UN-HABITAT - ADAPTATION FUND

Community & Stakeholders Consultation Sessions Report

Conducted, on behalf of UN Habitat, for the full project proposal to be submitted to the Adaptation Fund, titled 'Increasing the resilience of both displaced persons and host communities to climate change-related water challenges in Jordan and Lebanon.'

This assessment document focuses on the proposed concrete adaptation measures in Jordan



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List of Abbreviations

AF	Adaptation Fund
AF's ESP	Adaptation Fund Environmental & Social Policy
CC	Climate Change
CEDAW	Convention on the Elimination of All Forms of Discrimination Against Women
DOS	Department of Statistics
EE	Executing Entity
EIA	Environmental Impact Assessment
ESIA	Environmental and Social Impact Assessment
ESMMP	Environmental and Social Risks Management & Monitoring Plan
ESMP	Environmental and Social Management Plan
GoJ	Government of Jordan
HFDJB	The Hashemite Fund For Development of Jordan Badia
ILO	International Labour Organization
JNCW	Jordan National Commission for Women
JOHUD	Jordanian Hashemite Fund for Human Development
JUST	Jordan University for Science and Technology
JVA	Jordan Valley Authority
MCM	Million Cubic Meters
MIE	Multilateral Implementing Entity
MoEnv	Ministry of Environment
MPWH	Ministry of Public Works and Housing
MWI	Ministry of Water and Irrigation
NARC	National Agricultural Research Center
RSCN	Royal Society for the Conservation of Nature
WAJ	Water Authority of Jordan

- WSD Water Saving Devices
- WWTP Wastewater Treatment Plant
- YWC Yarmouk Water Company

INTRODUCTION

According to the scope of work of the Environmental & Social Impact Assessment (ESIA) study for the proposed project, several comprehensive consultation sessions were conducted facilitated by an accredited national consultant for conducting ESIAs. The stakeholders engagement expert was commissioned by the NIE (UN-HABITAT) to carry out consultations with national stakeholders (locals, Syrian refugees, youth, women, official agencies and donors), a step that represents an important phase of the ESIA for the project, as it identifies the stakeholders concerns about the project activities in relation to the major environmental and social aspects. The Consultant ensured adequate coverage in the consultation process of all stakeholders that may be affected negatively or positively or may interact with the project including regulatory authorities, non-governmental organizations (NGOs), local communities' representatives and DPs including Syrian refugees. Several consultation sessions were held at different locations in northern of Jordan where the project is intended to take place. The following is a list of these locations with the date on which such consultation sessions were conducted:

1) For the Wastewater Treatment Plants' (WWTPs) operational enhancement and wastewater reuse activities around them, several consultations were conducted :

- a) Consulted for the Mearad and Al Akaider WWTP at Jarash, at the Princess Basma Community Development Centers JOHUD on the 2nd of Sept, and for both Jordanians & Syrian Refugees on the 10th of September, 2019, for Syrian refugees respectively (Figures 1 & 2). Refer to Annex (1) "A" to view the attendees list.
- b) Consulted on WW reuse at Al Shayah Library in Ramtha, on the 3rd & 11th of September 2019, for both Jordanians & Syrian refugees respectively (Figure 3). Refer to Annex (1) "B" to view the attendees list.

c) Consulted on Mafraq WWTP at Mugayyir As-Sirhan with Jordanians and Syrians via the Hashemite Fund for Development of Jordan Badia on the 19th of September Refer to Annex (1) "C" to view the attendees list.

These meetings were held to assess Environmental & Social Issues and concerns from the perspective of the farmers, Syrian refugees working on farms (males and females) and youth from local community and other stakeholders. Such meetings aimed at investigating the WWTPs interventions and asses the environmental and social issues at these plants as well. These meetings were also held to explain what is climate change and how to adapt to its potential impact in Jordan. Also to hear from the local farmers & refugees and local community what their needs and demands are, their socio-economic and environmental concerns in accordance to the AF's ESP, their needs to increase the quantity of food production and the measures needed to be implemented to encourage them to use the wastewater that is treated in accordance with the 893/2006 standards to irrigate their crops.

- 2) For the <u>Rainwater Harvesting activities at Schools</u> (for both Jordanian and Syrian Students) in the Northern Governorates, several consultations were conducted :
 - a) Aydoun Basic School for boys, Irbid on the 11th of September 2019
 - b) Asmaa Bint Amais mixed School in Ramtha on the 25th of September 2019
 - c) Hay Al-Elemat High School for Girls, in Mafraq on the 26th of September 2019

These meetings were held to discuss general issues and concerns identified for the Installation of Rainwater Harvesting Systems at these schools.

 More Consultations were held for the <u>Rain Water and Grey Water systems in</u> <u>mosques</u>, held at:

- a) Al Quds Mosque, in Ramtha on the 11th of September 2019
- b) Princess Basma Community Development Center JOHUD in Irbid on the 18th of Sept, 2019 (Figure 2)
- c) Mafraq Mosque for Jordanians and Syrian worshippers at Mogheyr al Serhan(males and Females) on the 19th of September.

Theses meeting were held to assess Environmental & Social Issues and concerns regarding the installation of Rain Water and Grey water systems in mosques. And to hear from Syrian Refugees what their demands and concerns are, with regard to water availability in general and access to water in mosques, this in addition to understand the possible social and environmental issues and impacts that might arise during or after the installation of grey water & rainwater harvesting systems in mosques at Irbid Governorate.

- 4) Consultations held for the Permaculture
 - a) Jordan University of Science and Technology (JUST), in Irbid on the 18th of Sept, 2019

The meeting was held to assess Environmental & Social Issues that might arise as a result of the implementation of the Permaculture Project in JUST. This meeting was held to hear from the university faculty and students both males & females what their understanding of such new concept in agricultural practices, issues, demands and concerns in relation to CC adaptation. This is in addition to understand the possible social and environmental issues and impacts that might arise during or after the application of permaculture concept at JUST.

CONSULTATION PROCESS DESCRIPTION, DOCUMENTATION AND PHOTOS



Figure 1 Consultation session at Princess Basma Community Development Centers JOHUD in Jerash for the Mearad and Al Akaider WWTP



Figure 2 Consultation at Princess Basma Centre Jerash-Al Kitteh on ww reuse with Jordanian and Syrian female farmers



Figure 3 Consultation at Al Shayah Library in Ramtha for Syrian Refugees on WW reuse for Ramtha and Al Akaider WWTPs

The activities undertaken in all Consultation sessions and the findings are described below.

At the beginning of each session, each participant was provided with information package consisted of a project summary and an overview of the project activities for all phases of the project in Arabic. Some comments were raised and clarifications provided by the ESIA consultant, JOHUD, Hashemite Fund, and UN-Habitat project team, and other authority figures were made during the presentation.

Furthermore each participant was handed a survey which included tables to fill out their concerns and possible environmental & social impacts they believe might arise in three different phases and the policies they need to comply with in relation to the AF's ESPs (Commencing of activities, Operation & Decommissioning phases). Below are the sub-activities for each phase:

PROJECT ACTIVITIES ACCORDING TO PHASES AS PRESENTED IN THE CONSULTATION SESSION FOR THE THREE WWTPS OPERATIONAL ENHANCEMENT:

Activities discussed through the phases of the project were as follows:

Beginning of WWTP Operational Enhancement Activities:

- 1) Rehabilitation of pipes, treatment pools and other infrastructures
- 2) Enhancing the WWTP operational performance and raising its efficiency
- 3) Increased pond storage capacity through lining the existing ponds
- 4) Improve the quality of wastewater effluent from the plant etc...

Operation Phase

- 1) Restart the new capacitive station
- 2) Hire new engineers or workers to supervise ponds rehabilitation
- 3) Pumping better quality of treated wastewater
- 4) Routine and emergency maintenance.

Decommissioning Phase

- 1) Disposal and transportation of equipment.
- 2) Remove buildings and get rid of landfills and waste.
- 3) Reclamation of the factory site.
- 4) Cessation of activities and services (employment)

Below are all mentioned and raised issues in the survey, which will be further assessed & monitored as part of the ESMMP study. Moreover, potential interactions of these issues will be specified and evaluated with respect to the 15 AF Environmental & Social Principles, (see tables belwo), and following valued environmental components (VECs):

- Natural environment (biodiversity, air, surface water, groundwater, and soil).
- Air quality.
- Public health and safety.
- Occupational health and safety.
- Socio-economic conditions.
- Archeology.

Major Environmental & Social Issues and Concerns for the WWRPs Operational Enhancement Projects

The general issues and concerns identified by Jordanian local community farmers (Table 1) for all project phases at AL Kitteh Jarash for (Al Me'rad WWTP and Al Akaider WWTPs):

Project Phases	Main Issue/ Concern	Adaptation Fund Environmental & Social Principles (AF ESP)
<i>(1)</i> Beginning of WWTP	Limited capacity of the existing wastewater storage tanks	Pollution Prevention and Resource Efficiency

Table 1 The general issues and concerns identified by Jordanian local community farmers for all project phases at AL Kitteh Jarash for (AI Me'rad WWTP and AI Akaider WWTPs):

Project Phases	Main Issue/ Concern	Adaptation Fund Environmental & Social Principles (AF ESP)
Enhancement Activities	Inadequate irrigation water distribution networks for both the local and Syrian refugee farmers which would affect the efficiency on the field.	Access and Equity
	Effect of potential oils and hazardous materials spillage from equipment on the adjacent areas Environment.	Conservation of Biological Diversity and public health
	Risk of noise and gases produced by machinery causing pollution in surrounding environment.	Public Health
	Potential water pollution during the upgrading process.	Public Health
	Generation of Employment Opportunities	Access and Equity.
	Poor wastewater treatment system, leading to farmers receiving poor wastewater quality	Pollution Prevention and Resource Efficiency
	Soil contamination from wastewater	Lands and Soil Conservation.
	Not cleaning the canals between the WWTPs and the flood channels/stream.	Pollution Prevention and Resource Efficiency

Project Phases	Main Issue/ Concern	Adaptation Fund Environmental & Social Principles (AF ESP)
	Wastewater ponds pollution resulting in bad water odour.	Pollution Prevention and Resource Efficiency
	There's much precipitation in water leading to drip irrigation system blockage (wastewater quality lssues).	Pollution Prevention and Resource Efficiency
	The presence of pathogens	Public Health
(2)Operation Phase	Some farmers accessing wastewater from the storage tank during rainfall season.	Access and Equity
	Impacts of pollution in the event of untreated ww leakage to groundwater	Pollution Prevention and Resource Efficiency
	Impact of increased water Salinity during irrigation on soil quality	Pollution Prevention and Resource Efficiency
	Risk of climate conditions on the availability of treated water.	Climate Change
	Laborer injuries while maintenance work is under progress.	Core Labour Rights, health and Safety
	Valleys and wells pollution due to treated wastewater uncontrolled release or leakage.	Protection of Natural Habitats

Project Phases	Main Issue/ Concern	Adaptation Fund Environmental & Social Principles (AF ESP)
	The potential of treated wastewater not meeting the Jordanian standards.	Compliance with the Law
	High content of heavy metals in treated water.	Public Health
	Having microorganisms in the treated water.	Public Health
	High risk of using treated wastewater for household works	Public Health

On the other hand, the general issues and concerns identified by Syrian refugees for project phases at AL Kitteh Jarash for (AI Me'rad WWTP and AI Akaider WWTPs) are depicted in Table 2.

Table 2 general issues and concerns identified by Syrian refugees for project phases at AL Kitteh Jarash for (AI Me'rad WWTP and AI Akaider WWTPs)

Project Phases	Main Issue/ Concern	Adaptation Fund Environmental & Social Principles (AF ESP)
(1)Beginning of WWTP	The rehabilitation period will have a major effect on traffic and accidents triggered by moving trucks & machines on the region's people.	Public Health
Enhancement Activities	The maintenance work carried out at the WTP will impact the WW plant and the wastewater distribution schedule	Pollution Prevention and Resource Efficiency

Project Phases	Main Issue/ Concern	Adaptation Fund Environmental & Social Principles (AF ESP)
	Oils and hazardous materials arising from equipment on the surrounding environment.	Protection of Natural Habitats
	Risk of dust particles, noise, and gases generated by the machinery	Public Health
	Worker injuries during ongoing maintenance work	Labor law, occupational safety and health
	Effect of inadequate irrigation wastewater distribution on both the local society and the refugees	Pollution Prevention and Resource Efficiency
	Risk of climate conditions on the availability of treated wastewater	Climate Change
	Leakage of untreated wastewater to groundwater	Pollution Prevention and Resource Efficiency
	Impact of Increased wastewater salinity on irrigated agriculture and crops	Conservation of Biological Diversity and public health
	Crop contamination due to irrigating with treated wastewater that do not comply with Jordanian Standards	Conservation of Biological Diversity and public health
	Release poor/bad odor from improperly treated waste water.	Public Health
	High content of heavy metals in the treated wastewater.	Pollution Prevention and Resource Efficiency

Project Phases	Main Issue/ Concern	Adaptation Fund Environmental & Social Principles (AF ESP)
	Having microorganisms in the treated wastewater.	Public Health
(2)Operation Phase	High risk of using treated wastewater for household works	Public Health

General Recommendations & Demands of Jordanians & Syrians Stakeholders

The general recommendations and demands of Jordanians and Syrian stakeholders are shown in Table 3 (Jarash consultation sessions for Al Mearad and Al Akaider WWTPs):

Table 3 Jarash consultation sessions for Al Mearad and Al Akaider WWTPs:

Recommendations & Demands of Stakeholders	AF (ESP)	
 Revising the standard (JS 893/ 2007) that is not as rigid as the original and attach it to each contract the farmers sign with YWC or WAJ. 	Compliance with th Law	he
 To provide lined wastewater storage pond for each farm 	Access and Equity	

 Provide training courses and awareness-raising workshops that seek cognitive shift among locals in the consumption of water. 	Access and Equity
 Provide Health care facilities 	Public Health
 Place filters on the distributing wastewater pipes leaving the station 	Pollution Prevention and Resource Efficiency
 Equity in distributing wastewater pipes and water provision 	Access and Equity
 Provide efficient Water pumps 	Pollution Prevention and Resource Efficiency
 Provide agricultural equipment and machinery (tractors, bailers, compactors, storage) 	Access and Equity
 Dripping irrigation and subsurface irrigation networks with efficient emitters 	Pollution Prevention and Resource Efficiency
 Provide Personal Protective clothing and equipment and toilets with wash facilities (personal Protective equipment such as gloves and headwear) 	Public Health
 Install water gauges and meters at farm inlets 	Pollution Prevention and Resource Efficiency
 Increase the per capita quantity of wastewater and apply fair distribution policy. 	Access and Equity
 Provide on farm monitoring and control, to manage misuse and frivolity 	Pollution Prevention and Resource Efficiency
 Increase pastoral animal numbers 	Conservation of Biological Diversity
 Protect drainage system pipes. 	Pollution Prevention and Resource Efficiency
 Provide job opportunities. 	Human Rights
 Conduct frequent irrigation networks inspections and maintenance 	Pollution Prevention and Resource Efficiency

Major Environmental & Social Issues and Concerns

Major environmental & social issues and concerns of Jordanian farmers and Syrian farm workers are shown in Table 4 (Al Ramtha WWTP Consultation Session for Jordanian farmers and Syrian farm workers) and Table 5 (Al Ramtha & Al Mafraq WWTPs and Reuse Consultation Sessions for Syrian Refugees)

Table 4 Al Ramtha WWTP Consultation Session for Jordanian farmers and Syrian farm workers

Project Phases	Main Issue/ Concern	Adaptation Fund Environmental & Social Principles (AF ESP)
	Effect of oils and hazardous materials arising from the equipment on the area's adjacent Environment.	Conservation of Biological Diversity
(1) Paginning of	Spread of dust during operational enhancement activities	Pollution Prevention and Resource Efficiency
(1)Beginning of WWTP Enhancement Activities	Potential water pollution during the enhancement process	Pollution Prevention and Resource Efficiency
Activities	Labor injuries while maintenance work is under progress	Core Labour Rights and Health and Safety
	Concern about the plastic bags that clog the wastewater effluent pumps	Pollution Prevention and Resource Efficiency
	Risk of climate conditions on the availability of treated wastewater.	Climate Change
(2)Operation	Impacts of pollution in the event of untreated effluent leakage to groundwater	Pollution Prevention and Resource Efficiency
Phase	Impact of increased irrigation wastewater salinity affecting soil	Lands and Soil Conservation.
	Valleys and wells pollution prevalence due to treated wastewater releases or leakage.	Protection of Natural Habitats and pollution prevention
	Release of poor/bad odor from wastewater causing air pollution.	PollutionPreventionandResourceEfficiency

High content of heavy metals in treated wastewater.	PollutionPreventionandResourceEfficiency
Having microorganisms in the treated water	Public Health
High risk of using treated water for household works	Public Health
Forcing the farmers to take treated wastewater in the winter season, leading to an increase in soil salinity	Pollution Prevention and Resource Efficiency
Losing crops due to bad wastewater effluent quality	Conservation of Biological Diversity

 Table 5 Al Ramtha & Al Mafraq WWTPs and Reuse Consultation Sessions for Syrian Refugees

Project Phases	Main Issue/ Concern	Adaptation Fund Environmental & Social Principles (AF ESP)
	The rehabilitation period will have a major effect on traffic and potential accidents triggered by moving machines and traffic	Public Health
(1)Beginning of WWTP Enhancement Activities	Generation of new Job opportunities	Access & Equity
	The maintenance work carried out at the WWTPs will impact the operation and the wastewater distribution	Pollution Prevention and Resource Efficiency
	Spread of dust during operational enhancement activities	Pollution Prevention and Resource Efficiency

	Labor injuries while maintenance work is under progress	Core Labour Rights and Health and Safety
	Concern about the plastic bags that clog the wastewater effluent pumps	Pollution Prevention and Resource Efficiency
	Risk of climate conditions on the availability of treated wastewater.	Climate Change
(2)Operational	Impacts of pollution in the event of untreated effluent leakage to groundwater	Pollution Prevention and Resource Efficiency
Phase	Impact of increased irrigation wastewater salinity affecting soil	Lands and Soil Conservation.
	Valleys and wells pollution due to treated wastewater releases or leakage.	Protection of Natural Habitats and pollution prevention
	Release of poor/bad odor from wastewater causing air pollution.	Pollution Prevention and Resource Efficiency
	High content of heavy metals in treated wastewater.	Pollution Prevention and Resource Efficiency
	Having microorganisms in the treated water	Public Health
	High risk of using treated wastewater for household works	Public Health
	Losing crops due to bad wastewater effluent quality	Conservation of Biological Diversity

General Recommendations & Demands of Stakeholders

The general recommendations & demands of stakeholders consulted are shown in Table 6 (Al Ramtha & Al Mafraq Consultation Sessions)

Table 6 Al Ramtha & Al Mafraq Consultation Sessions

Recommendations & Demands of Stakeholders	AF (ESP)
 Lower the treated wastewater prices 	Access and Equity
 Establish framer' association named "AI Ramtha water User Association" 	Marginalized and Vulnerable Groups, & Access and Equity
 Provision of new machinery for planting 	Access and Equity
 Farmers requested frequent maintenance of the WWTP & piping system 	Pollution Prevention and Resource Efficiency
 Place filters ahead of treated effluent pumps to prevent sprinkles clogging and diseases from spreading 	Public Health and resource efficiency
 Control foreign farmers' illegal access to artesian aquifers. 	Access and Equity
 Support farmers in marketing their crops 	Access and Equity
 Equality in treated water distribution 	Access and Equity
 Conduct regular maintenance works for the water canals linking between the water pumps and farms 	Pollution Prevention and Resource Efficiency
 Provide agricultural equipment and machinery at low prices. And use solar energy for pumping. 	Access and Equity and Resource Efficiency
 Provide interest-free loans to farmers. 	Access and Equity
 Work on lowering treated water prices from 50 cents to 10 cents. 	Access and Equity
 Install pumps powered by solar energy. 	Pollution Prevention and Resource Efficiency
 Use Drip irrigation. 	Pollution Prevention and Resource Efficiency
 Removal and prevention of use of plastic bags disposed of in the canals linking between the treated wastewater pumps and farms. 	Pollution Prevention and Resource Efficiency
 Provide additional spare electrical generators in the summer season, as the main generators may suddenly shut down. 	Pollution Prevention and Resource Efficiency
 Install filters ahead of the effluent conveyance pipes pumping from the WWTP to the farms. 	Public health

PROJECT ACTIVITIES ACCORDING TO PHASES FOR GREY WATER & RAINWATER HARVESTING SYSTEMS IN MOSQUES AND RAINWATER HARVESTING SYSTEMS AT SCHOOLS

The consultation session with Syrian refugees at Princess Basma Community Development Center JOHUD in Irbid is shown in Figure 1 while the consultation session at Al Quds Mosque, in Ramtha (Figure 2).



Figure 4 Consultation session with Syrian refugees at Princess Basma Community Development Center JOHUD in Irbid



Figure 5 Consultation session at Al Quds Mosque, in Ramtha

Activities discussed through the phases of the project were as follows:

Installation of Grey water & Rainwater harvesting Systems in Selected Mosques:

- Installation of base & floors for equipment.
- Transportation and Installation of equipment and preparation of other infrastructure.
- Installing pipes and connecting electricity and water when needed
- **Operation Phase**
- Operating Grey water & Rainwater Harvesting Systems
- Appoint technicians or guards to supervise the operation of treatment units
- Routine and emergency maintenance.
- Decommissioning Phase
- Disposal and transportation of equipment.
- Remove any built infrastructure buildings and get rid of any waste material.
- Rehabilitation of the site.
- Cessation of activities and services (employment)

Below are all the mentioned issues in the survey, which were further assessed & monitored as part of the ESIA's ESMMP study. Moreover potential interactions of these issues will be specified and evaluated with respect to the 15 AF Environmental & Social Principles (ESP). Natural environment (biodiversity, air, surface water, groundwater, and soil).

- Air quality.
- Public health and safety.
- Occupational health and safety.
- Socio-economic conditions.
- Archeology.

Major Environmental & Social Issues and Concerns

General issues and concerns identified for Grey water treatment project at Greater Irbid Mosque are disputed in table 7.

Project Phases	Main Issue/ Concern	Adaptation Fund Environmental & Social Principles (AF ESP)
Installation	Risk of dust particles and noise generated by the machinery	Public Health
Operation	Impact of the bad odor of water that is released into the environment.	Public Health
Decommissioning	Noise-induced by dismantling of machinery	Public Health

Table 7 General issues and concerns identified for Grey water treatment project at Greater Irbid Mosque

General issues and concerns identified for the installation of rainwater harvesting systems at Greater Irbid Mosques are depicted in Table 8.

Table 8 General issues and concerns identified for the Installation of Rainwater HarvestingSystems at Greater Irbid Mosque

Project Phases	Main Issue/ Concern	Adaptation Fund Environmental & Social Principles (AF ESP)
Operation	Children slipping into rainwater tanks	Public Health
Operation	Contamination of collected Rainwater	Pollution Prevention & Resource Efficiency
Installation	Offering Job opportunities for the community	Marginalized & Vulnerable Groups
Operation	The change in precipitation seasons will affect the availability of water	Climate Change
Operation	Inability to pay workers	Core Labor Rights
Operation	The wage difference between various working nationalities or differences in pay schedules between locals and Syrian refugee worker	Core Labor Rights
Operation	Rise in ambient temperature might affect water availability	Climate Change
Decommissioning	Remaining waste and chemical disinfectants leftover may have a possible impact after the end of the equipment life.	Pollution Prevention & Resource Efficiency

General issues and concerns identified for wastewater reuse project at Ramtha mosques are shown in Table 9.

Project Phases	Main Issue/ Concern	Adaptation Fund Environmental & Social Principles (AF ESP)
Installation	Risk of dust particles & noise generated by the machinery	Public Health and Pollution Prevention
Operation	Significant danger on the biodiversity in the region from irrigating vegetables and fruits with gray water that do not comply with the Jordanian standards	Pollution Prevention & Resource Efficiency
Operation	Untreated water leakage	Protection of Natural Habitat
Operation	Bad odor of water that is released into nearby environment.	Public Health
	Water salinity on irrigation.	Lands and Soil Conservation.
Decommissioning	Effect of transferring equipment after its dismantling and the destiny of this equipment	Pollution Prevention & Resource Efficiency

 Table 9 General issues and concerns identified for wastewater reuse project at Ramtha Mosque

General issues and concerns identified for Rainwater Harvesting project at Al Quds Mosque in Ramtha are shown in table 10.

Table 10 General issues and concerns identified for Rainwater Harvesting project at Al Quds Mosque in Ramtha

Project Phases	Main Issue/ Concern	Adaptation Fund Environmental & Social Principles (AF ESP)
Operation	Children slipping into rainwater tanks	Public Health
Operation	Contamination of collected Rainwater	Pollution Prevention & Resource Efficiency
Installation	Offering Job opportunities for the community	Marginalized & Vulnerable Groups
Operation	The change in precipitation seasons will affect the availability of water	Climate Change
Operation	Inability to pay workers	Core Labor Rights
Operation	The wage difference between various working nationalities or differences in pay schedules between locals and Syrian refugee worker	Core Labor Rights
Operation	Rise in ambient temperature might affect water availability	Climate Change
Decommissioning	Remaining waste and chemical disinfectants leftover may have a possible impact after the end of the equipment life.	Pollution Prevention & Resource Efficiency

General Recommendations & Demands of Jordanians and Syrian Refugees Attending Mosques:

Table 11 shows the general recommendations & demands of Jordanians and Syrian refugees attending the mosques in the area.

Table 11 general recommendations & demands of Jordanians and Syrian refugees attending the mosques in the area

	Recommendations & Demands of Stakeholders	AF (ESP)
	This program is crucial for all social groups focusing on vulnerable, displaced persons and low income groups. With the need for employment opportunities in the area.	Vulnerable & Marginalized Groups
	There are social, cultural and economic barriers preventing gender equality, it is highly recommended to implement awareness workshops that seek behavioral and attitude change among the participants.	Gender equality and women's empowerment
	Workers should be treated fairly; justice should be applied between them, and have documented contracts for the workers.	Core labor rights
•	The creation and execution of a local commission, as stated by the refugees, would assist maintain and monitor the proposed project.	Access & Equity
	All those responsible parties must take the Committee into the grips and take accountability.	Human Rights

Schools Rain Water Harvesting Systems

General issues and concerns identified for the Installation of Rainwater Harvesting Systems at (1) Aydoun Basic School for boys, Irbid; (2) Asmaa Bint Amais mixed School in Ramtha; (3) Hay Al-Elemat High School for Girls, in Mafraq (Table 12) (Figures 6,7, and 8) are posted below, which were held at the following dates

Dates:

- (1) Wednesday, 11th of September 2019
- (2) Wednesday, 25th of September 2019
- (3) Thursday, 26th of September 2019

Attendees (mix of Jordanian and Syrian refugee students :

- (1) UN-Habitat, Students; both locals and Majority Syrian refugees
- (2) UN-Habitat, Students; both locals and Majority Syrian refugees
- (3) UN-Habitat, 12th Grade (Scientific and Literary Stream) mox of Jordanian and Syrian students

Students listed in the attached attendees' form.

Table 12 General issues and concerns identified for the Installation of Rainwater HarvestingSystems at (1) Aydoun Basic School for boys, Irbid; (2) Asmaa Bint Amais mixed School in Ramtha;(3) Hay Al-Elemat High School for Girls, in Mafraq

Project Phases	Main Issue/ Concern	Adaptation Fund Environmental & Social Principles (AF ESP)
Operation	Children slipping into rainwater tanks	Public Health
Operation	Contamination of collected Rainwater	Pollution Prevention & Resource Efficiency
Operation	Availability of fresh water	Access & Equity
	Offering Job opportunities for the community	Marginalized & Vulnerable Groups
	The change in precipitation seasons will affect the availability of water	Climate Change
	Inability to pay workers	Core Labor Rights
	The wage difference between various working nationalities	Core Labor Rights
	Rise in Temperature might affect water availability	Climate Change

Decommissioning	Remaining waste and chemical leftover may have a possible impact after the end of the equipment life.	Pollution Prevention &Resource Efficiency
Decommissioning	Noise from the demolition of the equipment may have an enormous effect.	Public Health



Figure 6 Consultation session at Aydoun Basic School for boys, Irbid



Figure 7 Consultation session at Asmaa Bint Amais mixed School in Ramtha.



Figure 8 Consultation session at Hay Al-Elemat High School for Girls, in Mafraq

CONSULTATION ON PERMACULTURE AT JORDAN UNIVERSITY OF SCIENCE AND TECHNOLOGY PROCESS:

The activities undertaken in the Consultation session and the findings are described below.



Figure 9 Consultation session on Permaculture at Jordan University of Science and Technology, in Irbid

Consultation Session: At the beginning of the session, each participant was provided with information package consisted of a project summary and an overview of the project activities for all phases of the project in Arabic. Some comments and clarifications from UN-Habitat study team were made during the presentation.

Furthermore each participant was handed a survey which included tables for them to fill on their concerns and possible environmental & social impacts they believe might arise Below are all the mentioned issues in the survey which will be further assessed & monitored as part of the ESMMP study. Moreover potential interactions of these issues will be specified and evaluated with respect to the 15 AF Environmental & Social Principles (ESP). Natural environment (biodiversity, air, surface water, groundwater, and soil).

- Air quality.
- Public health and safety.
- Occupational health and safety.
- Socio-economic conditions.
- Archeology.

Major Environmental & Social Issues and Concerns for the implementation of Permaculture project

General issues and concerns identified for the implementation of Permaculture project are depicted in Table 13 while general recommendations and demands are shown Table 14.:

Main Issue/ Concern	Adaptation Fund Environmental & Social Principles (AF ESP)
Significant effect of dust particles on the adjacent surroundings during excavations work.	Public Health
The use of chemical fertilizers on the land	Lands and Soil Conservation
Effect of irrigation with untreated water on plants	Conservation of Biological Diversity
Effects of using genetically modified seeds	Conservation of Biological Diversity
Accumulation of animal dung	Lands and Soil Conservation
Inequality and favoritism of benefit-sharing among beneficiaries.	Access & Equity
Presence of social, cultural and economic barriers to gender equality.	Gender Equity and Women's Empowerment

Table 13 General issues and concerns identified for the implementation of Permaculture project
Main Issue/ Concern	Adaptation Fund Environmental & Social Principles (AF ESP)
Long working hours	Core Labor Rights
Inability to pay workers.	Core Labor Rights
The wage difference between various working nationalities.	Core Labor Rights
The proposed interventions/measures will have a beneficial effect on the surrounding environment.	Conservation of Biological Diversity
High air temperature.	Climate Change
Natural resources scarcity; water and soil	Climate Change

Table 14 general recommendations and demands with regard to for the implementation of Permaculture project

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	Recommendations & Demands of Stakeholders	AF (ESP)
	To ensure equal access to benefits it is recommended to raise the awareness and disseminate information through social media and daily newspapers within a large segment of the university society.	Access & Equity
	There is a need for adequate transport system, employment opportunities, and better wage for the workers in the area.	Core Labor Rights
-	This program is crucial for all social groups focusing on vulnerable, displaced persons, farmers and agricultural laborers, and low- income groups.	Marginalized and Vulnerable Groups
•	Workers should be treated fairly, and that justice be applied between them and considering Jordanian Labor Law.	Core Labor Rights
	The development and implementation of a local committee would help the proposal to be maintained and monitored	Access & Equity
•	What is expected from the interventions is to reduce emitted gases, increase vegetation coverage, enhance soil type, and adapt to climate change.	Conservation of Biological Diversity
-	Types of soil found in the area are; Silty Loam Soil, Sandy Loam Soil, and Red Clay Soil. No legitimate impact has been recognized that could lead to the loss of soil.	Lands and Soil Conservation

Annex (1) show the list of attendants for all consultation sessions

(A)

Attendees Sheet for Jordanian Farmers at Jarash



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Attendees Sheet for Syrians at Jarash



قائمة بأسماء المشاركين في الجنسة التوارية: (عادة استخدام العياد التادمة''، خلال الفترة من 10 – 12 أيلول (سيتمبر) 2019 في جرش و الرمثا وإريد والمفرق مكان عقد الجنسة النقاشية: تجريز المرض بحمال مركم تاريخ عقد الجنسة النقاشية:

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برنامج الأمم المتحدة للمستوطنات البشرية 63 نبارع تيمير نعناعة – عدون الجنوبي، عمان، الأردن متف: 1989-6-5924 فلكس: 1448-6-592489

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Attendance sheet for Jordanians at Ramtha



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Attendance sheet for Syrians at Ramtha



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Attendance sheet for Syrian Refugees at Mafraq



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Attendants at Al Quds Mosque in Irbid



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قائمة بأسماء الاسترك لمسبر من المشاركين في الجلسة الحوارية: " إعادة استخدام العياد العادمة"، خلال الفترة من 10 – 12 أيلول (سبتمبر) 2019 في جرش و الرمثا واريد والمفرق مكان عقد الجلسة النقاشية: بركز العسري مكان عقد الجلسة النقاشية: بركز العسري

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Attendants at AI Quds Mosque in Ramtha



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برنامج الأمم المتحدة للمستوطنات البشرية 63 شارع تيمير تعناعة ـــ جدون الجنوبي، عمان، الأردن مانك: 962-6-5924+ فلكس: 1448-962-6-962+

قائمة بأسماء 👘 المشاركين في الجنسة الحوارية؛ " إعادة استخدام العياء العامة ?، خلال الفترة من 10 – 12 أيلول (سبتمبر) 2019 في جرئل و الرمثا واريد والمفرق

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قائمة باسماء محمد المناركين في الجنسة الموارية: " (عادة استخدام المواد العادمة"، خلال الفترة من 10 – 12 أيلول (سبتمبر) 2019 في جرش و الرمثًا وإريد والمفرق

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Syrian Refugees Attendants Sheet



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Attendants Sheet at JUST University in Irbid



برنامج الأمم المتحدة للمستوطنات البشرية 63 شارع قيس نطاعة – عدون الجنوبي، صان، الأردن مانف: 962-6-5924889 فاقس: 1488-962-65924

قائمة بأسماء (1991 في المشاركين في الجاسة الحوارية: * إعادة استخدام المياء العامة "، خلال القترة من 10 – 1. أيثول (سبتمبر) 2019 في جرف و الرمثا وإربد والسلرق

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