



**GREEN  
CLIMATE  
FUND**

**Meeting of the Board**  
12 – 14 November 2019  
Songdo, Incheon, Republic of Korea  
Provisional agenda item 14

**GCF/B.24/02/Add.05**

22 October 2019

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# Consideration of funding proposals - Addendum V

## Funding proposal package for FP119

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### **Summary**

This addendum contains the following seven parts:

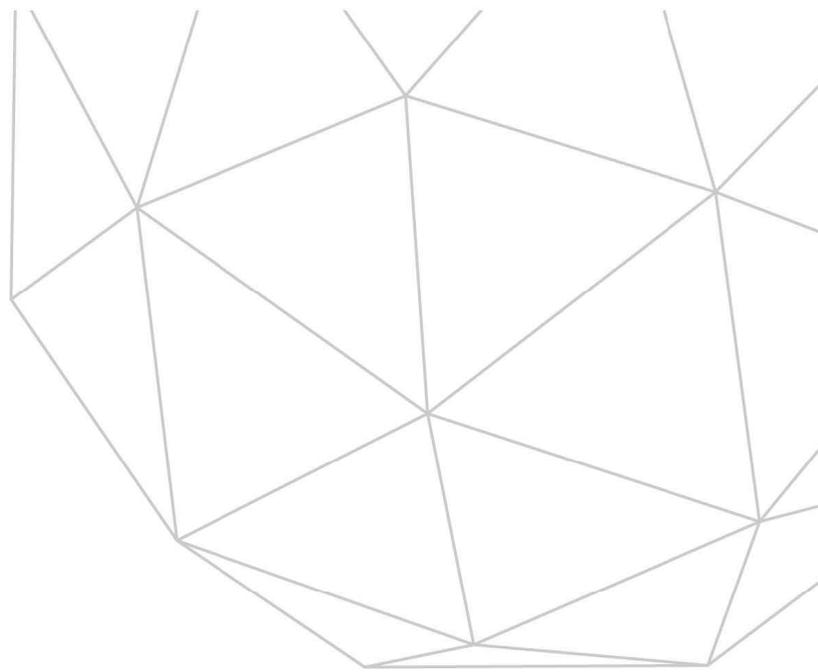
- a) A funding proposal titled “Water Banking and Adaptation of Agriculture to Climate Change in Northern Gaza”;
- b) No-objection letter issued by the national designated authority(ies) or focal point(s);
- c) Environmental and social report(s) disclosure;
- d) Secretariat’s assessment;
- e) Independent Technical Advisory Panel’s assessment;
- f) Response from the accredited entity to the independent Technical Advisory Panel’s assessment; and
- g) Gender documentation.

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# Funding Proposal

Version 1.1

**The Green Climate Fund (GCF) is seeking high-quality funding proposals.**

Accredited entities are expected to develop their funding proposals, in close consultation with the relevant national designated authority, with due consideration of the GCF's Investment Framework and Results Management Framework. The funding proposals should demonstrate how the proposed projects or programmes will perform against the investment criteria and achieve part or all of the strategic impact results.

Project/Programme Title: **Water Banking and Adaptation of Agriculture to Climate Change in Northern Gaza**

Country/Region: PALESTINE

Accredited Entity: Agence Française de Développement (AFD)

Date of Submission: 25 June 2018

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### *Note to accredited entities on the use of the funding proposal template*

- Sections **A, B, D, E** and **H** of the funding proposal require detailed inputs from the accredited entity. For all other sections, including the Appraisal Summary in section F, accredited entities have discretion in how they wish to present the information. Accredited entities can either directly incorporate information into this proposal, or provide summary information in the proposal with cross-reference to other project documents such as project appraisal document.
- The total number of pages for the funding proposal (excluding annexes) is expected not to exceed 50.

**Please submit the completed form to:**

[fundingproposal@gcfund.org](mailto:fundingproposal@gcfund.org)

Please use the following name convention for the file name:

“[FP]-[Agency Short Name]-[Date]-[Serial Number]”

## LIST OF KEY ABBREVIATIONS

AFD Agence Française de Développement  
EQA Environment Quality Authority  
FAO Food and Agriculture Organization of the United Nations  
INCR Initial national communication  
IPCC Intergovernmental Panel on Climate Change  
IRR Internal Rate of Return  
GEDCO Gaza Electricity Distribution Company  
MAR Managed Aquifer Recharge  
MoA Ministry of Agriculture  
MoFP Ministry of Finance and Planning  
NAP National Adaptation Plan  
NGEST North Gaza Emergency Sewage Treatment  
NWC National Water Company  
NDC Nationally Determined Contribution  
PENRA Palestinian Energy and Natural Resources Authority  
PNA Palestine  
PRECIS Providing Regional Climates for Impact Studies  
PMU Project Management Unit  
PWA Palestinian Water Authority  
TWW Treated Wastewater  
RS Recovery Scheme  
UNDP United Nations Development Programme  
UNFCCC United Nations Framework Convention on Climate Change  
WB World Bank  
WHO World Health Organization  
WSRC Water Sector Regulatory Council  
WUA Water Users Association  
WWTP waste water treatment plants

A.1. Brief Project/Programme Information		
A.1.1. Project / programme title	<b>Water Banking and Adaptation of Agriculture to Climate Change in Northern Gaza</b>	
A.1.2. Project or programme	Project	
A.1.3. Country (ies) / region	<b>Palestine</b>	
A.1.4. National designated authority (ies)	<b>Environment Quality Authority</b>	
A.1.5. Accredited entity	<b>Agence Française de Développement</b>	
A.1.5.a. Access modality	<input type="checkbox"/> Direct <input checked="" type="checkbox"/> International	
A.1.6. Executing entity / beneficiary	Executing Entity: Palestinian Water Authority; Ministry of Agriculture – Food and Agriculture Organization Beneficiary: Palestinian Authority	
A.1.7. Project size category (Total investment, million USD)	<input type="checkbox"/> Micro ( $\leq 10$ ) <input checked="" type="checkbox"/> Small ( $10 < x \leq 50$ ) <input type="checkbox"/> Medium ( $50 < x \leq 250$ ) <input type="checkbox"/> Large ( $> 250$ )	
A.1.8. Mitigation / adaptation focus	<input type="checkbox"/> Mitigation <input type="checkbox"/> Adaptation <input checked="" type="checkbox"/> Cross-cutting	
A.1.9. Date of submission	25 June 2018, V2 28 May 2019	
A.1.10. Project contact details	Contact person, position	MECHALI Zacharie – Task Team Leader (TTL) BALLIN Quentin – co-TTL OURBAK Timothée – Climate Change Specialist, GCF focal point
	Organization	Agence Française de Développement - AFD
	Email address	<a href="mailto:mechaliz@afd.fr">mechaliz@afd.fr</a> ; <a href="mailto:ballinq@afd.fr">ballinq@afd.fr</a> <a href="mailto:ourbakt@afd.fr">ourbakt@afd.fr</a>
	Telephone number	+33 1 53 44 31 31
	Mailing address	5, rue Roland Barthes 75598 Paris cedex 12 France

A.1.11. Results areas <i>(mark all that apply)</i>	
<b>Reduced emissions from:</b>	
<input checked="" type="checkbox"/>	<b>Energy access and power generation</b> (E.g. on-grid, micro-grid or off-grid solar, wind, geothermal, etc.)
<input type="checkbox"/>	<b>Low emission transport</b> (E.g. high-speed rail, rapid bus system, etc.)
<input type="checkbox"/>	<b>Buildings, cities and industries and appliances</b> (E.g. new and retrofitted energy-efficient buildings, energy-efficient equipment for companies and supply chain management, etc.)
<input type="checkbox"/>	<b>Forestry and land use</b> (E.g. forest conservation and management, agroforestry, agricultural irrigation, water treatment and management, etc.)
<b>Increased resilience of:</b>	
<input checked="" type="checkbox"/>	<b>Most vulnerable people and communities</b> (E.g. mitigation of operational risk associated with climate change – diversification of supply sources and supply chain management, relocation of manufacturing facilities and warehouses, etc.)
<input checked="" type="checkbox"/>	<b>Health and well-being, and food and water security</b> (E.g. climate-resilient crops, efficient irrigation systems, etc.)
<input type="checkbox"/>	<b>Infrastructure and built environment</b> (E.g. sea walls, resilient road networks, etc.)
<input checked="" type="checkbox"/>	<b>Ecosystem and ecosystem services</b> (E.g. ecosystem conservation and management, ecotourism, etc.)

### A.2. Project / Programme Executive Summary (max 300 words)

The Palestinian National Adaptation Plan (NAP) and the initial national communication (INCR) to the United Nations Framework Convention on Climate Change (UNFCCC) in addition to the Palestinian Nationally Determined Contribution (NDC) have identified water and food security as the most vulnerable issues in Palestine, with knock-on implications for all sectors. In Gaza, the population has one of the lowest per capita water availability in the world, with quality far below World Health Organization (WHO) standards.

Food and water insecurity will increase in the baseline scenario with a “climate contribution” to this trend, in terms of acceleration of existing anthropic factors, estimated at 30% (as will be explained further down). The project intends to counterbalance the negative compounding effect of climate change on already degraded resources by delivering infrastructure and innovative hydraulic technology -Managed Aquifer Recharge (MAR)- to create a new non-conventional water resource to be injected in the aquifer and to be reused for agricultural purposes.

The project will increase the resilience of 4 200 people involved in agriculture, and enhance the livelihood of 23 553 people, including 11 776 women; MAR will alleviate the pressure on the aquifer, thereby improving access to domestic water of 200 000 additional people.

It will also increase the production of Palestinian renewable energy, through the installation of 8,5 ha of PV scheme.

This is a huge paradigm shift for Palestine, where the MAR technology is implemented for the first time and will allow engaging directly with the neuralgic issue of adaptation to climate change in the area, which is the Nexus Food – Water – Energy. A map of the project area and key infrastructure is provided in **Annex 2.**

### A.3. Project/Programme Milestone

Expected approval from accredited entity's Board (if applicable)	14/11/2019
Expected financial close	31/12/2026
Estimated implementation start and end date	Start: <u>01/07/2019</u> End: <u>01/07/2024</u>
Project/programme lifespan	5 years

**B.1. Description of Financial Elements of the Project / Programme**

Output	Activity	Input	Financing Source	Budget Account Description	Amount Year 1 (EUR)	Amount Year 2 (EUR)	Amount Year 3 (EUR)	Amount Year 4 (EUR)	Amount Year 5 (EUR)	Total (EUR)
<b>Output 1 : Production of additional quantities of water for agricultural use</b>	Activity 1.1 An additional water resource is created by Managed Aquifer Recharge	Input 1.1.1 Rehabilitation of 7 infiltration basins for recharge of the aquifer	AFD	Construction cost	217 965	217 965	0	0	0	435 929
		Input 1.1.2 Delivery of the recovery scheme	GCF	Equipment	1 000 000	0	0	0	0	1 000 000
		Construction cost		1 204 083	2 000 000	2 214 000	0	0	5 418 083	
	Activity 1.2 Water – Energy Nexus, development of renewable low-emission energy solutions	Input 1.2.1 Delivery of 2 PV schemes to sustain the overall needs of the NGEST scheme	IrishAid	Equipment	3 642 857	3 642 857	0	0	0	7 285 714
	<b>Total Component 1</b>				6 064 905	5 860 822	2 214 000	0	0	14 139 726
<b>Output 2 : Development of irrigation, water</b>	Activity 2.1 An improved water service	Input 2.1.1 Delivery of an irrigation	GCF	Construction cost	0	2 165 179	2 165 179	2 165 179	2 165 179	8 660 714

<b>efficiency and climate resilient agriculture</b>	for irrigation is brought to 4 200 beneficiaries serving 1 500 ha	scheme, 1 500 ha	AFD	Construction cost	2 467 857	2 467 857	2 467 857	2 467 857	0	9 871 429
	Activity 2.2 Increased climate resilience of agriculture, adaptation of cropping systems to climate change	Input 2.2.1 Extension services to farmers	GCF	Local consultants	148 200	148 200	148 200	148 200	148 200	741 000
				Equipment			194 000			194 000
		Input 2.2.2 Subsidy of on-farm water saving equipment	GCF	Equipment	0	0	1 480 349	1 480 349	1 480 349	4 441 046
		Input 2.2.3 Gender, land tenure and irrigation – a Gender-responsive approach to agricultural resilience to climate change	GCF	Equipment	0	25 000	25 000	25 000	25 000	25 000
Local consultants	21 750			21 750	21 750	21 750	0	87 000		
	<b>Total Component 2</b>				2 637 807	4 827 986	6 502 334	6 308 334	3 818 727	24 095 189
<b>Output 3 : Management of the water cycle</b>	Activity 3.1 Strengthening of PWA	Input 3.1.1 Technical assistance	AFD	Local consultants	0	100 000	100 000	100 000	100 000	400 000

<b>and capacity building of stakeholders</b>	capacities in its role of coordination and quality control of the process of reuse of treated waste water			International consultant	0	100 000	100 000	100 000	100 000	400 000
		Input 3.1.2 Setting-up of a water quality monitoring and control system	GCF	Equipment	0	0	150 784	0	0	150 784
	Activity 3.2 Exit Strategy and Transfer of O&M to Water Users	Input 3.2.1 Identification and establishment of the co-management scheme – Structuring and capacity building of a WUA	AFD	Local consultants	93 500	93 500	93 500	93 500	0	374 000
		Input 3.2.2 Integration of women in the governance bodies of the WUA	GCF	Local consultants	0	47 000	47 000	0	0	94 000



	2.2.1, 2.2.3, Act. 3.2 and 3.3)	Irish Aid			0	0	0	0	0	0
	Total PM Component				378 624	349 967	218 624	143 263	138 624	1 229 101
<b>Project cost</b>					<b>9 174 835</b>	<b>11 441 607</b>	<b>9 796 575</b>	<b>6 907 430</b>	<b>4 257 351</b>	<b>41 577 799</b>
		AFD			2 903 771	3 100 009	3 049 307	2 815 903	249 350	<b>12 118 340</b>
		GCF			2 571 957	4 657 386	6 523 268	4 072 735	3 991 501	<b>21 816 848</b>
		Irish Aid			3 699 107	3 684 212	30 000	18 792	16 500	<b>7 448 611</b>
<b>Contingency rate</b>	8%									
<b>Contingencies</b>		AFD	29%		175 939	175 939	175 939	175 939	175 939	879 693
		GCF	53%		339 787	339 787	339 787	339 787	339 787	1 698 935
		Irish Aid	18%		110 278	110 278	110 278	110 278	110 278	551 388
		Total Contingencies			626 003	626 003	626 003	626 003	626 003	3 130 016
<b>Total Amount</b>				<b>9 800 839</b>	<b>12 067 610</b>	<b>10 422 579</b>	<b>7 533 434</b>	<b>4 883 354</b>	<b>44 709 782</b>	
<b>Total Amount GCF</b>				<b>2 911 744</b>	<b>4 997 172</b>	<b>6 863 055</b>	<b>4 412 522</b>	<b>4 331 288</b>	<b>23 709 782</b>	
<b>Total Amount Irish Aid</b>				<b>3 809 385</b>	<b>3 794 490</b>	<b>140 278</b>	<b>129 070</b>	<b>126 778</b>	<b>8 000 000</b>	
<b>Total Amount AE</b>				<b>3 079 710</b>	<b>3 275 948</b>	<b>3 225 245</b>	<b>2 991 841</b>	<b>425 288</b>	<b>13 000 000</b>	

As presented in the table above, only few activities / inputs won't be financed by GCF Proceeds: 1.1.1, 1.2.1, 3.1.1, 3.2.1 and 3.3.1. Since the GCF requirements apply to the entire funded activity, including parts which the GCF does not finance, AFD will pass down the GCF requirements to the parts of the funded activity that is not being financed by GCF.

B.2. Project Financing Information							
	Financial Instrument	Amount	Currency	Tenor	Pricing		
<b>(a) Total project financing</b>	<b>(a) = (b) + (c)</b>	<b>44.709782</b>	<u>million euro</u> (€)				
<b>(b) GCF financing to recipient</b>	(i) Senior Loans	.....	<u>Options</u>	( ) years	( ) %		
	(ii) Subordinated Loans	.....	<u>Options</u>	( ) years	( ) %		
	(iii) Equity	.....	<u>Options</u>		( ) % IRR		
	(iv) Guarantees	.....	<u>Options</u>				
	(v) Reimbursable grants *	.....	<u>Options</u>				
	(vi) Grants *	<b>23.709782</b>	<u>million euro</u> (€)				
<p>* Please provide economic and financial justification in <a href="#">section F.1</a> for the concessionality that GCF is expected to provide, particularly in the case of grants. Please specify difference in tenor and price between GCF financing and that of accredited entities. Please note that the level of concessionality should correspond to the level of the project/programme's expected performance against the investment criteria indicated in <a href="#">section E</a>.</p>							
Total requested (i+ii+iii+iv+v+vi)		<b>23.709782</b>	<u>million euro</u> (€)				
<b>(c) Co-financing to recipient</b>	Financial Instrument	Amount	Currency	Name of Institution	Tenor	Pricing	Seniority
	<u>Grant</u>	13	<u>million euro</u> (€)	AFD	( ) years	( ) %	<u>Options</u>
	<u>Grant</u>	8	<u>million euro</u> (€)	Irish Aid	( ) years	( ) %	<u>Options</u>
	<u>Options</u>	.....	<u>Options</u>	.....		( ) % IRR	<u>Options</u>
	<u>Options</u>	.....	<u>Options</u>	.....			<u>Options</u>
Lead financing institution: AFD							

	<p><i>* Please provide a confirmation letter or a letter of commitment in section I issued by the co-financing institution.</i></p>										
<p>(d) Financial terms between GCF and AE (if applicable)</p>	<p><i>In cases where the accredited entity (AE) deploys the GCF financing directly to the recipient, (i.e. the GCF financing passes directly from the GCF to the recipient through the AE) or if the AE is the recipient itself, in the proposed financial instrument and terms as described in part (b), this subsection can be skipped.</i></p> <p><i>If there is a financial arrangement between the GCF and the AE, which entails a financial instrument and/or financial terms separate from the ones described in part (b), please fill out the table below to specify the proposed instrument and terms between the GCF and the AE.</i></p> <table border="1" style="width: 100%; border-collapse: collapse; margin: 10px 0;"> <thead> <tr style="background-color: #f2f2f2;"> <th style="text-align: left;">Financial instrument</th> <th style="text-align: left;">Amount</th> <th style="text-align: left;">Currency</th> <th style="text-align: left;">Tenor</th> <th style="text-align: left;">Pricing</th> </tr> </thead> <tbody> <tr> <td>Choose an item.</td> <td>.....</td> <td><u>Options</u></td> <td>( ) years</td> <td>( ) %</td> </tr> </tbody> </table> <p><i>Please provide a justification for the difference in the financial instrument and/or terms between what is provided by the AE to the recipient and what is requested from the GCF to the AE.</i></p>	Financial instrument	Amount	Currency	Tenor	Pricing	Choose an item.	.....	<u>Options</u>	( ) years	( ) %
Financial instrument	Amount	Currency	Tenor	Pricing							
Choose an item.	.....	<u>Options</u>	( ) years	( ) %							

**B.3. Financial Markets Overview (not applicable)**

*How market price or expected commercial rate return was (non-concessional) determined?*

*Please provide an overview of the size of total banking assets, debt capital markets and equity capital markets which could be tapped to finance the proposed project/programme.*

*Please provide an overview of market rates (i.e. 1-year T-Bill, 5-year government bond, 5-year corporate bond (specify credit rating) and 5-year syndicate loan.*

*Provide examples or information on comparable transactions.*

Please fill out applicable sub-sections and provide additional information if necessary, as these requirements may vary depending on the nature of the project / programme.

### C.1. Strategic Context

Acute water scarcity in Palestine is a strong determinant of the climate vulnerability of its population, in particular for rural areas and communities. The Palestinian National Adaptation Plan and the initial national communication to the UNFCCC have identified water and food security as the most vulnerable issues in Palestine, with knock-on implications for all sectors. This is also highlighted in the Nationally Determined Contribution (NDC).

The geopolitical situation substantially reduces the Palestinian's adaptive capacities, thereby compounding climate vulnerabilities with anthropic constraints and limitations of access to water resources, in particular in the Gaza Strip and in rural areas of the West Bank.

Palestine has one of the lowest *per capita* water availability in the world, with quality far below World Health Organization (WHO) standards. The average domestic water consumption is only 72 liters per capita per day (l/c/d) in the West Bank and 96 l/c/d in the Gaza Strip (availability of drinkable quality water is deemed to be half that number), below the 100 l/c/d minimum recommended by the WHO.

The impacts of climate change identified at regional level or in neighboring countries broadly apply to the Palestinian situation. Studies have attempted to model the impacts of climate change on Palestine's water resources: the regional climate model PRECIS (Providing Regional Climates for Impact Studies) with the Intergovernmental Panel on Climate Change (IPCC) A1B emissions scenario (AR5), predict a decrease in precipitations of 15% by mid-century and 23% by the end of the century, lowering per capita internal water resources in Palestine to 67 m<sup>3</sup> (cubic meter) by 2050 compared to 190 m<sup>3</sup> in 2010.

United Nations Development Programme - UNDP's analysis of climate vulnerability in Palestine highlights **climate risks as a humanitarian threat**, placing the Palestinians within the policy realm of disaster risk management and emergency response operations. Current high levels of food and water insecurity in Gaza and the West Bank are forecasted to be exacerbated by climate change, on account of worsening food growing conditions (the agricultural sector consumes over two-thirds of water abstracted or flowing from springs in Palestine) and a fragile water supply infrastructure. This will have severe implications on the human health, social development and general unrest in the Gaza Strip.

**Combining population growth forecasts and regional climate change projections, it has been estimated that Palestine will experience a water deficit of 271Mm<sup>3</sup> (million cubic meters) a year by 2020.** In the Gaza Strip, each year, around 195 Mm<sup>3</sup> are pumped from the coastal aquifer for the needs of the population and agricultural activities (representing less than 30% of total usages), while the water annual natural recharge of this aquifer does not exceed 60 Mm<sup>3</sup> per year. As a result, the capacity of the aquifer is declining at high speed, leading to significant intrusion of seawater into the only freshwater resource in the area, already heavily polluted by fertilizers, pesticides and untreated sewage.

Water availability is crucial to the food security of Palestinians, in particular in Gaza. Agriculture in Palestine is very dependent on precipitations: though irrigation is often the only option in this semi-arid territory and presents a gross productivity 6 times that of rain-fed agriculture, only 25% of agricultural land is irrigated in Palestine. Increasing aridity due to climate change (increasing temperature, decrease of precipitations, as well as sea level rise) will increase the pressure on already over-exploited aquifers, with consequences on the quality of the water (saline intrusions) and increases the risk of collapse of the system (irreversible deterioration of the aquifers). The United Nations has reported<sup>1</sup> that the aquifer will irrevocably collapse by 2020 if no significant interventions towards introducing nonconventional water resource such as wastewater reuse and desalination.

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<sup>1</sup> Report on UNCTAD assistance to the Palestinian people: Developments in the economy of the Occupied Palestinian Territory, 2015

Water availability for agriculture is also related to existing irrigation and cropping practices, which show relatively low levels of efficiency. The widespread use of submersion irrigation in the area of the project leads to overconsumption of water. The feasibility study also indicates that the cropping systems (in particular the low proportion of tree crops) in place in the area also lead to higher levels of water extraction. Finally, the increasing salinity of water in the aquifer, as a result of climate change (see climate change model Excel sheet, [Annex 4](#)), also decreases the irrigation efficiency and generates higher volumes applied for the same result.

In the context of increasing aridity, maintaining the existing agricultural and rural livelihoods in Palestine and Gaza (there is limited perspectives of growth in the agricultural sector, in the context of high demographic and urban pressure on land in Gaza and instability of markets) depends on both **securing access to sustainable water resources**, as well adapting irrigation practices and cropping systems on-farm.

For Palestine and its limited access to underground resources (because they are over exploited, for lack of adequate public infrastructure for additional mobilization) treated waste water is about the only new resource (compared to a baseline situation where it is going to the sea or to neighboring countries) that can be introduced in the local context of irrigated agriculture to alleviate the pressure on the aquifers and therefore prevent rupture scenarios, under the increasing effects of climate change.

**Making use of non-conventional water resources, such as Treated Wastewater (TWW) is considered a prerequisite for any sustainable development of irrigation in Palestine, thereby increasing the profitability and enhancing climate resilience of Palestinian agriculture.**

In Palestine, 50 Mm<sup>3</sup> of TWW are generated every year. If a fraction of this, for example 60% (i.e. 30 Mm<sup>3</sup>) met agricultural quality requirements and were used for irrigation, it would entail a 20% increase in water available for Palestinian farmers, enough to irrigate an additional 3 500 ha and create 15 000 jobs (*Source: Food and Agriculture Organization of the United Nations - FAO*). Whereas many other countries with dry conditions are already making use of this resource for irrigation (up to 80% of the TWW can be reused), this potential has not yet been realized in Palestine, mostly due to insufficient infrastructure and capacities to effectively utilize TWW for irrigation.

Water and sanitation, drinking water and associated sewage networks and waste water treatment plants (WWTP) projects, have multiplied over the years in Palestine, mainly through donor funding (KfW, WB, AFD, EU being the main partners of the Palestinian government in this sector), but also by way of public funding. In Gaza, the North Gaza Emergency Sewage Treatment (NGEST) plant (funded by WB, AFD and the EU), in the outskirts of Gaza City, is up and running since March 2018, with a capacity of 36 500 m<sup>3</sup>/day (13.3 Mm<sup>3</sup> per year). The NGEST plant will alleviate the pressure on the existing WWTP (Beit Lahia), functioning at six times its design capacity and will help solve the acute environmental and health hazards caused by the accumulation of waste water in Gaza.

The following excerpt from the Baseline Study On Water Quality & Public Health in The Gaza Strip (2015, [Annex 3](#)) illustrates the acuteness and severity of the situation and actual health hazards related to water contamination in Gaza:

*“It is needless to say that sewage is the biggest reason for groundwater biological and chemical contamination in the Gaza Strip. Only about 40% of the sewage generated in the Gaza Strip is properly treated. The percentage of population served by sewerage systems has increased in the last two decades and currently reached around 80%, leaving nearly half a million people unconnected to the sewage network and dependent on alternative means for excreta disposal.*

*Reports show that 19% of groundwater, 27% of desalinated water and 20% of water network samples are microbiologically contaminated by total Coliform while 13%, 14% and 12%, respectively, are contaminated by fecal coliform bacteria. The water situation in Gaza is dire. The Coastal Aquifer, Gaza’s sole fresh water resource, is polluted by the infiltration of raw sewage from cesspits and sewage collection ponds and by the intrusion of seawater (itself also contaminated by raw sewage discharged daily into the sea near the coast) and has been degraded by over-extraction. The water quality will be worse in the next few years and the aquifer will not be able to cover the people water needs, where the water quality will not be able to be used for any purposes (domestic, agriculture,...). Taking in*

*consideration the combined concentrations of both chloride and nitrate, it's clear that 3.8% of the domestic water is only matching with WHO drinking limit, while the remaining 96.2% is out of limit. (p.67)*

*[...] findings indicate that the incidence of diarrhea as reported by health clinics is constantly increasing over the past five years; almost doubled in five years. Also, hepatitis incidence rate is at the increasing trend (20.7 per 100,000 population to 73.3 per 100,000 in 2013)"*

In the baseline situation, non-treated waste water is currently stored in precarious basins outside of Gaza City (posing a threat to nearby populated areas) and transferred to infiltration basins, where it infiltrates into the aquifer resulting in severe pollution of the groundwater of high water table (rejection of these waters to sea is not an option, for environmental and geopolitical reasons), threatening the livelihoods and health of both rural and urban population when using this highly polluted water for agriculture and drinking.

The commissioning of the NGEST plant offers the opportunity to increase water and food security in the Gaza strip by generating an innovative, "new" and non-conventional resource for agricultural purposes, by infiltration in the aquifer (after tertiary treatment), recovery of treated waste water (diluted in ground water then extracted by wells), and development of an efficient irrigation scheme downstream. Infiltration of treated waste water in the aquifer will both increase the quantity and the quality (depollution) of the groundwater, thereby increasing its availability and suitability for agricultural purposes and, by the same token, preventing massive contamination and subsequent proliferation of water-borne diseases within the population of Gaza and Jabalia cities and their rural outskirts (an estimated 200 000 people would be affected positively by the project).

The cycle of production and reuse of TWW relies on an energy mix supplying the power for the functioning of the NGEST WWTP, the Recovery scheme (which involves pumping from the aquifer) and to pressurize the drip irrigation network at the end line. The current power concept consists of an external supply from the grid and on-site generation from emergency generators with sufficient capacity to cover the load of the facility (estimated at 9 MVA). The overall power supply situation in Gaza is constrained due to general geopolitical circumstances and options for extending existing supply system via the distribution network are limited because of cost of fuel for the local power plant or due to difficulties in fuel availability, in particular the limitations to increase the supply from cross-border sources.

Consequently, the Palestinian Water Authority (PWA) seeks, together with other responsible stakeholders (in particular the Palestinian Energy and Natural Resources Authority, PENRA) to **identify the most viable, long-term sustainable power supply option for the NGEST facilities during its whole life-cycle, by combining different sources of energy (electric grid, solar, wind, biogas, diesel), reducing greenhouse gas emissions (see activity 1.2).**

*Closing the water cycle*, by the reuse of treated water, calls for increased coordination between several stakeholders (the Palestinian Water Authority and the Ministry of Agriculture, as well as PENRA, and EQA (Environment Quality Authority), and the farmers benefiting from the project). Close and careful monitoring of water quality of water used for irrigation or for recharge the aquifer will be guaranteed. Enforcing regulations for the use of the treated water and monitoring of the quality and quantity of water in the aquifer will be key challenges of the project.

## C.2. Project / Programme Objective against Baseline

The Gazan Coastal Aquifer is the only source of fresh water for the population of the Gaza Strip. This aquifer serves mainly as a source of domestic water and for irrigation of agricultural crops.

With one of the world's highest demographic density (around 5 000 people/Km<sup>2</sup>) and population growth (around 3%/y), the aquifer is currently severely over exploited (extractions amount to more than 3 times the annual recharged volume), leaving the population in an extreme state of vulnerability (domestic water availability is already under the 100 l/capita/day threshold as defined by the WHO) if this trend was to be continued.

Climate change has a compounding effect on the local anthropic/demographic component of the baseline scenario, with regard to the evolution of the situation of the water balance in Gaza and the future of its availability for domestic and agricultural uses.

The following equation intends to model the baseline scenario with regard to water scarcity and seek out the climate component of the growing vulnerabilities (health and economic) due to lack of water:

$$\Delta WB_{Ag}/\Delta t = 1/\Delta t\{\Delta P - \Delta ETP (Ag+\Delta Ag) + \Delta Eff.irri\} + 1/\Delta t\{\Delta Dem + \Delta Ag + \Delta Ind\}$$

Where  $\Delta WB_{Ag}/\Delta t$  is the variation of the "usable" waterbalance (i.e. polluted and unusable water is not counted as positive quantities) over  $\Delta t$  (the lifespan of the infrastructure financed through the project)

In a context of relatively high uncertainty at regional and local level, a no regrets approach calls for the adoption of medium to worst case scenario assumptions for 2050 ( $\Delta t = [2018 - 2050]$ ), which are detailed in the Excel sheet in [Annex 4](#). Using the available data and published predictions (also presented in [Annex 4](#)), it is possible to characterize the contribution of each factor to the global trend of water scarcity in Gaza, as follows:

- **$\Delta P$**  is the evolution of precipitations over  $\Delta t$ , as a result of climate change. Rainfall is the only significant factor of recharge of the aquifer and it is assumed it will decrease 15% (worst case scenario being 30%) by 2050. This will lead to a decrease in the recharge from 60 to 51 Mm<sup>3</sup>/y as a result of climate change.
- **$\Delta ETP (Ag + \Delta Ag)$**  is the evolution of crop demand for water (evapotranspiration) of the existing agricultural area and of its variation over  $\Delta t$  (i.e.  $\Delta Ag$ ), as a result of increasing temperatures due to climate change. Predictions (IPCC, AR5 2014) show an increase in temperature expected to be + 2-3°C in the Gaza Strip over  $\Delta t$ , which will cause an increase in crop demand for water (ETP) between 10 and 19% (see calculation in [Annex 4](#)). Initial ETP in the baseline situation is estimated at 1 400 mm/y and the rate of increase in crop water requirement (+ 15%) is applied to the total cultivated area in Gaza (10 000 ha) because (i) for irrigated crops, higher ETP will translate in increased withdrawals from the aquifer; (ii) for rain-fed crops, higher ETP will mean less recharge of the aquifer. Total crop demand for water will increase from 140 to 161 Mm<sup>3</sup>/y as a result of climate change.
- **$\Delta Eff.irri$**  represents the loss in efficiency of irrigation due to increasing salinity of the aquifer, as a result of the sea level rise. Increase of sea level (up to +35 cm according to predictions for 2050) will further salinity intrusions in the aquifer which will, in turn, degrade its quality from moderately saline (600 - 1 000 mg/l) to highly saline (1 000 - 1 500 mg/l). This will have a negative effect on the efficiency of water for irrigation purpose (more water needs to be applied to maintain the same yields and leaching practices are required) by an estimated 25% with regard to baseline. This coefficient is applied only to irrigated areas and generates an increase in crop requirements of 12 Mm<sup>3</sup>/y due to climate change.
- **$\Delta Dem$**  is the evolution of domestic water consumption over  $\Delta t$ . Population is expected to double over  $\Delta t$  and it is assumed that so is domestic water consumption, bringing it to 200 Mm<sup>3</sup>/y in 2050.
- **$\Delta Ag$**  is the evolution of water usages in agriculture due to an increase in cultivated area or intensification over  $\Delta t$ , which is deemed negligible in the case of Gaza.
- **$\Delta Ind$**  is the evolution of water usages in the industrial sector over  $\Delta t$ , which is also deemed negligible in the case of Gaza and its stunted industrial development.

In aggregating these factors together, it is possible to segregate the “Human” component ( $1/\Delta t\{\Delta Dem + \Delta Ag + \Delta Ind\}$ ), contributing a negative  $100 \text{ Mm}^3/\text{y}$  to the water scarcity trend, from the “Climate” component ( $1/\Delta t\{\Delta P - \Delta ETP (Ag + \Delta Ag) + \Delta Eff\text{-irri}\}$ ), contributing a negative  $42 \text{ Mm}^3/\text{y}$  to increased water vulnerability for the population of Gaza over the course of the next 30 years, i.e. 30% of the overall determinant of change in the baseline scenario.

The project aims at limiting the compounding and amplifying effects of climate change on an already degraded scenario of worsening water scarcity by bringing in new resources to the water balance and creating a closed cycle of reused treated waste water for irrigated agriculture. This will enhance the resilience of agriculture and related livelihoods in the Northern part of Gaza and, at the same time, alleviate the pressure on the aquifer and free equivalent amounts of water needed for the needs of the population of the Gaza Strip. Thirteen million cubic meters of treated waste water will be injected in the aquifer, thanks to the infrastructure provided through the project, and channeled to an irrigation scheme (1 500 ha, 4 200 beneficiaries) nearby the NGEST facilities, covering 100% of its needs. In a closed system, as that of the Gazan aquifer, where every drop is needed and used, this additional amount secured for agriculture will free the equivalent amount for other uses, in particular domestic – covering the needs of around 200 000 people. The replicability and scalability of the project in new areas of Palestine, in Gaza Strip and West Bank and even abroad will be an important outcome of the successful implementation of the project.

### C.3. Project / Programme Description

As mentioned above, the launching of the NGEST WWTP and, in general, the current development of the Gazan water treatment capacity, offer an important opportunity to bring an additional resource (with regard to the baseline scenario whereby waste water is not treated and becomes a source of pollution for the aquifer) to the water balance in Gaza and, therefore, increase the resilience of its population and reduce the vulnerability of agricultural sector, in the context of climate change.

#### **Objectives of the project**

The project’s goal is to **develop an integrated low-carbon water management scheme to reduce the impact of warming temperatures, decreasing rainfall and increasing aridity due to climate change, and deliver additional amounts of water usable for sustaining agriculture and increasing the resilience of a highly vulnerable population in the Gaza Strip.**

The outcomes specific to the project are as follows:

- 01. Reduce the vulnerability of Gaza’s coastal aquifer and secure sustainability of access to domestic and agricultural water;**
- 02. Promote climate resilient and water-efficient agriculture;**
- 03. Enhance the institutional and operational capabilities for integrated resilient water management.**

#### **Description**

The project will deliver infrastructures immediately downstream from the NGEST WWTP that will allow the recharge of the aquifer, using treated waste water ( $13 \text{ Mm}^3/\text{year}$ ), its recovery by a network of wells, its storage and its transfer to an irrigation scheme (15 000 donums ~ 1 500 ha of gross irrigated area; the net area is estimated at 1 200 ha) located in the vicinity of the WWTP.

The project has three main outputs and its theory of change is described in **Annex 5**.

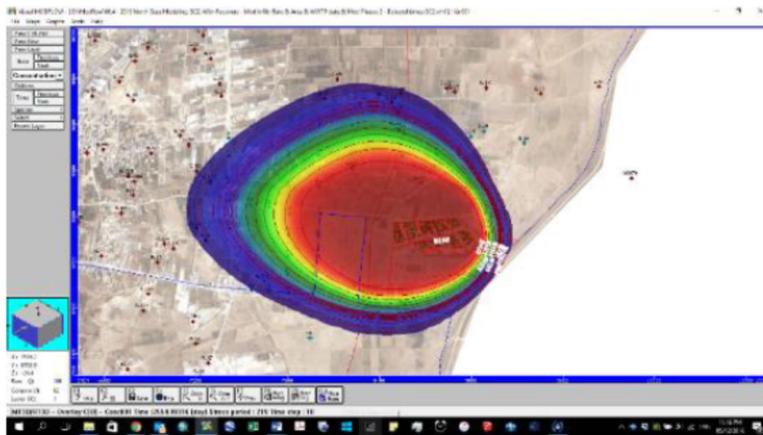
The technical and feasibility studies implemented for the preparation of the project have been conducted over a period of 5 years due to “stop & go’s” in the context of intermittent degradation of the security conditions in Gaza. AFD and Palestine have financed updates of the initial studies implemented in 2013 (design of the recovery and irrigation schemes and ESIA/ESMP/RAP related to these infrastructures): the 2017 version of the design study is

presented in **Annex 6**; the original ESIA/ESMP/RAP and its update are located in **Annex 9-Feasibility Studies**. The design study for the photovoltaic (PV) scheme is also presented in **Annex 9**.

**OUTPUT 1: PRODUCTION OF ADDITIONAL QUANTITIES OF WATER FOR AGRICULTURAL USE**

Main outcomes from this output are:

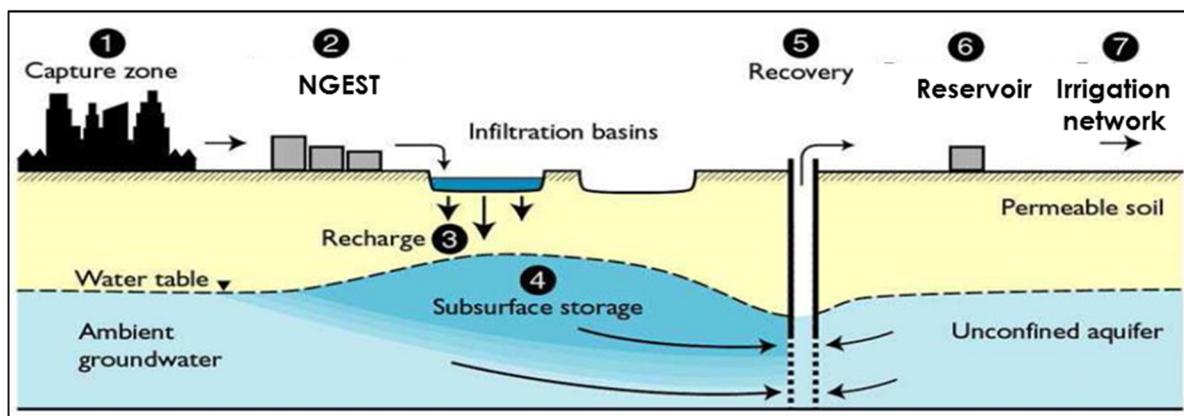
- Recharge of the aquifer with additional “clean” water coming from the WWTP (tertiary treatment is implemented through the infiltration process) usable in agriculture;
- Depollution of the aquifer and environmental and sanitary impacts of the existing pollution on the Gazan population (see ground water modelling outputs illustrated hereunder).

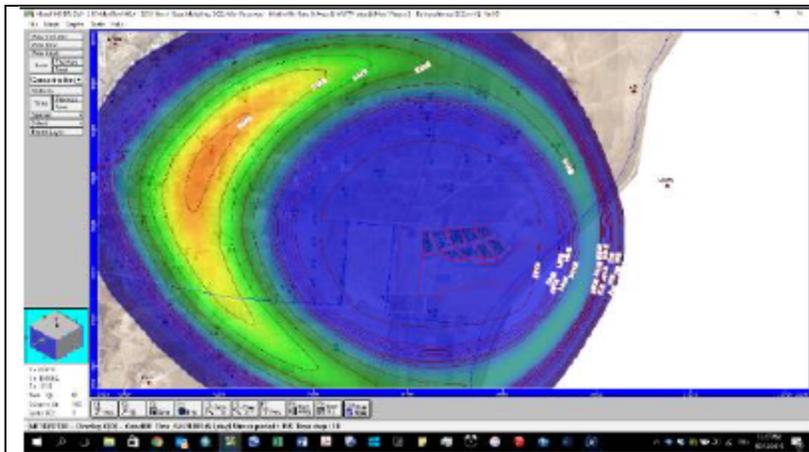


The red area shows the progression of underground pollution due to the infiltration of untreated wastewater and its progression towards the urbanized areas. The infiltration basins can be distinguished at the origin.

2016

The following illustration presents the Managed Aquifer Recharge (MAR) approach that will be put into place for NGEST:





This image shows the results of MAR in the project scenario and, in particular the depollution effect.

2024

### **Activity 1.1 An additional water resource is created by Managed Aquifer Recharge**

#### **Input 1.1.1 Rehabilitation of 7 infiltration basins for recharge of the aquifer**

The belated entry in service of the NGEST WWTP (in 2018 instead of 2015), the dangerous accumulation of raw waste water in the Gaza Strip and the inexistence of alternate solutions in the context of Gaza, has constrained Palestine in transferring the waste water from the Beit Lahia WWTP to the infiltration basins located in the NGEST perimeter. For 8 years, raw waste water has therefore been infiltrated in the aquifer, creating a pollution plume underground, as well as accumulating residue and clogging the infiltration basins.

The World Bank (WB) has undertaken to rehabilitate 2 of the 9 basins and the project will complete the works (rehabilitation of the 7 remaining basins) to deliver a fully operational infiltration scheme for the recharge of the aquifer. Since this input is 100% under AFD grant financing, tender documents have been published in spring 2019 and contractor is currently being selected.

#### **Input 1.1.2 Delivery of the recovery scheme**

The TWW reuse scheme relies on a tertiary treatment obtained by infiltration through sandy soil and the recovery of the water, stored in the shallow section of the aquifer, by a network of 28 wells located 500 m downstream from the infiltration point in a concentric formation. The recovered water will converge, through a network of pipes connecting the wells to 2 reservoirs of 4 000 m<sup>3</sup> each, in order to manage the distribution according to the needs. The organization of the full NGEST scheme is presented in the final design study presented in [Annex 9](#). Technical specifications are detailed in the same Output of the design study as well as precise location of wells, which are also presented in the ESIA and RAP.

The first part of this investment (14 recovery wells and 1 reservoir) has been completed under WB financing; the project will implement the second phase of this investment (14 remaining wells and an additional reservoir).

### **Activity 1.2: Water – Energy Nexus, development of renewable low-emission energy solutions**

#### **Input 1.2.1 Development of solar energy capacity for the NGEST WWTP and treated waste water (TWW) reuse complex**

Securing the treatment of waste water, the recovery of the clean water from the aquifer and its transfer to agricultural lands depends on the performance of the NGEST plant and of the Recovery Scheme (RS) and, in particular, on the reliability of its power supply (strongly constrained in the baseline by restrictions on access to electricity –generated by diesel generators- due to the geopolitical situation).

The water-energy nexus has been part of the NGEST implementation strategy since the inception, as co-generation facilities, using the biogas released by the sludge produced by the WWTP, are already in place (previously financed

by AFD-WB-EC). The present Project will take the water-energy nexus one big step further by tapping in a renewable and abundant source of energy in the context of Gaza: solar radiations.

The project, in the framework of a partnership between the PWA, PENRA and the Gaza Electricity Distribution Company (GEDCO), will set up a total surface area of 8.5 ha of ground-mounted photovoltaic (PV) panels within the premises of NGEST WWTP (2 ha – PVc1), around the recovery scheme (3 ha – PVc2) and in the Restricted Access Area (RAA) adjacent to NGEST (3.5 ha PVc3)<sup>2</sup>. The three solar parks, of a total installed capacity of 7.5 MWp, will produce an average useful 9 411 MWh/year in comparison with the 10,659 MWh/year needed for the overall reuse scheme (TPS + WWTP + Recovery + Irrigation). It is important to highlight that electricity production from PVc1 and PVc2 will be used to directly supply the needs to operate the WWTP and the Recovery & Irrigation site and only the excess of energy will be fed to the electricity grid. PVc3 will feed all its production to the electricity grid and will be delivered back to the system (to cover needs when the solar parks are not producing) through the net metering mechanism.

By adding the PV fields to the NGEST system, the annual direct supply from the grid in its first year of operation will be reduced by 59 % and the required annual energy from the emergency diesel is taken down by 45 %, leading to a direct saving of around 4.7 million liters of diesel fuel per year. Accordingly, the PV share in the energy mix feeding NGEST system on the first year of operations should reach 38 % of the total annual power consumption, diesel 12 %, grid electricity 20 % and biogas 30 %.

The NGEST WWTP + RRS power supply without PV and with the current supply options lead to an overall Levelized Cost of Energy (LCOE) of 0.24 USD/kWh. NGEST with the PV installed will have an overall LCOE of 0.155 USD/kWh, making it much cheaper than the “no PV situation”. This will generate savings amounting in 700,000 USD in the first year, together with a gain of 1,500,000 USD from net-metering (compensation of electric consumption from other sites by feeding extra PV power to the grid). Over the lifespan of the project, the gain should be around 36,000,000 USD in present value at 5 % discount rate.

The three PV schemes will produce a total of 10 519 MWh/year, both for supply of energy to the WWTP (1 752 MWh/y) and recovery scheme (2 479,5 MWh/y), as well as supply to the grid (6 288 MWh/y), displacing high carbonated generation from diesel generators and from the grid (diesel power plant in Gaza and Israeli electricity). This will lead to emissions reduction of 5 561,95 tCO<sub>2</sub>e/year over 30 years (GHG calculations are presented in **Annex 21**).

## **OUTPUT 2: DEVELOPMENT OF IRRIGATION, WATER EFFICIENCY AND CLIMATE RESILIENT AGRICULTURE**

Main results from this output are:

- Agricultural farms and livelihoods are maintained in Northern Gaza ;
- Improved agricultural practices and more efficient use of water are extended to increase the resilience of agriculture to the effects of climate change and implementing **climate resilient agricultural practices**.

This output consists of the delivery of an irrigation scheme over a gross irrigable area of 1 500 ha as well as services provided to the farmers/water users aiming at improving their practices, thereby enhancing their resilience and reducing their vulnerabilities. The beneficiaries are all the households end users of the water that will be delivered by the irrigation scheme. They are already identified and aware of the project.

***Activity 2.1: An improved water service for irrigation is brought to 4 200 beneficiaries over 1 500 ha***

***Input 2.1.1 Delivery of an irrigation scheme, 1 500 ha***

<sup>2</sup> This land belongs to NGEST but is located within the ARA alongside the boarder; Israeli authorities have communicated their willingness to authorize the implantation of PVc3 on that land adjacent to NGEST facilities. This is an example of the high level of coordination existing between the project and Israeli authorities, which have shown willingness to collaborate in the execution of all phases of the NGEST programme.

The project will deliver a distribution network in order to service two irrigated sub areas of 500 ha and 1 000 ha of gross irrigable area located around the WWTP (see [Annex 9](#), Design Study), corresponding to a total of 126 km of pipeline and the upgrading of the booster station in order to support drip irrigation practices. Project areas were selected based on the potential irrigated area around the NGEST facilities, delimitating an irrigation scheme, on which farmers are present in the baseline. On-farm investments will be included in the costs supported by the project but will be reimbursed (with a subsidy rate) by the farmers over a 3 years' period in order to set up an O&M fund for the WUA. The delivery of the irrigation scheme will take place in two lots, one of 500 ha and another of 1000 ha, plus one lot for the provision of on-farm equipment (drip irrigation). Tendering documents for the first lot of 500 ha are currently being prepared by PWA, since it is an investment 100% under AFD grant financing. Also are tendering documents for the Works supervision contract associated to these works.

The NGEST WWTP, which is operating since March 2018, generates 35 600 m<sup>3</sup>/day of treated water, i.e. 13 million m<sup>3</sup>/y; this represents allocations of about 10 000 m<sup>3</sup>/ha/y which is sufficient water to sustain agricultural needs (horticulture and vegetable growing) in Gaza. In the current situation, pumping in the aquifer is done through private wells which partially irrigate the 1 500 ha of interest to the project. Each well is owned and managed by shareholders who are the main users of the water and pay the real cost of its extraction (mainly the cost of diesel, O&M); non-shareholders may have access to water, but will pay an additional fee apart from the cost of extraction. In any case, water for irrigation is not available on a daily basis and water turns are usually of 10 to 12 days.

The project will support the creation of a Water Users Association (WUA), to which the recovered water will be delivered and sold to and which will have the responsibility of equally distributing it to all users through the application of a transparent and approved tariff. The design of the irrigation scheme to be delivered by the project will allow availability of water for all farmers, every day, 12 hours per day. The drip irrigation systems installed by the project will increase on-farm productivity and generate *more crops for the drop* and consequently generate more income for the farmers.

### **Activity 2.2: Increased climate resilience of agriculture, adaptation of cropping systems to climate change**

#### *Input 2.2.1: Extension services to farmers*

In the baseline situation, farmers have little access to extension and advisory services and in the context of limited and fluctuating access to water, cropping patterns practiced by farmers show low levels of profitability and efficiency with regard to water. The feasibility study of the project has shown how changes and transformations at farm level can improve the profitability of agriculture and save water.

Nevertheless, these changes cannot be imposed on the farmers and will need to be adapted to the needs on a case by case basis through the provision of professional extension services, to be provided through the project (technical and economic advisory; capacity building by demonstrations; farmer field schools; training).

The preliminary data obtained through hydrological modeling, as well as analysis of the quality of water extracted from the aquifer show that the water recovered from the wells will be fit for all agricultural uses and according to Palestinian law, the recovered water is equivalent to groundwater, on which no restrictions are imposed (contrary to treated waste water coming directly from the treatment plant and used for irrigation). The high level of nitrogen in the water prevents it from being drinkable but constitutes an advantage for agricultural use (saving equivalent amounts of fertilizer).

Finally, the use of treated and disinfected effluent sludge from the NGEST WWTP will be promoted by the project in order to substitute the use of chemical fertilizers for environmental and economic reasons (in line with Palestinian standards and EQA approval).

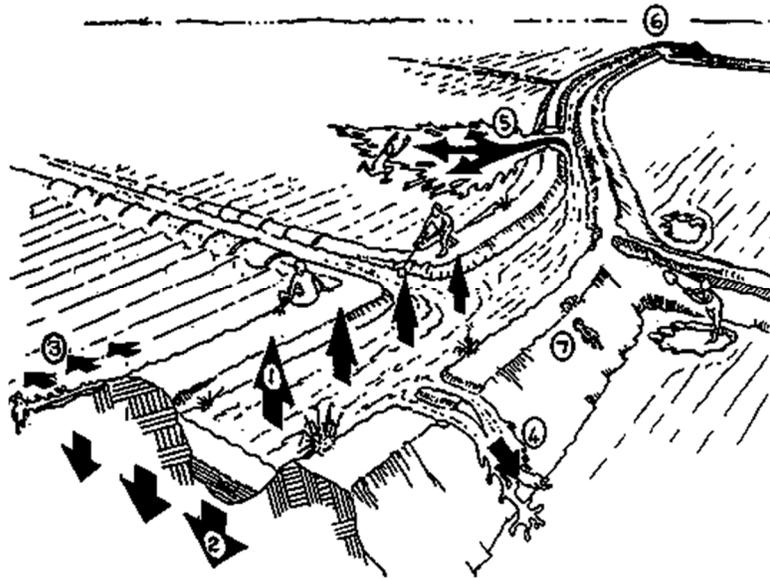
Support to on-farm activities is the mandate of the Ministry of agriculture of the Palestinian Authority, which will seek technical assistance from the Food and Agricultural Organization of the United Nations in order to perform this task in the framework of the project. The FAO will provide technical and training inputs on development of climate resilient agriculture, crop and yield quality control and knowledge management with regard to best practices for reuse of TWW. More details on FAO's input to the project overall (in outputs 2 and 3) are presented in [Annex 10](#).

*Input 2.2.2: Subsidy of on-farm water saving equipment*

The provision of the above technical extension services is an opportunity for Gazan farmers to transform their practices and the ways they manage water at on-farm level in order to adapt to water scarcity and compounding effects of climate change. These transformations nevertheless require a concomitant mix of services to farmers and availability of water-saving-equipment, in particular for drip or sprinkler rather than surface irrigation. Surface irrigation (based on canals which are dug by the farmers or workers) typically requires no equipment and only relies on work force, but suffers from high levels of water losses in canals, in terms of:

1. Evaporation from the water surface
2. Deep percolation to soil layers underneath the canals
3. Seepage through the bunds of the canals
4. Overtopping the bunds
5. Bund breaks
6. Runoff in the drain
7. Rat holes in the canal bunds

As shown in the figure below (source: FAO):



Surface irrigation is widespread in Gaza, as in most low income countries where irrigation is practiced, but its low efficiency is one of the main obstacles to adaptation of the farming systems to growing water scarcity because of climate change. Other irrigation methods exist, which show greater water efficiency (see table below), but require specific equipment:

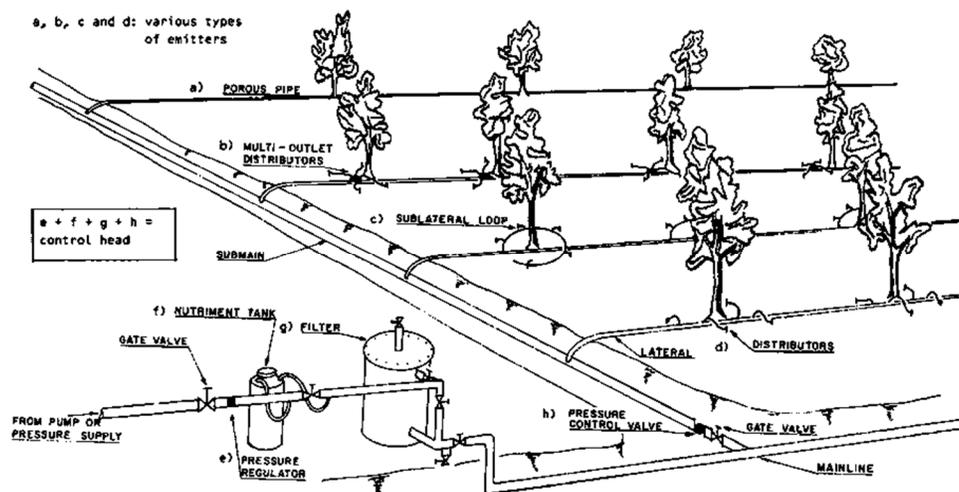
<b>Irrigation methods</b>	<b>Field efficiency</b>	<b>application</b>
Surface irrigation (border, furrow, basin)	60%	
Sprinkler irrigation	75%	

Drip irrigation	90%
-----------------	-----

(Source: FAO)

A typical drip irrigation system is, according to the FAO, generally composed of the following components:

- The **pump unit** takes water from the source and provides the right pressure for delivery into the pipe system.
- The **control head** consists of valves to control the discharge and pressure in the entire system. It may also have filters to clear the water. Common types of filter include screen filters and graded sand filters which remove fine material suspended in the water. Some control head units contain a fertilizer or nutrient tank. These slowly add a measured dose of fertilizer into the water during irrigation. This is one of the major advantages of drip irrigation over other methods.
- **Mainlines, submains and laterals** supply water from the control head into the fields. They are usually made from PVC or polyethylene hose and should be buried below ground because they easily degrade when exposed to direct solar radiation. Lateral pipes are usually 13-32 mm diameter.
- **Emitters** or drippers are devices used to control the discharge of water from the lateral to the plants. They are usually spaced more than 1 meter apart with one or more emitters used for a single plant such as a tree. For row crops more closely spaced emitters may be used to wet a strip of soil. Many different emitter designs have been produced in recent years. The basis of design is to produce an emitter which will provide a specified constant discharge which does not vary much with pressure changes, and does not block easily.



Conversion to drip irrigation combined with the appropriate capacity building of farmers and adaptation of the cropping systems (which the extension services provided by the FAO will ensure) can divide by 2 or 3 the water losses in Gaza, and is therefore a key adaptive measure to tackle compounding effects of climate change on water scarcity.

Nevertheless, investment by the farmers in these technologies (widely spread in Jordan) and appropriate training and extension services are scarce in Gaza. This is mainly explained by the high cost of the appropriate equipment (estimated at 3 000 EUR/ha) and the relatively low profitability of agriculture in the area.

Observation of similar contexts in Israel, Jordan or North Africa shows that promoting water efficient irrigation in Gaza corresponds to a no-regrets approach to adaptation to climate change, as it appears relevant and necessary in all future scenarios, including the present situation.

The project intends to provide a “push” towards conversion of current irrigation practices to more efficient ones (sprinkling and drip) by financially supporting it, through the pre-financing of 100% of the cost of the equipment needed for it to happen (along with training and extension services mentioned above). This pre-financing will be delivered to farmers that will have confirmed their membership to the Water Users Association (WUA) and have agreed to reimburse the amount invested by the project for on-farm equipment, over a period of 5 years. The proceeds of these reimbursements will serve to constitute the WUA’s Operation and Maintenance (O&M) and investment fund, which is an important element of the project’s Exit Strategy.

*Input 2.2.3: Gender, land tenure and irrigation – a gender-responsive approach to agricultural resilience to climate change*

A Gender Action Plan (GAP) has been developed and is presented in **Annex 12**. The GAP will be the overall guiding document for the mainstreaming of gender in relation with all outputs of the project. The main specific inputs related to gender are detailed in this section, among which that related to land tenure and irrigation.

In Gaza, land tenure is more in favor of men, as a result of cultural practices, social customs and traditions. This reality is strongly embedded in a relatively rigid and complex cultural apparatus, which the project will have no power to change entirely.

In relation specifically with the development of irrigation in the area, the project will investigate (through an initial diagnostic during inception phase) opportunities whereby women could gain access to the land they own or improve their use of land they already have access to, by increased access to water and technical services. These opportunities will be sought through a process of community involvement, whereby family and community members become instrumental in establishing these channels of improved access to land. Of course, the first step of the community involvement around the issue of “irrigation and gender” will be to mobilize the women in the communities, in order to understand their needs, objectives.

Through a diagnostic and community mobilization work, it is anticipated that a group of women willing to embark on a process of improved access to land and water will be formed, sponsored by the community. This group of women will be supported by the project (namely through a methodology developed by the FAO<sup>3</sup>, that will be adapted to the context of Gaza) through positive action with regard to access to water (see hereunder, participation of women to the governance of the WUA) and technical services in order to develop intensive and quality cropping (gardening) on their micro-plots of land.

As a second step, if possible/needed/wished, groups of women will be supported in forming into cooperatives in order to market their products or create food banks for their families, according to their objectives.

This activity will be coordinated by the Ministry of Agriculture and FAO and will involve local civil society and women non-governmental organizations. In terms of methodology, the GAP will be implemented using inputs from the FAO (see **Annex 10**) and particularly from the [International Union for Conservation of Nature- IUCN’s training Manual on Gender and Climate Change](#)<sup>4</sup>. Civil society and WNGOs will not be EEs. They may be recruited or selected to support the implementation of this input.

### **OUTPUT 3: MANAGEMENT OF THE WATER CYCLE AND CAPACITY BUILDING OF STAKEHOLDERS**

Main expected results from this output are:

- Improved water governance (co-management with users) and increased water use efficiency in the context of growing aridity and increased demand due to climate change;
- Sustained operation and maintenance of adaptation infrastructure.

This output represents the institutional aspect of the project, which, in the context of « reuse of waste water » and its multiple stakeholders and need for coordinated action, is of particular importance.

<sup>3</sup> See : [www.fao.org/3/a-be879e.pdf](http://www.fao.org/3/a-be879e.pdf)

<sup>4</sup> [https://portals.iucn.org/union/sites/union/files/doc/training\\_manual\\_on\\_gender\\_and\\_climate\\_change.pdf](https://portals.iucn.org/union/sites/union/files/doc/training_manual_on_gender_and_climate_change.pdf)

### **Activity 3.1: Strengthening of PWA in its role of coordination and quality control of the process of reuse of treated waste water**

#### *Input 3.1.1: Technical assistance*

The PWA is the main implementing agency of the project and will be responsible for all the infrastructures that will be delivered through the project; for the establishment of the irrigation scheme (in particular the on-farm investments) and the “soft” components, it will coordinate with the ministry of agriculture and the FAO (see **Annex 10**).

A technical assistance (TA) will be provided to the PWA for the duration of the project. The TA has been designed with the PWA in order to ensure progressive transfer of tools and know-how within the project time frame of five years. Indeed, the PMU is well staffed and has already benefited from several capacity building activities since the NGEST system and associated projects have been initiated (see details in section C.4). Main issues needing support identified by PWA are:

- Coordinating actions of the implementers: MoA/FAO and PWA;
- Setting-up the M&E system for water quality for irrigation and for the whole project implementation (including coordination with MoA/FAO);
- Stakeholders communication: implementing the MSEP and coordinating messages to different stakeholders (including beneficiaries);
- Some specific expertise on a short term basis, such as ESMP and RAP implementation, delivery of on-farm irrigation equipment, Gender action plan implementation.

In the context of Palestine and of the high professional level of the PWA, there is no need for full time TA for the duration of the project. Once all tools and procedures will be implemented and transferred to the PMU, it will gradually be converted from full-time into backstopping support and short term expertise on an *ad hoc* basis, for the remaining duration of the project.

This TA will be integrated within the PMU at the PWA in Ramallah and Gaza. The corresponding services will be acquired through an international bidding process.

Furthermore, the PMU will be supported in Works supervision by specialized contractors.

Tendering documents for Technical Assistance are currently being prepared by PWA (the activity is 100% under AFD grant financing).

#### *Input 3.1.2: Setting-up of a water quality monitoring and control system*

The PWA, in coordination with EQA, will be in charge of establishing and implementing monitoring procedures to supervise the water infiltrated in the aquifer and that recovered through the wells downstream in order to guarantee the quality of the water delivered to the irrigation scheme. The system will rely on 15 monitoring wells equipped with measurement probes, 5 of which will be financed through the project. The project will also support the upgrading of the laboratory located at the NGEST WWTP and the capacity building of the staff employed in the laboratory in charge of performing the quality tests.

The monitoring system is a central piece of the ESMP of the project and will provide the information and data necessary to sustain a quality and transparent communication and dialogue between the water provider and the end-users in order, namely, to fine tune agricultural practices and cropping patterns to quality and quantity of the water delivered to the irrigation scheme.

A Groudwater Quality Monitoring Plan will be put into place, based on the Palestinian/Jordanian guidelines for irrigation water. For heavy metals, a stricter standard will applied (WHO/EU standards for Drinking Water) in order to follow a zero risk policy. These standards and the full Groudwater Quality Monitoring Plan are presented in **Annex 23**. The Water Quality Monitoring Plan will pay special attention to the most hazardous contaminants (e.g. Hg and B). If the levels of these elements are close to the permissible limits, those elements should also be periodically tested in the soil in order to control accumulation. If soil samples present values exceeding internationally recognized standards, boron and mercury shall also be tested in plants to control absorption, bioaccumulation and possible health hazards for consumers.

The laboratory and related equipment to be financed through the project will increase the monitoring autonomy of PWA and allow thorough and intensified monitoring of water quality for the duration of the project, prior to and during the activation of the recovery wells and distribution of water to farmers. Once the laboratory is up and running, the WQMP will be put into place.

### **Activity 3.2: Exit Strategy and Transfer of O&M to Water Users**

As per the 2014 Water Law and recently approved by-laws on the Water Users Associations (2018, see [Annex 13](#)), hydraulic infrastructure must be jointly managed between the public sector and the users themselves and, when possible, be transferred to full management by the users. This co-management or co-operation has both an institutional (establishment and capacity building of a WUA) and financial dimension (cost-sharing of investments and O&M) that gives birth to a transaction between a water provider and a water user, at a certain tariff and to a set of rules and procedures for the management of the infrastructure.

Several co-management scenarios exist and determining the appropriate one in the context of the project is the result of a consultation and feasibility process (including a tariff and “willingness to pay” study) that will be undertaken, in the first few months of the project with the support of the FAO (see [Annex 10](#)), locally with the farmers/water users/land and well owners of the irrigation scheme.

A possible scenario, that will necessarily have been tested and adapted through the process described above, could be as follows:

1. The PWA would own (and for the first few years, also operate) the Recovery and Reuse Systems with the ultimate goal of transferring the operation and management of the irrigation scheme to the Water Users Association (WUA);
2. This would imply that:
  - PWA would own the Reuse System, and operate it for the first 3 years of the project;
  - During the first three years the WUA and Ministry of Agriculture in addition to PWA would receive intense capacity building;
  - After the first three years of the project, PWA will continue operate the recovery scheme until the functional establishment of the National Water Company (NWC) and the WUA would assume operation and management of the Reuse scheme;
  - PWA would continue to own the irrigation scheme but would lease them to the WUA.
3. The farmers will own and be responsible for operation of the On-Farm System (drip irrigation network), with the support of the WUA helping to coordinate farmers for technical assistance and capacity building with modern irrigation techniques and the proposed cropping pattern.

In financial terms, the sustainability and replicability of the project depends on the involvement of various donors, government and farmers, as per their capacity to cover the following costs:

- (1) Capital Investment for the Water Recovery Scheme;
- (2) Capital Investment for the Water Reuse (irrigation) Scheme up to Farm’s Gate;
- (3) O&M costs for the Water Recovery Scheme;
- (4) O&M costs for the Water Reuse (irrigation) Scheme;
- (5) Capital Investment for On-Farm’s Development.

The preferred scenario involves Capital (1, 2 and 5) and O&M subsidies from the Government, in a context of high vulnerability of the population. Costs (1) and (2) will be paid by the Government/Donors. Costs (3) and (4) would be subsidized by the Government only until Farmers have paid back cost (5). Farmers are expected to pay for the development of their own farm. All other costs are paid by the Government/Donors for the first 3 years (i.e. the time it takes for the farmers to be able to pay back the improvement of their farm). After that point, farmers will be responsible for paying O&M costs for the whole system (evaluated tariff at .33 USD/m<sup>3</sup> and would need validation by the Water Sector Regulatory Council, WSRC, as per the 2014 water law).

*Input 3.2.1: Identification and establishment of the co-management scheme – Structuring and capacity building of a WUA*

Any scenario of co-management to be established during the lifetime of the project implies that:

- The WUA to be created will be rapidly functional and have the adequate level of capacities to dialogue with the water provider and properly negotiate the financial and non-financial conditions whereby effective co-management and cost-sharing will enter into force;
- The farms, constituting the economic entities using the water, have been sufficiently supported by the project – and first economic outcomes of this support to be observed- in order to create the necessary resources and incentives to participate in the costs of O&M of the scheme.

Setting-up and support to WUAs is the mandate of the Ministry of Agriculture of Palestine; for the purpose of this project, it will be assisted in its mandate by the FAO, as its implementation partner, through which other institutions and NGOs may also be involved.

*Input 3.2.2: Integration of women in the governance bodies of the WUA*

In order to support change with regard to access of women to land and water, it is essential that positive action be taken to ensure that women are represented in the bureau of the WUA and have effective means of taking part in the decision making with regard to water allocations.

**Activity 3.3: Communities are empowered and supported**

*Input 3.3.1: Diagnostic and analysis of the conditions of restoration of unused land within the irrigable area*

As it is the case in other parts of Palestine, in particular in occupied areas of the West Bank, the protracted conflict situation has consequences on the state of mind and psychological welfare of the populations, affecting negatively human interactions within the communities (capacity to resolve conflicts and to work together) and also households. In turn, this situation has implications, in the project area, on the capacity of farmers to make use of their land and to work together in community-based or collective water management (WUA) and agricultural (cooperatives) activities.

This situation and its complexity will be analyzed during inception by the FAO in order to understand the determinants of maximizing the irrigated area and agricultural production. This diagnostic study will involve household surveys for all beneficiaries of the project, including economic and social analyses of their situation.

*Input 3.3.2: Psychosocial support and strengthening of community and household bounds*

As suggested above, transfer to users of hydraulic infrastructure and community based organizations will have a chance to work and perform only if the women and men that constitute them are capable of interacting positively to reach a common goal. All processes related to changes in practices, in particular for adaptation to climate change or change in terms of gender will not take place spontaneously. This is particularly the case in the context of Gaza and when a common pooled resource is at stake. Community and collective work leading to those changes requires changes in the mindset of people and an ability to join forces, to work together: this is not possible in a context of protracted conflict, without psychosocial support. This type of support is then catalytic and quintessential to successful adaptation strategies.

In the context described above, and based on a more detailed baseline study to be performed during the inception phase, the project will design and provide a psychosocial support package to the communities including collective and individual services aiming at re-boosting the community dynamics. A particular set of services and activities will target women and their position within the family – linking with the issue of their access to land described above. This activity will therefore be strategic for and closely linked to the implementation of the Gender Action Plan.

This support will be delivered through the FAO, which will mobilize other specialized organizations.

### **Activity 3.4: Capitalization of the outputs/outcomes of the project for replication and upscaling in Palestine**

#### *Input 3.4.1: Intellectual services for capitalization*

The project will help deliver the first large scale reuse of waste water scheme in Palestine. The process of its establishment and the quality of its related services, outputs and outcomes will need to be documented, analyzed through independent expertise, in order for the experience to be evaluated with credibility and, eventually, replicated and/or up-scaled (the overall waste water treatment capacity of Gaza will keep growing over the years).

The project will therefore provide resources to perform such intellectual services for capitalization during the project life time, including a mid-term and final evaluation, and the results could help updating the incoming NDC, for instance.

### **C.4. Background Information on Project / Programme Sponsor (Executing Entity)**

The PWA is a public entity directly attached to the Presidency of the Palestinian Authority; its mission is to manage, develop and protect water resources for Palestinian citizens, while respecting the environment. According to the 2014 Water Law, the PWA is in charge of defining sectoral policy and is responsible for conducting the reform process according to a strategic three-year plan. The plans involves establishing a National Water Company to manage all water resources, a Regional Water Utilities institution to efficiently manage water distribution and Water User Associations in collaboration with the Ministry of Agriculture, which will be responsible for managing the water irrigation infrastructure. It is important to note that the by-law for Water User Association was proposed by PWA and approved by the Palestinian Cabinet in April 2018.

The PWA has headquarters in Ramallah and Gaza, as well as representatives in all governorates. A Project Management Unit (PMU) was set up in 1997 within the PWA to manage all projects implementation financed by donors or by the Palestinian Government. The PMU in Gaza has so far brought together 15 staff members, including 11 engineers (mechanical, civil, environmental, water, and wastewater), and one Financial Manager for the implementation of NGEST WWTP and the first batch of the Recovery Scheme. The PMU in the Ramallah HQ includes a Financial Manager and Procurement Expert to monitor the activities in Gaza and to liaise with other PWA departments (Procurement Department and Financial Controllers within the Palestinian Ministry of Finance). This PMU participated in an extensive capacity building program in 2011-2013 through the World Bank, which helped it streamline its financial and procurement processes to satisfy both the Palestinian procedures as well as international donors' reporting requirements. Several major projects were implemented by the PWA/PMU in Gaza such as North Gaza Emergency Sewage Treatment program (NGEST – 75MUSD) financed by the World Bank, EU, AFD, SIDA and other donors; the ongoing Wastewater treatment Plant at Bureij (35 MUSD) financed through the KfW. Within the PWA strategy (2017-2022), the PMU in Gaza will form the core team for the future National Water Company.

Thanks to comprehensive working sessions between the PMU/PWA Director and the AFD, the PMU/PWA team has been adjusted for this Project's needs. It will be responsible for all tendering activities for capital investments, recruiting international technical assistance for project management support, and for ensuring the financial management of the Project. The Chairman of the PWA has officially appointed each member of the PMU as per the table below.

This team will be responsible for the operation and maintenance of NGEST WWTP and the first tranche of the Recovery Scheme, as well as the implementation of the Project. As a result, salaries and operational costs of the PMU will be partly funded by the Project, as presented in the table below. The remainder will be financed by the World Bank budget support.

Furthermore, the PWA will prepare a note describing the institutional set up for O&M of all NGEST facilities (WWTP + Recovery and irrigation scheme), as a condition precedent to the first disbursement of AFD's financial contribution to the Project. This note shall include a cost analysis of O&M, including: fixed costs (e.g. labor) and variable costs (e.g. energy), as well as provisions for renewal of the irrigation scheme components (pipes, pumps...), and a discussion of how the costs will be recovered through different scenarios involving the

participation of the farmers, the WUA, and relevant Palestinian Authority institutions. Finally, this note will appraise the scenario presented in **Activity 3.2** and is part of the Exit strategy for the project.

<b>Position within the PMU</b>	<b>Salaries and operational costs financed by the Project</b>
1- PMU Director (based in Ramallah)	The PMU Director will ensure overall coordination of the project and link with the PWA Chairman. His contribution is not financed by the project
2- Project manager and Material access coordinator (based in Ramallah)	2019 : 100% 2020→ 2023: 50%
3- Procurement Manager (based in Ramallah)	2019 : 100% 2020→ 2023: 50%
4- Financial Manager (based in Gaza)	2019 : 100% 2020→ 2023: 50%
5- Site Manager - Environmental and Social + Recovery scheme supervision (based in Gaza)	2019 : 100% 2020→ 2023: 50%
6- Site Manager - Electrical Engineer (based in Gaza)	2019 : 100% 2020→ 2023: 50%
7- Site Manager - Civil Engineer + Irrigation scheme supervision (based in Gaza)	2019 : 100% 2020→ 2023: 70%
8- Site Manager - Rehabilitation of Effluent (based in Gaza)infiltration Basins/Surveyor/Quantity Surveyor	2019 : 100% 2020→ 2023: 50%
9- 1 receptionist/secretary (based in Gaza)	2019→ 2023 : 100%
10- Operator 1 (based in Gaza)	2019→ 2023 : 100%
11- Operator 2 (based in Gaza)	2019→ 2023 : 100%
12- Guard 1 (based in Gaza)	2019→ 2023 : 100%
13- Guard 2 (based in Gaza)	2019→ 2023 : 100%
14- Driver (based in Gaza)	2019→ 2023 : 100%

For activities located outside the mandate of the PWA, related to on-farm activities, the Ministry of Agriculture (MoA) of the Palestinian Authority will take over the implementation as an Executing Entity. The Ministry structure includes the Directorate General for irrigation and the General Directorate for Extension services that are providing services to the framers through their district offices. However, within the particular context of the Gaza Strip, the MoA designated three directors in Gaza Strip to coordinate with PWA for this project implementation and the Ministry will seek the assistance of the FAO as its Implementing Partner to implement Outputs 2.2, 3.2 and 3.3; based on the FAO know-how and previous experience in Gaza, the FAO will engage Civil Society Organizations (CSOs) according to its sets of rules and regulations to implement parts of the tasks within 2.2, 3.2 and 3.3. MoA and FAO have a pre-existing partnership. The MoA will mobilize the FAO under this

partnership umbrella and sign a tripartite project agreement between AFD, MoA (representing Palestine) and FAO for the joint implementation of the aforementioned activities.

FAO's coordination office for the West Bank and Gaza Strip programme is operating since 2002 and implements its programme through a team of 45 employees (35 nationals and 10 internationals) in 3 offices (Jerusalem, Ramallah and Gaza). Having developed strong partnerships with a large number of stakeholders in the Palestinian agriculture sector, FAO is a central stakeholder in capacity development and for the facilitation of institutional coordination between public, private and non-governmental actors in the agriculture sector. In close partnership with the Ministry of Agriculture, FAO recently supported the development of the Revised National Standards for the Use of Reclaimed Wastewater for Irrigation, which defines the required qualities for different types of crops. Building on this experience along with experience of similar work from areas with similar climate and socio-economic conditions, FAO is uniquely positioned to address the enabling conditions for effective and sustainable TWW in a comprehensive manner, which requires taking a combination of legal, regulatory, socio-cultural, economic, environmental and technical factors into consideration. FAO in Jerusalem works also closely with FAO Head Quarters in Rome and FAO RNE (Regional office for the Middle East) in Cairo, which have built a strong expertise in TWW and water management in the MENA region.

In conclusion, All inputs will be implemented by the PWA, with the exception of 2.2.1, 2.2.3, 3.1.1, 3.2 and 3.3, implemented by MoA-FAO.

### **C.5. Market Overview (not applicable)**

*Describe the market for the product(s) or services including the historical data and forecasts.*

*Describe the competitive environment including the list of competitors with market shares and customer base and key differentiating factors (if applicable).*

*Provide pricing structures, price controls, subsidies available and government involvement (if any).*

### **C.6. Regulation, Taxation and Insurance (if applicable)**

Construction permits: they are usually delivered by Municipalities, but Government institutions are exempt from this procedure.

Environmental permit: EQA has approved the updated version of the ESIA; updated version of the RAP will be also submitted to the EQA.

Land titles: the NGEST project land titles are lands registered in PWA benefit as governmental land that was an acquisition of endowment land registered under the Waqf Ministry since 2013 (reference PA Council of ministers Decree 4/284/11 for the year 2013).

Taxation: As AFD financing agreements signed with the PA are exempt from taxes and duties, the funding will get the required exemptions during the implementation as per the PA Tax Regulations.

Insurances: Following the PA procurement law and the signed funds financing agreements, Contractors are always requested to furnish adequate insurance policies within their contracts for the duration of the implementation period.

### **C.7. Institutional / Implementation Arrangements**

#### **Contracting authority**

AFD will sign a subsidiary agreement with the Ministry of Finance and Planning in Ramallah (representing the Palestinian Authority). This agreement and the related project documents will specify the tasks dedicated to the PWA and to the Ministry of Agriculture. The project will be implemented by two Executing Entities (EEs): the PWA and FAO.

For the implementation of the project, AFD will also enter into 2 tripartite Project Agreements with, respectively, PWA and MoF and, the FAO and MoA. For the avoidance of doubt, the tripartite project agreements will also be considered Subsidiary Agreements.

Accordingly, there will be a total of three Subsidiary Agreements for the implementation of the project.

**AFD, as the AE, will be responsible for the project implementation and activities carried out by EEs.**

### **Project implementation responsibility**

The Ministry of Finance and Planning will sign an on-granting agreement with the PWA (the PWA is an independent public organization; therefore, an on-granting agreement is required). The PWA will be the lead Executing Entity for the project and will be in charge of the overall coordination of the activities and of the “hard” components of the project (i.e. delivery of the infrastructure).

The execution of the tripartite project agreement, between AFD, MoFP (representing Palestine) and PWA will be a condition precedent to the first disbursement under the AFD-Palestine Subsidiary Agreement.

The Ministry of Agriculture according to the grant agreement will be responsible, as Executing Entity, for part of the project implementation, for activities related to on-farm development.

MoFP will not channel funds. It is the legal representative of Palestine for the signing of financial agreements with AFD. It also has legal power to on-grant resources to any Public Entity designated by Palestine and AFD to execute the project, in this case PWA. Disbursements will be made directly to PWA (EE 1) or MoA-FAO (EE 2) or to Contractors.

### **Main stakeholders**

The PWA – Executing Entity: will be directly responsible of the project implementation apart from on-farm activities.

PWA is a government body of separate legal personality as Palestine/Palestinian Authority. AFD’s sovereign relationship as a bilateral donor and through a Grant Agreement is with Palestine (represented by its Ministry of Finance), which subsequently on-grants the funds to PWA as the Executing Entity. The On-Granting Agreement (or the tripartite project agreement, in case of this project), will strictly transfers all applicable terms and obligations of the Funded Activity Agreement between AFD and GCF to the EE and defines the terms whereby the EE can enter in direct relationship with AFD: the PWA is thus capacitated to request funds directly from AFD and is obligated to manage them under the terms of the Grant Agreement, i.e. AFD’s Guidelines.

The Ministry of Agriculture will implement the project downstream the connection points. The FAO will be the MoA’s implementing partner for on-farm activities and support the civil society organizations. The FAO will sign an Implementing Partnership Agreement with the MoA, detailing the technical and financial characteristics of this cooperation. The organic and prior relationship existing between the MoA and the FAO, as well as specific knowledge and know-how of this organization in the context of Palestine and Gaza justifies that this United-Nations Organization be directly involved in the project, alongside the MoA.

MoA and FAO have a secular relationship because Palestine’s MoA is a FAO Member. The project will activate this pre-existing and non-commercial institutional relationship through a specific FAO-Country MoA Agreement directed to the implementation of specified activities and funded through the project. The terms of this FAO-MoA agreement, which will be the tripartite project agreement between AFD, MoA (representing Palestine) and FAO will specify the scope of work to be implemented by the FAO and will provide for “direct payment” modalities, which will allow AFD to transfer funds directly to FAO, based on MoA’s approval of the workplan and implementation progress.

In this context, MoA will not manage funds itself (direct payments will be made to the FAO), but will remain in the driver's seat in terms of co-piloting the activities technically. This institutional arrangement is necessary in a context where on-farm activities are essential to the project's success, but MoA's capacities to implement them are limited. In general, though capacity is low, we prefer inclusion of State institutions when possible and promote, through the type of partnership described above, their capacity building by Development Partners.

The Water user association (WUA) will be organized with the support of the FAO and will sign a MOU with PWA (see input 3.2.1).

Environment Quality Authority (EQA). In its capacity as NDA and a partner in the water quality monitoring scheme.

### **Project implementation**

#### **Activities under the PWA responsibility**

A project management unit (PMU) within the PWA will be responsible for all tendering activities for capital investments, the recruitment of an international technical assistance and for the financial management of the project. All tendering activities will follow AFD procurement guidelines and will be subject to prior review by AFD at each stage of the procurement process: tender documents review; technical evaluation; financial evaluation; contracting. This consists in a three level verification process by: AFD-Jerusalem Office, AFD Headquarters technical department and disbursement officer. All contracts for goods and works will be managed under "direct payment" procedure (standard procedure described in AFD's financing agreement), whereby AFD will be the paying agency on the basis of invoices from the contractors reviewed and transmitted by the PWA/PMU to AFD Jerusalem Office.

The PMU will include a Gender Action Plan Coordinator, with previous experience in coordinating Gender Studies, based in PWA-Gaza.

Further, the PWA will be responsible for the Groudwater Quality Monitoring Plan, in liaison with the MoA and FAO, and for the setting-up of a communications protocol to inform WUAs and users about possible water quality hazards. This protocol will be attached to risk mitigation procedures that will include progressive measures, ranging from restriction of use for agriculture to the temporary shutdown of the transfer of water to users and, if necessary, its redirection to the infiltration basins for further filtration and purification until levels of contaminants reach acceptable levels. In case infiltration basins are full or "unavailable" (which is unlikely thanks to the rehabilitation of 7 additional basins through this project), an emergency discharge protocol will be triggered by transfer of treated water to Wadi Beit Hanoun.

The PWA/PMU will be assisted in its project management tasks by an international Technical Assistance.

#### **Activities located outside the mandate of the PWA.**

For activities related to on-farm activities, the Ministry of Agriculture of the Palestinian Authority will take over the implementation. The Ministry will seek the assistance of the FAO as its Implementing Partner for Outputs 2.2, 3.2 and 3.3 (see **Annex 10**); based on the FAO know-how and previous experience in Gaza, the FAO will engage Civil Society Organizations (CSOs) according to its sets of rules and regulations to implement parts of the tasks within 2.2, 3.2 and 3.3.

#### **Land Rights**

Project activities are expected to require minimal land acquisition for the construction of wells, pumping stations, effluent reuse pipelines and storage tanks. The PWA (EE) will adopt a comprehensive avoidance mechanism through the following procedures:

1- Constructing of wells on State owned lands. As such, the first phase of the project caused no impacts pertaining to land acquisition;

- 2- Selection of less valued land (e.g. that are located far from the main roads);
- 3- All monitoring wells are installed along the roads to avoid affecting the private lands;
- 4- Small plots of lands that might result in severe impacts on the affected people are avoided;
- 5- All physical assets are entirely avoided in order to minimize unfavorable impacts.

Nevertheless, there will be isolated cases of expropriation, for which the World Bank's Operational Procedures (OP) on Involuntary Land Acquisition and Resettlement (OP 4.12) as well as Palestinian Law (Law No. 2 of year 1953 on "Land Expropriation for Public Projects") will be triggered. As a result, a comprehensive Relocation Action Plan (RAP) has been prepared, which details procedures and guidelines for land acquisition.

### **Governance of the project**

A Steering Committee will be established to ensure appropriate coordination between stakeholders of the project (PWA the Chair, EQA, PENRA, Ministry of Finance and Planning – MoFP, Coastal Municipalities Water Utility(CMWU), MoA/FAO, WSRC), to take strategic decisions and to guarantee good information sharing; the Committee will be conveyed twice a year. AFD will be an external observer in this Committee.

This Committee will follow the implementation of the project through the indicators and the logical framework.

The WUA, as soon as it is established, shall also be included as a member of the Committee.

A Technical Committee, limited to Implementing agencies (PWA the Chair, MoA/FAO, WSRC,) shall also be created for more periodical and operational decision making. It will report to the Steering Committee.

The secretariat of the two Committees will be held by the PMU.

### **AFD supervision of the project**

AFD will provide no-objections:

- Prior to the signing of the on-granting agreement with the PWA and the project agreement with FAO;
- On semi-annual technical and financial execution plans;
- On every steps of a tendering process according to its own procedures.

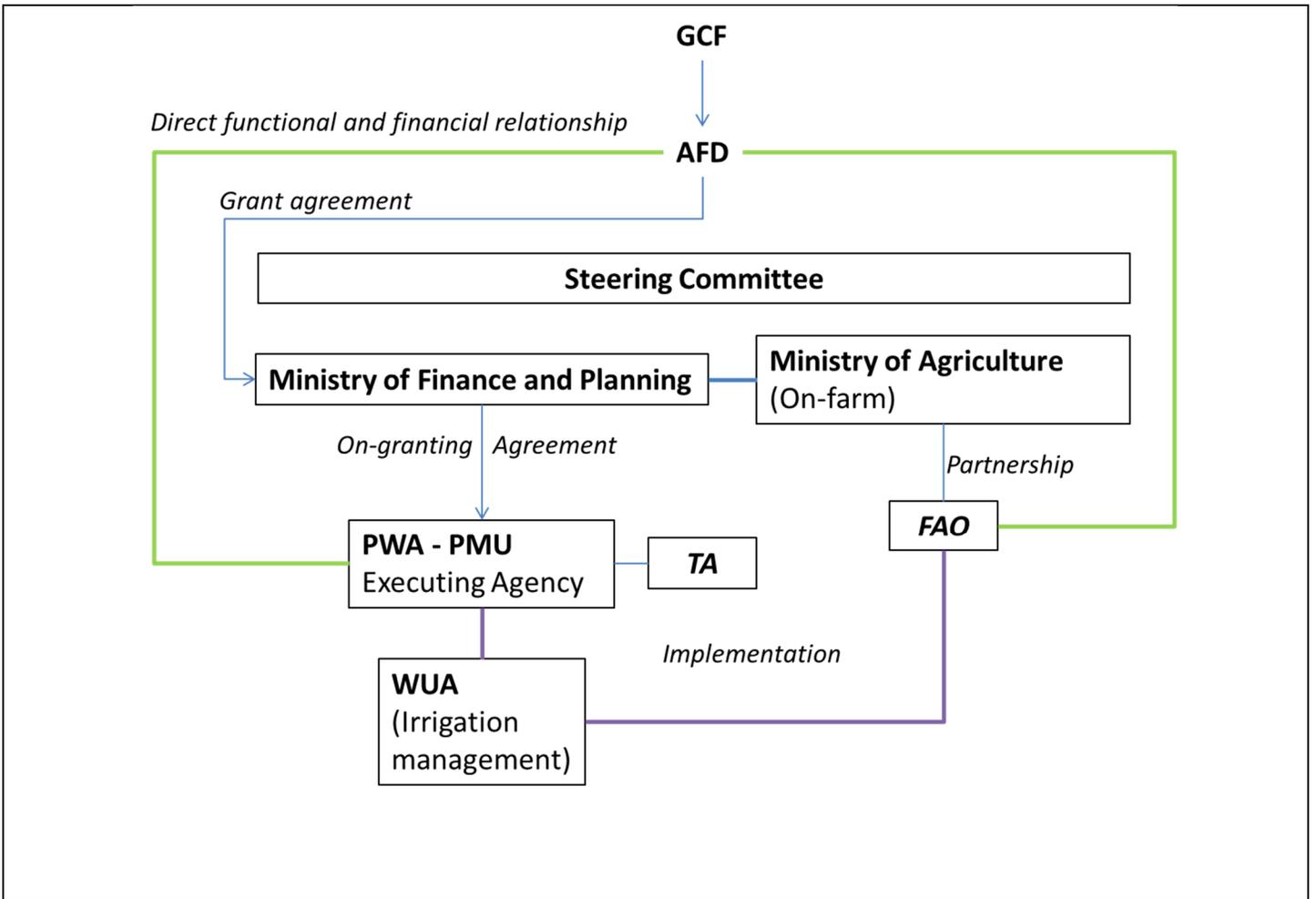
Bi-annual supervisions will take place, including the mobilization of expertise. A gender expert – AFD staff -is assigned for the monitoring of the Gender Action Plan.

### **Monitoring and evaluation**

The PWA-PMU will be in charge of centralizing and managing the monitoring system of the project. In particular, the PMU will be responsible for organizing the Mid-term review, as well as the end-line final evaluation of the project.

AFD will tender and contract the consultancy services for the ex-post evaluation of the project, after full completion of the activities (usually one year after project completion).

The institutional set-up of the project is summarized by the following figure:













### D.1. Value Added for GCF Involvement

The GCF involvement is sought at the end line of a relatively long and costly investment starting with the creation of the NGEST WWTP and that will end with the proposed project. Conventional development banks have pushed to the limit the amount of funds dedicated to this endeavor as the World Bank has delivered its final contribution in 2016 for the first stage of the infiltration and recovery scheme and as AFD will, in 2018, dedicate more than the amount of its country contribution to this project, usually capped at 10 MEUR/year.

This last push from conventional donors to this endeavor cuts short of converting a classical “water and sanitation” project into a low-carbon adaptation to climate change scheme. The GCF funding is sought to cover exactly the incremental costs related to closing the water cycle in order to make use of every drop of the 13 Mm<sup>3</sup> produced yearly by the WWTP to compensate the 30% compounding effect of climate change on agricultural production, access to domestic water and livelihoods in Gaza.

In this rationale, the incremental costs necessary for the completion of each step of the water cycle (infiltration, low-carbon recovery, storage and distribution, efficient irrigation infrastructure) are considered eligible to the GCF financing because only the full completion of the overall scheme will deliver the paradigm shift that is hoped for through the project. Nevertheless, GCF funding has been concentrated on output 1, dedicated to generating (infiltration + recovery) an additional water resource in a context of growing aridity due to climate change, impacting agriculture and availability of resources for domestic use. Costs of output 2, 3 and 4, related to the development of a water-efficient irrigation scheme and to capacity building have been shared with AFD resources, to the full and maximum amount of its possible financial contribution to the project (AFD is limited on its annual contributions to Palestine at 10 MEUR/year; an exceptional effort has been made to bring this contribution to 13 MEUR in order to better match GCF funds and close the financing of this project), singling out and justifying the very incremental nature of the GCF contribution to the project.

This low-carbon (i.e. with mitigation co-benefits) adaptation to climate change investment is the end-line of first phases of investment described above and therefore needs to be looked at through the lens of a holistic approach to solving a water scarcity problem. As such, the AE considers that the climate value for money for GCF funds should be evaluated in light of the financial effort made by conventional donors from the start of the overall investment, i.e. the establishment of the NGEST WWTP, which produces the water used for adaptation to climate change – even though this investment has been delivered and commissioned prior to the present project and is now completed.

Therefore, the value for money of GCF funds sought to co-finance this project is calculated as follows:

Water deficit related investments	Cost (MEUR)	GCF	GCF cofinancing ratio of water deficit related investments
WWTP	43	0	0,0%
Recovery	13,6	7,2	52,9%
Irrigation	18,7	9,4	50,3%
Capacity building water sector	1,85	0,75	40,5%
<b>Total</b>	<b>77,15</b>	<b>17,35</b>	<b>22,5%</b>
<b>CLIMATE VALUE FOR MONEY</b> <b>[Climate vulnerability / Climate financing] Ratio</b>		<b>131,7%</b>	

It is apparent that the 22,5 % of co-financing of GCF to the global NGEST program is of the same magnitude as the “climate change contribution” of 30% to the growing vulnerability of the Gazan population due to increasing water scarcity(see C.2 and [Annex 3](#)), bringing GCF’s climate value for money at roughly 130%.

## D.2. Exit Strategy

The exit strategy related to the sustainable operation and maintenance of the hydraulic infrastructure is built in the project, in **Activity 3.2**. It relies on the ability of the WUA to buy water from the public supplier, apply a tariff for water services on its users and use the remaining financial resources to operate and maintain the scheme.

## E.1. Impact Potential

Potential of the project/programme to contribute to the achievement of the Fund's objectives and result areas

### E.1.1. Mitigation / adaptation impact potential

This project is expected to have an important impact on both the adaptation and the mitigation sides. Below is a description of the impact potential, with quantitative indicators where possible and relevant.

<i>Paradigm-shift Objective</i>	<i>Expected result of the project</i>
<b>Increased climate-resilient sustainable development</b>	<p>Three adaptation impacts are expected from the project:</p> <ul style="list-style-type: none"> <li>- Increased resilience of Gazan agriculture through the provision of improved water services for irrigation;</li> <li>- Recharge of the aquifer and improved access to domestic water of 200 000 people exposed to water scarcity;</li> <li>- Depollution and prevention of the aquifer.</li> </ul>
<b>Fund-level Impacts</b>	
<p><b>Tonnes of carbon dioxide equivalent (t CO<sub>2</sub>eq) reduced as a result of Fund-funded projects/ programmes</b></p> <p>Reduced emissions through increased low-emission energy access and power generation</p>	166 858
<b>Total Number of direct and indirect beneficiaries</b>	<p>4 206 beneficiaries (farm owners, permanent and seasonal labor) benefiting from improved access to irrigation water, including 264 female farmers</p> <p>23 553 people (including the 4 206 farmers) benefiting from enhanced livelihoods, including 11 776 women, are direct beneficiaries</p> <p>200 000 people with increased access to domestic water, 50% of women, are indirect beneficiaries.</p> <p>Total = 223 553 people</p>
<b>Number of beneficiaries relative to total population</b>	20% of the population of Northern Gaza

<p><b>Increased resilience and enhanced livelihoods of the most vulnerable people, communities, and regions</b></p> <p>Number of males and females benefiting from the adoption of diversified, climate-resilient livelihood options (including fisheries, agriculture, tourism, etc.)</p>	<p>23 553 people benefiting from enhanced livelihoods and strengthening adaptive capacity, including 11 776 women</p>
<p><b>Increased resilience of health and well-being, and food and water security</b></p> <p>Number of food-secure households (in areas/periods at risk of climate change impacts)</p> <p>Number of males and females with year-round access to reliable and safe water supply despite climate shocks and stresses</p> <p>Area (ha) of agricultural land made more resilient to climate change through agricultural practices (e.g. planting times, new and resilient native varieties, efficient irrigation systems adopted)</p>	<p>4 206</p> <p>200 000 ; 50% women</p> <p>1 500 ha</p>
<p><i>Project/Programme Outcomes</i></p>	
<p><b>Number of technologies and innovative solutions transferred or licensed to promote climate resilience as a result of Fund support.</b></p>	<p>Managed Aquifer Recharge (Infiltration of treated waste water and recovery from the aquifer) rely on technologies developed and transferred from other countries such as the USA, Israel or Jordan.</p> <p>Climate Resilient Agriculture, Precision Agriculture, Drip Irrigation will be transferred to farmers through extension services.</p>
<p><b>Strengthened institutional and regulatory systems for climate-responsive planning and development</b></p> <p>Institutional and regulatory systems that improve incentives for climate resilience and their effective implementation.</p>	<p>Improved institutional and regulatory systems for the development of closed water cycles using treated waste water for agriculture. Support to and capacity building of PWA, WUA and WRSC will be crucial in the implementation of the project and its scaling-up.</p>

E.1.2. Key impact potential indicator			
<i>Provide specific numerical values for the indicators below.</i>			
GCF core indicators	<i>Expected tonnes of carbon dioxide equivalent (t CO<sub>2</sub> eq) to be reduced or avoided (Mitigation only)</i>	<i>Annual</i>	5 561,95
		<i>Lifetime</i>	166 858,5
	<ul style="list-style-type: none"> <li><i>Expected total number of direct and indirect beneficiaries, disaggregated by gender (reduced vulnerability or increased resilience);</i></li> <li><i>Number of beneficiaries relative to total population, disaggregated by gender (adaptation only)</i></li> </ul>	<i>Total</i>	223 553 people, including 111 776 women
		<i>Percentage (%)</i>	20% of Northern Gaza population
Other relevant indicators	<p><i>Examples include:</i></p> <ul style="list-style-type: none"> <li><i>Expected increase in the number of households with access to low-emission energy</i></li> <li><i>Expected increase in the number of small, medium and large low-emission power suppliers, and installed effective capacity</i></li> <li><i>Expected increase in generation and use of climate information in decision-making</i></li> <li><i>Expected strengthening of adaptive capacity and reduced exposure to climate risks</i></li> <li><i>Others</i></li> </ul>		
<p>4 206 beneficiaries (farm owners, permanent and seasonal labor) will benefit from improved access to water, increasing their resilience to Climate Change over the lifespan of the hydraulic infrastructures. Each farmer represents a household containing 5,6 people on average, according to the Palestinian Central Bureau of Statistics which leads to 23 553 people with enhanced livelihoods.</p> <p>The 13 Mm<sup>3</sup> infiltrated and recovered for agriculture will reduce their exposure to climate risks by alleviating the pressure on the aquifer from agricultural activity. In a context of extreme water scarcity, to cover the domestic needs of the population, it is expected that this additional resource will “free” water otherwise used by agriculture (in the baseline scenario) that will immediately be used to cover the domestic needs of the growing population. Applying the current level of consumption of domestic water (96m<sup>3</sup>/capita/year), which is extremely low, the project will allow covering the domestic needs of 200 000 people over the lifetime of the infrastructure.</p> <p><b>The total impact of the project is therefore of 223 553 people.</b></p> <p>Depollution of the aquifer due to infiltration of clean water and dilution of the polluted water plume underground, which will prevent the contamination of municipal wells downstream from the infiltration basins, is an important environmental and public health co-benefit. It translates into reducing climate risks exposure of 200 000 people that will be affected positively by the project, which will improve their access to usable domestic water.</p> <p><i>Describe how the project/programme’s indicator values compare to the appropriate benchmarks (i.e. the indicator values for a similar project/programme in a comparable context).</i></p> <p>The scale of the project in Gaza has no equivalent in Palestine: reuse of TWW schemes exist in Jenin and Nablus, but remain small scale (less than 100 ha) and results are not available yet. Comparing the situations in Israel or Jordan would have little relevance due to the discrepancy in situations: for one thing, it would show that</p>			

expected number of beneficiaries, benefits and co-benefits are much higher in Gaza due to the very degraded baseline situation and scenario.

Information and references on other REUSE schemes in Palestine can be found in [Annex 14](#).

## E.2. Paradigm Shift Potential

Degree to which the proposed activity can catalyze impact beyond a one-off project/programme investment

### E.2.1. Potential for scaling up and replication (Provide a numerical multiple and supporting rationale)

Water and sanitation, drinking water and associated sewage networks and waste water treatment plants (WWTP) projects, have multiplied over the years in Palestine, mainly through public and donor funding (KfW, WB, AFD being the main partners of the Palestinian government in this sector), and in the region. In Gaza, the Central WWTP will be operational in 2019 and it is expected that the capacity of the NGEST WWTP be doubled by 2025.

In the context of Palestine, including Gaza, it is a humanitarian and developmental imperative that every drop of water be recycled in order to compensate the effects of climate change on water scarcity and increase the resilience and adaptation capacity of the population.

The NGEST is the only “real scale” reuse of TWW experience in Palestine and it will serve as a model to multiply the experience throughout its territory. At design stage, as an adaptive response, all new sanitation and WWTP projects will include a “REUSE” component for agriculture and associated activities related to on-farm development in order to guarantee and manage the timely delivery of each step of the water cycle from the TP to the irrigation scheme. In addition, climate change co-benefits have been embedded in the very design of the present project by providing low-carbon solutions (bio-digesters + PV schemes). Tested for the first time at this scale, they will also be systematically included in future projects.

The results of the mid-term evaluation of this project will be strategic and timely inputs to ongoing or future REUSE schemes all over Palestine: at the El Bireh WWTP (neighboring Ramallah and projecting to transfer water for the Palestinian agriculture in the Jordan Valley); at the Jericho WWTP to irrigate palm tree groves for date production; at the Nablus WWTP where the German cooperation is supporting a pilot of direct reuse of TWW for agriculture (40 ha). It is also expected from this project to be potentially duplicated to other projects in the region.

### E.2.2. Potential for knowledge and learning

The knowledge potential of the project, as the first real scale REUSE by aquifer recharge operation in Palestine, is both huge and highly strategic in order to foster and strengthen the adaptive capacity to climate change of Palestine and its population.

In the current situation, Palestine has no other short term option on the table to start reversing its water deficit than the reuse of TWW.

Nevertheless, up-scaling this effort calls for the mastering of the several dimensions of reuse of TWW:

- Technological: what is the best solution in terms of cost and quality to deliver the best service to end-users?
- Economic, Social and environmental: how do we guarantee quality and stability of the water delivered (do no harm) and the inclusion of the more vulnerable as beneficiaries of the project;
- Sustainability: how do we create and support functional and legitimate users' institutions that take over all or part of the O&M of the infrastructure delivered by the public sector?

These questions are being answered through the ongoing dynamic at NGEST and will need to be documented and analyzed through the present project, its external evaluations and by the mobilization of funds earmarked for intellectual services for capitalization (Activity 3.4). The COSTEA (<https://www.comite-costea.fr/>), a platform created by AFD and bringing together professionals and researchers in water and irrigation, could be mobilized and could cofinance this work in the amount of 150 000 EUR in addition to the financing of the project. This knowledge will then be used for the next generation of REUSE operations in the region.

### E.2.3. Contribution to the creation of an enabling environment

As mentioned above, NGEST is but the first step of a relatively long path to full development of REUSE capacity in Palestine. It is clear that the factors of success of the NGEST project will pave the way to the multiplication of similar projects in other parts of the territories.

In particular, the following aspects of the project will be particularly enabling of this development in the future:

- The setting-up and strengthening of a water quality monitoring and control mechanism, which is paramount to the success of any REUSE project, will allow to fix the standards of all future projects;
- The involvement of the Water Sector Regulatory Council, as an external oversight body, will be essential to limit the risks of such projects and make sure that quality standards are met on a day to day basis;
- The stronger inclusion of on-farm activities, a key aspect of the sustainability of reuse of TWW in agriculture, and the involvement of MoA and FAO will set a precedent to a more holistic approach to the management of the water cycle;
- The creation of the WUA and the importance of women therein, which will lead to a more equitable and gender-balance access and distribution of water.

#### E.2.4. Contribution to regulatory framework and policies

The reuse of treated waste water is a complex multi-stakeholder endeavor and quality control at each level of the water cycle is paramount to the success of any such project. The Water Sector Regulatory Council serves exactly that purpose and, in the context of Palestine, its strengthening and capacity building is dependent on direct funding from donors.

The main responsibilities of the WSRC as per the water law can be detailed as follows:

- Approval of water tariffs, costs of supply networks and other services required for the delivery of water and wastewater services, as well as review and monitoring of these tariffs to ensure compliance with the policy adopted by the Palestinian Water Authority.
- The issuance of licenses to Regional Water Utilities and any operator that establishes or manages the operation of a facility for the supply, desalination, or treatment of water or the collection and treatment of wastewater, and the levying of license fees.
- The monitoring and inspection of compliance with the terms, requirements and indicators stipulated in licenses and permits.
- The development of performance incentives programs for water service providers.
- Monitoring operation processes related to the production, transport, and distribution of water and operational processes of wastewater management.
- Monitoring water supply agreements.
- Setting quality assurance standards for the provision of technical and administrative services by Service Providers to consumers.
- Monitoring the compliance of the National Water Company and Service Providers with the adopted standards for the provision of water and sanitation services.
- The establishment of a database for technical, financial and statistical information and the publication of this information periodically.
- Addressing complaints of consumers against Service Providers.

The project will integrate the WSRC into the steering and the technical committees in order to allow it to exercise its oversight mandate over the water sector investments of the project and stakeholder mobilization in the context of the creation of a water users association.

### E.3. Sustainable Development Potential

#### Wider benefits and priorities

##### E.3.1. Environmental, social and economic co-benefits, including gender-sensitive development impact

By embracing several developmental dimensions in the same project, the proposal has a strong potential when it comes to sustainable development.

It is important to recall, before going into the details of the different dimensions of sustainable development, to highlight the following SDGs, which are targeted by this project, namely SDG 1 (no poverty), SDG 2 (zero hunger), SDG 3 (good health and well being), SDG5 (gender equity), SDG 6 (clean water and sanitation), SDG 7 (affordable and clean energy), SDG 8 (decent work and economic growth), SDG 9 (industry, innovation and Infrastructure), SDG 10 (reduced inequalities), SDG 13 (climate action).

#### **Environmental:**

Since 2009, about 30 million cubic meters of untreated water have been infiltrated in the aquifer at the location of NGEST; this has created a pollution plume which is moving towards the West and should reach the proposed location of the recovery wells by 2020 and, further down the Municipal wells by 2022, impacting the drinkability of the water and the health of the population of Gaza City (See Baseline Study On Water Quality & Public Health In The Gaza Strip, 2015, **Annex 3**). The activation of the water cycle downstream from the NGEST WWTP by infiltration and recovery of treated waste water will have two beneficial effects to reduce the pollution and prevent the occurrence of a health crisis in Gaza City: (i) infiltration of treated waste water will dilute the pollution plume (as shown in the extractions of the water model below) (ii) the depression in the aquifer caused by pumping (see image below) will reverse the progression of the pollution plume towards the surrounding wells.

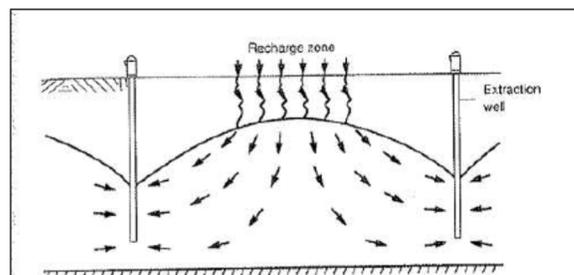


Fig. 4.1: Schematic sketch of Nordic groundwater recharge by surface spreading.

Further infiltration of water in the aquifer after agricultural use will contribute to depolluting the water underground and sustaining its use by the population.

Reduction in Greenhouse Gas (GHG) through the installation of a 8 ha PV scheme is also an environmental co-benefit of the project.

**Socioeconomic co-benefits** of the project are mainly twofold:

(i) the establishment of a public irrigation scheme and the democratization of daily access to water for all farmers will create more winners than losers with regard to the baseline. Owners of private wells (15 people) will see their business decrease (while benefiting from an improved water service; they will also be targeted by the ESMP to evaluate and compensate their eventual losses), while the rest of the farmers and their families will see their access to irrigation water highly improved: from not at all (20% of the farmers) or once every 10 days (80% of the farmers), all farmers subscribing to the water users association will benefit from daily under pressure water service.

(ii) in a context where every drop of available water is used, the reliance of agriculture on an alternate and non-conventional source of water will free the equivalent quantities for other uses, namely in the context of a fast growing population, which in the baseline scenario would of taken place any further depleting the aquifer and generating health hazards due to bad quality of water. It is estimated that, thanks to the project, 200 000 people

will benefit from improved access to domestic water due to the infiltration of 13 million cubic meters yearly by the NGEST facilities (applying a low 65 m<sup>3</sup>/y/capita of domestic water consumption, which is the current situation of domestic water availability in Gaza).

**Gender empowerment:**

Key Gender issues experienced by women in the project area that were revealed by the gender analysis are as follows:

- 1) adverse social norms;
- 2) discriminatory laws and lack of legal protection;
- 3) the failure to recognize, reduce and redistribute unpaid household work and care; and
- 4) a lack of access to financial and property assets.

The project's Gender Action Plan (GAP) forms the basis for operationalizing the results and recommendations of the gender analysis prepared during the preparation phase. It ensures effective gender mainstreaming and integration of a consistent gender-perspective in the NGEST project in order to maximize climate and development co-benefits. The aim is to promote opportunities, drivers of change and positive gender dynamics as well as to manage and mitigate potential adverse risks over the duration of the project. The GAP ensures that the project is compliant with GCF's Gender Policy and Action Plan (GCF/B.09/23)<sup>5</sup>. The full GAP is presented in **Annex 12**. The PWA and the GAP Coordinator within the PMU will be supported in its implementation by the provision of specialized Gender expertise through the Technical Assistance services that are funded under the project – the expertise will include provision of training of PWA staff and mainstreaming of gender in relevant PWA technical departments.

The GAP is closely aligned to the outputs of the log frame (see H.1) and planned activities of the recovery scheme from the NGEST project. It complements the Environmental and Social Management Plan (ESMP) that already contains gender-related aspects<sup>6</sup>. In addition to the specific activities and measures of the GAP, the NGEST project will apply more general, systematic measures in accordance with the Palestinian Water sector reform Plan<sup>7</sup> as well as the National Water and Wastewater Strategy for Palestine<sup>8</sup>.

The activities of the project and, in particular, the establishment a WUA based on the recently published bylaws promoting inclusiveness of the most vulnerable, is an opportunity to open pathways of change for women. The GAP interventions<sup>9</sup> seek to tackle adverse social norms, reform discriminatory practices, and help women build financial and property assets. Promoting female membership and leadership in the WUA will help to strengthen visibility and local women's collective voice and representation, which should contribute to other ripple effects throughout Gaza of increased female empowerment.

The Ministry of Agriculture and FAO will involve local civil society and women non-governmental organizations. In terms of methodology, the GAP will be implemented using inputs from the FAO (see **Annex 10**) and

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<sup>5</sup> <https://www.greenclimate.fund/documents/20182/818273/1.8 - Gender Policy and Action Plan.pdf/f47842bd-b044-4500-b7ef-099bcf9a6bbe?version=1.1>

<sup>6</sup> *Annex 9: Socio Economic Baseline Assessment Willingness Survey Results Cost Analysis and Tariff Surveys Results (2013)*.

<sup>7</sup> Palestinian Water Sector Reform Plan (2016-2018). Technical, Planning And Advisory Team in the Water And Sanitation Sector (Tpat) Phase II. [http://www.wafainfo.ps/pdf/water\\_project\\_2016\\_2018.pdf](http://www.wafainfo.ps/pdf/water_project_2016_2018.pdf)

<sup>8</sup> National Water and Wastewater Strategy for Palestine: Toward Building a Palestinian State from Water Perspective. PALESTINIAN WATER AUTHORITY. July 2013. [http://procurement-notices.undp.org/view\\_file.cfm?doc\\_id=27192](http://procurement-notices.undp.org/view_file.cfm?doc_id=27192)

<sup>9</sup> See the Gender Action Plan, Section 4: Drivers of Change.

particularly from the [International Union for Conservation of Nature- IUCN's training Manual on Gender and Climate Change](#)<sup>10</sup>.

Further, the project will mainstream gender in relation with all expected Outputs of the project – as per the GAP- bust mostly in relation with Outputs 2 and 3, namely through the following inputs:

*Input 2.2.3. Gender, land tenure and irrigation – a Gender-responsive approach to agricultural resilience to climate change*

*Input 3.2.2. Integration of women in the governance bodies of the WUA*

*Input 3.3.2: Psychosocial support and strengthening of community and household bounds*

PWA and the TA (with dedicated staff) will have the responsibility of implementing the GAP, which will be monitored by the Steering Committee.

#### E.4. Needs of the Recipient

Vulnerability and financing needs of the beneficiary country and population

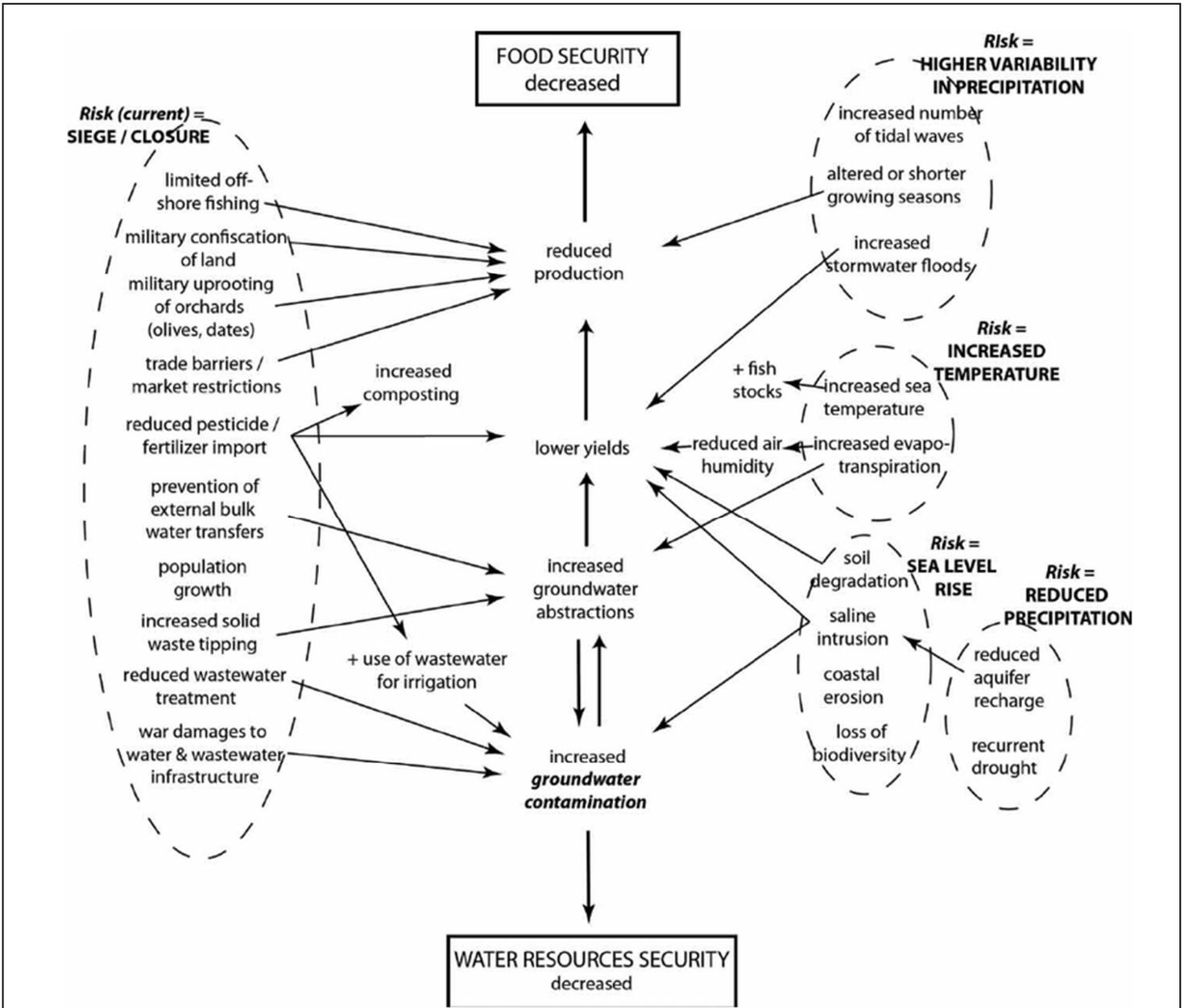
##### E.4.1. Vulnerability of country and beneficiary groups (Adaptation only)

Conflict and climate vulnerability in Gaza has been extensively studied by Michael MASON from the London School of Economics, who develops a very useful analysis of the two coexisting and combining factors:

*“In societies marred by conflict, the propensity of populations to be harmed by climate hazards is likely to be increased by their exposure to violence and other coercive practices. Stakeholder assessments of climate vulnerability, as reported here for the Gaza Strip, can capture the qualitative experience of harm caused by conflict-related practices as these relate to, and interact with, forecasted climatic risks. The key pathways of climate vulnerability identified by stakeholders in Gaza relate above all to expected impacts on food security and water security. Exploration of these vulnerability pathways reveals conflict-structured non-climatic risks overwhelming forecasted climate risks. The prevalence in Gaza of short-term ‘enforced coping’ prevents the development of long-term adaptive capacity. Climate vulnerability assessments in (post)conflict environments should acknowledge the methodological and political-policy challenges caused by chronic, non-climatic sources of harm.”* (Michael Mason, Mark Zeitoun & Rebhy El Sheikh (2011): Conflict and social vulnerability to climate change: Lessons from Gaza, *Climate and Development*, 3:4, 285-297)

The following figure, adapted from the work of M. MASON et al. in Gaza is also included in Palestine-UNDP Adaptation du Climate Change Action Plan (UNDP 2010a, p.36):

<sup>10</sup> [https://portals.iucn.org/union/sites/union/files/doc/training\\_manual\\_on\\_gender\\_and\\_climate\\_change.pdf](https://portals.iucn.org/union/sites/union/files/doc/training_manual_on_gender_and_climate_change.pdf)



This analysis, which highlights the food insecurity - water insecurity nexus as the main driver of vulnerability in Gaza, is the backbone of the rationality of the present project. The reuse of treated waste water by recharge of the aquifer and recovery for agriculture, as described at large in the above sections, co-impacts, by nature, both water availability and agricultural resilience.

#### E.4.2. Financial, economic, social and institutional needs

- *Economic and social development level of the country and the affected population*

Despite its potential, the Palestinian economy is currently heavily distorted and failing to generate the jobs and incomes needed to improve living standards. Restrictions on trade and access to resources, along with a decade long blockade of Gaza have hollowed out the productive base. The share of manufacturing in the economy has halved in the last twenty-five years, while agriculture is only one third its previous size. The economy is import dependent with imports over three times the size of exports and a trade deficit close to 40 percent of GDP (one of the highest in the world), while trade is concentrated with Israel. Investment rates have been low with the bulk channeled into relatively unproductive activities that generate insufficient employment. As a result, growth, which has mainly been driven by consumption, has run out of steam. With a sharp decline because of the 2014 Gaza war and a drop in aid levels, growth in real Gross Domestic Product (GDP) slowed to 2 percent on average between 2013 and 2016, and dropped to a mere 0.7 percent in early 2017. Unemployment remains close to 30 percent on average, with youth unemployment twice as high in Gaza where the humanitarian situation has significantly worsened in recent months following the electricity crisis which has serious implications on the health, water and sanitation sectors as well as business activity (source Economic Monitoring Report to the Ad Hoc Liaison Committee, World Bank, Sep 2017).

Historically, the agriculture sector has been the largest economic sector in the Gaza Strip and still plays an important role in the economy. This role, however, has declined over time in an unsecure context. The contribution of the agriculture sector to GDP declined from 37% at the end of the 1970s, to 22% at the end of 1980s. The contribution to GDP continued declining after the Oslo agreement, reaching 10% in the 1990s. Intensification of restrictions of movement of people and goods affected the marketing and export of agricultural products. This caused further decline in the contribution of the agriculture sector to Gaza's GDP to 7% in 2000, lowering total exports to around 23%, and constituting 14% of the employment. In 2005, Israel withdrew occupation forces and removed settlements from Gaza. In 2006, after the Palestinian elections, a decision was made to introduce a policy of separation between the West Bank (WB) and Gaza Strip. Between 2005 and 2015, after the establishment of the blockade, the contribution of the agriculture sector to Gaza' GDP fluctuated between 5.6% and 8.5%, reaching 5.7% in 2015. The latest Palestinian Central Bureau of Statistics (PCBS) reports indicate that in the third quarter of 2016, only 4.5% of total workers in the Gaza Strip work in agriculture and fishing, and the agriculture sector recorded the lowest average daily wage at 22 NIS (6 USD).

With regard to the beneficiary population, the following excerpt of the Poverty Profile of Palestine (full document in [Annex 15](#)) illustrates the situation of the beneficiary population:

*“Two poverty lines have been developed according to actual spending patterns of Palestinian households. The first, termed “deep poverty line,” which was calculated to reflect a budget for food, clothing and housing. The second line adds other necessities including health care, education, transportation, personal care, and housekeeping supplies. The two lines have been adjusted to reflect the different consumption needs of households based on their composition (household size and the number of children). In 2017, the poverty line and deep poverty line for a reference household of five individuals (2 adults and 3 children) were, respectively, NIS 2,470 (~692 USD) and NIS 1,974 (~553 USD). 53 percent of individuals in Gaza Strip found to be poor in 2017, the poverty rate for Gaza Strip was more than four times higher than of the West Bank rate of 13.9 percent. Moreover, is the fact that 33.7 percent of individuals living in Gaza Strip were suffering from deep poverty compared with 5.8 percent of the West Bank; (which means that they are unable to meet the minimum required for food, clothing and housing).”*

*Absence of alternative sources of financing (e.g. fiscal or balance of payment gap that prevents from addressing the needs of the country; and lack of depth and history in the local capital market)*

Palestine has no credit record or capacity and is entirely dependent on concessional foreign aid to implement public investments as described in this project. Further, the magnitude of these investments combined with the high level of vulnerability of the population in Gaza does not allow private sector involvement.

- *Need for strengthening institutions and implementation capacity.*

The PWA is the lead agency for the water sector in Palestine; AFD has a long history of cooperation with this institution which shows a high level of capacity. Nevertheless, given the complexity of the project, combining different types of infrastructure, including irrigation for which PWA has limited experience, and the need for a robust quality control mechanism, PWA has requested for support in terms of the overall coordination and management of the project (implementation capacity), as well as institutional and technical strengthening for the management of the water quality monitoring system.

On the other hand, the ministry of agriculture, in charge of the on-farm development activities has limited resources and capacities to invest in their implementation. Therefore, the Food and Agriculture Organization of the UN will act as its Implementing Partner. Funds from co-financiers of this project will be channeled directly to the FAO in exchange of the implementation of the agricultural activities of the project and capacity building of the ministry of agriculture and the water users association.

#### E.5.1. Existence of a national climate strategy and coherence with existing plans and policies, including NAMAs, NAPAs and NAPs

On the 17<sup>th</sup> of March 2016, Palestine officially became the 197<sup>th</sup> party to the UNFCCC. It also ratified the Paris Agreement on the 22<sup>nd</sup> of April, 2016 and was one of the first countries to do so. Few months after joining the UNFCCC Palestine was able to submit its Initial National Communication Report (INCR) and the National Adaptation Plan (NAP) and became the sixth country in the world that submitted their NAP to the UNFCCC, which reflects the very high priority given to adaptation to climate change by the Palestinian Authority.

The INCR, which was developed in accordance with the recommended and applicable guidelines, highlights the key outcomes on Greenhouse Gas (GHG) emission inventories, analysis of mitigation and adaptation potentials, making it a vital source of information on GHGs emissions, the measures to be taken to mitigate GHGs and to adapt to the adverse effect of climate change.

The Nationally Determined Contribution (NDC) was build up upon the INCR and NAP and in line with the National Development Plan. Recently, Palestine formulated the National Policy Agenda (2017-2022), the highest policy paper which clearly indicates that climate change and efficient response to its impact as a priority. Palestine has developed 18 sectoral strategies and 3 cross sectoral strategies to achieve sustainable economic development in a manner that takes climate change into consideration. In this document could be found Water Sector Strategy, Agriculture Sector Strategy and Environment Cross Sectors Strategy which include goals linked to climate change mitigation and/or adaptation.

Palestine together with AE have prepared this project based on key adaptation actions prioritized in the NAP: **"Enhance the use of additional and alternative water resources for nondomestic purposes"**. The activities of this project aims to reduce the vulnerability, enhance resilience to climate change and increase adaptive capacity in 12 sectors including: water, wastewater, health and others. It clearly improves water security by creating new and additional resources to the country which is greatly suffering from lack of water resources and allows enhanced aquifer management to respond to climate change challenges.

The gender responsive technology road map formulation, which will identify relevant mitigation and adaptation technologies to achieve the Palestine's climate change action plans as defined in its INCR, NAP and NDC, is currently ongoing. Although the development of the technology road map is still at an early stage, stakeholders have already identified a number of priority technologies which are in line and linked with the technologies involved in the project. This include technologies related to efficient irrigation, water harvesting, climate smart agriculture, water resource monitoring technologies, and the treatment and reuse of wastewater. The roadmap will further explore financing

sources available for each technology and the required measures for their introduction. The technology roadmap will therefore clearly show linkages between ongoing proposals such as this project, and the technologies prioritized.

A key point to emphasise is that Palestine's NAP (and associated NDC conditional actions) is being used as a common foundation by:

- This funding proposal ;
- the current work on the Technology Roadmap;
- the ongoing development of a GCF country programme and
- the continuing development of NDC implementation plans for the Agriculture (and Energy) sector (including its nexus with other sectors – Food security, Water, Waste and wastewater, Coastal and marine).

This foundation logically ensures that they will be systematically aligned, feed into each other and focus requests for support on conditional actions that are Palestine's domestic priorities, as set out in the NAP, and where their implementation is dependent on provision of international funding, as noted in the NDC.

UNEP and UNDP consultants are engaging all stakeholders in the development of their work to maintain the common understanding and commitment that evolved during development of the NAP (and subsequent NDC).

Notably, Palestine was one of the first six countries globally to develop a NAP and it remains one of only a dozen uploaded to UNFCCC NAP Central. The NAP was developed systematically, building upon the UNFCCC's Technical Guidance for the NAP process. In doing so, it involved more than 300 stakeholders from across 12 themes (not only including Agriculture and Gender but also Coastal and marine, Energy, Food security, Health, Industry, Terrestrial ecosystems, Tourism, Urban and infrastructure, Waste and wastewater, and Water ) over a period of 18 months. In accordance with the IPCC 5<sup>th</sup> Assessment Report definitions, vulnerabilities were prioritised for the NAP in relation to climate sensitivities and adaptive capacities. Adaptation options were then identified that address each of the highly vulnerable issues and these options were prioritised for the NAP in relation to a range of criteria (impact, efficacy, timing/urgency, social acceptance, technology, knowledge/skills, costs, and co-benefits for adaptation and mitigation). The resultant NAP was endorsed by all six relevant ministries.

A recent review of the priority of NDC conditional actions with stakeholders from across the Agriculture sector in relation to Government support, adaptation benefits, mitigation benefits, capacity available and technology available was performed. This process has reconfirmed the importance of the NDC actions, in particular the ones that are the basis of this project.

### E.5.2. Capacity of accredited entities and executing entities to deliver

*Please describe experience and track record of the accredited entity and executing entities with respect to the activities that they are expected to undertake in the proposed project/programme.*

#### **AFD and Climate Change**

AFD was one of the first international donors to integrate the fight against climate change into its practices. This approach, initiated more than a decade ago, is based on the principle that the fight against climate change is inextricably linked to the trajectory and development policies of countries, in terms of opportunities and threats, as well as the involvement of economic, institutional and civil society actors. AFD's first climate strategy dates from 2005.

Since then and in line with its national positioning and its involvement in ecological and climate diplomacy, France has devoted a large part of its official development assistance to climate finance. The AFD Group has thoroughly adjusted its intervention strategy and committed more than EUR 29 billion between 2005 and 2017 to projects and programmes designed to provide climate co-benefits.

AFD's climate strategy has thus become a strong marker of its identity, with three main aspects: (i) systematically measuring the carbon footprint of the operations financed (carbon balance) and assessing their potential benefits in terms of adaptation to the effects of climate change, (ii) an ambitious quantitative commitment to financing 50% of projects with climate co-benefits, and (iii) selectivity of projects in terms of impact on climate, taking into account the level of development of the countries concerned. This strategy has profoundly transformed AFD's portfolio and methods, far beyond the operational sphere, and has also shaped its partnership strategy.

This strong position has contributed to the AFD Group's significant visibility on climate issues at both national and international levels. It is actively involved in most major initiatives undertaken with its peers and civil society actors. AFD was particularly involved in issues of accounting and deployment of climate finance, metrics in terms of impact, risk approaches, economic modelling, and issues of strategic integration of climate dimensions by financial actors. The new international momentum, transcribed in the SDGs and the Paris Agreement, requires AFD to support fundamental and rapid changes in the development models of countries and economic actors even more ambitiously. Moreover, through the setting up of its Climate Plan in July 2017, the French government wishes to speed up the implementation of the Paris Agreement not only in France but also at the international level. This provides AFD with a framework that extends its mandate by affirming that AFD will become the first development bank with an explicit mandate to implement the Paris Agreement across its entire portfolio. AFD must therefore continue the transformation of its methods and instruments, launched within the framework of its previous climate strategies.

Three strategic challenges have been identified concerning the role and place of AFD in climate action in the years to come: ensuring that the Group's activities are consistent with the Paris Agreement, in support of low-carbon and climate-resilient development and related public policies; maximizing the impact of its actions in this regard, notably in terms of leverage effects; and strengthening AFD's role as a platform for France's international financial commitment to climate and its positioning as a reference on climate and development among international finance institutions.

The new AFD Climate and Development Strategy for 2017–2022 thus proposes four major commitments: (i) ensure activities are 100% Paris Agreement compatible, (ii) increase the volume of climate finance, (iii) contribute to redirecting finance and investment flows, and (iv) co-build solutions and bring influence to bear on standards.

In terms of parameters and scope, the first commitment entails a fundamental evolution of the AFD Group's approach to climate issues. This involves progressing from an approach mainly based on an assessment of projects' climate benefits towards an approach that includes seeking compliance of all interventions with low-carbon and climate-resilient development pathways.

In terms of volume of climate finance, as characterized by the methodology tested by the previous Climate Change Strategy and shared internationally, the 50% objective of commitments to projects with climate co-benefits is being extended to the entire AFD Group. This will lead to an absolute increase in the volume of such commitments, with a special funding effort for adaptation and the African continent.

The AFD Group operates in the Palestinian Territories since 1998 and has financed, until 2017, about fifty projects, representing a total of more than € 346 million.

AFD operates and supports national strategies in various sectors (Water and Sanitation, local development, private sector, energy, etc.), with a focus on:

- strengthening public institutions and service providers by supporting the development through the implementation of sectoral policies,
- maintain and improve the living conditions of the Palestinian population,
- support economic actors in the private sector
- Supporting the modernization of SMEs;
- Development of rural territories including transportation and solid waste management, etc;
- Management of natural resources in the context of climate change;
- Promoting renewable energy and energy efficiency.

The water and sanitation sector has been AFD's priority intervention sector, with 13 water and sanitation investment programs financed in the Palestinian Territories for a total amount of nearly € 106 million (excluding funds delegated to AFD by other financing partners such as the EU). According to our estimates, these projects have enabled 800,000 people to gain access to drinking water and/or to benefit from improvement drinking water services.

The modalities of intervention of AFD in the sector have evolved from projects focusing on production and transfer of drinking water to broader sectoral interventions:

- Supporting the sector reform: establishment of joint service councils to rationalize the service delivery, supporting the new water law established in 2014 that led to the creation of the Water Sector Regulatory Council (WSRC), supporting the establishment of a National Water Company to manage the conventional and un-conventional water resources. Currently AFD's new intervention, the Nexus North project, committed in 2017 is part of the new water law by placing the distribution operators in their role as project owners and by focusing on their empowerment;
- The field of sanitation: construction of large-scale wastewater treatment plants in the northern Gaza Strip and Hebron, construction of a wastewater treatment plant in Missilya. A new project is under study by AFD for the construction of a sewage treatment plant in Bethlehem.
- The reuse of treated wastewater for agricultural purposes is always an integral part of investments programs to maximize the benefit from water resources in a water scarcity environment.

The three above-mentioned themes, targeted by AFD, are at the heart of the Palestinian Authority's sectoral priorities:

- Effective implementation of the water sector reform initiated in 2014.
- The treatment of the 100% of the wastewater flowing from the Palestinian Territories to Israel today, with the aim of reducing the net-lending bill (the Israelis treat the effluents arriving on their territories and charge this treatment to Palestinians) that reached 35MUSD in 2017.
- Achievement of 100% REUSE: reuse of all treated wastewater for agricultural purposes. The agriculture sector is currently consuming around 80% of available fresh water.

### E.5.3. Engagement with NDAs, civil society organizations and other relevant stakeholders

The ground water recovery and irrigation schemes at the North Gaza WWTP are part of the wastewater management system for North Gaza and are based on several studies commissioned by the PWA. The Palestinian Environment Quality Authority, NDA for GCF, in cooperation with PWA have included this project in the National Adaptation Plan to Climate Change 2016 as an adaptation option for the Gaza Strip to enhance the use of alternative water resources for non-domestic purposes. The PWA commissioned a feasibility study for the irrigation scheme in 2017 (funded by AFD) and in parallel executed the first phase of the water recovery scheme through a World Bank funded contract. Since July 2017, AFD has identified this project as an essential intervention, in light of the water crisis in the Gaza Strip; the PWA and the EQA were actively involved in every step of the project formulation that can be itemized as follows:

- PWA participated to all the identification and appraisal meetings that were performed through 2 missions from AFD headquarters. Consultations took place with several Palestinian stakeholders; such as Ministry of Agriculture, Ministry of Finance and Planning,
- Assessing the studies that required updates (i.e. irrigation scheme design update based on the feasibility study findings, the EIA update, gender analysis and action plan)
- 3 consultations were organized during the preparation phase of the project with the North Gaza population of the area that included, but not limited to, the final beneficiaries of the irrigation schemes (the farmers).
- The PWA have pushed forward in April 2018, after 2 years of consultations, the approval of the WUA bylaws by the Palestinian Council of Ministers that will provide the legal framework for the public irrigation networks management.

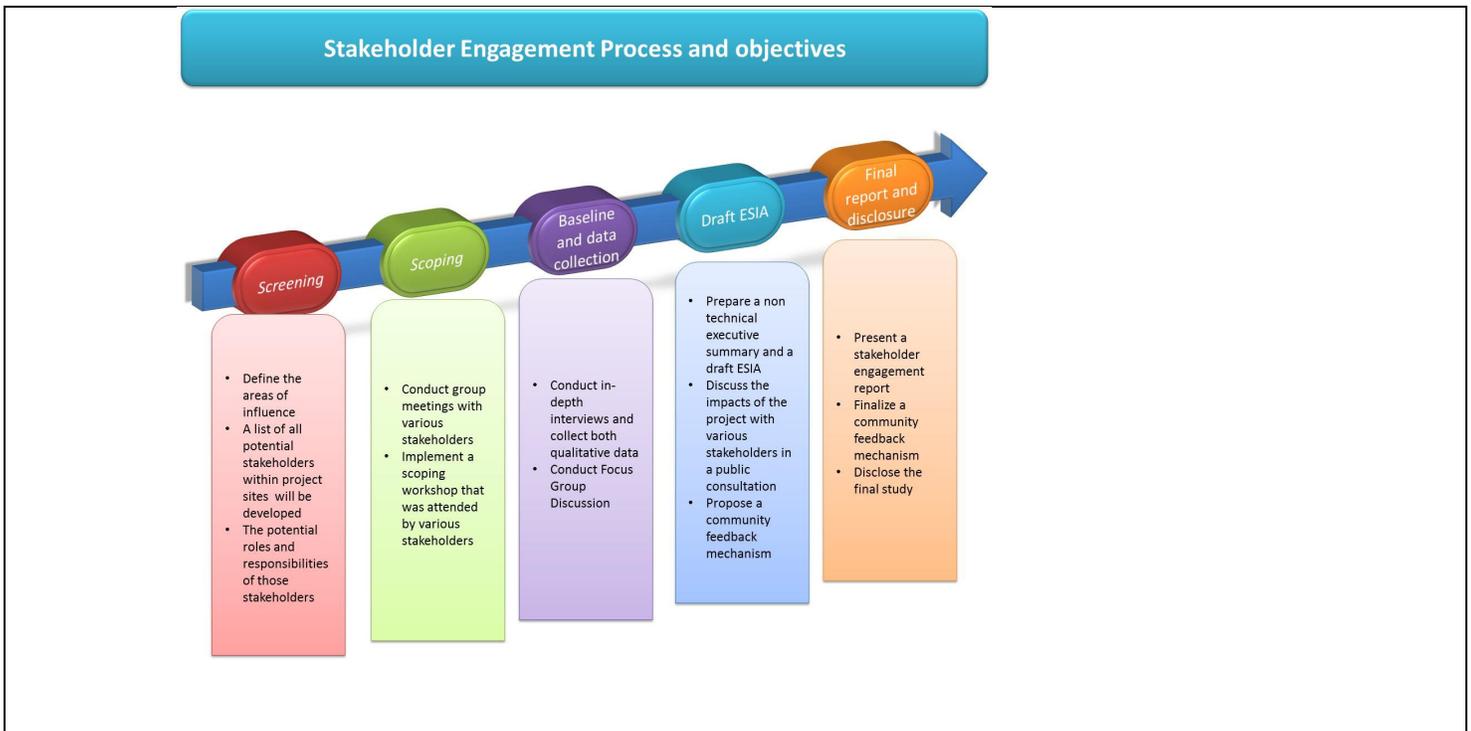
It is important to highlight PWA insisted on the financial sustainability of the project outputs reducing the public subsidies for the O&M of the irrigation scheme to the minimum during the transitional period.

*Please also specify the multi-stakeholder engagement plan and the consultations that were conducted when this proposal was developed.*

During the preparation of this project, multi-dimensional consultation activities have been conducted to enable the marginalized, voiceless, youth and women to gain information about the project in order to gain information about their concerns and worries regarding the project during various implementation phases.

Following are the main consultation activities to date conducted as a basis for the elaboration of the Multi-stakeholder Engagement Plan presented in full in **Annex 11**:

- The study team visited the project area in order to define various stakeholders during April 2018
- Meetings were conducted during April 2018 in order to develop an engagement plan that is locally tailored for the residential communities along with the study team members
- Based on the identification of stakeholders, various questionnaires and guidelines were prepared in order to engage: i) the residents in the project areas, ii) Governmental municipalities, iii) the Community Based Organizations (CBOs), iv) health facility, v) Ministry of Endowment and Ministry of Agriculture, vi) the EQA
- As shown in the scheme below, the study team divided various engagement activities of the project to:
  - a. Screening
  - b. Scoping phase and data collection phase and,
  - c. Public consultation phase.
  - d. Final report disclosure



## E.6. Efficiency and Effectiveness

Economic and, if appropriate, financial soundness of the project/programme

### E.6.1. Cost-effectiveness and efficiency

*Describe how the financial structure is adequate and reasonable in order to achieve the proposal's objectives, including addressing existing bottlenecks and/or barriers; providing the least concessionality; and without crowding out private and other public investment.*

As mentioned earlier on in the proposal, conventional donors have exhausted their capacity to finance the end line investments allowing the completion of the full water cycle delivering adaptation to climate change impacts, as well as social, economic and environmental co-benefits. The World Bank has provided its last contribution in 2017 and AFD has pledged more than its annual 10 MEUR commitment in 2018, in order to maximize its contribution to the project, alongside the GCF.

The situation in Gaza, the urgency of the intervention and the high social and environmental co-benefits sought by the project call for the highest level of concessionality. Though there is an economic component to the expected impacts of the project, the current level of poverty and vulnerability of the beneficiaries (see Poverty profile in **Annex 15**), as well as the level of risk related to agricultural investments in the area (where climatic and geopolitical risks are compounded) make it impossible to envisage lending for such large scale investments.

*Please describe the efficiency and effectiveness, taking into account the total project financing and the mitigation/adaptation impact that the project/programme aims to achieve, and explain how this compares to an appropriate benchmark. For mitigation, please make a reference to [E.6.5 \(core indicator for the cost per tCO2eq\)](#).*

As described earlier in the proposal there is a good level of correspondence between the level of financial contribution by the GCF and the level of climate change effects the beneficiary population will need to adapt to.

In terms of benchmarking, this project will be the first large scale Managed Aquifer Recharge in Palestine and, in particular, in Gaza, where conditions are very much specific. Comparing the project's costs with those of similar

operations elsewhere, reveals a 15 to 20% increase in Gaza, due to the high dependency on import, the complexity of border crossing and, overall, the translation into financial terms of the overall risks in the area.

Furthermore, the project has a “no regrets” approach. In the context of Gaza and its exceptional level of water scarcity, all solutions for the production of additional non-conventional water resources should be pursued. Desalination capacities will be installed in Gaza in the medium term, but this does not affect the necessity to pursue other options available, amongst which MAR. In terms of recycling the water produced by the WWTP –otherwise lost in the sea- the alternative to MAR is the direct reuse of the water for agricultural purposes. This approach is less efficient because it would need to rely on an installed and therefore energy consuming tertiary treatment (which is performed by the process of infiltration itself in the case of MAR), and because the water directly transferred to farmers would be less acceptable socially when coming directly from the WWTP.

#### E.6.2. Co-financing, leveraging and mobilized long-term investments (mitigation only)

*Please provide the co-financing ratio (total amount of co-financing divided by the Fund’s investment in the project/programme) and/or the potential to catalyze indirect/long-term low emission investment.*

*Please make a reference to [E.6.5 \(core indicator for the expected volume of finance to be leveraged\)](#).*

The co-financing ratio for this project is 1.875.

As mentioned above, there is a potential to replicate this kind of technology and project not only in Palestine, but also in the region.

#### E.6.3. Financial viability

*Please specify the expected economic and financial rate of return with and without the Fund’s support, based on the analysis conducted in [E.1](#).*

The feasibility study does contemplate, in Outputs 4 and 6, the economic and financial profitability acquired through an improved access to water showing, in an ideal scenario, that improved access to water and improved cropping systems lead to relatively high Internal Rate of Returns (IRR), making us believe that the project may create an island of prosperity in its area of intervention.

The reality of water deficit in Palestine and its particular acuteness in Gaza is such that every cubic meter added to the water balance has immediate and multiple knock-on effects on every dimension of vulnerability and survival of the Gazan population. In other words, the alternate scenario of not delivering the adaptation and water supply infrastructure to the area is certain rupture of the hydraulic, economic and social systems, with drastic geopolitical consequences.

Over the lifespan of the infrastructure, i.e. 30 years, the AE is confident that in the context of extreme vulnerability of the population and the accelerating effects of climate change of an already dire scenario, the economic rate of return of a non-ruptured system is extremely high. Conversely, not maximizing the infiltration and recovery power of the hydraulic system financed by the project increases drastically the probability of rupture and the IRR becomes zero.

Reasoning in terms of water-flow rather than in cash-flow – the actualization of which over time is a mere theoretical calculation – the project will allow the aquifer to sustain the livelihoods and associated economic activity of an additional 200 000 people at the current level of access to water over the lifetime of the financed infrastructure. In the baseline scenario, this additional population –resulting of the demographic growth- will find itself, all things being equal, with no access to water or depleting the last resources for the following generations. Without the GCF support, we remain in the baseline scenario.

*Please describe financial viability in the long run beyond the Fund intervention.*

Operation and maintenance of the full NGEST scheme is expected to be highly subsidized by Palestine in the medium term, until the co-management of the scheme is effective and part of the costs are covered by the users themselves,

through the Water Users Association. The costs incurred by Palestine will amount to more than 4 MUSD annually. Financial resources of Palestine being extremely low in the current situation, these costs will be covered through direct budgetary support provided in particular by the WB.

#### E.6.4. Application of best practices

*Please explain how best available technologies and practices are considered and applied. If applicable, specify the innovations/modifications/adjustments that are made based on industry best practices.*

The technology applied in this project is referred to as Water Banking (because of the role of the aquifer as storage and buffer) or Managed Aquifer Recharge (MAR). It is extensively studied and described by the scientific community (for example: Multi-Objective Optimization of Managed Aquifer Recharge, Aybulat Fatkhutdinov et al., April 2018) and considered as an effective approach to adaptation to climate change, namely in semi-arid areas of the world (<https://www.soas.ac.uk/ledc/events/groundwater-and-climate-change-2015/file104580.pdf>), in particular in the neighboring Jordan:

*“Jordan like many other semi-arid countries in the world is highly dependent on groundwater resources and face increasing demand and decreasing supply leading to groundwater level declines and potentially salinisation of groundwater resources. Managed aquifer recharge (MAR) could support an increase in water resources and is defined as the intentional recharge of groundwater for recovery or environmental purposes and includes the monitoring of recharge water quality and resulting impacts. It has been applied successfully internationally and its importance is increasing as a tool for adaptation to climate change.”* ([https://www.bgr.bund.de/EN/Themen/Wasser/Projekte/abgeschlossen/TZ/Jordanien/mar\\_fb\\_en.html](https://www.bgr.bund.de/EN/Themen/Wasser/Projekte/abgeschlossen/TZ/Jordanien/mar_fb_en.html))

#### E.6.5. Key efficiency and effectiveness indicators

<b>GCF core indicators</b>	Estimated cost per t CO <sub>2</sub> eq, defined as total investment cost / expected lifetime emission reductions (mitigation only)	
	(a) Total project financing	MEUR 44.709782
	(b) Requested GCF amount	MEUR 23.709782
	(c) Expected lifetime emission reductions overtime	166 858,6 tCO <sub>2</sub> eq
	<b>(d) Estimated cost per tCO<sub>2</sub>eq (d = a / c)</b>	<b>EUR 267 _____ / tCO<sub>2</sub>eq</b>
	<b>(e) Estimated GCF cost per tCO<sub>2</sub>eqremoved (e = b / c)</b>	<b>EUR 142 _____ / tCO<sub>2</sub>eq</b>
<p><i>Describe the detailed methodology used for calculating the indicators (d) and (e) above.</i></p> <p><i>Please describe how the indicator values compare to the appropriate benchmarks established in a comparable context.</i></p>		
Expected volume of finance to be leveraged by the proposed project/programme and as a result of the Fund's financing, disaggregated by public and private sources (mitigation only)		

	<p><i>Describe the detailed methodology used for calculating the indicators above.</i></p> <p><i>Please describe how the indicator values compare to the appropriate benchmarks established in a comparable context.</i></p>
Other relevant indicators (e.g. estimated cost per co-benefit generated as a result of the project/programme)	

### F.1. Economic and Financial Analysis

*Please provide the narrative and rationale for the detailed economic and financial analysis (including the financial model, taking into consideration the information provided in [section E.6.3](#)).*

Climate vulnerability and climate risks in Palestine and Gaza are a humanitarian threat, placing the Palestinians within the policy realm of disaster risk management and emergency response operations. Economic and financial analyses at micro level are nevertheless available in Outputs 4 and 6 of the feasibility study.

*Based on the above analysis, please provide economic and financial justification (both qualitative and quantitative) for the concessionality that GCF provides, with a reference to the financial structure proposed in section B.2.*

The Gazan population presents an extremely high level of vulnerability and of uncertainty with regard to the future. The important climate vulnerability, in addition to the demographic growth in Gaza and its consequences on the water resources, the emergency of the situation, the humanitarian rationale of adaptation to climate change in the context of Gaza, the insolvability of Palestine and of the farmers (in a very high risk environment) calls for the highest level of concessionality for the delivery of infrastructure, dedicated to recharging the aquifer, which is considered a public good. On-farm equipment will be advanced by the project but reimbursed by the farmers to create an O&M fund for the irrigation scheme, managed by the WUA, which will be key factor for long run viability of the project.

### F.2. Technical Evaluation

Water banking or MAR is a technological approach to artificial aquifer recharge in contexts where water scarcity calls for recycling of all possible sources of water. In the case of Gaza recycling of treated waste water is one of only two short/medium term solutions to alleviate pressure on the aquifer and maintain minimal access to agricultural and domestic water for the population – the other one being massive desalinization of sea water (representing much more costly, highly emissive and complex investments). The sandiness of the soil in Gaza makes it a particularly adapted location to perform MAR, due to the high infiltration capacity of such soil.

Further, the MAR scheme proposed in this project includes an off-grid solar energy production field and a net metering contract with the electricity company, allowing the storage of energy on the local grid. This is a response to the third element of the vulnerability nexus in Gaza: energy insecurity.

Finally, the proposed approach, through MAR in Gaza, will generate an important climate co-benefit, as well as in environmental terms: the activation of the water cycle at NGEST will act as a clean “washing machine” depolluting the aquifer and preventing a health crisis in the downstream Gaza City.

### F.3. Environmental, Social Assessment, including Gender Considerations

*Describe the main outcome of the environment and social impact assessment. Specify the Environmental and Social Management Plan, and how the project/programme will avoid or mitigate negative impacts at each stage (e.g. preparation, implementation and operation), in accordance with the Fund's Environmental and Social Safeguard (ESS) standard. Also describe how the gender aspect is considered in accordance with the Fund's Gender Policy and Action Plan.*

#### **Environmental Methodology**

##### ***Hydro Model Update and for Groundwater Analyses Verification and Modeling***

The most updated data provided by the client, up to year 2017, was used to update the model, accounting for the following:

- The actual infiltrated partially treated wastewater quantities and rates from 2012 to 2017 (15,000 – 20,000 m<sup>3</sup>/day).
- The updated locations and numbers of the recovery wells.
- The actual design of the first stage of the recovery wells (14 wells) that were constructed by the end of year 2017.
- The updated time schedule for the operation of the treatment plant and the two stages of the recovery wells.

The assessment of the impacts on groundwater considered the abstraction rates of the recovery wells, the possible recharge in the agricultural lands and different scenarios for project implementation. Two scenarios are considered in the current impact assessment:

1. Without the implementation of recovery scheme.
2. With the implementation of recovery scheme. 27 recovery wells will be implemented on two stages; 14 wells that already constructed and to be operated by the end of 2019 and 13 wells to be operated by the end of 2021.

Both scenarios took into account the operation of the WWTP by the beginning of 2018. It is important to note that partially treated wastewater continued to be infiltrated until the beginning of 2018. Since the beginning of 2018, only treated wastewater is infiltrated and will reach its full capacity of 35,600 m<sup>3</sup>/day of treated wastewater by June 2018.

#### ***Important Environmental Outcomes and Considerations***

1. No significant changes have occurred in any of the physical or biological environment of the project areas since 2013. The main physical and biological characteristics of the environment in the vicinity of the project area therefore remain unchanged.
2. Recent monitoring results reveal nitrate concentrations ranging from 20mg/l to 70 mg/l in 2017, both in the monitoring wells and in the recovery wells, indicating an increase in nitrate concentrations since 2012. These numbers far exceed the WHO standards that indicate a maximum value of 55 mg/l for nitrate, and, other Jordanian standards, Palestinian standards, Egyptian standards and Palestinian standards.
3. Pathogenic bacteria was also found in the groundwater in monitoring wells in close proximity to the infiltration basin, since partially treated sewage has been infiltrating the aquifer for 9 years.
4. Heavy metals were analyzed in the same wells close to the infiltration by PWA in mid of year 2016. The heavy metals concentrations in all analyzed wells were less than the Palestinian standard values for irrigation. While trace elements were found occasionally in slightly higher levels than indicated in standards, this was only the case in very few monitoring wells and would therefore not limit the use in irrigation as a general

rule. It is only recommended that these elements are continuously monitored to avoid water use where limits are exceeded.

5. All results of major water parameters monitored in first stage recovery wells such as Acidity (PH), E.C., T.D.S, T.A., B.O.D., SO<sub>4</sub>, and K have been found to be compliant with Palestinian standards.
6. Water in monitoring wells meets most quality parameters limits set by international and local standards for **unrestricted use in irrigation** with the exception of the high nitrate levels.

**As a temporary condition (until the washing out of the plume)**, high nitrogen levels may be beneficial during early growth stages but may cause yield losses during the later flowering and fruiting stages. High nitrogen water can be used as a fertilizer early in the season. However, as the nitrogen needs of the crop diminish later in the growing season, the nitrogen applied to the crop must be substantially reduced. Blending or changing supplies during the later more critical growth stages would be helpful. Another option is to plant less sensitive crops, which can utilize the nitrogen from the irrigation water more effectively. Also, the rates of nitrogen fertilizer supplied to the crop should be reduced by an amount very nearly equal to that available from the water supply for crops irrigated with water containing nitrogen. Crop rotations can be planned to utilize residual nitrogen in the soil during the non-irrigation season.

**According to modelling results, the situation is expected to be greatly improved after the operation of the recovery wells and nitrate levels will be reduced to internationally and locally acceptable irrigation limits, causing no need for concern.**

7. The current water table elevation in the area around the basins is 2 m above mean sea level. After the operation of the first stage of recovery wells by the end of year 2019, about 20,000 m<sup>3</sup>/day of groundwater will be recovered (abstracted). This result in lowering the groundwater table elevation after two years of operation of the first stage of recovery wells. In 2030, the model estimated that the water table elevation, in the area around the basins, will be between 2 m and 4 m below mean sea level if the second stage of recovery wells is not implemented. While, in the same area, the water table elevation will be between 4 m and 6 m below mean sea level if the second stage is implemented; as about 18,000 m<sup>3</sup>/day of groundwater will be abstracted through 13 recovery wells. This will prevent the vertical building up of the water table, which without recovery will have a negative impact on current land use.

### **Social Consultation Methodology and Activities**

The research team for this study has adopted multi-dimensional consultation activities that enable the marginalized, voiceless, youth and women to gain information about the project. As well as gaining information about their concerns and worries regarding the project during various implementation phases.

Following are the main consultation activities performed until June 2018 (additional engagement activities will take place until mid-July):

1. Field visit to define various stakeholders during April 2018;
2. Meetings were conducted during April 2018 in order to develop an engagement plan that is locally tailored for the residential communities;
3. Based on the identification of stakeholders, various questionnaires and guidelines were prepared in order to engage: i) the residents in the project areas, ii) Governmental municipalities, iii) the CBOs, iv) health facility, v) Ministry of Endowment and Ministry of Agriculture, vi) the EQA

### **Important Social Outcomes and Considerations**

The general outcomes and recommendations of the social part include:

1. Importance of engaging stakeholders, including persons or groups who are directly or indirectly affected by a project, as well as those who may have interest in the project and/or those who have the ability to influence its outcome, either positively or negatively taking their comments, ideas and concerns into consideration;
2. Communicating and implementing a viable community grievance mechanism;
3. Municipalities should be involved, engaged and consulted in the process of land acquisition and compensation to contribute in resolving disputes;
4. Land acquisition should be appropriately handled and addressed as suggested in the RAP. Project affected people (private well owners and operators) should be compensated, to account for both property and job losses in a fair and timely manner;
5. Importance of the institutional framework as it is the basis for the operation and success of this project.

#### **Needed improvements of ESIA/RAP and update during inception phase:**

In the process of project preparation and, in particular, through interaction with the GCF Secretariat, several lines of improvement of the ESIA and RAP have been identified, in order to best reflect the final implementation set-up of the project. Introduction of these improvements in the ESS Documents –and others that may appear during inception- will be the responsibility of the consultants that elaborated the first versions of ESIA and RAP. AFD will allocate the necessary funds on its own budget to ensure the update is performed by the initial consultancy team (if possible), in the first weeks of project inception.

Improvement of the ESIA and RAP will include, among others:

- Integration of the discussion on the consideration of alternatives;
- Integration of the Contingency Plan, with particular and explicit measures to deal with contingencies affecting quality of water to be infiltrated in the aquifer or distributed in the irrigation scheme;
- Integration of analysis of compliance and performance of existing assets gathered in monthly reports of the monitoring and water quality control system.
- Integration of an updated institutional arrangements for ESMP implementation;

Furthermore, the final project set-up (e.g. hire an Environmental Manager and a Social Development Officer in the PMU) as well as the terms of reference for the Technical Assistance are now fully consistent with the ESIA recommendations, which can be found in the Environmental and Social Commitment Plan (ESCP) attached to the AFD Contribution Financing Agreement with Palestine. A revised and comprehensive Contingency Plan for the whole NGEST system will also be produced during inception of the project, based on the existing version elaborated by PWA.

#### **F.4. Financial Management and Procurement**

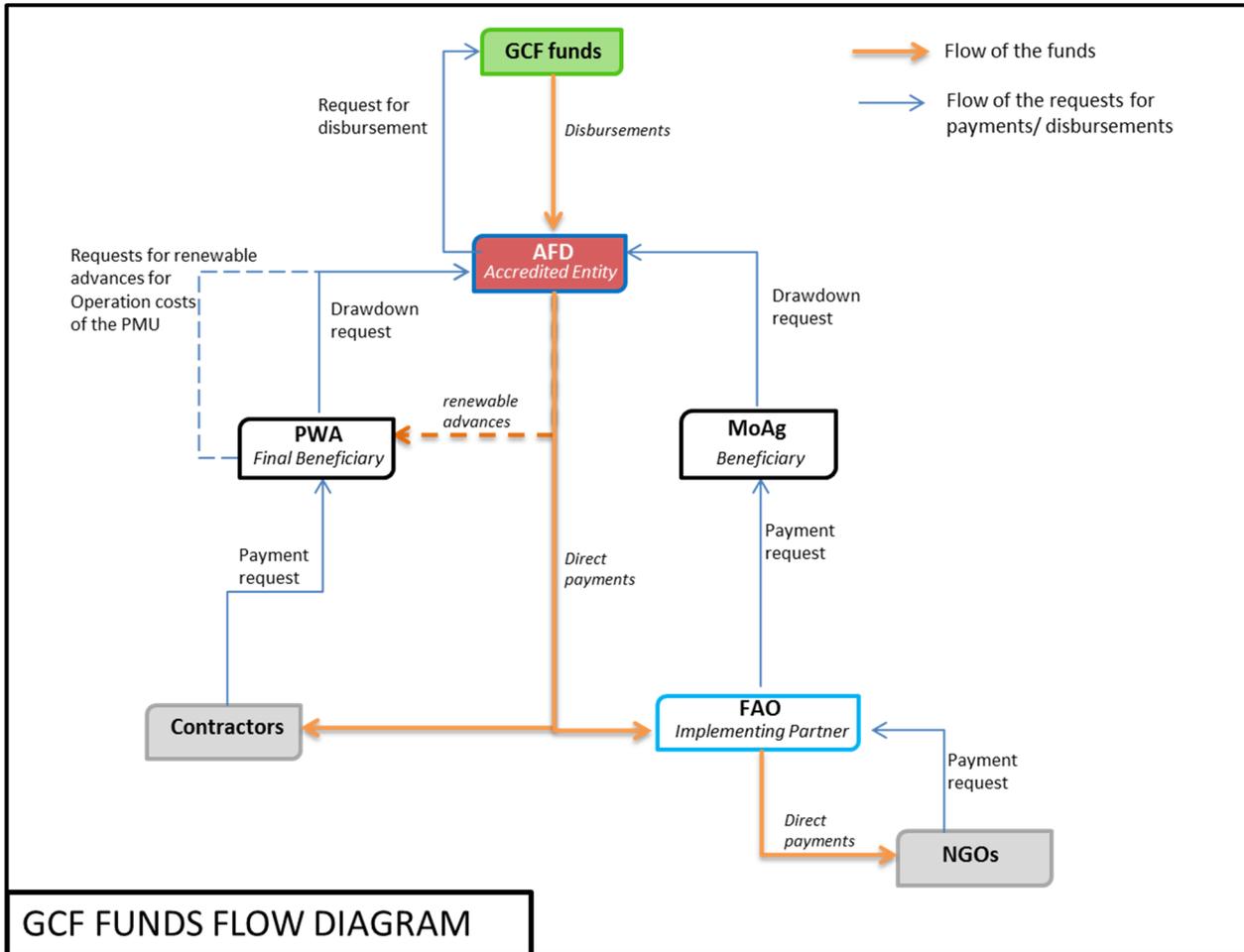
*Describe the project/programme's financial management and procurement, including financial accounting, disbursement methods and auditing.*

Procurement will be managed by the Central Tendering Department attached to the Ministry of Public Goods and Housing.

**AFD, as the AE, will be responsible for the project implementation and activities carried out by EEs:**

**AFD will provide oversight of procurement function, prior review and approval, as detailed in the AMA. Procurement activities and processes will follow AFD procurement policy and standards, as detailed in the AMA.**

Most disbursements will take the form of direct payments to firms contracted for works, supply of goods or services.



A special account will be opened at PWA for day to day small scale operational expenses as well as payment of salaries of PMU staff, where advance payment will be made in the maximum amount of a cumulated EUR 1 085 982. This account will be audited annually by a private firm accredited to international standards.

### G.1. Risk Assessment Summary

*Please provide a summary of main risk factors. Detailed description of risk factors and mitigation measures can be elaborated in G.2.*

Main risk factors are related to:

**Management of water quality for agriculture:** a monitoring system will be set up by the project and managed by PWA in coordination with EQA to perform day to day control of the quality of the water injected in the distribution scheme. The ESIA and ESMP detail the functioning and means of the monitoring system.

**Energy needs of the Managed Aquifer Recharge scheme:** the project includes alternate sources of energy (than the grid and generators) through solar panels and a bio-digester.

**Acceptance of treated wastewater:** in general, social acceptance can be a problem, especially in Muslim countries; in the case of MAR, the fact that the reuse is not operated directly from the WWTP strongly mitigates the social risk presented above. There will nevertheless be a need to communicate adequately on this aspect and make sure there is no confusion and residual reluctance to using the water (it will also depend on the quality of the water delivered).

### G.2. Risk Factors and Mitigation Measures

*Please describe financial, technical and operational, social and environmental and other risks that might prevent the project/programme objectives from being achieved. Also describe the proposed risk mitigation measures.*

#### Selected Risk Factor 1

Description	Risk category	Level of impact	Probability of risk occurring
<b>The water in the aquifer is not depolluted fast enough</b>	Social and environmental	Medium (5.1-20% of project value)	Low

#### Mitigation Measure(s)

The NGEST WWTP provides a high quality secondary treatment. Infiltration through 60 meters of sand completes the secondary treatment to a point that the water, when it enters the aquifer, is considered clean. It will nevertheless be mixed with relatively polluted water, residual from past infiltration of non-treated water and will therefore not be drinkable. Modeling of the aquifer and initial tests implemented by the PWA confirm it will be usable for agriculture when recovered by the wells installed by the project.

It is therefore crucial that the water cycle through the activation of the recovery wells is initiated as soon as possible, in order to stop the progression of the pollution plume and guarantee that uses of the underground water will be concentrated in agriculture.

The PWA, through the project, will enhance its monitoring and quality control mechanisms in order to generate real time information regarding the quality of water extracted from the aquifer and delivered to farmers. Communication and awareness raising of the population and farmers – also included in this project- will be a crucial element in the capacity of the implementing agency to mitigate this risk.

<b>Selected Risk Factor 2</b>			
Description	Risk category	Level of impact	Probability of risk occurring
<b>Lack of energy to run the system</b>	Technical and operational	Medium (5.1-20% of project value)	Medium
<b>Mitigation Measure(s)</b>			
<p>The negotiation between Palestine and Israel for access to electricity of the Gaza Strip has been going on for years and is part of a political discussion.</p> <p>At this stage Palestine and the local authorities in Gaza have secured an average of 16 hours per day of electricity from the grid for the NGEST WWTP, which is enough to run the plant. Nevertheless, in general, access to energy in Gaza, as described above, is problematic due to its fuel dependency.</p> <p>In this context, the project has taken every possible step to mitigate the energy insecurity in Gaza by diversifying, as much as possible, the energy mix of the overall MAR scheme: energy from the grid; cogeneration using byproducts of the WWTP; and, in particular, climate friendly off-grid solar energy production over 8,5 ha.</p>			
<b>Selected Risk Factor 3</b>			
Description	Risk category	Level of impact	Probability of risk occurring
<b>Social acceptance of TWW</b>	Social and environmental	High (>20% of project value)	Low
<b>Mitigation Measure(s)</b>			
<p>In theory, the use of TWW in Muslim countries poses acceptance issues by the population, namely for religious reasons. In growing aridity situations, as in Tunisia for instance, these social barriers can be overcome with growing awareness by the population.</p> <p>In the case of this project and, in general with MAR, the TWW is infiltrated in the aquifer, blended with underground water and recovered as such by the wells. It is not direct reuse of TWW – for which the social and cultural issues mentioned above can arise - and the water distributed to farmers is therefore quasi-conventional. Awareness raising on this issue will nevertheless be necessary due to the proximity of the recovery wells from the WWTP; monitoring of the quality of recovered water and communication with users will be crucial in establishing their trust with the provider. This is part of the FAO assignment which has deep know how and experiences with MoA in Palestine on this topic.</p>			

*\* Please expand this sub-section when needed to address all potential material and relevant risks.*

## H.1. Logic Framework.

Please specify the logic framework in accordance with the GCF's [Performance Measurement Framework](#) under the [Results Management Framework](#).

### H.1.1. Paradigm Shift Objectives and Impacts at the Fund level<sup>11</sup>

#### Paradigm shift objectives

<i>Shift to low-emission sustainable development pathways</i>	<p>Mitigation objective : Reinforce the sustainability of the Water-Energy nexus for the NGEST system.</p> <p>The project will show how emergency solutions related to survival of a whole population in the context of Gaza, can be thought and designed along low emission and sustainable pathways, the cobenefits of which are an increased resilience to shocks and an increased efficiency with regard to operation and maintenance costs.</p>
<i>Increased climate-resilient sustainable development</i>	<p>Three climate-resilient co-benefits are expected from the project:</p> <ul style="list-style-type: none"> <li>- Increased resilience of Gazan agriculture through the provision of improved water services for irrigation;</li> <li>- Recharge of the aquifer and improved access to domestic water of 200 000 people exposed to water scarcity;</li> <li>- Depollution and preservation of the aquifer.</li> </ul> <p>As a result of achieving these objectives, the process of pollution and overexploitation of the aquifer will be stopped before they reach an irreversible status.</p>

Expected Result	Indicator	Means of Verification (MoV)	Baseline	Target		Assumptions
				Mid-term (if applicable)	Final	

#### Fund-level impacts

	Tonnes of carbon dioxide equivalent (t CO <sub>2</sub> eq) reduced as a result of Fund-funded projects/ programmes	Measurement of the total solar power distributed to the NGEST system	0	0	316 125	
	Cost per tCO <sub>2</sub> eq decreased for all Fund-funded mitigation	Mid-term and final evaluations	N.A.	0,1 EUR/kWh	0,08 EUR/kWh	

<sup>11</sup>Information on the Fund's expected results and indicators can be found in its Performance Measurement Frameworks available at the following link (Please note that some indicators are under refinement):

[http://www.greencimate.fund/documents/20182/239759/5.3\\_-\\_Performance\\_Measurement\\_Frameworks\\_PMF\\_.pdf/60941cef-7c87-475f-809e-4ebf1acbb3f4](http://www.greencimate.fund/documents/20182/239759/5.3_-_Performance_Measurement_Frameworks_PMF_.pdf/60941cef-7c87-475f-809e-4ebf1acbb3f4)

	projects/programmes					
	Volume of finance leveraged by Fund funding	Decisions by other financial organizations	0	8 000 000 EUR	8 000 000 EUR	Additional funding obtained by the Irish Government
	Total Number of direct and indirect beneficiaries; Number of beneficiaries relative to total population	Palestinian Authority Statistics+ project information	0	100 000	223 553 (20% of Northern Gaza population)	
<i>M1.0 Reduced emissions through increased low-emission energy access and power generation</i>	M1.1 *Tonnes of carbon dioxide equivalent (t CO <sub>2</sub> e) reduced or avoided as a result of Fund-funded projects/programmes	Reviews by third party GHG auditors, etc.	0	40 000	166 858	
<i>A1.0 Increased resilience and enhanced livelihoods of the most vulnerable people, communities and regions</i>	A1.1 Change in expected losses of lives and economic assets (US\$) due to the impact of extreme climate-related disasters in the geographic area of the GCF intervention	Government / PWA – Gaza City Municipality data	18 = actual loss of lives as a consequence of previous waste water disaster (flooding) due to lack of treatment and MAR  No information available	0	0	In the baseline “scenario” (no project), the pollution of the aquifer would continue and more losses of lives due to unavailability of drinkable water would be expected (a negative figure – representing avoided losses of lives- could be introduced at mid-term and endline)

			e on loss of economic assets			
	A.1.2 Number of males and females benefiting from the adoption of diversified, climate-resilient livelihood options (including fisheries, agriculture, tourism, etc.)	Data from the Ministry of Agriculture, and FAO. Assessment by the Water Sector Regulatory Council (independent body)	0 males  0 females	1 600 males  400 females	3 306 males  900 females	Farmers in baseline depend on private wells delivering low quality water, unsustainably extracted from the aquifer
<i>A2.0 Increased resilience of health and well-being, and food and water security</i>	A.2.2 Number of food-secure households (in areas/periods at risk of climate change impacts)	Assessments by the FAO and WSRC	0	1 000	3 000	It is expected that not all farms will reach food security after gaining increased access to water, due mainly to other factors at play. Food security levels will be measured using FAO methodologies and standards.

	A.2.3 Number of males and females with year-round access to reliable and safe water supply despite climate shocks and stresses	National statistics / Gaza City Municipality data	0 male 0 female	50 000 male 50 000 female	100 000 male 100 000 female	The water infiltrated in the aquifer in substitution to water extracted for agricultural purposes will serve the domestic needs of 200 000 people that will appear due to demographic growth and that would otherwise not have access to sufficient quantities of water (safety of water will be closely monitored by the PWA, in accordance to Palestinian Water Law).

<p><i>A3.0 Increased resilience of infrastructure and the built environment to climate change</i></p>	<p>A.3.1 Number and value of physical assets made more resilient to climate variability and change, considering human benefits (reported where applicable)</p>	<p>Environmental Quality Agency (EQA) assessment</p>	<p>0 0 EUR</p>	<p>0 0 EUR</p>	<p>2 Value = 85 MEUR)</p>	<p>Assumptions of the value of assets: - The NGEST WWTP made more resilient by the Water-Energy nexus (60 MEUR) + - The irrigation scheme made more resilient through an improved water service (25 MEUR in value))</p>
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H.1.2. Outcomes, Outputs, Activities and Inputs at Project/Programme level						
Expected Result	Indicator	Means of Verification (MoV)	Baseline	Target		Assumptions
				Mid-term(if applicable)	Final	
<b>Project/programme outcomes</b>	<b>Outcomes that contribute to Fund-level impacts</b>					
	Number of technologies and innovative solutions transferred or licensed to support low-emission development as a result of Fund support. (mitigation)	Final evaluation and EQA – PENRA assessment	0	2	3	Design and adoption of a complex and innovative Water – Energy nexus, including solar and biogas generation, as well as a net-metering system with the grid
	Number of technologies and innovative solutions transferred or licensed to promote climate resilience as a result of Fund support. (adaptation)	Final evaluation and EQA assessment	0	0	1	Design and transfer of an Managed Aquifer Recharge scheme
M.5.0 Strengthening institutional and regulatory systems for low-emission planning and development	M.5.1 Institutional and regulatory systems that improve incentives for low-emission planning and development and	EQA and PENRA assessment	No such system in N. Gaza	System partially functioning	System functioning	Implementation of the Water – Energy Nexus and in particular effectivity of the Net metering system (in order to maximize use of solar energy)

	their effective implementation					
M6.0 Increased number of small, medium and large low-emission power suppliers	M6.1 Proportion of low-emission power supply in a jurisdiction or market	EQA and PENRA assessment and data	0	0	40%	
	M.6.3 MWs of low-emission energy capacity installed, generated and/or rehabilitated as a result of GCF support	EQA – PENRA assessment and data	0	4 MWp	8 MWp	
<i>A5.0 Strengthened institutional and regulatory systems for climate-responsive planning and development</i>	A.5.1 Institutional and regulatory systems that improve incentives for climate resilience and their effective implementation	Level of funding and autonomy / power of WSRC	Low to inexistence	Funding directed to WSRC	WSRC performing its regulatory role with funds and independence	The Water Sector Regulatory Council (WSRC) acts as an effective regulator of the Water Sector in order to improve planning and allocation of investments to reduce water scarcity and promote co-management of the resource between users and government (as per the Water Law)
<i>A7.0 Strengthened adaptive capacity and reduced exposure to climate risks</i>	A7.1 Use by vulnerable households, communities, businesses and public-sector services of Fund-supported tools, instruments, strategies and	Water metering system co-managed by the WUA and PWA at the entry point of the irrigation scheme and at farm	0	5 m <sup>3</sup> of water from the recovery scheme every year	13 m <sup>3</sup> /year	The Fund-supported tool considered is the water recovery scheme and its use by farmers for irrigation.

	activities to respond to climate change and variability	gate. Independent assessment from the WSRC				
<i>A.8.0 Strengthened awareness of climate threats and risk-reduction processes.</i>	A8.1 Number of males and females made aware of climate threats and related appropriate response.	WSRC independent assessment	Male: 0 Female: 0	Male:500 Female: 100	Male: 1 000 Female: 200	Farmers (men and women) are made aware of the effects of climate change on water scarcity and means of increased efficiency in use of agricultural water.
<b>Project/programme outputs</b>	<b>Outputs that contribute to outcomes</b>					
1. Production of additional quantities of water for agricultural use	Quantity of “usable” water available (in Mm <sup>3</sup> )	Measurement at infiltration point and field surveys amongst farmers and surrounding urban population (measurements in quantity will be implemented by independent lab in Ramallah, in accordance with national	0	26	26	The WWTP functions at capacity

		standards – Warer Law)				
	Decrease in direct pumping in the aquifer by the farmers	WSRC assessment	13 000 000m <sup>3</sup>	6 000 00 0m <sup>3</sup>	0	
	Increased quality of water	Measureme nt of nitrate containts (mg/l)	100	75	50	
2. Development of irrigation, water efficiency and climate resilient agriculture	Number of hectares benefiting from the project	Field survey/sate llite images	0	500	1 200	Farmers are willing to pay for the water service  New cropping patterns are introduced by the FAO and adopted by the farmers
	Change in agricultural practices and cropping patterns	FAO assessment	Mostly horticul tural crops	Inceptio n of drip irrigatio n agricultu re	Mostly trees croppi ng and rotatio ns on high value crops under drip irrigati on	
3. Management of the water cycle and capacity building of stakeholders	Number of people trained and members of community empowered as well as uptake of capacity building	Counting of trainees and scoring of the level of intake (performed by the TA)	0	2 500 people, with 60% uptake	5 000 with 75% uptake	TA and NGO's are mobilized for the community work.

	Capacity of the WUAs and involvement of women in decision making	Scoring of WUAs for governance , administrative and financial management, quality of services	0	Poor to medium score	High score	

Activities	Description	Inputs	Description
1.1. An additional water resource is created by Managed Aquifer Recharge	Rehabilitation of 7 infiltration basins for recharge of the aquifer Implementation of the recovery scheme (14 wells and 1 reservoir)	Works Tendering of equipments and goods	Cleaning of the infiltration basins ; drilling of wells and construction of a new reservoir.
1.2. Water – Energy Nexus, development of renewable low-emission energy solutions	Delivery of 2 PV schemes to sustain the overall needs of the NGEST scheme for a total of 7,5 MWp	Works Tendering of equipments and goods Consultancy services for supervision of works	Delivery and installation of solar panels
2.1. An improved water service for irrigation is brought to 4 200 beneficiaries over 1 500 ha	Development of the irrigation scheme bringing the water from the recovery scheme to the farms	Works Tendering of equipments and goods Consultancy services for supervision of works Supervision by FAO	Construction of an irrigation scheme
2.2. Increased climate resilience of agriculture, adaptation of cropping systems to climate change	Extension services to farmers Subsidy of on-farm water saving equipment Gender, land tenure and irrigation – a Gender-responsive approach to agricultural resilience to climate change	Extension services by FAO and MoA staff Consultancy services Tendering of equipments and goods	Provision of technical and economical services to farmers to improve productivity
			Equipment of beneficiary farms with localized irrigation systems (e.g drip irrigation)
			Support to land owning women; empowerment of communities to increase their gender sensitivity in agriculture; training and capacity building of women in agriculture.

<p>3.1. Strengthening of PWA capacities in its role of coordination and quality control of the process of reuse of treated waste water</p>	<p>cycle Technical assistance Setting-up of a water quality monitoring and control system</p>	<p>Consultancy services</p>	<p>Support to the PWA for implementation and coordination of the project</p>
<p>3.2. Exit Strategy and Transfer of O&amp;M to Water Users</p>	<p>Identification and establishment of the co-management scheme – Structuring and capacity building of a WUA Integration of women in the governance bodies of the WUA</p>	<p>Support by FAO</p>	<p>The FAO and MoA will support farmers in organizing within the WUA in order to manage the irrigation scheme. Particular attention will be given to the participation of women in the decision making processes.</p>
<p>3.3. Communities are empowered and supported</p>	<p>Support to communities and farmers to increase resilience and develop coping mechanisms in the face of further crises. Diagnostic and analysis of the conditions of recovery and restoration of unused land within the irrigable area Psychosocial support and strengthening of community and household bounds</p>	<p>Consultancy services, NGOS and FAO support</p>	<p>A set of actions will be implemented in order to increase the resilience of the population in the face of climate change.</p>
<p>3.4. Capitalization of the outputs/outcomes for replication and upscaling in Palestine</p>	<p>Knowledge building. Intellectual services for capitalization</p>	<p>Consultancy services</p>	<p>The scaling-up and replication of the project's key outputs will take place through a capitalization</p>



			process that will involve independent expertise.
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## H.2. Arrangements for Monitoring, Reporting and Evaluation

*Besides the arrangements (e.g. semi-annual performance reports) laid out in AMA, please provide project/programme specific institutional setting and implementation arrangements for monitoring and reporting and evaluation. Please indicate how the interim/mid-term and final evaluations will be organized, including the timing.*

The project will have a specific and institutionalized approach to oversight, monitor and evaluate. Apart from the necessary monitoring and evaluation tools the PMU will indeed develop with the assistance of the Technical Assistance, the institutional framework of the project includes the Water Sector Regulatory Council as an external body in charge of independently monitoring and evaluating the project's achievements, as per the Palestinian Water Law requirements and standards.

Roles and responsibilities of the WSRC in the project need to be detailed further at inception report stage. Indeed, the reform of the water sector is not yet completed and more specifically, the independency of WSRC is unfortunately not yet formally agreed and approved.

In this context, the PWA-PMU will be in charge of centralizing and managing the monitoring system of the project. In particular, the PMU will be responsible for co-organizing the Mid-term review, as well as the end-line final evaluation of the project, in line with the incoming GCF guidelines.

AFD will tender and contract the consultancy services for the ex-post evaluation of the project, after full completion of the activities (usually one year after project completion).

*Please provide methodologies for monitoring and reporting of the key outcomes of the project/programme.*

PWA will be in charge of semi-annually reporting on hydraulic activities of the project, whereas the MoA-FAO will report semi-annually as well on on-farm, agricultural activities. Independent data sources will be mobilized and used for the mid-term and final evaluations.

For both PWA and FAO, an M&E specialist will be involved in gathering data in order to update indicators of key outcomes of the project. All inputs under each activity are designed in order to contribute the key outcomes of the project. As presented in the Logframe, it is expected that most of the project outcomes will be reached after project completion. Periodic reporting will then present what has been completed on the path towards the outcomes.

## I. Supporting Documents for Funding Proposal

- NDA No-objection Letter
- Feasibility Study
- Integrated Financial Model that provides sensitivity analysis of critical elements (xls format, if applicable)
- Confirmation letter or letter of commitment for co-financing commitment (If applicable)
- Project/Programme Confirmation/Term Sheet (including cost/budget breakdown, disbursement schedule, etc.) – see *the Accreditation Master Agreement, Annex I*
- Environmental and Social Impact Assessment (ESIA) or Environmental and Social Management Plan (If applicable)
- Appraisal Report or Due Diligence Report with recommendations(If applicable)
- Evaluation Report of the baseline project(If applicable)
- Map indicating the location of the project/programme
- Timetable of project/programme implementation

*\* Please note that a funding proposal will be considered complete only upon receipt of all the applicable supporting documents.*

**List of Annexes:**

Annex 1	NDA no-objection letter(s)
Annex 2	Map(s) indicating the location of proposed interventions
Annex 3	Baseline study on water in Palestine
Annex 4	Climate Change Model
Annex 5	Theory of Change
Annex 6	Feasibility study - and a market study, if applicable
Annex 7	Economic and/or financial analyses in spreadsheet format
Annex 8	Detailed budget plan
Annex 9	E&S document corresponding to the E&S category (A) - Environmental and Social Impact Assessment (ESIA) - Environmental and Social Management Plan (ESMP) - Resettlement Action Plan (RAP)
Annex 10	FAO activities
Annex 11	Summary of consultations and stakeholder engagement plan
Annex 12	Gender assessment and project/programme-level action plan
Annex 13	WUA By-laws
Annex 14	Other REUSE Systems
Annex 15	Poverty Profile of Palestine
Annex 16	Procurement plan
Annex 17	AE fee request
Annex 18	Co-financing commitment letters, if applicable
Annex 19	Term sheet including a detailed disbursement schedule and, if applicable, repayment schedule
Annex 20	Evidence of internal approval
Annex 21	Green House Gas emissions reduction calculations
Annex 22	Appraisal mission report
Annex 23	Water Quality Management Plan

No-objection letter issued by the national designated authority(ies) or focal point(s)

State Of Palestine  
Environment Quality Authority  
Chairman Office



دولة فلسطين  
سلطة جودة البيئة  
مكتب رئيس سلطة جودة البيئة  
الرقم: 1539-2017  
التاريخ: 28-11-2017  
رقم: 2017-11-28

No :-----

Date:-----

To: The Green Climate Fund ("GCF")

Ramallah / Palestine, November 27, 2017

**Re: Funding proposal for the GCF by French Development Agency (AFD) regarding:**

**Water Banking and Adaptation of Agriculture to Climate Change in Northern Gaza**

Dear Madam, Sir,

We refer to the project: **Water Banking and Adaptation of Agriculture to Climate Change in Northern Gaza in Palestine** as included in the funding proposal submitted to us by **French Development Agency (AFD)** on November 23, 2017.

The undersigned is the duly authorized representative of **Environment Quality Authority**, the National Designated Authority of Palestine.

Pursuant to GCF decision B.08/10, the content of which we acknowledge to have reviewed, we hereby communicate our no-objection to the project as included in the funding proposal.

By communicating our no-objection, it is implied that:

- The government of Palestine has no-objection to the project as included in the funding proposal;
- The project as included in the funding proposal is in conformity with Palestine's national priorities, strategies and plans;
- In accordance with the GCF's environmental and social safeguards, the project as included in the funding proposal is in conformity with relevant national laws and regulations.

We also confirm that our national process for ascertaining no-objection to the project as included in the funding proposal has been duly followed.

We acknowledge that this letter will be made publicly available on the GCF website.

Kind regards,

Eng. Adalah Attereh

Chair of Environment Quality Authority



Al Bireh – Al Sharafa – P.O.Box 3841  
Tel: 2403495 or 2403498 Fax: 2403494

فلسطين – البيرة - حي الشرفه - ص.ب 3841  
تلفون: 2403495/8 فاكس 2403494

Email: [info@environment.pna.ps](mailto:info@environment.pna.ps): بريد الكتروني

## Environmental and social safeguards report form pursuant to para. 17 of the IDP

Basic project or programme information	
Project or programme title	Water Banking and Adaptation of Agriculture to Climate Change in Northern Gaza <sup>1</sup>
Existence of subproject(s) to be identified after GCF Board approval	No
Sector (public or private)	Public
Accredited entity	Agence Française de Développement (AFD)
Environmental and social safeguards (ESS) category	Category A
Location – specific location(s) of project or target country or location(s) of programme	Northern Gaza, Palestine
Environmental and Social Impact Assessment (ESIA) (if applicable)	
Date of disclosure on accredited entity's website	Tuesday, July 9, 2019
Language(s) of disclosure	English and Arabic
Explanation on language (valid for all disclosed documents)	<p>English is an official language in Palestine and the professional language for preparing these documents in Palestine. All public stakeholders involved in the processes of elaborating the Environmental and Social Impact Assessment (ESIA), Environmental and Social Management Plan (ESMP), and Resettlement Action Plan (RAP) read and write in English. Furthermore, since these studies are prepared under international E&amp;S performance standards, it is deemed more practical to work in that language.</p> <p>Arabic is the local language.</p>
Link to disclosure	<p>English:  <a href="https://www.afd.fr/en/water-banking-and-adaptation-agriculture-climate-change-northern-gaza-environmental-and-social-safeguards">https://www.afd.fr/en/water-banking-and-adaptation-agriculture-climate-change-northern-gaza-environmental-and-social-safeguards</a></p> <p>Arabic:  <a href="https://www.afd.fr/sites/afd/files/2019-07-02-46-37/water-banking-and-adaptation-northern-gaza-environmental-and-social-safeguards-arabic-version.pdf">https://www.afd.fr/sites/afd/files/2019-07-02-46-37/water-banking-and-adaptation-northern-gaza-environmental-and-social-safeguards-arabic-version.pdf</a></p>
Other link(s)	Ministry of Environmental Affairs, Palestine: <a href="https://bit.ly/30xLa7I">https://bit.ly/30xLa7I</a>
Remarks	An ESIA consistent with the requirements for a category A project is contained in the Supplemental Environmental and Social Impact Assessment Final Report (SESIA).

<sup>1</sup> This is the title of the phase of the overall North Gaza Emergency Sewage Treatment Project (NGESTP) we are currently financing and submitting to the GCF, with a focus on climate change. The project title stated in the ESIA and ESMP, North Gaza Emergency Sewage Treatment Project (NGESTP) Effluent Recovery and Reuse System and Remediation works, refers to the generic name of the project, as it has been used in precedent phases of financing.

<b>Environmental and Social Management Plan (ESMP) (if applicable)</b>	
Date of disclosure on accredited entity's website	Tuesday, July 9, 2019
Language(s) of disclosure	English and Arabic
Explanation on language	<p>English is an official language in Palestine and the professional language for preparing these documents in Palestine. All public stakeholders involved in the processes of elaborating the ESIA, ESMP, and RAP read and write in English. Furthermore, since these studies are prepared under international E&amp;S performance standards, it is deemed more practical to work in that language.</p> <p>Arabic is the local language.</p>
Link to disclosure	<p>English:  <a href="https://www.afd.fr/en/water-banking-and-adaptation-agriculture-climate-change-northern-gaza-environmental-and-social-safeguards">https://www.afd.fr/en/water-banking-and-adaptation-agriculture-climate-change-northern-gaza-environmental-and-social-safeguards</a></p> <p>Arabic:  <a href="https://www.afd.fr/sites/afd/files/2019-07-02-46-37/water-banking-and-adaptation-northern-gaza-environmental-and-social-safeguards-arabic-version.pdf">https://www.afd.fr/sites/afd/files/2019-07-02-46-37/water-banking-and-adaptation-northern-gaza-environmental-and-social-safeguards-arabic-version.pdf</a></p>
Other link(s)	Ministry of Environmental Affairs, Palestine: <a href="https://bit.ly/30xLa7J">https://bit.ly/30xLa7J</a>
Remarks	An ESMP consistent with the requirements for a category A project is contained in the SESIA.
<b>Environmental and Social Management (ESMS) (if applicable)</b>	
Date of disclosure on accredited entity's website	N/A
Language(s) of disclosure	N/A
Explanation on language	N/A
Link to disclosure	N/A
Other link(s)	N/A
Remarks	N/A
<b>Any other relevant ESS reports, e.g. Resettlement Action Plan (RAP), Resettlement Policy Framework (RPF), Indigenous Peoples Plan (IPP), IPP Framework (if applicable)</b>	
Description of report/disclosure on accredited entity's website	Tuesday, July 9, 2019
Language(s) of disclosure	English and Arabic
Explanation on language	<p>English is an official language in Palestine and the professional language for preparing these documents in Palestine. All public stakeholders involved in the processes of elaborating the ESIA, ESMP and RAP read and write in English. Furthermore, since these studies are prepared under international E&amp;S performance standards, it is deemed more practical to work in that language.</p> <p>Arabic is the local language.</p>
Link to disclosure	<p>English:  <a href="https://www.afd.fr/en/water-banking-and-adaptation-agriculture-climate-change-northern-gaza-environmental-and-social-safeguards">https://www.afd.fr/en/water-banking-and-adaptation-agriculture-climate-change-northern-gaza-environmental-and-social-safeguards</a></p>

	Arabic: <a href="https://www.afd.fr/sites/afd/files/2019-07-02-46-37/water-banking-and-adaptation-northern-gaza-environmental-and-social-safeguards-arabic-version.pdf">https://www.afd.fr/sites/afd/files/2019-07-02-46-37/water-banking-and-adaptation-northern-gaza-environmental-and-social-safeguards-arabic-version.pdf</a>
Other link(s)	Ministry of Environmental Affairs, Palestine: <a href="https://bit.ly/30xLa7I">https://bit.ly/30xLa7I</a>
Remarks	The SESIA contains a Resettlement Action Plan.
<b>Disclosure in locations convenient to affected peoples (stakeholders)</b>	
Date	Thursday, July 12, 2018
Place	On the site of the NGEST WW Treatment Plant, in the vicinity (200 m) of the future irrigation scheme and at Gaza City, Hotel Rashid where some of the public consultations were also conducted.
<b>Date of Board meeting in which the FP is intended to be considered</b>	
Date of accredited entity's Board meeting	Thursday, November 14, 2019
Date of GCF's Board meeting	Tuesday, November 12, 2019

**Note: This form was prepared by the accredited entity stated above.**

## Secretariat's assessment of FP119

Proposal name:	Water Banking and Adaptation of Agriculture to Climate Change in Northern Gaza
Accredited entity:	Agence Française de Développement (AFD)
Country/(ies):	State of Palestine
Project/programme size:	Small

### I. Overall assessment of the Secretariat

1. The funding proposal is presented to the Board for consideration with the following remarks:

Strengths	Points of caution
The project has a strong climate rationale. Acute water scarcity in the State of Palestine is strongly linked with the climate vulnerability of its population, especially those in rural areas and communities.	Access to energy in the project location could be limited. The photovoltaic system installed through the project will bring a 35 per cent autonomy to the managed aquifer recharge scheme; the rest will be secured through the grid.
The project demonstrates good value for money for GCF funding. The 30 per cent contribution from GCF to address the growing vulnerability of the target population due to increasing water scarcity is estimated to have a climate value for money of approximately 130 per cent.	Social acceptance around treated wastewater could be low. The residence time of water in the aquifer before reuse is key to mitigating this risk. The creation of Water Users Associations would ensure the inclusion of the most vulnerable farmers, including women, into project activities.
The project uses an effective technical solution that has been demonstrated regionally. Managed aquifer recharge is considered a better option than providing direct transfer of treated wastewater to farmers due to higher water quality and environmental co-benefits.	

2. The Board may wish to consider approving this funding proposal with the terms and conditions listed in the respective term sheet and addendum XVII titled "List of proposed conditions and recommendations".

### II. Summary of the Secretariat's assessment

#### 2.1 Project background

3. The State of Palestine is characterized by high climate variability that impacts upon its already depleted water resources. It is estimated that the State of Palestine will experience a

water deficit of 271 million cubic metres per year by 2020 due to climate change and population growth. Furthermore, the coastal aquifer is the only freshwater resource in the area, serving the needs of the population and agricultural activities, but its water level is declining at a rapid rate, resulting in the significant intrusion of seawater. Against this backdrop, agricultural inefficiencies in the area lead to the overuse of water and high evaporation, putting additional pressure on the aquifer under the increasing effects of climate change. In this respect, the project aims at limiting the compounding effects of climate change on water resources by adding new resources to the water balance in the northern part of Gaza through creating a closed cycle of reusing treated wastewater for irrigated agriculture. This multiplier effect will alleviate pressure on the coastal aquifer and improve the climate resilience of farmers and local populations.

4. The accredited entity (AE) has requested €23.70 million in grant financing from GCF to finance project activities. Additional co-financing will be provided by Agence Française de Développement (AFD) and IrishAid, amounting to €13 million and €8 million, respectively.

5. The project has been categorized by the AE as a category B (medium-risk project) and by GCF as category A (high-risk project). The high-risk categorization of the project is due to the inclusion of activities that could potentially contaminate an aquifer that is already in a critical state. The other key environmental and social risks relate to: (i) involuntary resettlement, which is made more significant given the scarcity of land in the Gaza Strip; (ii) the potential damage to buried artefacts, considering that the site is situated in an archaeologically important region; (iii) the cultural acceptability of wastewater as a source of irrigation; (iv) the potential contamination of agricultural produce and exposure of consumers and farmworkers to these contaminants; and (v) the security situation of the area.

6. The AE has submitted an environmental and social impact assessment (ESIA)/environmental and social management plan (ESMP) and a resettlement action plan (RAP) along with the funding proposal to mitigate these risks.

## 2.2 Component-by-component analysis

7. The project's goal is to develop an integrated low carbon water management scheme to reduce the impact of climate change and deliver additional amounts of water usable for sustaining agriculture and increasing the resilience of local populations in Gaza. It will achieve this through the following three outcomes:

- (a) Reducing the vulnerability of Gaza's coastal aquifer and securing sustainability of access to domestic and agricultural water;
- (b) Promoting climate-resilient and water-efficient agriculture; and
- (c) Enhancing the institutional and operational capabilities for integrated and resilient water management.

*Output 1: Production of additional quantities of water for agricultural use (total cost: €14.13 million; GCF cost USD 7.47 million, or 46.3 per cent)*

8. The component will include activities to rehabilitate seven infiltration basins by transferring wastewater from the Beit Lahia wastewater treatment plant (WWTP) to the Northern Gaza Emergency Sewage Treatment (NGEST) area. Currently, wastewater is infiltrated directly into the aquifer, resulting in a pollution plume underground and infiltration basins clogged with residue. The treated wastewater reuse scheme will recover, store and distribute treated water through a network of 28 recovery wells located 500 meters downstream from the infiltration point and pipes connecting the wells to two reservoirs of 4,000 cubic metres each. The first phase of the scheme was financed by the World Bank, covering 14 recovery wells and one reservoir.

9. The second part of the component will supply power to the NGEST plant and the recovery scheme, which currently have restricted access to electricity from diesel generators. The project will set up a total surface area of 8.5 ha of ground-mounted photovoltaic (PV) panels at three locations: i) within the premises of the NGEST WWTP (2 ha); ii) around the recovery scheme (3 ha); and iii) adjacent to the NGEST area (3.5 ha). The three systems will result in a total installed capacity of 7.5 megawatts (MW). Electricity produced from the first two systems will supply power directly to the WWTP and the recovery and irrigation site (with only excess supply being supplied to the grid). Electricity from the third system will be delivered back to the system through net metering. This activity will receive co-financing from IrishAid and is expected to reduce direct electricity supply from the grid by 59 per cent. The AE has confirmed that land adjacent to NGEST facilities has been authorized by Israeli authorities through existing coordination mechanisms already in place.

*Output 2: Development of irrigation, water efficiency and climate-resilient agriculture (total cost: USD 26.98 million; GCF cost USD 15.93 million, or 59 per cent)*

10. This component consists of the delivery of an irrigation scheme over a gross irrigable area of 1,500 ha and agricultural services to the farmers/water users aimed at improving their practices and thereby enhancing their resilience to climate change impacts and reducing their vulnerabilities.

11. The component will deliver a distribution network to service two irrigated sub-areas of 500 ha and 1,000 ha of gross irrigable area located around the WWTP, corresponding to a total of 126 km of pipeline and an upgrade of the booster station to support drip irrigation practices. On-farm investments will be included in the costs supported by the project, but they will be reimbursed (with a subsidy rate) by the farmers over a three-year period in order to set up an operation and maintenance (O&M) fund for the Water Users Association (WUA). The drip irrigation system will reduce water losses and evaporation, increase on-farm productivity and thereby generate more income for the farmers.

12. The component will also support the creation of a WUA, through the recovered water will be sold and delivered. It will also have the responsibility of distributing it equally to all users through the application of a transparent and approved tariff. The design of the irrigation scheme to be delivered by the project will allow for the availability of water to all farmers every day, for 12 hours per day.

13. The component will provide agricultural and extension services (i.e., technical and economic advisory services, capacity-building by demonstration, farmer field schools, training) to farmers to help them adapt better to climate impacts. In addition to advisory and extension services, the component will also provide on-farm services and water-saving equipment (drip irrigation system or sprinklers) to farmers who have confirmed their membership to the WUA and have agreed to reimburse the amount invested by the project for farm equipment over a period of five years. The proceeds from these reimbursements will cover the O&M and investment fund of the WUA as part of the project's exit strategy.

14. The component will incorporate a gender-responsive approach to agricultural resilience to climate change by creating more opportunities whereby women could gain access to water, technical services and agricultural work. Thus, women will be engaged through community mobilization work led by the Ministry of Agriculture and the Food and Agriculture Organization of the United Nations (FAO) (in collaboration with local civil society organizations). This will increase the participation of women in the governance of the WUA and enable them to practice quality cropping (gardening) on their micro plots. Furthermore, the women would be supported to create cooperatives to market their products and create food banks for families.

*Output 3: Management of the water cycle and capacity-building of stakeholders (total cost: USD 2.36 million; GCF cost USD 818,720, or 34.6 per cent)*

15. The project will work towards improving institutional and governance mechanisms around water use and ensuring the sustained O&M of adaptation infrastructure. The component will support the capacity-building of relevant line agencies operating in Gaza through a technical assistance (TA) component provided to the Palestine Water Authority (PWA) to:
- (a) Coordinate the actions of implementing agencies;
  - (b) Set up a monitoring and evaluation system to assess water quality for irrigation and broader project outcomes;
  - (c) Stakeholder engagement (including beneficiaries);
  - (d) Environmental and social management plan (ESMP), gender action plan (GAP) and resettlement action plan (RAP) implementation; and
  - (e) Delivery of on-farm irrigation equipment.
16. The component will also set up a monitoring and water quality control system to ensure the quality of water delivered to the irrigation scheme.
17. Finally, the component will include elements targeting social co-benefits to increase the adaptive capacity of beneficiaries through reboosting community dynamics and knowledge-sharing.

### **III. Assessment of performance against investment criteria**

#### **3.1 Impact potential** *Scale: High*

18. The 13 million cubic metres of water per year recovered through the WWTP and infiltrated into the aquifer will reduce the exposure of around 23,553 farmers to climate risks by alleviating the pressure on the aquifer from agricultural activity.
19. In the context of extreme water scarcity, it is expected that this additional resource will free up additional quantities of water to cover the domestic needs of a growing population that otherwise would be used for agriculture (in the baseline scenario). The project will meet the domestic needs of 200,000 people over the lifetime of the scheme. The total impact of the project therefore reaches 223,553 beneficiaries.

#### **3.2 Paradigm shift potential** *Scale: High*

20. Reuse of treated domestic wastewater within the water cycle creates a multiplier effect, as a key adaptive response to water scarcity. The setup and strengthening of a water quality monitoring and control mechanism, which is paramount to the success of any reuse project, will ensure that water is suitable for agricultural reuse.
21. The involvement of the Water Sector Regulatory Council as an external oversight body will be essential to limit the risks of such projects and make sure that quality standards are met on a day-to-day basis.
22. The stronger inclusion of on-farm activities, a key aspect in the sustainability of reusing treated wastewater in agriculture, and the involvement of the Ministry of Agriculture and FAO will set a precedent for a more holistic approach to the management of the water cycle. The creation of the WUA and the prioritization of women therein will lead to more equitable and gender-balanced access and distribution of water.

#### **3.3 Sustainable development potential** *Scale: High*

23. The activation of the water cycle downstream from the NGEST WWTP through the infiltration and recovery of treated wastewater will have two benefits in terms of reducing pollution and preventing the possible occurrence of a health crisis in Gaza City: (i) infiltration of treated wastewater will dilute the pollution plume; and (ii) the depression in the aquifer caused by recovery will reverse the progression of the pollution plume towards the city wells.
24. An environmental co-benefit of the project is the reduction in greenhouse gases through the installation of a seven-hectare PV scheme.
25. The project's gender action plan will ensure effective gender mainstreaming and the integration of a consistent gender perspective in the NGEST project in order to maximize climate and development co-benefits.

### 3.4 Needs of the recipient

*Scale: High*

26. The food insecurity–water insecurity nexus is the main driver of vulnerability in Gaza, which highlights the rationale for the present project. The reuse of treated wastewater through the recharge of the aquifer and wastewater recovery for agriculture results in the co-impacts of increased water availability and agricultural resilience.

### 3.5 Country ownership

*Scale: High*

27. The project is well aligned with national climate plans and policies. The AE prepared this project based on key adaptation actions prioritized in the State of Palestine's national adaptation plan, which identifies enhancing the use of additional and alternative water resources for non-domestic purposes as one of the key areas.
28. The activities of this project aim to reduce vulnerability, enhance resilience to climate change and increase adaptive capacity in 12 sectors, including water, wastewater and health. It clearly improves water security by creating new and additional resources for the country, which is greatly suffering from a lack of water resources, and helps the country respond to climate change challenges through enhanced aquifer management.

### 3.6 Efficiency and effectiveness

*Scale: High*

29. The addition of PV fields to the NGEST system will reduce: (i) the annual direct supply from the grid in its first year of operation by 59 per cent; and (ii) the required annual energy from emergency diesel by 45 per cent, leading to a direct savings of around 4.7 million litres of diesel fuel per year. Accordingly, the PV share in the energy mix feeding the NGEST system in the first year of operations should reach 38 per cent of the total annual power consumption, with the rest supplied by diesel (12 per cent), grid electricity (20 per cent) and biogas (30 per cent).
30. The NGEST WWTP + Recovery Scheme power supply without PV and with the current supply options leads to an overall levelized cost of energy (LCOE) of 0.24 USD/kilowatt hour (kWh). NGEST with the PV installed will have an overall LCOE of 0.155 USD/kWh, making it much cheaper than the "no-PV situation". This will generate savings amounting to USD 700,000 in the first year, together with a gain of USD 1,500,000 from net metering (compensation of electric consumption from other sites by feeding extra PV power to the grid). Over the lifespan of the project, the gain should be around USD 36,000,000 in present value at a 5 per cent discount rate.

## IV. Assessment of consistency with GCF safeguards and policies

## 4.1 Environmental and social safeguards

31. **Environmental and Social Risk Category.** The project is assessed as Category A, given that it would involve activities affecting an aquifer which is currently in a critical state. Although the interventions are partly designed to protect and improve the aquifer, there is a risk of further contamination of the groundwater due to malfunction or failure of the scheme. The other key environmental and social risks relate to: (i) involuntary resettlement which is made more significant given the scarcity of land in the Gaza Strip, including displacement of existing private and community wells in the area; and, (ii) the potential contamination of agricultural produce and exposure of consumers and farmworkers to these contaminants.

32. **Safeguard Instruments and Disclosure.** The AE has submitted an Environmental and Social Impact Assessment (ESIA) report with an Environmental and Social Management Plan (ESMP), and a Resettlement Action Plan (RAP). The documents are disclosed on the AE's and GCF's websites in accordance with GCF's Information Disclosure Policy for Category A project.

33. **Compliance with GCF's Environmental and Social Safeguards (ESS) Standards.** The following summarizes the project's compliance to GCF ESS standards and requirements:

- (a) **ESS 1: Assessment and Management of Environmental and Social Risks and Impacts.** The AE has prepared an ESIA with ESMP, which is an updated version of the ESIA for the NGEST-Phase B. The ESIA covers the expansion and the additional components. It also incorporates the lessons learned from Phase B. The assessment focused on the Managed Aquifer Recharge (MAR) scheme using partially treated wastewater. The recharge will provide additional aquifer capacity, allowing the aquifer to sustain existing and additional water abstraction for irrigation. The recovery component of the MAR is also expected to facilitate the removal of poor-quality infiltrates that had accumulated in the aquifer during the early phases of NGEST when raw sewage was transferred into the infiltration basins while the WWTP was not yet operational.
- (b) **ESS 2: Labor and Working Conditions.** Around 150 workers are expected to be mobilized during construction who may be exposed to occupational health and safety risks and job-related accidents, illnesses, and other adverse impacts on workers. Influx of construction workers in the project may also contribute to additional stress to local utilities and social dynamics. To manage this, the project will orient the workers and be required to comply with a Code of Conduct governing workers' behaviour during off-shift hours and in their interactions with local communities. The ESIA and ESMP have also included measures to manage labour and working conditions of the project including providing training to unskilled workers and measures against child labour and exploitation.
- (c) **ESS 3: Resource Efficiency and Pollution Prevention.** The project will maximize water resource efficiency by treating and reusing wastewater for irrigation. It will also facilitate the removal of a plume of low-quality infiltrates currently in the aquifer, which had accumulated from 2009 to 2018 when raw sewage from Beit Lahia was stored in the infiltration basins while NGEST WWTP was not yet operational.
- (d) **ESS 4: Community Health, Safety and Security.** The use of recovered wastewater for irrigation poses a risk of contamination of fresh produce from the irrigated fields especially during the early years of operation. Farm workers may also be exposed to pathogens and other contaminants from the irrigation water. This risk is being addressed through regular monitoring of irrigation water quality and restricting the types of crops and manner of application of irrigation water. On the security issue, the ESIA indicated that a security plan is aligned to the Voluntary Principles on Security and Human Rights. The AE also commits to develop a revised and comprehensive

Contingency Plan for the whole NGEST system which will be produced during the inception phase of the project and will identify explicit measures to deal with contingencies affecting the quality of water to be infiltrated in the aquifer or distributed in the irrigation scheme.

- (e) **ESS 5: Land Acquisition and Involuntary Resettlement.** A Resettlement Action Plan (RAP) which adequately addressed all lands and ROW requirements of the proposed facilities, as well as the impacts to existing private and community wells. The construction of 14 recovery and five (5) monitoring wells will require the acquisition of small portions of lands. The operation of these wells will also impact on existing private and community wells in the area. The RAP has identified a total of 39 households who will be directly affected by the project. In particular, 12 private agricultural wells will be closed affecting 11 well operators while about 16 landowners will permanently lose small portions of their lands due to the construction of wells. The 30 dunums (c.a. 3 hectares) of additional land for the installation of solar panels will be taken from the Ministry of Endowment (Waqf) land. No further land acquisition is required for the drip irrigation network as they will be installed at farm level while the main trunk pipelines will be installed in the main roads and streets. Temporary access roads at the farm during pipeline installation will be arranged with the farm owner-beneficiaries. Based on the consultations with the PAPs, the 11 well operators will be provided with permanent employment in the project while the 12 well owners will be provided with alternative sources of water for their farms. The 16 landowners had opted to sell the whole of their affected parcels at the market price. The land taken from the Waqf will be replaced by PWA.
- (f) **ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources.** Certain species of wild plants, birds and small mammals are present especially near the wilderness area. The project is not expected to significantly impact the habitat of these species as the project facilities will generally be located in the built-up areas. The project proponent also confirmed that the irrigation component of the project will serve only existing farms and will not open up new areas for cultivation.
- (g) **ESS 7: Indigenous Peoples.** The AE reported that there are no indigenous peoples in the project area.
- (h) **ESS 8: Cultural Heritage.** The project will not affect any monuments, historical or cultural heritage sites. While the project is located in an archaeologically rich region, the field surveys of the ESIA did not identify any archaeological sites within the project area. This is also confirmed by the Antiquity Authority. Still, the minimal excavation involved, and the drilling of wells may expose long buried artefacts or fossils. The ESMP describes the protocol to be followed in case of such chance finds.
34. **Implementation arrangements.** AFD, as the AE, will be responsible for the project implementation and activities carried out by the EEs, namely, the PWA and FAO. A project management unit (PMU) within the PWA will also be established. The project will also engage an Environmental Manager and a Social Development Officer in the PMU. The Environment Quality Authority (EQA), is also involved in its capacity as NDA and a partner in the water quality monitoring scheme. However, given the number of institutions involved in the project, the institutional arrangements for the implementation of the ESMP need to be clarified based on the proposed institutional arrangements for project implementation as presented in the proposal. In particular, the roles and responsibilities of the various agencies (e.g. Coastal Municipality Water Utility (CWMU), EQA, FAO, AFD and NGEST Management) in terms of ESMP implementation, monitoring, reporting and oversight need to be delineated and clarified. The AE has agreed to clarify these arrangements at the project inception.

35. **Stakeholder engagement.** The stakeholders for NGEST have been continuously engaged during project preparation. Additional consultations have been conducted among beneficiaries of the irrigation system and those adversely affected to enable the various stakeholders to gain information and voice their concerns about the project during various implementation phases. A Multi-Stakeholder Engagement Plan (MSEP) for the construction and implementation phases has been prepared as part of the project. The MSEP provides for the hiring of a Social Development Officer (SDO) who is responsible for community engagement and relationship management and will facilitate information flow and build relationships with the communities. The project has prepared a stakeholder engagement program which will be updated and revised on a quarterly basis during the construction and operation phases of the project.

36. **Grievance redress mechanism (GRM).** In addition to the GRM at the entity level, the project will also implement a project level GRM to provide local residents with a means of contacting the project with any concerns or complaints on environmental and social issues. At the project level, grievances will be handled by the PMU in the PWA. The SDO is designated as the focal person within the PMU who will work within the PWA in cooperation with the municipalities, to handle grievances related to resettlement activities. A grievance mechanism will also be made available to workers with a proper communication channels to enable workers to voice concerns, particularly on workers' health and safety.

## 4.2 Gender policy

37. The AE has submitted a gender assessment; therefore, it complies with the operational guidelines of the GCF gender policy and action plan. The AE has also provided a gender action plan for the project.

38. Gender inequality is a persistent challenge in Gaza despite improvements in gender equity over the last decade, as illustrated in the gender analysis. The analysis indicates the existence of discriminatory laws and the lack of legal protection which mirror the perceptions and attitudes towards women and the existence of adverse social norms towards women. Further laws on inheritance affect women's access to land and property, whereby Gazan women do not have any legal claim on their family property and daughters are unable to inherit land. The assessment also indicates that social and institutional structures are weakened due to conflict, resulting in fluid norms. These norms fail to recognize, reduce and redistribute unpaid household work and care; furthermore, they reinforce the existing lack of access to financial resources and assets by women.

39. The assessment was undertaken through desk review as well as stakeholder consultations whereby the views and opinions of both women and men were solicited. The consultations with communities focused on roles and responsibilities in productive and reproductive roles as well as access to resources such as land and irrigated water. The assessment finds that the population is very poor, with low household income and high cost of living. Women spend most of their time fulfilling household responsibilities while men work on farms and dominate agriculture related activities. Women in this regard have fewer roles and decision-making power. Women however do have critical roles in food production, post-harvest activities, livestock care, and increasingly in cash cropping, spending 34% of their day working on the farm. Men, on the other hand, spend much of their time on farm conducting farming and related marketing activities. Access to irrigated water is low for both women and men, but even lower for women at 8.7% as compared to 22% for male farmers. Women's lower access to irrigation is further exacerbated by their lack of technical knowledge and skills about irrigation. During the assessment, respondents (both women and men) indicated that they are willing to use recovered water to irrigate their farms and plots, if it is affordable. More importantly however, because few women formally own land, their participation and representation in

Water User Associations is low, reducing their access to irrigation. The women who do own land usually manage and farm smaller agricultural plots than their male counterparts. The fact that only a few women own land also means that they are often denied access to credit, productive farm inputs, support from extension services and access to markets and other inputs necessary for productivity.

40. Recognizing all these challenges, the project will provide input for increasing production and food security, investing in building women's capacity towards increasing their leadership role through engaging in and playing roles in WUAs, supporting women to gain greater access to (cheaper but high-quality) irrigation water for their essential farming activities and making increased profits. In addition the gender action plan includes activities aimed at encouraging the reduction and re-distribution of reproductive work between women and men, through dialogue and discussions within communities, among women themselves and with men folk as suggested through the dialogues with the communities. The psychosocial support and strengthening of communities and households is one of the activities in the overall FP aimed at addressing challenges brought on by conflict, as well as looking at the roles and responsibilities of women and men in the community. The action plan also includes activities providing better access to extension services, skills and knowledge to improve agricultural practices, building resilience and allowing both women and men to secure their livelihoods through the use of irrigation systems proposed through the project.

41. The gender action plan and the funding proposal contain sex disaggregated targets and indicators, with baseline (0) with budgets to undertake the activities. The PWA has designated a GAP Coordinator in Gaza for the project, being a permanent PWA female staff member with prior experience in coordinating Gender Studies, in charge of the implementation of the Gender Action Plan with the support of the TA. Additional expertise from FAO and monitoring by AFD will be available to make sure the gender action plan is implemented, and capacity building is conducted.

## 4.3 Risks

### 4.3.1. Overall proposal assessment (medium risk)

42. GCF is requested to provide a grant of EUR 23.7 million to enhance the water supply for agricultural use, develop climate-resilient agriculture and enhance the management of the water cycle in the State of Palestine. The project has co-financing in the amounts of EUR 13 million and EUR 8 million by way of grants from the AE and Irish Aid, respectively. The GCF project builds on the earlier investment funded by the World Bank and AFD.

43. While the project may face considerable challenges during implementation, the involvement of the AE in an earlier project can partly mitigate such issues.

### 4.3.2. Accredited entity/executing entity capability to execute (medium risk)

44. AFD is the AE for the project. The AFD Group has operated in the Palestinian Territories since 1998 and has financed approximately 50 projects by 2017, representing a total of EUR 346 million.

45. The project has two executing entities: PWA and FAO. PWA has been involved in other projects funded by the World Bank, AFD and Kreditanstalt für Wiederaufbau (KfW). PWA is a public entity directly attached to the Presidency of the Palestinian Authority and is in charge of defining water sectoral policy and conducting the reform process. The Ministry of Agriculture will coordinate with PWA and seek assistance from FAO to implement agriculture- and irrigation-related outputs. FAO has been operating in the West Bank and Gaza Strip since 2002 and has three offices there. FAO has recently worked on the use of reclaimed wastewater for

irrigation in the State of Palestine. It has technical knowledge and expertise in treated wastewater reuse and water management in the Middle East and Northern Africa region.

46. The project needs strong coordination among several stakeholders (PWA and the Ministry of Agriculture, as well as Palestinian Energy and Natural Resources Authority, the Environment Quality Authority and the farmers benefiting from the project).

#### 4.3.3. Project-specific risks (high risk)

47. Regulatory support: the project leverages the success of the earlier project funded by the World Bank and AFD – the NGEST wastewater treatment plant. The project will build infrastructure immediately downstream from the NGEST WWTP that will allow for the recharge of the aquifer using treated wastewater, and the water recovery, storage and transfer to an irrigation scheme located in the vicinity of the WWTP. The first part of this investment (14 recovery wells and 1 reservoir) is being implemented with World Bank financing; the GCF project will implement the second phase of this investment (14 remaining wells and an additional reservoir). Though the regulations related to quality and use of water are in place under the Water Law (updated in 2014), the AE has expressed the view that enforcing regulations for the use of the treated water and the monitoring of the quality and quantity of water in the aquifer will be key challenges of the project.

48. Security concerns: the technical and feasibility studies implemented for the preparation of the project have been conducted over a period of five years due to “stop & gos” in the context of the intermittent degradation of the security conditions in Gaza. Such issues may also affect project implementation. The AE also acknowledged the possibility of such security issues affecting the project.

49. Water tariff: the project will support the creation of a WUA, which will be responsible for distributing the water to the users by levying a transparent and approved tariff. It is necessary that the tariff conforms to farmers’ willingness and ability to pay. This will be realized based on relevant studies to be undertaken in the first few months of the project. The AE indicated that the analyses done during the feasibility study demonstrate the capacity to pay of farmers, and willingness to pay is contingent on a number of factors besides economic (i.e. cultural, social and/or political). The AE stated that a further study on this will be conducted when the project is secured and underway.

50. Long term O&M activities: The Government of the State of Palestine will initially bear the O&M costs, with farmers subsequently carrying the responsibility. On-farm equipment will be initially supplied by the project but reimbursed by the farmers to create an O&M fund for the irrigation scheme (managed by WUA), which will be a key factor in the long-term viability of the project.

51. Economic viability: the economic model estimates the direct benefits of the project (mainly from output 2 (agriculture irrigation)) over 30 years. The direct benefits of the GCF project results in an internal rate of return of 5 per cent. The AE opined that the economic internal rate of return (EIRR) will be very high post-implementation, considering the indirect economic and social co-benefits.

#### 4.3.4. Compliance risk (medium)

52. The project activities pertaining to construction pose risks to procurement integrity. However, these risks are not beyond those typically expected in procurement-related activities. Furthermore, the AE has well-established systems and controls in place to ensure effective risk prevention and mitigation.

53. However, there are political vulnerabilities that may affect the project’s timely execution. The AE highlights its extensive experience in navigating the uncertainties through

reliance on close collaboration with bilateral agencies in order to facilitate smooth implementation.

#### 4.3.5. GCF portfolio concentration risk (low)

54. In the case of approval, the impact of this proposal on the GCF portfolio concentration in terms of result area and single proposal is not material.

55. It is recommended that the Board consider the above factors in its decision.

Summary risk assessment		Rationale
Overall programme	Medium	The project needs to have regulatory support and buy-in from the beneficiaries for levying appropriate water tariffs  The project may face implementation challenges due to security and regulatory aspects  The accredited entity's earlier experience with a project in the country is expected to support project implementation
Accredited entity/executing entity capability to implement this programme	Medium	
Project-specific execution	High	
GCF portfolio concentration	Low	
Compliance	Medium	

## 4.4 Fiduciary

56. The executing entities for the project are PWA and FAO.

57. As an executing entity in the project, the PWA will be the lead implementing agency for the project and will be in charge of the overall coordination of activities, except for on-farm development. The latter falls under the mandate of the Ministry of Agriculture, which will mobilize FAO under its partnership umbrella to sign a specific agreement for the joint implementation of certain activities.

58. On the other hand, as AE, AFD will sign an agreement with the Ministry of Finance and Planning in Ramallah that will specify the tasks dedicated to PWA and the Ministry of Agriculture. In addition, AFD will be an external observer in the Steering Committee of the project to ensure appropriate coordination between stakeholders of the project and supervise the following on a non-objection basis: (i) signature of the on-granting agreement between PWA and FAO; (ii) semi-annual technical and financial execution plans; and (iii) procurement tendering process.

59. A project management unit established within PWA will be responsible for carrying out all tendering activities for capital investments, recruiting international technical assistance for project management support, and ensuring the financial management of the project. The PWA and project management unit (PMU) will be assisted in its project management tasks by an international TA.

60. The Ministry of Finance and Planning, as the legal representative of the State of Palestine for signing financial agreements with AFD, will sign an on-granting agreement with PWA.

61. For activities related to on-farm development, the Ministry of Agriculture will take over implementation and seek the assistance of FAO as its implementing partner. Based on its know-

how and previous experience in Gaza, FAO will engage civil society organizations according to its sets of rules and regulations to implement some tasks.

62. Procurement will be managed by the Central Tendering Department attached to the Ministry of Public Goods and Housing, whereby AFD will provide oversight for procurement, and its prior review and approval. Procurement activities and processes will follow AFD procurement policies and standards, as detailed in the accreditation master agreement. Most disbursements will take the form of direct payments to firms contracted for works and/or supply of goods/services.

63. The PMU will be in charge of centralizing and managing the monitoring system of the project, and in particular for co-organizing the midterm review as well as the end-line final evaluation of the project. AFD will tender and contract the consultancy services for the ex-post evaluation of the project after the full completion of the activities.

## 4.5 Results monitoring and reporting

64. The log frame has been revised in line with the GCF project management framework in order to align the project with the relevant indicators and metrics. As the project covers both adaptation and mitigation aspects, relevant indicators have been included.

65. The greenhouse gas emission calculation approach has been revised and applies methodological approaches based on United Nations Framework Convention on Climate Change's Clean Development Mechanism methodologies. The approach is conservative and allows for a transparent greenhouse gas monitoring and estimation.

66. The implementation timeline was also revised to reflect the relevant milestones during project implementation.

## 4.6 Legal assessment

67. The Accreditation Master Agreement was signed with the Accredited Entity on 11 November 2017, and it became effective on 16 January 2018 (the "AMA").

68. The Accredited Entity has provided a legal opinion/certificate confirming that it has obtained all internal approvals and it has the capacity and authority to implement the project.

69. The proposed project will be implemented in the State of Palestine, a country in which the GCF is not provided with privileges and immunities. This means that, amongst other things, the GCF is not protected against litigation or expropriation in this country, which risks need to be further assessed. No discussions on a privileges and immunities agreement with the government of the State of Palestine have been initiated.

70. The Heads of the Independent Redress Mechanism (IRM) and Independent Integrity Unit (IIU) have both stated that it would not be legally feasible to undertake their redress activities and/or investigations, as appropriate, in countries where the GCF is not provided with relevant privileges and immunities. Therefore, it is recommended that disbursements by the GCF are made only after the GCF has obtained satisfactory protection against litigation and expropriation in the country, or has been provided with appropriate privileges and immunities.

## 4.7 List of proposed conditions (including legal)

71. In order to mitigate risk, it is recommended that any approval by the Board is made subject to the following conditions:



- (a) Signature of the funded activity agreement in a form and substance satisfactory to the Secretariat within 180 days from the date of Board approval; and
- (b) Completion of legal due diligence to the satisfaction of the Secretariat.

## Independent Technical Advisory Panel's assessment of FP119

Proposal name:	Water Banking and Adaptation of Agriculture to Climate Change in Northern Gaza
Accredited entity:	Agence Française de Développement (AFD)
Project/programme size:	Small

### I. Assessment of the independent Technical Advisory Panel

#### 1.1 Impact potential *Scale: Medium*

##### 1.1.1. Adaptation impact

1. Project activities are divided into three main components:
  - (a) Managed aquifer recharge with treated wastewater, followed by a recovery and reuse scheme, including a photovoltaic (PV) power plant to feed the system;
  - (b) Implementation of a distribution network to deliver the recovered water to 1,200 ha of agricultural land for irrigation, and the installation of on-farm drip irrigation equipment and provision of extension services to farmers related to climate-resilient agriculture, crop-and-yield quality control and knowledge management regarding the reuse of treated wastewater; and
  - (c) Capacity-building for the Palestinian Water Authority (PWA) and water user associations, and support for community empowerment and knowledge management to promote replication and upscaling.
2. Direct beneficiaries who would potentially benefit from the installation of the drip irrigation systems and increased water availability for irrigation include farm owners and seasonal and permanent workers and are estimated at 4,200 people. However, the norm is to estimate beneficiaries as households rather than people. Increased demand for seasonal and permanent labour should be considered as an economic co-benefit. Given that the project would benefit 922 farm owners and that there is an average of 6 people per household, direct beneficiaries could be estimated at 5,532 people.
3. As per the estimations on the funding proposal, after the project has been fully implemented, the recovered water would be sufficient to cover 100 per cent of the crop irrigation requirements in the target area.
4. Managed aquifer recharge would involve the rehabilitation of nine existing infiltration basins, which would be receiving the treated effluent from the new North Gaza wastewater treatment plant (WWTP). The infiltration would take place through sandy soil and would therefore act as a tertiary treatment (soil-aquifer treatment), and water stored on the shallow section of the aquifer would then be extracted by a set of 28 recovery wells placed 500 m downstream in a concentric formation. The reuse scheme includes two 4,000 m<sup>3</sup> tanks to allow the water flow to be managed according to demand from farmers, a distribution network to deliver water to agricultural land and on-farm drip irrigation equipment to cover 1,200 ha.

5. As a first stage of the project, the construction of 14 recovery wells, a 4,000 m<sup>3</sup> storage tank and the rehabilitation of the first two basins has already been completed through financing from the World Bank.<sup>1</sup>
6. By providing water for irrigation, the project would relieve the pressure on other groundwater wells, indirectly allowing an increase on the net aquifer recharge and therefore improving access to domestic water for approximately 200,000 people currently vulnerable to water scarcity.<sup>2</sup>
7. Although drought is an issue that would certainly be exacerbated by climate change, it is clear that the current state of water resources and infrastructure in the Gaza Strip is not mainly caused by climate change, but by the geopolitical situation.
8. Nevertheless, the regional climate model PRECIS (Providing Regional Climates for Impact Studies) with the Intergovernmental Panel on Climate Change (IPCC) A1B emissions scenario (AR5), predict a decrease in precipitation of 15 per cent and 23 per cent by 2050 and 2100, respectively, which would lower the per capita internal water resources in the State of Palestine from 190 m<sup>3</sup> in 2010 to 67 m<sup>3</sup> by 2050. The United Nations Development Programme's analysis of climate vulnerability in the State of Palestine highlights climate risks as a humanitarian threat.
9. The State of Palestine's fragile water supply infrastructure and the growing water scarcity will worsen agricultural yields and exacerbate current high levels of food and water insecurity in Gaza and the West Bank, severely affecting human health and social development, and generating general unrest in the population. The total annual groundwater extraction in the Gaza Strip is estimated at approximately 195 mm<sup>3</sup>, while the annual natural recharge of this aquifer does not exceed 60 mm<sup>3</sup> per year. As a result, the water table is rapidly declining, promoting saline intrusion into the only freshwater resource in the area, already heavily polluted by fertilizers, pesticides and untreated sewage.<sup>3</sup>
10. As a result of the delay on the construction of the North Gaza WWTP and the general socioeconomic and political context in Gaza, for the last eight years untreated wastewater has infiltrated the aquifer through the existing infiltration basins, creating an underground pollution plume.
11. Although the proposal states that the use of the recovered water would be unrestricted, data on the environmental and social impact assessment (ESIA) of the reuse and recovery scheme suggest otherwise. Water analysis of the wells located in the area where the recovery scheme would be installed showed that, in general, groundwater quality parameters currently comply with the water reuse standards for irrigation of the State of Palestine, Jordan, Israel and the Food and Agriculture Organization of the United Nations (FAO). However, six of the seven wells tested for heavy metals showed boron and mercury levels exceeding the permissible Palestinian standards.<sup>4</sup> All boron levels were still within the acceptable short-term use range of 0.7–2 mg/l.<sup>5</sup> Mercury, on the other hand, was present in values of up to 10 times the recommended limit of 0.001 mg/l.<sup>6</sup> A study by Pillay et al.<sup>7</sup> found that daily irrigation of agricultural soil with treated wastewater containing an average mercury concentration of 0.0005 mg/l (half the Palestinian limit for irrigation) can produce mercury soil concentrations of up to 500 ng/g, which is 10 times higher than the accepted limit for mercury in agricultural

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<sup>1</sup> Funding proposal, p. 14.

<sup>2</sup> Funding proposal, p. 61.

<sup>3</sup> Funding proposal, p. 9.

<sup>4</sup> Environmental and social impact assessment, p. 70, table 19.

<sup>5</sup> FAO. 2003. *Users Manual for Irrigation with Treated Wastewater*. Cairo: FAO, p. 9. Short-term use means "For water used for a period of up to 20 years on fine - textured neutral or alkaline soils".

<sup>6</sup> Environmental and social impact assessment, pp. 56 and 57. Updated ESIA2018.docx.

<sup>7</sup> Pillay AE et al. 2007. Mercury pollution from irrigation with treated sewage water. *Journal of Water Health*;5 (2), pp.315-322.

soil of 50 ng/g.<sup>8</sup> Mercury concentrations on the tested wells ranged from 0.001 to 0.01 mg/l, which represent between 2 and 20 times the concentration of treated wastewater in Pilay et al.'s study.

12. Questioned about this issue, the project proponent responded that the seven monitoring wells tested for heavy metals are located closer to the infiltration basins than to the recovery wells and that for this reason, the concentration of pollutants is higher than expected on the recovery wells. This explanation is plausible but cannot be verified since heavy metals were not tested for at the recovery wells.

13. In addition, analyses of samples taken from the recovery wells showed that sodium levels exceeded permissible Palestinian limits<sup>9</sup> in all samples, nitrate levels exceeded these limits in approximately 50 per cent of the wells, and chloride and potassium levels in some cases were slightly higher than the permissible limits.<sup>10</sup>

14. The "Public Health Related Monitoring Plan for Using Recovery Water" described in the ESIA of the Reuse and Recovery Scheme,<sup>11</sup> which defines the parameters that would need to be periodically analysed in the irrigation water, soil and crops in order to safeguard public health, does not explicitly include mercury, boron or sodium. Clearly, the project design underestimated or even ignored the presence of these elements in the tested wells. Given the baseline scenario, the monitoring plan explicitly includes testing for boron, mercury and sodium in irrigation water. If the levels of boron and mercury are close to the permissible limits, they must also be periodically tested for in soil and plants in order to monitor potential accumulation.

15. Organic contaminants, although specified under the required periodic analyses in the monitoring plan,<sup>11</sup> were not measured during project design when the water quality of the aquifer was assessed, as described in the ESIA.<sup>10</sup>

16. The original monitoring plan proposed in this funding proposal had a monitoring frequency for all parameters of four times a year, except for the water level, the measurement frequency of which is monthly. The independent Technical Advisory Panel (iTAP) considers that a complete assessment of groundwater quality must be carried out on the recovery wells before the introduction of the water distribution network. Based on the assessment of the iTAP, parameters exceeding or close to permissible limits shall continue to be monitored on a monthly basis until they reach acceptable limits and show a decreasing trend.

17. As explained by the proponent in response to comments from the iTAP on the matter, "... the depollution of the aquifer is expected to take place by the joint effects of two mechanisms: the dilution of the existing pollution by the infiltration of clean/treated water from the WWTP and the aspiration effect of the functioning recovery wells, which will lead to the slowing down of the existing pollution plume".<sup>12</sup> Given that when contaminants exceed permissible limits water use would be partially or totally restricted, and that it is expected that farmers would only gradually change from private wells to the new water supply system, the extraction rate needed to prevent further expansion of the pollutant plume during at least the first year would be considerably smaller than the ideal rate of almost 40,000 m<sup>3</sup>/day.<sup>13</sup> The underground model assumes that the extraction is not limited by farmers' demand, therefore overestimating the "aspiration effect" of the recovery wells in the depollution process.<sup>14</sup> The proponent explained that to counteract insufficient demand "during the first year, excess water from the recovery wells may be re-infiltrated in the aquifer in order to accelerate dilution and, at the same time,

<sup>8</sup> De A.K. 1990. *Environmental Chemistry*. Delhi, India: Wiley Eastern Ltd.

<sup>9</sup> UPDATE REUSE RECOVERY SCHEME SESIA24052019.docx, p. 45, table 5.

<sup>10</sup> UPDATE REUSE RECOVERY SCHEME SESIA24052019.docx, p. 71.

<sup>11</sup> UPDATE REUSE RECOVERY SCHEME SESIA24052019.docx, p. 212.

<sup>12</sup> AFD-Palestine iTAPquestions-round3[5352].docx, response to question 5.

<sup>13</sup> Feasibility study, p. 36.

<sup>14</sup> Updating Groundwater Model-NGEST-2018-Revised.docx.

maximize pumping activity”. Nevertheless, it is not clear if the infiltration basins would have the capacity to receive and infiltrate that extra flow of excess water. For these reasons, the iTAP considers there to be a risk of failing to achieve the required extraction rate, resulting in the expansion of the pollution plume beyond the recovery wells, allowing it to reach other agricultural and domestic wells.<sup>15</sup>

18. In response to these comments by the iTAP, the Agence Française de Développement (AFD) modified the funding proposal to include a groundwater quality monitoring plan (WQMP), based on the Palestinian/Jordanian guidelines for irrigation water. For heavy metals, a stricter standard will apply (World Health Organization/European Union standards for drinking water) in order to follow a zero risk policy. These standards and the WQMP are presented in annex 15.

19. The laboratory and related equipment to be financed through the project will increase the monitoring autonomy of the PWA and allow thorough and intensified monitoring of water quality for the duration of the project, prior to and during the activation of the recovery wells and distribution of water to farmers. Once the laboratory is up and running, the WQMP will be put into place.

#### 1.1.2. Mitigation impact

20. Mostly as a result of the geopolitical situation in Gaza, energy supply is not reliable. For this reason, and given the whole treatment/recharge/recovery/reuse system depends on having uninterrupted power supply, the project incorporates the installation of a PV power facility, which would consist on three solar parks installed on the premises of the North Gaza WWTP, with a total capacity of 7.5 MW, designed to supply 33 per cent of the energy requirement of the WWTP and 75 per cent of the energy requirement of the recovery and reuse scheme. The PV scheme would sell part of the generated energy to the electricity grid, to be consumed back by the system when the solar parks are not producing (net metering mechanism). The original emission reduction calculations were made using the wrong methodology. As per advice received from the iTAP, the calculation was corrected by the accredited entity (AE). The PV plant should bring an emission reduction of approximately 5,600 tonnes of carbon dioxide equivalent per year.

## 1.2 Paradigm shift potential

*Scale: High*

### 1.2.1. Potential for knowledge and learning

21. The evaluation of project outcomes and the generation of knowledge products to capitalize on lessons learned and enable replication and upscaling, are incorporated under activity 3.4, with an assigned budget of EUR 300,000. However, the specifics of this output are not described in detail.

22. It is the first implementation of managed aquifer recharge and also the first time a reuse scheme for treated wastewater has been implemented in the State of Palestine on a large scale. For this reason, and being that the rest of the State of Palestine faces similar challenges and baseline scenarios, the project has considerable replication and upscaling potential.

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<sup>15</sup> On the feasibility study, the gross irrigation water requirement of the targeted agricultural land is estimated at approximately 11 million m<sup>3</sup>/year (Feasibility study, p. 41). On the other hand, the recovery wells would need to capture all the wastewater treated by the North Gaza WWTP and infiltrated into the aquifer plus the extra 10 per cent necessary to guarantee that all infiltrated water is captured by the wells, this way avoiding further expansion of the underground pollution plume, which could otherwise reach agricultural and municipal wells located beyond the recovery wells. The required extraction represents roughly 14 million m<sup>3</sup>/year, which is 3 million m<sup>3</sup>/year in excess of the estimated gross irrigation requirement.

### 1.2.2. Contribution to the creation of an enabling environment

23. The sustainability of the project beyond project lifespan rests with the exit strategy included under activity 3.2, which involves the following scheme: PWA would own the recovery and reuse schemes and would be responsible for its operation and maintenance (O&M) during the first three years of project implementation. After this, it is expected that the National Water Company will be functional and ready to take over the O&M of the recovery scheme, and the water users associations will be capable of taking responsibility for the O&M of the reuse scheme.

24. Users are expected to pay a monthly tariff that would be sufficient to cover the O&M costs of the new water supply system, including the running costs of the water users associations. The required tariff was calculated to be 0.63 Israel shekel (ILS)/m<sup>3</sup>.<sup>16</sup> The funding proposal indicates that a willingness-to-pay study would be carried out during the first months of the project with the support of FAO.<sup>17</sup> However, the feasibility study<sup>18</sup> mentions that a survey indicated that, based on the cost of the diesel used to extract water, farmers pay, on average, ILS 1.5 /m<sup>3</sup>. Based on this, and given the better availability of water from the proposed supply system, the proponent expects that all farmers would eventually shift to the new reclaimed water system.

25. Consulted on the financing of on-farm drip irrigation equipment, which farm owners are expected to repay over a period of five years and which would constitute the O&M fund for the water users associations,<sup>19</sup> the proponent responded that the proposed tariff of ILS 0.63 /m<sup>3</sup> includes the repayment of on-farm equipment.<sup>20</sup> This tariff is calculated in the tariff and organization setup document based on the net irrigation requirements and the total cost of O&M of the recovery and reuse system, including the PV facility, as estimated in the economic model. However, these calculations do not seem to include the repayment of the costs of on-farm equipment.<sup>21</sup> In response to a question raised by the iTAP on this issue, the AE indicated that diverse scenarios were tested at different levels of detail and none of the tariff estimates were definitive or reflected the scenario that would prevail after a full-tariff study (to be performed during the first phase of the project) and negotiations with involved parties. The AE also responded that the establishment of full and realistic theoretical tariff scenarios and discussion/negotiation between parties – including the farmers – were central to the work the project management unit and its technical assessors would need to perform during the first months of the project.

26. As the proposed tariff assumes that all farmers would adopt the new water supply system (net irrigation requirements), the financial sustainability of the project implementing the proposed tariff, would depend on achieving high adherence by farmers.

27. Given the elevated nutrient content of the reclaimed wastewater, it is expected that farmers would prefer its use over conventional well water, because it can potentially save money owing to reduced fertilizer use. To allow for this, it is paramount that nutrient testing on recovered water is carried out periodically as defined in the monitoring plan, and that this information is evaluated along with crop requirements to advise farmers on specific fertilizer needs.

28. Although the proposal states that the biological sludge produced by the North Gaza WWTP would be promoted as a replacement for chemical fertilizers, when questioned by the

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<sup>16</sup> AFD-Palestine\_iTAPquestions-round3[5352].docx, in response to question 6.

<sup>17</sup> Funding proposal, p. 21.

<sup>18</sup> Feasibility study, p. 32.

<sup>19</sup> Funding proposal, p. 19.

<sup>20</sup> Tariff & Organization Setup.docx, p. 58.

<sup>21</sup> REUSE-Gaza\_Economic Model\_sheet.xlsx, sheet "O&M costs 2019".

iTAP the proponent responded that the sludge would not be used for agriculture. The digested sludge would be dried and disposed of in landfill.

### 1.2.3. Contribution to the regulatory framework and policies

29. The responsibilities of the Water Sector Regulatory Council (WSRC) include, among others, the approval of water tariffs, costs of supply networks and other related services, monitoring of operation process and compliance of the National Water Company and service providers with adopted standards, setting quality assurance standards, and establishment of a database for technical, financial and statistical information. The project would strengthen the capacity of WSRC by integrating it into the steering and the technical committees in order to allow it to control project investments.

## 1.3 Sustainable development potential

*Scale: High*

### 1.3.1. Environmental and social co-benefits

30. In the present proposal, environmental and social co-benefits and hazards are closely related, since the affected environment consists mainly on the aquifer and the aquifer is the main domestic and agricultural water source.

31. The groundwater model shows that after the installation of the first stage of recovery wells, the groundwater table level at the coastline in the same area as the infiltration basins would be reduced from sea level to 10 m below sea level. When questioned about the potential risk of promoting saline intrusion, the proponent explained that this reduction could be due to the margin of error of the models, and that all modelling data showed a progression of this mass towards the sea – though slowed down by the implementation of the recovery wells – which was a demonstration that no reverse currents and salinization would take place due to the project. The AE added that this would be closely monitored and the intensity of pumping to manage both the depollution co-benefit and adequate quantities extracted for agriculture would be fine-tuned over time.<sup>22</sup>

32. The most important environmental co-benefit consists of the gradual remediation that will occur on the aquifer as a result of the extraction of contaminated groundwater, the infiltration of treated wastewater, and the consequent dilution of the contaminated groundwater. As suggested in the groundwater model, the pollution plume present in the area of the infiltration basins, as a result of eight years of discharging untreated wastewater into the basins, would be greatly reduced after seven years of water infiltration and recovery. It should be noted that this result is highly dependent on the efficiency of the wastewater treatment plant.

33. The extracted groundwater consists of the pollution plume that has been cleaned from the aquifer, gradually diluted by the infiltrated treated wastewater. As explained in paragraphs 8– 10 above, some groundwater quality parameters in the area of the recovery wells have higher values than those permissible by Palestinian standards for irrigation water.<sup>23</sup> The most important problem seems to be the potential mercury content and salinity. When reclaimed water fails to comply with Palestinians standards for irrigation water, partial or total restrictions should be applied, to avoid soil contamination and potential environmental and health hazards.

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<sup>22</sup> E-mail dated 23 August 2019.

<sup>23</sup> UPDATE REUSE RECOVERY SCHEME SESIA24052019.docx, pp. 70–71.

34. Mercury is harmful even at low concentrations to plants, animals and humans, and accumulates because of its long biological half-life.<sup>24</sup> In plants, mercury stunts seedling growth and root development and inhibits photosynthesis.<sup>25</sup> In humans, it has been demonstrated to affect the central nervous system, impacting the neurological, psychomotor and intellectual development of children.<sup>26</sup>

#### 1.3.2. Economic co-benefits

35. The increased productivity of agriculture activities due to project outcomes would generate an increased demand for permanent and seasonal workers, which, as noted previously, would represent an indirect economic co-benefit.

36. Another economic co-benefit could be linked to the improved health situation of the population thanks to project activities against the baseline scenario. The remediation of the underground pollution plume would prevent the contamination plume reaching other agricultural and domestic wells, therefore maintaining a higher groundwater quality, with subsequent health benefits, which translate to saving public health system resources.

#### 1.3.3. Gender-sensitive development impact

37. The project would support the empowerment of women mostly through the promotion of female membership and leadership in the water users associations, which would be responsible for managing the irrigation scheme, and through assessing opportunities or mechanisms for women to obtain land ownership.

## 1.4 Needs of the recipient

*Scale: High*

#### 1.4.1. Vulnerability of the country, vulnerable groups and gender aspects

38. The State of Palestine is highly vulnerable to the effects of climate change, especially to drought, given its limited water resources and economic situation.<sup>27</sup>

39. Groundwater availability in Gaza has become increasingly limited because the natural recharge from the East and North is being extracted before reaching the Gaza Strip through wells at the Eastern and Northern Gaza borders. Also, the dams constructed in Israel along the upper stream of the wadi Gaza stop the natural flow towards the Gaza Strip, making the entire wadi in the Gaza Strip dry. The distribution of the groundwater resource is illustrated by per capita consumption: the Palestinian per capita consumption is between 35 and 80 l/day (far below the World Health Organization standard of 100 l/day), while the Israeli per capita consumption exceeds 300 l/day.<sup>28</sup>

40. In addition, perhaps equally significant is the low rainfall (200 to 400 mm/year) and the fact that, with approximately 5,500 inhabitants/km<sup>2</sup>, the population density in the Gaza Strip is one of the highest in the world.

#### 1.4.2. Economic and social development

<sup>24</sup> Gothberg A, Greger M and Bengtsson BE. 2002. Accumulation of heavy metals in water spinach (*Ipomoea aquatica*) cultivated in the Bangkok region, Thailand. *Environmental Toxicology and Chemistry*, 21(9), pp.1934–1939

<sup>25</sup> Paris J and Jones JB. 1997. *The Handbook of Trace Elements*. Boca Raton, FL: CRC Press.

<sup>26</sup> Richardson ML and Gangoli S. 1995. *The Dictionary of Substances and their Effects*. Royal Society of Chemistry: Cambridge, UK.

<sup>27</sup> See section 1.1 – Impact potential.

<sup>28</sup> UPDATE REUSE RECOVERY SCHEME SESIA24052019.docx, p. 77.

41. The funding proposal clearly describes the challenging economic and social situation of the Gaza Strip, which is mainly a result of war and restrictions on trade and access to resources imposed by Israel.

**1.4.3. Absence of alternative sources of financing**

42. Given the economic situation, the State of Palestine's investments are entirely dependent on foreign concessional aid. Being unlikely to be profitable, the project is not expected to attract private investors.

**1.4.4. Need for strengthening institutions and implementation capacity**

43. The PWA has already received training during the implementation of the Northern Gaza Emergency Sewage Treatment (NGEST) system and associated previous projects, and the present project would provide complementary technical assistance to the PWA during the five years of project lifespan, to guarantee knowledge transfer and PWA capacity to manage the new recovery and reuse system. Technical assistance would include coordination between implementers and stakeholders, development and implementation of the water quality control system, and some specific expertise on the implementation of the environmental and social management plan, the resettlement action plan and the gender action plan, and the delivery of on-farm irrigation equipment.

44. Water quality control, which is essential to achieve the social and environmental benefits that the project seeks, would involve the development and implementation of a monitoring and evaluation programme to periodically control the quality of the treated water infiltrated into the aquifer and the recovered water to be delivered for irrigation. The system would include 15 monitoring wells equipped with measurement probes, 5 of which will be financed through the project. In addition, this activity would support the upgrading of the laboratory of the North Gaza WWTP, including staff training.

## 1.5 Country ownership

*Scale: High*

**1.5.1. Alignment with national climate strategy and policies**

45. The present proposal is fully aligned with initial national communication report and was included as part of the National Adaptation Plan to Climate Change 2016 as an adaptation alternative to improve the use of alternative water resources for non-domestic purposes in the Gaza Strip.

**1.5.2. Capacity of accredited entities or executing entities to deliver**

46. AFD has already financed 13 water and sanitation investment programmes in the State of Palestine for a total amount of nearly EUR 100 million, benefiting an estimated 800,000 people.

47. The executing entities will be the PWA, the Ministry of Agriculture and FAO. The weaknesses of PWA are identified in the proposal and would be addressed through the capacity-building components.

**1.5.3. Engagement with civil society organizations and other relevant stakeholders**

48. As explained in the proposal, PWA in coordination with the Palestinian Environment Quality Authority are the main promoters of the project since its inception.

49. Funded by AFD, in 2017, PWA executed the first phase of the recovery scheme and commissioned a feasibility study for the irrigation scheme.
50. The main document of the funding proposal lists the consultation activities conducted as a basis for the elaboration of the multi-stakeholder engagement plan (MSEP), which include a field trip for the identification of stakeholders, and the preparation of questionnaires and guidelines for stakeholder engagement. Consultation activities carried out during project design are described in the MSEP.
51. In relation to the MSEP, the iTAP asked the AE if the farmers had been consulted on the use of reclaimed water for irrigation. The AE responded that farmers had been consulted at every step, namely in the context of establishing the ESIA, with a direct and particular focus on the use of “recovered” (rather than “reclaimed”) water for irrigation – as opposed to direct reuse of treated wastewater (a significant difference to farmers). The AE indicated that levels of acceptance appeared to be very high in the context of growing water scarcity.

## 1.6 Efficiency and effectiveness

*Scale: medium*

### 1.6.1. Cost-effectiveness and efficiency

52. In general, budget allocation and financial structure seem adequate for the proposed outputs.
53. However, the cost estimation of drip irrigation systems was made as if the cost of implementing drip irrigation for fruit trees, grains or vegetables was the same, even though implementing drip irrigation for grains or vegetables can cost as much as two or three times that of fruit trees, because of the difference in the required density of pipes. Based on consulted prices, the expected cost is in the upper range for grains and vegetables. As explained in the proposal, this is because of the small size of farms. In line with this logic, the cost of the first stage of 500 ha was estimated at EUR 3,300/ha, and for the second stage of 1,000 ha, where farms are larger, the cost was estimated at EUR 2,800/ha.

### 1.6.2. Amount of co-financing

54. The project would be co-financed by GCF, AFD and Irish Aid, which would contribute with 53 per cent, 29 per cent and 18 per cent, respectively.

### 1.6.3. Financial viability

55. While the funding proposal states that the proposed tariff would be USD 0.33/m<sup>3</sup>, which at the current exchange rate represents approximately ILS 1.2/m<sup>3</sup>, the balance sheets for different crops,<sup>29</sup> where the net margin for each crop is estimated, assume a tariff of ILS 0.63/m<sup>3</sup>, and the economic model uses these margins for the project scenario. Although various tariffs were considered during the development of the present proposal, the proponent clarified that the selected tariff is ILS 0.63/m<sup>3</sup>.<sup>30</sup> As indicated in paragraph 19 above, the AE also indicated that none of the tariff estimates were definitive or reflected the scenario that would prevail after a full-tariff study (to be performed during the first phase of the project) and negotiations with involved parties.
56. The economic model shows the cost–benefit analysis, considering the benefit that the new irrigation water source would have on agriculture. For this, the model assumes, based on balance sheets developed for each crop,<sup>31</sup> that some crops which have negative net margins

<sup>29</sup> Tariff & Organization Setup.docx, pp. 60–65.

<sup>30</sup> AFD-Palestine iTAPquestions-round3[5352].docx, question 8.

<sup>31</sup> Tariff and Organization Setup.docx, pp. 60–65.

would still be implanted in both baseline and project scenarios, at a loss. For example, in the baseline scenario used in the economic model, olive trees have a net margin of – ILS 1,571/dunum. This estimation assumes a labour cost of ILS 320/dunum. If labour cost is not considered, assuming the farm owner would do it at no direct cost, the margin is – ILS 1,251/dunum. When questioned by the iTAP on this matter, the proponent responded: “It is indeed typical of most agricultural/family farming systems around the world that farmers pursue the cultivation of crops that show individual negative net margins. These are generally strategic or essential crops at farm level (for dietary/nutritional or cultural reasons) or at national level (with generally public incentives associated). Farms are systemic units and, generally, low or negative margin crops are balanced by higher margin crops (e.g. vegetables and citrus), reflecting the farmer’s multi-criteria (not only in economic terms) decision processes.

57. Based on the information provided in the funding proposal, the economic model set out in this proposal presents multiple uncertainties that should be clarified during the initial stages of project implementation. However, the public service nature of the project and the importance and urgency of the environmental and social benefits of the project activities, combined with the climate change adaptation nature of the activities, leads the iTAP to believe that the project should yield a favorable economic assessment.

#### 1.6.4. **Best practices**

58. Managed aquifer recharge followed by water reuse is an innovative and effective approach to adapt to climate-change-induced water scarcity.

## **II. Overall remarks from the independent Technical Advisory Panel**

59. The iTAP recommends the approval of this funding proposal.

## Response from the accredited entity to the independent Technical Advisory Panel's assessment (FP119)

Proposal name: Water Banking and Adaptation of Agriculture to Climate Change in Northern Gaza

Accredited entity: Agence Française de Développement

<b>Impact potential</b>
<p>The AE acknowledges and agrees with iTAP's positive assessment. The Water Quality Monitoring Plan developed by the project will be essential to the mitigation of associated risks. Regarding heavy metals, the AE and Executing Entity will pay close attention to the concentrations of these elements, applying a zero risk policy. The AE has already further investigated the situation and it appears that the data used in the ESIA concluding high levels of mercury and boron contradict other and more actual information provided by the Ministry of Agriculture and the Ministry of Health, suggesting that concentrations of mercury are under permissible limits in the project area.</p>
<b>Paradigm shift potential</b>
<p>The AE acknowledges and welcomes iTAP's very positive assessment.</p>
<b>Sustainable development potential</b>
<p>The AE acknowledges and welcomes iTAP's very positive assessment, and reiterates that all measures are put into place to better qualify the situation with regard to concentrations of heavy metals and take any necessary subsequent actions to mitigate associated risks. If concentrations are indeed high (which needs to be confirmed, see above) it is expected that the infiltration of treated water (of domestic origin) in the aquifer will have a direct dilution effect, as it will for other pollutants or undesirable elements.</p>
<b>Needs of the recipient</b>
<p>The AE acknowledges and welcomes iTAP's very positive assessment.</p>
<b>Country ownership</b>
<p>The AE acknowledges and welcomes iTAP's highly positive assessment.</p>



### **Efficiency and effectiveness**

The AE acknowledges and agrees with iTAP's positive assessment. More work (both analytical and participatory) will be performed both on the issues of tariff and on-farm equipment to ensure water efficiency. Both topics require intense presence on the field, engineering skills as well as robust participatory approaches: succeeding in these processes and reaching balanced solutions for the economic, environmental and social sustainability of the proposed paradigm shift is the central challenge of this project. FAO's involvement in the project will be key in reaching those goals.

### ***Overall remarks from the independent Technical Advisory Panel:***

The AE acknowledges and welcomes iTAP's very positive assessment, which summarizes perfectly the strengths and risks of the project. This assessment will be of much use as guidance for a sound implementation of the project.

**Gender documentation for FP119**

State of Palestine



Palestinian Water Authority

## **COMPLEMENTARY FEASIBILITY STUDY FOR IRRIGATION SCHEME**

# **Gender Action Plan**

**For Additional Work Related to the Redesign of the Recovery  
Scheme**

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المدينة - استشاريون في الإدارة البيئية والتخطيط العمراني

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## **Abbreviation**

AFD	French Development Agency
AWM	Agriculture water management
CBOs	Community Based Organizations
CMWU	Coastal Municipalities Water Utility
Dunum	Land area of 1000 square meters (0.1 hectare)
GCF	Green Climate Fund
GAP	Gender Action Plan
FAO	Food and Agriculture Organization,
IMT	Irrigation Management Transfer
MoWA	Ministry of Women Affairs,
NGEST	North Gaza Emergency Sewage Treatment
NGOs	Non-Governmental Organizations
PCU	Palestinian Water Authority
PIO	project implementing and operation contractor
PWA	Palestinian water Authority
WUA	Water Users Association
WCBOs	Women community based organizations
WF	Women's Federation,

# Gender Action Plan

## 1. Introduction

The Gender Action Plan (GAP) consolidates and synthetically presents the information learned from the Gender Analysis in order to maximize the recovery scheme's impacts on the improvement of gender issues in the project area. As such, this GAP is the key gender mainstreaming mechanism for ensuring gender-inclusiveness during operation of the NGEST project. It also provides visibility to and accountability for gender mainstreaming by designing tangible and explicit actions and indicators for the operation phase. The aim is to promote opportunities, drivers of change and positive gender dynamics as well as to manage and mitigate potential adverse risks over the duration of the project. The GAP also ensures that the project is compliant with GCF gender policy (GCF/B.09/23)<sup>1</sup>.

The Gender Action Plan provides suggested entry points for gender-responsive actions to be taken under each activity of the NGEST project. In addition, specific indicators are proposed to measure and track progress on these actions at the activity level. This will be incorporated into the detailed M&E plan, which will be developed at the inception of the project and provides concrete recommendations on how to ensure information on gender (including disaggregated data) continues to be collected and measured throughout implementation. A gender-specific budget has been allocated for project activities.

The GAP is closely aligned to the outputs of the log frame and planned activities of the recovery scheme of the NGEST project. It complements the Environmental and Social Management Plan (ESMP) that already contains gender-related aspects.<sup>2</sup> In addition to the specific activities of the GAP, the NGEST project will apply measures in accordance with the Palestinian Water Sector Reform Plan<sup>3</sup> as well as the National Water and Wastewater Strategy for Palestine.<sup>4</sup>

The National Water and Wastewater Strategy for Palestine ensures the adequate involvement of all stakeholders (from a gender perspective) in water and wastewater programs & projects to support sustainability in water resources management in Palestine. The GAP will be executed by the different entities involved in the project management: NGEST project team, NGEST operator, the Project Coordination Unit (PCU), the Palestinian Water Authority (PWA), the Coastal Municipalities Water Utility (CMWU), water services

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<sup>1</sup> Document can be found [https://www.greenclimate.fund/documents/20182/953917/GCF\\_B.19\\_25\\_-\\_GCF\\_Gender\\_Equality\\_and\\_Social\\_Inclusion\\_Policy\\_and\\_Action\\_Plan\\_2018\\_2020.pdf/dc9ac06d-2cef-4442-8346-3bfbc7995a0](https://www.greenclimate.fund/documents/20182/953917/GCF_B.19_25_-_GCF_Gender_Equality_and_Social_Inclusion_Policy_and_Action_Plan_2018_2020.pdf/dc9ac06d-2cef-4442-8346-3bfbc7995a0)

<sup>2</sup> *Annex 9: Socio Economic Baseline Assessment Willingness Survey Results Cost Analysis and Tariff Surveys Results (2013).*

<sup>3</sup> Palestinian Water Sector Reform Plan (2016-2018). Technical, Planning And Advisory Team in the Water And Sanitation Sector (Tpat) Phase II. [http://www.wafainfo.ps/pdf/water\\_project\\_2016\\_2018.pdf](http://www.wafainfo.ps/pdf/water_project_2016_2018.pdf)

<sup>4</sup> National Water and Wastewater Strategy for Palestine: Toward Building a Palestinian State from Water Perspective. PALESTINIAN WATER AUTHORITY. July 2013. [http://procurement-notices.undp.org/view\\_file.cfm?doc\\_id=27192](http://procurement-notices.undp.org/view_file.cfm?doc_id=27192)

providers and other relevant entities that will be established in the future, such as the Water User Association (WUA).

The GAP takes into consideration that the water for irrigation in the project area is from recovered groundwater from the NGEST project. Utilizing treated municipal wastewater for Managed Aquifer Recharge and then extracting that groundwater for agriculture is essential to food security in rural areas of Gaza and North Gaza. The recovered groundwater will contribute to an increase in the areas of agricultural land by turning 2520 dununs from rainfed lands to irrigated lands, which will increase the agriculture productivity of these lands. In addition, there are 2300 dununs of uncultivated areas due to water scarcity, so the irrigation scheme would encourage cultivation of these lands as well.

Policy and decision-making regarding land and water management have traditionally been the domain of men. As a result, policies and programs do not always consider women's unique knowledge, needs, or unequal ownership rights. Women farmers need to be actively involved in the planning and implementation of water management programs and must be able to participate in developing the policies that affect their access and control of these resources. This GAP presents a number of proposed activities based on the experience and lessons of gender-analysis.

## 2. Objective

The GAP intends to increase participation by women in associated agricultural activities, particularly through community based organizations and water users associations; more equitable access to project and program resources including skills training, technology, and services; improved practical benefits for women such as increased income, greater financial security, and more livelihood options; progress toward gender equality, including changing decision-making patterns in the household, membership in and leadership community based organizations; and increased mobility.

Gender equality and women's empowerment are essential for meeting the direct beneficiaries' aspirations of inclusive and sustainable development. Gender equality needs to be pursued in its own right for a just and equal society, and for better development outcomes. This GAP includes clear targets, gender design features and quantifiable performance indicators to ensure men and women participation and benefits.

## 3. Methodology

### 3.1 Identify and design gender elements for the NGEST recovery scheme

- Use the Gender Analysis to understand the specific vulnerabilities within the target population, in terms of social roles, needs, uses and access to services, priorities/expectations, participation in decision making, and impact of access to water on women and men.

- Based on the vulnerabilities assessed, identify locally appropriate gender elements to be targeted.
- Once identified, design how the gender elements that have been targeted can be included in the recovery scheme activities.
- Targets and strategies should enable step-by-step progress, bringing incremental changes and challenges to culture without threatening it.
- Help relevant stakeholders understand the rationale for focusing on women.

### 3.2 Select outputs, activities, targets and indicators

- The Gender Action plan provides suggested entry points for gender-responsive actions to be taken under each activity area of the project.
- Specific activities to ensure gender mainstreaming during the implementation and operation of the project.
- Specific proposed indicators to measure and track progress on these actions at the activity level.

### 3.3 Design project implementation and monitoring institutional arrangements

- All gender outputs, outcomes and impact indicators will be incorporated into a detailed Monitoring & Evaluation plan, which will be developed during inception of the project.
- The M&E Plan will provide concrete recommendations on how to ensure gender information continues to be collected and measured throughout implementation.

### 3.4 Estimate the implementation budgets

- A gender-specific budget will be allocated for each project activity.
- While conducting the plan, gender specialists in executing agencies are assigned to project teams with adequate resources to ensure GAP implementation.
- Nongovernment organizations and community-based organizations contracted to implement some project activities should have demonstrated gender capacity.

Generally, the Gender Action Plan also is a complementary effort to the on-going and planned activities by local agricultural and Women NGOs/CBOs in Gaza. These organizations are active in gender issues and women's empowerment and capacity building for agricultural programs.

## 4. Drivers of Change

The Gender Analysis Report identified four overarching systemic constraints to women in the project area: 1) adverse social norms; 2) discriminatory laws and lack of legal protection; 3) the failure to recognize, reduce and redistribute unpaid household work and care; and 4) a lack of access to financial and property assets. Below are the recommended drivers of change for each constraint, with concrete actions and interventions that have shown to have

a demonstrated impact<sup>5</sup> in reducing gender inequality and are promising in the local context of Gaza. Some actions may help in more than one area.

#### 4.1 Tackling adverse norms and promoting positive role models

Transforming the norms that limit women's access to work is core to achieving women's economic empowerment. Social norms are the rules of behavior that are considered acceptable in a group or society. There are many norms around the types of work done by women and men; about women's mobility outside the home; about the value of women's work; about the justification for violence against women; and about women and men's rights to expect equal remuneration and respect at work and equal access to property—all of these shape women's opportunities.

As part of this project, some interventions could include:

- The WUA (or other association) that will handle the operation and maintenance of the recovery scheme must have robust female participation, including in leadership positions. Various ways of mandating female inclusion are discussed below.
- Provide specialized training on a variety of technical skills for irrigation and management of recovered water so that female farmers have the skills and information needed to make them eligible to do the task of irrigation in a professional way. Once women are qualified for the work and begin taking jobs in a broader array of positions, adverse social norms regarding acceptable women's work will be challenged and altered.
- The WUA or, perhaps, the gender office of PWA should help create a mentorship program between older, more experienced female farmers and younger ones to pass institutional knowledge and promote positive role models.

#### 4.2 Ensuring legal protection and reforming discriminatory laws and regulations

Laws reflect a society's expectations for gender roles. By guaranteeing equal opportunities and protections and by removing legal barriers, governments signal their commitment to achieve and enforce gender equality. Laws provide a powerful framework for women to know and assert their rights.

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<sup>5</sup> The United Nations Secretary General's High-Level Panel on Women's Economic Empowerment has analyzed the impact of interventions in these areas and identified the programs that have the greatest demonstrable impact. See, Report of The UN Secretary-General's High-Level Panel On Women's Economic Empowerment, 2016.

Although the political volatility of Palestine rules out any additions or amendments to the law (changing the WUA regulation to add a quota for women, for example), there are still actions that would improve conditions.

- Mandating female participation and leadership through the WUA bylaws (which have not yet been written);
- Encourage the creation of new or strengthening of existing female farmer organizations and CBOs;
- Carry out capacity building on various areas of the law that can educate and empower women, including on heritage and land ownership, contracts, and other areas.

### 4.3 Recognizing, reducing and redistributing unpaid work and care

Progress on the agenda to expand women's economic empowerment depends, to a significant extent, on reducing and redistributing the unpaid work and care that routinely consume a woman's day. Only when the household work is reassigned can a woman spend more time at the farm.

The reduction and redistribution of care require investments from both the public and private sector. These investments not only have major benefits for individuals and families but also major benefits for the economy, businesses and society at large, including increasing women's labor force participation in paid work, creating jobs in the care sector and strengthening the education of children, with beneficial effects for the development of their talent and future productivity.

The time spent on care can be reduced by investing in basic infrastructure and in time- and labor-saving technology. And it requires redistributing care through larger roles for men at home and through public policies such as publicly supported quality childcare services, early childhood education and other social care services. In Gaza, more immediate solutions may be found by fostering greater dialogue on this issue between women and within the community for context-specific arrangements.

As part of this project, some interventions could include:

- Encourage the creation of new or strengthening of existing female farmer organizations and CBOs. These organizations should hold discussion groups around "life/work balance" so that women can brainstorm local solutions, such as child-share agreements or a daycare co-op arrangement between families in the project area.
- Capacity building on finance and how to budget so that women can be better equipped to calculate the costs of household work vs. outside work, and how best to balance her time in a way that she can afford.
- There are several trainings already planned as part of the NGEST project that are designed to help the farmers in the project area become profitable (irrigation technology, better crop selection, a cheaper source of water, etc). Women must be equally included in each of these trainings. Once the profit from farming is higher

than the cost of leaving home, more women will be able to afford to do more productive work.

#### 4.4 Building assets — Financial and property

Eliminating gender disparities in work and in society depends on eliminating gender disparities in access to key assets. As found in the Gender Analysis Report, women in the project area are often denied ownership or access to assets such as land ownership or household income.

As part of this project, some interventions could include:

- Carry out capacity building on various areas of the law that can educate and empower women, including on heritage and land ownership, contracts, and other areas.
- Irrigation projects often include land titling components. Opportunity exists here for expansion of women's asset base provided that new land titles are granted to women or to husbands and wives jointly, depending on the prevailing socio-agricultural context of the area. Understanding specific gender division of labor in the project and investigation into the gender aspects of land tenure, including the use of participatory investigations and gender-disaggregated land surveys can increase women's access to and control over land.
- Gather more information about women who own land but do not manage it in order to better understand their constraints and how they may be addressed through the project.

#### 4.5 Improving public sector practices in employment and procurement

Beyond the government's role in determining the legal, institutional and policy environments that affect women's economic opportunities, governments are major employers and procurers of goods and services. The power of governments in setting high standards for and exemplifying gender equality at work cannot be underestimated.

As part of this project, some interventions could include:

- PWA should include among project objectives specific reference to increasing women's capacity to participate in irrigation projects and plan for ways to increase their access to productive resources.
- PWA needs to have a better understanding of the social, economic, and institutional reality of the project area. In practical terms, this means that some modest incremental resources should be allocated for assessment of such realities, particularly during the implementation and operation stages.
- The gender expert at PWA could monitor progress and provide specialized training, technical assistance, and sometimes modest financial incentives can be most effective in providing more opportunities for women.

- PWA should hire more women to work in the water sector overall. A paltry percentage of the water workforce is comprised of women. As the lead agency on water, PWA is in a position to set an example and actively recruit more women in its ranks.

#### 4.6 Strengthening visibility, collective voice and representation

Women’s organizations play a critical role in driving women’s economic opportunities. Women who belong to such organizations can benefit from access to finance, business and leadership skills, and technical advice and assistance, such as how to link to markets and supply chains. In addition, being a member of such an organization allows women to voice their needs and demands, enhance their bargaining power, advocate for legal and policy reforms, and increase access to markets on fair and efficient terms.

As part of this project, some interventions could include:

- Carry out capacity building on various areas of the law that can educate and empower women, including on heritage and land ownership, contracts, and other areas.
- The WUA or, perhaps, the gender office of PWA should help create a mentorship program between older, more experienced female farmers and younger ones.
- Promote the participation of women in WUAs and other organizations by supporting appropriate institutional measures, such as minimum quotas, or allowing that other forms of tenure besides ownership be eligible for being a member in the association. Approaches for ensuring greater female membership in Water User Associations have included the following:

***Quota systems wherein a minimum number of board seats are reserved for women.***

This positive discrimination can increase women’s participation, though quotas have also backfired in other places or been “captured” by women put up to the position by dominant men. This has also led to a focus on increasing women’s participation among membership ranks as well as leadership, so that a “critical mass” of women develops.

***Gender-inclusive WUAs developed by removing exclusionary membership criteria regarding land ownership.***

This would change membership to WUAs so that it is not limited to farmers who own the land and, instead, would be associated with irrigation. By doing so, it would open up the opportunity to get women involved. Much depends here on how “farmer” is defined, for example, not just “irrigators” applying water to the field, which may be a man’s task in many places, but also other farmers, such as those doing weeding, transplanting, harvesting, and other tasks, who are often women, and beyond crop production, those farmers using water for livestock production and other uses (often women).

- Scope also exists to establish other water user groups at the community level that represent women’s needs and interests, provided they link up formally to the WUA. Examples of such associations are cooperatives in which membership is not limited just to owners of land but to any type of tenure. Such associations may take the place

of a traditional WUA or work in parallel with them. Recognizing organizational pluralism with various groups set up to respond to different needs is important.

## 5. Gender Action Plan 2018-2025

**WF** = Women’s Federation, **PWA** = Palestinian Water Authority, **WUA** = water users association, **CBO** = Community Based Organization, **MoWA** = Ministry of Women Affairs, **FAO** = Food and Agriculture Organization.

	Gender Equality Features	Actions for gender mainstreaming	Indicators for gender mainstreaming	Time Frame		Responsibility	Budget Estimate USD
				Baseline 2019	Targets 2025		
<b>OUTPUT 1: PRODUCTION OF ADDITIONAL QUANTITIES OF WATER FOR AGRICULTURAL USE</b>	1.1 Gender Strategy Promotion	Conduct four workshops in cooperation with women CBOs on adopting gender strategy to promote women equal participation in the project/program. 1 in each area of the project.	# of promotion workshops on gender strategy including gender mainstreaming in agriculture.	0	4 workshops held	PWA	12000
	1.2 Reduced difficulties accessing water resources	Conduct water access field survey at the household level (representative sample)	% of women reporting “access with difficulties” to water resources.	5%	20%	PWA and WUA	15000
	1.3 Women Empowerment	Carry out capacity building on areas of	# of women who attended a training	0	114 women farmers	MoA-FAO and Women	15000

		the law that can empower women, including on heritage, land ownership, and contracts.	on legal empowerment			CBOs	
	1.4 Male & Female awareness on crop suitability.	Conduct awareness workshops on crop adjustments to adapt to climate change.	% of farmers (women and men) changed crop cultivation.	11% of men, 7% of women have changed their crop cultivation to adapt to climate change	40% of the total farmers	PWA and WUA	14000
	1.5 Improved farm productivity	Conduct field survey at the farm level on improved farm productivity (representative sample from the farm owners and labor)	% of Farmers (women and men) reported improved farm productivity.	0	50% of the total farmers	Ministry of Agriculture-FAO	5000
	1.6 Improved data on female land owners	Conduct field survey of women who own land	% of female farmers who own land in the project area surveyed	0	100%	WUA	5000

<b>OUTPUT 2.1: DEVELOPMENT OF IRRIGATION, WATER EFFICIENCY AND CLIMATE RESILIENT AGRICULTURE</b>	2.1.1 Male and Female farmers connected to the water networks	Male and Female farmers connected to the water networks recovery scheme.	# of male and female connected to recovery scheme network.	0	(808) men & (114) women  Total = 922	PWA, and WUA MoA-FAO	Part of the routine operations of the PIO
	2.1.2 Female farmers managing irrigation system	Actively promote female farmers to manage the irrigation system.	# of female farmers who manage irrigation system.	0	40 female farmers	WUA MoA-FAO	10000
	2.1.3 Participation in irrigation system	Actively promote women's participation in irrigation system development	# of women who participate in irrigation system development	0	114 female farmers	PIO, PWA, and WUA	10000
<b>OUTPUT 2.2: STRENGTHENED INSTITUTIONAL AND FARMER CAPACITY</b>	2.2.1 Support establishment of a WUA in the project area	Support establishment of a WUA according to the newly approved bylaw by the Minister's cabinet	# of male and females farmers have a membership at the WUA	0	At least 90 female and 450 male farmers have a membership at the WUA	PWA and Ministry of Agriculture and agricultural CBOs .	30000 from project capacity building fund

	2.2.2 Encourage the reduction and distribution of reproductive work	Hold 4 group discussions (one in each area) of women in the project area on local solutions to a productive/reproductive work balance	% of time women spend at farm	35%	50%	WUA and Women's CBOs	10000
	2.2.3 Irrigation system training	Conduct 40 training hours on irrigation system	% of male and females farmers have training on irrigation system	0	At least 50% of female farmers and 70% of male farmers trained, with training schedules suitable for them	Ministry of Agriculture and agricultural CBOs .	10000 from project capacity building fund
	2.2.4 Agricultural training	Conduct 40 Training hours on agricultural practices such as crop selection, seeding, planting, fertilization, and irrigation.	% of male and females farmers have training on agricultural practices	0	At least 50% of female farmers and 70% of male farmers trained, with training schedules suitable for them	Ministry of Agriculture and agricultural CBOs .	10,000 from project capacity building fund
	2.2.5 Farm management training	Conduct 40 Training hours on farm management	% of male and females farmers have training on farm management, including finance	0	At least 50% of female farmers and 70% of male farmers trained, with training schedules suitable for them	Ministry of Agriculture and agricultural CBOs .	10,000 from project capacity building fund

	2.2.6 Pesticide application training	Conduct 40 Training hours training on pesticide application strengthened	% of male and females farmers have training on pesticide application strengthened	0	At least 50% of female farmers and 70% of male farmers trained, with training schedules suitable for them	Ministry of Agriculture and agricultural CBOs.	10,000 from FFS fund in the project
	2.2.7 Cooperative management training	Conduct 30 training hours on cooperative management	% of female cooperative management capability strengthened	0	At least 30% female farmers are members of cooperative leading group; and 60% female farmers and 90% PIO female staff trained	PIOs	8,000 project counterpart funds
	2.2.8 WUA management training	Conduct 30 training hours on WUA management	% of males and females attend training hours on WUA management and their WUA management capability strengthened	0	At least 30% female farmers are members of cooperative leading group; and 60% female farmers and 90% PIO female staff trained	WUA	8,000 project counterpart funds
<b>OUTPUT 3: MANAGEMENT OF THE WATER CYCLE AND</b>	3.1 PWA capacity building	Capacity building activities (on-job training) on inclusion	# of PWA staff involved in on-job training	0	20	PWA	20000

<b>CAPACITY BUILDING OF AGENTS</b>	towards gender mainstreaming	of gender issues in the project activities.					
	3.2 MoA capacity building towards gender mainstreaming	Capacity building activities (on-job training) on inclusion of gender issues in the project activities.	# of MoA staff involved in on-job training	0	30	MoA -FAO	20000
	3.3 Ministry of Women affairs capacity building towards gender mainstreaming	Capacity building for MoWA activities (on-job training) on inclusion of gender issues in the project activities.	# of MoWA staff involved in on-job training on gender issues in agriculture practices.	0	14	MoWA	20000
	3.4 CMWU capacity building towards gender mainstreaming	Capacity building activities for CMWU (on-job training) on inclusion of gender issues in the project activities.	# of CMWU staff involved in on-job training on gender issues in agriculture practices.	0	14	CMWU	20000
	3.5 Male and female equal access to job opportunities	Actively promote women's equal access to job opportunities and assurance of their participation in agriculture.	% of women have job opportunities and assurance of their participation in agriculture.	0	At least 30% job opportunities created under the project for women	PWA, and WUA	Part of the routine operations of the PIO

## 6. Implementation, Monitoring and follow up of gender-related targets and activities

The PWA will be responsible for the implementation of the GAP. A focal person and Coordinator of the GAP is designated in the PWA team in Gaza. The GAP Coordinator will be assisted by the TA Gender Expert and related expertise and will coordinate closely with FAO for gender related activities. The GAP Coordinator will also be in charge of leading the mainstreaming of gender issues within the PWA local staff in Gaza and Ramallah.

The PWA will be assisted in the implementation of the Gender Action Plan by the provision of specialized Gender expertise through the Technical Assistance services that are funded under the project – the expertise will include provision of training of PWA staff and mainstreaming of gender in relevant PWA technical departments. Further, gender issues being strongly linked to on-farm activities and access to water by women, the FAO will be an important partner for the implementation of the GAP. *In terms of methodology, it will be implemented using inputs from the FAO (see **Annex 8 of the GCF Funding Proposal**) and particularly from the [International Union for Conservation of Nature-IUCN's training Manual on Gender and Climate Change<sup>\[1\]</sup>](#).*

Systematic follow-up is needed to ensure that policy reforms and the GAP is implemented. Monitoring is the continuous collection and analysis of information to track progress. The monitoring mechanism, plan and tools should be defined from inception and be ongoing. Monitoring should clearly identify for each activity: quality of the outputs; means of verifications and person in charge of each activity, both in time-frame of the project and the associated budget. Gender sensitive indicators both quantitative and qualitative should assess changes pertaining to gender indicators. M&E approach necessary to ensure effective implementation of this gender action plan, and will provide performance targets to allow periodic monitoring of progress towards meeting the Plan's overarching goals. The periodic monitoring and reporting will also contribute to the Plan's smooth implementation and allow the replication and scaling up of the most successful initiatives. The M&E plan should be able to identify challenges and feasible solutions in order to readjust any action that might be reinforcing discriminatory social norms or expose beneficiaries to violence, in respect of the do no harm principle.

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<sup>[1]</sup> [https://portals.iucn.org/union/sites/union/files/doc/training\\_manual\\_on\\_gender\\_and\\_climate\\_change.pdf](https://portals.iucn.org/union/sites/union/files/doc/training_manual_on_gender_and_climate_change.pdf)

AFD will be a party to the monitoring of the GAP, in a supervision position, through the designation and involvement of a Gender Specialist within the Project Management Team.

It is very important to enhance ownership through internal participatory monitoring especially while analysis related to promotion of gender equality. The GAP will include **sufficient budget allocation** for implementation and gender capacity building for WUA and Women CBOs as partners in the targeted area. Specific elements of the monitoring plan are presented in the following matrix.

M&E activity	Frequency	Mean of verification	Responsibilities	Budget Estimate for the coming five years (USD)
Monitor woman participation of the farm activities/# of women farmers	Every four months	Quarterly report	PWA and WUA WSRC	Part of the routine operations of the PWA
Evaluate the efficiency of irrigation system	Quarterly report	Quarterly report	PWA and WUA WSRC	Part of the routine operations of the PWA
Monitor the direct and indirect beneficiaries (men & women) from the project	Annually	Annual report of the WUA	WUA	Part of the routine operations of the WUA
Monitor changing in crop cultivation.	Annually	WUA annual report	WUA	Part of the routine operations of the WUA
Monitor & Evaluate improvement of farm productivity.	Annually	Ministry of Agriculture reports	Ministry of Agriculture (MoA)	Part of the routine operations of the MoA
Register the connected farmers to recovered scheme network.	Annually	WUA annual report	WUA	Part of the routine operations of the WUA
Register female farmers who managed irrigation system.	Annually	WUA annual report	WUA	Part of the routine operations of the WUA
Monitor participation in irrigation system development	Annually	WUA annual report	WUA	Part of the routine operations of the WUA
Monitor & Evaluate male and female farmers	Annually	PWA Annual report	Consultant in	10000

M&E activity	Frequency	Mean of verification	Responsibilities	Budget Estimate for the coming five years (USD)
who have training on a <ul style="list-style-type: none"> <li>• agricultural practices</li> <li>• farm management</li> <li>• pesticide application strengthened</li> </ul>			cooperation with Women CBs and WUA	
Monitor Female beneficiaries informed about opportunities on access to project funds, technical advice, training, and employment opportunities Record how many women are hired under the project and their % of the project's workforce.	Annually	PWA Annual report	PWA	Part of the routine operations of the WUA
Monitor & Evaluate the establishment of cooperatives in the project area and their female membership.	Annually	Field study	Consultant in cooperation with Ministry of agriculture	5000
Monitor & Evaluate the training conducted by WUA management and their capacity building activities	For each training package	Output of Training evaluations	Consultant in cooperation with WUA	10000
Monitor & Evaluate the farmer's satisfaction of the quality and quantity of irrigated water	Biyearly	PIO Annual reports	Consultant in cooperation with PWA	7000
Monitor & Evaluate the performance of WUA with focus of women participation, decision-making and planning.	Biyearly	WUA Annual reports	Consultant in cooperation with WUA	8000

The total cost of the monitoring and evaluation activities is \$40,000.

## 7. Estimated Budget for GAP implementation:

The proposed GAP will be a roadmap for supporting the achievement of gender equality goals as outlined in GCF Gender Policy. The budgeting will also take into consideration the available funds and resources that could be gained for each priority area in such a way that makes the implementation of the proposed actions more flexible and achievable. The following table will be used for estimation of the needed budget for action plan implementation.

<b>Outputs</b>	<b>Estimated cost for Gender Mainstreaming Activities (USD)</b>
<b>Output 1: PRODUCTION OF ADDITIONAL QUANTITIES OF WATER FOR AGRICULTURAL USE</b>	50 000
<b>Output 2.1: DEVELOPMENT OF IRRIGATION, WATER EFFICIENCY AND CLIMATE RESILIENT</b>	200 000
<b>Output 2.2: STRENGTHENED INSTITUTIONAL AND FARMER CAPACITY</b>	100 000
<b>Output 3 : MANAGEMENT OF THE WATER CYCLE AND CAPACITY BUILDING OF AGENTS</b>	85 000
<b>Monitoring and evaluation the implementation of the gender action plan</b>	100,000
<b>Indicative Total cost (USD)</b>	<b>535 000</b>

## Annex 1: Project Fact Sheet

Item	Number	Comments
Population of Gaza and North Gaza Governorates	1,021,575 inhabitants	(North Gaza and Gaza governorates is about 1,021,575 inhabitants (53% of total population of Gaza Strip).
Project area	14,880 dunum	In eastern part of Gaza, Jabalia and Biet Hanoun including streets, uncultivated areas and cultivated areas.
Net classified agricultural areas area	12,800 dunum	The total project area excluding the streets areas. This includes cultivated and uncultivated area
Uncultivated lands	2300 Dunums	18% of Areas left for many years without cultivation due to access restriction and/or water scarcity.
Net cultivated lands	10,500 Dunums	Including rianfed and irrigated agricultural lands
Net rainfed agricultural lands	2520 dunums	Areas cultivated with wheat, barely, olives, etc.
Net irrigated agricultural lands using groundwater wells	7980 Dunums	Areas cultivated with vegetables, citrus, onion, potato, etc.
Total no. of planned recovery wells	27 recovery wells	27 recovery wells surrounding the infiltration basins of NGEST.
No. of constructed recovery wells	14 recovery wells	14 recovery wells have been constructed.

Total no. of planned monitoring wells	23 monitoring wells	6 monitoring wells have been constructed, 6 agricultural wells are utilized as monitoring wells and additional 10 monitoring wells to be constructed.
No. of constructed monitoring wells	6 monitoring wells	Already constructed monitoring wells
No. of agricultural wells utilized as monitoring wells	7 agricultural wells	Agricultural wells utilized as monitoring wells.
No. of reservoirs	2 reservoirs	A reservoir for phase 1 has been constructed
No. of parcels	1383	For both phases of the project
No. of parcels - phase 1	824	Areas of the parcels ranges from less than 1 dunums to 30 dunums.
No. of parcels - phase 2	559	Area of the parcels are more than 30 dunums.
Area of parcels	55% of the farms are smaller than 5 dunums	nearly 55% of the farms are smaller than 5 dunums, and 25% of them are comprised between 5 and 10 dunums. Farms larger than 30 dunums are less than 5%.
No. of farms' owners	922	For both phases of the project
No. of female owners	114	With a percent of 12.4% from total number of owners.
No. of male owners	808	With a percent of 87.6% from total number of owners.
Farm ownership	88% owing the cultivated land	Most farmers own their land 88%, whereas tenants represent just 12%.

Crop pattern	22% mixed arable and vegetable crops; 50% a mixed crop pattern,  14%wheat  10% onion, barley and potatoes	The majority (22%) of the targeted area is cultivated with mixed arable and vegetable crops; almost half of the farms has a mixed crop pattern, mostly based on arable, vegetable and fruit tree crops, among which citrus and olive are the most important. Arable crops, such as wheat (14%), are quite important as staple food for the household. On the other hand, onion, barley and potatoes represent together less than 10% of the cropping pattern.
Uncultivated land	18%	Uncultivated due to the Israeli damages, farm access restriction to the areas close to the Israeli borders, lack of financial resources, and water availability.
Irrigation system	24% rain-fed,  76% irrigated	Around 24% of total cultivable land is rain-fed, while the remaining 76% is being irrigated through wells.
Direct beneficiaries	4206	Sum of farm's owners, permanent labor and seasonal labor
No. of female farmers	264	About 6% only females. This figure could be increased in case of increased women access to farm activities.
Permanent workers	1596	Agricultural workers, well operators and farm guards.
Seasonal workers	1688	Mainly men who work during cultivation, harvesting and marketing periods.
Indirect beneficiaries	23,553	Families of the farm's owners, permanent labor and seasonal labor.

Anticipated persons with improved income	27,618	Sum of farm's owners, permanent Labor, seasonal labor and crop traders.
Anticipated women with improved income	13,800	Female members of the families who will have improved income.
Carbon dioxide to be reduced	71,000 tones	This amount generated by diesel generators operated in the area.
People protected from water pollution ( for year 2020)	254,713	People protected from being affected from the pollution plume.
Water wells protected from water pollution ( for year 2020)	35 wells	In case of no project there are 35 wells at the down stream will be polluted by wastewater
Time spent at Farm	85% of men time 34% of women time	As a percent of their daily time.
Length of the irrigation network	128 km	The total length of the irrigation pipelines for the two phases according to the design.



State of Palestine



Palestinian Water Authority

# SELECTION OF CONSULTING SERVICE FOR COMPLEMENTARY FEASIBILITY STUDY FOR IRRIGATION SCHEME

Gender Mainstreaming Baseline Study

For Additional Work Related to The Redesign of The Recovery Scheme

Contract ID: AFD/C/QCBS/1/2015

Grant N.: AFD-MOP/CPS 1016

Submitted by: Joint Venture ALMADINA-TIMESIS S.r.l.



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**ALMADINA - CONSULTANTS**  
Environmental Management and Urban Planning  
المدينة - استشاريون في الإدارة البيئية والتخطيط العمراني

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## **Abbreviations**

5DE Five Domains of Empowerment

BZU Birzeit University

GCF Green Climate Fund

PWA Palestinian Water Authority

PwDs People with Disabilities

NGEST North Gaza Emergency Sewage Treatment

SAAD Sex and Age Disaggregated Data

WASH Water, Sanitation, and Hygiene

# Gender Baseline Study

## 1. Introduction

This Gender Analysis Report aims to assess the implications of this project’s planned activities in order to identify vulnerabilities or disadvantages of women that the project is in a position to improve. By utilizing the baseline survey and other data, this report seeks to determine how the project can respond to the needs of women and men in view of the specific climate change issue to be addressed.

Gender analysis in the study refers to different roles, rights, and responsibilities of men and women and the relations between them. Gender does not simply refer to women or men, but to the way their qualities, behaviors, and identities are determined through the process of socialization. The different positions of women and men are influenced by historical, religious, economic and cultural realities.

Gender relations are often dictated by unequal power dynamics that assign particular roles, determine access to decision-making and access to and control over resources. Part of this Gender Analysis Report, therefore, is to understand the inequalities between women and men that influence how individuals manage water resources. Women in the project area seem to be the guardians of and main users of water while men are the providers and managers of water resources. Understanding gender roles, relations, and inequalities can help to explain the choices male and female make, their options, and how best to foster greater social equity.

## 2. Water situation in Gaza Strip

In Gaza Strip, 93% of households are connected to the domestic water network, which is not suitable for drinking or cooking (96.4% of water resources in Gaza are contaminated). Drinking water is obtained mainly from private vendors who drive it directly to homes. In some areas children are in charge of getting water from the closest desalination plant or filling “SABEEL” point (which is free of charge). In some Bedouin communities, women bring drinking water on a donkey-driven car.

Less than 60% of households are connected to a wastewater network. The best situation is in the northern governorate where 87.4% HH are connected to wastewater networks<sup>1</sup>.

The population in the Gaza Strip receives just 5-8 hours of water supply every 3 days<sup>2</sup>.

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<sup>1</sup> Wash assessment at household’s level in Gaza strip (UNICEF, GVC, and PHG 2016)

<sup>2</sup> Un -Women and GVC. 2016. “Gender & Wash tool Kits for Palestine”.

### 3. WHY MAINSTREAM GENDER IN WASH IN PALESTINE?

A gender approach to water and sanitation services aims to ensure that all people benefit from and are empowered by improved water and sanitation services that take into consideration different needs, gender roles and safety, and different barriers to access to meaningful participations for both males and females. The importance of involving both women and men in the management of water has been recognized at the global level as not only intrinsically desirable but also practically beneficial – involving women in water projects increases project effectiveness and long-term sustainability.

Use of water is one of the major challenges in overcoming gender inequalities. Inadequate access to safe, hygienic and private sanitation facilities is a source of shame, physical discomfort and insecurity for millions of women across the world<sup>3</sup>. Access to use of recovered water for irrigation is also inequitable, the issue we work on in this study.

Ensuring women participation is quite challenging in the specific context of Palestine. Often gender blindness and/or the lack of capacity of WASH actors to ensure women participation is wrongly attributed to “cultural restrictions and norms” and results in a lack of gender equity in WASH and recovered water services.

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<sup>3</sup> Un -Women and GVC. 2016. “Gender & Wash tool Kits for Palestine”.

#### 4. LITERATURE REVIEW

There is a scarcity of studies on gender mainstreaming in the WASH sector, especially for treated wastewater in Palestine. To gather information, the WASH cluster in UNDP, Women Institute Studies in BZU, PWA (Gaza & WB), UN- Women, and GCF website and other sources were consulted. Four relevant studies were reviewed, as follows:

**A. The first study** by Hanadi Badr (2013). It is a master thesis of a student in Birzeit University – Women Institute Studies, who was studying Gender & Development. The title of the study: “Women Empowerment Towards Treated Wastewater Reuse: Reconnect Practical & Strategic Women needs in Palestinian Rural Area”.

The issue of treated wastewater is suggested as a solution that might partially resolve the domestic water crisis as well as protect the environment and food-security. Some people attributed the water deficit to climate change, others attribute it to the lack of justice in the distribution of water resources as a result of Israeli control over these sources.

Main objective of the study is to study the impact of training Palestinian rural women on the reuse of treated wastewater to determine whether having access to greater information about wastewater would increase their acceptance of its use. It studied 120 women, divided into two groups of 60, who were given 10 days of training on treated wastewater use. The acceptance of wastewater use increased from 47% to 55% in the group that received the training (the acceptance rate for the control group that did not receive training did not change).

**B. The second study** by Marwan Ghanem (2015) titled “Gender Empowerment and Treated Wastewater Reuse in Ein Qinia Village, Ramallah – Palestine.” The paper aims to improve the empowerment of communities and individuals, particularly women, on the acceptance of wastewater treatment projects and the reuse of treated wastewater. Research was carried out at the Al-Tireh quarter and EinQiniya village in Ramallah about whether or not training women in treated wastewater reuse can increase their awareness and acceptance regarding the reuse of treated wastewater from the Al-Tireh Wastewater Treatment Plant.

A roughly selected sample of 30 farmers from Ein Qiniya inhabitants was interviewed. Women’s empowerment in agriculture was analyzed using Alkire methodology that illustrates five domains of women empowerment: (1) production, (2) decision making power over productive resources, (3) control over use of income, (4) leadership in the community, and (5) time use’ (Alkire et al, 2012), those domains were used in recent study to assess women empowerment in Ein Qiniya.

65% of the study sample respondents did not have a problem in the use of wastewater, while 35% had no objection to the idea of wastewater reuse. 55% of the study sample were convinced to use waste water, 30% agree to use it, but in 15% disagree to use the treated wastewater. The acceptance of individuals to use treated wastewater for drinking, shows that

only 35% agree to use it for drinking, 15% disagree, and 50% are not sure of the extent of their acceptance of the idea. As for the reasons that result in non-acceptance of the idea of wastewater reuse were as follows: 70% answered that the reason is a health, 23% answered that it is cultural, and 7% say it is for personal reasons.

**C. The third Study** by GVC - Italian Cooperation (2017) titled “Gender & Wash Toolkit for Palestine”.

The study aims to mainstream gender in Wash projects in Palestine (Gaza & WB). A gender approach to water and sanitation services aims to ensure that all people benefit from and are empowered by improved water & sanitation services and hygiene practices that take into consideration different needs, gender roles and safety.

To mainstream gender in WASH projects in Palestine; the study Conducted a gender analysis and collect sex and age disaggregated data (SAAD) in order to form an accurate and nuanced picture of the situation of target communities and personal/social relations within them;

The study team ensure that the design of interventions addresses gender needs and integrates gender considerations and include meaningful participation in the formulation of the intervention of different groups of the population (e.g. widows, persons with disabilities, adolescent girls, farmers, etc.);

Design a Monitoring and Evaluation(M&E) plan at the very beginning of the project with appropriate indicators that will measure the gendered impact of activities and the achievement or lack of expected results and objectives. To link the actions of the implementation with the gender needs and interests identified.

The study clarifies the unequal relationships between women and men, girls and boys and characterized by a differentiation of roles, affecting and influencing all areas and spheres of life. Gender relations are often dictated by unequal power dynamics that assign particular roles, determine access to decision making and access to/control over resources. Access to water, sanitation and hygiene (WASH) knowledge and practices is directly influenced by gender relations and roles. In all the world including Palestine; WASH facilities and access to water is associated with responsibilities undertaken by women, since they are the ones responsible inside the household of meeting the basic needs of its members. In addition, availability of WASH facilities in education and health facilities has significant gender differentiated impact. Access to water for agricultural use also has significant implications for women working in agriculture.

Gender considerations in securing WASH needs during humanitarian emergencies and in long term interventions ensure protection of women and girls from Gender Based Violence (GBV). To improve the conditions of women in different societies, several guidelines have been developed worldwide aiming to provide direction and recommendations for gender mainstreaming in water, sanitation and hygiene (WASH) projects. Societal and political

constraints in the Palestinian context make gender mainstreaming in WASH projects a challenging task. The toolkit provides technical instruments to tackle some of the most significant issues affecting women in the WASH sector in Palestine.

**D. The forth Study** is a manual prepared by GCF and UN Women titled “Mainstreaming Gender in Green Climate Fund Projects”, GCF senior staff and Mr. Rajib Ghosal. (2017)

This is a practical manual to support the integration of gender equality in climate change interventions. The manual addresses the GCF’s potential to mainstream gender into climate finance. Gender mainstreaming is central to GCF’s objectives and guiding principles through engaging women and men of all ages as stakeholders in the design, development, and implementation.

Gender equality considerations should be mainstreamed into the entire project cycle to enhance the efficiency of climate change mitigation and adaptation interventions and ensure that the gender co-benefits are obtained. Gender mainstreaming is fundamental to any project intervention to make climate interventions more effective and efficient.

The manual is based on a one-day training on gender delivered by UN Women. The GCF requested UN Women to deliver this training to support the integration of gender equality concerns in climate change interventions and investments. The manual reviews GCF gender policy and related programming provisions, including readiness support. It covers a number of gender mainstreaming tools and methodological approaches, which can be employed in designing projects, including gender analysis, gender assessment and action plan, and gender responsive results or logical frameworks. The manual focuses on the minimum set of tools needed to meet the project cycle.

## 5. GENDER ROLES

As a first mandatory step, let us briefly define some basic key concepts:

**Gender:** Refers to how societies and specific cultures assign roles and ascribe characteristics to men and women on the basis of their sex; refers to the socially constructed roles, behaviors, activities and characteristics that a given society considers suitable for women and men of different ages. Gender is a series of constructed categories and therefore can change and evolve over time.

**Sex:** Refers to refers to the biological, physiological and anatomical characteristics that define men and women.

**Gender roles:** Gender roles are theoretical constructs used for social analysis. A role reflects a model of behavior by an individual, including certain rights and duties. A role also relates to a certain status and social power. The role of an individual changes according to social and cultural changes in society.

**Gender-based division of labor:** A division of labor according to social and cultural patterns that define the roles of men and women, boys and girls both inside and outside the family, and separate from the biological differences between men and women.

**Gender equality:** Refers to equal rights, power, responsibilities and opportunities for women and men, as well as equal considerations of the interests, needs and priorities of women and men.

**Gender equity:** Refers to the process of being fair to women and men, to reduce disparity of social disadvantages that prevent women and men from operating on an equal basis, it is based on the principle that both women and men of all ages and abilities have the right to “access opportunities” to improve their quality of life - individually and collectively.

**Gender Sensitivity:** Refers to the understanding of the ways that people think about gender and socio-cultural factors underlying gender inequality.

**Gender mainstreaming:** Gender mainstreaming is the concept of assessing the different implications for women and men of any planned policy action or project in all areas and levels.

In this study, we study the baseline data to get an understanding of gender roles, gender needs, and access to resources (including recovered water) for irrigation use by the beneficiaries in Gaza city and Gaza North area. This Report seeks to identify restrictions that female farmers face in order to see how the project may reduce any existing vulnerabilities or disadvantages to women, in the context of the project’s goals and activities.

## **6. Methodology**

The methodology includes qualitative and quantitative techniques.

For quantitative data, a random selection of 106 farmers in the targeted area were selected with near-equal participation among the sexes (51 Females, 55 Males) for a total of 106 participants. The questionnaire survey aimed to understand the status of women in terms of ownership and participation in agriculture, household activities, time dedication, marketing, membership in agricultural institutions, and access to training. Field workers who filled the questionnaires entered the answers into an SPSS spreadsheet, then answers were analyzed.

Another quantitative tool used for this Report is focus groups. We held 6 focus group discussions in the targeted area: 2 in Jabalia; 2 in Beit Lahia at Shemaiah area; and 2 in Beit Hanoon. They were carried out in separate sessions with women and girls, men and boys, and people with disabilities (PwDs) so that they could express their feelings freely. The researcher facilitated the sessions with a co-facilitator. The sessions were recorded via mobile phone and the co-facilitator wrote benchmarks of the discussion.

For qualitative information, meetings were conducted with two gender specialists in PWA: one from PWA in Ramallah as she is gender expert, and another from PWA in Gaza as she is the gender focal point in the project department.

Gender analysis done in accordance of GCF policy and gender theories as well as the PWA policy and priorities to mainstream gender.

## 7. Geography of the Study Area

The Palestinian Water Authority (PWA) is executing the Northern Gaza Emergency Sewage Treatment (NGEST) Project initiated in 2004. Around 15,000 dunums of agricultural lands are located in the eastern part of North Gaza and Gaza City that will be irrigated by recovery water wells from the NGEST project. Farmers are either owners or workers at these lands living in North Gaza (Beit Hanoon, Jabalia, and Gaza city). This area is in the buffer zone near the border to Israel with a lot of risks, farmers are prone to political instability compounded with the effects of climate change and increasing aridity and overall water insecurity.

The project's goal is to develop an integrated and low-emission water management scheme capable of mitigating the impact of increasing aridity due to climate change, by delivering water in quality and quantity for sustaining agriculture and preserving the health of highly vulnerable population in the Gaza Strip. The project was prepared with no specific approach to tackle gender issues, so this study was commissioned as a complementary study to mainstream gender considerations into the project.

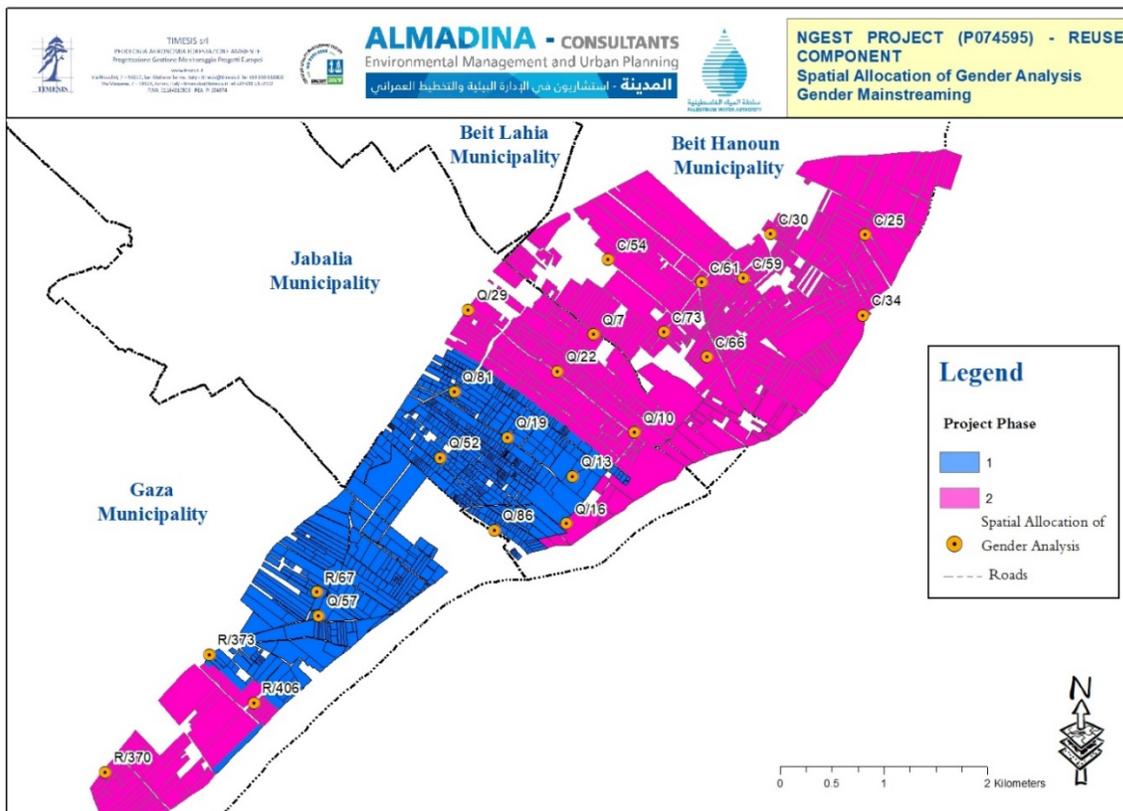


Figure (1) Geographical location and respondents' distribution

## 8. Recovered groundwater and sociality

Population growth and rapid urbanization are intensifying pressure on freshwater resources in Gaza Strip as tests show that 96.4% of domestic water resources are contaminated. The NGEST projects seeks to reduce the pressure on freshwater use in Northern Gaza by creating a “new” water source, which will be used for irrigation. Overall, the analysis of the answers from the questionnaires shows that 98.6% of the respondents (farmers) agreed to use this recovered water for irrigation; %96.4 Male 98% Females agree to use the non-conventional water for irrigation.

Women awareness around water reuse is considered a strategic need that can empower because it affects traditional women roles (Bader 2013). Investing in women training can increase their awareness of the issues of reuse of treated wastewater and their acceptance of reusing the treated wastewater. The importance of creating knowledge and awareness toward recovered water for agricultural activities, even for communities that have water networks, becomes a strategic need for all Palestinian men and women.

Analyzing the surveys of respondents from the sample that of 106, 19 Males answered yes that they received training on related topics, and 35 farmers answered no. For female farmers, 8 of the respondents received training and 43 females did not have training on agricultural issues.

### 8.1 Gender & Recovered water in Palestine

Few studies have been conducted in Palestine that connect gender, water, and treated wastewater. Water quality that is an indicator to gender equity was studied by Bader (2013). Women roles in rural areas are gender-based and subject to social means. Social roles that Palestinian women bear prohibited them from gaining the necessary knowledge to carry out these roles in the safest and most productive way. Bader in her study concluded that involving women in environmental education will be important regarding sustainable water management.

The WASH sector is a technical sector which needs technical tools to be able to intervene administratively. If you have a treatment plant and you do not have the ability, know-how and skills to deal with this component, there will be no administration. If the female farmer has the knowledge, she will become specialized and she will be more active in the sector.

## 9. Gender Analysis

### 9.1. Questionnaire Analyses

A randomly selected sample of 106 farmers (51 females, 55 males) in the project area were interviewed. The questionnaire focused on the socio-economic situation, roles (productive & reproductive), and access to resources (land and water). It also inquired about any past training on agricultural or related topics, and about acceptance of using recovered water for irrigation.

#### Statistical Analysis

The data collected from field observations and workshop participants was analysed and presented quantitatively. The data collected by survey was analyzed using SPSS (Statistical Package for Social Science) program.

#### **9.1.1. Socio-economic situation**

The targeted area in the northern area in Gaza (Jabalia, Beit Hanoon, and Shijaia area at Gaza City) near the border, the population is very poor, with high unemployment rate, low household incomes, a high cost of living (particularly for food) and the erosion of livelihoods have resulted in continued high levels of food insecurity in Gaza Strip. Access to essential services including in Gaza City is low. The people in the targeted area suffer poverty as unemployment rate is higher in this area than other areas (72.5 % unemployment rate), as questionnaires' results show. The survey shows that most of the women spend their time in the household doing domestic work and follow traditional roles, and males spend most of their time in the farm and field.

Over (86.8%) of the sample depended on the male in the family as the breadwinner for the household's income. Moreover, the majority of the respondents (72.5%) were not employed, indicating that most were housewives and depended on their spouses for their income.

The household source of income is from different sectors, but from agricultural production is the highest percentage 65.1% (Figure 2).

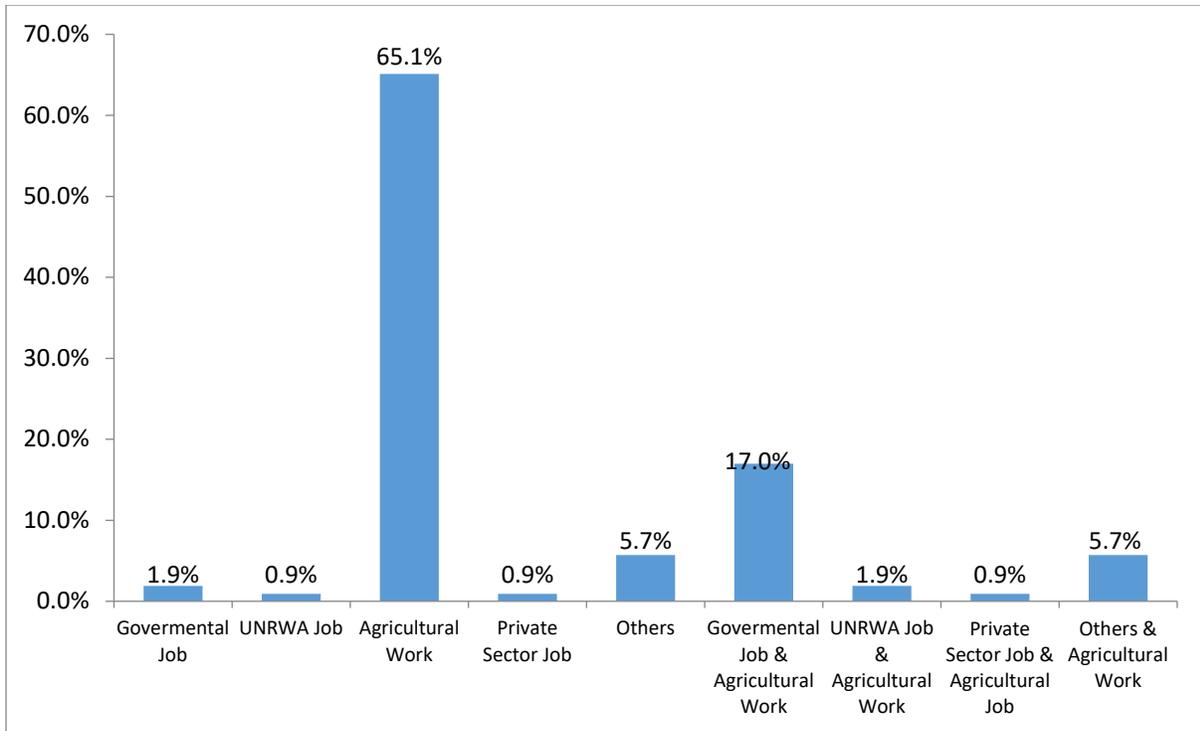


Figure (2) Family income source

The majority of farmers had seasonal income, ranging from 1200 -12,000 NIS from agricultural activities as shown in Figure (3). Olive oil production is the highest income compared to the income from other crops.

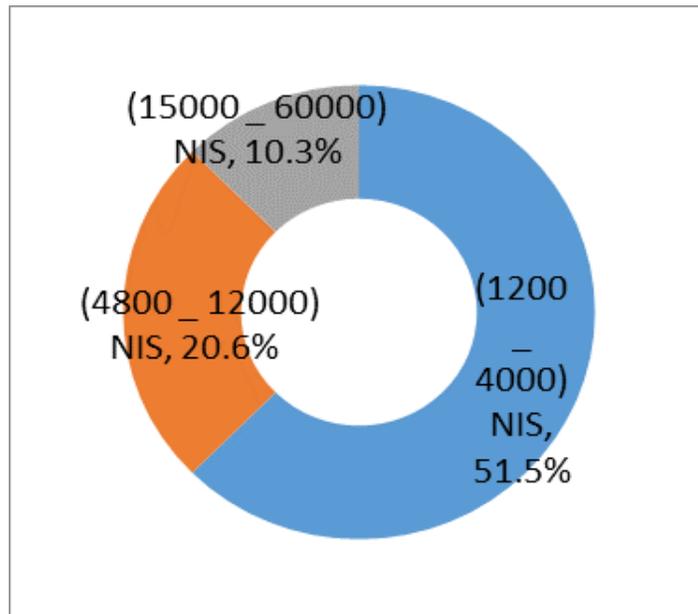


Figure (3) Income from agricultural crops (NIS)

83% of the sample cultivate privately owned land, while 17% work on land that is rented. Also results indicated that expenditures, notably input costs, impact the decisions made by the respondents in terms of production including the type of crops grown. 84% of males respondents while 17% of females answered that they selected the crops.

The decisions about land and other resources were dominated by men in most cases as the results illustrated that the male in the household, being either the husband or the father, makes the decision on how income is spent.

### 9.1.2 Current Water Sources for Irrigation

As estimated 53.3% of the population in the targeted area irrigates their lands from collective wells, 20% from private wells, 6.6% from rainwater. To irrigate from wells, either collective or private, is expensive: it costs them around 60 NIS per hour yet the income from the farm and agricultural production is low.

The majority of respondents agree to use the recovered water for irrigation purposes, and they believe this recovered water will contribute to the solution of water scarcity and will positively impact the environment. This indicates that people had the desire to use recovered water and have a network connection to it as most of the sample (about 78%) has background information of NGEST and the project. 98.6% agree to be connected to the network of this recovered water for irrigation, just 1.4% did not agree.

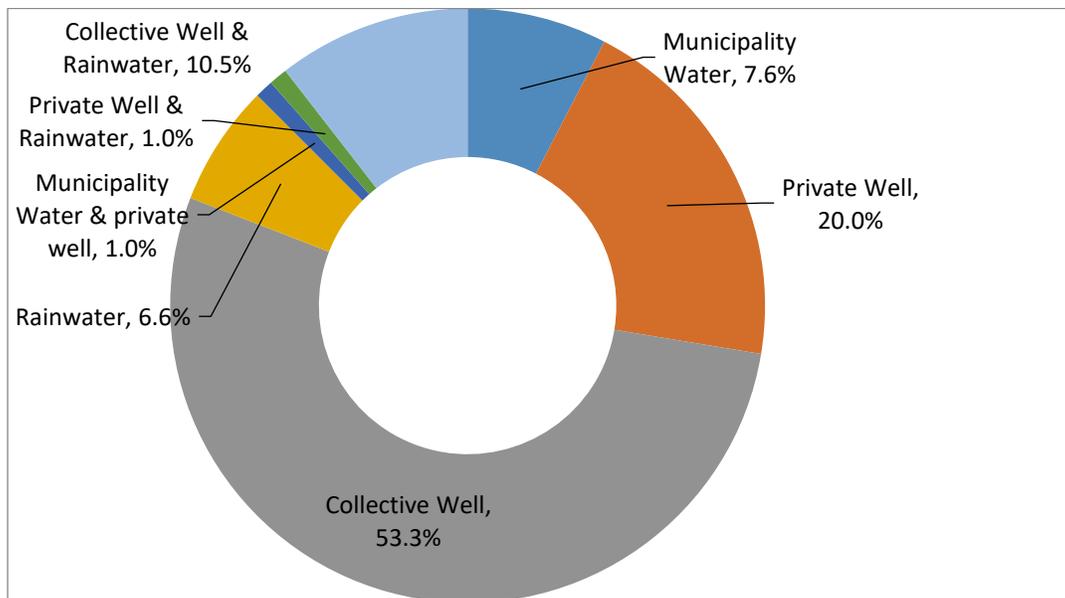


Figure (4) methods of irrigation water

### 9.1.3 Access to Irrigation water

Figure (5) presents that only 22% of male farmers had easy access to water for irrigation and only 8.7% of females confirmed that they had easy access to water for irrigation. In addition,

around 30% of the male farmers and 39% of females had difficulties to access the water for irrigation.

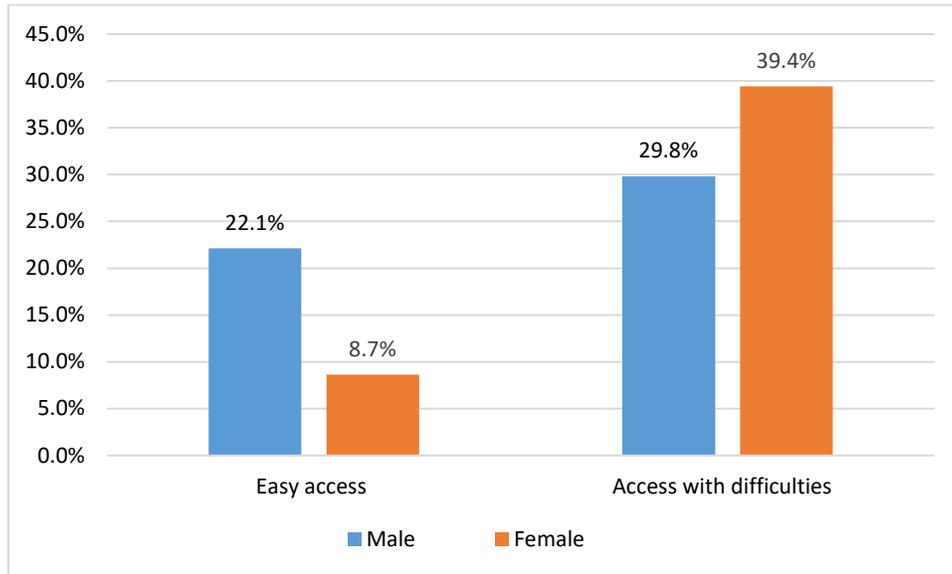


Figure (5) Access to irrigation water

### 9.1.3 Payments for irrigation

Respondents answered that male farmers are responsible to pay the cost for irrigation, high percentage for men (83%), while very little percentage of women (4.7%).

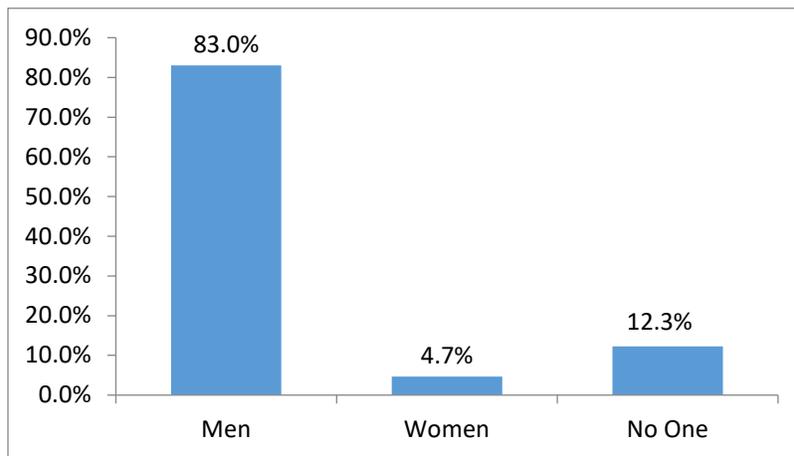


Figure (6) Responsibility of paying for the cost of irrigation.

As shown in Figure (6) the majority of respondents (96%) agreed to use recovered water for irrigating crops that are consumed by humans.

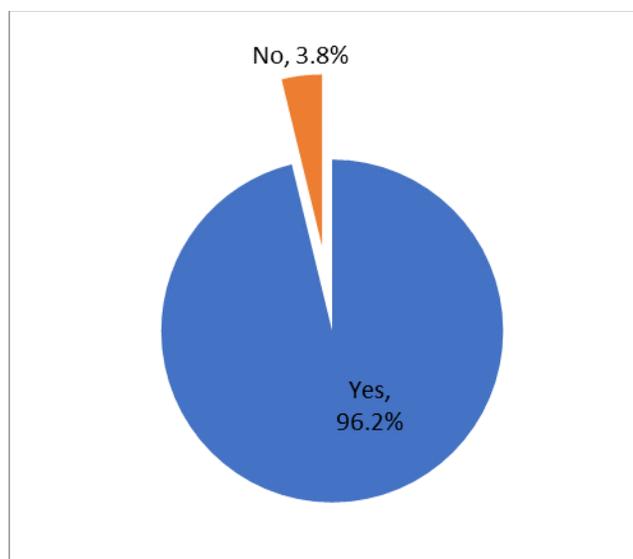


Figure (7): Using recovered water for irrigation

When asked for the kinds of plants to irrigate, 95% accepted to use this recovered water for irrigation of vegetables and plants that are eaten as fresh food, 98% of the respondents accepted to use this water for irrigating plants that are eaten cooked. Overall, the majority of the respondents accepted this recovered water for irrigation, mostly because of the lower cost.

## 10. Control/decision over production crops

Respondents confirmed that decisions related to agricultural work are made by the male in a high percentage of households (80- 85%), while in only 15-20% of the cases is the female involved. In some tasks, such as harvesting and seeding, the percentage is increased, but for fertilization and irrigation the percentage decreased (Table 1).

Table (1) control/decision over production crops

Control/Decision Over Resources	Husband	Wife	Son	Daughter	Labor
Crops selection	83.7%	8.7%	16.3%	1.0%	3.8%
Seeding	80.8%	7.7%	21.7%	0.9%	6.6%
Planting/sowing	81.1%	7.5%	19.8%	0.9%	9.4%
Fertilization	78.3%	6.6%	20.8%	0.9%	3.8%
Irrigation	79.2%	8.5%	19.8%	0.9%	3.8%
Harvesting	76.4%	9.4%	18.9%	1.9%	6.6%

Marketing	67.9%	6.6%	17.9%	0.9%	1.9%
Olive oil production	87.5%	8.3%	12.5%	2.1%	4.2%

Although these results suggest that females are not as empowered as males to make decisions for the household in agricultural matters, it may be more nuanced than that. 'Statistical' perspectives on decision-making should be remembered for what they are: simple windows on complex realities. They may provide a brief glimpse of processes of decision-making, but they tell us very little about the subtle negotiations that go on between women and men in their private lives. Consequently, they may underestimate the informal decision-making agency which women often exercise. As pointed by Kabeer (1999), women may opt for "private forms of empowerment, which retain intact the public image, and honor, of the traditional decision-maker but which nevertheless increases women's 'backstage' influence in decision-making processes" (Basu, 1996; Chen, 1983; Kabeer, 1997).

### 10.1 Time spent at household for males and females

Figure (8) shows 85% of male farmers spend most of the daytime at the farm while only 34% of females are spending some of the daytime at farms, which is expected given how much domestic work women are responsible for.

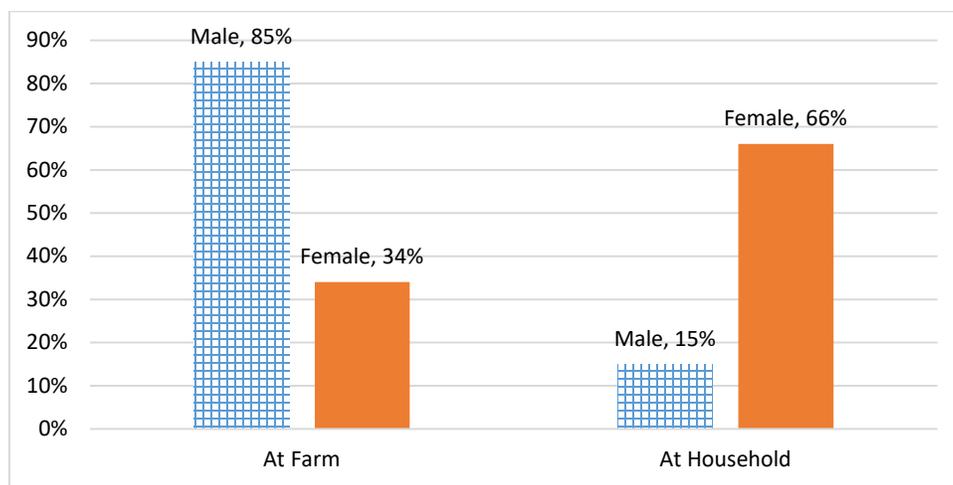


Figure (8) Time spent in farm by males and females.

The vast majority of the respondents were not members of any type of organization, such as farmers associations or agricultural cooperative societies. Of the 11% who belonged to a professional association, 13% of males are members of agricultural organization and 10% of females.

For educational level, when the data is disaggregated, females were higher: for high education females percentage in diploma is 4.1% and in bachelor 10.3%, while no men had a diploma or bachelor degree.

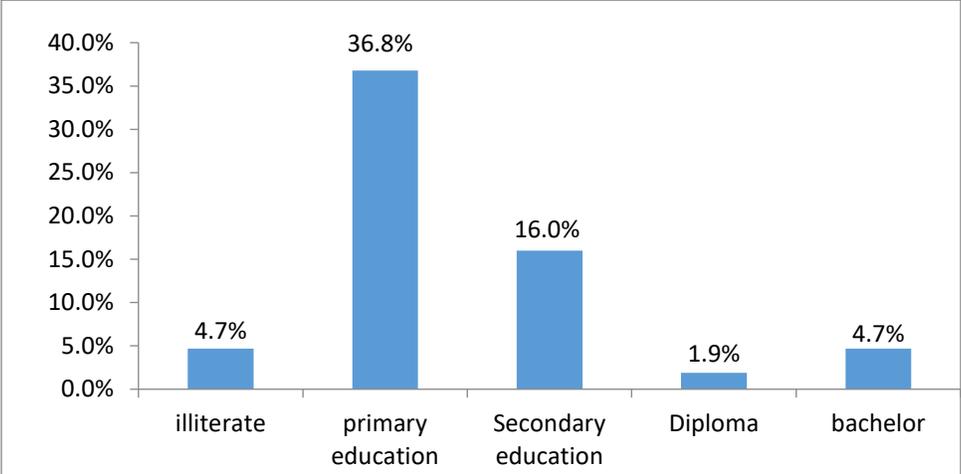


Figure (8) Education level

While the distribution of the respondents across age categories varies, most of the respondents ages are between 31-50 years (41.5%).

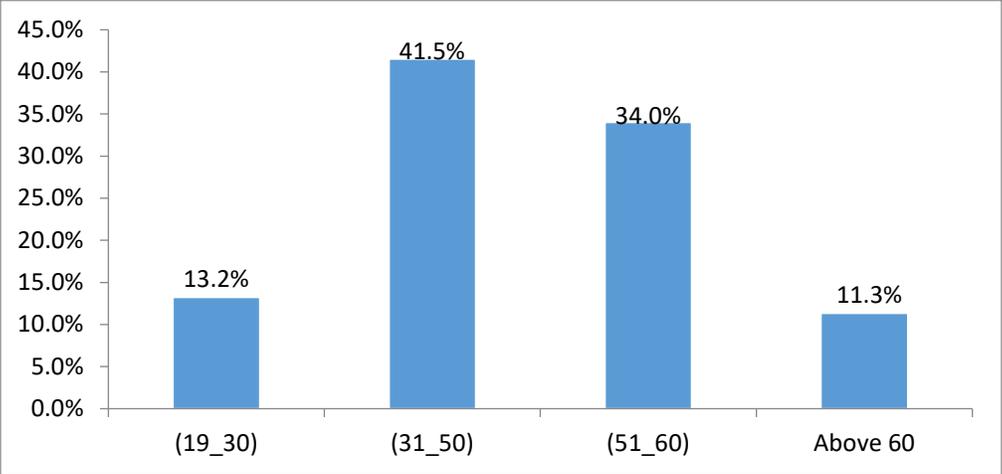


Figure (9) Age of the participants.

## 10. Climate change and agricultural activities

Men and women both noticed significant climate changes during the last decade. Around 47% of males had noticed changes in temperature and rainfall during the last decade while around 38% of the females had noticed these changes. Therefore, around 45% farmers confirmed significant impacts on their agricultural activities at the project area while 33% of females agreed. Accordingly, around 11.4% of male farmers had changed their crops while only 6.7% of females agreed on changing the crops. The decision of changing the crop is dominated by male farmers, their sons and the labourers.

## 11. Focus Group Discussions Analysis:

Six workshops were conducted with farmers from local communities in the targeted area (Table 2). At least 10 farmers in every workshop; 10 females and 10 males participated in every area of the targeted three areas. The main issue that the facilitator raised in the workshops is wastewater treatment and use of recovered water for irrigation from NGEST plant. Six focus group discussions conducted during field research in Gaza raised that it is prevented to cultivate trees there or any kind of plants taller than 1 meter for security reasons in Jabalia, Beit Hanoon, & Shejaieh at Gaza City. They cultivate just seasonal plants.

*Table (2) Focus Groups Meetings*

#	Date	Location	No. of Participants	Gender
1	3 April	Beit Hanoon	12	Males
2	7 April	Beit Hanoon	13	Females
3	11 April	Jabalia	16	Males
4	7 April	Jabalia	9	Females
5	4 April	Gaza city	9	Males
6	4 April	Gaza city	8	Females

The dialogues were about using this water, and the current water they are using for irrigation now and the cost of the current irrigation system, the problems they are facing while access to their land near the border. One male farmer from Jabalia stated, “the wife prefer to share in the farm work alone not forced by any other family members share in the farm work, roles of women in the farm”, her acceptance of her role. Most of the farmers (male & female) said that the cost of current irrigation from wells cost is between 50-70 NIS per hour. They commented that if this non- conventional water for irrigation costs less than the one they use they agree to change and use recovered water for irrigation in their farms.

Male farmers from Shajaieh area added that they sell the farm’s products in (El Khan) as wholesale for contractors with cheap prices, and those contractors sell for shops to sell the

products; sometimes they lose money no profits for most of them, they said we planted our lands near the boarder as we feel shame to leave it without cultivation, this is related to our citizenship and love of our land.

In their discussion they concentrated on Israeli violations to them as farmers near the border as dredging their agricultural lands most of the time, sometimes shooting and bombing around them, the Buffer zone area is dangerous with no stabile political situation all the time. One male of the participants commented that they faced death many times and they cultivated the land to keep it and it is a shame to leave our land without planting it, especially the land near the border.

A female farmer from Jabalia who headed her house and she is the source of income to her extended family said: "If we have electric power we go to irrigate the land, and if there is no electric power we use Gallons and transfer the water by gallons on the donkey wheel to the farm to use the water for irrigation, by this way we keep the plants alive." Her narrative shows how those farmers suffer to cultivate and irrigate their lands near the border, and their need of the project. She added: "After the Israeli wars against Gaza, every time we work on rehabilitation of our lands without assistant from any organization, and on our account." So those women who head their houses suffer as farmers and as bread winner to their families.

### 11.1 Dialogue about use of recovered water

In a group discussion with female's farmers in Beit Hanoon, most are members in Saving & Lending Cooperative Society in Beit Hanoon. Some of the respondents are members in other societies and received trainings related to agriculture and food processing. In Shijaia area of Gaza City, no female was a member in any society, the same in Jabalia for membership. Female farmers in the Beit Hanoon discussion reflected that they accept to use recovered water for irrigation if it is cheaper than the one they are using from wells, as the electricity short feeding in all Gaza Strip including Beit Hanoon, and if they used fuel to pump water from wells it is costly, one of the participants said: "El Baiara Majabet Hag Maietha", which means cultivation of the farm did not cover the price of the water. This shows us that the farmers are suffering and they do not have any profit from farming -- they just cover their house from cultivated crops.

## 12. Meetings

Several meetings were held with gender-specialized experts in order to more fully understand women's issues in agriculture in the target area. One meeting was held with the gender expert in PWA in Ramallah (Hanadi Badir). She said: "This project is national and sector project we did not deal with it as individual." When talking about women's roles she commented:

“To talk about Wash sector and women’s role you talk about technical sector that requires technical tools to intervene, if you have wastewater plant and you don’t have technical knowledge and required skills to deal with this component, there will be no social administrative capacity. If the female farmer did not have the technical skill, this means that she will fail to use recovered water to irrigate crops in the irrigation water treatment system. The farmer needs community skills, communication skills, and technical skills as specialized farmer (male or female) so stereotype roles can’t appear, what we can do in this case?

If the farmer has the knowledge, she would be her highest performer and to have balance to achieve equality between the productive and reproductive roles, how? To develop the farmers and their knowledge, training and empowerment in a direction that serves the highest gender role. In Gaza how can I develop and provide them with these tools to develop the productive role for females to achieve balance? It can be achieved by developing her skills and technical knowledge. Another thing is to make sure that females want to go to the farm and play their productive role freely and alone, and if women have the desire to be part of the productive process and effective component in the process. If she is thinking to be part of the productive role and be part of it, this will increase the burden on her shoulder and if she is able to carry this burden, I mean as a female she works in home and do all her domestic work (reproductive role), and how can I share in the productive role and share in working in the farm; this means to have balance between the two roles. One thing I want to know carefully is how can we create integration, and reiterating that the man is the breadwinner of the family this stereotype can give the opportunity a feeling of safety for women here we work on the positive issue. Here to have gender mainstreaming in water management we can ease some facilitations to women that head a house, perhaps we can give her a higher amount of non- conventional water for irrigation.”

Another meeting was held with Reem Shomer, gender focal point in PWA – Gaza, who said that the strategy of PWA is to mainstream gender in the WASH sector, and that to use non-conventional water is important because it covers water for irrigation which is a scarce resource in Palestine including Gaza, and treatment of wastewater is a new source of water. The strategy mentions modern sources of water as recovered water and desalination of seawater to reduce the burden of groundwater use. Recovered water is to use alternative water resources and preventing wastewater to be pushed in the sea and this will have bad effects on environment as it pollutes seawater.

Users of water will be partners and share in monitoring this non-conventional quality and ensure compliance with the specifications to be compliant with WHO (World Health Organization) guidelines for treated wastewater quality.

As we handle the roles of men & women she said: “Men are in the fields and farms more than women and for domestic work it is the opposite, so we have to work on balance not equality.” Interventions will feed this point of view and our interventions will put into consideration culture, religion, and social issues. Intervention on roles of both men & women will be on

sensitization and awareness, especially for women, that productive work in the farm is paid work, domestic work in the house is not paid work – just to brainstorm with them and test if it is possible to go on or it is critical to discuss, while discussing this I have to keep in mind culture and religion.

The expert also mentioned as we talked about ownership of land, she commented that women who own land is a very small percentage, and if a woman owns the land she lets her son, husband, or brother to manage her land, in general she does not have control of the land.

Another point about the status of women we discussed is when female talks about her husband as a farmer and she went with him and shared the work in the farm, this refers to protection and he works near the border that is dangerous area and she preferred to share him working in the farm to protect, sometimes she walk in front of him while walking to the farm.

### 13. Gender Roles

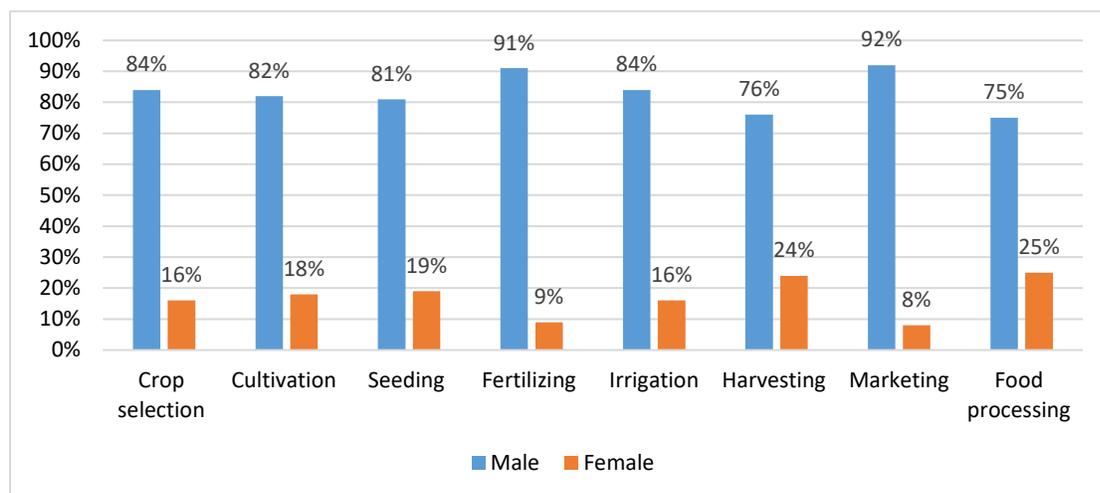
The relationship between women and men, girls and boys, have traditionally been unequal and characterized by a differentiation of roles, affecting and influencing all areas and spheres of life. Gender relations are often dictated by unequal power that assigns particular roles, determines access to decision making and access to/control over resources, including water.

Safe drinking water and sanitation are indispensable to sustain life and health. Access to water knowledge and practices is directly influenced by gender relations and roles. As is the case in most societies in the world, WASH facilities and access to water is associated with responsibilities undertaken by women in Palestine, since they are the ones responsible inside the household to cover the basic needs of its members. But access to water for agricultural use is associated with responsibilities undertaken by men in Palestine.

To improve the conditions of women in different societies, several guidelines have been developed worldwide aiming to provide direction and recommendations for the roles of men and women in agricultural activities.

Who performs the agricultural activities?

In the project area, the performance of agricultural activities is dominated by men. Females had minimal contribution to these activities. The women participation in these activities are as follows: crop selection only (16.0%), cultivation (18.0%), seeding (19.0%), fertilizing (9.0%), irrigation (16.0%), harvesting (24.0%), marketing (8.0%) and food processing (25.0%).



Societal and political constraints in the Palestinian context make gender mainstreaming in WASH projects a challenging task especially for agricultural use as stereotypes show that males control lands and are responsible for doing most of agricultural work in the farm, females especially wives assist their husbands in the farm work with children.

Another challenge is that irrigation requires technical skills. If the male or female has the knowledge and skills of irrigation, they can do the task no matter the gender. The need, therefore, is to provide training related to irrigation so that females can acquire the required knowledge and skills to make them eligible to do the task of irrigation in a professional way. In addition, it must be considered if females desire to do this work. Females should be empowered to choose this line of productive work, but not forced into it from males in her household.

Access to water for agricultural use also has significant implications for women working in agriculture. So while working in the project we have to put in our consideration equal distribution to females especially who head their houses and give them priority to have recovered water for irrigation to support them and assist them to build their capacity.

#### 14. Women Empowerment

Empowering women and reducing gender inequalities are two key objectives of development policy. (The third Millennium Development Goal (MDG3)). Empowerment means:

- Ability to improve quality of their life,
- Independent,
- Decision making capability.
- Equality with men.

#### **Definition of empowerment**

Kabeer (1999) has put forward one of many possible definitions found in the gender literature, stating that empowerment is the process by which those who have been denied the ability to make strategic life choices acquire such ability. Empowerment by this definition, therefore, entails a process of change.

Kabeer continues: "As far as empowerment is concerned, we are interested in possible inequalities in people's capacity to make choices rather than in differences in the choices they make. An observed lack of uniformity in functioning achievements cannot be automatically interpreted as evidence of inequality because it is highly unlikely that all members of a given society will give equal value to different possible ways of 'being and doing'. Consequently, where gender differentials in functioning achievements exist, we have to disentangle differentials which reflect differences in preferences from those which embody a denial of choice." In the project's context, it must be understood if the gaps identified between the roles of men and women are a reflection of oppressive gender roles that inhibit women from participating or of an empowered choice by women to engage in other activities.

Another complication in understanding the power/choice dynamic it is difficult to identify forms of gender inequality when these appear to have been chosen by women themselves. This

problem plays out in the literature on gender and well-being in the form of behaviour on the part of women which suggests that they have internalized their social status as persons of lesser value. Women's acceptance of their secondary claims on household resources, their acquiescence to violence at the hands of their husbands, their willingness to bear children to the detriment of their own health and survival to satisfy their own or their husband's preference for sons, are all examples of behaviour by women which undermine their own well-being. (Kabeer 1999)

In the project's context, if women report that they do not want to participate in agriculture because they think it is rightly the exclusive domain of men and so they "choose" to only participate in domestic work, that would suggest that certain aspects of tradition and culture are so taken-for-granted that they have become naturalized – traditions and beliefs which exist beyond discourse or argumentation. In assessing whether or not an action embodies meaningful choice, we have to ask ourselves whether other choices were not only materially possible but whether they were conceived to be within the realms of possibility in the first place.

Also, Bertelsen, and Holland describe empowerment as "a group's or individual's capacity to make effective choices, that is, to make choices and then to transform those choices into desired actions and outcomes" (2006, 10). This definition has two components—the component related to Amartya Sen's (1989) concept of agency (the ability to act on behalf of what you value and have reason to value)—and the component related to the institutional environment, which offers people the ability to exert agency fruitfully (Alkire 2008; Ibrahim and Alkire 2007).

In defining empowerment in agriculture, it is important to consider the ability to make decisions as well as the material and social resources needed to carry out those decisions.

#### The WEAI

Alkire et al. (2012) developed the Women's Empowerment in Agriculture Index (WEAI), which is a new survey-based index designed to measure the empowerment, agency, and inclusion of women in the agricultural sector. It assesses the degree to which women are empowered in five domains of empowerment (5DE) in agriculture. These domains are (1) decisions about agricultural production, (2) access to and decision-making power about productive resources, (3) control of use of income, (4) leadership in the community, and (5) time allocation. Although women's empowerment is a multidimensional process that draws from and affects many aspects of life, including family relationships, social standing, physical and emotional health, and economic power, the focus of the WEAI is on those aspects of empowerment that relate directly to agriculture—an area that has been relatively neglected in studies of empowerment.

In this project, the data shows that the 1, 2, 3 & 4 domains are controlled by men. For the 5<sup>th</sup> domain of time allocation, the study shows that men spent most of their time in the farm is 94.5% and the time spent in households is 5.5% during day time, vice versa for women.

Between procurement and marketing: In all agricultural sectors, on activities 'after procurement and before marketing' both male and female indicate a clear role for females. Either a clear responsibility to food processing as they cover their households need, if they have extra amount they go to market for selling.

Respondents confirmed that decisions related to agricultural work is made by the male in a high percentage of more than 80- 85%, while in only 15-20% of the cases is female involved, in some tasks as harvesting and seeding is increased, but for fertilization and irrigation the percentage decreased. It is clear in (Table 1).

### 14.1 Drivers of change

A gendered approach to water and sanitation services aims to ensure that all people benefit from and are empowered by improved water and sanitation services and takes into consideration different needs, gender roles and safety, as well as differentiated barriers to access and conditions for meaningful participation. Often gender blindness and/or the lack of capacity of water actors to ensure women participation is wrongly attributed to "cultural restrictions and norms" and results in a lack of gender equality application in irrigation services.

Land ownership and decisions over resources were dominated by men in most cases as the results illustrated that the male in the household, being either the husband or the father, makes the decision on how income is spent. Also, the one who manages expenditures – according to male respondents – is the husband (76%); according to female respondents, the one who manages the household expenditures is the female (33%). Nearly (87%) of the sample depended on the male in the family as the breadwinner for the household's income. Moreover, the majority of the respondents (79%) were not employed<sup>4</sup>, indicating that most were in fact housewives who depend on their spouses for their income.

There are several social norms and practices in Palestine that would need to be challenged in order to fully empower women in the agricultural sector: management of land; resource decisions; and time allocation between reproductive work and productive work are but a few. The drivers of change to gender norms in this project can, broadly speaking, be conceptualized in two categories: social/philosophical drivers; and structural/institutional drivers. For the social/philosophical component, interventions such as awareness raising and social marketing techniques can help overcome negative beliefs of women playing a greater role in agricultural production. For structural/institutional change, practical interventions that allow for greater participation by women are necessary, such as technical capacity building, access to loans and

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<sup>4</sup> *Gender Policy & Action Plan, Green Climate Fund, p. 1*

financial credit, and membership in agricultural associations. These and other interventions are proposed and discussed in the Gender Action Plan Report.

## Conclusion

This report aims to assess the implications of this project's planned activities in order to identify vulnerabilities or disadvantages of women, which the project is in a position to improve. By utilizing the baseline survey and other data, this report seeks to determine how the project can respond to the needs of women and men in view of the specific climate change issue to be addressed.

In order to do this, the study conducted a gender analysis and collected sex and age disaggregated data in order to form an accurate and nuanced picture of the situation of target communities and social relations within them. To understand relationships between men and women farmers, we examined different roles, rights, needs, and opportunities for enhancing gender equality in the project.

The study analyzed the socio-economic situation of respondents by educational level, work experience and family income. Most of the farmers income is from agricultural income ( 65%), the unemployment rate is high especially in the Northern area (72.5%). In Palestine, women labour force participation is 19% in Palestine in Gaza & WB.<sup>5</sup>

The survey responses show us that females spend 66% of their time in the household and 34% in the farm, and this influences how they respond to changes in water and non-conventional water management and has implications for the desire of women to build their agricultural capacity, freedom of mobility, time that they spend in home and balancing it to the time they spend in the farm.

The interventions for this project, which are discussed in the Gender Action Plan, would not seek to change the traditional roles of men and women in Palestinian society. They would merely seek to, first, ensure that the project activities do not inadvertently harm vulnerable populations such as women out of ignorance of the issues they face. And second, they would seek to be as inclusive as possible, which is not only intrinsically desirable but also practically beneficial – involving women in water projects increases project effectiveness and long-term sustainability. Hopefully the interventions that are proposed will help achieve greater equality in opportunities and choice between men and women in the targeted area.

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<sup>5</sup> Wash Tool Kit

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# **Gender Profile: Palestinian Territories**

## **Final Report**

**January 2016**

**Japan International Cooperation Agency (JICA)**  
**Kokusai Kogyo Co., Ltd.**

<b>EI</b>
<b>JR</b>
<b>16-100</b>

This study was conducted between August 2015 to January 2016 by Kokusai Kogyo Co., Ltd., based on a review of existing literature and a field survey in Palestine. This study was produced as a reference material for the Japan International Cooperation Agency (JICA) for implementation of its development assistance in the country. The views, analysis and recommendations presented here do not necessarily reflect the official views and opinions of JICA.

## Summary

<b>Gender Situation and Government Policy on Gender</b>
<b>Current Gender Situation in Palestine</b>
<ol style="list-style-type: none"><li>(1) The political, economic, and social dimensions of Palestinian life are fragmented due to long (and seemingly endless) conflicts. In recent years, the socio-economy has deteriorated both in the West Bank and in Gaza. Gaza, which has experienced four ‘wars’ in a decade, is especially damaged with nearly 40% of the population in poverty.</li><li>(2) The Palestinian gender situation should be understood on the basis of the social/gender norms which have been developed from Arab traditional and cultural values and Islamic values. Women are mother, wife, and caretaker of the family who stay at home, and are not to be seen by non-relative men.</li><li>(3) Electoral quota systems have enabled women to occupy seats in the Palestinian Legislative Council (equivalent to a Parliament) and local bodies to a certain extent. However, the elected women are yet to achieve tangible power and/or capacity to make a difference.</li><li>(4) While economic necessity has started to change the gender division of roles, with which some women have begun to work to earn an income, this does not necessarily empower women.</li><li>(5) Women’s education level is very high. However, this has not led to their active participation in the economy; only less than 20% of the women are in the labour force. The women’s presence is specifically weak in the private sector, compared to the public sector. For one, social norms on ‘appropriate’ jobs, as well as education for women, limit the women’s job opportunities. For another, gender bias affects the potential employers negatively against hiring women.</li><li>(6) Other important gender issues of concern include women’s ‘asset poverty’, high fertility rate, gender-based and political/economic violence, early marriage and honour killings, and the influence of rising conservatism amongst others.</li></ol>
<b>Governmental Commitment on Gender</b>
<ol style="list-style-type: none"><li>(1) The Palestinian Authority’s “National Development Plan 2014-2016” has incorporated gender mainstreaming when developing the document, while it does not explicitly discuss gender mainstreaming/equality.</li><li>(2) The “Cross-Sectoral National Gender Strategy 2014-2016” is the main gender strategy of the government, which is the first of its kind in Palestine to promote gender mainstreaming in all sectors.</li><li>(3) The “National Strategy to Combat Violence Against Women 2011-2019” specifically tackles gender-based violence (GBV)/violence against women (VAW), while “Gender Charter for the Aid Coordination Structure in Palestine” argues for gender mainstreaming in aid coordination amongst the Palestinian Authority and the donor circle.</li><li>(4) The legal system of Palestine is a ‘patchwork’ of historical laws of different countries. Partly due to this, legal stipulations which would disadvantage women are still in practice. However, some recent laws, including Labour Law and Electoral Law, set regulations favourable for women.</li><li>(5) The de-facto internal split (the West Bank of Fatah and Gaza of Hamas) has made the rule</li></ol>

of law difficult to be applied.

- (6) The Palestinian Authority has joined the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) in 2014, and is currently in preparation of the National Action Plan for UN Security Council Resolution 1325.

#### **National Machinery**

- (1) The national machinery is the Ministry of Women's Affairs (MOWA), established in 2003.
- (2) MOWA develops gender policies, promotes gender mainstreaming in various sectors, and coordinates with other actors including the civil society.
- (3) Although MOWA is committed, it has a short history and small ministry without implementing power; thus, it is not always possible for MOWA to ensure that governmental programmes/activities actually take gender considerations into account.
- (4) Gender Units are to be established in other governmental institutions. As of 2015, 11 out of 27 institutions have activated Gender Units, with an additional four institutions having gender departments in other names.

#### **Current Gender Situation in Selected Sectors**

##### **Peacebuilding / Palestinian Refugees Support**

- (1) Palestinian women have not had much influence on peace negotiations, partly due to the unfavourable environment against women's movements and opinions in recent years.
- (2) Palestinian Refugees account for more than 40% of the population. Refugees tend to be poorer than non-Refugees, while Refugee women tend to participate more in the labour force than non-Refugee women.
- (3) While there are 27 Refugee Camps in Palestine, the majority of the Refugees reside outside Camps, i.e., in various communities.
- (4) The living environment in the Camps is poor, with overpopulation, poor hygiene, and troubled infrastructure. The women's life in the Camps is extremely stressful.
- (5) The majority of Camps have Women's Centres, where women can gather and have their own activities. However, many Women's Centres suffer from lack of funds and support.

##### **Agriculture and Rural Development**

- (1) The "National Agriculture Sector Strategy 2014" does not give strategic importance to gender mainstreaming/women's empowerment.
- (2) While the importance of the agriculture sector in terms of its share of GDP has been shrinking, it is still significant in terms of women's employment; 20% of women in the labour force work in agriculture.
- (3) Working in agriculture, however, does not necessarily empower women. Women's contribution is often underestimated, not only by others but also by the women themselves. This could be attributed to the fact that many women work in family-run farms, in many cases as unpaid family members.
- (4) While agricultural cooperatives are popular in Palestine, the proportion of women members is small. In men-led cooperatives, women tend to have little power and decision making.

Thus, women are unlikely to be empowered. In women-only cooperatives, they tend to concentrate on 'feminine' work which is in line with traditional women's roles as mothers/caretakers.

### **Private Sector Development**

- (1) Major sectoral strategies in the sector, "National Economic Development Plan 2014-2016" and "National Employment Strategy" are yet to incorporate gender considerations strategically.
- (2) Women's participation in the private sector economy is limited. While the women's labour force participation is less than 20%, more women work in the public sector than in the private sector. The private sector employment is less preferred by women, because the types of jobs tend not to be 'appropriate' for women, but at the same time the employers do not have incentives to hire women as they tend to see women workers as incompetent (gender bias). In addition, women tend to be less qualified for the private sector jobs as their educational background is concentrated on 'female appropriate areas' including education, health, and humanities, whereas what is needed in the private sector jobs are more related to science. In micro, small and medium enterprises (MSMEs), very few women are in the workplace.
- (3) Women tend to prefer to work in agriculture while men prefer to work in the informal sector, when they do not have job opportunities in the public/formal sector. When women work in the informal sector, it is likely because they have no other choice.
- (4) There are very few women entrepreneurs, and women's enterprises tend not to expand/develop. One factor is that women entrepreneurs do not have the proper 'business mind', but it is also true that the women do not have chances and/or access to develop the business mind.
- (5) Access to financial services, other than that of microfinance, is difficult for women. Whether microfinance has been beneficial for women is arguable; it is reported that in many cases women become 'loan windows', who simply bring the borrowed money to their husbands/fathers. Whether or not the women have control of the money is critical.

### **Challenges and Considerations for Gender Mainstreaming in Development Assistance**

#### **Significance of Understanding Diversified Gender Situations**

Gender situations in Palestine are extremely complicated and diversified. Depending on the group attributions, experience with migration, and community locations, to name but a few, the gender situations and issues of specific groups vary greatly. From the perspective of development assistance on gender, this leads to a high probability of ineffectiveness of applying 'generic' gender component(s) without case-by-case gender analysis.

Thus, in assisting Palestinian people on gender issues, it would be advisable for each project/programme 1) to implement gender research and analysis of each target community, as much as possible; 2) to have a gender expert on the team who has enough expertise and skills to be able to deal with this complexity and individuality. It would be desirable to make the design and activities of all projects/programmes 'tailor-made' as much as possible.

In addition, these researched data and analysis should then be consolidated and accumulated, in a cross-sectoral manner, so that they will form an invaluable resource of collected

information, an intellectual property, which will contribute to designing and implementing development assistance in Palestine as a whole.

### **Potential of Livelihood Support as GBV Countermeasure**

It is understood that access to a safe and stable livelihood works as an effective means for prevention and protection against GBV. Therefore, GBV protection/prevention and livelihood support could be, to a certain extent, incorporated into the same project/programme.

Gender issues in Palestine have evolved as consequences of the interaction of various political, socio-cultural, and economic factors. This being so, interventions to tackle them are also to be multi-dimensional. Women's livelihood support is, thus, not only for the beneficiaries' economic empowerment; rather, it should be considered in the context of multifaceted empowerment including political and social empowerment of women (e.g., strengthening the bargaining power of women in the household/community and re-examination of traditional gender norms); and combining GBV protection/prevention with livelihood support is one way to do so.

### **Gender Situation in relation to Monetary Control**

It is important to keep the issue of monetary control in mind, in development assistance in today's cash economy, for which Palestine is no exception. While it is generally a male role to control the money in the household, according to Palestinian social norms, the study finds that the individual who has control of the family 'wallet' varies greatly case-by-case. However, the lack of concrete and specific information on actual cases regarding this matter makes further analysis impossible. It would be desirable to collect more data and analyse the collected information on this issue.

As for microfinance, which has become a well-established development programme in Palestine, one problematic tendency is that women often become 'loan windows', whose names are simply used to obtain the loans used by household males. On the other hand, microfinance does have a potential to empower women borrowers, economically as well as socially, if women actually have the control of the money they borrow. As such, application of microfinance should be designed and implemented with great care, with consideration of these positive and negative impacts.

### **Potential for Support to Help Women Step Out of 'Female Appropriate' Areas**

One factor that hinders women's labour force participation and economic empowerment in Palestine is that a majority of women remain, willingly or unwillingly, in the socially 'female appropriate' areas of work and education.

It would be an appropriate support if the livelihood support, the private sector development, and the education sector development, promote and/or encourage women to step out these 'female appropriate' fields. However, it should be noted that working with and encouraging targeted women only would not be enough; raising awareness of this issue among the people around the targeted women would also be important. The social norm which has kept women in the supposedly 'female appropriate' fields regulates not only women themselves but also the people around them, who, in turn, intentionally or unintentionally, regulates these women's behaviour.

### **Securing Commitment with Checklists**

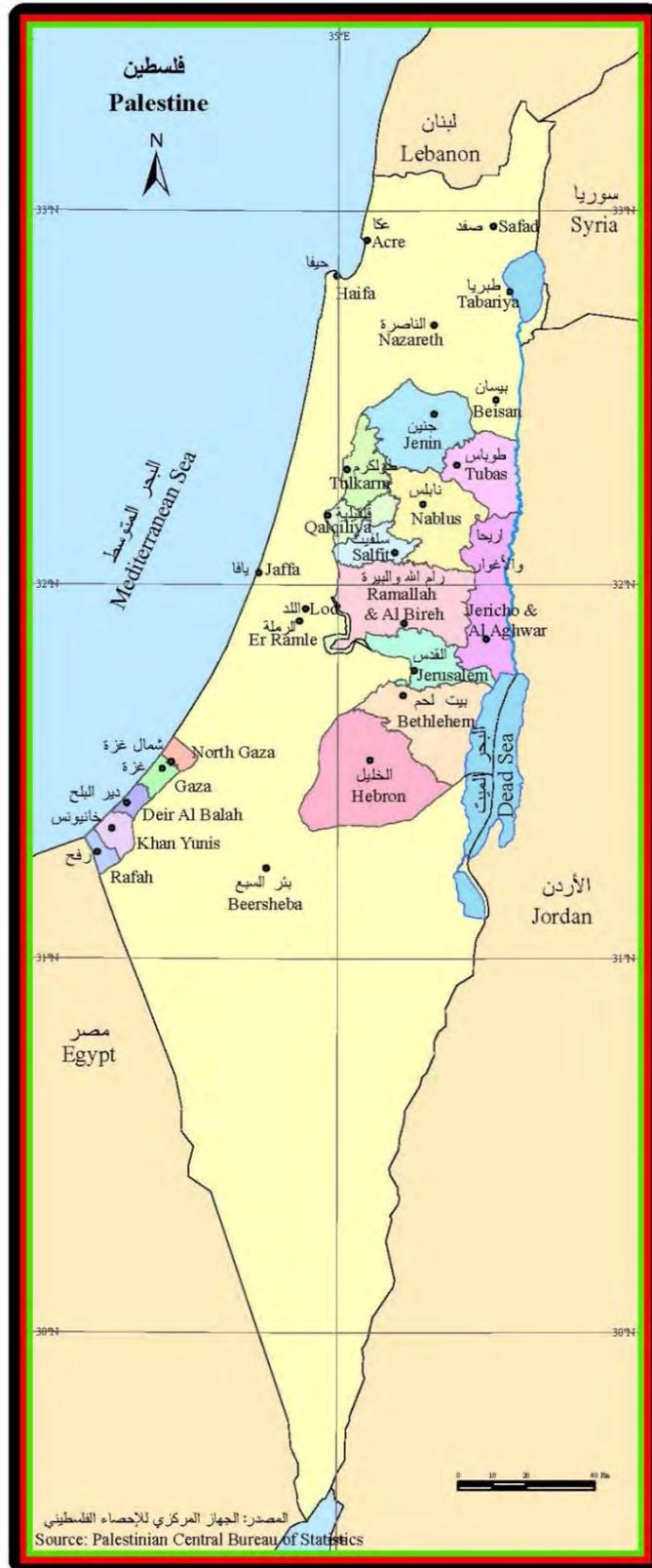
In the context of Japan's development assistance, all projects and programmes would comply and commit to Japan's National Action Plan for UN Security Council Resolution 1325 (the Plan), formulated in 2015. In the context of assistance for Palestine, the Gender Charter for the Aid Coordination Structure in Palestine (the Charter) requires commitment and compliance.

In order to comply with the Plan and the Charter effectively and efficiently, it would be advisable that the required considerations, actions, to-dos and not-to-dos for compliance with these documents would be distilled and compiled into a kind of checklist.

## List of Abbreviations

BDS	Business Development Service
BWF	Business Women Forum –Palestine
CBO	Community Based Organization
CBT	Community-based Tourism
CEDAW	The Convention on the Elimination of All Forms of Discrimination Against Women
DPT	Diphtheria, Pertussis, Tetanus
DV	Domestic Violence
EVAP	Project on Improved Extension for Value-Added Agriculture
FAO	Food and Agriculture Organization of the United Nations
FP	Family Planning
FPCCIA	Federation of Palestinian Chambers of Commerce, Industry and Agriculture
GBV	Gender-based Violence
GDI	Gender-related Development Index
GDP	Gross Domestic Product
GEM	Global Entrepreneurship Monitor
GEM	Gender Empowerment Measure
GNI	Gross National Income
GPI	Gender Parity Index
HDI	Human Development Index
HDR	Human Development Report
HIV/AIDS	Human-Immunodeficiency Virus/Acquired Immuno-Deficiency Syndrome
IDP	Internally Displaced Person(s)
ILO	International Labour Organization
JICA	Japan International Cooperation Agency
LACS	Local Aid Coordination Secretariat
MSMEs	Micro, Small and Medium Enterprises
NIS	New Israel Shekel
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
OECD	Organisation for Economic Co-operation and Development
MOA	Ministry of Agriculture
MOL	Ministry of Labour
MONE	Ministry of National Economy
MOTA	Ministry of Tourism and Antiquities
MOWA	Ministry of Women’s Affairs
PA	Palestinian Authority
PCBS	Palestinian Central Bureau of Statistics
PFI	Palestinian Federation of Industries
PLC	Palestinian Legislative Council
PLO	Palestine Liberation Organization
PWWSD	Palestinian Working Woman Society for Development
RH	Reproductive Health
TFR	Total Fertility Rate
UNICEF	United Nations Children’s Fund
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	United Nations Population Fund
UNRWA	United Nations Relief and Works Agency for Palestine Refugees in the Near East
VAW	Violence against Woman / Women
WATC	Women’s Affairs Technical Committee-Palestine

# Map of the Palestinian Territories



Source: Palestinian Central Bureau of Statistics

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# 1 Basic Profiles

## 1.1 Socio-Economic Profile

International Development Indicators	Year	Human Development Index (HDI)		Gender Development Index (GDI)		Reference <sup>1</sup>		
		Value	Rank	Value	Rank			
	2013	0.686	107	0.974	41	<1>		
	2007	0.731	106	N/A	N/A	<2>		
	Year	Gender Empowerment Measure (GEM)		Gender Inequality Index (GII)		Reference		
				Value	Rank			
	2013	N/A		N/A	N/A	<1>		
	2007	N/A		N/A	N/A	<2>		
Demographic Indicators	Year	Population		Urban Population		Reference		
		Total	% of female	Urban Population	% of female			
	2014	6,607,000	48.7%	1,147,703	N/A	<3>		
	2008	5,786,000	48.3%	1,089,875	N/A	<3>		
	Year	Annual Population Growth Rate	Households by Head of Households' Gender		Reference			
			Male-headed Households	Female-headed Households				
	2012	3.0%	N/A	N/A	<3>			
	2007	2.6%	N/A	N/A	<3>			
Economic Indicators	Year	GNI per capita	GDP Growth Rate	Inflation Rate	Gini Index	ODA received (% of GNI)	Grant received (against GDP)	Reference
	2013	\$3,060	-4.3%	8.2%	34.5 (2009)	19.1%	N/A	<3>, <4>
	2007	\$1,660	-1.8%	5.2%	34.7 (2005)	28.3%	N/A	<3>, <4>
Public Expenditure by Sector	Year	Health	Education	Employment & Welfare	Agriculture	Defense	Reference	
	2013	N/A	N/A	N/A	5%	N/A	<3>	
	2007	N/A	N/A	N/A	7%	N/A	<3>	
Sectoral Share of GDP	Year	Agriculture	Industry	Services	Reference			
	2013	5%	23%	72%	<3>			
	2007	7%	24%	69%	<3>			
Labour Indicators	Year	Labour Force Participation Rate (Age 15-64) (%)		Unemployment Rate (%)		Minimum Wage per Month	Reference	
		Male	Female	Male	Female			
	2013	68.9	16.1	23.8	21.3	\$377 (2012)	<3><4>	
	2007	70.6	15.9	22.0	19.5	—	<3>	
Sectoral Employments	Year	Agriculture	Industry	Services	Reference			
	2013	10.5%	28.4%	61.6%	<3>			
	2008	13.4%	25.7%	60.9%	<3>			

1 See list of Data Sources for Basic Profiles on page 7.

Global Gender Gap Indices	Overall Rank in 2014 (Rank/out of total number of countries) <sup>2</sup>	— /142	
	Economic Participation and Opportunity	Rank in 2014	Reference
	<b>Total</b>	N/A	—
	<b>Ratio: female labour force participation over male value</b>	N/A	—
	<b>Wage equality between women and men for similar work</b>	N/A	—
	<b>Ratio: female estimated earned income over male value</b>	N/A	—
	<b>Ratio: female legislators, senior officials and managers over male value</b>	N/A	—
	<b>Ratio: female professional and technical workers over male value</b>	N/A	—

## 1.2 Education Profile

Education System

Palestinian educational system comprises of 10 years of primary education and 2 years of secondary education. Secondary educational schools consist of general education schools and vocational schools. Higher education is provided at four-year universities, technical colleges and two-year community colleges.

Adult Literacy Rate

Year	Total	Male	Female	Reference
2014	96.43%	98.40%	94.41%	<5>
2009	94.60%	97.43%	91.70%	<5>

Primary Education

Year	Gross Enrolment Rate			Net Enrolment Rate			Reference
	Total	Male	Female	Total	Male	Female	
2013	95.26%	94.92%	95.62%	91.24%	90.51%	92.01%	<5>
2008	88.46%	88.59%	88.33%	83.66%	83.62%	83.71%	<5>
Year	Completion Rate			Reference			
	Total	Male	Female				
2013	93.99%	94.21%	93.76%	<5>			
2008	89.95%	90.71%	89.15%	<5>			

Secondary Education

Year	Gross Enrolment Rate			Net Enrolment Rate			Reference
	Total	Male	Female	Total	Male	Female	
2013	82.29%	78.53%	86.21%	80.11%	76.55%	83.83%	<5>
2008	89.12%	86.13%	92.23%	86.70%	84.07%	89.44%	<5>
Year	Completion Rate (Lower Secondary) <sup>3</sup>			Reference			
	Total	Male	Female				
2013	73.11%	64.64%	81.93%	<5>			
2008	86.17%	80.19%	92.39%	<5>			

Vocational & Technical Education

Year	Number of Students /Female Ratio		Reference
	Number of Students	Female Ratio	
2013	2,711	13%	<6>
2008	6,582	33%	<6>

Tertiary Education

Year	Gross Enrolment Rate			Reference
	Total	Male	Female	
2013	45.6%	36.6%	55.0%	<3>
2008	50.7%	45.8%	55.7%	<3>

<sup>2</sup> Palestine is not included in the 2014 Global Gender Gap survey.

<sup>3</sup> "Lower secondary" is as is defined in the source.

Global Gender Gap Indices	Education Attainment	Rank in 2014	Reference
	<b>Total</b>	N/A	-
	<b>Ratio: female literacy rate over male value</b>	N/A	-
	<b>Ratio: female net primary enrolment rate over male value</b>	N/A	-
	<b>Ratio: female net secondary enrolment rate over male value</b>	N/A	-
	<b>Ratio: female gross tertiary enrolment ratio over male value</b>	N/A	-

### 1.3 Health Profile

Life Expectancy at Birth (age)	Year	Male	Female	Reference
	2012	73	73	<6>
	2007	72	72	<6>

Health Professionals	Year	Doctor to Population Ratio (per 1,000)	Nurse to Population Ratio (per 1,000)	Reference
	2013	N/A	N/A	-
	2003	N/A	N/A	-

Reproductive Health	Year	Maternal Mortality Ratio (per 100,000 live births)	Total Fertility Rate	Contraceptive Prevalence Rate (Age 15-49)	Pregnant Women Receiving Antenatal Care	Reference
		2013	48.0	4.0	52.5% (2010)	98.0%(2010)
	2006	61.0	4.6	50.2% (2006)	98.8%	<3>
	Year	Births Attended by Skilled Health Staff	Average Age at First Marriage	Adolescent Fertility Rate (births per 1,000 women aged 15-19)	Reference	
	2013	99% (2010)	N/A	60.2	<3>	
	2006	98.9%	N/A	67.1	<3>	

Infant and Under-five Mortality Rate	Year	Infant Mortality Rate (per 1,000 live births)			
		Total	Male	Female	
	2015	18.0	19.4	16.6	
	2010	20.2	21.7	18.6	
	Year	Under-5 Mortality Rate (per 1,000 live births)			Reference
		Total	Male	Female	
	2015	21.1	22.9	19.3	<3>
	2010	23.8	25.7	21.7	<3>

Immunization Rate (1 year old)	Year	Measles	DPT	BCG	Polio
		2012	98%	97%	98%
	2005	N/A	N/A	N/A	N/A
	Year	Hep B	HiB	Reference	
	2012	98%	97%	<7>	
	2005	N/A	N/A	-	

Nutrition

Year	Prevalence of Underweight (% of children under 5)	Prevalence of Stunting (% of children under 5 )	Iodine Deficiency	Diarrhea Treatment (% of children under 5 receiving ORS <sup>4</sup> packet)	Reference
2014	1.4%	7.4%	N/A	N/A	<3>
2010	3.7%	10.9%	N/A	31.4%	<3>

Access to Safe Water and Improved Sanitation Facilities (% of population)

Year	Access to Safe Water	Access to Improved Sanitation Facilities	Reference
2015	58%	92%	<8>
1995	88%	87%	<8>

HIV/AIDS

Year	HIV Prevalence among Pregnant Women Attending Antenatal Care(s)	Prevalence of HIV among Adults aged 15-49 (%)			Reference
		Total	Male	Female	
2013	N/A	N/A	N/A	N/A	-
2007	N/A	N/A	N/A	N/A	-

Global Gender Gap Indices

Health and Survival	Rank in 2014	Reference
Total	N/A	-
Sex Ratio at Birth	N/A	-
Ratio: Female Healthy Life Expectancy over Male Value	N/A	-

4 Oral rehydration salts.

## 1.4 Millennium Development Goals

<b>Goal 1: Eradicate Extreme Poverty and Hunger &lt;9&gt;</b>		<b>2001</b>	<b>2007</b>
Target 1.A: Halve, between 1990 and 2015, the proportion of people whose income is less than \$1.25 a day	● Proportion of population below \$1.25 (PPP) per day	27.9%	34.5%
	● Poverty gap ratio	7.6	9.8
	● Share of poorest 20% (lowest quintile) in overall consumption	6.8%	6.8%
Target 1.B: Achieve full and productive employment and decent work for all, including women and young people	● Growth rate of GDP per person employed	11.3%	0.0%
	● Employment to population ratio	28.9%	32.9%
	● Proportion of employed people living below \$1.25 (PPP) per day	N/A	38.4%
	● Proportion of own-account and contributing family workers in total employment	33.2%	36.2%
Target 1.C: Halve, between 1990 and 2015, the proportion of people who suffer from hunger	● Prevalence of underweight children under 5	N/A	N/A
	● Proportion of population below minimum level of dietary energy consumption	N/A	N/A
<b>Goal 2: Achieve Universal Basic Education &lt;9&gt;</b>		<b>2001</b>	<b>2007</b>
Target 2.A: Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling	● Net enrolment ratio in primary education	91.7%	83.9%
	● Proportion of pupils starting grade 1 who reach last grade of primary education	98.3%	99.4%
	● Literacy rate of 15-24 years-olds, women and men	98.7%	99.1%
<b>Goal 3: Promote Gender Equality and Empower Women &lt;9&gt;</b>		<b>2000</b>	<b>2008</b>
Target 3.A: Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015	● Ratio of girls to boys in primary, secondary and tertiary education	96.2%	109.5%
	● Share of women in wage employment in the non-agricultural sector	13.6	N/A
	● Proportion of seats held by women in national parliament	5.7%	12.9%
<b>Goal 4: Reduce Child Mortality &lt;9&gt;&lt;10&gt;</b>		<b>2005</b>	<b>2010</b>
Target 4.A: Reduce by two thirds, between 1990 and 2015, the under-five mortality rate	● Under-5 mortality rate per 1,000 live births	26/1,000	24/1,000
	● Infant mortality rate (0-1 year) per 1,000 live births	22/1,000	20/1,000
	● Proportion of 1-year old children immunized against measles	N/A	N/A
<b>Goal 5: Improve Maternal Health &lt;10&gt;</b>		<b>2005</b>	<b>2010</b>
Target 5.A: Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio	● Maternal Mortality Rate (per 100,000 live births)	59/100,000	53/100,000
	● Proportion of births attended by skilled health personnel (15-49 years olds)	97%	99%
Target 5.B: Achieve, by 2015, universal access to reproductive health	● Contraceptive prevalence rate	50%	53%
	● Adolescent birth rate	6.8%	6.3%
	● Antenatal care coverage (at least one visit)	N/A	16%
	● Unmet need for family planning	N/A	N/A
<b>Goal 6: Combat HIV/AIDS, Malaria and other Major Diseases<sup>5</sup> &lt;9&gt;&lt;10&gt;</b>		<b>2005</b>	<b>2010</b>
Target 6.A: Have halted by 2015 and begun to reverse the spread of HIV/AIDS	● HIV prevalence among population aged 15-24 years old	N/A	N/A
	● Condom use at last high-risk sex	N/A	N/A
	● Proportion of population aged 15-24 years old with comprehensive correct knowledge of HIV/AIDS	N/A	N/A
	● Ratio of school attendance of HIV/AIDS orphans to school attendance of non-orphans aged 10-14 years old	N/A	N/A
<b>Goal 7: Ensuring Environmental Sustainability<sup>6</sup> &lt;8&gt;&lt;10&gt;</b>		<b>2005</b>	<b>2015</b>
Target 7.C: Halve, by 2015, the proportion of the population without sustainable access to safe drinking water and basic sanitation	● Proportion of population using an improved drinking water source	80%	58%
	● Proportion of the population using improved sanitation facilities	90%	92%

5 Selected relevant target and indicators.

6 *Ibid.*

## 1.5 National Commitment on Gender Issues (Political Participation, Conventions and Laws)

### Women in Decision Making

Year	Parliament	Government		Private Sector			Reference
	Member of Parliament	Minister	Vice Minister	Manager	Professional	Technical	
2006	12.9%	12.5%	N/A	16.25%	N/A	N/A	<11>
-	N/A	N/A	N/A	N/A	N/A	N/A	-

### Commitment to International Agreements

Signature	Ratification	Treaty/Convention/Declaration
	2014	Convention on the Elimination of All Forms of Discrimination against Women (CEDAW)

### Laws and Regulations for Gender Equality and Protection for Women

Year	Law/Regulation
2003	The Basic Law
2005	Electoral Law

### National Policy on Gender

Year	Policy
2011	National Strategy to Combat Violence Against Women 2011-2019
2014	Cross-Sectoral National Gender Strategy 2014-2016
2014	Gender Charter for the Aid Coordination Structure in Palestine

### National Machinery

Year of Est.	Name of National Machinery
2003	Ministry of Women's Affairs

### Global Gender Gap Indices

	Political Empowerment	Rank in 2014	Reference
<b>Total</b>		N/A	-
<b>Ratio: females with seats in parliament over male value</b>		N/A	-
<b>Ratio: females at ministerial level over male value</b>		N/A	-
<b>Ratio: number of years of a female head of state (last 50 years) over male value</b>		N/A	-

## **Data Sources for Basic Profiles**

- <1> Human Development Report 2014:  
<http://hdr.undp.org/en/content/human-development-report-2014>  
(accessed: 1/Nov/2015)
- <2> Human Development Report 2007/2008:  
[http://hdr.undp.org/sites/default/files/reports/268/hdr\\_20072008\\_en\\_complete.pdf](http://hdr.undp.org/sites/default/files/reports/268/hdr_20072008_en_complete.pdf)  
(accessed: 1/Nov/2015)
- <3> World Development Indicators / World Bank Data:  
<http://data.worldbank.org/indicator/>,  
<http://data.worldbank.org/country/west-bank-gaza> (accessed: 1/Nov/2015)
- <4> Development Finance Statistics, OECD (DAC): <http://www.oecd.org/dac/stats/>  
(accessed: 1/11/2015)
- <5> UNESCO Institute for Statistics:  
<http://data.uis.unesco.org/index.aspx?queryname=166> (Accessed: 26/Oct/2015)
- <6> Briefing note for countries on the 2014 Human Development Report: Palestine:  
[http://hdr.undp.org/sites/all/themes/hdr\\_theme/country-notes/PSE.pdf](http://hdr.undp.org/sites/all/themes/hdr_theme/country-notes/PSE.pdf) (accessed:  
29/10/2015)
- <7> UNICEF Palestine: Statistics: [http://www.unicef.org/infobycountry/oPt\\_statistics.html](http://www.unicef.org/infobycountry/oPt_statistics.html)  
(Accessed 7/Jan/2016)
- <8> WHO/UNICEF Joint Monitoring Programme (JMP) for Water Supply and Sanitation.  
<http://www.wssinfo.org/> (accessed: 29/Oct/2015)
- <9> Millennium Development Goals (MDGs (Statistical Report):  
[http://www.arabstates.undp.org/content/dam/undp/library/MDG/english/MDG%20Country%20Reports/Programme%20of%20Assistance%20to%20the%20Palestinian%20People/oPT\\_MDGReport\\_2009.pdf](http://www.arabstates.undp.org/content/dam/undp/library/MDG/english/MDG%20Country%20Reports/Programme%20of%20Assistance%20to%20the%20Palestinian%20People/oPT_MDGReport_2009.pdf) (accessed: 1/Nov/2015)
- <10> MDG Table, World Development Indicators:  
<http://databank.worldbank.org/data/Views/Reports/ReportWidgetCustom.aspx?ReportName=MDG-Table&Id=c658ae98&inf=n> (accessed: 1/Nov/2015)
- <11> Facts and Figures: Leadership and Political Participation, UN Women Palestine:  
<http://palestine.unwomen.org/en/what-we-do/leadership-and-political-participation/facts-and-figures> (accessed: 1/Nov/2015)

## 2 Gender Situation and Government Policy on Gender

### 2.1 Current Gender Situation in Palestine

#### Summary

- (1) The political, economic, and social dimensions of Palestinian life are fragmented due to long (and seemingly endless) conflicts. In recent years, the socio-economy has deteriorated both in the West Bank and in Gaza. Gaza, which has experienced four ‘wars’ in a decade, is especially damaged with nearly 40% of the population in poverty.
- (2) The Palestinian gender situation should be understood on the basis of the social/gender norms which have been developed from Arab traditional and cultural values and Islamic values. Women are mother, wife, and caretaker of the family who stay at home, and are not to be seen by non-relative men.
- (3) Electoral quota systems have enabled women to occupy seats in the Palestinian Legislative Council (equivalent to a Parliament) and local bodies to a certain extent. However, the elected women are yet to achieve tangible power and/or capacity to make a difference.
- (4) While economic necessity has started to change the gender division of roles, with which some women have begun to work to earn an income, this does not necessarily empower women.
- (5) Women’s education level is very high. However, this has not led to their active participation in the economy; only less than 20% of the women are in the labour force. The women’s presence is specifically weak in the private sector, compared to the public sector. For one, social norms on ‘appropriate’ jobs, as well as education for women, limit the women’s job opportunities. For another, gender bias affects the potential employers negatively against hiring women.
- (6) Other important gender issues of concern include women’s ‘asset poverty’, high fertility rate, gender-based and political/economic violence, early marriage and honour killings, and the influence of rising conservatism amongst others.

#### <Socio-economic Situation in Palestine>

The Palestinian Territories (hereafter referred to as Palestine) consists of the West Bank (5,655 km<sup>2</sup>) and the Gaza Strip (hereafter referred to as Gaza) (365 km<sup>2</sup>). The population is 278 million in the West Bank and 187 million in Gaza<sup>7</sup>. The Palestinian Refugee<sup>8</sup> population is 78 million in the West Bank and 128 million in Gaza<sup>9</sup>. Many Palestinians reside overseas, including neighbouring Jordan, Lebanon, Syria and other Arab countries, some as immigrants and others as Palestinian Refugees; it is said that the Palestinian population worldwide exceeds 1,000 million.

In Palestine, 92% are Muslims, 7% are Christians and 1% belong to other religious groups<sup>10</sup>.

Ethnically, the majority are Arab people<sup>11</sup>. The nomadic people called Bedouins (who are ethnically

7 <https://www.cia.gov/library/publications/the-world-factbook/geos/we.html>,  
<https://www.cia.gov/library/publications/the-world-factbook/geos/gz.html> (accessed 28/Nov/2015)

8 See 3.1 below for more detailed discussion on Palestinian Refugees issue.

9 UNRWA (2015a)

10 <http://www.mofa.go.jp/mofai/area/plo/data.html#section2> (accessed 26/Nov/2015)

11 <https://www.cia.gov/library/publications/the-world-factbook/geos/we.html>,  
<https://www.cia.gov/library/publications/the-world-factbook/geos/gz.html> (accessed 28/Nov/2015).

Arabs) reside in and around Palestine<sup>12</sup>.

After the Arab-Israeli War in 1967, both the West Bank and Gaza were occupied by Israel. The situation finally changed in 1993, when the Oslo Accord was agreed by the Palestine Liberation Organization (PLO) and Israel, which led to the creation of the Palestinian Authority in 1994<sup>13</sup>.

According to the Oslo Accord, both parties were to negotiate on the final status of Palestine including final borders, security, Jerusalem, how to settle the Palestinian Refugee problem, and Jewish settlements within 5 years of the interim period<sup>14</sup>. However, as the Israeli Prime Minister Rabin was assassinated in 1995, followed by the formation of a right-wing government led by Benjamin Netanyahu of the Likud Party, the Oslo process stalled<sup>15</sup>. The second Intifada started in 2000 saw the Palestine-Israel confrontation intensified. The second Intifada died down in a few years, but then in 2006, Hamas (Islamic Resistance Movement), won the general election for the Palestinian Legislative Council (PLC) over Fatah (the leading/largest faction in the PLO) which held up hopes for the resumption of peace negotiations. Hamas took control of Gaza and removed Fatah officials in 2007, to which Israel reacted by blockading the Strip. Ever since then, Gaza has been under siege. The Fatah-Hamas conflict has divided Palestine into de-facto separate entities, of the West Bank governed by Fatah and Gaza by Hamas. After as long as seven years, in April 2014, Fatah and Hamas reached an agreement on a unity government formation followed by an election, as an attempt for reconciliation<sup>16</sup>. Two months later, a unity government was formed<sup>17</sup>.

Armed conflicts at various scales between Palestine and Israel have continued. In Gaza, within this century, four ‘wars’ were fought—in 2006, 2008-09, 2012, and 2014. In 2014, the fighting continued nearly two months in July and August with more than 2,000 casualties including at least 1,483 civilians<sup>18</sup>. In the West Bank as well, smaller but frequent conflicts have taken place; since October 2015 the tension has been rising to the extent that some even envisage the eruption of a third Intifada<sup>19</sup>.

After the Palestinian Authority came to power in 1994, until 1999, the economy grew on the average at 10%. With the eruption of second Intifada in 2000; however, the situation deteriorated. Then, as the Intifada calmed down; the economy revitalized with nominal GDP recovering to the pre-Intifada level

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12 The current Bedouin population is unclear. Bedouin people are originally nomads; however, recently a considerable proportion of the Bedouin population has chosen to be settled in one place. Definition of Bedouin varies; in this study, the word refers to person/people whose identity is Bedouin/ex-Bedouin.

13 <http://www.jica.go.jp/palestine/office/about/greeting.html> (accessed 27/Nov/2015)

14 <http://www.pbs.org/wgbh/pages/frontline/shows/oslo/negotiations/>,  
<http://america.aljazeera.com/articles/2013/9/13/oslo-accords-explained.html> (accessed 27/Nov/2015)

15 <http://america.aljazeera.com/articles/2013/9/13/oslo-accords-explained.html>  
<https://history.state.gov/milestones/1993-2000/oslo> (accessed 27/Nov/2015)

16 <http://www.mofa.go.jp/mofaj/area/plo/data.html#section2> (accessed 27/Nov/2015)

17 Nakashima (2014)

18 Seita (2015), <http://www.ochaopt.org/content.aspx?id=1010361> (accessed 28/Dec/2015)

19 <http://wedge.ismedia.jp/articles/-/5522> (accessed 26/Nov/2015)

in 2004. Yet again, as Hamas formed the government in 2006, drop in aid from the international donors caused negative growth in 2006 and 2007<sup>20</sup>. Confrontation between Fatah and Hamas has resulted in disjointed economic performance; in 2008 and 2009, the economy of the West Bank, backed up by the international community, grew approximately 10% while Gaza dipped into negative growth. Afterwards, the West Bank economy slowed down but in Gaza the reconstruction demand pushed up the growth, of 15.2% in 2010 and 23% in 2011. As can be seen, the growth in economy has not come from within, but rather relied on external circumstances, and thus is not sustainable. As of 2015, with negative impacts of 2014 Gaza crisis lasting, and private investment being among the lowest in the world, the Palestinian economy as a whole is in recession. The poverty rate as of 2014 is 16% in the West Bank, and is as much as 39% in Gaza. The Gaza economy has been specifically damaged; the private sector is severely eroded and 80% of the population depends on aid for their survival<sup>21</sup>.

As to GDP composition, the service sector accounts for 20% as the largest contributor<sup>27</sup>. The following sectors are: wholesale and retail trade, mining, manufacturing, electricity and water, and public administration and defence. GDP composition within the West Bank only shows that the service sector, wholesale and retail trade sector, and mining, manufacturing, electricity and water sector all account for more than 15% respectively, followed by transportation, information and storage sector and public administration and defence sector. In the Gaza economy, 30% is by service sector and 20% is by public administration and defence sector, followed by wholesale and retail trade<sup>28</sup>.

#### **Physical Fragmentation of the West Bank**

According to the Oslo Accord, the West Bank is divided into three areas: A, B, and C<sup>22</sup>. In Area A, Palestinian Authority is responsible for both security and civil matters. In Area B, the Authority rules the civil matters while the security is in the joint responsibility of Israel and Palestinian Authority<sup>23</sup>. Area C is controlled by Israel both in security and in civil matters<sup>24</sup>. Also, Area C accounts for more than 60% of the West Bank area<sup>25</sup>.

In addition, since 2002, Israel has been constructing the so-called 'separation wall' inside the West Bank, which reinforces fragmentation and impedes movements<sup>26</sup>.

20 [http://www.mofa.go.jp/mofaj/gaiko/oda/shiryo/hyouka/kunibetu/gai/plo/pdfs/kn12\\_03\\_01.pdf](http://www.mofa.go.jp/mofaj/gaiko/oda/shiryo/hyouka/kunibetu/gai/plo/pdfs/kn12_03_01.pdf) (accessed 26/Nov/2015)

21 World Bank (2015)

22 <http://www.mofa.go.jp/mofaj/area/plo/kankei.html> (accessed 27/Nov/2015)

23 Having said that, in practice, security in Area B is controlled by Israel who has the priority.

24 According to the Oslo Accord, Area C control is gradually to be handed over to the Palestinian side. Nevertheless, as of 2015, no official change of the situation has been observed.

25 OCHA (2014a)

26 Tobina (2009)

27 [http://www.mofa.go.jp/mofaj/gaiko/oda/shiryo/hyouka/kunibetu/gai/plo/pdfs/kn12\\_03\\_01.pdf](http://www.mofa.go.jp/mofaj/gaiko/oda/shiryo/hyouka/kunibetu/gai/plo/pdfs/kn12_03_01.pdf) (accessed 26/Nov/2015)

28 [http://www.mofa.go.jp/mofaj/gaiko/oda/shiryo/hyouka/kunibetu/gai/plo/pdfs/kn12\\_03\\_01.pdf](http://www.mofa.go.jp/mofaj/gaiko/oda/shiryo/hyouka/kunibetu/gai/plo/pdfs/kn12_03_01.pdf) (accessed 26/Nov/2015)

The largest trading partner for Palestine is Israel. In 2010, 69.4% of goods imported into Palestine were from Israel; 92.0% exported from Palestine were for Israel; the Palestinian economy is largely dependent on Israel. The most imported goods in 2010 were: diesel fuel oil (10.8% of the total imported goods), natural gas (5.5%), and gasoline (5.3%). The most exported goods were: stone (12.3% of the total exported goods), marble stone (4.9%), and re-melting scrap (4.1%)<sup>29</sup>.

### <General Situation of Women in Palestine>

The gender situation in Palestine is based on the traditional, and socially accepted, concept developed from both tribal cultural values of the Arab region and Islamic values: that is, women should be at home, taking care of the family and raising children, and women should not interact with—or should not be even seen by—men who are not their family/relatives. In reality, the traditional gender division of roles of men as breadwinners and women as caretakers has started to crumble due to the male and female necessity to cope with the prolonged crisis. But this does not necessarily lead to women's empowerment. A decent woman is one that has married and has become mother of children (especially son(s)), is a notion still widely accepted by both men and women; only then, is she a respectable person in the community who could participate in the society more freely<sup>30</sup>.

While increasing numbers of women have taken up the role of the breadwinner as a coping strategy required for the family survival, it neither changes their traditional role of caretaker at home, nor lessens the burden of that role; they are simply to assume the double burden<sup>31</sup>. It is reported that some women, especially those with less education, feel it disempowering that they have to work outside home out of necessity<sup>32</sup>.

Israeli policies on occupation, settlement and blockade, and movement restrictions, have had considerable negative impact on both Palestinian men and women, economically, socially, and mentally. For women in particular, the 'movement restrictions' are double-fold; directly, women are impeded in their movements and harassed (including sexual harassment) at checkpoints<sup>33</sup> and/or borders<sup>34</sup>. Then, Palestinian men, i.e., the women's husbands, fathers, brothers, and neighbours, restrict the women's movements and behaviour further in order to 'protect' them from the Israelis<sup>35</sup>. In the West Bank, this issue is notably apparent in Area C, where Palestinian Authority does not have

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29 [http://www.mofa.go.jp/mofaj/gaiko/oda/shiryu/hyouka/kunibetu/gai/plo/pdfs/kn12\\_03\\_01.pdf](http://www.mofa.go.jp/mofaj/gaiko/oda/shiryu/hyouka/kunibetu/gai/plo/pdfs/kn12_03_01.pdf) (accessed 26/Nov/2015)

30 The Institute of Women's Studies at Birzeit University (2013), UN Women (2011), World Bank (2010)

31 The Institute of Women's Studies at Birzeit University (2013), UN Women (2011)

32 World Bank (2010)

33 Checkpoints are set up at borders between Israel territory (including the occupied territories) and strategically significant locations.

34 Frequent reports are that women are stopped at those checkpoints and/or borders, and kept waiting for several hours without explanation which prohibits them from going to schools and work places, including farms. Extreme cases are that pregnant women are not given the permission to pass, resulting in being forced to give birth at the those checkpoints and/or borders (World Bank (2010))

35 MOWA (2014a), The Institute of Women's Studies at Birzeit University (2013), UN Women (2011), World Bank (2010)

the control on security (and civil matters)<sup>36</sup>. These physical segmentation and movement restrictions have severely weakened the informal social safety net<sup>37</sup> which could, to some extent, complement the malfunctioning public services, further increasing the vulnerability of women<sup>38</sup>.

As women call the situation, it is '*falataan amni* (absolute lack of security)<sup>39</sup>'. International and internal political conflict, depressed economy, and socio-cultural constraints are all coupled together, making the gender situation more difficult and complicated. Major gender issues are examined below.

### <Women in Decision Making>

Elections for the PLC, the parliament in the Palestinian Authority, and for municipal bodies, have legal quotas to secure seats for women<sup>40</sup>. In the PLC, 17 out of 132 seats (12.9%) are occupied by women according to the most recent 2006 election results; note that the PLC has not been able to function due to the internal political conflict since Hamas' victory in 2006. In municipal bodies, 1,205 out of 5,629 members (21.4%) are women according to 2012 election results, raising the female member rating from 18% in 2010. Note that the 2012 elections were only conducted in the West Bank; not in Gaza and not for Popular Committees, self-management organisations in Palestinian Refugee Camps<sup>41</sup>. It is reported that women members in the municipal bodies have suffered from harassment (for instance, meetings are set in the night-time when women hesitate to attend due to security reasons, and women are ignored when making remarks)<sup>42</sup>.

It has been pointed out that women having seats through quota system is not enough; many women members need more capacity so that they would be able to put more (or any) gender considerations in actual decision making. Moreover, research indicates that as long as these women are excluded from the economic and social resources, the formality of having women in seats would not affect women's political considerations to have a say in the social decision making<sup>43</sup>.

Currently major political parties have quotas for women members in their management organisations<sup>44</sup>. As of 2014<sup>45</sup>, in Fatah, 20% of the party members are women, with 1 woman out of 21 Central Committee members. In Hamas, where men and women belong to different organisations inside, 35% of the party members are women. It is reported that in Hamas, women have little

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36 MOWA (2014a), World Bank (2010)

37 Including mutual help within the relatives and friends.

38 <http://palestine.unwomen.org/en/what-we-do/economic-empowerment/programmes> (accessed 10/Dec/2015)

39 World Bank (2010)

40 See 2.2 below for more detailed discussion on the quota system.

41 OECD (2014), Quota Project (2014), UN Women (nd). See 3.1 and 4.4 below for decision making situation regarding Popular Committees in Refugee Camps.

42 PWWDS (2013a), interview with a woman member of local council in Jericho, West Bank.

43 The Institute of Women's Studies at Birzeit University (2013), PWWSD (2013a), and interview with PWWSD.

44 World Bank (2013)

45 Hereafter, the data on women in political parties are based on WATC (2014) unless otherwise specified.

influence in the decision making of the party<sup>46</sup>. In opposition, the Secretary General of Palestinian Democratic Union (FEDA) is a woman. In other major parties, 10 to 30% of the party members are women.

At the time of writing this study, the current cabinet (reshuffled in July 2015) has four women out of 24 ministers. In the history of Palestinian Authority cabinets, the largest number of women ministers is seven<sup>47</sup>.

As of 2013, women comprise 5% of ambassadors, 16.9% (West Bank) and 8.8% (Gaza) of judges, and 16.4% of prosecutors in the West Bank (data from Gaza is unobtainable)<sup>48</sup>.

In the public sector, as of 2012, 40% of the public servants are women. However, at the Director level, women comprise 22% only, with even fewer, 11%, at the Director General level<sup>49</sup>.

The private sector shows much less participation of women. Although detailed information such as the proportion of women at managerial levels is unavailable, the proportion of 'employers' is 1.9% within the female labour force, while 7.4% of men are employers within the male labour force<sup>50</sup>. As discussed in the next section, female labour force participation is very low; indicating the actual number of women employers is very small.

### <High Education Level which Does Not Lead to Economic Empowerment>

In Palestine, the education level of women compares well with that of men; actually, it could be said that women are better educated than men. As in 1.2 above, the net enrolment ratio in primary education is 92.01% for girls while 90.51% for boys. In secondary education, it is 83.83% for girls and 76.55% for boys<sup>51</sup>. In higher education, the gender parity index (GPI) is 1.48, meaning more female students are in higher education than male students<sup>52</sup>. The reason for boys not to be enrolled in schools and/or to drop out is considered to be that they tend to start working, rather than studying, whenever there is a change, reacting to flagging economy and deepening poverty<sup>53</sup>.

The international trend is that the more women are educated, the more they participate in economic activities. However, in Palestine, women's labour force participation is very low, despite their high

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46 OECD (2014)

47 Interview and e-mail correspondence with PWWSD.

48 PCBS (2014a)

49 UN Women (nd)

50 PCBS (2015a). See also 3.3 for discussion on gender situation in the private sector.

51 <http://data.uis.unesco.org/index.aspx?queryname=166> (Accessed: 26/Oct/2015)

52 PCBS (2014a)

53 UNRWA (2013), interviews with Palestinians in various sectors, including NGOs and donor agencies, as well as beneficiaries of aid programmes. Another face of this tendency is that, job opportunities barely exist for young women who drop out of school.

level of education<sup>54</sup>. The table below shows men and women’s labour force participation rates in 2014.

Table 2.1.1: Labour Force Participation Rate in 2014 by Gender (%)

Region \ Gender	Male	Female
West Bank	73.4	19.1
Gaza	68.2	20.0
Total	71.5	19.4

Source: PCBS (2015a)

Both in the West Bank and in Gaza, a mere 20% of women are either working or trying to get a job. The unemployment rate, also in 2014, is shown below.

Table 2.1.3: Unemployment Rate in 2014 by Gender (%)

Region \ Gender	Male	Female
West Bank	15.2	27.4
Gaza	40.1	56.8
Total	28.9	38.4

Source: PCBS (2015a)

It is clear that in Gaza, where the economy (notably the private sector economy) is severely depressed, both men and women suffer from very high unemployment rate. It is also clear, however, that regardless of the region, women’s unemployment rate is disproportionately higher than that of men. To add a note, the Palestinian Central Bureau of Statistics (PCBS), the data source for Tables 2.1.2 and 2.1.3 above, defines the labour force as “[all] persons aged 15 years and above who are either employed or unemployed”<sup>55</sup>, thus including those who are in the informal sector and are unpaid. That is to say, even fewer women are actually gaining tangible income than in seen above.

Behind the low labour force participation and high unemployment of women, many factors work against women.

Unemployment rate for men is high, which indicates in the flagging economy, there are few job opportunities in the first place. The traditional gender norm that it is men, who feed the family, while women take care of the household and raise children, is still strong in the society, although the reality has started to change (see above). In this context, men naturally come before women when employed<sup>56</sup>. Men including husbands and fathers would not, in many cases; let women under their care (supposedly) work outside, due to the same gender norm. Women themselves would also feel

<sup>54</sup> This phenomenon is prevalent not only in Palestine but also in neighbouring Jordan and other Middle East countries(JICA (forthcoming))

<sup>55</sup> Pp. 31, PCBS (2015a)

<sup>56</sup> This phenomenon seems to be more clearly seen in the private sector than in the public sector. See 3.3 below for the discussion on women in the private sector.

hesitant to step outside the norm by taking up working. As a consequence, many women would become so-called discouraged workers<sup>57</sup>.

Another hindrance is the large number of children that Palestinian women have, as discussed in the section below. The family system has become more nuclear, which makes the women with children (especially small children) hold back, as it is difficult to find a person to take care of the children while working. Potential demand for childcare services is therefore high, but in reality the service is scarce<sup>58</sup>.

While, as discussed, women's labour participation has not increased<sup>59</sup>, their unemployment rate exceeds that of men's. The possible factors are examined below.

Employers' general preference of men over women, as mentioned above, is undoubtedly a major reason. Moreover, women generally lack competitiveness as job seekers, due to their educational backgrounds. Female students predominantly study 'feminine' and 'female-appropriate' areas, including health, education and humanities, i.e., areas closely related to traditional women's role<sup>60</sup>, as the parents—even the parents who are positive for their daughters' education<sup>61</sup>—often allow girls to proceed into higher education only if they choose these 'feminine' areas as their major. However, these educational backgrounds generally provide not much professional expertise, as required by the employers, except for several professions such as teachers and health service personnel (professions that traditionally tend to have women)<sup>62</sup>. Even though quite a few female students major in life and physical science, because it is an abstract type of study, the major job option for the graduates is said to be teaching<sup>63</sup>.

The notion for 'feminine' and 'female-appropriate' area is set not only for education but also profession. Typical 'appropriate' jobs include teachers, health professionals, office secretaries, sales clerks, and farmers (since in Palestinian agriculture, basically farmers work on family farms with family members)<sup>64</sup>. According to data collected in 2014, 20.9% of women workers are in agriculture, 57.0% are in service sector; the vast majority are clearly in the 'appropriate' women jobs<sup>65</sup>.

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57 Hiral *et al.* (2008)

58 MOWA (2014a), The Institute of Women's Studies at Birzeit University (2013)

59 Female labour participation rate has been continuously low; it is reported that the rate has been declining since 2000s(The Institute of Women's Studies at Birzeit University (2013)). This could well be correlated with the social trend of deepening conservatism (discussed below).

60 The role as a mother and the caretaker of the family and other people, including the tasks related to these.

61 It is reported that in reality, parents still put priority to their sons' education, making their daughters have no choice but seeking for scholarships(UN Women (2011)).

62 The Institute of Women's Studies at Birzeit University (2013), UN Women (2011)

63 The Institute of Women's Studies at Birzeit University (2013)

64 UN Women (2011), The Institute of Women's Studies at Birzeit University (2013). See 3.2 below for women in the agriculture sector.

65 PCBS (2015a)

Considerable proportion of ‘appropriate’ jobs of teachers, health professionals and office workers is in the public sector, and the women workers have actually penetrated in the public sector<sup>66</sup>. The downside of the public sector jobs is, however, that the number of employment in the sector would not increase (if not decrease) as the sector is close to saturated and wage bill for public servants accounts for 16% of the relative GDP<sup>67</sup>. It is likely that the women are already competing with each other to get jobs.

While education does not necessarily result in securing a job, the education level of women maintains its high level. This is so probably because it is a coping strategy for the people<sup>68</sup>. According to a study in 2010 by the World Bank, education for women is seen as, in the West Bank, investment for the future possibility to obtain livelihood means, and/or investment for better marriage opportunity which would secure more stable life; in the context of unsure political and economic future, and in Gaza, which is in even graver shape of economy, as investment to grab whatever opportunity possible for formal sector job (that is, stable income source)<sup>69</sup>. Education does not secure a job, whereas without education one is unlikely to have a chance for a ‘good’ job (that is, either in the public sector or in larger private enterprise). According to the interviews in the field research for this study, in Gaza as well as in the West Bank, educated women tend to have better chances for ‘good’ marriages<sup>70</sup>. As stated before, in Palestinian society, to become/be seen as a decent woman, one needs to get married and have children.

### <‘Asset Poverty’ of Women and its Impact on Gender Situations>

It is considered that a woman’s social status could be evaluated by looking at her access to and control of resources in the household and in the society. The resources here include both physical resources (income, assets including land, essential goods including food and other properties) and social resources (knowledge, power, and respect received from others)<sup>71</sup>. A study that examined the correlation between gender equality and ownership of assets by international comparison finds that not owning assets and/or not having access to resources directly leads to having less and less bargaining power and influence in the household and in the society<sup>72</sup>. From this point of view,

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66 As stated above, female proportion in the public servants is as high as 40%.

67 World Bank (2015) According to this report, Palestinian wage bill as 16% of GDP is at the highest level in the world.

68 UN Women (2011)

69 World Bank (2010)

70 Interviews with NGOs working in Gaza. According to these interviews, the husbands-to-be and their family prefer women with education as their future wives because the women would: (1) have higher potential for bringing income to the households, and (2) be able to educate the children better even if (1) is not possible, thus making it more likely for the children to have more stable life. Therefore, men would not mind if their wives-to-be are more educated than themselves.

71 The Institute of Women’s Studies at Birzeit University (2013)

72 Doss *et al.* (2008)

Palestinian women are extremely vulnerable<sup>73</sup>.

In terms of individual asset development, because women have little chance for jobs (see the section above) and thus income, it is very difficult for them to build up assets with their own efforts. Even when women have income, socio-culturally it is men's role to control the money in the household so that it would not be accumulated as the women's own asset<sup>74</sup>.

When looking at immovable property including land and house, due to the scarcity of individual assets, it would not be realistic to purchase it. Thus, whatever property a women owns is practically obtained through inheritance. Inheritance is, unfortunately, also problematic. Although women have legal rights for inheritance to a certain extent<sup>75</sup>, socio-culturally it should be men who own land and other immovable properties, which leads to considerably intense pressure on women from the male relatives (including family members) to waive the inheritance rights for the sake of males—to which a majority of women are forced to concede<sup>76</sup>. It is reported that recently an increased number of women who try to exercise their rights would bring the matter to Sharia (Islamic) Court<sup>77</sup>. However, even then, many of them would face negative reaction from the Court and/or legal personnel, only to be rejected or smothered up<sup>78</sup>, as this women's action implies that they would dare to 'rebel' against the norms and thus against the men. This sometimes results in the women being ousted from the family and the community<sup>79</sup>.

Another means for women to obtain assets is her dowry, which is typically jewellery. Because of the situations described above, in the majority of cases, the dowry is the only individual asset of women<sup>80</sup>.

Although comprehensive and recent research and data on this matter is unavailable, the table below illustrates the general tendency as described above.

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73 The Institute of Women's Studies at Birzeit University (2013), OECD (2014), MOWA (2014a). As access to various resources is discussed in the following chapters as appropriate, this section mainly focuses on assets.

74 World Bank (2010), The Institute of Women's Studies at Birzeit University (2013), MOWA (2014a).

75 Generally speaking, a woman has less inheritance than a man in the equivalent position (such as a daughter vs a son). See also 2.2 below.

76 OECD (2014), The Institute of Women's Studies at Birzeit University (2013), UN Women (2011)

77 UN Women (2011)

78 UN Women (2014a)

79 *Ibid.*

80 The Institute of Women's Studies at Birzeit University (2013)

Table 2.1.3: Proportion of Women who Own Assets

	1991	1999	2010
	West Bank and Gaza Strip	West Bank and Gaza Strip	West Bank (economically active women only)
Car	-	1%	15%
Land (or share in land)	8%	5%	29%
House (or share in a house)	9%	8%	11%
Bank account	8%	12%	NA
Private investment project (or share in a project)	-	0.2%	5%
Jewelry	48%	53%	52%
Other assets	9%	9%	NA

Source: The Institute of Women's Studies at Birzeit University (2013)

At the time of this study's writing, current concerns as to women and their assets include the following:

- Due to prolonged economic recession, especially in Gaza and Area C in the West Bank, many women are forced to sell off their only asset, their dowry, as a desperate coping strategy for their own and family's survival<sup>81</sup>.
- Recently in Gaza, population increase has pressured land prices and caused them to sky-rocket. This inevitably results in intensified conflicts over inheritance. Increasingly, women who try to defend their inheritance rights are victimized via physical and mental violence. It is reported that in some cases the violence accelerates into murder<sup>82</sup>.

### <Reproductive Health (RH)>

Total Fertility Rate (TFR) in Palestine in 2014 is 4.1 (3.7 for the West Bank and 4.5 for Gaza)<sup>83</sup>. TFR in 1991 was 6.1, and thus it has been decreasing for these several decades<sup>84</sup>, yet is still at a high level. Contradicting the international trend in which the higher the education level rises, the lower TFR becomes, Palestinian women, especially Gaza women, continue to have many children.

The factors behind the high TFR are likely to be multi-fold. An underlying factor is a traditional and persistent social value, that is, a woman is to be respected when married and is a mother (of, especially, son(s))<sup>85</sup>. Also, as discussed above, labour force participation of Palestinian women are low and many women are full-time housewives. While the causal association between the two—the

81 UN Women (2011), The Institute of Women's Studies at Birzeit University (2013)

82 UN Country Team in the occupied Palestinian territory (2012), interviews with NGOs and a cooperative in Gaza. See also the item of [Early Marriage and Honour Killings] in the next section.

83 PCBS (2015b)

84 The Institute of Women's Studies at Birzeit University (2013)

85 The Institute of Women's Studies at Birzeit University (2013), UN Women (2011), World Bank (2010)

women do not work because they have many children, or, they have many children because they do not work—is unclear, it is very much likely for these two correlate to each other<sup>86</sup>.

Furthermore, in Palestine, a widespread societal sentiment aiming toward larger Palestinian population exists. This is in the context of ‘versus Israel’; if and when Palestinian population grows larger in comparison with Israeli population, Israel would feel pressured. Thus, it is sometimes said that the population is a weapon for Palestinians<sup>87</sup>. It would be conceivable that Gazan women have even higher TFR than the West Bank because some social sub-consciousness may be at work, toward increased Gazan people as a weapon for resistance; after all, Gaza has seen large scale violent conflicts every few years, to the extent that it is not impossible to think of an extinguishment of the people and the land.

The trends in Family Planning (FP) in 2014 are as follows: 44% use modern contraceptive methods, 13% use traditional methods, and 43% do not use any<sup>88</sup>. Due to high social pressure to have children, desirably many of them, some report that women have difficulties to decide about FP independently<sup>89</sup>.

A current concern is RH in Gaza specifically. 2014 conflict has resulted in massive damage of medical and health facilities, and consequently in increased maternity mortality which could have been avoided and reduced rate of FP usage<sup>90</sup>.

### <Women and Violence>

Gender-based violence (GBV) in Palestine is largely affected not only by socio-cultural factors but also by political and economic factors.

#### [Domestic Violence and VAW]

Violence against Woman/Women (VAW) in Palestine is a social taboo, regarded as a domestic problem that is needed to be handled inside home<sup>91</sup>. This makes it difficult to have any accurate picture. According to available data, though, it is prevalent. An international comparison by UN (2015) reports 58.8% of Palestinian women experience intimate partner psychological violence at least once in their life<sup>92</sup>. The PCBS Territory-wide study in 2011, reports<sup>93</sup> that within the year before the data collection, 29.9% (in the West Bank) and 5.10% (in Gaza) of wives experienced at least one form of spousal violence<sup>94</sup>. Moreover, 65.3% of the victims did not tell anybody about the

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86 The Institute of Women's Studies at Birzeit University (2013)

87 *Ibid.*, Richter-Devroe (2011)

88 PCBS (2015b)

89 OECD (2014)

90 UNFPA (2015)

91 The Institute of Women's Studies at Birzeit University (2013)

92 UN Department of Economic and Social Affairs (2015)

93 PCBS (2012)

94 Physical, psychological, sexual, economic and social violence are included (PCBS (2012)).

violence<sup>95</sup>—the so-called ‘culture of silence’ kicks in.

What lies behind this ‘culture of silence’ includes patriarchal and masculinist values and socio-cultural norms that are built upon them. Decision, including judgement of good and bad, is for men to make. Therefore, if a husband beats his wife, it is because he has justifiable reason to do so<sup>96</sup>. According to a study in 2000, 49% of male and 43% of female respondents answer that a wife is beaten by her husband because she deserves it<sup>97</sup>. UN Women (2014a) summarizes the spousal violence situation utilizing PCBS data, as follows.

Table 2.1.4: Spousal Violence against Wives (%)

	Psychological Violence		Physical Violence		Sexual Violence	
	2005	2011	2005	2011	2005	2011
West Bank	68.0	48.8	23.7	17.4	11.5	10.2
Gaza	49.7	76.4	22.6	34.8	9.7	14.9

Source: UN Women (2014a)

Few data and researches are available as to violence against unmarried women, widows and divorcees, as well as to VAW outside household including VAW in public spaces. A piece of information compiled in UN Women (2014a) is shown below, as to domestic violence against unmarried women.

Table 2.1.5: Domestic Violence experienced by Unmarried Women (age 18+) (%)

	Psychological Violence		Physical Violence		Sexual Violence	
	2005	2011	2005	2011	2005	2011
West Bank	56.1	19.5	24.4	24.0	N/A	0.7
Gaza	47.3	35.3	25.1	39.7	N/A	1.0

Source: UN Women (2014a)

Comparison between 2005 and 2011 according to Tables 2.1.4 and 2.1.5 shows that regardless of marital status, domestic violence against women in the West Bank has, although slightly, reduced whereas that in Gaza has increased almost sharply. This phenomenon is discussed in the following item since the political and economic environment of Gaza is likely to be an affecting factor.

As a protection and support system, the Family Protection Unit established in 2008 in the Security Force has been working, although its effectiveness is limited<sup>98</sup>. One problem is that GBV and VAW are not clearly defined in the legal system<sup>99</sup> on which the Unit is supposed to be working; another is that the Unit is not sufficiently staffed both in terms of number and of their professionalism. It is reported that there has been serious secondary damage against the survivors (such as harassment, let

95 *Ibid.*

96 The Institute of Women's Studies at Birzeit University (2013)

97 *Ibid.*

98 MOWA (2011), UN Women (2014a)

99 See 2.2 below.

alone neglect)<sup>100</sup>. There are non-governmental services, by NGOs and international organisations, which tend to emphasize prevention and advocacy over care, the absolute number is still small, and coordination amongst them is yet to be improved<sup>101</sup>. As to referral systems, which refer survivors to professional care services including psychological counselling, legal service and/or higher medical services according to necessity, there is one active system by United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA) in the Palestinian Refugee Camps, although it has not had many users<sup>102</sup>. A governmental referral system is to be built, with Ministry of Women's Affairs (MOWA) being in the planning phase<sup>103</sup>.

Under these circumstances, a mere 0.7% of victims of spousal violence tried to seek outside support (including care/support services by NGOs and medical institutions) while, as stated above, 65% kept their silence, according to PCBS survey in 2011<sup>104</sup>.

### **[Political Violence, Economic Violence and GBV]**

In Palestine, violence is an everyday occurrence for both men and women, due to the cycle of violence by and against Israel as well as due to internal political turmoil. In the PCBS survey conducted in 2011 (referred to above), 47.8% of West Bank households and 49.1% of Gaza households have experienced at least some sort of violence by either Israeli force(s) or by settlers<sup>105</sup>. Political violence by Israeli forces and settlers takes various forms including detention of Palestinians, invasion, forced eviction, and destruction of buildings and farm lands, physical violence such as beating, verbal violence such as insults and threats, and harassment at checkpoints such as being kept for hours, rejection of passing, and sexual harassment. In addition, it would be fair to consider economic blockade in Gaza and water and building restrictions in the West Bank as political violence as they are highly politically motivated<sup>106</sup>. While women are also victimized by Israeli political violence (such as sexual harassment at checkpoints), men are more likely to be assaulted precisely because they are Palestinian men<sup>107</sup>.

A vicious circle of violence has been observed within Palestinians; males as victims of political violence further victimize women. A statistical study by Clark *et al.* reveals that men who have experienced political violence are more likely (statistically significantly) to commit violence against

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100 MOWA (2011), UN Women (2014a)

101 UNFPA (nd)

102 UNRWA (nd) and interview with UNRWA HQ (Amman, Jordan). See also 3.1 below.

103 Interview with MOWA

104 PCBS (2012)

105 *Ibid.*

106 World Bank (2010), MOWA (2014a)

107 In the field research for this study in a Refugee Camp in West Bank, a case of a mother of a current detainee is collected. The respondent's son, an apolitical teenager, was simply walking near the separation wall when he was suddenly detained. He has been in detention for more than half a year. The only reason for his detention seems to be 'being a Palestinian boy'.

women than men without such experience<sup>108</sup>. Moreover, grim economic conditions, and male joblessness aggravates VAW. A study conducted in 2011 shows that 30% of women with unemployed husbands have experienced domestic violence, while 21% of women with employed husbands have<sup>109</sup>.

When a male is victimized through political violence, he suffers not only physically but also psychologically—his self-esteem drops and he feels humiliated. In Palestine, this occurs naggingly and chronically. On the one hand, the traditional value requires him to feed and protect his family, which is simply difficult to fulfil. Consequently, his humiliation, lowered self-esteem, frustration and anxiety pile up. His mind and body needs a ventilation outlet; which tends to be materialized as violent behaviour against those weaker around him—his wife and other women in the household, and children. Here, the psychology of showing his ‘superiority’ (probably subconsciously, though) also works<sup>110</sup>.

The increase of VAW, as described in Tables 2.1.4 and 2.1.5 above, could be explained through this mechanism. As discussed, Gaza has experienced a long blockade (economic as well as physical) after Hamas’s rise in 2007 and as many as four violent conflicts which some call ‘wars’, within a decade only<sup>111</sup>. Gazan people are practically locked in within the Strip, with a devastated economy and grave political prospect. The social anxiety is naturally severe. This social, economic and political situation has mentally cornered Gazan men, if not physically or economically, pushing them over the threshold, so that they would resort to violence against women around them.

The situation in the West Bank is comparatively better, but it is not in any way good. It should be noted that in the West Bank, the political violence is not homogeneous. As explained above, the West Bank comprises Area A, B and C; especially in Area C, where Israel controls both security and civil matters, people suffer from political violence (in the sense discussed above) by Israeli forces and settlers day-to-day. Although detailed documentation of the situation in Area C is scarce due to the complicated political context<sup>112</sup>, it is reported that more than 70% of the communities are excluded from the water network, control of movements is more severe than it is in Area A and B, and in 2013 alone, at least 565 Palestinian buildings were forcibly dismantled with more than 800 people losing their houses and farm lands, and more are at risk of eviction<sup>113</sup>. In this environment, it would be fair to consider that the prevalence of political violence as well as VAW influenced by that in Area C is

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108 Clark *et al.* (2010)

109 UN Women (2013)

110 Clark *et al.* (2010), World Bank (2010), The Institute of Women’s Studies at Birzeit University (2013)

111 Smaller violent incidents simply go on and on. During the field research in Gaza for this study as well, a rocket attack by Hamas occurred, resulting in the next day’s retaliation attack by Israel.

112 OCHA (2014b)

113 OCHA (2014a)

considerably higher than that in Area A and B<sup>114</sup>.

### **[Early Marriage and Honour Killings]**

The current international consensus is that early marriage, that is a marriage of a minor under 18 years of age, is regarded as a form of forced marriage (because a person less than 18 years old would not be mature enough to make a legally eligible decision of life such as marriage), and thus included in GBV<sup>115</sup>. Early marriage in Palestine has reduced greatly in number; however, it is reported that it again started to increase in the last several years, notably in Gaza where the poverty is deepening. Parents who cannot afford to feed their children ‘marry off’ their daughters to lessen their economic burden<sup>116</sup>. While the actual number and/or rate of increase are unclear, development agencies working in women’s empowerment in Gaza are concerned with the perceived fact that specifically after the conflict in 2014, in several specific local communities, early marriage has increased considerably<sup>117</sup>. The reasons stated for this trend include poverty as described above, and that parents who have been displaced (Internally Displaced Person(s), IDP(s))<sup>118</sup> would not be able to provide security to their children and thus marry their daughters to males who are seen to be capable of having a more secure life than themselves<sup>119</sup>.

Another gender issue of concern is the increase of so-called honour killing(s), again with no clear data available<sup>120</sup>. Honour killing is typically a murder of a woman who supposedly committed ‘shameful’ behaviour(s)—that is, in many cases, behaviour with sexual implications such as out-of- or before-marriage sexual intercourse)—by family/relative males (father, brothers, cousins and so on) in order to protect the family honour. However, in certain cases, it is not clear what is ‘shameful’ about the victim’s behaviour<sup>121</sup>. The number of cases reported includes 13 cases in 2012 and 19 cases in 2008. Information on the difference between and/or characteristics in the West Bank and Gaza and other attributions is not available for this study<sup>122</sup>. Another issue around this matter is that there are cases in which ‘honour’ is used as an excuse for murder which is actually for inheritance issues, assets, and/or properties; for instance, a woman who inherited land is murdered so that male relative(s) would get the land back to his/their hands, and then the murder is socially settled because supposedly she was killed in order to keep the family honour for her ‘shameful’ behaviour. This is

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114 This study is unable to identify any data and/or researches which are on the prevalence of and/or differences in GBV/VAW in Area A, B, and C.

115 Sexual and Gender-Based Violence Sub-Working Group (2014)

116 OECD (2014)

117 Interviews with UNFPA and UN Women, as well as with NGOs working in Gaza.

118 In the 2014 ‘war’ in Gaza, the number of IDPs rose to 485,000 (28% of the population) at one point; even after one year, in July 2015, 100,000 people were still displaced (OCHA (2015)).

119 Interviews with UNFPA and UN Women, as well as with NGOs working in Gaza.

120 The Washington Post (2014), OECD (2014)

121 *Ibid*, The Institute of Women’s Studies at Birzeit University (2013)

122 The Institute of Women’s Studies at Birzeit University (2013)

particularly the argument in Gaza<sup>123</sup> where the land price has surged in recent years<sup>124</sup>.

### <Rising Conservatism and its Impact on Gender Situations>

The post-Oslo Accord era in Palestine has seen weakening of modern values including democracy, diversity, civil society movements and women's empowerment and gender equality<sup>125</sup>.

It is beyond the scope of this study to examine the proceedings and background factors of this phenomenon; one quick note is that the fact that the PLO (and subsequently Palestinian Authority) has decided on the 'two-state solution', i.e., coexistence with Israel, without the consensus of the population and has navigated—or had to do so—has been crucial<sup>126</sup>. A tough decision was made, and nevertheless, peace negotiation has stalled, with socio-economic and political situations in a mess. This has made the population disillusioned and mistrusting against the PLO as well as other establishments, including the Western World which (is seen to) have backed up the Oslo Accord. This subsequently has led to the negative feelings against the modern values based on the Western Modernism<sup>127</sup>. This sentiment is thought to be a base of recent rise of Islam fundamentalism in Palestine as well as in the Middle East as a whole<sup>128</sup>. These sentiments and situational factors intermingled together have fostered the return to the so-called traditional and religious values and the rise of conservatism in the society<sup>129</sup>.

Conservatism with re-strengthened traditional values has negatively impacted the Palestinian gender situation. The women's movement, majorly by the women's organisations, for the rights and freedom of women was active in pre-Oslo Accord era, but considerably deaccelerated since, especially, the early 2000s. Social presence of female opinion leaders has shrunk, and not only that, control of movement imposed on women by men and the community/society has tended to become more strict so that women would be 'protected' from the dangers in the society, especially Israeli violence<sup>130</sup>.

The governments (both Fatah government in the West Bank and Hamas government in Gaza) have recently become more authoritarian<sup>131</sup> and are reported to have taken offensive measures against women's organisations<sup>132</sup>. These circumstances coupled together, women's movements and actions, especially in organized manners, have become more difficult to be undertaken.

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123 Interviews with NGOs active in Gaza.

124 UN Country Team in the occupied Palestinian territory (2012), interviews with NGOs and a cooperative working in Gaza.

125 The Institute of Women's Studies at Birzeit University (2013), Richter-Devroe (2011)

126 International Crisis Group (2014)

127 The social mode has shifted, and it has become widely felt that democratization, women's freedom/empowerment and such are not what were derived from the society of Palestinians, but something parachuted from outside—that is, international community led by the Western countries(The Institute of Women's Studies at Birzeit University (2013)).

128 Iizuka (2002), Richter-Devroe (2011), interview with PWWSD.

129 The Institute of Women's Studies at Birzeit University (2013), Otero (2012), Richter-Devroe (2011), interview with UN Women.

130 The Institute of Women's Studies at Birzeit University (2013), World Bank (2010), interviews with UNFPA and PWWSD.

131 Shimizu (2011)

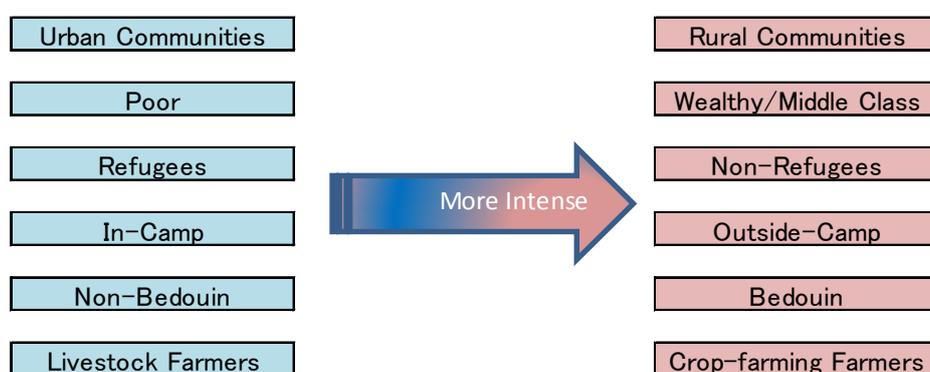
132 OECD (2014)

### <Intensity of Gender Norms by Community/Group Attributions>

The peculiar modern history of Palestine has forced many of its people to migrate—often more than once, typically seen in Palestinian Refugees and IDPs. Furthermore, conflicts themselves, Israeli policies on occupation and economy, and massive inflow of international aid, coupled with the repeating migration, have considerably affected the integrity and continuity of socio-economic situation and livelihood of the communities. As a consequence, community structures are observed to be fluctuating and fragmented.

This has led to a greatly complicated gender situations in the community and in the society as a whole<sup>133</sup>. To put it bluntly, Palestine is a society composed of a ‘patchwork’ of communities without united and integrated communal history. Because of this, variables that determine gender situations are diversified, and each community has its own particular sets of these variables.

This makes an ‘overview’ of gender situations in Palestine extremely difficult. As an attempt to better understand the complicated situations, a categorisation of intensity of gender norms by community/group attributions is provided below, as a generalized guide. This categorisation is developed through the analysis of the information accumulated for this study and detailed discussions of respective groups are given in this study as appropriate. Gender norms here refer to the notions commonly held by the people within the group they belong to, regarding what and how men and women should and should not do/act.



Source: Author’s compilation <sup>134</sup>

Figure 2.1.1: Gender Norms within Groups by Group Attributions

133 As UN Women stated, ‘ready-made’ gender assistance measures are no good in Palestine (interview with UN Women).

134 Sources for information used in the analysis are as follows: for urban-rural difference, JICA (2015a) and interviews with Palestinian informants; for difference among rich-middle class-poor, World Bank (2010), The Institute of Women’s Studies at Birzeit University (2013), and interviews Palestinian informants; for Refugee-Non-Refugee difference, see more detailed discussion in 3.1 below; for Bedouin-Non-Bedouin difference, see more detailed discussion in 4.1 and 4.2 below; and for difference within farmers community, JICA (2015b) as well as interviews with Palestinian informants. See also 4.1 below.

The factors behind the tendency depicted above vary from group to group. For instance, a major factor in Wealthy/Middle Class-Poor groups, Refugee-Non-Refugee groups, and In- and Outside-Camps groups is probably the economic and physical necessity, and related attitude of people to adopt coping strategies. In order for the individual/family/group to survive, the people of Poor, Refugees, and In-Camp groups cannot afford to stick to the traditional gender norms, that is, ‘women should not work outside home’ ‘women should not move around too freely’ and so on<sup>135</sup>. In the case of Bedouins, socio-cultural factors seem to play a critical norm. As Bedouin people have led a nomadic life as a group composed mainly of blood-relatives, their everyday life tends to be completed within the group, without much interaction with people outside. This would probably result in strongly maintained traditional norms<sup>136</sup>.

The categorisation has a limited scope. For one, the groups discussed above are only those whose tendency in terms of gender norms could be examined by more than one source. Attributions that are important when analysing gender situations, but without plural information sources on this matter, are excluded; they include the West Bank-Gaza difference, educational attainment, difference in the types of jobs and employment, and ownership of assets including land.

It should be noted that this categorisation is merely an attempted generalisation of propensity. Therefore, this guide may not prove correct in actual individual cases. It is also very much possible that another attribution of the group may have greater influence than these examined above. Moreover, gender norms of a group with overlapping attributions, for example, a group of Refugees, who are Bedouin, living in a rural area, cannot be assumed from this categorisation<sup>137</sup>

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135 UN Women (2011), World Bank (2010)

136 Interviews with Palestinian informants including a Bedouin Tribal Leader.

137 See 4.1 below for elaborated discussion.

## 2.2 Governmental Commitment on Gender

### Summary

- (1) The Palestinian Authority's "National Development Plan 2014-2016" has incorporated gender mainstreaming when developing the document, while it does not explicitly discuss gender mainstreaming/equality.
- (2) The "Cross-Sectoral National Gender Strategy 2014-2016" is the main gender strategy of the government, which is the first of its kind in Palestine to promote gender mainstreaming in all sectors.
- (3) The "National Strategy to Combat Violence Against Women 2011-2019" specifically tackles gender-based violence (GBV)/violence against women (VAW), while "Gender Charter for the Aid Coordination Structure in Palestine" argues for gender mainstreaming in aid coordination amongst the Palestinian Authority and the donor circle.
- (4) The legal system of Palestine is a 'patchwork' of historical laws of different countries. Partly due to this, legal stipulations which would disadvantage women are still in practice. However, some recent laws, including Labour Law and Electoral Law, set regulations favourable for women.
- (5) The de-facto internal split (the West Bank of Fatah and Gaza of Hamas) has made the rule of law difficult to be applied.
- (6) The Palestinian Authority has joined the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) in 2014, and is currently in preparation of the National Action Plan for UN Security Council Resolution 1325.

### <National Policy on Gender>

The "National Development Plan 2014-2016", the Palestinian Authority's basic strategy for development, has incorporated gender mainstreaming as one of the seven pillars of the approach to developing the Plan. The vision of the plan states "[Palestinian Authority] respects human rights and fundamental freedoms and guarantees equal rights and duties for all citizens", and the people "live in safety and security under the rule of law"<sup>138</sup>, although it does not explicitly mention gender mainstreaming and/or gender equality.

The current policy which directly relates to gender issues is named "Cross-Sectoral National Gender Strategy 2014-2016", which was formulated as the first of its kind in Palestine to promote gender mainstreaming in all sectors<sup>139</sup>. The five strategic objectives of the Strategy are: to increase women's participation in the labour force, to reduce all forms of violence against Palestinian women, to increase women's participation in decision making institutions, for Palestinian women to have access to all basic services, and to mainstream and universalize gender issues<sup>140</sup>. As to the second objective, reducing VAW, another Policy has already been formulated in 2001, namely, "National Strategy to

138 Pp. 42, Palestinian Authority (2014)

139 ILO (2013)

140 MOWA (2014a)

Combat Violence Against Women 2011-2019”<sup>141</sup>. The existence of the VAW Strategy indicates the recognition by Palestinian Authority of the problem and challenges that VAW poses.

In addition, in 2014, Palestinian Authority in cooperation with the international donor agencies<sup>142</sup> launched “Gender Charter for the Aid Coordination Structure in Palestine”. The Charter has been formulated reflecting on the insufficient attention so far on gender consideration in aid coordination, given Palestine’s dependency on international aid, which is derived from the territory’s particular political and socio-economic context<sup>143</sup>. The Charter aims to foster coordination and cooperation by the Authority and donor agencies in the following six areas: data for analysis, eliminating all forms of violence against women and girls in Palestine, mainstreaming gender within planning, budgeting and policy making, political, economic and social participation, closing gender gaps in service provision, and mutual accountability<sup>144</sup>.

## <Gender in the Legal System>

### [The Basic Law]

The Basic Law of 2002 (amended in 2003) stipulates that all citizens are equal before the law regardless of their race, sex, colour, religion, political views and disability, and basic human rights and freedom are protected and respected<sup>145</sup>. On the other hand, the Basic Law also refers to Sharia (Islamic) laws as the principal source of legislation, which, depending on interpretations, may undermine the rights of women<sup>146</sup>.

### [Legal System as a ‘Patchwork’ of History]

Several decades of colonisation, occupation, and political turmoil to date, have made the legal system in Palestine a ‘patchwork’ of historical laws of different countries. In some spheres, the Jordanian laws govern the West Bank while Egyptian laws regulate Gaza. Since the creation of Palestinian Authority, the PLC as the parliamentary system had tried to consolidate these fragmented laws into new Palestinian laws, but the process was halted due to the second Intifada erupted in 2000 and political confusion that followed. Then, since 2007, the PLC itself has been frozen due to the internal division and political rivalry<sup>147</sup>. Even the laws newly launched and/or amended by 2007, are problematic as they contradict within and/or each other. Moreover, inadequate implementation

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141 MOWA and National Committee to Combat Violence Against Women (2011)

142 Those who led the process in the international community are UN Women and Local Aid Coordination Secretariat (LACS). LACS was established in 2005 in order to increase the effectiveness of the donor coordination in Palestine, with Aid Coordination Officers working extensively to coordinate with and amongst the donors. (<http://www.lacs.ps/article.aspx?id=2> (accessed 6/Nov/2015))

143 United Nations (2014), <http://www.lacs.ps/article.aspx?id=52> (accessed 6/Nov/2015)

144 MOWA (2014b)

145 UNDP (2011), UN Women (2013)

146 UNDP (2011)

147 *Ibid*, OECD (2014), Quota Project (2014)

capacity of the government(s) (that is, Fatah's and Hamas') and Israeli occupation severely hinder their enforcement<sup>148</sup>.

The laws and their contents that affect major gender issues are outlined below.

### **[Laws that Govern Family and Personal Life]**

The laws that regulate the family and personal life are: in the West Bank, the Personal Status Law of 1976, of Jordan, and in Gaza, the Law of Family Rights of 1954, of Egypt. Major provisions, which are common to the two laws and have influences in gender situations, include the following<sup>149</sup>:

- Muslim men can have up to four wives<sup>150</sup> while women may have only one husband.
- When getting married, Muslim women are required to be approved by their male guardians (a male relative called 'wali'). Men do not need such approval.
- Minimum age eligible for marriage is set (see below). However, when and if Sharia Court decides that it would be the best interest for the person, those who are younger than the age can be married.
- Husband may divorce his wife one-sidedly. In order for the wife to be able to divorce her husband one-sidedly, there must be an article stating so in the marriage contract. Otherwise, she may only require 'legal separation' based on the mutual agreement.
- When re-married, a divorced woman automatically loses the custody of her children from the previous marriage.
- As to inheritance, the details are regulated by the Sharia Law; for example, a daughter may inherit from her parent half of what a son does.
- As there is no concept as common property of husband and wife, when a husband dies or the couple is divorced, a wife does not have a right for the property acquired during the marriage unless it is documented as such.
- In Sharia Court, a woman's testimony weighs less than a man's.
- If a woman leaves the house in opposition to the husband's will, she may be legally forced to go back home.

In addition, provisions particular to the Personal Status Law in the West Bank include:

- Minimum age for marriage is 16 for males and 15 for females.
- The custody of a child, when the parents are divorced and the mother is not remarried, is given to the mother until the child reaches puberty, and then to the father.

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148 UNDP (2011)

149 The description below is based on UNDP (2011) and OECD (2014).

150 As it is regulated in Islamic (Sharia) Laws. Note that the Laws stipulate that the husband must treat all the wives equally.

Provisions particular to the Law of Family Rights in Gaza include:

- Minimum age for marriage is 18 for males and 17 for females.
- The custody of a girl child, when the parents are divorced and the mother is not remarried, is given to the mother until the child reaches 11 years of age and then to the father. The custody of a boy child is given to the mother until he is seven years old, and when the boy reaches nine years old to the father. While the boy is between seven to nine years of age, either the father or the mother, who would provide betterment for the child, holds the custody.

### **[Penal Code]**

The laws that regulate crimes and punishable activities are: in the West Bank, the Penal Code of 1960, of Jordan, and in Gaza, the Mandate Penal Law of 1936 (law formulated during the British rule).

Major provisions which are common to the two laws and have influences in gender situations include the following<sup>151</sup>:

- Rape is criminalized except for spousal rape.
- The rape charge is dropped if the assailant marries the victim<sup>152</sup>.
- Domestic Violence (DV) is not regarded as crime.
- Artificial abortion is criminalized, even when it is performed for a pregnancy due to sexual assault. Not only the pregnant woman but also all who supported the abortion, including the medical personnel, are penalized.
- Penalties for so-called 'honour crimes' and 'honour killings'<sup>153</sup> are light in general and in certain circumstances no penalty is given.

In addition, provisions particular to the Penal Code of the West Bank include:

- Penalties for rape are lighter if the victim is non-virgin compared to the case of virgin victims, from one-third to half.
- Incest is not regarded as sexual assault. Both the assailant and the victim are regarded as offenders.

In the West Bank, in 2011, a Presidential decree deleted the provision for the penalty reduction against the 'honour killing' in the Penal Code (of Jordan). Yet, it is still criticized as insufficient, as it is possible to lighten the penalty by interpretation of other provisions and application.

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151 The description below is based on OECD (2014), Jallad (2012) and UNDP (2011).

152 It is not clear that how much this stipulation is actually used. However, being raped—an unmarried woman losing her chastity—is socially regarded as 'shame', which leads to the people around the victim (family and relatives) pressuring her to accept the marriage arrangement. Many victims are thought to bow to their pressure so that family 'honour' is cleared (Jallad (2012))

153 See 2.1 above.

## **[Labour Law]**

In the public sector, the Civil Service Law of 1998, and in the private sector, the Labour Law of 2000 regulate the rights and duties of workers. The Labour Law prohibits discrimination due to gender and protects female workers with provisions including 10 weeks of maternity leave, employment after childbearing, and breast-feeding at workplaces. At the same time, the Law prohibits women from ‘dangerous work’ ‘heavy work’ and night-time work in certain conditions. Other problematic issues include non-protection of domestic workers and those employed by relatives (who, in many cases, are women)<sup>154</sup>. The non-existence of minimum wage had been criticized as one factor for gender gaps in wage. The 2013 amendment of Labour Law now sets the minimum wage at 1,450 NIS<sup>155</sup> per month<sup>156</sup>.

## **[Electoral Law]**

Electoral Law regulates the national election. The 2005 amendment introduced female quota for the PLC elections as follows<sup>157</sup>:

- In the PLC elections, political parties are required to include, in the candidates list, one woman in the first three, then another woman in the next four, and then at least one woman in each five that follows.
- If the condition above is not fulfilled, Central Election Commission does not accept the candidates list.

In local elections, regulations vary depending on the number of elected members. To generalize, approximately 20% of the seats are reserved for women in Local Bodies<sup>158</sup>. In Popular Committees in the Refugee Camps (see 3.1 below), the Bylaw for the Committees encourages the Committees to include at least one woman Committee member<sup>159</sup>.

## **[Difficulties in Rule of Law due to de-facto Internal Split]**

As discussed above, the PLC has been frozen which has resulted in the absence of recent formulation and amendment of laws. In the West Bank, the Fatah government has issued Presidential decrees and Cabinet Decisions to develop the laws and regulations to compensate the absence of the PLC. However, due to the political conflict, the Hamas government in Gaza often does not approve/implement these decrees and decisions; it is also reported that even the existing laws are not

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154 Center for Development Studies, Birzeit University (2015a), UNDP (2011)

155 NIS=New Israel Shekel. Palestine does not have its own currency and NIS is usually used. In West Bank, Jordanian currency, Dinar, is also in use.

156 Center for Development Studies, Birzeit University (2015b), interview with PWWSD.

157 Quota Project (2014)

158 Quota Project (2014), <http://palestine.unwomen.org/en/what-we-do/leadership-and-political-participation/facts-and-figures> (accessed 6/Nov/2015), and interviews with international agencies and NGOs.

159 PLO Department of Refugee Affairs (2010)

properly implemented there<sup>160</sup>. Laws and regulations which relate to gender issues are especially (and probably intentionally) neglected, as the civil society criticizes<sup>161</sup>. It is reported that in 2007, the Hamas government issued a decree that polices women's access to public spheres. Although this decree was later retracted, it is still reported that women have been criticized as and/or punished for being 'un-Islamic', including not wearing veils, walking with a non-relative male, and riding bicycles<sup>162</sup>. In the West Bank as well, the systematic limitation of governance<sup>163</sup> and insufficient capacity of the government has caused inadequate implementation and enforcement of the existing laws and policies<sup>164</sup>.

### <Commitment on International Agreements>

#### [CEDAW]

In April 2014, the Palestinian Authority has submitted its application to the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), along with seven other international treaties and conventions on human rights, including the Convention on the Rights of the Child, the Convention on the Rights of Persons with Disabilities and the International Convention on the Elimination of All Forms of Racial Discrimination, officially joining them in the following May. The move is seen as a 'negotiation card' against Israel. The Palestinian Authority does not hold reservations in CEDAW articles<sup>165</sup>.

#### [National Action Plan for UN Security Council Resolution 1325]

The Palestinian Authority is in preparation of National Action Plan for UN Security Council Resolution 1325 (Women and Peace and Security). As of September 2015, it is formulating a National Framework for the Plan in collaboration with the civil society organisations<sup>166</sup>.

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160 UN Women (2014a), The Institute of Women's Studies at Birzeit University (2013), and interviews with international agencies and NGOs.

161 Interviews with Palestinians. In order to protect their political safety, the names of the informants are not given.

162 OECD (2014)

163 See 2.1 above. As clearly seen in the difference amongst Area A, B, and C of the Palestinian authority, and the actual practice of it.

164 OECD (2014)

164 OECD (2014), UN Women (2014a), The Institute of Women's Studies at Birzeit University (2013), UNDP (2011)

165 UNOHCHR (2014)

166 Interviews with MOWA and UNFPA.

## 2.3 National Machinery

### Summary

- (1) The national machinery is the Ministry of Women's Affairs (MOWA), established in 2003.
- (2) MOWA develops gender policies, promotes gender mainstreaming in various sectors, and coordinates with other actors including the civil society.
- (3) Although MOWA is committed, it has a short history and small ministry without implementing power; thus, it is not always possible for MOWA to ensure that governmental programmes/activities actually take gender considerations into account.
- (4) Gender Units are to be established in other governmental institutions. As of 2015, 11 out of 27 institutions have activated Gender Units, with an additional four institutions having gender departments in other names.

### <Background and Tasks>

The national machinery in the Palestinian Authority is the Ministry of Women's Affairs (MOWA) established in 2003. Its vision is to empower Palestinian women to participate in construction and development of humane and just Palestinian society. The major task of MOWA is to affirm the Authority's commitment to gender equality and women's political, economic, social and cultural empowerment<sup>167</sup>. Its activities include<sup>168</sup>:

- To develop and formulate policies on gender mainstreaming and empowerment of women,
- To encourage the policies of various sectors in (more) gender mainstreaming through lobbying and advising Ministries and other governmental institutions concerned,
- To review legal stipulations from gender perspective and accordingly encourage the government to amend the laws toward gender equality, through lobbying and advising Ministry and other governmental institutions concerned, and,
- To coordinate and build cooperative relationships with international agencies and civil society organisations active in gender issues and empowerment of women.

Additionally, MOWA plans and conducts training for capacity building in gender mainstreaming and gender equality for governmental personnel in Ministries and other governmental institutions, though rather small in scale<sup>169</sup>.

### <Achievements and Challenges>

The gender policies overviewed in 2.2 above are realized thanks to the inputs and efforts of MOWA to Palestinian Authority. MOWA has also succeeded to a certain extent in incorporating gender

167 MOWA (nd)

168 Interview with MOWA, MOWA (nd), Richter-Devroe (2011)

169 Interview with MOWA

consideration in several policies and legal system; for instance, MOWA has led, in cooperation with the civil society, the formulation of female quota in election systems<sup>170</sup>.

On the other hand, the environment is not necessarily favourable in the Authority, which, broadly saying, has lacked strong commitment on gender mainstreaming and/or empowerment of women<sup>171</sup>. MOWA is a policy making and advisory institution and not an implementing agency; thus it does not have the authority and/or power to enforce gender considerations written in policies and laws. Likewise, MOWA is not entitled to enforcing other Ministry/Institutions to actually commit to gender-related matters. More resource and investment, both in human capital and budget, are needed in order to mainstream gender more concretely in various sectors<sup>172</sup>.

MOWA is a young and small ministry with approximately 90 staff (60 in the West Bank and 30 in Gaza). The Minister of Women's Affairs worried, in the interview for this study, that it might not be possible to pay the staff salaries for the month<sup>173</sup>. The working environment is further complicated by the Israeli blockade of Gaza; staff meetings between those of the West Bank and of Gaza cannot be held<sup>174</sup>, with only the Minister being able to move between the West Bank and Gaza. Yet, the Minister is still required to obtain the Israeli permission beforehand. This hinders the prompt and potentially more effective work of the Ministry<sup>175</sup>.

### <Gender Departments in Governmental Institutions>

A Cabinet Decision in 2005 requested Ministries and other governmental institutions to establish 'Gender Units'<sup>176</sup>. After a decade, as of August 2015, out of 27 Ministries and other institutions, 11 have active Gender Units, 4 have gender departments with other names. A further 3 have Gender Units, which are ratified, but yet to be activated. The remaining 9 have not ratified Gender Units. The table on the next page shows institution-wise situation of Gender Units/departments.

Whether Gender Units/departments are to be established, ratified and/or activated has been subject to the intention, understanding and/or commitment of each Ministry/institution (more specifically, that of the top-level personnel including the Minister). Even in Ministries where Gender Units are activated, some have less power/authority within the institution than others, resulting in their incapability of producing tangible outcomes<sup>177</sup>.

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170 Richter-Devroe (2011), ILO (2013)

171 UNFPA (nd), Richter-Devroe (2011)

172 Interviews with MOWA and UNFPA

173 Interview with MOWA

174 Israel does not issue permission for the staff's passing checkpoints/borders (interview with MOWA).

175 Interview with MOWA

176 Cabinet Decision as of May 3, 2005 (Palestinian Authority (2005))

177 Interviews with MOWA, Ministry of National Economy and Ministry of Labour.

Table 2.3.1: Gender Units and Departments in Governmental Institutions

Name of Institution	Name of Department	Ratified	Activated
Ministry of Agriculture	Gender Department, General Directorate of Planning	○	
Ministry of Culture	Gender Unit	○	○
Ministry of Detainees	Gender Unit	○	○
Ministry of Education	Gender Unit	○	×
Ministry of Environment	Gender Unit	×	×
Ministry of Finance	Gender Unit	×	×
Ministry of Foreign Affairs	Gender Unit	×	×
Ministry of Health	General Directorate of Women's Health	○	
Ministry of Housing	Gender Unit	○	○
Ministry of Information	Gender Unit	×	×
Ministry of Interior	Gender Unit	○	×
Ministry of Justice	Gender Unit	×	×
Ministry of Labour	Gender Unit	○	○
Ministry of Local Government	Gender Unit	○	○
Ministry of National Economy	Gender Unit	○	○
Ministry of Personal Affairs	Gender Unit	○	○
Ministry of Planning	Gender Unit	○	○
Ministry of Religious Affairs	Department of Women's Work	○	
Ministry of Social Affairs	Department of Women's Affairs	○	
Ministry of Tourism and Antiquities	Gender Unit	×	×
Ministry of Transportation	Gender Unit	○	○
Council of Ministers	Gender Unit	○	×
Border Authority	Gender Unit	×	×
Central Bureau of Statistics	Gender Unit	○	○
Committee of Youth and Sports	Gender Unit	×	×
Committee of Radio and TV	Gender Unit	×	×
Department of Refugee Affairs	Gender Unit	○	○

Source: Ministry of Women's Affairs, JICA (2015c)

### 3 Current Gender Situation in Selected Sectors

#### 3.1 Peacebuilding / Palestinian Refugees Support

##### Summary

- (1) Palestinian women have not had much influence on peace negotiations, partly due to the unfavourable environment against women's movements and opinions in recent years.
- (2) Palestinian Refugees account for more than 40% of the population. Refugees tend to be poorer than non-Refugees, while Refugee women tend to participate more in the labour force than non-Refugee women.
- (3) While there are 27 Refugee Camps in Palestine, the majority of the Refugees reside outside Camps, i.e., in various communities.
- (4) The living environment in the Camps is poor, with overpopulation, poor hygiene, and troubled infrastructure. The women's life in the Camps is extremely stressful.
- (5) The majority of Camps have Women's Centres, where women can gather and have their own activities. However, many Women's Centres suffer from lack of funds and support.

##### <Participation of Women in Peace Negotiations>

Participation of women in Palestine's international peace negotiations so far has been very limited and it would be fair to say that women's voices have hardly been heard<sup>178</sup>. A background factor is that recently, notably in the era after the Oslo Accord, Palestinian politics has become more conservative while tribalism has gained strength; in parallel, society as a whole has been going against the modern/international trend of democratisation and diversification of values<sup>179</sup>. As a consequence, in the Palestinian Authority, women have been "systematically marginalized" from top-level decision making<sup>180</sup>.

The similar (and correlated) trend has been observed, as discussed in 2.1 above, in the society as a whole. Organized women's movement has been discouraged in the conservative society, especially since the turn of the century. Thus, it has become more difficult for women's wills and opinions to penetrate into the decision making and political process including that of peacebuilding, through a bottom-up manner<sup>181</sup>.

178 PWWSD (2013b)

179 The Institute of Women's Studies at Birzeit University (2013), Shimizu (2011).

180 Pp.12, Richter-Devroe (2011)

181 The Institute of Women's Studies at Birzeit University (2013), Otero (2012), interview with PWWSD. International society is also concerned with the trend of rising conservatism and weakening of women's movements (interviews with UNFPA and UN Women).

## <Support for Palestinian Refugees>

### [‘Palestinian Refugees’ and UNRWA]

Ever since the outbreak of the Palestinian Refugee crisis, the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA) has been a central actor in the picture, without which it is very difficult to understand the socio-economic situation of Palestinian Refugees.

UNRWA was established in 1949, as the response of the international society to the 1948 Arab-Israeli conflict and began its relief activities in 1950. Having started as an emergency relief agency, in the absence of a solution to Palestinian Refugee problem, UNRWA’s mandate has repeatedly been renewed by the UN until today. The agency supports Palestinian Refugees with registration, in 5 (five) operation fields including the West Bank and Gaza Strip, Jordan, Lebanon and Syria. UNRWA provides assistance mainly in basic services including education, health, social welfare, and food, as well as livelihood support including microfinance services<sup>182</sup>.

UNRWA defines Palestine Refugees as persons “whose normal place of residence was Palestine during the period from 1 June 1946 to 15 May 1948, and who lost both home and means of livelihood as a result of the 1948 conflict”<sup>183</sup>. The Palestinian Refugee population, starting with 750,000, now exceeds 5 million<sup>184</sup> and is scattered across within 5 UNRWA fields<sup>185</sup>.

### [Refugee Communities and their Gender Norms]

Palestinian Refugees account for 43.1% of the total population in the Territory<sup>186</sup>, with 775,000 in the West Bank and 1,277,000 in Gaza<sup>187</sup>.

Table 3.1.1: Refugee and non-Refugee Population in Palestine (%)

	Palestinian Refugees	Non-Refugees	Total
West Bank	27.3	72.7	100.0
Gaza	68.0	32.0	100.0
Total	43.1	56.9	100.0

Source: PCBS (2014b)

According to the data of Palestinian Central Bureau of Statistics (PCBS), the poor population is more in Refugees than in non-Refugees (35.4% in Refugees, 26.1% in urban population, and 19.4% in rural

182 [http://www.unicef.org/info/un/unsystem/other\\_bodies/unrwa/](http://www.unicef.org/info/un/unsystem/other_bodies/unrwa/),

[http://www.unicef.org/activities/humanitarian\\_aid/palestine\\_refugees/](http://www.unicef.org/activities/humanitarian_aid/palestine_refugees/) (accessed 10/Nov/2015)

183 <http://www.unrwa.org/palestine-refugees> (accessed 10/Nov/2015). Although this definition does not include people who were displaced by the other (later) conflicts such as the Third Middle Eastern War of 1967, considering the availability of the data and integrity of the argument, “Palestinian Refugee(s)” in this study will mean those in UNRWA definition, unless otherwise specified.

184 <http://www.unrwa.org/palestine-refugees> (accessed 10/Nov/2015)

185 <http://www.unrwa.org/palestine-refugees> (accessed 10/Nov/2015)

186 PCBS (2014b)

187 UNRWA (2015a)

population). Refugee women have slightly higher fertility rate than non-Refugees (Refugees' 4.4 vs. non-Refugees' 4.3) and higher labour participation rate (20.9% vs. 18.4% of non-Refugees)<sup>188</sup>. While it is not clear whether the difference in fertility is statistically significant, the higher labour participation rate of Refugee women could be explained as follows: because Refugees households are more in poverty, more acute economic necessity works to weaken the social notion/gender norm, that is, it is not good for women to work outside. Another factor, which may have contributed, is that in Refugee Camps, UNRWA has supported, through its Job Creation and Microfinance programmes, women's income generation<sup>189</sup>.

Although it is difficult to examine objectively, what has been repeatedly heard in the field research in this study is that: Palestinian Refugee communities hold considerably low in conservativeness and in traditional gender norms, compared to non-Refugee communities. As examples, it is claimed that Refugees send more girls for higher education and that they tend to control women's movements less than non-Refugees. When asked the reasons/factors behind this tendency, the vast majority of the informants told the researcher that the Refugee population has had more chances and opportunities to interact with people outside their original communities, due to their forced and often repeated movements, which made them more susceptible to new, non-traditional ideas and ways of thinking<sup>190</sup>. Another factor that is conceivable to contribute is that, due to their underprivileged condition including lack of land/assets<sup>191</sup> and higher rate of poverty, Refugees, male and female, would adopt coping strategies for gaining income and other necessities such as food. This would mean that they are more prone to 'deviate' from traditional gender norms including restrictions on women's work outside home, more freedom of movements, and education<sup>192</sup>.

### **[Palestinian Refugees in and outside Refugee Camps]**

There are 19 in the West Bank, and 8 in Gaza, Palestinian Refugee Camps. The Camp residents' population in the West Bank is 229,000 while that in Gaza is 560,000<sup>193</sup>.

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188 PCBS (2015c)

189 While both programmes target men and women, UNRWA as an agency mainstreams gender in all of its work (interview with UNRWA HQ, Amman) and the programmes are constructed in such a way that women are encouraged to participate. See, for respective programmes, the following: <http://www.unrwa.org/what-we-do/microfinance>, <http://www.unrwa.org/resources/about-unrwa/gaza-job-creation-programme>, <http://www.unrwa.org/resources/about-unrwa/west-bank-job-creation-programme> (accessed 17/Nov/2015)

190 Interview with NGOs, International Agencies and other concerned Palestinians. JICA (2015a) reports similar opinions.

191 Refugees are by definition people who have been forced to leave their lands and thus at least at the beginning they did not own land and hardly any assets. After several decades, some have most probably obtained land and other assets, but compared to non-Refugees, it would be fair to think that they have considerably less land/assets. (Note that reliable data for comparison is unavailable)

192 See also UN Women (2011) for the weakening of gender norms as coping strategies are employed.

193 UNRWA (2015a)

Table 3.1.2: Refugee Population In and Out of Camps

	West Bank	Gaza	Total
Palestinian Refugees	774,167	1,276,929	2,051,096
In-Camp Refugees (% in total Refugee Population)	228,560 (29.5%)	560,964 (43.9%)	789,524 (38.5%)
Out-Camp Refugees (% in total Refugee Population)	545,607 (70.5%)	715,965 (56.1%)	1,261,572 (61.5%)
Non-Refugees <sup>194</sup>	2,054,200	573,251	2,627,451

Source: UNRWA (2015a) (except for non-Refugee population)

The table above shows Refugee population residing in and out of Camps, compared to non-Refugee population. As seen, more than 60% of Refugee population live outside Camps. The majority of them are scattered across the Territory, living in local communities just next to non-Refugees. This makes it very difficult to understand the living situations of the Refugee population as a whole. On the other hand, Refugees who can afford to, tend to live outside Camps, due partly to the poor living environment in the Camps (see below)<sup>195</sup>. Considering these conditions, the discussion below largely refers to the issues observed in the Camps.

### [Gender Issues in Palestinian Refugee Camps]

Despite the implication of the phrase ‘refugee camps’, Palestinian Refugee Camps are not composed of tents or prefabrications. The Camps were first set up as emergency and temporary places to stay. However, after six decades of taking refuge, the Camps have become aggregations of small residential buildings. While no solution for the Palestinian Refugee Problem is found, these buildings and infrastructures in the Camps have been built, repaired, and rebuilt without clear planning. Consequently, in small limited space designated to the Camp, ever-increasing buildings are built which are required to accommodate (again) ever-increasing population. The result is severe overpopulation. The situation is harsh enough in the West Bank, but in Gaza, where Camps have “one of the highest population densities in the world”, it is nearly devastating<sup>196</sup>. Basic infrastructure including water supply, sewerage systems and electricity is inadequate with hygiene conditions being very poor<sup>197</sup>. It is of concern that Camps would become slums<sup>198</sup>.

Problems of living environment, poverty and unemployment, coupled together with the deep sense of stagnation and grim political prospects for the future, negatively impact both males and females. Yet women, who are generally more vulnerable, lead their everyday life overloaded with mental and physical burdens.

194 Figures for non-refugees are taken from PCBS (2014b) for the comparison. Note that figures for refugees are not identical in PCBS (2014b) and UNRWA (2015a), thus the comparison is just for the tendency.

195 JICA (2015a, 2015d)

196 <http://www.unrwa.org/where-we-work/gaza-strip> (accessed 10/Nov/2015)

197 JICA (2015a, 2015d)

198 JICA (2006)

The challenges each Camp faces vary greatly from each other; physical and environmental conditions lead to unique difficulties to each Camp and its residents. These conditions include: in the West Bank, which area (A, B or C) it is located in or near, whether Israeli settlement(s) and/or separation walls are close<sup>199</sup>; in Gaza, whether it is in the northern area (i.e., close to the Israeli border where more violence has been observed) and/or the border walls. Urban or rural settings also affect Camp conditions. As such, women in a particular Camp may have even more serious issues than those in another Camp. Yet, it would be useful to have a quick overview of common problems that many Camp women face<sup>200</sup>:

- Due to overpopulation, women hardly have a space to relax. Mentally strained virtually 24/7, always seen by somebody else.
- Children are also strained as there is little space to play safely. The stress may lead to children's mental problems and/or troubled behaviours, which puts more burdens on their mothers<sup>201</sup>.
- As generations have continued to live in the Camp, more family members live in the limited space in the house. Women, who are less free to go out than men, have to stay in the small house with other women of the family (mother- and sisters-in-law, for instance). Consequently, women often experience disputes and collisions within home.
- Men in the households, including the husbands, are often unemployed and/or jobless. It frequently results in conflicts and disputes within the couple, including domestic violence (see also discussion on violence below). Even if the woman tries to work herself, adequate job opportunity is scarce<sup>202</sup>. It is difficult to find a person to take care of the child/children ('men do not take care of children'). This all leads to economic hardship.
- These everyday stresses would repeat every day, forever. This realisation leads to even more stress and distress.

### **[Women's Participation in Decision Making in Refugee Camps]**

In Palestinian Refugee Camps, the Service Popular Committees (hereafter referred to as Popular Committees), elected from the residents, manage the decision making. According to Amended Bylaws for the Popular Committees of 2010, by the PLO Department of Refugee Affairs, each

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199 The Camp visited in the field research for this study is located near the Area C and separation wall; as such, a majority of women respondents have experienced detention of male family members including their husbands and sons. The mental distress and anxiety when family members are detained is obviously high, but even when not, the apprehension for the possibility is persistently profound.

200 Interview with members of a Women Centre in West Bank, JICA (2015a)

201 Depressions, hypertension and miscarriages, potentially induced by stress, are reported amongst women residents (JICA (2015a)).

202 According to a woman who lives in a Camp, "We don't find good job around here. Maybe cosmetic shops. The payment is really bad. 300NIS a month, that's about it. Barely pays the kid's lunch at school. If you don't like it, you just get unemployed. That's the choice". For information, legal minimum wage is 1,450NIS for a full-time job (see 2.2 above)

Committee shall have one (or more) woman as Committee member(s)<sup>203</sup>. The PLO encourages Camps to comply with the Bylaw in Popular Committee elections, while it is not yet for all the Committees to have women members<sup>204</sup>

As to organisations of Refugee Women, the majority of Camps (18 in the West Bank and 7 in Gaza) have Women Centres<sup>205</sup>. Women Centres were established through support of UNRWA and have later evolved into Community Based Organizations (CBOs) managed by women volunteers. Typical activities in the Centres include vocational training programmes (e.g., embroidery, tailoring, accessory-making), related income generation programmes (gaining income through part-time work utilizing skills gained by vocational training programmes), awareness raising and advocacy, and catering services called productive kitchens, as these activities would have support from UNRWA<sup>206</sup>. Some Centres cooperate with others through, for example, sending member women as trainers of the vocational training programmes<sup>207</sup>.

Some Centres are more active, and have better coordination with other Camp organisations (including the Popular Committees) than others<sup>208</sup>. Yet, the physical existence of the Centre seems to have significance for the women, as it means there is at least some physical and social space for women to meet and interact with other women<sup>209</sup>. Here it should be noted that there is much 'hidden' demand for Centres and their activities, as it is most probable that many more women in the Camps would like to be involved but cannot, due to the social norms which are negative against women's participation in outside home activities. Actually, many, if not the majority, of the women active in the Centre activities do so despite opposition from men around them including their husbands and other male relatives<sup>210</sup>.

Additional information on Women Centres include the following: UNRWA has recently shrunk its programmes targeting refugee women, including support for the Centres, due to the fund shortage<sup>211</sup>; and self-help organisation of refugee women, other than that in relation to Women Centres, is not identified.

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203 PLO Department of Refugee Affairs (2010)

204 Correspondence with Office for Peacebuilding and Reconstruction, Infrastructure and Peacebuilding Department, JICA

205 <http://www.unrwa.org/where-we-work> (accessed 07/Dec/2015); the total number of Camps are 19 in West Bank and 8 in Gaza. Women Centres usually do not have their own buildings; The Centre visited in the field research for this study is located in a floor in a multi-tenant building next to the Camp border.

206 Interview with members of a Women Centre in West Bank, JICA (2015a)

207 Interview with members of a Women Centre in the West Bank

208 Interview with members of a Women Centre in West Bank, JICA (2015a)

209 Women's Refugee Commission (2009, 2011)

210 In the interview conducted in the field research for this study, out of 16 respondents (refugee women), 15 answered that their family (from husbands to relatives) had opposed for their going to the Centre. One woman told the author that she has been lying to her husband for more than 10 years; every time she comes to the Centre, she tells her husbands that she goes to see a doctor.

211 Interview with members of a Women Centre in the West Bank, JICA (2015a), UNRWA (2015a)

### **[Violence against Palestinian Refugee Women]**

As discussed in 2.1 above, GBV is persistent and prevalent; Camp communities may be less conservative than others, but GBV still exists. Adversely, some report that GBV is more serious in Camps<sup>212</sup>. If that is so, it could be (at least partly) attributed to the GBV mechanism described in 2.1 above; men, when losing their identity and pride as the family protector and breadwinner (due to, for instance, unemployment), tend to turn to violence so that they could in some ways alleviate their anxiety and stress<sup>213</sup>. Thus, it is possible that in refugee communities where unemployment and poverty rate is higher, more GBV is happening.

UNRWA has set up and operates the support system for GBV survivors, which would refer the survivors to professional services such as psychological and legal counselling as per necessity<sup>214</sup>. However, as GBV is a social taboo, not many survivors have used the system. For instance, in 19 Camps in the West Bank in 2014, the system has treated a mere 485 cases<sup>215</sup>.

### **[Non-communicable Diseases and Refugee Women]**

In recent years, non-communicable diseases (NCDs) have become a major development problem worldwide, with Middle East and Palestine as no exception. In Palestine in particular, NCDs are more of a major cause of death than communicable diseases<sup>216</sup>.

While comprehensive data with which Refugee and non-Refugee populations can be compared as to NCDs is unavailable, available data enables us to catch a glimpse of a gravely problematic situation of Refugee women; El Kishawi *et al* (2014) is a research that probes into the prevalence of obesity, which has strong correlation with diabetes and cardiac diseases. According to their data, 66.8% of women with children (18-50 years of age) in Gaza Refugee Camps are obese<sup>217</sup>. Likewise, an unpublished research quoted in El Kishawi *et al* (2014) finds that 70.0% of women of 40-65 years of age in West Bank Refugee Camps are obese<sup>218</sup>. It is analysed in the study that a major reason for these high obesity rates is that Refugees, especially those in poverty, tend to depend on food aid (rice, sugar, edible oil and so on) for their survival. As their diet contains more quick-energy items, their dietary balance would be constantly impeded, impacting many women who are more prone to obesity than men.

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212 ILO (2013). This report however, does not include data/information to back up the statement.

213 Clark *et al* (2010), World Bank (2010), The Institute of Women's Studies at Birzeit University (2013). This mechanism is observed not only in Palestine but also in other countries (Women's Refugee Commission (2009, 2011))

214 Interview with UNRWA HQ (Amman, Jordan), UNRWA (nd)

215 UNRWA (2015b)

216 WHO (2009)

217 El Kishawi *et al* (2014)

218 Rizkallah, cited in El Kishawi *et al* (2014) (unpublished PhD Thesis).

Points of Attention in the Sector (when considering development assistance)	
Nearly 1/2 of population being 'Palestinian Refugees'	<ul style="list-style-type: none"> <li>● More than 40% of total population is 'Palestinian Refugees': in Gaza, 2 out of 3 are Refugees.</li> <li>● Majority of Refugees reside outside Camps.</li> <li>● How to differentiate Refugees and non-Refugees?</li> </ul>
Life in Refugee Camps	<ul style="list-style-type: none"> <li>● Life in Camp is a fight against overpopulation.</li> <li>● Life in Camp is a fight against never-ending stress and pressures.</li> <li>● Physical and mental support is needed.</li> </ul>
Poverty & female labour participation	<ul style="list-style-type: none"> <li>● Refugees are poorer than non-Refugees.</li> <li>● Refugee women are more employed than non-Refugee women.</li> </ul>
Refugees are less conservative?	<ul style="list-style-type: none"> <li>● Refugee communities are supposedly less conservative.</li> <li>● Would they be flexible to new/unfamiliar ideas and practices?</li> <li>● GBV in Refugee communities is severe? Possibly so, but reliable data and analysis is needed.</li> </ul>
Refugee women's self-organization and initiatives	<ul style="list-style-type: none"> <li>● Women Centres are in operation in most Camps.</li> <li>● Women's mutual-help organization is seemingly not vibrant (except for Women Centres)</li> <li>● What would leverage their own initiatives and actions?</li> </ul>

## 3.2 Agriculture and Rural Development

### Summary

- (1) The “National Agriculture Sector Strategy 2014” does not give strategic importance to gender mainstreaming/women’s empowerment.
- (2) While the importance of the agriculture sector in terms of its share of GDP has been shrinking, it is still significant in terms of women’s employment; 20% of women in the labour force work in agriculture.
- (3) Working in agriculture, however, does not necessarily empower women. Women’s contribution is often underestimated, not only by others but also by the women themselves. This could be attributed to the fact that many women work in family-run farms, in many cases as unpaid family members.
- (4) While agricultural cooperatives are popular in Palestine, the proportion of women members is small. In men-led cooperatives, women tend to have little power and decision making. Thus, women are unlikely to be empowered. In women-only cooperatives, they tend to concentrate on ‘feminine’ work which is in line with traditional women’s roles as mothers/caretakers.

### [Policy Framework in Agriculture and Rural Development, and Gender]

“National Agriculture Sector Strategy 2014”, the main policy framework in Palestine in this sector, sets strategic objectives as follows: “[ensuring] farmers’ resilience and attachment to their land, while fulfilling the contribution of the agriculture sector in providing requirements for development”, “[e]fficient and sustainable management of natural resources”, “[e]nhanced agricultural production, productivity and competitiveness, as well as enhanced contribution of agriculture to food security”, and the “agriculture sector has effective and efficient capacities, institutional frameworks, legal environment, infrastructure and agricultural services”<sup>219</sup>. In terms of gender consideration, the Strategy refers repeatedly to ‘women farmers’ in sections such as policies to achieve the strategic objectives. However, the references are vague and abstract without clear and/or practical intent<sup>220</sup>.

Within the Ministry of Agriculture, Gender Department in General Directorate of Planning is in charge of gender issues (thus there is no Gender Unit)<sup>221</sup>.

### [Overview of the Agriculture Sector where Many Women Work]

For Palestine, the agriculture sector is important as it absorbs 10% of the working population, and also in terms of food security<sup>222</sup>. However, the situation surrounding the sector is problematic.

Currently the agriculture sector accounts for approximately 5% of Palestine’s GDP<sup>223</sup>, which has been declining.

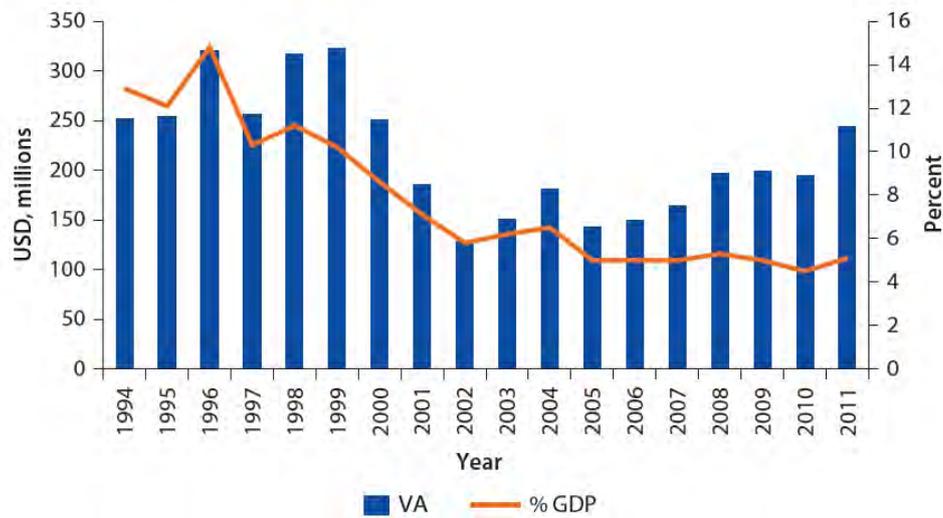
219 Pp 22-23, Ministry of Agriculture (2014)

220 Ministry of Agriculture (2014)

221 JICA (2015c)

222 Ministry of Agriculture (2014), FAO (2011a)

223 <http://databank.worldbank.org/data/reports.aspx?source=2&country=PSE&series=&period=> (accessed 10/Dec/2015)



Source: Niksic *et al* (2014)

Figure 3.2.1: Trend of Agriculture Value-Added in West Bank

The decline of agriculture value-added in the West Bank is thought to be mainly caused by the limited access to and investment in the agricultural land and water resources, imposed by Israeli policies<sup>224</sup>.

In Area C, which accounts for more than 60% of West Bank, these restrictions are particularly severe. Moreover, agricultural land is often demolished and disrupted (as political demonstration) and farmers suffer frequent interference while going to their farms, making the agricultural productivity in Area C very low<sup>225</sup>.

In Gaza, where traditionally labour-intensive export-oriented farming has been a major agricultural practice, Israeli construction of walls and the blockade since 2007 have severely hindered exports. To make the things worse, conflict which occurs every several years (including, most recently, 2014) has greatly damaged agricultural lands and infrastructure<sup>226</sup>. As a consequence, livelihood depending on agriculture only has become almost impossible<sup>227</sup>.

Having said that, the agriculture sector is still significant, especially as a sector that absorbs much of female labour force; one out of five working women is in agriculture, as seen in Table 3.2.1 on the next page.

One reason that the agriculture sector has many working women would be that the majority of Palestinian farms are family-run. It would be easier for a woman to work on a family-run farm than in enterprises/operations outside, because in the former she would be primarily working with her family

224 Niksic *et al* (2014)

225 Niksic *et al* (2014), OCHA (2014a, 2014b), World Bank (2010)

226 The 2014 conflict resulted in \$450 million damage in agriculture in Gaza (MAS (2014a)).

227 MAS (2014a), UN Country Team in the occupied Palestinian territory (2012), UN Women (2011), interviews with an agricultural cooperative and farmers in Gaza

and would not be exposed to the eyes of the outsiders. Thus, it is less likely to offend the gender norm that puts negative implication on women's outside work (see 2.1 above)<sup>228</sup>. Another factor is that considerable numbers of women working in agriculture do not earn income as such; rather, they work for food items needed in their everyday survival<sup>229</sup>.

Table 3.2.1: Workers in Agriculture (% of total in Labour Force) by Gender

	Male	Female	Total
West Bank	9.1	20.0	11.1
Gaza	5.6	23.2	8.6
Total	8.2	20.9	10.4

Source: PCBS (2015a)

Division of roles by gender in agriculture is commonly said to be as follows: males are in charge of physically demanding work such as harrowing, as well as work that includes interaction with outsiders such as purchasing agricultural inputs and selling the products in the market, while women do organizing seeds and seedlings, planting and transplanting, and preparation of products before bringing them to markets (such as washing and packing). However, this description is so generalized that it may cause for one to miss the nuances of the reality. In practice, tasks of men and women vary very much case by case, depending on the composition of the family/household, seasonal factors, and scale/size of the farm, amongst others<sup>230</sup>. It should be noted, though, that strategically and/or symbolically important tasks including management of water and utilisation of newly introduced equipment are supposed to be done by males<sup>231</sup>.

### [Gender Issues in Agriculture]

Even though many women work in agriculture, when it comes to whether working empowers women, it is often doubtful. In many cases, contribution of women is underestimated, not only by the males but also by the women themselves<sup>232</sup>. FAO (2011b) reports a woman's response in which she states she 'does not work' because she is a housewife, although in reality she works every day on the family farm next to the male family members.

One reason behind the fact that women's contribution is not adequately recognized would be that in the majority of cases farms are family-run and in the informal sector, with many women involved as unpaid family workers<sup>233</sup>. On the contrary, men tend to be owner-operators<sup>234</sup>. While actual situation,

228 FAO (2011b), JICA (2015b). See also discussion in 3.3 below on the informal sector.

229 UN Women (2011)

230 FAO (2011b), interviews with farmers in Gaza.

231 JICA (2015b), interviews with farmers in Gaza.

232 FAO (2011a, 2011b), MOWA (2014a).

233 UN Women (2011). Unpaid family workers are defined as workers who work without pay in enterprises managed/run by relative(s) in the same households (PCBS (2015a)).

234 UN Women (2011)

including the number/proportion of female unpaid family workers in agriculture, is not clear, according to Center for Development Studies, Birzeit University (2015a), a mere 1.8% of women in the agriculture sector earn a wage. In addition to this, less than 5% of women own agricultural property<sup>235</sup>, which would mean that very few women are owner-operators.

In Gaza specifically, it is likely that more women have been recently joining the sector as unpaid family workers; as discussed above, export-oriented farming has fallen on extremely difficult times which is probably resulting in less wage labourers employed, substituted by unpaid family workers<sup>236</sup>.

Employment without pay, i.e., unpaid family work, tends not to be recognized as valuable contribution by the worker him/herself, the employer, and everybody around, specifically because the labour is not calculated into tangible value, i.e., income. Neither would it help to accumulate the worker's individual assets, nor would it strengthen the person's bargaining power in the household<sup>237</sup>, while the time and physical burdens increase. Therefore, working in such a manner could be, and probably often is, in fact disempowering<sup>238</sup>. It should be noted here, though, that agricultural communities in Palestine are greatly diversified especially in terms of their gender situations, depending on the conditions and attributions of the community and its people (for instance, whether owns land or not, whether Refugee or not, as well as physical factors such as the land being located in Area A/B/C in the West Bank or in Gaza)<sup>239</sup>; that being so, one should be very careful to examine and especially to judge how the gender situation and issues are in a particular community<sup>240</sup>.

Lastly, women's access to agricultural input is very much limited. This is because, as discussed in the section above, it is usually the 'men's job' to communicate with the outside world<sup>241</sup>. Women's access to extension services varies; as to the extension services provided by Ministry of Agriculture, extension workers have different approaches to male and female farmers<sup>242</sup>. Although women who belong to women-only agricultural cooperatives do have access both to agricultural inputs and extension services, the number of such women is not large, as discussed in the next section.

### **[Women and Agricultural Cooperatives]**

In Palestine, there are many agricultural cooperatives<sup>243</sup> which are organized in order to provide the members better livelihood means in agriculture. The International Labour Organization (ILO), 2014,

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235 MOWA (2014a)

236 Interview with an export-oriented agricultural cooperative in Gaza, UN Women (2011)

237 Doss *et al* (2008)

238 JICA (2015b) reports cases in which women in particular communities in the West Bank have been exploited as "free labour force" for decades, deprived of life choices including marriage opportunities. See 4.1 below for more discussion.

239 JICA (2015b, 2015e, 2015f)

240 This point is elaborated in 4.1 below.

241 FAO (2011b), interviews with male and female farmers in Gaza.

242 JICA (2015b), interviews with Ministry of Agriculture, extension workers, and male and female farmers in Gaza.

243 Cooperatives in general is discussed in 3.3 below.

reports there are at least 230 agricultural cooperatives active in the West Bank only<sup>244</sup>. Out of these 230 cooperatives, 32% work in animal husbandry, 29% in crop production, and 25% in agricultural services including marketing and processing.

The composition of members by gender could be: male only, female only and male-female mixed, although quite a few are male only probably due to the socio-cultural norms which dislike women's interaction with non-family males<sup>245</sup>. According to ILO (2014), 39% of all cooperatives are comprised of male members only, while a mere 5% are women only. Within the total members, women constitute only 7%.

A recent trend in mixed cooperatives is efforts to increase women members<sup>246</sup>; this could be because cooperatives try to conform to the donors' values including gender mainstreaming, so that they are more likely to be given the aid/fund from the donors<sup>247</sup>. It is reported that in mixed-cooperatives, women tend to have little power in management and in decision making, so that membership does not necessarily empower (both economically and socially) them<sup>248</sup>.

Women only cooperatives tend to be smaller than men only and mixed cooperatives. In cooperatives researched in ILO (2014), the average number of members in women only cooperatives is 28, while in total the number of members is 81. The areas where women only cooperatives are active are mainly in home gardening, small-scale animal husbandry (such as chicken- and goat-raising), and small-scale crops/food processing (such as production of jam and olive oils); in other words, they concentrate mainly in the traditional 'female' area of work, which is in relation to domestic work<sup>249</sup>. This is 'natural' because women only cooperatives seek comparative advantage over men only and mixed cooperatives, leading, in most cases, to do what they do best. It should be noted, however, that this tendency contains the risk of reinforcing traditional gender segregation of roles—not only for women themselves but also for others surrounding them. Thus, more diversification of activities by women cooperatives would be desirable<sup>250</sup>.

According to UN Women (2011), this reinforcement of traditional gender segregation of roles could be seen not only in agricultural cooperatives but also in women-targeted donor assistance in the sector as a whole, which should be of concern. While the proportion of women-targeted programmes is small in the donor assistance in the sector, the majority of this small proportion is dedicated to traditional 'female' tasks which are in the realm of household work, including poultry farming and home gardening. The problem of this kind of assistance is, even when successful, it would lead

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244 Information on overall situation of agricultural cooperatives in Gaza is not available in information gathered for this study.

245 See 2.1 above.

246 Gaza Agricultural Cooperative Society for Producing and Marketing Vegetable (nd), JICA (2015c).

247 JICA (2015c)

248 ILO (2010), UN Women (2011)

249 *Ibid.*

250 ILO (2010)

neither to the women's asset-building nor their improved access to strategic resources, and thus not to medium and long term empowerment for the women<sup>251</sup>.

Points of Attention in the Sector (when considering development assistance)	
Many women in the agriculture sector	<ul style="list-style-type: none"> <li>● The sector's role in women's economic participation is significant.</li> <li>● But in reality, a considerable proportion of women work unpaid, without leading to empowerment. Severe exploitation is also reported to happen.</li> </ul>
Entering work by necessity	<ul style="list-style-type: none"> <li>● Seemingly many women entered the agriculture sector because there was no other choice (for work/for survival).</li> <li>● Agriculture as the single livelihood is becoming unviable. What is the choice for people/women? Sticking to agriculture? Looking for something else?</li> </ul>
Underestimation of women's work	<ul style="list-style-type: none"> <li>● Gender division of roles in agriculture is not uniform and is diversified.</li> <li>● Women's agricultural contribution tends to be underestimated and underrated, by women themselves and by others around them.</li> <li>● Firstly needed is the women's own fair recognition?</li> </ul>

251 The Institute of Women's Studies at Birzeit University (2013), UN Women (2011). See also Doss *et al* (2008).

### 3.3 Private Sector Development

#### Summary

- (1) Major sectoral strategies in the sector, “National Economic Development Plan 2014-2016” and “National Employment Strategy” are yet to incorporate gender considerations strategically.
- (2) Women’s participation in the private sector economy is limited. While the women’s labour force participation is less than 20%, more women work in the public sector than in the private sector. The Private sector employment is less preferred by women, because they tend not to be ‘appropriate’ for women, but at the same time the employers do not have incentives to hire women as they tend to see women workers as incompetent (gender bias), and also, women tend to be less qualified for the private sector jobs as their educational background is concentrated on ‘female appropriate areas’ including education, health and humanities, whereas what is needed in the private sector jobs are more of science. In micro, small and medium enterprises (MSMEs), very few women are in the workplace.
- (3) Women tend to prefer to work in agriculture while men prefer to work in the informal sector, when they do not have job opportunities in the public/formal sector. When women work in the informal sector, it is likely because they have no other choice.
- (4) Women entrepreneurs are very few, and women’s enterprises tend not to expand/develop. One factor is that women entrepreneurs do not have the proper ‘business mind’, but it is also true that the women do not have chances and/or access to develop the business mind.
- (5) Access to financial services, other than that to microfinance, is difficult for women. Whether microfinance has been beneficial for women is arguable; it is reported that in many cases women become ‘loan windows’, who simply bring the borrowed money to their husbands/fathers. Whether the women have the control of the money is critical.

#### [Policy Framework in Private Sector Development, and Gender]

Gender mainstreaming in economic development, private sector development, and employment in private sector, is yet to be promoted actively. “National Economic Development Plan 2014-2016”, of Ministry of National Economy, does not refer to gender mainstreaming and economic participation of women<sup>252</sup>. “National Employment Strategy”, of Ministry of Labour, is concerned about the low labour participation rate of women (see 2.1 above and also discussion below), but yet to set up a practical strategy to tackle the issue<sup>253</sup>.

It is not that the Ministries ignore gender issues. Both Ministries have set up and activated Gender Units. The Gender Unit in the Ministry of National Economy works mainly in the Ministry in order to incorporate gender consideration into the policies and programmes, as well as into the budget planning, of the Ministry<sup>254</sup>. The Ministry of Labour has played the key role in establishment of National Committee for Women’s Empowerment in 2012, which aims to promote employment of women and increase the labour participation of women. The Gender Unit of the Ministry is the

252 Ministry of National Economy (2014)

253 Ministry of Labour (2010)

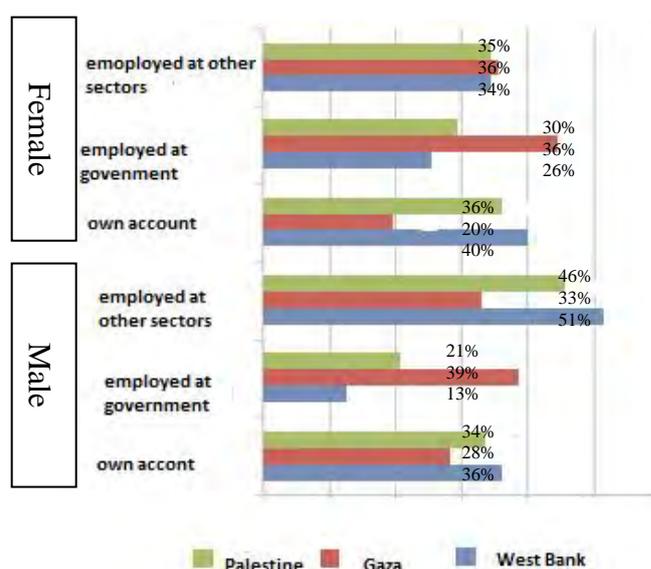
254 Interview with Ministry of National Economy

secretariat for the Committee<sup>255</sup>.

**[Stagnated Participation of Women in the Private Sector]**

As discussed in 2.1 above, women’s labour participation is low in general in Palestine—a mere 19.4% for women compared to 71.5% for men<sup>256</sup>. The rate is particularly low in the private sector.

The figure below shows the rates of the workers by sector (public or private)<sup>257</sup>, by region (the West Bank or Gaza), and by gender. Comparison between the West Bank and Gaza reveals that in Gaza, the public sector employment is very high for both males and females. This could be interpreted in relation to the stagnated private economy in Gaza, affected severely by the long-lasting blockade of the Strip by Israel. Comparing characteristics by gender, it is seen that in both the West Bank and in Gaza, large proportion of women is in the public sector, while males work more in the private sector<sup>258</sup>.



Source: ILO (2012)

Figure 3.3.1: Proportion of Employed Persons by Sector and by Gender

Reasons for which women’s employment is low have been discussed in 2.1 above. In addition to these, factors below also affect the disproportionate low proportion of women workers in the private sector, compared to the public sector, of which belong both the employers’ sides and the workers’

255 Interview with Ministry of Labour, Ministry of Labour (2012)

256 PCBS (2015a)

257 Note that the categorization in this figure is ‘employed at government’ and ‘employed at other sectors’. Therefore, ‘private sector’ here includes non-commercial entities such as international agencies and NGOs. Another category, ‘own account’, including self-employment, is discussed separately in an item below.

258 The figure below is based on 2010-2011 data. The current situation is likely to be changed, especially in Gaza where the economy is in trouble, especially after 2014 conflict. The figure is shown to understand the general tendency.

sides.

On the employers' side, one reason would be the persistent gender bias, that is, women are incompetent workers compared to men<sup>259</sup>. Another would relate to the depressed economy, and thus severe management conditions of private enterprises. As the financial situation is poor, employers do not have many job offers; when and if they employ somebody, they would 'naturally' select men as they have done so far; the labour market is a 'buyers' market' where even males struggle for jobs with high unemployment. From the viewpoint of employers, incentives to employ women (for instance tax reduction for certain percentage of women workers) do not exist, while the traditional social and gender norms tell them that it should be men who work outside home—then why employ women? Moreover, existing systems to protect women workers, including maternity leave and employment after child delivery, are likely to work as disincentives because the employers would see them as more—and unnecessary—trouble which would need to be dealt with if they hire women<sup>260</sup>.

Reasons on the workers side include those discussed in 2.1 above: opposition from the people around, mismatching between the education/qualification/skills and those needed at job, and problems to find caretakers for children while at work. Besides, in the private sector employment, social/gender norms become more of the obstacles than in the public sector; the socially 'female-appropriate' jobs, including teachers, office administrators, nurses and health-workers, basically presumed to be the public sector jobs<sup>261</sup>, coupled with the gender bias negative against women as businesspersons, which exists not only in the minds of employers but also in those of the workers – women themselves as well, discourage women from entering the private sector jobs<sup>262</sup>.

Gender gap in wage is likely to be another discouragement for women's employment in the private sector. Median wage per day for women is 84% of that for men; in the manufacturing sector, it is only 57%<sup>263</sup>.

Factors from both sides consolidated together; limit the sectors to which women have access. As seen in the table below (Table 3.3.1), few women work in the sectors other than agriculture and services. Considering the situation discussed above, it would be fair to consider many of the women working in those other sectors are likely to be working as office secretaries and the like.

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259 The gender bias is particularly strong in the private sector, which is likely to discourage women to enter the private sector enterprises (ETF (2014)).

260 ETF (2014), The Institute of Women's Studies at Birzeit University (2013)

261 UN Women (2011), The Institute of Women's Studies at Birzeit University (2013)

262 Interviews with Business Women Forum-Palestine(BWF), Federation of Palestinian Chambers of Commerce, Industry and Agriculture (FPCCIA) and Palestinian Federation of Industries (PFI)

263 ILO (nd)

Table 3.3.1: Proportion of Women Workers by Sector (%)

Industry \ Year	2000	2005	2010	2014
Agriculture, Hunting, Forestry & Fishing	34.7	32.9	21.4	20.9
Mining, Quarrying & Manufacturing	11.1	8.2	7.5	9.8
Construction	0.3	0.3	0.3	0.7
Commerce, Hotels & Restaurants	7.6	8.3	8.1	10.3
Transportation, Storage & Communication	0.6	0.6	0.9	1.3
Services & Other Branches	45.7	49.7	61.8	57.0
Total	100.0	100.0	100.0	100.0

Source: PCBS (2015a)

To summarize, the trend is that employment of women, including its sector-wise variety, is greatly restricted. Given the limited self-sustaining development capacity of the economy of Palestine and its private sector, alteration of this trend would not be easy. One sector which is argued to have potential to absorb women workers, though, is the information technology sector<sup>264</sup>. In education, science, mathematics, and computer science are areas where men and women students are more or less same in number. Moreover, IT-related jobs could be ones which do not necessarily require much communication with many/unspecified male outsiders, and thus are less likely to be rejected in terms of gender norms<sup>265</sup>.

### [Micro, Small and Medium Enterprises, the Informal Sector, and Women]

Out of 110,000 private enterprises in Palestine, 97% are small and medium enterprises with less than 10 employees, and 90% are micro enterprises with less than five employees<sup>266</sup>. These micro, small and medium enterprises (MSMEs), though, do not employ many women. Only 13% of employed women work in micro enterprises with five or less workers<sup>267</sup>. Therefore, in MSMEs, proportion of females in total employees is also small (see Table 3.3.2 and Figure 3.3.2 below). 90% of MSMEs are family- or individual-owned<sup>268</sup>.

Reflecting these situations, in MSMEs, working environment is poor for women workers. In addition to physical shortcomings such as lack of space for women to take breaks, it is reported that problems such as sexual harassment and prolonged work without rest imposed on women are widespread<sup>269</sup>.

264 The Institute of Women's Studies at Birzeit University (2013), Kawasmi and White (2010)

265 *Ibid.* However, it should be noted that the prospects of the Palestinian IT industry are limited. The Palestinian economy lacks innovation, as the peculiarity of the political economy and related (and continuous) international aid has fostered its dependency; the IT industry in particular is managed mainly based on subcontracted works from Israeli enterprises and is not very self-sustaining in its development(The Institute of Women's Studies at Birzeit University (2013)).

266 JICA (2015g), ETF (2014)

267 ILO (2012)

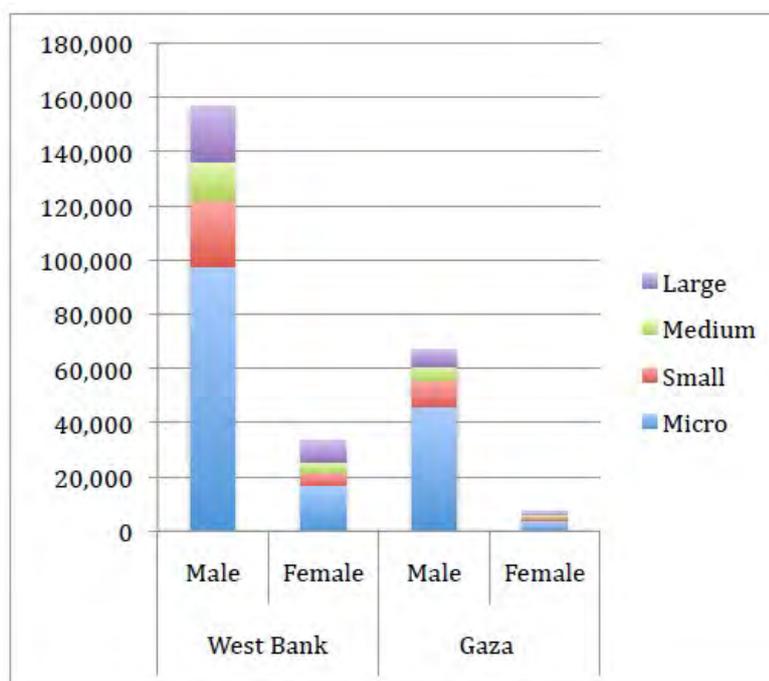
268 Kawasmi and White (2010)

269 Center for Development Studies, Birzeit University (2015b)

Table 3.3.2: Proportion of Male and Female Employees by Enterprise Size (%)

	Male	Female
<b>West Bank</b>		
MSMEs	84	16
Larger Enterprises	76	24
<b>Gaza</b>		
MSMEs	91	9
Larger Enterprises	85	15

Source: Kawasmi and White (2010)



Source: Kawasmi and White (2010)

Figure 3.3.2: Proportion of Private Sector Employees by Gender and by Enterprise Size

The majority of the MSMEs are also informal sector enterprises<sup>270</sup>. Although the actual scale of informal sector enterprises is difficult to grasp, precisely because they are informal, Kawasmi and White (2010) estimates 50-60 % of total enterprises are informal, while according to Al-Falah (2014), informal enterprises account for 49.7% of the total.

Employment in informal enterprises is problematic; informal enterprises are by definition not legally regulated and issues to be concerned include prolonged work, low wage including that less than minimum wage requirement<sup>271</sup>, absence of social benefits including paid leave and retirement plan,

270 While there is no clear and common definition for the informal sector, a vast majority of the reference materials adapted the PCBS definition of the informal sector in their argument. This study, which is based on them, thus also adapts the PCBS definition, unless otherwise specified, that is, the informal sector here is the sector of enterprises without registration in the tax registration. See PCBS (2011)

271 Issues on unpaid workers are discussed in an item below.

and dangerous working environment<sup>272</sup>. While they need to be remedied and improved, regardless of the gender of the worker, gender does seem to correlate with the person's choice of whether to work in the informal sector<sup>273</sup>.

- 1 Within the options of (a) employment in the formal sector, (b) employment in the informal sector, and (c) employment in the agriculture sector, both males and females choose (a) the formal sector if possible. However, when it is unavailable, males tend to choose (b) the informal sector, while females are more likely to choose (c) the agriculture sector.
- 2 Looking at the workers in the informal sector by age, the biggest population in males is the young group (15-29 years of age), while in females, it is the older group (45 or older).

As to 2 above (difference by age), Hiral *et al* (2008) argues that when males get older and accumulate more experience, they have a better chance to obtain formal sector jobs. On the contrary, women, even if they are once employed in the formal sector, they tend to quit when a child is born<sup>274</sup>. Then, in their 30s or later with their children are older, they may want to go back to work but it is too competitive to get the formal sector jobs because of a large number of younger females trying to work there. Consequently, they are forced to work in the informal sector albeit in worse conditions. Hiral *et al* (2008) does not analyse 1 (gender difference of sector choice); it could be attributable to the family-run and small-scale nature of the majority of Palestinian farms. Working in agriculture has fewer hurdles for women in terms of gender norms, because it does not include 'going outside' and 'seen by males outside family'. For the male choice of the informal sector over agriculture, the reasons are not clear, but one thinkable factor is that the agriculture has become more or less deficient as a livelihood means due to low productivity in the sector<sup>275</sup>, which makes men turn to jobs in the informal sector so that they could earn more.

Hiral *et al* (2008) also reports that only 6% of women with higher education work in the informal sector, while women with only primary or up-to-secondary education work more in the sector: both categories have more than 20% with informal jobs. It is analysed that since many women in the informal sector have taken their jobs as a 'last resort' for survival<sup>276</sup>, they (especially those with less education) see working outside home as 'shame', feeling disempowered, whereas educated women in the formal sector tend to consider their working outside home as self-empowerment<sup>277</sup>.

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272 ETF (2014), Al-Falah (2014)

273 The following two bullet points are based on the data in Hiral *et al* (2008). More recent data is not identified. It seems that the PCBS had not collected/accumulated data on informal sector/informal employment in its Labour Force Surveys in 2010.

273 Leaving job when/after delivery could be two patterns: one is due to the woman's will, and another is the unavailability of a person to take care of the child which makes it impossible for the woman to continue working.

274 Leaving job when/after delivery could be two patterns: one is due to the woman's will, and another is the unavailability of a person to take care of the child which makes it impossible for the woman to continue working.

275 MAS (2014b), Niksic *et al* (2014), UN Women (2011)

276 Kawasmi and White (2010), Hiral *et al* (2008)

277 World Bank (2010)

## [Women Entrepreneurs and their Enterprises]

According to Global Entrepreneurship Monitor (GEM), which researches and analyses entrepreneurship in more than 100 countries (as of 2015), enterprises set up by women entrepreneurs in Palestine, in 2012, rank 58 out of 67 countries for the category of Start-ups (enterprises aged less than 42 months), and 66 out of 67 countries for the category of Established Enterprises (aged 42 months or more). These low ranks are mainly due to low proportion of female entrepreneurs in the population<sup>278</sup>. The fact that the rank for Established Enterprises is even lower than that of Start-ups implies that out of few women entrepreneurs, even fewer would be able to sustain for more than several years; women's business in Palestine must be in a truly severe environment.

GEM 2012 also reveals that 16% of males are involved in entrepreneurial activities, while only 3.4 % of females are. One major reason for females to start their business is 'necessity', while that for males is 'opportunity'<sup>279</sup>. A typical case is that the male breadwinner (say, the husband) loses his job, and the woman (say, the wife) is required to obtain income, so that she would set up a micro enterprise<sup>280</sup>. Thus, an opinion expressed by a women's business organisation makes sense: "many women entrepreneurs do not have the business mind, which hinders continuation and development of their business"<sup>281</sup>.

The business set up by women being out of necessity for them and their family to survive, tends to be in the area in their reach—that is, relating to the traditional female work of domestic work. They typically include embroidery, production of handicraft, small kiosks with their neighbours as their customers, and tiny beauty salons based at home. More than 50% of women's business is consumer-oriented<sup>282</sup>. The women, however, should not be blamed unilaterally for their narrow scope of business; the areas out of these 'traditional female work', because nobody expects women to enter, are nearly impossible for women to access unless they are exceptionally well equipped with knowledge/skills/funds or back up<sup>283</sup>.

After establishment, more emphasis is given to stability than to growth and development. Few female entrepreneurs try to grab the chance, if any, to expand and/or innovate. Another dimension of this is, it should be noted, that women's access to business information, knowledge and skills is so limited that they either do not notice the opportunity or feel it would be too much for them to handle<sup>284</sup>. A Palestinian women's business organisation that trains women entrepreneurs explains this as a problem of access to information, knowledge, skills, and finance which are intangible business assets. Women

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278 MAS (2013), Abdullah and Hattawy (2014)

279 MAS (2013), Abdullah and Hattawy (2014)

280 UN Women (2011), Abdullah and Hattawy (2014)

281 Interview with BWF

282 *Ibid*, Interviews with BWF and FPCCIA, Abdullah and Hattawy (2014)

283 Abdullah and Hattawy (2014)

284 Interview with BWF and FPCCIA, Abdullah and Hattawy (2014)

are not legally excluded from access to these, but in practice, control of movement imposed on women, and time and physical burdens of domestic work again imposed on women, coupled with people's (men's) negative attitude against women's business, to access business information/skills, or more precisely, to access the information on the existence of business information/skills, is difficult for women. Without these accesses, women cannot change their way of thinking and behaviour. Without change of thinking and behaviour, development of women's business is hardly imaginable<sup>285</sup>.

Table 3.3.3 below shows how few women are employers, i.e., those who manage the business<sup>286</sup>. In both the West Bank and Gaza, the overall trend in the employer category has not changed since 2010<sup>287</sup>.

Table 3.3.3: Proportion of Employers by Gender (%)

	2010	2011	2012	2013	2014
<b>West Bank</b>					
Male	8.4	8.7	8.9	8.2	8.5
Female	1.5	1.9	1.9	2.1	2.2
<b>Gaza</b>					
Male	4.6	4.3	4.1	4.6	4.5
Female	1.2	0.9	0.9	0.9	1.1

Source: PCBS (2011, 2013, 2014c, 2015a), ETF (2014)

Noted is the difference in the proportion of male employers, in the West Bank and in Gaza; Gaza has considerably less employers (in proportion) than the West Bank. This could be attributed to the greatly depressed economy of Gaza, due to Israeli blockade. It is conceivable that in Gaza, setting up and maintaining business with individual efforts is more difficult than it is in the West Bank.

### **[Women's Self-employment and Unpaid Work]**

Women's self-employment is not comprehensively researched and documented, and the actual situation is almost impossible to understand<sup>288</sup>. What can be seen from available data is that it is increasing considerably in Gaza, as in Table 3.3.4 below.

Increase of women's self-employment in Gaza could be interpreted as that more women have started economic/income-generating activities in the context of economic devastation of Gaza, with high male unemployment (that is, the traditional breadwinner losing their jobs). In the same manner as women entrepreneurs, it would likely to be a coping strategy, pressed by the necessity of everyday life<sup>289</sup>. It is not clear, though, how much of these micro/individual economic activities are

285 Interview with BWF

286 While the figures in the table are percentages within the gender, considering the low female labour force participation (see above), the absolute number of women employers is very slim.

287 See the next item for self-employment and unpaid work.

288 The Institute of Women's Studies at Birzeit University (2013), UN Women (2011)

289 Abdullah and Hattawy (2014)

viable—how much actual income these women could generate—in the economy which is in ‘abnormal’ state of being under blockage<sup>290</sup>.

Table 3.3.4: Women in Employment by Employment Type (%)

	2010	2011	2012	2013	2014
<b>West Bank</b>					
Employer	1.5	1.9	1.9	2.1	2.2
Self-employed	13.4	11.8	12.2	11.7	13.0
Wage employee	61.9	60.6	59.6	62.0	60.6
Unpaid family member	23.2	25.7	26.3	24.2	24.2
Total	100.0	100.0	100.0	100.0	100.0
<b>Gaza</b>					
Employer	1.2	0.9	0.9	0.9	1.1
Self-employed	5.4	5.7	5.1	14.2	27.6
Wage employee	90.7	80.3	75.4	73.9	67.6
Unpaid family member	2.7	13.1	18.6	11.0	3.7
Total	100.0	100.0	100.0	100.0	100.0

Source: PCBS (2011, 2013, 2014c, 2015a), ETF (2014)

In the West Bank, the rate of women’s self-employment has been more or less constant (10-14%) since 2000, with small ups-and-downs linked to political and economic turmoil including the second Intifada<sup>291</sup>; it does not show the drastic change seen in Gaza, reflecting comparatively stable economy in the West Bank.

Another point that should be noted in Table 3.3.4 is unpaid family members<sup>292</sup>. While in Gaza it does not show consistent trend, in the West Bank, the rate of women unpaid family workers has been steady, with very high one-out-of-four. It could be thought that a majority of these unpaid family workers work in family-run MSMEs, as approximately 70% of family-run enterprises are located in the West Bank and a vast majority of these enterprises are MSMEs<sup>293</sup>.

Unpaid family work as a woman’s work is problematic from the point of view of empowerment. Firstly, in many cases, the woman herself, as well as the people around her, tends not to recognize her work as economic contribution<sup>294</sup>. Secondly, specifically because it is unpaid, regardless of her contribution, it leads neither to the woman’s asset accumulation nor to her obtainment of money that she can control. This also means her bargaining power in the household and access to resources do not increase, as discussed in 2.1 above. Even worse, it would be likely to be disempowering her; in most cases, the ‘employer’, the person who manages/runs the family operation is male. The

290 UN Women (2011)

291 World Bank (2010)

292 According to the PCBS, the source of the data, an unpaid family member is a person “who works without pay in an economic enterprise operated by a related person living in the same household” (pp. 32, PCBS (2015a)). See 3.2 for unpaid work in the agriculture sector.

293 Kawasmi and White (2010)

294 World Bank (2010)

mechanism is that the traditional gender norm of ‘male as decision maker, female as subordinate’ is reinforced through everyday interaction, while she is burdened by the workload with more limitation of time.

A further note is that this unpaid family work does not include taking care of sick and elderly at home<sup>295</sup> and/or domestic work which are supposed to be women’s job.

### **[Women and Cooperatives]**

Although they may not exactly be in the ‘private sector’, cooperatives should be discussed in the Palestinian context as they are many and active as livelihood basis of the people. There are also many women’s cooperatives. Cooperatives are said to have good potential particularly in conflict-affected areas such as Palestine, as they would allow sharing risks, pooling resources, and balancing work and family responsibilities more than private enterprises could<sup>296</sup>.

However, in reality, similar challenges to those of women entrepreneurs and self-employment are reported. Many of the women’s cooperatives concentrate on traditional ‘women’s job’ types of activities, that is, activities related to domestic work including small-scale food production/processing such as bakery and handicraft making. This choice of work is logical, so that women cooperatives would have comparative advantage to men’s and mixed-gender cooperatives. On the other hand, women always working in ‘women’s job’ types of activities would reinforce, in the eyes of both men and women, the traditional gender roles and related gender norms, making it more difficult for women (and men) to try non-conventional activities<sup>297</sup>. Furthermore, many women’s cooperatives are said to function as de-facto receivers of donor funds and they tend to go for charitable support, rather than making efforts of making profits and income<sup>298</sup>. If so, participation in cooperatives would enforce the women’s donor dependence. Even though it would benefit the participants economically, in terms of empowerment of women as active agents, the effects would be questionable.

### **[Access to Financial Services]**

It is difficult for women to access official financial services such as bank loans. It is not because there is any legal hindrance; it is rather because few women are able to provide requirements including collateral and guarantors; as to collateral, women hardly have, as discussed in 2.1 above, any assets including land. As to guarantors, in most cases a guarantor must be a socially and economically reliable person, and thus a man. Here, a woman would have a very limited list of such men to ask, as the social and gender norms are such that a woman should not interact and/or meet with men outside

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295 Hiral *et al.* (2008)

296 ILO (2010).

297 *Ibid*

298 Interview with BWF.

their family and relatives<sup>299</sup>. The lack of access to finance is thought to be a major obstacle for which women's enterprises and self-employment do not develop and expand<sup>300</sup>.

With this concern in mind, donors and NGOs have started to provide microfinance services since 1980s<sup>301</sup>. Currently, so many microfinance schemes are being given by NGOs as well as international agencies including UNDP and UNRWA, that some reckon the market is already saturated<sup>302</sup>. While unavailability of comprehensive data prohibits the study to understand the actual situation of the market, according to available data, at least 11 microfinance institutions are in operation and approximately 70,000 are active borrowers of the microcredits<sup>303</sup>.

The microfinance industry is inadequately regulated<sup>304</sup>. Interest rates, as well as gender and economic situation of the target population, vary depending on the scheme. There are programmes which do not require collateral although many do<sup>305</sup>. In many programmes, a potential borrower is required to have guarantor(s)<sup>306</sup> which tends to make the women's access difficult, just as in the cases of official loans.

Microfinance is considerably more accessible compared to official financial services. However, from the point of view of empowerment, microfinance in Palestine so far has shown mixed-results<sup>307</sup>. A major issue here is that women tend to become 'windows for loans'<sup>308</sup>.

According to research by the World Bank in the West Bank, many women borrow from microfinance not because they want to but because men (husbands and/or fathers) 'urge' them to do so, so that the men would use the money for their own (often micro/small) business<sup>309</sup>. In this case, when the men's business is in trouble, the borrower-women are obliged to repay (for nothing). It is of concern that due to the stagnated economy, this issue has become more prevalent now<sup>310</sup>--the West Bank economy has been depressed, although Gaza has been in even worse shape<sup>311</sup>. On the other hand, when and if the woman who borrowed the credit is able to control the money herself, then she is likely to experience

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299 The Institute of Women's Studies at Birzeit University (2013), interview with BWF.

300 World Bank (2010), The Institute of Women's Studies at Birzeit University (2013)

301 Dodeen (2013), The Institute of Women's Studies at Birzeit University (2013)

302 Interview with BWF. There are a considerable number of men and women who refrain from borrowing (even with access), the reason being it would be against Islam to have interests involved in lending and borrowing money.

303 Microfinance Information Exchange <http://www.mixmarket.org/mfi/country/Palestine> (accessed 02/Dec/2015).

Gender-segregated data are unavailable (The Institute of Women's Studies at Birzeit University (2013)).

304 Dodeen (2013). In 2003, a decree is issued to set Palestinian Monetary Authority as the regulator of microfinance institutions. However, concrete work is yet to be observed. ([http://microfinance-mena.org/?page=Pages\\_Activities&id=3](http://microfinance-mena.org/?page=Pages_Activities&id=3) (accessed 02/Dec/2015)) ([http://microfinance-mena.org/?page=Pages\\_Activities&id=3](http://microfinance-mena.org/?page=Pages_Activities&id=3) (accessed 02/Dec/2015))

305 For instance, UNRWA loans targeting Refugees include a 'Solidarity Group Loan' for women's groups (joint responsibility without collateral) and 'Microenterprise Credit' for men and women micro entrepreneurs amongst others.

(<http://www.unrwa.org/what-we-do/products-and-services?program=41> (accessed 02/Dec/2015))

306 Dodeen (2013)

307 Interviews with MOWA and BWF

308 Interviews with NGOs in West Bank and in Gaza.

309 World Bank (2010)

310 The worry is shared both in West Bank and in Gaza while no tangible/comprehensive data is available (interviews with NGOs in West Bank and in Gaza).

311 See 2.1 above.

multi-layered empowerment including not only economic empowerment but also increased bargaining power in the household and raised self-esteem<sup>312</sup>.

Points of Attention in the Sector (when considering development assistance)	
Employment	<ul style="list-style-type: none"> <li>● Diversification from—out of—'female appropriate' jobs and skills are likely to widen opportunity for women.</li> </ul>
Unpaid Work	<ul style="list-style-type: none"> <li>● West Bank has a very high proportion of unpaid family women workers, while unpaid work tends to lead to disempowerment.</li> <li>● If they keep on working with the family, what would be needed for their empowerment? How to gain income? How to improve the bargaining power? Possibly life skills including negotiation skills would help.</li> </ul>
Self-employment	<ul style="list-style-type: none"> <li>● Gaza has seen a rapid increase in women's self-employment.</li> <li>● But the economy in Gaza may not enable their business to be viable. What would be the effective support in this context?</li> </ul>
Women entrepreneurs	<ul style="list-style-type: none"> <li>● Micro-businesses started by women, including those of self-employment, tend not to grow as a business. What is needed?</li> </ul>
Cooperatives	<ul style="list-style-type: none"> <li>● Women cooperatives tend to concentrate on 'female appropriate' work.</li> <li>● While this provides comparative advantage over men-led cooperatives, it also poses a risk of enforcing conventional gender division of roles.</li> <li>● Diversification of women's work, tasks, knowledge, and skills would be desirable in cooperatives.</li> </ul>

312 UN Women (2011)

## 4 Gender Mainstreaming in Development Assistance of JICA and its Lessons Learned

Japan's development assistance plan for Palestine of 2012 focuses on Peacebuilding through promotion of social and economic independence as the basic policy. Priority areas include (1) stability and betterment of people's livelihood, (2) reinforcement of government's capacity, and (3) promotion of sustainable economic growth. In this study, 4 (four) JICA projects that deal with areas (1) and (3) are reviewed to examine the extent and effectiveness of their gender mainstreaming, and to draw lessons from their experiences.

### 4.1 The Project on Improved Extension for Value-Added Agriculture (EVAP Phase 2)<sup>313</sup>

(Project Time Frame: 5 years from 2016 (in planning))

#### [Project Overview and States if Gender Mainstreaming]

The agriculture sector is important for Palestine from the point of view of job creation, poverty reduction and food security. The Ministry of Agriculture promotes improvement of agricultural productivity and profitability through extension services by extension workers. However, the farmers are reported to be unsatisfied with the extension services as the provided technology does not necessarily match the needs of the farmers and the frequency of extension workers visit is not enough. Improvement of the extension services and more promotion of value-added agriculture would be desirable.

In this context, JICA has supported development of the Palestinian agriculture sector and its extension services through projects including “Strengthening Support System focusing on Sustainable Agriculture in Jericho and Jordan River Rift Valley (ASAP)” (2007-2010) and “the Project on Improved Extension for Value-Added Agriculture in the Jordan River Rift Valley” (EVAP 1) (2011-2015). EVAP 1 targeted small and medium sized farms/farmers in Jordan Rift Valley region in the West Bank. Through the activities, it formulated the EVAP extension package: an agricultural extension service package which provides skills/technologies and information required for farmers to make judgements based on profitability and to improve their productivity/profitability—in other words, to be more market-oriented. “The Project on Improved Extension for Value-added Agriculture in Palestine (EVAP Phase 2)”, hereafter referred to as EVAP 2<sup>314</sup> is in formulation to expand the extension service with market-oriented viewpoint to both the West Bank and Gaza.

EVAP 1 has worked throughout the project time frame to revise and improve the EVAP extension

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313 The title of the project is as of its adoption and may potentially be modified.

314 *Ibid.*

package. This was done through 5 cycles (seasons) of diffusion practices of farming technologies. Project Monitoring and Advisory Mission in July 2012 advised the project to incorporate gender consideration because it did not at first. Survey on the situation of women in the targeted communities was conducted in November to December in 2013, with which results the Project included the following two gender-related objectives: to empower women in farming management and household budget so that they would more actively participate in decision making in the family farming, and to lessen the workload of women in farming by bringing in simple and cheap equipment. New gender-related activities were introduced into the 4<sup>th</sup> and 5<sup>th</sup> cycles: women's participation in training sessions encouraged, gender training included within the training for farmers, technologies which would lessen the workload introduced, and training on joint household budget management incorporated ('joint' means male and female in the household, primarily the husband and wife)<sup>315</sup>. At the time of final evaluation in April 2014, because the project activities were still in the transition to those with gender consideration, in-depth probing as to gender mainstreaming and other gender-related issues were suspended. Instead, in August 2015 research which focuses on gender-related outcomes and challenges in EVAP 1, so-called EVAP Gender Research was conducted<sup>316</sup>. EVAP Gender Research finds out that the effectiveness of gender training in EVAP was limited; that introduction of workload-lessening equipment was effective only when the husband already was comparatively aware of gender equality; and that lack of gender-segregated data made it difficult to conduct further analysis. The Research also finds out that there are good practices in which, for example, a husband and his wife inspired by the project inputs did their own local marketing research and successfully raised their income; this resulted in the husband's high appreciation of the contribution by his wife. Unfortunately, these good practices were rather sporadic<sup>317</sup>.

### **[Lessons Learned and Challenges for Strengthening Gender Mainstreaming]**

The experience of EVAP 1, that is, incorporation of gender consideration from a halfway point yielded only limited effectiveness, provides important lessons for EVAP 2 as well as for agricultural projects as a whole. For one, it is essential to include gender mainstreaming in the design of the project from the start. Furthermore, it is crucial to make the project personnel (Experts as well as other staff) understand why gender mainstreaming is important in the agricultural projects.

It would be fair to consider the EVAP 1 gender components were compromised so that they would not impede the other—from the point of view of the agricultural experts, potentially more important— components. For instance, gender training was 'crammed into' the existing training module, resulting in only half-hour sessions. As such, it would not let the farmers (trainees) give

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315 JICA (2015h)

316 JICA (2015e)

317 JICA (2015b, 2015e, 2015f)

proper and in-depth consideration on gender situation around themselves. Thus it did not make impact on them to the extent to change their thinking and behaviour. On the contrary, a male trainee-farmer answered that the gender training let him re-appreciate the traditional gender roles because the training gave him understanding of women's roles which are different than men's. In this case at least, the gender training, opposite to the intention of the component, has reinforced and entrenched the conventional gender division of roles<sup>318</sup>.

The training on joint household budget management aimed to foster man and woman's cooperation within the household on decision making with regard to farming management. Positive reactions included that the training let the trainee-farmers have clearer understanding of household income and expenditure, enabling them to manage domestic budget more efficiently<sup>319</sup>. On the other hand, a considerable proportion did not utilize what they learned in the training, or moreover, even though they started to keep track of the domestic budget, decision making was still in the men's hands<sup>320</sup>.

In relation to the above, it should be noted that information collected by EVAP Gender Research implies tremendous diversity exists in the patterns of household income and expenditure, and of its control, in Palestinian farmers: for instance, in an extended family, in addition to the husband-and-wife agriculture income, temporary income of the brothers of husband comes in time to time. The control of these incomes may differ; the husband may control the agriculture income while the brothers' income may be controlled by somebody else, still the family members may regard the total of these incomes as the household income<sup>321</sup>.

As in the case of household control of income, the household and community situations in Palestinian farmers, and in other Palestinian people, are greatly diversified; and so are their gender norms, gender situations, and the extent of women's empowerment (or disempowerment). Some attributions that would affect the situations include whether the community or households are refugee/IDP or not, own land or not and/or are Bedouin or not amongst others. It would be extremely difficult to find a one-size-fits-all understanding<sup>322</sup>. In order to examine this point further, this study attempts a case study of several farming communities, based on the information collected by EVAP Gender Research. It should be noted that the case study below is a very crude attempt to encourage more discussion on the point; the information from EVAP Gender Research naturally has different objectives than this study and thus does not provide comprehensive data that would be required for deeper analysis.

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318 JICA (2015b)

319 JICA (2015i)

320 JICA (2015b)

321 JICA (2015b, 2015e, 2015f)

322 JICA (2015f), Richter-Devroe (2011). See also 2.1 above

### A Case Study on Diversity and Gender Situations of Farming Communities

Hereafter, 4 (four) farmer communities with which EVAP Gender Research directly interviewed are examined in terms of their gender situations. Simplified attributions of each group are given below.

Although the communities are located in the West Bank, their specific locations in the West Bank are not given in this case study due to insufficient information regarding the communities' locality and its gender characteristics, and also not to give any unnecessary impression on the reader.

Table 4.1.1: Group Attributions of 4 Farmer Communities from EVAP Gender Research

Group A	Non-Refugee and non-Bedouin. Cropping mainly vegetables in the farming land that is either owned or leased. Group members organize a large agricultural cooperative of approximately 100 members (male members only). Livestock is also owned, taken care by wives of the members.
Group B	Refugees but non-Bedouin. Group organized by 15 female landless farmers. The husbands of the members work as agricultural labourers in Israeli settlements and also in sharecropping. Agricultural work in sharecropping is done by women during the day and in the evening by husbands (after they come back from the settlements); both women and men tend to be overloaded with work. The women's group cultivates herbs.
Group C	Non-Refugees. Ex-Bedouin who are now settled. Mostly landless. Group organized by 16 males, working mainly on livestock rearing. Some men work as agricultural labourers; some women (wives of members) cultivate vegetables in sharecropping.
Group D	Non-Refugees. Ex-Bedouin who are now settled. Group organized by 15 farmers (both males and females). Cultivate mainly vegetables with some livestock rearing. All members are blood relatives to each other.

Source: Author's compilation based on JICA (2015b, 2015e, 2015f)

Gender situations in the 4 groups, based on EVAP Gender Research, are given below. It should be noted that 'High/Middle/Low' in the table below are comparative within the 4 groups and not in any way absolute, as reasonable interpretation of the information available from the sources.

Table 4.1.2: Gender Situations in the Groups

	Group A	Group B	Group C	Group D
<b>Gender-related Attributions</b>				
Male Gender Awareness	Low	Low	Middle	High
Female Gender Awareness	Low	High	Middle	High
Male-female Joint Decision Making	Low	Low	Middle	High
Activities Initiated by Women	Low	High	High	High
Male Reactions toward Women's Activities	NA <sup>323</sup>	Negative	Positive	Positive
<b>Others</b>				
Land Ownership	Owned/Leased Land	Labour/Share-Cropping	Labour/Share-Cropping	Owned Land
Bedouin or not	Not	Not	Ex-Bedouin	Ex-Bedouin
Refugees or not	Not	Refugees	Not	Refugees
Other notes/concerns	Exploitation Of Women			

Source: Author's compilation based on JICA (2015b, 2015e, 2015f)

Importantly, group attributions such as Bedouin (or not) and Refugees (or not) do not explain their specific gender situations. According to the categorisation provided in 2.1 above, Bedouins are more conservative than non-Bedouins while Refugees have less intense gender norms than non-Refugees, as generalisation. However, Group C and D, who are ex-Bedouins, score better in overall gender situations, than Group A and B who are not Bedouins. Non-Refugee Group C, supposedly more conservative, scores better than Refugee Group B<sup>324</sup>. Thus, as stressed in 2.1 above, the categorisation is a mere attempted generalisation which would be unable to interpret specific cases where various factors interact.

Another important point is the relationship between gender awareness and male and female behaviours (that is, male and female jointly making decisions (or not), women taking initiatives without male consent (or not), and how males react to those women). Specifically, male gender awareness seems to play a notable role; for example, in Group D where both male and female gender awareness is high, female and male actions more easily leads to women's empowerment; on the contrary, in Group A where both male and female gender awareness is low, gender situation would stagnate.

323 The information available does not provide cases in which the women of this group have taken clear initiatives/actions on their own.

324 Individual cases are not described in this study as they are too detailed for the scope of this study. See JICA(2015b) for more information.

These may be apparent. However, when male and female gender awareness collide against each other, the outcome would be complicated.

In Group B, women have high awareness and they are engaged in group activities so that they would leverage their say to be heard. However, their husbands are negative. One factor behind this negative reaction is that the women's group activities are yet to yield tangible outcomes such as increased income, while they eat up the women's time<sup>325</sup>. As such, the male-female joint decision making stalls; men still have the deciding power in the households as well as the community. Change of behaviour toward more gender equality is yet to be observed<sup>326</sup>.

On the other hand, in Group C, a positive behavioural change case is found out in which a successful income-generating behaviour of wives (women-only share-cropping venture) promoted male-female joint decision making<sup>327</sup>.

These actual cases imply the significance of male gender awareness. While whether the higher male gender awareness is either the cause of the result of the communal change of behaviour is not clear from the information at hand, it would be safe to assume that male gender awareness, rather than that of females', correlates more strongly with gender consideration as a group of people and with gender situations in the group.

Then, it could be said that when observing gender situation, behavioural change, and/or potential of behavioural change, of a group of people, male gender awareness would work as a useful focal point for gender analysis of the group.

If allowed to repeat, though, it is clear those specific situations and the multi-fold attributions mingled together bear a perceived gender situation of a group—or any group. It would be advisable not to go for rapid and/or easy typology; when analysing gender situations in a group, it would be crucial to probe into the specific attributions, history, and various environments of the specific group. As UN Women states, no 'ready-made' gender assistance measures bring out results in Palestine<sup>328</sup>.

#### Supplemental Note on Table 4.1.2: Other notes/concerns

'Exploitation of Women' as noted in Other notes/concerns in Table 4.1.2 is explained below. In this community, many females are 'used' as free agricultural labourers by

325 JICA (2015b)

326 JICA (2015b, 2015e)

327 JICA (2015b)

328 Interview with UN Women.

community males. According to local informants, in approximately 40% of the households, women are not allowed to live their own life; some women are kept at their parental households up to the age of 40s without any chance of marriage (or any other option to leave); others are kept likewise up to their 30s only to be married off as a second wife, so that their fathers could take advantage of their free labour on the family farms<sup>329</sup>.

This community may be an extreme case. However, the field research for this study finds a case in Gaza, in which an unmarried woman in her early 60s (who has retired from her job as a school teacher), works in her brother's farm every day without any pay. In this case, she lives in the brother's household and does all the so-called 'female' work on the farm as there is no other female worker—the brother's wife is too occupied with 12 children of hers. These cases are enough to make those in development worry about the situations of women who are not wives—the unmarried women. It would be quite possible that considerable proportion of unmarried women are 'used' as free labourers without any other choice. In this study, an abundant collection of information and data on wives and their situations was collected.

Whereas, information and data on unmarried women, as well as those on widows and divorcees, were scarce. It would be fair to assume that this problem is not so only in the agriculture sector. In the agriculture sector, and in other sectors as well, more information/ data collection, researches and analysis on the situation of 'non-wife' women are greatly needed<sup>330</sup>.

As seen in the case study above, a quick typology of target farmers/communities from the viewpoint of gender is more or less impossible. It should be noted that the attempted analysis above is based on the information from West Bank farms only. As EVAP 2 plans to target Gaza farmers alongside with West Bank farmers, the situations of target farmers would be even more diversified. A natural conclusion would be that gender consideration in EVAP 2 would be required to be 'tailor-made', depending on the actual situations of and circumstances surrounding the specific farmer group(s) targeted.

It would be advisable that EVAP 2 should, as much as possible, research each target group on its gender situations before the actual activities so that the project could incorporate gender

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329 JICA (2015b)

330 While UN Women (2011) states concerns about the lack of data on widows and divorcees, concrete information and/or analysis on the gender situation of unmarried women, other than that from EVAP Gender Research described above, is unidentified by this study.

mainstreaming components appropriate to the respective groups; lessons learned from EVAP 1 are that generic type of gender component would be unlikely to be effective in the context of the project.

In order for the non-generic gender activities to be realized, then, it would be most desirable to have a knowledgeable and skilful personnel member as 'gender-in-charge'. It would be required for him/her to be capable of understanding the diversified and complicated nature of gender situations in Palestine and of being flexible to plan, consider, conduct, and change the project activities depending on the socio-economic context. Also important is that the project team as a whole would need to be capable of understanding what the gender-in-charge does and says, so that the gender-related components are appropriately treated and utilized in the project. This would mean the capacity development on gender issues for the whole project team would be desirable. Furthermore, according to EVAP Gender Research, some C/P and extension workers in charge of gender understand gender only superficially; for instance, cases are reported in which extension workers regard 'gender equality' to be achieved simply when both males and females physically participate in project events<sup>331</sup>. It would be advisable that on the Palestinian side also, more fundamental and critical understanding of, and capacity development on, gender and gender mainstreaming would be necessary.

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331 JICA (2015b, 2015e, 2015f)

## 4.2 **Project for Sustainable Tourism Development through Public Private Partnership (Phase 2)**

(Project Time Frame: June 2013-June 2016 (planned))

### **[Project Overview and States if Gender Mainstreaming]**

Jericho in the West Bank is called the world's oldest city. A JICA project, "Project for Sustainable Tourism Development through Public Private Partnership" (Phase 1) (2009-2012), aimed for development of the potential on tourism in the region and for economic benefit of tourism to be more widely enjoyed by the local people. In terms of direct benefit to the people, Community-based Tourism (CBT), in which local people are actively involved in tourism-related activities, was focused on. The project achieved outcomes including tourism promotion such as establishment of tourist information centres and production of tourist maps, as well as CBT pilot projects. Since 2013, Phase 2 of the project (hereafter referred to as the Project) has started in order to make good use of the experience gained in Phase 1, to develop the activities more so that the local economy as a whole would benefit, and to expand the activities to a larger area.

Within the current project design, activities, and monitoring, gender consideration is not specifically incorporated. As to CBT, 6 local groups are conducting respective activities as pilot projects, with support from the Project. In selecting these groups for CBT pilot projects, very naturally considering the theme of the Project, tourism promotion potential was most important. As such, selected 6 groups work on activities including production and sales of traditional handicrafts and food (for souvenirs as well as on-the-spot consumption) and experience tours of traditional local lifestyles. As production of handicrafts and food are traditionally done by females, it happens to be that in 4 out of 6 pilot projects, many of the project activities are in the women's hands.

### **[Lessons Learned and Challenges for Strengthening Gender Mainstreaming]**

The Ministry of Tourism and Antiquities, C/P agency of the Project, states that while the Project did not consciously include gender considerations in selection criteria of CBT pilot project, as long as women are active in the selected groups, the Ministry would be happy to provide support as much as possible within the framework of the Project<sup>332</sup>. For one, a pilot project group which works on production and sales of traditional mosaics is a cooperative established and led by a local woman, with women comprising approximately 80% of members. The cooperative works with an objective of providing better job opportunities for local women, but due to still-slim revenues, it is yet to produce

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332 Interview with Ministry of Tourism and Antiquities

many job offers<sup>333</sup>. The Jericho office of the Ministry of Tourism and Antiquities, responding to the group leader's request, has supported the cooperative by introducing potential buyers and advising for the production skills improvement. Actually, the CBT pilot project scheme itself was introduced to the leader by the Ministry office<sup>334</sup>. This case indicates that the support and cooperation of the Ministry has been indispensable for the leadership of the group leader and the work of the cooperative as a whole.

While the support for local women in the Project is observed, although by no means intentional, a CBT pilot project group with a risk of negative impact on gender situations is also found: a Bedouin cooperative which works on production of traditional woollen fabrics. It is known that in Bedouin communities in general, traditional gender norms including gender division of roles are strict, with decision making almost predominantly done by males, and women suffer from severe workload. As to production of traditional woollen fabrics, the working process is almost entirely done by women, except for the very first step of shearing the livestock. In this case as well, the vast majority of the workers are females. However, the CBT project participation was initiated and designed by males, and communication with out-of-community people, including that with the Project, is done exclusively by males. Within the process so far, decision making is predominantly done by males with nominal participation of women. As the production of woollen fabrics had been worn thin before the CBT project, it would be possible that the women were mobilized, as workers, regardless of their actual wills/preference, putting more burden on their already-high workload, whereas their participation in the decision making process is hardly advanced<sup>335</sup>. (It should be noted that this study refrains from being too judgmental on this potential negative impact, and its severity, as the field research on this matter is not very much in-depth, due to time limitations.)

It would be interpreted that this negative impact (or the possibility for it) was brought out because the Project did not—or could not—examine the CBT pilot projects (in planning and in implementation) from proper gender perspective. If an Expert, or a C/P personnel, with professional gender-related knowledge and skills was working in or for the Project, it would have been possible not to select a potentially problematic group such as the one described above, or, to support the group's planning and activities in the direction of promoting and realizing women's empowerment. The other example, the mosaic cooperative, could also be supported more effectively in terms of gender mainstreaming. Within the same activity, that is, CBT pilot project scheme, totally opposite (positive and negative) impacts are observed. An important lesson learned here is that, gender consideration and gender analysis should be incorporated in every process and activity in a project so that there is a check

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333 Interview a CBT pilot project group, working on production and sales of traditional mosaics

334 *Ibid.*

335 Interview a CBT pilot project group organized by Bedouin tribes

function; any potentially negative occurrence could be avoided or corrected, and positive occurrence would be reinforced or fostered further.

In the case of the Bedouin cooperative (woollen fabric production), there seem to be some people within the Project circle who regard the project as gender empowering activity, simply because there are many women involved. However, participating in a cooperative itself does not guarantee the women to be empowered<sup>336</sup>.

Furthermore, as discussed in 4.1 above, gender issues in Palestine are extremely complicated and diversified. Generic gender components would, as said before, yield few positive outcomes—or could bring about negative outcomes, whether intentionally or not. This understanding should be a premise in development activities in any sector. Therefore, it would be desirable to have components and activities related to gender ‘tailor-made’ as much as possible in projects in the tourism sector, as well as in other sectors. ‘Tailor-made’ here refers to, for example in the context of this Project, to implement pre-activity in-depth gender analysis for all CBT pilot project plans and groups, and according to the results, to employ different approaches for respective pilot projects. Another important point here is that the gender Expert who leads these suggested activities should have enough skills and expertise to be able to understand complicated gender-related social context of Palestine and to deal with the various situations properly. In order for the gender Expert to be effective, in turn, the other Experts and project personnel should have capacity development opportunities on gender mainstreaming, continuously and systematically, so that the opinions and activities of the gender Expert would be incorporated into the overall project in the right timing and with proper attention.

As to this particular Project, due to limited time left before the termination, it would be difficult to make changes in the operation. It would have been desirable if, at least for CBT pilot projects, in-depth gender review be done by a gender expert to identify positive and negative impacts which materialized, so that the lessons learned would be passed on to similar projects in the future. Or, possibly after the Project termination, a freestanding research on gender-related impact could be considered, as it was done in EVAP 1 (see 4.1 above), for the betterment of similar and/or succeeding projects in this field.

This study understands the CBT activities as primarily aiming for economic empowerment of local people. However, if seen from gender perspective, with the actual examples of the two cooperatives described above, economic empowerment only would not be enough. Women need to be empowered socio-culturally within the cooperative/group as well as in the wider community of theirs, including having more negotiation power/skills against men. It would be advisable for JICA to have more

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336 ILO (2010, 2014). See also 3.2 and 3.3 above.

gender-considered project designs for similar and/or succeeding projects to come, which incorporate holistic—i.e., not only economic but also socio-cultural and other life-skills related— gender empowerment.

#### 4.3 **Project for Business Development Service (BDS) Enhancement for MSMEs**

(Project Time Frame: September 2013-September 2016 (planned))

##### **[Project Overview and States if Gender Mainstreaming]**

MSMEs are important as job creation sources in Palestine. While MSMEs suffer from vulnerable management foundations, management capacity, and lack of market information, they are in need of new market opportunities, including those in the overseas market, as the Palestinian market is limited. Therefore, MSMEs and their management require business development services (BDS): that is, training/capacity building, advisory services, and consultations on marketing, quality improvement, and management. The reality in Palestine is, however, that quality BDS are too expensive for MSMEs whereas affordable BDS are poor in quality. In this context, JICA has started the “Project for Business Development Service (BDS) Enhancement for MSMEs” (hereafter referred to as the Project) in order to cultivate national experts who would provide BDS with better qualities to MSMEs<sup>337</sup>.

C/P institutions for the Project include Ministry of National Economy, Federation of Palestinian Chambers of Commerce, Industry and Agriculture (FPCCIA), Palestinian Federation of Industries (PFI) and other business associations. The Project provides lectures and training sessions targeting these institutions as well as their staff aiming for the development of their capacity as quality BDS providers. As to gender consideration, it has not been included in the Project design in particular. However, in the first year of operation, one of the C/P institutions (PFI) suggested a business women’s association called BWF to be added into the Project as another C/P institution, which was accepted. PFI and BWF have been proactive to include women trainees in the Project activities. As a consequence, the Project has achieved women’s participation to a certain extent<sup>338</sup>.

Although not directly related to the Project activities, another C/P institution, FPCCIA, has started women targeted activities. The factors behind this are that they, as a business federation, would need to increase the federation members (i.e., companies) as well as to improve their services toward the member companies, and there are women-led enterprises although the vast majority of them are informal micro enterprises. Their newly created women targeted activities include establishing gender focal points in their local offices and planning of BDS targeting women entrepreneurs<sup>339</sup>.

All C/P institutions interviewed for this study, including PFI, FPCCIA, and BWF, expressed their

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337 JICA (2015 g)

338 Interviews with PFI and BWF

339 Interview with FPCCIA. The recent activities targeting women entrepreneurs of the FPCCIA are supported by other donors including GIZ.

hope/willingness of incorporating activities related to women-targeting BDS in the Project<sup>340</sup>.

### **[Lessons Learned and Challenges for Strengthening Gender Mainstreaming]**

As discussed in 3.3 above, MSMEs by women entrepreneurs in Palestine are still very much of a minority. The problem is argued to include many women entrepreneurs establish their tiny businesses out of necessity for survival, with neither business mind-set to develop and/or expand the business, nor information, technology and skills required for business development. Another issue reported is that male businesspersons often (if not always) do not treat women businesspersons as their equals<sup>341</sup>.

However, as described in the section above, business federations and associations who are C/Ps of this Project are inclined to take in women entrepreneurs and their enterprises, however micro they are. It could be said that the favourable environment for women entrepreneurs in the Palestinian industrial circle has started to evolve, though maybe slowly.

In parallel, increase/promotion of women's labour force participation has been sought with the Ministry of Labour as a lead<sup>342</sup>. Concerned issues include gender gap in wages and needs for improvement in working environment. Another point here that could be considered would be the limitation of access by women to wider job varieties and industries (sectors), as discussed in 3.3 above; in the context of the Project, awareness raising as to the various potential of women workers/professionals could be useful.

Due to the limited time left before the completion of the Project, it might be difficult to incorporate gender-related activities from now on. However, in similar/succeeding projects in the future, gender considerations should be included from the beginning, i.e., from the designing phase of the projects. The following are some suggestions in this regard:

- In designing (including PDM formulation):
  - To conduct research, data collection, and analysis on women's participation in MSMEs as well as in the economy in general;
  - To conduct detailed gender analysis on the needs of the target population; and,
  - According to the results of the above, to examine women entrepreneurs and female businesspersons as one of the target groups.
- In implementation:
  - To develop BDS targeting women entrepreneurs and female businesspersons;
  - To develop BDS and to conduct training on how to do business with businesswomen, targeting male businesspersons;

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340 Interviews with PFI, FPCCIA, and BWF.

341 ETF (2014), interviews with PFI, FPCCIA, and BWF

342 See 3.3 above.

- To develop BDS and to conduct training on how to improve working environment for women workers and how to prevent and deal with sexual harassment, targeting both male and female businesspersons; and,
- To conduct training/awareness raising on the potential of women workers in the jobs and sectors that are currently not accessible by women.

In the Project, the Ministry of National Economy is the C/P institution within the government. It would be possible to invite the Ministry of Labour as well. Thus, in addition to the support of women as employers (entrepreneurs, businesspersons), as considered in the current Project framework, the support of women as employees could be strengthened.

Last but not least, as a very basic suggestion, the data of the Project as well as of the future similar projects should be gender-segregated.

## 4.4 Refugee Camp Improvement Programme in Palestine

(Project Time Frame: February 2016-January 2018 (planned))

### [Project Overview and States of Gender Mainstreaming]

The living environment including hygiene in Palestinian Refugee Camps is poor, as discussed in 3.1 above, with infrastructure (water system, electricity, roads amongst others) as well as housing not properly built/maintained. Infrastructure and social services are provided by local authorities and UNRWA, but local authorities are constantly short of funds and UNRWA also recently suffers from insufficient finance. Consequently, public services including infrastructure building/maintenance are dependent on non-consistent support by donors and NGOs.

While a fundamental political solution for the Palestinian Refugee issue is unlikely to be found anytime soon, it would be necessary to tackle the existing problems such as living environment with whatever available; this would include problem solving with and by the Refugees (residents) themselves, through promotion of their active participation in planning and implementation of environmental improvement programmes. At the same time, as Refugee Camp residents suffer from higher poverty rate than others, livelihood improvement could also be addressed in participatory manner. Based on this understanding, a new project by JICA, “Refugee Camp Improvement Program in Palestine” (hereafter referred to as the Project) is in formulation.

The project formulation survey is being done with gender consideration, with interviews with Women Centres always included in the field data collection in Camps. What is also important now would be how to actually and effectively incorporate women’s voices and needs into the participatory planning as decision making of the respective Camps.

### [Lessons Learned and Challenges for Strengthening Gender Mainstreaming]

#### ● Involvement of Men including Popular Committees

Gender mainstreaming is not a simple ‘support for women’; rather, it is about the relationship between males and females. In current international consensus in development assistance, involvement of the community, particularly males, plays a significant role in addressing gender issues. In this context, it would be important for the Project to find ways how to incorporate male actors, in addition to females, in gender mainstreaming of the Project. The Project may want to draw lessons learned from another JICA project in neighbouring Jordan, that is, “Project for Capacity Development for Improvement of Livelihood for Palestinian Refugees” (current phase implemented until September 2016), since this project in Jordan also tackles living conditions in Palestinian Refugee Camps through residents’ participation. This project, in its efforts to support livelihood improvement

of the women in the Refugee Camps, first constructed a cooperation and communication structure with Camp Committees<sup>343</sup>. Then, utilizing the relationship as leverage, has conducted gender awareness raising workshops and other events targeting men and women in the Camps<sup>344</sup>. Obviously it should be noted that in Palestine and in Jordan, with different political and social contexts, automatic duplication of the project component(s) would not work, even though both projects work in Palestinian Refugee Camps. Still, the experiences of the project in Jordan could shed some practical light on the coming Project<sup>345</sup>.

### ● ‘Participation’ of Women in the so-called Participatory Decision Making

International experience on participatory development tells us that women’s physical ‘participation’ itself—for instance, the mere fact that women are present in meetings— does not necessarily guarantee the women’s voices will be heard and appreciated. This would be especially so in Palestine, where traditional gender norms set decision makers as men and regard women’s interaction with non-family men as inappropriate. Recent rise of conservatism, as discussed above, may further induce men’s conscious and unconscious negative reaction against women assuming new role as participants in joint decision making, in participatory planning, next to men. It is reported that women on the ground have already employed coping strategy for similar problems; for instance, in order not to offend men’s masculine pride, women consciously underrate their own economic and other contributions<sup>346</sup>.

Considering these issues, it would be conceivable that when both men and women are physically present, women tend not to speak up their true opinions and/or pros and cons toward certain topics. When holding ‘participatory’ meetings, whether or not men and women should sit in should be examined, according to the circumstances. It could be considered to organize women-only organisation, such as women’s committee for the Project, where women’s opinions and suggestions would be formulated without being shy in the presence of males. It could be further plausible that quota-like system would be constructed, that is, at least certain number of suggestions provided by the women’s committee must be included/reflected in the participatory planning of the Camp. In management of the women’s committee, it should be noted that if the supporting outsider (Expert, C/P, and/or local consultant) is male, then his intention may disproportionately influence the argument and/or conclusion of the women’s committee, specifically because it is a *male* intention. Obviously, it is not that male outsiders should not deal with women’s committees. However, they must understand

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343 Self-governing body of the Camps organized by Camp residents. Equivalent to Popular Committees in Camps in Palestine.

344 This project, for instance, has produced a DVD as awareness raising workshop material, in which a famous Islamic scholar corrects the prevailing yet wrong interpretation of Islamic teaching, by preaching oppressing women is not truly “Islamic”. This, or similar attempt, could be useful in the Project (JICA (forthcoming)).

345 JICA (forthcoming) discusses the experiences of and lessons learned from this project.

346 World Bank (2010)

gender sufficiently, and be prepared for what could happen<sup>347</sup>. In addition, this sufficient understanding on gender would not come, in the greatly complicated and diversified gender context of Palestine (see 4.1 above), by simply taking generic gender training.

The discussion in 4.1 above finds out, along with diversity of gender situations, that male gender awareness would be a useful variable to measure/predict the group's potential for gender inclusiveness (at least in the short run). Thus, it would be desirable for this Project to research and analyse male (and female) gender awareness in each Camp, at the beginning phase, so that the findings and analysis would be utilized in the actual Project activities in the respective Camps. It should be noted, though, that the discussion in 4.1 is, as stated, crude and provisional; more arguments and analysis are in great need, on actually how male (and female) gender awareness influence the behaviour of the group, what formulates this gender awareness and how, and what are the other influential variables than gender awareness.

#### ● Utilisation and Strengthening of Women Centres

As discussed in 3.1 above, there are Women Centres established in the vast majority of Camps both in the West Bank and in Gaza. While some are more active than others, the Centres seem to be the most important base of the organized (group) activities of the women who live in respective Camps. Thus, the Project could include utilisation and strengthening of these Women Centres within its gender component(s), unless any other—and more active/influential—women's organisations are discovered, which this study did not identify.

Existing support for Women's Centres is mainly by UNRWA, in some cases supplemented by other donors including NGOs. Women involved in Women's Centres express their anxiety and discontent toward shrinking support from UNRWA (as UNRWA has been in shortage of funds) and wider international community<sup>348</sup>. In other words, these women are yet to have the self-sustained mindset to develop their Centres and the activities by their own sustainable and continuous efforts. Taking advantage of the Project's major framework of participatory development, it would be desirable for the Project to promote and encourage women's own initiatives to protect and develop the Centres, so that not only the Centres are strengthened but also the women themselves are more empowered.

The scope of the Project incorporates livelihood improvement of the residents, in addition to infrastructure improvement. In this regard, as far as this study could identify, livelihood support activities in Women's Centres so far have been predominantly those which are 'appropriate/traditional female jobs': typically they include embroidery, tailoring, handicraft making,

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347 This does not mean woman outsiders have no problems. They, unfortunately, often do, due to their insufficient understanding of gender/gender issues.

348 Interviews with Refugee women in the Palestinian Refugee Camp, JICA (2015a), UNRWA (2015a)

and catering. As repeatedly discussed in 3.2 and 3.3 above, concentration on ‘female appropriate’ jobs, i.e., lack of diversity of women’s employment opportunities, hinders potential for economic empowerment of women and could work to reinforce conventional gender division of roles. It would be desirable for the Project to consider, when working on livelihood improvement of women, to include non-conventional job opportunities for women.

Last but not least, it should be noted that women currently involved in Women’s Centres are comparatively empowered, as they could go out of their houses on their own and have social life outside family life; considerable number of women are likely to be (practically) confined in their houses as family and relatives do not allow them to go out freely (see discussion in 3.1 above). If the Project is to embrace the will of the Refugee women, it should always remember these ‘hidden’ women, and stop to think how to listen to their voices<sup>349</sup>.

#### ● **Gender Mainstreaming with Considerations for Political Context**

When and if the Project considers cooperation with Popular Committees in relation to gender mainstreaming/consideration, as suggested above, it would be advisable for the Project to decide plans and activities based on the good understanding of political context, especially in Gaza. In Gaza, where Hamas is the de-facto government, ‘modern’ and/or internationally accepted gender mainstreaming sometimes receives negative reactions<sup>350</sup>. It would be also possible that Popular Committees themselves are politicized.

#### ● **Flexibility for Plans ‘with Women’s Perspective’**

In the field research conducted by this study, what was ‘popular’ amongst the programmes targeting women in Refugee Camps includes recreational programmes such as motor-coach tours<sup>351</sup>. It would be interpreted that these recreational programmes were appraised because they contribute to lessen the women’s tremendous stress as well as they enable them to visit different parts of the Territory which would be impossible on their own due to various restrictions of movement. This is a mere anecdote, but it could provide a hint as to when in the Project the women formulate their own participatory plans; if and when the participatory plans by women go out of Project framework of infrastructure and livelihood improvement, how would the Project react? If the Project could support these out-of-framework plans in some ways, that is, not reject them outright, then it could be meaningful in

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349 Having said that, it is not the intention of the author to urge/encourage the Project to physically bring out these “hidden” women out of their houses; for example, it is not to say the “hidden” women should be present in the Project’s participatory planning meetings—it is simply not realistic. Rather, by developing capacity of the more outgoing women (e.g., women involved in Women Centres), the Project may be able to collect the opinions of “hidden” women more effectively as the outgoing women may become more capable of listening to them. Or, these outgoing women may serve as role models so that in the longer run, the “hidden” women may be able to change their behaviours.

350 See 2.1 and 2.2 above.

351 Interviews with Refugees residing in a Refugee Camp in West Bank, and with UNRWA-Jerusalem

terms of the improved quality of life of the women, but moreover, it would contribute to the women's empowerment as active agents (as opposed to passive recipients) by strengthening their planning capacity and acting power.

## 5 Gender-related Assistance by International Agencies and Other Organisations

Programme/Project	Agency	Outline
<b>Gender in General/Gender Mainstreaming at Policy Level</b>		
Increased Accountability in Financing for Gender Equality	UN Women	Capacity building targeting governmental personnel toward gender budgeting and its practice; related consultation.
Gender Tracking in DARP System	UN Women	'Gender Marker' is incorporated into DARP (Development Assistance and Reform Platform), a donor-fund tracking system, so that concerned circle is able to monitor and analyse how (or not) donor fund is utilized in gender mainstreaming.
Gender Initiative Programme	UNRWA	Partnering with mainly local NGOs as implementers, the programme provides vocational training, health education and awareness raising on gender issues targeting Gaza women.
<b>Rule of Law</b>		
Strengthening the Rule of Law in the oPt: Justice and Security for the Palestinian People	UNDP & UN Women	Strengthening the rule of law through capacity building for the security force and the judicial professionals (judges, prosecutors and lawyers) in order to better protect women. Expected to improve GBV survivors' protection.
<b>Livelihood Improvement and Economic Development</b>		
Deprived Families Economic Empowerment Programme (DEEP)	UNDP	Through microfinance/micro-grants and vocational training, the programme supports livelihood projects of deprived households. Although targeting both men and women, due to consideration given to the importance of women's economic empowerment, approximately half of the projects supported are by women.
Job Creation Programme	UNRWA	Supports Palestinian Refugees in poverty by providing temporary jobs. Approximately 60% of the jobs target women. Since 2015, attempts have been made in creating non-conventional jobs for women including female security guards in UNRWA facilities.
Private Sector Development Programme (PSDP)	GIZ/SIDA	While the programme basically aims for development of MSMEs and strengthening concerned organizations such as business associations, gender mainstreaming is incorporated in the design which has led to the programme's support on gender units establishment in business organizations.
<b>Community Development</b>		
"Together We Stand"	UNFPA	Targeting youth of 18-24 years of age, the programme provides life skill training and supports their small-scale initiatives. The

		youth are expected to build their life capacity and potential for livelihood improvement through the participation.
GBV		
Working together to stop GBV	UNFPA	Improving the access of GBV survivors to RH services and to psychological care services through a referral system.
GBV Referral System	UNRWA	Referral System has been activated in UNRWA-managed facilities in Palestinian Refugee Camps, which enables GBV survivors to have better access to quality medical, psychological and legal supports.

## **6 Challenges and Considerations for Gender Mainstreaming in Development Assistance<sup>352</sup>**

### **6.1 Significance of Understanding Diversified Gender Situations**

As discussed repeatedly in this study, gender situations—gender norms as well as empowerment/disempowerment of women in Palestine are tremendously diversified, depending on various factors including groups' attributions and experiences (Refugees or not, Bedouins or not, having migrated or not, or how many times, and location of the community, to name but a few). Social, political, and economic differences including those of the West Bank and of Gaza also have influences. Consequently, it would be possible for one programme/activity to induce both positive and negative outcomes<sup>353</sup>.

This being the case, ready-made gender mainstreaming measures including generic gender training are unlikely to achieve much, if not to bear (unintentionally) negative impact. Gender mainstreaming and gender-related development assistance in Palestine should be premised to be 'cumbersome' by nature. It would be thus very important for all programmes and projects to incorporate gender experts who are equipped with expertise, skills and experiences that enable them to sufficiently analyse and deal with complicated individuality of respective cases, based on the socio-political context of Palestine. It would be further desirable to have 'tailor-made' as many plans and activities as possible, so that they would be in line with the specific nature of the target group(s).

It would not be realistic for all programmes/projects to have gender experts throughout the time frame. Then, at least, all programmes/projects should be equipped with gender experts in important points, including the times of: programme/project formulation, PDM formulation/revision, selection of beneficiaries, introduction and alternation of component(s), and monitoring. In JICA's work, these gender experts could be Short-term Experts. The work of the gender experts in this manner is expected to have activities 'tailor-made' as much as possible and to improve the effectiveness of gender mainstreaming/ gender empowerment, while avoiding any possible negative impact. It would be advisable for programmes/projects to have inputs from gender experts in all phases of the implementation cycle, including review and evaluation.

It would be suggested that the gender experts, when involved in the manner above, would research and analyse the attributions and characteristics of the target group(s) from gender perspective; an attempt to give an example is provided in the 4.1 above as A Case Study on Diversity and Gender

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<sup>352</sup> This section discusses challenges and considerations required for gender mainstreaming and women's empowerment in development assistance, with Japan's ODA in mind. However, the discussed points should also be applicable to development activities conducted by other actors, to a considerable extent.

<sup>353</sup> See 4.1 and 4.2 above.

Situation of Farming Communities (note that this suggested research and analysis should be done at the beginning of the activities, rather than in retrospect, so that the results would be practically utilized). In the Case Study, it is indicated that male gender awareness could be specifically correlated with the gender situation of the group. Therefore, a first step could be measuring and analysing male (and female) gender awareness. However, as noted in 4.1, the Case Study is a crude springboard for further discussion. There could well be other, and possibly more important, elements than male gender awareness that are significant in Palestinian context. Also, the categorisation on intensity of gender norms by group attribution (see 2.1 above) is another attempt in this study that awaits further discussion and revision.

In relation to the above, it is also suggested that this type of research and analysis should be conducted in various sectors, with the results accumulated in a cross-sectoral manner. If done, it would serve as an invaluable resource of intellectual property which contributes in support for Palestine in the medium and long run<sup>354</sup>.

In addition, it would be advisable for these researches and analysis to target women in various family positions. Conventionally, gender-related assistance as well as researches and analysis tend to focus on women as wives. In this study, then, it is indicated that unmarried women (such as daughters and sisters of the household head) could be in even more difficult/complicated situations than wives, with high risks of being exploited<sup>355</sup>. Yet, it is beyond the scope of this study to probe deeply into the issue. Further data collection, researches and analysis would be desirable.

## 6.2 Potential of Livelihood Support as GBV Countermeasure

As gender issues in Palestine are wide-ranging, it would not be realistic for each assistance scheme to cover everything. However, GBV protection/prevention and livelihood support could be, at least to a certain extent, “killing two birds with one stone”.

It is understood that access to safe and stable livelihoods works as effective means for prevention and protection against GBV<sup>356</sup>. As GBV is a social taboo, there may be social or political circumstances where programme(s)/activities which explicitly focused on GBV are difficult to design/implement. Even in these circumstances, ‘programme(s)/activities for livelihood improvement with (non-vociferous) attention to GBV protection/prevention’ could be implemented.

According to previous studies on correlation between GBV/DV and livelihoods, when a woman starts working outside home, the male in the household (e.g., her husband) tends to become more violent as

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354 When/if detailed research/analysis suggested here is physically unavailable, it is important at least to collect and accumulate data related to programmes/projects segregated by gender.

355 See 4.1 above for actual cases.

356 UN Women (2014b)

his authority and identity as the breadwinner of the house is perceived as threatened. However, this tends to be resolved as time passes and as it becomes clear to him and to other members of the family that the woman's income benefits all in the household<sup>357</sup>. While these findings should be seriously noted in livelihood support, in Palestine, changes in gender roles as to who the breadwinner is (or are) are already observed, as discussed above, as the economic contribution by women has become more and more crucial for family survival. Which is to say, it is already likely that husbands are feeling threatened as breadwinners and to have become violent<sup>358</sup>. This being so, livelihood support for women would be even more meaningful so that this negative occurrence would be reduced as soon as possible.

While livelihood support targeting women is often discussed in the context of economic empowerment, as this study has argued so far, gender issues in Palestine have evolved as consequences of the interaction of various political<sup>359</sup>, socio-cultural, and economic factors. Because elements are diversified, interventions to tackle them are also to be multi-dimensional. This, on the other hand, means that a successful intervention could empower the beneficiaries multi-dimensionally.

Therefore, development assistance in the area of gender should examine the challenges and their elements as such, and accordingly, approaches and activities as such, and finally, should aim to achieve empowerment in a multi-dimensional manner. Livelihood support and protection/prevention of GBV should also be considered in this manner; an intervention may want to set targets not only on economic empowerment and physical and mental security, but also on political and social empowerment including increased bargaining power and re-examination of traditional gender/social norms within the community.

A supplementary suggestion is that GBV-related intervention would have difficulty to bear visible/tangible outcomes even when successful, as GBV itself is hidden. It would be important to examine how to design, implement and importantly, evaluate, these invisible outcomes.

One issue raised in the female labour participation is the scarcity of support/services to take care of the young children. A livelihood-targeting intervention could consider a component which deals with this problem including providing/supporting childcare service(s). This would be particularly helpful for beneficiaries from socially/economically vulnerable groups. Supplementarily, a childcare service would serve as a job-creation centre as it would require service providers such as nursery teachers.

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357 Women's Refugee Commission (2009)

358 The World Bank (2010) reports that women with unemployed husbands intentionally underrate their own economic contribution to the household income (especially in the presence of their husbands), so that the husbands' pride would not get offended. This behaviour could be interpreted as a coping strategy against the VAW mechanism described here.

359 'Political' here is not limited to that in relation to the political system (such as voting and running for an election); rather it includes that concerning power relations/balance in a large and small scale, for example, a wife's bargaining power against her husband is a political matter.

### 6.3 Gender Situation in relation to Monetary Control

In relation to the section above on livelihood support, this section takes note of monetary control. As discussed in 2.1 above, how much access to and control of resources a woman has is an important point of view to measure how much she is oppressed (or empowered)<sup>360</sup>. In today's society where a cash economy is almost universal, proper attention on control of money would be indispensable when considering empowerment of women in Palestine. As said in the former section, empowerment here is not only economic empowerment, but is a wider and multi-layered concept, which encompasses political empowerment including strengthened negotiation power and socio-cultural empowerment.

Firstly, it should be remembered that it is a male role to control money in the household, as a social norm<sup>361</sup>. To make the matter complicated, though, households may have more than one male. EVAP Gender Research indicates that the 'family wallet' takes various patterns depending on the household. Many variables including nuclear or extended family, who has and who doesn't have income, who is indebted, and whether the income is stable or temporary, all influence the 'wallet' pattern of the household. Even within the same household, the pattern may change in relation to seasons and life cycles of family members<sup>362</sup>. The implication is that, when and if the woman assumes control of the money, even if partially, then it would let her have a big step forward toward empowerment, but her route to this control may be totally different from that of her neighbour. That is, in the same manner with other gender issues discussed in 6.1 above, it would be extremely difficult to prepare a one-size-fits-all manual on how to support the women toward monetary control. While it would be desirable to have a 'tailor-made' support for each case, the reality is that even broad knowledge/tendency on this matter is scarce, what is needed first would be information. Possible variables include locality, social and/or economic strata, tendency in relation to profession/job (employed wage worker, farmer, self-employed, or day labourer), the job sector, and household size. It would be desirable for research on this topic to be conducted. If large-scale research is difficult to conduct, then it could be considered that interested projects include this topic within their base-line survey.

Secondary, microfinance is briefly discussed. While microfinance is established itself as a means to access for women to financial services, its achievements are mixed in Palestine<sup>363</sup>, as in other countries and regions. Cases are reported in which microfinance has negatively impacted women; women take loans from women-targeting microfinance programmes, without control of the money

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360 The Institute of Women's Studies at Birzeit University (2013). In some cases, women have some pot money to which they have the control. It seems some husbands know and approve it, while others do not, but the information available is sporadic and scarce (JICA (2015b))

361 See 2.1 above.

362 See 4.1 above.

363 See 3.3 above.

(that is, she becomes the ‘loan window’), then it does not lead to their empowerment. Rather, it could lead to their disempowerment, when, for example, ‘the husband uses the money the wife borrowed, and then the wife has to repay so that she borrows more money from other sources, resulting in multiple debts’. Apparently, there are also cases in which the women do have the control of the loaned money, with which livelihood improves, resulting in their empowerment. At any rate, considering microfinance as a part of the assistance programme for women, the potential risks should be considered and addressed.

#### **6.4 Potential for Support to Help Women Step Out of ‘Female Appropriate’ Areas**

The discussion above in relation to women’s work/employment and education in this study clearly indicates that one of the major factors which hinders women from more labour force participation and economic empowerment is their confinement in the ‘female appropriate’ areas (of work as well as of study)<sup>364</sup>. The ‘female appropriate’ areas of work/study, that is those close to domestic work and motherly role, are where women have traditionally and intensively worked, and this study does not have any intention to deny it as these are areas where women have current comparative advantage over men. Yet, it would be fair to consider the over-concentration on these areas makes the women compete with each other for rather a small pie.

This being so, when assisting women in Palestine in livelihood improvement and/or in development of the private sector, as well as in education, it could encourage women to step out of these traditional ‘female’ areas so that more options would be available. A proper attention should be given, though, to the reasons for why women select these narrow areas; they choose these areas not only because they may be interested in them; but also, or rather than that, they may have no other choice because people around (parents, husbands, and/or the community) would not approve other areas. Thus, when encouraging women to venture on non-traditional areas, it would be needed to encourage and/or persuade not only the women themselves but also the people around them.

#### **6.5 Securing Commitment with Checklists**

Development assistance of Japan in relation to gender mainstreaming and women’s empowerment in Palestine would be required to commit and comply with the following two documents:

- 1) National Action Plan of Japan for UN Security Council Resolution 1325<sup>365</sup>
- 2) Gender Charter for the Aid Coordination Structure in Palestine<sup>366</sup>

JICA as Japan’s international cooperation agency would obviously comply with these. However, in

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364 See 2.1, 3.2, and 3.3 above.

365 <http://www.mofa.go.jp/mofaj/files/000101797.pdf> (accessed 11/Dec/2015)

366 See 2.2 above.

practice, it would be ineffectual and inefficient for each and every project/personnel to examine these documents in detail in order to properly commit to them. It would be advisable, therefore, that required considerations, actions, to-dos and not-to-dos for compliance with the Plan as well as the Charter are organized and compiled into some sort of checklists. Ideally, the checklists would be instructive for the personnel concerned in every phase of the project/programme cycle—planning, designing, implementation, and evaluation.

As to 2) above, this Gender Charter is formulated as an international consensus. It would also be useful in terms of avoiding overlapping amongst the donors. Those who are in charge of donor coordination in relation to the Gender Charter are: Ministry of Women's Affairs in Palestinian Authority, and Local Aid Coordination Secretariat (LACS), in cooperation with UN Women, in donor circle. Communication and coordination with these actors would be important when dealing with the Gender Charter.

In addition, as discussed in 2.2 above, the Palestinian Authority is also in preparation of National Action Plan for UN Security Council Resolution 1325. When the Plan is finalized, a similar checklist could be compiled.

## 7 List of Organizations working on Gender

Name of Organization	Activities	Contact
<b>Governmental and Academic Institutions</b>		
Ministry of Women's Affairs	Promotes gender mainstreaming in the government as the national machinery, including national and sectoral policies. Coordination with the civil society organizations working on gender.	P. O. Box 4616, Al-Beireh, West Bank
The Institute of Women's Studies at Birzeit University	Research and education on gender issues and women's affairs.	Birzeit University, PO Box 14, Birzeit, West Bank women-inst@birzeit.edu
<b>International and Donor Agencies</b>		
UN Women	Gender mainstreaming, women's empowerment including political empowerment. Gender budgeting, GBV, capacity building of the government. Works on both policy and project levels.	P. O. Box 51359, Jerusalem
UNFPA	RH, sexual health, GBV. Empowerment of women and youth. Works on both policy and project levels.	P.O. Box 67149, Jerusalem 91517
UNICEF	Empowerment and protection of children and youth. Gender is mainstreamed in projects and plans. Works on both policy and project levels.	P. O. Box 25141, Jerusalem
UNDP	Human development, poverty reduction, strengthening rule of law, infrastructure. Works on both policy and project levels.	4A, Ya'kubi Street, P.O.Box: 51359 Jerusalem
UNRWA	Supporting Palestinian Refugees. Provided services include education, health, basic needs and livelihood improvement.	Gamal Abdul Nasser Street, Gaza City / Sheikh Jarrah, East Jerusalem
Palestinian Women's Research and Documentation Centre, UNESCO	Research as well as collection of data and information on gender issues.	Info@pwrdc.ps/z.kamal@unesco.org
OCHA	Coordination amongst international and donor agencies in the areas of emergency and humanitarian aid. Information management in the areas.	MAC House 7 St. George Street. P.O. Box 38712, East Jerusalem
LACS (Local Aid Coordination Secretariat)	Coordination amongst international and donor agencies.	Al-Rimawi Building, Al-Ersal Street, Al-Masayef, Ramallah, West Bank secretariat@lacs.ps
<b>Private Sector and Civil Society Organizations</b>		
Business Women Forum – Palestine	Organization of businesswomen. Capacity building of women micro entrepreneurs including marketing and legal support.	2 <sup>nd</sup> Floor, Al-Fare' Building, Al-Bireh, West Bank

Name of Organization	Activities	Contact
PNGO (Palestinian NGOs' Network)	Umbrella organization of Palestinian NGOs. Networking of Palestinian NGOs, advocacy, capacity building of NGO staff.	Jerusalem Main Street Beside Al Swees Station, Ramallah , West Bank
Aisha Association for Women & Child Protection	Various gender-support activities in Gaza, including livelihood improvement, legal and psychological support, and awareness raising.	Gaza Seaport, Gaza City, Gaza Strip
ASALA (The Palestinian Businesswomen's Association)	Support for women micro entrepreneurs; microfinance services, capacity building.	Issa Suleiman Building, 2nd Floor, Al Mubadeen St., Al Bireh, West Bank
PWWSD (Palestinian Working Woman Society for Development)	Economic and political empowerment of women.	Alanbia Street, 3 <sup>rd</sup> Floor, Real Estate Company Building, Ramallah, West Bank
WATC (Women's Affairs Technical Committee)	A leader organization of women's movement. Awareness raising, advocacy.	P.O.Box 2197, Ramallah, West Bank / Awad Center, 2nd Floor, Radio Street , Ramallah, West Bank.
WCLAC (Women's Centre for Legal Aid and Counselling)	Research and analysis on gender issues. Advocacy.	23 Wadi'a Shatarah Street, Batn Al-Hawa, Ramallah, West Bank

## 8 Technical Terms and Indicators

### Technical Terms

Term	Explanation
Empowerment	To be empowered is for an individual to have control over his/her own life. To be able to lead his/her life based on his/her values, to aim for what he/she wants, to be independent to make decision(s) either individually or collectively.
Gender	Gender refers to male-female differentiation, but is not about biology (which is referred to as sex). Rather, gender is about masculinity/femininity formed and developed socially and culturally.
Gender budget	To analyse the budget of state/local administration/ministry from the point of view of gender equality, and accordingly, to revise policies/programmes and/or to redistribute the budget so that the policy/programme would have an equal and fair effect on both men and women.
Gender mainstreaming	Based on the understanding that each and every policy, programme and measure affects men and women differently, gender mainstreaming is a process in which issues, needs and impacts of men and women are made clear in each stage of the policy/programme/measure. This being so, gender mainstreaming would work as a means to achieve gender equality.
National Machinery	Central policy-coordinating unit in the government in relation to gender equality and women's empowerment. The national machinery works in order to mainstream gender government-wide by supporting various government actors and institutions to strengthen their gender consideration and to promote gender equality in all policy areas.
Reproductive Health (RH)	RH refers to physical, mental and social health related to reproductive functions and systems. In good RH, a person is able to have a satisfying and safe sex life, has the capacity to reproduce, and freedom to decide if, when, and how often to do so. The concept encompasses access to not only health and medical services, but also sexual/reproductive education and protection and prevention services of sexually transmitted diseases including HIV/AIDS.

### Indicators

Indicator	Definition
Gender Development Index (GDI)	GDI measures disparities in HDI (see below) by gender, as a ratio of HDI values estimated separately for women and men. The closer the ratio is to 1, the smaller the gap between women and men.
Gender Empowerment Measure (GEM)	A measure to examine whether women and men are actively participating in economic and political life and participating in decision making. By considering gender gaps in political

Indicator	Definition
	representation, in professional and management positions in the economy, as well as gender gaps in incomes, it seeks to evaluate relative female representation in economic and political power.
Gender Inequality Index (GII)	Based on the lessons learned from GDI and GEM which are indices that measure gender situation, the new index GII measures gender inequalities utilizing data from three areas: RH, empowerment, and economic status.
Gini Index	Aggregated numerical measures of income inequality ranging from 0.00 to 1.00. A Gini index of zero represents absolute equality, while an index of 1.00 implies absolute inequality. A well-used indicator to express income disparity.
Gross Enrolment Rate	The total number of students/pupils who enroll in a given level of education regardless of age, expressed as a percentage of the population in the theoretical age group for that level of education.
Human Development Index (HDI)	A well-used index created by the UNDP, HDI is a summary measure of the average achievement in key dimensions of human development: (1) a long and healthy life, assessed by life expectancy at birth; (2) being knowledgeable, by mean of years of schooling for adults (aged 25+) and expected years of schooling for children of school entering age; and (3) having a decent standard of living, assessed by GNI per capita.
Infant Mortality Rate	Probability of a child born in a specific year or period dying before reaching the age of one. It is a probability of death expressed as the rate per 1,000 live births.
Labour Force Participation Rate	The proportion of the population aged 15 and older that is economically active (either employed or unemployed); all people who supply labour for the production of goods and services during a specified period.
Maternal Mortality Ratio	The number of women who die from pregnancy-related causes while pregnant or within 42 days of pregnancy termination per 100,000 live births.
Net Enrolment Rate	The total number of students/pupils in a theoretical age group who are enrolled, expressed as a percentage of the same population.
Total Fertility Rate (TFR)	The number of children that would be born to each woman if she were to live to the end of her child-bearing years and bear children at each age in accordance with prevailing age-specific fertility rates in a given year/period, for a given country, territory or geographical area.
Under-5 Mortality Rate	Probability of a child born in a specific year or period dying before reaching the age of 5. It is a probability of death expressed as rate per 1,000 live births.
Unemployment Rate	Definition and presentation of unemployment vary from country to country. ILO defines unemployed persons as all persons above a specified age who during the reference period were without work, currently available for work, and seeking work.

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