

**Finance for Jobs Project- F4J**  
**DAI-Project Implementation Agency (PIA)**

**Environmental Screening and Categorization**  
for

**Mada FTTH project in Ramallah and Bethlehem Cities**

**December 2021**

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## ACRONYMS:

CRF	Complaint register form
DisCos	Distribution Companies
EHS	Environment, health and safety
EIA	Environmental Impact Assessment
ERP	Emergency Response Plan
EQA	Environmental Quality Authority
ES	Environmental screening
EMP	Environmental management Plan
ES Consultant	Environmental and Social consultant
ESO	Environmental and Social Officer
ESMP	Environmental and Social Management Plan
JDECO,	Jerusalem District Electricity Distribution Co.
ESS	Environmental and Social Standards

F4j	Finance for Jobs
FTTH	Fiber To The Home
GHG	Greenhouse Gases
GRM	Grievance Redness Mechanism
Mbps	Mega bites per second
MOH	Ministry of Health
MONE	Ministry of National Economy
MTIT	Ministry of Telecommunication and Information Technologies
MOFP	Ministry of Finance and Planning
MOU	Memorandum of Understanding
OHS	Occupational Health and Safety
PAP	Project Affected People
PCBS	Palestinian Central Bureau of Statistics
SEP	Stakeholder Engagement Plan
WBG	World Bank Groub

## **Environmental Screening and Categorization**

Mada FTTH project in Ramallah and Bethlehem Cities

### **0.0 Executive Summary and Recommendation**

Finance for Jobs program and through risk sharing grants, aiming at creation of sustainable new jobs – especially for women, youth, unemployed and other vulnerable categories is a lead supporter in this direction.

This screening report aiming at project classification was based on the World bank environmental and social safeguards policies as well as PA environmental requirements; all those policies, laws and bylaws related to this project were listed.

Meetings were held with project owners as well as with other stakeholders as illustrated later in the report.

The Environmental and social consultant has completed a screening exercise on the intended activities and believes that potential negative environmental and social impacts for the proposed program are not expected to be significant. Potential environmental and social Impacts are small or modest in intensity, of limited duration and extent, mostly reversible, and can be mitigated to acceptable levels.

Minimal environmental and occupational health and safety concerns likely to arise from the installation of Mada FTTH project in Ramallah and Bethlehem cities as well as the network operations.

The following conclusion was discussed with EQA, Ministry of Telecommunication, JEDCO, and Ministry of National Economy (MoNE) who declared the importance of the project in the area, and confirmed the fact that positive impacts are more likely to happen compared to the limited negative impacts.

The project will have both beneficial and limited negative impacts on the physical, biological and social environment. Such impacts and associated mitigation measures are discussed.

**Conclusion:** Based on application review, discussions with applicants and their representatives, review of applicable laws, bylaws and decrees, screening of potential environmental and social impacts based on planned activities,

**the proposed FTTH activity is classified as of category B.**

**Project installation requires the preparation of an ESMP**

## 1.0 Introduction:

### 1.1 The Applicant

Mada is a Palestinian company established in 2010 specialized in providing quality telecommunication services and value-added services including internet over BSA services, VOIP services, content filtering, emails, web hosting, domain management and others through its own fiber network, wide broadband networks in the West Bank and the Gaza Strip as well as strong microwave network in strategic locations in the WB and the GS.

Mada has an extensive experience in building end-to-end networks and providing full-fledged services and already has its own fiber optic lines connecting its switches to the world (2 redundant fiber optic rings connecting Mada to Europe through Israel, and to Jordan).

The company is already offering broadband including fiber optic connectivity to business customers in the middle region using JDECO infrastructure, and will be using an existing

infrastructure (JDECO) which would enable Mada to move and expand faster, work with minimum negative environmental impact, and create jobs faster.

## **I.2 Project Background**

The Palestinian Authority (PA) is responsible for regulating the telecommunications sector areas under its jurisdiction (Areas A and B) as provided in the Oslo Agreement, which subject many regulatory areas to coordination between the Palestinian and the Israeli authorities. Sector policy and regulation are presently the responsibility of Ministry of Telecommunication and Information Technologies (MTIT) of the PA.

In 2004 MTIT and PA started a process to draft a new legal and regulatory framework to oversee the reform of the market, including the establishment of an independent Palestinian telecommunications Regulatory Authority (PTRA) which would assume part of the responsibilities held by MTIT for the telecommunications sector. After several reviews, in June 2009 the PA President issued a decree to enact a new Law on Telecommunications and in April 2010 MTIT published the “The Palestinian National Authority Statement of National Telecommunications Policy”.

Positive developments were noted in the Palestinian telecom market including the endorsement of the new Telecom Law by the Palestinian President, Cabinet approval of a new licensing scheme for the development and operation of fiber networks, as well as the recent entry of all outstanding equipment, some of which has been pending since 2016, for the fixed network expansion into Gaza.

Mada was one of two companies licensed to provide fiber optics services, and based on this decided to start in Ramallah and Bethlehem cities.

The Cities of Ramallah, Hebron and Nablus are among the major localities in the West Bank that are seeking to bring high-speed broadband connectivity to their businesses and communities. The Cities recognize fiber-based connectivity—particularly fiber-to-the-home (FTTH) deployment designed to serve every business and resident in the community. The impact is especially pronounced when the new FTTH network is installed and can deliver speeds beyond what most incumbent telecommunication networks currently provide. Mada is willing to invest into FTTH project, targeting 30% of the market, in areas where JDECO, NEDCO, and HEPCO, mandates are in existence, serving more than 100,000 subscribers, along a 5-year project span. The model of installing the infrastructure is still in negotiation with the respective electrical distribution companies in both Hebron and Nablus. Whilst the model in Ramallah & Bethlehem areas has been formalized with JDECO for the benefit of the pilot project, where JDECO is willing



to contribute around approximately 30% of the project's equity. The total investment needed for the whole project with JDECO is approximately USD 8M, with an IRR of 12.2%, and payback period of around 7 years. This might be considered as the worst scenarios, since it has no specific add-ons, such as IPTV, gaming bundles, ...etc. The project will contribute to the GDP with a USD 0.5 M annually.

The network that will be installed is a complete fiber-optic network, one that connects fiber-optic cable to every subscriber. Fiber-optic networks have been demonstrated to be the most reliable, robust, and future proof technology currently available. Mada will utilize a network architecture that can handle downloads and uploads speeds of 100 Megabits per second (Mbps) and is positioned to handle speeds of 100 Gbps or greater in the future. This speed currently represents a small amount of the market share, which will not be reflected in the Financial Model, but will be available to all customers, including businesses in the near future. Mada's market knowledge and awareness puts its services at the forefront and will also contribute to the development of the industry in the long run.

### I.3 Project Objectives:

Through this project, Mada aims to provide access over FTTH to the end users in the cities of Ramallah & Al-Bireh, and Bethlehem; with the following main objectives:

- ❑ Provide enhanced services with higher speeds in download and upload. (100 to 1,000+ Mb).
- ❑ Introduce more reliable networks with higher reach and superior quality.
- ❑ Improve customer experience using internet and add-on services (IPTV, online gaming, education, start-ups, applications, online shopping, business, etc.).
- ❑ Promote a monopoly-free market and improve healthy competition.
- ❑ Create a competitive advantage and encourage other investors to join in and increase the interest to invest.
- ❑ Convert to a more cost-effective model for both Mada and the end user.
- ❑ Open the doors for new industries, services, and applications.

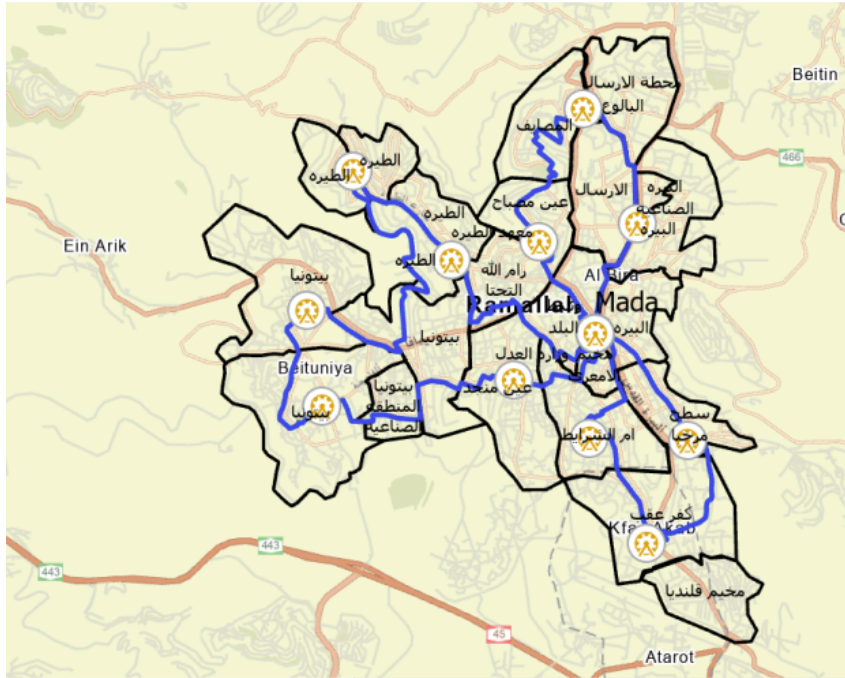
### 1.3.1 Project activities

The project plan is to build a fiber optic cable of around 700 km in around 100 days. This will also include:

- 20-24 building will be connected daily by a 3 technicians' team.
- Plan implementation and supervision on daily basis
- Infrastructure will include power shelters and cabinets foundations.
- Fiber lines installation on electricity posts,
- Trenching wherever needed, trenches will be of 8-12 cm wide and 20 cm deep.
- Fiber installation underground, within trenches, installation of splitters, welding fibers within splitters, and from main hub to main sites and to customers.
- Installation of collection cabinets, some will require concrete foundations
- Traffic operators will control traffic in working areas.
- Drivers to operate cranes, lifts and trucks involved in the project.
- Transportation of cables to working areas.
- Home installation include splitters installation within the building, and welding.
- Engineering supervision.

### 1.4 Project Location

This phase of the project will be in the cities of Ramallah and Bethlehem as detailed below:



And Bethlehem proposed network is shown below:



### 1.5 Stakeholders Consultations:

The proposed work by Mada requires coordination as well as consultation with a number of key stakeholders; in reaching this, Mada, as well as the ESC met during the preparatory phase and the preparation of this report with a number of people including:

Stakeholder	Persons met	Discussion issues
MTIT	HE Ishaq Seder Layth Seder	License, conditions, details, expectations

Ramallah Municipality	Musa Hadeed	Facilitation and coordination requirements
Al Bireh Municipality	Azzam Ismael Munif Triash, Jamal Shaltaf	Facilitation and coordination requirements
Betonia Municipality	Rebhi Doleh	Facilitation and coordination requirements
Bethlehem Municipality	Antwan Salman	Facilitation and coordination requirements
Masader	Azem Besharah	Partnership agreement details
JEDCO	Hisham Omari	Use of electricity network agreement framework

And the consultant discussions during the months of November and December 2021 were as follows:

<b>Stakeholders</b>	<b>Persons met</b>	<b>Discussion issues</b>
Mada Team 20/11/2021	Nader Alool Rajae Eseed Mohamad alami Ali Abdu Al Latif	Project details, Mada capacities, adopted policies, list of stakeholders
PENRA, 22/11/2021	Thafer Milhem	Agreement details and conditions between DesCOs and Mada
PERC, 22/11/2021	Hamdi Tahboob	Regulatory and Monitoring requirements
EQA, 21/11/2021	Ayman Abu Thaher	EQA requirements and expectations
Ramallah Municipality 24/11/2021	Musa Hadeed Ahmad Abu Laban	Municipality roles and expectations, facilitations asked by Mada
Al Bireh Municipality 24/11/2021	Azzam Ismael	Municipality roles and expectations, facilitations asked by Mada
MOL 2/12/2021	Samer Salamh	Worker's safety in infrastructure projects

Meetings with municipalities has covered the services to be provided by Mada to the communities, expected tariffs and connection fees, services to be provided by local authorities

and commitments of Mada to preserve good working conditions, not to harm or disturb and current services and minimize road traffic to the minimal during working hours.

With MITI, the meeting covered licensing procedures and processes, future monitoring and inspections.

### 1.5.1 MADA-JDECO Relationship:

Mada has already started the project in the mentioned cities using the existing infrastructure of JDECO based on assigned MOU. This approach would help the project move faster, expand faster, save costs, and minimize the environmental effect resulted by the required civil works in case of building a new infrastructure. Mada is already offering broadband including fiber optic connectivity to business customers in the middle region using JDECO infrastructure.

Within this MOU work will be executed by Mada teams with continuous presence of JDECO technical supervision. Instalations, testing and future maintenance and follow up will be the responsibility of Mada teams. Any modifications or work using JDECO infrastructure will be carried out under JDECO presence and technical supervision.

## 2.0 The Screening Process:

The screening process forms the first step in the environment management process for the proposed FTTH project. This helps in early identification of key environmental and social issues at the implementation level and is carried out in parallel with the Project design and feasibility study. This process helps in identification sites located fully or partially within setback boundaries of environmentally sensitive areas. Similarly, the sites requiring private lands or sites with displacement issues or sites with impacts on vulnerable people will be identified through this screening process.

The Environmental and Social Screening Process provides mechanism to determine whether the proposed project is likely to have potential negative environmental and social impacts; to determine appropriate mitigation measures for activities with potentially adverse impacts; to incorporate mitigation measures into project design; to review and approve project proposals; and to monitor environmental parameters during project's implementation. And, the extent of environmental and social works that might be required for the project prior to commencement,

It is also to determine the appropriate environmental and social risk classification as per the environmental and social standards; and to determine whether community peoples are likely to be affected by the project and to finally to facilitate the review and approval of the screening results and updated ESMP from the World Bank Team approval.

To complete the screening process, the following tasks were carried out by the ESO:

- A kick off meeting with the factory representatives followed by review of the maps of the proposed site;
- Interview of company partners, managers, on proposed activities, level of knowledge of potential impacts, preparedness and willingness to take and consider mitigation measures.
- Review of cooperative and company profile, proposal, and brochures
- Review of DAI proposed project documentations.
- Identification of potential impacts; taking into consideration current practices in similar projects based on a set of questionnaires as outlined in World Bank Screening requirements
- Discussions with EQA representatives the legal status of the factory and their interests
- Draft report writing
- Farther discussion of findings with company managers.
- Final screening report.

## 2.1 Purpose of the Screening Process and Report

The basic intent of this process and report is to identify and resolve any anticipated environmental safeguard issues that may arise during the installation or operation of the FO network in Ramallah and Bethlehem.

This report will encompass and summarize the findings of the environmental screening conducted during the month of December 2021 at an early stage of the project planning cycle. It was conducted based on the World Bank Environmental Management Framework (EMF). The purpose of this report is listed below.

The main objective of this screening process and reporting is to:

- ☐ Identify and highlight environmental and social issues that need to be taken into account in supporting the Mada FTTH project in Ramallah and Bethlehem cities.
- ☐ This process will enable the determination of the category of this project as per the World Banks' guidelines.
- ☐ To set the ground for further reports that may require to be done, especially to ensure compliance with World Bank safeguards.
- ☐ Further, this screening will assist in determining if this project requires a full Environmental and Social Impact Assessment study before its implementation.
- ☐ The overall objective remains to support the sustainable implementation of the planned project.

- ☐ To avoid potentially adverse environmental impacts and enhance environmental outcomes so that the project is expected to have limited and minimum adverse environmental impacts.

### 3.0 Legal Requirements:

The project final funding approval is conditioned with its compliance with all applicable World Bank safeguard policies and relevant ratified international laws and treaties as well as Palestinian laws, policies and regulations that correlate the project planning, implementation and operations to environmental and social standards.

#### 3.1 World Bank Projects Screening Requirements:

The Bank undertakes environmental screening of each proposed project to determine the appropriate extent and type of Environmental Assessment (EA). The Bank classifies the proposed project into one of four categories, depending on the type, location, sensitivity, and scale of the project and the nature and magnitude of its potential environmental impacts.

##### **World Bank Safeguard Policies**

The World Bank (WB) classifies projects into four distinctive categories, depending on the type, location, sensitivity, and scale of the project, including the nature and magnitude of its potential environmental impacts. These categories are as follows:

**Category A:** This list is limited to those projects with significant environmental and social impacts, which require a full detailed EIA.

**Category B:** A proposed project is classified as Category B if its potential adverse environmental impacts on human populations or environmentally important areas including wetlands, forests, grasslands, and other natural habitats are less adverse than those of Category A projects. These impacts are site-specific, reversible, and in most cases easily remediable than for Category A projects.

**Category C:** These are projects, which have no adverse environmental impacts, and accordingly will not require any environmental assessment or follow-up.

Categories B and C projects require Initial Environmental Examination, limited environmental management plan (EMP), and/or Environmental Screening (ES).

**Category FI:** A proposed project is categorized FI (Financial Intermediary) if it involves investment of Bank funds through a financial intermediary, in subprojects that may result in adverse environmental and social impacts.

Environmental screening is applied to FI projects to determine the level of Environmental Assessment (EA) to be required.

Under the World Bank's operational policies, there are ten environmental and social policies referred as the Bank's "safeguard policies". The Bank's environmental assessment policy and procedures in light of these ten safeguard policies are well described in the Operational Policy/Bank Procedures (OP/BP).

The applicability and relevance of these policies to intended activities is as follows:

*Table 2: World bank Policies:*

<b>Policy</b>	<b>Summary of Core Requirements</b>	<b>Public Consultation</b>
OP/BP 4.01 Environmental Assessment	Screen early for potential impacts and select an appropriate instrument to assess, minimize, and mitigate potential adverse impacts.	This policy is triggered. Environmental assessment is a WB as well as PA requirement. The project will be subject to screening and a mitigation plan in accordance with these requirements. All requirements are to be considered by Mada company
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.	The proposed project installation on an already built infrastructure, natural habitat and biodiversity issues were studied at an early stage, and no additional harm to biodiversity or natural resources
OP 4.09 Pest Management	Support integrated approaches to pest management Identify pesticides that may be financed under the project and develop an appropriate pest management plan to address risks.	No direct relation with farming, therefore, So, policy is not triggered



OP/BP 4.10 Indigenous Peoples	Screen to determine the presence of Indigenous Peoples in the project area. Policy triggered whether potential impacts are positive or negative. Design mitigation measures and benefits that reflect Indigenous People cultural preferences.	There are no impacts on any recognized Indigenous People in the project area; thus, this project will benefit all, regardless of their status or classifications, this policy will not be triggered
OP/BP 4.11 Physical Cultural Resources	Investigate and inventory cultural resources potentially affected, include mitigation measures when there are adverse impacts on physical cultural resources.	Cultural heritage has a special value in Palestine, and alteration, damage or removal is not allowed by law and within this project. This policy is not triggered.
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.	There will be no resettlements in the project, so this is not triggered
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.	The project does not include new infrastructure requiring land, or trees cuttings therefore will not be triggered.
OP/BP 4.37 Safety of Dams	For large dams, technical review and periodic safety inspections by independent dam safety professionals.	No dams exist in the proposed project area, therefore will not be triggered.
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 international waterways exist in the project area, therefore will not be triggered.

OP/BP Projects in Disputed Areas	7.60	Ensure that claimants to disputed areas have no objection to proposed projects	This provision is not applied to West Bank and Gaza projects.
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In conclusion, only OP/BP 4.0I Environmental Assessment will be triggered, but all listed and potential impacts are limited in magnitude, localized, and can be avoided, and/or mitigated.

All mitigation measures shall be presented later within the ESMP.

### 3.2 The Palestinian Legal and Policy Requirements:

#### **Palestinian Environmental Assessment Policy**

The Palestinian Ministerial Council approves the Palestinian Environmental Assessment Policy (PEAP), through resolution No: 27-23/4/2000. This Policy shall be interpreted and implemented to support the sustainable economic and social development of the Palestinian people through assisting in meeting the following goals:

1. Ensuring an adequate standard of life in all its aspects, and not negatively affecting the basic 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 it.
3. Conserving biodiversity, landscapes and the sustainable use of natural resources.
4. Avoiding irreversible environmental damage, and minimizing reversible environmental damage, from development activities.

#### **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 National Strategy for Solid Waste Management in Palestine (2017-22):**

The NSSWM was adopted in August 2017, following the first National Strategy for SWM 2010-2014. The first strategy was set up in 2004 by the Ministry of Local Government (MoLG). It is considered as the global framework of all decisions, programs, activities and medium-term investment plans, aiming at developing the SW sector in Palestine. Updating what was done in the first NSSWM, the National Strategy (2017-2022) includes also the willingness to align the Palestinian SW policy on the Sustainable Development Goals of 2030, especially Goal 3 (Health and Well-being), as well as Goal 11 (Sustainable cities and human settlements).

#### **Labor Law.**

The Palestinian Labor Law No. 7/2000 is applicable to the Project. The law includes provisions for occupational health and safety measures, protection of workers' rights, ensuring a safe working environment, life insurance, accidents insurances, working hours, workers' age and workers' wages. According to the law, the maximum number of hours per day that employee must perform is 8 hours; (Saturday through Thursday) and the allowed work week of 48 hours. The employment of children before they reach the age of eighteen years shall be prohibited. A more addition to Palestinian labor laws came through Ministry Council decision number 11 in October 2012 which set the minimum wage for employees in the Palestinian labor market at 1450 ILS. The law applies to both men and women, and was meant to improve conditions for workers.

### **Decision of the Council of Ministers No. (8) of 2016 on the Regulation on Complaints**

This Regulation shall apply to every complaint filed by any recipient of service, or any person requesting a service who was harmed by the decisions of a government department, its procedures, practices or failure to perform services.

Directorate General was established and manage a computerized central government complaints system, linking it with the Unit and the Section, through which the Directorate General shall be entitled to access periodical and one periodical report and to analyses them for work purposes.

The decision covers among other articles, complaints verification mechanism, review process, responding process, adherence to legal terms in appeals and reporting.

### **Occupational Health and Safety (OHS):**

A number of laws, resolutions, and ministerial instructions and decisions have addressed, inter alia, issues of occupational safety and health, and suitability of the working conditions. Occupational Health and Safety Regulations Articles No. 90, 91, and 92 of the labor law provided that, the cabinet shall issue the regulations governing the occupational safety and health and work environment. Such regulations shall in particular provide for personal protection and prevention methods for workers from the work hazards and occupational diseases; the necessary health conditions in workplaces; first medical aid means at the establishment; and routine medical examinations of workers. The law also prohibits cutting any expenses or deductions from the workers' wages in return for the provision of occupational safety and health requirements at the workplace. 16. Following the Labor Law, several resolutions and ministerial instructions were issued detailing health conditions and standards related to occupational safety at different workplaces. These include:

- The ministerial decrees No. 15, 17, and 21 of 2003 concerning health conditions and standards at workplaces, medical assistance procedures at the workplace, and safety standards at companies.
- The Decision of the Council of Ministers No. (49) of 2004 concerning the preventive list of work hazards and career diseases and work accidents.
- Instructions by the Minister of Labor no. (1) of 2005 concerning the precautions to protect workers in construction sites.
- Instructions by the Minister of Labor no. 2-6 of 2005, defining the range of chemical exposure limits and standards, exposure to ionizing radiation, noise, and safe levels of brightness of light and temperature at the workplaces.
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### **Adherence to EQA Environmental Requirements:**

Based on initial screening during the discussions, review of maps and plans, the following is a summary of environmental findings:

*Table 3: Adherence to EQA requirements:*

No.	Environmental and Social Component	Impact			Comments
		Positive	No Impact	Negative	
1.	Air Quality		X		No to Negligible emissions, limited to traffic, these can be mitigated
2.	Groundwater Quality		X		Not applicable
3.	Community Water Supply		X		No burden on community/domestic water supply,
4.	Public Health and Services		X		No negative impacts are expected
5.	Workers' Health and Safety			X	potential exposures to minimal to limited occupational health hazards.
6.	Noise Reduction		X		No heavy machinery shall be used other than those used on the installation phase, and these are mainly lift.
7.	Cultural Heritage		X		No sensitive cultural heritage in the area to be affected by networks installations
8.	Access to job opportunities	X			The company has indicated that Creating 350 direct jobs and thousands (10,000) of indirect jobs
9.	Impacts on livelihoods	X			Related to workers income as well as helping families to have better access to internet, Online education. Partnership with remote educational centers, and Entrepreneurs and startups.
10.	Social conflict		X		No public complaints are expected,
11.	Impacts on gender issues and vulnerable groups	X			At least 50% of required work force will be women as they are already employed by the company.

12.	Use of child labor		X		No child labor is considered in the factory
13.	Watercourses and Wadis		X		NA
14.	Biodiversity		X		NA
15.	Soil Contamination		X		NA
16.	Use of Pesticides and Fertilizers		X		NA to this project

## 4.0 Project Potential Impacts and proposed Mitigation Measures:

### 4.1 Potential Environmental Concerns:

Fiber has significant advantages where it usually completes its lifespan, and it can be recycled multiple times. The recycling process is also good for the environment because it does not require a substantial amount of heat, which is not suitable for the environment. Whereas copper needs regular replacement and melts due to overheating. On the other hand, recycling copper is not only a lengthy process, but it also requires a substantial amount of water and heat. Therefore, fiber is environmentally friendly and imposes a positive impact for the long run, either in terms of cost or longevity.

The impact assessment was carried out on the activities relating to the deployment of fiber optic and accompanied civil works, if necessary, on the existing road rights-of-way in accordance with the different project phases.

The FTTH access networks use GPON technology, i.e. the Gigabit Passive Optical Network. This is a standard for a passive optical network. It splits the signal from one optical fiber into many users with the help of optical splitters. The idea of a passive network means that there are no devices between the central office and the subscriber that require power supply. Hence, there is also no source of electromagnetic radiation. In addition, it is worth noting here that the fiber optic network is not only resistant to electromagnetic interference, but also does not itself emit this type of disturbance.

The potential impact on small scale internet service providers was studied; these are two types of service providers, medium size and some of them are discussing merging with each other's like super link with Paltel, and the merging of Zaytona with Jimzo. Still the MTIT has announced that companies can apply for fiber optic license. 6 companies so far were granted this license.

The smaller internet service providers especially in the rural areas are now in a better situation; so far, the wireless or microwave ability to provide high speed internet was limited, now with FO, they can increase the speed through reselling the service they receive from Mada or other service provider licensed to provide internet through FO system and network.

*Table 4: potential negative impacts identified:*

		<b>Impacts</b>	<b>Proposed measures</b>
<b>1</b>	Limited knowledge and Environmental and social risk management Integration	E&S risk management requirements not being adhered to or considered during the project planning and design process	The ESMP once prepared shall have a reference to the design and specifications of all parts of the FO system.
<b>2</b>	Soil pollution	following the route site preparation works if required in some locations and at entrances of buildings, cleaning/clearing some trees; opening of access roads (earthworks) if needed; earth compaction, creation of ruts by the repeated passing of machinery and workers during the works installation phase; spillage of oil, gasoline or other pollutants that could impact soil quality. This negative impact will be minimal;	Monitoring of works and strict compliance with the rules of site protection and security
<b>3</b>	Air pollution	because of dust emissions as well as exhaust fumes during the works. This negative impact will be minimal following the implementation of mitigation measures	Monitoring of works and strict compliance with the rules of site protection and security
<b>4</b>	Deterioration of the quality of surface water	The reference here is to storm water in rainy days, and this could be caused by accidental spillage of fuel and oils from machinery during the works phase and disruption of the hydraulic systems of water courses.	Make sure that vehicles and machinery are maintained, and monitor any spillage,
<b>5</b>	Occupational health and safety	Increase in different types of accidents because of machinery and works, Increase in different types of nuisances and pollution, Increased risk of diseases such as COVID 19, and influenzas. The negative impact on health, of falling, electrification, and other injuries.	Strict control and supervision for safety tools, clothes and procedures. Free and easy access to grievance redress mechanism. Strict control over GBV within the

		security and unneighborly relations will be moderate during the works.	company and field teams. Make sure that the OHS measures should be according to the Palestinian regulation, and to WBG EHS guidelines and GIIP (Good International and Industry Practices
6	Social impacts	In the installation phase, installation of fiber-optic cable routes might affect a few properties. Furthermore, the delivery of equipment and materials could represent a nuisance for local communities, which is a potential source of conflict. This risk should be taken into consideration	Identify and put forward measures and plans to intensify
7	biophysical environment	Civil works activities if required in some areas consisting in digging trenches, storing excavated earth, laying of ducting and backfill will create: (i) a risk of obstruction of the drainage networks on the roads carrying the FO; and (ii) a risk of water pollution through the drainage network and its outlets. (iii) risks of traffic accidents, noise pollution from transport vehicles and machinery during working hours.	Strict monitoring of activities
8	Operational Phase	No negative impact is identified; fiber-optic network is neutral with no radiation or nuisance of any kind the positive impacts of the project will be of a socio-economic nature with job opportunities offered to local young workers: · Direct jobs on-site, and · Indirect jobs	Coordinate with EQA

At the same time, Mada has listed a number of positive social impacts as follows:

*Table 5: Mada project potential positive impacts*

Area/sector	impacts
development and job creation	Creating 350 direct jobs and thousands (10,000) of indirect jobs Developing small businesses and startups Promoting outsourcing businesses



	Remote management solutions in healthcare and agriculture
socially	the project will help families to have better access to internet
Education	Online education Partnership with remote educational centers
Women empowerment	Entrepreneurs and startups Remote jobs
Environmental impact	New development with limited civil works (utilizing JDECO existing infrastructure) Less cables and coils, so less wastage or need for imports Less maintenance and replacement work the project will allow families to utilise IPTV services, which will not need satellite antennas and coils, therefore, a more environmentally friendly buildings and houses that are serviced by one fibre line that provides internet, fax, smart meters, and TV rather than many coils' connections. it will not require further excavation or have any environmental negative impact, such as dust or building towers or close roads ...etc.
Local and National Economy	To be able to compete the Israeli operators and regain their market Share Economically, the project will which will give businesses the opportunities for further marketing tools, and approaches, and have further clients' segments, locally and internationally, furthermore, the project will allow industries from manufacturing and agricultural sectors to have more stable remote management and have a complete monitoring against natural disasters, thefts, and/or other sectorial impediments
Health care	Remote diagnostics, online collaboration with remote medical centers
Apps development industry	Supporting ICT industries (Apps development, programing and coding, etc.)

### 4.3 Environmental and Social Screening and Classification of the Project

Table 6: Environmental and Social Screening Questionnaire
Project Sponsor: Partial sponsorship from Finance for Jobs Project- F4J
Project Title: Installation of a Fiber Optic Network
Which sector is the subproject in? Telecommunication

Please, give a short description of the proposed sub-project below:

Questions	Actions
<p><b>1.</b> Is the sub-project likely to have <b>significant adverse*</b> environmental impacts (based on type, location, sensitivity, and scale of the project and the nature and magnitude of its potential environmental impacts)?</p> <p><b>*Significant adverse</b> impacts are generally:</p> <ul style="list-style-type: none"> <li>(i) large-scale</li> <li>(ii) irreversible</li> <li>(iii) sensitive</li> <li>(iv) diverse</li> <li>(v) cumulative</li> <li>(vi) precedent setting</li> <li>(vii) may affect an area broader than the sites or facilities financed by the project</li> </ul>	<p>No</p> <p>Given the nature of the project, it includes installation of a fiber optic network on existing electricity network; limited excavations, no land use, no use of any natural resources, limited waste can be generated throughout the operation phase 9Trenching, welding, installation of splitters cabinets).</p>
<p><b>2.</b> Are this subproject's potential adverse environmental impacts on human populations or environmentally important areas--including wetlands, forests, grasslands, and other natural habitats likely to be:</p> <ul style="list-style-type: none"> <li>(i) Site-specific?</li> <li>(ii) Reversible?</li> <li>(iii) Mitigated by specific mitigation measures?</li> </ul>	<p>No adverse environmental impacts are expected. A number of positive social, economic and environmental impacts are expected</p>
<p><b>3.</b> Is the sub-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?</p>	<p>No</p> <p>Installations is planned on current electricity network, no land use, no impacts on protected areas or any special ecological area.</p>
<p><b>4.</b> 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?</p>	<p>No</p> <p>As already indicated, the project installation is within an approved electricity network.</p>
<p><b>5.</b> Will the sub-project utilize or discharge water</p>	

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?	No No rivers within the area
<b>6.</b> Will this sub-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 public, privately, or communally owned?	No No forests are part of this program.
<b>7.</b> Does the sub-project propose to manufacture, transport, and/or directly finance the use of pesticides?	No The project does not include pesticides manufacturing, transportation or finance the use of pesticides
<b>8.</b> Does the project have the potential to stimulate increase/change in pesticides use)?	No The project does not at all involve any direct or indirect relation, contact or handling of pesticides.
<b>9.</b> Is this sub-project likely to have minimal or no adverse environmental impacts?	Yes, The investment may lead to a number of moderate, minimal and no adverse environmental impacts including: Workers safety at the installation stage if proper mitigation and workers safety measures are not considered

<b>10.</b> Will this sub-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?	(No)
<b>10.1. Social safeguards screening information</b>	
<i>10.1.1. Will there be any involuntary land acquisition?</i>	(No)
<i>10.1.2. 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?</i>	(No)
<i>10.1.3. Will the project result in the 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)</i>	(No)
<i>10.1.4. Will the project result in the temporary or permanent loss of crops, fruit trees, etc.?</i>	(No)
<i>10.1.5. Will the project result in the temporary or permanent loss of household infrastructure (such as granaries, outside toilets, and kitchens, etc.)?</i>	(No)
If the answer to any of the above question is "Yes", then <b>OP/BP 4.12 Involuntary Resettlement</b> is applicable and the project is excluded	
<b>10.2. Required Documentation</b>	
<i>10.2.1. Is the information related to the affiliation and ownership status of the project site available and verifiable?</i>	(Yes)
<i>10.2.2. If there is a voluntary land donation, is documentation provided and have the World Bank procedure been followed as outlined in the ESMF?</i>	NA
<b>10.3. Cultural resources safeguard screening information</b>	
<i>10.3.1. Will the project require excavation near any historical, archaeological or cultural heritage site? Will the project require renovations of historical buildings sites?</i>	(NO)
If the answer to question 9.3.1 is "Yes", then <b>OP/BP 4.11 Physical Cultural Resources</b> is triggered and the project is excluded	
Note: In any case and for the accepted subprojects possible chance finds must be considered in accordance with OP 4.11 and relevant procedures provided in the ESMF	
<b>11.</b> What design alternatives have been considered and what measures are suggested to prevent, minimize, mitigate, or compensate for adverse impacts?	A number of alternatives were discussed including new network, underground network as well as the selected option of using current electricity network

12. What lessons have been incorporated into the design from the previous similar projects?	Use of current infrastructure saves time and money, minimize adverse environmental and social impacts and opens potential channels for future farther cooperation
13. Have concerned communities been involved yet? 14. If so, have their interests and knowledge been adequately taken into consideration?	No complaints are expected
<p>If there is no adverse social and environmental impact, the project is considered EA Category C. Therefore, no ESIA or ESMP are required.</p> <p>Nonetheless, if the answer is “Yes”, then the project is under EA Category B and ESIA and ESMP are required.</p>	
<b>Conclusions</b>	
The conclusion of the environmental and social screening: <input type="checkbox"/> Project is declined	<input checked="" type="checkbox"/> Project is accepted <input type="checkbox"/>
<input checked="" type="checkbox"/> The project is classified as category B: <input type="checkbox"/> The project is classified as category C: <input type="checkbox"/>	
If accepted as category “B”, project preparation requires: <input checked="" type="checkbox"/> ESIA/ESMP <input type="checkbox"/> <input checked="" type="checkbox"/> *Application of applicable environmental matrix <input type="checkbox"/>	
*Please refer to section 4 “Environmental Assessment and Preparation of ESMP”	
If accepted as category “C”, project preparation requires: <input checked="" type="checkbox"/> *Application of applicable environmental matrix _____	
*Please refer to section 4 “Environmental Assessment and Preparation of ESMP”	
If the subproject is considered as EA Category C, the project sponsors must sign the standard clause required by the VWB, that states: a) Design, construct, operate and maintain operations and leased equipment in compliance with the relevant laws and regulations of Palestine, and where relevant, additional applicable E&S requirements from the VWB Safeguard Policy. b) Within three (3) days of occurrence, notify PIA of any social, labor, health, and safety, security or environmental incident, accident or circumstance having or which could reasonably be expected to have, any material impact on compliance of with applicable	

E&S requirements.
<b>Comments of Environmental and Social Officer (ESO):</b> Name: Title: Signature: Date:

## 6.0 Conclusion and Recommendations

Based on application review, as well as review of proposed sites and network maps, discussions with applicants and their representatives, review of applicable laws, bylaws and decrees, screening of potential environmental and social impacts based on planned activities, **the activity is classified as of category B.**

To proceed with the project funding and implementation, **an ESMP is to be completed for the proposed project.**

Based on above, the required ESMP should take into consideration the World Bank requirement and format, with emphasis on the following components:

- Occupational health and safety plan (OHS)
- Emergency Response Plan (ERP)
- Grievance Mechanism
- Institutional set up and capacity building plan
- Documentation and reporting plan.

