td>
<td>Will the project lead to the creation of stagnant water bodies in borrow pits, quarries, etc., suited for mosquito breeding and other disease vectors?</td>
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<td>22.</td>
<td>Will the project lead to health hazards and interference of plant growth adjacent to road by dust raised and blown by vehicles?</td>
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<tr>
<td><strong>23.</strong> Will the project lead to erosions of lands below the roadbed receiving concentrated outflow carried by covered or open drains?</td>
<td>هل سيؤدي المشروع إلى تحطم المناظر الطبيعية في الأراضي المجاورة للمشروع نتيجة تصفير المياه؟</td>
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</table>
| **24.** Will the project lead to unplanned use of the infrastructure being developed? | هل سيؤدى المشروع إلى استخدام البنية التحتية المطّلقة لغير الهدف المقصود?
| **25.** Will the project lead to the illegal invasion of homelands and indigenous people by squatters and poachers causing serious social and economic disruption? | هل سيؤدي المشروع إلى استيلاء الغرباء على الأراضي الخاصة مما يسبب بإصابات اجتماعية وإقتصادية؟ |
| **26.** Will the project be equally profitable to all beneficiaries in the region? | هل سيكون المشروع موردًا متساويًا لجميع المستفيدين في المنطقة؟ |
| **27.** Will the project be equally accessible by all beneficiaries in the region? | هل سيكون المشروع متاحًا متساويًا أمام المستفيدين في المنطقة؟ |

### B. Site Related Issues

1. Is the project located in an area with designated natural reserves? | هل الموقع واقع في منطقة مصنفة كمحرم طبيعية؟
2. Is the project located in an area with unique natural features? | هل الموقع واقع في منطقة ذات طبيعة فريدة من نوعها؟
3. Is the project located in an area with endangered or conservation-worthy ecosystems, fauna or flora? | هل الموقع واقع في منطقة مهمة لحماية الدبائل أو الحيوانات أو أنواع طبيعية هامة باللغة؟
4. Is the project located in an area falling within 500 meters of national forests, protected areas, wilderness areas, wetlands, biodiversity, critical habitats, or sites of historical or cultural importance? | هل الموقع واقع على بعد 500 م من غابات، محميات طبيعية، مناطق حيوانية، أماكن تاريخية أو طبيعية ذات أهمية؟
5. Is the project located in an area such that it would create a barrier for the movement of conservation-worthy wildlife or livestock? | هل الموقع واقع في منطقة بحيث يحول بين الحيوانات أو المواشي?
6. Is the project located close to subterranean water sources, surface water bodies, watercourses or wetlands? | هل الموقع واقع قرب منبع الماء الجوفية أو سطحية أو سطحية أو مستنقعات؟
7. Is the project located in an area with designated historic or cultural resources? | هل الموقع واقع في منطقة ذات أهمية حضارية أو تاريخية؟
8. Is the project located in a polluted or contaminated area? | هل الموقع واقع في منطقة ملوثة؟
9. Is the project located in an area of high visual and landscape quality? | هل الموقع واقع في منطقة غنية بالمناظر الطبيعية؟
10. Is the project located in an area susceptible to landslides or erosion? | هل الموقع واقع في منطقة معرضة لانجرافات أو تآكل في التربة؟
11. Is the project located in an area of seismic faults? | هل الموقع واقع في منطقة زلزال؟
12. Is the project located in a densely populated area? | هل الموقع واقع في منطقة كثيفة بالسكان؟
13. Is the project located in prime agricultural land? | هل الموقع واقع في منطقة زراعية ذات أهمية؟
14. Is the project located in an area of tourist importance? | هل الموقع واقع في منطقة سياحية ذات أهمية؟

### C. Comments and Recommendations

طباق ووصفات:

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**Signed by Environment Specialist:**

Name: 

Title: 

Date: 

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**Signed by Project Manager:**

Name: 

Title: 

Date: 

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Appendix 8.2 Terms of Reference for Environmental and Social Assessment

TERMS OF REFERENCE
ENVIRONMENTAL AND SOCIAL ASSESSMENT (ESA)
Component A.3: Bridge Replacement Pilot Program Bridges
Component B.1: The Erbil – Altun Kopri (Perdi) Road Improvement

A. INTRODUCTION
1. The Government of Iraq has applied for a credit from the International Development Association (IDA) to finance an Emergency Road Rehabilitation Project (ERRP), which included among other components:

   - **Component A.3.** Bridge Replacement Pilot Program that would provide a limited number of critical river crossings with safer and permanent structures by replacing their old decaying floating bridges with permanent two-way concrete bridges. The bridges are expected to be between 100 meters and 250 meters long, and about 12 meters wide. The four bridges identified so far are located in the governorates of Al Muthanna, Babil, and Anbar, and cross the Euphrates River or its tributaries.

   - **Component B1.** Emergency road repairs and improvements on the national road network, in particular the road from Erbil to Altun Kopri (Perdi) in Erbil Governorate in Kurdistan. The 42 km road section from Erbil to Perdi is part of the Erbil-Baghdad highway and the lifeline of the economy of the Kurdistan Region. The existing two lane carriageway has about 22,000 vehicles a day, and due to the deterioration of the pavement and frequent overtaking, there are about 12 serious road crashes each day and many injuries and fatalities every year. The road is connecting a number of villages (25) and secondary roads and provides access to not less than 80 villages on both sides at various distances from the road. The Kurdistan Regional Government (KRG) intends to first widen the existing road by constructing a parallel carriageway alongside the existing road. When this new carriageway is completed, all traffic will be transferred to the new carriageway, while the old carriageway is repaired and rehabilitated. When all works are completed, the road will be opened for four lane traffic on the full length.

2. Environmental screening. The project will be processed as an Emergency Recovery Project. Considering the emergency situation and the current security conditions in Iraq, the Environmental and Social Screening Assessment Framework designed for Iraq will be used for this project. The above mentioned two main components (B.1 and A.3) are rated as category "A" with no direct adverse social impacts and no land acquisition since the additional lanes are within the right of way of the exiting road and no settlements or inhabitants are reportedly within the right of way. Under Bank guidelines for emergency projects, the Environmental and Social Assessment (ESA) will be prepared before initiation of construction activities by the State Commission for Roads and Bridges (SCRB) for Component A.3 and by the General Directorate for Roads and Bridges (GDRB) in the Kurdistan Region (KRG-GDRB) for the Component B.1. The SCR and the KRG-GDRB are responsible for preparing details of their respective component final design.

3. Scope of Analysis. The analysis shall include an evaluation of the alternatives to the proposed Project, including the “no-action alternative” and an examination of the direct and indirect effects of the proposed action. It shall also include an Environmental and Social Management Plan (EMP) that provides a proposed framework for mitigation, monitoring, and institutional strengthening actions to be integrated into the design and implementation of the Project. As part of this process, it is planned that public consultation will be undertaken and that environmental studies be disclosed to the public.

4. World Bank Environmental and Social Safeguards Policies. The Terms of Reference have been prepared to support the preparation of an ESA that is in compliance with the environmental and social policies and procedures of the World Bank. World Bank Safeguard Policies involve mechanisms for integration of environmental and social issues into decision-making and are complemented by a Policy on Disclosure of Operational Information. The WB Safeguard Policies encompasses two main types of policies namely, environmental and social. Environmental policies include Environmental Assessment, Natural Habitats, Forestry, Pest Management, Safety of Dams, and Projects involving international waters; while social policies include Indigenous People, Cultural Property, Involuntary Resettlement, and Projects in Disputed Areas.
B. OVERVIEW OF APPLICABLE WORLD BANK SOCIAL & ENVIRONMENTAL SAFEGUARD POLICIES AND RELATED REQUIREMENTS

5. Preliminary review of the proposed Project indicates that several World Bank Environmental Policies might be triggered.

**OP 4.01 – Environmental Assessment.** Category “A” environmental assessment is required since the project may be associated with diverse and significant environmental and social impacts during the construction and operation phases. The environmental assessment should include an analysis of the potential positive and negative physical, biological, socio-economic, and cultural property impacts from the proposed Project. It should identify and evaluate direct, indirect and cumulative impacts from the proposed Project in the zone of influence to be defined by the Consultant and may extend beyond the Bridge area. Under current procedures of the World Bank, all environmental assessments for category “A” projects require that the studies be prepared by an independent consultant that has no conflict of interest resulting from having been the lead consultant and/or member of a consortium or joint venture responsible for undertaking the feasibility and design studies for the proposed project.

6. In addition, another World Bank policy or consideration that is necessary in a project of this scope include:

**BP 17.50 – Disclosure of Operational Information.** The proposed Project is subject to the provisions of this Policy and other related World Bank requirements concerning the disclosure of environmental and social information. These requirements include making the ESA and its supporting studies available in draft and final versions at the World Bank, Washington, DC, and with involved governmental authorities within Iraq (SCRB in Baghdad, and KRG-GDRB in Erbil). Key documents should be made available in both Arabic and English.

C. SCOPE OF WORK

7. **Overall Outputs.** The ESA report shall be concise and comprehensive. The main text shall focus on findings, conclusions and recommended actions, supported by summaries of the data collected and citations for references used in interpreting those data. Detailed or un-interpreted data are not appropriate in the main text and shall be presented in appendices or a separate volume. Unpublished documents used in the assessment that may not be readily available, shall also be assembled in an appendix. The ESA report shall be organized according to the outline below:
   - Executive Summary for the ESA which will summarize the project description, the applicable safeguard policies, the environmental impacts, the Environment and Social Management tables and the summary of the consultation process
   - Policy, Legal and Administrative Framework
   - Description of the Proposed Project
   - Environmental and Social Baseline Conditions
   - Significant Environmental and Social Impacts
   - Analysis of Alternatives (Including ‘No-action alternative’)
   - Environmental and Social Management Plan
     - Resettlement and Land Acquisition Policy Framework/ Resettlement and Land Acquisition Plan, if applicable.
   - Environmental Management Plan:
     - Mitigation Measures
     - Monitoring Plan
     - Training and Institutional Strengthening Plan
   - Summary of the Environmental and Social Management Plan
   - Summary of the results of the consultation process
   - List of References
   - Appendices
     - List of Environmental Assessment Preparers
     - Records of Interagency Meetings
     - Records of Public Meetings
     - Public Consultation and Disclosure Plan for the Implementation Period
     - Data and Unpublished Reference Documents
     - Archaeological and Historical Sites Surveys (if applicable)
     - Archaeological Chance Find Procedures (if applicable)
8. **Objectives of the Assignment.** The objective of this assignment is to conduct an ESA of the Proposed Project that will:

- Be in conformity of the World Bank safeguard policies, taking into consideration the environmental and social procedures of the Government of Iraq;
- Be based on information and data from previous technical studies, original field surveys, and investigations as appropriate;
- Recognize the environmental, social, and economic impacts of the proposed project, recommend control, mitigation and monitoring measures to be addressed during the implementation of the project;
- Conduct a formal process of public participation and consultation, including public information meetings and consultation on the scope of work for the ESA, and timely disclosure of draft and final ESA Reports.

9. As part of this process, the Consultant shall be responsible for reviewing and analyzing available information regarding the proposed Project and collecting site specific field information related to social and environmental issues.

10. **Primary Study Areas and Extended Areas of Influence.** The primary study areas encompass (a) the replacement of existing floating bridges; and (b) the 42 km road section from Erbil to Perdi including its right of way. They also include lands adjacent to the bridges and the road, which might be subject to potential social and environmental impacts. The extended zones of influence consists of the main communities or travelers, affected positively or negatively by the project, including urban and rural areas and natural habitats stretching across the bridges and the road proper and areas affected by vehicle induced emissions (i.e. air, noise, vibration) and in terms of improved accessibility and potential reduction in travel time.

11. **Approach and Phasing of the Study Process.** The duties of the consultant should be carried out in two phases as detailed below:

- Phase I- Overview and Preparatory Work (represents about 30 percent of the level of effort)
- Phase II- Project Specific ESA (represents about 70 percent of the level of effort)

**PHASE I- OVERVIEW AND PREPARATORY WORK**

12. The Consultant shall use the existing data, collect and gather supplementary baseline information, and assure a full and open public consultation process. The required procedures for completing this preparatory phase is highlighted below:

**Task 1. Develop a Consultation & Communications Program, including Public Consultation**

13. In the context of a bridge replacement project, consultation of stakeholders as well as the general public constitutes an important step that shall be accomplished by the consultant during project implementation. The main objective of the consultation process is to inform stakeholders about the project and allow them to articulate various views, concerns and values. This process will ensure better transparency and accountability in decision-making. In this respect, the consultant with the aid of concerned governmental authorities shall organize public consultation meeting(s) during the preparation of the ESA report in order to capture the views of the various stakeholders and the general public, and address them within the ESA to the extent technically and economically feasible.

14. In close cooperation with the SCRd or KRG-GDRB, the Consultant shall follow a Consultation and Communications Program including activities that involve inputs from public consultation and participation to the environmental and social assessment process. The Consultation and Communications Program shall describe how the substantive issues are discussed in a two-way manner with stakeholders from national and local government, residents of the Project area of influence, academic and applied research institutes, non-governmental organizations and/or interested individual citizens. Meetings shall involve representatives of various stakeholders. For each meeting,
a formal record shall be made including the agenda, a list of participants, and a summary of the issues discussed. Copies of materials describing the Project shall be provided to the participants.

15. It is proposed that consultation and participation meetings be conducted at well known locations in the Project areas particularly where significant impacts are expected (positive or negative). These locations are to be determined once the ESA is initiated.

16. The Consultation and Communications Program shall continue during the Project implementation process, especially in conjunction with major construction activities. Although the Consultant may no longer be involved at that stage, the Consultant will need to train appropriate staff in the SCR and KRG-GDRB to continue the consultation process during Project operation.

**Task 2. Assist SCR and KRG-GDRB in Implementing the Consultation and Communications Program**

17. The Consultant shall assist the SCR and KRG-GDRB in implementing the Consultation and Communications Program. The Consultant shall also provide, through the SCR and KRG-GDRB, factual inputs for use by the World Bank. The Consultant shall also provide assistance to the SCR and KRG-GDRB in complying with the World Bank’s policies on disclosure of Project related environmental and social documents. This Policy requires that the environmental and social documentation for proposed projects be made available to the public at accessible locations in the project area and at the World Bank in Washington, DC.

18. The draft and final reports shall be disclosed as follows: the Executive Summary of the ESA shall be made available in Arabic and English; the Main Report of the ESA in English; the Social Assessment, if required, in Arabic and English; the Resettlement and Land Acquisition Framework and Resettlement and Land Acquisition Action Plan(s), if required, in Arabic and English. Provisions shall also be made for the disclosure of information to local communities before the construction phase of the Project.

**Task 3. Project Description**

19. The consultant shall provide a detailed description of the proposed bridge replacement project. The Project description shall include diagrams, maps, tables, and descriptive text based on the existing information. It shall be updated throughout the preparation of the ESA. The Project description shall address the following components, but is not limited to:

   a. For Component A.3: Bridges complete layout and profiles using appropriately scaled maps
      - For Component B.1: Road complete layout and profiles using appropriately scaled maps
      with detailed definition of areas with cuts and fills.

   b. Funding and implementing agencies

   c. Identification and brief description of areas potentially served by the bridge

   d. Land use surveys of areas surrounding the bridge (at least 1 km radius on both sides of the bridge)

   e. Identification of areas to be expropriated, if applicable

   f. Design of the various bridge components using appropriately scaled maps

   g. Nature and duration of construction and operation activities

   h. Nature, quantities, and source of materials needed during the construction phase

   i. Schedule and description of construction activities

   j. Staffing and support

   k. Facilities and services

   l. Operation and maintenance activities

   m. Financial requirements for the implementation of the project

**Task 4. Overview of Policy, Legal, and Administrative Framework**

20. The existing policy, legal and administrative framework in Iraq related to the construction and operation of the proposed project shall be reviewed by the consultant and included within the ESA report. Relevant World Bank Safeguard Policies (listed in Section B) shall also be reviewed to ensure compliance of the project with both local and World Bank regulations.

21. The replacement of floating bridges may require the involvement of several ministries (Public Works, Electricity, Environment, Water and Agriculture) along with various governmental agencies. A statement of the mission of each shall be included by the consultant in the ESA report and within the context of the proposed project.

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22. In Iraq, while existing environmental laws and regulations may not be integrated within a well-articulated environmental policy framework, analysis of environmental management and legal-institutional frameworks and capacities shall be conducted by the consultant and included within the ESA report. It is important to outline sector-specific environmental laws and regulations and put in the context of the proposed project. If applicable, Iraqi ratified international conventions of relevance to the proposed project shall also be presented and analyzed in the ESA report.

23. In the context of the proposed project, several standards may be adopted including water and river sediment quality standards, water clearance, ambient air quality standards, noise and vibration guidelines, etc. As such, the consultant shall identify, summarize, synthesize, and analyze relevant Iraqi environmental standards and will also use the guidelines set forth by the World Bank’s on pollution abatement and prevention handbook (PAAH) which ever are the strictest. Relevant international standards shall also be described and adopted where feasible and applicable provided that they are stricter than PAAH and acceptable by the Government of Iraq. Such standards could be promulgated by the World Health Organization (WHO), the European Commission (EC), the US Environmental Protection Agency (US-EPA), the Occupational Safety and Health Administration (OSHA), the Federal Highway Administration (FHWA), etc.

24. The consultant shall review relevant World Bank Safeguard Policies as listed in Section B and ensure their integration within the framework of the ESA.

**Task 5. Design and Conduct of a Social Assessment**

25. A Social Assessment shall be conducted as part of the ESA to determine how the Project will affect local communities and serve as a broader analysis of Project related social issues beyond those concerning potential impacts and risks. The Consultant must seek advice from the World Bank social specialists to resolve issues in interpretation of good practice guidelines (http://www.worldbank.org/socialanalysis).

26. The Consultant shall conduct a literature review and collect relevant information available at various Government ministries and agencies. This would entail:
   - Collecting copies of important thematic atlases and maps;
   - Defining a methodology to collect information from various stakeholders that combines focus group discussions and in depth case studies;
   - Clarifying and assessing the most relevant issues through discrete sampling and focus group techniques in the primary study areas and the extended zones of influence.

**Phase II- Project Specific Environmental and Social Assessment**

**Task 6. Describe the Project-Specific Environmental and Social Conditions**

27. Baseline conditions define the characteristics of the existing and projected future environment with or without the project implementation. Wherever applicable, elements of the environment include its physical (such as climate and meteorology, surface and groundwater quality, river sediment and soil, topography, noise and vibration levels, air quality, traffic, rivers and waterways), biological (terrestrial, and riverine biodiversity including flora, fauna, rare or endangered species, sensitive habitats, significant natural sites), and socio-economic characteristics (such as population, land-use, planned development activities, community structure, employment, distribution of income, goods and services, recreation, public health, cultural properties, customs, aspirations, and attitudes).

28. Existing basic documents (such as topographical and geological maps, technical documents on climate and meteorology, geology, hydrogeology, bridge characteristics, water quality/quantity, river flows and usage, etc.) shall be collected, reviewed, synthesized, and analyzed. Additional information shall be sought from various government agencies, academic or research institutions, and/or consulting firms. To the extent feasible residents and professionals shall be consulted to validate information from other sources and identify potential gaps in the technical data. Field surveys shall also be conducted where existing site-specific information is expected to be inadequate or incomplete.

29. It is particularly important to accurately identify any additional lands that could be required by the GoI for the Project. In such case, it is essential to identify any involuntary relocation of people and any individuals whose livelihoods may be affected by the Project. The numbers, locations, and socio-economic conditions of the affected people shall be fully documented, to assist the GoI in meeting the objectives of World Bank OD 4.12.
Task 7. Analyze potential environmental and social impacts

30. The potential anticipated environmental and social impacts associated with the proposed project both at the construction and operational phases are typically associated with surface water and sediment quality, river flow and biodiversity, air quality, noise and vibration, traffic, landscape, waste generation, resource use, health and safety, and socio-economics. The consultant shall use both qualitative and quantitative (using analytical and mathematical means) approaches to assess the potential impacts. In addition, the consultant shall distinguish between significant positive and negative impacts, direct and indirect impacts, and immediate and long-term impacts as well as identify impacts, which are unavoidable or irreversible.

31. The assessment of impacts is directly related to the definition of sensitive receptors. As such, the consultant shall identify sensitive receptors located on-site and its surroundings and assess each potential impact separately in the water shed of the project:

32. For each impact being identified, the following shall be provided:
   - Description of the major issues
   - Documentation of the cause and effect relationships between planned project activities
   - Identification of secondary or higher order effects, with clearly defined pathways of impacts from higher order effects
   - Description of methods used to predict impacts
   - Assessment of significance of predicted direct, indirect, and cumulative impacts, with their relative risks
   - Methods or approaches to assigning impact significance
   - Justification for the choice of methods used to predict environmental impacts

33. Although not exhaustive, the following factors, which may have environmental impacts, shall be considered in the ESA for all phases of the project namely, construction and operation.

Task 7.1. Air quality

34. The consultant shall assess at least the following air quality impacts:
   - Emissions from construction activities
   - Emissions from construction equipment and trucks
   - Vehicle-induced emissions during the operation phase
   - Accidental fuel leaks and accidents

Task 7.2. Noise and vibration

35. The consultant shall assess at least the following noise impacts:
   - Noise and vibration generated by powered mechanical equipment (PME) employed during the construction phase
   - Trucks transporting material in and out of construction sites
   - Vehicle-induced noise and vibration emissions during the operation phase

Task 7.3. Traffic

36. The consultant shall assess at least the following traffic impacts:
   - Increased traffic and congestion during the construction phase due to detours and slow movement of heavy construction vehicles
   - (for Components A.3 Bridges) Constraining of river water boats during both the construction and the operation phases
   - Improved traffic conditions during the operation phase

Task 7.4. Surface water

37. The consultant shall assess at least the following surface water impacts:
   - Chemical contamination from wastes and accidental spills
   - Hydrology: describe any changes in the river water flow which may be introduced with the bridge construction

Task 7.5. Groundwater and soil

38. The consultant shall assess at least the following soil and groundwater impacts:
   - Erosion, runoff, and sedimentation from construction
   - Chemical contamination from wastes and accidental oil spills
Task 7.6. Biodiversity

39. The consultant shall assess at least the following biological impacts:
   - Habitat and organism loss: (a) in the river due to bridge replacement and river flow changes
     (for Component A.3 Bridges); or (b) along the road due to rehabilitation and expansion
     activities (for Component B.1 Road)
   - Affecting soil and plant areas due to vehicle induced emissions deposition during the
     operation phase

Task 7.7. Landscape

40. The consultant shall assess at least the following impacts on landscape:
   - Presence of equipment or material, soil heaps, and borrow pits during the construction phase
   - Potential loss of trees and vegetation during construction and operations (for Component B.1
     Road)

Task 7.8. Solid waste and wastewater generation

41. The consultant shall assess at least the following impacts:
   - Solid waste and wastewater generation linked with construction and operation activities

Task 7.9. Resource use

42. The consultant shall assess at least the following resource impacts:
   - Source of construction material and its transport to the project areas

Task 7.10. Cultural heritage

43. The consultant shall assess at least the following cultural heritage impacts:
   - Field-based survey will be conducted to define cultural areas and the potential impacts of the
     proposed bridges and/or road on such areas will be evaluated.

Task 7.11. Health and safety

44. The consultant shall assess at least the following health and safety impacts:
   - Improper handling and storage of construction materials as well as accidents occurring with
     the operation of moving equipment and with trucks moving on-site
   - Traffic accidents during both construction and operation phases
   - Storage tanks fracturing, leakage, as well as explosion and fire hazards
   - Potential sabotage: risk assessment and emergency response

Task 7.12. Socio-economics

45. The consultant shall assess at least the following socio-economic impacts:
   - Induced secondary development during construction in the surrounding areas
   - Potential damage or loss of agricultural land as well as crop damage by emissions deposition
     (for Component B.1 Road)
   - Population perception of risk in residential areas close to the road (for Component B.1 Road)
   - An assessment of changes to demographics including increased burdens on social services
     and/or existing infrastructure), land use and land use plans, and economy as appropriate

Task 8. Analyze alternatives

46. The consultant shall describe the alternatives that were examined in the course of developing the
    proposed project and identify other alternatives, which would achieve the same objectives. The
    concept of alternatives extends to other alignment, design, technology selection, construction
    techniques and phasing, and operating and maintenance procedures.

47. The consultant shall compare alternatives in terms of potential environmental impacts, capital and
    operating costs, suitability under local conditions, and institutional, training, and monitoring
    requirements. To the extent possible, the costs and benefits of each alternative shall be quantified,
    incorporating the estimated costs of associated mitigation measures. In this respect, a set of selection
    criteria shall be considered to achieve a balance between environmental impacts, the level of
    interference with human activities, technical constraints, as well as capital and operational costs. The
    “No Project” scenario shall be considered in the analysis of alternatives.

Tasks 9 to 11- Develop an Environmental and Social Management Plan (ESMP)

48. The ESMP consists of the recommended actions to mitigate both the environmental and social
    issues. The ESMP consists of two discrete sections, which are described in detail below:
- Resettlement and Land Acquisition Plan
- Environmental Management Plan

**Task 9. Resettlement and Land Acquisition Policy Framework and Plan**

49. While no resettlement and land acquisition are expected, if OD 4.12 is triggered, the Consultant shall develop a project-specific Resettlement and Land Acquisition Policy Framework, as well as a Resettlement and Land Acquisition Plan. This Policy Framework will provide a detailed review of the potential need for involuntary resettlement and the general approach, procedures and general principles of compensation for residents, relocations, compensation for the involuntary acquisition of land, compensation for temporary disruption, compensation for damage to crops, and compensation and/or costs for removal and replacement of plantings. The Resettlement and Land Acquisition Plan shall also provide detailed involuntary resettlement cost estimates (including entitlements of different categories of affected people) that need to be included in the project and incorporated into the overall project budget.

50. Any required land acquisition additional to that already buffered by the road or bridges right of way shall be included in the Resettlement and Land Acquisition Plan by the Consultant so as to comply with World Bank OP 4.12 on Involuntary Resettlement. The Resettlement and Land Acquisition Plan shall be based on up-to-date and reliable information regarding the scale of the proposed resettlement and land acquisition and its impact on the affected people, including legal issues involved. At a minimum, the Plan shall cover the following elements: (a) an inventory of lands to be acquired and the numbers of affected persons and assets; (b) description of compensation and other resettlement entitlements to be provided; (c) consultations with affected people about acceptable alternatives; (d) institutional responsibility for implementation; (e) a timetable and budget; (f) participation of affected people in the design and implementation of the resettlement program; (g) grievance redress system; and (h) monitoring and evaluation of resettlement implementation.

**Task 10. Environmental Management Plan**

51. The consultant shall prepare an Environmental Management Plan (EMP) to identify: (a) the mitigation measures that address the identified potentially adverse impacts, (b) the monitoring program that verifies compliance with the recommended mitigation measures and that monitors for unanticipated impacts that might arise, and (c) the institutional structure, strengthening and training required to implement the mitigation and monitoring plans.

**Task 10.1. Environmental Mitigation Plan**

52. The primary adverse environmental impacts that are expected with the construction and operation phases can be eliminated or minimized by careful planning and staging of construction activities, the adoption of proper management practices during operation, and relying on effective environmental monitoring and training to support management decisions. The consultant shall devise a mitigation plan to propose several potential impact-mitigation or control measures that shall earn the project more acceptability, by reducing or eliminating to the extent possible the expected impacts that were outlined above. Mitigation measures are intended to reduce the effect of potentially significant impacts on the environment. Thus, they are highly dependent on the significance of the predicted impact, the nature of the impact (permanent vs. temporary), or the phase of the project (construction vs. operation).

53. For each negative environmental and social impact (during both the construction and operation phases), the consultant shall identify and describe (wherever applicable):
- Corresponding protection measures to mitigate or offset damaging impacts from project activities
- Costs and benefits for each recommended mitigation measure developed to resolve a significant environmental issue
- Appropriateness and cost effectiveness of mitigation measures
- Technology used in each mitigation measure, including information regarding its prior effective use, the range of environmental conditions under which it is effective, and the level of skills required to operate and maintain the technology
- Time schedule for implementation of each mitigation measure, showing that it will be in use before the project impacts are felt
- Intervention location(s) for each of the proposed mitigation measures (on an appropriately scaled map)
Concerned parties responsible for implementing the mitigation measures and the required personnel
Defining compensation to affected parties for impacts which cannot be mitigated

Task 10.2. Environmental Monitoring Plan

54. The development and implementation of a continuous, long-term monitoring plan is a crucial step towards ensuring the sustainability of the Bridge and associated infrastructure within the surrounding environment. Establishing a database that will be continuously updated will provide a clear indication of potential environmental degradation that will allow remedial action at an early stage thus limiting irreversible damage. The consultant shall develop a monitoring plan within the ESA report. The monitoring plan should be implemented at the construction phase and be maintained at least 5 years after completion of construction activities and preferably throughout the lifetime of the project. The main objectives of the monitoring plan include: (a) monitoring the performance of the Bridge and associated infrastructure and the effectiveness of mitigation measures; (b) identifying the extent of the environmental and social impacts predicted in the ESA on sensitive receivers; (c) determining project compliance with regulatory requirements; and (d) recommending further mitigation measures if found to be necessary.

55. Monitoring indicators of water and sediment quality, river flow, air quality, noise and vibration levels, vehicle and boat traffic, biodiversity, landscape, waste management practices, resource use, health and safety, and socio-economics shall be proposed by the consultant. For certain indicators, sampling and chemical analysis are necessary in order to assess the extent of the impact, while other indicators require visual inspections and photographic documentation by experienced and specialized personnel. As such, indicators to be monitored, monitoring locations, analysis methods, equipment required, frequencies, field procedures, responsibilities, implementing parties, as well as relevant standards and budgetary requirements shall be defined by the consultant. Monitoring locations shall be illustrated on detailed scale maps.

Task 10.3. Institutional Strengthening-Capacity Building

56. The consultant shall review the authority and capability of institutions at local, provincial, regional, and national levels and recommend steps to strengthen or expand them so that the management and monitoring plans in the ESA can be implemented. The recommendations may include the preparation of new laws and regulations, new agency functions, inter-sectoral arrangements, management procedures and training, staffing, operation and maintenance training, budgeting, and financial support.

57. Appropriate environmental management, in the context of the proposed project, dictates that construction and operation be implemented in accordance to the current state of the art and knowledge regarding environmental protection. This can be accomplished by hiring competent personnel with the appropriate educational and professional background and instituting periodic and systematic training programs with site-specific plans that are adequate for protecting the general public and the environment contributing to the mitigation of potential environmental impacts as well as raising environmental awareness among contractors and operators. For this purpose, the consultant shall develop an environmental training course whereby personnel who will be involved in the construction and operation of the various components of the proposed project will be required to attend prior to the initiation of project activities. Similarly, personnel involved in monitoring activities during both construction and operation shall attend similar courses / workshops to ensure their ability to implement the monitoring plan.

Task 11. Summary of ESMP - Schedule, Responsibilities, and Costs

58. The Consultant shall provide: a) a description of activities and a time-line schedule for implementing the Resettlement and Land Acquisition Plan (if applicable) and the Environmental Management Plan, with breakdown to the sub-activities of mitigation measures, institutional strengthening, and monitoring activities that are recommended for the Project, showing phasing and coordination with overall Project plans from construction to operations; b) the entity responsible for each activity, and to whom they report functionally and legally; and c) the capital and recurrent cost estimates and sources of funds for implementing the ESMP.

59. An ESMP Monitoring Consultant shall be appointed by the GoI to provide assurance and technical advice on effective implementation of the ESMP. The scope of work and proposed budget level to appoint and remunerate an ESMP Monitoring Consultant for the construction and
Implementation phases of the proposed Project shall be prepared. The ESMP Consultant would report directly to the representative of the GoI and coordinate closely with Government environmental officials.

60. The Summary of the ESMP shall cover enough years to take into account the scope of work for the ESMP Consultant, and all related mitigation, training and monitoring activities.

D. REPORTING

61. Draft ESA Reports with Executive Summary (10 copies). The Draft ESA Report shall be submitted within the time schedule set out below. The objective of the ESA Report is to present key findings and the most relevant information and data, rather than general and non-specific information. The Draft ESA Report shall be concise and limited to significant social and environmental issues.

62. The Executive Summary shall indicate community/agency consultations undertaken and the budget levels and source(s) of financial support for implementation of the recommended actions. The Executive Summary shall be not more than 30 pages of text, and shall contain tables, figures, and graphics as needed.

63. The Main Report shall focus on findings, conclusions, and recommended actions, supported by summaries of the data collected and citations for any references used in interpreting those data. Liberal use of tables, maps, and graphics to present summaries of data and analyses are strongly encouraged. Detailed or un-interpreted data are not appropriate in the main text and should be included in an appendix or a separate volume. Unpublished documents that are not readily available should also be included in an appendix or a separate volume.

64. The Draft ESA Report shall be delivered to the SCRB or KRG-GDRB and disclosed to the public as follows: the Executive Summary of the ESA shall be made available in Arabic and English; the Main Report of the ESA in English; the Social Assessment with the Resettlement and Land Acquisition Framework and Resettlement and Land Acquisition Action Plan(s), if required, in Arabic and English. Provision shall also be made for the disclosure of information to local communities before the construction phase of the Project.

65. The SCRB shall organize review meetings and maintain written minutes of meetings to record the major comments. Main sections of the ESA Report that require extensive rewriting and editing shall be re-submitted for verification to SCRB or KRG-GDRB. Once the SCRB or KRG-GDRB has issued a letter approving the revisions to the Draft ESA Report that incorporate its comments, the Consultant shall submit the Final ESA Report.

66. Final ESA Report with Executive Summary (25 copies). The Final ESA Report shall be submitted within the time schedule set out below. The Final ESA Report shall provide complete details of all work performed, analyses made, and justification of options and recommendations proposed. This report shall build upon the reports completed previously, and integrate comments received from the World Bank, Ministry of Environment or other relevant governmental ministries or agencies including issues raised and discussed at review meetings, as well as written comments.

67. The Final ESA Report shall be delivered to SCRB or KRG-GDRB and would be disclosed to the public as follows: the Executive Summary of the ESA shall be made available in Arabic and English; the Main Report of the ESA in English; the Social Assessment with the Resettlement and Land Acquisition Framework and Resettlement and Land Acquisition Action Plan(s), if required, in Arabic and English. Provision shall also be made for the disclosure of information to local communities before the construction phase of the Project. The Consultant shall prepare a suggested distribution list for the copies, with the objective of a wide dissemination of the reports to stakeholders, universities, and the public.

68. In addition, a master hard copy and master soft electronic copy suitable for reproduction purposes shall be provided to SCRB or KRG-GDRB to meet any future needs for reprinting.

E. ESA SUPERVISION AND TIME SCHEDULE

69. The work of the Consultant shall be supervised by the SCRB (for the Bridges component A.3) or KRG-GDRB (for the Road Component B.1). The SCRB or KRG-GDRB will be the focal point for coordination with all other ministries, agencies, and any other international institution. The SCRB or KRG-GDRB shall assure free access to all existing data and to all relevant operations and facilities. It shall also provide liaison and contacts with local authorities, NGOs, academic institutions, and will
work cooperatively with the Consultant for all public participation and public consultation activities.

70. The following is the time schedule for the production of the reports described above, assuming that all comments are received within one week of receiving any deliverable. This is a relatively short period to conduct the ESA and receive comments due to the emergency nature of the proposed project. The Consultant shall begin work upon contract signature. The Consultant shall propose a clear schedule with critical milestones, and make all possible efforts to meet the proposed time schedule.

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<thead>
<tr>
<th>Milestone/ Deliverable</th>
<th>Weeks to completion</th>
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<tr>
<td></td>
<td>Component A.3 Bridges</td>
</tr>
<tr>
<td>Submit Draft ESA Report</td>
<td>8</td>
</tr>
<tr>
<td>Submit Final ESA Report</td>
<td>12</td>
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F. STAFFING AND EXPERIENCE OF THE CONSULTANT

71. It is anticipated that the Consultant would establish a strong core team of specialists. It is envisaged that a highly experienced environmental specialists would serve as the ESA Project Team Leader. The Consultant should complement the skills of the core team with other social, environmental, technical, and institutional specialists with experience in Iraq and/or internationally. The team is expected to provide pragmatic and insightful planning to complete the above scope of work.

72. The Consultant shall propose and justify the range of disciplines to be included in the core Project team and the complementary skills of other short-term specialists. The inputs of all specialists shall be clearly indicated as it is anticipated that the majority of the work program would be carried out by individuals highly experienced in their professional fields and aligned with the tasks assigned.

73. Primary skills and specialties of the team are suggested below. The Project Team Leader shall have at minimum 15 years professional experience working in environmental assessment of projects, ability to work with government officials, transport / bridge and environmental specialists, familiarity with environmental and social assessments for equivalent size projects, and a proven track record in managing and coordinating a diverse group of professionals. The team shall include specialists who are highly familiar with specifying detailed mitigation measures, focused training programs, and structured monitoring programs. The entire proposed Project Team may include, but not be limited to, several of the specialists listed below:

List of Suggested Specialists:
- Environmental assessment specialist (Team leader);
- Bridge engineer (for Component A.3 Bridges);
- Road Engineer (for Component B.1 Road);
- River ecologist / natural habitat specialist;
- Environmental health and safety specialist;
- Social Scientist.

74. The Consultant shall name individuals to participate in specified roles within the Project Team and provide full curricula vitae and any other information considered relevant by the Consultant. The Consultant shall name the Project Leader, and the other core team members and key short-term specialists, and provide an assurance that all members of the proposed team will be made available as specified in the proposal, if the Consultant is named.

75. The team members should have experience in environmental assessment of large scale infrastructure projects, preferably in the Middle East and North Africa (MENA) Region, and must have familiarity with the World Bank requirements and guidelines. Familiarity with the GoI environmental guidelines is an asset. The Consultant should have experience in social and environmental studies and be fully familiar with World Bank Safeguard policies, as well as other related guidelines and procedures.
Appendix 8.3: Guidelines for Land and Asset Acquisition, Entitlements and Compensation

1. **Objectives.** Resettlement and land acquisition will be kept to a minimum, and will be carried out in accordance with these guidelines. Subproject proposals that would require demolishing houses or acquiring productive land should be carefully reviewed to minimize or avoid their impacts through alternative alignments. Proposals that require more than minor expansion along rights of way should be carefully reviewed. No land or asset acquisition may take place outside of these guidelines. A format for a Land Acquisition Assessment Data Sheet is attached as Attachment 3(i).

2. These guidelines provide principles and instructions to compensate negatively affected persons to ensure that they will be assisted to improve, or at least to restore, their living standards, income earning or production capacity to pre-project levels regardless of their land tenure status.

3. **Categorization.** Based on the number of persons that may be affected by the project, Project Affected People (PAPs) and the magnitude of impacts, projects will be categorized as follows:
   
   (a) Projects that will affect more than 200 PAPs due to land acquisition and/or physical relocation and where a full Resettlement Action Plan (RAP) must be produced. If the RAP cannot be prepared prior to project appraisal, a waiver can be provided by the World Bank Managing Director (MD) in consultation with the Resettlement Committee. In such cases, the Project Team (or task Team) should agree with the Borrower on a timetable for preparation of the RAP.
   
   (b) Projects that will affect less than 200 persons require the following documentation: (i) a land acquisition assessment, (ii) the minutes or record of consultations which assess the compensation claimed and agreement reached, and (iii) a record of the receipt of the compensation, or voluntary donation, by those affected (see below).
   
   (c) Projects that are not expected to have any land acquisition or any other significant adverse social impacts; on the contrary, significant positive social impact and improved livelihoods are expected from such interventions.

4. **Eligibility.** PAPs are identified as persons whose livelihood is directly affected by the project due to acquisition of the land owned or used by them. PAPs deemed eligible for compensation are:
   
   (a) those who have formal legal rights to land, water resources or structures/buildings, including recognized customary and traditional rights;
   
   (b) those who do not have such formal legal rights but have a claim to usufruct rights rooted in customary law; and
   
   (c) those whose claim to land and water resources or building/structures do not fall within (i) and (ii) above, are eligible to resettlement assistance to restore their livelihood.

5. **Acquisition of Productive Assets and Compensation.** PAPs are eligible for replacement costs for lost assets as described below:
   
   (a) **Voluntary contributions.** Individuals may elect to voluntarily contribute land or assets provided the persons making such contributions do so willingly and are informed that they have the right to refuse such contributions; and
   
   (b) **Contributions against compensation.** A contributor/asset loser considered "affected" will be eligible for compensation and other necessary assistance.

6. Voluntary contribution should be clearly documented to confirm the voluntary nature of the transition. The documentation should specify that the land is free of any squatters, encroachers or other claims. A format is shown in Appendix 8.3(i), which includes a Schedule for assessing any compensation claimed and the agreement reached.

7. **Compensation Principles.** The project implementation agencies will ensure timely provision of the following means of compensation to affected peoples:
   
   (a) Project affected peoples losing access to a portion of their land or other productive assets with the remaining assets being economically viable are entitled to compensation at a replacement cost for that portion of land or assets lost to them. Compensation for the lost assets will be made according to the following principles:
(i) replacement land with an equally productive plot, cash or other equivalent productive assets;
(ii) materials and assistance to fully replace solid structures that will be demolished;
(iii) replacement of damaged or lost crops and trees, at market value;
(iv) other acceptable in-kind compensation;
(v) in case of cash compensation, the delivery of compensation should be made in public, i.e., at the Community Meeting; and
(vi) in case of physical relocation, provision of civic infrastructure at the resettlement sites.

(b) Project affected peoples losing access to a portion of their land or other economic assets rendering the remainder economically non-viable will have the options of compensation for the entire asset by provision of alternative land, cash or equivalent productive asset, according to the principles in (a) i-iv above.

8. **Consultation Process.** The implementing agencies will ensure that all occupants of land and owners of assets located in a proposed subproject area are consulted. Community meetings will be held in each affected district and village to inform the local population of their rights to compensation and options available in accordance with these Guidelines. The Minutes of the community meetings shall reflect the discussions held, agreements reached, and include details of the agreement, based on the format provided in Appendix 8.3(ii).

9. The implementing agency shall provide a copy of the Minutes to affected people and confirm in discussions with each of them, their requests and preferences for compensation, agreements reached, and any eventual complaint. Copies will be recorded in the posted project documentation and be available for inspection during supervision.

10. **Subproject Approval.** In the event that a subproject involves acquisition against compensation, the implementing agency shall:

(a) not approve the subproject unless satisfactory compensation has been agreed between the affected person and the local community; and

(b) not allow works to start until the compensation has been delivered in a satisfactory manner to the affected persons.

11. **Complaints and Grievances** Initially, all complaints should be negotiated to reach an agreement at the local community/village/district level. If this fails, complaints and grievances on these Guidelines, implementation of the agreements recorded in the Community Meeting Minutes or any alleged irregularity in carrying out the project can also be addressed by the affected peoples or their representative at the municipal or district level. If this also fails, the complaint may be submitted to the relevant implementing agency for consideration.

12. **Verification.** The Community Meeting Minutes, including agreements of compensation and evidence of compensation made shall be provided to the Municipality/district, to the supervising engineers, who will maintain a record hereof, and to auditors and socio-economic monitors when they undertake reviews and post-project assessment. This process shall be specified in all relevant project documents, including details of the relevant authority for complaints at the municipal/district or implementing agency level.
Appendix 8.3 (i) Land Acquisition Assessment Data Sheet
(To be used to record information on all land to be acquired)

1. Quantities of land/structures/other assets required:

2. Date to be acquired:

3. Locations:

4. Owners:

5. Current uses:

6. Users:
   - Number of Customary Claimants:
   - Number of Squatters:
   - Number of Encroachers:
   - Number of Owners:
   - Number of Tenants:
   - Others (specify): ___________________________ Number: ___________________________

7. How land/structures/other assets will be acquired (identify one):
   - Donation
   - Purchase

8. Transfer of Title:
   - Ensure these lands/structures/other assets are free of claims or encumbrances.
   - Written proof must be obtained (notarized or witnessed statements) for the voluntary donation, or acceptance of the prices paid from those affected, together with proof of title being vested in the community, or guarantee of public access, by the title-holder.

9. Describe grievance mechanisms available:
Appendix 8.3 (ii): Form to Document Contribution of Assets

The following agreement has been made on .................................. day of ........................................ between .................................................. resident of .................................................. (the Owner) and .................................................. (the Recipient).

1. That the Owner holds the transferable right of .................................................. of land/structure/asset in ..................................................

2. That the Owner testifies that the land/structure is free of squatters or encroachers and not subject to other claims.

3. That the Owner hereby Grants to the Recipient this asset for the construction and development of .................................................. for the benefit of the villagers and the public at large.

(Either, in case of donation:)

4. That the Owner will not claim any compensation against the Credit of this asset.

(Or, in case of compensation:)

4. That the Owner will receive compensation against the Credit of this asset as per the attached Schedule.

5. That the Recipient agrees to accept this Credit of asset for the purposes mentioned.

6. That the Recipient shall construct and develop the .................................................. and take all possible precautions to avoid damage to adjacent land/structure/other assets.

7. That both the parties agree that the .................................................. so constructed/developed shall be public premises.

8. That the provisions of this agreement will come into force from the date of signing of this deed.

______________________________________________________________________________

Signature of the Owner  ..................................................  Signature of the Recipient

Witnesses:

1. ..................................................

2. ..................................................

(Signature, name and address)
## Appendix 8.3(iii): Schedule of Compensation of Assets Requisition

### Schedule of Compensation of Asset Requisition

<table>
<thead>
<tr>
<th>Summary of Affected Unit/Item</th>
<th>Units to be Compensated</th>
<th>Agreed Compensation</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Urban/agricultural land (m²):</td>
<td>________________________</td>
<td>____________________</td>
</tr>
<tr>
<td>b. Houses/structures to be demolished (units/m²):</td>
<td>________________________</td>
<td>____________________</td>
</tr>
<tr>
<td>c. Type of structure to be demolished (e.g. mud, brick, cement block, etc.,)</td>
<td>________________________</td>
<td>Not Applicable.</td>
</tr>
<tr>
<td>d. Trees or crops affected:</td>
<td>________________________</td>
<td>____________________</td>
</tr>
<tr>
<td>e. Water sources affected:</td>
<td>________________________</td>
<td>____________________</td>
</tr>
</tbody>
</table>

Signatures of local community representatives, Sheikh/Head of Tribe:

Include record of any complaints raised by affected persons:

Map attached (showing affected areas and replacement areas):
Appendix 8.4: Protection of Cultural Property

1. Cultural property include monuments, structures, works of art, or sites of significance points of view, and are defined as sites and structures having archaeological, historical, architectural, or religious significance, and natural sites with cultural values. This includes cemeteries, graveyards and graves.

2. The initial phase of the proposed emergency reconstruction operations pose limited risks of damaging cultural property since subprojects will largely consist of small investments in community infrastructure and income generating activities, reconstruction of existing structures, and minor public works. Further, the list of negative subproject attributes, which would make a subproject ineligible for support (Attachment 1), includes any activity that would adversely impact cultural property. Nevertheless, the following procedures for identification, protection from theft, and treatment of discovered artifacts should be followed and included in standard bidding documents as provided in Attachment 6.

Chance Find Procedures

3. Chance find procedures will be used as follows:
   (a) Stop the construction activities in the area of the chance find;
   (b) Delineate the discovered site or area;
   (c) Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be present until the responsible local authorities and the Ministry of Culture take over;
   (d) Notify the supervisory Engineer who in turn will notify the responsible local authorities and the Ministry of Culture immediately (within 24 hours or less);
   (e) Responsible local authorities and the Ministry of Culture would be in charge of protecting and preserving the site before deciding on subsequent appropriate procedures. This would require a preliminary evaluation of the findings to be performed by the archeologists of the Ministry of Culture (within 72 hours). The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage; those include the aesthetic, historic, scientific or research, social and economic values;
   (f) Decisions on how to handle the finding shall be taken by the responsible authorities and the Ministry of Culture. This could include changes in the layout (such as when finding an irremovable remain of cultural or archeological importance) conservation, preservation, restoration and salvage;
   (g) Implementation for the authority decision concerning the management of the finding shall be communicated in writing by the Ministry of Culture; and
   (h) Construction work could resume only after permission is given from the responsible local authorities and the Ministry of Culture concerning safeguard of the heritage.

4. These procedures must be referred to as standard provisions in construction contracts, when applicable, and as proposed in section 1.5 of Attachment 6. During project supervision, the Site Engineer shall monitor the above regulations relating to the treatment of any chance find encountered are observed.

5. Relevant findings will be recorded in World Bank Project Supervision Reports (PSRs), and Implementation Completion Reports (ICRs) will assess the overall effectiveness of the project’s cultural property mitigation, management, and activities, as appropriate.
Appendix 8.5: Codes of Practice for Prevention and Mitigation of Environmental Impacts

(Particularly for components/activities that do not require a separate EMP)

To be drafted
Appendix 8.6: Safeguards Procedures for Inclusion in the Technical Specifications of Contracts

General

1. The Contractor and his employees shall adhere to the mitigation measures set down and take all other measures required by the Engineer to prevent harm, and to minimize the impact of his operations on the environment.

2. The Contractor shall not be permitted to unnecessarily strip clear the right of way.

3. Remedial actions which cannot be effectively carried out during construction should be carried out on completion of each Section of the road (earthworks, pavement and drainage) and before issuance of the Certificate of Completion:
   (a). these sections should be landscaped and any necessary remedial works should be undertaken without delay, including grassing and reforestation;
   (b). water courses should be cleared of debris and drains and culverts checked for clear flow paths; and,
   (c). borrow pits should be dressed as fish ponds, or drained and made safe, as agreed with the land owner.

4. The Contractor shall limit construction works to between 6 am and 7 pm if it is to be carried out in or near residential areas.

5. The Contractor shall avoid the use of heavy or noisy equipment in specified areas at night, or in sensitive areas such as near a hospital.

6. To prevent dust pollution during dry periods, the Contractor shall carry out regular watering of earth and gravel haul roads and shall cover material haulage trucks with tarpaulins to prevent spillage.

Transport

7. The Contractor shall use selected routes to the project site, as agreed with the Engineer, and appropriately sized vehicles suitable to the class of road, and shall restrict loads to prevent damage to roads and bridges used for transportation purposes. The Contractor shall be held responsible for any damage caused to the roads and bridges due to the transportation of excessive loads, and shall be required to repair such damage to the approval of the Engineer.

8. The Contractor shall not use any vehicles, either on or off road with grossly excessive, exhaust or noise emissions. In any built up areas, noise mufflers shall be installed and maintained in good condition on all motorized equipment under the control of the Contractor.

9. Adequate traffic control measures shall be maintained by the Contractor throughout the duration of the Contract and such measures shall be subject to prior approval of the Engineer.

Workforce

10. The Contractor should whenever possible locally recruit the majority of the workforce and shall provide appropriate training as necessary.

11. The Contractor shall install and maintain a temporary septic tank system for any residential labor camp and without causing pollution of nearby watercourses.

12. The Contractor shall establish a method and system for storing and disposing of all solid wastes generated by the labor camp and/or base camp.

13. The Contractor shall not allow the use of fuel-wood for cooking or heating in any labor camp or base camp and provide alternate facilities using other fuels.
14. The Contractor shall ensure that site offices, depots, asphalt plants and workshops are located in appropriate areas as approved by the Engineer and not within 500 meters of existing residential settlements and not within 1,000 meters for asphalt plants.

15. The Contractor shall ensure that site offices, depots and particularly storage areas for diesel fuel and bitumen and asphalt plants are not located within 500 meters of watercourses, and are operated so that no pollutants enter watercourses, either overland or through groundwater seepage, especially during periods of rain. This will require lubricants to be recycled and a ditch to be constructed around the area with an approved settling pond/oil trap at the outlet.

16. The contractor shall not use fuel wood as a means of heating during the processing or preparation of any materials forming part of the Works.

**Quarries and Borrow Pits**

17. Operation of a new borrow area, on land, in a river, or in an existing area, shall be subject to prior approval of the Engineer, and the operation shall cease if so instructed by the Engineer. Borrow pits shall be prohibited where they might interfere with the natural or designed drainage patterns. River locations shall be prohibited if they might undermine or damage the river banks, or carry too much fine material downstream.

18. The Contractor shall ensure that all borrow pits used are left in a trim and tidy condition with stable side slopes, and are drained ensuring that no stagnant water bodies are created which could breed mosquitoes.

19. Rock or gravel taken from a river shall be far enough removed to limit the depth of material removed to one-tenth of the width of the river at any one location, and not to disrupt the river flow, or damage or undermine the river banks.

20. The location of crushing plants shall be subject to the approval of the Engineer, and not be close to environmentally sensitive areas or to existing residential settlements, and shall be operated with approved fitted dust control devices.

**Earthworks**

21. Earthworks shall be properly controlled, especially during the rainy season.

22. The Contractor shall maintain stable cut and fill slopes at all times and cause the least possible disturbance to areas outside the prescribed limits of the work.

23. The Contractor shall complete cut and fill operations to final cross-sections at any one location as soon as possible and preferably in one continuous operation to avoid partially completed earthworks, especially during the rainy season.

24. In order to protect any cut or fill slopes from erosion, in accordance with the drawings, cut off drains and toe-drains shall be provided at the top and bottom of slopes and be planted with grass or other plant cover. Cut off drains should be provided above high cuts to minimize water runoff and slope erosion.

25. Any excavated cut or unsuitable material shall be disposed of in designated tipping areas as agreed to by the Engineer.

26. Tips should not be located where they can cause future slides, interfere with agricultural land or any other properties, or cause soil from the dump to be washed into any watercourse. Drains may need to be dug within and around the tips, as directed by the Engineer.
Historical and Archeological Sites

27. If the Contractor discovers archeological sites, historical sites, remains and objects, including graveyards and/or individual graves during excavation or construction, the Contractor shall:
   (a) Stop the construction activities in the area of the chance find.
   (b) Delineate the discovered site or area.
   (c) Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be present until the responsible local authorities and the Ministry of Culture take over.
   (d) Notify the supervisory Engineer who in turn will notify the responsible local authorities and the Ministry of Culture immediately (less than 24 hours).
   (e) Contact the responsible local authorities and the Ministry of Culture who would be in charge of protecting and preserving the site before deciding on the proper procedures to be carried out. This would require a preliminary evaluation of the findings to be performed by the archeologists of the Ministry of Culture (within 72 hours). The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage, including the aesthetic, historic, scientific or research, social and economic values.
   (f) Ensure that decisions on how to handle the finding be taken by the responsible authorities and the Ministry of Culture. This could include changes in the layout (such as when the finding is an irremovable remain of cultural or archeological importance) conservation, preservation, restoration and salvage.
   (g) Implementation for the authority decision concerning the management of the finding shall be communicated in writing by the Ministry of Culture; and
   (h) Construction work will resume only after authorization is given by the responsible local authorities and the Ministry of Culture concerning the safeguard of the heritage.

Disposal of Construction and Vehicle Waste

28. Debris generated due to the dismantling of the existing structures shall be suitably reused, to the extent feasible, in the proposed construction (e.g. as fill materials for embankments). The disposal of remaining debris shall be carried out only at sites identified and approved by the project engineer. The contractor should ensure that these sites (a) are not located within designated forest areas; (b) do not impact natural drainage courses; and (c) do not impact endangered/rare flora. Under no circumstances shall the contractor dispose of any material in environmentally sensitive areas.

29. In the event any debris or silt from the sites is deposited on adjacent land, the Contractor shall immediately remove such, debris or silt and restore the affected area to its original state to the satisfaction of the Supervisor/Engineer.

30. Bentonite slurry or similar debris generated from pile driving or other construction activities shall be disposed of to avoid overflow into the surface water bodies or form mud puddles in the area.

31. All arrangements for transportation during construction including provision, maintenance, dismantling and clearing debris, where necessary, will be considered incidental to the work and should be planned and implemented by the contractor as approved and directed by the Engineer.

32. Vehicle/machinery and equipment operations, maintenance and refueling shall be carried out to avoid spillage of fuels and lubricants and ground contamination. An 'oil interceptor' will be provided for wash down and refueling areas. Fuel storage shall be located in proper bonded areas.

All spills and collected petroleum products shall be disposed of in accordance with standard environmental procedures/guidelines. Fuel storage and refilling areas shall be located at least 300m from all cross drainage structures and important water bodies or as directed by the Engineer.