5.4 Off-site Infrastructure Development

As the project site has not yet been selected, it is not possible to discuss the off-site infrastructure issue accurately at the moment. The Study roughly considers overall engineering requirements (design parameters) and summarizes peripheral information for planning off-site infrastructure (road network, water supply, and so forth), assuming the site shall be in the southern or eastern part of Jericho city.

5.4.1 Road network

(1) Road Network in the JRRV

The road network provides the only transportation mode in the West Bank. The existing roads fall into three categories: main, regional and local roads. According to *Jericho Regional Development Study Project* (August, 2006), the total length of the road network in the West Bank is about 4,456 km.

The West Bank is connected to outside world through a limited number of border crossings. All the border-crossing points into the West Bank are controlled by the Israeli authorities. This control restricts the international movement of Palestinian people and goods.

The existing main and regional road network in the JRRV is presented in Figure 5.4.1. Route 90, a north-south Israeli artery in the eastern part of the West Bank, totally falls in Area C de facto. In Tubas areas, Hamra checkpoint (Route 57) is reportedly one of the main obstacles[15] against the smooth movement between Tubas City and the south-eastern part of the West Bank. As Jericho city is located no more than five (5) km from the Allenby Bridge, access from the city to Jordan is geographically easy.

[15] According to the Palestinian Federation of Industries (PFI), the closure system in the West Bank comprises 540 physical obstacles to control and restrict the traffic of Palestinian vehicles. The types of obstacles include permanent and partially manned checkpoints, roadblocks (consisting of rows of 1-meter concrete blocks), metal gates, earth mounds, earth walls (a long series of earth mounds), trenches, road barriers and permit restrictions.

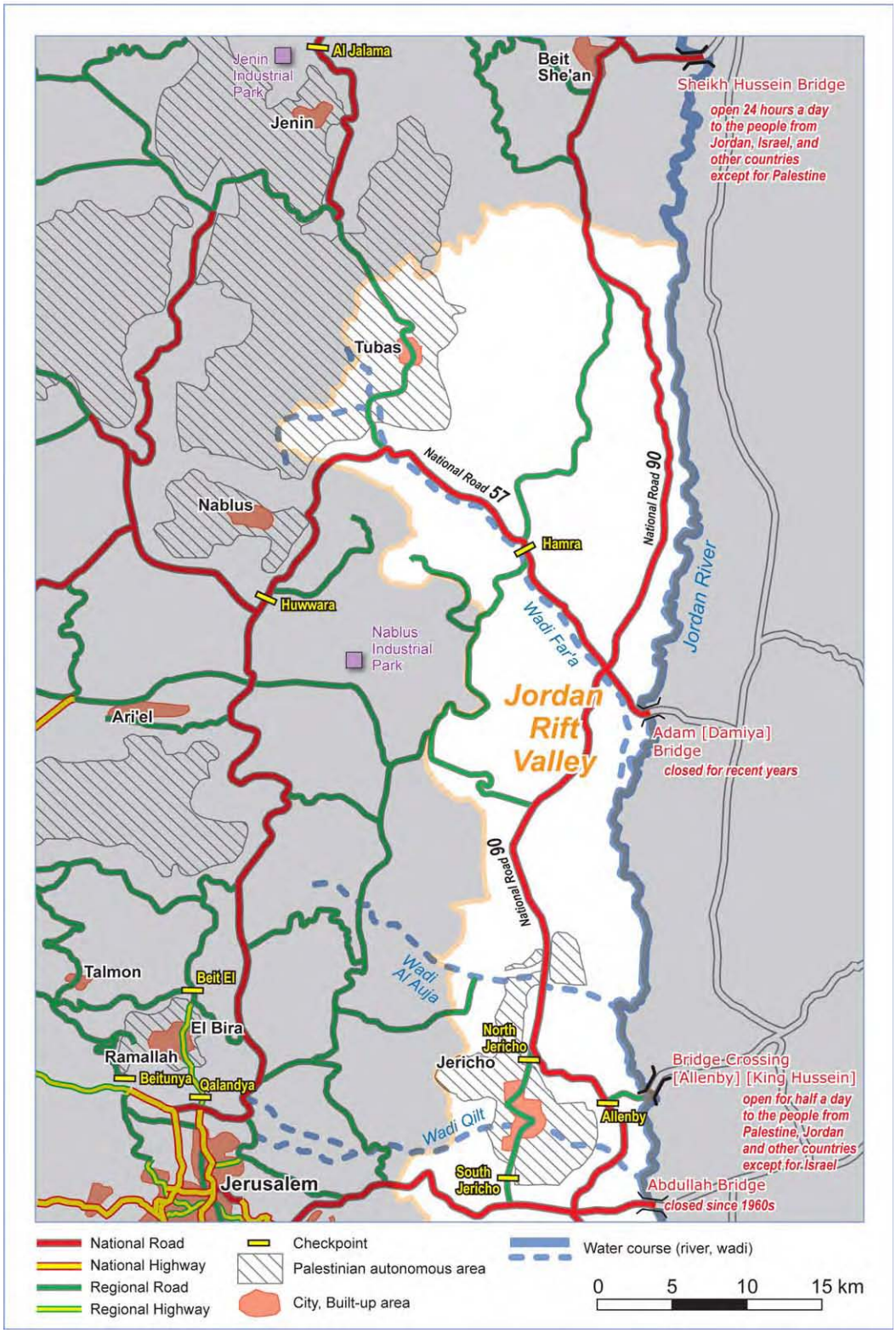

Figure 5.4.1 Road Network in JRRV

(2) Road Conditions in the Southern Part of Jericho City

Currently, there are two access roads to Jericho city from outside through checkpoints. They are Route 90 and Route 449. The other access roads are closed with roadblocks. The inner main roads in Jericho city are mostly paved roads with two (2) or four (4) lanes.

There is a new road construction plan in the southern part of Jericho city, which has been proposed to the central government and waiting for funding. This road will connect the southern entrance of Jericho city directly to the southern urban fringe (to the direction for the existing iron factory), without passing through the city center. The total length of the planned section is 3.7 km with the construction cost estimate of about US$1,886,000.

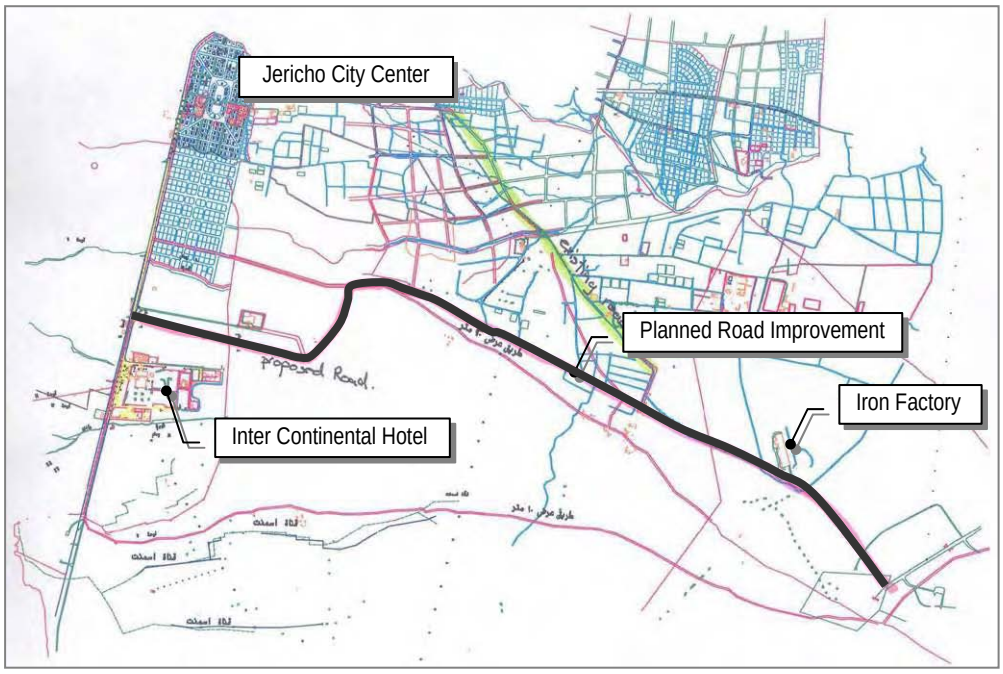

Figure 5.4.2 Planned Road Improvement in the Jericho City

(3) Preparatory Discussion on Off-site Road Development

Assuming that the site is selected in the southern part of the Jericho city, the JICA Study Team roughly but in a characteristic manner simulate two locations in order to identify technical issues presumable at the moment for the development.

Two locations, “X” and “Y”, are tentatively set at the both ends of the southern border line of the Jericho city as shown in Figure 5.4.3. Site “X” is located in the west close to the north-south regional road No. 449, while Site “Y” is in the east close to Route 90. Figure 5.4.4 illustrates conceivable technical issues (constraints/difficulties/challenges) in assuring road accessibility while paying attention to the Israeli military and security code:

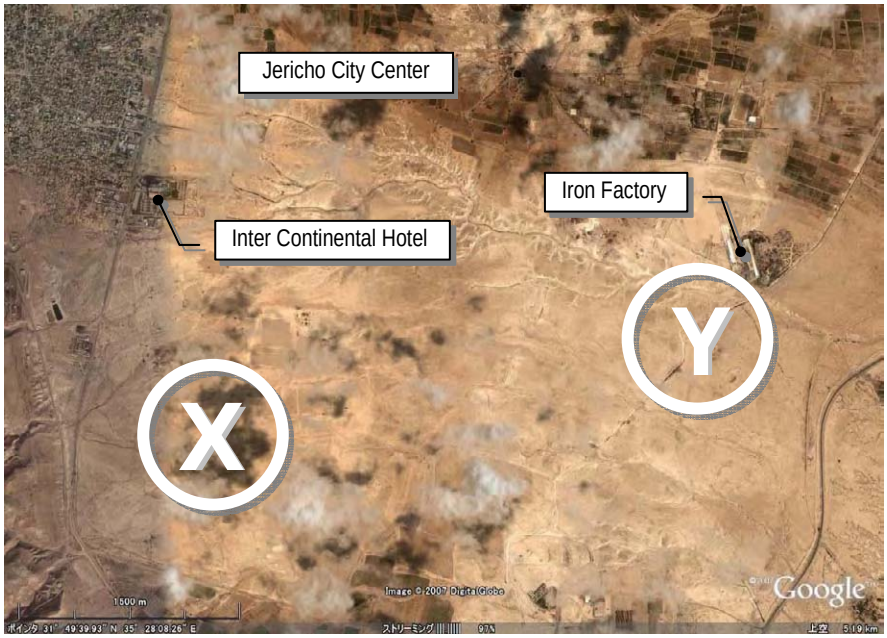

Figure 5.4.3 Site Simulation in the Southern Part of Jericho City

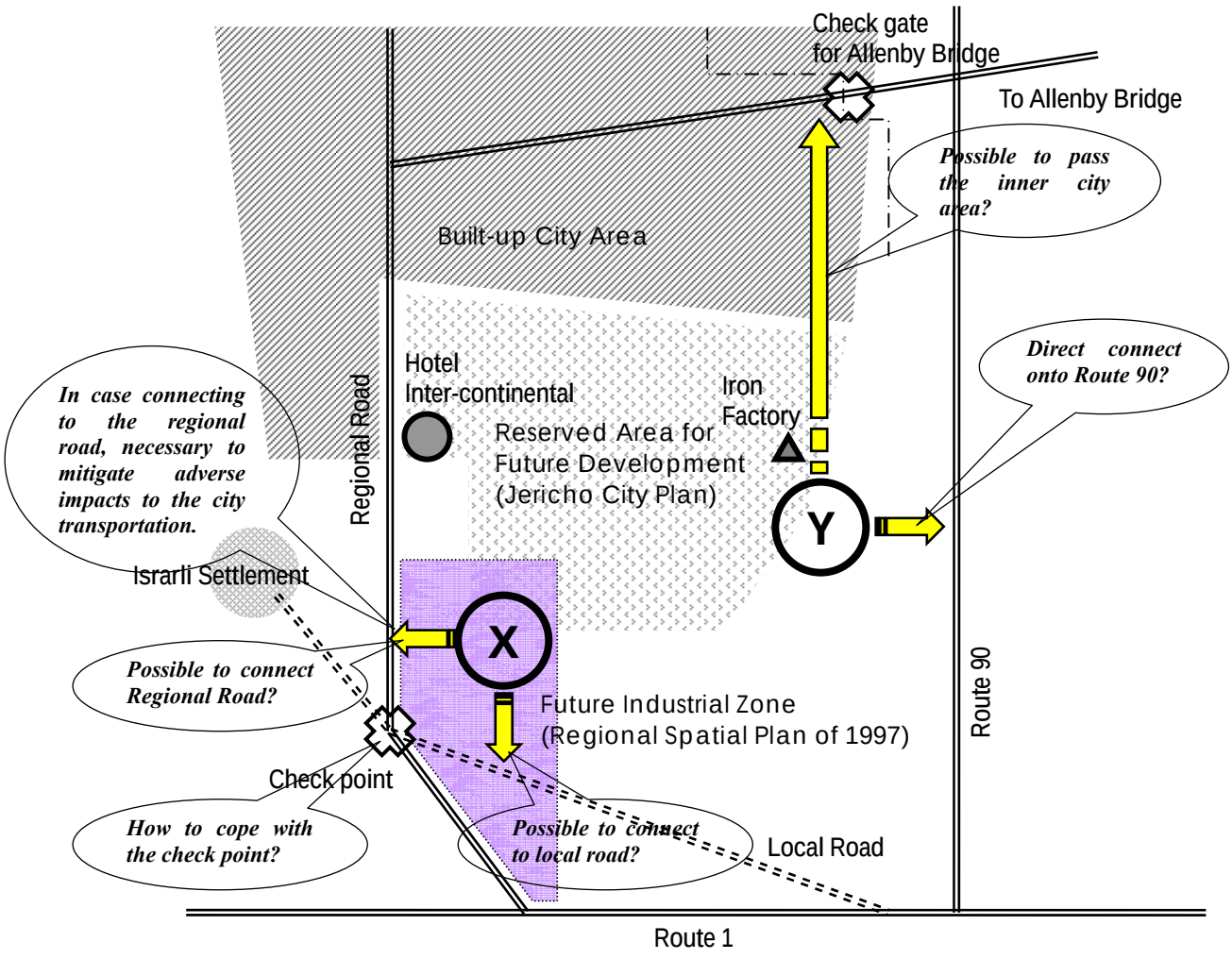

Figure 5.4.4 Conceivable Technical Issues for Site X and Y

Passing check-point and crossing Route 90 are considered to be the particular issues of concern here, which is likely to call for special technical countermeasures in accordance with the political situation. If the both parties (Palestine and Israel) shall come to a mutual trust, technical measures would not be required so much, resulting in no considerable extra cost imposed. On the contrary, if their mutual trust would be less, a higher level of technical measures may need to be taken, causing much extra cost. The cost variance between the cases (with and without practical partnership) could be a variable following the effect of bilateral partnership and trust.

In addition, in developing an industrial area near an urban area, it is better to construct new road which would specifically serve as an industrial road so as not to cause heavy traffic in the existing urban roads. It is also possible to cope with the increase of industrial traffic by improving the urban road section where considerable industrial traffic is generated in case no industrial road is constructed, but it would depend on the extent of increase whether this measure could work out or not. In both cases, a sizable amount of cost would be imposed that should be weighed against the expected development effect along the new industrial road and the spillover effect on the urban improvement.

5.4.2 Water Supply

(1) Water Supply in the JRRV

The total domestic and industrial (except agriculture) water supply in the West Bank in 2002 was estimated to be 62.8 MCM[16]. In general, urban areas have access to Palestine water resources, and small villages depend on the Israeli wells managed by "*Mekorot*", an Israeli water supply company. Table 5.4.1 shows the actual status of the water supply in the JRRV.

Table 5.4.1 Current Water Supply Conditions in Jericho Communities

Communities		Resource	Network	Population	Consumption (m^3/yr)	per capita (lpcd) *1
Jericho	'Ein as Sultan Camp	Spring	O	1,916		207
	Jericho	Spring	O	19,213		
	Al Jiftlik	Mekorot		4,141	63,860	71
	Fasayil	Mekorot		847	34,150	110
	Al 'Auja	Mekorot		3,774	111,530	84
	Al Nuwei'ma	Mekorot		1,096	32	0
	Aqbat Jabar Camp	Mekorot		5,970	340,710	156
	'Ein ad Duyuk al Foqa	Spring	O	766	50,000	82
	'Ein al Duyuk al Tahta	Spring	O	910		
	Al Nabi Musa	Mekorot		54		20
	Total			38,687		

Source: Water Supply for Domestic and Industrial, PWA, 2003 **1: Including water losses.*

[16] *West Bank and Gaza, Infrastructure Assessment,* World Bank, December 2004

(2) Water Supply in Jericho City

According to Jericho Municipality and the JICA Study Team for *the Feasibility Study on Water Resources Development and Management in JRRV*, the existing water network consists of main lines with a length of 45km, and individual connection lines to the households with a length of 45km. The main water resource is Ein–El Sultan spring with a capacity of 650 m^3/hour.

Based on the agreement between the farmers and Jericho Municipality, 42% of water is currently used for the households (including other civil facilities) and 58% for irrigation. The water quality is good for drinking purpose, but is subjected to a potential risk of pollution by seepage of untreated wastewater.

Table 5.4.2 represents the current water balance between supply and demand in the urban area of Jericho City. The supply barely meets the demand even counting the Well No.1 which will be rehabilitated soon.

Table 5.4.2 Current Water Balance in the Urban Area of Jericho City

Domestic Water Supply (Jericho Urban Area)					
Spring/ Well		Water Rights	Supply/ hour	Supply/ day	Supply/ year
			m3	m3	MCM
Ein El Sultan	Total		650	15,600	5.69
	1) Agricultural	58.0%		9,048	3.30
	2) Domestic	42.0%		6,552	2.39
Well No.1 *To be Rehabilitated			70	1,680	0.61
Total * Including Well No.1	0		70	8,232	3.00

Domestic Water Demand (Jericho Urban Area)					
	population	Demand/ day/ capita	Demand/ day	Demand/ day	Demand/ year
	(2005)	liters	liters	m3	MCM
Total	42,268	350	13,170,000	13,170	4.81
Urban	19,783	350	6,924,050	6,924	2.53
Rural	14,366	350	5,028,100	5,028	1.84
Camps	8,119	150	1,217,850	1,218	0.44
Urban + Camps	27,902			8,142	2.97

BALANCE = (SUPPLY) - (DEMAND) =	0.03

Data Source: JICA Study Team for the Feasibility Study on Water Resources Development and Management in the Jordan River Rift Valley

Calculation: JICA Study Team for the Feasibility Study on Agro-industrial Park Development In the Jordan River Rift Valley (Phase I)

The water demand of the agro-industrial park (Phase I) is estimated to be 0.45 MCM/year as shown in Table 5.4.3. Judging from the actual water capacity of Ein El Sultan and Well No.1, it is impossible to supply sufficient water to the agro-industrial park from these (3) water resources. Apart from these resources, there are three springs in the north-west of Jericho City as shown in Table 5.4.3. Currently, most of the water from these springs is used for irrigation. But, assuming that water saving is widely spread among the farmers, and that 7% of the existing water at *Wadi Qilt*, the nearest one to the agro-industrial park, can be used for the Industrial Park, the minimum water demand of Phase I will be secured.

Table 5.4.3 Simulation of Water Reallocation to the Park

Water Supply from Other Potential Resources * Actually water from these resources are mostly used for irrigation.					
Spring	Supply/ hour	Supply/ day	Supply/ year	Water Rights for Industry (Hyporhesis)	Supply for Industry/ year
	m3	m3	MCM		MCM
Dyuk	563	13,512	4.93	0%	0.00
Nuweimah	301	7,224	2.64	0%	0.00
Upper Wadi Qilt	759	18,216	6.65	7%	0.47
TOTAL	1,623	38,952	14.22		0.47

Water Demand of Industrial Park - Phase (I)					
		Demand/ ha/ day	Net Area	Demand/ day	Demand/ year
		m3	ha	m3	MCM
Industrial Area		48	25	1,200	0.44
Total (rounded)				1,200	0.45

BALANCE = (SUPPLY) - (DEMAND) = 0.02

The location of all the water resources mentioned above is presented in Figure 5.4.5.

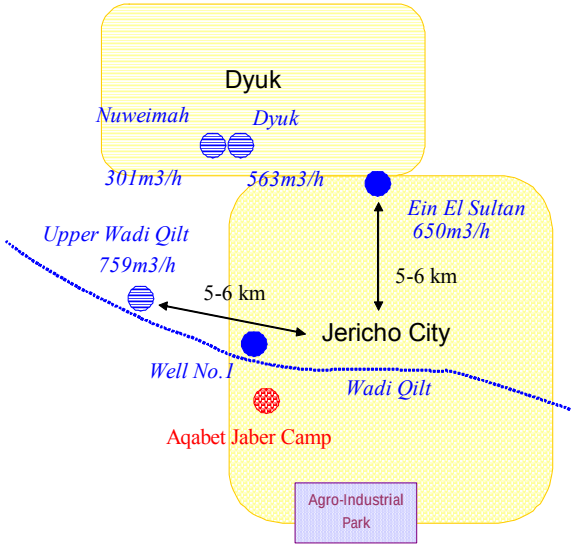

Figure 5.4.5 Main Water Resources in and around Jericho City

5.4.3 Other Infrastructure Facilities

(1) Electricity Supply

Palestinian Energy and Natural Resources Authority (PENRA) is responsible for policy, sector development, regulation and generation, and transmission. According to PENRA, the West Bank is entirely dependent on imported electricity supplies. The current maximum capacity of electricity supply to the West Bank is about 550MVA, of which 30% is supplied directly by IEC, and 70% indirectly by IEC through *Jerusalem District Electricity Company* (JDECO).

Power supply in the JRRV is not stable currently due to insufficient capacity of the facilities. In order to overcome this situation, PNA is trying to increase the supply capacity. The following is the information about improvement in power supply in the West Bank.

- At present, Jordan, Egypt, Syria and Libya are electrically interconnected[17]. The power supply due to the interconnection project is estimated to be 300 MW. Palestine is currently an observer of this program and is going to be a full member by the end of year (2007). This electrical interconnection project will give a positive impact on the West Bank by increasing the capacity of power supply. The feasibility study of this electrical interconnection project will be finalized by end of February 2008.
- Interconnection with Jordan: According to JDECO, PNA and Jordan has agreed on connecting the Palestinian power grid to the Jordanian grid with a 33kV transmission line through King Abdullah Bridge, which will be completed by the end of 2007. The capacity will be 20MW. A transformer substation will be constructed in the south of the Jericho City and connected to the existing network.

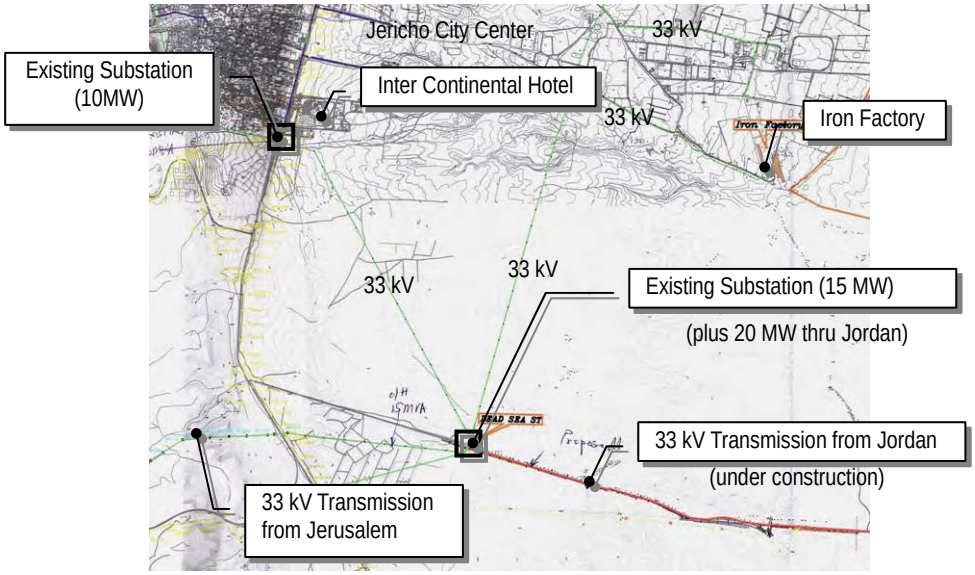

Figure 5.4.6 Power Transmission Grid in the South of Jericho City

[17] Seven (7) Countries Electric Interconnection Project (Egypt, Iraq, Jordan, Lebanon, Libya, Syria, and Turkey):

The current and future power supply in the West Bank is as shown in Table 5.4.4.

Table 5.4.4 Current and Future Power Supply in the West Bank

Year	Status	Capacity	Power Source
2007	Existing	500 MW	IEC
2008	Decided	20 MW	From Jordan
2012	Option (High Senario)	250 MW	New Israeli Power Plant or from Jordan
Total Supply in 2012		770 MW	

Source: Energy Sector Review Report, World Bank, May 2007

(2) Wastewater Collection/ Treatment

Wastewater is currently untreated or partially treated almost everywhere in Palestine. Existing reports related to the wastewater sector in Palestine says that most of the existing treatment plants are overloaded, poorly equipped and badly maintained, which poses a major threat to plant workers, farmers, and consumers. According to the PWA, approximately 60% of the houses in the urban communities are connected to sewerage systems, but some large cities/towns have no treatment systems. In rural areas, no sewerage systems exist and wastewater is collected in cesspits or septic tanks.

There is no wastewater collection system at present in Jericho City. All sewage from residential and public buildings in the area is drained to cesspits.

According to Jericho Municipality, following a feasibility study, drawings and tender documents were prepared for a sewage system in Jericho City in 1999. However, for lack of funds, it has not been implemented yet since then.

The sewage network plan for Jericho City consists of the following components[18]:

- (a) Sewerage Collector pipelines (approximately 45 km)
- (b) Irrigation pipeline network (approximately 15 km)
- (c) Sewerage Treatment Plant, Building Structure
- (d) Sewerage Treatment Plant, Electro-mechanical Components

The capacity of the planned sewage network is as shown in Table 5.4.5.

Table 5.4.5 Capacity of the Planned Sewage Network Plan for Jericho City

	Daily Average	Daily Maximum	Hourly Maximum
Sewerage Treatment Plant	4,000 m^3/day	5,000 m^3/day	10,000 m^3/day

Source: Jericho Municipality (Engineering Department)

[18] This project was proposed as a grant-aid-project to Japanese government in 2005.

(3) Solid Waste Collection

JCspd is an official organization established in 2005 to provide solid waste management in the JRRV and started its service in January 2007. Its service area covers 17 Local Authorities (LA) that are located in JRRV (Table 5.4.6). JCspd collects waste on daily basis (except Fridays) and use four (4) landfills: Jericho, Ojah, Tubas and Tovlan. JCspd made agreements with Jericho municipality and Ojah Council in terms of common use of Jericho and Ojah dumping sites.

Table 5.4.6 Local Councils of JCspd for SWM in JJRRV

Name of LA	Governorate	Name of LA	Governorate
1. Jericho	Jericho	9. Ein Al-Bidah	Tubas
2. Al-New'meh & Edyuk Al-Foqa	Jericho	10. Kardalah	Tubas
3. Al-Ojah	Jericho	11. Bardalah	Tubas
4. Fasayel	Jericho	12. Froosh Beit Dajan	Nablus
5. Al-Jiftlik	Jericho	13. Ein Shibli	Nablus
6. Zbidat	Jericho	14. Nawaji	Nablus
7. Marj Al-Ghazal	Jericho	15. Beit Hasan	Nablus
8. Marj Na'jeh	Jericho	16. Al-Nassaryyah	Nablus
		17. Al-Aqrabanyyah	Nablus

Source: Basic Plan of JCspd prepared by Palestinian counterparts and JICA Expert Team

JCspd deals with only domestic and commercial/institutional waste in 2007, as shown in Table 5.4.7.

Table 5.4.7 Target Waste of JCspd for 2007

Category	Generation (ton)	Service area	Collection and transportation	Disposal
Domestic waste	50/day	All target areas	JCspd	Dumping at landfill site
Commercial waste	5/day	Jericho	JCspd	Dumping at landfill site
Agricultural waste	1,200/year	To be studied		
Hospital waste	0.1	Hospitals , Clinics	Ministry of Health	-
Night soil (sewerage)	40-50/day	-	Private person, with charges for collection	Dumping at landfill site (tentative)

Source: Basic Plan of JCspd prepared by Palestinian counterparts and JICA Expert Team

The Jericho dumping site has been improved since the middle of January 2007, with the technical assistance provided by JICA[19], which may prolong the life of the existing dumping site. Extension of the existing dumping site is currently being planned by Jericho municipality.

[19] *The Project for Capacity Development on Solid Waste Management in Jericho and Jordan River Rift Valley*.

5.5 Socio-economic Impact

The agro-industrial park development project is expected to bring about significant socio-economic impact on the regional economy. It may be too early to discuss the precise economic benefit of the project since a detail development plan has not been formulated at this *Pre-feasibility* stage. However a preliminary estimation of the socio-economic impact has been made focusing on the two major socio-economic benefits, i.e., creation of employment and promotion of export. Detailed evaluation including the calculation of economic and financial IRR (Internal Rate of Return) will be made in the Second Phase of the Feasibility Study.

5.5.1 Definition

Socio-economic impact is theoretically defined as '*Flow-effects*' and '*Stock-effects*'. *Flow-effects* are socio-economic impacts resulting from a project which would activate the regional economy during the construction period[20]. On the other hand, *Stock-effects* are brought about by the use of project facilities after the project completion. Since *Flow-effects* provide transient economic impact only, it is more important to look into *Stock-effects*. *Stock-effects* can be further classified into *direct-effects* and *indirect-effects*. The following are detailed descriptions of *direct-effects* and *indirect-effects*.

(1) Direct-effects

Creation of the additional employment

Additional employment creation through the agro-industrial park establishment is considered as the main economic benefit of the project. This *direct-effect* could be calculated on the basis of the increase of wages to be earned by the additional employees.

Value-added for promotion of export

It is expected that the Agro-industrial Park would raise the value-added of the Palestinian products, which would lead to expansion of export. In case of such export-oriented industrial estates, it is expected that the industrial clusters would achieve the human resource development by the accumulation of knowledge and reduction of the production costs. It is expected therefore that the industrial park would create significant product output for export.

(2) Indirect-effects

Trickle-down effects to the regional economy

The Project will also activate related industries in the region. Creation of additional

[20] The flow-effects are generally estimated by using the regional *input-output tables* and *multiplier effect.* In case of Japan, the latest short-term national macro-economic accounting model (2006) indicates a public investment of 1% of nominal GDP lifts up the nominal GDP by 1.19 times for the 1st year and 1.69 times for 2nd year. In case of Palestine, due to the lack of information and political risks, it is difficult to estimate the flow-effects precisely at this moment.

employment for those industries in the surrounding areas is also expected as an *indirect -effect*.

Not only the direct premises, but also the local economy as a whole can enjoy economic benefit resulting from the project. For instance, access road development can save time and cost for both freight and passengers.

Improvement of the living standards

It is also expected as an indirect effect of the project that the living standards of the local communities would improve. They would use the project facilities, such as roads, water supply and sewage, schools and hospitals, etc. In the further study stage, detailed calculation of the effects should be considered after the project site is decided.

Inflow of population

An additional inflow of population from the other areas is expected as an *indirect-effect*. The expected socio-economic benefits brought about by the population inflow are increase of the economic activities in the regional economy. In the further study stage, this effect should be estimated.

A schematic image of the direct-effects and indirect-effects for the project is shown below.

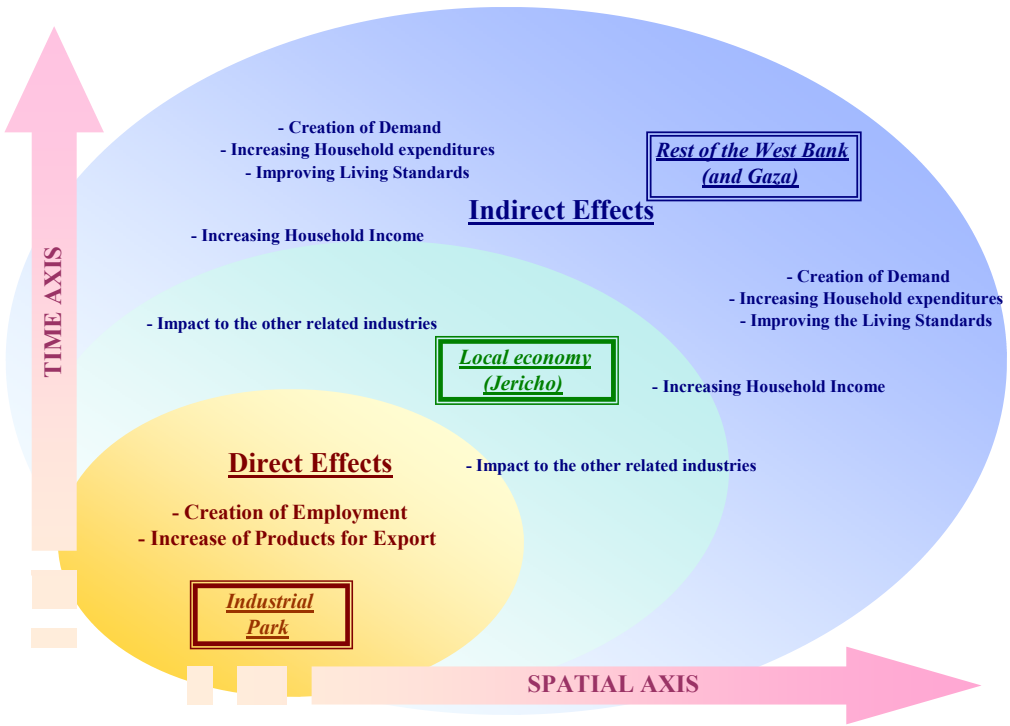

Figure 5.5.1: Schematic Image of the Socio-economic Impact

5.5.2 Preliminary Evaluation of Major Direct Effects

(1) Feature of the Agro-industrial Park

- Land scale : Net scale 25 ha/ Gross scale 50 ha
- Number of companies : 50 companies (e.g. 40 for food processing, beverage and olive products companies, and 10 for pharmaceutical and bio-technical industries)
- Occupancy rate : maximum at 90% at the 3rd year (1st year 50%, 2nd year 80% and 3rd year and after consistent to 90%)
- Evaluation period : 20 years

(2) Creation of Employment

Referring to the existing feasibility study reports regarding industrial estate development project[21], the socio-economic impact by the employment creation is evaluated as follows;

- Number of the additional direct employment: 2,700[22]
- Number of the additional indirect employment: 4,000[23]
- Average wage per employee: US$5,600 per annum[24]
- Economic benefit of the employment creation: About US$37 million per annum[25]

The creation of employment by the agro-industrial park is anticipated to improve the employment environment in the local economy. The projected number of the additional direct employment created by the project is equivalent to more than quarter of the current employment in Jericho City, and furthermore the entire additional employment including the indirect employment would be equivalent to about 65%[26].

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[21] *Jenin Industrial Estate Feasibility Study Final Report.* KfW, June 1998
Nablus Industrial Estate Feasibility Study Final Report, UNCTAD, July 1998

[22] The number is estimated by *the job creation per area (ha)* coefficient. The *Jenin Industrial Estate F/S report (1998)* reported that the job creation per area (ha) of the food & beverage sector was 155 employments per ha from their survey result. The Study Team also employed *155 employments per ha* for this study. Thus the total numbers of the employees for the industrial park is calculated by *25ha (Net land scale) x 155 (no. of employments) x 90% (occupancy rate)*.
Finally, it is necessary to extract only the 'additional' employment from the total employment number. The Study Team projected that 80% of the total employment would be additionally created by the project (it means the rest 20% stands for the relocated employees). *The Nablus Industrial Estate F/S (1998)* has also employed the same projection.

[23] Both the above two F/S reports employed the same multiplier to calculate the indirect employment. The Study Team has also referred the same multiplier of *1.5* for the estimation of indirect employment.

[24] PCBS announced the average daily wage of an employee in the West Bank as of the first quarter (Jan.-Mar.) 2007 was NIS 90.2, almost equivalent to US$20, in the. *Labour Force Survey (January-March, 2007) Round (Q1/2007).* The survey also mentioned the average working days per month for the manufacturing sector in the West Bank was 22.2 days.

[25] This figure includes the indirect employment also. The estimated economic benefit of the additional direct employment by the project is US$15 million per annum, at the full-scale operation. (after 2015).

[26] The current employment number in Jericho City is 10,400. Whereas the current employment in the West Bank is 495,700, and the additional employment created by the project is equivalent to 1.4% of that number. The data is as of the first quarter of 2007.

It is estimated that the number of unemployment in Palestine in 2015, under full-scale operation of the industrial park, will be about 170,000, and the unemployment rate is about 14.3%. The employment created by the project itself may reduce the unemployment rate by 0.6 point, down to 13.7%[27].

(3) Promotion of Export

Export promotion impact has been estimated under the following conditions;

- 80 % of the goods produced in the agro-industrial park are considered to be exported.
- Labor productivity[28] of factories in the industrial park is considered to increase by 1.5 times for a lower scenario and 2.0 times for a higher scenario, by 20th years.

According to the calculation, the total output for export produced in the industrial park will be US$2,200 million (lower scenario) to above US$2,600 million (higher scenario) for the 20-years evaluation periods. The average annual export promotion is accordingly US$110 million to US$130 million[29], respectively.

In order to grasp how the above output promotes the Palestine's export, the Study Team roughly projected the future export scenario of Palestine on the basis of the target figure in the medium term development plan and also the past transitional performance of the export. In accordance with the above projected scenario of the export growth, the contribution of the industrial park to the export growth portion of the whole Palestine will reach more than 20% after the Park is in full-scale operation. During the whole project period, its share to the total export growth of Palestine is expected to be around 15% for lower scenario, whereas around 20% for a higher scenario.

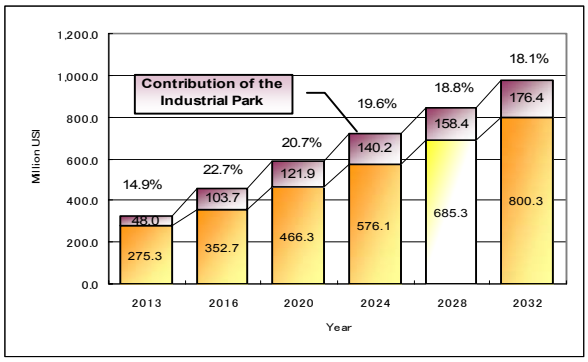

Figure 5.5.2
Expected Contribution of the Export Promotion by the Project to the Entire Regional Export Growth (Higher Scenario)

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[27] PCBS reported that the latest number of unemployment and the unemployment rate of Palestine were 192.1 thousand and 21.6%, respectively. (*Labour Force Survey (January-March, 2007) Round (Q1/2007))* In accordance with the latest trend, the Study Team projected that the number of unemployment and the total domestic labor force in Palestine in 2015 would be at around 165,000 (lower case) to 175,000 (higher case) and 1.2 million, respectively.

[28] According to the PCBS report, the labor productivity of the food & beverage sector was calculated at USD34,000, whereas the one of pharmaceutical sector was USD9,400 in 2005. Those are the base levels for the productivity.

[29] As mentioned in the foregoing section, the number of total employees for the industrial park is calculated at 3,400 people. Ninety five percent of the total employees is considered to work for the food & beverage and olive products, whereas the rest five percent was for the pharmaceutical products. The total output is calculated by *the no. of employees x projected productivity for each the sector and incremental scenario (1.5times or twice) x 80% (export portion)*.
Finally, in order to calculate the opportunity cost, the value of export promotion by 'without case' is subtracted from the total output above mentioned. The calculation is done by the following formula;
Existing employees (=Total direct employees – additional direct employees) x productivity (base level) x conversion factor (15%: since at most 10 to 15% of the total food related products are currently exported.)

5.6 Issues for Implementation

5.6.1 Implementation Schedule

After this Phase I of Feasibility Study, the 2nd Technical Meeting of the Four-Party Consultative Unit is scheduled to be held in October 2007. Phase II of Feasibility Study could commence after the site is selected and would last till August 2008. Phase II will cover more detailed engineering aspects than Phase I, in which i) all the necessary infrastructure facilities would be planned, ii) accurate financial and economic analysis shall be made, and iii) O&M formation and marketing strategies would be formulated. Environmental Impact Assessment[30] (EIA) shall also be conducted by the responsible authority in parallel with basic design of the Park meeting the actual site conditions.

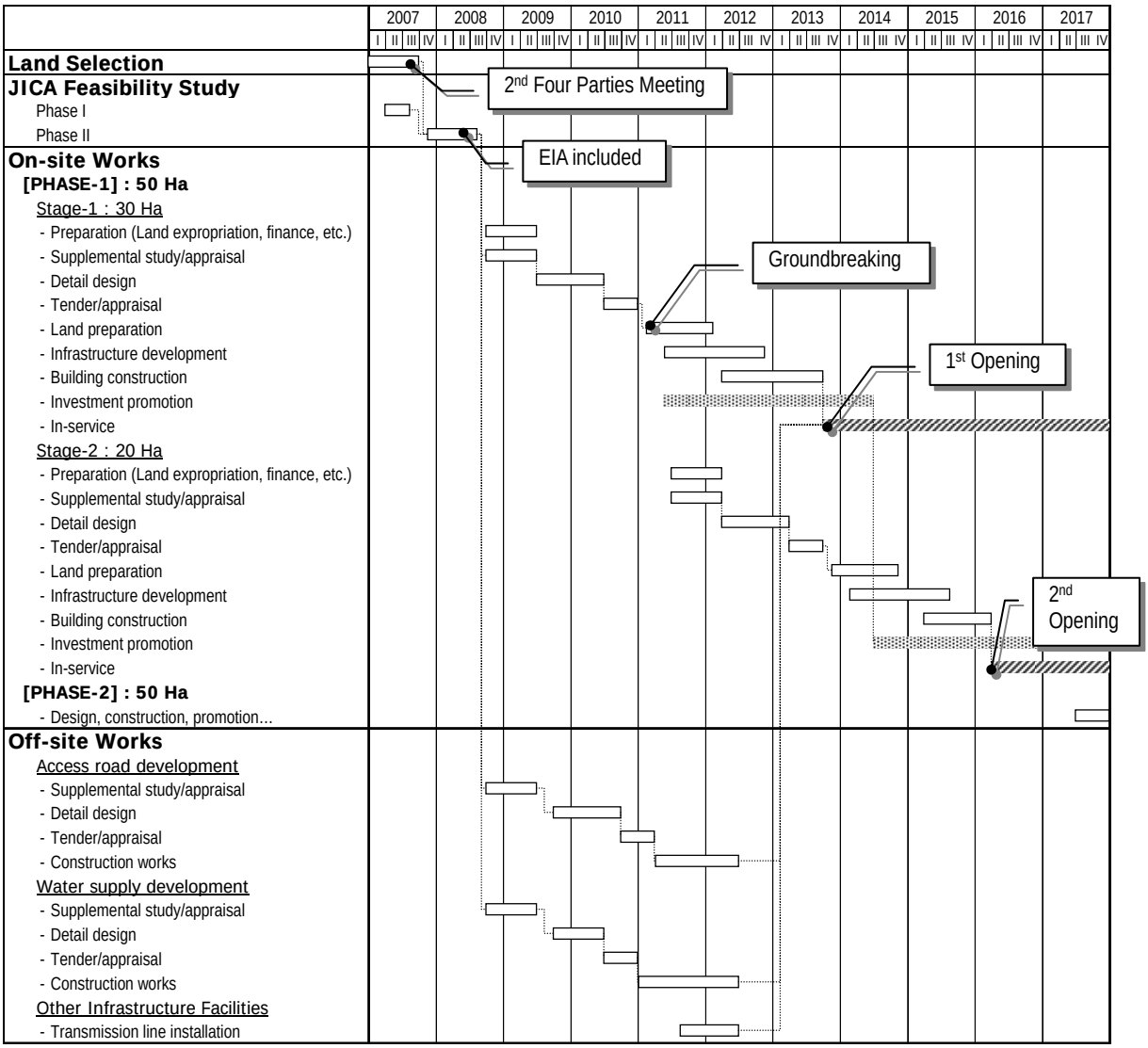


Figure 5.6.1 Project Implementation Schedule (tentative)

[30] See Technical Note II: Environmental and Social Consideration,

Figure 5.6.1 illustrates an implementation schedule (tentative), in which major project activities are shown, including critical milestones for the staged opening of the Park. The first opening is scheduled in the end of 2013 (three years after the groundbreaking in 2011) and the second opening (as grand opening of Phase One) would come in 2016. After the successful progress, hopefully, Phase Two shall launch from 2017. Such a development scenario could be set even tentatively.

As mentioned in the first page of this Chapter, the global economy may not allow us to spend much time for taking actions, thus it is strongly recommended to the parties and authorities concerned to make prompt and appropriate decisions, even for the site selection.

5.6.2 Role-sharing between Public and Private Sector

In order for the Industrial Park to be attractive, operational and sustainable, involvement of the private sector for the development and operation would be essential. The public sector of PNA is frail and worn out due to economic closure, prolonged financial strain and resultant malfunctioning of the government body. Public and Private Partnership (PPP) will be essential in implementation of the Industrial Park.

The Gaza Industrial Estate (GIE), the export-oriented industrial park in PNA, has been a good example of PPP. Public sector with assistance from international donors was responsible for the off-site development, while a private sector developer conducted the on-site development as concession. The time was good when GIE was put into operation, but the climate today is much dimmer than the middle of 1990's, and thus supportive measures needs to be deliberately extended.

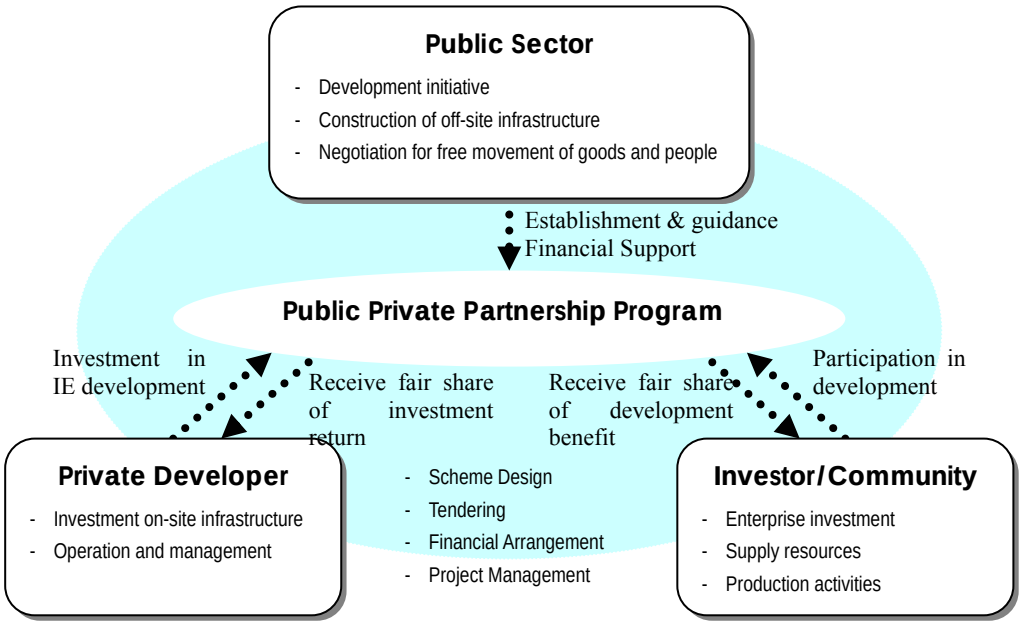


Figure 5.6.2 Schematic Image of PPP for the Park

Figure 5.6.2 illustrates a comprehensive picture of stakeholders participating in PPP for the Park. Investors for the Industrial Park would not be limited to Palestinian enterprises. Investment to the Park would come from neighboring Arab nations such as Jordan and Gulf nations, as well as Israel, EU or other parts of the world.

Preliminary idea of role sharing is shown in Figure 5.6.3. The Park would be developed in a form of PPP, mainly led by a private developer. While, off-site infrastructure development shall be under the responsibility of the public sector.

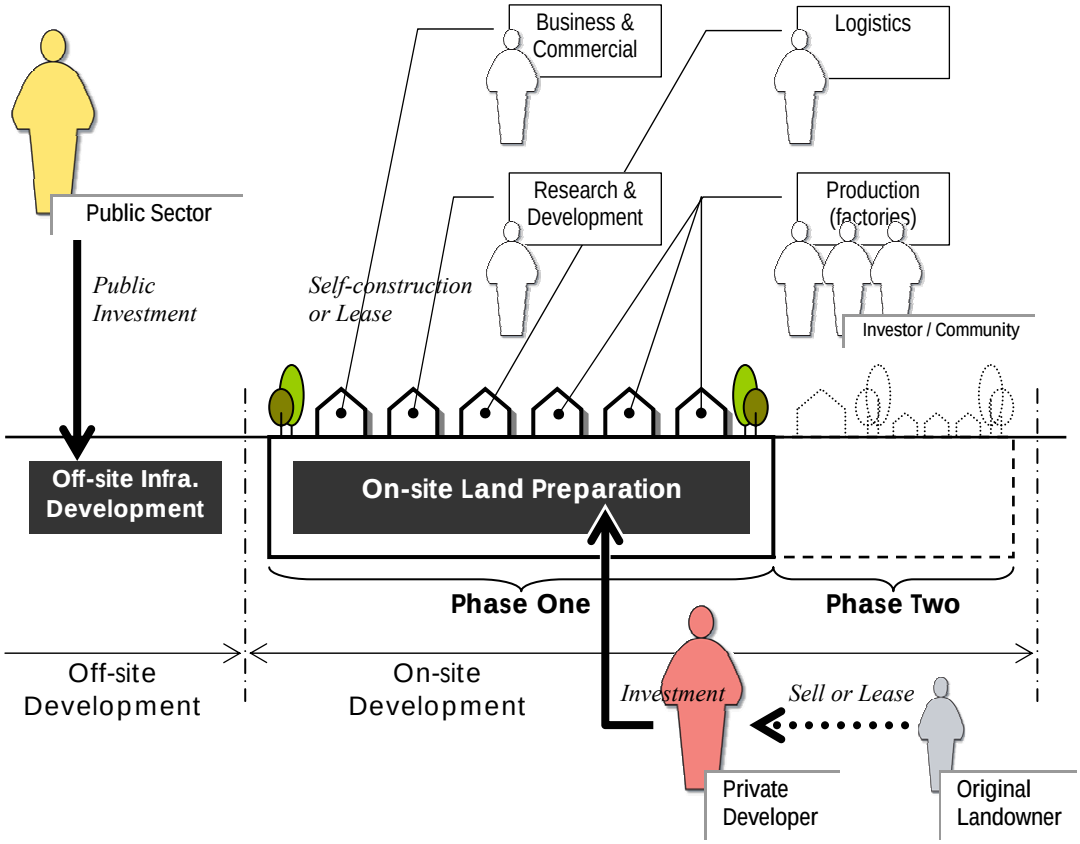


Figure 5.6.3 Schematic Image of PPP for the Park (Phase One)

5.6.3 Cost Recovery Framework

As it is not possible to prepare a concrete land use plan at this moment, because the site has not yet been selected, practical simulation of project cash flow is not able to be made. However, the Study has attempted to make a cost recovery framework for quick understanding of the project nature from a financial point of view.

The following is the basic scenario for Phase One of the Industrial Park development.

i) A private developer shall obtain a land (approximately 50 ha in somewhere in the southern part of Jericho city) by purchasing or leasing from the original landowner.

ii) The developer shall make a certain amount of investment for land preparation

including necessary infrastructures such as inner road network, water distribution network, drainage network, storm-water retention pond, electricity supply stations, telecommunication stations, and greening.

iii) In parallel with ii) above, the public sector shall develop several major off-site infrastructures in connection with the on-site infrastructure services. They are access road and water supplying source. Waste water treatment plant and solid waste treatment would also be necessary infrastructures services, but not necessarily to be developed/improved in an urgent term.

iv) After land preparation and off-site infrastructure arrangement, the time shall come for the investors/communities to actually move into the Park by building/leasing necessary facilities for them[31]. They are expected to be accommodated (at a certain occupancy level) in Business & Commercial, Research and Development, Logistics and Production (factories).

v) After having the Park in operation, on-site cleaning and maintenance shall be made under responsibility of the developer, while off-site services such as access road maintenance, water transmission, waste collection and waste water treatment (if necessary in the future) shall be undertaken by the public sector in accordance with the beneficiary-payment principle.

In accordance with the scenario above, likely cost and income to be incurred for the on-site development during the construction and O&M stage were estimated as shown in Table 5.6.1, with reference to the assumptions in the previous similar studies[32].

Table 5.6.1 Assumptions of Cost and Income (On-site Development)

Item	Assumption	Remarks
Land preparation*	105 US$/ m^2 (net plot)	ref. 97 ~ 116 US$/ m^2
Factory const.	140 US$/ m^2 (floor area)	Tenant-pay
Building const.	360 US$/ m^2 (floor area)	Tenant-pay
Land lease rate	8.5 US$/ m^2/ yr. (net plot)	ref. 8 ~ 9 US$/ m^2/ yr.
Tenant occupancy	1st yr: 50%, 2nd yr: 80%, 3rd yr and after: 90%	
O&M cost	1.6 US$/ m^2/ yr. (net plot)	2% of land prep. cost
Income and cost increase rate	Increase at 5% every three years.	

Note: Land expropriation cost is not counted under the assumption that the seed land would be leased from the original landowner to developer in a long term contract, and it would be sub-leased to the tenants (investors) in contract at a certain rate acceptable to them. Indices shown in the Assumption are set for the basic case.

[31] Individual wastewater treatment facility shall be equipped by the investors/communities themselves.

[32] *Nablus Industrial Estate Feasibility Study,* UNCTAD, 1998 and *Jenin Industrial Estate Supplementary Feasibility Study*, KfW, 1998. In estimating cost and income, the price levels were appropriately adjusted by applying consumers' price index to update from the old ones.

According to the cash flow simulations in the developer's standpoint, based on several cases of income and cost, the initial land preparation cost could be recovered in 17 ~ 23 years after completion. It could result in that the project is not so profitable but possible if the developer's target year of financial recovery would be set at 20 years. Figure 5.6.4 shows the cash flow pattern of the basic case, in which the initial land preparation cost is recovered in 18 years after the investment.

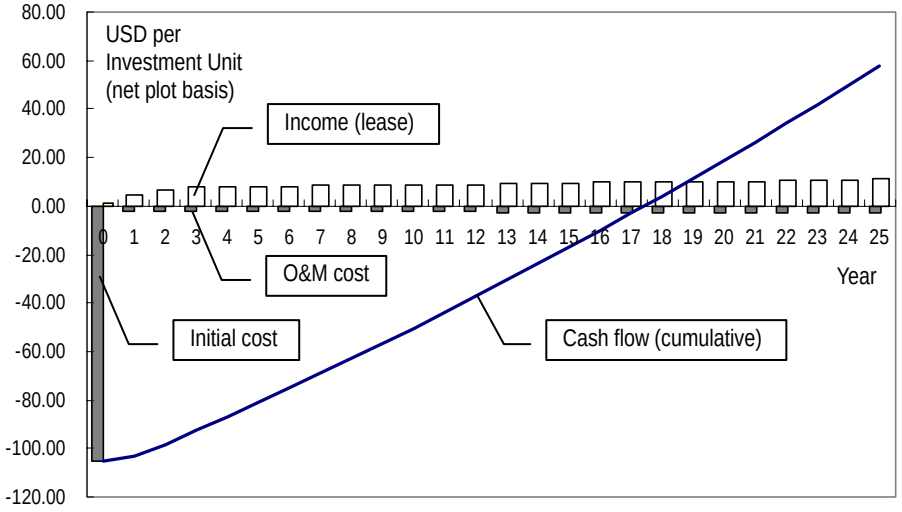


Figure 5.6.4 Cash Flow Pattern - Base Case (Phase One)

Since the cash flow simulation has been made on the crude assumption basis, it is further necessary to examine the feasibility in the next study stage of Phase Two, after planning a more detailed land use plan in the actual site to be selected soon. However, it could be suggested to both the public sector and private sector (developer) that:

- Private developer is requested to make efforts to reduce the initial investment cost, while properly considering to provide good quality of environment and facilities competitive in the market.
- Public sector is requested to extend appropriate assistances/facilitations (physical and institutional) in addition to the off-site infrastructure development/improvement, so as to support the developer's marketing activities. For instance, tax exemption and/or reduction, subsidy for environmental related equipment (e.g. individual waste water treatment), establishment of a national research and development center for the fields of food processing, medicine and so forth shall be attractive to the investors to come in the Park.

Technical Note I : Candidate Sites Assessment

I. 1 Basic Attitude

There have been eight candidate sites for the Industrial Park, preliminarily selected for the Study, on the basis of the following considerations:

- The location is situated in an advantageous position for the smooth distribution/commerce of goods inside/outside Palestine area, supported with a good accessibility to the arterial roads.
- The location is not difficult in accessing indispensable infrastructures for industrial area such as electricity supply, water supply, sewerage and telecommunications, and in securing employees from its surroundings.
- It is preferable that above a certain size of little-used/un-used land (at least 50 ha, for instance) can be secured in and around the location, in order to ensure the scalability of development in the future.

In addition to the three points above, the JST added another point of consideration so as the location to be a symbolic one for promoting partnership among the parties concerned, in a view of the Japanese initiative "*Corridor for Peace and Prosperity*". In particular, the location near the borders would be regarded preferable. A site near the borders is considered to be suitable as *node* for the *Corridor*, where goods and people will be vividly exchanging, while enough attention should be paid to the international issues. The current international political and diplomatic situations among the vicinity countries are considered to be not easygoing to let the near-borders location free for goods and people to come and go, however, it is strongly hoped to have a sort of open-border location for posterity in the future.

Table I.1.1 History of Site Proposal

Timing	Proposed site	Proponent	Remarks
Jan. 2007	No.1 Tubas	JICA (PFM)	area A
	No.2 Jericho	JICA (PFM)	area A + area C
	No.3 Jericho	JICA (PFM)	area C
	No.4 Jericho	JICA (PFM)	area C
			※All proposed by JICA Project Formulation Mission and agreed with PNA
June 2007	No.5 Jericho	Israel	area A
	No.6 Jericho	Israel	area A
			※All proposed by Israel at the Four Parties Meeting
July 9, 2007	No.7 Jericho	Jericho City	area C, Jericho Municipality proposed
July 13, 2007	No.8 Jericho	Israel	area A + area C (only the area A allowed to use)
			※Proposed by Israel in a letter and map attached

I. 2 Alternative Locations

Eight candidate locations were identified on the basis of the above rationale and criteria. Out of them, four sites were selected when JICA conducted *the Project Formulation Mission* in 2006, as a preparatory work for this Study, and another four sites have been additionally identified after commencement of the Study, through official coordination meetings among the stakeholders concerned. The following figure shows the locations of the alternative sites.

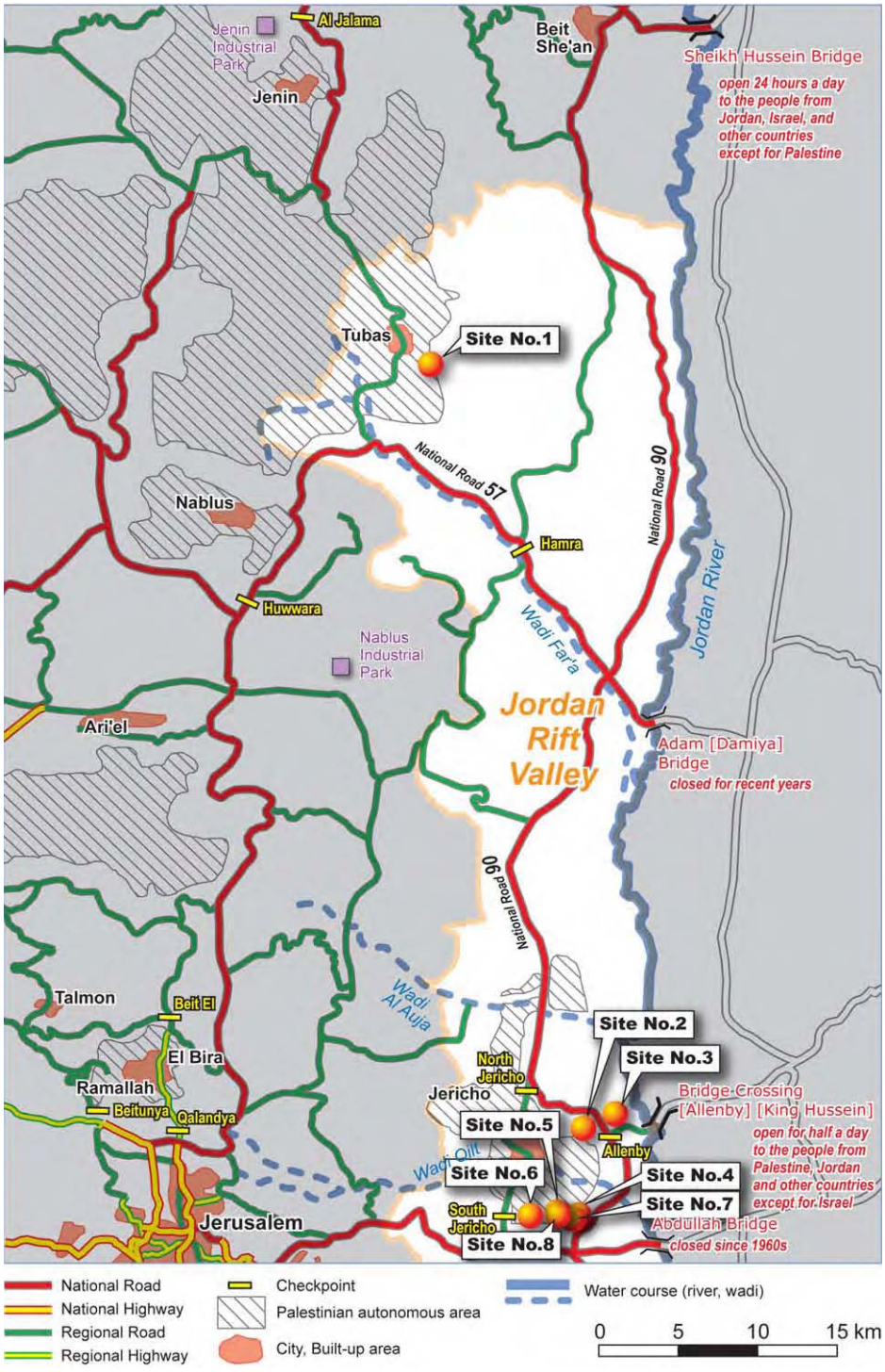


Figure I.2.1 Location of Alternative Sites

Figure I.2.2 (1) Satellite Image of Alternative Site (No.1)

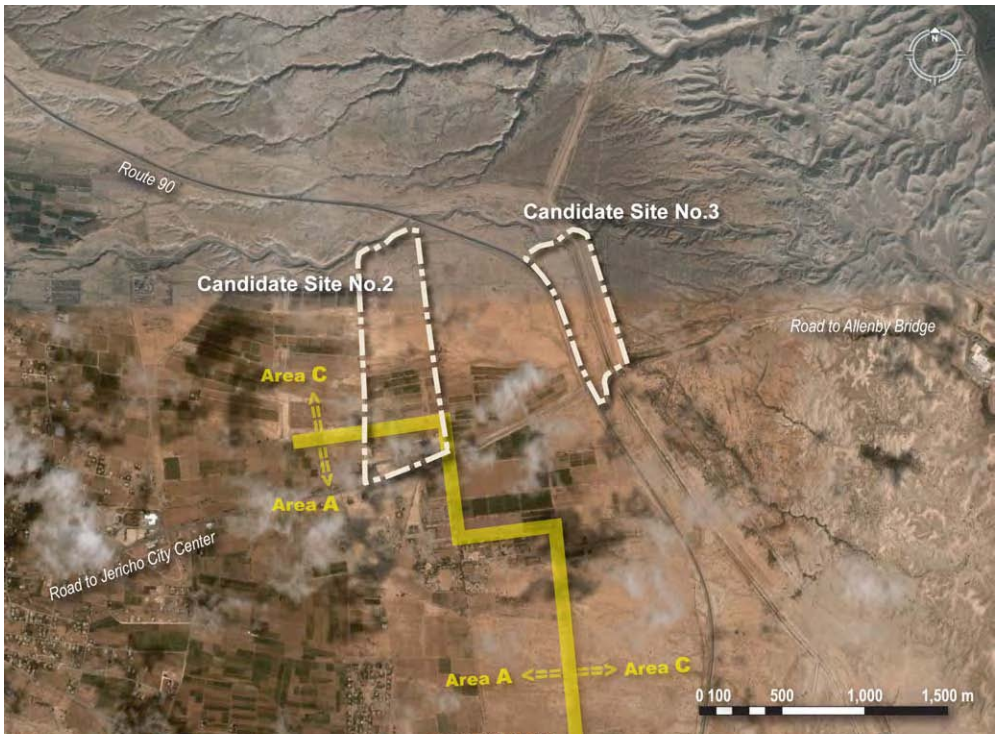


Figure I.2.2 (2) Satellite Image of Alternative Sites (No.2, No.3)

Figure I.2.2 (3) Satellite Image of Alternative Sites (No.4, No.5, No.7, No.8)

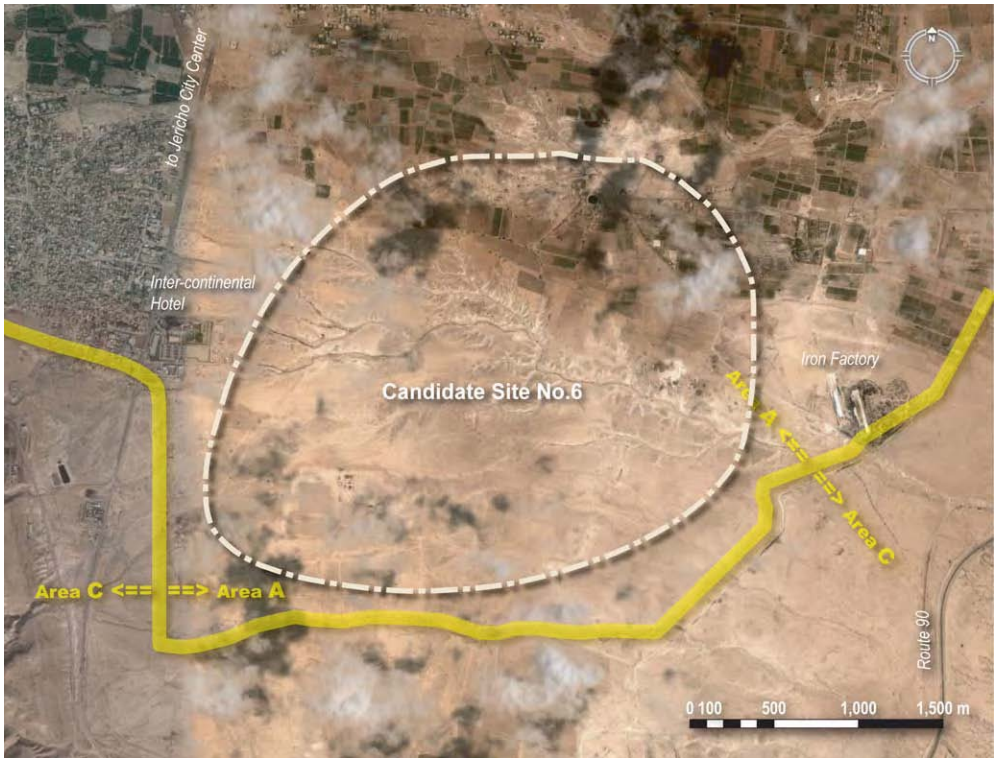


Figure I.2.2 (4) Satellite Image of Alternative Site (No.6)

Physical conditions in and around the alternative sites and advantages/disadvantages are summarized in Table I.2.1.

Table I.2.1 (1) Physical Condition and Advantages/Disadvantages of Alternative Sites (No.1-No.4)

Comparison Items \ Site Name		No. 1 Tubas	No. 2 E- Jericho	No. 3 E- Jericho	No. 4 SE- Jericho
Physical Condition					
Estimated Area		68 ha	57 ha	50 ha	200 ~ 300 ha
Land Jurisdiction		A	A (14ha), C (43ha)	C	C
Land Ownership		Government	Arab Dev. Society (positive for development)	Arab Dev. Society (positive for development)	*Waqf* land, Managed by Min.of Religion
Road Access		- Needs road improvement - 30 km from Damiya Bridge - 80 km from Allenby Bridge	- 3 km from Allenby Bridge - 40 km from Damiya Bridge - Close to R-90	- 3 km from Allenby Bridge - 40 km from Damiya Bridge - Directly facing R-90	- 10 km from Allenby Bridge - 45 km from Damiya Bridge - Close to R-90
Condition of other off-site infra.	Water Supply	Ground water (250m^3/hr.)	Drill a new well, or allocation of agricultural water	Drill a new well, or allocation of agricultural water	Drill a new well, or allocation of agricultural water
	Power Supply	Available by transmission	Distribution line of 11 kV (JEDCO) available	Distribution line of 11 kV (JEDCO) available	Distribution line of 33 kV (JEDCO), up to the iron factory
Site Condition	Geography	- Hilly land - Stony soil	- Flat land - Already graded	- Flat land - Already graded	- Almost flat land - *Wadi* in North edge and South edge
	Current Land Use	Unused	Partially used for agriculture	Unused	Unused
Land Availability		Designated for agro-industrial park, and ready for immediate development	Part of the area A is ready for development Procedure for the area C development	Procedure for the area C development	Procedure for the area C development
Advantages/Disadvantages					
Advantages		Ready for development	In front of the gate for Allenby Bridge.	Near the gate for Allenby Bridge.	Scalability in development
Disadvantages		Hamrah check point	Less scalability	Less scalability Needs setback (500m) from R-90	Land lease only (49 yr. by law) Needs setback (500m) from R-90

Table I.2.1 (2) Physical Condition and Advantages/Disadvantages of Alternative Sites (No.5-No.8)

Comparison Items \ Site Name		No. 5 SE- Jericho	No. 6 S- Jericho	No. 7 SE- Jericho	No. 8 S- Jericho
Physical Condition					
Estimated Area		about 200ha	about 900 ha	150 ha	about 200ha
Land Jurisdiction		A	A	C	A and C
Land Ownership		Private and Public	Private Land (Al Hussein family)	*Waqf* land, Managed by Min.of Religion	Private (A) and *Waqf* (C)
Road Access		- Needs road improvement - 10 km from Allenby Bridge - 45 km from Damiya Bridge	- Needs access road - 12 km from Allenby Bridge - 45 km from Damiya Bridge	- 10 km from Allenby Bridge - 45 km from Damiya Bridge - Close to R-90	- Needs road improvement - 10 km from Allenby Bridge - 45 km from Damiya Bridge
Condition of other off-site infra.	Water Supply	Drill a new well, or allocation of agricultural water	Allocation of agricultural water	Allocation of agricultural water	Allocation of agricultural water
	Power Supply	Distribution line of 33 kV (JEDCO), up to the iron factory	Distribution line of 33 kV (JEDCO)	Distribution line of 33 kV (JEDCO), up to the steel factory	Distribution line of 33 kV (JEDCO), up to the steel factory
Site Condition	Geography	- Flat land	- Flat land - *Wadi* is flowing in the middle	- Almost flat land - *Wadi* in the South part of the land	- Flat land
	Current Land Use	- Agricultural use - Including construction site for the community center in the central part of the land	- Agricultural use in the north - Vacant land in the south	Unused	- Agricultural use - Including construction site for the community center in the central part of the land
Land Availability		Needs conversion of land use (agricultural use) before starting development	The southern part of the land is ready for development	Procedure for the area C development Limited land area due to the shape of land and *Wadi*	Needs conversion of land use (agricultural use) before starting development
Advantages/Disadvantages					
Advantages		---	Scalability in development. Large part of the land is designated for industrial development by MoP (1997).	---	---
Disadvantages		Land acquisition Limited available land	*Wadi* running thru. Land acquisition. Needs access road in the area C.	Land lease only (49 yr. by law) Needs setback (500m) from R-90	Land acquisition Limited available land

Based on the summarized information in Table I.2.1, the JST made a assessment on the alternative sites from technical viewpoint. Five criteria for assessment were set, namely *accessibility*, *scalability*, *land availability*, *readiness of infrastructure* and *partnership promotion*.

Accessibility can be assessed positive if the distance from/to arterial roads or international gateways such as Allenby Bridge and Damiya Bridge is short.

Scalability is represented by the size of the land available for development. It can simply be understand that 100 ha of land is better than 10 ha in scalability of development.

Land availability is explained by a composition of several factors, i.e. land ownership, land jurisdiction, geographical condition, current land use, etc. For instance, a flat unused land in the area A with one owner is preferable than another agricultural land with plural owners, to make a quick start for development.

Readiness of Infrastructure can be explained by availability of the off-site infrastructures (access road, electricity, water, etc.).

Partnership promotion is an additional criterion which the JST put in consideration of the context after "*Corridor for Peace and Prosperity*". If the location is close to the borders, this criterion would be assessed positive (strategic) as stated.

Figure I.2.3 shows the results of assessment (rating) on each alternative site.

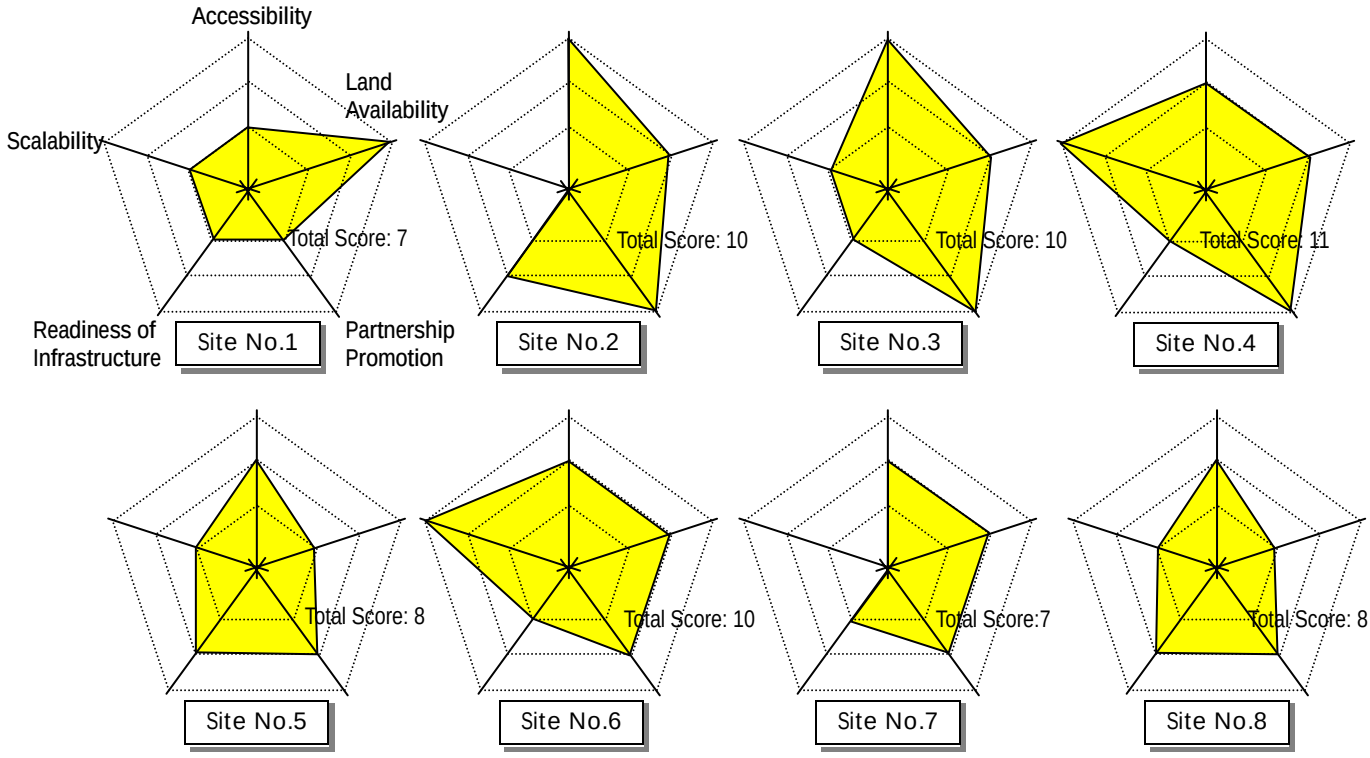


Figure I.2.3 Technical Assessment on the Alternative Sites

The result of the rating can be briefly described by site, as follows:

Site No.1 is superior in *Land Availability* as the land is fully owned by the Government and has already been designated for an industrial park use. However, other rating criteria are inferior to those of other alternative sites.

Site No.2 is superior in *Accessibility* and *Partnership Promotion* because of its location very close to the gate for Allenby Bridge and to the Route 90, while *Scalability* is limited and *Availability* of the land is rather complicated as a mixture of the area A (14 ha) and C (43 ha). Supposing that this Site is selected for the Industrial Park development, the part in the area A could be developed but too small. Plus, the remaining part in the area C seems to take long years for development, necessary for special coordination with Israel.

Site No.3, closely located to the No.2, is also superior in *Accessibility* and *Strategic Characteristics*. However, it's *Readiness* of Infrastructure is poorer than that of Site No.2 as it is located outside the Route 90. *Land Availability* maybe of the most disadvantage which would make an early development very difficult because of the land jurisdiction of the area C.

Site No.4 and Site No.5 have similar characteristic in location. The only difference is in *Land Availability*, though the rating is at same level. In concrete terms, Site No.4 is unused and situated fully in area C, while Site No.5 is currently used for agriculture and situated in area A. Both lands are not easy for an early development in a short term, same as No.3.

Site No.6 is superior in *Scalability* and fairy good in other criteria, except for *Readiness of Infrastructure*. As the entire land area is in area A, there seems no difficulty or constraint for a quick start of the development, while enough attention should be paid to the environment aspect, *wadi* related issue in particular, in designating land use demarcation. Since a part of this site has been delineated for an industrial development use when Ministry of Planning prepared the latest spatial development plan of Palestine in 1997, this site has an official rationale for the industrial area development.

Site No.7 is poor in *Scalability* among all. After setback from the Route 90, in accordance with the Israeli military and security code, only small land area would remain.

Site No.8 is almost same as No.5.

Based on the above result, Site No.4 turns out to be the most comparative advantage, which are followed by No.2, No.3 and No.6. However, No.2, No.3 and No.4 are considered difficult to quickly start development since almost all the lands belong to Area C, which shall be fully controlled by Israeri authority, while No.6 could include large area of Area A.

Therefore, as a tentative conclusion, the JST recommends to designate a certain delineation of land (50 ~ 100 ha) in No.6 as the most possible project site.

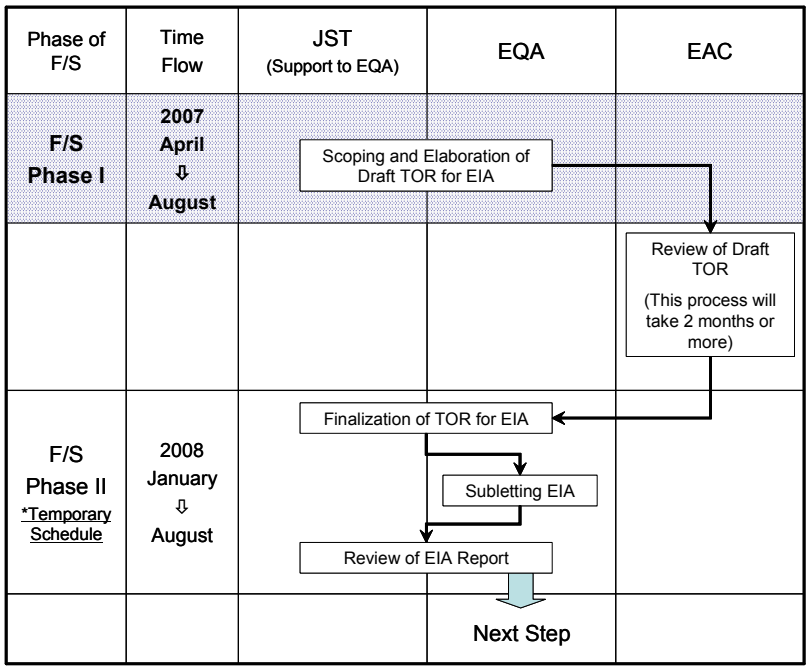
Technical Note II : Environmental and Social Consideration

II. 1 TOR for Environmental and Social Consideration

(1) Provisional Scoping

(a) Temporary Schedule for "Scoping and Study" Step

The temporary schedule for EIA for this Feasibility Study is as shown in Figure II.1.1.



JST : JICA Study Team
EQA : Environment Quality Authority
EAC : Environmental Assessment Committee

Figure II.1.1 Temporary Schedule for "Scoping and Study" Step

(b) General Conditions of the Provisional Industrial Park

The general conditions of the provisional agro-industrial park are as shown in the Table II.1.1. In this report, all EIA-related issues are hypothetically discussed based on these conditions, for the site location and other indicators for the Industrial Park have not been determined yet as of the end of July 2007.

Table II.1.1 General Conditions of the Provisional Agro-industrial Park

	Indicator	Condition
1	Location	Southern Fringe of Jericho City
2	Main Industries	Food and beverage, Olive Products, Pharmaceutical Products
3	Scale	50 ha (About 20 factories and related facilities for Phase I)

(c) Scoping

Provisional impacts are presented in Table II.1.2. According to EQA, all the 40 items should be checked in an EIA report.

Table II.1.2 Scoping Based on the Palestinian Environmental Components Standard

Category			Rating	Reason
Biophysical Resources and Land-Use Components	1	Climate and Air Quality	D	No impact. Scale of the Industrial Park is small.
	2	Surface Water Hydrology and Quality	D	No surface water exists.
	3	Groundwater Hydrology and Quality	C	There is some possibility that existing wells or ground water should be affected.
	4	Terrain and Natural Hazards	C	There is some possibility that the existing *wadi* should be dangerous in case of torrential downpours.
	5	Soils and Vegetation	C	No remarkable vegetation exists. But, possibility of soil erosion should be checked.
	6	Wildlife Resources and Use	D	No valuable species exist.
	7	Aquatic Resources and Use	D	No aquatic resources exist.
	8	Recreation and Tourism Resources and Use	D	No recreation and tourism resources exist.
	9	Forest Resources and Use	D	No forest resources exist.
	10	Agricultural Resources and Use	C	Basically, no farmland shall be included in the site for an industrial park. But, this item should be checked when the site was selected definitively.
	11	Mineral Resources and Use	D	No mines exist.
Economic Components	12	Direct Employment and Income	*A	* Usually positive impact is expected.
	13	Indirect/ Induced Employment and Income	*B	* Usually positive impact is expected.
	14	Labor Market Conditions	*B	* Usually positive impact is expected.
	15	Sources of supplies, materials, and services	*C	* Usually positive impact is expected.
	16	Transportation Requirements	C	Transportation facilities should be improved depending on facilities introduced in and around the Industrial Park.
	17	Infrastructure Development Requirements and Costs	B	It is possible that the surrounding infrastructures should be improved gradually as the Industrial Park is developed.
	18	Government Revenues and Costs	B	It is possible that the MONE (or other organization(s) in charge) shall budget for the procedures for the construction of the Industrial Park, including land taking.
	19	Indirect/ Induced Economic Development Opportunities	*B	* Usually positive impact is expected.
Cultural and Heritage Components	20	Archeological Sites	D	No cultural property is reported in and surrounding area of the Industrial Park.
	21	Sites for Traditional Use	D	No site for traditional use is reported in and surrounding area of the Industrial Park.
	22	Historic Sites and Landscape Features	C	No historic property is reported in and surrounding area of the Industrial Park, but there is some possibility that the Industrial Park should damage the existing local landscape.

Category			Rating	Reason
Social Components	23	Social/ Demographic Profile	*-	* This item should be described in an EIA report.
	24	Population	*-	* This item should be described in an EIA report.
	25	Housing and Accommodations	*-	* This item should be described in an EIA report.
	26	Land and Water Use	B	There is some possibility that resettlement of Bedouins/ expropriation of residential or farmlands should be necessary, and that local communities should be split depending on the location of the selected site. Available water volume shall be also examined in detail.
	27	Transportation and Traffic	C	There is some possibility that vehicles should affect the current traffic circulation depending on the location of the selected site and the capacity of the access road.
	28	Community Services Delivery	*-	* This project is not to provide the local society with community services.
	29	Local Government Revenues/ Costs	B	It is possible that the Jericho Municipality shall budget for some part of the infrastructures around the Industrial Park (off-site).
	30	Social Support Services	B	It is necessary to investigate an overall influences of the Industrial Park on the adjacent areas or the whole Jericho City from the social point of view.
	31	Community Stability, Cohesion, and Well-Being	D	There is little possibility that the Industrial Park affect the local community-related matters.
	32	Gender Equity	D	There is little possibility that the Industrial Park affect the gender equity.
Health Components	33	Supply of Health Facilities and Services	*-	* This project is not to provide the local society with health facilities or services.
	34	Community Water Supply and Watersheds	C	There is some possibility that the wastewater from the Industrial Park affect the water resource in the long run, if the wastewater is not properly treated and discharged.
	35	Waste Treatment and Discharge	C	There is some possibility that the waste from the Industrial Park affect the neighbors' comfortable life in the long run, if the waste is not properly discharged and collected.
	36	Ambient Air and Water Quality	C	Unknown. To be investigated.
	37	Public Health Risks	C	Unknown. To be investigated.
	38	Worker Health and Safety	C	There is some possibility depending on products to be processed.
	39	Noise	C	There is some possibility that noise damage should affect the local society..
	40	Local Community Health	C	There is some possibility in terms of wastewater, solid waste, and others.

Evaluation Categories: A: Serious impact is expected.
B: Some impact is expected.
C: Extent of impact is unknown. (Examination is needed. Impacts may become clear as study progress.)
D: No impact is expected. IEE/ EIA is not necessary.

(2) Draft TOR for EIA

The draft TOR for EIA is presented in Annex 3. The draft shall be reviewed and modified if necessary, following the schedule shown in Figure II.1.1.

II. 2 Alternatives and Consideration for the Negative Impact

(1) Alternatives

The comparison between different alternatives is shown in Table II.2.1. Due to the delay of site selection, it is impossible to compare alternatives one another by their determined locations and other conditions. Therefore, "without project" and the other location outside Jericho, Tubas, are the only comparable alternatives at this moment.

Table II.2.1 Comparison between Different Alternatives

Category			Alternatives	
			Without Project	Tubas
Biophysical Resources and Land-Use Components	1	Climate and Air Quality	D	D
	2	Surface Water Hydrology and Quality	D	D
	3	Groundwater Hydrology and Quality	D	C
	4	Terrain and Natural Hazards	D	C
	5	Soils and Vegetation	D	C
	6	Wildlife Resources and Use	D	D
	7	Aquatic Resources and Use	D	D
	8	Recreation and Tourism Resources and Use	D	D
	9	Forest Resources and Use	D	C
	10	Agricultural Resources and Use	D	C
	11	Mineral Resources and Use	D	D
Economic Components	12	Direct Employment and Income	D	*A (positive)
	13	Indirect/ Induced Employment and Income	D	*B (positive)
	14	Labor Market Conditions	D	*B (positive)
	15	Sources of supplies, materials, and services	D	*C (positive)
	16	Transportation Requirements	D	C
	17	Infrastructure Development Requirements and Costs	D	B
	18	Government Revenues and Costs	D	B (Governmental land but high cost is expected due to geographically hilly and geologically rocky conditions)
	19	Indirect/ Induced Economic Development Opportunities	D	*B (positive)

Category			Alternatives	
			Without Project	Tubas
Cultural and Heritage	20	Archeological Sites	D	D
	21	Sites for Traditional Use	D	D
	22	Historic Sites and Landscape Features	D	C
Social Components	23	Social/ Demographic Profile	*-	*-
	24	Population	*-	*-
	25	Housing and Accommodations	*-	*-
	26	Land and Water Use	D	B
	27	Transportation and Traffic	D	C
	28	Community Services Delivery	D	*-
	29	Local Government Revenues/ Costs	D	B
	30	Social Support Services	D	B
	31	Community Stability, Cohesion, and Well-Being	D	D
	32	Gender Equity	D	D
Health Components	33	Supply of Health Facilities and Services	D	*-
	34	Community Water Supply and Watersheds	D	C
	35	Waste Treatment and Discharge	D	C
	36	Ambient Air and Water Quality	D	C
	37	Public Health Risks	D	C
	38	Worker Health and Safety	D	C
	39	Noise	D	C
	40	Local Community Health	D	C

Evaluation Categories: A: Serious impact is expected.
B: Some impact is expected.
C: Extent of impact is unknown. (Examination is needed. Impacts may become clear as study progress.)
D: No impact is expected. IEE/ EIA is not necessary.
NC: No Change

(2) Alleviation of Negative Impact in Terms of Food Processing

Many documents on environmental issues published in Palestine warn that there are serious environmental problems to be solved as immediately as possible. However, the existing industrial zones or individual factories seem to remain unchanged, being want of environmental considerations.

Therefore, a practical system for environmental protection shall be established in the present agro-industrial park so that it should be a symbolic existence of environmentally sustainable production base in Palestine.

In this context, through the operations in the agro-industrial park, "3 R (Reduce, Reuse, and Recycle) trials are highly recommended to alleviate negative impacts on the environment on daily basis. Possible trials in the food industry are described below.

(a) Different Operational Steps of Food Processing and Corresponding Discharge of Environmental Loads

Table II.2.2 represents the discharge of environmental loads at different operational steps in food processing and the possibilities of alleviation with ratings (A, B, or C).

Wastewater will be generated mainly at washing, heating (boiling/ roasting/ simmering), and pickling steps. Problems of gas emission and offensive odor will be conspicuous at heating (boiling/ roasting/ simmering/ steaming) step. Discharge of waste will be serious at cutting step.

Table II.2.2 Discharge of Environmental Loads at Different Operational Steps for Food Processing

Operation for Food Processing	Washing Original Products	Cutting	Boiling/ Roasting/ Simmering	Steaming	Pickling	Seasoning	Washing Apparatus
Purposes of Operation and Effect	*Removal of dirt & odor/ Water Absorption*	*Removal of non-comestible parts/ Size adjusting/ Tissue softening*	*Tissue softening/ Penetration of flavor/ Removal of harshness/ Coagulation of albumin/ Sterilization*	*Tissue softening / Making starch sticky/ Coagulation of albumin/ Sterilization*	*Penetration of flavor/ Reduction of volume*	*Flavoring*	*Prevention of dregs' decomposition / Food hygiene*
Discharge of Wastewater/ Pollution Level	[C] *Diffusion of dirt*	[B] *Diffusion of turbidities depending on ingredients*	[C] *Diffusion of Highly concentrated liquid dregs*	[B] *Diffusion of turbidities depending on ingredients*	[C] *Diffusion of Highly concentrated liquid dregs due to pickling liquid containing "salt", "vinegar" or "sugar"*	[A] ** But in case of seasoning by pickling, [C] for the same reason as the column on the left*	[C] *Necessity of using a large volume of water to wash away dirt and dregs*
Possibility of Reduction of Wastewater	[A] *Change of method/ Reuse*	[A] *Cutting without using water*	[A] *Making the best use of liquid dregs*	[A] *Making the best use of liquid dregs*	[A] *Making the best use of liquid dregs*	–	[B] *Change of method (Vapor cleaning, etc)*
Diffusion of Gas/ Offensive Odor	[A]	[B] *Diffusion of offensive odor from onions & animal proteins*	[C] *Diffusion of gas and odor due to combustion of fuel and heated ingredients*	[C] *Diffusion of gas and odor due to combustion of fuel and heated ingredients*	[A]	[B] *Diffusion of offensive odor to some extent in case of using spices*	[B] *Diffusion of offensive odor due to discharge of a large quantity of wastewater at a time*
Discharge of Carbon Dioxide Gas	[A]	[A]	[C]	[C]	[A]	[A]	[B] *In case of using hot water or vapor*
Discharge of Waste	[B] *Sludge*	[C] *Non-comestible parts/ Sludge*	[B] *Diffusion of waste oil*	[A]	[B] *Sludge*	[B] *Diffusion of waste oil depending on ingredients*	[B] *Sludge*

Rating: A: No or little negative impact/ high possibility of alleviation is expected
B: Negative impact/ possibility of alleviation is expected to some extent depending on the situation.
C: Negative impact/ little possibility of alleviation is expected.

(b) Reduction and Recycle of Solid Waste

Reduce

Segregated disposal is effective to reduce the quantity of solid waste, because pure organic waste could be utilized for producing compost. Therefore, it is recommended that segregation system should be encouraged and introduced in the agro-industrial park.

Recycle

It might be possible that the produced compost be put to good use by the neighboring farmers. The maximum amount of compost to be used effectively for agricultural fields as fertilizer is 20 tons/ha in general. It will be necessary to pay attention to the balance between the supply and the demand of the compost. Mechanization of spreading compost in the filed will also be promoted to ensure the best use of the compost. It is recommended to reserve a space for composting inside the industrial park and encourage the improvement in agricultural technology by the contribution of the research and development function.

(c) Reduction and Reuse of Treated Wastewater

Reduction/ Reuse

Not a few methods can be introduced for reducing wastewater to be generated in food processing. Only, it will be necessary to consider that capital investments and empirical tests should be indispensable.

Reuse

Treated wastewater from the agro-industrial park is recommended to reuse for irrigation. The quality of treated wastewater should meet the standards as described in Table II.2.3 according to the final destination of discharge or reuse.

Table II.2.3 Hypothetic Quality of Original Wastewater and Target Quality of Treated Wastewater for Food Processing Industry

	Hypothetic Original Wastewater	Target Quality I *Wadi* Discharge	Target Quality II Reuse for Agricultural Products
Temperature	20ºC	-	-
pH	7.0	6.0 – 9.0	6.0 – 9.0
BOD	1,000 mg/ liter	< 35 mg/ liter	< 15 mg/ liter
SS	200 mg/ liter	< 30 mg/ liter	< 15 mg/ liter
n-Hexane Extracts	100 mg/ liter	(< 1 mg/ liter)	(< 1 mg/ liter)
T-N	5-10 mg/ liter	< 30 mg/ liter	< 50 mg/ liter
T-P	10-30 mg/ liter	< 15 mg/ liter	< 30 mg/ liter

Source: PWA, PSI (Palestinian Standards Institute)
BOD: Biochemical Oxygen Demand
SS: Suspended Solids
T-N: Total Nitrogen
T-P: Total Phosphorus
Figures in the table come from Palestine guidelines provided with by PWA.
( ) No Palestinian standard, but an ideal quality level

Potential substances generated in the course of food and pharmaceutical products processing are as shown in Table II.2.4. It is important that each factory and all public organizations concerned pay special attention to how to treat these substances with a view to developing the agro-industrial park as environmentally friendly and sustainable model.

Table II.2.4 Further Consideration for Specific Food and Pharmaceutical Products

Product	Generated substances in processing
Food and Beverage	BOD
Olive Product	BOD, Acid
Pharmaceutical and Plastic Product	Different solid, liquid and gaseous pollutants

Source: *Palestinian Environmental Strategy*

II. 3 Results of the Environmental Survey

(1) Evaluation

As the site location has not been selected officially yet as of July 2007, it is not possible to determine the environmental evaluation at this moment. Even so, judging from the economic and geographical conditions and discussion so far, it could be presumed that the site would be located somewhere in the southern or the eastern fringe of Jericho City. Based on this hypothesis, as much information as possible was collected during the Phase I of the feasibility study in order to analyze environmental impacts on the area.

An overall evaluation of the environmental impacts that the present agro-industrial park would give in and around the site is summarized in Table II.3.1. Water supply and the appropriate discharge of waste and wastewater will be the most crucial issues to be studied in detail.

Table II.3.1 Overall Draft Evaluation

Evaluation Item	Evaluation	Study Policy for EIA and Phase II	Remarks
Resettlement	C	Site reconnaissance/ interview survey with local residents in the selected site shall be conducted. Agreement between all stakeholders shall be made.	It is necessary to pay attention to the Bedouins who are living in the southern fringe of Jericho City if the site is selected definitively in or near the area.
Land Expropriation	B	In case the selected site should partially or totally belong to a private land, the subsequent procedure necessary to expropriate the land in question shall be followed up.	MoNE has is responsible for land expropriation. The procedure is shown in Figure (4)-1, on Page Annex 2-10.
Water	B	Water will be supplied from existing network with an extension line. A detailed study on necessary water volume shall be conducted after the site location, the industries introduced, and the size of the park are determined Definitively. Development of new water resources and water saving policy shall be encouraged to avoid a conflict between the industrial park and the local community. Agreement with the local authorities shall be made.	Jericho Municipality has been trying to develop new water resources. Rehabilitation of "Jericho Well No. 1 is one of the priority municipal projects. Jericho Municipality has also a plan to develop a water supply network, but as of July 2007, the plan has not been funded yet. It is recommendable to consider the latest information that can be obtained from the "Engineering Dept, Jericho Municipality".

Evaluation Item	Evaluation	Study Policy for EIA and Phase II	Remarks
Wastewater	C	Appropriate treatment methods of wastewater shall be re-examined, including "Reduce" and "Reuse" trials. Discharge system shall also be studied. Possibility of Connection to a planned sewage system shall be re-examined after the site is determined. Agreement with the local authorities shall be made.	Jericho Municipality has a plan to develop a sewage network, but as of July 2007, the plan has not been funded yet. It is recommendable to consider the latest information that can be obtained from the "Engineering Dept, Jericho Municipality".
Waste	C	Appropriate disposal methods of solid waste, sludge and other discharges shall be re-examined, including "Reduce" and "Recycle" trials. Discharge system shall also be studied. The disposal system shall be consistent with the municipal plan for solid waste. Agreement with the local authorities shall be made.	Jericho City has one dumping site of which management system is being improved by a JICA technical project. Jericho Municipality has also a plan to develop a new dumping site, but the location has not determined yet. It is recommendable to consider the latest information that can be obtained from the "Engineering Dept, Jericho Municipality".
Hydrological Situation	C	Current hydrological situation (water potential, *wadi* flows, cross sections, flood, etc) shall be investigated. All constructions shall be designed not to give the minimum negative impact on the environment.	
Landscape	C	No high-rises shall be planned. Agreement with the local authorities shall be made.	
Soil Contamination	C	As long as wastewater sludge and solid waste is adequately discharged, there will be no serious soil contamination problem. Detailed study is needed after the site is determined.	
Offensive Odor	C	Offensive odor will be generated in processing food. A detailed study including possible methods of alleviation shall be conducted.	
Traffic and Public Facilities	C	Depending on the site location, it is possible that the conveyance of materials and products influence the actual traffic status at the entrance to Jericho City. This shall be examined after site selection.	Jericho Municipality has a plan to improve the existing roads (partially new construction) in the southern peripheral of the urban area, but as of July 2007, the plan has not been funded for the total length yet. It is recommendable to consider the latest information that can be obtained from the "Engineering Dept, Jericho Municipality".
Economic Activities, Split of Communities, Cultural Properties, Fauna and Flora, Air Pollution, Noise and Vibration	C	Very little negative impact is expected for these items. However, they shall be re-examined in the course of EIA.	These items should be included according to PNA environmental regulation.

Evaluation Categories: *A: Serious impact is expected.*
B: Some impact is expected.
C: Extent of impact is unknown. (Examination is needed. Impacts may become clear as study progress.)
D: No impact is expected. IEE/ EIA is not necessary.

(2) Lessons Learned from Similar Projects in the Past – Ramallah Industrial Zone

It is useful to learn lessons from the existing industrial parks/ zones in Palestine to avoid potential negative impacts in the future. As no qualitative or numerical data on the discharge of wastewater, solid waste, and the like, is available as of July 2007, either for Ramallah Industrial Zone or Gaza Industrial Park. Ramallah Municipality asked the Birzeit University to conduct a detailed environmental survey on Ramallah Industrial Zone. This study is still ongoing as of July 2007, and is said to be complete hopefully by November 2007. The general information on Ramallah Industrial Zone obtained so far is as summarized in Table II.3.2. The result of the above-mentioned environmental study will be useful for the agro-industrial park, for food industry and pharmaceutical industry are also included as shown in the table.

Table II.3.2 General Information on Industrial Zone (Ramallah)

Inauguration	1970's
Number of lots	7 blocks
Area	33.7 ha (*Including all lands with industrial use)
Main Industries	Lethers, Printing, Auto repairing garage, Metal workshop, Wood workshop, Furniture manufacturing, Factories*
*Factories	There are 49 factories as shown below. - Food (8) 16.3% - Plastic (5) 10.2% - Pharmaceutical (3) 6.1% - Paper (3) 6.1% - Chemical (2) 4.1% - Detergents (2) 4.1% - Fodder (2) 4.1% - Others (25) 51.0%

(3) Monitoring Plan

For a sustainable development of the agro-industrial park, it is important to establish a practical monitoring system. A draft outline of monitoring system is shown in Table II.3.3. This draft shall be discussed and elaborated in detail by EAC members and determined after the Phase I of this F/S.

Environmental Monitoring & Inspection Dept, EQA is responsible for periodical monitoring, inspections and follow-up for all environmental issues, including projects on industrial park.

Table II.3.3 Outline of the Proposed Monitoring System

Organization in charge of the monitoring	PIEFZA (PWA, MOA, MOLG EQA, Jericho Municipality and other central and regional public organizations are required to support the monitoring system.)
Items to be monitored	➢ Main physical impacts during the construction period (Air, Transportation) ➢ Progress of 3R (Reduce, Reuse, Recycle) trials ➢ Numerical data on the discharge of wastewater and solid waste ➢ Management of the discharge of wastewater and solid waste (* Wastewater effluent should be monitored by PWA. MOA takes initiative in reusing treated water.) ➢ Social impact on Jericho City ➢ Other observed problems
Monitoring period	➢ During the construction of the agro-industrial park ➢ Periodically after the inauguration of the agro-industrial park
Stakeholders	➢ PIEFZA (MONE) ➢ PWA ➢ MOA ➢ MOLG ➢ EQA ➢ Jericho Municipality ➢ Local community ➢ Investors and all persons concerned ➢ NGO (Non Governmental Organizations) ➢ Other interested parties

CHAPTER 6 FURTHER ISSUES

This Pre-feasibility Study (Phase I) concludes that the agro-industrial park development will be the significant project to fulfill its mission in line with the proposed industrial development strategy under the Japanese initiative "*Corridor for Peace and Prosperity*".

There are several issues to be further considered as necessary measures/actions among the stakeholders which would help efficient and effective implementation of the successive step of the full-scale Feasibility Study (Phase II).

6.1 Promotion of Priority Industries

As discussed in Chapter 4, the Study prioritized the following industries/products along with export strategies for export promotion.

- Agriculture : High price or high added value products
- Processed Foods : High quality of products (i.e. extra virgin olive oil), *Halal* products matching Arab food requirements, Organic food aiming at the potential healthy food market
- Stone and marble : Products with unique and custom-made design
- Pharmaceutical : Nutrient supplements
- Metal, Rubber/Plastics : Strengthening vertical linkages with Jordanian/GCC companies

In order to explore new markets for promising products and to facilitate them being more competitive in the external market, relevant stakeholders are recommended to take actions, which will be explained below.

(1) Practical Market Survey

It is necessary to strengthen marketing channels and obtain firsthand market information. Many papers and references about the organic food market in Europe are available. PFIA is, for instance, advised to conduct its own study on organic food by kind, market size, and farm size by product, and to investigate farming practices in the EU, and listen to the voices of European organic food producers and importers about promising organic products in Palestine. The study shall target the European market for organic foods.

Malaysia is currently the major export country for *Halal* products into the UAE. Palestine would have to find niche product segments in the Arab market including UAE. The Malaysian export strategy for *Halal* products would be a good reference for Palestinian manufacturers in terms of labeling and market segmentation.

(2) Technical Assistance to Farmers

Technical assistance to farmers is also important. Organic food, such as olive oil, requires natural conditions concerning soil, fertilizer, seeds and water. Small farmers who have limited production capacity need to acquire special farming practices to produce primary products by organic cultivation. *The Palestinian Agricultural Relief Committees* (PARC), having the functions of extension services and R&D, would be the suitable institution to assist small farmers in developing farming practices. There would also need to be a laboratory and pilot farms specializing in organic primary products to primarily furnish small farmers with basic technology. A public-private partnership between PARC and a donor-funded project would be recommended to implement technical assistance to farmers in terms of new products and product development including demonstration of a pilot farm and laboratory facilities.

As JICA is currently undertaking another technical cooperation scheme for the agriculture sector "*The Project for Strengthening Support System Focusing on Sustainable Agriculture in the Jordan River Rift Valley*", close coordination with the Phase II Study shall be made for practical implementation.

6.2 Promotion of Investment

As the investment demand survey identified impediments to investment promotion, appropriate action shall be taken to make the agro-industrial park attractive and feasible for investment.

PNA is recommended to create the "*Investment Promotion Unit*" attached to the Minister of National Economy. The Unit would provide investors with a set of necessary information including land, financial incentives, legal consultation, local partners and so on. It is also recommended that the Feasibility Study (Phase II) shall conduct an investment promotion as a pilot activity, which will assist PNA in establishment of the Unit by appointing competent staff from the relevant stakeholders, i.e., MoNE, PIPA, PIEFZA and the private sector. Preliminary investment promotion activity shall be undertaken in cooperation with the Unit.

6.3 Negotiation of Regional Cooperation Issues

Since regional cooperation issues definitely affect feasibility of the project in terms of investment demand and development cost, improvements in the issues would be vital for the successful implementation of the Park. Therefore, prior to the successive study stage (Phase II), improvements in the following issues need to be discussed/negotiated in the next Four-party Consultative Meeting.

The following have been taken into consideration to facilitate the agro-industrial park development project as the regional cooperation issues between Palestine, Israel and Jordan, under Japanese facilitation.

- Improvements relating to movement restriction
- Agreement on site selection and access road
- Establishment of decision-making body and working groups.

(1) Improvements Relating to Movement Restriction

Both Palestine and Israel are recommended to resume discussion on a special agreement for free movement of goods and people applicable to the industrial park, the origin of which can be traced back to the ministerial agreement made in 1999 between the two parties.

A third party's involvement in security services at the industrial park is expected to soften Israeli security concern and is vital to realize such a special agreement. An agreement should include relaxation of passage control on goods and people at commercial crossing points between the West Bank and Israel, which would enable delivery of goods without transshipment.

Transportation of goods at the Allenby Bridge (international crossing point) has been a matter of security between Israel and Jordan. Cargo passage is currently controlled under the back-to-back system. High transportation cost is considered to be attributable primarily to the system. Therefore, an alternative method, such as the door-to-door system, shall be taken into account instead of the back-to-back system.

(2) Agreement on Site Selection and Access Road

Site selection and provision of an access road are the urgent matters necessary to be agreed between Palestine and Israel. Palestine, for the time being, has proposed an area adjacent to the iron factory as the development site, which is located in the southern part of Jericho City. This proposed site comprises Areas A and C, while Palestine needs Israeli agreement on Area C where the industrial park could be further expanded. An exclusive access road connecting to Route 90 could be the most cost-effective way, but it would conflict with the Israeli security concern. It is also necessary for the access-road issue to be discussed/negotiated together with the improvements in movement restriction.

(3) Establishment of Decision-Making Body and Working Groups

In the course of the Study, the Team found that it would be worthwhile for Palestine to establish a decision-making body and working groups by respective issue, comprising technical experts from the relevant authorities, for the purpose of more efficient and effective discussion/negotiation among the stakeholders.

Ministers or their appointed persons from the Ministry of Planning and Ministry of National Economy are requested to discuss regional cooperation issues periodically and guide the working groups. Working groups shall consist of members from technical experts/staff from the Ministry of Planning, Ministry of National Economy, PIEFZA, Jericho Governorate,

Negotiation Support Unit, Negotiation Affairs Department of PLO and so forth. Even private consultants are able to be involved, if necessary, depending on the nature of the issue. Working groups shall provide necessary data with the Negotiation Affairs Department, which is responsible for negotiations with the Israeli side. The following figure is a schematic organization of the decision-making body and working groups.

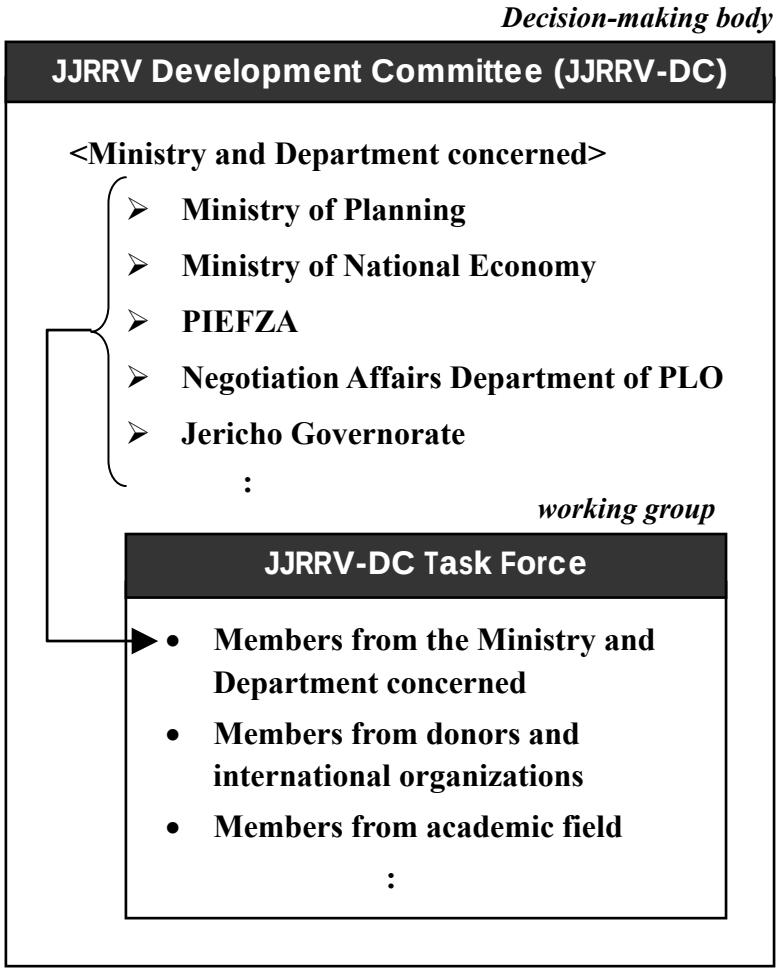


Figure 6.2.1 Proposed Organization (*conceptual*)

6.4 Scope of Work for the Feasibility Study (Phase II)

The successive Study, as Phase II, would be implemented after the second technical level meeting of the Four-Party Consultative Unit, which is scheduled to be held at the end of October 2007. The Phase II study shall cover three major items. They are i) Investment Promotion of Agro-industrial park, ii) Agribusiness Promotion and iii) Agro-industrial Park Development Plan.

The provisional scope of work for Phase II is shown in the table below.

Table 6.4.1 Scope of Work for the Phase II Study (*provisional*)

Item	Content
Investment Promotion of Agro-industrial Park	・ Private Investment Needs Survey ・ Foreign/Domestic Investment Promotion ・ Institutional Improvement and Capacity Building
Agribusiness Promotion (*see margin note*)	・ Market Study for Agricultural Product (i.e. new product segment) ・ Quality Improvement of Agricultural Product ・ Study and Pilot Project for Post Harvest Management/Treatment
Agro-industrial Park Development Plan	・ Development Concept ・ Land Use Plan ・ Planning of On-site and Off-site Facilities ・ Cost Estimate ・ Implementation Framework and Schedule ・ Economic and Financial Evaluation ・ Environmental and Social Consideration (incl. assistance for implementation of EIA)

Note: This item is to be closely coordinated with the on-going technical cooperation project "*The Project for Strengthening Support System Focusing on Sustainable Agriculture in the Jordan River Rift Valley*".

ANNEX

Annex 1

Value of Palestinian Export of Selected Commodities

1999 - 2005

1. Processed Meat Products
2. Olive Oil
3. Thyme
4. Stone & Marble
5. Furniture
6. Metal Products
7. Pharmaceutical Products
8. Textile
9. Apparel
10. Footwear
11. Rubber Products
12. Plastic Products
13. Fruits and Vegetables (Fresh)
14. Fruits and Vegetables (Processed)

1. Processed Meat Products (Thousand US$)

	1999		2000		2001		2002		2003		2004		2005	
Israel	Israel	564.78	Israel	497.10	Israel	245.42	Israel	520.80	Israel	445.25	Israel	194.08	Israel	302.80
Jordan	Jordan	1401.01	Jordan	1207.26	Jordan	1550.06	Jordan	1203.70	Jordan	1513.13	Jordan	1803.17	Jordan	1,491.73
Gulf Countries	U.A.E	59.74	U.A.E	102.16	U.A.E	147.78	U.A.E	108.65	Saudi Arabia	122.45	U.A.E	202.08	UAE	278.31
	Qatar	6.75	Qatar	2.69	Bahrain	17.27	Saudi Arabia	37.72	U.A.E	90.73	Saudi Arabia	78.76	Saudi Arabia	83.87
	Saudi Arabia	3.32	Saudi Arabia	2.32	Saudi Arabia	14.73					Kuwait	27.08	Kuwait	51.75
			Oman	1.15	Kuwait	11.56							Qatar	4.20
					Qatar	0.07								
Other Arab League Countries	Iraq	2.10	Egypt	73.78			Iraq	7.64	Iraq	72.55			Syria	4.20
	Lebanon	0.38							Egypt	0.05			Algeria	1.46
Other Countries							U.S.A	0.03	Sudan	10.30				
TOTAL		2038.07		1886.47		1986.88		1878.54		2254.47		2305.17		2,218.32

Source: PCBS

2. Olive Oil (Thousand US$)

Area/Country	1999		2000		2001		2002		2003		2004		2005	
Israel	Israel	561.09	Israel	1,335.99	Israel	1,303.53	Israel	1,422.94	Israel	1,579.32	Israel	2,258.43	Israel	5,208.40
Jordan	Jordan	23.73	Jordan	25.39	Jordan	127.43	Jordan	273.63	Jordan	0.81	Jordan	33.12	Jordan	35.98
Europe	Netherlands	27.31					Italy	350.02	Belgium	270.41	France	249.10	France	471.19
	Belgium	7.31					Switzerland	148.31	Switzerland	149.04	Belgium	103.22	UK	156.03
							Belgium	55.65	France	126.76	UK	80.45	Spain	153.40
							Netherlands	1.00	Italy	26.40	Switzerland	45.88	Switzerland	146.95
									Australia	18.11	Italy	41.93	Belgium	71.18
											Austria	24.87	Italy	66.93
											Slovenia	10.79	Slovenia	65.63
											Germany	4.98	Germany	29.14
Gulf Countries	UAE	196.15	UAE	799.34	UAE	700.86	Saudi Arabia	779.13	UAE	965.16	UAE	1,210.42	Saudi Arabia	569.84
	Saudi Arabia	40.68	Saudi Arabia	481.83	Saudi Arabia	523.94	UAE	664.13	Saudi Arabia	938.91	Saudi Arabia	1,125.29	UAE	518.81
					Kuwait	124.92	Kuwait	222.28	Kuwait	445.12	Kuwait	554.03	Kuwait	268.37
									Qatar	17.01	Qatar	118.42	Bahrain	41.90
													Qatar	25.01
Other Arab League							Syria	44.16	Yemen	88.84	Yemen	44.40	Yeman	6.43
													Syria	0.43
													Egypt	0.35
													Libya	0.20
North/South America					Canada	3.84			USA	93.02	USA	269.50	USA	419.08
									Canada	37.81	Canada	27.24	Canada	62.12
Other											Turkey	7.21	Japan	164.77
											China	48.75		
TOTAL		856.28		2,642.55		2,784.52		3,961.26		4,756.73		6,258.00		8,482.16

Source: PCBS

3. Thyme (Thousand US$)

	1999		2000		2001		2002		2003		2004		2005	
Israel	Israel	75.89	Israel	169.66	Israel	188.22	Israel	122.56	Israel	36.85	Israel	57.30	Israel	61.90
Jordan							Jordan		Jordan		Jordan	31.60	Jordan	35.89
Europe							Netherland	0.40	Germany	0.02	Germany	0.40	Germany	1.00
											Switzerland	3.54	Italy	2.84
											Slovenia	1.99	UK	0.20
Gulf Countries					UAE	65.66	Saudi Arabia	13.63	UAE	2.55	Kuwait	0.11	Kuwait	0.34
											Qatar	1.81	Qatar	0.51
											Saudi Arabia	5.20	UAE	5.83
											UAE	1.17		
Other Arab League Countries											Yemen	16.99	Libya	0.30
													Syria	3.96
North/South America									Canada	0.59				
TOTAL		75.89		169.66		253.88		136.59		40.01		120.10		112.78

Source: PCBS

4. Stone & Marble (Thousand US$)

	1999		2000		2001		2002		2003		2004		2005	
Israel	Israel	65,571.75	Israel	68,947.00	Israel	57,862.74	Israel	48,017.89	Israel	51,058.60	Israel	51,678.62	Israel	50,964.74
Jordan	Jordan	1,871.11	Jordan	1,660.86	Jordan	2,510.91	Jordan	2,566.49	Jordan	2,981.28	Jordan	2,075.72	Jordan	6,100.62
Europe	Italy	571.11	UK	340.81	UK	527.02	Italy	691.63	Italy	435.65	UK	558.03	UK	1,265.19
	UK	307.83	Italy	778.58	Italy	441.02	UK	396.11	UK	319.29	Italy	303.34	Italy	762.98
	Belgium	104.10	Greece	17.34	Belgium	208.71	France	109.78	France	62.10	France	159.22	France	210.29
	France	36.88	Germany	17.08	France	42.03	Belgium	82.82	Cyprus	61.04	Spain	106.95	Spain	110.75
	Germany	20.26	France	26.73	Austria	29.84	Ireland	16.10	Ireland	38.32	Cyprus	75.48	Cyprus	78.56
	Austria	0.59	Belgium	204.85	Greece	16.91			Germany	36.51	Belgium	70.72	Finland	30.21
					Germany	0.05			Belgium	30.19	Ireland	48.77	Germany	27.55
									Portugal	25.30	Greece	24.82	Portugal	24.21
									Spain	22.98			Belgium	16.56
													Sweden	16.49
Gulf Countries	Saudi	17.49	Saudi	63.66	UAE	54.87	Kuwait	24.00	Saudi Arabia	108.01	Saudi Arabia	855.80	Saudi Arabia	307.40
	UAE	6.99			Saudi Arabia	37.30	Saudi Arabia	16.12	UAE	1.42	UAE	89.67	Oman	276.31
											Bahrain	11.25	UAE	87.67
											Kuwait	7.76	Kuwait	2.17
Other Arab League Countries							Tunisia	20.97			Yemen	0.30	Egypt	54.73
											Syria	0.50	Algeria	5.61
											Algeria	0.05	Syria	0.40
North/South America	USA	6.23			USA	52.95	USA	69.05	USA	318.49	USA	858.51	USA	3,413.80
									Canada	15.80			Canada	19.09
Other Countries	Turkey	6.99			China	32.40			China	147.26	China	449.04	China	373.98
											Japan	25.40	Japan	20.46
											South Africa	8.63	Turkey	5.72
											Turkey	0.02		
TOTAL		68,521.31		72,056.91		61,816.75		52,010.96		55,662.24		57,408.58		64,175.49

Source: PCBS

5. Furniture (Thousand US$)

	1999		2000		2001		2002		2003		2004		2005	
Israel	Israel	24,034.18	Israel	22,947.62	Israel	19,784.07	Israel	17,327.50	Israel	19,692.92	Israel	23,509.26	Israel	24,699.48
Jordan			Jordan	0.53	Jordan	2.57			Jordan	98.95	Jordan	24.64	Jordan	683.89
Europe							Portugal	0.42					Spain	0.29
Gulf Countries							UAE	16.75	Saudi	15.02	UAE	2.54		
											Bahrain	0.42		
Other Arab League Countries											Algeria	0.50	Egypt	5.28
											Syria	1.61		
Other Countries	Bhutan	3.68									Unkonwn	13.52	unknown	0.76
TOTAL		24,037.86		22,948.15		19,786.65		17,344.67		19,806.88		23,552.50		25,389.69

Source: PCBS

6. Metal Products (Thousand US$)

	1999		2000		2001		2002		2003		2004		2005	
Israel	Israel	18,873.14	Israel	15,621.11	Israel	10,620.87	Israel	8,246.43	Israel	8,932.80	Israel	12,453.015	Israel	14,460.41
Jordan	Jordan	280.52	Jordan	231.85	Jordan	1,184.67	Jordan	1,360.99	Jordan	455.42	Jordan	518.851	Jordan	686.61
Europe	Ireland	2.29							France	16.08	Italy	6.460		
									Italy	16.28				
									Spaini	5.30				
									UK	19.92				
Gulf Countries											Bahrain	2.080	Saudi	701.12
													UAE	0.07
Other Arab League Count	Iraq	0.79									Egypt	0.021		
	Lebanon	1.16												
	Syria	1.70												
	Yemen	1.45												
North/South America	Mexico	73.10												
	TOTAL	19,234.15		15,852.96		11,805.54		9,607.43		9,445.80		12,980.43		15,848.20

Source: PCBS

7. Pharmaceutical Products (Thousand US$)

	1999		2000		2001		2002		2003		2004		2005	
Israel	Israel	9,785.14	Israel	10,131.08	Israel	9,331.93	Israel	7212.93	Israel	9,144.64	Israel	11,229.28	Israel	8,222.60
Jordan	Jordan	0.64			Jordan	2.02	Jordan	1.28	Jordan	220.71	Jordan	406.13	Jordan	480.68
Europe	Estonia	3.12	France	65.35	France	48.76					Cyprus	3.71		
	France	3.06			Germany	0.06								
Gulf Countries											Bahrain	0.05	Qatar	2.75
Other Arab League Countries			Yemen	21.50					Yemen	135.00	Syria	0.05	Algeria	2,509.29
									Iraq	6.09	Iraq	45.76	Yemen	345.37
											Yemen	0.00	Iraq	27.93
											Algeria	0.05		
North/South America					USA	1.00								
Other Countries	Benin	95.97							Azerbaijan	20.04	Cote d'Ivoire	45.76	Cote d'Ivoire	84.94
	Cote d'Ivoire	26.58												
	Cameroon	27.36												
TOTAL		9,941.87		10,217.93		9,383.77		7,214.21		9,526.47		11,730.79		11,673.57

Source:PCBS

8. Textile (Thousand US$)

	1999		2000		2001		2002		2003		2004		2005	
Israel	Israel	9,121.26	Israel	8,302.02	Israel	6,740.97	Israel	4584.20	Israel	7,611.94	Israel	6,668.44	Israel	8,625.07
Jordan	Jordan	8.64	Jordan	2.51	Jordan	2.00			Jordan	0.03	Jordan	0.88	Jordan	84.85
Europe							Germany	4.98					Cyprus	6.37
Gulf Countries	UAE	4.37	UAE	4.57	Bahrain	27.90								
Other Arab League Countries											Algeria	0.33	Libya	1.40
													Syria	10.59
													Turkey	4.59
North/South America					USA	1.53								
TOTAL		9,134.27		8,309.09		6,772.40		4,589.18		7,611.97		6,669.65		8,732.88

Source: PCBS

9. Apparel (Thousand US$)

	1999		2000		2001		2002		2003		2004		2005	
Israel	Israel	7,818.90	Israel	9,493.56	Israel	5,786.77	Israel	5342.33	Israel	4,936.69	Israel	5,241.93	Israel	3,309.00
Jordan	Jordan	41.88	Jordan	14.73	Jordan	17.45	Jordan	10.45			Jordan	0.04	Jordan	1,167.98
Europe					France	0.08			Germany	0.99	Germany	5.86	Belgium	62.74
					Germany	21.28			UK	1.27	UK	0.92		
					Italy	0.09								
					Macedonia	0.02								
					Poland	0.00								
					UK	0.02								
Gulf Countries	UAE	26.83					UAE	0.20					UAE	6.00
	Saudi Arabia	13.51												
Other Arab League Countries					Egypt	2.57			Tunisia	1.17	Algeria	0.06	Egypt	4.00
					Syria	0.30					Syria	0.15		
					Turkey	0.14					Turkey	52.33		
North/South America	USA	50.44	USA	5.21	U.S.A	3.91			USA	145.95	Canada	20.55	Colombia	102.55
					Brazil	0.11			Canada	78.15	USA	28.13		
Other Countries														
TOTAL		7,951.56		9,513.50		5,832.74		5,352.97		5,164.22		5,349.98		4,652.26

Source:PCBS

10. Footwear (Thousand US$)

	1999		2000		2001		2002		2003		2004		2005	
Israel	Israel	21,731.66	Israel	18,003.55	Israel	15,491.71	Israel	11,438.81	Israel	11,569.07	Israel	13,644.34	Israel	15,355.65
Jordan	Jordan	355.05	Jordan	78.50	Jordan	35.62	Jordan	46.14	Jordan	20.76	Jordan	112.90	Jordan	151.64
Europe					Australia	1.00							Italy	199.20
					Germany	0.04								
					Romania	5.95								
Gulf Countries	Saudi Arabia	129.42	Saudi Arabia	258.25	Saudi Arabia	8.25	UAE	0.25	Sauri Arabia	123.01	Bahrain	4.50	Bahrain	11.69
	UAE	11.72	UAE	75.68							Saudi Arabia	139.78	Sauri Arabia	186.32
													UAE	19.37
Other Arab League Countries	Egypt	8.84			Syria	0.46					Syria	0.10	Egypt	2.65
											Yemen	616.51		
North/South America			USA	30.19	USA	0.25			USA	52.58				
Other Countries	Djibouti	6.14			Ukraine	1.42								
TOTAL		22,242.83		18,446.16		15,544.69		11,485.20		11,765.42		14,518.13		15,926.52

Source: PCBS

11. Rubber (Thousand US$)

	1999	2000	2001	2002	2003	2004	2005
Israel	2,838.87	3,447.14	1,747.60	1,750.47	1,577.60	1,456.983	1,917.47
Jordan				52.08			3.67
TOTAL	2,838.87	3,447.14	1,747.60	1,802.55	1,577.60	1,456.98	1,921.14

Source: PCBS

12. Plastics (Thousand US$)

	1999		2000		2001		2002		2003		2004		2005	
Israel	Israel	7,863.16	Israel	7,479.55	Israel	7,240.83	Israel	4726.83	Israel	7,216.38	Israel	7,093.766	Israel	8,332.90
Jordan	Jordan	4.49	Jordan	23.59	Jordan	1.80	Jordan	33.58	Jordan	81.83	Jordan	391.285	Jordan	40.70
Gulf Countries											Bahrain	0.050		
Other Arab League Countries											Syria	0.020		
TOTAL		7,867.65		7,503.14		7,242.63		4,760.41		7,298.22		7,485.12		8,373.60

Source: PCBS

13. Fruits and Vegetable: Fresh (Thousand US$)

Country/Area	1999		2000		2001		2002		2003		2004		2005	
Israel	Israel	32,192.70	Israel	37,902.04	Israel	11,139.29	Israel	7,981.16	Israel	9,542.50	Israel	6,415.45	Israel	7,891.25
Jordan	Jordan	634.54	Jordan	709.10	Jordan	563.25	Jordan	101.69	Jordan	1,506.49	Jordan	433.24	Jordan	295.47
Eurpe					Germany	9.01	netherland	382.55	Netherland	791.52	Netherland	425.16	Neherland	845.25
							UK	149.81	UK	461.47	UK	272.45	France	119.82
							Germany	121.21	France	261.35	France	113.47	Belgium	39.29
							Belgium	55.33	Belgium	169.72	Belgium	88.10	Italy	15.31
							Switzerland	46.78	Switzerland	161.45	Italy	74.71	UK	0.80
							Austria	28.13	Germany	68.98	Denmark	41.37		
							Denmark	27.97	Denmark	37.90	Switzerland	28.31		
							Italy	26.15	Austria	36.42	Germany	13.50		
							France	17.42	Greece	15.53	Austria	3.27		
							Greece	8.96	Poland	6.68	Canada	0.29		
							Spain	7.22	Italy	4.41				
							Poland	0.40	Canada	1.42				
Gulf Countries	Saudi Arabia	36.73	Saudi Arabia	18,153.58	UAE	49.83	UAE	2.00	UAE	109.49	UAE	120.06	UAE	96.33
	UAE	19.51	UAE	87.61	Bahrain	31.94	Saudi Arabia	0.27	Saudi Arabia	44.74	Kuwait	67.03	Kuwait	79.74
					Saudi Arabia	21.52			Kuwait	29.59	Saudi Arabia	46.33	Saudi Arabia	36.05
					Kuwait	5.20			Qatar	3.03	Qatar	16.22	Qatar	26.86
Other Arab League Countries									Yemen	1.91	Yemen	0.34	Iraq	32.20
													Yemen	3.86
													Libya	0.16
North/South America					Canada	0.10					USA	12.87	Canada	0.19
Other Countries							Czechenia	0.66	Russia	1.97	Russia	0.11	Unkown	889.72
											Unkown	1,206.03		
TOTAL		32,883.49		56,852.33		11,820.15		8,957.69		13,256.57		9,378.29		10,372.30

Source: PCBS

14. Fruits and Vegetables: Processed Products (Thousand US$)

	1999		2000		2001		2002		2003		2004		2005	
Israel	Israel	2,418.04	Israel	3,124.62	Israel	2,573.83	Israel	965.76	Israel	1,113.72	Israel	1,483.55	Israel	2,057.26
Jordan	Jordan	565.91	Jordan	26.13					Jordan	102.43	Jordan	87.40	Jordan	92.24
Europe	Romania	1.96											Austria	94.71
													Belgium	13.19
													Denmark	148.69
													France	35.17
													Germany	107.31
													Hungary	0.47
													Netherland	279.94
													Switzerland	4.45
													UK	360.91
Gulf Countries					UAE	0.18	Saudi Arabia	3.96					Kuwait	30.11
													Qatar	24.16
													UAE	25.40
Other Arab League Countries					Egypt	10.86			Egypt	77.48	Yemen	68.29		
									Iraq	12.60				
									Yemen	28.51				
North/South America									USA	44.36			Canada	0.06
Other Countries											unknown	21.73	unkonwn	4.32
TOTAL		2,985.91		3,150.75		2,584.87		969.72		1,379.12		1,660.98		3,278.40

Source: PCBS

Annex 2

Legal and Organizational Aspects of Environmental & Social Considerations

(1) Palestinian Environmental Assessment Policy
(2) Water-related Laws
(3) Laws Related to Solid Waste and Hazardous Materials
(4) Land-related Matters
(5) Authorities and Ministries Concerned
(6) Environment Quality Authority (EQA)
(7) Palestinian Water Authority (PWA)
(8) Environmental Assessment Committee (EAC)
(9) Joint Water Committee (JWC)
(10) Palestinian Land Authority (PLA)

(1) Palestinian Environmental Assessment Policy

(a) Outline of the Environmental Assessment (EA)

The necessity for EA is clearly spelled out in the "Palestinian Environmental Assessment Policy", which was approved by the Ministerial Council in resolution No: 27-23/4/2000 on 23 April, 2000. Two (2) kinds of EA studies may be required as shown in Table (1)-1.

Table (1)-1 Palestinian Environmental Assessment

Kind of EA studies	Application
IEE: Initial Environmental Evaluation	✧ Applied for projects of which significant environmental impacts are uncertain ✧ Compliance with environmental regulations must be ensured
EIA: Environmental Impact Assessment	✧ Applied for projects that are likely to have significant environmental impact ✧ EIA may be carried out as a result of an IEE

The policy mandates the implementation of Environmental Impact Assessment (EIA) for the following development projects: 1. Power Plants, 2. Quarries and mines, 3. Wastewater treatment plants including main sewers, 4. Cement plants, 5. Solid waste disposal sites, 6. Hazardous waste disposal sites, 7. Plants producing, storing or using hazardous substances, 8. Airports and landing strips, 9. Seaports, jetties and harbors, 10. Refineries, 11. Industrial estates, 12. Major dams and reservoirs, 13. Major roads, 14. Steel mills. Accordingly, an EIA will be required as a precursor to the construction of an industrial park in Palestine.

Prior to EA for a project, screening criteria are used to determine whether an IEE is required or whether to move directly to an EIA.

The screening criteria are that the proposed development will:

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

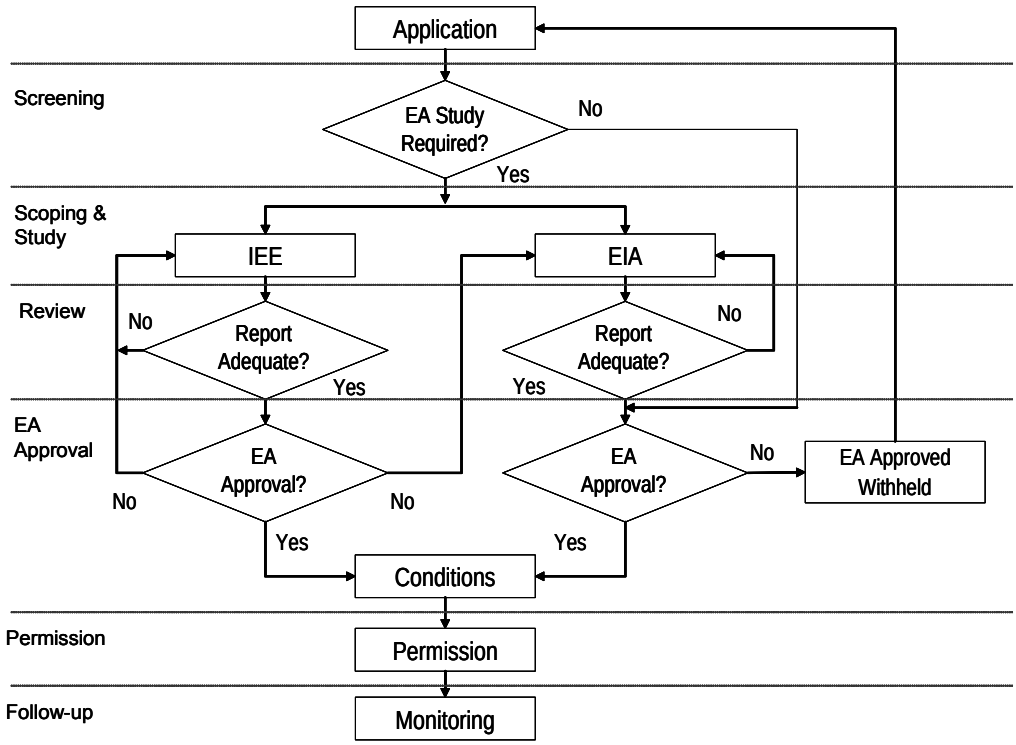
The "Environmental Law (No (7) 1999)", which was given effect to at the end of 1999, covers a wide range of environmental issues with 82 articles in total. It contains specific sections with rules and regulations related to:

- Land use

- Solid waste
- Hazardous materials and waste
- Pesticide and fertilizers
- Quarrying and mining
- Desertification and land-erosion
- Air pollution
- Noise pollution
- Water environment
- Marine environment
- Natural zones, reserves, cultural and historical areas

Among these, water environment, solid waste, hazardous materials and waste, and land use are considered to be the most important items from the viewpoint of the construction of an agro-industrial park. Different laws related to these issues are described in "(2) Water-related Laws" – "(4) Land-related Matters".

A flowchart of the EA administrative procedures is given in Figure (1)-1



Source: EQA

Figure (1)-1 EA administrative Procedures

(b) General Environmental Items

General environmental items to be described in the EIA reports are as enumerated in Table (1)-2.

Table (1)-2 Environmental Component to Evaluate

Category	√	Environmental Component
Biophysical, Resource and Land Use Components	√	Climate and air quality
	√	Surface water hydrology and quality
	√	Groundwater hydrology and quality
	√	Terrain and natural hazards
	√	Soils and vegetation
	√	Wildlife resources and use
	√	Aquatic resources and use
	√	Recreation and tourism resources and use
	√	Forest resources and use
	√	Agricultural resources and use
	√	Mineral resources and use
Economic Components	√	Direct employment and income
	√	Indirect/induced employment and income
	√	Labor market conditions
	√	Sources of supplies, materials and services
	√	Transportation requirements
	√	Infrastructure development requirements and costs
	√	Government revenues/costs
	√	Indirect/induced economic development opportunities
Cultural and Heritage Components	√	Archaeological sites
	√	Traditional use sites
	√	Historic sites and landscape features
Social Components	√	Social/demographic profile
	√	Population
	√	Housing and accommodation
	√	Land and water use
	√	Transportation and traffic
	√	Community service delivery
	√	Local government revenues/costs
	√	Social support services
	√	Community stability, cohesion and well being
	√	Gender equity
Health Components	√	Supply of health facilities and services
	√	Community water supply and watersheds
	√	Waste treatment and discharge
	√	Ambient air and water quality
	√	Public health risks
	√	Worker health and safety
	√	Noise
	√	Local community health

Source: *EQA*

(c) Necessity of EIA for the Agro-Industrial Park

EIA is absolutely necessary for the construction of an industrial park in Palestine as described in this Annex.

(d) Environmental Laws and Regulations to be Referred to in Different Jurisdictions

The environmental laws and regulations to be applied differ depending on the site location (Area A, B, or C) as shown in Table (1)-3.

When the site location is close to area C, Israeli side often requires PNA's submitting the EIA report. And this is the case of the construction of an industrial park in the urban fringe of Jerico City. According to COGAT Tel Aviv, usually it will take two (2) to six (6) months before issuing approval.

Table (1)-3 Environmental Laws and Regulations to be Applied (West Bank)

Area	A	B	C
International Agreement	Oslo II Agreement		
Laws to be Applied	PNA Law		Israeli Law + PNA Law + Jordanian Law (pre 1967)
Regulations to be Applied	PNA Regulation		Israeli Regulation + Israeli Military Orders + PNA Regulation

Source : EQA
PNA : Palestinian National Authority
CA : Civil Administration
A law is the governing rule that works a general guideline stating what should and shouldn't be done. A Regulation is an actual interpretation of the law, setting the procedures and policies, and who's accountable for what.

(2) Water-related Laws

(a) Water Law

The current water law promulgated on 17 July, 2002 consists of 44 articles.

The "Water Law" repeals the previous laws and any other legislation irrelevant to this law and reaffirms the PWA's mandate and its full responsibility for the management of water resources and wastewater in Palestine.

(b) Other Water-related Laws

Legislation in Palestine is complicated. This is attributed to the long history of occupation when Palestine was governed by a sequence of different laws. An outline of this past series of laws is summarized in Table (2)-1.

Table (2)-1 Water Related Laws Introduced to Palestine

	Epoch	Laws Introduced
1	Jordanian Legislation (1948-1967)	1. Land and Water Settlement Law No.40/1952 The law provides for a settlement and registration of land and water rights in the Jordanian Land Registry. The law provides for procedures on the registration process. 2. Water Control Law No.31/1953 This law prescribes rules relating to the construction of irrigation structures in Irrigation Areas, Water Allocations. Tables were prepared to detail the quantities allocated to each land parcel and the quantity of irrigated land. 3. Municipalities Law No.29/1955 This law detailed the powers of the municipalities and stipulated that the council would be responsible for the provision of water to the residents, determination of the means for including installations of pipelines, the organization of water allocations, determination of tariffs and fees, and the prevention of pollution of springs, canals, pools, and cisterns. 4. Law on the Organization of Matters of Drinking Water in the Jerusalem District No.9/1966 This law created a Municipal-Regional Water Authority with the responsibility as well as the powers for the supply of water in the district of Jerusalem, including to Ramallah, Bethlehem and their neighboring townships and villages. The legal norms which were applicable to the West Bank on the eve of the 1967 war included the Ottoman Laws, the British Mandatory Ordinances and the Jordanian Laws.
2	Israeli Military Orders (1967-1995)	1. Military Order on Powers Concerning Water Laws No.92/1967 The order provided that any and all of the powers in the sphere of water laws which were held by the Government of the Hashemite Kingdom of Jordan would be held henceforth by a person to be appointed by the Military Commander. 2. Military Order Amending Law No.31/1953 on Water Control No.158/1968 The order added a provision to the Jordanian Law to the effect that henceforth not only Irrigation Installations in Irrigation Areas were put under the control of the authorities but that the centralized control be extended to include all water production installations. The Order provided that the erection, possession and operation of any water production installation would require henceforth a license. 3. Military Order on Land and Water Settlement No.291/1969 This order amended the Jordanian Law on Water and Land Organization of 1952 and provides that any water and land settlement which has not yet been completed in accordance with the Jordanian Law is put in abeyance and may not prevent real estate transactions. 4. Military Order Amending the Law on the Regulation of the Natural Resources No.457/1972 The Order provides that the assessment of the value of land and water quotas for the purpose of compensation is to be made by an official body appointed by the Military Commander.

	Epoch	Laws Introduced
3	Palestinian Legislation (1995-To Date)	1. Presidential Decree No.5/1995 The Decree established the Palestinian Water Authority. 2. Law No.2/1996 This law established the Palestinian Water Authority and defined its objectives, functions and responsibilities. This Law gave the Palestinian Water Authority the mandate to manage the water resources, execute the water policy, establish, supervise and monitor water projects, and to initiate coordination and cooperation between the stakeholders in the water sector. 3. Presidential Decree No.66/1997 The Decree established the internal regulations of the Palestinian Water Authority and the rules of procedures. 4. Palestine Water Law No.3/2002 The Water law No.3/2002, which was signed on 17 July 2002 by the President, mentioned and assured these responsibilities; Develop, Supervise, and Manage Water Sector .The available Water Policy which states that "Water resources should be developed and managed efficiently in order to meet present and future needs in an environmentally sustainable way", was the guide in stipulating the Water Law. The Water Law includes within its articles the institutional framework of each level in the water sector, the roles of each level, and some water regulations.

Source: "Water Legislation in Palestine" provided by PWA

(c) Water Laws and Regulations to be Applied in Different Jurisdictions

The water laws and regulations to be applied differ depending on the site location (Area A, B, or C) as shown in Table (2)-2.

Table (2)-2 Water-Related Laws and Regulations to be Applied (West Bank)

Area	A	B	C
International Agreement	Oslo II Agreement		
Laws to be Applied	PNA Law		Israeli Law + PNA Law + Jordanian Law (pre 1967)
Regulations to be Applied	+ PNA Regulation		Israeli Regulation + Israeli Military Orders + PNA Regulation (Palestinian Villages)

Source : PWA
PNA : Palestinian National Authority
CA : Civil Administration

According to *Oslo II Bilateral Agreement, Article 40 Water and Sewage*, all development of water resources and systems by either side shall require the prior approval of the Joint Water Committee (JWC).

The procedure of water-related decisions by land jurisdiction type is shown in Figure (2)-1.

In Area A and Area B, the procedure starts from PWA and ends with JWC, while in Area C, it starts from PWA and ends with Civil Administration (CA) at Beit El, which is located on the outskirts of Ramallah City.

With an approval by JWC (and CA in case of Area C), PWA issues a license for the project in question so that it be able to go on to the next step (planning and design).

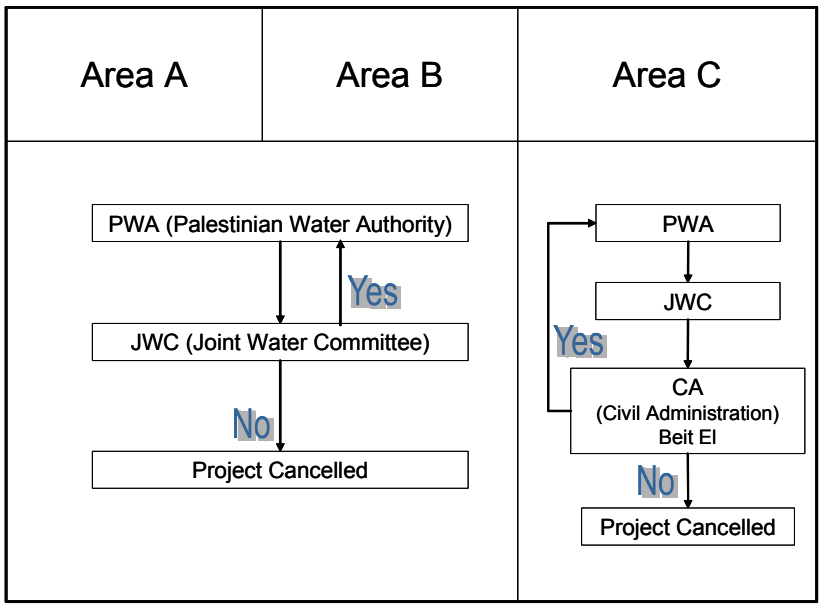


Figure (2)-1 Procedure of Water-related Decisions by Land Jurisdiction Type

(d) Water Reuse

The actual principles of collection, treatment, and reuse of wastewater policies in the West Bank are fundamentally based on *Regional Plan for the West Bank Governorates, December 1998 (MOPIC)*. Though the said regional plan is still valid and PNA has been encouraging the people to reuse wastewater, according to PWA, the things have not turned out so far as it was planned due to the following reasons: 1. Farmers mostly seem unwilling to use treated wastewater, 2. PNA is often confronted with financial constraints, and 3. Israeli side take time in making decisions in JWC, which often causes problems of delay.

Standards for the reuse of treated wastewater are specified by Palestinian Standards Institute (PSI) as fallows.

- PSI -1998-227: Industrial effluent wastewater
- PSI-2005-803: Air Pollution Emissions from Stationary Sources
- PSI-2005-41: Drinking Water
- PSI-2003-742: Treated wastewater

JWC approval will be necessary as shown in Figure (2)-1, if a wastewater treatment is constructed in the Agro-Industrial Park.

(3) Laws Related to Solid Waste and Hazardous Materials

There are articles related to "Solid Waste" (Article 7 – Article 10), and "Hazardous Substance and Waste" in (Article 11 – Article 13) in the "Environmental Law (No (7) 1999)", which provide very basic PNA policies.

On practical basis, there is a draft bylaw issued by EQA in 2005 regarding "Dealing and Management of Solid Waste", which were based upon articles 7, 8, 9, 23 of "Environmental law (No (7) 1999)". This bylaw is composed of 31 articles which mainly aim at assuring good management of solid waste through implementation of appropriate methods to reduce negative impacts on the environment (mainly groundwater). According to this draft bylaw, interested parties should take appropriate measures to reduce produced amount of solid waste. Local authorities are responsible for the management of solid waste according to type of solid waste generated and its characteristics. This bylaw is applicable to those who carries or discharges wastes or to those who are in charge of operation of dumping sites or waste treatment plants.

There are regulations applicable to limited areas or beneficiaries, too. In Jericho City, there are regulations for Joint Council for Solid Waste Management in JJRRV which were approved by the general body meeting of Joint Councils for Services, Planning and Development (JCspd) in August 2006. The regulations are made up with 32 articles, which mainly provide a basic system for solid waste management. As of July 2007, the regulations can be downloaded from the following uniform resource locator (URL).

URL: http://www.jcspd-jericho.org/en/regulations.html

(4) Land-related Matters

(a) Land-related Laws

The land-related laws and regulations to be referred to would differ depending on the land jurisdiction (Area A, B, or C) as shown in Table (4)-1.

Table (4)-1 Land-Related Regulations to be Applied (West Bank)

Area	A	B	C
Laws to be Referred to	Jordanian Law (pre 1967)		Israeli Law
Regulations to be Applied	PNA		Israeli Military Orders

Source : PLA

There are two Jordanian laws; what is called "Old Registration System" and "New Registration System" for land registration as shown in Table (4)-2. In case that an industrial park is constructed in an unregistered land, it is the "New Registration System" that will be applied, because it is a public work.

Table (4)-2 Land Registration Systems (West Bank)

Law	Old Registration System	New Registration System
Law Number	6/64	40/52
Effective since	1964	1952
Nature	Jordanian Law	Jordanian Law
Scope of Application	➢ Individual registration of personal parcels	➢ Public registration in unison of the whole or a part of "locality" on a large scale ➢ Land registration of for public development

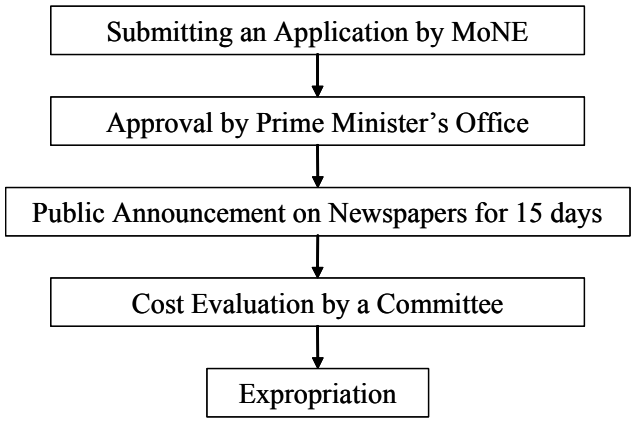
Source : PLA

(b) Land Expropriation

Law

Land expropriation and related matters are specified in the "expropriation law (No.2/ 1953)".

In case that an industrial park is constructed in (a) private land(s), the procedure of expropriation will be like the flow shown in Figure (4)-1.



Source : PLA
MoNE : Ministry of National Economy

Figure (4)-1 Typical Procedure of Land Expropriation for Industrial Parks

Compensation

Landowners are compensated for up to 70 – 75% of their lands brought under development according to the "expropriation law (No.2/ 1953)" and the interview to PLA conducted by JICA Study Team.

(c) Status of *Waqf*

According to Palestinian Liberation Organization (PLO)-Negotiations Supporting Unit (NSU), Waqf has definitions as described in the Table (4)-3.

Table (4)-3 Definitions of *Waqf*

Version	Definition	Source
1.	Mortmain; inalienable estate; tail general; gift left in perpetuity; dedication	Faruqi's Law Dictionary, Arabic-English, Second Revised Edition, 1983 (New Impression 1997
2.	Keeping assets, whether real estate or movable, from circulation, and limit benefiting from them to certain persons or parties. Waqf is two kinds: temporary and eternal. If it is temporary, the Waqf will be considered the ownership of the person who declared it, as long as he is alive, and his heirs after his death. The beneficiary can benefit from the assets for a specified period. When it expires, his right in them will cease, and the assets will return to the person who declared the Waqf and his heirs. A Waqf will not be considered Waqf Sehih ["full Waqf"] unless a legal certificate issued in its regard.	Translation from Faruqi's Law Dictionary, English-Arabic, Third Revised Edition

Source : PLO, NSU

It is possible that the site will be selected in *waqf* which is much easier, compared with a private land, to be reserved as an industrial park according to the PIEFZA's experiences. It is the Ministry of *Waqf* which is responsible for the lease contract of *waqf*. Usually, a lease contract can be extended every 49 years, which is based on the Jordanian law.

(5) Authorities and Ministries Concerned

Though the main actor related to environmental matters is EQA, other ministries and authorities are also concerned with different domains as shown in Table (5)-1

Table (5)-1 Environmental Responsibilities for Different Authorities and Ministries

		MOP	HPC	MOLG	MOH	MONE	PWA	PENRA	MOA	MOTr	MOTo
1	Land Use Planning	X	X								
2	Solid Waste Management			X							
3	Medical Waste Management				X						
4	Hazardous Waste Management					X					
5	Water Resources, Wastewater Management, and Sanitation						X				
6	Energy Saving and Conservation							X			
7	Use of Agrochemicals and Protection of Biodiversity								X		
8	Environmental Aspects of Traffic Infrastructure									X	
9	Protection and Management of Cultural Heritage										X

Source: Palestinian Environmental Strategy (EQA)
MOP: Ministry of Planning, HPC: Higher Planning Council, MOLG: Ministry of Local Government, MOH: Ministry of Health, MONE: Ministry of National Economy, PWA: Palestinian Water Authority, PENRA: Palestinian Energy & Natural Resources Authority, MOA: Ministry of Agriculture, MOTr: Ministry of Transportation. MOTo: Ministry of Tourism

These ministries and agencies compose Environmental Assessment Committee (EAC) which responsibilities are described as follows.

- To ensure adequate scoping of EA studies
- To prepare and to approve TOR for EA studies
- To review EA reports
- To make recommendations for the chairman of EQA who chairs EAC when he makes decisions.
- To assist EQA to ensure compliance of individual projects with environmentally approvable conditions.

(6) Environment Quality Authority (EQA)

EQA is responsible for overall environmental management, including solid waste management. This entity is in charge of Environmental Safety, Awareness & Education, Projects & International Relations, Policies and Planning, Environmental Resources, and Administrative and Financial Affaires. The organization chart of the Environmental Quality Authority (EQA) is as shown in Figure (6)-1.

It is "Environment Assessment Department" under "General Directorate for Environmental Protection" which is responsible for overseeing the EA process.

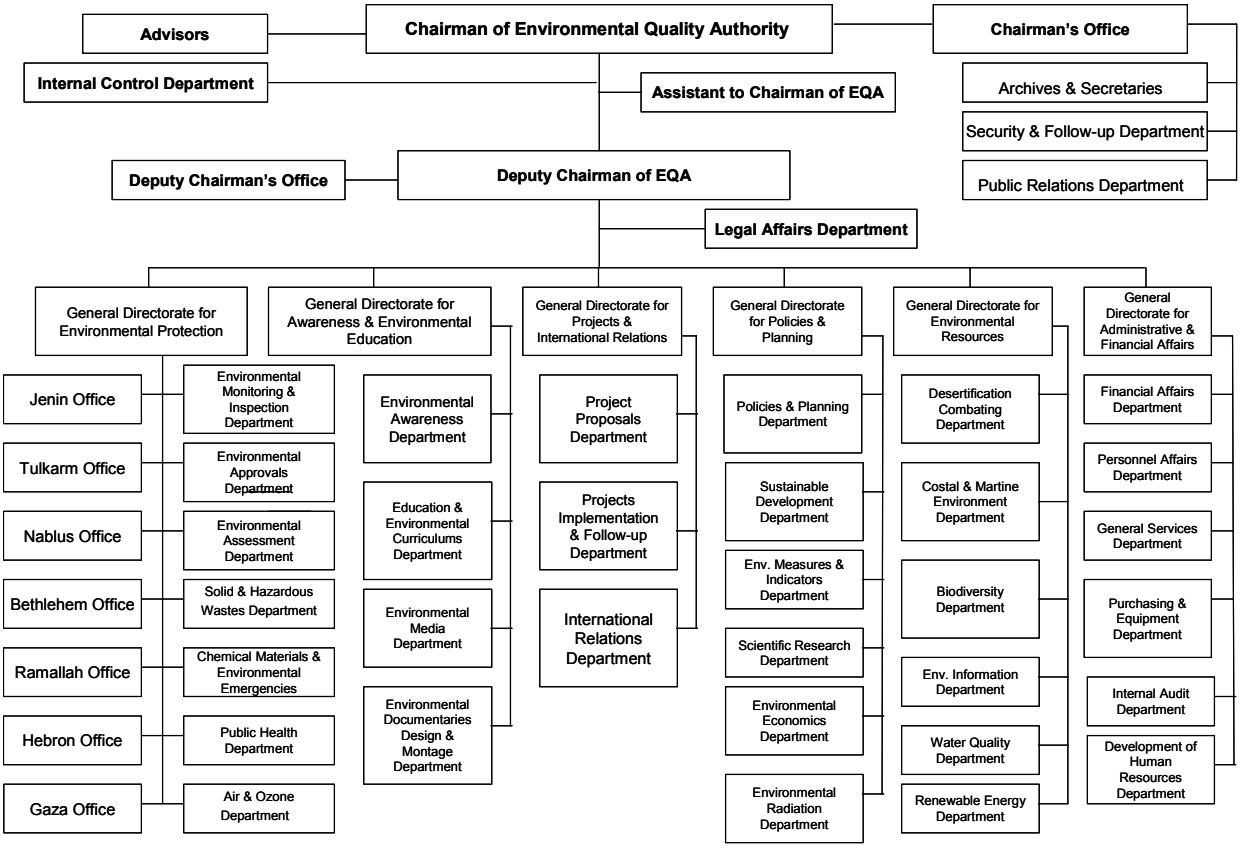


Figure (6)-1 Organization Chart of the Environment Quality Authority (EQA)

(7) Palestinian Water Authority (PWA)

According to the Water Control Directorate of PWA, the roles and responsibilities in the water sector in Palestine have been scattered, fragmented and unclear. In order to create a sustainable water control system, the PWA has decided to restructure the water sector separating the existing organizations into decision making, regulatory and service delivery levels, and to clarify their roles. The overall existing and future institutional framework of the water sector is as shown in Table (7)-1. Based on this framework, institutional reconstruction will be supposed to take effect at the following three (3) levels:

1. Cabinet of Ministers and National Water Council (Decision Making Level)

This level is responsible for approving policies, strategies and regulations of the water sector.

2. PWA (Regulatory Level)

PWA is a regulator and supervisor of the sector of which task shall be carried out at two (2) different levels: economic and environmental.

3. Bulk Water Utilities (Service Delivery Level)

The bulk water utilities are responsible for the implementation of all PWA's national investments in infrastructures. PWA has been trying to secure the water supply in Palestine by drilling new wells, as well as the construction and maintenance of the main trunk lines to convey water among the different Palestinian communities.

4. Regional Water Utilities (Service Delivery Level)

There will be four (4) regional utilities providing the Palestinians with necessary services including water supply and waste water treatment: one (1) is in Gaza (currently established and in operation) and the other three (3) will be in the West Bank (North, Central, and South).

Table (7)-1 Current & Future Institutional Framework of the Water Sector

	Current Framework	Future Framework	Level
1	Cabinet of Ministers	Cabinet of Ministers	Decision Making Level
2	National Water Council	National Water Council	
3	Palestinian Water Authority	Palestinian Water Authority	Regulatory Level
4	West Bank Water Department	Bulk Water Utilities	Service Delivery Level
5	Water & Wastewater Sub-utilities Municipal Water Department Village Councils Water Departments Joint Services Councils	Regional Water Utilities	
6	Well Owners and Farmers Spring Users	Water Users' Associations	

Source: "Institutional Reforms in the Water Sector and the Future Water Institutions in Palestine"

The organization chart of the Palestinian Water Authority (PWA) is as shown in Figure (7)-1. PWA is responsible for water and wastewater management at the regulatory level. The Water Control Directorate is the supreme responsible entity for overall management of water service.

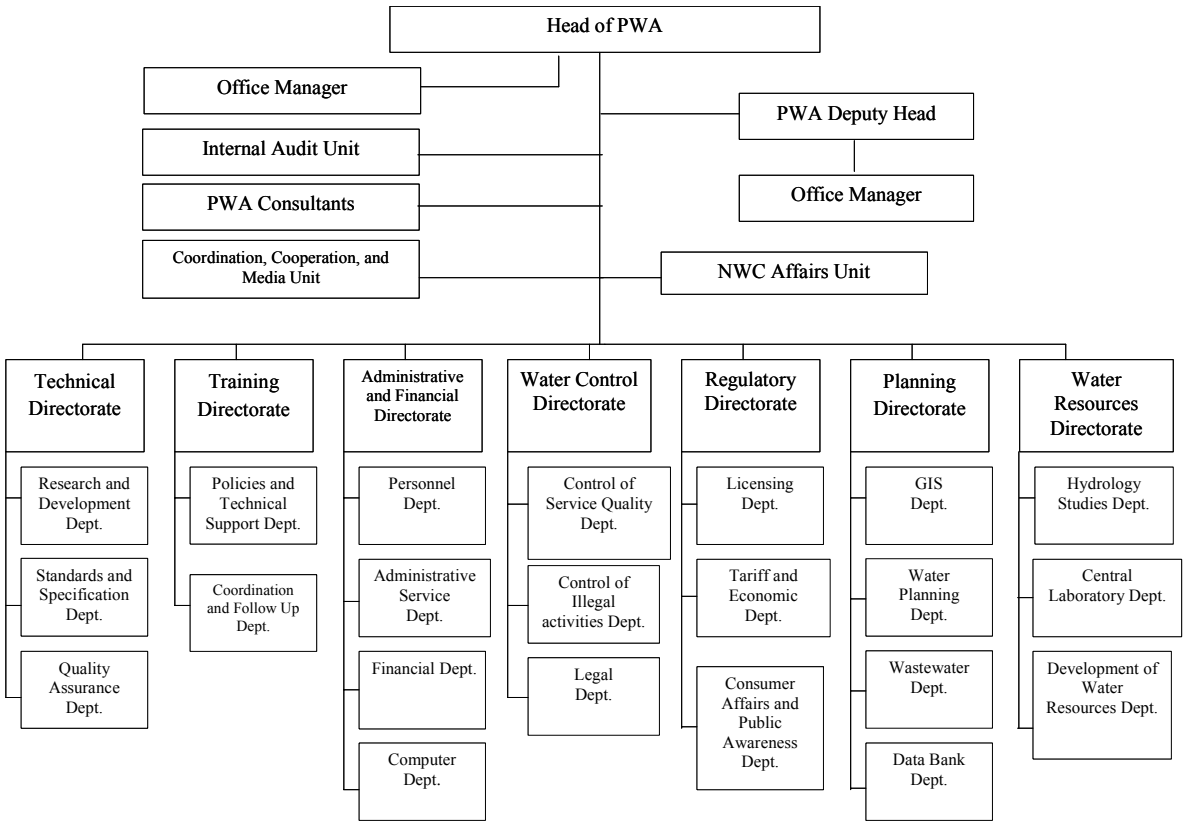


Figure (7)-1 Organization Chart of the Palestinian Water Authority (PWA)

(8) Environmental Assessment Committee (EAC)

(a) Entity of EAC

Environmental Assessment Committee (EAC) shall be established with members from the following governmental agencies:

- 1. Environmental Quality Authority
- 2. Ministry of Industry
- 3. Ministry of Local Government
- 4. Ministry of Transport
- 5. Ministry of Agriculture
- 6. Ministry of Health
- 7. Ministry of Tourism and Antiquities
- 8. Ministry of Planning and International Cooperation
- 9. Palestinian Water Authority
- 10. Palestinian Energy and Natural Resources Authority

Other organizations may be asked to join the EA Committee as required to review the nature and location of individual projects.

(b) Functions

The EA Committee shall undertake the following responsibilities:

- 1. To ensure adequate scoping of environmental assessment studies.
- 2. To prepare and approve terms of reference for environmental assessment studies.
- 3. To review environmental assessment reports.
- 4. To recommend environmental assessment decisions to the Minister.
- 5. To assist the Ministry to ensure compliance of projects with Environmental Approval conditions.

(9) Joint Water Committee (JWC)

(a) Entity of JWC

JWC was established under *Oslo II agreement Article 40* to deal with all water-related issues in the West Bank. This committee is made up of an equal number of representatives of Israel and the PA. All decisions shall be made by consensus, including the agenda, procedures and other related matters. No mechanism has yet been established to settle disputes where a consensus cannot be attained.

(b) Functions and Rules

The function of the JWC shall be to deal with all water and sewage related issues in the West Bank including the followings:

- Coordinated management of water resources.
- Coordinated management of water and sewage systems.
- Protection of water resources and water and sewage systems.
- Exchange of information relating to water and sewage laws and regulations.
- Overseeing the operation of the joint supervision and enforcement mechanism.
- Resolution of water and sewage related disputes.
- Cooperation in the field of water and sewage, as detailed in this Article.
- Arrangements for water supply from one side to the other.
- Monitoring systems. The existing regulations concerning measurement and monitoring shall remain in force until the JWC decides otherwise.
- Other issues of mutual interest in the sphere of water and sewage.

(10) Palestinian Land Authority (PLA)

The organization chart of the Palestinian Land Authority (PLA) is not available as of July 2007. However a simplified structure with important departments could be charted as shown in Figure (10)-1. PLA is responsible for all land related matters in Palestine. Surveying Department and State Department will be the first contact for overall land related information about Jericho City.

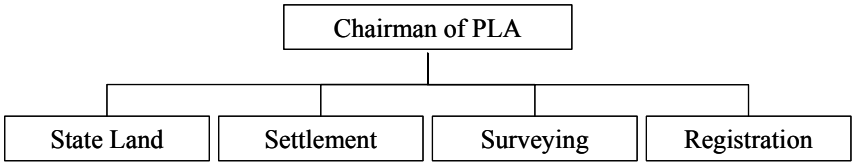


Figure (10)-1 Organization Chart of the Palestinian Land Authority (PLA)

Annex 3

Terms of Reference (TOR) for

Environmental Impact Assessment

(Draft, July 2007)

Terms of Reference (TOR)
For Environmental Impact Assessment
(Draft July, 2007)

Agro-Industrial Park Development
In Jordan River Rift Valley (JRRV)

Project:	Agro-Industrial Park Development in Jordan River Rift Valley (JRRV)
Proponent:	Ministry of National Economy (MoNE)
Contact:	
Project No:	
Application Date:	
Terms of Reference Date:	

1. GENERAL REQUIREMENTS

1.1 Environmental Assessment (EA)

These terms of reference (TOR) for an Environmental Impact Assessment (EIA) apply to the captioned project (Agro-Industrial Park Development in Jordan River Rift Valley) as described in the Proponent's Application for Environmental Approval. Any significant changes to the Project as described in the said application may require that new TOR be prepared and approved by Environment Quality Authority (EQA) before the application can be considered further.

The EIA shall be carried out in conformity with requirements of the Palestinian Environmental Assessment Policy, and with the General Guidelines for Environmental Assessment (the Guidelines) published by EQA.

The EIA shall be a comprehensive evaluation of environmental impacts of the Project, and should be undertaken during pre-feasibility and/or detailed feasibility studies (Phase II). Its main purposes are (1) to assist the Proponent in planning the Project and (2) to provide EQA with information it needs to consider granting Environmental Approval. The EIA provides an environmental plan in which features to be incorporated to mitigate adverse impact and potential benefits to be captured shall be described. It shall include a sever analysis and significance of impacts and benefits, especially for individuals and communities directly influenced by the project. It shall also provide an environmental management plan.

The EIA Report shall be of excellent quality to provide the EQA with sufficient information to:

a) grant Environmental Approval, with or without conditions; *OR*
b) Withhold Environmental Approval since the project has unacceptable environmental impacts.

1.2 Background of the Project

On the occasion of the visit of His Excellency Former Prime Minister Koizumi to Palestine in July 2006, the Japanese Government proposed the concept "Corridor for Peace and Prosperity" to promote regional development. Under the Japanese initiative, a governmental consultation platform has been set up involving Palestine, Jordan, Israel and Japan for the purpose of promoting economic cooperation in the region. This concept aims to create stability in the region surrounding Palestine.

In August 2006, the Japan International Cooperation Agency (JICA) decided to implement "The Jericho Regional Development Program" composed of three sub-programs: (1) Government Administration and Social Service; (2) Agriculture, Agro-industry and Distribution; and (3) Tourism and Urban Environment. Subsequently in November 2006 JICA dispatched a Project Formulation Mission to discuss the scope of works for the second sub-program.

Then followed the "Feasibility Study on Agro-industrial Park Development in the Jordan River Rift Valley", which is one of major core inputs under this initiative. The Study consists of two phases, the Pre-Feasibility Study (Phase I) (April-August 2007) and the Feasibility Study (Phase II) (January-August 2008, *tentatively).

Study Area Map (To be attached later on)

2. SCOPE OF THE EVALUATION

The EIA shall focus on addressing key issues important to:

a) Planning and design of the project;
b) the local community;
c) the EQA in considering Environmental Approval; and
d) The related authorities in considering the issue of permission required for the Project to proceed.

Valued environmental components (VECs) which must be considered during the EIA are indicated with a check mark (√) in Annex A. As required for clarification, the VECs and related issues discussed shall be the items specified in Annex B-1.

The EIA shall assess project compliance with relevant local, district, regional and national land use and development policies, plans and programs, and with relevant regulatory standards.

The spatial boundaries and timeframe of the EIA shall be established to adequately address all direct, indirect, cumulative and, trans boundary impacts on the VECs as described in Annex B-2.

3. ENVIRONMENTAL PLANNING

The EQA expects the EIA to contribute positively and significantly to the planning and design of the Project. The EIA Report shall document how environmental factors are incorporated into Project planning and design, and what the results are. EIA's study and reporting requirements on environmental planning are described in the Guidelines. The Proponent shall pay particular attention to the need to:

a) Consider alternatives in planning and designing the Project; and
b) Develop an environmental management plan.

4. STAKEHOLDER CONSULTATION

Prior to EIA, the Proponent shall consult with relevant local, district and national government agencies to ensure that their concerns, interests and regulatory requirements are adequately reflected in the EIA strategy and report. Without limiting the scope of these consultations, a preliminary list of these agencies is included in Annex B of these TOR.

General guidance on public consultation is given in the Guidelines. Specific consultation requirements for this Project are discussed in Annex B-3.

5. MINIMUM EIA REPORT REQUIREMENTS

Detailed guidance on the conduct of an EIA and the preparation of EIA Reports is given in the Guidelines.

The EIA Report must contain at least:

a) Non-technical executive summary;
b) An introduction to the project, the proponent, and the EIA strategy;
c) A summary of stakeholders and public consultations about the project;
d) Baseline conditions (natural and social environmental conditions)
e) A description of the environmental planning for the project, and particularly of the alternatives to be considered;
f) A description of the project, including design and strategies for environmental protection;
g) Suitable maps showing the location of the project site(s), route(s) and alternatives, and the arrangement of project facilities within the preferred site or route;
h) An assessment of significant, potential impacts and their mitigation measures during and after construction;
i) An environmental monitoring and management plan and;
j) Identification of the names and responsibilities in charge of the EIA.

The EIA Report, and/or the letter of submission which accompanies it, must clearly indicate to which the Proponent:

a) Is in agreement with the contents of the Report; and
b) Is committed to implementing the environmental planning, design, mitigation, compensation and management measures it contains.

The Proponent shall note that the EIA Report will be reviewed by EQA and other Palestinian National Authority (PNA) agencies using standard procedures (see the guidelines). The comprehensive evaluation criteria used in these procedures represent quality standards which EQA expects the Proponent to meet in his EIA Report.

The Proponent shall also note that if the draft EIA Report fails to meet the minimum requirements specified above, it will not be accepted for review by the Authority.

6. SUBMISSION AND REVIEW OF THE EIA REPORT

The Proponent shall submit three (3) copies of the draft EIA Report to the Director of the environmental assessment department at EQA Office in Ramallah.

When the EQA is satisfied that the draft EIA Report meets the minimum reporting requirements, the Proponent shall submit twelve (12) copies of the final Report for detailed technical review under the provisions of the EA Policy.

Annex A:
Valued Environmental Components

Category	√	Environmental Component
Biophysical, Resource and Land Use Components	√	Climate and air quality
	√	Surface water hydrology and quality
	√	Groundwater hydrology and quality
	√	Terrain and natural hazards
	√	Soils and vegetation
	√	Wildlife resources and use
	√	Aquatic resources and use
	√	Recreation and tourism resources and use
	√	Forest resources and use
	√	Agricultural resources and use
	√	Mineral resources and use
Economic Components	√	Direct employment and income
	√	Indirect/induced employment and income
	√	Labor market conditions
	√	Sources of supplies, materials and services
	√	Transportation requirements
	√	Infrastructure development requirements and costs
	√	Government revenues/costs
	√	Indirect/induced economic development opportunities
Cultural and Heritage Components	√	Archaeological sites
	√	Traditional use sites
	√	Historic sites and landscape features
Social Components	√	Social/demographic profile
	√	Population
	√	Housing and accommodation
	√	Land and water use
	√	Transportation and traffic
	√	Community service delivery
	√	Local government revenues/costs
	√	Social support services
	√	Community stability, cohesion and well being
	√	Gender equity
Health Components	√	Supply of health facilities and services
	√	Community water supply and watersheds
	√	Waste treatment and discharge
	√	Ambient air and water quality
	√	Public health risks
	√	Worker health and safety
	√	Noise
	√	Local community health

Annex B:
Specific EIA Requirements

(B-1) VECs and Related Issues/Concerns

The EIA Report shall study issues and concerns related to the following VECs as follows:

- **Air Quality**

1. Possible release of air pollutants as a result of construction and operation of the Agro-Industrial Park.
2. The expected level of such air pollutants and their cumulative effects;
3. the wind directions and the boundaries of their negative impacts;
4. Source reduction and other mitigation measures; and
5. The monitoring system to be adopted.

- **Groundwater hydrology and quality**

1. The geology and hydrology of the area.
2. The possible sources of pollution to groundwater;
3. Negative impacts onto the groundwater and their mitigation measures; and
4. The monitoring system that will be established.

- **Surface water hydrology and quality**

1. The maximum annual rainfall;
2. The natural drainage system in the area;
3. The runoff collection system and drainage that will be established;
4. Possible sources of pollution.
5. The mitigation measures to be adopted; and
6. The monitoring plan.

- **Soil and vegetation**

1. The presence of endangered species in the area and measures to conserve them;
2. Possible negative impacts on the surrounding biodiversity, sensitive areas, forests and the procedures to conserve and enhance them;
3. Soil erosion especially during construction and mitigation measures required for conserving soils for other uses such as greening of the area; and
4. Vegetation and habitat conserving and replanting plan.

- **Water resources and uses**

1. The available water resources and uses scheme;
2. The safe yield of such resources;
3. The expected project's water consumption and its impacts on the resources and other users; and
4. Measures to mitigate such impacts.

- **Wildlife**

1. The native Fauna;
2. The endangered wildlife in the area;
3. The impact of Agro-Industrial Park Project on the wild life presence;
4. Mitigation measures required to reduce or avoid wildlife and habitant disturbance or fragmentation; and
5. Plans to enhance the surrounding wildlife habitat.

- **Recreation and tourism**

1. The impacts of the project on the recreational and tourism sites and activities in the area;
2. The role of the project to conserve the resources of such activities and measures to enhance them.

- **Agriculture**

1. The valuable agricultural activities in the area;
2. The project impact on the agricultural land uses and activities;
3. Possible mitigation measures; and
4. Plan for agricultural enhancement in the area as part of the compensation for the loss or any negative impacts on the agricultural land.

- **Direct employment and income and labor market conditions**

1. The project's impact on employment and income;
2. Measures to enhance the employment and income rates;
3. The impacts on local communities; and
4. Possible mitigation measures of any negative impacts on local communities.

- **Sources of supplies, materials and services.**

1. The nature of such sources;
2. The impact of such sources on the project, local communities, and the Palestinian economy;
3. Measures to mitigate such impacts and benefits to local communities; and
4. Plans and policies to insure sustainable Palestinian sources.

- **Land Value**

1. The impact of the project on land value;
2. The compensation scheme and possible mitigation measures.

- **Transportation**

1. Map of the transportation system inside and outside the Agro-Industrial Park during the different project phases;
2. The impact of the movement of people, agricultural equipment’s and trucks across and along the project for the surrounding communities needs.
3. The expected traffic increase and routes to accommodate such increase;
4. The parking policy in the project area; and
5. Measures to mitigate congestion, air pollution, accidents and to ease transportation and prevent traffic interruption.

- **Infrastructure**

1. The capacity of the infrastructure to handle the project activities; and
2. The possible impacts of the development activities on the infrastructure and their mitigation measures.

- **Historic and Archeological sites and landscape features**

1. Full investigation of these sites in the area to avoid any damage or disturbance.
2. In case of the presence of any archeological and historical site and landscape features in the area, a plan for conservation of such sites should be suggested; and
3. The plan should suggest also the coherence of the project landscaping with these sites and possible social and economic impact.

- **Demographic profile, population and housing.**

1. The demographic map of the area;
2. The expected demographic changes in the map as a result of the project;
3. Risks of fragmentation of build-up areas and communities;
4. Compensation and other mitigation measure.

- **Public health, health facilities and services**

1. The possible health impacts of the project activities on workers, beneficiaries and the surrounding communities;
2. Accidents and health risks assessment;
3. Health facilities and services to serve both the industrial Park and the neighboring communities;
4. The health monitoring plan; and
5. Other mitigation measures to avoid health risks and accidents.

- **Waste water**

1. Industrial and waste water collection and treatment systems and technologies that will be established;
2. Who will be served by the proposed systems;
3. Measures for source reduction;
4. Treated waste water reuse; and
5. The possible impacts of wastewater collection, treatment and reuse or disposal and their mitigation measures.
6. Testing of treated wastewater and compare it with the Palestinian standards that EQA recommends.

- **Solid and hazardous wastes.**

1. The solid and hazardous wastes management systems that will be suggested for the project;
2. Assessment of needs for equipment and facilities;
3. Measures for prevention and source reduction; and
4. Possible environmental impacts of handling and disposal of such wastes and the mitigation measures.

- **Noise and safety**

1. Assessment of sources of risk and hazards that may endanger workers, visitors and the neighborhoods' safety;
2. Measures to mitigate such risks and to improve safety;
3. Sources and levels of noise and compare it with the allowed EQA recommended standards.
4. Measures to reduce noise levels.

- **Other social issues of concern that could attested from the scoping and public consultation,**

(B-2) Spatial Boundaries and Timeframe for the Study

- As appropriate to encompass anticipated effects on each VECs or group of VECs

1. Mapped definition of study area, including any alternatives to be considered.
2. Study time frame for construction phase and operation phase for up to 20 years.
3. The possible trans boundary impacts.

Alternatives to be Considered

- Alternatives regarding phasing:

1. The locations of different phases of the project based on clear criteria; and
2. The types of priority industries.

- Alternatives regarding social and environmental aspects:

1. Choice of technologies and processes;
2. Supply of materials, goods and services, especially where local suppliers exist;
3. Labor supply and scheduling for construction;
4. Handling of hazardous materials;
5. Waste management; and
6. Water supply.

Minimum Requirements for an Environmental Monitoring and Management Plan

- For monitoring each phase of the project:

1. Environmental variables to be monitored, and frequency; and
2. Reporting to appropriate authorities and local community.

- Issues/concerns that are to be the subject of the environmental management plan, and reporting requirements to government and the public,

- Environmental standards and guidelines that will be adopted or required.

Stakeholder Consultation Requirements

Stakeholder consultation will be carried out during the early stages of report preparation. The purposes of consultation are:

1. To inform the public of all issues and concerns related to the project;
2. To determine public concerns.
3. To specify project performance standards to be met;
4. To collect data, information or local knowledge;
5. To avoid future conflicts with affected or concerned stakeholders; and
6. To mitigate public environmental concerns.

The consultant has to examine suitable means to reach and get feedback from the public. Consultations and feedback should be included in the report.

(B-3) Stakeholders that will be consulted are the following

1. The site and neighborhood land owners.
2. The surrounding municipalities. (Joint Service Council JSC in the area)
3. Public institutions in the area.
4. The Palestinian ministries of:
   - Agriculture
   - Transportation
   - Labor
   - Health
   - Local Government
   - Public Works & Housing
   - Water Authority
   - National Economy
   - Energy Authority
   - Tourism and Antiquities.
5. Universities and NGOs in the region.
6. Other stakeholders that the consultant fined that they are affected by the project.

Continuous consultation should be held with EQA during the preparation process.
During public consultations, page 5 of this TOR has to be examined and any additional concerns should be mitigated.
The significance of all issues and concerns mentioned in this TOR or presented during public consultations should be examined based on clear environmental criteria.

Finally the report should provide the industrial park management with clear and easy to apply criteria for sitting of new industries in each phase and each location.
Industries should be categorized in to the following categories:

1. Industries that do not require any kind of environmental assessment.
2. Industries that require environmental approval because of their well known direct or accumulative environmental impacts.
3. Industries that will not be accepted in the Industrial Park.