

**EMERGENCY OPERATION DEVELOPMENT PROJECTS
(EODP)**

**ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN
(ESMP)**

FOR

**Roads Rehabilitation in Al Shohada, Al Yarmuk and Rajam
Hadid, Mosul District, Nineveh Governorate, Iraq**

EODP-AF-NIN-W06 & W07

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Presented to:

**Reconstruction Fund for Areas Affected by
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Abbreviation List

E&S	Environmental and Social
CSO	Central Statistical Organization
EHSO	Environment, Health, and Safety Guidelines
EODP	Emergency Operation for Development Project
EODP-AF	Emergency Operation for Development Project-Additional Finance
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMMP	Environmental and Social Management and Monitoring Plan
ESMP	Environmental and Social Management Plan
FGD	Focus Group Discussion
GBV	Gender Based Violence
GRM	Grievance Redressal Mechanism
H&S	Health and Safety
HSE	Health, Safety and Environment
IFC	International Finance Cooperation
ILO	International Labour Organization
ISIS	Islamic State of Iraq and Syria
NGOs	Non- Governmental Organizations
OHS	Occupational Health and Safety
OHSA	Occupational Health and Safety Administration
OP	Operational Policy
PCU	Project Coordination Unit
PM10	Particulate Matter (10)
PM2.5	Particulate Matter (2.5)
PMT	Project Management Team
PPE	Personal Protective Equipment
RE	Resident Engineer
REFAATO	Reconstruction Fund for Areas Affected by Terroristic Operations
ROW	Right of Way
SEA/SH	Sexual Exploitation and Abuse and Sexual Harassment
SEA	Sexual exploitation and abuse
SH	Sexual harassment
SDO	Social Development Officer
SO _x	Sulfur Oxides
UXO	Unexploded Ordinance
VOCs	Volatile Organic Carbons
WB	World Bank
WBG	World Bank Group
WHO	World Health Organization

الملخص التنفيذي

1. المقدمة

هذا المشروع الفرعي هو إعادة تأهيل الطرق الداخلية ل3 أحياء سكنية بالموصل وهي: الشهداء واليرموك ورجم حديد. ستشمل أعمال التأهيل إزالة الأسفلت القديم، إعادة الإكساء، عمل أرصفة جانبية وعمل شبكة لتصريف مياه الأمطار. تم تفعيل السياسة التشغيلية للبنك الدولي 4.01 بشأن التقييم البيئي حيث أن المشروع الفرعي المقترح له بعض الآثار البيئية والاجتماعية السلبية المحتملة. وفقاً لذلك، فإن خطة الإدارة البيئية والاجتماعية (ESMP) مطلوبة لتنفيذ المشروع الفرعي وفقاً لمتطلبات الإجراءات التشغيلية للبنك الدولي والتشريعات الوطنية العراقية المعمول بها. تسترشد خطة الإدارة البيئية والاجتماعية (ESMP) بإطار الإدارة البيئية والاجتماعية (ESMF) الخاص بـ EODP.

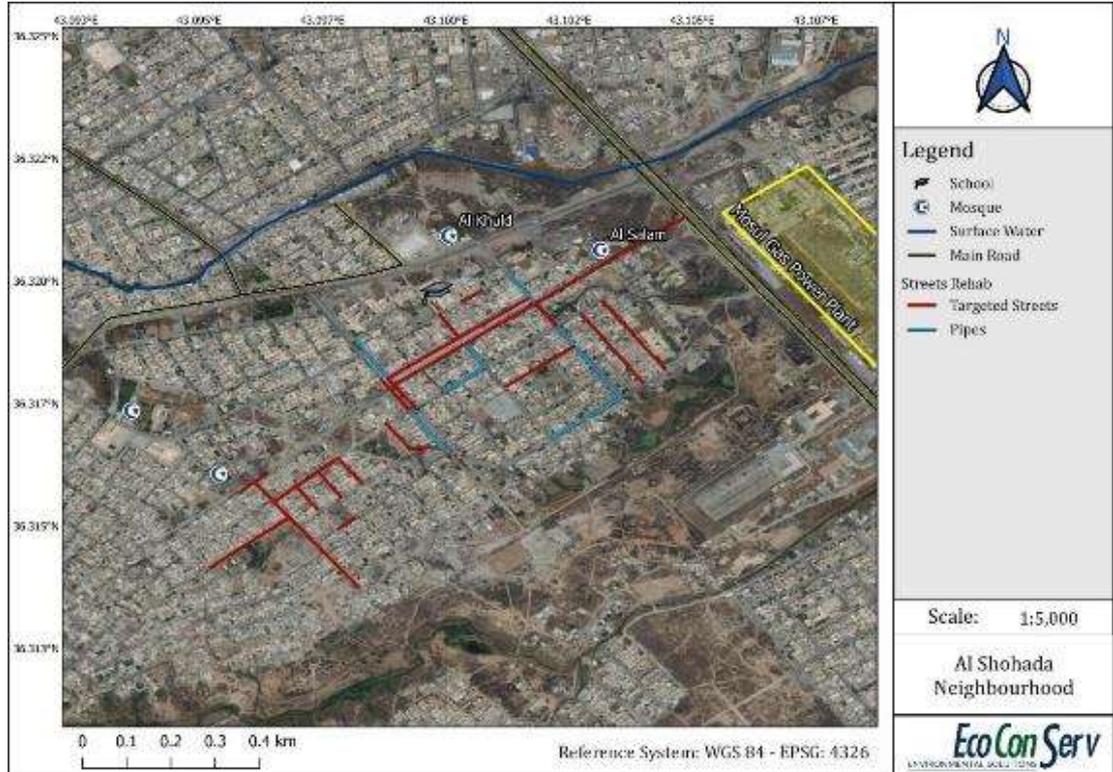
2. وصف المشروع

a. موقع المشروع

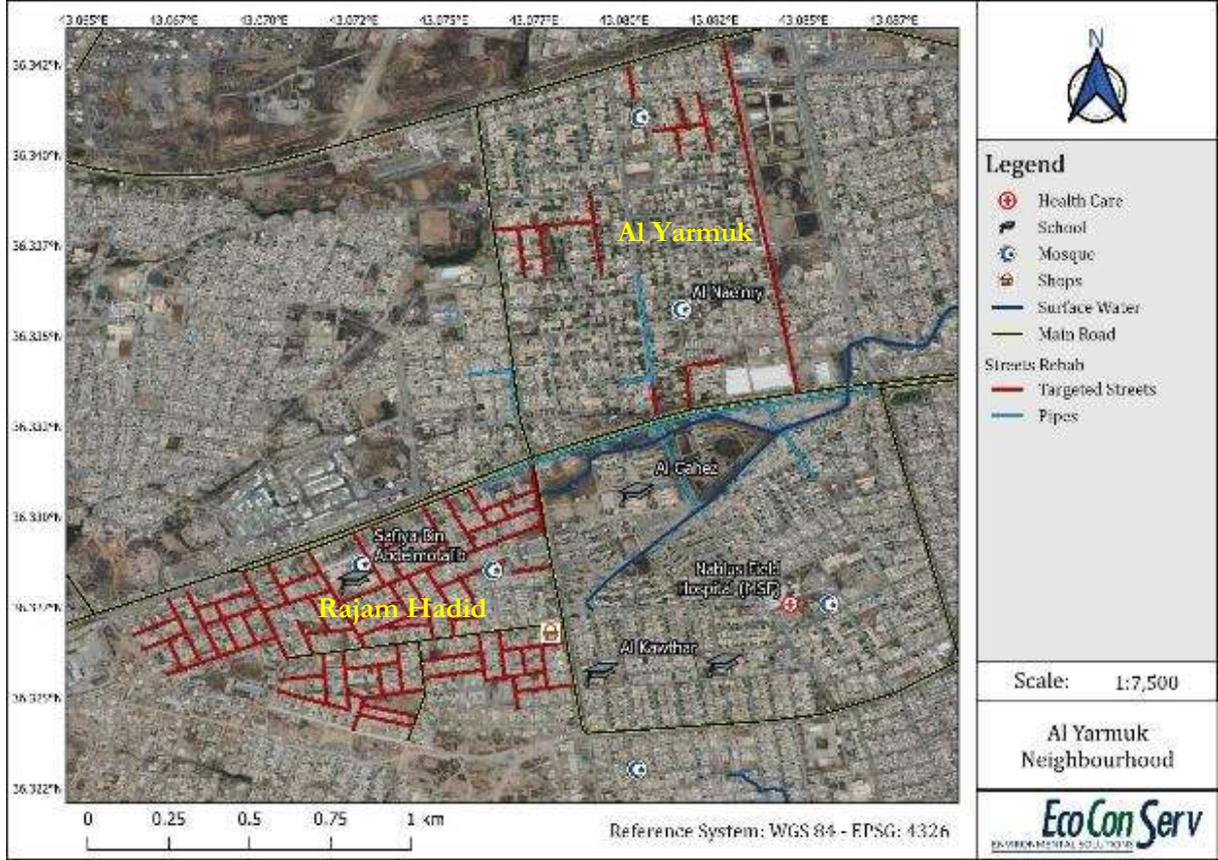
يحتوي المشروع الفرعي المقترح على مكونين:

- W06 وهو حي الشهداء
- W07 والذي يتكون من حي اليرموك وحي رجم حديد

حجم العمل في أحياء الشهداء واليرموك أقل بكثير من حجم العمل المتوقع لحي رجم حديد والذي تحتاج جميع شوارعه تقريبا إلى إعادة تأهيل كما هو موضح بالخرائط التالية.



شكل 10 :- حي الشهداء (W06)



شكل 20 :- أحياء اليرموك ورجم حديد (W07)

جميع الطرق التي يتضمنها المشروع محاطة بمناطق سكنية.

b. أنشطة إعادة التأهيل

الطول الكلي للشوارع المراد إعادة تأهيلها بالأحياء الـ3 السابق ذكرها هو 10 كم تقريبا ومتوسط عرض هذه الشوارع هو 7 متر.

إعادة تأهيل الطرق

. تتكون عملية إعادة التأهيل من بناء وتجهيز عدة طبقات على النحو التالي:

- تقطيع وإزالة طبقات الإسفلت البالية والأرصفة. من المتوقع أن يكون عمق الحفر - والاستبدال - 25 سم على الأقل ، وبالتالي سيتضمن طبقات الأساس الحاملة لطبقة الإسفلت السطحية.
- تجهيز وتوريد حصى عالي الجودة لنشره كطبقة أساس للطرق والأرصفة. يتم فرش الحصى باستخدام الكاشطات ثم رشه بالماء وضغطه.
- تركيب حواجز جانبية على النحو التالي
 - o صب طبقة أساس خرسانية مقاس 20 * 85 سم
 - o وضع الحواجز فوق الأساس الخرساني باستخدام المونة كمادة لاصقة.
- صب الخرسانة للأرصفة.
- ستتضمن الطبقات العلوية ما يلي (من أسفل إلى أعلى)
 - o طبقة أولية مصنوعة من مادة بيتومينية يتم تخزينها في شاحنة و يتم رشها مباشرة من الشاحنة على الطريق.
 - o طبقة تثبيت أسفلتية بسمك 10 سم يتم تطبيقها باستخدام ماكينات رصف مزودة بجهاز استشعار.
 - o طبقة تاك كوت (tack coat)

○ طبقة إسفلتية ممزوجة على الساخن بسمك 6 سم

شبكة تصريف مياه الأمطار

تشمل الأنشطة الرئيسية ما يلي:

- حفر الخنادق الجانبية عن طريق إزالة طبقات الأسفلت / الخرسانة العلوية وكذلك أي طبقات تحتها حتى الوصول إلى العمق الذي سيتم وضع الأنابيب فيه. سيتم قطع طبقات الأسفلت / الخرسانة باستخدام مطرقة هوائية.
- مد المواسير وتركيب كافة الملحقات الخاصة بها ودفنها بالحصى عالي الجودة ثم إعادة الشارع إلى حالته الأصلية. تتراوح أقطار الأنابيب التي سيتم تركيبها بين 300 مم إلى 1200 مم. سيتراوح عمق الحفر من متر إلى 1.5 متر.
- انشاء غرف التفريش. يشمل العمل قطع الأسفلت والحفر وصب الهيكل الخرساني للفتحة وتركيب الأغطية الفولاذية ودهان الفتحة من الداخل بالإيبوكسي ودهان الخارج بمادة مانعة لتسرب المياه.

الطول الكلي لشبكة تصريف مياه الأمطار التي تندرج تحت مشاريع W06 و W07 هو 3.7 كم تقريبا.

c. مدة المشروع

من المتوقع أن يتم الانتهاء من المشروع في غضون 240 يوماً.

3. الإطار المؤسسي والقانوني

التشريعات البيئية والاجتماعية المطبقة في العراق:

- القانون رقم 27 لسنة 2009: قانون حماية وتحسين البيئة
- القانون رقم 37 لسنة 2008: قانون وزارة البيئة.
- اللائحة التنفيذية رقم 4 من عام 2012: الخاصة بجودة الهواء المحيط
- القانون رقم 41 من عام 2015: بشأن الحماية من الضوضاء والتحكم فيها.
- القانون رقم 50 من عام 2008: بشأن إدارة مصادر المياه.
- القانون رقم 89 لسنة 1981 المعدل بالقرار رقم 54 لسنة 2001: قانون الصحة العامة.
- اللائحة التنفيذية رقم 2 لسنة 2001: المحافظة على الموارد المائية.
- اللائحة رقم 25 لسنة 1967: بشأن لائحة حماية الأنهار.
- تعليمات رقم 2 لسنة 2014 بخصوص حماية البيئة من المخلفات الصلبة.
- قانون لتعديل قانون رقم (67) لسنة 1986: تنظيم مناطق تجميع الأنقاض.
- قانون رقم 37 لسنة 2015: قانون العمل العراقي
- تعليمات رقم (12) لسنة 2016 بشأن متطلبات الصحة والسلامة المهنية.
- قانون الطرق العامة رقم 2002/35
- قانون الاستملاك رقم 1981/12
- قانون التسجيل العقاري العراقي رقم 43 لسنة 1971

سياسات البنك الدولي الوقائية

حدد البنك الدولي 10 سياسات تشغيلية للحماية البيئية والاجتماعية والتي ينبغي مراعاتها في المشروعات التي يقوم بتمويلها. تتطبق السياسات التشغيلية التالية على المشروع الرئيسي:

- سياسة التقييم البيئي – OP 4.01 – (تتطبق على المشروع الفرعي)
- سياسة الموارد الثقافية المادية – OP 4.11 (لا تتطبق على المشروع الفرعي)

• سياسة المشاريع في الممرات المائية الدولية – OP 7.50 (لا تنطبق علي المشروع الفرعي)

• سياسة إعادة التوطين القسري – OP 4.12 (لا تنطبق علي المشروع الفرعي)

المشروع المقترح مصنف ضمن الفئة "ب" بحسب البنك الدولي. وفقا لإطار الإدارة البيئية والاجتماعية (ESMF) الخاص بمشاريع صندوق التعمير، فإن هذا المشروع يتطلب إعداد خطة إدارة بيئية واجتماعية (ESMP).

4. الوصف البيئي والاجتماعي لمنطقة المشروع

سينفذ المشروع الفرعي في مدينة الموصل التي هي عاصمة المنطقة التي تحمل نفس الاسم والواقعة في محافظة نينوى.

a. الوصف البيئي

المناخ: يصنف مناخ الموصل على أنه دافئ ومعتدل. أشهر الشتاء ممطرة أكثر بكثير من أشهر الصيف في الموصل. تكون درجات الحرارة الأعلى في المتوسط في يوليو، حيث تصل إلى حوالي 44 درجة مئوية. يناير هو أكثر الشهور برودة، حيث تنخفض درجات الحرارة إلى 4 درجات مئوية. كميات هطول الأمطار هي الأعلى خلال شهر يناير. يبلغ متوسط عدد أيام هطول الأمطار السنوية حوالي 5 أيام.

الرياح: تتراوح سرعة الرياح بالموصل ما بين 5 إلى 12 كم/ساعة وقد تصل في بعض الأيام إلى 28 كم/ساعة. الرياح السائدة بالموصل هي الشمالية الشرقية.

جودة الهواء: يمكن تصنيف جودة الهواء بمنطقة المشروع على أنها متوسطة، أي ان التعرض للهواء لمدة طويلة يمكن أن يسبب مشاكل صحية.

الضوضاء: جميع الطرق محاطة بمناطق سكنية وبالتالي لا يوجد أي مصادر للضوضاء باستثناء الحركة المرورية داخل الأحياء.

التنوع البيولوجي: لا يوجد بمنطقة المشروع مناطق محمية قانوناً أو موائل أرضية أو مائية شديدة الحساسية.

البيئة المائية: تتراوح أعماق المياه الجوفية في منطقة المشروع الفرعي بين 30 إلى 40 متراً تحت سطح الأرض. المسطح المائي الرئيسي في الموصل هو نهر دجلة والذي يبعد حوالي 4 كم عن منطقة المشروع الفرعي.

b. الوصف الاجتماعي

يتضمن هذا الجزء من التقرير بيانات أساسية عن منطقة المشروع الفرعي بالإضافة إلى وصف للآتي: الخصائص السكانية، الوضع الاقتصادي، خدمات البنية التحتية الأساسية، الأمن والسلامة العامة والثرات الثقافي. تم عرض هذه البيانات إما على مستوى المحافظة أو المدينة أو الأحياء بحسب مدى توفرها.

5. التأثيرات البيئية والاجتماعية المحتملة

A. التأثيرات الإيجابية خلال مرحلة إعادة التأهيل

من المتوقع أن يؤدي المشروع إلى خلق العديد من فرص العمل المباشرة. بناءً على الخبرة السابقة في مشاريع مماثلة تم تنفيذها مؤخراً من قبل صاحب المشروع الفرعي (البلدية)، فإن إجمالي عدد العمال اليومي خلال وقت الذروة للمشروع الفرعي هو 40 عاملاً. قد يقوم المقاول بتجنيد المزيد من الأشخاص للوفاء بالمواعيد النهائية للبناء.

كجزء من مرحلة البناء، من المتوقع ظهور عدد من فرص العمل غير المباشرة، بسبب الحاجة إلى المزيد من خدمات الدعم للعمال والمقاولين الذين سيعملون في المواقع المختلفة مثل إدارة النفايات، إخلاء خزانات الصرف الصحي، الإمداد الغذائي، إلخ.

B. التأثيرات الإيجابية أثناء التشغيل

- الحد من برك المياه الراكدة التي تنتشأ خلال مواسم الأمطار حيث أنه سيتم إنشاء شبكة تصريف مياه الأمطار
- تحسين إمكانية وصول الأشخاص والسلع والخدمات إلى مناطق المشروع الفرعي.
- تحسين ظروف السلامة بسبب توفير ظروف أفضل للشوارع.
- تقليل الأمراض الناتجة عن المياه الراكدة.

الجدول التالي يعرض الآثار السلبية المحتملة أثناء مراحل التأهيل والتشغيل.

جدول 10- ملخص التأثيرات السلبية المحتملة

تقييم الأثر	التأثيرات المحتملة	مستقبلات / جانب البيئة والصحة والسلامة
مرحلة إعادة التأهيل		
متوسط	<ul style="list-style-type: none"> • الانبعاثات الغازية (أكاسيد النيتروجين ، أكاسيد النيتروجين ، ثاني أكسيد الكربون ، المركبات العضوية المتطايرة ، إلخ) من محركات آلات ومعدات البناء. • انبعاثات الغبار (PM10 ، PM2.5) بسبب أعمال الحفر وحركة شاحنات وآلات البناء. 	جودة الهواء
متوسط	الضوضاء والاهتزازات الناتجة عن آلات البناء.	ضوضاء
متوسط	<ul style="list-style-type: none"> • احتمال تلوث التربة / باطن الأرض بسبب الانسكابات العرضية والتسريبات من معدات البناء • التصريف غير السليم لمياه الصرف من مكاتب المقاول. 	تربة
لا يذكر	أقرب مسطح مائي يبعد حوالي 4 كم عن المشروع، أما عمق المياه الجوفية بمنطقة المشروع يتراوح ما بين 30 إلى 40 متر وبالتالي لا توجد أي تأثيرات متوقعة على المياه الجوفية أو المسطحات المائية.	تلوث المياه
قليل التأثير	سيستهلك المشروع الفرعي الوقود الأحفوري (بشكل أساسي الديزل) لمركبات وآلات البناء. الطاقة الأحفورية غير متجددة ، وقد يكون لاستخدامها المفرط آثار بيئية خطيرة على توافرها وسعرها واستدامتها.	استهلاك الطاقة

تقييم الأثر	التأثيرات المحتملة	مستقبلات / جانب البيئة والصحة والسلامة
معتدل	<p>ستنتج أنشطة إعادة التأهيل:</p> <ul style="list-style-type: none"> • نواتج حفر. • كتل الخرسانية وحطام أسفلت. • الرمل والحصى، • مخلفات تقطيع الأنابيب البلاستيكية • النفايات المنزلية الصلبة الناتجة عن الاستهلاك اليومي للعمال. • النفايات الخطرة بما في ذلك الطلاء والأبيوكسي وحاويات المواد الكيميائية المقاومة للماء والزيوت المنسكبة من تشغيل وصيانة آلات البناء. • مياه الصرف المنزلية من مكاتب الموقع 	المخلفات
خطير	<p>وفقاً لمعايير الصحة والسلامة المهنية للبنك الدولي ، يجب أن يكون لدى كل عامل معلومات دقيقة بشأن المخاطر أو الإصابات المحتملة في مكان العمل. تشمل المخاطر الرئيسية المطبقة على هذا المشروع الفرعي أعمال الحفر والحفر ، والتلامس مع معدات البناء الثقيلة ، والظروف الجوية القاسية ، وانبعاثات الهواء السامة ، ومستويات الضوضاء العالية.</p>	الصحة والسلامة المهنية
معتدل	<p>وفقاً للملاحظات الميدانية أثناء الزيارات الميدانية ، فإن الوضع الحالي للشوارع يسمح بأعمال البناء ، مع الأخذ في الاعتبار التزام المقاول بالعديد من التدابير للحفاظ على صحة المجتمع وسلامته وعدم تقييد الوصول إلى المنازل والمرافق والخدمات في المجتمع المحلي .</p> <p>تركز غالبية تأثيرات صحة المجتمع وسلامته على انتقال الأمراض والآثار على الصحة الناتجة عن الجوانب البيئية بسبب أنشطة البناء / إعادة التأهيل</p>	صحة المجتمع وسلامته
معتدل	<p>سوف يتأثر تدفق حركة المرور بسبب إعادة تأهيل الشوارع وتنقل المعدات ومواد البناء</p>	تدفق حركة المرور
خطير	<p>تميل عمالة الأطفال لأن تكون مرتفعة بالنظر إلى القانون 2015/37 (قانون العمل العراقي) الذي ينص على أن الحد الأدنى لسن العمل هو 15 سنة. وفقاً لذلك ، هناك احتمال كبير لتجنيد الأطفال.</p>	عمالة الأطفال

تقييم الأثر	التأثيرات المحتملة	مستقبلات / جانب البيئة والصحة والسلامة
قليل التأثير	بالنسبة لأعمال البناء والحفر ، فإن التأثيرات المرئية مؤقتة ، خاصة من تخزين المواد الخام ومخلفات البناء.	البصرية والمناظر الطبيعية
قليل التأثير	استنادًا إلى العديد من الدراسات السابقة التي أجريت في منطقة الموصل، هناك احتمال كبير لمواجهة الآثار المتعلقة بالتراث الثقافي.	التراث الثقافي
قليل التأثير	نتيجة لأعمال البناء، قد تتعرض المرافق الموجودة تحت الأرض لأضرار عرضية.	البنية التحتية والمرافق تحت الأرض
قليل التأثير	قد يكون لتدفق العمالة المؤقتة ووجود عمال إضافيين تأثيرات على مناطق المشروع الفرعي من حيث: <ul style="list-style-type: none"> • مخاطر النزاعات مع المجتمع • زيادة مخاطر السلوك غير المشروع والجريمة • مخاطر انتقال الأمراض المعدية • ارتفاع الأسعار 	تدفق العمالة المؤقتة
معتدل	هناك احتمالية لحدوث آثار متعلقة بقضايا العنف القائم على النوع الاجتماعي ، مثل التحرش الجنسي والتمييز والحرمان من الفرص.	العنف القائم على النوع الاجتماعي
لا يذكر	ستتطلب أنشطة البناء العمل على الطرق العامة التي لا يتعدى عليها أفراد المجتمع. بناءً على الزيارات الميدانية التي تم القيام بها ، لم يكن هناك أي اعتداء. سيحصل المقاول على أراضي مملوكة للدولة من البلدية لتكوين المكاتب الكرفانية ولتخزين المواد والمعدات. وفقًا لذلك ، لن يتم الاستحواذ القسري على الأراضي أو التهجير الاقتصادي.	التأثيرات المتعلقة بالأرض
مرحلة التشغيل		
قليل التأثير	ستؤدي أنشطة الصيانة الدورية للطرق ، التي من المحتمل جدًا أن تشمل الحفر ، إلى زيادة انبعاثات الغبار (PM10 ، PM2.5) والانبعاثات الغازية (أكاسيد النيتروجين ، أكاسيد النيتروجين ، ثاني أكسيد الكربون ، المركبات العضوية المتطايرة ، إلخ) التي تنتجها آلات البناء والمركبات.	انبعاثات الهواء

تقييم الأثر	التأثيرات المحتملة	مستقبلات / جانب البيئة والصحة والسلامة
قليل التأثير	إعادة تأهيل الطرق سيؤدي إلى زيادة حركة المرور ؛ وبالتالي رفع مستوى الضوضاء والاهتزازات الناتجة عن حركة المرور. بالإضافة إلى ذلك ، من المتوقع حدوث ضوضاء أثناء صيانة شبكة تصريف المياه التي قد تتطلب أعمال حفر ، ومع ذلك ، ستكون هذه الأنشطة متقطعة ولفترات قصيرة.	الضوضاء
معتدل	أثناء أنشطة الصيانة الدورية، سيتم إنتاج نفس أنواع المخلفات التي سيتم إنتاجها أثناء إعادة التأهيل، ولكن بكميات أقل.	المخلفات
معتدل	تعرض أنشطة الصيانة العمال للحوادث والمخاطر التي قد تؤدي إلى إصابات. تشمل الأسباب الرئيسية لمثل هذه الحوادث إصابة العمال عند استخدام المعدات الثقيلة.	الصحة والسلامة المهنية
قليل التأثير	خلال مرحلة التشغيل، التأثيرات المحتملة على سلامة المجتمع ضئيلة حيث ان أعمال الصيانة الدورية للطرق لا تستغرق وقتًا طويلاً ولا تتطلب عدداً كبيراً من العمال.	صحة المجتمع وسلامته
لا يذكر	لن تكون التأثيرات المرورية خلال مرحلة التشغيل ذات أهمية.	تدفق حركة المرور
لا يذكر	لن يكون هناك عمالة أطفال أثناء مرحلة التشغيل بسبب اعتماد المشروع على العمال الدائمين الذين يجب أن يكون لديهم وثائق توظيف سارية مثل الهوية والشهادات التعليمية ... إلخ.	عمالة الأطفال
لا يذكر	نظرًا لأن المشروع الفرعي سيعزز الشوارع في منطقة التأثير ، تميل تأثيرات المشهد المرئي إلى أن تكون إيجابية.	البصرية والمناظر الطبيعية
لا يذكر	لا توجد آثار متوقعة على مواقع التراث الثقافي والمعالم الأثرية خلال مرحلة التشغيل.	التراث الثقافي
لا يذكر	لن يكون هناك أي تأثيرات على أي بنية تحتية داخل مواقع المشاريع الفرعية. ومع ذلك ، سيكون هناك تحسن كبير في ظروف الشوارع وشبكة إدارة مياه الأمطار.	البنية التحتية والمرافق تحت الأرض
لا يذكر	نظرًا للعدد المحدود من العمال أثناء التشغيل وأن الغالبية ستكون من منطقة المشروع، فإن تأثيرات تدفق العمالة تميل إلى أن تكون غير ذات أهمية	التدفق المؤقت للعمالة والعنف القائم على النوع الاجتماعي

تقييم الأثر	التأثيرات المحتملة	مستقبلات / جانب البيئة والصحة والسلامة
لا يذكر	لن يكون هناك أي آثار تتعلق بامتلاك الأرض في مرحلة التشغيل.	التأثيرات المتعلقة بالأرض

6. خطة الإدارة والرصد البيئي والاجتماعي

الهدف من خطة الإدارة والمراقبة البيئية والاجتماعية (ESMMP) ، هو تحديد الإجراءات لتقليل أو القضاء على الآثار السلبية المحتملة ومراقبة تطبيق وأداء تدابير التخفيف. يناقش القسم 6 من هذا التقرير خطة الإدارة البيئية والاجتماعية (ESMMP) للمستقبلات المختلفة ، ويحدد الأدوار والمسؤوليات لتنفيذ ورصد التخفيفات خلال المراحل المختلفة للمشروع.

7. استشارات أصحاب المصلحة

نفذ المستشار أنشطة إشراك أصحاب المصلحة في سبتمبر 2021 ، من خلال الطرق التالية: إجراء مقابلة فردية مع أفراد المجتمع المحيط بمنطقة المشروع ، وكذلك إجراء مناقشات مجموعة التركيز (FGDs). تم النظر في تنوع تمثيل المجتمع. حاول المستشار أن يكون له تمثيل من مختلف أصحاب المصلحة ، على سبيل المثال ، أعضاء المجتمع ، أعضاء الحكومة ، طاقم المدرسة الذين يعملون في منطقة تأثير المشروع ، حي الكفاءات ، والتجار ، وكبار المجتمع ، والنساء. كان من الصعب نسبيًا إشراك النساء ؛ لذلك ، تتواصل مستشارة اجتماعية مع النساء المقيمت في منطقة تأثير المشروع. بلغ مجموع الأشخاص الذين تمت استشارتهم 23 رجلاً و 11 نساء و 5 من المسؤولين.

ملخص نتائج الاستشارة

- جميع من تم التشاور معهم أكدوا على ضرورة إعادة تأهيل الشوارع
- عبر أفراد المجتمع المحلي عن رغبتهم بالعمل في هذا المشروع.
- تم تحديد أكثر الطرق فعالية للوصول إلى المجتمع المحلي ومن بينها وسائل التواصل الاجتماعي وبخاصة الفيسبوك.

لمزيد من التفاصيل حول أنشطة الاستشارة ، يرجى مراجعة القسم 7 من هذا التقرير.

a. آلية التظلم والتعويض

وضع مشروع العملية الطارئة من أجل التنمية (EODP) آلية شاملة للتظلم والتعويض تنطبق على جميع المشاريع الفرعية. ومع ذلك ، هناك نظام شكاوى آخر تتبناه البلدية. لذلك ، من الضروري تقديم آلية معالجة المظالم الخاصة بتنفيذ العمليات الطارئة من أجل التنمية وآلية المظالم الأخرى المعتمدة واقتراح آلية للتنسيق والتعاون بين جميع الأنظمة.

آلية التظلم الخاصة بالمشروع تراعي الفوارق بين الجنسين. إنه معيار للممارسة الجيدة يهدف إلى توفير نقطة اتصال نسائية منفصلة للشكاوى التي يتم تلقيها من النساء. في حالات زيادة خطر التمييز أو المضايقة أو الاغتصاب أو الاعتداء (على سبيل المثال ، عندما يكون معسكر العمال بالقرب من المجتمع) ، تضمن آلية معالجة المظالم أن النساء اللاتي يتعرضن للاعتداء الجسدي أو الجنسي ، أو الاغتصاب ، يمكنهن تقديم شكاوى سرية. قنوات استيعاب GRM المطبقة هي كما يلي:

REFAATO	PMT
<ul style="list-style-type: none"> ▪ Email: grm.wb@refaato.iq ▪ Online complaint system: refaato.net/form/ ▪ REFAATO hotline: 80011111 ▪ GRM users can call between Sunday-Thursday from 10 AM to 2 PM 	<ul style="list-style-type: none"> ▪ Letters to the PCU and/or relevant PMT's ▪ Phone calls to PMT's using telephone or WhatsApp <ul style="list-style-type: none"> ○ The resident engineer ○ <u>The social officer of the PMT (Mr. Yaser 07714221722)</u> ▪ In-person feedback to resident engineers on sub project sites and documented in GRM uptake form

للأفراد الذين يقدمون تعليقاتهم أو تظلماتهم الحق في طلب الحفاظ على سرية أسمائهم ، على الرغم من أن هذا قد يعني أن فريق إدارة المشروع غير قادر على تقديم ملاحظات حول كيفية معالجة التظلم. ومع ذلك ، يمكن أن تتلقى الشكوى المجهولة رمزًا ويجب التحقيق فيها بشكل مناسب والتعامل معها بلباقة

1 Introduction

This ESMP will focus on the rehabilitation of the road network in 3 residential neighborhoods in Mosul, namely Al Shohada, Al Yarmuk and Rajam Hadid. The roads are in bad condition and some of them suffered significant damage due to terrorist activities that took place during the occupation of Mosul by ISIS and the conflict that followed to liberate the city. In addition, these neighborhoods do not have a functioning rainwater collection system, which causes a lot of inconvenience to residents in rainy seasons during which the streets become flooded by water to an extent that hinders vehicle and pedestrian movement.

1.1 Rationale for the ESMP

The Environmental and Social Management Plan (ESMP) is a combination of the proposed mitigation measures for the anticipated impacts and the monitoring plan, which is designed to: 1) ensure that the prediction for the impacts is accurate and 2) ensure that the mitigation measures are implemented.

The specific objectives of the ESMP are the following:

- Describe the sub-project's components and activities of relevance to the environmental and social assessments;
- Identify relevant national and international legal requirements and guidelines;
- Assess the baseline status of environmental and social conditions;
- Evaluate potential site-specific environmental and social impacts of the project;
- Developing environmental & social management and monitoring plans in compliance with the relevant national and international requirements;
- Establish the roles and responsibilities of all parties involved in the project's environmental and social management;
- Document key environmental and social concerns raised by stakeholders during public consultation activities;
- Ensure the existence of a grievance redress mechanism (GRM) system through for the lodging and handling of complaints.

1.2 Scope of Work

The ESMP outlines the environmental and social management processes and procedures applicable to the sub-project. Accordingly, the structure of this document is as follows:

- Chapter two: Institutional and Legal Framework
- Chapter three: Project/Activities Description
- Chapter four: Environmental and Social Baseline Conditions
- Chapter five: Assessment of Potential Risks and Impacts
- Chapter six: Environmental and Social Management Plan
- Chapter seven: Stakeholder Engagement and Public Consultation

This document is guided by the ESMF for the EODP-AF. The information drawn from the ESMF was supplemented by additional literature research, field data collection, as well as consultations and close collaboration with the institutional stakeholders and members of the local community. Therefore, the potential impacts and associated mitigation measures and management procedures presented in this ESMP are based on the baseline information and E&S assessments.

2 Institutional and Legal Framework

2.1 Preface

This Chapter describes the legal and administrative framework for the proposed Subproject. It lists the national laws and the international requirements pertinent to the Subproject. Detailed information about the regulations are presented in Annex 3.

The World Bank (WB) has defined 10 environmental and social safeguard policies that must be considered for its financed projects. The applicability of such policies to this Subproject are outlined and discussed in the subsequent sections.

In case of any discrepancy between the requirements of Iraqi legislations and the requirements of the WB, the stricter requirements will be applied. In the case where national requirements are non-existent for specific issues or pollutants, the WB requirements will be adopted.

2.2 Applicable Iraqi Environmental and Social Legislations

General Environmental Legislations

- Law no. 27 for the year 2009: Protection and Improvement of Environment
- Law no. 37 for the year 2008: Establishment of the Ministry of Environment

Air Quality

- Regulation No. 4 for the year of 2012: Ambient Air Quality

Noise

- Law No. 41 for the year of 2015: Noise Protection and Control

Water Resources

- Law no. 50 of the year 2008, Ministry of Water Resources
- Law no. 2 of the year 2001: Water Systems Protection
- Act no. 25 of the year 1967: The Regulation for the Protection of Rivers
- Law No. 12 of 1995 for Maintenance of Irrigation and Drainage Network

Waste Management

- Instructions no. 3 of 2015 on Hazardous Waste Management
- Instructions no. 2 of 2014 on Environmental Protection from Municipal Waste.
- Directive No. (67) of 1986 Regulating the Debris Collection Areas.

Occupational Health and Safety

- Instructions No. 12 of the year 2016: Occupational Health and Safety
- Law No. 6 of 1988 concerning the National Commission for Occupational Hygiene and Safety, governing the enforcement of OHS regulations

Labor Laws

- Law no. 37 of the year 2015: The Iraqi Labor Law
- Law no. 89 of the year 1981, amended by Decree No.54 of 2001: Public Health

Roads

- Public Roads Law No. 35 of 2002

2.3 World Bank Safeguard Policies

The WB has identified 10 environmental and social safeguard policies that should be considered in its financed projects.

Table 2-1: World Bank safeguard operational policies and their applicability to the Subproject

Safeguard Policy	Triggered	Applicability to project	Justifications
Environmental Assessment (OP/BP 4.01)	Yes	Yes	The Subproject is classified as Category B and requires an Environmental and Social Management Plan (ESMP).
Natural Habitats (OP/BP 4.04)	No	No	There are no protected areas in the vicinity of the proposed subproject
Forests (OP/BP 4.36)	No	No	Proposed Subproject areas contain no forests.
Pest Management (OP 4.09)	Yes	No	Although this OP is triggered for the EODP AF project, the proposed subproject will not involve purchasing or using of pesticides.
Physical Cultural Resources (OP/BP 4.11)	Yes	No	This OP does not apply to the neighborhoods targeted under this subproject, although it is triggered by the parent project.
Indigenous Peoples (OP/BP 4.10)	No	No	No indigenous people are identified in Iraq.
Involuntary Resettlement (OP/BP 4.12)	Yes	No	OP 4.12 will not be applicable to this subproject as the construction activities will be carried out at an already existing road network. Therefore, there will not be any land acquisition or economic displacement activities.
Safety of Dams (OP/BP 4.37)	No	No	Not relevant to the proposed Subproject
Projects on International Waterways (OP/BP 7.50)	Yes	No	This policy is triggered for the whole EODP-AF but this particular Subproject is not expected to affect international waterways.
Projects in Disputed Areas (OP/BP 7.60)	No	No	No disputed areas in the EODP project

2.4 The World Bank Policy on Access to Information

This Policy governs the public accessibility of information in the Bank's possession. The World Bank allows access to any information in its possession that is not on a list of exceptions.

This Policy is based on five principles:

- Maximizing access to information;
- Setting out a clear list of exceptions;
- Safeguarding the deliberative process;
- Providing clear procedures for making information available; and
- Recognizing requesters' right to an appeals process.

2.4.1 Environmental, Health and Safety Guidelines (EHS)¹

The EHS guidelines entails the effective methods for managing environmental, health and safety issues in accordance with WBG requirements. This includes understanding the likelihood, magnitude and priority of the EHS risks. The EHS guidelines includes 4 Elementary sections and respective subsections:

1. Environmental Guidelines
2. Occupational Health and Safety Guidelines
3. Community Health and Safety Guidelines
4. Construction and Decommissioning Guidelines

2.4.2 Labor Influx Guidance Note (2016)²

This Guidance Note³ was established to support the World Bank in identifying and managing risks to and impacts on local communities associated with temporary labor influx. It includes a list of Toolkits and methods for the assessment and management of labor influx. The Guidance Note identifies the impacts related to labor influx e.g., risk of social conflict, illicit behaviour and crimes. etc. the impacts related to labor influx are presented in chapter 5 and the mitigation measures are found in chapter 6.

2.4.3 Good Practice Note – Addressing Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH) in Investment Project Financing Involving Major Civil Works (2020)⁴

The sub-project will not entail major impacts related to GBV as the workers' number is limited. However, within this ESMP, GBV discussion is presented in chapter 5 and the mitigation measures in chapter 6.

¹ Environmental, Health and Safety ([EHS](#)) Guidelines

² [Labor Influx Management Guidance Note](#) - 2016

³ The guidance note is entitled " Managing the Risks of Adverse Impacts on Communities From Temporary Project Induced Labor Influx"

⁴ [Good Practice Note](#) - Addressing Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH) in Investment Project Financing - 2020

3 Project / Activities Description

3.1 Overview

The proposed subproject is the rehabilitation of the road network in 3 neighborhoods located on the right bank of Mosul, namely Al Shohada, Al Yarmuk and Rajam Hadid neighborhoods. The planned rehabilitation will also include installing a rainwater drainage network, which will consist of pipelines and manholes.

Currently, the roads are in bad condition as they contain a lot of uneven sections. Furthermore, none of the 3 neighborhoods has an adequate rainwater collection network. As a result, on rainy days, rainwater accumulates in low areas leading to the formation of stagnant water ponds which later become a breeding ground for parasites and bacteria. In addition, rainwater accumulation causes significant disturbance to traffic and pedestrian movement.

As seen in some of the pictures below, some of streets suffer from solid waste accumulation.



Figure 3-1: Current condition of the streets in Al-Shohada Neighborhood



Figure 3-2: Current condition of the streets in Al-Yarmuk Neighborhood



Figure 3-3: Current condition of the streets in Rajam Hadid Neighborhood

The main conclusion that can be drawn from the pictures above is that the asphalt is cracked and broken and that water, whether rainwater or wastewater, accumulates in low areas and potholes thus giving rise to hygiene and safety concerns.

3.2 Project Location and Surroundings

The approximate areas of the neighborhoods in which the sub-project areas are located are: Al Shohada (470,000 m²), Al Yarmuk and Rajam Hadid (1,500,000 m²). The majority of lands where rehabilitation activities will take place are classified as residential lands.

Al Shohada neighborhood is comprised of 2500 housing units and 10 business offices, while Al Yarmuk and Rajam Hadid combined consist of 3000 housing units 25 business offices. The detailed socioeconomic data relevant to the subproject areas is provided in chapter 4.

W06

Al Shohada neighborhood is bordered by Baghdad street from the east, Al Amel Neighborhood from the north, Al Ain valley from the south, and other residential areas from the west. The neighborhood is a populated residential area with some commercial activities. It is surrounded by relatively large areas of empty land, especially from the south. There is a water stream, indicated in dark blue on Figure 3-4, that runs very close to the targeted roads, but it is not significant as it is not a branch from the river. In addition, there is a gas power plant that lies east of the neighborhood on the other side of the main road. The total lengths of roads which will be rehabilitated in Al Shohada neighborhood is approximately 2.5 km and their average width is 7 m. The approximate length of the rainwater drainage pipelines under W06 is 1.2 km and their diameters will be in the range 300 -1200mm.

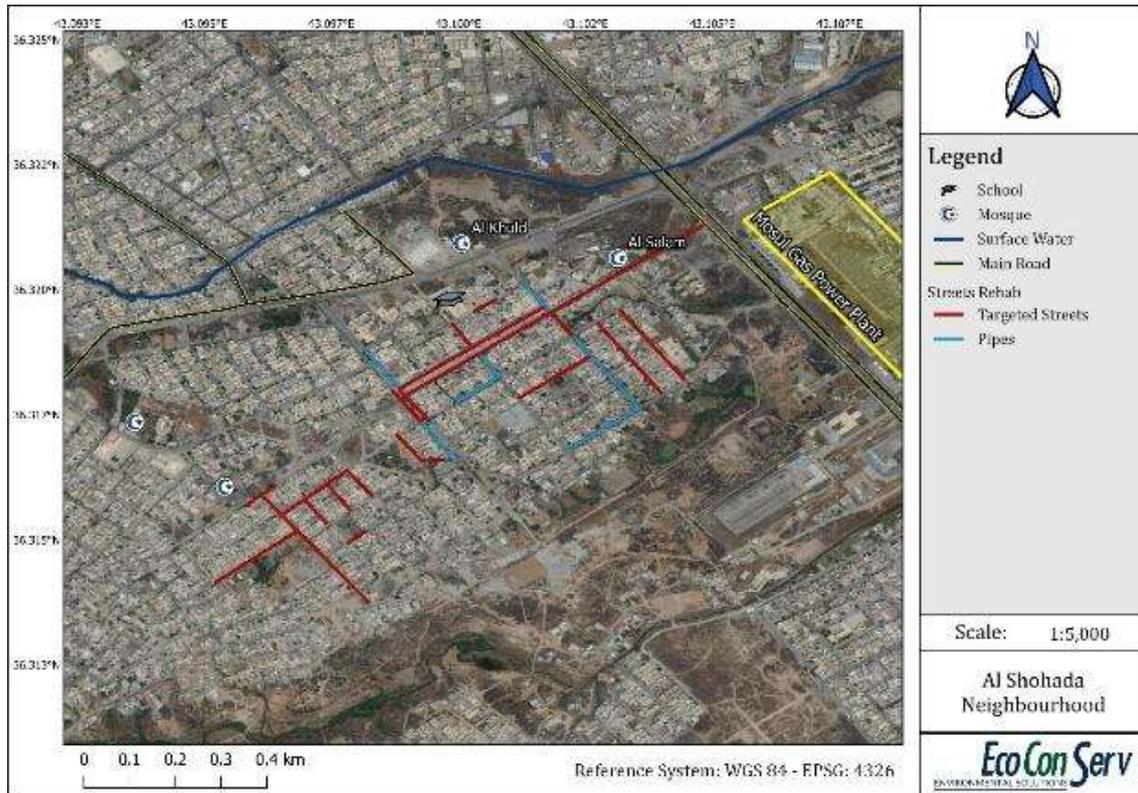


Figure 3-4 Al Shohada Neighborhood and surroundings

W07

W07 comprises two neighborhoods, Al Yarmuk and Rajam Hadid (Figure 3-5). As shown on the map, there are at least 2 main roads leading to each neighborhood. The commercial activities in these 2 neighborhoods are very minor. The red lines indicate the streets which require rehabilitation, whose combined length is around 7.5 km, while the blue lines indicate the routes of the rainwater collection pipelines which will be installed. The average width of the roads is 7 m, and the total length of the rainwater drainage pipelines is approximately 2.5 km. The pipeline diameters will be in the range 300-1200 mm.

The map shows that the scale of work in Al Yarmuk neighborhood is very limited compared to Rajam Hadid where almost all internal roads require rehabilitation.

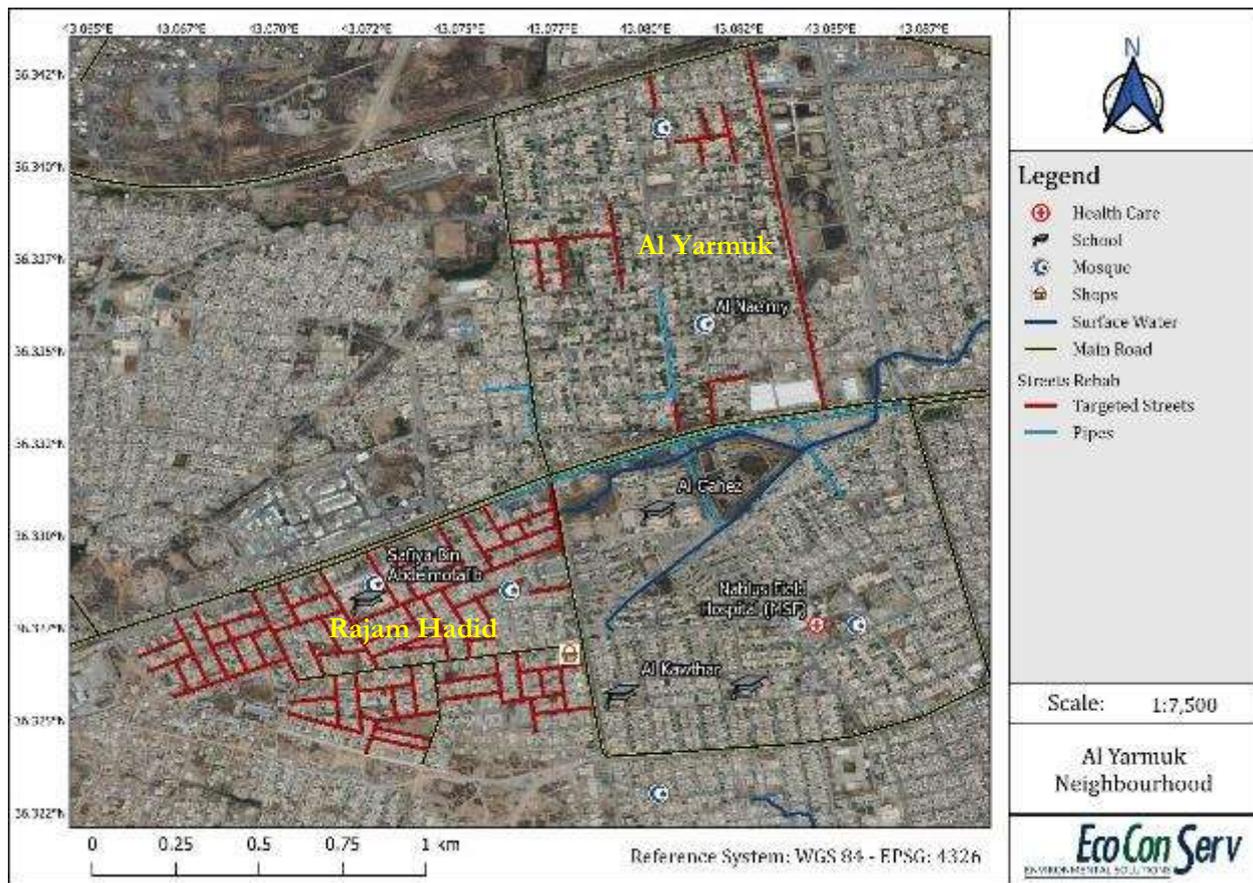


Figure 3-5: Al Yarmuk and Rajam Hadid Neighborhoods

3.3 Project Duration

The expected duration for each of W06 and W07 is 240 days.

3.4 Rehabilitation Activities

Roads Rehabilitation

The main road rehabilitation activities include

- Cutting and removing worn-out asphalt layers, curbs and sidewalks. The depth of excavation - and replacement – is expected to be at least 25 cm and thus it will cover base and potentially subbase layers. In some areas where the damage is severe, the excavation depth will reach up to 1 meter. The debris shall be transported to a disposal location which will be identified by the municipality. The debris is expected to include concrete blocks, asphalt blocks and excavated material.
- Preparing and supplying good quality gravel to be spread as a foundation layer for the roads as well as the sidewalks. The gravel will be spread using scrapers and then sprayed with water and compacted.
- Installing side curbs as follows
 - o Pouring a 20*85 cm concrete foundation layer
 - o Placing the curbs on top of the concrete foundation using mortar as a paste.
- Pouring concrete for the sidewalks.
- The top finishing layers will include the following (bottom up)

- A prime coat, which is made of a bituminous substance that is stored in a truck and it is usually sprayed directly from the truck on the road.
- A 10-cm thick asphalt stabilizing layer which will be applied using sensor paver machines.
- A tack coat layer
- A 6-cm thick hot-mix asphalt layer

The subproject's rehabilitation activities are going to be carried out in sections. In order to maintain traffic flow, alternative routes will be proposed. In addition, walkways will be established adjacent to the construction site location in order not to interrupt pedestrian access to residential buildings and commercial areas on the sides of the road under rehabilitation.

Rainwater Drainage Network

The work under this item will include:

- Excavating side trenches by removing the top asphalt/concrete layers as well as any layers below until reaching the depth at which pipes will be placed. The asphalt/concrete layers will be cut using a jack hammer. The depth of excavation will be in the range 2-5 m.
- Laying the pipes, installing all related accessories, backfilling using good quality gravel and then restoring the street back to its original condition.
- Constructing manholes. The work includes asphalt cutting, excavating, pouring the concrete body of the manhole, installing the steel covers, painting the inside of the manhole with epoxy and painting the outside with a waterproofing substance.

3.5 Equipment Needed

The planned road rehabilitation activities will require the following equipment: road grader to flatten surfaces, roller compactor, excavator, forklift, loader, trucks, asphalt mixer and paver. One road section usually requires 2 trucks to transport excavated soil and raw material. The paver is only used to lay the very top asphalt layer.

3.6 Operation and Maintenance

Some maintenance activities are expected to take place during the operation phase and they can be classified as follows:

Routine

These include:

- Daily cleaning activities
- Safety measures such as:
 - Repairing street signs, light poles and traffic lights.
 - Pothole patching
 - Crack sealing
 - Repairing the drainage slopes whenever there is a need to.

Periodic

Periodic maintenance operations include removing and replacing the top asphalt layer (overlay), re-graveling the base and subbase layers, sealing holes and cracks and maintaining the traffic marks and signs.

In case of replacing the asphalt layer and the layers below, the activities will be the same as in the rehabilitation phase, except that the duration will be less because not all road sections will require maintenance at the same time and sometimes, only the top asphalt layer is replaced.

Periodic maintenance could also include inspecting the components of the rainwater collection system to clear blockages and remove sediments.

Emergency

Emergency works may include repairing large potholes that hinder vehicles movement and repairing any damage resulting from accidents.

3.7 Resources

3.7.1 Water

Water will be supplied to the subproject by the public water network in the city. Based on consultations with the local community, no complaints were raised about lack of drinking water or water cuts.

3.7.2 Energy (Fuel/Electricity)

Most heavy construction equipment run on diesel.

3.8 Labor

The daily average number of workers during peak time for each sub-project is 40 workers. This number might increase or decrease based on the construction activities taking place at a given point in time, based on the number of concurrent construction sites and the construction time plan. Workers will be recruited from the local community and thus, they will not require accommodation

The total number of workers who will be recruited throughout the construction phase in each of W06 and W07 is 75 workers.

The labor breakdown is as follows.

Type of Work	No. of Workers
Civil Engineers	2
Land Surveyor	1
Skilled Workers	10
Unskilled Workers	60
Administrative	2
Total	75

The contractor will be responsible for providing workers with drinking water, food, and transportation means.

3.9 Construction Camp

The contractor will establish caravans and portable toilets on a piece of land close to the targeted neighborhoods and this land will be owned by Mosul municipality.

If needed, additional land owned by the municipality will be allocated to storing raw materials and equipment.

Locations of the contractor's offices for W06 and W07 are indicated on the following maps. It has been confirmed that these two pieces of land are owned by the municipality.



Figure 3-6: W06 Contractor's offices



Figure 3-7: W07 Contractor's offices

Coordinates of the contractor's offices are provided below.

Contractor's offices		
	Latitude	Longitude
W06	36°19'57.73"N	43° 4'43.98" E
W07	36°19'12.47"N	43° 6'1.22"E

Since the subproject will rely on local labor, no labor camp will be constructed.

3.10 Waste Generation

Waste generated during the rehabilitation phase includes domestic and construction waste, hazardous and non-hazardous. The waste which is expected to be generated by the rehabilitation activities includes:

- Excavated soil.
- Demolished concrete blocks and demolished asphalt.
- Sand and gravel,
- Trimmings of plastic pipes
- Domestic solid waste from daily consumption by workers
- Hazardous waste including paint, epoxy and waterproofing chemical containers, spilled oils from the operation and maintenance of the construction machinery.
- Domestic wastewater from the site offices

The waste generated during the operation phase will result either from maintenance, repair and/ or replacement activities. All wastes shall be collected by a licensed contractor and disposed in a designated waste facility.

3.11 Waste Disposal

The domestic and construction waste will be loaded onto trucks and disposed of in a dumping site that will be identified by the Mosul municipality.

The dumping site for W06 & W07 is indicated on the map below. The approximate distance between the dumping site and the targeted neighborhoods is 9 km.



Figure 3-8: Dumping Site

Domestic wastewater generated by the site offices will be collected in holding tanks and emptied regularly by municipal trucks.

Water collected by the rainwater drainage network during the operation phase will be directed to valleys outside the city and then it will continue to pour into other larger valleys which can absorb many times the amount of incoming rainwater. The collected rainwater gradually dries up by the end of the rainy season

4 Environmental and Social Baseline Conditions

4.1 Sensitive Receptors

In addition to the houses, the sensitive receptors in the subproject areas and their distances from the planned rehabilitation activities are as follows.

Table 4-1: Sensitive Receptors in the subproject's vicinity

Receptor	Distance
Al Shohada Neighborhood (W06)	
4 Mosques	All inside the neighborhood, and the closest to the planned construction areas is Al Salam Mosque and it is a few meters away from one of the roads which will undergo rehabilitation.
Al Yarmuk Neighborhood (W07)	
2 Mosques	Both are inside the neighborhood, and the nearest distance from the planned rehabilitation activities to a mosque is approximately 20 m.
Rajam Hadid Neighborhood (W07)	
There are 2 mosques and 1 school located directly on roads which will be rehabilitated.	

4.2 Physical Environment

4.2.1 Climate⁵

Mosul's climate is classified as warm and temperate. The winter months are much rainier than the summer months in Mosul. The temperatures are highest on average in July, reaching around 44 °C. January is the coldest month, with temperatures going as low as 4 °C.

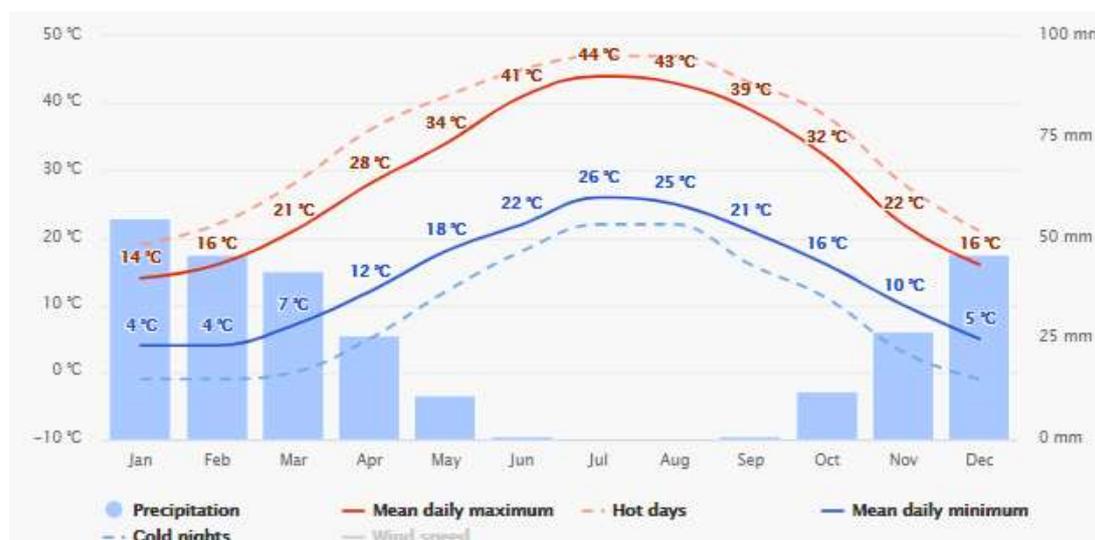


Figure 4-1: Average temperatures and precipitation in the city of Mosul

The dominant wind direction is north-north-east as illustrated in the wind rose below. On average, the wind speed is 5-12 km/h, but the speed of wind gusts can reach up to 28 km/h.

⁵ https://www.meteoblue.com/en/weather/historyclimate/climatemodelled/mosul_iraq_99072

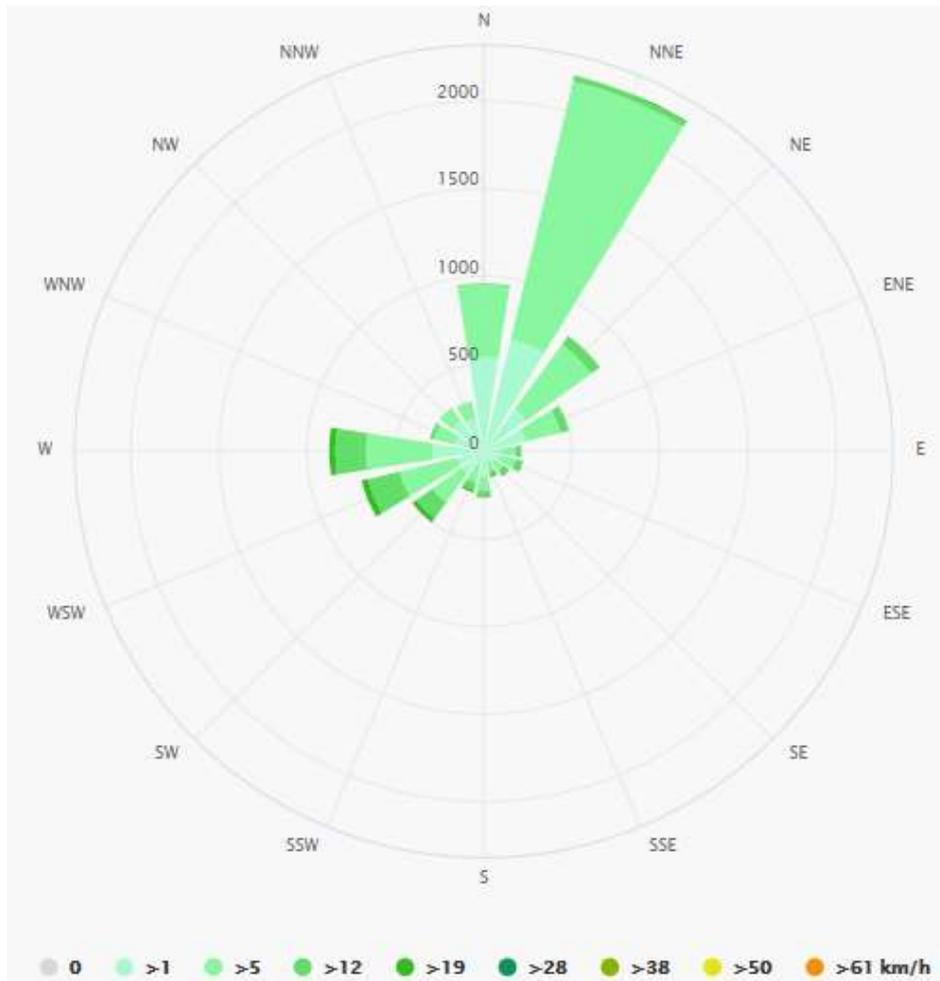


Figure 4-2: Wind rose for the city of Mosul

4.2.2 Ambient Air Quality and Noise Level

The annual average air quality index in the region⁶ is around 32 which, based on the following table, is a moderate pollution level that can have health impacts in case of long-term exposure.

The following tables provide a description for each numerical range.

Table 4-2 Air Quality Index Categories⁷

Numerical Range	Description
20 – 50	The air is moderately polluted. Long-term exposure can affect health.
50 – 100	The air pollution level has exceeded the maximum level for 24 hours set by the World Health Organization (WHO)

⁶ <https://air.plumelabs.com/air-quality-in-Mosul-pLW>

⁷ https://plumelabs.zendesk.com/hc/en-us/article_attachments/360039609054/Article_Plume_Index_.pdf

100 – 150	This range indicates a very high level of pollution that can be immediately felt by individuals at risk.
150 – 200	The air pollutants concentration has reached a critical level. Healthy individuals will be affected even if exposure is for a short period of time.

Concerning noise levels, no numerical data is available to accurately describe the noise emissions in the study area. However, given that all targeted roads are surrounded by residential buildings, it can be concluded that, aside from the daily traffic, there are no major noise generating activities in the subproject area.

4.2.3 Seismic Activity

Generally, Iraq is a seismically active region especially in the North East. It is divided into 4 main seismic zones as follows (shown on the map below):

- Zone 1, no damage zone where on a Mercalli Magnitude (MM) scale, the earthquake intensity is III.
- Zone 2, the minor damage zone, covering the intensities IV and V on the MM scale.
- Zone 3, the moderate damage zone, where the intensity is in the range VI-VII.
- Zone 4, the major damage zone, with an intensity of VIII and is located on the Zagros thrust outside the Iraqi borders.

The subproject lies in the minor damage zone, i.e., zone 2.

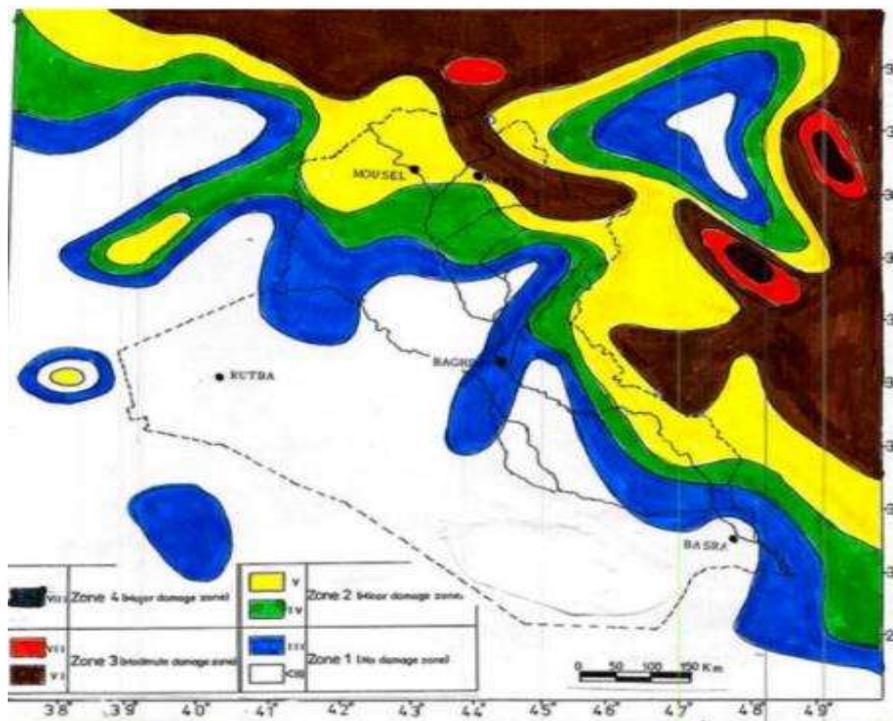


Figure 4-3 Seismic Zones in Iraq

4.2.4 Groundwater

Groundwater depth in the subproject area ranges between 30 to 40 meters below ground surface. Groundwater salinity increases from the northern and north-eastern recharge areas towards the discharge areas.

River runs from the Turkish border through the eastern portion of the governorate, bisecting Mosul along the way.



Figure 4-5: Map of Nineveh Governorate

4.4.2 Administrative Division

4.4.2.1 Nineveh Governorate

There are three levels of administration in Iraq: governorates, districts, and sub-districts. Each governorate is subdivided into districts (*qhadās*) and sub-districts (*nahiyas*). The district is usually named after the district's major city. The governorate includes the eight districts of Mosul, Telafar, Hamdaniya, Shikhan, Tilkaif, Hatre, Sinjar, Makhmour and Ba'aj.¹⁰ Each district is divided into several sub-districts. Furthermore, at the most local level of governance, each sub-district has a community leader (*mukhtar*) who is appointed by local councils and serves as a primary intermediary between residents and government service providers within their area of responsibility. The *mukhtar* is responsible for keeping and maintaining records of the households living within his sub-district, assigning households to Public Distribution System (PDS) government officials and addressing community concerns to the relevant authorities.¹¹

The Nineveh governorate is the most ethnically diverse in Iraq. In addition to the sizeable Arab Sunni population, Arab Shias, Kurds, Assyrians, Chaldeans, Turkmen, Yezidis, Shabak and other minorities live in the governorate.¹²

4.4.2.2 Mosul City

The city of Mosul is a capital of the district of the same name located in the Nineveh governorate. With an estimated population of 1,377,000 according to the Statistics Department of Nineveh

¹⁰ Akre was a district of Nineveh before 2000. However, ever since the establishment of the Kurdish Region of Iraq, Akre has been considered a district of Duhok governorate.

¹¹ The Iraqi Public Distribution System (PDS) is run by the Ministry of Trade and provides government-subsidized food and fuel rations to all Iraqi citizens. The system is Iraq's biggest social safety net reaching almost 39 million people.

¹² Due to a lack of national census, no precise ethnic or sectarian population estimates exist for Nineveh.

Governorate in 2014 (before ISIL took control of the city)¹³. Mosul city is the third most populous city in Iraq, after Baghdad and Basra.¹⁴ Mosul city is around 400 kilometers from the Iraqi capital of Baghdad and consists of 8 sub-districts. The city is largely perceived to consist of two parts, a right bank and a left bank, separated by the Tigris River.

Overall, Mosul city has 251 neighborhoods (*mabalas*) spread along both sides of the river with five main connecting bridges. The right bank has 91 neighborhoods, while the left bank has 160 neighborhoods.¹⁵

The right bank of the Tigris, hosts most of Nineveh's minorities, whether Kurdish, Turkoman or Christian. Most areas of the left bank have Sunni Arabs as constituting the majority. The majority of land in the right and left bank is classified as residential.

The area of influence of the project is the Right Bank of Mosul (i.e. West Mosul) as a whole, with the immediate vicinity of project activities is in Al Shohada, Al Yarmuk and Rajam Hadid neighborhoods.

¹³ According to a report by IOM (2015), registered IDPs from Mosul city amount to approximately 200,000 individuals. A report by ACTED and UNOSAT (2015), however, argues that this estimate is too low and cannot be considered an accurate indication of the number of people who fled the city.

¹⁴ "City Profile of Mosul, Iraq" (2016) UN Habitat. Available at:

https://reliefweb.int/sites/reliefweb.int/files/resources/UN-Habitat_MosulCityProfile_V5.pdf

¹⁵ "The Politics of Security in Ninawa" (2018) Harvard Kennedy School. Available at:

https://www.hks.harvard.edu/sites/default/files/degree%20programs/MPP/files/Finalized%20PAE_Ahn_Campbell_Knoetgen.pdf

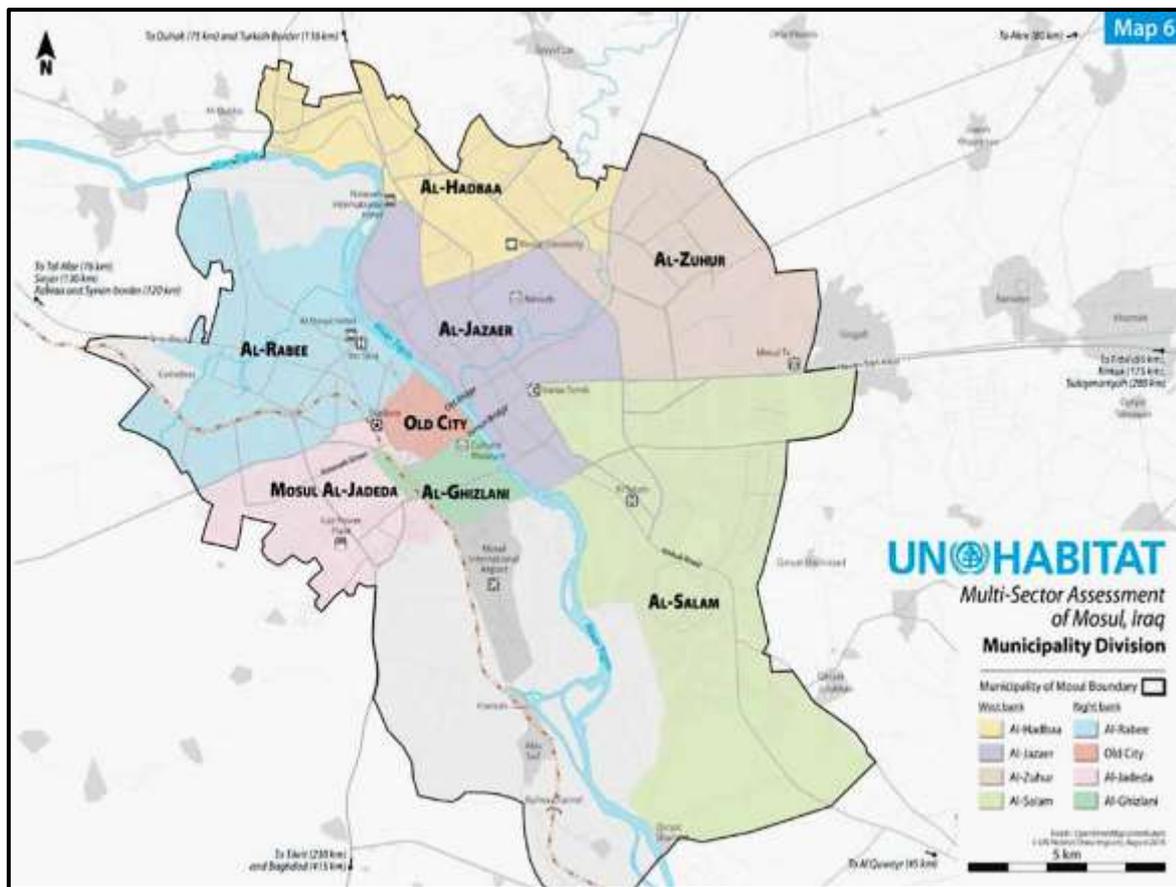


Figure 4-6: Division of Mosul City - Right and Left Bank

4.4.3 Demographic Overview

The section aims to shed light on demographic data on the level of the Governorate, City and subprojects areas.

4.4.3.1 Population

The table below indicates the population and gender breakdown of Nineveh Governorate, Mosul City and Right Bank of Mosul, where the subprojects sites are located. The Mosul City population represents 46.5% of the total population of Nineveh Governorate.

Table 4-3: Population Breakdown based on gender and households in the subprojects areas

Area	Households	Population		Total Population
		Male	Female	
Nineveh Governorate	482,857	1,936,730	1,793,268	3,379,998
Mosul City	81,802	255,079	189,921	445,000
Right Bank of Mosul City	35,000	102,000	98,000	200,000
Al Shohada Neighborhood	2,836	9,187	8,758	17,945
Al Yarmuk Neighborhood	2,390	8,731	8,150	16,881
Rajam Hadid Neighborhood	987	4,205	3,914	8,119

Source: Central Statistical Organization of Iraq (CSO), 2018. Government officials' units in the city of Mosul, 2019. Local units of the subprojects neighborhoods 2020.

4.4.3.2 Number of Houses and Businesses

According to the data received from the subprojects environmental officer (PMT), the following table shows the table below indicates the number of houses and businesses.

Table 4-4: Number of houses and businesses in the subproject areas

Area	No. of Houses	No. of Businesses offices
Al Shohada Neighborhood	2500	10
Al Yarmuk Neighborhood	2150	15
Rajam Hadid Neighborhood	760	10

Source: Local units of the subprojects neighborhoods 2020.

and approximate number of people who will be impacted by these three subprojects according to the percentage covered by the subproject of the total area of the neighborhood.

The officials from the sub-projects management team (PMT) made it clear that each subproject benefits the residents of the neighborhood in addition to the users from the neighboring areas when passing the main roads within the areas of these subprojects. Thus, we note that the number of beneficiaries from the implementation of these projects is more than the average population; This is because the roads are used by residents as well as road users from neighboring areas.

Regarding the number of residents likely to be affected by the construction activities in the sub-projects areas; Rajam Hadid neighborhood is about 70% of the total population, and the Yarmuk and Shohada neighborhoods are about 35% of the total population.

4.4.3.3 Age structure

Figures from the 2018 CSO Statistical Abstract outline that the population in Nineveh Governorate is generally young, with citizens over the age of 64 representing only under 1% of the population. The largest age group in the governorate is 15-64, with the second being under 15 years old. Nineveh Governorate contains the country's second largest under 15 population.

Table 4-5: Age composition of the population in Nineveh Governorate

Age Composition	Nineveh Governorate Population in %
Population under 15 years	45.3%
Population (15-64) years	54.0%
Population 64 years and over	0.7%

Source: Central Statistical Organization of Iraq (CSO), 2018

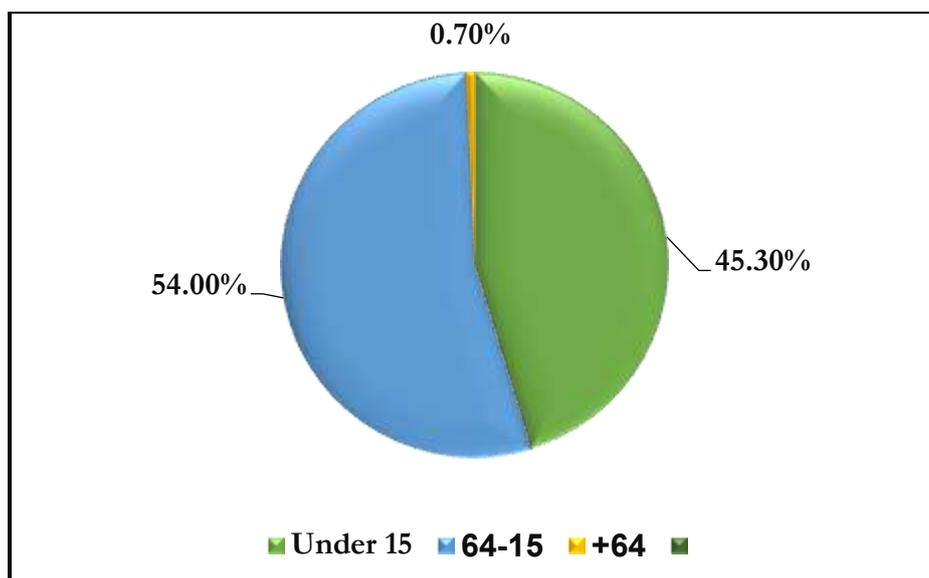


Figure 4-7: Age Distribution in Nineveh Governorate

4.4.3.4 Rate of Natural Increase

The natural increase rate is calculated by deducting the mortality rate from the birth rate. The remaining figure is the population natural increase value. Population increase on the level of Nineveh Governorate was 2% in 2018 (CSO).

4.4.3.5 Household Characteristics

The majority of residents reside in houses of one to two story's high. Furthermore, consultations with government officials revealed that the average household size in the right bank of Mosul city was six individuals.





Figure 4-8: Residential houses in sub-project areas

It should be noted that Mosul city suffers from scarcity of buildable plots that can be allocated for housing. As a result, affordable housing is uncommon and so there is rise of informal settlements and squatters in the city.¹⁶

4.4.3.6 Gender Dynamics

Before ISIS' occupation of the area, prevalent gender behaviors and expectations were based on the belief that there were inherent differences between women and men, therefore gender roles were based on the division of labor.

Since 2014, ISIS has enforced strict social control in numerous communities in Iraq. Their hold on Mosul was particularly strong, therefore the preexisting day-to-day gender norms of those communities have been impacted strongly as they enforced their own gendered restrictions and status quo.

While women's mobility in public spaces have been strongly restricted and sanctioned, men have been subjected to the most casualties by the group where some disappeared or were imprisoned by ISIS. With the occurrence of abductions, recruitment of youth under 18, and trafficking the traditional household dynamics have been drastically disrupted and altered. Alternatively, when husbands and fathers disappeared, women became the main heads of their households in most families, however, with their weakening financial means they also found themselves in highly vulnerable positions as well.¹⁷

¹⁶ "City Profile of Mosul, Iraq" (2016) UN Habitat. Available at:
https://reliefweb.int/sites/reliefweb.int/files/resources/UN-Habitat_MosulCityProfile_V5.pdf

¹⁷ Dietrich, Luisa, and Simone E. Carter. "Gender and conflict analysis in ISIS affected communities of Iraq." (2017).
<https://oxfamlibrary.openrepository.com/bitstream/handle/10546/620272/rr-gender-conflict-isis-affected-iraq-300517-en.pdf?sequence=1>

4.4.3.7 Vulnerable Groups

Vulnerable groups are composed of people who are typically excluded, disadvantaged or marginalized based on their socio-economic position. Hence, low-income households with a female head of household and children tend to be financially disadvantaged. Moreover, low-income households taking care of a sick or elderly member of the family is also vulnerable.

The group most fitting to this definition in Mosul are female heads of households, in particular, widowed, unmarried, and divorced women who returned back to the city after displacement, in addition to those in Mosul that have reported having family members with disability.

The available data does not indicate the number of people with disabilities in the sub-project areas or the type of disability, but consultations were conducted with women who explained that they have returned to settle in the area with their families for more than four years, in addition to women who take care of their families due to the travel of the husband or the older brother to work outside Mosul (in Baghdad) or outside Iraq (Saudi Arabia).

4.4.4 Education

Educational facilities in the city of Mosul city are functional, but their performance is affected by multiple reasons. Interviewed government representatives and community members identified the most critical issues relating to education to be the following:

- Lack of teachers and supplies at the facilities;
- Increased cost for education services;
- Overcrowded classrooms with around 60 students per class in West Mosul;
- While there are facilities available for all age groups (pre-school, primary, secondary, and graduate schools) the number of educational facilities is not sufficient for the young growing population of the Right Bank;
- School children have missed on average one year of formal education as a result of the reasons stated above as well as political events and/or weather conditions.

Furthermore, prior to ISIL, Mosul had three universities and two technical institutions. After ISIL occupied the city, all higher education institutions were shut down. However, the University of Mosul (which is considered as one of Iraq's top universities) reopened its doors in mid-2014. However, students from other governorates are enrolling in the University in Mosul at significantly lower numbers. It is believed that the primary reason for this is Mosul's severe security deterioration since 2005.¹⁸

¹⁸ "City Profile of Mosul, Iraq" (2016) UN Habitat. Available at: https://reliefweb.int/sites/reliefweb.int/files/resources/UN-Habitat_MosulCityProfile_V5.pdf



Figure 4-9: Rajam Hadid neighborhood school, one of the sub-projects areas

4.4.5 Health Facilities

Healthcare is considered an expensive expenditure for the local community because they need to calculate transportation to the health facility, buying medication, and all necessary medical fees. Furthermore, health services have been negatively affected by the ISIL occupation, and so a number of issues remain:¹⁹

- Lack of medical staff because many have fled during the occupation
- Medical fees for services and operations have increased significantly
- Poor sanitation in hospitals due to lack of maintenance and need for repair
- The low availability of maternal and natal care in the city of Mosul

Table 4-6 Health Facilities in Nineveh Governorate and Mosul City (2018/2019)²⁰

Type of Health Facility	Nineveh Governorate	Mosul City
No. of hospitals (public and private)	19	6
Primary Healthcare Units	178	20

Although many pharmacies are still open, their stock is limited. Medicine, when available, is largely unaffordable due to the limited supply. As a result, community members reported difficulties in accessing medication.

¹⁹ Ibid.

²⁰ Multiple Indicator Cluster Survey developed by the Central Statistical Organization of Iraq (2018) – Nineveh Governorate as well as consultation with Mosul Local Council



Figure 4-10: Mosul public hospital

4.4.6 Infrastructure and Access to Basic Services

4.4.6.1 Electricity

All household are reportedly connected to the grid, but the electricity network is in poor condition. Mosul government officials stated that most households receive of around 8 hours of public grid provided electricity per day, but electricity is infrequent due to power cuts that occur throughout the day. Therefore, residents rely on generators to compensate. Furthermore, community members reported that the weak supply of electricity limits the number of home electrical appliances that they can use and increases the need for transformers to convert the electrical output of the power source to match the voltage of their appliances (i.e. convert the available 180 Volt to 220 Volt).



Figure 4-11 Electricity network in sub-project areas

4.4.6.2 Potable Water

The water provision was reported by community members to be similar to pre-ISIL levels, both in terms of quality and quantity. All households had access to piped water and use it as their primary water source.

Interviews with officials from government entities indicated that the neighborhoods in the sub-projects areas (Al Shohada, Al Yarmuk and Rajam Hadid) are served by water networks, in addition to the consultation activities with local communities did not revealed any complaints about the lack of drinking water or water cuts.

4.4.6.3 Sanitation

There is no sewage system in the Mosul Right Bank and hence residents use septic tanks to store wastewater. Wastewater removal services are contacted once the tank is full and the residents pay fee for its removal. The cost per evacuation is 40 USD and evacuations occur either once or twice per year.

Table 4-7: Sanitation Figures of Nineveh Governorate (2017/2018)

Item	Figure
Total pumping stations	7
Proportion of population served by public and shared sewerage networks	2.3%
Proportion of the population served by septic tanks	97.7%

4.4.6.4 Mobility and Transportation

Movement and transportation are considered especially difficult in Mosul city because of the number a checkpoints and other security measures set-up and controlled by the Iraqi police and security forces. These checkpoints are a point of concern for the local community because passing through these checkpoints takes hours. Additionally, there is also no public transportation system, therefore, transportation services are taxis and minibuses.

4.4.6.5 Roads

The sub-projects areas are surrounded by a network of main roads that facilitate easy access to and from these areas, and help connect them with neighborhoods and neighboring areas. The three neighborhoods (Al Shohada, Al Yarmuk and Rajam Hadid) also have a network of secondary roads.

Mobilization of heavy machinery, asphalt breaking, and excavation, placement of piping and backfill activities are bound to limit traffic and accessibility to the areas. Mobilization, preparation and construction phases will entail narrowing roads by longitudinal and/or lateral excavation, totally blocking narrow or side roads, as well as limiting or prohibiting parking along the length of the works. Access to buildings and shop entrances may be limited or constricted in cases where excavations form obstacles for pedestrians and cargo. Thus, it can affect the flow of traffic on the streets of the sub-project areas.

Government officials and local authorities confirmed that the project’s construction and rehabilitation will not have negative effects on the surrounding community in regards to traffic and access to roads; Due to the limited traffic in the streets of the sub-projects areas, which was evident during the site visits. Figure 3-4 Al Shohada Neighborhood and surroundings and Figure 3-5 Al Yarmuk and Rajam Hadid Neighborhoods in section 3.2 showing the main roads surrounding subprojects neighborhoods.

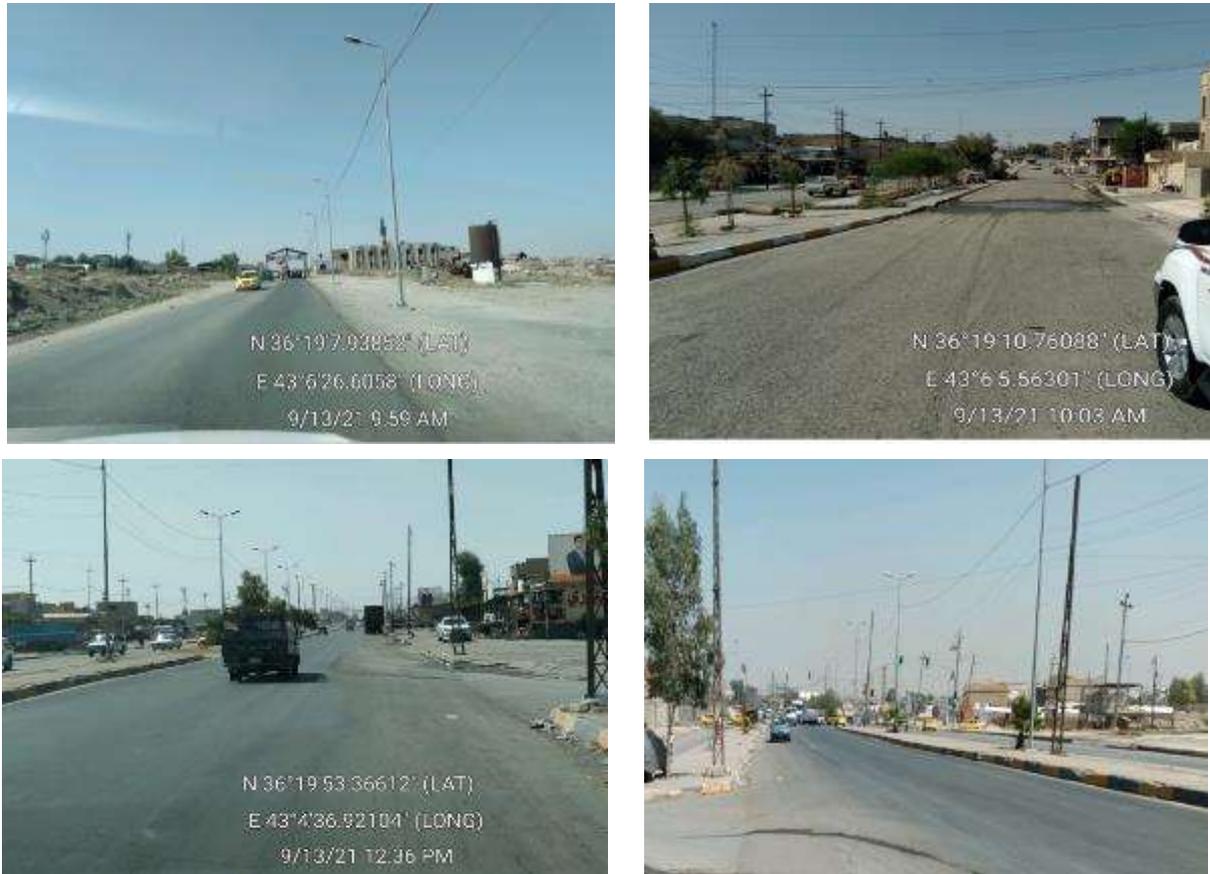


figure 4-12: Photos of some main roads surrounding the sub-project areas

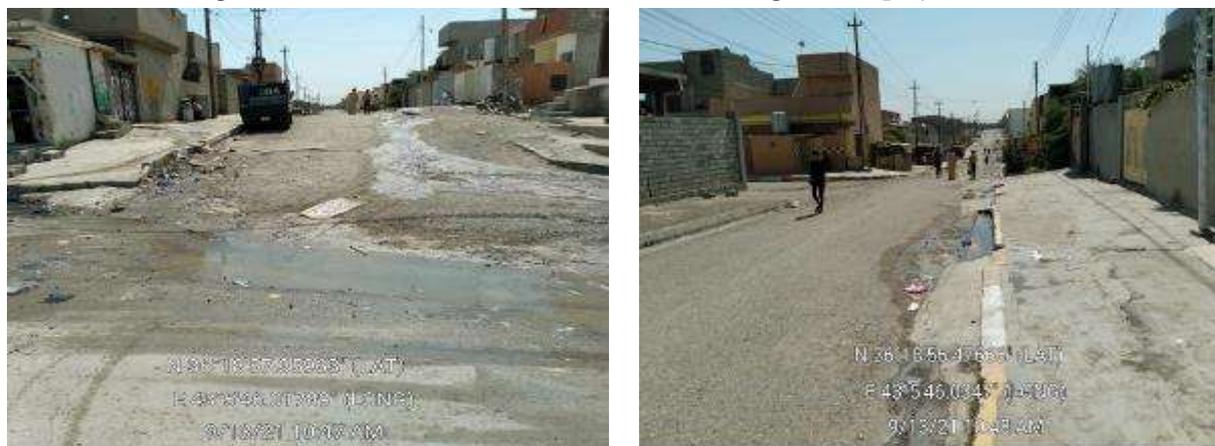




Figure 4-13: Photos of some secondary roads in the sub-project areas (the roads that will be rehabilitated)

The current situation of the secondary roads in the study neighborhoods (Al Shohada, Al Yarmuk and Rajam Hadid)

According to site visits and consultation with officials in Nineveh Governorate; Al Shohada neighborhood is one of the neighborhoods that suffers the most from the accumulation of water and its impact on houses and the movement of residents, especially in the winter. The street terrain in Al Shohada neighborhood plays a role in creating swamps and pools of water that turn into sewage water that harms the environment and the health of citizens as well as economic activity.

The street in Rajam Hadid neighborhood suffers from the same problem of the accumulation of water, but to a lesser degree. As for Al Yarmouk neighborhood, it has an old water drainage network and it is currently working. The W07 project includes some streets from the neighborhood to be connected to the old network.



Figure 4-14: Water pools in the streets of Al Shohada neighborhood



Figure 4-15: Water pools in the streets of Rajam Hadid neighborhood



Figure 4-16: Water pools in the streets of Al Yarmuk neighborhood

4.4.7 Public Safety and Security

Like in other parts of Iraq, Nineveh Governorate experienced large-scale displacements of its minority groups long the wave of displacements inflicted by ISIL. Mosul has one of the highest rates of displacement in Nineveh Governorate. More than 50% of Internally Displaced Persons (IDP's) in Nineveh from Mosul. According to the IOM, recent years have witnessed a return to this population after the situation stabilized. Most people were displaced for the following reasons: a) Armed conflict, b) Direct threats of life, c) Forced displacement from property, d) Generalized violence, e) Left out of fear²¹.

²¹ The Governorate Profile published by International Organization for Migration (IOM)

According to consultations with both government officials as well as the local community, ISIS attacks in the Mosul City in general has decreased significantly. Consultations even consider the current security situation to be stable.

Residents in the subproject areas (who were consulted) explained that they have been residing in the subproject area for a long time, and the vast majority of the displaced population have returned to their homes. No data available on the number of displaced populations in the subproject areas; However, field observations during the site visits showed that the sub-projects areas are inhabited.

4.4.8 Economic Overview

Mosul's economic development as well as the quality of life of its residents were negatively affected by the recent conflict. Mosul was a prominent commercial center and its main export products were oil, and agricultural, industrial and mineral products.

The interruption of public services and the lack of available jobs made it difficult to restart economic activities. According to consultations conducted at the Mosul Local Council, the Right Bank in particular has a poverty rate of 30% of the population.

4.4.9 Living Conditions

While Nineveh is among the governorates with highest poverty rates, Mosul has always been a prominent commercial center. Recent data on poverty in Nineveh Governorate is unavailable; However, the Iraqi Ministry of Planning asserts that poverty rates in governorates seized by ISIL have significantly increased as a result of escalating unemployment levels.

Despite lack of sufficient statistical data, there is palpable evidence that the living conditions of those who stayed in Mosul city have declined after July 2015, when governmental salaries were cut to deprive ISIL of the financial resources it deducted from staff salaries. This reduced the cash flow available in the city and led to a cutback in people's purchasing power.

With escalating costs of basic goods and services (in particular education, healthcare, gas, food and drinking water), daily life became difficult and the living conditions of the city's poor families putting people's and dignity at stake²².

4.4.9.1 Employment and Unemployment

The rate of unemployment in the Nineveh governorate is high, ranging at about 19.2%. Employment rates have been affected by the lack of economic development in the area, especially since the agricultural sector has been hurt by the recent conflict. Furthermore, wages were reported to be lower than before the arrival of ISIL, especially wages for daily jobs.

Employment rates were also found to be affected by demographics. According to Mosul government officials, there is a considerable gap between men and women, with around 35% of males employed, whereas only 20% of females are employed. Furthermore, average unemployment rate in the Right

²² “City Profile of Mosul, Iraq” (2016) UN Habitat. Available at:

https://reliefweb.int/sites/reliefweb.int/files/resources/UN-Habitat_MosulCityProfile_V5.pdf

Bank of Mosul is about 30% among males and 10% among females. It is worth mentioning that the majority of females are not willing to work. Therefore, they are not identified as unemployed.

Additionally, in terms of livelihood opportunities for women; according to site visits and community consultation activities; women from the local communities in the sub-project areas practice jobs and crafts from home, such as sewing, nurses and teachers.

4.4.9.2 Economic Activities

The following table presents the main economic activities pursued by Mosul residents.²³ The main reported employment sectors were: agriculture, industry, military, civil society (NGOs), small business ownership, public sector, and daily work. Each of these employment sectors are elaborated upon below. Additionally, it is worth mentioning that many residents of the Right Bank of Mosul migrate for work, either abroad to Turkey, or within Iraq to both Erbil or Baghdad.

Description of Economic Activities in Mosul

Agriculture: Local authorities indicated that the agricultural sector was of great importance to the city, but that this employment sector was damaged heavily during the recent conflict. In addition, they reported agricultural work had not resumed, as the security situation did not allow farmers to return to the fields. Some farmers abandoned their lands as a result of displacement to other areas, as well as because of the possibility of explosives in some areas.

Industries: Destruction of the industrial area has had a major negative effect on job availability in Mosul. The financial means necessary to repair the area and restart factories is not available. Food production has historically been one of the main contributors to the economy of Mosul. There are several grain silos in Mosul city as well as a number of flour factories that are both private and government-owned.

Military: A high rate of youth unemployment causes youth to look at military career opportunities more than they might otherwise if other opportunities were available. The military serves as an avenue for stable income for young adults.

Small Businesses: Businesses related to construction, metalworking, and retail are possible avenues for private investors and entrepreneurs. However, investors and business owners are having difficulty in finding qualified workers and skilled laborers.

Public Sector: Public sector employment (i.e. teachers, lawyers, engineers, and doctors) is sought by residents because public sector workers are paid on time, despite the limited opportunities available from government jobs.

Daily Work: Daily work is also a common income source. However, it was reported that fewer daily jobs were available and wages had decreased. Daily work wages tend to be unstable and unreliable and residents tend to seek and ask the government to introduce more stable job opportunities.

²³ “Labor Market Opportunities and Challenges, Mosul, Nineveh Governorate” (2019) IOM Iraq. Available at: <https://iraq.iom.int/files/Al-Shifaa%2C%20Ninewa.pdf>

4.4.10 Land Use

Consulted government officials have reported that the total area of the neighborhoods in which the sub-project areas are located approximately are: Al Shohada (470,000 m²), Al Yarmuk and Rajam Hadid (1,500,000 m²).

Almost the majority of lands in project activities are classified as residential lands the three neighborhoods are classified as residential areas in the first place. Few percentages of lands are used for industrial activities; there is an industrial area and a gas complex outside the scope of the sub-projects areas in the north-east. All visited areas were limited to residential in general. According to field observations, there are no lands used for agriculture in or adjacent to the sub-projects areas.



Figure 4-17: Photos of the residential areas in the neighborhoods in which the sub-projects will be implemented

In the project areas within the residential neighborhoods, there are some markets (2) and shops (17 over the three sub-project areas) that provide the daily needs of the residents. Consultation activities with shop owners in the Al Shohada and Al Yarmouk neighborhoods they did not reveal any concerns or objections to the presence of construction works near them and residents being unable to reach their stores during project implementation. Despite this, they indicated their willingness of the project. The consulted Nineveh Project team officials responded that construction work is expected to be

done by sections to avoid road closure and by loss of income to for small business owners. They noted that the various shops gather on the main streets surrounding the neighborhood, but there are no economic activities in the streets inside the neighborhood. Furthermore, the duration of construction work per section will be temporary and limited to a few days. The extensiveness of construction work will differ from road to road so construction action activities will not automatically cause restriction of access.



Figure 4-18: Photos of the shops in sub-projects areas

In the residential neighborhoods between the houses and on the corners of the main roads, there are some empty plots of land. The consultant did not find out if the property belongs to the municipality or the local community, and it seems unused at the present time.



Figure 4-19: Photos of some empty plots of land in the subproject areas

There are also some service facilities in the residential neighborhoods in the sub-projects areas such as schools and medical centers, in addition to mosques. Most of them are concentrated on the main roads. In addition, mosques have two entrances, one on the main road and the other on the secondary road.



Figure 4-20: Some mosques located in the sub-project areas



Figure 4-21: A school under construction in the Al Shohada neighborhood

4.4.11 Cultural Heritage

The Nineveh governorates includes multiple ruins from various historical periods, many of which have not been properly excavated, or remain to be discovered, due to security and political conditions. In Mosul city, in particular, consultations with the local population determined that much of the city's archaeological and cultural heritage sites have been destroyed by the recent conflict. However, they stated that the closest heritage site to the project is the Nineveh Fortification Wall. Accordingly, given Iraq's multi-millennia history, artifacts are expected to be found in the area. Therefore, while there are no known sites of historical and archeological importance within the immediate vicinity of the project, caution should be exercised during the rehabilitation phase and chance find procedures must be implemented when necessary.

5 Assessment of Potential Risks and Impacts

The environmental and social impacts assessment is based on both quantitative and qualitative data available, as well as the consultant's experience.

The assessment is based on the methodology presented in the Environmental and Social Management Framework document.

5.1 Potential Positive Impacts during the Rehabilitation Phase

5.1.1 Direct job opportunities to skilled and semi-skilled laborers

The subproject is anticipated to result in creation of various direct job opportunities. Based on previous experience in similar sub-projects implemented recently by the project owner (the municipality) and the contractor, the total number of workers who will be recruited during the construction period per each sub-project will be at minimum as follows:

No. of Workers anticipated for each subproject (W06 & W07)	
Type of Work	No. of Workers
Civil Engineers	2
Land Surveyor	1
Skilled Workers	10
Unskilled Workers	60
Administrative	2

The daily average number of workers during peak time per sub-project is 40 workers. The contractor might recruit more people to meet the construction deadlines, based on the number of concurrent construction sites and the construction time plan.

Workers will be recruited from the local community and thus, they will not require accommodation.

In order to maximize employment opportunities in the local communities it is anticipated that on the job capacity building activities will be required for currently unskilled workers. On-the-job training will also supplement opportunities for the local workforce for both temporary construction roles and for long-term employment during the operation phase, where these are available.

5.1.2 Indirect job opportunities

As part of the construction stage, a number of indirect job opportunities are expected to arise, due to the need for more supporting services to the workers and contractors who will be working in the various locations.

Economic activity in the project area will be increased through the following supply chain:

- Implementation of works and provision of supplies related to construction, operation and closure of the site and ancillary facilities;
- Provision of transportation, freight and storage services to the project;
- Drivers and mini-bus owners will benefit from the transportation of the workers;
- Provision of food supplies, catering, and cleaning services;
- Provision of construction & auxiliary materials, accessories, engineering, installation and spare parts;
- Security personnel.

5.2 Negative Impacts During Rehabilitation

5.2.1 Environmental Impacts

5.2.1.1 Air Quality

Dust emissions

Dust emissions (PM_{2.5} and PM₁₀) will be generated as a result of excavation, backfilling and asphalt cutting. The emissions will primarily affect the construction workers but will also have an impact on the residents of the houses near which the activities will take place. The emissions will continue to be generated for a period of 240 days, but at different sections of the road network.

The vehicles and trucks used to transport construction materials, such as sand and gravel, can also be a major source of dust emissions if not adequately covered and if not restricted by a speed limit.

Exhaust emissions

Exhaust emissions containing SO_x, NO_x, and CO will be produced from excavation equipment and other heavy construction machinery. These emissions will have a direct impact on the workers and will affect the surrounding community by a lesser degree.

Nevertheless, these impacts are temporary as the total duration of the subproject will be 240 days. In addition, these emissions will be produced at different parts of the targeted neighborhoods and thus when assessing the impact on residents in terms of duration, the period to be taken into consideration is less than 240 days.

The impact of dust and exhaust emissions is expected to be of moderate significance.

5.2.1.2 Noise and Vibration

Asphalt cutting, demolishing concrete, removing debris, excavation and backfilling are all activities that will lead to an increase in ambient noise levels mainly because they involve the use of heavy construction equipment such as jack hammers, excavators, loaders and dump trucks.

The expected levels of noise produced by different operating machinery are shown in the following table.

Table 5-1: Noise Emission Levels dB (A) of Typical Construction Equipment²⁴

Equipment	Expected Noise Emission Levels
Front End Loader	72-84
Jack Hammer	81-98
Backhoe	72-93
Dump truck	83-94
Crane	75-77

²⁴ USA, Environmental Protection Agency, 1995

Given that this subproject is inside residential neighborhoods, the following noise limits will apply and they will most probably be exceeded.

Table 5-2: Ambient Noise Level Limits

IFC Noise Level Guidelines		
Receptor	Daytime (7 am to 10 pm)	Nighttime (10 pm to 7 am)
Residential; institutional; educational	55	45

The impact of noise and vibration is expected to be moderate.

5.2.1.3 Soil

Soil may be contaminated by leakages from equipment and it may be polluted by improper disposal of solid or hazardous waste or improper discharge of domestic wastewater from the contractor's offices.

The impact on soil is expected to be of moderate significance

5.2.1.4 Water Pollution

The nearest surface water to the subproject is 4 km away and since the groundwater depth in the subproject area is in the range 30-40 meters, no impacts are anticipated on groundwater or surface water

The impact on surface water is expected to be of moderate **Insignificant**

5.2.1.5 Energy Consumption

The subproject will consume fossil fuels (mainly diesel) for the construction vehicles and machinery. Fossil energy is non-renewable, and its excessive use may have serious environmental implications on its availability, price and sustainability.

The impact of energy consumption is expected to be of minor significance

5.2.1.6 Waste generation

The rehabilitation activities will produce:

- Excavated soil.
- Demolished concrete blocks and demolished asphalt.
- Sand and gravel,
- Trimmings of plastic pipes
- Domestic solid waste from daily consumption by workers. Domestic waste decomposes if not frequently collected leading to unpleasant odors and bacteria accumulation which is a hazard to workers' health
- Hazardous waste including paint, epoxy and waterproofing chemical containers, spilled oils from the operation and maintenance of the construction machinery.
- Domestic wastewater from the site offices

The waste generation impact is expected to be of moderate significance

5.2.2 Occupational health and safety

According to World Bank OHS standards²⁵, each worker must have accurate information regarding potential hazards or injuries in the workplace. The Occupational health and safety Administration (OSHA)²⁶ define the key risks, which arise from construction projects, and the following are the ones applicable to this subproject.

- **Excavation and Trenching** –trenching is considered one of the most dangerous works in any construction site,
- **Heavy Construction Equipment** – Malfunctioning equipment (brakes not working properly, unexpected starting of the equipment, unobvious movement during operation, etc.) can lead to serious injuries.
- **Weather conditions** – include heavy rains, wind, high temperatures and fog.
- **Airborne fibers and toxins:** which may be generated from asphalt cutting activities, removing debris and general site clean-up.
- **Noise:** Construction sites in particular can be problematic when it comes to hazardous noise levels.

Occupational health and safety impacts are considered of **high** significance

5.2.3 Community health and safety

The subproject is located in the residential areas of Al Shohada, Al Yarmuk and Rajam Hadid neighborhoods. According to field observations during the site visits, the current condition of the streets allows for construction work, considering the contractor's commitment to many measures to maintain community health and safety and not to limit or restrict accessibility to houses, facilities and services in the local community.

The majority of community health and safety impacts focus around the disturbance of public health and quietness due to construction/rehabilitation activities. Impacts on community health and safety are expected to be the following:

- Temporary nuisance and inconvenience as a result of the construction activities including noise emissions, and road traffic.
 - Emissions of gaseous pollutants and dust from equipment and machinery used.
- Increased background noise levels resulting from the operation of jackhammers and other heavy equipment.
- Obstructing access to amenities due to construction/ rehabilitation activities. which reflect on potential of restriction of access to certain stores, mosques, etc.
- Community safety considerations around the construction site.
 - Potential child labor employment by local subcontractors,
 - Pedestrian safety, especially in regard to people with disabilities,

²⁵<https://siteresources.worldbank.org/INTRANETENVIRONMENT/Resources/244351-1279901011064/OccupationalHealth.pdf>

²⁶ <https://www.osha.gov/>

- Construction works will involve the use of equipment which can cause injuries to local community as a consequence of contact. This is a major risk especially if there is open access to rehabilitation activities.
- Potential accidents on the roads leading to the subproject due to traffic and the passage of equipment and heavy vehicles.
- The possibility of being infected by diseases or viruses from workers, staff such as COVID-19.

Temporary disruptions regarding access to houses, schools, shops, and mosque are anticipated. However, due to the presence of alternate routes and entrances, continuous access will be available. In addition, construction work will be divided in sections.

The impacts on Community Health and Safety are considered of **moderate** significance

5.2.4 Social Impacts

5.2.4.1 Traffic Flow (disruption of traffic) applicable to all three neighborhoods

Mobilization of heavy machinery, asphalt breaking, and excavation, placement of piping and backfill activities are bound to limit traffic and accessibility to the areas. Mobilization, preparation and construction phases will entail narrowing roads by longitudinal and/or lateral excavation, totally blocking narrow or side roads, as well as limiting or prohibiting parking along the length of the works. Access to buildings and shop entrances may be limited or constricted in cases where excavations form obstacles for pedestrians and cargo.

Local access on selected parts of the road will be ceased and will likely restrict residents' access to, from, into and out of their houses, schools and commercial areas. The inconvenience is expected to affect the flow of small vehicles by slowing them down.

The impacts on Traffic and access limitation impacts are of **moderate** significance

5.2.4.2 Child labor and School Dropout

Child labor is a common practice in the project communities in Mosul. Children work in construction projects as they accept lower salaries and are less demanding. Additionally, Iraq recently enacted Law 37/2015 (the Iraqi Labor Law). Chapter 3 of this Law states that the minimum age for employment is 15 years old. However, Iraq is also signatory to the 1989 International Convention on the Rights of the Child, which defines everyone under the age of 18 as a child who must have special protection and care.

Child labor might be detected in the project sites during the construction phase. This risk will be addressed in the ESMP and strict obligations and monitoring should be applied in the contractual agreements of the contractors.

The impact of child labor and school dropout is considered of **major** significance.

5.2.4.3 Visual and landscape impacts

For construction and excavation works, the visual impacts are temporary, mainly from the storage of raw materials and construction waste. However, because of the short duration of exposure, they are regarded as of minor significance.

Impacts pertaining to landscape are expected to be of **minor significance**

5.2.4.4 Cultural heritage and monuments

Based on numerous previous studies conducted for the area of Mosul, there is a significant probability to encounter impacts related to cultural heritage, particularly, during the construction of the drainage pipelines. Accordingly, a chance find procedure will be implemented.

Impacts on cultural heritage are expected to be of **minor significance**

5.2.4.5 Underground utilities

As a result of the construction work, existing underground utilities might be accidentally damaged. Damaging sanitary pipes, electricity underground cables and water pipelines result in severe disturbance to community people. Breaking a water supply pipe may result in cutting the supply to a number of residential units, which may lead residents to use other sources of water which may be either expensive or unsafe.

Impacts related to underground utilities are expected to be of **minor significance**.

5.2.4.6 Temporary Labor Influx

The contractor/s rely on recruiting workers and technicians during the rehabilitation phase. The total number of workers who will be recruited during the construction period is estimated to be about 75 workers for each subproject. The daily average number of workers during peak time per sub-project is 40 workers. This number might increase or decrease based on the construction activities taking place at a given point in time, based on the number of concurrent construction sites and the construction time plan

Additionally, the contractor/s will have different working sites. Construction workers will be divided into teams. They might work in parallel or in sequence. Therefore, the number of workers varies according to the size of the work in each area. Consequently, the impact differs and varies according to each area. The temporary labor influx and presence of additional workers may have impacts on the project areas in terms of:

- **Risk of social conflict:** There are no potential effects of temporary labor influx on the culture of the society in the project areas; this is due to the focus of the implementing companies on the labor, whom are often from areas (cities- villages) adjacent to the project sites. The temporary workers also have the same culture and values as those in the project areas;
- **Increased risk of illicit behavior and crime:** the implementation companies and the contractors should revise the criminal records of the workers, in order to avoid the risk of illicit behavior and crime in the project areas;
- **Increased risk of communicable diseases and burden on local health services:** there is a probability to transmit diseases to community areas, particularly, COVID-19, hepatitis B and C;
- **Local inflation of prices:** There is a probability to result in increase in food prices

Given the limited number of workers and being from the same project areas, the probability of labor influx impacts tends to be minor.

The impacts of temporary labor influx are of **minor significance**.

5.2.4.7 Gender Based Violence (GBV)

Gender based violence is violence that is based on gender discrimination between males and females and involves abuse of power, threats or coercion, harm, violation of universal human rights and lack of informed consent. The GBV impacts that might be detected in the subproject sites²⁷ are outlined below:

- Sexual exploitation and abuse (SEA) and Sexual Harassment (SH) of women and girls by workers, this might lead to honour crimes,
- The probability of limitation of women and young girls' mobility in the subproject sites,
- Discrimination against women in terms of employment opportunities.

The GBV-related impacts will be, local, and of **moderate** significance.

5.2.4.8 Land Related Impacts

The land that will be used for the construction of rainwater drainage pipelines is located in the Right of Way ROW, and the ROW in the subproject sites is clear and there is no encroachment on it. The rest of the construction activities of the subprojects do not require additional land as they will be taking place within the existing roads. There is no voluntary or involuntary land acquisition. Additionally, the workers facilities will be temporarily established on an empty plot of land that is currently not in use and owned by the municipality where equipment and construction material can also be stored. The municipality will provide the contractor with the land for temporary use in order to complete the project. The workers facilities will include the necessary storage and sanitation facilities. Workers will be recruited from the local community and thus, no land will be required for additional worker accommodation. Additionally, the contractor will temporarily rent a place for administrative purposes (willing buyer/willing seller). The area is free from squatters/encroachers.

No involuntary resettlement or economic displacement are expected to take place.

Land related impacts are expected to be **insignificant**.

5.3 Positive impacts during Operation

The subproject is expected to have potential positive environmental and social impacts, as follows:

5.3.1 Environmental Impacts

- Reducing dust (PM10, PM2.5) because of roads paving
- Reducing the stagnant water ponds created during the rainy season.

5.3.2 Social Impacts

The subproject has significant positive economic impacts during the operational phase and they include:

- Providing reliable infrastructure for residents,

²⁷ World Bank Group Good Practice Note: Addressing Gender Based Violence in Investment Project Financing involving Major Civil Works (2018); Available at: <http://documents.worldbank.org/curated/en/399881538336159607/Environment-and-Social-Framework-ESF-Good-Practice-Note-on-Gender-based-Violence-English.pdf>

- Increasing the accessibility as well as keep roads safe for vehicles and pedestrians and deflecting storm runoff off the roads,
- Increasing the hygiene profile of the community, because rainwater will no longer accumulate in the streets and become a breeding ground for bacteria and insects.
- Avoiding slipping accidents to which pedestrians are exposed when rainwater accumulates near sidewalks and intersections.
- Enhanced visual impact of the street.

5.4 Negative Impacts during Operation

5.4.1 Environmental Impacts

5.4.1.1 Air Emissions

Operation of the rainwater drainage system will not produce any emissions. However, maintenance of pipelines will result in dust emissions if excavation works are necessary.

Road pavement will increase traffic which in turn would produce small amounts of dust and exhaust emissions (SO_x, NO_x, CO, VOCs, etc.) during operation.

Maintenance activities is going lead to an increase in the fugitive dust emissions (PM10, PM2.5) and gaseous emissions (SO_x, NO_x, CO, VOCs, etc.) produced by the construction machinery and vehicles.

The air emissions impact is expected to be of **minor** significance

5.4.1.2 Noise

Rehabilitation of the roads will lead to an increase in the traffic; consequently, elevating the noise and vibration level produced by traffic.

Additionally, noise is expected during the maintenance of failed pipes that may require excavation works, however, these events will be intermittent and for short periods.

Noise impacts are expected to be of **minor** significance

5.4.1.3 Waste generation

The same types of waste which will be produced during rehabilitation will also be produced during the periodic maintenance activities, but in less quantities.

The waste generation impact during the operation phase is expected to be of **minor** significance

5.4.2 Occupational health and safety

Maintenance activities expose workers to accidents and hazards that may lead to injuries. To avoid such situations, all risks that can be encountered during maintenance activities must be identified and recognized. The main causes of such accidents include the injury of workers when using heavy equipment.

The impact on occupational health and safety during the operation phase is of **moderate** significance

5.4.3 Community health and safety

During the operational phase, the potential impacts on the safety of the community will be minor because maintenance activities are only periodic and do not require a large number of workers. In addition, workers will be recruited from the project's area of influence.

Impacts related to community health and safety are considered to be of **minor** significance

5.4.4 Social Impacts

5.4.4.1 Traffic Flow (disruption of local and regional traffic)

The maintenance work of the street and the drainage pipelines will be limited to their site. It will not intersect with the main streets. Additionally, for road maintenance, activities are limited to specific parts and not anticipated to be carried out on bigger scale. Therefore, the traffic impacts will be of no significance.

Impacts on traffic flow are considered **insignificant**.

5.4.4.2 Child labor

There will be no child labor during operation phase due to the project reliance on the permanent workers who must have valid recruitment documents i.e. ID, educational certificates...etc.

The municipality staff are fully aware that recruiting people below 18 years old is prohibited in all rehabilitation projects. ReFAATO will focus on applying rigid monitoring of recruitment process.

Impacts on child labor are considered to be **insignificant**.

5.4.4.3 Visual and landscape impacts

As the subproject will enhance streets in the area of influence, visual landscape impacts tend to be positive. Recently, all subproject sites suffer due to bad street conditions and unfavorable water accumulation in the pits.

Impacts on visual and landscape are considered to be **insignificant**.

5.4.4.4 Cultural heritage and monuments

There are no expected impacts on cultural heritage sites and monuments during the subproject's operation phase.

Impacts on cultural heritage are considered to be **insignificant**

5.4.4.5 Infrastructure and underground utility

There will be no impacts on any infrastructure within the subproject sites. However, there will be significant enhancement in street conditions and the rainwater management network.

Impacts on infrastructure and underground utility are considered to be **Insignificant**

5.4.4.6 Temporary labor influx and GBV

Given the limited number of workers during operation and that the majority will be from the subproject sites, labor influx impacts tend to be of no significance.

Impacts on temporary labor influx and GBV are considered to be **insignificant**

5.4.4.7 Land related impact

During the operation phase, equipment and raw material will not require any storage areas. Therefore, there will be no impacts related to the acquisition of land in the operational phase.

Impacts on land acquisition are considered to be **insignificant**

5.5 Assessment of impacts during Rehabilitation and Operation

Receptor/ EHS Aspect	Duration	Spatial	Magnitude	Basic Impact Index	Receptor Categorization	Impact Significance
Rehabilitation Phase						
Air Quality	Very Low	Low	Moderate	Moderate	Medium	Moderate
Noise	Very Low	Low	Moderate	Moderate	Medium	Moderate
Soil	Very Low	Low	Moderate	Moderate	Medium	Moderate
Water Pollution	--	--	--	--	--	Insignificant
Energy Consumption	Very Low	Low	Low	Low	Medium	Minor
Waste Generation	Very Low	Low	Moderate	Moderate	Medium	Moderate
Occupational Health and Safety	Very low	Moderate	Very high	High	Medium	Major
Community Health and Safety	Very low	Moderate	Moderate	Moderate	Medium	Moderate
Traffic flow	Very low	Low	Moderate	Moderate	Medium	Moderate
Child labor	Very low	Moderate	Very high	High	Medium	Major
Visual and landscape	Very low	Low	Low	Low	Low	Minor

Receptor/ EHS Aspect	Duration	Spatial	Magnitude	Basic Impact Index	Receptor Categorization	Impact Significance
Cultural heritage	Very Low	Low	Low	Low	Low	Minor
Infrastructure and underground utility	Very low	Low	Moderate	Moderate	Low	Minor
Temporary labor influx	Very low	Low	Moderate	Moderate	Low	Minor
Gender based violence	Very low	Moderate	Moderate	Moderate	Medium	Moderate
Land Related Impacts	--	--	--	--	--	Insignificant
Operation Phase						
Air emissions	Very low	Very low	Moderate	Low	Low	Minor
Noise	Low	Low	Low	Low	Medium	Minor
Waste generation	Very low	Low	Low	Low	Medium	Minor
Occupational health and safety	Very low	Low	High	Moderate	Medium	Moderate
Community health and safety	Very low	Very low	Low	Low	Medium	Minor
Traffic flow	--	--	--	--	--	Insignificant

Receptor/ EHS Aspect	Duration	Spatial	Magnitude	Basic Impact Index	Receptor Categorization	Impact Significance
Child labor	--	--	--	--	--	Insignificant
Visual and landscape	--	--	--	--	--	Insignificant
Cultural heritage	--	--	--	--	--	Insignificant
Infrastructure and underground utility	--	--	--	--	--	Insignificant
Temporary labor influx and GBV	--	--	--	--	--	Insignificant
Land Related Impacts	--	--	--	--	--	Insignificant

6 ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

The objective of the Environmental and Social Management Plan (ESMP) is to outline a mechanism for mitigating potential negative impacts which the subproject imposes on the environment and the surrounding community. Additionally, the ESMP is a vital tool that is utilized for monitoring the application and performance of the proposed mitigation measures. The ESMP identifies roles and responsibilities of different stakeholders for the proper implementation and efficient monitoring of the mitigation actions

6.1 Environmental and Social Management Plan for the Rehabilitation Phase

Table 6-1 Environmental and Social Management Plan for the Rehabilitation Phase

Receptor/ EHS Aspect	Impact	Proposed mitigation measures	Responsibility for		Supervision method(s)	Estimated Cost
			Implementation	Supervision		
Air Quality	Dust and gaseous emissions	<ul style="list-style-type: none"> Perform regular maintenance to construction vehicles and equipment. If there is a need to store construction materials such as sand and aggregates on site, they must be adequately covered/contained so that they do not produce dust emissions. Equipment should be shut down when not in use to minimize emissions. There will be no burning of any type of waste on site. Excavated material must be stored in a confined area or removed from the site as soon as they pile up. This measure is to minimize dust emissions that may result from wind action. Excavated material will be produced as a result of replacing the base and subbase layers of the roads. Some of it may be used in backfilling valleys in the subproject areas. Vehicles transporting excavated material or construction waste 	Site engineer /contractor	Resident Engineer- PMT	Site supervision	Included in the Contractor's construction costs

Receptor/ EHS Aspect	Impact	Proposed mitigation measures	Responsibility for		Supervision method(s)	Estimated Cost
			Implementation	Supervision		
		<p>such as asphalt debris must be adequately covered to prevent loose particles from escaping into the air. Excavated material can be used by the municipality to backfill land depressions around the city.</p> <ul style="list-style-type: none"> Whenever possible, spray and wet the grounds at which dust generating activities are taking place. 				
Noise and vibration	Noise disturbance to local community and workers	<ul style="list-style-type: none"> Since the subproject lies in a residential area, heavy construction activities should be limited to daytime, typically from 7am to 10 pm. Perform regular maintenance to all vehicles to limit noise generation. Engines of all construction vehicles must be covered while in operation. Switch-off all equipment while not in use. 	Site engineer /contractor	Resident Engineer- PMT	Site supervision	Included in the Contractor's construction costs
Soil	<ul style="list-style-type: none"> Possibility of accidental spills and leaks from construction equipment 	<ul style="list-style-type: none"> A spill-kit (gloves, absorbent material such as sand and plastic bags) must always be available on site to clean and remove any oil/chemical spills. 	Site engineer /contractor	Resident Engineer- PMT	Site supervision	Included in the Contractor's construction costs

Receptor/ EHS Aspect	Impact	Proposed mitigation measures	Responsibility for		Supervision method(s)	Estimated Cost
			Implementation	Supervision		
	<ul style="list-style-type: none"> • Improper handling of solid waste • Improper discharge of domestic sewage from construction offices 	<ul style="list-style-type: none"> • The soil resulting from excavation activities must not be mixed with other types of waste and must not come in contact with any chemicals. This soil has to remain clean because it may be re-used later on. • The construction contractor shall provide portable toilet cabinets on site, to be equipped with an external tank for wastewater storage in order to avoid improper disposal of sanitary waste. 				
Energy Consumption	Consumption of fossil fuels for the construction vehicles and machinery	<ul style="list-style-type: none"> • Proper planning of transportation of materials to ensure optimum consumption of fossil fuels (diesel, petrol) • Use machines with high efficiency engines • Adopt a policy of switching off machinery and equipment when not in use (idle mode). • Apply regular maintenance to the machinery 	Site engineer /contractor	Resident Engineer- PMT	Site supervision	Included in the Contractor's construction costs
Waste Generation and Hazardous Materials	Improper handling and storage of construction waste and domestic waste	<ul style="list-style-type: none"> • Identify the types of waste generated from construction/rehabilitation activities and have as many 	Site engineer /contractor	Resident Engineer- PMT	<ul style="list-style-type: none"> • Site supervision • Occasional inspection and auditing 	Included in the Contractor's construction costs

Receptor/ EHS Aspect	Impact	Proposed mitigation measures	Responsibility for		Supervision method(s)	Estimated Cost
			Implementation	Supervision		
		<p>skips/bins as needed to segregate them, including a hazardous waste bin. Expected waste types include hardened concrete, excavated material, domestic waste and demolished asphalt.</p> <ul style="list-style-type: none"> • Waste containers must be labeled. • Keep a record of the waste quantities produced at the site. • Allocate and prepare a proper place within the construction site for temporary storage of scrap such as wood and construction materials. Each type must be stored in a separate area/skip. The waste must be arranged so that it can be directly disposed of through a licensed solid waste contractor or sold to scrap dealers on a frequent basis. • Demolished asphalt has to be collected and transported to the disposal site identified by the local authorities. Alternatively, the broken asphalt can be re-used as aggregate for the base and subbase layers in other road construction projects. • Soil contaminated by chemicals must be placed in plastic bags and disposed of as hazardous waste. 			of the waste accumulation areas (WAA)	

Receptor/ EHS Aspect	Impact	Proposed mitigation measures	Responsibility for		Supervision method(s)	Estimated Cost
			Implementation	Supervision		
Occupational Health and Safety (OHS)	<ul style="list-style-type: none"> Workforce, Accidental hazards, working conditions, and site housekeeping, as well as transmission of communicable diseases (such as COVID-19). 	<p>The Contractor shall prepare an Occupational Health and safety plan during the rehabilitation phase that guarantees a job hazard analysis and assign a competent Occupational Health and Safety officer to supervise the plan. According to the Occupational Health and Safety WBG EHS Guidelines and the Administration (OHSA) standards, some of the main mitigations measures to prevent common construction hazards include:</p> <ul style="list-style-type: none"> All workers must be made aware of potential risks associated with subproject activities prior to construction activities, Workers should be trained to identify and evaluate different job hazards and be fully aware of how to control exposure to such risks. First aid and emergency kit to be made available on site. One of the personnel to be trained for first aid Workers must follow safety standards and use personal protective equipment (PPE) to minimize hazards while trenching, excavating and asphaltting to minimize the risk of encountering vector-borne diseases, Workers must comply with OSHA's general rule for the safe use of ladders, 	Contractor	Resident Engineer- PMT	<ul style="list-style-type: none"> Periodic reports Periodic meetings with the community people 	Included in the Contractor's construction costs

Receptor/ EHS Aspect	Impact	Proposed mitigation measures	Responsibility for		Supervision method(s)	Estimated Cost
			Implementation	Supervision		
		<ul style="list-style-type: none"> • To prevent Heavy Construction Equipment risk, workers should follow construction safety guidelines designed to eliminate the exposure to such injuries and accidents, • Emergency equipment (spill-kit, fire extinguishers, etc..) must always be available on-site and functional, • The health and safety risk on the workers should be covered with appropriate insurance schemes for all the types of workers. In addition, the Insurance should be covering work related accidents (injuries and fatalities), as well as insurance for third party, • The contractor also will be obliged to maintain daily attendance sheets in order to verify the attendance of workers in case of accidents and provide the injured persons with proper health insurance, • The OHS plan must include measures to protect workers from COVID-19 infection, and all national health regulations will be followed, details on COVID 19 mitigation measures are presented in Annex (6), • Provide H&S training to the construction workforce (including sub-contractors, temporary workers and drivers), • Deployment of HSE procedures for the construction personnel 				

Receptor/ EHS Aspect	Impact	Proposed mitigation measures	Responsibility for		Supervision method(s)	Estimated Cost
			Implementation	Supervision		
Local Community	<ul style="list-style-type: none"> Community health and safety 	<p>Temporary disruptions regarding access to houses, schools, and the mosque are anticipated. However, due to the presence of alternate routes and entrances, continuous access will be available. In addition, , construction work will be divided in sections as stated by the project engineer team. Mitigations to reduce impacts on community health and safety:</p> <ul style="list-style-type: none"> • Safe pathways for pedestrian and ambulance access and must be defined to prevent contact with heavy equipment • Access to construction areas and exposure to equipment must be restricted to workers and project personnel, • Install safe pathway to ensure resident's access to household due to their close proximity to the subproject area, • A traffic plan, including signage, must be designed to direct the movement of construction vehicles during construction related activities, • Installing walkways for the disabled and children with adequate signs and ramps to ensure their health and safety, • Limit the hours of operation for equipment with high noise, • Publishing and registering working time of construction machines with 	Contractor	Resident Engineer- PMT	<p>Develop a traffic plan</p> <p>Monitoring report on vehicles</p>	Included in the Contractor's construction costs

Receptor/ EHS Aspect	Impact	Proposed mitigation measures	Responsibility for		Supervision method(s)	Estimated Cost
			Implementation	Supervision		
		<p>local authorities and strict compliance therewith,</p> <ul style="list-style-type: none"> • The contractor must adopt an emergency plan for construction related incidents and road accidents that might take place, with special consideration for all residential commute, • A Grievance Mechanism should be made available to community members before the start of construction activities, by the contractor, Resident Engineer RE and the Social Development Officer SDO. • The contractor must adopt COVID-19 mitigation measures (see Annex 6) • Share project information with the community members before the start of construction activities, through the contractor and local units in the project areas • The code of conduct²⁸ must include instructions to ensure that cultural values, traditions, and GBV measures are respected. The CoC to be signed by the contractor and sub-contractors, if any. 				

²⁸ Code of Conduct for instructions related to the conduct of workers within a construction site to clarify obligations associated with workers' interactions with each other and with members of the local community surrounding the subproject areas.

Receptor/ EHS Aspect	Impact	Proposed mitigation measures	Responsibility for		Supervision method(s)	Estimated Cost
			Implementation	Supervision		
		<ul style="list-style-type: none"> • All workers should be trained on the code of conduct. • Install safe pathways for students to go to their schools without the possibility of being exposed to danger, • Access to houses and shops should be guaranteed through a safe pathway • The contractor work schedule must ensure compliance with local cultural calendar of social and cultural activities, i.e., prayer times and in the event of activities taking place during the month of Ramadan fasting activities, • Air and noise mitigation measures mentioned above should be adhered to, to minimize impacts on the community. 				
Local Community	<ul style="list-style-type: none"> • Traffic flow 	<p>The below mitigations aim to minimize negative impacts:</p> <ul style="list-style-type: none"> • Determine the maximum speed within and around the subproject site • Ensure vehicle safety and regular maintenance, • Provide information about the roads that will be closed during construction, before the start of construction activities, through the contractor and local units in the project areas 	Contractor	Resident Engineer- PMT	<ul style="list-style-type: none"> • Accidents log • Community grievance mechanism 	Included in the Contractor's construction costs

Receptor/ EHS Aspect	Impact	Proposed mitigation measures	Responsibility for		Supervision method(s)	Estimated Cost
			Implementation	Supervision		
		<ul style="list-style-type: none"> • Conduct a traffic assessment study and develop and implement a traffic plan, including safety measures, • The contractor, in cooperation with the subprojects' RE, must implement a system of preventive monitoring by which any potential delays can be predicted and mitigated efficiently. This must be done on a weekly basis, and must be a very rigorous process, since community members want the subprojects to be finished as soon as possible. Preventive monitoring will also reduce the amount of time the roads could be blocked or closed off, • Restrict the movement of construction-related vehicles during peak hours and set speed limits, • Divide the work on the road into longitudinal sections to ensure that if restriction of access to services happens, the street will remain open, • PMT and local authorities to coordinate a work schedule to avoid construction during peak hours, • The contractor must adopt an emergency plan for construction-related incidents, 				
Local Community	<ul style="list-style-type: none"> • Child labor 	<ul style="list-style-type: none"> • The contract to be prepared for both contractor and subcontractors will prohibit any kind of hiring minors in the subproject (Children below 18 years), 	Contractor	Resident Engineer- PMT	<ul style="list-style-type: none"> • Site investigations 	Included in the Contractor's construction costs

Receptor/ EHS Aspect	Impact	Proposed mitigation measures	Responsibility for		Supervision method(s)	Estimated Cost
			Implementation	Supervision		
		<ul style="list-style-type: none"> • The contract also will oblige the contractor/subcontractor to keep a copy of IDs of laborers in order to facilitate the monitoring of the presence of hired staff below 18 years to be monitored daily, • The contractor /subcontractor also will be obliged to maintain daily attendance sheets in order to verify the attendance of workers not include staff below 18 years' old, • Penalty provisions for hiring child labor must be included in the contractor's contract. 				
Local Community	<ul style="list-style-type: none"> • Visual and landscape 	<p>Visual intrusion impacts cannot be avoided. However, the below mitigation measures must be adhered to so as to ensure construction materials are properly piled:</p> <ul style="list-style-type: none"> • Ensure there isn't any randomization of building materials, • classification and placement of building materials in an orderly manner reduces the visual impact 	Contractor	Resident Engineer- PMT	<ul style="list-style-type: none"> • Site investigations 	Included in the Contractor's construction costs
Local Community	<ul style="list-style-type: none"> • Cultural heritage 	<ul style="list-style-type: none"> • Apply chance find procedure (Annex 1) <ul style="list-style-type: none"> ○ All mitigation measures mentioned above will minimize impacts on the mosque (noise- vibration) 	Site engineer	Resident Engineer- PMT	<ul style="list-style-type: none"> • Reports about antiquities found 	Included in the Contractor's construction costs
Local Community	<ul style="list-style-type: none"> • Infrastructure and underground utility 	<ul style="list-style-type: none"> • The contractor shall coordinate with the different authorities of potable water, wastewater (who are responsible for septic tanks), and telecom authorities to obtain maps 	Site engineer	Resident Engineer- PMT	<ul style="list-style-type: none"> • Keep records of any infrastructure accidents 	Included in the Contractor's construction costs

Receptor/ EHS Aspect	Impact	Proposed mitigation measures	Responsibility for		Supervision method(s)	Estimated Cost
			Implementation	Supervision		
		<p>to determine the existing infrastructure in the subproject areas in order to avoid any damage (If feasible)</p> <ul style="list-style-type: none"> In case of pipes damage, the contractor should repair them immediately and inform the affected people about the duration of water cut through local units that can publish project news through the well-known and most widely used social media for local communities The contractor can dig trial pits before starting the excavation, if necessary. 			<ul style="list-style-type: none"> Review periodic reports about infrastructure accidents 	
Local Community	<ul style="list-style-type: none"> Temporary labor influx 	<p>To avoid any impacts associated with labor influx the following should be thoroughly implemented.</p> <ul style="list-style-type: none"> Preparation and implementation of Code of Conduct and corresponding training concerning commitment of labor towards the community and the different behavior that should be avoided; including but not limited to: respect for the beliefs and customs of the populations and community relations, GBV risk mitigation, safety rules, forbidding substance abuse, environmental sensitivity of the area, All workers should be trained on the code of conduct. Code of conduct to be signed by sub-contractor 	Site engineer	Resident Engineer- PMT	<ul style="list-style-type: none"> Site visit Monthly reporting GRM Meetings with surrounding communities 	Included in the Contractor's construction costs

Receptor/ EHS Aspect	Impact	Proposed mitigation measures	Responsibility for		Supervision method(s)	Estimated Cost
			Implementation	Supervision		
		<ul style="list-style-type: none"> • Code of conduct induction to be done every 2 weeks for the recurrent workers and the new comers before starting work • Apply Penalties to workers violating the code of conduct • Providing workers with the necessary training and awareness raising session on issues regarding SEA/SH and Verifying that GRM is adequately implemented to record complaints from the surrounding communities to find adequate resolutions and implement corrective actions • Apply the full requirements related to operating the grievance mechanism including anonymous channels • Raising awareness of the local populations about the project commitment towards communities' and the measures taken for that through public consultation and focus group discussions 				
Local Community	<ul style="list-style-type: none"> • Gender based violence (GBV) 	<ul style="list-style-type: none"> • Ensure that the Code of Conduct and corresponding training concerning commitment of labor towards the community and the different behavior that should be avoided emphasizes zero tolerance of gender-based violence (GBV) i.e. sexual harassment, sexual exploitation and sexual abuse, 	Site engineer	Resident Engineer- PMT	<ul style="list-style-type: none"> • Site visit • Monthly reporting • GRM • Meetings with surrounding communities 	Included in the Contractor's construction costs

Receptor/ EHS Aspect	Impact	Proposed mitigation measures	Responsibility for		Supervision method(s)	Estimated Cost
			Implementation	Supervision		
		<ul style="list-style-type: none"> • Apply penalties to workers violating the Code of Conduct, • The contractor to prepare an awareness session/training on GBV issues for workers, • The contractor to ensure all available capacity building trainings are accessible to both male and female workers, • Implement all facets of the established grievance mechanism, ensuring anonymous channels are available. • Conduct ongoing consultations with women and girls only that is understandable and culturally appropriate. • Establish a grievance mechanism that is sensitive to gender by assigning a female Social Development Officer (SDO) in case of GBV incidents, who will follow up on resolving complaints in accordance with the project's grievance mechanism. • Apply the full requirements related to operating the grievance mechanism including anonymous channel, <ul style="list-style-type: none"> ○ Ensure grievance mechanism that is survivor centered 				

6.2 Environmental and Social Management Plan for the Operation Phase

Table 6-2 Environmental and Social Management Plan for the Operation Phase

EHS Aspect / Receptor	Topic/ Potential Impact	Mitigation	Means of Supervision	Responsibility		Estimated Cost
				Implementation	Supervision	
Air Emissions	<ul style="list-style-type: none"> Dust and exhaust emissions 	<ul style="list-style-type: none"> Installing road signs to set the speed limit and minimize dust emissions during maintenance activities. In case of excavation for pipes and/or road maintenance, the mitigation measures of the rehabilitation phase should be followed 	Mosul municipality	Mosul municipality	Site supervision	Operation costs
Noise	Periodic maintenance works	<ul style="list-style-type: none"> Ensure that any equipment or machines used during maintenance are adequately maintained and release the lowest possible noise. According to the general EHS guidelines of the WBG, the ambient noise limit in a residential area is 55 dB(A) at any hour during the day and 45 dB (A) at any hour during the night²⁹. Concerning the work environment noise, the 8-hr equivalent should not exceed 85 dB(A). Minimize, to the extent possible, the use of heavy construction equipment near residential units. 	Mosul municipality	Mosul municipality	Site supervision	Operation costs
Waste generation	Wastes (hazardous & non-hazardous) are generated during the operation phase from maintenance, repair and replacement activities	<ul style="list-style-type: none"> Temporary disposal of waste in the designated waste area on-site The waste must be collected by a licensed waste contractor and transported to the disposal site which will be determined by local authorities. 	<ul style="list-style-type: none"> Mosul municipality 	<ul style="list-style-type: none"> Mosul municipality 	<ul style="list-style-type: none"> Site supervision 	Operation costs

²⁹ <https://www.ifc.org/wps/wcm/connect/4a4db1c5-ee97-43ba-99dd-8b120b22ea32/1-7%2BNoise.pdf?MOD=AJPERES&CVID=ls4XYBw>

EHS Aspect / Receptor	Topic/ Potential Impact	Mitigation	Means of Supervision	Responsibility		Estimated Cost
				Implementation	Supervision	
		<ul style="list-style-type: none"> • Proper handling of oil and lubricants by keeping them in closed labelled containers. As a secondary containment, a plastic sheet or a steel retention box must be placed below the areas where oil and lubricants are used so as to contain any spills. • Keep hazardous waste on leak proof surfaces, especially if in liquid form. 				
Work force	Occupational health and safety	<ul style="list-style-type: none"> • Maintain site security and safety. • Organization of work shifts and movement of trucks. • Develop occupational health and safety plan. • Develop emergency plans. 	Mosul municipality	Mosul municipality	<ul style="list-style-type: none"> • Incidents and accidents reports • Site visit reports 	Operation cost
Community	Community health and safety	<ul style="list-style-type: none"> • Follow the mitigation measures mentioned earlier (rehabilitation phase). • Provide a complaint mechanism for the community. • Conduct periodic community meetings to observe any concerns they may have. 	Mosul municipality	Mosul municipality	<ul style="list-style-type: none"> • Incidents and accidents reports • Site visit reports 	Operation cost

6.3 Environmental and Social Monitoring Plan for the Rehabilitation Phase

Table 6-3 Environmental and Social Monitoring Plan for the Rehabilitation Phases

Receptor/EHS Aspect	Indicators	Responsibility of Monitoring	Frequency of Monitoring	Location of Monitoring	Methods of Monitoring	Estimated Cost of Monitoring
Air Quality	<ul style="list-style-type: none"> • Number of complaints related to air quality 	PMT resident engineer and Mosul municipality	<ul style="list-style-type: none"> • Monthly 	<ul style="list-style-type: none"> • On site near excavation and demolition activities 	<ul style="list-style-type: none"> • Random site inspection • Reviewing equipment and 	PMT management costs

Receptor/EHS Aspect	Indicators	Responsibility of Monitoring	Frequency of Monitoring	Location of Monitoring	Methods of Monitoring	Estimated Cost of Monitoring
	<ul style="list-style-type: none"> Compliance with dust abatement measures 			<ul style="list-style-type: none"> Offsite at the nearest receptor 	trucks maintenance report	
Noise and vibration	Noise intensity and vibration levels	PMT resident engineer and Mosul municipality	<ul style="list-style-type: none"> Monthly 	<ul style="list-style-type: none"> On site near operating heavy equipment, Nearest Sensitive receptors 	<ul style="list-style-type: none"> Random site inspection Equipment and trucks maintenance report 	PMT management costs
Soil	Evidence of spills of fuels and lubricants	PMT resident engineer and Mosul municipality	<ul style="list-style-type: none"> Twice during the rehabilitation phase In the event of rainfall 	<ul style="list-style-type: none"> Waste accumulation areas (WAA) Material/equipment storage areas 	<ul style="list-style-type: none"> Visual observation Recording and documenting spillage 	PMT management costs
Energy Consumption	Quantity of fossil fuels utilized	PMT resident engineer and Mosul municipality	Twice during the rehabilitation phase	Site	Checking documents where diesel/oil consumption is recorded	PMT management costs
Waste Generation	<ul style="list-style-type: none"> Disposal of waste in the designated (WAA) Cleanliness of the construction site Waste segregation 	PMT resident engineer and Mosul municipality	Monthly	<ul style="list-style-type: none"> WAA Construction Sites 	<ul style="list-style-type: none"> Inspection and recording of items disposed in the WAA Inspection of cleanliness of the construction site and the handling process of waste 	PMT management costs
Occupational health and safety	<ul style="list-style-type: none"> Existence or the implementation procedure documents of the OHS Plans 	PMT resident engineer and Mosul municipality	Once a month	Site and office	<ul style="list-style-type: none"> Random site inspection 	PMT management costs

Receptor/EHS Aspect	Indicators	Responsibility of Monitoring	Frequency of Monitoring	Location of Monitoring	Methods of Monitoring	Estimated Cost of Monitoring
	<ul style="list-style-type: none"> No. of trainings performed and recorded Coverage of workers by appropriate insurance schemes PPE used by workers Number of continuous monitoring of all hazardous events, Number of accidents on site, Workers' health, incl. presence of communicable diseases (e.g. COVID-19) and pathogenic agents No of accidents registered on the log on site Labor registry Existence and updated Grievance log 				<ul style="list-style-type: none"> Maintaining records of injuries and accidents with cause and location Insurance schemes of workers (incl. coverage of COVID-19) Regular inspection of workers against communicable diseases (e.g. COVID-19) and pathogenic agents. 	
Community health and safety	<ul style="list-style-type: none"> Presence of fencing/barriers restricting pedestrian access to parts of the site. Number of accidents and injuries involving local community. Presence of warning signs in and around the site. Number of complaints raised by locals concerning community health and safety. 	PMT resident engineer and Mosul municipality	Once a month	Site and office	<ul style="list-style-type: none"> Monthly reports and grievance log Site inspection with photo documentation Review Grievance log Review Accidents log (if applicable) 	PMT management costs

Receptor/EHS Aspect	Indicators	Responsibility of Monitoring	Frequency of Monitoring	Location of Monitoring	Methods of Monitoring	Estimated Cost of Monitoring
	<ul style="list-style-type: none"> • Presence of safe pathways for pedestrians, and shop owners to use • Safety measures taken to ensure safe pedestrians and students' movement 					
Traffic flow	<ul style="list-style-type: none"> • Number of installed boards and warning signs for speed limits and construction vehicles • Implementation of the Traffic Management Plan • No. of complaints raised about traffic system by the communities surrounding the subproject's site • Number of notifications to communities of changing traffic patterns 	PMT resident engineer and Mosul municipality	Once a month	Site and office	<ul style="list-style-type: none"> • Site inspection with photo documentation • Monthly reports and grievance log • Review Grievance log • Review Accidents log (if applicable) 	PMT management costs
Child labor	<ul style="list-style-type: none"> • Age of workers in the Record of workers • Age of workers in the Labor registry • No of complaints about child labor in the Grievance log 	PMT resident engineer and Mosul municipality	Once a month	Site and office	<ul style="list-style-type: none"> • Site inspection with photo documentation • Monthly reports • Review Grievance log • Review Labor registry and IDs 	PMT management costs
Visual and landscape impacts	<ul style="list-style-type: none"> • Organization of the construction site equipment and building materials 	PMT resident engineer and Mosul municipality	Once a month	Site	<ul style="list-style-type: none"> • Site inspection with photo documentation • Monthly reports 	PMT management costs

Receptor/EHS Aspect	Indicators	Responsibility of Monitoring	Frequency of Monitoring	Location of Monitoring	Methods of Monitoring	Estimated Cost of Monitoring
	<ul style="list-style-type: none"> Cover materials and construction equipment 					
Cultural heritage and monuments	Documentation of chance find procedures	PMT resident engineer and Mosul municipality	Upon finding any cultural heritage	Site and office	<ul style="list-style-type: none"> Review documentation of chance find procedures Monthly reports 	PMT management costs
Infrastructure and underground utility	<ul style="list-style-type: none"> Documentation of affected infrastructure Corrective procedures taken 	PMT resident engineer and Mosul municipality	On quarterly basis	Site and office	<ul style="list-style-type: none"> Periodic reports and grievance log Review documentation of affected infrastructure and corrective procedures taken Review Grievance log 	PMT management costs
Temporary labor influx	<ul style="list-style-type: none"> No. of Complaints raised by the local community due to labor influx No. of Certificate of Workers' Code of Conduct Completion. No and documentation on the Corrective measures adopted 	PMT resident engineer and Mosul municipality	On quarterly basis	Site and office	<ul style="list-style-type: none"> Periodic reports Review Grievance log Site observation Review Worker code of conduct 	PMT management costs
GBV	<ul style="list-style-type: none"> No of. Complaints raised by the local community specific to GBV No of. Certificate of Workers' Code of Conduct Completion. 	PMT resident engineer and Mosul municipality	On quarterly basis	Site and office	<ul style="list-style-type: none"> Periodic reports Review Grievance log Site observation Review Worker code of conduct 	PMT management costs

Receptor/EHS Aspect	Indicators	Responsibility of Monitoring	Frequency of Monitoring	Location of Monitoring	Methods of Monitoring	Estimated Cost of Monitoring
	<ul style="list-style-type: none"> No of event Engagement with women on GBV 					

6.4 Environmental and Social Monitoring Plan for the Operation Phase

Table 6-4 Environmental and Social Monitoring Plan for the Operation Phase

Receptor /EHS Aspect	Indicators	Responsibility of monitoring	Frequency of monitoring	Location of monitoring	Methods of monitoring	Estimated Cost of monitoring
Air emissions	<ul style="list-style-type: none"> • Number of complaints related to air quality • Compliance with dust abatement measures 	Mosul Municipality	During maintenance	Sensitive receptors and nearby houses in the subproject areas	<ul style="list-style-type: none"> • Random site inspection • Reviewing equipment and trucks maintenance report 	Operation cost
Noise	Records of Noise intensity	Mosul Municipality	During maintenance	Sensitive receptors and nearby houses in the subproject areas	<ul style="list-style-type: none"> • Random site inspection • Equipment and trucks maintenance report 	Operation cost
Waste generation	<ul style="list-style-type: none"> • Disposal of waste in the designated temporary waste area on-site and final disposal in the nearest landfill by a licensed contractor • Cleanliness of the project area 	Mosul Municipality	During maintenance	Subproject areas	Site supervision	Operation cost
Occupational health and safety	<ul style="list-style-type: none"> • Number of complaints raised from the workers • Number of accidents/ injuries 	Mosul Municipality	During maintenance	Site and office	<ul style="list-style-type: none"> • Biannual report and GRM • Continuous monitoring of all hazardous events. • Regular inspection of workers against pathogenic agents 	Operation cost

Receptor /EHS Aspect	Indicators	Responsibility of monitoring	Frequency of monitoring	Location of monitoring	Methods of monitoring	Estimated Cost of monitoring
					and provision of immunization when needed	
Community health and safety	<ul style="list-style-type: none"> • Number of accidents/ injuries • Number of complaints raised by local community. 	Mosul Municipality	Bi-annual report	Site and office	<ul style="list-style-type: none"> • Biannual report and GRM • Incidents and accidents reports 	Operation cost

6.5 Institutional Framework

6.5.1 Environmental Management Structures

Roles and responsibilities of the ESMP are divided between various entities below:

- The HSE unit at the Municipality of El Mosul City is the central level of the supervisory body for the Rehabilitation Works.
- The Contractor who is responsible for full implementation of mitigation measures in full cooperation with the regional Ministry of Environment (MoE) and Municipality staff.
- ReFAATO and the Project Coordination Unit (PCU) under ReFAATO
- The Project Management Team PMT

Structure organization mandates define who will be the responsible body for monitoring and management of various impacts.

6.5.2 Roles and responsibilities of ReFAATO

ReFAATO is responsible for designing and operationalizing the Environmental and Social safeguards frameworks during the Parent project preparation phase. Thereafter, ReFAATO will be responsible for monitoring the implementation of E&S safeguards policies requirements. ReFAATO responsibilities are as follows:

Figure 6-1 ReFAATO Roles and Responsibilities

Responsibility	Description
Monitoring	<ul style="list-style-type: none"> • Monitor safeguard polices and technical aspects of the E&S as required by the WB • Periodic monitoring visits and oversight of the PMT and contractors' performance related to E&S aspects and implementation of the ESMP
Report preparation	<ul style="list-style-type: none"> • Prepare adequate and fit for purposes templates and mechanisms that verify level of commitment with the safeguard polices implementation • Prepare the quarterly reports to be shared with the WB
Capacity building	<ul style="list-style-type: none"> • Make sure that the PMT's personnel are well equipped and qualified to perform their roles and responsibilities • Provide technical assistance to the PMT's on E&S safeguards (if needed) • Develop, organize and deliver environmental training programs and workshops for the staff of PMT's, and contractors; • Develop programs to build the capacity in the PMT's to enhance their environmental and social management and monitoring understanding and practices.
Coordination/consultation and	<ul style="list-style-type: none"> • Coordinate closely with the PMT's and develop a contact list that can be shared with various entities (if needed) • Hold regular review meetings with the environmental focal points of the PMT's;

information sharing	<ul style="list-style-type: none"> Secure sufficient information to community people and enable them to actively participate in the process of planning and monitoring of project activities Maintain active communication channels that enable community people to report their complaints and give their feedback Provide guidelines on community participation in environmental and social monitoring to the PMTs.
Documents/ reports revision	<ul style="list-style-type: none"> Review all reports related to E&S i.e., Screening, Scoping, ESIA, ESMP, Checklists, etc. Verify the practicality and applicability of all proposed mitigation measures and integrate them in the tender document.
Documentation	<ul style="list-style-type: none"> Maintain full documentation of all reports submitted to the WB

6.5.3 Roles and responsibilities of Project Coordination Unit (PCU) under ReFAATO

- Coordinate with all ministries and stakeholders.
- Consolidate and disseminate all reports from the PMTs and reflect the work progress to higher officials.
- Coordinate all monitoring and assume responsibility for internal and external independent evaluations.
- Coordinate the citizen's engagement program.
- Coordinate the communications and sensitization program.
- Coordinate training activities and capacity building programs.
- Ensure compliance with all legal obligations and instruments.
- Participate in Bank support missions.

6.5.4 Roles and responsibilities of Project Management Teams (PMTs) and contractor

The PMTs will be directly responsible for planning, coordinating, monitoring, and evaluation of all activities including consultant selection, reporting, procurement and auditing, and payment authorization.

The PMTs in this subproject will be responsible for adopting the following procedures:

6.5.4.1 Compliance with World Bank safeguards

1. Preparing internal guidelines for the preparation, implementation, monitoring and reporting of environmental and social documents required by various safeguard instruments;
2. Reviewing, as applicable, ESMP and other safeguard documents prepared by consultants to ensure compliance with relevant safeguard policies of the National and the World Bank;
3. Providing recommendations to MoE management and other contractors accordingly and make necessary changes prior to submission of relevant documents to the World Bank – ensure consistency in the level of proficiency and presentation of the documentation;

4. Carrying out documentation review pertaining to environmental and social compliance (including bidding documents, reviews on-site, reports from contractors etc.) throughout project implementation;
5. Coordinating and facilitating the work of consultants engaged to carry out environmental and social impact assessments and resettlement planning (if needed) and external monitoring of safeguard instruments implementation;
6. Accidents resulting in fatalities should be immediately reported to ReFAATO and the WB within 48 hours.

6.5.4.2 Monitoring and reporting

1. Conducting internal monitoring of the implementation of the environmental and social component of the ESMP in matters pertaining to timely payments and the provision of temporary measures to affected persons;
2. Contributing to project progress reports pertaining to overall implementation of environmental and social requirements of the project.

6.5.4.3 Communication with and responsiveness to targeted communities

1. Adhere to the designed community friendly grievance redress mechanism with clear and timely bound tiers and responsibilities and ensure dissemination on the local level. Develop quarterly grievance and redress report to be shared with MoE and the Municipality of Al Mosul City; by the PMT officials and the social development official SDO responsible for the grievance redress mechanism GRM (documentation, follow-up, reporting, etc.).
2. Conducting field visits to ensure that the established grievance redress mechanisms are functioning properly and that the individual projects are implemented in a socially sustainable manner;
3. Participate in the process of disbursing compensations and keep track record of the compensation process documentation if exists.
4. Reach out to local communities, including PAPs if exists, to raise awareness about the project and the implementation schedule.
5. Build the capacity and provide support to the field staff as needed.

6.5.5 Roles and responsibilities of the Contractor's Environmental Health and Safety (EHS) Officers

The Contractor who is responsible for full implementation of mitigation measures in full cooperation with the regional MoE and Municipality staff. The Contractor's mandates are as follows:

1. Ensure that workers comply to EHS manuals and procedures
2. Management of wastes generated
3. Management of liquid waste
4. Checking that handling of hazardous waste is done according to the requirements of the Environmental Law
5. Other tasks as outlined in ESMMP

6. Daily reports are to be compiled and sent to the governorate EHS officers for preparation of monthly summary reports.

Monthly reports are sent to EHS officer at MoE and the municipality of Al Mosul for compilation into quarterly reports.

6.5.6 Reporting

Reporting process will be implemented as follows:

1. **Reporting by ReFAATO to the WB:** Quarterly reports will be submitted to the WB.

The main elements of these reports are:

- Project implementation updates
 - Environmental & social risks and safeguards
 - Grievance and how they were managed
2. **Reporting by PMTs to ReFAATO:** PMTs are the implementing agencies. They have direct contacts with the site engineers and contractors. They will provide on a quarterly basis the same above-mentioned elements.
 3. **Reporting by Contractors/ site engineers to PMTs:** The contractors and site engineers maintain close eye on all project activities. Therefore, they will report to the PMTs on monthly basis. The contractors and site engineers' monthly performance report will include, environmental, social, occupational health and safety issues and the grievances received segregated by topic/ issue and how they were solved. Any support documents will be included as Annexes.

6.5.7 Required Actions

- Involvement of environmental and social officers during the design, costing, tendering, and construction phases would be advantageous (accomplished and the ToR is in place;
- Specifically, contractor should take steps to develop capacity of site engineers and HSE officers with specific courses focused on implementation of the ESMP detailed in this ESMP report.

6.5.8 Required Resources

The Mosul City municipality have relatively limited capacity to implement the environmental and social commitments and ESMP developed in full compliance with the WB requirements. However, the PMT received an intensive training and capacity building by EcoConServ Environmental Solutions by the end of 2020. All training materials were recorded and shared with the PMT. Accordingly, the PMT can share the training materials and work for raising the capacity of Mosul municipality staff in terms of the topics below.

Figure 6-2 Recommended training courses for designated staff and resident engineer

Training course	Type of training	Participating parties	Proposed Scheduling	Budget in US\$
Environmental Management and monitoring for the project	Class room + on the job training	<ul style="list-style-type: none"> ▪ Selected members from the designated staff ▪ Resident engineer 	Prior to project implementation	500 US\$

Training course	Type of training	Participating parties	Proposed Scheduling	Budget in US\$
Occupational health and safety	Classroom + on the job training	<ul style="list-style-type: none"> ▪ Selected members from the designated staff ▪ Resident engineer 	Prior to project implementation	750 US\$
Gender based Violence	One day workshop	<ul style="list-style-type: none"> ▪ Contractor's Social Development Officers and ▪ Selected members from the designated EHS staff 	- One workshop in the beginning of the project implementation	300 US\$
Defensive driving and machinery operation safety	Classroom + on the job training	Drivers and operators	Periodical	Part of the OHS training
Monitoring & evaluation (activities and tools)	Classroom + on the job training	<ul style="list-style-type: none"> ▪ Selected members from the designated staff ▪ Resident engineer 	Prior to project implementation	800 US\$
Community health and safety	Classroom + on the job training	<ul style="list-style-type: none"> ▪ Selected members from the designated staff ▪ Resident engineer 	- One workshop in the beginning of the project implementation	The cost is included below

Figure 6-3 Recommended training courses for social staff

Training course	Type of training	Participating Parties	Proposed Scheduling	Budget US\$
Stakeholder Engagment	Two-day Workshop	Contractor's Social Development Officers, selected members from the designated staff and selected NGOs members from the community living in the subproject area	- One workshop in the beginning of the project implementation	300 US\$
Community health and safety	One-day Workshop	Contractor's Social Development Officers and selected members from the designated staff	- One workshop in the beginning of the project implementation	300 US\$

Training course	Type of training	Participating Parties	Proposed Scheduling	Budget US\$
WB operational policies with emphasis on handling grievances	One-day Workshop + on the job training	Contractor's Social Development Officers and selected members from the designated staff	- One workshop in the beginning of the project implementation	300 US\$
Communication Skills with emphasis on being sensitive cultural practices and including the participation of women	Two-day Workshop + on the job training	Contractor's Social Development Officers and selected members from the designated staff	- One workshop in the beginning of the project implementation	300 US\$
Promotion of Awareness Raising Activities	Workshop + on the job training	Contractor's Social Development Officers and selected members from the designated staff	- Once prior to project implementation - Refreshment course during the implementation of the project	300 US\$
Community Participation Tools	One-day Workshop + on the job training	Contractor's Social Development Officers and selected members from the designated staff	- One workshop in the beginning of the project implementation	300 US\$
Monitoring and Evaluation mechanisms (M&E)	Two-day Workshop + on the job training	Contractor's Social Development Officers and selected members from the designated staff	- One workshop in the beginning of the project implementation	300 US\$
Gender based Violence	One day workshop	Contractor's Social Development Officers and selected members from the designated staff	- One workshop in the beginning of the project implementation	300 US\$
Cultural heritage	Half day workshop	Contractor's Social Development Officers and selected members from the designated staff	- One workshop in the beginning of the project implementation	150 US\$
Labour and working conditions	One day workshop	Contractor's Social Development Officers		300 US\$

Training course	Type of training	Participating Parties	Proposed Scheduling	Budget US\$
Community and workers grievance mechanism		and selected members from the designated staff	- One workshop in the beginning of the project implementation	
child labour	One day workshop	Contractor's Social Development Officers and selected members from the designated staff	- One workshop in the beginning of the project implementation	300 US\$

6.5.9 Summary of the Tentative Budget Required to Implement the ESMP

The table below reflects all additional cost required to implement the ESMP and not included in the contractor cost or in the management cost.

Table 6-5: Tentative Budget Required to Implement the ESMP

Management/ monitoring	Item	Unit cost in US\$	Total cost in US\$
Sub-item For the pre-construction and reconstruction phase			
Management of GRM	<u>Printed posters and complaint form:</u> Posters 10 Complaint forms 1000	Poster 10 US\$ Complaint form 0.5 US\$	600 US\$
Sub-item for operation phase			
Management of GRM	<u>Printed posters and complaint form:</u> Posters 10 Complaint forms 1000	Poster 10 US\$ Complaint form 0.5 US\$	600 US\$
Management of Solid & Hazardous waste	<u>Dump truck (2ton) trip to dispose collected waste</u>	\$500 per dump truck (2 ton) trip	\$500 per dump truck (2 ton) trip
Groundwater	Testing the drinking water quality (One Sample)	300-500\$/water sample (Rough Estimate)	300-500\$/water sample (Rough Estimate)
Sub-item (3) Capacity building (Training of Trainers)			
Environmental trainings	Different items and costs see table 6.3		2,350
Social training	Different items and costs see table 6.4		2,800

The above-mentioned budget does not include transportation and per-diem of the monitoring staff.

7 Public Consultation and Participation including section about GRM

7.1 Introduction

This chapter describes the stakeholder engagement and consultation activities that have been undertaken to inform this ESMP. It aims to focus on key stakeholder interactions and analyze their outcomes. Accordingly, the information and findings of these consultations are integrated into the contents of this report.

In terms of methodology, consultation activities were conducted in the form of in-depth face-to-face interviews and focus group discussions. These activities were performed in compliance with all national regulations relevant to public consultation as well as World Bank policies relevant to disclosure and public consultation (namely, WB ESS 10 and the WB Policy on Access to Information³⁰) considering all the COVID-19 restrictions. As a result, the key principles of effective engagement that guided stakeholder consultations include:

- Ensuring that all interactions are free of intimidation or coercion;
- Providing meaningful information in a format and language that is understandable and tailored to the needs of the target stakeholder group(s);
- Being inclusive in the representation of views, i.e. including different ages, genders, and incorporating vulnerable and/or minority groups;
- Respecting local traditions in the decision-making processes.

Consultation Objectives

Objectives of various consultation activities are summarized as follows:

- Disseminate information about the project to enable stakeholders to identify their concerns, needs, and recommendations;
- Define potential project stakeholders and suggest their possible project roles;
- Listen to their comments, ideas and concerns and recording the same for follow up;
- Document stakeholder feedback and enhance the ESIA accordingly;
- Identify the most effective outreach channels that support continuous dialogue with the community;
- Avoid any misconceptions about the project and properly manage expectations;
- Discuss potential resettlement plans and impacts of involuntary resettlement.

7.2 Stakeholder Identification

The first step in the process of stakeholder engagement is stakeholder identification, the process in which project stakeholders are determined and grouped. More importantly, identifying stakeholder representatives is key to effectively carrying out consultations. Representatives both inform the project with their valuable information, as well as serve as a communication channel to disseminate

³⁰ <http://pubdocs.worldbank.org/en/837721522762050108/Environmental-and-Social-Framework.pdf>

information to large numbers of stakeholders and receive feedback. The potential project stakeholders are presented in more detail in Annex 7

7.3 Consultation Methodology and Activities

The Consultant carried out stakeholder engagement activities in September 2021, through the following methods: Semi-Structured Interviews with community members surrounding the subproject area, as well as Focus Group Discussions (FGDs). The diversity of community representation was considered through the inclusion of the males, females, elderly and community leaders. The identification of relevant stakeholders to the subproject considered two factors, namely the geographical proximity of the potential stakeholders to the subproject area, and the level of influence on/by the subproject, to include specific groups of stakeholders depending on several levels, to achieve the objectives of the current study. The following stakeholder groups have been identified:

- Residents and shop owners in the subproject areas
- Officials of the General Authority for the operation of the subprojects from Nineveh Governorate

Following are the main consultation activities conducted:

- The study team conducted site visits to locations of the proposed activities. In addition, field observations were organized at subprojects activities points to define various stakeholders, and the potential impacts of the subproject,
- Provide information on the subprojects, in order to enable the competent stakeholders to determine the concerns, requirements, and recommendations,

EcoConServ's study team visited the three neighbourhoods (Al Shohada, Al Yarmuk and Rajam Hadid) in September 2021 to interview local community members. The consultant carried out 4 focus group discussions with 23 males and 3 focus group discussions with 11 females, in addition to interviews with 5 community and government officials.

Consultations were conducted with the local community (randomly selected near the subprojects areas) and other relevant stakeholders to:

- Gain a more in-depth understanding of the local context,
- Obtain community feedback on the subprojects,
- Discuss subprojects activities and anticipate its environmental and social impacts
- Propose mitigation measures
- Disclose information regarding the Grievance Redress Mechanism (GRM)

The feedback received was an important component to the formulation of mitigation measures and outcomes presented in this ESMP report.

All activities conducted were documented with lists of participants in order to guarantee an appropriate level of transparency. The table below is a condensed breakdown of the stakeholder categories that were engaged.

Table 7-1 Summary of the consultation activities that were conducted in project area

Stakeholders	Number		Date
	Males	Females	
Government Officials	3	-	September 2020
Potential Affected Communities	24	12	



Figure 7-1 Meeting with officials from Nineveh Governorate



Figure 7-2 FGDs with shop owners



Figure 7-3 FGDs with residents

7.4 Consultation outcomes

Based on the above-mentioned engagement activities with stakeholders, this analysis classifies the most discussed topics and highlighted concerns (listed below) and identifies their primary interests in the subproject. Such an analysis provides a more in-depth understanding of these groups and should inform future stakeholder engagement throughout the subproject’s duration. Accordingly, the following table displays the interests of select target groups.

Table 7-2 Key comments and concerns raised during the consultations

Stakeholder	Key Outcomes	Reflection of Comment in Report
<p>Government Officials</p> <p>Assistant Governor of Nineveh for Reconstruction Affairs</p> <p>Environmental and Social Officials for the Subprojects</p>	<p>Sub-project benefits during construction and operation phases:</p> <p>These subprojects are very important to the community people in these neighborhoods. The poor services in the neighborhoods of the right side prompted many people to move to live in the left coast.</p> <p>The construction activities will provide job opportunities for some of the people of the area in which the project is being implemented, as well as reviving the local market, and it will be reflected in the income of some families. Additionally, the sub-project will remove debris from the streets.</p> <p>During operation period the sub-project will ensure a clean environment for living and ease of movement within the neighborhood streets, which will attract more families to settle in these neighborhoods, especially the right-side neighborhoods.</p> <p>Consequently, the urban movement will increase and the value of property will increase, and in return the demand for labor in the area</p>	<p>Included in:</p> <ul style="list-style-type: none"> Chapter 3 (Project description) Chapter 5 (Positive impacts during construction and operation)

Stakeholder	Key Outcomes	Reflection of Comment in Report
	<p>will increase and this will lead to an increase in workers' wages and thus the standard of living of families will improve. When we implemented previous projects, the value of land and real estate increased by 25%.</p>	
	<p>Potential effects on traffic and pedestrians</p> <p>The duration of construction work per section will be temporary and limited to a few days. The extensiveness of construction work will differ from road to road so construction action activities will not automatically cause restriction of access.</p> <p>The construction activities will be carried out in segments to ensure a smooth flow of traffic.</p>	<p>Included in:</p> <ul style="list-style-type: none"> • Chapter 3 (Project description) • Chapter 4 (Social baseline) • Chapter 5 (Impacts during construction) • Chapter 6 (ESMP for the Construction)
	<p>The current situation of the streets in the three neighborhoods:</p> <p>Al Shohada neighborhood is one of the neighborhoods that suffers the most from the accumulation of water and its impact on houses and the movement of residents, especially in the winter. The street terrain in Al Shohada neighborhood plays a role in creating swamps and pools of water that turn into sewage water that harms the environment and the health of citizens as well as economic activity.</p> <p>The street in Rajam Hadid neighborhood suffers from the same problem of the accumulation of water, but to a lesser degree. As for Al Yarmouk neighborhood, it has an old water drainage network and it is currently working. The W07 project includes some streets from the neighborhood to be connected to the old network.</p>	<p>Included in:</p> <ul style="list-style-type: none"> • Chapter 4 (Social baseline)
	<p>GRM</p> <p>with regard to the complaints mechanism; We are currently following a grievance mechanism that is flexible and has multiple communication channels.</p> <p>We have prepared a special form for all projects funded by the World Bank. We receive complaints either through a complaints box located in front of the resident engineer department, the complainant can also submit his complaint directly to the concerned employee, or calls through the phones whose numbers are installed on the project identification board (the resident engineer's phone and the social official's phone).</p>	<p>Included in:</p> <p>Chapter 7 (Disclosure activities)</p>

Stakeholder	Key Outcomes	Reflection of Comment in Report
	<p>This mechanism has proven its effectiveness in the projects that we implemented previously, as we received many complaints through different channels, and were responded to according to the type of complaint.</p> <p>Disclosure of information</p> <p>The assistant governor of Nineveh for reconstruction affairs indicated their keenness to raise citizens' awareness of the services provided to them, especially in poor areas, and encourage them to communicate continuously .</p> <p>One of the participants speculated that the best way to raise disclose information about the project is by placing posters and a bulletin board on the implementation of the project. The participant was aware of the complaint's mechanism approved by the World Bank because he previously supervised roads rehabilitation and storm water drainage projects in areas close to the subprojects funded by the reconstruction fund.</p>	<p>Included in:</p> <ul style="list-style-type: none"> Chapter 7 (Consultation outcomes)
<p>Potential Affected Communities</p> <p>Neighbourhoods</p> <p>Al Shohada</p> <p>Al Yarmuk</p> <p>Rajam Hadid</p>	<p>Shop Owners</p> <p>Consultation activities with shop owners in the Al Shohada and Al Yarmouk neighborhoods they did not reveal any concerns or objections to the presence of construction works near them and residents being unable to reach their stores during project implementation. they indicated their willingness of the project. The consulted Nineveh Project team officials responded that construction work is expected to be done by sections to avoid road closure and by loss of income to for small business owners.</p> <p>Shop owners stressed that the condition of the streets is very bad, especially during the rainy season. Due to the accumulation of rain water, which turns in some streets into pools, which makes walking unsafe for children and pedestrians.</p> <p>Residents</p> <p>All community members, both males and females, have stated that the proposed rehabilitation activities will increase the safety of the street.</p> <p>Community members have stated that the street is not equipped to handle rainwater, which makes collects in the alleys of the neighborhood and makes the street very muddy. To address this</p>	<p>Included in:</p> <ul style="list-style-type: none"> Chapter 4 (Social baseline) Chapter 5 (Positive and negative impacts during construction and operation) <p>Responding to concerns is included in:</p> <ul style="list-style-type: none"> Chapter 6 (ESMP for the Pre-construction, Construction and Operation Phases)

Stakeholder	Key Outcomes	Reflection of Comment in Report
	<p>issue, community members have stated that they have been forced to rely on using gravel to cover the mud. And in some streets in Al-Shohada neighborhood, shop owners put a stepladder/ platform to cross this mud to facilitate the arrival of customers to the shops.</p> <p>Male participants emphasized the importance of prioritizing the employment of local workers, stating that this will alleviate unemployment in the area.</p> <p>All community members have expressed no concern regarding construction works, residents of Yarmouk neighborhood also indicated the success and safe implementation of previous rehabilitation of streets and lighting in other areas as confirmation that the subproject's activities will yield successful results.</p> <p>The females working in one of the schools pointed out the importance of rehabilitating the water drainage network, because it will protect children from slipping, especially in the rain season, most of the streets turn into pools that impede the pedestrians.</p> <p>All participants expressed strong willingness to cooperate with subproject managers and accept short-term negative impacts such as accessibility, abiding by certain hours for movement etc. in order to receive the full benefits of the subproject.</p>	
	<p>Disclosure of information:</p> <p>With regards to spreading information, females have stated that subprojects owners should consider sharing information pertaining to scheduled activities at the mosque, as it attracts all members of the community, mosques would typically be the best places to disclose information about the project to the community,</p> <p>As others have pointed out, it is better to disclose through Facebook groups and the official websites of government departments that are followed by all the people, such as (the Nineveh Governorate's official website, Facebook page of the Nineveh Traffic Directorate, Ain Mosul Facebook page, and Mosul News Facebook page)³¹.</p> <p>The majority of participants are eager for the completion of the project. They are aware of the benefits it would have for them in the</p>	<p>Included in:</p> <ul style="list-style-type: none"> Chapter 7 (Consultation outcomes)

³¹ <https://ninava.gov.iq/>, <https://www.facebook.com/pages/category/Personal->, <https://arar.facebook.com/MosulEye/>, <https://ar-ar.facebook.com/Mosulnewsnow2021/>.

Stakeholder	Key Outcomes	Reflection of Comment in Report
	long term, especially since the new rainwater drainage network works.	

7.4.1 The summary of the consultation activities conducted is as follows:

- Almost all of the community members and governmental entities consulted were keen to have all project activities conducted immediately with no further delay as street conditions were in an extremely deteriorated condition;
- The community people also expressed their willingness to be recruited in the project, as the unemployment rate is high;
- The Consultant aimed to identify the most effective outreach channels that support continuous dialogue with the community, these channels are represented in:
 - Mosque;
 - Project bulletin board; and
 - Social media, particularly Facebook.

7.5 Grievance Redressal Mechanism (GRM)

The **Emergency Operation for Development Project (EODP)** has developed a comprehensive Grievance and Redress Mechanism that is applicable to all the sub-projects. However, there are other grievance system that are adopted by the municipality. Therefore, it is essential to present the EODP GRM and other grievances mechanism adopted and propose a mechanism for coordination and cooperation among all systems.

7.5.1 GRM objectives

The objective of a grievance procedure is to ensure that all comments and complaints from any project stakeholder are considered and addressed in an appropriate and timely manner. The effective grievance management can help in:

- Identification, channeling and impartial, timely and effective resolution of issues related to the implementation of **Emergency Operation for Development Project (EODP)** and its additional fund;
- Strengthening accountability and responsiveness towards beneficiaries, affected persons and the public regarding EODP and EODP AF implementation; and
- Serving as an important feedback and management mechanism for the PCU and PMTs to deduce challenges and risks for EODP implementation.

7.5.2 Current GRM adopted by the Mosul municipality

The Sub-project adopts a grievance mechanism. It can be summarized as follows:

Table 7-3 Current GRM adopted by the Mosul municipality

Aspect	During construction		During operation	
	EODP	Municipality	EODP	Municipality
Communication channels	<p>The complaint mechanism is adopted and implemented by:</p> <ul style="list-style-type: none"> • The resident engineer • <u>The social officer of the PMT (Mr. Yaser 07714221722)</u> 	<ul style="list-style-type: none"> - Facebook of Mosul municipality - Face to face meeting 	<p>The complaint mechanism is adopted and implemented by:</p> <ul style="list-style-type: none"> • The resident engineer • <u>The social officer of the PMT (Mr. Yaser 07714221722)</u> 	<ul style="list-style-type: none"> - Facebook of Mosul municipality - Face to face meeting
Registration	All complaints are registered and sent to the social officer for documentation	A designated officer is assigned to manage the complaints	All complaints are registered and sent to the social officer for documentation	A designated officer is assigned to manage the complaints
Feedback to the complaints	The aggrieved person is met and the complaint is discussed with him/her. Clear time interval is in place.	Face to face meeting	The aggrieved person is met and the complaint is discussed with him/her. Clear time interval is in place.	Face to face meeting
Procedure for appeal	If the aggrieved person is not satisfied with the solution provided, s/he has the option to go to court.	It is allowed to raise the complaint to court	If the aggrieved person is not satisfied with the solution provided, s/he has the option to go to court.	It is allowed to raise the complaint to court
Confidentiality	<p>Anonymous complaints are accepted.</p> <p>Complaints submitted by women are taken with the same seriousness as complaints submitted by men.</p>	No evidence of assuring confidentiality	<p>Anonymous complaints are accepted.</p> <p>Complaints submitted by women are taken with the same seriousness as complaints submitted by men</p>	No evidence of assuring confidentiality
Monitoring	Clear procedures of monitoring are applied by the PMT.	No evidence of monitoring	No records are maintained for complaints. Complaints submitted in written are recorded as received, like any other documents.	No evidence of monitoring

Aspect	During construction		During operation	
Reporting	Reporting is implemented in full compliance with the WB requirements	No evidence of reporting	Reporting is implemented in full compliance with the WB requirements	No evidence of reporting

7.5.3 Interface between EODP GRM and the Mosul municipality Grievance System

There is significant need to fine tune the above-mentioned grievance mechanism. Therefore, the PMT should coordinate with various entities in order to oversee or at least gain better understanding about the complaints raised.

Continuous communication should be maintained between the social officer within the PMT from one side, and the municipality from the other side, in order to obtain, document and follow up the resolution of all grievances.

The social officer should follow up the received grievances by municipality and register them in a grievance log. The social officer should get in contact with municipality on weekly bases to gain better understanding about the status of complaints received and the adopted corrective measures.

During operation phase, the social officer should cooperate with the municipality in order to follow up the grievance received related to E&S aspects.

In case of receiving any SEA/SH complaints, they should be carefully handled following the key principles of confidentiality and survivor’s consent. A female social officer should be assigned to manage SEA/SH complaints and should be trained on dealing with SEA/SH issues. The female social officer should communicate with the aggrieved person (survivor) in the same day of receiving the complaints to verify and acknowledge the complaint and get the survivor’s consent on the next steps including potentially referring the case to a specialized support entity in case the survivor prefers so. The time interval should not exceed two working days for referral of complaint. The contacts of the qualified female social officer should be shared with the local communities as well as other GRM channels. It should be made clear that anonymity and confidentiality and consent of the complainants/survivors will be ensured for any complains that will be channeled through the female social officer.

Any steps for escalating the complaints related to SEA/SH or referring them to any third party (e.g. police department and the court) should be made only under the consent of the survivor.

7.5.4 EODP GRM

7.5.4.1 Communication

Each PMT GRM coordinator (governates and ministries) will:

- Confirm to the Project Coordination Unit (PCU) GRM coordinator the uptake channels that each of them has in place for the PMT GRM
- Conduct outreach regarding the PMT GRM (including at least updating the PMT/ governorate webpage and installing a sign that has information on the EODP PMT on the sub project site
- Install complaint boxes at sub project sites
- Ensuring that the resident engineers have hard copies of the GRM uptake form
- Emphasis on outreach regarding the EODP GRM during TA and capacity building for resident engineers.

Due to the diversity of the context in different Governorates and the socioeconomic characteristics of the beneficiaries, the communication channels to receive grievances were locally tailored to address all petitioners concerns and complaints.

A range of channels will be made available for submission of feedback including complaint boxes that will be installed in locations that are easily accessible to the public, a free of charge phone line, regular mail, an email account, and even on the social media application WhatsApp. In addition, hard copies of GRM uptake forms will be available at the PMT offices and project site. The main GRM uptake channels are summarized in the table below.

Table 7-4: GRM uptake channels for submission of feedback

REFAATO	PMT
<ul style="list-style-type: none"> ▪ Email: grm.wb@refaato.iq ▪ Online complaint system: refaato.net/form/ ▪ REFAATO hotline: 80011111 ▪ GRM users can call between Sunday-Thursday from 10 AM to 2 PM 	<ul style="list-style-type: none"> ▪ Letters to the PCU and/or relevant PMT's ▪ Phone calls to PMT's using telephone or WhatsApp <ul style="list-style-type: none"> ○ The resident engineer ○ <u>The social officer of the PMT (Mr. Yaser 07714221722)</u> ▪ In-person feedback to resident engineers on sub project sites and documented in GRM uptake form

As stated above, REFAATO has an online complaint system, available at: refaato.net/form/.³² Furthermore, on a more local level, community people should be informed about the GRM using the snowball method, which enables the verbal exchange of information. Accordingly, the most effective outreach channels to do this verbal exchange is by:

- *Mukhtars* (community leaders);
- Religious leaders;
- Social media;

³² A sample of the online form (in Arabic and English) is included in **Annex (4)**.

- NGOs in the project area; and
- Some government officials in the local units.

7.5.4.2 EODP Grievance Management Process

The Project undertakes to respond to all grievances within 30 calendar days of submission – and more quickly in cases where there is high risk of escalation. The GRM was presented for EODP sub-projects.

The GRM process is described in the sections below. The figure below provides a visual overview of the steps and associated timelines.



Figure 7-4 Grievance Management Process

Step 1: Uptake

A range of channels will be made available for submission of feedback, including a free of charge phone line, regular mail, an email account, and a Facebook page. In addition, hard copies of GRM uptake forms will be available at the PMT offices of the ministries and governorates, and with the resident engineers.

To submit feedback through the phone line, GRM users can call between Sunday-Thursday from 10 AM to 2 PM.

Queries, suggestions and complaints must be specific and concise to the extent possible, and contain basic information including: the name of the subproject, the location (address where possible) and/or closest landmark), the timeline of the issue/incident, persons involved (PMT staff, contractors, community members or any others), and contact details for non-anonymous GRM users

For complaints, the feedback submitted should also include: details of the incident/issue, what was said/committed or what action was taken/not taken, the action sought by the GRM user, contact details of the non-anonymous GRM user

Step 2: Sorting and Processing

Grievance Log will be maintained by the GRM Coordinator if s/he is the first point of contact with the GRM user. The same applies if contact is made between the GRM user and the resident engineer or GRM coordinators for PMTs and will include: a summary of the feedback received, date that it was received, location (where relevant), channel through which it was received (in-person, letter, telephone etc), whether an acknowledgement has been provided to the non-anonymous GRM user that the issue is under consideration and/or has been escalated, whether the feedback is anonymous (this would include cases in which the person providing the feedback has expressed a preference for anonymity), whether the GRM user was channeled to another PMT, whether the issue was resolved and if so, whether a final response has been provided to the non-anonymous user of the GRM, whether the issue is pending and if so, whether it has been escalated to the PMT head.

Step 3: Acknowledgment and Follow up

If the identity of the GRM user is known, then receipt of the feedback will be acknowledged within 3 business days. At the 20 business-day mark, if a complaint/question is still pending, the GRM focal point for the PMTs will provide an update to the non-anonymous GRM user, inform them if there will be delays in resolving their case, and provide the date for which they will be able to provide a response.

The social officer should classify the received grievances as follows:

Table 7-5 Classification of grievance level

High-Level Feedback	Standard-Level Feedback
<p>Feedback received to be categorized as ‘high’ level instances will include issues that meet the following criteria:</p> <ul style="list-style-type: none"> ▪ Incidents that caused or may potentially cause significant or great harm to the environment, workers, communities, or natural resources, including issues of gender-based violence; ▪ Incidents which entail failure to implement E&S measures with significant impacts or repeated non-compliance with E&S policies; ▪ Incidents for which failure to address may potentially cause significant impacts that are complex and/or costly to reverse; and ▪ Incidents that may result in fatality or some level of lasting damage or injury. <p>This type of feedback will be acknowledged, and an investigation will be launched by the PCU/PMT and any other relevant stakeholders within 24 hours during work days and within 48 hours if the feedback was received over the weekend. It should be noted that some types of incidents, including accidents and fatalities need</p>	<p>If the identity of the aggrieved person is known and the grievance is classified as ‘standard’, the acknowledgement of grievance will be within 3 business days. At the 20 business-day mark, if a complaint/question is still pending, the GRM focal point for the PMTs and the PCU will provide an update to the non-anonymous GRM user, inform them if there will be delays in resolving their case, and provide the date for which they will be able to provide a response</p>

to be reported to the World Bank. This guidance is provided in the Environment & Social Incident Response Procedures.	
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Step 4: Verification, Investigation and Action by PMT Technical Team

Verification and investigation involve gathering information about the complaint to determine its validity and to generate a clear picture of the circumstances surrounding the issue under consideration. This process normally includes site visits, document reviews, a meeting with the GRM user (if known and willing to engage), liaising with the PMT safeguards specialist(s) and resident engineers, and meetings with other individuals and/or entities who can assist with resolving the issue. For complaints related to the misuse of funds, it may also require meetings with suppliers and contractors.

Potential actions include responding to a query or comment, providing GRM users with a status update by the 20-working day mark, escalating the matter to the PMT head, imposing sanctions, or referring the grievance to another PMT that may be relevant for investigating and addressing the issue. Feedback that cannot be resolved at the PMT level should be referred to the PCU level for further investigation per the timelines and standards established for the GRM.

Step 5: Providing Responses to GRM Users

This step entails informing GRM users and the public at large about the results of the investigation and the actions taken. It is integral to enhance the GRM's visibility among beneficiaries and increases users' trust in the system (making it more likely that they will provide feedback). The GRM focal points of the PMTs can provide feedback by contacting the GRM user directly (if his or her identity is known) within a 30-day period of receipt.

Information included in the written response should include: setting out/summary of the feedback, detailing how the investigation was conducted, summarizing the facts, outlining the findings appropriate resolution along with the rationale for such resolution. resolutions may include an explanation, apology, reconsideration, reimbursement, restitution– all are possible remedies.

Step 6: Reporting

GRM focal points for all PMTs will report to the PCU GRM focal point on the second Monday of each month. The PCU GRM focal point will make consolidated reports available to the REFAATO President on a monthly basis, and to the World Bank on a quarterly basis and on request.

The reports should provide an overview of feedback received that is related to EODP implementation. Additional information should include:

- Nature of the feedback
- Aggregate information on the GRM users (including demographic – student, parent, gender, etc.)

- Information on where the feedback was received and in what format.
- Information on the status of complaints and queries (resolved, under review, etc.).
- Information on how complaints and queries were resolved.
- Information on unresolved complaints/queries and why they are not yet resolved.

Such reports may also include recommendations for improving the GRM or the EODP design. These recommendations should be based on the monitoring of the GRM, specifically the extent of the GRM’s functionality and the types of feedback that have emerged.

7.5.4.3 Monitoring and Evaluation

Monitoring refers to the process of tracking grievances and assessing the extent to which progress is being made to resolve them.

All information related to contact, cases, tracking and monitoring of feedback cases shall be tracked through a database created for this purpose. The database shall be managed by the PCU GRM focal point and updated and shared by GRM focal points of the PMTs on a monthly basis. All files shall be protected to ensure no loss of data and information.

Ultimately, the SDO will be responsible for consolidating, monitoring and reporting on the total number of complaints, enquiries and other feedback that have been received, resolved or are pending at the subproject, PMT and PCU levels. As part of this system, the higher levels of the EODP GRM are responsible for monitoring complaints handling performance at the lower levels at any given point during the implementation of this project.

Information compiled by the PCU GRM focal point will be essential for reporting on progress on the EODP’s grievance indicators, “number and percentage of grievances registered that are addressed”, that are included in the Project Results Framework on a quarterly basis.

7.5.4.4 Institutional Arrangements

The table below provides a summary of the roles and functions involved in the management of the EODP GRM.

Table 7-6 Summary of Roles and Functions for EODP GRM

Role	Functions
Sub project residents	<ul style="list-style-type: none"> • Ensure that information on the GRM is posted on EODP subproject sites, including contact information for the Social Development Officer • Maintain logs of the feedback received and share them with the relevant GRM focal points for the PMTs and the PCU on the second Monday of each month and share them with the SDO. Close cooperation with the SDO is essential. • Support in submitting feedback, including facilitating contact/communication between GRM users and relevant GRM focal points

Role	Functions
engineer and Contractors	<ul style="list-style-type: none"> • Provide support to the PMT and PCU to verify and investigate issues or complaints, when possible • Refer the complaint to the person in charge for solving it
Social Development Officer	<ul style="list-style-type: none"> • Liaise and collaborate with other ministries and entities to which complaints/feedback are channeled and following up on the investigation and resolution of issues • Ensure that all EODP project sites have contact information for the EODP GRM • Ensure that resident engineers have hard copies of the GRM uptake forms that GRM users can send to the PCU by mail • Disseminate information regarding uptake channels for submitting feedback, the structure and standards of the GRM, and their role • Monitor GRM uptake channels for their PMT and communication from the PCU regarding feedback that is relevant to their PMT • Acknowledge receipt of complaint/feedback from GRM users and respond to them with the outcome of the investigation within a predetermined timeline that is publicly communicated • Maintain the privacy of GRM users who wish to remain anonymous • Maintain the GRM log to track and report on the status of each case • Undertake verification and investigation of issues/complaints with relevant entities, groups or individuals • Follow up on additional information that may be required from non-anonymous GRM users to resolve a complaint • Liaise with the legal department and other technical staff in the ministry as required • Respond to GRM users on the resolution and the status of the feedback and ensure that the “feedback loop” is closed • Share all information about received and processed complaints with the PCU GRM Focal Point
PMT Head or Coordinator	<ul style="list-style-type: none"> • Supervise outputs and reports of GRM focal points • Highlighting issues on compliance of environmental and social safeguards policies to PCU and World Bank team • Intercede and liaise with senior staff from the PMT ministry and governorate; other ministries and senior REFAATO staff as required to escalate and resolve specific issues
PCU GRM Focal Point	<ul style="list-style-type: none"> • Work with REFAATO staff and PMTs to ensure that the GRM is publicized, and communicate with all relevant stakeholders, especially beneficiaries, on any issues concerning the GRM; • Liaise and collaborate with GRM focal points in the PMTs and governorates to ensure that there is an integrated and functional EODP GRM system in place • Flag challenges in resolving issues that need to be escalated to the REFAATO President • Update and maintain a monitoring system for complaints/feedback received directly by the PCU, as well as feedback reported by the PMTs for ministries & governorates • Prepare and provide consolidated reports on grievance/feedback data on an ongoing basis in collaboration with the PMTs and governorates • Analyze the data and generate reports on feedback trends for REFAATO senior management and the World Bank team

Role	Functions
President of REFAATO	<ul style="list-style-type: none"> • Endorse responses to feedback that are received by the PCU and escalated to the GRM Committee • Review the data and reports developed on the feedback and by the PCU's GRM Coordinator

Source: Grievance redress mechanism guidelines and procedures

7.5.4.5 Procedure for Appeal

Aggrieved persons who are dissatisfied with the outcome of their complaint can appeal the decision by resubmitting their complaint to the GRM focal point within 30 working-days of receiving a response to the original submitted grievance. Subsequently, the GRM focal point and other relevant personnel have 30 working-days to investigate and address the issue. Additionally, the GRM focal point has 10 working-days to prepare a comprehensive response, including the findings of the investigation and the rationale of the determination. Accordingly, within a maximum of 40 working-days, the appeal case should be closed.

Lastly, if the aggrieved person is still not satisfied with the solution provided, s/he has the option to go to court.

7.5.4.6 Gender sensitive GRM

The project grievance mechanism is gender-sensitive. It is a standard of good practice that aims to provide a separate female contact point for complaints to be received from women. In cases of increased risk of discrimination, harassment, or assault (for example, where a worker camp is near a community), the GRM ensures that women subject to physical or sexual abuse or harassment, can file confidential complaints.

7.5.4.7 Confidentiality

Individuals who submit their comments or grievances have the right to request that their name be kept confidential, though this may mean that the PMT is unable to provide feedback on how the grievance is to be addressed. However, an anonymous complaint can receive a code and should be investigated appropriately and treated courteously.

7.5.4.8 Reporting

GRM focal points for all PMT's will report to the PCU GRM focal point on the second Monday of each month. The PCU GRM focal point will make consolidated reports available to the REFAATO President on a monthly basis, and to the World Bank on a quarterly basis and on request.

The reports should provide an overview of feedback received that is related to EODP implementation. Additional information should include:

- Nature of the feedback
- Aggregate information on the GRM users (including demographic – student, parent, gender, etc.)
- Information on where the feedback was received and in what format.
- Information on the status of complaints and queries (resolved, under review, etc.).
- Information on how complaints and queries were resolved.
- Information on unresolved complaints/queries and why they are not yet resolved.

Such reports may also include recommendations for improving the GRM or the EODP design. These recommendations should be based on the monitoring of the GRM, specifically the extent of the GRM's functionality and the types of feedback that have emerged.

7.6 Disclosure activities

As soon as the site-specific ESMPs gets clearance from the World Bank and approval from the Mosul Municipality, the following disclosure procedures will be adapted:

- A final report, in English and a summary in Arabic, will be published on the WB, EODP and Mosul Municipality websites.
- A copy of the ESMP report in English and a summary in Arabic will be made available in the municipality, in Nineveh and Baghdad Governorate. Additionally, an Arabic executive summary will be made available in the regional branch.
- An A3 poster will be installed in the entrance of the regional branch office informing about the results of the study and the website link for the full ESMP report.
- It will be useful also to maintain leaflets of the project impacts, GRM and contact office in the regional branch.

Annex 1: Cultural Heritage Chance Find Procedure

Cultural property includes 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. During the project induction meeting, all contractors will be made aware of the presence of an on-site archaeologist who will monitor earthmoving and excavation activities.

The initial phase of the proposed emergency reconstruction operations pose limited risks in damaging cultural property since sub-projects will largely consist of small investments in community infrastructure and income generating activities, reconstruction of existing structures, and minor public works. Further, it is understood by the Consultant that any activity that would adversely impact cultural property would make a subproject ineligible. Nevertheless, the Consultant will check that the following procedures for identification, protection from theft, and treatment of discovered artifacts should be followed in the event that archaeological material is discovered:

- Stop all construction activities in the area of the chance find.
- Delineate the discovered site or area.
- Record the find location, and all remains are to be left in place.
- 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 immediately (within 24 hours or less);
- Notify the supervisory Engineer who in turn will notify the responsible local authorities and 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.
- Decisions on how to handle the findings 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 archaeological importance) conservation, preservation, restoration and salvage.
- Implementation for the authority decision concerning the management of the finding shall be communicated in writing by the Ministry of Culture; and
- Construction work could resume only after permission is given from the responsible local authorities and the Ministry of Culture concerning safeguard of the heritage.
- The Consultant will ensure that during project supervision, the Site engineer will monitor the above regulations relating to the treatment of any chance find encountered and observed. 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.

Annex 2: Contractor's Responsibilities in Arabic and English

Arabic

يجب على مقاول الإنشاء الالتزام بالإجراءات التالية:

جودة الهواء

- عمل صيانة دورية للمعدات
- تغطية أي مواد بناء قابلة للتطاير بحيث لا تتسبب الرياح بانتشارها في الهواء.
- عدم تشغيل المعدات في حالة عدم استخدامها.
- عدم حرق أية مخلفات داخل الموقع
- تخزين نواتج الحفر داخل منطقة مسورة أو تغطيتها لمنع تولد الغبار أو نقلها خارج الموقع أولاً بأول.
- تغطية شاحنات نقل نواتج الحفر. يمكن استخدام نواتج الحفر لردم الوديان المحيطة بمنطقة المشروع.
- أثناء أعمال الحفر والقشط، تستخدم تدابير مكافحة الغبار كلما أمكن عن طريق الرش وترطيب الأرض خاصة وأن الشارع محاط بمناطق سكنية.

الضوضاء

- نظراً لأن المشروع يقع داخل مناطق سكنية، يجب أن يقتصر تشغيل المعدات على أوقات محدودة خلال النهار، وهي من 7 صباحاً حتى 10 مساءً.
- صيانة المعدات بشكل دوري.
- غلق غطاء المحرك لجميع معدات الإنشاء.
- عدم تشغيل المعدات في حالة عدم استخدامها.

جودة التربة

- التأكد من وجود المواد والأدوات اللازمة للتعامل مع الانسكابات (واقى يد، مادة لامتصاص التسريب كالرمل وأكياس بلاستيك)
- عدم خلط نواتج الحفر بأي مخلفات أخرى أو أي مواد كيميائية حتى تظل قابلة لإعادة الاستخدام
- إتاحة دورات مياه متنقلة بمنطقة المكاتب وربطها بخزان مياه صرف صحي والتخلص (كسح) من هذه المياه بشكل دوري.

استهلاك الطاقة

- عمل لخطة لنقل المواد والمعدات تضمن أقل استهلاك للوقود
- استخدام معدات ذات كفاءة عالية
- عدم تشغيل المعدات في حالة عدم استخدامها
- عمل صيانة دورية للمعدات

إدارة المخلفات

- تحديد أنواع المخلفات التي ستننتج من أنشطة المشروع وتخصيص صندوق لكل نوع بما في ذلك المخلفات الخطرة.
- وضع علامات على الصناديق لتوضيح نوع المخلفات الذي يحتويه.
- عمل سجل بنوع وكميات المخلفات التي تتولد في الموقع.
- تحديد مكان في الموقع لتخزين خردة الخشب ومواد البناء الأخرى، والفصل بينها لتسهيل عملية جمعها والتخلص منها.
- التعاقد مع مقاول مصرح له بالتخلص من الخردة والمخلفات العامة/العضوية

- جمع حطام الأسفلت ونقله إلى الموقع الذي تحدده الجهة المحلية المختصة. يمكن أيضا استخدام الحطام في طبقات الأساس لمشاريع طرق أخرى.
- وضع التربة المختلطة بالمواد الكيميائية في أكياس بلاستيك والتخلص منها كمخلفات خطرة.

المخلفات الخطرة (تتضمن فلاتر الزيت وعلب الدهانات ومادة العزل "فلانكوت")

- تخزينها في صناديق مخصصة لها وعدم خلطها بباقي المخلفات.
- بالنسبة للمخلفات الخطرة السائلة كالزيوت المستخدمة، يجب أن توضع في براميل محكمة الغلق وأن تكون داخل حوض احتجاز قادر على احتواء أي انسكاب.
- التعاقد مع مقاول مصرح له بالتخلص من المخلفات الخطرة سواء كانت صلبة أو سائلة.
- التأكد من وجود نشرات بيانات السلامة الخاصة بجميع المواد التي يتم استخدامها بالموقع.

الصحة والسلامة المهنية

- يجب توعية جميع العمال بالمخاطر المحتملة المرتبطة بأنشطة المشروع الفرعي قبل أنشطة البناء،
- يجب تدريب العمال على تحديد وتقييم مخاطر العمل المختلفة وأن يكونوا على دراية كاملة بكيفية التحكم في التعرض لمثل هذه المخاطر،
- توفير الإسعافات الأولية وحقيبة الطوارئ في الموقع. أحد الأفراد المراد تدريبه على الإسعافات الأولية،
- يجب على العمال اتباع معايير السلامة واستخدام معدات الحماية الشخصية (PPE) لتقليل المخاطر أثناء حفر الخنادق والسفلة،
- يجب على العمال الامتثال لقاعدة OSHA العامة للاستخدام الآمن للسلالم،
- لمنع مخاطر معدات البناء الثقيلة، يجب على العمال اتباع إرشادات سلامة البناء المصممة للقضاء على التعرض لمثل هذه الإصابات والحوادث،
- يجب أن تكون معدات الطوارئ (مجموعة الانسكاب، طفايات الحريق، إلخ ..) متوفرة دائمًا في الموقع وعملية،
- يجب تغطية مخاطر الصحة والسلامة على العمال بخطط تأمين مناسبة لجميع أنواع العمال. بالإضافة إلى ذلك،
- يجب أن يغطي التأمين الحوادث المتعلقة بالعمل (الإصابات والوفيات)، وكذلك التأمين للغير،
- سيكون المقاول ملزمًا أيضًا بالحفاظ على كشوف الحضور اليومية من أجل التحقق من حضور العمال في حالة وقوع حوادث وتزويد المصابين بالتأمين الصحي المناسب،
- يجب أن تتضمن خطة الصحة والسلامة المهنية تدابير لحماية العمال من عدوى COVID-19، وسيتم اتباع جميع اللوائح الصحية الوطنية، وترد تفاصيل تدابير التخفيف من COVID 19 في الملاحق المرفقة،
- توفير تدريب H&S للقوى العاملة في مجال البناء (بما في ذلك المقاولون من الباطن والعمال المؤقتون والسائقون)،
- نشر إجراءات الصحة والسلامة والبيئة لموظفي البناء

صحة المجتمع وسلامته

- ممرات آمنة لوصول المشاة وسيارات الإسعاف ويجب تحديدها لمنع ملامسة المعدات الثقيلة،
- يجب أن يقتصر الوصول إلى مناطق البناء والتعرض للمعدات على العمال وموظفي المشروع،
- تثبيت مسار آمن لضمان وصول السكان إلى المنزل نظرًا قربهم من منطقة المشروع الفرعي،
- يجب تصميم خطة مرور، بما في ذلك اللافتات، لتوجيه حركة مركبات البناء أثناء الأنشطة المتعلقة بالبناء،
- إنشاء ممرات للمعاقين والأطفال مع وجود علامات ومنحدرات كافية لضمان صحتهم وسلامتهم،
- تحديد ساعات تشغيل المعدات ذات الضوضاء العالية،
- نشر وتسجيل أوقات عمل آلات البناء لدى السلطات المحلية والالتزام الصارم بذلك،
- يجب على المقاول اعتماد خطة طوارئ للحوادث المتعلقة بالبناء وحوادث الطرق التي قد تقع، مع إبلاء اعتبار خاص لجميع التنقلات السكنية،
- يجب أن تكون آلية التظلم متاحة لأفراد المجتمع،
- يجب على المقاول اعتماد تدابير التخفيف من COVID-19

- تبادل معلومات المشروع مع أفراد المجتمع
- يجب أن تتضمن مدونة السلوك تعليمات لضمان احترام القيم الثقافية والتقاليد والعنف القائم على النوع الاجتماعي.
- ضمان وصول الزوار إلى المنازل والمحلات التجارية عبر ممر آمن
- إنشاء ممرات آمنة للطلاب للذهاب إلى مدارسهم دون احتمال التعرض للخطر،
- يجب أن يضمن جدول عمل المقاول الامتثال للتقويم الثقافي المحلي للأنشطة الاجتماعية والثقافية ، أي أوقات الصلاة وفي حالة الأنشطة التي تتم خلال أنشطة الصيام في شهر رمضان،
- يجب الالتزام بتدابير تخفيف الهواء والضوضاء المذكورة أعلاه لتقليل التأثيرات على المجتمع.

السلامة المرورية

- تحديد السرعة القصوى داخل وحول موقع المشروع الفرعي،
- التأكد من سلامة المركبة والصيانة الدورية،
- تقديم معلومات حول الطرق التي سيتم إغلاقها أثناء الإنشاء،
- إجراء دراسة تقييم المرور ووضع وتنفيذ خطة المرور ، بما في ذلك تدابير السلامة،
- تقييد حركة المركبات ذات الصلة بالبناء خلال ساعات الذروة ووضع حدود للسرعة،
- تقسيم العمل على الطريق إلى أقسام طويلة لضمان أنه في حالة حدوث قيود على الوصول إلى الخدمات ، سيظل الشارع مفتوحاً،
- تنسيق جدول العمل لتجنب البناء خلال ساعات الذروة،
- يجب أن يعتمد المقاول خطة طوارئ للحوادث المتعلقة بالبناء ،

عمالة الأطفال

- سيحظر العقد الذي سيتم إعداده لكل من المقاول والمقاولين من الباطن أي نوع من توظيف القصر في المشروع الفرعي (الأطفال دون سن 18 عاماً)،
- سيلزم العقد أيضاً المقاول / المقاول من الباطن بالاحتفاظ بنسخة من بطاقات هوية العمال من أجل تسهيل مراقبة وجود الموظفين المعيّنين الذين تقل أعمارهم عن 18 عاماً ليتم رصد يومياً،
- سيكون المقاول / المقاول من الباطن ملزماً أيضاً بالاحتفاظ بكشوفات الحضور اليومية من أجل التحقق من حضور العمال الذين لا يشملون الموظفين الذين تقل أعمارهم عن 18 عاماً،
- يجب أن تكون أحكام العقوبات متاحة لتوظيف عمالة الأطفال.

التأثيرات البصرية والمناظر الطبيعية

- عدم التوزيع العشوائي لمواد البناء،
- تصنيف مواد البناء ووضعها بطريقة منظمة يقلل من التأثير البصري

التراث الثقافي

- تطبيق إجراء إيجاد الفرصة (مرفقة في ملاحق الدراسة)
- جميع تدابير التخفيف المذكورة أعلاه ستقلل من التأثيرات على المسجد (الضوضاء- الاهتزازات)

مرافق تحت الأرض

- يجب على المقاول التنسيق مع السلطات المختلفة لمياه الشرب والمياه العادمة وسلطات الاتصالات للحصول على خرائط لتحديد البنية التحتية الحالية في مناطق المشروع الفرعي من أجل تجنب أي ضرر (إذا كان ذلك ممكناً)
- في حالة تلف الأنابيب ، يجب على المقاول إصلاحها على الفور وإبلاغ المتضررين بمدة انقطاع المياه

تدفق العمالة

من أجل تقليل الآثار المتعلقة بتدفق العمالة ، يجب تنفيذ ما يلي بدقة.

- إعداد وتنفيذ مدونة السلوك والتدريب المقابل فيما يتعلق بالالتزام بالعمل تجاه المجتمع والسلوكيات المختلفة التي يجب تجنبها. بما في ذلك على سبيل المثال لا الحصر: احترام معتقدات وعادات السكان والعلاقات المجتمعية ، وتخفيف مخاطر العنف القائم على النوع الاجتماعي ، وقواعد السلامة ، وحظر تعاطي المخدرات ، والحساسية البيئية للمنطقة
- يجب تدريب جميع العمال على مدونة السلوك
- واعد السلوك التي يوقعها المقاول من الباطن
- مدونة قواعد السلوك التعريفي يتم إجراؤها كل أسبوعين للعاملين الدائمين والوافدين الجدد قبل بدء العمل
- تطبيق العقوبات على العاملين المخالفين لقواعد السلوك
- تزويد العمال بالتدريب اللازم وجلسة إذكاء الوعي حول القضايا المتعلقة بالتقييم والاستغلال الاجتماعي والاستغلال الاجتماعي والتحقق من تنفيذ آلية معالجة المظالم بشكل مناسب لتسجيل الشكاوى الواردة من المجتمعات المحيطة لإيجاد الحلول المناسبة وتنفيذ الإجراءات التصحيحية
- تطبيق المتطلبات الكاملة المتعلقة بتشغيل آلية التظلم بما في ذلك القنوات المجهولة
- زيادة وعي السكان المحليين بالالتزام المشروع تجاه المجتمعات والتدابير المتخذة لذلك من خلال المشاورات العامة ومناقشات مجموعات التركيز.

العنف القائم على النوع الاجتماعي

- التأكد من أن مدونة قواعد السلوك والتدريب المقابل فيما يتعلق بالالتزام بالعمل تجاه المجتمع والسلوك المختلف الذي ينبغي تجنبه يؤكد عدم التسامح مطلقا مع العنف القائم على نوع الجنس ، أي التحرش الجنسي والاستغلال الجنسي والاعتداء الجنسي،
- تطبيق العقوبات على العاملين المخالفين لقواعد السلوك،
- يقوم المقاول بإعداد جلسة توعية / تدريب للعمال حول قضايا العنف القائم على النوع الاجتماعي،
- أن يضمن المقاول أن جميع تدريبات بناء القدرات المتاحة متاحة للعاملين والعاملات على حد سواء،
- تنفيذ جميع جوانب آلية التظلم المنشأة ، وضمان توفر قنوات مجهولة،
- إجراء مشاورات مستمرة مع النساء والفتيات فقط التي هي مفهومة وملائمة ثقافيا
- إنشاء آلية للتظلم تراعي النوع الاجتماعي من خلال تعيين أنثى على أساس الجنس في حالة وقوع حوادث عنف على أساس النوع الاجتماعي،
- تطبيق المتطلبات الكاملة المتعلقة بتشغيل آلية التظلم بما في ذلك القناة المجهولة،
- ضمان آلية التظلم واضحة

العقوبات وإلغاء التعاقد

إذا فشل المقاول في الوفاء بأي من الالتزامات المذكورة أعلاه بموجب العقد ، فسيتم تطبيق العقوبات التالية:

المرحلة	الإجراء	التفاصيل
المرحلة الأولى	التحذير	يجب أن يتلقى المقاول بيان تحذير يتضمن الإجراءات التصحيحية المقترح.
		يجب أن تبدأ جميع الإجراءات التصحيحية في مدة لا تزيد عن أسبوعين.
		يجب على المقاول اتخاذ الإجراءات التصحيحية بشكل سريع.

<p>في حالة عدم التزام المقاول بخطة الإدارة البيئية والاجتماعية ، لا يحق للمقاول الحصول على الدفعات النقدية بموجب شروط هذا العقد.</p> <p>لن يتم صرف المدفوعات حتى يتم وضع خطة عمل واضحة ويبدأ المقاول في تنفيذ الإجراءات المتفق عليها.</p>	<p>الدفعات النقدية</p>	<p>المرحلة الثانية</p>
<p>لن يتم إنهاء العقد بسبب عدم الوفاء بالتزامات خطة الإدارة البيئية والاجتماعية. ومع ذلك ، سيخصم مالك المشروع تكلفة تنفيذ خطة الإدارة البيئية والاجتماعية من العقد. وفي هذه الحالة يجب إرفاق دليل واضح على فشل المقاول في تنفيذ خطة الإدارة البيئية والاجتماعية</p>	<p>إلغاء التعاقد</p>	<p>المرحلة الثالثة</p>

English

The contractor must abide by the following measures:

Air Quality

1. Perform regular maintenance to construction vehicles and equipment.
2. If there is a need to store construction materials such as sand and aggregates on site, they must be adequately covered/contained so that they do not produce dust emissions.
3. Equipment should be shut down when not in use to minimize emissions.
4. There will be no burning of any type of waste on site.
5. Excavated material must be stored in a confined area or removed from the site as soon as they pile up. This measure is to minimize dust emissions that may result from wind action. Excavated material will be produced as a result of replacing the base and subbase layers of the roads.
6. Vehicles transporting excavated material or construction waste such as asphalt debris must be adequately covered to prevent loose particles from escaping into the air. Excavated material can be used to backfill land depressions around the city.
7. Whenever possible, spray and wet the grounds at which dust generating activities are taking place.

Noise

1. Since the subproject lies in a residential area, heavy construction activities should be limited to daytime, typically from 7am to 10 pm.
2. Perform regular maintenance to all vehicles to limit noise generation.
3. Engines of all construction vehicles must be covered while in operation.
4. Switch-off all equipment while not in use.

Soil

1. A spill-kit (gloves, absorbent material such as sand and plastic bags) must always be available on site to clean and remove any oil/chemical spills.
2. The soil resulting from excavation activities must not be mixed with other types of waste and must not come in contact with any chemicals. This soil has to remain clean because it may be re-used later on.
3. The construction contractor shall provide portable toilet cabinets on site, to be equipped with an external tank for wastewater storage in order to avoid improper disposal of sanitary waste.

Energy consumption

1. Proper planning of transportation of materials to ensure optimum consumption of fossil fuels (diesel, petrol)
2. Use machines with high efficiency engines

3. Adopt a policy of switching off machinery and equipment when not in use (idle mode).
4. Apply regular maintenance to the machinery

Waste generation

1. Identify the types of waste generated from construction/rehabilitation activities and have as many skips/bins as needed to segregate them, including a hazardous waste bin. Expected waste types include hardened concrete, excavated material, domestic waste and demolished asphalt.
2. Waste containers must be labeled.
3. Keep a record of the waste quantities produced at the site.
4. Allocate and prepare a proper place within the construction site for temporary storage of scrap such as wood and construction materials. Each type must be stored in a separate area/skip. The waste must be arranged so that it can be directly disposed of through a licensed solid waste contractor or sold to scrap dealers on a frequent basis.
5. Demolished asphalt has to be collected and transported to the disposal site identified by the local authorities. Alternatively, the broken asphalt can be re-used as aggregate for the base and subbase layers in other road construction projects.
6. Soil contaminated by chemicals must be placed in plastic bags and disposed of as hazardous waste.

Occupational Health and Safety

1. All workers must be made aware of potential risks associated with subproject activities prior to construction activities,
2. Workers should be trained to identify and evaluate different job hazards and be fully aware of how to control exposure to such risks.
3. First aid and emergency kit to be made available on site. One of the personnel to be trained for first aid
4. Workers must follow safety standards and use personal protective equipment (PPE) to minimize hazards while trenching, excavating and asphaltting to minimize the risk of encountering vector-borne diseases,
5. Workers must comply with OSHA's general rule for the safe use of ladders,
6. To prevent Heavy Construction Equipment risk, workers should follow construction safety guidelines designed to eliminate the exposure to such injuries and accidents,
7. Emergency equipment (spill-kit, fire extinguishers, etc..) must always be available on-site and functional,
8. The health and safety risk on the workers should be covered with appropriate insurance schemes for all the types of workers. In addition, the Insurance should be covering work related accidents (injuries and fatalities), as well as insurance for third party,
9. The contractor also will be obliged to maintain daily attendance sheets in order to verify the attendance of workers in case of accidents and provide the injured persons with proper health insurance,

10. The OHS plan must include measures to protect workers from COVID-19 infection, and all national health regulations will be followed, details on COVID 19 mitigation measures are presented in Annex 6,
11. Provide H&S training to the construction workforce (including sub-contractors, temporary workers and drivers),
12. Deployment of HSE procedures for the construction personnel

Community Health and Safety

1. Safe pathways for pedestrian and ambulance access and must be defined to prevent contact with heavy equipment
2. Access to construction areas and exposure to equipment must be restricted to workers and project personnel,
3. Install safe pathway to ensure resident's access to household due to their close proximity to the subproject area,
4. A traffic plan, including signage, must be designed to direct the movement of construction vehicles during construction related activities,
5. Installing walkways for the disabled and children with adequate signs and ramps to ensure their health and safety,
6. Limit the hours of operation for equipment with high noise,
7. Publishing and registering working time of construction machines with local authorities and strict compliance therewith,
8. The contractor must adopt an emergency plan for construction related incidents and road accidents that might take place, with special consideration for all residential commute,
9. A Grievance Mechanism should be available to community members,
10. The contractor must adopt COVID-19 mitigation measures (see Annex 6)
11. Share project information with the community members
12. The code of conduct must include instructions to ensure respect the cultural values, traditions, and GBV,
13. Access to the houses and shops should be guaranteed to visitors through a safe pathway
14. Install safe pathways for students to go to their schools without the possibility of being exposed to danger,
15. The contractor work schedule must ensure compliance with local cultural calendar of social and cultural activities, i.e., prayer times and in the event of activities taking place during the month of Ramadan fasting activities,
16. Air and noise mitigation measures mentioned above should be adhered to, to minimize impacts on the community.

Traffic

1. Determine the maximum speed within and around the subproject site,

2. Ensure vehicle safety and regular maintenance,
3. Provide information about the roads that will be closed during construction,
4. Conduct a traffic assessment study and develop and implement a traffic plan, including safety measures,
5. The contractor, in cooperation with the subprojects' RE, must implement a system of preventive monitoring by which any potential delays can be predicted and mitigated efficiently. This must be done on a weekly basis, and must be a very rigorous process, since community members want the subprojects to be finished as soon as possible. Preventive monitoring will also reduce the amount of time the roads could be blocked or closed off,
6. Restrict the movement of construction-related vehicles during peak hours and set speed limits,
7. Divide the work on the road into longitudinal sections to ensure that if restriction of access to services happens, the street will remain open,
8. PMT and local authorities to coordinate a work schedule to avoid construction during peak hours,
9. The contractor must adopt an emergency plan for construction-related incidents,

Child Labor

1. The contract to be prepared for both contractor and subcontractors will prohibit any kind of hiring minors in the subproject (Children below 18 years),
2. The contract also will oblige the contractor/subcontractor to keep a copy of IDs of laborers in order to facilitate the monitoring of the presence of hired staff below 18 years to be monitored daily,
3. The contractor /subcontractor also will be obliged to maintain daily attendance sheets in order to verify the attendance of workers not include staff below 18 years' old,
4. Penalty provisions should be available for hiring child labor.

Visual and landscape

1. Lack of randomization of building materials,
2. Classification and placement of building materials in an orderly manner reduces the visual impact

Cultural heritage

1. Apply chance find procedure (Annex 1)
2. All mitigation measures mentioned above will minimize impacts on the mosque (noise-vibration)

Underground utilities

1. The contractor shall coordinate with the different authorities of potable water, wastewater, and telecom authorities to obtain maps to determine the existing infrastructure in the subproject areas in order to avoid any damage (If feasible)
2. In case of pipes damage, the contractor should repair them immediately and inform the affected people about the duration of water cut

Labor influx

In order to minimize impacts pertaining to labor influx the following should be thoroughly implemented.

1. Preparation and implementation of Code of Conduct and corresponding training concerning commitment of labor towards the community and the different behavior that should be avoided; including but not limited to: respect for the beliefs and customs of the populations and community relations, GBV risk mitigation, safety rules, forbidding substance abuse, environmental sensitivity of the area,
2. All workers should be trained on the code of conduct.
3. Code of conduct to be signed by sub-contractor
4. Code of conduct induction to be done every 2 weeks for the recurrent workers and the new comers before starting work
5. Apply Penalties to workers violating the code of conduct
6. Providing workers with the necessary training and awareness raising session on issues regarding SEA/SH and Verifying that GRM is adequately implemented to record complaints from the surrounding communities to find adequate resolutions and implement corrective actions
7. Apply the full requirements related to operating the grievance mechanism including anonymous channels
8. Raising awareness of the local populations about the project commitment towards communities' and the measures taken for that through public consultation and focus group discussions

GBV

1. Ensure that the Code of Conduct and corresponding training concerning commitment of labor towards the community and the different behavior that should be avoided emphasizes zero tolerance of gender-based violence (GBV) i.e. sexual harassment, sexual exploitation and sexual abuse,
2. Apply penalties to workers violating the Code of Conduct,
3. The contractor to prepare an awareness session/training on GBV issues for workers,
4. The contractor to ensure all available capacity building trainings are accessible to both male and female workers,
5. Implement all facets of the established grievance mechanism, ensuring anonymous channels are available.
6. Conduct ongoing consultations with women and girls only that is understandable and culturally appropriate.
7. Establish a grievance mechanism that is sensitive to gender by assigning a female SDO in case of GBV incidents,
8. Apply the full requirements related to operating the grievance mechanism including anonymous channel,

9. Ensure grievance mechanism that is survivor centered

Penalties and termination

In the event that the Contractor fails to fulfill any of the above-mentioned obligations under the contract, the penalties below will be applicable

Steps	Action	Details
Step one	Warning	<p>The contractor should receive a warning statement including proposed corrective measure.</p> <p>All corrective measures should be started no more than two weeks.</p> <p>The contractor should bring to action the immediate corrective measure.</p>
Step two	Payment	<p>If the Contractor does not adhere to the Environmental and Social Management Plan, the Contractor shall not be entitled to continue to receive payments under the terms of this Contract.</p> <p>Payments will not be disbursed until a clear action plan is developed and the Contractor started the implementation of the agreed actions.</p>
Step three	Termination of contract	<p>The Contract will not be terminated due to the failure to fulfill ESMP obligations. However, the project owner will deduct the cost of ESMP implementation from the contract upon. Clear evidence of failure of contractor to implement the ESMP is required</p>

Annex 3: Institutional and Legal Framework

(A) Preface

This Chapter describes the legal and administrative framework for the proposed Subproject. It lists the national laws and the international requirements pertinent to the Subproject. The World Bank (WB) has defined 10 environmental and social safeguard policies that must be considered for its financed projects. The applicability of such policies to this Subproject are outlined and discussed in the subsequent sections.

In case of any discrepancy between the requirements of Iraqi legislations and the requirements of the WB, the stricter requirements will be applied. In the case where national requirements are non-existent for specific issues or pollutants, the WB requirements will be adopted.

(B) National Policy, Legal, Regulatory and Administrative Frameworks

(1) General Environmental Legislations

Law no. 27 for the year 2009: Protection and Improvement of Environment

The law aims at protecting and improving the environment through mitigating existing damages or damages likely to be caused. The Law necessitates the provision of the Environmental Impact Assessment (Article 18) for any new developmental project in the country. The Law addresses the issues of regulation of air pollution and noise reduction, protection of soils, biodiversity conservation, management of hazardous waste, protection of the environment from pollution resulting from exploration and extraction of oil and natural gas, and establishment of an environmental protection fund. Additionally, the law specifies the necessity of protection of water resources from pollution, and it regulates the discharge of effluents independently of their origin. Moreover, the law specifies the punitive measures for violation of the specified regulations.

Law no. 37 for the year 2008: The Ministry of Environment

This Law was legislated to define the institutional arrangements of the Ministry of Environment. It outlines policies, and roles and responsibilities towards protecting the environment.

(2) Applicable Environmental, Social and Antiquities Legislations in Iraq

Air Quality

Regulation no. 4 of the year 2012: Ambient Air Quality

This regulation aims to protect ambient air quality and to control sources of pollution. The regulation necessitates that sources emitting air pollutants abide by national limits and use monitoring equipment to ensure compliance with standards. It also prohibits the burning of all types of wastes indoors or in open air, or next to a residential region or near water bodies.

Noise

Law no. 41 of the year 2015: Noise Protection and Control

This Law identifies maximum permissible noise limits during day and nighttime for industrial, commercial and residential zones as follows

Area type	Limit during day time (dB)	Limit during night time (dB)
Industrial	70	65
Commercial	65	60
Residential	55	45

Law no. 89 of the year 1981, amended by Decree No.54 of 2001: Public Health

In addition to addressing various issues related to the population's health, the Law stipulates the provision of the safety of drinking water and drinking water quality standards.

Waste Management

Instructions no. 2 of 2014 on Environmental Protection from Municipal Waste:

The instruction aims at protecting the urban environment with a proper management of wastes, such as solid materials, recyclable and non-recyclable derived from domestic, commercial and professional activities, from the cleaning of streets, gardens, farms and public places, and construction waste. The Ministry of Municipalities and Public Works and the Municipality of Baghdad are responsible for collecting and transporting waste materials in places for the treatment and disposal; for creating the necessary supplies and equipment; for identifying appropriate locations and the development of containers to throw municipal waste; for distributing of special bags for waste producers; and for identifying waste collection dates. The aforementioned Ministry and Municipality have to decide on how to treat the reusable materials and dispose of others through landfills. Special provisions are established for waste weighing more than 50 kilograms, as well as for farm owners and investors in farming.

Directive No. (67) of 1986 Regulating the Debris Collection Areas: debris disposable should be done in areas with stable geology and avoid sitting near particularly vulnerable or sensitive ecosystems and groundwater and surface water resources.

Occupational Health and Safety

Instructions no. 12 of the year 2016: Occupational Health and Safety

The instructions provide for the enforcement of occupational health and safety provisions at places of work and establish the functions and duties of employers and employees with regard to occupational health and safety which are to provide and maintain safe working procedures and operations, ensure awareness of all potential work related risks and hazards and to develop preventive strategies against them, provide appropriate training to all concerned to work safely and effectively.

For the projects of the Rehabilitation of Civil Works, the occupational health and safety primarily focuses on work equipment and protective gear

Law No. 6 of 1988 concerning the National Commission for Occupational Hygiene and Safety governs the enforcement of occupational health and safety regulations.

The Law establishes the duties and responsibilities of employer's regarding occupational health and safety, the functions of safety commissions at places of work, and it regulates the responsibilities and duties of workers with respect to occupational health and safety.

Directive No. 4 of 1993 concerning Occupational health, Protection of Workers against Vibration, Pursuant to Sections 3 and 105 of the Public Health Act (No. 89 of 1981)

It establishes work place procedures designed to minimize vibration and any harmful effects that workers might be exposed to. It also stipulates the maximum total daily limits for occupational

Labour Laws

Iraq recently enacted Law 37/2015 (the Iraqi Labour Law), which governs employment relationships in most of Iraq. To date, no known reforms are being considered for Iraq. In addition to this law, the respective government ministries may issue instructions or regulations that affect employment law. The law covers all aspects of employment, including:

- the definition of 'workers';
- hiring and termination;
- health and safety;
- leave;
- wages;
- collective bargaining; and
- avenues for complaints and redress.

The law distinguishes foreign workers from Iraqi workers, but all workers must be fully documented in order to legally work in Iraq. The Iraqi Labour Law does not distinguish between employees and contractors. The law applies to all 'workers', which is anyone working under the supervision of an employer in return for a wage. The law does distinguish between permanent work and work for a defined period, but there are certain requirements that must be met under the law in order to ensure that a contract for a determined period does not convert to a permanent contract.

Article 6, chapter 3 of Iraqi Labor Law, states that the minimum age for employment is 15 years old. However, Iraq is also signatory to the 1989 International Convention on the Rights of the Child, which defines everyone under the age of 18 as a child who must have special protection and care. Therefore, according to best international practices and based on the elaboration in the Iraqi labor law about limitation in youngsters work, child over the minimum age of 15 and under the age of 18 should not be employed or engaged in connection with the project in a manner that is likely to be hazardous or interfere with the child's education or be harmful to the child's health or physical, mental, spiritual, moral or social development

Land Acquisition

Law no. 12 of the year 1981: Land Acquisition

The law governs the expropriation of property through acquisition and entitlement for compensation and replacement costs, cancellation of legal rights and other issues of acquisition for the public benefit.

This law will not be applicable to W06 and W07 as the construction activities will be carried out at already existing road networks. Therefore, there will not be any land acquisition or economic displacement activities.

Roads

Public Roads Law No. 35 of 2002

(C) World Bank Safeguard Policies

The WB has identified 10 environmental and social safeguard policies that should be considered in its financed projects.

World Bank safeguard operational policies and their applicability to the subproject

Safeguard Policy	Triggered	Applicability to project	Justifications
Environmental Assessment (OP/BP 4.01)	Yes	Yes	The Subproject is classified as Category B and requires an Environmental and Social Management Plan (ESMP).
Natural Habitats (OP/BP 4.04)	No	No	There are no protected areas in the vicinity of the proposed subproject
Forests (OP/BP 4.36)	No	No	Proposed Subproject areas contain no forests.
Pest Management (OP 4.09)	Yes	No	Although this OP is triggered for the EODP AF project, the proposed subproject will not involve purchasing or using of pesticides.
Physical Cultural Resources (OP/BP 4.11)	Yes	No	This OP does not apply to the neighborhoods targeted under this subproject, although it is triggered by the parent project.
Indigenous Peoples (OP/BP 4.10)	No	No	No indigenous people are identified in Iraq.
Involuntary Resettlement (OP/BP 4.12)	Yes	No	OP 4.12 will not be applicable to this subproject as the construction activities will be carried out at an already existing road network. Therefore, there will not be any land acquisition or economic displacement activities.
Safety of Dams (OP/BP 4.37)	No	No	Not relevant to the proposed Subproject

Projects on International Waterways (OP/BP 7.50)	Yes	No	This policy is triggered for the whole EODP-AF but this particular Subproject is not expected to affect international waterways.
Projects in Disputed Areas (OP/BP 7.60)	No	No	No disputed areas in the EODP project

World Bank Policy- Access to Information:

This Policy governs the public accessibility of information in the Bank’s possession. The World Bank allows access to any information in its possession that is not on a list of exceptions.

This Policy is based on five principles:

- Maximizing access to information;
- Setting out a clear list of exceptions;
- Safeguarding the deliberative process;
- Providing clear procedures for making information available; and
- Recognizing requesters’ right to an appeals process.

(D) Relevant Environmental, Health and Safety Guidelines (EHS)³³

The EHS guidelines entail the effective methods for managing environmental, health and safety issues in accordance with WBG requirements. This includes understanding the likelihood, magnitude and priority of the EHS risks. The EHS guidelines includes 4 primary sections and respective sub sections

5. Environmental Guidelines

- a. **Ambient Air Quality** – Limits and Guidelines
- b. **Hazardous Material Management** – The appropriate Methods for managing hazardous waste and instructions on community and worker protection
- c. **Waste Management** – Instructions on waste management and planning, waste prevention and safe waste disposal
- d. **Noise** – Methods for prevention and control of Noise, and the applicable noise limits for different activities and exposure period
- e. **Contaminated Land** – Management approaches for contaminated land due to different hazardous substances or waste or oil. Includes Risk Reduction measures

6. Occupational Health and Safety Guidelines

- a. **Communication and Training** – Ensuring there is an appropriate level of communication between workers and management, and that there is sufficient training for all workers prior to operations

³³ Environmental, Health and Safety (EHS) Guidelines

- b. **Physical Hazards** – Methods for prevention of accidents or injuries that can occur due to exposure to mechanical or other physical works, including Noise and Vibrations
- c. **Chemical Hazards** – Injuries and accidents that could occur due to usage of chemicals and methods of protection and prevention. Includes management of fires and explosions
- d. **PPE** – Guidance on usage of PPE
- e. **Monitoring** – Efficient monitoring of occupational health and safety programs and mitigation measures. This includes the Occupational Accident Reporting frequency

7. Community Health and Safety Guidelines

- a. **Water Quality and Availability** – Ensuring the protection of nearby water resources such as groundwater and surface water sources.
- b. **Traffic Safety** – Includes the potential risks and impacts on traffic and from traffic that occurs due to the project. Includes recommended measures to deal with traffic risk
- c. **Disease Prevention** – Includes the recommended interventions and methods to protect the community from communicable diseases and vector borne diseases
- d. **Emergency Response and Preparedness** – This sub section requires a plan and response system in place to respond to any potential emergency that could occur due to the works or operation.

8. Construction and Decommissioning Guidelines

- a. **Environment** – covers the different environmental factors that could be affected by the construction activities including soil erosion, disturbance to water bodies, disturbance to air quality, wastewater discharges etc.
- b. **Occupational Health and Safety** – Different OHS risks due to construction or decommissioning works.
- c. **Community Health and Safety** – Different Hazards that can occur due to the project and affect the surrounding community.

تفاصيل الحالة

إكمال من حالة السكوي

نوع المشروع

المحافظة

المنطقة

اسم المشروع (إذا كان معروفًا)

وصف مختصر للحالة

يرجى وصف موجز للحالة الخاصة بالمشروع والمعلومات والمعلومات ذات الصلة بالمشروع المذكور. المسمى المستخدم في الموقع.

تفاصيل الاتصال

إذا تم تقديم الملاحظات بطلب من شخص آخر

فاي من علاقات بالشخص الذي يتم تقديم الملاحظات نيابة عنه؟

- انقر لتحرير العنود -

تفاصيل الشخص الذي يتم تقديم الملاحظات نيابة عنه

الاسم الأول

أكتب الاسم الأول

اسم الأب

أكتب اسم الأب

اسم العائلة

أكتب اسم العائلة

العنوان

رقم المنزل

رقم الشارع

القضاء أو التقية أو المدينة

ما هي وسيلة الاتصال المفضلة لديك؟ (الافتراضي)

- انقر لتحرير العنود -

هل يواجه هذا الشخص أي من التحديات التالية التي يجب مراعاتها أثناء الاتصال به أو الرد عليه؟

- انقر لتحرير العنود -

الأداة التي يمكنك مشاركتها مع الصندوق لتوثيق الحالة

أدخل عنوان البريد الإلكتروني

أدخل عنوان الهاتف

إذا كنت شكوي، هل انتدب ان ابره إمكانية معالجة شكوى؟ إذا كانت الإجابة بـ "نعم"، يرجى تحديد نوع الشكاوى التي انتدبها بهذا الشكل:

هل لديك أية اعتراضات على ما يلي:

على جمال من شوارع المدينة المشيخ أحمد من التوزيع بالمملكة مع الشيوخ؟

أجزء منظمة مع المجتمع من وحدة نظم الشكاوى من صندوق هذه اعمار المناطق المتضررة من العميات الزراعية بعد هجمات على ارض تلك المنطقة من قبل (شعوب - مكنون - استعمار) الجاهل من ريفك من اناجيا؟

يرجى ملاحظة: أنه يجب لجميع المواطنين الوطن من قرار تبعية الشكاوى التي قدمت الى EOPD GRM . يجب للمستخدمين اليه تلقي الشكاوى الغير واضير من تبعية شكاوهم اعادة تقديم شكاوهم الى الاستعمار من وحدة تلقي الشكاوى (REFATTO GRM Coordinator) في غضون 30 يوم من تلقي الرد على الحالة السابقة. التأخر هو التمهيد للقضاء على حسابك المستمرة.

ارسال الشكاوى

ENGLISH

ARABIC

انسخة الرئيسية



صندوق اعادة اعمار المناطق المتضررة من العمليات الزراعية

FEEDBACK UPTAKE FORM FOR GRIEVANCE REDRESS MECHANISM

Please answer the following questions

Do you wish to remain anonymous?

- Yes or No -

Contact Details

If you do not wish to remain anonymous, then please fill out the following information [Please fill in your details even if you are complaining on behalf of someone else]

First Name	Father's name	Family Name:
<input type="text"/>	<input type="text"/>	<input type="text"/>

Address

Town or city	Street name	House number or name
<input type="text"/>	<input type="text"/>	<input type="text"/>

What is your preferred means of communication

- optional -

EODP

FEEDBACK UPTAKE FORM FOR GRIEVANCE REDRESS MECHANISM

Complaints phone number**80011111****About this form**

This Feedback Uptake Form (U001) is intended for stakeholders, including beneficiaries and other persons affected by the Emergency Operation for Development Project (EODP) to submit their feedback (including complaints, questions, suggestions and compliments).

This form is designed to document information that is required by the EODP GRM (grievance redress mechanism) to investigate, address and respond to the feedback that has been submitted by beneficiaries, affected persons and citizens. The EODP GRM is composed of REFAATO's GRM unit for EODP and the GRM units of EODP PMTs for the ministries and governorates, PMTs.

REFAATO's GRM unit for EODP, the GRM units of the Ministry and Governorate EODP PMTs and Field Engineers should have this form available to fill out when and if stakeholders contact them or when they are in the field and interact with stakeholders. This form is available online on the REFAATO Website, Facebook and other social media managed by REFAATO and the websites of the Ministry and Governorate EODP PMTs.

Next >

Details of the person on whose behalf feedback is being submitted

First Name	Father's name	Family Name
<input type="text"/>	<input type="text"/>	<input type="text"/>
Address		
<input type="text"/>		
Town or city	Street name	House number or name
<input type="text"/>	<input type="text"/>	<input type="text"/>
WhatsApp / Viber / Facebook / Messenger	Email	Phone
<input type="text"/>	<input type="text"/>	<input type="text"/>
Do you have any physical disabilities		
<input type="text" value="- Yes Or No -"/>		

Details of Feedback

Type of Project

Governorate

City

Project Name (if it is known)

Detailed description of feedback

Please provide a description of your feedback. For complaints and queries, please describe in detail the grievance/complaint/recommendations you have.

Annex 5: UXO Clearance Letter

Annex 6: Covid-19 Measures – WBG Response to Covid-19 - Health and Safety Issues in English

Civil Works (conversion and construction of medical facilities including isolation facilities)

Older people and people with pre-existing medical conditions (including asthma, diabetes, and heart disease) appear to be more vulnerable to becoming severely ill from COVID-19³⁴.

The following table lists the health and safety risks and impacts associated with civil works financed by the WB in response to the COVID-19 outbreak. Potential mitigation measures and references to sources of additional advice and information are provided.

Activity	Risks and Impacts	Mitigation Measures
Design activity – hospitals, clinics	The focus on treatment and care is progressed disproportionately with the need for adequate medical waste infrastructure.	<p>Ensure that the designs for medical facilities also consider the collection, segregation and treatment of medical waste.</p> <p>There is no evidence that direct, unprotected human contact during the handling of healthcare waste has resulted in the transmission of COVID-19.</p> <p>The treatment of healthcare wastes produced during the care of COVID-19 patients should be collected safely in designated containers and bags, treated and then safely disposed.</p> <p>Open burning and incineration of medical wastes can result in emission of dioxins, furans and particulate matter, and result in unacceptable cancer risks under medium (two hours per week) or higher usage.</p> <p>If small-scale incinerators are the only option available, the best practices possible should be used, to minimize operational impacts on the environment. Best practices in this context are:</p> <ul style="list-style-type: none"> • effective waste reduction and segregation, ensuring only the smallest quantities of combustible waste types are incinerated; • an engineered design with sufficient residence time and temperatures to minimize products of incomplete combustion; • siting incinerators away from health-care buildings and residential areas or where food is grown;

³⁴ The SARS-CoV-2 virus has been identified as the cause of COVID-19.

Activity	Risks and Impacts	Mitigation Measures
		<ul style="list-style-type: none"> • construction using detailed engineering plans and materials to minimize flaws that may lead to incomplete destruction of waste and premature failures of the incinerator; • a clearly described method of operation to achieve the desired combustion conditions and emissions; for example, appropriate start-up and cool-down procedures, achievement and maintenance of a minimum temperature before waste is burned, use of appropriate loading/charging rates (both fuel and waste) to maintain appropriate temperatures, proper disposal of ash and equipment to safeguard workers; • periodic maintenance to replace or repair defective components (including inspection, spare parts inventory and daily record keeping); and • improved training and management, possibly promoted by certification and inspection programs for operators, the availability of an operating and maintenance manual, visible management oversight, and regular maintenance schedules. <p>Single-chamber, drum and brick incinerators do not meet the BAT requirements under Stockholm Convention.</p> <p>Small-scale incineration should be viewed as a transitional means of disposal for health-care waste.</p> <p>Alternative treatments should be designed into longer term projects; such as steam treatment methods. Steam treatment should preferably be on site, although once treated, sterile/non-infectious waste may be shredded and disposed of in suitable waste facilities.</p> <p>See WHO Safe management of wastes from health-care activities³⁵.</p>
Construction activity – hospitals, clinics, mortuary	Land taking for the construction of new and expansion of existing hospitals.	<p>Follow ESS5 and IPF Policy para 12 on E&S requirements in situations of urgent need of assistance.</p> <p>Apply ESHGs to implementation of projects.</p>

³⁵ https://apps.who.int/iris/bitstream/handle/10665/85349/9789241548564_eng.pdf?sequence=1

Activity	Risks and Impacts	Mitigation Measures
	Injury during the construction of new buildings or refurbishment of existing buildings.	
Design and operation of facilities, including triage, isolation (or quarantine) facilities	The design of the facility and the operating procedures will help prevent spread of infection	<p>For patients with possible or confirmed COVID-19, isolation rooms should be provided and used at medical facilities. Isolation rooms should:</p> <ul style="list-style-type: none"> • be single rooms with attached bathrooms (or with a dedicated commode); • ideally be under negative pressure (neutral pressure may be used, but positive pressure rooms should be avoided); • be sited away from busy areas (areas used by many people) or close to vulnerable or high-risk patients, to minimize chances of infection spread; • have dedicated equipment (for example blood pressure machine, peak flow meter and stethoscope), but should avoid excess equipment or soft furnishings; • have signs on doors to control entry to the room, with the door kept closed; • have an ante-room for staff to put on and take off PPE and to wash/decontaminate before and after providing treatment. <p>An operation manual should be prepared prior to the opening of isolation rooms to describe the working procedures to be taken by healthcare workers to protect themselves and prevent infection escape while providing treatment. The operational procedures should be of a standard to meet guidance from WHO and/or CDC on infection control:</p> <ul style="list-style-type: none"> • WHO interim guidance on Infection prevention and control during health care when novel coronavirus (nCoV) infection is suspected³⁶; • WHO technical brief water, sanitation, hygiene and waste management for COVID-19³⁷;

³⁶ [https://www.who.int/publications-detail/infection-prevention-and-control-during-health-care-when-novel-coronavirus-\(ncov\)-infection-is-suspected-20200125](https://www.who.int/publications-detail/infection-prevention-and-control-during-health-care-when-novel-coronavirus-(ncov)-infection-is-suspected-20200125)

³⁷ <https://www.who.int/publications-detail/water-sanitation-hygiene-and-waste-management-for-covid-19>

Activity	Risks and Impacts	Mitigation Measures
		<ul style="list-style-type: none"> • WHO guidance on infection prevention and control at health care facilities (with a focus on settings with limited resources)³⁸; • WHO interim practical manual for improving infection prevention and control at the health facility³⁹; • CDC Guidelines for isolation precautions: preventing transmissions of infectious agents in healthcare settings⁴⁰; and • CDC guidelines for environmental infection control in healthcare facilities.⁴¹
Improve access to support and treatment for the disadvantaged vulnerable groups	Some vulnerable groups (especially the elderly or those with pre-existing medical conditions) may be severely affected by COVID-19 and may need additional support to access treatment.	<p>Projects should develop and commit to specific actions to ensure disadvantaged and vulnerable groups have effective treatment, whether in medical facilities or in the community.</p> <p>Similarly, where IP communities are involved, need to follow ESS7 and IPF policy Para 12 on emergency provision.</p>
Employment of workers	Workers do not receive the care needed if infected with COVID-19.	Contractors should ensure that contracted workers have medical insurance, covering treatment of COVID-19.
Transient and expat workforce	Workers that are mobilized from abroad or returning from abroad become vectors for transmission of disease to construction projects. Workers that travel from other regions may also provide a vector for passing infection onto work sites.	<p>Expats or transient workers should adhere to national requirements and guidelines with respect to COVID-19.</p> <p>Expats or transient workers coming from countries/regions with cases of the virus:</p> <ul style="list-style-type: none"> • Should not return if displaying symptoms • Should self-isolate for 14 days following their return <p>For self-isolation, workers should be provided with a single room that is well-ventilated (i.e., with open windows and an open door). If a single room is not available for each worker, adequate space should be provided to maintain a distance of at least 1 m between workers sharing a room. Workers in isolation should limit their movements in shared space, for example through timed use of shared spaces (such as kitchens</p>

³⁸ <https://www.who.int/infection-prevention/tools/core-components/facility-manual.pdf>

³⁹ <https://www.who.int/infection-prevention/tools/core-components/facility-manual.pdf>

⁴⁰ <https://www.cdc.gov/infectioncontrol/pdf/guidelines/isolation-guidelines-H.pdf>

⁴¹ [cdc.gov/infectioncontrol/pdf/guidelines/environmental-guidelines-P.pdf](https://www.cdc.gov/infectioncontrol/pdf/guidelines/environmental-guidelines-P.pdf)

Activity	Risks and Impacts	Mitigation Measures
		<p>and bathrooms) with cleaning prior to and after use of the facilities. Visitors should not be allowed until the worker has shown no signs and symptoms for 14 days, and the number of staff involved in caring for those in isolation should be kept to a minimum.</p> <p>Healthcare professionals and cleaners should visit each day (wearing the appropriate PPE and observing hygiene requirements and make appropriate arrangements for supplying food and water to the kitchens for the workers in isolation. Further information is provided by WHO in Home care for patients with suspected novel coronavirus (COVID-19)⁴².</p>
Labour camps	Close working and living conditions of workforce may create conditions for the easy transmission of COVID-19 and the infection of large numbers of people.	<p>Develop contingency plans with arrangements for accommodation, care and treatment for:</p> <ul style="list-style-type: none"> • Workers self-isolating • Workers displaying symptoms • Getting adequate supplies of water, food and supplies <p>Contingency plans also should consider arrangements for the storage and disposal arrangements for medical waste, which may increase in volume and which can remain infectious for several days (depending upon the material).</p> <p>Ensure medical facilities are stocked with adequate supplies of medical PPE, as a minimum:</p> <ul style="list-style-type: none"> • Gowns, aprons • Medical masks and some respirators (N95 or FFP2) • Gloves (medical, and heavy duty for cleaners) • Eye protection (goggles or face screens) <p>Medical staff at the facilities should be trained and be kept up to date on WHO advice and recommendations on the specifics of COVID19</p> <p>The medical staff/management should run awareness campaigns and posters on site advising workers:</p>

⁴² [https://www.who.int/publications-detail/home-care-for-patients-with-suspected-novel-coronavirus-\(ncov\)-infection-presenting-with-mild-symptoms-and-management-of-contacts](https://www.who.int/publications-detail/home-care-for-patients-with-suspected-novel-coronavirus-(ncov)-infection-presenting-with-mild-symptoms-and-management-of-contacts)

Activity	Risks and Impacts	Mitigation Measures
		<ul style="list-style-type: none"> • how to avoid disease spread (cough/sneeze in crook of elbow; keep 1m or more away, sneeze/cough in tissue and immediately through tissue away, avoid spitting, observe good hygiene) • the need to regularly wash hands with soap and water – many times per day • to self-isolate if they think they may have come in contact with the virus • to self-isolate if they start to display any symptoms, but alert and seek medical advice <p>Wash stations should be provided regularly throughout site, with a supply of clean water, liquid soap and paper towels (for hand drying), with a waste bin (for used paper towels) that is regularly emptied.</p> <p>Wash stations should be provided wherever there is a toilet, canteen/food and drinking water, or sleeping accommodation, at waste stations, at stores and at communal facilities. Where wash stations cannot be provided (for example at remote locations), alcohol-based hand rub should be provided.</p> <p>Enhanced cleaning arrangements should be put in place, to include regular and deep cleaning using disinfectant of catering facilities/canteens/food/drink facilities, latrines/toilets/showers, communal areas, including door handles, floors and all surfaces that are touched regularly (ensure cleaning staff have adequate PPE when cleaning consultation rooms and facilities used to treat infected patients)</p> <p>Worker accommodation that meets or exceeds IFC/EBRD worker accommodation requirements⁴³ (e.g., in terms of floor type, proximity/no of workers, no ‘hot bedding’, drinking water, washing, bathroom facilities etc.) will be in good state for keeping clean and hygienic, and for cleaning to minimize spread of infection.</p>

⁴³ https://www.ifc.org/wps/wcm/connect/60593977-91c6-4140-84d3-737d0e203475/workers_accomodation.pdf?MOD=AJPERES&CACHEID=ROOTWORKSPACE-60593977-91c6-4140-84d3-737d0e203475-jqetNIh

Activity	Risks and Impacts	Mitigation Measures
		<p>To minimize pressure on PPE resources: WHO advice on the effectiveness and use of PPE by general public should be followed to ensure that the supplies are not exhausted through ineffective use – this is equally important on construction sites.</p> <p>Other measures (such as working water sprinkling systems at crushers and stock piles, covered wagons, water suppression or surfacing of haul roads etc.) should be used for dust suppression on site before relying upon the use of dust masks (which could unnecessarily reduce the availability of N95/FFP2 masks for use by medical staff performing some duties)</p>

Annex 7: Main Stakeholders Identified for the Project

Categories	Stakeholder Groups	Role/Concern
Potential Affected Communities Neighbourhoods Al Shohada Al Yarmuk Rajam Hadid	Residents of the site	<ul style="list-style-type: none"> • They are the main stakeholders. • They will be responsible of communicating with the Project and other community people.
	Vulnerable groups, i.e. women, young people, and elders	<ul style="list-style-type: none"> • They are the potential Project Affected Persons (PAPs), i.e. households and communities that will receive impacts (positive/negative) as a result of the project. • Given their vulnerable status they might be severely affected by positive or negative impacts.
Governmental sector	El Mosul Municipality	<ul style="list-style-type: none"> • The main role of the municipality authority is the provision of support to the project through mobilizing people to gain information about the project. • Permits for the state-owned lands needed for storage purposes should be prepared by the municipality. • Paving roads.
Environmental sector	The Ministry of Health and Environment (MoHE)	<ul style="list-style-type: none"> • Responsible for developing public policies related to the protection of environment and improving its quality. Also, it is responsible for issuing regulations for environmental determinants and for monitoring their implementation.
Funding Agencies	The World Bank (WB)	<ul style="list-style-type: none"> • Financiers and regulators because their safeguards will influence the implementation of the project. • Responsible for reviewing and approving safeguard documents
	REFAATO - EODP	<ul style="list-style-type: none"> • Project client, responsible for allocation of funding and prioritization of projects
Project Owner	The Mosul municipality	<ul style="list-style-type: none"> • Implementing agency overseeing activities of the Environmental and Social Management Plan
Other Governmental Entities	Nineveh Governorate	<ul style="list-style-type: none"> • Provision of data required about project sites • Taking necessary security measures. • Educating population on and implementing the GRM.
	Environmental Office within the Governorates	<ul style="list-style-type: none"> • Responsible for monitoring compliance to environmental requirements.

	Health Directorate	<ul style="list-style-type: none"> • Health directorates provide health services to local units and project labourers through the health services' providers
	Directorate for Antiquities	<ul style="list-style-type: none"> • It has a role in providing the maps that illustrate the archaeological sites near the Project areas, as well as the procedures to be followed in case of finding any antiquities.
Ministries	Ministry of Interior Affairs and Traffic	<ul style="list-style-type: none"> • They have a role in mitigating impacts related to traffic • They expressed their willingness to provide security to the project (if needed).
	Ministry of Labour	<ul style="list-style-type: none"> • They oversee working conditions and worker's occupational health and safety.
Contractors	Contractors	<ul style="list-style-type: none"> • They will be responsible for the implementation of the sub-projects as well as the ESMP
Traders and Suppliers	Traders (small scale stores)	<ul style="list-style-type: none"> • They provide workers with food and amenities.
	Small contractors	<ul style="list-style-type: none"> • They may be affected because they are situated in the project's adjacent areas.
Civil Society	NGOs (regional, local) Justice Center to Support Marginalized Groups in Iraq	<ul style="list-style-type: none"> • They support the local community by providing capacity building activities. • They play an active role in any awareness-raising activities related to the project. • They are responsible of sharing information with the community.
Media	Television Representatives Newspaper Websites Editors Social Media	<ul style="list-style-type: none"> • They disclose information about the project.