State of Palestine

Palestinian Water Authority

دولة فلسطين

سلطة المياه الفلسطينية

سلطة الميـــاه الفلسطينية

PALESTINIAN WATER AUTHORITY

Environmental and Social Management Framework (ESMF) for the Water Security Development Program (WSDP)

Final Report

Prepared by

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and

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UNIVERSAL GROUP

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ENVIRONMENTAL SOLUTIONS

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List of Acronyms

CMWU	Coastal Municipalities Water Utility
EA	Environmental Assessment
EQA	Environment Quality Authority
EIA	Environmental Impact Assessment
EM	Environmental Matrix
EMP	Environmental Management Plan
ESMP	Environmental and Social Management Plan
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESO	Environmental and Social Officer
GRM	Grievance and Redressal Mechanism
GSWSP	Gaza Sustainable Water Supply Program
HSE-MP	Health, Safety and Environment Management Plan)
IEE	Initial Environmental Examination/Evaluation
IFC	International Finance Corporation
ILO	International Labour Organization
IR	Inception Report
IUWMP	Integrated Urban Water Management Program
LVC	Land Valuation Committee
LGUs	local government units
M&E	Monitoring and Evaluation
MCM	Million Cubic Meters
MDLF	Municipal Development and Lending Fund
MDP	Municipal Development Program
MoH	Ministry of Health
MoT	Ministry of Transportation
MoTA	Ministry of Tourism and Antiques
MoPWH	Ministry of Public Works and Housing
NGOs	None Governmental Organizations
NRW	Non-Revenue Water
NSP	National Spatial Plan
OP/BP	Operational Policy/Bank Procedure
PA	Palestinian Authority
PAP	Project Affected People

PC	Project Counterpart
PCR	Physical Cultural Resources
PCU	Program Coordination Unit
PEAP	Palestinian Environmental Assessment Policy
PEL	Palestinian Environmental Law
PLA	Palestinian Land Authority
PS2	Performance Standard 2 – Labor and Working Conditions
PSI	Palestinian Standard Institute
PWA	Palestinian Water Authority
RPF	Resettlement Policy Framework
RWSMP	Rural Water Supply and Sanitation Program
SDP	Strategic Development Plan
SPs	Service Providers
ToR	Terms of Reference
UG	Universal Group for Engineering and Consulting
WB	World Bank
WASH	Water and Sanitation Hygiene
WSDP	Water Security Development Program
WSRC	Water Sector Regulatory Council
WWTP	Wastewater Treatment Plant

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0. Executive Summary

The Water Security Development Program (WSDP) of the Palestinian Water Authority (PWA) aims to improve the efficiency of the Palestinian water sector and water security in Palestine through a set of measures and interventions along. The WSDP is made up of: Component 1: "Strengthening policy framework and institutional capacity of the water sector at national level" supports the national level to improve the business environment in the water sector. Component 2: "Improving Water Supply and Wastewater Services in Gaza" will support improving the water system efficiency and institutional capacity to be able to comply with the ongoing and future water supply and the proposed investment strategy. Component 3: "Water Supply and Wastewater Services Management in West Bank" is linked to Integrated Urban Water Management Program (IUWMP) to be implemented in the West Bank.

Of the three components, Components 2 and 3 are likely to have significant environmental and social impacts. These are addressed in this Environmental and Social Management Framework (ESMF).

ESMF Objectives

The ESMF is to improve decision making and ensure that environmental and social effects of activities and interventions are well mitigated. The specific objectives are:

- To identify potential environmental policies, legal and institutional framework pertaining to the WSDP and individual infrastructure sub-projects that may add to the environmental risks and entails cumulative impacts;
- To establish clear directives and methodologies for the environmental and social screening and scoping of projects within the framework of the WSDP;
- To assess the potential environmental and social impacts of the projects whether positive or negative, and propose mitigation measures which will effectively address negative impacts;
- To guide the development of site specific ESMPs, which will be required for any sub-project triggering OP 4.01, and in accordance with the relevant local legislation.

Justification of the ESMF

This ESMF applies to all sub-projects and other activities to be financed under WSDP. It provides a general impact identification framework to assist sub-project implementers to screen the sub-projects and institute measures to address adverse environmental and social impacts. During the application of the WSDP sub-projects, specific information on project locations, land to be impacted and requirements, bio-physical features etc., may trigger the

preparation of sub-project site specific ESMPs (project categories B and C) and, in special cases (project category A), also a sub-project specific Environmental and Social Impact Assessment (ESIA).

This ESMF is guided by the applicable Palestinian regulatory texts in the environment and water sectors, as well as the World Bank's environmental and social safeguards policies. Accordingly, the WSDP is to finance projects that are under categories B and C status as its potential negative environmental impacts are neither unprecedented nor are they as critical as those of Category A. The program is also to consider financing Category A projects subject to the Environmental Assessment (EA) and the results of the sub-project ESIA.

Institutional and Implementation arrangements

The PWA will implement the WSDP. The Program Coordination Unit (PCU) will recruit an Environmental and Social Officer (ESO) who will have oversight responsibility for implementing this ESMF. His responsibilities will include coordinating with the Environment Quality Authority (EQA) to monitor the compliance of the water and wastewater Service Providers (SPs); including Municipalities, Local Government Units (LGUs), and water utilities, as well as contractors, with the Palestinian Environmental Law (PEL), the Palestinian Environmental Assessment Policy (PEAP) and this ESMF.

Environmental and Social risk screening

The ESMF provides a screening process to: (i) define the specific procedure to be followed in environmental permit applications to EQA; (ii) identify potential key environmental and social impacts; (iii) determine appropriate environmental category, according to OP 4.01; (vi) review and approve projects; and; (v) identify mitigation and monitoring indicator measures. Environmental and Social Screening Check lists are presented in Section 5.3 of this ESMF.

The likely environmental and social risks associated with the potential water and wastewater sub-projects are linked primarily to noise, air pollution, traffic disturbance, cut of water supply, etc. These impacts could become a source of grievance. It is also possible that interruption of services during construction, could become a source of grievance.

Some of the likely impacts and suggested mitigation measures are presented in **Table (1)** and are detailed in the ESMF.

Environmental and Social Monitoring

Environmental and social monitoring programs are required to be implemented to address all activities that have potentially significant impacts on the environment during normal operations and upset conditions. Environmental monitoring activities are to be based on

direct or indirect indicators of emissions, effluents, and resource use, applicable to the particular sub-project of the WSDP.

Monitoring frequency shall be sufficient to provide representative data for the parameter being monitored. Monitoring shall be conducted by trained individuals, following monitoring and record-keeping procedures and using properly calibrated and maintained equipment. Monitoring data shall be analyzed and reviewed at regular intervals and compared with the operating standards so that any necessary corrective actions can be taken (IFC, 2006).

Table (1): Likely impacts and suggested mitigation measures of the sub-projects of WSDP

Issue	**Likely Impact**	**Mitigation Measures**
Noise	Construction noise/ vibration temporarily affect sensitive receptors during installation works. The principal source of noise during the operation phase is associated with the operation water and wastewater pumping stations.	• Inform neighbors of work schedule and only work during daytime; • Working hours complying with the labor law in Palestine. • Recommended noise management action includes the use of noise suppression shields and mufflers as well as the location of noise generating sources away from residential or other noise sensitive receptors to meet the noise emissions levels provided in the International Finance Corporation (IFC) General Environmental Health and Safety (EHS) Guidelines.
Air Quality	Dust due to construction, rehabilitation, loading and unloading of material from/to the site.	Spoil piles shall be transported daily in covered trucks. Mechanical excavation shall be used where possible. Best construction practices shall be employed, water spray and proper fencing shall be applied to minimize dust spread out.
	Air pollutants and emissions emitted temporarily during construction/ rehabilitation.	
	Limited odors may be generated during construction out of construction equipment and vehicles.	• Vehicles and construction machinery should be required to be properly maintained and to comply with relevant emission standards; • The vehicles, in particular, the trucks should not be over loaded;

Issue	Likely Impact	Mitigation Measures
		to minimize exhausts emissions; • Assure the use of well-maintained mechanical construction equipment.
Land use and planning	As pipelines will be buried, land use where pipes will be laid will only be affected temporarily.	Application of proper engineering practices during pipes laying and construction.
Properties and livelihood impacts	Acquiring lands for the construction of water tanks Impacts on livelihood and social properties. For the pipes to be laid on the ground, land will be needed.	• Land will be acquired, for any of the infrastructure, based on the principles of the Resettlement Policy Framework (RPF) and after site specific Resettlement Action Plans (RAPs) are prepared and disclosed. • The targeted municipality will purchase lands from present property owners at replacement value/ current market rate; Owners will need to be compensated for livelihood impacts at replacement value and at current market rate in accordance to the RPF prepared for the project. • The affected people shall be compensated for their lands as per the RPF, where and as applicable.
Other social impacts such as restriction of access to business'/residences during construction, influx of construction labor	Loss of income during the construction. Restriction of access to houses and business during the construction, disturbances of services (e,g. electricity, water, etc.) during the construction. Follow of labor the area, causing disturbances even conflict in the neighborhoods.	• Community outreach and sensitization, , establishment of easily accessible feedback mechanisms, strict requirement for workers through contractors' contracts.
Infrastructure and Public Services	Construction/ rehabilitation will temporarily disrupt traffic patterns in the vicinity of sub-project	• Potential access restrictions during construction will be localized and temporary. The Contractor shall notify receptors at least one week

Issue	Likely Impact	Mitigation Measures
	facilities, as well as disruption of businesses or agriculture, etc. The implementation of the proposed sub-projects will improve water and wastewater services in the targeted communities.	in advance of the schedule and duration of construction. • The Contractor shall also coordinate with providers of fire and police protection and hospitals to ensure continued access during construction • The affected people shall be compensated for the duration of the time that they cannot work on their lands or continue their businesses.
	Temporary impacts to services and utilities during construction such as interruption of water supply service during installation of sewer pipelines	• As applicable, conduct underground utility searches prior to construction. • Citizens, businesses and public facilities will be informed of the water supply cutting schedule. • Emergency service providers shall be provided with contact names, locations, etc.
Solid Waste	Poor management and piling up of construction waste may cause pooling and flooding, as well as an unpleasant visual impact.	• Unusable construction wastes shall be moved, removed, and disposed of at an approved dumpsite in coordination with the targeted LGU. • Reusable piles of material produced from excavation shall be stored properly for refilling after pipelines are installed.

Issue	Likely Impact	Mitigation Measures
Public Safety and Occupational Health	Average level of hazard to construction workers Potential health hazards on residents during construction, i.e. accidents at excavation sites Proposed sub-projects implementation will improve the existing and future quality of life in the targeted communities with respect to public health.	• Contractor will adhere to health and safety regulations and Labour Law. • Contractors are required to develop proper emergency responses in advance, which shall be coordinated and approved by PWA and the PCU, in timely manner. • First aid equipment must be available on site. • Provision of awareness and instruction signs by contractor is required. • Public awareness campaigns.
Historical and Cultural Heritage	Archeological sites may be potentially revealed during construction activity.	• Contractor will have to continuously monitor any archaeological evidence revealed during construction, and is required to immediately inform EQA and the Ministry of Tourism and Antiques (MoTA) for appropriate protection procedures.
Visual Impacts	The visual impacts may depend on the perception of the local community as well as the aesthetic value assigned to the scenery. In some cases, visual impacts of new water tanks can be significant and may be important.	• Taking into account public perception about aesthetic issues by consulting with the local community during the sitting process of new water tanks.
Socio-economic	Temporary employment opportunities	• Train local workers; • Use local labour.

Public Consultations

Public consultations are critical in preparing effective and sustainable projects. This requirement supports the participatory planning process as required by the World Bank and the Palestinian Authority (PA) national EA regulations. It is important that beneficiaries are involved in the project cycle, from the design to implementation and monitoring. The same applies to relevant stakeholders.

During the preparation of the ESMF and RPF, intensive public consultation has been conducted by the consultant. Visits to sample municipalities have been conducted, where information about on-going and potential water and wastewater projects have been collected. Ramallah, Qalqiliya, Anabta, Tulkarem, Jenin, Hebron, Tubas, Jericho, Gaza City, Khan-Younis and Rafah are among the visited cities and municipalities. Further consultations with the public and social entities, NGOs and institutions have been conducted by the social expert during the first week of December, 2017. The consultation is detailed in the RPF report.

To facilitate meaningful consultations during sub-project implementation, where required, PWA, LGUs as well as any relevant institutions should provide all relevant material and information in a timely manner, and in a form and language that are understandable to the public. The location of the relevant documents should be advertised through commonly used media. Depending on the public interest in the potential impacts of the sub-project and its EA category/type, a public hearing may be required to better convey concerns.

Capacity Building and Training for ESMF

Effective implementation of the ESMF will require adequate capacity enhancement for WSDP implementing institutions and other stakeholders. This is covered by sections 8.3 and 8.4 of this ESMF.

1. Introduction

PWA has instituted a Strategic Development Plan (SDP) (2017-2022) to improve the water sector in West Bank and Gaza. The SDP focuses on institutional development as a main pillar to supports the sector reform. PWA is aiming through the SDP on establishing sustainable and financially viable water service delivery institutions, enhancing water and wastewater services delivery, improvement of water resources and water supply and wastewater systems.

The Water Security Development Program (WSDP), financed by the World Bank, is aligned with the SDP. It will support the institutional capacity building at the national level to improve business planning and water resource management and support improving water and wastewater services provision at the local level for a number of utilities in West Bank and the Coastal Municipal Water Utility (CMWU) in Gaza. The WSDP program will provide long-term support through a programmatic and performance-based approach.

As per World Bank requirements, PWA is responsible for carrying out all safeguards preparation. PWA has contracted UG and EcoConServe to conduct Environmental and Social Management Framework (ESMF) and Resettlement Policy Framework (RPF) for the WSDP. A framework approach is selected, based on the fact that infrastructure investments will be fully identified during program implementation. The ESMF

(i) describes the generic environmental and social impacts and mitigation measures of potential water supply and wastewater investments envisaged under the WSDP in Gaza and West Bank,

(ii) sets the standards, which will guide sub-project screening, and preparation of Environmental and Social Management Plans (ESMP) for individual infrastructure sub-projects financed under the program.

In parallel to this assignment, PWA is conducting an Environmental and Social Impact Assessment (ESIA) for the investments, which constitute the desalination plant that will be constructed in Gaza. Some of these investments are expected to be financed through the WSDP program. As per the World Bank Environmental Assessment Policy, PWA is committed to conducting ESIA and/or ESMP for all investments (projects) financed under the WSDP program, once fully identified. The annexed ToR (Annexes 9.11 and 9.12) provide guidance for the preparation of the ESIA/ESMP to be carried out for identified investments during program implementation. Template ESMP (Annex 9.5) is also provided.

2. WSDP Description

2.1 WSDP Key Components

The key components of the WSDP Program are:

Component 1: Strengthening policy framework and institutional capacity of the water sector at national level. The WSDP will support the national level to improve the business environment in the water sector:

(i) improve the integrated water resources management through the continuation of the reform process of the water sector restructuring and setting the general water policies, strategies and plans, etc.
(ii) develop policies, financing mechanisms and provide technical assistance, capacity building and guidance to local governments service providers for improving and reforming service delivery, coordination and collaboration with the private sector, and service provision to the poor.
(iii) improve the effectiveness of investments through performance incentives targeted technical assistance and capacity building activities for the service providers.

In addition, the WSDP will support:

(i) monitoring and controlling compliance of the service providers to the set standards and regulations to incentivize for better performance,
(ii) regulating water and wastewater services operations,
(iii) introducing measures for the service providers' sustainability, and
(iv) developing database with technical, financial and statistical information and dissemination of periodical reports.

Component 2: Improving Water Supply and Wastewater Services in Gaza. The WSDP will support improving the water system efficiency and institutional capacity to be able to comply with the ongoing and future water supply and the proposed investment strategy:

- ***Improvement, Rehabilitation and Configuration of Water Supply Facilities***. This will finance construction and/or rehabilitation of water wells, concrete water tanks, and associated booster-pumping stations, development of transmission mains and distribution networks, water meters and improved disinfection. Activities will be included to improve energy efficiency and Non-Revenue Water (NRW) in order to improve system efficiency and financial sustainability.
- ***Upgrading and Maintaining of the Wastewater Systems.*** This will focus on efficient and continuous operation and maintenance for wastewater systems and treatment facilities,

increasing pumping capacity, security and safety measures, upgrading of electro-mechanical systems, improving energy efficiency, connecting new neighbourhoods or rehabilitating existing networks, in addition to activities pertaining to the improvement and expansion of storm water collection.

- ***CMWU Capacity Building and Operational Support.*** This will include the provision of technical assistance to improve CMWU management system and to strengthen the coordination and participation in the development process. In addition to enhancing customer services, it will update and implement tariff regulation, including conducting customer outreach and public awareness campaign, to introduce new activities and improve collection of fees, improve and implement citizen engagement and gender policies at the service delivery level. This sub-component will also support the operations of CMWU by financing the purchase of chemicals, chlorine, detergent, and fuel to run the water and wastewater facilities in Gaza Strip.

Component 3: Water Supply and Wastewater Services Management in West Bank. This component is linked to Integrated Urban Water Management Program (IUWMP) to be implemented in the West Bank. It will include the following areas of Intervention:

- ***Establishment of Urban Water Utilities.*** The establishment of water utilities to achieve sustainable water management is main activity under the WSDP. This will complement the ongoing support under the Hebron Wastewater Management Project in building the capacity of Hebron Municipality Water and Wastewater Department and the plan to establish a water utility. Therefore, this sub-component will include the provision of technical assistance to support the establishment of Urban Water and Wastewater Utilities in Hebron and other major utilities in the West Bank.
- ***Improvement of Water and Wastewater Systems.*** The financing support under this sub-component is performance-based, which will support investments based on results achieved in the aforementioned sub-component. It will finance improvement of NRW, the rehabilitation of water wells, construction and rehabilitation of concrete water tanks, installation of associated booster pumping stations, development of transmission mains and distribution networks, and replacement of water meters. Efficient and continuous operation and maintenance for wastewater systems and treatment facilities are also included, as well as increasing the pumping capacity, security and safety measures, upgrading of electro-mechanical systems, improving energy efficiency, in addition to connecting new neighborhoods or rehabilitating existing networks. This sub-component will also include activities pertaining to the improvement and expansion of storm water collection.

2.2 WSDP Implementation Arrangements

The overall WSDP implementation arrangements would entail three levels. At the apex is PWA as the formal Project Counterpart (PC) to the project. Project Coordination Unit (PCU) will be established to coordinate the program implementation and reporting.

In addition to the PC and PCU, there will be separate provider contracts generated for the sub-projects to be undertaken under the WSDP, namely the contracts for water and wastewater services, capacity building and Water and Sanitation Hygiene (WASH). After that, the role of private sector investors comes.

The PCU will be responsible for project procurement and management, safeguards, and Monitoring and Evaluation (M&E) including annual work planning and progress reporting and oversight of the Performance Contracts. The PCU will be staffed accordingly and report to the PC.

2.3 Institutional Structure

Chart (1) depicts the institutional structure for the implementation of the WSDP. PWA as the PC will be the signatory of the WSDP and the recipient of the World Bank's Grant, as well as reporting back to the Bank. The Grant will be distributed through a designated account. As stated above, the PCU will be responsible for the overall implementation of the project and management of the account, fiduciary aspects including financial management, incurring expenditures and making payments.

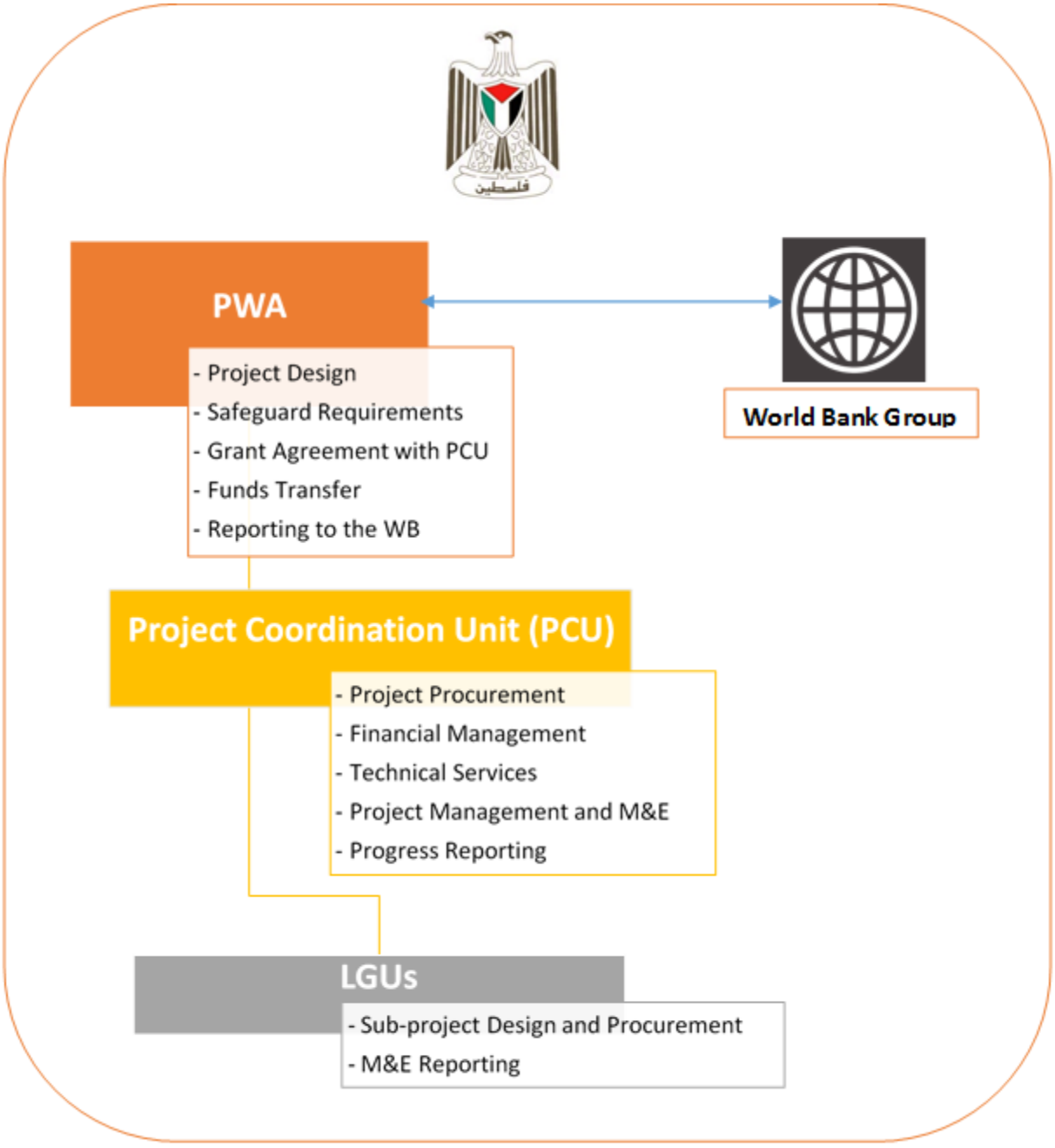

Chart 1: WSDP Institutional Structure

3. Environmental Policy and Legal Framework

3.1 Applicable Laws

The WSDP will be implemented in compliance with applicable Palestinian laws, policies and regulations, as well as the applicable World Bank safeguard policies and relevant ratified international laws and treaties.

The Palestinian Authority (PA) is the borrower of the Project, while the PWA is the executing agency and the PC. The legal affairs are administered through relevant ordinances and legislation applicable respectively to the Gaza Strip and the West Bank. These include the laws and ordinances adopted into the PA legal regime in 1994, based on all laws in force prior to 1967.

The legal and institutional framework concerning the West Bank and Gaza is quite exceptional. The laws and regulations applied vary depending on whether the project is in Areas "A" "B" or "C". The relevant laws span the Ottoman regime, the British Mandatory period, the Jordanian administration of the West Bank, the Egyptian administration of the Gaza, the Israeli occupation of Palestine, and the PA administration over certain areas. However, it remains a challenge to seek remedies in the PA court system because of the uncertainty concerning enforcement and the institutional limitations of a court system operating under occupation.

3.2 Laws and Regulations Related to Environmental Management

3.2.1 Palestinian Environment Law

The Palestinian environmental legal and administrative framework has taken major strides towards protecting environmental resources and institutionalizing their sustainable management. The Palestinian Environment Law (PEL) No 7 of 1999 is comprehensive, covering the main issues relevant to environmental protection and law enforcement. It has the following objectives:

- To protect the environment from all sorts and types of pollution;
- To protect public health and social welfare;
- To incorporate environmental resources protection in all social and economic development plans and promote sustainable development to protect the rights of future generations;
- To conserve ecologically sensitive areas, protecting biodiversity, and to rehabilitate environmentally damaged areas;
- To promote collection and publication of environmental information and to raise public awareness of environmental issues.

The PEL addresses various environmental management including:

- Management and protection of various resources. Issues covered are related to land environment, air environment, water resources and aquatic environment, natural, archeological, and historical heritage protection;
- Environmental Impact Assessment (EIA) and auditing, permitting of development projects, monitoring of environmental resources and their parameters;
- Other issues addressed by the legislation include emergency preparedness, public participation, research training and public education.

Article 45 of the PEL empowers EQA to set standards for environmental impact assessment studies and to prepare the relevant rules and procedures for such studies. Articles 12 and 13 provide for the disposal of hazardous materials only under the umbrella of the EQA approval, in coordination with the specialized agencies.

The PEL further requires the EQA to cooperate with the competent authorities to follow up on the implementation of decisions that are issued concerning the environmental impact. The EQA is also required to monitor compliance with approved specifications, standards and instructions for the protection of environment and vital resources. The law further empowers EQA inspectors and other appointed inspectors to record the environmental violations and crimes that may take place and violate this law. The EQA inspectors shall also have, in cooperation with the competent departments and authorities, right of entry into the installations for the purpose of: inspecting them, taking samples, carrying out measurements, and ascertaining the application of the standards and conditions of the environment protection and prevention of pollution.

EQA is also empowered to stop, for a period not exceeding two weeks, any project works that could constitute a serious hazard to the environment. The stoppage can only be extended by a judicial order from the competent court.

3.2.2 Palestinian Environmental Assessment Policy

The Palestinian Environmental Assessment Policy (PEAP), approved through resolution No: 27-23/4/2000 has the following goals:

- Ensuring that development activities improve the standard of life, without negatively affecting the social, cultural and historical values of people;
- Preserving and sustaining the natural environment;
- Conserving biodiversity, landscapes and the sustainable use of natural resources;
- Avoiding irreversible environmental damage, and minimizing reversible environmental damage, from development activities.

EQA applies the following PEAP-defined screening process based on the requirements of relevant land use plans, to determine whether an Initial Environmental Examination (IEE) report or an EIA report is required. The screening process determines whether the project is likely to:

- Use a natural resource in a way that pre-empts other uses of that resource;
- Displace people or communities;
- Be located in or near environmentally sensitive areas such as natural reserves, wetlands, or registered archeological and cultural sites;
- Generate unacceptable levels of environmental impact;
- Create a state of public concern; or
- Require further, related development activities that may cause significant environmental impacts.

The IEE is for projects where significant environmental impacts are uncertain, or where compliance with environmental regulations must be ensured, whereas an EIA is required for projects, which are likely to have significant environmental impacts. **Chart 2** depicts the EA administrative process as to EQA.

The PEAP stated that the stakeholder consultation is mandatory when undertaking an EIA. In consultation with the proponent and the EA Committee, EQA determines the minimum requirements for stakeholder consultation. At the minimum, the proponent must meet with the principal stakeholders to inform them about the proposed project and to solicit their views about it. The methods and results of the consultations must be documented.

All mentioned laws, orders and regulations have enforcement power, the main base of the enforcement system is the Palestinian Public Health Law No 20 and the Municipality regulatory system. Enforcement actions are to be taken by the municipality directly in some cases and through the court, the police and sometimes the district governor for much complicated cases.

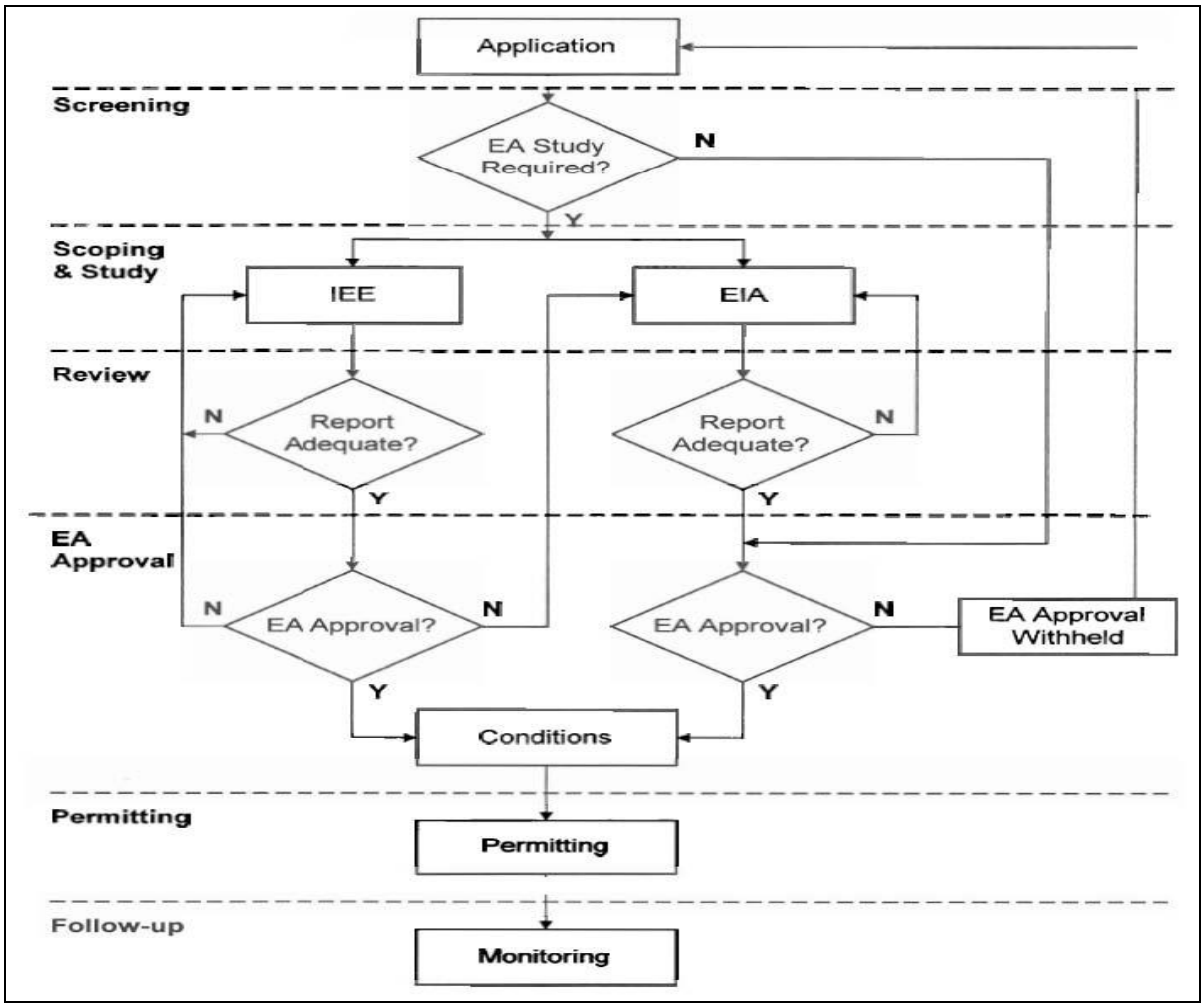

Chart 2: EA administrative process, EQA Palestine

3.2.3 Laws and Regulations related to Resettlement, Land Expropriation and Involuntary Resettlement

The Jordanian Expropriation Law No. 2 for 1953 which is applied in the West Bank/Palestine covers the process of expropriating private lands for public use and the compensation should be paid. The Land Acquisition for Public Schemes Act (1953) was passed pursuant to Article No. 31 of the Jordan Constitution The Jordanian Expropriation Law No. 2 for 1953 covers the process of expropriating private lands for public use and the compensation should be paid. The process of expropriating private lands for public use is defined as follows:

1. The project proponent has to publish an announcement in the official newspapers (Gazette) for 15 days; declaring his willingness to request a resolution from the Cabinet in order to expropriate a private land, defined in the announcement, for public use.

2. After the expiry of the announcement, the project proponent has to submit an application to the Cabinet attached with a map for the land he is willing to expropriate, and a proof of his financial capacity that he is capable to implement the project.

3. When the Cabinet makes sure of the proponent's financial capacity and the public benefits of the project; the Cabinet has the right to decide:

    - The absolute expropriation of the land.
    - Dispossession of the land for a limited period of time.
    - Dispossession of any easement right, or any other rights related to the land.

4. The Cabinet's resolution should be approved by the President of Palestine, and then published in the official Gazette.

5. The Proponent, then, has to inform the Land Registrar in the area where the land exists, who subsequently informs the owners with the Cabinet Resolution.

6. After informing the land owner of the resolution, the project proponent has to negotiate the expropriation, disposition or the limited use of the land with the land owner or with anyone has a right in it.

7. If the project proponent and the land owner didn't agree upon the amount of the compensation, any of them can submit a request to the court to estimate the compensation.

8. After paying the compensation to the land owner or to the court, the Land Registrar then registers the land under the name of the proponent.

The abovementioned process applies for lands in zones A, B and C as to Oslo agreement classification. However, in zone C, approval from the Israeli side must be obtained before the expropriation.

Land acquisition is undertaken in accordance with Decree (12) of 1987 referred to as the Land Acquisition Law (LAL) and in accordance to its amendments.

Articles 3 and 9 of the LAL stated the two main conditions under which land can be expropriated:

- No land can be taken away unless it is for public benefit and that there is fair and just compensation for any PAPs -Article 3 of the LAL

- The law requires direct negotiation between the purchasers or public benefit project and landowners until agreement is reached - Article 9 of LAL. In the event that agreement cannot be found between the two parties, cases are referred to the Primary Court that has jurisdiction in this area and to higher courts if necessary.

Article 10 of LAL states that compensation should be fair to PAP; either they are owners or tenants. Owners should be compensated for their properties including (e.g., buildings, improvements, trees) at full replacement cost.

Articles 11-26 of the LAL lists the following key principles and stages under which compensation shall be processed:

- Setting the proper amount of compensation for land value is dependent on:
    - The amount of land confiscated,
    - The purpose of confiscation,
    - The percentage of land confiscated and,
    - The status and size of the leftover land.
- The landowner is responsible for paying any previous taxes on the property concerned prior to compensation.
- Upon final agreement reached on compensation amount, approval and authentication by the Directorate of Land followed by an authentication of the Cabinet is required,
- The relevant party or the public benefit project is required to pay the compensation to the landowner directly or deposited the full compensation amount in the Treasury under the beneficiary name within three months.
- Non-payment results in a 9% annual interest being added to the compensation starting the day after the three months period. (As the World Bank required payment prior to acquisition this will be accommodated where possible by the project.)

Article 7 of the LAL specifies that the owner of the property is the person under whose name the property is registered at the Land Registry. If the property is not registered, the person seizing the land on the day of issuance of the Council of Ministers' Resolution to acquire shall, for the purposes of compensation, be considered the owner. This stipulation

does not preclude anyone else from claiming ownership through the courts. The entitlements of legally established renters are also confirmed.

The Palestine LAL in Article 11 does not place limit on what a PAP can be compensated for. However, it permits expropriation without compensation for up to 25% of the area of a plot if the purpose of the expropriation is for:

- Linear projects, e.g. the construction, or expansion/widening of a road, or
- The construction of a government housing project

Article 12 of the LAL stated that, if for the above purposes all the area is expropriated or if what is left is not of use, compensation shall be paid in full for the whole property without any part being acquired for free.

Articles 3.9B and 10 of the LAL stated that direct negotiation between landowners and the relevant purchasing party or public benefit project should occur to allow for agreement to be made on a fair and just level of compensation of any confiscated land.

In the cases where the parties reach into negotiated agreement, the project will ensure that compensation for land is directed to the PAPs or placed under bank accounts in their names in accordance with the Land Acquisition Law of 1987, article 16. Grievance procedures are set according to articles 10-14 of the Land Acquisition Law

3.2.4 General Rules for the Protection of Historic Areas

The Higher Council of Planning decided in its meeting No. 4/2006 on 11/3/2006 according to the decision No. 54 to approve the General Rules for the protection of historic areas and individual historic buildings. These rules are considered part of the Building and Planning Regulations for the Local Authorities approved with a decision of the Higher Council of Planning No. 30 on 24/8/1996. This amendment to the building and planning regulations for the local authorities was vital because it prevents demolish or remove any historic buildings or demolish or distort any element of that forming the root of the historic town (the traditional urban fabric) such as paths, alleys, open spaces, covered passages and portals.

However, the law of building and planning for the local authorities of the year 2011 has not broadly mentioned the above mentioned amendment. It only points that historic towns are mandated to the special committee responsible of building and planning in local authorities.

3.2.5 Other Laws and Regulations relating to Environment Management

The Public Health Law No. 20 for 2004 has articulated that it is part of the Ministry of Health (MoH) tasks and authorities is to license the establishments specialized in waste collections, method of waste treatment, and disposal.

It also states that it is under MoH authority in cooperation with the competent authorities to specify the rules and conditions of transferring, saving, treatment or disposal of the hazardous waste. No one is allowed to do what is stated here above unless it is in accordance with the conditions and rules.

Among the other related laws that need to be considered in environmental monitoring are Jordanian Heritage law No. 51 for the year 1966, Article 15; the Jordanian Law No. 79 of 1966; the Cities, the Villages and Buildings Regulating Law; and the Buildings and Regulation Bylaw for Local Authorities No. 5.

In addition it is to consider the Palestinian Basic Law of 2003 and the Grievance and Complaints bylaw that has been approved by the Ministerial Cabinet on 9/3/2005 and updated on 8/3/2009.

3.2.6 World Bank Project Categories and Safeguard Policies

(Annex 9.1) brings definitions of the ten World Bank environmental and social policies "safeguard policies". The definition is only to clarify what is meant by each. The table in the annex outlines the core requirements under each policy.

The World Bank Operational Policy (OP) 4.01 on Environmental Assessment categorizes projects into four categories, depending on the type, location, sensitivity, and scale of the project and the nature and magnitude of its potential environmental impacts. These categories are:

- Category A projects are projects likely to have significant adverse environmental impacts that are sensitive, diverse or unprecedented. These impacts may affect an area broader than the sites or facilities subject to physical works. Such projects require full environmental assessments;
- Category B projects are projects whose potential adverse environmental impacts on humans or environmentally important areas are less adverse than those of Category A project. This category requires partial assessment;
- Category C projects are projects that have minimal or no impacts on the human or natural environments. Most of the service delivery type of projects falls under this category.

- Category FI: A proposed project is classified as Category FI if it involves investment of the Bank funds through a financial intermediary. Environmental Screening is applied to FI projects to determine the level of Environmental Assessment to be required.

The Policy 4.01 requires that the proposed project screens early for potential negative impacts and select appropriate instruments to assess, minimize and mitigate potentially adverse impacts. It further requires early consultations with the affected groups and relevant NGOs.

The examination and assessment of the projects of the WSDP shall be conducted in light of the World Bank's environmental assessment policy and procedures OP/BP (Operational Policy/Bank Procedures) and the EIA guidelines of EQA. The assessment shall be addressed through:

- Reviewing the ten safeguard policies and determining the OP 4.01 Environmental assessment is triggered by the project. Mitigating measures have been identified accordingly;
- Describing the safeguard issues and impacts associated with the project. Identifying and describing any potential large scale, cumulative, significant and/or irreversible impacts;
- Describing the potential indirect and/or long term impacts due to anticipated future activities in the project area;
- Describing the measures taken to address safeguard policy issues. Providing an assessment of project proponent capacity to plan and implement the measures;
- Identifying the key stakeholders and describing the mechanisms for consultation and disclosure on safeguard policies, with an emphasis on the potentially affected people.

This ESMF is the environmental and social instrument prepared based on the OP 4.01 requirements and is to be applied to the screening and assessment of the projects to be financed by the WSDP. When there is discrepancy between PA's legislation and World Bank policies, the most stringent will apply.

3.3 Applicable World Bank Safeguard Policies

The potential application of the World Bank Safeguard Policies will be assessed during the preparation of the sub-project prior to appraisal; and if likely to be triggered, appropriate measures will be designed and applied. The two main safeguard policies applicable to the WSDP are OP 4.01 for Environmental Assessment and OP 4.12 for Involuntary Resettlement. **Table (2)** indicates how the World Bank safeguard policies might apply.

Table (2): Application of the World Bank Safeguard Policies

Yes	If applicable, How might it apply and/or how it will be determined?
(√)	***Environmental Assessment (OP 4.01)*** The WSDP sub-projects will include interventions for water supply networks, wastewater collection systems, water and wastewater pumping stations, rehabilitation of water wells, construction and rehabilitation of concrete water tanks, replacement of water meters, and other similar small to medium size water sector infrastructure projects in Gaza and West Bank. The risks associated with this kind of infrastructure are generally low, so the sub-project is assigned to environmental category B under OP 4.01. Specific ESMPs will be prepared as necessary once the exact locations of these facilities have been identified. The ESMF will be publicly disclosed in the affected areas prior to appraisal.
(to be determined)	***Natural Habitats (OP 4.04)*** It is not anticipated that natural habitats and/or protected areas could be affected by the proposed activities. Sub-projects proposed under the WSDP will be screened for impacts prior to financing to avoid and minimize any potential impacts on natural habitats or areas of ecological importance. If impacts may occur, the ESMP will be prepared and would outline the necessary measures needed to mitigate and address them.
(to be determined)	***Cultural Property (OP 4.11)*** The WSDP is not anticipated to result in impacts to cultural property in the targeted areas and therefore does not trigger the policy. Mitigation clauses for avoiding potential impacts will be inserted into the civil works contracts to ensure that the necessary measures are in place during the construction and operational phase of the sub-projects.
(√)	***Involuntary Resettlement (OP 4.12)*** Land acquisition for terrestrial facilities will likely trigger OP 4.12 *Involuntary Resettlement considerations*. However, some activities will be carried out in already existing infrastructures, implying that no involuntary resettlement will be required as direct result of the sub-project. However, potential loss of property may take place and the RPF, prepared for the overall WSDP, applies. Specific RAPs/ ARAPs may need to be prepared for the terrestrial facilities, in line with the RPF, once the exact locations of the facilities have been identified. The RPF will be publicly disclosed in the affected areas prior to appraisal.

3.4 Gap Analysis

To ensure that the ESMF will be effectively implemented, it is important to determine whether the local legislative structure is adequate for effective environmental and social management and whether this structure supports the World Bank's safeguard policies.

A gap analysis between the World Bank's and EQA's Environmental Assessment policies and regulations was undertaken for the World Bank-funded Local Governance and Service Improvement Program (June 2015). The analysis found that the PEL and the PEAP as written, which are the overarching framework for environmental and social impact management, are largely consistent with the World Bank environmental and social safeguards policies. However, there are gaps in the system, outlined below:

- **Gaps in EIA Content:** While the content of the screening and analysis for EIAs under the Palestinian EIA Policy are comprehensive and cover most of the elements of OP/BP 9.00, there are gaps in the content of EIA requirements in the following areas: (i) The screening process requires additional clear criteria and explanation of criteria related to (i.e. potential resettlement and livelihood impacts, requirements related to voluntary land donation, including documentation of consent, and other environmental and social impacts and hazards), (ii) the analysis of alternatives requires the "without project" alternative, (iii) the EIA needs to explicitly analyze induced impacts, (iv) associated facilities and cumulative impacts are to be addressed and examined in the EIA, and (v) Technical Assistance (TA) component is required in the EIA, i.e. changes in policies, possibly having environmental and social impacts.

- **Impact Categorization Differences:** There are semantic mismatches between what the Bank and the Palestinian EIA Policy consider projects with "significant" impacts. For the Bank, "significant" refers to projects with adverse impacts that are sensitive, diverse, or unprecedented, and where impacts may affect an area broader than the site of physical works. In Palestine, the threshold for "significant" is not precisely defined. Projects which are considered as "A" are determined by a category list, a list that is largely commensurate with those having significant impacts by World Bank standards.

- **Oversight of Non-full EIA Projects:** For those projects requiring full EIA as per the criteria in the PEAP, there are requirements for environmental management plans (including mitigation measures), environmental audits, public participation and disclosure. Those projects not requiring a full EIA are subject to fewer requirements and less oversight – there are no requirements that these projects are audited, nor that the public is mandatory involved, nor that documents are disclosed.

- **Public Participation and Accountability:** Public participation and disclosure requirements for EIA in Palestine are fairly weak. For those projects requiring a full EIA, public availability of the documents is required. However, the actual process of public review and comment could be onerous and result in EIA being relatively inaccessible. While consultations are required during the preparation of the full EIA between

communities and the project proponent, public hearings are at the government's discretion during the EIA review and approval process.

The gaps that have been considered by another project in the power sector are listed in **Table (3)**. The table gives recommendations to be applied for the WSDP.

Table (3): Gaps between World Bank and Palestinian policies and regulations

Issue	Palestinian legislative requirements	World Bank Policies	Recommendations
Impact Categorization	The threshold for "significant" impacts not precisely defined. Project categorization based on an established list of projects.	"Significant" refers to projects with adverse impacts that are sensitive, diverse, or unprecedented, and where impacts may affect an area broader than the site of physical works.	Apply the World Bank's method for impact categorization
Public Disclosure	Public disclosure is not required for projects that do not require a full EIA.	Public disclosure is required for all EIA reports, including those that do not require full ESIA.	Apply the World Bank's requirements for public disclosure.
Public consultation and accountability	Weak requirements for public consultations. Public availability of the documents is required for full EIA. Consultations are required during the preparation of the EIA between communities and the project proponent. Public hearings are at the government's discretion during the EIA review and approval process.	Requires consultation with the affected people. As to OP 4.01, ESIA will include and take into account coordination and consultation with affected people and other interested parties, particularly at an early stage, to ensure that all potentially significant environmental and social Risks and impacts are identified and addressed.	Ensure consultation and ongoing communication throughout the WSDP implementation period

Other gaps, related to the pricing of land, eligibility criteria for receiving land compensation and income/livelihood restoration, status of squatters and encroachers, national complaint mechanism, etc., are considered and detailed in the RPF document. The right to complain is given to the public by the Grievance and Complaints bylaw.

In the PA, the compensation amount and the price of a property are estimated by an official Land Valuation Committee (LVC), represented by at least three ministries; among these are Ministry of Finance (MoF), MoLG, Palestinian Land Authority (PLA) and Ministry of Public Works and housing (MoPWH). The LVC can ask the assistance of any other institutions and authorities like the local government units. It may also invite individuals from the private sector as to make sure that the estimated price meets the fair market price.

If the promoter and the owner do not agree on the compensation amount, either party may refer the dispute to the court, in which case the court will determine the amount of compensation or usufruct right based on fair criteria including:

- the price of adjacent lands of the same kind;
- the price of the land if it is publicly sold on the market;
- rent fees for leasing the land shall be assessed based on annual fees at the time of publication of the Cabinet's acquisition resolution;
- damages caused to the values of the land;
- decrease in value of any remaining part of land must be considered;
- consideration of any damage incurred as a result of separating the acquired land from any other land belonging to landowner;

The law empowers the court with the jurisdiction to consider all lawsuits, hear all contradictory litigation and any claims made to the subject.

The compensation is then paid by the MoF. If the owners are not available or refuse to take the compensation, an account is opened in the name of the owners and the compensation is deposited in this account.

4. Baseline Environmental and Social Data

The WSDP geographic area is the West Bank, which is covered by **Component III** of the WSDP, **Figure 1,** as well as Gaza strip, covered by **Component II**, **Figure 2**. The Program targets the water and wastewater Service Providers (SPs; including Local Government Units (LGUs)). A sample of LGUs have been selected and are targeted to be zoomed on by the ESMF; these include Gaza City in Gaza Strip, as well as eight urban areas in the West Bank, which are: Hebron, Yatta, Jenin, Salfit, Tulkarem, Qalqiliya, Tubas, and Jericho. These municipalities provide water and wastewater services to more than 70% of the inhabitants in West Bank and Gaza.

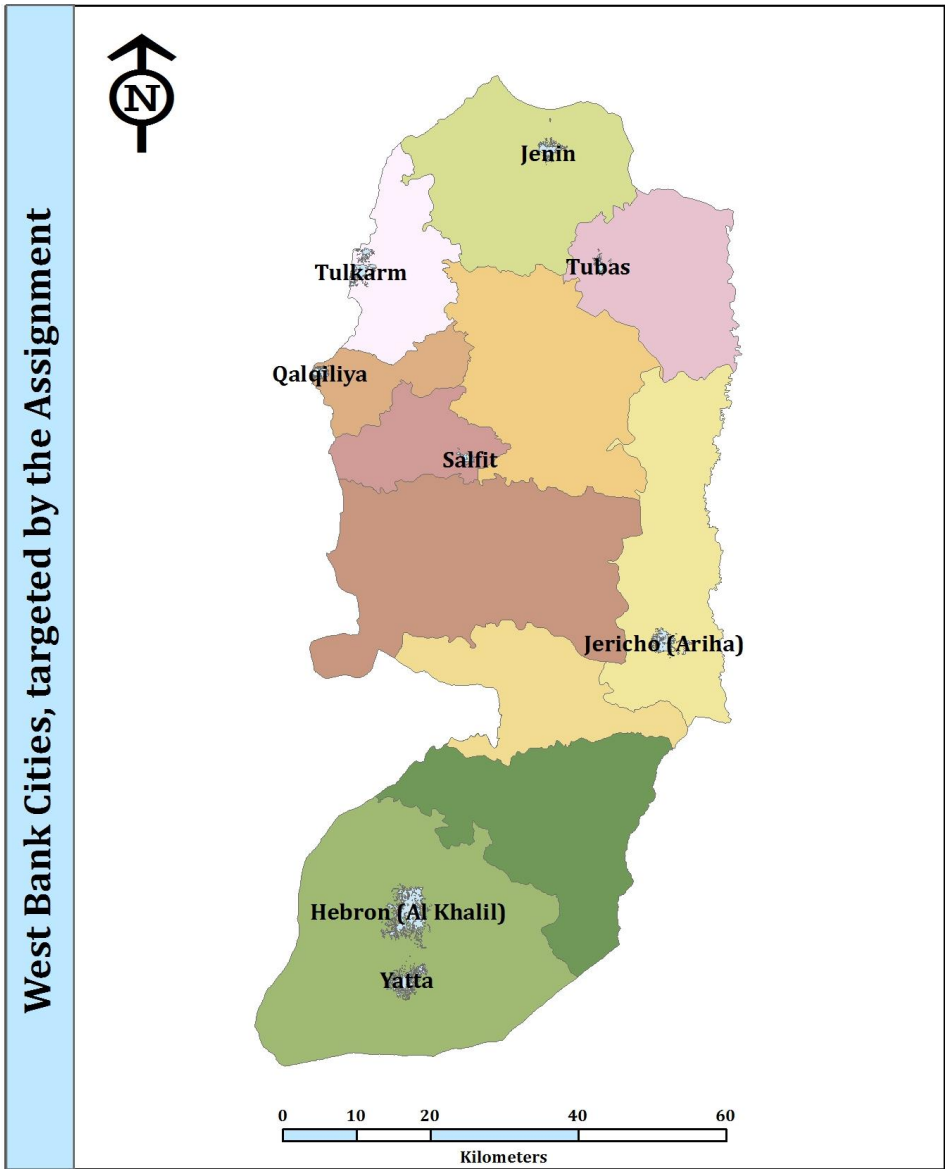

Figure 1: West Bank selected cities, zoomed on by the ESMF

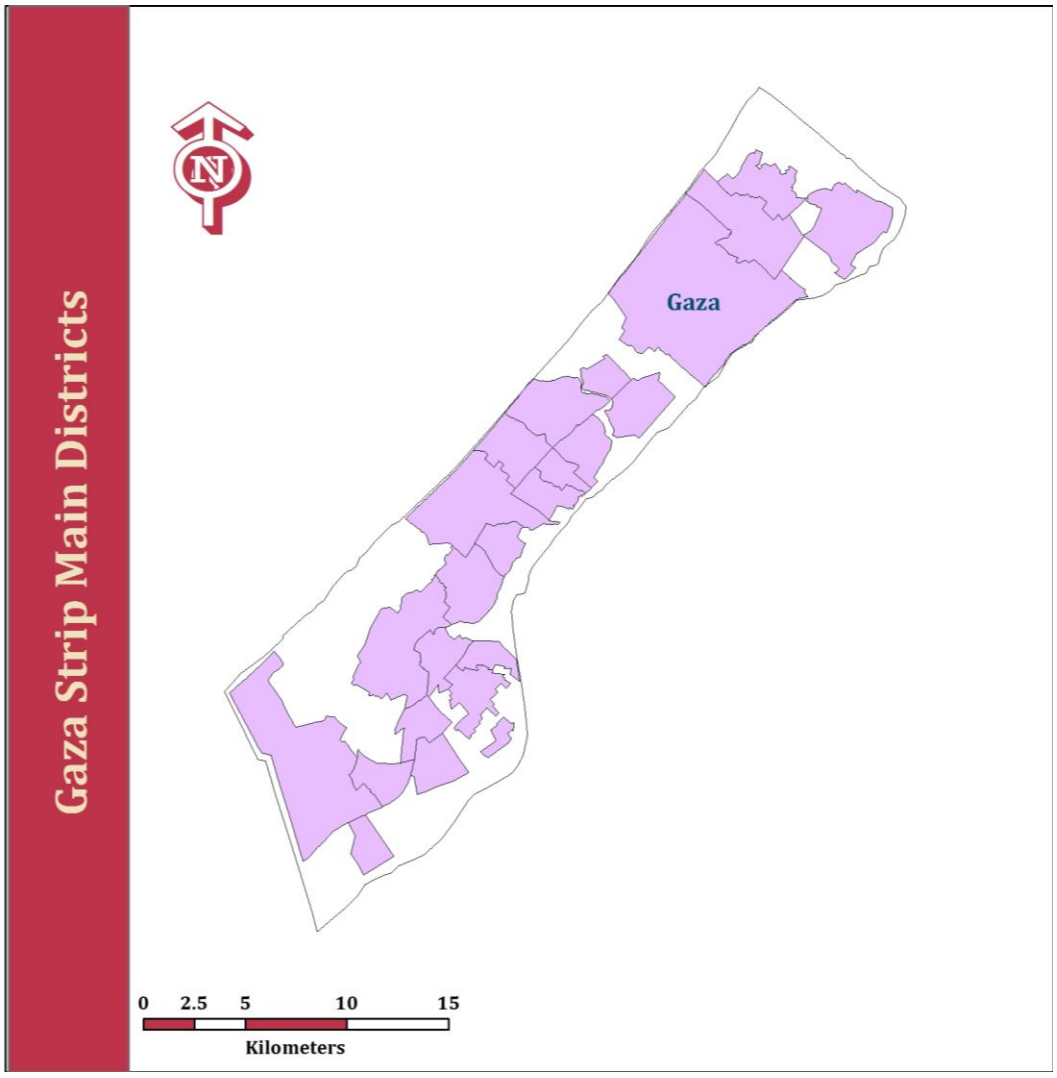

Figure 2: Location of Gaza City relative to Gaza Strip

Summary of the related baseline data of each of the selected nine municipalities (as a sample) are presented in **Annex (9.2)**. The ongoing and foreseen water and sanitation plans, programs and projects in the nine municipalities is presented in **Annex 9.3** .

5. Environmental and Social Management Framework

5.1 Introduction

The ESMF is the instrument and will help in excluding any project that have significant and severe cumulative impacts on the environment. It provides technical day-to-day guide for making sure that WSDP projects are implemented in an environmentally and socially responsible manner. The ESMF provides guidance for screening project proposals against environmental and social risks. Based on the outcome of the risk identification and appraisal, eligibility of projects for financing are determined based on screening criteria. The ESMF carries uniform templates to conduct safeguards review and screening, preparation of ESIA/ESMP and setting up monitoring system for sub-projects.

5.2 Screening Criteria

5.2.1 Screening of Project Categories

The OP/BP 4.01 Environmental Assessment policy indicates and lists the kind of projects, which are categorized as "A" projects and for which a full ESIA is required. These projects include most of those having large population displacement impacts. Category “B” projects may require an ESIA and ESMP. Category “C” projects do not require environmental analysis, but are recommended to have an ESMP. The classification will depend on the type, location, sensitivity, and scale of the project and the nature and magnitude of its potential environmental impacts.

WSDP will include activities and projects that mainly have positive environmental and social impacts including capacity building and job creation. These projects do not include infrastructure construction and/or waste management aspects. They are classified as category B or C since they are social service-delivery types of projects. However, some WSDP sub-projects under Component 2 include construction activities that are likely to have negative environmental and social impacts.

The ESMF shall be incorporated and implemented as a tool for the WSDP to support sustainable economic and social development of the Palestinian people, and the water sector in particular, through assisting in meeting the following goals:

1. Ensuring an adequate standard of life in all its aspects, and not negatively affecting the basic water needs, and the social, cultural and historical values of people as a result of development activities;
2. Preserving the capacity of the natural environment to clean and sustain itself;
3. Conserving biodiversity, landscapes and the sustainable use of natural resources;
4. Avoiding irreversible environmental damages, cumulative adverse impacts, and minimizing reversible environmental damage.

5.2.2 Cultural Heritage and Physical Cultural Resources (OP/BP 4.11)

The definition of physical cultural resources include any movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. Physical cultural resources may be located in urban or rural settings, and may be above or below ground, or under water. Their cultural significance may be at the local, provincial or national level, or within the international community.

In case of accidental findings of any antiquities or physical cultural resources that might occur during the implementation of the projects, PWA and the municipality must notify MoTA immediately. According to the applicable Jordanian Heritage law No. 51 for the year 1966, Article 15, PWA and the municipality must stop the contractor and notify the related Authority within 3 days to take the necessary actions.

The Chance Find Procedures, which are to be applied in case culturally valuable materials are uncovered during excavation, include:

- Stop work immediately following the discovery of any materials with possible archeological, historical, paleontological, or other cultural value; announce findings to project manager; and notify relevant authorities;
- Protect artifacts as well as possible using plastic covers; implement measures to stabilize the area, if necessary, to properly protect artifacts;
- Control access to site where finding occurred;
- Prevent and penalize any unauthorized access to the artifacts; and
- Restart construction works only upon the authorization of the relevant authorities.

The Chance Find Procedures are detailed in **Annex (9.4)**.

5.2.3 Involuntary Resettlement (OP/BP 4.12)

In terms of social safeguards, any sub-project that trigger the OP/BP 4.12 Involuntary Resettlement will follow the principles and requirements detailed in the RPF to and will be prepared in accordance to the RPF.

Projects submitted to PWA for funding should fulfill the legal and policy requirements spelled in the RPF, that is prepared based on revised Palestinian Basic Law of 2003, the Jordanian Law No. 79 of 1966, the Cities, the Villages and Buildings Regulating Law, and the Buildings, Regulation Bylaw for Local Authorities No. 5. and OP 4.12.

This is also pertinent to cases when land is acquired through a willing-seller willing buyer or through voluntary land donation. In all these cases principles spelled in the RPF, in this case for willing buyer/seller, will be followed. These principles include:

- The project cannot be site specific (i.e. site alternatives should be in place)

- No coercion should be involved in the process
- No individual or household can donate more than ten percent of their lands: to ensure impacts are minor
- No individual or household should be relocated (moved) as a result of donating lands to projects
- The land, required to meet a technical project criteria, must be identified by the affected community, not by line agencies or project authority
- Verification (for example, notarized or witnessed statements) of the voluntary nature of land donations must be obtained from each person donating land
- If any loss of income or physical displacement is envisaged, verification of voluntary acceptance of community-devised mitigation measures must be obtained from those who are expected to be adversely affected

Each instance of land donation must be documented. This requires written notification indicating the location and amount of land that is sought and its intended use for the project, and requires a formal statement of donation, establishing informed consent and signed by each owner or user involved. Taxes to be paid by the land donator for registration of the land transfer, if applicable, should be covered in full by the implementation agency. Measures shall be in place to protect Project Affected People (PAP) who cannot read and write to ensure they are fully aware when signing a document and particularly cognizant of the right to refusal (i.e. having a literate witness of their choice inform them of the contents of the documents and their right of refusal at the time of signing). The implementation agency maintains a record with documentation for each instance of land donation. The documentation is made available for review in any grievances that may arise, and is provided to the World Bank upon request. The PCU will need to confirm the above criteria is met as well ensure that voluntary land donation was not done through coercion.

5.2.4 Natural Habitat (OP/BP 4.04)

Projects proposed under the WSDP will be screened for impacts prior to financing to avoid and minimize any potential impacts on natural habitats or areas of ecological importance. The screening is to be conducted by consultation of the authorized Palestinian authorities and ministries. If impacts may occur, the ESMP will be prepared and would outline the necessary measures needed to mitigate and address them.

The National Spatial Plan (NSP) that classifies West Bank and Gaza lands based on agriculture uses, groundwater vulnerability and sensitivity, etc. shall be referenced in this regard. Three main lands are specified by the NSP; lands where construction is allowed; lands that require investigations and environmental assessment prior to construction; and lands where construction is totally prohibited.

5.3 Screening, Review, and Approval of Sub-Projects

This section outlines the screening, review, and approval process for activities to be financed under the WSDP, and in particular for Components 2 and 3. As the locations for the sub-projects are not clearly identified at this stage, it is important to have the appropriate tools in place to assist the WSDP in screening these activities for potential impacts and to provide guidelines for implementing measures to effectively address them.

In addition, the following approach is provided to the screening and appraisal process for sub-projects; under the WSDP. Once the sub-projects have been identified and locations selected, this section is to be used to screening sub-projects and implementing the appropriate measures while ensuring adherence to all respective legislative requirements for screening and EA.

While risks associated with various projects may vary from high to low risk, most of them are expected to fall under EA Category B and C. The following screening steps are to be applied:

1. First, it is to fill and study the application as to make sure that the project is eligible and fall under the WSDP components and project types (**Table (4)**).
2. The sub-projects are checked against the safeguard policies; if any of the World Bank safeguard policies, other than OP 4.01 Environmental Assessment, OP 4.04 Natural Habitats, OP 4.11 Cultural Property, and OP 4.12 Involuntary Resettlement, are triggered by the project, then it will be rejected (**Table 5**).
3. The category of the sub-project is to be checked; if the sub-project is listed among the projects that are under EA Category "A", a site and sub-project specific ESIA are ESMP are required (**Table 5**).
4. If the project is of Category B and is accepted, then an ESMP or ESIA is required to be prepared; usually less rigorous than a full ESIA and often taking a form of ESMP (**Table 5**).
5. If the project is of Category C and is accepted, no further Environmental and social requirements are applied (**Table 5**). An ESMP may be requested and is recommended.

Once the sub-project activity is defined and the location selected, screening forms will need to be filled out. The forms will allow for identification of the potential environmental and social impacts associated with the proposed activity. As the ESMF and RPF shall be utilized in tandem, the screening forms will also allow for the identification and assessment of impacts related to potential land acquisition and involuntary resettlement.

Table 5 and **Chart 3** detail the Environmental Screening that should take place at an early stage of sub-project cycle. Screening forms ideally should be filled out after the long-listing steps and prior to short-listing stage, so that environmental and social aspects can be considered as part of the final selection of the sub-projects. The screening and review process will be conducted by the PCU and approved by PWA Project Officers.

The screening process is also to include documentations, checklists and Environment and Social Review. This is needed in order to verify the sector and sub-project specific ESIA and ESMP that have to be prepared for EA category A and category B projects.

Checklists are applied for screening and for identification of potential social and environmental impacts of projects. **Table 7** is an example of an Environmental Management Checklist for construction and rehabilitation projects. Similar checklists are recommended to be used for screening of the sub-projects of the WSDP as to determine which are to be excluded and which are eligible for inclusion.

A standard appraisal and mitigation ESMP is required to be part of the specifications for the Contractor and shall form the basis of regular monitoring. The ESMP matrix is based on the sectors and consisting of phases, and potential environmental and social impacts, if any, mitigation measures, operation and supervision. **Annex (9.5)** presents ESMP sample, which can be used. The annex lists guidelines for a WSDP project ESMP. The sample ESMP lists monitoring potential environmental and social impacts during construction and post development phases.

Annex (9.6) gives guidelines for Environmental Safeguards Projects Monitoring Reports, as well as a template for the Environmental and Social Safeguards section of the Quarterly Progress Reports.

Annex (9.7) is the environmental requirements for contractors, which are legally binding and are to be included in the contracts for the WSDP projects.

Environmental screening and classification of the WSDP sub-projects is to occur with the application, EQA screening and World Bank screening using the provided tables and forms.

If the proposed sub-project falls under one or more of the WSDP components and project types, it can be considered and subject to the ESMF. The ESMF would need to be updated and reviewed for clearance and disclosure before the project could be accepted for WSDP financing.

Table (4): WSDP Screening and Classification of the sub-Project's Type

Project Title:	
Project Duration	
A) WSDP Screening	
What project sector does the proposed project fall under:	**Yes/No**
Water Resources?	
Water Supply?	
Wastewater?	
Institutional Arrangement?	
WASH?	
Other?	
Does the proposed project include any of the following characteristics:	
Wells and springs rehabilitation?	
Equipping wells?	
New water supply systems?	
Rehabilitation and expansion of existing water supply systems?	
New pumping stations?	
Rehabilitation of existing pumping stations?	
New water tanks?	
Rehabilitation of existing water tanks?	
New wastewater collection pipes?	
Rehabilitation of wastewater pipes?	
Capacity building?	
Please give a short description of the proposed project below:	

Table (5): Environmental Screening of the sub-Projects

Project Title:	
Project Sector:	
Duration:	
World Bank Project Screening	
Questions	**Actions**
1. Is the project likely to have **significant adverse*** environmental impacts (based on type, location, sensitivity, and scale of the project and the nature and magnitude of its potential environmental impacts)? ***Significant adverse** impacts are generally: (i) large-scale; (ii) irreversible; (iii) sensitive; (iv) diverse; (v) cumulative; (vi) precedent setting; and/or (vii) may affect an area broader than the sites or facilities financed by the project.	Yes / No (circle one) Please describe the primary adverse impacts and their possible 'significance' (as defined at left) here; (If potentially "yes", please confer with ESO and confirm the environmental category of this project will not expected to have significant and severe adverse cumulative impacts on the environment) …… …… …… …… …… …… …… …… date non-applicability confirmed:
2. Is the project likely to result in significant degradation or conversion of habitats and/or forests in designated protected areas, proposed protected areas or areas that, based on local public consultation, are considered of special ecological significance?	Yes / No (circle one) If potentially yes, please describe these impacts: …… …… …… …… …… (If potentially "yes", please confer with ESO and

Project Title:	
3. Does this subproject have potential to cause significant conversion or loss or degradation of natural habitats either directly through construction or indirectly through induced human activities?	confirm that these potential impacts will not invoke application of OP 4.04 Natural Habitats) date non-applicability confirmed:
4. Will this project have potential to cause temporary or permanent relocation or any other type of impact on physical cultural resources known to be of local, regional, or PA significance based on PA or international list?	Note: To answer this question please go to **Table 6 and Chart 4** Yes / No (circle one)
5. Will the project utilize or discharge water from or into a river or river tributary that flows to or through or forms a border with a neighboring country or drains into an international sea or a sea that is connected with an international sea?	Yes / No (circle one) If potentially yes, please describe these impacts: …… …… …… …… …… …… (If potentially "yes", please confer with ESO and confirm that this project will not invoke application of OP 7.50 International Waterways). date non-applicability confirmed:
6. Does the project propose to manufacture, transport, and/or directly finance the use of pesticides?	Yes / No (circle one) If potentially yes, then the project is excluded as it invoke OP 4.09 Pest Management

Project Title:	
7. Will this project have any potential impacts on : (a) health and quality of forests; (b) (rights and welfare of people who depend on or interact with forests; (c) and their level of dependence upon or interaction with forests; and/or (c) management, protection, or utilization of natural forests or plantations, whether they are publicly, privately, or communally owned?	Yes / No (circle one) If potentially yes, please describe these impacts: …… …… …… …… …… (If potentially "yes", please confer with ESO and confirm that this project will not invoke application of OP 4.36 Forests.) date non-applicability confirmed:
8. Does this project have the potential to include any of the following: involuntary taking of land; involuntary restriction of access; loss of shelter, loss of assets or access to assets, or loss of income sources?	Note: To answer this question please go to **Table 6 and Chart 4**
9. Is this project likely to have minimal or no adverse environmental impacts?	Please outline all potential impacts and explain how they are likely to be minimal: …… …… …… …… …… …… Date Environmental Category confirmed as C: If category C: no ESIA or ESMP are required.

Project Title:	
10. Is this project's potential adverse environmental impacts on human populations or environmentally important areas--including wetlands, forests, grasslands, and other natural habitats likely to be: (i) Site-specific? (ii) Reversible? (iii) Not Cumulative? (iv) Mitigated with specific mitigation measures?	Please outline the projects' potential positive and negative environmental and social impacts: …… …… …… …… …… …… …… …… …… …… Please note how these impacts are site-specific, reversible, and able to be mitigated: …… …… …… …… …… …… …… …… …… …… Date Environmental Category confirmed as B: If the answer to any of the questions of 11 is yes, then a project is under EA category B and ESIA and ESMP are required.

Project Title:
For Projects of Category "B"
What design alternatives have been considered and what measures are suggested to prevent, minimize, mitigate, or compensate for adverse impacts? …… …… …… …… …… …… ……
What lessons from the previous similar projects have been incorporated into the design? …… …… …… …… …… …… ……
Have concerned communities been involved yet? If so, have their interests and knowledge been adequately taken into consideration? …… …… …… …… …… …… …… ……

Project Title:	
Conclusions	
Conclusion of the environmental screening: Project is declined ☐	Project is accepted ☐
Project is classified as category B: ☐ Project is classified as category C: ☐	
If accepted as category "B", project preparation requires: • ESIA/ESMP: ☐ • The following land documents: ☐ _____ _____	
If accepted as category "C", project preparation requires: • Application of applicable environmental matrix _____ ☐ • Standard contractor clause: _____ ☐	
Comments of Environmental and Social Officer (ESO): Name: Title: Signature: Date:	

Project Title:
Comments of PWA PCU: …… …… …… …… …… …… …… …… …… …… …… …… …… …… …… …… …… …… Name: Title: Signature: Date:

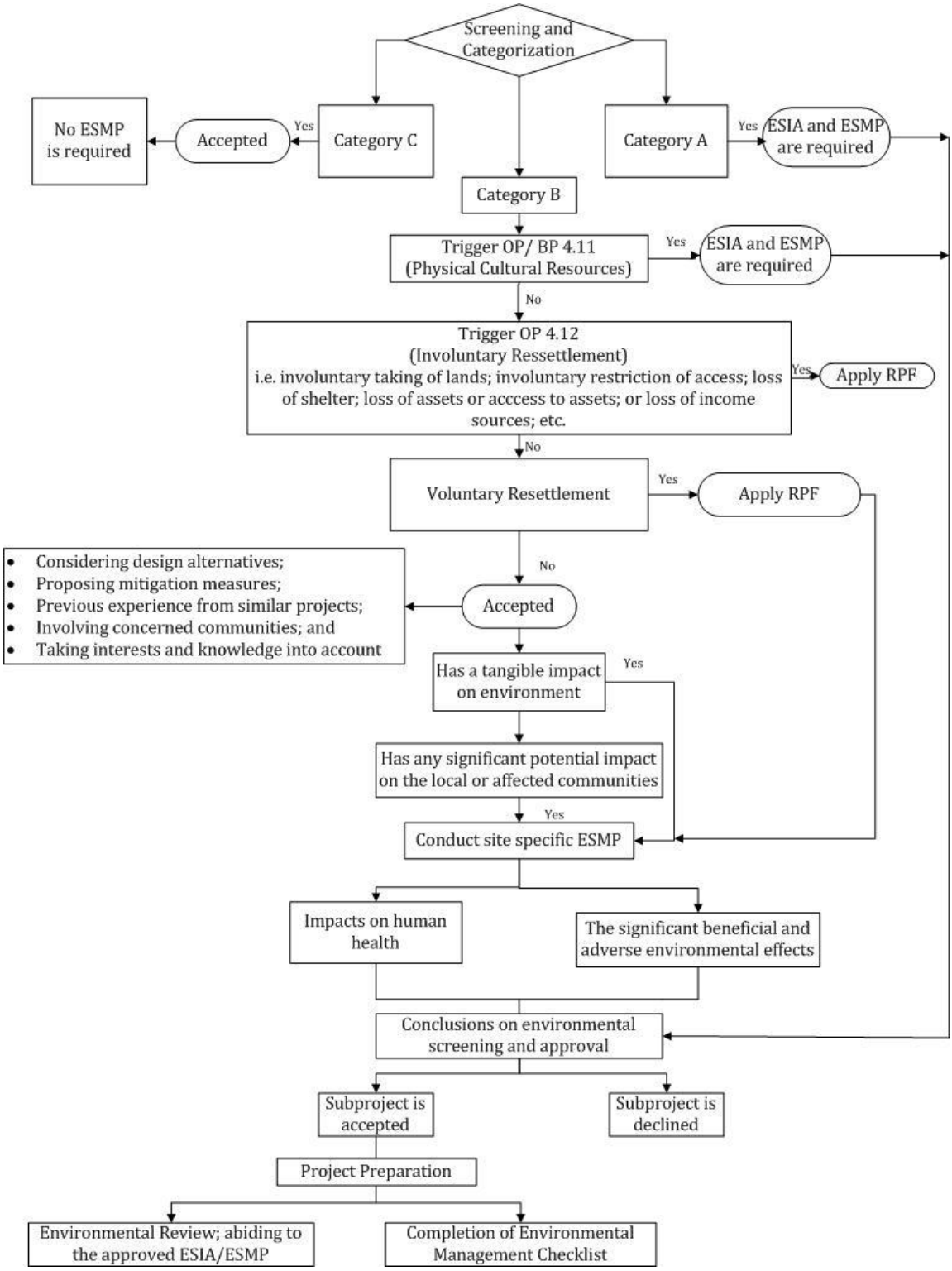

Chart 3: Environmental Categories Screening Chart

Table (6): Social and Cultural Resources Screening of sub-Projects

Social safeguards screening information		**Yes**	**No**
If the answer to any of the following question is "Yes", then **OP/BP 4.12 Involuntary Resettlement** is triggered and applicable and the project is subject to RPF.			
1	Will the project reduce other people's access to their economic resources, such as land, pasture, water, public services or other resources that they depend on?		
2	Will the project disturb/impact livelihood on a temporary or permanent bases during the project implementation (e.g. traders, street vendors, or business have to stop till the pipes are laid)		
2	Will the project result in resettlement of individuals or families or require the acquisition of land (public or private, temporarily or permanently) for its development? Land taking includes displacement of people lacking legal land title (squatters/none title holders of lands)		
3	Will the project result in the temporary or permanent loss of crops, fruit trees, etc.?		
4	Will the project result in the temporary or permanent loss of household infrastructure?		
If the Answer to any of the above is "yes" then a RAP or a ARAP will be prepared in accordance to the RPF. If the answer of all of the above is "No", then social management measures are to be taken.			
Cultural resources safeguard screening information		**Yes**	**No**
5	Will the project require excavation near any historical, archaeological or cultural heritage site? Will the project require renovations of historical buildings sites?		
If answer to question 5 is "Yes", then **OP/BP 4.11 Physical Cultural Resources** is triggered and the project is subject to ESIA and ESMP. Note: In any case and for the accepted projects under WSDP possible chance finds (**Annex 9.4**) must be considered in accordance with OP 4.11 and relevant procedures provided in the ESMF.			

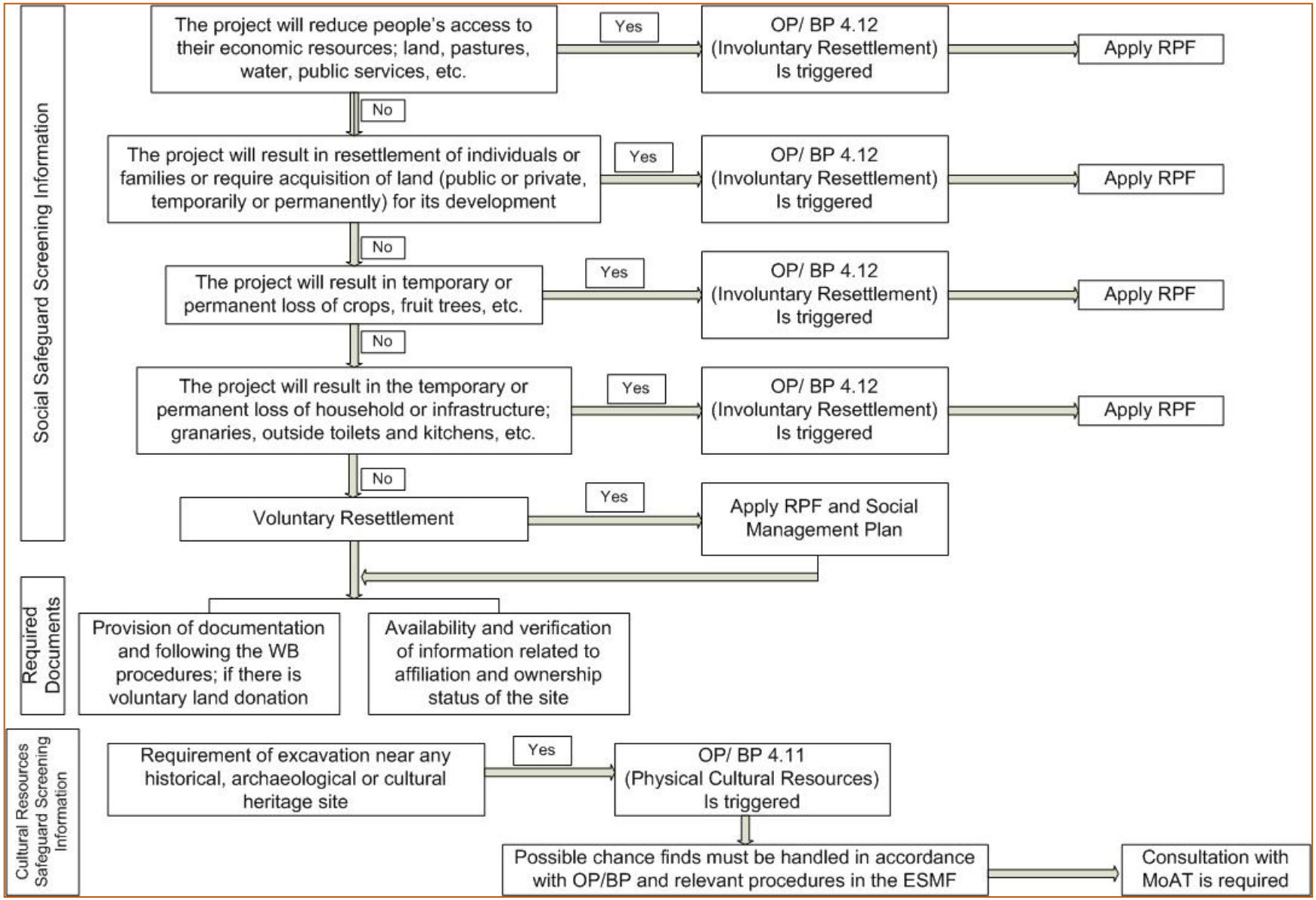

Chart 4: Social Safeguard Screening Chart

Table (7): Environmental Management Checklist for Construction and Rehabilitation Projects

Proponent: ……

Project Name: ……

Date: ……..

	Impact to check	Yes	No	Remarks	Safeguards/ Mitigation measures carried on
1	Noise/alarm generation				
2	Dust spreading out				
3	Odor emission				
4	Traffic problems (hindering, detours, closure etc.)				
5	Solid Waste Services problems				
6	Sewerage Services problems				
7	Water Services problems				
8	Green cover negatively affected				
9	Pedestrians' safety endangered				
10	Electricity services problems				
11	Landscape/ aesthetic element/s deteriorated				
12	Natural Resources negatively affected				
13	Biodiversity and Wildlife threatened				
14	Recreational sites negatively affected				
15	Heritage and archaeological sites negatively affected				
16	Agricultural activities negatively affected				
17	Industrial utilities negatively affected				
18	Workers safety and health considered				
19	Workers commitment to OHS (vests, gloves, Heavy Duty wearing apparel etc.)				
20	Working machines suitability				
21	Additional Impact (please add it) …… ……				

22. Comments: ……
……
……
……

Proponent: …… Project Name: …….. Date: ……..
23. Recommendations: ……
Environmental and Social Officer (ESO) Signature …… **Date**……

5.4 Project Implementation

Environmental and social monitoring will be an integral part of the PCU supervisory work in the course of the project implementation. The PCU including the ESO and Project Coordinator, will be responsible to ensure that project proponents and contractors are familiar with ESIA/ESMP and on the compliance with the plan. The concerned proponent and PCU will conduct regular on-site monitoring of works to verify adherence to the requirements set out in the ESMP. **Chart 5** depicts the WSDP Project Implementation stages, monitoring and reporting.

The project-specific ESIA/ESMP is to be prepared for accepted sub-projects (Category A and B) and shall be included in the bidding document, so that potential proponents and contractors are aware of environmental and social performance standards expected from them and are able to reflect these in their bids.

The ESMP becomes an essential part of a works contract upon its conclusion and their implementation is mandatory. The project proponent (Municipalities), as an owner of the works, will be responsible for enforcing compliance with the terms of the contract, including adherence to the ESMF.

Detailed presentation of the status of environmental and social performance under the WSDP projects cycle will be included in the progress reports during their implementation. Reports will present overview of deviations/violations of the ESMP encountered over the reporting period; including instructions given for addressing incompliance and identified issues, and follow-up actions on the revealed outstanding matters.

Chapter 6 provides guidelines for the assessment of the potential environmental and social impacts of the potential projects and the preparation of the ESIA/ESMP. These are to be prepared by the applying companies, enterprises, etc. The PCU is to provide guidance in this regard.

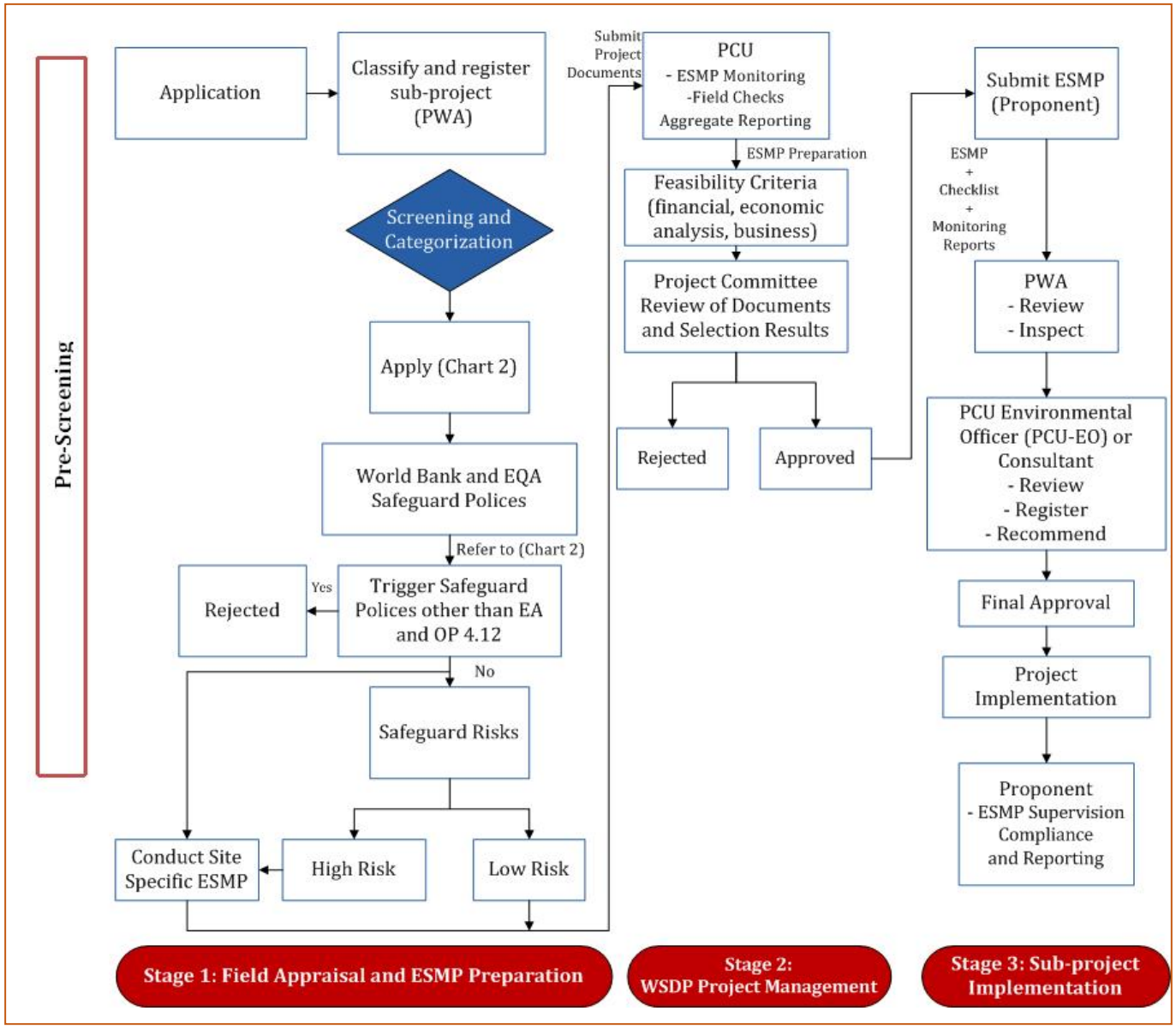

Chart 5: Project Implementation Chart

6. Environmental Assessment and Preparation of ESMP

6.1 Introduction

WSDP includes activities that mainly have positive environmental and social impacts, such as capacity building . It is to exclude projects that are expected to have significant and severe adverse cumulative impacts on the environment.

Negative impacts might occur for the sub-projects during the construction and operation phases such as dust, noise, safety hazards, restriction to access, etc. The ESMF is to cater these negative impacts and provide the framework for the project ESIA and ESMP in case these are to be prepared.

Examples of some of the negative impacts as a result of infrastructure projects that may be financed by WSDP are provided in the Environmental Matrices (EM) listed by **Tables 8** to **16**.

To mitigate these negative impacts, an ESIA and ESMP will be prepared for each approved project of Category A and B, as required. It is recommended to use the EM for listing overall main environmental and social impacts. The EM lists the expected environmental and social impacts and indicates whether the impact is positive, negative or neutral.

The application of the Environmental Approval as to the EQA is presented in **Annex (9.10)**. A sample Terms of Reference (ToR) for the preparation of ESIA as to the World Bank requirements is presented in **Annex (9.11)**. The ToR (in Arabic) issued by EQA for water and sanitation projects is presented in **Annex (9.12)**.

It is to consider the requirements of EQA in the EA preparation of the ESIA, including:

(i) The Palestinian, World Bank and/or the European Standards to be considered in respectively regarding the instructions related to the measures to mitigate dust and noise emissions.
(ii) The impact on the aesthetic aspects and on the landscape
(iii) Aquatic environment and the impacts related to the sea and shore in Gaza
(iv) The already and ongoing water projects and the cumulative impacts
(v) Waste Management and the allocation of temporary storage piles to later transport the wastes to official and sanitary landfill sites.
(vi) The water and wastewater quality standards accredited by the Palestinian Standard Institute (PSI) to be respected and applied.

6.2 Examples of EM

The WSDP sectors include, among others, water supply, water resources, wastewater, institutional arrangements, and WASH projects. The EM can be prepared and modified after detailed information of the projects are provided.

Other assessment concerns are: (i) positive and 'no-impact' categories could degenerate to negative if caution is not exercised; and (ii) these impacts are often 'site-specific', which should be taken into consideration.

Table 8 is an EM for new water and wastewater pipes projects. It indicates that the Water and Wastewater projects almost have equal number of crosses for negative and positive impacts, but this does not mean that the overall assessment of the project is neutral. Mitigation measures shall be considered for the negative impacts. In addition, the impacts have different weighting factors regarding their importance, which need to be considered in the assessment.

Table (8): Main Environmental and Social Impacts for new water and wastewater projects

No.	Environmental Component	Impacts		
		Positive	**No Impact**	**Negative**
1	Air quality			×
2	Groundwater quality			×
3	Community water supply	×		
4	Public health and services	×		
5	Workers health and safety	×		
6	Noise and dust reduction			×
7	Cultural heritage		×	
8	Socio-economic[1]	×	X	
9	Accidental risk			×
10	Water courses and wadis			×
11	Biodiversity		×	

Tables 9 to 16 present the EM for water and wastewater systems, maintenance, and rehabilitation projects.

[1] The negative socio-economic issues referred to in this table include loss of land, asset, livelihood, lack of access to business'/residences during construction, influx of construction labor, community level conflicts resulting from project interventions, etc.

Table (9): Main Environmental and Social Impacts for rehabilitation of water supply systems

No.	Environmental Component	Impacts		
		Positive	No Impact	Negative
1	Air quality		×	
2	Groundwater		×	
3	Community water supply	×		
4	Public health and services	×		
5	Workers health and safety	×		
6	Noise and dust reduction			×
7	Cultural heritage		×	
8	Socio-economic	×		
9	Soil contamination		×	
10	aesthetic			×
11	traffic			×

Table (10): Main Environmental and Social Impacts for rehabilitation of wastewater pipes

No.	Environmental Component	Impacts		
		Positive	No Impact	Negative
1	Air quality			×
2	Groundwater		×	
3	Community water supply		×	
4	Public health and services	×		
5	Workers health and safety			×
6	Noise and dust reduction			×
7	Cultural heritage		×	
8	Socio-economic	×		
9	Water courses and wadis		×	
10	Soil contamination	×		
11	Waste reduction	×		
12	Accidental risks			×
13	aesthetic			×
14	traffic			×

Table (11): Main Environmental and Social Impacts for new water tanks

No.	Environmental Component	Impacts		
		Positive	**No Impact**	**Negative**
1	Air quality		×	
2	Groundwater quality		×	
3	Community water supply	×		
4	Public health and services	×		
5	Noise and dust reduction		×	
6	Cultural heritage		×	
7	Socio-economic	×		
8	Water courses and wadis		×	
9	Biodiversity			×
10	Soil	×		

Table (12): Main Environmental and Social Impacts for water harvesting projects

No.	Environmental Component	Impacts		
		Positive	**No Impact**	**Negative**
1	Air quality	×		
2	Groundwater quality	×		
3	Community water supply	×		
4	Public health and services	×		
5	Noise and dust reduction		×	
6	Cultural heritage		×	
7	Socio-economic	×		
8	Water courses and wadis	×		
9	Biodiversity	×		
10	Soil	×		

Table (13): Main Environmental and Social Impacts for equipping wells projects

No.	Environmental Component	Impacts		
		Positive	No Impact	Negative
1	Air quality			×
2	Groundwater			×
3	Community water supply	×		
4	Public health and services	×		
5	Workers health and safety			×
6	Noise and dust reduction			×
7	Cultural heritage		×	
8	Socio-economic	×		
9	Water courses and wadis			×
10	Soil contamination		×	
11	Accidental risks			×
12	aesthetic		×	
13	Power supply			×

Table (14): Main Environmental and Social Impacts for Capacity Building projects

No.	Environmental Component	Impacts		
		Positive	No Impact	Negative
1	Groundwater quality		×	
2	Community water supply	×		
3	Public health and services	×		
4	Workers health and safety	×		
5	Socio-economic	×		
6	Waste reduction	×		

Table (15): Main Environmental and Social Impacts for new pumping stations projects

No.	Environmental Component	Impacts		
		Positive	No Impact	Negative
1	Air quality			×
2	Groundwater quality			×
3	Community water supply	×		
4	Public health and services	×		
5	Workers health and safety		×	
6	Noise and dust reduction			×
7	Cultural heritage		×	
8	Socio-economic	×		
10	Soil contamination		×	
11	Accidental risks			×
12	aesthetic		×	
13	Power supply			×

Table (16): Main Environmental and Social Impacts for rehabilitation of pumping stations

No.	Environmental Component	Impacts		
		Positive	No Impact	Negative
1	Air quality			×
2	Groundwater quality			×
3	Community water supply	×		
4	Public health and services	×		
5	Workers health and safety		×	
6	Noise and dust reduction			×
7	Cultural heritage		×	
8	Socio-economic	×		
10	Soil contamination		×	
12	aesthetic		×	
13	Power supply			×

Both construction and operational phases of the project cycle involve activities that can be associated with impacts on the surrounding environment and society, which need to be closely monitored. Monitoring responsibilities have to be clear and the monitoring plan has to define who does what, when, where, why and at what costs. The contractor, for example, might have responsibilities during the construction phase and liability period. The project owner will have the responsibility for monitoring the contractor compliance, while the PCU and the ESO have the responsibility to ensure overall compliance during the construction and operational phases of the projects.

Table 17 is an example of project activities identifying potential impacts on the significant environmental and social issues during construction, while **Table 18** lists the project activities and potential impacts during the operational phase.

The Contractor shall be responsible to comply with the project specific ESMP, which is to be prepared and attached as one of the WSDP subproject documents among the other bidding documents and contracts. He is also to abide to the chance-find protocol during implementation and to the coordination with archeological departments (MoTA) or any other department (e.g. EQA), when and where required.

Based on experience in previous projects, there are typical concerns during operation of the projects; the contractor and the PCU shall be aware of, these include:

- Availability of functioning and maintained sanitation facilities; this is to be assessed during appraisal of the projects;
- Improper disposal of municipal wastewater; (e.g. establishments may dispose of their wastewater in percolation pits without assessing the surrounding environment). It is important to assess its sensitivity and accordingly whether there are potential environmental and/ or public health risks;

- Improper management of generated solid wastes. This usually results in the accumulation of the waste on or around the project premises/area. This is considered failure of implementation of the ESMPs. A provision about proper handling, transport, and disposal of solid waste shall be included in the ESMP.

Table (17): Project Activities and Potential Impacts during Construction Phase of Projects

Project Construction Activities	**Significant Environmental and Social Issues**				
	Socio-economic Conditions	**Cultural/ Historical Resources**	**Air Quality**	**Water Resources**	**Agricultural Resources**
Demolition		X	X		
Removal of Existing Infrastructure	X	X			
Heavy Machinery Operation	X	X	X	X	
Construction of Infrastructure	X	X	X	X	
Excavations and Earthwork	X	X	X	X	X
Construction of Buildings and Facilities	X	X	X		
Material Procurement	X				
Waste Disposal (solid, liquid, hazardous, etc.)	X		X	X	X
Wastewater Disposal	X		X	X	X
Transportation	X	X	X	X	
Accidents and Unplanned Events		X	X	X	X

It is important to note that if rehabilitation works interfere with existing public or private roads, the contractor shall construct diversion ways wherever possible.

Table (18): Project Activities and Potential Impacts during Operational Phase of Projects

Project Construction Activities	Significant Environmental and Social Issues				
	Socio-economic Conditions	Cultural/ Historical Resources	Air Quality	Water Resources	Agricultural Resources
Transportation	X		X	X	
Power Generation	X		X	X	
Water Supply				X	
Solid Waste Collection and Disposal	X		X	X	X
Wastewater Collection and Disposal	X		X	X	X
Educational Training		X			X
Accident and Unplanned Events	X	X	X	X	X

7. Public Consultation, Grievance Redressal, and Complaints Mechanism

7.1 Public Consultation

In addition to the World Bank, the stakeholders that are involved in the WSDP include PWA, EQA, MoLG, MoPWH, MoF, MoL, MoH. The main beneficiaries are the LGUs, mainly municipalities. Other stakeholders are JSCs, water and wastewater SPs, and NGOs. The public served by the municipalities are the PAP.

At the minimum, the proponent must meet with the principal stakeholders to inform them about the proposed project and to solicit their views about it. More extensive consultations is required for specific projects that have significant impacts. The methods and results of the consultations shall be documented in the ESIA Report.

All consultations need to be a two-way dialogue with the aim of informing the stakeholders about the project impacts (positive/negative) and obtain their feedback and views about the project and the proposed mitigation etc. All consultations need to be inclusive of all groups and gender, transparent and documented.

Once the sub-project has been reviewed and cleared, the PCU shall inform the public about the results of the review. It is important to note that any affected or interested individual or group has the right of appeal, if dissatisfied with the decision reached at any stage in the evaluation process. The appeals process will be according to the national regulations and the Word Bank's provisions.

7.2 Grievance Redressal and Complaints Mechanism

In Palestine, the right of the public to complain or grievance has been confirmed by the Grievance and Complaints bylaw that has been approved by the Ministerial Cabinet on 9/3/2005 and updated on 8/3/2009. The Bylaw has regulated the means and tools to settle the complaints of the public and has stated the policies for the improvement of the performance of the Palestinian Ministries and Authorities and other NGOs.

This means that the citizens and beneficiaries of WSDP can raise their complaints anytime during the construction and operation of projects and that their complaints must be settled. The appropriate partner for the implementation of the Grievance and Redressal Mechanism (GRM) is water and sanitation SPs. SPs are responsible for working with PCU of PWA and assisting with implementation of the GRM. In addition, they act as a conduit of information between PCU and the public. For example, they advise people on their rights and GRM process throughout the period of projects implementation.

For minor infringements and social complaints, an incident which causes temporary but reversible damage, the contractor will be given environmental and social note/ stop and alert to remedy the problem and to restore the environment. If reviewing the action showed that restoration is done satisfactorily, no further actions will be taken, otherwise and if the Contractor has not remedied the situation within one day, any additional days of stopping work will not be considered as excused delay.

If the remediation is not done during the given time, the work has to be stopped and an environmental and social note has be issued to the contractor. Financial penalty applied to the non-complied mitigation measure, which shall be depicted in the biding documents and the ESMP. If repeating the noncompliance to the ESMP and penalties approximated (3-5%) of the contract value, the SP shall raise the formal recorded environmental and social notes and the deduction history to PWA in order to apply a legal action.

The penalty item shall be added to the bidding document, stating the deduction percentage if there is noncompliance to the ESMP. The ESMP will be part of the bidding documents, which will include explanation of the penalty deduction method. **Annex (9.8)** is a proposed penalty deduction method that was applied by the Municipal Development and Lending Fund (MDLF).

To ensure that the public has a safe, reliable and accountable means for their grievance to be heard, a specific mechanism of the following main features is to be established:

- **Information on sub-project and where and how to address Complaints:** For information on the sub-project and the GRM, compensation and consultation process, the public can download information from the PWA website. The website indicates the contact information of the head of the GRM Unit. Information on how complaints can be received i.e. name of the person in-charge, Telephone, fax, e-mail, drop box, wake-in details shall be announced.

  The SP is to prepare the web page informing the people on where and how to complain. It shall put on the web the type of complaints received and the answers to these complaints. Log of complaints at both PCU and SP is to be prepared and made available. Documentation of the complaints is essential for the success of the Grievance system and is committed to be applied.

  In addition, before construction begins, a billboard shall be posted that is visible including contact information of the regulator, whose role is to record all complaints and inform the SP immediately of the complaint. A brochure describing the sub-project, its impacts, and channels for making inquiries, comments and complaints about it shall be prepared and distributed.

- **Processing of Complaints:** In order to address all complaints in a timely manner, the SP is to set up a specific complaints unit (GRM unit). The unit will include at least three employees. It will handle the complaints and will make sure that an initial reply indicating that the complaint is received is sent in a week time. The head of the GRM unit will follow up with the officials of the SP and PCU to secure the reply to the complaint during 1-3 weeks time depending on the type of the complaint. The GRM unit will respond to all concerns through meetings, written responses and other forms of communication.

  The GRM unit is to report monthly to the management of the SP and PCU on the complaints and will inform of any pending ones that may need interference from the upper management. This is to ensure that all complaints are redressed and are settled. The SP will inform the PCU immediately if there are any urgent issues that need to be addressed.

- **Appeals Procedure:** If a complaint has not been resolved in a manner that the person making the complaint is satisfied, he or she can appeal. The appeal procedure is also to be announced on the web and made available for the public. The appeal will be addressed directly to the upper management of the SP and PCU, i.e. to the Head of the SP and/or the Head (Minster) of the PWA as appropriate. A reply to the appeal has to be issued within 40 days. A meeting with the concern to answer the complaint and come to a compromise is to take place in case the issue is not solved.

- **Monitoring and Follow-up of Complaints:** As to the institutional setup of the project, the PCU will have the overall supervision and control on the sub-project and will make sure that the ESMP is implemented. PCU will also make sure that the GRM and the complaint system is applied properly and as to the related laws and regulations.

- **Annex (9.9)** is the World Bank Performance Standard on Labor and Working Conditions that have to be applied (Performance Standard 2 – Labor and Working Conditions (PS2)).

8. Environmental and Social Monitoring and Capacity Building

8.1 Environmental and Social Monitoring Guidance

A system for environmental and social monitoring and reporting for projects will be developed by the ESO. These specifics will depend on the final institutional arrangements decided between PWA, the PCU (including the ESO), the project proponents, and the local EQA officials. However, these principles are to be incorporated in WSDP environmental and social monitoring and reporting, as follows:

- The ESO, with the project proponent, will conduct at least one site visit for each proposed project, in order to "ground-truth" the environmental screening and classification form. A brief on this visit is to be written, with subproject visit date, participants, visit specifics covered, photos, names of beneficiaries interviewed, conclusions and recommendations, etc.

- Similarly, the ESO with the project proponent will conduct at least one site visit for each accepted project, in order to give relevant advice on the expected design, structure, and content of the ESIA/ESMP. A brief on this visit is to be written, with project visit date, participants, visit specifics covered, photos, names of beneficiaries interviewed, conclusions and recommendations, etc.

- PCU Quarterly Progress Reports and interim reports (on safeguards trainings, capacity building, and site visits) should be shared with PWA and the World Bank. The reports should include detailed information on each workshop conducted, including:

    - The date and place of the workshop;
    - The agenda of the workshop, i.e. what topics were covered;
    - The names, titles, and LGU for each person in attendance. It is suggested that there be a "sign-in sheet" that can then be scanned and inserted directly into the report.
    - The names and titles of those who led the workshop;
    - Any observations about: what topics need to be covered next, any interesting topics/ subjects that came up during the discussions; any good practices shared by LGUs, which should be followed up on and incorporated into future workshops.

- The construction-phase site monitoring form: 100% compliance is defined to be at least one completed form for each month that project is in its construction phase;

- The PCU ESO and the local EQA official will conduct one joint site visit per month in order to jointly report on safeguards compliance with both national and World Bank environmental and social safeguards policies.

8.2 Monitoring, Evaluation, and Reporting Responsibilities

The flow of monitoring proceeds is presented in **Table 19**:

Table (19): WSDP Monitoring, Evaluation, and Reporting Framework

Type of Monitoring	From Whom to Whom	Description
Constant monitoring	Between PCU/ ESO and project proponent site engineering staff	The PCU ESO and the project proponent staff responsible for safeguards compliance will be interacting on a day-to-day basis.
Monthly monitoring reports	From project proponent to ESO	The project proponent will submit a monthly progress report to the PCU through the ESO. This report will necessarily address environmental and social issues relevant to the project, and specifically focus on those issues relevant to safeguards policies.
Monthly monitoring reports	From PCU to PWA	The PCU ESO will submit monthly monitoring reports to PWA as part of a consolidation of PCU reporting. The structure and content of these reports, interim to the Quarterly Progress Reports, will be finalized between PCU and PWA.
Quarterly Progress Reports (QPRs)	From PCU to PWA, From PWA to World Bank	The PCU will submit the report to PWA, and PWA is to quality-check and formally submit this report to the World Bank. Elements of contents of this report are presented in **Annex (9.6)**.

8.3 Capacity Building Requirements

The successful approach to safeguards implemented under WSDP will be maintained. Project officers are to attend capacity building programs that will ensue having accumulated sound knowledge in the World Bank and EQA safeguard policies, as well as supporting LGUs in their efforts to comply with these procedures. PWA will appoint and/or consult an ESO to assist PCU to monitor environmental safeguards issues.

The PCU shall be responsible for monitoring and compliance with the environmental and social policies and requirements. It will have the responsibility of reviewing and assessing the ESIAs/ESMPs of the projects. Full time ESO shall be appointed by the PCU. The PCU and the ESO shall receive additional environment and social specific training.

Among the other subjects that the training and capacity building in the WSDP SOPs shall cover are:

- Environmental and social screening;
- Preparation of ESMPs;
- Implementation of ESMPs; construction and operational phases;
- Occupational Health and Safety;
- Environmental and social monitoring and reporting.

The capacity building and training shall also invite officers of PWA, interested private sector parties, and other stakeholders; an interesting subject for the stakeholders would be environmental monitoring and reporting.

Specifically, the ESO in coordination with PWA will:

- Screen and review all proposed projects in order to identify any that may carry the risk of adverse environmental and social impacts;
- Assign a category to each project in accordance with the Environmental safeguard policies of the World Bank and EQA;
- Support private sector entities in designing ESIAs/ ESMP for projects that are classified under Category "B" with the aim of demonstrating proposed monitoring activities that encompass all major impacts and identify how they will be integrated into project supervision;
- Hold field visits to projects sites to ensure compliance with the environmental and social safeguard procedures.

8.4 Capacity Building Good Practices

Capacity building good practices and coordination between the PCU and EQA go hand-in-hand. The best learning is that in the field and during the course of during work. To this end, it has been suggested that:

All Quarterly Progress Reports and PCU interim reports (on safeguards trainings, capacity building, and site visits) should be shared with PWA and EQA. Sharing of these reports will allow to learn from how PCU is documenting its work; there is no expectation that formal comments will be sent or received on these reports.

The ESO and EQA should conduct one site visit together per month. When this is to be an EQA construction monitoring visit, EQA will "host" the visit and will work with the

project proponent site engineer, with the ESO is an observer, and vice versa. This ensures that each the PCU and the EQA learns from the other's process of working in the field.

Within each six-month time-period, PCU and EQA together will design and lead one or more workshops, to cover all projects for which they are responsible, on the topic of construction-phase site supervision, monitoring, and recording. PCU will hold the first workshop, which EQA safeguards staff will attend, so that EQA can learn from the PCU ESO's delivery of the workshop. Then, EQA will design and co-host its workshops, which the WSDP project will fund, and the PCU ESO will co-host.

The content of these workshops should be based on similar "project stories", i.e. projects with similar sector specificities, which also have interesting environmental and social safeguards issues to share and to learn from.

Once construction is fully underway, it is suggested that project proponent site engineers be asked to present their own "project stories" in terms of telling about a project, relevant safeguards issues and how they were solved, and lessons for others, so that there is "peer-to-peer teaching and learning", guided by the PCU and EQA. Discussion of these stories should be the core of these workshops.

When conducting site visits with the LGU site engineer responsible for environmental and social safeguards, the PCU ESO or EQA should ask the project proponent site engineer to lead the conversations with any on-site construction workers and/ or impacted neighbors. This reinforces the confidence, capacity, and authority of that site engineer; a discussion of how these conversations can be improved should be held immediately after these site visits.

8.5 Financial Implications

Any cost implications relevant to the development/training will be recorded and will be financed from WSDP budget. The mitigation measures and the associated costs will become part of the ESMP for the project, which will be monitored during the implementation.

Costs shall be calculated based on estimates provided by contractors for any mitigation measures required during the civil works. For example:

- Costs of ensuring the appropriate dust suppression mechanisms in place during excavation works must be calculated and included in the tender documents;
- Costs of installing erosion control measures shall be estimated as part of the engineering costs;
- Training of staff on environmental and Occupational Health and Safety issues should be outlined in detail; and

- Costs of monitoring noise during construction shall be calculated; based on the frequency of monitoring and cost of equipment.

Table 20 shows a provision of the proposed training that is seen to be held for the different levels during the project implementation stages.

Table (20): WSDP proposed safeguards training sessions

Target Group	Workshop/ Training Sessions	Cost US $
Coordinators and Project Officers (PCU, ESO, etc.)	- Training session on environmental and social screening forms; - Training session on planning and design of ESIAs/ ESMPs.	12,000
Beneficiaries and Stakeholders	- Consultation sessions on potential environmental and social impacts of projects.	15,000
Project proponents	- Training session on environmental and social screening forms; - Training session on planning and design of ESIAs/ESMPs; - The design and implementation of mitigation measures; - Occupational health and safety guidelines.	15,000
Sub Total (US $)		**42,000**
ESO Salaries per year for 10 years		**360,000**
Total (US $)		**402,000**

In addition to the US$ 42,000 for training, US$ 36,000 per year is to be made available to pay the ESO at US$ 3,000 per month including social charges and taxes.

The budget, to be allocated for ESMF implementation, shall cover costs related to stakeholder trainings and consultation forums on ESMF; preparation, implementation monitoring and evaluation of individual instruments (EA/ESMP) and hiring of safeguards staff/consultants to support PWA in the implementation of the ESMF.

9. Annexes

9.1 World Bank Safeguard Policies

Environmental Assessment (EA) (OP/ BP 4.01): The World Bank's safeguard system, including Environmental Assessment, is an essential tool for integrating environmental and social concerns into development policies, programs and projects by providing minimum requirements that all Bank-supported operations meet. The safeguard policies of the Bank are operationalizing the "do no harm" approach and are fundamental in meeting the three pillars of the World Bank Environment Strategy:

- Improving the quality of life;
- Improving the quality of growth;
- Protecting the quality of the regional and global commons.

Among the ten World Bank Safeguard Policies, Environmental Assessment (EA), a formal Bank policy since 1989, was the first process to mandate the screening of Bank-funded projects for their environmental and to some extent social impacts.

Natural Habitats (OP/ BP 4.04): Natural habitats are land and water areas where (i) the ecosystems' biological communities are formed largely by native plant and animal species, and (ii) human activity has not essentially modified the area's primary ecological functions.

All natural habitats have important biological, social, economic, and existence value. Important natural habitats may occur in tropical humid, dry, and cloud forests; temperate and boreal forests; Mediterranean-type shrub lands; natural arid and semi-arid lands; mangrove swamps, coastal marshes, and other wetlands; estuaries; sea grass beds; coral reefs; freshwater lakes and rivers; alpine and sub alpine environments, including herb fields, grasslands, and paramos; and tropical and temperate grasslands.

The conservation of natural habitats like other measures that protect and enhance the environment, is essential for long-term sustainable development. It is therefore necessary to support the protection, maintenance, and rehabilitation of natural habitats and their functions in its economic and sector work, project financing, and policy dialogue. It is essential to apply, a precautionary approach to natural resource management to ensure opportunities for environmentally sustainable development.

Forests (OP/ BP 4.36): Forests is as an area of land of not less than 1.0 hectare with tree crown cover (or equivalent stocking level) of more than 10 percent that have trees with the potential to reach a minimum height of 2 meters at maturity in situ. A forest may consist of either closed forest formations, where trees of various stories and undergrowth cover a high proportion of the ground, or open forest. Young natural

stands and all plantations that have yet to reach a crown density of 10% or tree height of 2 meters are included under forest, as are areas normally forming part of the forest areas that are temporarily unstocked due to human intervention such as harvesting or natural causes but that are expected to revert to forest. The definition includes forests dedicated to forest production, protection, multiple uses, or conservation, whether formally recognized or not. The definition excludes areas where other land uses not dependent on tree cover predominate, such as agriculture, grazing or settlements.

The management, conservation, and sustainable development of forest ecosystems and their associated resources are essential for lasting poverty reduction and sustainable development, whether located in countries with abundant forests or in those with depleted or naturally limited forest resources. The objective of this policy is to assist borrowers to harness the potential of forests to reduce poverty in a sustainable manner, integrate forests effectively into sustainable economic development, and protect the vital local and global environmental services and values of forests.

Pest Management (OP 4.09): In assisting borrowers to manage pests that affect either agriculture or public health, the World Bank supports a strategy that promotes the use of biological or environmental control methods and reduces reliance on synthetic chemical pesticides.

In appraising a project that will involve pest management, it is necessary to assess the capacity of the country's regulatory framework and institutions to promote and support safe, effective, and environmentally sound pest management.

Physical Cultural Resources (OP 4.11): The United Nations term "cultural property" includes sites having archeological (rehistoric), paleontological, historical, religious, and unique natural values. Cultural property, therefore, encompasses both remains left by previous human inhabitants (for example, middens, shrines, and battlegrounds) and unique natural environmental features such as canyons and waterfalls. The rapid loss of cultural property in many countries is irreversible and often unnecessary.

Indigenous Peoples (OP 4.02): This policy contributes to the World Bank's mission of poverty reduction and sustainable development by ensuring that the development process fully respects the dignity, human rights, economies, and cultures of Indigenous Peoples. For all projects that affect Indigenous Peoples, it is essential to engage in a process of free, prior, and informed consultation that results in broad community support to the project by the affected Indigenous Peoples. The measures to be included are to (a) avoid potentially adverse effects on the Indigenous Peoples' communities; or (b) when avoidance is not feasible, minimize, mitigate, or compensate for such effects. The projects should be designed to ensure that the Indigenous Peoples receive social

and economic benefits that are culturally appropriate and gender and inter-generationally inclusive.

The identities and cultures of Indigenous Peoples are inextricably linked to the lands on which they live and the natural resources on which they depend. These distinct circumstances expose Indigenous Peoples to different types of risks and levels of impacts from development projects, including loss of identity, culture, and customary livelihoods, as well as exposure to disease. Gender and intergenerational issues among Indigenous Peoples are also complex. As social groups with identities that are often distinct from dominant groups in their national societies, Indigenous Peoples are frequently among the most marginalized and vulnerable segments of the population. As a result, their economic, social, and legal status often limits their capacity to defend their interests in and rights to lands, territories, and other productive resources, and/or restricts their ability to participate in and benefit from development. At the same time, Indigenous Peoples play a vital role in sustainable development and their rights are increasingly being addressed under both domestic and international law.

Involuntary Resettlement (OP/BP 4.12): The experience indicates that involuntary resettlement under development projects, if unmitigated, often gives rise to severe economic, social, and environmental risks: production systems are dismantled; people face impoverishment when their productive assets or income sources are lost; people are relocated to environments where their productive skills may be less applicable and the competition for resources greater; community institutions and social networks are weakened; kin groups are dispersed; and cultural identity, traditional authority, and the potential for mutual help are diminished or lost. This policy includes safeguards to address and mitigate these impoverishment risks.

Safety of Dams (OP/BP 4.37): For the life of any dam, the owner is responsible for ensuring that appropriate measures are taken and sufficient resources are provided for the safety of the dam, irrespective of its funding sources or construction status.

Projects on International Waterways (OP/BP 7.50): This policy applies to the following types of international waterways:

- any river, canal, lake, or similar body of water that forms a boundary between, or any river or body of surface water that flows through, two or more states;
- any tributary or other body of surface water that is a component of any waterway described in above; and
- any bay, gulf, strait, or channel bounded by two or more states or, if within one state, recognized as a necessary channel of communication between the open sea and other states and any river flowing into such waters.

Also, this policy applies to the following types of projects:

- hydroelectric, irrigation, flood control, navigation, drainage, water and sewerage, industrial, and similar projects that involve the use or potential pollution of international waterways; and
- detailed design and engineering studies of projects, including those to be carried out by the World Bank as executing agency or in any other capacity.

Projects in Disputed Areas (OP/ BP 7.60): Projects in disputed areas may raise a number of delicate problems affecting relations not only between the World Bank and its member countries, but also between the country in which the project is carried out and one or more neighboring countries. In order not to prejudice the position of either the World Bank or the countries concerned, any dispute over an area in which a proposed project is located is dealt with at the earliest possible stages.

Table (21): World Bank Safeguard Policies and Core Requirements under each Policy

Policy	Summary of Core Requirements	Public Consultation
OP/BP 4.01 Environmental Assessment	Screen early for potential impacts and select appropriate instrument to assess, minimize, and mitigate potentially adverse impacts.	Consult affected groups and NGOs as early as possible.
OP/BP 4.04 Natural Habitats	Do not finance projects that degrade or convert critical habitats. Support projects that affect non-critical habitats only if no alternatives are available and if acceptable mitigation measures are in place.	Consult local people in planning, designing, and monitoring projects.
OP 4.09 Pest Management	Support integrated approaches to pest management Identify pesticides that may be financed under the project and develop appropriate pest management plan to address risks.	Consult local people in planning, designing, and monitoring projects.
OP/BP 4.10 Indigenous Peoples	Screen to determine presence of Indigenous Peoples in project area. Policy triggered whether potential impacts are positive or negative. Design mitigation measures and benefits that reflect Indigenous People cultural preferences.	Carry out free, prior, informed consultation and obtain broad community support.
OP 4.11 Physical Cultural Resources	Investigate and inventory cultural resources potentially affected, include mitigation measures when there are adverse impacts on physical cultural resources.	Consult appropriate agencies, NGOs, and University departments.

Policy	Summary of Core Requirements	Public Consultation
OP/BP 4.12 Involuntary Resettlement	Assist displaced persons in their effort to improve or at least restore their standards of living. Avoid resettlement where feasible or minimize. Displaced persons should share in project benefits.	Consult resettles and host communities, incorporate expressed views in resettlement plans.
OP/BP 4.36 Forests	Support sustainable and conservation oriented forestry. Do not finance projects that involve significant conversion or degradation of critical forest areas.	Consult local people, the private sector, and interest groups in forest area.
OP/BP 4.37 Safety of Dams	For large dams, technical review and periodic safety inspections by independent dam safety professionals.	No public consultations
OP/BP 7.50 Projects on International Waterways	Ascertain whether riparian agreements are in place, and ensure that riparian states informed of and do not object to project interventions	No public consultations. Riparian notification required.
OP/BP 7.60 Projects in Disputed Areas	Ensure that claimants to disputed areas have no objection to proposed projects	No public consultations. Claimants informed.

9.2 Baseline Data of the sample Municipalities

9.2.1 Tulkarem

9.2.1.1 General

Tulkarem lies on the western slopes of the West Bank, with plain areas to the west and mountainous terrain to the east. The City occupies an area of about 253,450 dunums from the total area of Tulkarem Governorate; that is about 334,530 dunums. The total population count of Tulkarem City in 2016 was estimated at 60,173 people, with a gender ratio of 102.1 males/ 100 females.

Tulkarem belongs to the sub-tropical zone, which is characterized by Mediterranean Climate. The average temperature ranges between 10.9 and 26.1 °C in January and August, respectively. The average relative humidity reaches about 69%. The annual average rainfall reaches 601 mm, while the maximum monthly rainfall is recorded in December of about 436 mm.

Tulkarem City is an agricultural city. The arable area in the city is 209,064 dunum, but the actually cultivated area is 138,368 dunums. These areas are mainly cultivated with fruit trees, vegetables and field crops.

9.2.1.2 Water Resources

Groundwater is considered the main water resource available in Tulkarem area. Groundwater in the area is exploited by several public and private groundwater wells. Most of these wells were drilled before 1967, while only few wells were drilled after the establishment of PA. Groundwater level in the area varies between 20-50 meters above sea level.

Due to the geological nature of the western groundwater basin, wells are mostly characterized by their considerable discharge capacity, and good water quality (Total dissolved solids TDS < 1000 mg/l).

9.2.1.3 Access to Water Supply System

Water supply situation in Tulkarem area has considerably improved within the last 15 years. Total water supplied to all communities is nearly 10 MCM/year. Of this quantity nearly 7.2 MCM is used and some 2.8 is lost or considered as non-revenue water (NRW). The average loss percentage is nearly 28%, while it varies from 6% to 45%.

9.2.1.4 Access to Sanitation

Tulkarem City has sewage collection system; covering more than 80% of the houses. The Municipality operates the sewerage system of Tulkarm and Shuweika, while the sewerage systems in Tulkarem Camp and Nur Shams Camp are operated by UNRWA.

Wastewater, collected in Tulkarem City sewage system, is pretreated in Tulkarem treatment ponds, located at the western part of the city adjacent to the green line. The treatment plant consists of one screen and three ponds. After passing the ponds, wastewater is discharged to a streambed located south of the WWTP conveying the sewage to the 1948 occupied Palestine where it is subsequently treated in Emek Hefer WWTP.

9.2.2 Salfit

9.2.2.1 General

Salfit city, which includes Khirbet Qeis (Qeis ruins) within its borders, is the only city in Salfit Governorate. The city is located at an altitude of 522 m above sea level with a mean annual rainfall of 649.5mm. The average annual temperature is 17.4 °C, whilst the average annual humidity is approximately 61%. According to PCBS, the total population of Salfit City in 2016 was 10,673. Salfit has a total area of approximately 26,123 dunums of which 16,202 are arable land and 1,594 dunums are registered as residential.

9.2.2.2 Water Resources

The city has two springs with an annual pumping rate of approx. 71,000 cubic meters. However, the water from these springs are only used for agricultural rather than domestic purposes. In addition, a public water reservoir with a capacity of 900 cubic meters is located in the city which is usually used for drinking, in addition to 20 household rainwater harvesting cisterns.

9.2.2.3 Access to Water Supply System

Salfit is provided with water by the West Bank Water Department (WBWD) through the public water network established in 1958. All of the housing units are connected to this network. The quantity of water supplied to the city in 2010 was approximately 512,161 cubic meters/year, which makes the estimated rate of water supply per capita around 147 liters/day. However, no Salfit citizen consumes this amount of water due to water losses, which are estimated at 22%.

9.2.2.4 Access to Sanitation

Salfit has been connected to a public sewerage network since 2000. Approximately, 60% of Salfit housing units use the sewage network as a means for wastewater disposal, while the rest of housing units use unhygienic and environmentally unsound cesspits. At the individual level, it is estimated that the per capita wastewater generation is 92 liters per day, depending on the consumption rate. There is no wastewater treatment either at the source or at the disposal sites and this poses a serious threat to both the environment and public health.

9.2.3 Qalqiliya

9.2.3.1 General

Qalqiliya is the only Palestinian city in Qalqiliya Governorate. Qalqiliya is located at an altitude of 57m above sea level with a mean annual rainfall of 587.4mm. The average annual temperature is 19°C whilst the average annual humidity is approximately 63.4%. The total population of Qalqiliya City in 2016 was 51,969, of whom 50.9% were males and 49.1% females.

9.2.3.2 Water Resources

The city has 42 artesian wells; six of which are used for drinking, while the rest are used for agricultural purposes. However, nine of these wells are isolated behind the Wall. There is also a public water reservoir with a capacity of 5,000 cubic meters located in the city.

9.2.3.3 Access to Water Supply System

Qalqiliya is provided with water by Qalqiliya Municipal Council through the public water network established in 1960. Approximately 98% of the housing units are connected to the network.

The quantity of water supplied to Qalqiliya city in 2012 was recorded as approximately 2.9 million cubic meters per year. Therefore, the estimated rate of water supply per capita is approximately 169 liters per day. However, no citizen consumes this amount of water due to water losses, which are estimated at 26%. Therefore, the rate of water consumption per capita in Qalqiliya is 125 liters per day.

9.2.3.4 Access to Sanitation

Qalqiliya city has been connected to a public sewerage network since 1960. Approximately 98% of Qalqiliya housing units use the sewage network as the means of wastewater disposal, while the remainder use cesspits. There is no wastewater treatment either at the source or at the disposal sites and this poses a serious threat to both environmental and public health

At the individual level, it is estimated that the per capita wastewater generation is 100 liters per day, depending on the consumption rate.

9.2.4 Jericho

9.2.4.1 General

Jericho is considered as the lowest region in the world. It is characterized by low contamination levels as well as the warmth of winter, the availability of fresh water, the absence of noise and the purity of air.

The topography of the city of Jericho shows continuous decrease in elevation from about 150 m below sea level in the East to 300 m below sea level in the West.

Jericho lies on a total area of around 58,701 dunums, of which 31,483 dunums are considered arable land, and 4,195 are registered as residential.

Jericho has a relatively low population density. The population of the city is recorded in 2016 as (23,220), distributed evenly (about 50% each) between males and females.

The climate of Jericho is classified as arid, which has hot summer and warm winter with very rare frost incidents. The average annual temperature is 23.5 degrees and the highest average annual temperature is 30.5 degrees. The average annual amount of rainfall is 150 millimeters, and the average annual humidity is 52%.

9.2.4.2 Water Resources

Groundwater is used as the main source of water supply for the Palestinians in Jericho City either by wells or springs. Water allocation from wells and springs in Jericho is 95% for agriculture and the remaining 5% is for human consumption. Jericho is currently being provided with water by 'Ein as Sultan water spring. The average rate of water discharged from 'Ein as Sultan spring is approximately 650 cubic meters/ hour.

The annual degradation in water quality of most groundwater wells is alarming due to overexploitation of available freshwater sources and brackish water type, where nitrate from fertilizers and sewage infiltration exacerbate the pollution load of nitrogen.

9.2.4.3 Access to Water Supply System

Jericho Municipality provides the residents with 'Ein as Sultan water through the public water network established in 1955. In 2009, the public water network was supplied with 310.7 cubic meters/ hour of the spring's water, which is equivalent to 48% of the spring's rate of discharge. The percentage of water loss through the network reaches about 23.7%.

9.2.4.4 Access to Sanitation

Jericho lacks a public sewerage network with most of the city residents using cesspits as their main means of waste -water disposal. The wastewater collected by cesspits, is discharged by wastewater tankers directly to open areas or nearby valleys without any regard for the environment. At the individual level, it is estimated that the per capita wastewater generation is 191 liters per day.

9.2.5 Jenin

9.2.5.1 General

The city of Jenin is the main city of Jenin district and its administration center. The city is located in the north of the West Bank, characterized by gentle slopes and considered

the third largest city after Hebron and Nablus in respect of the area. the population in the city of Jenin was 48,479 capita in 2016.

Ground elevations varies between 120 m at the northern boundary of Jenin city to around 300 m at the southern edges of the city, including some high hills with around 325 m above sea level.

The climate in Jenin Area is classified as semi-arid and Mediterranean (dry to sub-humid). The long term annual average rainfall within its boundary is estimated at 468 mm. The average monthly temperature within the boundary of Jenin during summer months is about 27.4 °C, while the mean monthly temperature during winter months is 14.1 °C. The average humidity is 72%.

9.2.5.2 Water Resources

Groundwater is the main water source in the Jenin and is represented by both wells and springs. Jenin Municipality owns and operates three ground water wells. These are Al Mechanic well, Al Saaadeh well and Balama. The maximum total production of the three wells reached around 768,263 m^3 in year 2012.

The Municipality purchases water from three private wells, which are Farahty, Alawneh and Muamar Jarar. In year, 2014 Municipality purchased around 444250 m^3 from Farahty and Alawneh.

9.2.5.3 Access to Water Supply System

The city is supplied with water via a water network (transmissions, distribution mains and distribution). The water is supplied from three municipal wells, two private wells (Farahty and Alawneh) and three WBWD/ Mekorot connection points (Al Jalameh, Al Swetat and Arraba).

According to the data collected from Jenin Municipality (water meter readings) for years 2012, 2013 and 2014, the water per capita consumption raised from an average of 54 l/c/d in year 2012 to an average of 58 l/c/d in year 2014 (around 15% increase). The average NRW varied between 43% and 46%.

9.2.6 Hebron

9.2.6.1 General

Hebron city is located within Hebron Mountains, extending from south of Jerusalem to the Negeb. Hebron Mountains form the southern rim of the West Bank Mountains. On average, they are 850 meters high with the highest point at 1,020 meters above mean sea level near Kherbit Khellan, to the north of Hebron city.

Hebron is the largest city in the West Bank, with a total area of approximately 74,100 dunums, including 30,000 dunums covered by housing units. The city housed 215,452 residents in 2016.

Hebron is located in the southern part of the West Bank mountainous range, which has lower temperatures than in other places of the West Bank. The average annual temperature in the area is 16°C. Average Relative humidity reaches 62.4%, while the mean annual rainfall is 370 mm.

9.2.6.2 Water Resources

There are ten springs and three wells in the city. The water of springs and wells are not currently used.

9.2.6.3 Access to Water Supply System

The majority of houses in Hebron city have been connected to a public water supply network since 1936. More than 80% of the city houses are linked to the public water supply network. Other households rely on rainwater collection, springs, or artesian wells (There are three artesian wells in Hebron). In Hebron, water supply is provided by PWA and Israeli Water Company (Mekorot). Average monthly water consumption in the city is around 55-60 liters per capita per day.

9.2.6.4 Access to Sanitation

In Hebron city, a public wastewater network covers the majority of the city housing units. Approximately, 30% of the city houses are not connected to the public sewage network.

In unconnected areas, cesspits are the common method households use to dispose of produced wastewater. Wastewater discharged as such gravely impacts on adjacent farmland and contaminates springs, groundwater and the environment in general.

9.2.7 Yatta

9.2.7.1 General

Yatta is a Town in the Hebron Governorate, located 9 km south of Hebron city, in the southern part of the West Bank. The total area of Yatta town estimated to be 270,000 dunums, of which 14,000 dunums are classified as 'built up' area; whilst 115,000 dunums are agricultural area, 141,000 is forests, uncultivated, or public land. Yatta town is located on the mountainous area south of Hebron city at an elevation of 793 m above the sea level, with a mean rainfall 303 mm, an average annual temperature of 18 °C, and average annual humidity at 61%. According to the Palestinian Central Bureau of Statistics, Yatta had a population of 64,277 in 2016.

9.2.7.2 Water Resources

There are six springs and wells in the town, the two mains ones being Al Hano spring and Tawani spring. Furthermore, the water of springs and wells are not used.

9.2.7.3 Access to Water Supply System

Yatta has been connected with a water network since 1974. Almost 85% of the households are connected. Mecorot is the main provider for water coming from Toque wells.

9.2.7.4 Access to Sanitation

There is no sewage network in Yatta town. All households dispose of their wastewater in cesspits. This is considered one of the main sources of pollution to the groundwater.

9.2.8 Tubas

9.2.8.1 General

Tubas City is located in the north-eastern part of the WB, to the west of Tubas Governorate. It has an area of 295,123 du, of which 51% is classified as agricultural areas. The city is located at a moderate elevation of 362 m asl. The mean annual rainfall in Tubas City is 329 mm, while the average annual temperature is 21 °C and the average annual humidity is 56%. The total population of the City was 21,487 in 2016, of which 51% were males and 49% were females.

9.2.8.2 Water Resources

There is one spring in Tubas area, providing water for households use. In addition to that, the city has a 900 m^3 water reservoir, used for providing the city with water in the summer time, once a week.

9.2.8.3 Access to Water Supply Systems

The water network in Tubas City existed since 1968. Around 90% of households are connected to it. Unfortunately, the network does not cover new built-up areas and consists of low capacity pipes, which needs rehabilitation to increase their capacity.

9.2.8.4 Access to Sanitation

The City of Tubas is not served by sewage networks. All households dispose of their wastewater in cesspits, which is considered one of the main sources of pollution to groundwater.

9.2.9 Gaza City

9.2.9.1 General

Gaza is one of the oldest cities in the world. It is located on the extreme western edge of a shallow coastal aquifer, and occupies an area of 45km^2. The number of inhabitants in the city is about 400,000.

Gaza is one of the semi-arid areas, where rainfall is falling in winter season only. The annual average rainfall is 350 - 400 mm. The highest temperature reaches 32 °C, while the lowest temperature reaches 6 °C.

Gaza was famous for growing and exporting wheat, barley, and cotton to the world. However, growing different types of citrus, such as lemon and orange, has spread in Gaza. In addition, hives to produce honey were established and potatoes, tomatoes, cucumbers and fruit, mainly grapes, strawberries, figs, melons and cantaloupe were grown. Irrigation in Gaza City depends on groundwater through pumping wells. Generally, the economy in Gaza depends largely on the cultivation and export of flowers to many countries around the world.

9.2.9.2 Water Resources

Water resources in Gaza are limited. The coastal aquifer is considered the only source of fresh water for the Palestinian population in Gaza for all kind of human usage (domestic, agricultural and industrial). The thickness of the water bearing strata ranges between several meters in the east and south-east to about 120-150 m in the western regions and along the coast. The aquifer consists mainly of sand and gravel and sandstone intercalated by clay and silt. A hard and non-productive layer of clay and marl with low permeability (Sakia Formation) has a thickness of about 800-1000 m situated below the coastal aquifer. The yearly recharge volume for this limited aquifer is in the range of 55-60 MCM/yr.

The direct consequences of over pumping of the coastal aquifer are seawater intrusion and uplift of the deep brine water; as a result the water quality falls below the accepted international guidelines for potable water resources. Currently, several agricultural wells are also showing high salinity levels. In addition to this, Gaza is experiencing serious wastewater-driven problems, it is characterized by high levels of nitrates in the groundwater.

9.2.9.3 Access to Water Supply and Sanitation Services

The Coastal Municipalities Water Utility (CMWU) is responsible for the delivery of water and wastewater services for the entire population of Gaza.

Water uses in Gaza for domestic purposes varies from 75 l/c/d to 107 l/c/d with an average of 96 l/c/d.

Around 90% of the population in the Gaza City is served by sewage network system and the remainder disposes raw wastewater into cesspools, open drains and vaults. There is a WWTP in the city, discharging its effluent directly to the sea.

Water and wastewater services have suffered significantly during the Palestinian – Israeli Conflicts. This has severely affected the lives of the people of Gaza and added to their suffering. Damages were incurred to a wide range of facilities and impacted almost

all types of water and wastewater facilities. This includes damage to water and wastewater pipes and pump stations; water production wells and storage reservoirs; wastewater treatment plants; electrical control panels; electricity supplies; administrative and operation buildings and stores; and utility vehicle and trucks.

9.3 Ongoing and Foreseen Water and Sanitation Projects

The Consultant sent a letter to the targeted municipalities and visited some of their water and wastewater departments, inquiring about the ongoing projects, needs, and future investments. The responses came as follows:

Tulkarem Municipality

The projects currently being implemented by the Municipality of Tulkarem are:

- Construction of some sewage lines in part of Al-Izab area east of the city, financed by AFD;
- Renovation of some drinking water lines in a number of sites, whose roads are currently being rehabilitated, at the expense of the Municipality.

The future projects, proposed by Tulkarem Municipality, are as follows:

- Completion of the construction of the sewage network in Al-Izab and Thannabah area;
- Improving ways for WLR in water networks;
- Improving the management of water and wastewater department;
- Implementation of a water distribution network for the east of Thannaba and Ezbet Al Rasheed;
- Implementation of sewage lines in a number of locations, within the city and its suburbs, especially those having a direct impact on drinking water wells;
- Construction of a small WWTP, at the site of the existing treatment ponds, west of the city.

Salfit Municipality

The upcoming futuristic (next 5 years) water projects in accordance with the Master Plan of the Municipality are:

- A new water tank (1,000 m3) with pipelines;
- A new Well;
- Booster for "Om Al Abed" Tank;
- Development for the current resources;
- New water tanks for emergencies ;
- Redevelop the current network (Add valves, etc.)
- Some SCADA projects;
- Equipment to discover the Water Loss;
- On multiple projects Supply: (Pipes 2 inch 12,000 m), (Pipes 3 inch 18,000 m), (Pipes 4 inch 5,500 m), (pipes 6 inch 5,500 m), (pipes 8 inch 1,500 m).

Qalqiliya Municipality

In 2013, Qalqiliya Municipality implemented a Water and Wastewater Master Plan Project covering the period of 2014-2027 funded by Val de Marne (Conseil general) and Seine-Saint-Denis (Le Departement).

The Master Plan proposed short and a long-term investment projects as follows:

- The short-term stage will include projects which mainly address emergency repairs and maintenance, rehabilitation of existing water networks, development of institutional and organizational capacities and reducing NRW;
- The long-term stage will include projects, which address segmentation of the available water resources, construction of new facilities, such as main lines, pumping stations, reservoirs, etc., as well as the expansion of existing networks and the development of other system components, increasing and improving the level and extent of the water services.

Qalqiliya Municipality identified the foreseen development priorities and needs in the city as follows:

- Rehabilitation projects: priority for sewage network rehabilitation of around (700,000$);
- Extension projects: for example a new water tank of around (400,000$).

Jericho Municipality

Jericho Municipality, with funding from the Municipality of Paris, is undertaking a project related to the following activities: rehabilitation of water networks, updating the strategic plan of the Water Department, public awareness campaigns, and developing a plan for the collection of water revenues.

Technical support in the sanitation sector is another ongoing project. The project covers the administrative, technical and financial aspects, in addition to awareness raising.

Concerning the foreseen projects, they include:

- Replace the current pumps for Ein Al-Sultan Spring;
- Rehabilitation of the existing water networks;
- Installation of pressure reducing pumps in high pressure areas;
- Extension of wastewater lines (40 km);
- House connection projects (2,000 house).

Jenin Municipality

Jenin Municipal Council has implemented several related development projects in Jenin, during the past years. In 2016, the Municipality implemented a Water and Wastewater Master Plan Project covering the period of 2015-2045 funded by Val de Marne (Conseil

general) and Seine-Saint-Denis (Le Department). The Final Master Plan Project outputs includes information about arrangements, strategies and measures for:

- Operating the designated water security entity's assets for providing water services in Jenin City;
- Addressing future infrastructure needs, including building new infrastructure or augmenting existing infrastructure;
- Managing the infrastructure relevant to the designated water security entity's operations; and
- Managing demand for water.

Since the development of new resources is a national level concerns, which are facing a lot of difficulties, the Master Plan as well as Jenin Municipality adopted the reduction of non-revenue water (NRW) as an emergency action for better service and operation of the water network.

The Master Plan proposed a short and a long-term project with a brief descriptions and cost estimates which includes projects which will reduce the NRW, capacity building, infrastructure extension project, etc.

As a result of the Master Plan project, a capacity building project funded by JICA has just started (Strengthen the Capacity of Water Service management in Jenin Municipality). The Project will focus on the capacity building of the water and wastewater department technically as well as financially and institutionally. This technical part of the project will provide more plans and give more details about the reduction of NRW.

Jenin city is in an urgent need for funds and emergency projects, which shall enhance the services and increase or secure a safe drinking water for the Jenin inhabitant.

Hebron Municipality

Hebron Municipality has established water and wastewater Master Plans, including the following development projects as a priority in the coming five years:

- Two water tanks with pipelines (750,000$) & (550,000$);
- 300 km water networks;
- Rehabilitation projects;
- SCADA system (1,350,000$) on multiple projects: (water pumps, quality control, pumps for wastewater, etc.)
- On multiple projects 7,750,000$ Supply: (Pipes 4 inch 28,600m), (pipes 6 inch 22,100m), (pipes 10 inch 15,000m);
- Rehabilitation for the sewage network at the old city (1000 m), 1 million$;
- Construction of multiple sewage networks in multiple places in Hebron. (Multiple projects of about 1 million $ each).

Yatta Municipality

The upcoming futuristic (next 5 years) water projects in accordance with the Master Plan of the Municipality are:

- A new water tank with pipelines (600,000$);
- Study for the sewage network of Yatta;
- New water networks for nearby villages;
- Construction of warehousing for maintenance purposes, fund for Sump trucks, Bager, other maintenance equipment, etc. (This was mentioned multiple times because of the amount of water loss they have);
- Culverts;
- Pre-paid meters (really low payment for the water bills);
- Machinery;
- Operate "Sa'ed Abu Diab" Well.

Tubas Municipality

The foreseen water and wastewater projects for the coming few years, proposed by Tubas Municipality are:

- Al Fare'a – Tubas interconnecting system (8", 4 km IP from Al Fare'a well to Tubas reservoir, pumping station, two boosters);
- Tubas – Aqqaba interconnecting system (8", 2 km IP from Tubas to Aqqaba reservoir, pumping station, two boosters, 300 m3 balance tank).

Gaza Municipality

The ongoing and proposed water projects in Gaza City include; water distribution networks, transmission lines, water wells and water tanks. On the other hand, wastewater foreseen projects are categorized into: equipping projects, cleaning operations, new sewer and storm water lines and rehabilitation of wastewater pipes. More details about Gaza and other proposed projects have been made available at PWA.

Table (21) presents the number of projects reported by each of the targeted municipalities listed per project category and types and per each of the selected municipalities.

Further consultations have been conducted by a social expert during the first week of December, 2017. Several LGUs, NGOs, institutions and public entities have been consulted. Ramallah, Qalqiliya, Anabta, Tulkarem, Jenin, Hebron, Gaza City, Khan-Younis and Rafah are among the visited cities and towns. The consultation is detailed in the RPF report.

Table (22): Project Types and Categories expected for the WSDP

Projects Type and Category	Water Resource		Water Supply						Wastewater						Storm Water			Institutional Arrangement					Wash	**Total**
	Equipping Wells	Construction of New Wells in Gaza Strip	New Water Supply System	Rehabilitation of water system	Pumping Station	Appurtenances and Equipment (Valves, Water meters, etc.)	New Water Tank	WLR/ NRW	New Wastewater system	Rehabilitation of Wastewater System	pumping station	Appurtenances and Equipment (Manhole, (Manhole cover...)	Machinery (Sump truck, sewer- cleaning)	Study and Design	Hydraulic Structural / Culverts	New Storm Water System	Rehabilitation of Storm Water System (maintenance clean)	Capacity Building	Equipment & Machinery (Bager, excavator, O&M, maintenance equipment)	Financial (cost recovery, tariff)	Management (SCADA, GIS, Regulation)	Awareness Campaign	Secure a Safe Drinking Water	
City	Project location and number of projects per project type and category																							
Jericho				/	/	/			/									/		/	/	/		**8**
Gaza		///	/	/					// //	/// // /// //		////	///	// /		/// // //	///// /							**42**

Hebron				/	/	/	//		//	/	//		/			/		/					/		**14**
Yatta	/		/			//	/	/					/	/	/			/	//						**12**
Qalqilia			/// /	/	/		/	/		/								/							**10**
Jenin								/										/						/	**3**
Tulkarm			/					/	// /									/							**6**
Salfeet			/// //	/	/	//	//																		**11**
Tubas			//		// //		/																		**7**
Total	**1**	**3**	**14**	**5**	**8**	**6**	**7**	**4**	**10**	**12**	**2**	**4**	**5**	**4**	**1**	**8**	**6**	**6**	**2**	**1**	**1**	**2**	**1**	**113**

9.4 Chance Find Procedures

Contracts for civil works involving excavations should normally incorporate procedures for dealing with situations in which buried Physical Cultural Resources (PCR) are unexpectedly encountered. The final form of these procedures will depend upon the local regulatory environment, including any chance find procedures already incorporated in legislation dealing with antiquities or archaeology. For WSDP, chance finds procedures contain the following elements:

1. PCR Definition

In some cases, the chance finds procedure is confined to archaeological finds; more commonly it covers all types of PCR. In the absence of any other definition from the local cultural authorities, the following definition could be used: "movable or immovable objects, sites, structures or groups of structures having archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance".

2. Ownership

The identity of the owner of the artifacts found should be ascertained if at all possible. Depending on the circumstances, the owner could typically be, for example, the state, the government, a religious institution, the land owner, or could be left for later determination by the concerned authorities.

3. Recognition

As noted above, in PCR-sensitive areas, recognition and confirmation of the specific PCR may require the contractor to be accompanied by a specialist. A clause on chance finds should be included in every contractor's specifications.

4. Procedure upon Discovery

Suspension of Work

If a PCR comes to light during the execution of the works, the contractor shall stop the works. Depending on the magnitude of the PCR, the contractor should check with the Ministry of Tourism and Antiquities (MoTA) for advice on whether *all works* should be stopped, or only the works immediately involved in the discovery, or, in some cases where large buried structures may be expected, all works may be stopped within a specified distance (for example, 50 meters) of the discovery. MoTA's decision should be informed by a qualified archaeologist.

After stopping work, the contractor must immediately report the discovery to the Resident Engineer. The contractor may not be entitled to claim compensation for work suspension during this period. The Resident Engineer may be entitled to suspend work and to request from the contractor some excavations at the contractor's expense if he thinks that a discovery was made and not reported.

Demarcation of the Discovery Site

With the approval of the Resident Engineer, the contractor is then required to temporarily demarcate, and limit access to, the site.

Non-Suspension of Work

The procedure may empower the Resident Engineer to decide whether the PCR can be removed and for the work to continue, for example in cases where the find is one coin.

Chance Find Report

The contractor should then, at the request of the Resident Engineer, and within a specified time period, make a *Chance Find Report*, recording:

- Date and time of discovery;
- Location of the discovery;
- Description of the PCR;
- Estimated weight and dimensions of the PCR;
- Temporary protection implemented.

The Chance Find Report should be submitted to the Resident Engineer, and other concerned parties as agreed with the cultural authority, and in accordance with Palestinian national legislation. The Resident Engineer, or other party as agreed, is required to inform the cultural authority accordingly.

Arrival and Actions of Cultural Authority

The cultural authority undertakes to ensure that a representative will arrive at the discovery site within an agreed time such as 24 hours, and determine the action to be taken. Such actions may include, but not be limited to:

- Removal of PCR deemed to be of significance;
- Execution of further excavation within a specified distance of the discovery point;
- Extension or reduction of the area demarcated by the contractor.

These actions should be taken within a specified period, for example, 7 days. The contractor may or may not be entitled to claim compensation for work suspension during this period.

If the cultural authority fails to arrive within the stipulated period (for example, 24 hours), the Resident Engineer may have the authority to extend the period by a further stipulated time. If the cultural authority fails to arrive after the extension period, the Resident Engineer may have the authority to instruct the contractor to remove the PCR or undertake other mitigating measures and resume work. Such additional works can be charged to the contract. However, the contractor may not be entitled to claim compensation for work suspension during this period.

Further Suspension of Work

During this 7-day period, the Cultural authority may be entitled to request the temporary suspension of the work at or in the vicinity of the discovery site for an additional period of up to, for example, 30 days. The contractor may, or may not be, entitled to claim compensation for work suspension during this period. However, the contractor will be entitled to establish an agreement with the cultural authority for additional services or resources during this further period under a separate contract with the cultural authority.

9.5 Sample Environmental and Social Management Plan

Guidelines for preparing ESMP: An ESIA/ESMP are needed for category B projects in order to identify the potential impacts and appropriate mitigation measures to be included in the ESMP. Any ESMP would have the following format:

1. **Project Description;**
2. **Description of Adverse Impacts:** The anticipated impacts are identified and summarized;
3. **Description of Mitigation Measures:** Each measure is described with reference to the impacts it is intended to deal with. As needed, detailed plans, designs, equipment description, and operating procedures are described;
4. **Mitigation Indicators and Description of Monitoring Program:** Monitoring provides information on the occurrence of impacts. It helps identify how well mitigation measures are working, and where better mitigation may be needed. The monitoring program should identify what information will be collected, how, where and how often. It should also indicate at what level of effect there will be a need for further mitigation. How environmental impacts are monitored is discussed below;
5. **Monitoring methods:** Methods for monitoring the implementation of mitigation measures or environmental impacts should be as simple as possible, consistent with collecting useful information, so that the project implementer can apply them. For instance, they could just be regular observations of the project activities or sites during construction and then when in use. Are plant/ equipment being maintained and damages repaired, does a water source look muddier/cloudier different than it should, if so, why and where is the potential source of contamination. Most observations of inappropriate behavior or adverse impacts should lead to common sense solutions.
6. **Responsibilities:** The people, groups, or organizations that will carry out the mitigation and monitoring activities are defined, as well as to whom they report and are responsible. There may be a need to train people to carry out these responsibilities, and to provide them with equipment and supplies.
7. **Implementation Schedule:** The timing, frequency and duration of mitigation measures and monitoring are specified in an implementation schedule, and linked to the overall project schedule.
8. **Capacity Development and Training:** If necessary, the ESMP can recommend specific, targeted training for project staff, contractor, and community groups to ensure the implementation of environmental safeguards recommendations.

9. **Cost Estimates and Source of Funds:** These are specified for the mitigation and monitoring activities as a project is implemented.

10. **Integration:** The ESMP must be integrated into the project's and WSDP's plan and design, budget, specifications, estimated costs, bid documents, and contract/ agreements clauses. Contract documents should only be finalized when site-specific ESMP recommendations are adequately and appropriately incorporated into the plan and design, cost estimates, specifications, and contract clauses.

Table (23): Sample ESMP for mitigating potential environmental and social problems of the WSDP EMSF during implementation

Activity	Relevant WSDP Project Categories	Potential Environmental and Social Impacts	Mitigation Measures	Indicators
Rehabilitation of existing facilities	- Water Resources - Water Supply - Wastewater - WASH	Construction-related, localized dust, noise, and traffic impacts, debris management, worker health and safety	- Application of Environmental Requirements for contractors - Implementation of simple mitigation measures as per screening results - Preparation of a separate ESIA/ESMP as one of the Environmental requirements	Testing and results within acceptable Palestinian Ambient dust and noise indicators
Construction of new facilities	- Water Supply - Wastewater - WASH	- Construction related - Workers health and safety - Waste Disposal	- All safety measures for high-rise installation must be followed. - All necessary protective gear must be worn at all times - Dispose construction waste properly at approved waste management sites, using registered transport facilities. - Have a temporary storage facility that can contain the waste until disposed. - Application of Environmental Guidelines for contractors - Performance Standard 2 on Labor and Working Conditions	- Pre-construction and construction phase site visit to review and detail site-specific environmental, social and safety features - Field inspection guidelines and checklist on worker health and safety - Waste management checklist

Supervision Responsibilities accrue to: the project proponent; the Contractor; Site Engineer.

Monitoring Responsibilities accrue to: the EQA District Officer, PCU Safeguard Specialists (ESO).

Table (24): Sample ESMP for monitoring potential environmental and social impacts during construction and post development phase

During Construction Phase					
Environmental and Social Aspects	Potential Negative Impact	Mitigation measures	Responsibility of execution	Monitoring procedures and measures	Monitoring and enforcement responsibility
Air Quality	Noise due to construction, rehabilitation, loading and unloading of material from/to the site.	Working hours and days complying with the labor law in Palestine	Contract or responsible of implementation	- Review of plans and specifications to ensure incorporation of noise mitigation measures; - Contractor to map locations of sensitive noise receptors in sitting pumping stations	Contractor, LGUs, PCU, MoT, MoPWH, Police.
	Air pollutants (mainly dust) will be emitted temporarily during construction/ rehabilitation. Dust, generated during installation of pipelines in cities, is a nuisance for residents, and dust generated during construction of water tanks will cause dust to accumulate on adjacent lands.	Spoil piles shall be transported daily in covered trucks. Mechanical excavation shall be used where possible. Best construction practices will be employed, water spray and proper fencing will be applied to minimize dust spread out.		- Ensure that mitigation measures are incorporated into bid documents; - Contractor shall implement air quality mitigation measures.	

	Limited odors may be generated during construction out of construction equipment and vehicles.	Assure the use of well maintained construction equipment.			
Land use and planning	Pipelines will be buried; land use where pipes will be laid will only be affected temporarily	Application of proper engineering practices during pipes construction.	Contractor responsible of implementation	- PWA negotiates easements and acquisitions, if any; - Contractor must provide written documentation of permissions from all affected agencies; - Contractor must present written documentation of permissions from all affected property owners; - Identify all affected property owners, negotiate sale conditions with families, confirm in sales contracts; remunerate owners.	PWA, LGU.
	Water Tanks locations	PWA and LGUs in which tanks are to be constructed within their borders, shall secure land acquisition and obtain change of land use permits, if needed, or easements from agencies having jurisdiction over the facility locations.	PWA and targeted LGUs		
		Targeted municipalities will purchase lands, proposed for tanks construction, from present property owners at fair market value. Land owners shall be fairly compensated.	PWA		

Infrastructure and Public Services	Construction will temporarily disrupt traffic patterns in the vicinity of project facilities.	Potential access restrictions during construction will be localized and temporary, but the Contractor will notify receptors at least one week in advance of the schedule and duration of construction. The Contractor will also coordinate with providers of fire and police protection and hospitals to ensure continued access during construction	Contractor	- Contractor will document neighborhood meetings, notification materials, other communications; - Contractor will provide contact reports with affected parties; - Ensure that mitigation measures are incorporated into bid documents; - Contractor shall implement required mitigation measures.	Contractor, MoT, LGU, PCU, Police.
	As a result of water pipes construction, cesspits will be removed. Wastewater will be collected in closed pipes instead of open disposal in wadis and by roadsides.				

	Temporary impacts to services and utilities during construction such as cutting water supply service during installation of sewer pipelines	As applicable, conduct underground utility searches prior to construction. Citizens, businesses and public facilities will be informed of the water supply cutting schedule. Emergency service providers shall be provided with contact names, locations.			
Soil	Soil will be disturbed during construction of the project facilities and will potentially increase erosion.	Standard measures to minimize soil erosion during construction will be included in the plans and specifications for project elements.	Contractor	- Review of bid documents to ensure that applicable codes and regulations are incorporated, inspection during construction to ensure that measures are implemented; - Contractor shall present written description of proposed debris and soil disposal site for review and approval.	Contractor, MoA, LGU,PCU.
Solid Waste	Poor management and compilation of construction waste may cause pooling	Unusable construction waste should be moved, removed and disposed at an approved	Contractor	Ensure that mitigation measures are incorporated into bid documents.	Contractor, LGU, PCU, EQA.

	and flooding, as well as an unpleasant visual impact	dumpsite in coordination With the targeted LGUs. Reusable piles produced from excavation shall be stored properly for refilling after pipelines are installed.			
Seismicity	Potential damages from earthquakes to water tanks could only cause hazardous conditions locally	- Tanks will be designed and constructed in accordance with Palestinian and International building codes and regulations. - Damage will be repaired by the regional utility or any other responsible parties soon after the possible seismic event occurs.	Contractor	- Review of geotechnical analysis and compare to bid documents to ensure recommendations are incorporated; - Review of bid documents to ensure that applicable codes and regulations are incorporated.	Contractor, LGU,PCU, EQA.
Socio-Economic	Construction will create a temporary number of new jobs in the area Purchase of construction material and rent of construction equipment. Also purchase of services	Assure purchase of high quality material, improve local economy by involvement of	Contractor	- Ensure that mitigation measures are incorporated into bid documents; - Periodic visits by PWA, MoH and MoL	Contractor, PCU, MoH, MoL

	and commodity in the area by contractors and workers is possible	local contractors			
Public & Occupational Health	Average level of hazard to construction workers	Contractor will adhere to health and safety regulations. Contractor is required to develop proper emergency responses in advance. First aid equipment must be available on site.	Contractor	- Contractor will provide safety training and inspection; - All accidents will be reported; - Unsafe conditions will be corrected; - Agency review of manual and emergency response plan; - Develop and implement training program, overseen by owner	Contractor, PCU, MoL, MoH
	Potential health hazards on residents during construction, i.e. accidents at excavation sites	Provision of awareness and instruction signs by contractor is required.			
Historical and Cultural Heritage	Archeological sites but may be potentially revealed during construction activity.	Contractor will have to continuously monitor any archaeological evidence revealed during construction, and is required to immediately inform the MoTA for appropriate protection procedures.	Contractor	- Contractor shall immediately report any material to the Inspector. The Contractor shall document the time and date of the materials discovery and the time and date of his contact	Contactor, PCU, MoTA

				with MoTA; - MoTA shall visit the site and approve the site boundary designated. The project inspector shall monitor activities near the established boundary.	
Aesthetic	Change in landscape character from site construction	- Leveling and site preparation shall be monitored; no old waste shall be spilled. - Improving the landscape; - Maintain structures, observe good housekeeping procedures, keep facilities and sites clean and well cared for; incorporate in O&M Manual.	Contractor	- Periodic inspections by EQA	EQA
Post-Development Phase					
Groundwater Aquifer System	In the absence of wastewater collection systems, groundwater quality has the	Any seepage of the sewage to the nearby areas, is not allowed. Regular testing of groundwater quality.			

	potential to become significantly degraded. Installation of such systems will reduce or eliminate the infiltration of raw domestic sewage towards the groundwater.				
Infrastructure and Public Services	Improve water and wastewater services				
Socio-Economic Public and Occupational Health	Improvement of the existing and future quality of life in the targeted communities with respect to public health.				

9.6 Form for Safeguards Monthly Monitoring Report

Table (25): Safeguard monthly Monitoring Report

No.	Mitigation measure	Dates of monitoring Inspections	Status of compliance	Corrective actions needed

Complaints received:

Table (26): Safeguards Monitoring Report

WSDP Project [i]	Project Location and Contact information [ii]	Date [iii] Table A (Screening Environmental and Social Impacts) Completed	Date [iii] Table B (Screening Involuntary Resettlement) Completed	Date [iii, iv] Environmental and Social Safeguards Project Monitoring Form Completed	Number of [v] complaints received	WSDP ESO Frequency of site visits(s)[vi] For this QPR	EQA site visit(s) [vii, viii] For this QPR	Comments/ Issues

i. the WSDP QPR Safeguards Monitoring Report should include a row for each proposed and accepted project;

ii. Each construction/ rehabilitation project should have its own row;

iii. The exact dates on which each of the forms (Table A, Table B, Project Construction Monitoring) have been completed, for each project, should be written in the QPR chart. These dates should be copied from the dates on the forms;

iv. The Environmental and Social Safeguards Project Monitoring Form on construction/ rehabilitation should be filled out once per month – in the timeframe between the beginning of construction, through the construction phase, until the end of construction. The frequency of site visits (and form of completion) will further depends on the size of the project and its complexity;

v. As noted in comment ii, there should be a reporting line for each project so that we know for which project the complaints were received. Record "0" if no complaints have been received. If any complaints have been received, there should be a separate paragraph for each relevant project. This paragraph should include a description of:

- what the complaints have been;
- if/how the project proponent/sub-contractor recorded the complaints;
- if/how the project proponent/sub-contractor responded to the complaints;
- if/how the project proponent/sub-contractor replied back to the person who complained (i.e. was there follow-up with the person who complained)?

- If/how the project proponent/sub-contractor records when each complaint was considered closed/resolved.

vi. This column is to record frequency of the ESO site visits. This can be either a number or a description (“at least once”, “weekly during construction phase”, “daily during construction phase”, etc.);

vii. It is expected that each construction/ rehabilitation project should be visited at least once during construction, and, if the construction period exceeds one month, once per month. However, it may not be the case that every project is visited during the period of each QPR, as some projects may either not have started construction, or, alternatively, may have completed construction;

vii. It is expected that any site visits where issues have been found will be described further in the written section of the QPR.

Sample Environmental and Social Safeguards WSDP projects' Monitoring Form

A. Institutional Arrangements and Documentation

1. Has the project been identified to have negative and social environmental impacts? Yes___ No ___

If "Yes", does the contractor include an environmental and social specialist/site engineer? Yes__ No ___

2. Does the contractor have a copy of the Environmental and Social Management Plan (ESMP)? Yes___ No ___

3. Is the project causing negative environmental or social impacts or nuisance? Yes_____ No_____

If "Yes", is the contractor carrying out environmental due diligence (mitigation) as required by the ESMP (e.g. relating to flora, fauna, dust, noise, waste)? Yes_____ No_____

Comments:

……
.....
……
.....
.....

4. Is environmental compliance and social risk being monitored and reported in the supervision consultant's reports? Yes_____ No _____

5. Does LGUs project management team include environmental and social staff or consultant? Yes_____ No _____

If "Yes", is the above individual trained on ESMP and World Bank safeguard policies? Yes_____ No_____

6. Does the LGU project management team include a Monitoring and Evaluation (M&E) specialist? Yes_____ No _____

7. Is information relating to environmental compliance included (separate annex or paragraphs) in Project Progress Reports? Yes_____ No _____

General Comments on social and environmental impacts:

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.....
……
.....
.....

Pollution, Degradation, Contamination and Erosion

8. Does the project require large amounts of raw material and construction material to be sourced (e.g. transported from a quarry)? Yes_____ No _____
9. Does the contractor have written permission from relevant authorities for selection of quarry site? Yes_____ No _____
10. Is the project obtaining sand or gravel from river bed or alternative source other than identified quarry? Yes_____ No_____
11. Does the project involve cutting down of trees or other vegetation? Yes_____ No _____
12. Is the project causing degradation to any wetlands, streams or other natural areas? Yes____ No _____
13. Is the project generating large amounts of residual wastes (solid/liquid waste)? Yes___ No ____
14. Is the project causing soil or water contamination (e.g. from oil, grease, fuel, equipment)? Yes_____ No_____
15. Is the project using any chemicals thereby causing soil and water contamination? Yes_____ No_____
16. Do the project activities involve or generate any hazardous waste substances? Yes_____ No _____

If "Yes", are these being handled and/or disposed as identified in the ESMP and in pre-identified and approved sites? Yes_____ No _____

17. Is the project causing any cumulative negative environmental impacts or unanticipated negative environmental impacts beyond the footprint of the project? Yes_____ No_____

Comment:

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.....
.....

18. Has the project come across any 'chance finds' during implementation (e.g. artifacts, gravesites, cultural heritage sites and/or artifacts)? Yes_____ No_____

If "Yes" what procedure has been followed by the project? Comment:

……
.....
……

General Comments:

……
……
……
……
……

B. Community, Health and Safety

1. Are there any community concerns/complaints relating to negative environmental impacts?

If "Yes", are they being addressed? Yes_____ No _____

2. Are on site workers equipped with Personal Protective Equipment (PPE)? Yes_____ No_____
3. Is the project causing an issue for traffic or pedestrian safety? Yes_____ No_____
4. Does the contractor have adequate medical emergency supplies (first aid kit) on site? Yes____ No ____
5. Is the project causing sanitation related environmental issues (also stagnant water)? Yes____ No ____

   If "Yes", are mitigation measures being applied? Yes_____ No _____

General Comments:

……
……
……
……
……

Assessed/prepared by	Reviewed and corrected by
Name: _____	Name: _____
Title: _____	Environmental and Social Officer (ESO)
Date: _____	Date: _____

9.7 Environmental Requirements for Contractors

General

1. These general environmental guidelines apply to any work to be undertaken under the WSDP project. For certain work sites entailing specific environmental and/or social issues, a specific Environmental and Social Management Plan (ESMP), has been prepared and incorporated in the works contract. In addition to these Guidelines, the Contractor shall therefore comply with any specific ESMP for the works he is responsible for. The Contractor shall be informed by the Client about such an ESMP for certain work sites, and prepare his work strategy and plan to fully take into account relevant provisions of that ESMP. If the Contractor fails to implement the approved ESMP after written instruction by the works supervisor to fulfill his obligation within the requested time, the Client reserves the right to arrange for execution of the missing action by a third party on account of the Contractor.

2. Notwithstanding the Contractor's obligation under the above clause, the Contractor shall implement all measures necessary to avoid undesirable adverse environmental and social impacts wherever possible, restore work sites to acceptable standards, and abide by any environmental performance requirements specified in an ESMP where such an ESMP applies.

3. These Environmental Guidelines, as well as any specific ESMP, apply to the Contractor. They also apply to any sub-contractors present on Project work sites at the request of the Contractor with permission from the Client.

General Environmental Protection Measures

1. In general, environmental protection measures to be taken at any work site shall include but not be limited to:

   (a) Minimize the effect of dust on the environment resulting from earth mixing sites, vibrating equipment, construction related traffic on temporary or existing access roads, etc. to ensure safety, health and the protection of workers and communities living in the vicinity of work sites and access roads;

   (b) Ensure that noise levels emanating from machinery, vehicles and noisy construction activities (e.g. excavation, blasting) comply with Palestinian standards and are generally kept at a minimum for the safety, health and protection of workers within the vicinity of high noise levels and nearby communities.

   (c) Ensure that existing water flow regimes in rivers, streams and other natural or irrigation channels are maintained and/or re-established where they are disrupted due to works being carried out.

(d) Prevent any construction-generated substance, including bitumen, oils, lubricants and wastewater used or produced during the execution of works, from entering into rivers, streams, irrigation channels and other natural water bodies/ reservoirs.

(e) Avoid or minimize the occurrence of standing water in holes, trenches, borrow areas, etc.

(f) Prevent and minimize the impacts of quarrying, earth borrowing, piling and building of temporary construction camps and access roads on the biophysical environment including protected areas and arable lands; local communities and their settlements. Restore and rehabilitate all sites.

(g) Upon discovery of graves, cemeteries, cultural sites of any kind, including ancient heritage, relics or anything that might or believed to be of archeological or historical importance during the execution of works, immediately report such findings to the Client (PCU and PWA); so that the Ministry in charge of Culture (Ministry of Tourism and Antiquities (MoTA)) may be expeditiously contacted for fulfillment of the measures aimed at protecting such historical or archaeological resources.

(h) Prohibit construction workers from engaging in the exploitation of natural resources such as hunting, fishing, and collection of forest products or any other activity that might have a negative impact on the social and economic welfare of the local communities.

(i) Prohibit the transport of firearms in Project-related vehicles.

(j) Prohibit the transport of third parties in Project-related vehicles.

(k) Implement soil erosion control measures; in order to avoid surface run off and prevent siltation, etc.

(l) Ensure that garbage, sanitation and drinking water facilities are provided in construction workers camps.

(m) Ensure that, in as much as possible, local materials are used to avoid importation of foreign material and long distance transportation.

(n) Ensure public safety, and meet Palestinian traffic safety requirements for the operation of work to avoid accidents.

(o) Ensure that any trench, pit, excavation, hole or other hazardous feature is appropriately demarcated and signposted to prevent third-party intrusion and any safety hazard to third parties.

(p) Comply with Palestinian speed limits, and for any traffic related with construction at projects sites, comply with the following speed limits unless Palestinian speed limits are lower:

- Inhabited areas: 50 km/h
- Open road: 90 km/h.

(q) Ensure that, where unskilled daily-hired workforce is necessary, such workers are hired from neighboring communities.

(r) Generally comply with any requirements of Palestinian law and regulations.

2. Besides the regular inspection of the sites by the supervisor appointed by the Client for adherence to the Contract conditions and specifications, the Client may appoint an environmental inspector to oversee the compliance with these environmental conditions and any proposed mitigation measures. National or district EQA Officers may carry out similar inspection duties. In all cases, as directed by the Client's supervisor, the Contractor shall comply with directives from such inspectors.

Drilling

1. The Contractor will make sure that any drilling fluid, drilling mud, mud additives, and any other chemicals used for drilling at any construction site complies with Palestinian health and safety requirements. In general, only bio-degradable materials will be used. The Contractor may be required to provide the detailed description of the materials he intends to use for review and approval by the Client. Where chemicals are used, general prescriptions of the World Bank's safeguard policy OP 4.09 "Pest Management" shall be complied with.

2. Drilling fluids will be recycled or disposed of in compliance with Palestinian regulations in an authorized disposal site. If drilling fluids cannot be disposed of in a practical manner, and if land is available near the drilling site that is free of any usage rights, the Contractor may be authorized to dispose of drilling fluids near the drilling site. In this occurrence, the Contractor will be required to provide to the Client due evidence of their total absence of potential environmental impacts, such as leachate tests certified by an agreed laboratory. In this case, drilling fluids will be dried at site, mixed with earth and spread at site.

3. Any site, affected by drilling work, will be restored to its initial condition. This applies to drilling pads, access roads, staging areas, etc. Topsoil will be stripped ahead of any earthmoving, stored near the construction site, and replaced in its original location after the re-contouring of the area affected by the works.

4. Where successive aquifers are intersected by the drilling works, and upon order by the work supervisor, the Contractor may be required to take measures to isolate aquifers from contamination by each other.

5. The Contractor will take all measures to avoid bacteriological or chemical contamination of the intersected aquifers by the drilling equipment. Similarly, the Contractor will take all measures to avoid bacteriological or chemical

contamination of the intersected aquifers from the surface by providing an adequately sealed well-head.

6. When greasing drilling equipment, the Contractor will avoid any soil contamination. In the event of a limited hydrocarbon spill, the Contractor will recover spilled hydrocarbons and contaminated soils in sealed drums and dispose of them in an authorized waste management facility.
7. Unless duly requested by the Contractor and authorized by the supervisor, no servicing of drilling equipment or vehicles is permitted at the drilling site.

Pipelines

1. No trench shall be left open for more than 7 days, unless duly authorized by the supervisor upon Contractor's request. Trenches and other excavation works shall be demarcated and/or signposted to avoid third party intrusion.
2. General conditions related with topsoil stripping, storage and restoration apply.
3. The Contractor will take measures to dispose of water used for pressure tests in a manner that does not affect neighboring settlements.

Waste Management

1. All drums, containers, bags, etc. containing oil/fuel/surfacing materials and other hazardous chemicals shall be stored at construction sites on a sealed and/or bonded area in order to contain potential spillage. All waste containers, litter and any other waste generated during the construction shall be collected and disposed of at designated disposal sites, in line with applicable Palestinian government waste management laws/ regulations. In this aspect, it is not to allow the use of any asbestos containing material, which shall be clearly stated in the specifications, bidding documents and the contract.
2. All drainage and effluent from storage areas, workshops, housing quarters and generally from camp sites shall be captured and treated before being discharged into the drainage system in line with applicable government water pollution control regulations.
3. Used oil from maintenance shall be collected, properly stored in sealed containers, and either disposed of appropriately at designated sites or be re-cycled.
4. Entry of runoff into construction sites, staging areas, camp sites, shall be restricted by constructing diversion channels or holding structures such as berms, drains, dams, etc. to reduce the potential of soil erosion and water pollution.
5. Construction waste shall not be left in stockpiles along the road, but removed and reused or disposed of on a daily basis.

6. Where temporary dump sites for clean excavated material are necessary, they shall be located in areas, approved by the Client's supervisor, where they will not result in supplemental erosion. Any compensation related with the use of such sites shall be settled prior to their use.

7. Areas for temporary storage of hazardous materials such as contaminated liquid and solid materials shall be approved by the supervisor and appropriate local and/or relevant national or local authorities before the commencement of work. Disposal of such waste shall be in existing, approved sites.

Quarries and Borrow Areas

1. The Contractor shall obtain appropriate licenses/permits from relevant authorities to operate quarries or borrow areas. The location of quarries and borrow areas shall be subject to review and approval by relevant local and national authorities.

2. New extraction sites:

    a. Shall not be located less than 1km from settlement areas, archaeological areas, and cultural sites – including churches and cemeteries, wetlands or any other valued ecosystem component, or on high or steep ground.

    b. Shall not be located in water bodies, or adjacent to them, as well as to springs, wells, well fields.

    c. Shall not be located in or near forest reserves, natural habitats or national parks.

    d. Shall be designed and operated in the perspective of an easy and effective rehabilitation. Areas with minimal vegetation cover such as flat and bare ground, or areas covered with grass only or covered with shrubs less than 1.5m in height, are preferred.

    e. Shall have clearly demarcated and marked boundaries to minimize vegetation clearing and safety hazards for third parties.

The licensing/permitting for operating quarries, borrow areas, and new extraction sites shall comply with the World Bank Safeguard Policy OP/BP 4.12 and shall include the above provisions. Related environmental and social impacts of the licensing/permitting process are to be considered in the screening of the WSDP projects.

3. Vegetation clearing shall be restricted to the area required for safe operation of construction work. Vegetation clearing shall not be done more than two months in advance of operations.

4. Stockpile areas shall be located in areas where trees or other natural obstacles can act as buffers to prevent dust pollution, and generally at a distance from

human settlements. Wind shall be taken into consideration when siting stockpile areas. Perimeter drains shall be built around stockpile areas.

5. The Contractor shall deposit any excess material in accordance with the principles of these guidelines, and any applicable ESMP, in areas approved by local authorities and/ or the supervisor.

Rehabilitation of Work and Camp Sites

1. Topsoil shall be stripped, removed and stored for subsequent rehabilitation. Soils shall not be stripped when they are wet. Topsoil shall not be stored in large or high heaps. Low mounds of no more than 1 to 2m high are recommended.

2. Generally, rehabilitation of work and camp sites shall follow the following principles:

    - To the extent practicable, reinstate natural drainage patterns where they have been altered or impaired.
    - Remove toxic materials and dispose of them in designated sites. Backfill excavated areas with soils or overburden that is free of foreign material that could pollute groundwater and soil.
    - Ensure reshaped land is formed; so as to be stable, adequately drained and suitable for the desired long-term land use, and allow natural regeneration of vegetation.
    - Minimize erosion by wind and water both during and after the process of reinstatement.
    - Compacted surfaces shall be deep ripped to relieve compaction unless subsurface conditions dictate otherwise.

Management of Water Needed for Construction Purposes

1. The Contractor shall at all costs avoid conflicting with water needs of local communities. To this effect, any temporary water abstraction for construction needs from either ground or surface water shall be submitted to the following community consultation process:

    - Identification of water uses that may be affected by the planned water abstraction,
    - Consultation with all identified groups of users about the planned water abstraction,
    - In the event that a potential conflict is identified, report to the supervising authority.

This consultation process shall be documented by the Contractor (minutes of meeting) for review and eventual authorization of the water withdrawal by the Client's supervisor.

2. Abstraction of both surface and underground water shall only be done with the consultation of the local community as mentioned and after obtaining a permit from the relevant authority.

3. Abstraction of water from wetlands is prohibited.

4. Temporary damming of streams and rivers is submitted to approval by the supervisor. It shall be done in such a way as to avoid disrupting water supplies to communities downstream, and to maintain the ecological balance of the river system.

5. No construction water containing spoils or site effluent, especially cement and oil, shall be allowed to flow into natural water drainage courses. Similarly, wash water from washing out of equipment shall not be discharged into water courses or road drains. Washing bays shall be sited accordingly. Unless site conditions are not favorable, it will generally be infiltrated through soak pits or similar.

6. Site spoils and temporary stockpiles shall be located away from the drainage system, and surface run off shall be directed away from stockpiles to prevent erosion.

Traffic Management and Community Safety

1. Location of temporary access roads shall be done in consultation with the local community and based on the screening results, especially in important or sensitive environments. Temporary access roads shall not traverse wetland areas or other ecologically sensitive areas. The construction of any access roads shall be submitted to a prior consultation process with potentially affected communities that will have to be documented (minutes of meetings) for supervisor's review and approval.

2. Upon the completion of civil works, all temporary access roads shall be ripped and rehabilitated.

3. Measures shall be taken to suppress dust emissions generated by project traffic.

4. Maximum speed limits for any traffic related with construction at projects sites shall be the following, unless Palestinian speed limits are locally lower:

    - Inhabited areas: 50 km/h
    - Open road: 90 km/h.

Salvaging and Disposal of Obsolete Components Found by Rehabilitation Works

1. Obsolete materials and construction elements such as electro-mechanical equipment, pipes, accessories and demolished structures shall be salvaged and disposed of in a manner approved by the supervisor. The Contractor has to agree with the supervisor which elements are to be surrendered to the Client's premises, which will be recycled or reused, and which will be disposed of at approved landfill sites.

2. Any asbestos cement material that might be uncovered when performing rehabilitation works will be considered as hazardous material and disposed of in a designated facility.

Damage to Property

1. However, in the event that the Contractor, deliberately or accidentally, damages property, he shall repair the property to the owner's satisfaction and at his own cost. For each repair, the Contractor shall obtain from the owner/user a certificate that the damage has been made good satisfactorily in order to indemnify the Client from subsequent claims.

Contractor's Health, Safety and Environment Management Plan (HSE-MP)

1. Within 6 weeks of signing the Contract, the Contractor shall prepare an HSE-MP to ensure the adequate management of the health, safety, environmental and social aspects of the works, including implementation of the requirements of these general conditions and any specific requirements of an ESMP for the works.

2. The Contractor's HSE-MP shall provide at least:

    - A description of procedures and methods for complying with these general environmental management conditions, and any specific conditions specified in an ESMP;
    - A description of specific mitigation measures that will be implemented in order to minimize adverse impacts;
    - A description of all planned monitoring activities and the reporting thereof; and
    - The internal organizational, management and reporting mechanisms put in place for such.
3. The Contractor's HSE-MP will be reviewed and approved by the Client before start of the works. This review should demonstrate if the Contractor's HSE-MP covers all of the identified impacts, and has defined appropriate measures to counteract any potential impacts.

HSE Reporting

1. The Contractor shall prepare bi-monthly progress reports to the Client on compliance with these general conditions, the project ESMP if any, and his own HSE-MP. The Contractor's reports will include information on:

    - HSE management actions/measures taken, including approvals sought from local or national authorities;
    - Problems encountered in relation to HSE aspects (incidents, including delays, cost consequences, etc. as a result thereof);
    - Non-compliance with contract requirements on the part of the Contractor;

- Changes of assumptions, conditions, measures, designs and actual works in relation to HSE aspects; and
- Observations, concerns raised and/or decisions taken with regard to HSE management during site meetings.

2. The reporting of any significant HSE incidents shall be done as soon as practicable. Such incident reporting shall therefore be done individually. The Contractor should keep his own records on health, safety and welfare of persons, and damage to property. It is advisable to include such records, as well as copies of incident reports, as appendixes to the bi-monthly reports. Details of HSE performance will be reported to the Client.

Training of Contractor's Personnel

The Contractor shall provide sufficient training to his own personnel to ensure that they are all aware of the relevant aspects of these general conditions, any project ESMP, and his own HSE-MP, and are able to fulfill their expected roles and functions. Specific training will be provided to those Employees that have particular responsibilities associated with the implementation of the HSE-MP. Training activities will be documented for potential review by the Client.

Other Requirements

Other requirements that the contractor shall consider include:

1. Community relations and the acceptable behavior expected from Contractor staff and labor;
2. Location of contractor's camps to ensure the privacy of residences; and
3. Existence of a resolution mechanism for conflicts among the labors and with the communities.

9.8 Proposed Penalty Deduction Method

Table (27): Proposed Penalty Deduction Method

Environmental and Social Note No. ( )		
Date	LGU	
Project Name		
Site Location		
Contractor		
The Environmental Note		
LGU Supervisor Engineer		
Contractor Representative on time of Note		
Submitted to Contractor Representative on		
Submitted to PWA on		
Hour		
Date		
ESMF Compliance Penalty[2]		
Penalty	**Environmental and Social Note**	**No.**
Stop/Alert	1	1
Stop / Deduct 0.05% for each mitigation measure[3] according to the project. and minimum 23 US $	2	2
Stop /Deduct 0.05% for each mitigation measure according to the project. and minimum 23 US $	3	3
Stop /Deduct 0.1% for each mitigation measure according to the project. and minimum 46 US $	4	4
Each 3 notes + deduction: For example: Stop/ Deduct 0.1%+0.5(0.1%) for each mitigation measure according to the project. And minimum 69 US $	4+1	5
If Penalties Rate approach 3% of Contract cost, it is recommended to stop work, and send official request to PWA of the proposed action according to bidding documents and procurement manual.		

[2] for social issues, only item number 1 is applied

[3] detailed mitigation measures noncompliance cost is to be depicted in the Bidding Documents, based on the project sector and upon screening and review

9.9 World Bank Performance Standard on Labor and Working Conditions

1. Performance Standard 2 – Labor and Working Conditions (PS2) recognizes that the pursuit of economic growth through Employment creation and income generation should be accompanied by protection of the fundamental rights of workers. For any business, the workforce is a valuable asset, and a sound worker-management relationship is a key ingredient in the sustainability of a company. Failure to establish and foster a sound worker-management relationship can undermine worker commitment and retention, and can jeopardize a project. Conversely, through a constructive worker-management relationship, and by treating the workers fairly and providing them with safe and healthy working conditions, clients may create tangible benefits, such as enhancement of the efficiency and productivity of their operations.

2. The requirements set out in PS2 have been in part guided by a number of international conventions and instruments, including those of the International Labor Organization (ILO) and the United Nations (UN).

   - To promote the fair treatment, non-discrimination, and equal opportunity of workers.
   - To establish, maintain, and improve the worker-management relationship.
   - To promote compliance with national Employment and labor laws.
   - To protect workers, including vulnerable categories of workers such as children, migrant workers, workers engaged by third parties, and workers in the client's supply chain.
   - To promote safe and healthy working conditions, and the health of workers.
   - To avoid the use of forced labor.

Application

1. The applicability of PS2 is established during the environmental and social risks and impacts identification process. The implementation of the actions necessary to meet the requirements of this Performance Standard is managed through the client's Environmental and Social Management System (ESMS), the elements of which are outlined in PS2.

2. The scope of application of this Performance Standard depends on the type of Employment relationship between the client and the worker. It applies to workers directly engaged by the client (direct workers), workers engaged through third parties to perform work related to core business processes of the project for a substantial duration (contracted workers), as well as workers engaged by the client's primary suppliers (supply chain workers).

Direct Workers

With respect to direct workers, the client will apply the requirements of paragraphs 8–23.

Contracted Workers

With respect to contracted workers, the client will apply the requirements of paragraphs 23–26.

Supply Chain Workers

With respect to supply chain workers, the client will apply the requirements of paragraphs 27–29.

Requirements

Working Conditions and Management of Worker Relationship

Human Resources Policies and Procedures

1. The client will adopt and implement human resources policies and procedures appropriate to its size and workforce that set out its approach to managing workers consistent with the requirements of PS2 and national law.

2. The client will provide workers with documented information that is clear and understandable, regarding their rights under national labor and Employment law and any applicable collective agreements, including their rights related to hours of work, wages, overtime, compensation, and benefits upon beginning the working relationship and when any material changes occur.

Working Conditions and Terms of Employment

1. Where the client is a party to a collective bargaining agreement with a workers' organization, such agreement will be respected. Where such agreements do not exist, or do not address working conditions and terms of Employment, the client will provide reasonable working conditions and terms of Employment.

2. The client will identify migrant workers and ensure that they are engaged on substantially equivalent terms and conditions to non-migrant workers carrying out similar work.

3. Where accommodation services are provided to workers covered by the scope of PS2, the client will put in place and implement policies on the quality and management of the accommodation and provision of basic services. The accommodation services will be provided in a manner consistent with the principles of non-discrimination and equal opportunity. Workers' accommodation arrangements should not restrict workers' freedom of movement or of association.

Workers' Organizations

1. In countries where national law recognizes workers' rights to form and to join workers' organizations of their choosing without interference and to bargain collectively, the client will comply with national law. Where national law substantially restricts workers' organizations, the client will not restrict workers from developing alternative mechanisms to express their grievances and protect their rights regarding working conditions and terms of Employment. The client should not seek to influence or control these mechanisms.

2. In either case described in paragraph 13, and where national law is silent, the client will not discourage workers from electing worker representatives, forming or joining workers' organizations of their choosing, or from bargaining collectively, and will not discriminate or retaliate against workers who participate, or seek to participate, in such organizations and collective bargaining. The client will engage with such workers' representatives and workers' organizations, and provide them with information needed for meaningful negotiation in a timely manner. Workers' organizations are expected to fairly represent the workers in the workforce.

Non-Discrimination and Equal Opportunity

1. The client will not make employment decisions on the basis of personal characteristics unrelated to inherent job requirements. The client will base the employment relationship on the principle of equal opportunity and fair treatment, and will not discriminate with respect to any aspects of the employment relationship, such as recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, job assignment, promotion, termination of employment or retirement, and disciplinary practices. The client will take measures to prevent and address harassment, intimidation, and/or exploitation, especially in regard to women. The principles of non-discrimination apply to migrant workers.

2. In countries where national law provides for non-discrimination in Employment, the client will comply with national law. When national laws are silent on non-discrimination in Employment, the client will meet PS2. In circumstances where national law is inconsistent with PS2, the client is encouraged to carry out its operations consistent with the intent of paragraph 15 above without contravening applicable laws.

3. Special measures of protection or assistance to remedy past discrimination or selection for a particular job based on the inherent requirements of the job will not be deemed as discrimination, provided they are consistent with national law.

Retrenchment

1. Prior to implementing any collective dismissals, the client will carry out an analysis of alternatives to retrenchment. If the analysis does not identify viable alternatives to retrenchment, a retrenchment plan will be developed and implemented to reduce the adverse impacts of retrenchment on workers. The retrenchment plan will be based on the principle of non-discrimination and will reflect the client's consultation with workers, their organizations, and, where appropriate, the government, and comply with collective bargaining agreements if they exist. The client will comply with all legal and contractual requirements related to notification of public authorities, and provision of information to, and consultation with workers and their organizations.

2. The client should ensure that all workers receive notice of dismissal and severance payments mandated by law and collective agreements in a timely manner. All outstanding back pay and social security benefits and pension contributions and benefits will be paid (i) on or before termination of the working relationship to the workers, (ii) where appropriate, for the benefit of the workers, or (iii) payment will be made in accordance with a timeline agreed through a collective agreement. Where payments are made for the benefit of workers, workers will be provided with evidence of such payments.

Grievance Mechanism

The client will provide a grievance mechanism for workers (and their organizations, where they exist) to raise workplace concerns. The client will inform the workers of the grievance mechanism at the time of recruitment and make it easily accessible to them. The mechanism should involve an appropriate level of management and address concerns promptly, using an understandable and transparent process that provides timely feedback to those concerned, without any retribution. The mechanism should also allow for anonymous complaints to be raised and addressed. The mechanism should not impede access to other judicial or administrative remedies that might be available under the law or through existing arbitration procedures, or substitute for grievance mechanisms provided through collective agreements.

Protecting the Work Force

Child Labor

The client will not employ children in any manner that is economically exploitative, or is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development. The client will identify the presence of all persons under the age of 18. Where national laws have provisions for the Employment of minors, the client will follow those laws applicable to the client. Children under the age of 18 will not be employed in hazardous work. All work of persons under the age of 18 will be subject to an appropriate risk assessment and regular monitoring of health, working conditions, and hours of work.

Forced Labor

The client will not Employ forced labor, which consists of any work or service not voluntarily performed that is exacted from an individual under threat of force or penalty. This covers any kind of involuntary or compulsory labor, such as indentured labor, bonded labor, or similar labor-contracting arrangements. The client will not employ trafficked persons.

Occupational Health and Safety

The client will provide a safe and healthy work environment, taking into account inherent risks in its particular sector and specific classes of hazards in the client's work areas, including physical, chemical, biological, and radiological hazards, and

specific threats to women. The client will take steps to prevent accidents, injury, and disease arising from, associated with, or occurring in the course of work by minimizing, as far as reasonably practicable, the causes of hazards. In a manner consistent with good international industry practice, as reflected in various internationally recognized sources including the World Bank Group Environmental, Health and Safety Guidelines, the client will address areas that include the (i) identification of potential hazards to workers, particularly those that may be life-threatening; (ii) provision of preventive and protective measures, including modification, substitution, or elimination of hazardous conditions or substances; (iii) training of workers; (iv) documentation and reporting of occupational accidents, diseases, and incidents; and (v) emergency prevention, preparedness, and response arrangements. For additional information related to emergency preparedness and response, refer to Performance Standard 2– Labor and Working Conditions (PS2).

Workers Engaged by Third Parties

1. With respect to contracted workers, the client will take commercially reasonable efforts to ascertain that the third parties who engage these workers are reputable and legitimate enterprises and have an appropriate ESMS that will allow them to operate in a manner consistent with the requirements of this Performance Standard, except for paragraphs 18–19, and 27–29.

2. The client will establish policies and procedures for managing and monitoring the performance of such third party Employers in relation to the requirements of this Performance Standard. In addition, the client will use commercially reasonable efforts to incorporate these requirements in contractual agreements with such third party Employers.

3. The client will ensure that contracted workers, covered in paragraphs 24–25 of this Performance Standard, have access to a grievance mechanism. In cases where the third party is not able to provide a grievance mechanism, the client will extend its own grievance mechanism to serve workers engaged by the third party.

Supply Chain

1. Where there is a high risk of child labor or forced labor in the primary supply chain, the client will identify those risks consistent with paragraphs 21 and 22 above. If child labor or forced labor cases are identified, the client will take appropriate steps to remedy them. The client will monitor its primary supply chain on an ongoing basis in order to identify any significant changes in its supply chain and if new risks or incidents of child and/or forced labor are identified, the client will take appropriate steps to remedy them.

2. Additionally, where there is a high risk of significant safety issues related to supply chain workers, the client will introduce procedures and mitigation

measures to ensure that primary suppliers within the supply chain are taking steps to prevent or to correct life-threatening situations.

3. The ability of the client to fully address these risks will depend upon the client's level of management control or influence over its primary suppliers. Where remedy is not possible, the client will shift the project's primary supply chain over time to suppliers that can demonstrate that they are complying with PS2.

Land Donation

Regardless of country and project specificities, it is recommended that the basic guidelines be followed for voluntary land donation as follows:

1. Land to be donated must be identified by the community through a participatory approach and that the person donating the land is the owner of the land;
2. The impacts of the proposed activities on donated land must be fully explained to the donor;
3. The potential donor is aware that refusal is an option, and that right of refusal is specified in the donation document the donor will sign;
4. The act of donation is undertaken without coercion, manipulation, or any form of pressure on the part of public or traditional authorities;
5. The proportion of land that may be donated cannot exceed the area required to maintain the donor's livelihood or that of his/her household;
6. Donation of land cannot occur if it requires any household relocation;
7. For community or collective land, donation can only occur with the consent of individuals using or occupying the land;
8. Verification must be obtained from each person donating land (either through proper documentation or through confirmation by at least two witnesses);
9. The implementing agency establishes that the land to be donated is free of encumbrances or encroachment and registers the donated land in an official land registry;
10. Any donated land that is not used for its agreed purpose by the project is returned to the donor;
11. Voluntary land donation will not be permitted in cases of site-specific infrastructure as community pressure could be too onerous for a person to refuse, thus removing the power of choice;
12. There should be no coercion, manipulation or pressure from the community or public or traditional authorities for individuals to voluntary donate land;
13. The title to the donated land will be transferred to the recipient through the prevalent legal process in the country.

9.10 Environmental Approval Request

Only, for the use of Environmental Quality Authority		
Project Name		
Project proponent		
Project classification	**[ ]** New Project **[ ]** Extension to existing project **[ ]** Existing project	
Application date		
Registration number at the Ministry		
Date	Design	Signature

Recommendations:

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Environmental Approval Request

The applicant should complete all the required information below. In the parts which are not related to the project please write "not required". In the absence of adequate spaces for the information required please add additional pages. Please add copies of the reports, plans and maps related to the project. The exact project location should be specified in the provided information and attached documents.

To consider the application completed, the proponent should provide all the requested information by the Palestinian Environmental Authority for the Environmental Approval in accordance with the policy of the environmental assessment described in detail in the instructions of the Environmental Assessment which was circulated by the Authority.

1. APPLICANT INFORMATION/ PROJECT PROPONENT

- Name and address

- Delegate name and position

- Telephone Fax:

2. PROJECT DESCRIPTION

2.1 Project classification

[ ] New Project

[ ] Extension to existing project

[ ] Existing project

2.2 General project description

2.3 Project location

a. The proposed locations for the project construction and the criteria for choosing the location:

b. The size of the project

2.4 Products and generation rate

2.5 Technology and production lines

2.6 Working periods in the project

a. Establishing phase/Construction:

b. Operating phase/Production:

2.7 Types and sources of raw materials, work and production requirements:

a. Establishing phase/Construction

b. Operating phase/Production

2.8 The project's traffic volume and vehicle kind:

a. Establishing phase/Construction

b. Operating phase/Production

2.9 Number and type of storage rooms:

2.10 Existence of laboratories and their objective:

2.11 Number of employees:

	Local	Foreign
Establishing phase/Construction		
Operating phase/Production		

2.12 Type and size of the required services and infrastructure:

a. Water supply

b. Energy

c. Wastewater

d. Roads and transport vehicles

2.13 The generated waste quantities through project life:

a. Hazardous wastes

b. Non-Hazardous wastes

c. Liquid wastes

2.14 Systems and methods of wastes collection, treatment and disposal:

a. Hazardous wastes

b. Non-Hazardous wastes

c. Liquid wastes

2.15 Types and quantities of the expected pollutants to:

a. Air

b. Surface water

c. Groundwater

d. Soil

2.16 The expected noise level nearby the project:

2.17 The adopted measures in the project to prevent or mitigate the negative impacts on the nature and human:

2.18 Size and locations of other similar nearby projects in the area:

2.19 Additions to the project or other projects associated with the planned or expected to be implemented in the future:

2.20 Prior required licenses and approvals before the beginning of the project:

3. ENVIRONMENTAL SITUATION AND EXPECTED INTEREST

3.1 Proposed land use in and around the project site:

3.2 Would the project cross or relocate houses, businesses, public infrastructure or change land uses? In such cases, what will happen?

3.3 Does the construction and operation of the project considered compatible with the neighboring land uses in terms of noise, traffic, the existing aesthetic or general acceptance? If no, or not sure, why?

3.4 Can the public infrastructure capacity carry the new increase in use as a result of the construction and operation of the project (for example, roads and public services, health services and schools)? If no, or not sure, why?

3.5 Will the project will be constructed on or near sensitive environmental areas (such as natural reserves, wetlands, archaeological sites and heritage important or in the habitats of species threatened with extinction)? Select these areas if the answer is yes?

3.6 Will the project utilize any of the natural resources in a manner that will negatively impact the other utilizations of this resource. If the yes, please elaborate?

3.7 Did the proponent consult the surrounding population about their opinion of the project? If yes, what are their concerns and comments?

4. DO YOU HAVE ANY OTHER RELEVANT INFORMATION RELATED TO THE PROJECT THAT SHOULD BE MENTIONED?

I hereby declare that the Information contained in this application is complete and accurate according to the best of my knowledge. I therefore take the full responsibility for the consequences of any false or misleading information contained in this request. Based on that I sign,

Name:

Title:

Date: Stamp

The name of the employee who revised the application:

Recommendations:

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Date:

9.11 Terms of Reference (World Bank) for ESIA

Terms of Reference (ToR) for an ESIA to support Water Supply and Sanitation Services

1. Objectives of the assignment

In order to fully comply with Palestinian Environmental Law and World Bank safeguard policies, as well as to support the sustainability of the expected project outputs and outcomes, the following are to be delivered in this consultancy:

(i) identification of the possible environmental and social impacts of the infrastructure component of the project;
(ii) identification of any potential temporary or permanent land acquisition requirements associated with civil works[4];
(iii) If the Bank's Operations Policy 4.12 is determined to apply due to land acquisition requirements, preparation of draft terms of reference to formulate a Resettlement Action Plan (RAP) to manage, mitigate, and monitor the impacts of the acquisitions;
(iv) an environmental and social management plan (ESMP) to manage, mitigate, and monitor any possible negative impacts during the construction and operation phases of the project;
(v) a capacity assessment of the implementing party to implement the ESMP and recommendations for any capacity building needs.

2. ESIA Requirements

Initial screening for applicable World Bank social and environmental safeguards policies indicate these policies would be/might be triggered:

OP/BP 4.01- Environmental Assessment. According to World Bank screening, this project is classified as category "B" project, which requires an environmental assessment. The scope of assessment will include determination of any expected environmental and social impacts and preparation of an environmental management plan for managing, mitigating and monitoring risks and negative impacts.

[4] This ESIA will assist in the determination of whether the Bank's Operational Policy OP 4.12 is applicable or not. This Operational Policy applies whenever in a Bank financed project, land is acquired involuntarily or access is restricted to legally designated parks and protected areas. The coverage of the policy includes "direct economic and social impacts that both result from Bank assisted investment projects, and are caused by the involuntary taking of land resulting in: i) relocation or loss of shelter; ii) loss of assets or access to assets; or iii) loss of income sources or means of livelihood, whether or not the affected persons must move to another location.

OP/BP 4.11- Cultural and Physical Resources. The environmental assessment will examine if the replacement of the water supply/ wastewater networks will impact the cultural resources and devise – if necessary -- a mitigation, management, and monitoring plan.

OP/BP 4.12- Involuntary Resettlement. It is to check if project activities will entail land acquisition for the construction of water reservoirs and/or for the rehabilitation and/or expansion of the water supply/ wastewater networks, etc. While the Bank's Operational Policy on *Involuntary Land Acquisition and Resettlement* (OP 4.12) does not apply in cases of public lands acquisition or in circumstances of voluntary donation by private individuals, this ESIA will consider the totality of temporary and permanent land requirement for this project to ascertain if any lands will be *involuntarily* acquired through the principal of eminent domain. It will also clarify the nature of land ownership for each site (*waqf,* public, or private). These set of assessments will determine the applicability of OP 4.12 and hence the requirements to prepare safeguards instruments, if any.

BP 17.50- Disclosure of Operational Information. The proposed project is subject to the Bank access to information policy concerning the disclosure of project information including the environmental and social impact assessments.

The ESIA is expected to examine these policies closely, and when warranted, prepare an ESMP, and other necessary instruments to comply with the Bank safeguards policies and Palestinian law.

3. Scope of Work

Task 1. Description of the Proposed Project. Provide a full description of the project: location; general layout; unit process description and diagram for rehabilitation/ new components; population served, present and projected; number and types of connected households; water supply characteristics, adjacent facilities, natural, or cultural facilities close to project site; existing/new road or other supportive infrastructure.

Task 2. Description of the Environment. Assemble, evaluate and present relevant baseline data on the environmental characteristics of the study area.

a. *Physical environment*: geology (general description for overall study area and details for land application sites); topography; soils (general description for overall study area and details for land application sites); monthly average temperatures, rainfall and runoff characteristics; description of waters bodies (identity of streams, springs, wadis, groundwater, water quality; existing discharges or withdrawals).

b. *(b)Biological environment*: identify and describe any terrestrial communities, rare or endangered species; sensitive habitats, including parks or reserves, significant natural habitats, in areas affected by construction, facility sitting, land application or disposal;

a. Socio-cultural environment: present and projected population; present land use/ownership; planned development activities; community structure; public health as it relates to water use; tourism; cultural properties.

Task 3. Legislative and Regulatory Considerations. Describe **pertinent** Palestinian, municipal, and local laws, regulations and standards governing environmental quality, pollutant discharges to surface waters and land, industrial discharges to public sewers, water reclamation and reuse, agricultural and landscape use of sludge, health and safety, protection of sensitive areas and endangered species, sitting, land use control, etc.

Task 4. Determination of the Potential Impacts of the Proposed Project. In this analysis, distinguish between significant positive and negative impacts, direct and indirect impacts, and immediate and long-term impacts. Identify impacts that are unavoidable or irreversible. Wherever possible, describe impacts quantitatively, in terms of environmental and/or social costs and benefits. The environmental and social impacts should be classified for both the construction and operational phases of the project. Although not exhaustive, the main impacts to be investigated are:

(i) Impacts on water supply and water quality;
(ii) Impacts on vehicle, foot traffic, and commerce in the pipe rehabilitation areas during the construction period;
(iii) Construction-related impacts (noise, dust, debris, increased accidents) during the construction phase;
(iv) Physical cultural resources;
(v) Impacts related to installation of new reservoirs;
(vi) Public health benefits anticipated.
(vii) Impacts to land ownership, land use, or access to properties

Task 5. Clarify the project social impacts including on issues related to involuntary resettlement.

- Briefly describe who are the affected communities;
- Summarize positive and adverse social impacts that will be accrued by community members;
- Clarify what the permanent and temporary land requirements of the project are with specific attention to land ownership, land use, access to properties, or livelihood as it

relates to access to properties, most notably in and around the path of the construction;

- Summarize Palestinian legislation on the acquisition of land through eminent domain principle.
- Conduct a rapid assessment of community's willingness and ability to pay for services, with special attention to more vulnerable households (poorer families, widows, disabled persons).

Task 6. Development of an Environmental and Social Management Plan (ESMP). Prepare a detailed plan to monitor the implementation of each mitigating measure, which corresponds to a negative impact of the project during rehabilitation/ construction as well as operation. Include in the plan an estimate of capital and operating costs and a description of other inputs (such as training and institutional strengthening) needed to implement the plan. Review the authority and capability of institutions at local, provincial/regional, and national levels and recommend steps to strengthen or expand them so that the ESMP may be effectively implemented.

The ESMP should include (but not limited to):

- Construction spoils management mitigation, to manage the disposal of construction spoils generated in an environmentally-friendly manner. Likewise, 'lifecycle management' recommendations for materials being replaced should be included, as West Bank has a serious solid waste management problem;
- If asbestos materials are generated due to replacement of old networks, an asbestos management plan should be prepared to facilitate the replacement and safe disposal of asbestos materials.
- A fugitive dust control mitigation plan should be prepared to control fugitive dust emissions during construction activities;
- A noise control mitigation plan to control noise impacts on the surrounding communities during construction activities;
- Traffic control mitigation plan to minimize the disruption of daytime traffic flows along important access roads;
- Cultural resources mitigation plan to manage any archeological or cultural impacts that might be encountered during the construction phase;

In sum, the ESMP should include the following: a proposed work program, budget estimates, schedules, staffing and training requirements, and other necessary support services to implement the mitigating measures, as well as a detailed monitoring plan. This monitoring plan will include for each mitigation measure the responsible party for mitigating the impact, how often the mitigating measure should be assessed, as well as a monitoring

indicator and parameters. The monitoring plan may be split with one for use during rehabilitation/ construction and a second for the length of project operation for ease of use.

The ESMP should identify one or two 'key indicators' from the monitoring plan that may be used as overall 'safeguard indicators' in the project-level Results Framework as a measure of general environmental and social safeguards performance.

An outline of the contents of the ESMP to be included in the project's Operational Manual should be provided along with environmental/ social protection clauses for contracts and specifications.

Task 7. Assist in conducting Stakeholder Consultations. Following the identification of key project stakeholders (affected communities, relevant LGUs among others), the consulting firm will assist PWA in coordinating ESIA-specific consultations with relevant stakeholders likely to be affected, both positively and negatively, by the proposed project. As this project has been assessed as a World Bank environmental category B, these stakeholders should be consulted once a draft ESIA has been prepared and an executive summary of the ESIA will be publicized both prior to and after these consultations. The draft ESIA should also be available in a public place accessible to affected groups and LGUs.

Relevant materials will be provided to affected groups in a timely manner prior to consultation and in a form and language that is understandable and accessible to the groups being consulted. The Consultant should maintain a record of the public consultation and the records should indicate: means other than consultations) e.g. surveys used to seek the views of affected stakeholders; the date and location of the consultation meetings, a list of the attendees and their affiliation and contact address; and summary minutes.

4. Delivery[5]

The consultant is required to submit the following reports

4. Environmental Scoping Statement (draft and final)

- Identification and determination of the significant issues relating to the proposed project and scope of issues to be addressed in the environmental assessment report
- organization of one public consultation session with relevant stakeholders

5. Final Environmental and Social Impact Assessment (ESIA) Report (draft and final)

[5] A follow-up deliverable which may arise depending on the results of the social impact portion of this study is the requirement to develop a Resettlement Policy Framework (RPF) or a Resettlement Action Plan (RAP) as per Bank social safeguard policy requirement. If required, a detailed Resettlement TOR will be prepared and submitted to the consulting firm.

The Environmental Assessment report should be concise and limited to significant environmental issues. The main text should focus on findings, conclusions and recommended actions, supported by summaries of the data collected and citations for any references used in interpreting those data. Detailed or uninterrupted data are not appropriate in the main text and should be presented in appendices or a separate volume. Unpublished documents used in the assessment may not be readily available and should also be assembled in an appendix. Organize the environmental and social assessment report according to the outline below:

- Executive Summary (both Arabic and English)
- Policy, Legal and Administrative Framework
- Description of the Proposed Project
- Description of the Environment in terms of:
  - Land use (topography, regional setting)
  - Demography
  - Physical environment
  - climate,
  - Geology and soil (soil types, faults, seismic activities, formation, lithology, maps, etc.
  - Hydrogeology
  - Surface water(drainage flow pathways, flooding, wadis, springs, rain water harvesting (cisterns), surface water quality)
  - Groundwater aquifer (recharge area, cesspits, groundwater wells if any, depth to groundwater, quality)
  - Biology (flora, fauna, wildlife) including field work survey
  - Historic/cultural resources including field survey
  - Economic/socio-economic
  - Noise
  - Transportation

- Significant Environmental consequences (Impacts)
- Discuss direct environmental impact and effects of each proposed action on each of the items mentioned above
- Analysis of Alternatives for each proposed action
- Environmental Management Plan, incl. mitigation, monitoring, capacity development and training and implementation schedule and costs; include environmental protection clauses for incorporation in contract agreements.
- Public Consultation
- List of References

- Appendices
- List of Environmental and Social Assessment Preparers;
- Records of Public Communications;
- Data and Unpublished Reference Documents:

5. Presentation of Consulting firms requirements

Eligible and qualified consulting firms, (private sector, University research centers, and NGOs) specialized *in water and sanitation, Socio Economic, Water Quality or related field.*

The firm should have a proven track record of previous experience implementing similar assignments/studies in the same or related field.

The study team /consultant is required to:

- Have previous experience of similar Environmental studies/assessment of impacts and able to submit reference
- Have previous expertise in conducting Environmental Quality Authority procedures
- Have knowledge of the Palestinian water sector and development issues in the project area
- Have in-depth understanding of poverty, equity, marginalization, gender and other social issues within the context of rural Palestine

6. Composition of Consulting Team.

The following areas of expertise might be considered for the core consulting team: Water Supply Engineering, civil engineering; environmental engineering, environmental planning (or other environmental generalists); sociology/ social science; or any other expert necessary to accomplish the work. Careful attention to the selection criteria of the team members is expected.

7. Assignment Schedule

- This is a _____ days assignment which is expected to start in _____
- The consultant should organize the scoping session after two weeks from Date of commence.
- The consultant should submit the draft scoping session report two weeks after the scoping session, and submit the final scoping after reviewing by PWA
- The consultant should submit the draft ESIA report after ____ months from Date of commence and to be delivered for EQA for approval
- The consultant should submit the final ESIA report after reviewing and comments by PWA and EQA but no more than _____ months from Date of commence

8. General Requirements

- The Consultant shall prepare all results, reports and recommendations in metric units and in English
- all detailed maps indicating the information requested in this scope of work shall be plotted with respect to Palestinian grid.
- all information shall include technical citations and references, as appropriate.
- where possible, original copies of data and information shall be provided in its original format/content.

Detailed list of impacts	Permanent Land Acquisition				Temporary Land Acquisition (during construction)			
	Total amount of land	Total HH affected	Total HH/persons displaced	# of businesses affected	Total amount of land	Total HH affected	Total HH displaced	# of businesses affected
Civil works								
Water supply network replacement								
Ware house for pipe fittings								
Warehouse for pipe fittings								
Enterprises								
Market								
Schools								
Other enterprises								
Private Shops								

Note: "# of businesses affected" must include formal and informal businesses such as vendors, stall owners etc.

9.12 Terms of Reference (EQA in Arabic) for ESIA

سلطة جودة البيئة

الشروط المرجعية لتقييم الأثر البيئي

المشروع:

مقدم المشروع:

رقم المشروع:

تاريخ شروط المرجعية:

1. المتطلبات العامة:

هذه الشروط المرجعية الخاصة بتقييم الأثر البيئي تنطبق على المشروع المذكور أعلاه كما هو موصوف في طلب مقدم المشروع للحصول على الموافقة البيئية (نموذج الطلب) المرفقة بهذه الشروط المرجعية كما هي موضحة في الملحق "جـ"،

إن أي تغييرات مهمة قد تطرأ على المشروع كما هو موضح في الطلب ربما تتطلب تقديم شروط مرجعية جديدة والحصول على موافقة سلطة جودة البيئة (السلطة) قبل أن يتم النظر في الطلب.

وسيتم تنفيذ تقييم الأثر البيئي بما ينسجم مع المتطلبات التي تحددها سياسة التقييم البيئي الفلسطيني.

وسيكون تقييم الأثر البيئي تقيماً عاماً واستكشافياً للآثار البيئية التي قد تنجم عن المشروع ويجب أن تتم خلال دراسات الجدوى الاقتصادية الأولية. لتقييم الأثر البيئي غرضان رئيسيان هما:

1. مساعدة الجهة المتقدمة للمشروع على التخطيط للمشروع.
2. تزويد سلطة جودة البيئة بالمعلومات التي تحتاج إليها للنظر في المشروع ومنحه الموافقة البيئية.

سيركز تقييم الأثر البيئي على التعرف على الآثار المحتملة وتقييم درجة خطورتها وتوضيح تلك الآثار الهامة.

وكذلك توضيح الفرص الكفيلة بتقليل الآثار البيئية السلبية وتعزيز المنافع البيئية المحتملة. وبشكل مناسب سيقدم التقييم البيئي الأولي المقترحات الخاصة بالإشراف والمراقبة والتحكم في الآثار المحتملة لاسيما تلك التي تؤثر على السكان المحليين، ويجب أن يكون تقرير تقييم الأثر البيئي وافياً بحيث يقدم للسلطة المعلومات اللازمة من أجل:

I. منح الموافقة البيئية بشروط أو بدون شروط.
II. تحديد التغيرات الواجب إجرائها على المشروع وكذلك الحاجة لتقييم الأثر البيئي جديد أو تقييم الآثار البيئية بشكل أكثر تفصيلاً وذلك قبل النظر في مسألة منح الموافقة البيئية.

متطلبات دراسة تقييم الأثر البيئي والتقرير الخاصة به حول التخطيط البيئي يمكن الرجوع إليها في الدليل الإرشادي Guidelines، ويجب على صاحب المشروع أن يولي اهتماماً خاصاً إلى ما يلزم من أجل:

أ -الأخذ بالاعتبار البدائل عند تخطيط المشروع وتصميمه.

ب -تطوير ووضع خطة للإدارة البيئية.

للمزيد من التوضيح سيتم في الملحق "ب" عرض مزيد من التعليمات الخاصة بدراسة البدائل وتطوير خطة للإدارة والمراقبة البيئية.

1. **استشارة الجهات المشاركة:**

يتوجب على مقدم المشروع أن يستشير السلطات المحلية والإقليمية والوطنية الحكومية ذات الصلة لضمان تحقيق اهتماماتهم ومتطلباتهم القانونية بشكل كاف في استراتيجية وتقرير التقييم البيئي الأولي، وبدون حصر مجال هذه الاستشارات فقد تم إدراج قائمة أولية بأسماء هذه السلطات في الملحق "ب" الخاص بشروط المرجعية. وهناك توجيهات عامة حول استشارة الجهة المشاركة في الدليل الإرشادي Guidelines، وتتم مناقشة المتطلبات المحددة للاستشارات لهذا المشروع وذلك في الملحق "ب ".

2. الحد الأدنى لمتطلبات تقرير تقييم الأثر البيئي:

سيتم تقديم توجيهات مفصلة حول طريقة سير تقييم الأثر البيئي وعملية إعداد التقارير الخاصة بالتقييم البيئي وذلك في الدليل الإرشادي Guidelines.

وعلى الأقل بجب أن يتضمن تقرير التقييم البيئي الآتي:

(أ) ملخص تنفيذي.

(ب) تمهيد للمشروع وصاحب المشروع واستراتيجية تقييم الأثر البيئي والوضع البيئي القائم قبل البدء بالمشروع.

(ت) موجز عن استشارات الجهات المشاركة حول المشروع.

(ث) وصف للتخطيط البيئي للمشروع لا سيما البدائل التي تم مناقشتها أو دراستها.

(ج) وصف للمشروع بما فيه تقديم التصميم ومظاهر الوقاية البيئية.

(ح) تقديم خرائط مناسبة تبين موقع المشروع والطرق المؤدية إليه والبدائل الأخرى وتوفير الخدمات والبنية التحتية للمشروع في إطار الموقع أو الطريق الأفضل.

(خ) تقييم الآثار المحتملة والهامة للمشروع والإجراءات التخفيفية التي سيتم تطبيقها لتلافي أو معالجة هذه الآثار.

(د) وضع خطة للمراقبة والإدارة البيئية.

(ذ) تحديد أسماء ومسؤوليات الأشخاص الذين قاموا بإعداد تقييم الأثر البيئي.

يتوجب أن يشير تقرير التقييم البيئي الأولي أو الرسالة المرفقة عند التقديم بوضوح إلى أي مدى تكون الجهة المتقدمة للمشروع:

أ -متوافقة مع محتويات التقرير

ب -ملتزمة بتطبيق التخطيط البيئي، والتصميم، والتخفيف من الأضرار، والتعويض وإجراءات الإدارة الواردة في التقرير.

يجب على الجهة المتقدمة بالمشروع العلم أن تقييم الأثر البيئي سيتم مراجعته من قبل السلطة مستخدمة المعايير القياسية الواردة في الدليل الإرشادي Guidelines، هذه المعايير للمراجعة التفصيلية المستخدمة في هذه الإجراءات تمثل معايير الجودة التي تتوقع الوزارة من الجهة المقدمة للمشروع أن تستوفيها في تقريرها لتقييم الأثر البيئي.

كذلك على الجهة المتقدمة بالمشروع العلم أنه في حالة فشل مسودة تقرير تقييم الأثر البيئي في أن يستوف الحد الأدنى من المتطلبات المحددة أعلاه فلن يُقبل للمراجعة من قبل الوزارة.

3. تقديم وفحص تقرير تقييم الأثر البيئي:

يجب على الجهة المتقدمة بالمشروع أن تقدم 3 نسخ من مسودة تقرير تقييم الأثر البيئي إلى مدير مكتب التقييم البيئي التابع للوزارة، وعند اقتناع السلطة أن مسودة التقرير تستوفِي الحد الأدنى من متطلبات التقرير، فعلى صاحب المشروع أن يقدم *خمسة عشرة* نسخه عن التقرير ليتم عمل المراجعة الفنية التفصيلية وفق الأسس الواردة في سياسة التقييم البيئي الفلسطينية.

الملحق (أ): العناصر البيئية المقيمة

الصنف		العنصر البيئي
1. العناصر البيوفيزيائية والمصادر واستخدامات الأرضي		المناخ وجودة الهواء
		هندسة المياه السطحية والجودة
		هندسة المياه الجوفية والجودة
		الأخطار الطبيعية والتضاريس
		التربة والنبات الطبيعي
		موارد الحياة البرية واستخدامها
		الموارد المائية واستخدامها
		الموارد الترفيه والسياحة واستخدامها
		موارد الغابات واستخدامها
		الموارد الزراعية واستخدامها
		الموارد المعدنية واستخدامها

2. العناصر الاقتصادية		التشغيل أو العمالة المباشرة والدخل
		العمالة غير المباشرة والدخل
		شروط سوق العمل
		مصادر الإمدادات والمواد والخدمات
		متطلبات النقل
		متطلبات وتكلفة تطوير البنية التحتية
		إيرادات ومصاريف حكومية
		فرص مباشرة وغير مستحثة للتنمية الاقتصادية
3. العناصر الثقافية والتراثية		مواقع أثرية
		مواقع للاستخدام التراثي
		مواقع تاريخية وسمات المناظر الطبيعية
4. العناصر الاجتماعية		ملامح الوضع الاجتماعي والسكاني
		السكان
		الإسكان والمأوى
		استخدام الأرض والماء
		النقل والمواصلات
		خدمة توصيل الخدمات والسلع للمجتمع
		إيرادات ومصاريف الحكم المحلي
		خدمات الدعم الاجتماعي
		استقرار المجتمع والترابط الاجتماعي
		المساواة بين الجنسين
5. العناصر الصحية		تقديم الخدمات والتسهيلات الصحية
		توصيل المياه للسكان وتجميع مياه الأمطار وخلافه
		معالجة النفايات والتخلص منها
		جودة الهواء والماء المحيطة بالمشروع
		أخطار على الصحة العامة
		صحة ووقاية العامل
		الضوضاء
		صحة المجتمع المحلي

الملحق (ب)

متطلبات محددة لتقييم الأثر البيئي

العناصر البيئية الهامة والمسائل المثيرة للاهتمام

على تقرير تقييم الأثر البيئي دراسة المسائل المثيرة للاهتمام المرتبطة بالعناصر البيئية الهامة التي تم تحديدها في الملحق (أ) بما في التالي:

1. **جودة الهواء:**
   - ❖ تحديد ملوثات الهواء وتقدير لكميات هذه الملوثات الناتجة عن المحطة بما في ذلك الرائحة.
   - ❖ حدود المكان المتأثر بهذه الملوثات.
   - ❖ كيفية التخفيض من آثار هذه الملوثات من خلال اعتماد إجراءات تخفيفية في الموقع.
   - ❖ إجراءات الرقابة الدائمة المقترحة.

2. **مصادر المياه واستخداماتها:**
   - ❖ مصادر مياه المشروع وطاقتها، واستهلاك المشروع.
   - ❖ وسائل الحفاظ على مصادر المياه والتخفيض من الاستهلاك والحد من تلوثها.
3. **المواصلات:**
   - ❖ حجم ونوعية حركة النقل على الطرق الناتجة عن المشروع.
   - ❖ الآثار البيئية المتوقعة لهذه الحركة على الطرق.
   - ❖ وصف مع مخططات تبين الطرق المستخدمة للمشروع.
   - ❖ الإجراءات التخفيفية لآثار حركة النقل ومنع الحوادث.
4. **البنية التحتية:**
   - ❖ البنية التحتية المقترحة للمشروع.
   - ❖ المظاهر البيئية للمشروع.
   - ❖ قدرة هذه البنية لخدمة المشروع.
   - ❖ الآثار البيئية والإجراءات التخفيفية.
5. **سمات المناظر الطبيعية للمنطقة:**
   - ❖ أثر المشروع على التناغم الطبيعي للموقع مع المنطقة المحيطة وجمالها.
   - ❖ الإجراءات التخفيفية لدمج المشروع ضمن هذا التناغم الطبيعي.
6. **خدمة العمال:**
   - ❖ عدد الأيدي العاملة المتوقع والخدمات المقدمة لهم.
   - ❖ إجراءات السلامة العامة الخاصة بالعمال والحفاظ على سلامتهم.
7. **الصحة العامة:**
   - ❖ الأخطار الصحية المتوقعة نتيجة العمل في الموقع.
   - ❖ مدى النظافة وتوفر متطلبات الصحة العامة في المحطة والمحيط
   - ❖ إجراءات الوقاية في الموقع بما في ذلك المحافظة على النظافة ومنع انتشار الحشرات والروائح.
   - ❖ إجراء الحماية الصحية للعاملين.

8. ***مياه الصرف الصحي والمياه الصناعية:***
   - ❖ الكميات المتوقعة لمياه الصرف الصحي والنفايات السائلة الخاصة بالمشروع.
   - ❖ إجراءات جمع هذه المخلفات ومن ثم معالجتها في الموقع.

9. ***المخلفات الصلبة للمشروع:***
   - ❖ نوعية وكمية المخلفات الصلبة المتوقعة وكيفية ادارتها والتخلص منها.
   - ❖ الإجراءات التخفيفية التي سيتم اتباعها لمنع الآثار البيئية لهذه المخلفات بما في ذلك التخفيف من انتشار الروائح الكريهة.

10. **إجراءات خاصة بالمشروع:**
    - ❖ يجب عمل مخططات للموقع المخصص لأجزاء المشروع المختلفة تبين علية كافة النشاطات والبنية التحتية البيئية للمشروع والمناطق الخضراء والطرق واستخدامات الاراضي المحيطة وغير ذلك من اجراءات سيتم تطبيقها.
    - ❖ اي آثار بيئية يتم التعرف عليها أثناء اعداد الدراسة يجب دراستها في التقرير

الحدود المكانية والزمانية للدراسة:

وكما هو مناسب لتطويق الآثار المتوقعة على كل عنصر أو مجموعة من مجموعات العناصر البيئية الهامة:

أ -التعريف بواسطة الخرائط لمواقع الدراسة مشتملة على البدائل التي يجب أخذها بالاعتبار.

ب -تحديد إطار زمني للدراسة لمرحلة الإنشاء، ومرحلة التشغيل ومرحلة ما بعد التشغيل.

البدائل الواجب اعتبارها:

- تحديد المعايير المعتمدة في تحدد الممرات أو الطرق البديلة.
- دراسة معايير تحديد مواقع كل نشاط مقترح داخل الموقع المقترح.
- كما يجب دراسة البدائل من حيث:

أ -اختيار التكنولوجيا والعمليات المناسبة.

ب -توفير العمالة ووضع جدول للإنشاءات.

ت -إدارة النفايات.

الحد الأدنى لمتطلبات خطة المراقبة والإدارة البيئية

- من أجل مراقبة كل مرحلة من مراحل المشروع:

أ -يجب مراقبة ورصد المتغيرات البيئية ودرجة تكرارها.

ب-تقديم التقارير للسلطات المختصة.

- المسائل أو الاهتمامات التي ستكون موضوع خطة الإدارة البيئية ومتطلبات التقرير يجب أن تقدم إلى السلطة

متطلبات استشارة الجهة المشاركة

- أثناء إعداد دراسة التقييم البيئي الأولى يجب الرجوع ال الجهات المشاركة التالية ووضع للتأكد من استيفاء متطلباتها أو عدم اعتراضها في التقرير:

1. وزارة الزراعة
2. وزارة الحكم المحلي
3. وزارة الصحة
4. سلطة الأراضي
5. أصحاب الأراضي التي يمكن أن تتأثر بالمشروع والمجاورين.

كما يجب توضيح طرق وأساليب جمع المعلومات التي سيتم استخدامها.