

**Ministry of Planning  
Ministry of National Economy  
Palestinian National Authority (PNA)**

**Feasibility Study  
on  
Agro-industrial Park Development  
in  
the Jordan River Rift Valley  
(Part I of Phase II)**

**Main Report**

**March 2008**

**JAPAN INTERNATIONAL COOPERATION AGENCY**

**KRI INTERNATIONAL CORP.**

**NIPPON KOEI CO., LTD.**

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**as of February 2008**

*(unless otherwise specified)*

## PREFACE

In response to a request from the Palestinian National Authority, the Government of Japan decided to conduct a feasibility study on Agro-industrial Park Development in the Jordan River Rift Valley in two phases, namely Phase I and Phase II, and entrusted the study to the Japan International Cooperation Agency (JICA). This is the final report of the Part 1 of Phase II.

JICA dispatched a study team to Palestine over the period from December 2007 to February 2008. The Study team consists of KRI International Corp. and Nippon Koei Co., Ltd., headed by Mr. TADA Munenori as Team Leader.

The Study team held a series of discussions with the officials concerned of the Palestinian National Authority and other parties concerned, and conducted field surveys at the study area. Upon returning to Japan, the Study team made further studies and compiled the final results in this report.

It is hoped that this report will contribute to the promotion of the Agro-industrial Park and to enhancement of friendly relationship between Palestine and Japan.

I wish to express my sincere appreciation to the officials concerned of the Palestinian National Authority and all the people involved in the course of the Study for their close cooperation extended to the Study.

March 2008

NAGATSUKA Seiichi  
Deputy Vice President  
Japan International Cooperation Agency

March 2008

Mr. NAGATSUKA Seiichi  
Deputy Vice President  
Japan International Cooperation Agency (JICA)

### **LETTER OF TRANSMITTAL**

Dear Sir,

We are pleased to submit to you the Final Report for “The Feasibility Study on Agro-industrial Park Development in the Jordan River Rift Valley (Part 1 of Phase II)”.

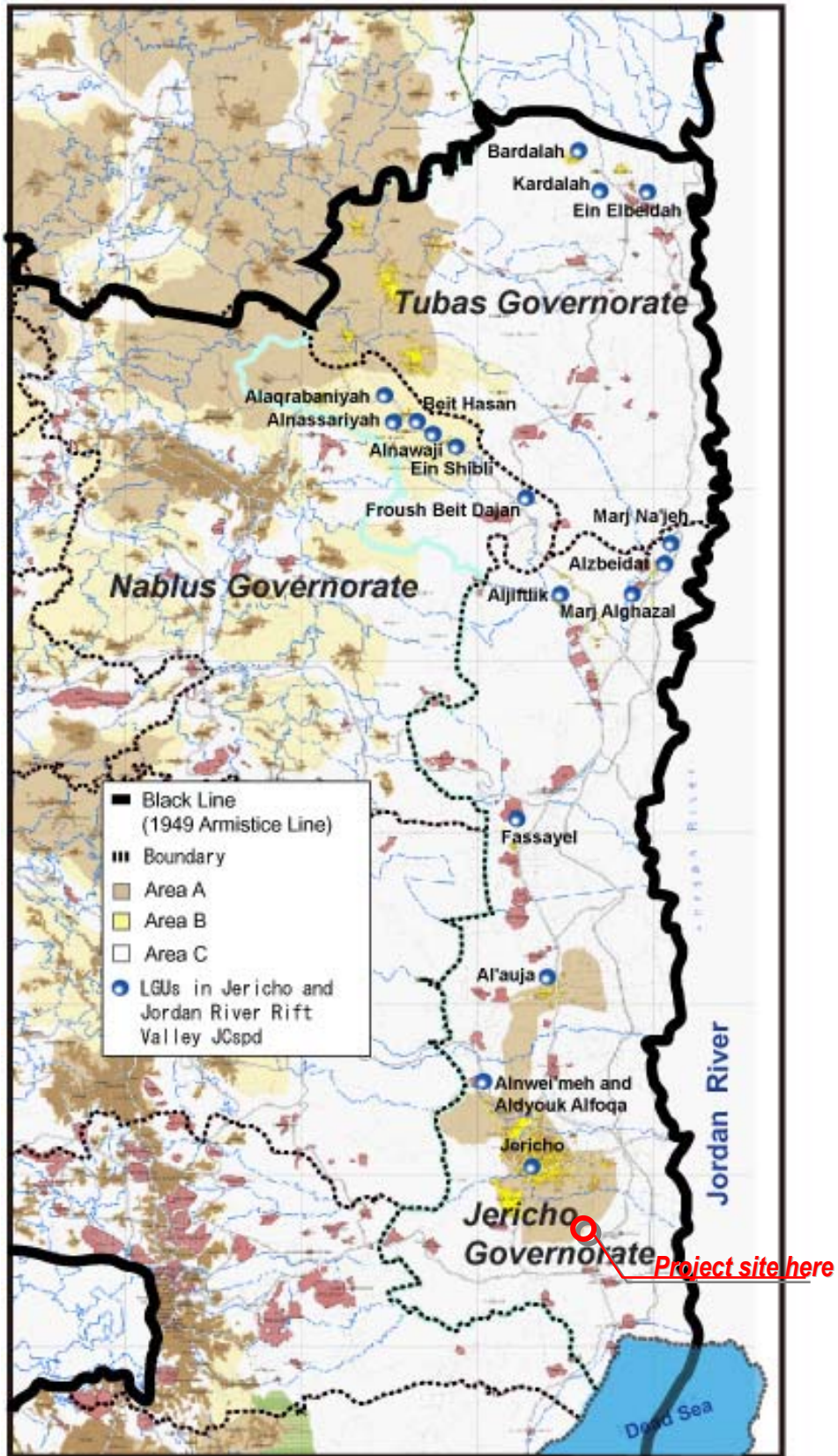
This Study has been conducted by the Study Team organized by KRI International Corp. and Nippon Koei Co., Ltd during the period from December 2007 to February 2008, in collaboration with counterpart experts assigned by the Ministry of National Economy and Ministry of Planning of Palestine.

The objectives of the Study are to make clear basic conditions necessary for the efficient and effective implementation of the Part 2 through Part 3 of Phase II, i.e. full-scale feasibility study, with focusing on the issues such as i) land procurement, ii) infrastructural conditions, iii) movement and access, and limitations on import, iv) potential products, industries and enterprises, and v) implementation scheme. There were a series of discussions and exchange of views with the officials concerned of Palestinian National Authority and the private sector people of the Palestine and its surrounding countries in the course of the Study, in order to share the basic conditions as well as the development approaches for the Agro-industrial Park.

The Study Team wishes to express its heartfelt gratitude for the valuable assistance and cooperation received from the counterpart experts and public and private institutions during the execution of the field study in Palestine. The Final Report is the fruit of cooperation and collaboration of all the personnel that joined the Study.

Very truly yours,

TADA Munenori  
Study Team Leader



Note: JICA Study Team arranged the map based on that originally prepared by OCHA

## Study Area Map

**FEASIBILITY STUDY  
ON  
AGRO-INDUSTRIAL PARK DEVELOPMENT  
IN  
THE JORDAN RIVER RIFT VALLEY  
(Part 1 of PHASE II)**

**FINAL REPORT**

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## Abbreviations and Acronyms

CP	Check Point
DCO	District Coordinator's Office
EAC	Environmental Assessment Committee
EIA	Environmental Impact Assessment
EQA	Environmental Quality Authority
EU	European Union
F/S	Feasibility Study
GAP	Good Agricultural Practice
G8	Group of Eight
ha	Hectare
HACCP	Hazard Analysis and Critical Control Point
H <sub>2</sub> O <sub>2</sub>	Hydrogen Peroxide
ISO	International Organization for Standardization
JDECO	Jerusalem District Electric Company
JICA	Japan International Cooperation Agency
JPY	Japanese Yen
JRRV	Jordan River Rift Valley
kV	Kilo Volt
MCM	Million Cubic Meter
MLIT	Ministry of Land, Infrastructure, Transport and Tourism
MVA	Mega Volt Ampere
MW	Mega Watt
NIS	New Israeli Shekel
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
OJT	On-the-job Training
PalTrade	Palestinian Trade Centre
PIEFZA	Palestinian Industrial Estates and Free Zones Authority
PNA	Palestinian National Authority
PPP	Public and Private Partnership
Prv	Private
Pub	Public
PWA	Palestinian Water Authority
TML	Terminal
TOR	Terms of Reference
UAE	United Arab Emirates
USD	United States Dollar
WB	West Bank
yr	Year

## CHAPTER 1 INTRODUCTION

### 1.1 Background

The Phase I Study was implemented during the period from March 2007 to August 2007 according to the work flow shown in Figure 1.1.1

The Study (Phase I) has concluded that the agro-industrial park development would be a significant project to fulfill its missions in line with the industrial development strategy and the Japanese initiative of “*Corridor for Peace and Prosperity*”. The following findings/issues are necessary to be reviewed for clarification prior to the commencement of the full-scale feasibility study (Phase II).

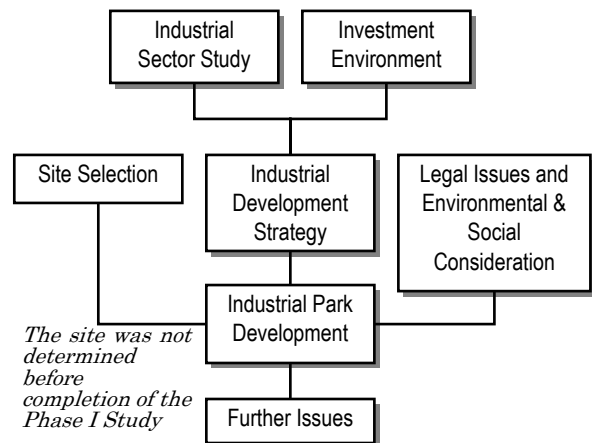


Figure 1.1.1 Work Flow of the Phase I

- Determination of project site and access road.
- Improvement of movement and access to and from the industrial park.
- Promotion of agro-industry and investment.

In the course of the Phase I Study, an inter-regional consultation platform, *the Four-party Consultative Unit*, was formulated under the initiative of “*Corridor for Peace and Prosperity*” involving PNA (Palestinian National Authority), Israel, Jordan and Japan for the purpose of promoting confidence-building through economic cooperation.

The First Technical Level Meeting was held on June 27, 2007, where regional cooperation issues were discussed actively among the participants. However, PNA and Israel had different views on the site selection, resulting in no agreement on it.

The Second Technical Level Meeting was held on October 25, 2007, in which the result of the Phase I Study was shared among the stakeholders and various opinions were exchanged. There were concrete steps forward marked, as follows, including an agreement on the site selection.

- The candidate site for the agro-industrial park covers 61.5 ha, and is next to an existing steel factory in the southern part of Jericho. The site is included in Area A where construction of the park will start. A future extension of the park into Area C would be subject to further discussion when and if it is required.

- As for an access road from the agro-industrial park to the Allenby Bridge, Israel recommends using the existing road through the checkpoint since the capacity of the existing road would be large enough to accommodate traffic volume to and from the agro-industrial park during the initial stage of the park operation. Meanwhile, the access route should be determined in consideration of both economic and security aspects.
- A consensus for regional cooperation was made in the field of agriculture.
- The Fourth Technical Level Meeting is scheduled to be held in Spring 2008, which shall be followed by the Ministerial Level Meeting in June 2008 and the G8 Summit in August 2008.

Considering these results, it was announced in the Third Technical Level Meeting on December 3, 2007 that the Study should immediately be shifted to the Phase II, a full-scale feasibility study.

## 1.2 Outline of Phase II Study

The Phase II Study is scheduled to be implemented in three study parts from December 2007 until November 2008. The overall schedule of the Phase II Study is shown in the figure below, in combination with the provisional schedule of the stakeholders meetings.

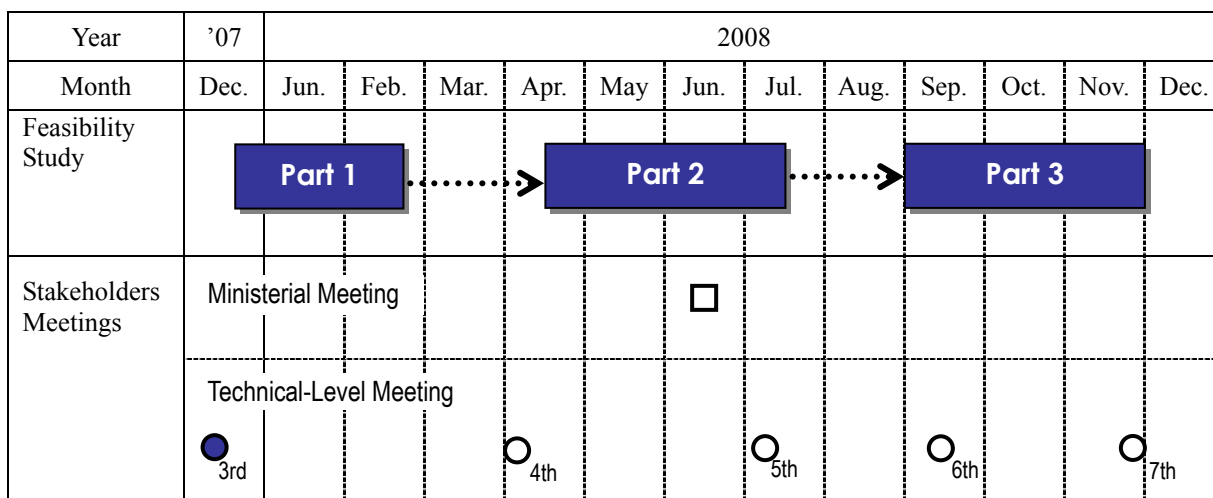


Figure 1.1.2 Overall Schedule of the Phase II Study (Provisional, as of January 2008)

The Part 1 Study will be undertaken from December 2007 to March 2008, for the purpose of making clear basic conditions for the efficient and effective implementation of the feasibility study, while focusing on the following issues:

- **Land procurement**
- **Infrastructural conditions**
- **Movement and access, and limitations on import**

- **Potential products, industries and enterprises**
- **Implementation scheme** (role-sharing in PPP: Public and Private Partnership)

After the Part 1, the Parts 2 and Part 3 will follow as the main parts of the full-scale feasibility study<sup>1</sup>.

### **1.3 Activities of Part 1**

During the period from December 2007 to February 2008, the Study Team conducted field surveys for the Part 1. There were intensive and practical discussions among the stakeholders and the Study Team, so that crucial points for successful implementation of the agro-industrial park, such as a stage-wise development concept, alternatives of appropriate cargo access, water supply options, ideas for improving movement and access, etc., were shared each other for the following Part 2.

This report provides the results of activities in the Part 1.

Chapter 2 describes the linkages among the JICA activities in the JRRV (Jordan River Rift Valley) and a provisional time-frame for the stage-wise development of the agro-industrial park which shall be shared among the stakeholders for the effective and successful implementation of the projects(s).

Chapter 3 reports the progress of discussion on each major issue, i.e., land procurement, infrastructural conditions, movement and access, limitations on import, and implementation scheme. These issues should be further considered while involving stakeholders' opinions in order to reach better and mutually acceptable solutions. For some issues, the Study provides several options to be taken into account.

Chapter 4 further shows the schedule and TOR (Terms of Reference) for the Part 2 and Part 3, which will last until November 2008.

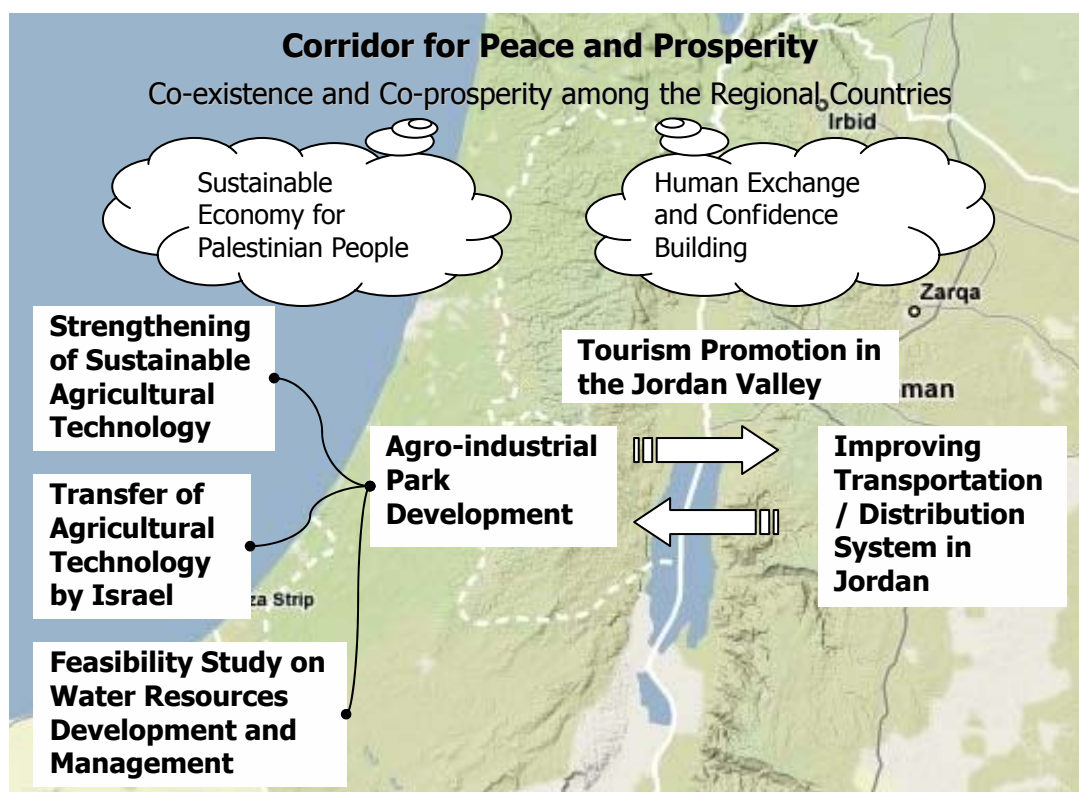
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<sup>1</sup> See 4.2: the scope of work for the Part 2 and Part 3.

## CHAPTER 2 APPROACH TO THE AGRO-INDUSTRIAL PARK DEVELOPMENT

### 2.1 Linkages among JICA activities in the JRRV

Under the Japanese initiative “*Corridor for Peace and Prosperity*”, JICA activities are currently in progress in the JRRV. Figure 2.1.1 illustrates a schematic interaction among the activities.



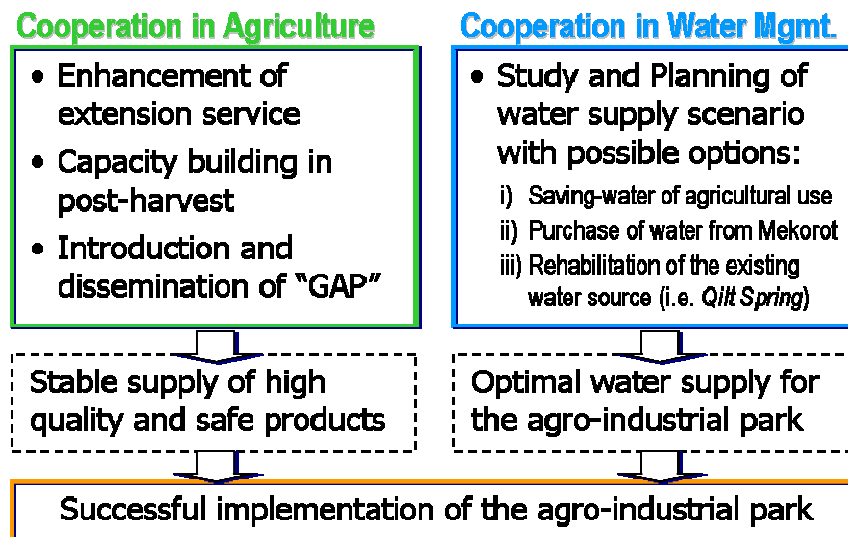
Source: JICA Study Team

Figure 2.1.1 Activities under the Japanese Initiative “*Corridor for Peace and Prosperity*”

The agro-industrial park development is closely linked to the agricultural projects and the feasibility study on water resource development and management. Since the mission of the agro-industrial park is to enhance economy and industry in the JRRV through agriculture sector improvement, it is expected that the technical cooperation in agriculture would bring out and maximize the agricultural potential in the JRRV, while the feasibility study on water resource management shall contribute to efficient and effective use of the precious water resources.

To successfully implement the agro-industrial park, therefore, more close coordination is needed among the on-going JICA projects, namely the Project for Strengthening Support System Focusing on Sustainable Agriculture in the JRRV, the Feasibility Study on Water

Resources Development and Management in the JRRV, and the Feasibility Study on Agro-industrial Park Development. Figure 2.1.2 illustrates how the agricultural project and the feasibility study on water resource would link and contribute to the successful implementation of the agro-industrial park.



Source: JICA Study Team

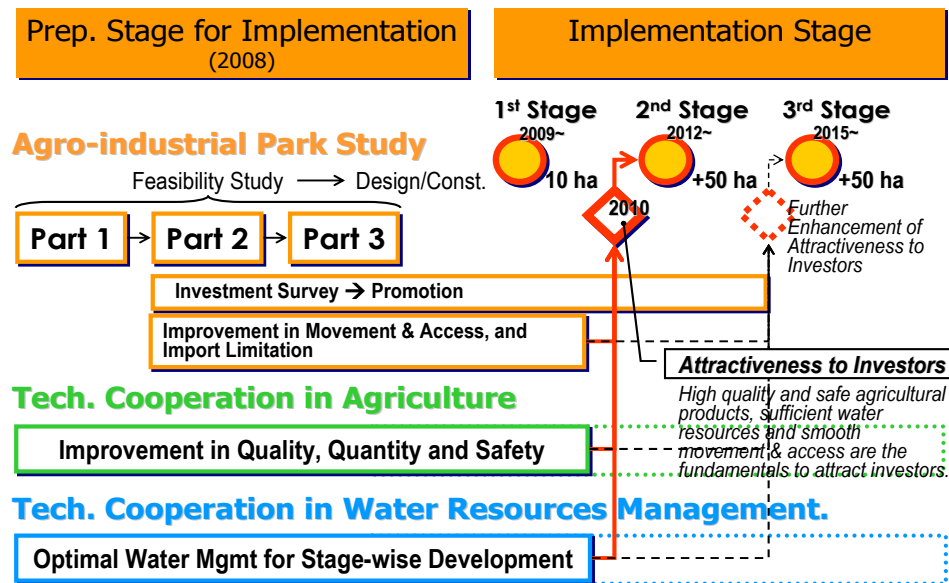
**Figure 2.1.2 Linkages among the JICA Projects**

The agricultural project would extend intensive technical assistance to the governmental staff for their capacity improvement and to the farmers aiming at obtaining certification of GAP (Good Agriculture Practice) toward the overarching goal of “maximization of the agricultural potential”, “improvement of quality, quantity and safety of agricultural products”. Stable supply of high quality and safe products shall be a crucial factor to successfully attract private investors to the agro-industrial park.

Meanwhile, the feasibility study on water resources development and management would study current conditions of the existing water resources and the water users’ attitude, and thereafter implement pilot activities for water-saving for the purpose of optimum utilization of the existing water sources. In parallel, relevancy of rehabilitation of the existing water source, namely *Qilt Spring*, would be carefully contemplated and the possibility to purchase water from Mekorot (Israeli water supply corporation) as well, so as to plan a realistic and optimal scenario for securing water and meeting the stage-wise development of the agro-industrial park which is described in the next section.

## 2.2 Stage-wise Development of the Agro-industrial Park

The Study Team envisioned a stage-wise development concept of the agro-industrial park, as shown in Figure 2.1.3, and presented a time frame of the agro-industrial park development to the stakeholders.



Source: JICA Study Team

**Figure 2.1.3 Stage-wise Development of the Agro-industrial Park (provisional)**

The year 2008 is the preparatory stage for implementation, where Feasibility Study on the Agro-industrial Park, Technical Cooperation in Agriculture, and the Feasibility Study on Water Resources Management shall be implemented concurrently in close coordination. The Feasibility Study on the Agro-industrial Park Development will last until November 2008, while part of it, i.e., investment promotion and improvement in movement and import limitations are necessary to be continued even after 2009, aiming at sufficiently attracting the private investors. Likewise, technical cooperation in agriculture and the study on water resources are essential for reaching their goals by 2010, i.e., improvement in quality, quantity and safety of agricultural products, and optimal water supply management for the agro-industrial park development in stage-wise. Both of them are considered to be fundamental conditions for attracting private investors.

The year 2009 has been tentatively set for the first stage commencement, though the fundamental conditions would not be matured enough by then to attract private investors. Although at this premature stage for attracting investors, it is worthwhile to construct some core facilities with such service functions as product display, business meeting, sales, etc. on a small scale. These functions could be primer effects which would help potential investors to expect the successful implementation of the agro-industrial park in the near future.

The year 2010 could be set as a target year for the fundamental conditions to be matured enough for attracting investors to the agro-industrial park, when the second stage implementation would commence on a larger scale in parallel with the investment promotion activities. The third stage would come after 2015 when and if it is required.

Though this stage-wise development concept is still hypothetical, it is recommendable to the stakeholders to start regarding the development process as concretely as possible stage-wise.

## **CHAPTER 3      OUTPUT OF STUDY PART 1**

### **3.1      Issues to Address**

Land procurement, infrastructural conditions, movement and access and limitations on import, potential products and industries, and implementation scheme are the major issues to address in the Study Part 1.

Since the likeliest candidate site for the agro-industrial park was identified and agreed among the stakeholders in the Second Technical Meeting on October 25, 2007 around two months after completion of the Phase I Study, issues related to land procurement and infrastructural conditions were not sufficiently verified in the Phase I. Therefore these issues needed to be clarified based on the specific site location by collecting update data and information.

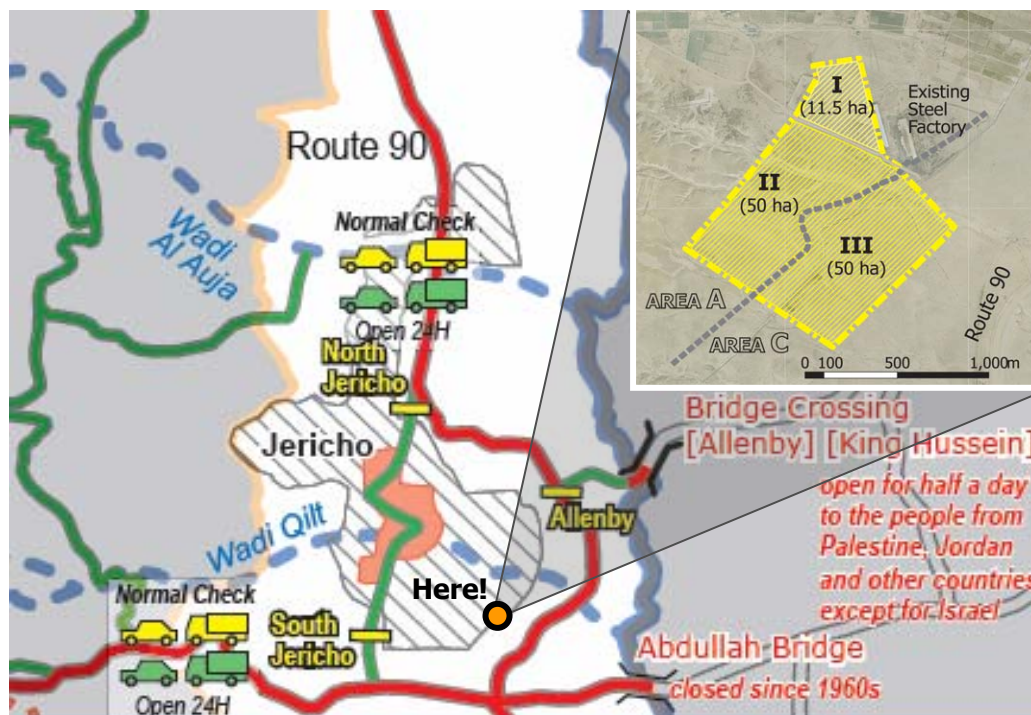
As for movement and access and limitations on import, the general conditions in the JRRV / the West Bank were studied through reading references and conducting a questionnaire survey among the private sector. However, specific ideas of improvement for the agro-industrial park hardly turned out to be proposed, due to the reasons of i) candidate site for the agro-industrial park were not identified, and ii) direct interviews with the interviewees were difficult for the Study Team to carry out because of the time schedule. This time, the Study Team took an approach to practically identify constraints in movement and access and limitations on import which the private sector is confronting in their business activities, in accordance with their business sequences by setting a supply chain model (see 3.4 in detail).

It is too soon to technically discuss what implementation scheme is suitable for the agro-industrial park, because no clear decision have been made so far on the type of infrastructures/facilities to develop and the development schedule. Substantive study and discussion shall be made in line with progress of the further engineering study in which a clearer picture of the project will be provided together with the time frame and cost estimate (probably by the end of the Part 2). At this planning stage, basic ideas for the implementation scheme are summarized for sharing among the stakeholders.



### 3.2 Land Procurement

Figure 3.2.1 shows the likeliest candidate site for the agro-industrial park, which was identified in the Second Technical Level Meeting in October 2007.



Source: JICA Study Team

**Figure 3.2.1 Location of the Likeliest Candidate Site**

The site is comprised of three land parcels as summarized in the Table 3.2.1.

**Table 3.2.1 Profile of Land Parcels**

Lot	Area	Jurisdiction	Ownership
I	11.5 ha	Area A	State-owned Land (PNA)
II	approx. 50.0 ha	Area A	Privately-owned Land (Al Hussein Family)
III	approx. 50.0 ha	Area C	Privately-owned Land (Al Hussein Family)
Total	111.5 ha		

Note: Based on the information from Ministry of National Planning. Lot name I, II and III are tentative ones.

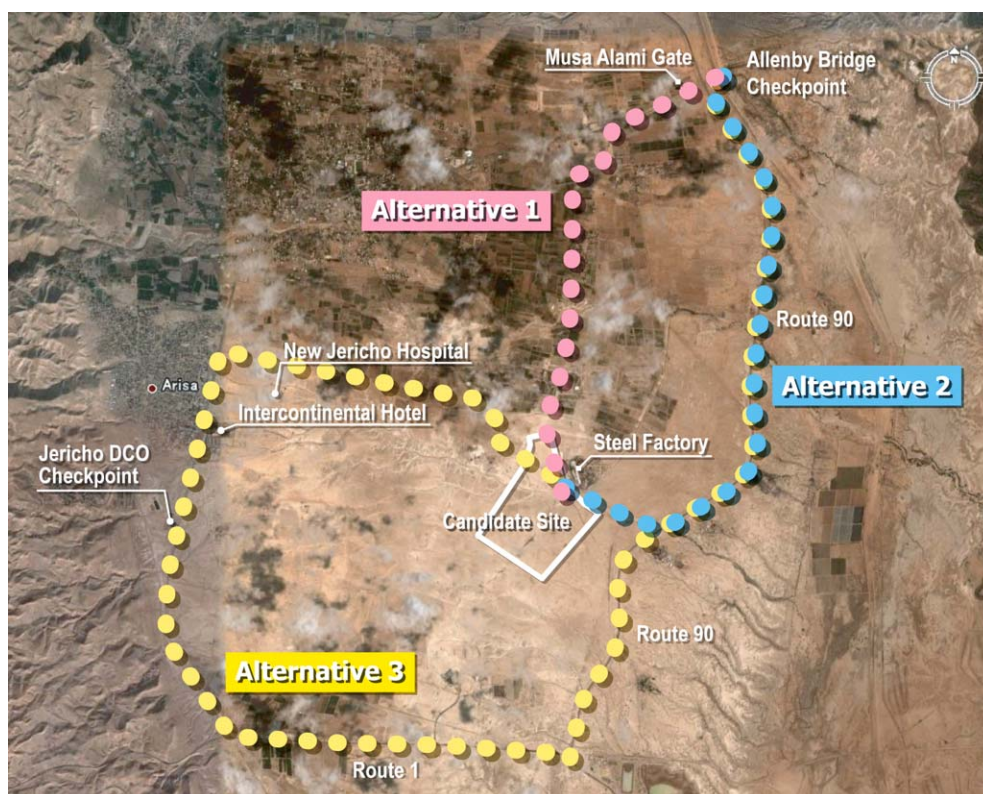
Lot I could be assessed as suitable for initial development area in the first stage of implementation considering its small scale, jurisdiction of Area A and state-owned status, while Lot II would be reserved for the second stage which shall be developed on a larger scale after agreement with the private land owner. On the other hand, Lot III needs special coordination/agreement with Israeli authorities because of its location in Area C. For this reason, it would take a long time until the lot could be developed as the third stage.

It has been reported by the Ministry of Planning that the state-owned land (Lot 1) is secured for the agro-industrial park use after a determination in the Cabinet meeting on February 18, 2008. Meanwhile, it is reported that PNA agencies have contacted the private land holder but no agreement has been concluded in any written form so far. Since the agro-industrial park development plan is still in a premature stage, it is difficult to talk and negotiate with the land holder in detail. However, considering the indispensability of land for this kind of development project, relevant agencies are requested to officially arrange a general terms of agreement with the land owner, as soon as possible before shifting to the Part 2 of the Feasibility Study.

### 3.3 Infrastructural Conditions

#### (1) Cargo Access

Following the general agreement made in the Second Technical Meeting and further discussions with the parties concerned, the Study Team provisionally set three alternatives for cargo access.



Source: JICA Study Team

**Figure 3.3.1 Cargo Access Alternatives**

Alternative 1 is a road section which would extend from the site to the north while passing through the eastern part of Jericho City where agricultural fields and new housing area spread. This alternative would be the shortest access (approx. 6.0 km, of which 5.5 km needs to be constructed) to the Allenby Bridge.

Alternative 2 would include a direct connection to Route 90 which needs to be constructed in Area C. This alternative is the second shortest route to the Allenby Bridge (approx. 7.0 km, of which 1.2 km needs to be constructed) without passing through the developed area.

Alternative 3 would include a new road construction, which has been planned in Jericho Municipality (from the site to the north point of the New Jericho Hospital). This alternative would be the longest access to the Allenby Bridge (approx. 22.0 km, of which 9.0 km needs to be constructed up to the connection to Route 1) while passing through Route 1 and Route 90.

The Study Team has preliminarily assessed the three alternatives from the technical points of view, i.e. transportation efficiency, environmental impact, land use effect, social and economic concern, financial concern, and other specific aspects if any, in reference to the assessment criteria commonly applied in Japan (Ministry of Land, Infrastructure, Transport and Tourism)

**Table 3.3.1 Assessment Criteria: Example of MLIT, Japan**

<b>Criteria</b>	<b>Points of Assessment</b>
Transportation Efficiency	<ul style="list-style-type: none"> <li>- Reduction of travel time</li> <li>- Alleviation of traffic congestion</li> <li>- Decrease in traffic accident</li> <li>- Improvement of traveling performance</li> <li>- Enhancement of inter-regional networking</li> <li>- Enhancement of inner city road network</li> </ul>
Environmental Impact	<ul style="list-style-type: none"> <li>- Air pollution</li> <li>- Noise and vibration</li> <li>- Landscape</li> <li>- Impact on flora and fauna</li> <li>- Impact on social and public facilities</li> <li>- Alleviation of global warming</li> </ul>
Land Use Effect	<ul style="list-style-type: none"> <li>- Effect on inter-regional communication</li> <li>- Impact on agricultural land use</li> <li>- Contribution of re-adjustment in land use</li> <li>- Impact on road-side commercial facilities</li> </ul>
Social and Economic Concern	<ul style="list-style-type: none"> <li>- Impacts on activation/revitalization of city and region</li> </ul>
Financial Concern	<ul style="list-style-type: none"> <li>- Recurrent cost for operation and maintenance</li> <li>- Required period for project implementation</li> <li>- Land acquisition risk</li> <li>- institutional risk</li> <li>- Flexibility of the project for unforeseen conditions</li> </ul>
Others	<ul style="list-style-type: none"> <li>- Items to be added accordance with the locality and the purpose</li> </ul>

Source: JICA Study Team

Preliminary desk assessment is summarized in Table 3.3.2.

Table 3.3.2 Preliminary Desk Assessment of Cargo Access Alternatives

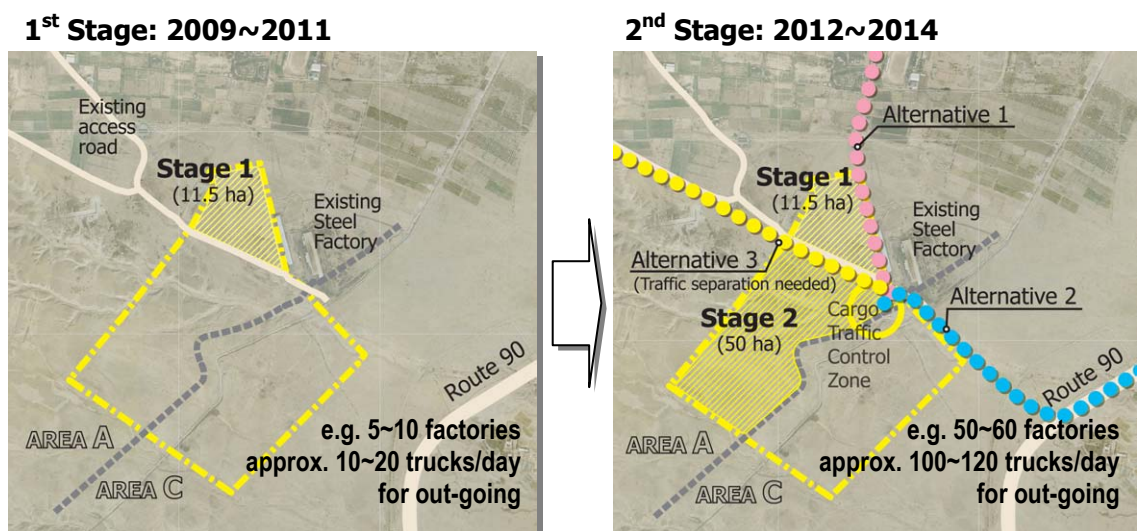
	Alternative 1 Site → (to the north thru existing city road) → Musa Alami Gate → (crossing Route 90) → Allenby Bridge Checkpoint	Alternative 2 Site → (to the east for Route 90) → Route 90 → Allenby Bridge Checkpoint	Alternative 3 Site → New Jericho Hospital → N-S Road → Jericho DCO Checkpoint → Route 1 → Route 90 → Allenby Bridge C.P.
Outline of route	■ A short route within Area A to Allenby Bridge C.P. crossing Route 90 through Musa Alami Gate. approx. 6.0 km	■ The physically shortest route to the Allenby Bridge through Route 90. approx. 7.0 km	■ A route within Area A, reaching to the Allenby Bridge via Route 1 and Route 90. approx. 22.0 km
Distance from the site to Allenby Bridge C.P.	approx. 5.5 km	approx. 1.2 km	approx. 9.0 km
Of which, length of improvement /const.	(improvement of agriculture road)	(new connection to Route 90)	(improvement of agriculture road, excluding Route 1 and 90)
No. of bridge const.	1 or 2	1 or 2	2 or 3
Remarks	■ Improvement of agriculture road in Area A. ■ Bridge construction on Wadi Qilt River. ■ Possible many private land acquisitions required.	■ Road construction in Area C (Waqf land). ■ Bridge/culvert construction. ■ New security arrangement before Route 90 required.	■ Improvement of agriculture road to New Jericho Hospital. ■ Upgrading of the N-S Regional Road up to Route 1, including rearrangement of Jericho DCO CP. ■ Possibly large land acquisition.
Transportation efficiency	■ 15-minute drive to the Allenby checkpoint (time required for security check is not included). ■ Possible traffic congestion mixed with the general traffic from the surrounding area. ■ Possible many bends along the road. ■ Contribution to enhancement of inner city road network.	■ 10-minute drive to the Allenby checkpoint (time required for security check is not included). ■ Smooth traffic without congestion. ■ Straight road alignment with no bend. ■ Heavy commercial traffic will be separated from the inner city road network.	■ 40-minute drive to the Allenby checkpoint (time required for security check is not included). ■ Possible heavy traffic congestion at the south Jericho checkpoint in busy seasons. ■ Possible many corners and traffic signals along the road. ■ Contribution to enhancement of inner city road network.
Environmental Impact	■ Possible negative impacts to the surrounding area. ■ Potential problem of land acquisition and relocation.	■ No serious negative impact to the surrounding area. ■ Little problem of land acquisition.	■ Possible negative impacts to the surrounding area. ■ Potential problem of land acquisition and relocation.
Land Use Effect	■ Possible community severance. ■ Possible effect on land use from agriculture to commercial purpose. ■ Contribution to re-adjustment of land.	■ No community severance. ■ No effect in land use.	■ Possible community severance. ■ Possible change in land use from agriculture to commercial purpose. ■ Contribution to re-adjustment of land.
Social & Environmental Concern	■ Potential problem in the social and environmental aspect of the eastern part of Jericho.	■ No direct relation/impact to the social and environmental aspect of Jericho.	■ Potential problem in the social and environmental aspect.
Financial Concern	■ Medium construction cost. ■ Possible long preparation period with no little land acquisition cost for implementation.	■ Small construction cost. ■ No long preparation period with little land acquisition cost for implementation. ■ New security arrangement cost.	■ Large construction cost. ■ Possible long preparation period with no little land acquisition cost for implementation.
Others	■ Smooth passage of commercial trucks at the checkpoint before Route 90. ■ Facilitation of smooth export of goods in cooperation with the security check operation at Allenby Bridge.	■ Smooth traffic of commercial trucks through Route 90 ■ Facilitation of smooth export of goods in cooperation with the security check operation at Allenby Bridge.	■ Possible relocation cost for the south Jericho checkpoint. ■ Smooth passage of commercial trucks at the south Jericho checkpoint, through Route 1 and Route 90. ■ Facilitation of smooth export of goods in cooperation with the security check operation at Allenby Bridge.
Overall Assessment	This alternative is assessed as practical one, while JICA Study Team gives an overall rate <b>B</b> in consideration of potential problem of land acquisition. In addition, efficiency of security check operation needs to be improved.	This alternative is assessed most appropriate in general engineering viewpoint, while JICA Study Team gives an overall rate <b>B<sup>plus</sup></b> in consideration of the administrative procedure for getting approval from the Israeli authority.	This alternative is assessed still practical in general engineering viewpoint, while JICA Study Team gives an overall rate <b>B<sup>minus</sup></b> in consideration of huge construction cost and possible land acquisition problem. In addition, efficiency of security check operation needs to be improved.

Note: Prepared by JICA Study Team. Rating: A = preferable or small constraint, B = fairly, C = problematic or big constraint

According to the preliminary desk assessment, Alternative 2 is considered to be most appropriate when the situation allows, since the alternative could be technically assessed as more preferable than the others in terms of distance to the Allenby Bridge, land acquisition and construction cost. However, as a matter of practice, Alternative 2 has a difficulty in land use because of its area jurisdiction, i.e. Area C, which would require further discussion and coordination with the Israeli authorities. While Alternative 1 is considered to be a practical one because of its situation in Area A, there are potential problems of land acquisition. Likewise, Alternative 3 is considered to be practical to the extent of Area A but with possibly a large amount of construction including widening of the road section in Area C to Route 1.

Assuming that the agro-industrial park would be developed stage-wise, as shown in 2.2, the exclusive cargo access would not be necessary in the first stage since the traffic volume to and from the agro-industrial park is estimated to be small enough to be accommodated by the existing road<sup>2</sup>. For instance, suppose two trucks per day would be generated from 5 to 10 factories in the first stage area, the total number of trucks would turn out to be 10 to 20.

While in the second stage, it is expected to have 50 to 60 factories in total, thus the total number of trucks from the agro-industrial park would be 100 or more. In this sense, it is recommendable that cargo access alternative should be determined before commencement of the second stage, and the determination should be promptly shifted into implementation to cope with the possible large increase of industrial traffic in the future.



Source: JICA Study Team

**Figure 3.3.2 Stage-wise Development of Cargo Access**

In the latter part of the feasibility study, a more accurate estimate would be made together with an engineering study, which would be ideal for more practical discussions on the alternatives.

<sup>2</sup> Some improvement or upgrading works might be necessary.

## (2) Water Supply

A preliminary estimate of water supply is shown in Table 3.3.3, for each development stage.

**Table 3.3.3 Preliminary Estimate of Water Supply<sup>3</sup>**

Stage/Year	1 <sup>st</sup> Stage 2009~2011	2 <sup>nd</sup> Stage 2012~2014	3 <sup>rd</sup> Stage after 2015
Total Development Area	11.5 ha	61.5 ha	111.5 ha
No. of factories	5~10	50~60	100~110
Water Supply	0.1 MCM	0.5 MCM	1.0 MCM

Source: JICA Study Team

There are several options for securing water to the agro-industrial park. Option 1 is to utilize water possibly to be saved from agricultural use. Option 2 is to purchase water in bulk from Mekorot<sup>4</sup>, Israeli Water Supply Corporation. And Option 3 is to use potential surplus water from rehabilitation of existing water source, i.e. *Qilt Spring*. These options were tentative results<sup>5</sup> of technical discussion with the JICA Study Team for the Feasibility Study on Water Resource Development and Management in the JRRV. All the options have constraints in data availability. Therefore further data collection as well as field verification is necessary to be conducted in the Part 2 in cooperation with the stakeholders.

The three options may be different in immediate availability. For instance, Option 1 could be effective after verification of potential amount of water to be shifted from agricultural use to industrial use, while it must be a prerequisite that the current water users (farmers) would understand and agree to shift the saved water to other use. Option 2 is considered to be the most immediate water source if the amount of water available is enough to cover the demand, while this option would require other discussion and coordination between Israel and PNA.

Option 3 would require a long-term approach for realization because of its location in Area C and the natural reserve area. Starting from data collection at several points along the water flow for 3 to 5 years, because of no accurate data available so far, estimating potential amount of surplus water with facilities rehabilitation to be used for the agro-industrial park, while economic ways to secure and carry the water to the site need to be planned. Figure 3.3.3 illustrates a schematic water supply concept by Option 3, in which possible water allocation by type of water use is estimated based on the present water use conditions<sup>6</sup>.

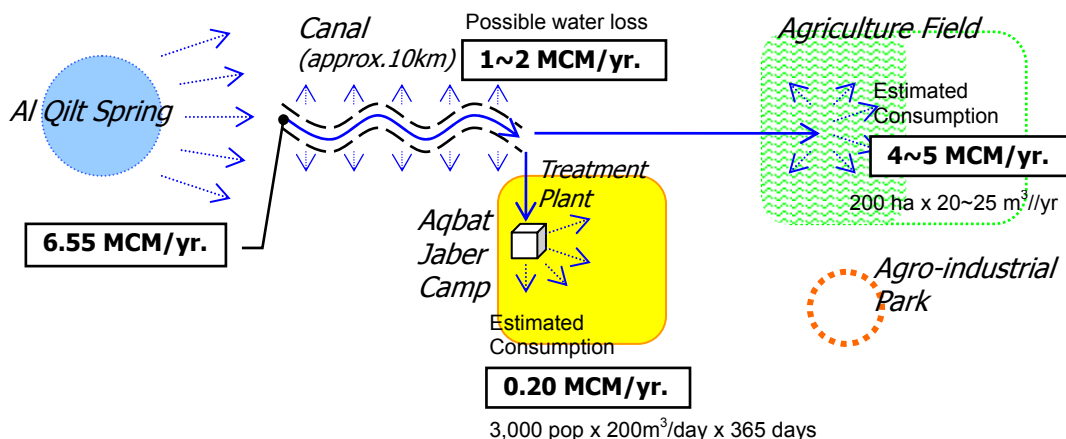
<sup>3</sup> Based on the estimate (0.45 MCM/yr. for 50 factories) which was calculated in the Phase I Study.

<sup>4</sup> The Study Team tried to collect information and data of Mekorot's service capacity in the JRRV, while so far not available.

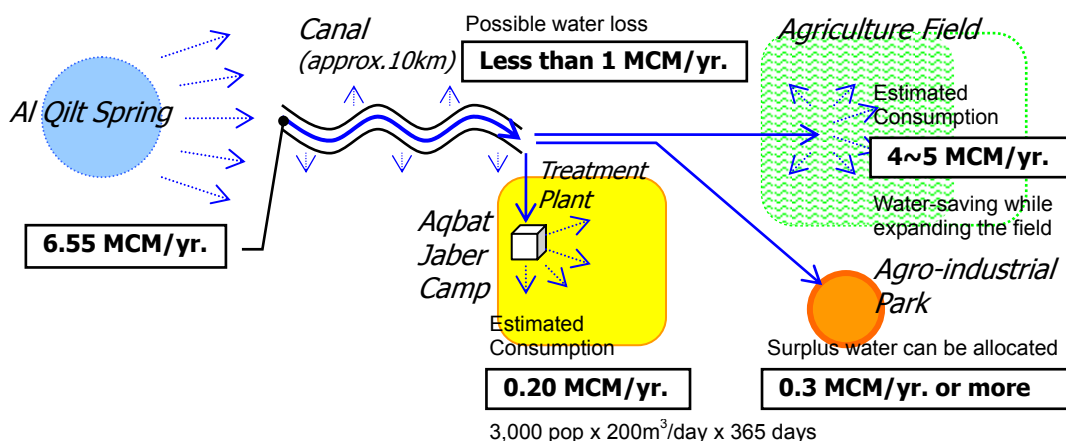
<sup>5</sup> There is another possibility to utilize existing unused wells (which had been transferred from Mekorot to PWA), while no data is available without location after 2000. However, their water quality is considered to be too salty to be used directly for industry.

<sup>6</sup> The present water use conditions are nothing more than a crude estimate, since no accurate data available.

**Without Canal Rehabilitation: Possibly High Water Loss along the Canal**



**With Canal Rehabilitation: Low Water Loss along the Canal**



Source: JICA Study Team

Figure 3.3.3 A Schematic Water Supply from the Qilt Spring

Based on these possible options, the Study Team proposes a provisional scenario for securing water to the agro-industrial park, as shown in Figure 3.3.4.

Stage/Year	1 <sup>st</sup> Stage 2009-2011	2 <sup>nd</sup> Stage 2012-2014	3 <sup>rd</sup> Stage after 2015
Water supply	0.1 MCM/yr.	0.5 MCM/yr.	1.0 MCM/yr.
Scenario (Provisional)	Prep. work	Saved Water from Agriculture Use or / and Water from MEKOROT	
	Preparatory. work		Water from Rehabilitated Existing Water Source (Qilt Spring)

Source: JICA Study Team

Figure 3.3.4 A Scenario based on the Likely Options

While conducting the study and planning work on rehabilitation of the existing source in cooperation with the stakeholders, the other options (Option 1 or/and Option 2) shall accommodate the industrial water demand as far as possible. This is the basic idea of the scenario. However, it is not sure at the moment if enough amount of water could be secured for the demand even after rehabilitation of the existing water source. For this reason, it is recommended to involve an engineering study for recycling waste water in the Part 2, which would contribute to saving water supply (see (4) Waste Water Treatment).

### (3) Power Supply

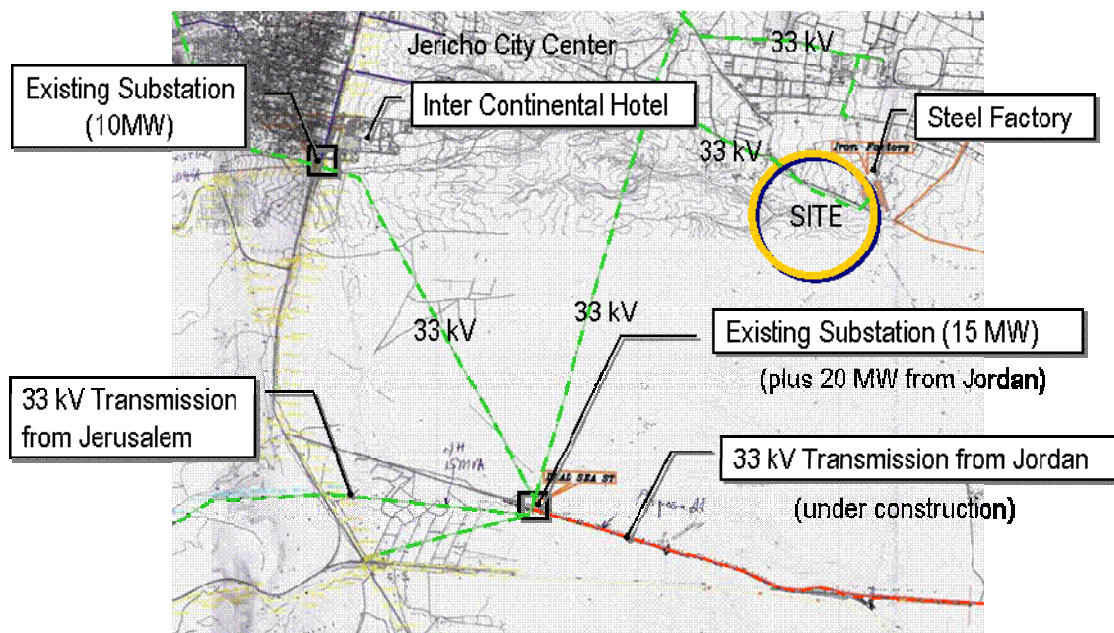
A preliminary estimate of power supply is shown in Table 3.3.4, for each development stage.

**Table 3.3.4 Preliminary Estimate of Power Demand<sup>7</sup>**

Stage/Year	1 <sup>st</sup> Stage 2009~2011	2 <sup>nd</sup> Stage 2012~2014	3 <sup>rd</sup> Stage after 2015
Total Development Area	11.5 ha	61.5 ha	111.5 ha
No. of factories	5~10	50~60	100~110
Power Demand	2 MW	10 MW	20 MW

Source: JICA Study Team

Currently, electricity for the Jericho area is supplied by JDECO (Jerusalem District Electricity Company) with its total capacity of 45 MW<sup>8</sup>.



Source: JDECO

**Figure 3.3.5 Transmission Grid of JDECO in the Southern Jericho**

<sup>7</sup> Based on the estimate (approx. 10 MVA for 50 factories) which was calculated in the Phase I Study.

<sup>8</sup> Since February 25, 2008, electricity supply is increased to 45 MW from the original 25 MW after the completion of the transmission line extension from Jordan.



Given the current power peak load in the Jericho area is 15 MW at maximum, the electricity demand estimated for the second stage of the agro-industrial park (10 MW) could be covered within their capacity with no problem. However it is not certain at this point whether the electricity demand for the third stage would be covered, since other electricity demand (mainly for domestic use) could possibly increase in accordance with the change of social and economic situation in years to come by 2015.

Detailed arrangement of the facilities such as transmission line extension, power transformer installation, distribution feeder lining, etc. shall be technically discussed in the Part 2 with the technical division of JDECO together with cost estimate and sharing.

#### (4) Others

##### Waste Water Treatment

Waste water quantity is estimated to be roughly 80 % of the total industrial water consumption. This should be firstly treated by individual factories so that the effluent quality could meet the requirements of the Palestinian Standards for discharge to public sewers<sup>9</sup>. After individual treatment, effluent would be collected through the waste water collection system, which would be appropriately laid down alongside the on-site roads. This is the basic idea for how to treat waste water on an individual treatment basis.

In the meantime, it is worthwhile considering a waste water recycling plant as an on-site common facility which could reproduce industrial water, resulting in saving water supply. A preliminary estimate is shown in Table 3.3.5 which would provide an idea for saving water supply to approximately 40 % of that without a recycling plant.

**Table 3.3.5 Preliminary Estimate of Waste Water**

Stage/Year	1 <sup>st</sup> Stage 2009~2011	2 <sup>nd</sup> Stage 2012~2014	3 <sup>rd</sup> Stage after 2015
Waste Water	0.08 MCM/yr.	0.40 MCM/yr.	0.80 MCM/yr.
Recycled Water (70%)	---	0.28 MCM/yr.	0.56 MCM/yr.
Water Supply w/ Recycling	0.10 MCM/yr.	0.22 MCM/yr.	0.44 MCM/yr.
Water Supply w/o Recycling	0.10 MCM/yr.	0.50 MCM/yr.	1.00 MCM/yr.

Source: JICA Study Team

Note: Waste water is estimated to be 80 % of the total water consumption.

It is recommended to include a scope of work, in the Part 2, for the engineering study on the water recycling plant. Water supply issues and water treatment issues could be considered together, which may contribute to effective use of the precious water resource and to environmentally-friendly project implementation as well.

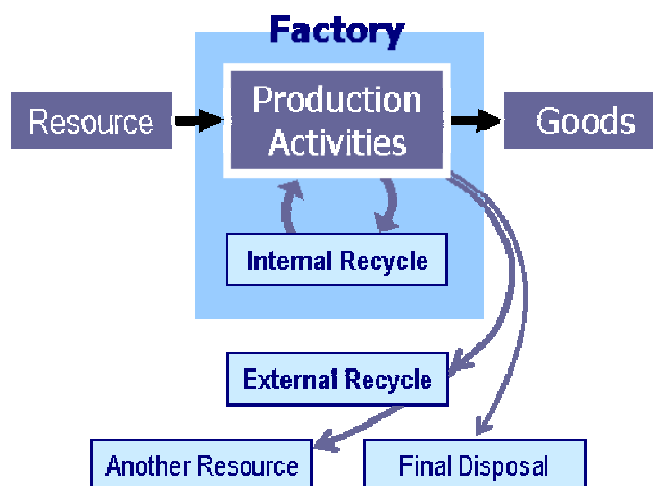
<sup>9</sup> Refer to the Technical Note II: Environmental and Social Consideration of the Phase I Report.

### **Solid Waste Management**

Solid waste from food related industries could be disposed of by the factories, as their waste materials (organic waste) could be composted and recycled for generating another source of income. There might be other types of waste materials which are solid, that need to be transported to the final disposal place. Jericho Municipality is currently undertaking improvement work to extend the existing dumping site to prolong the lifetime to cope with the future increase in solid waste. The agro-industrial park would need close coordination for solid waste management issues.

Meanwhile, following the concept of the agro-industrial park “Human Well-being”, it is worthwhile aiming at “Zero Emission Recycle Initiative” in the agro-industrial park by dissemination of the activities to the factories and installation of a common recycling facility on the site.

The solid waste issue is an unending issue, so that the Study Team would recommend involving an engineering study in the Part 2 for introduction of a common recycling facility, which may contribute even to the surrounding society in the Jericho area.



Source: JICA Study Team

**Figure 3.3.6 Schematic Image of Zero Emission**

### **3.4 Movement and Access, and Import Limitation**

In the Phase I Study, an Investment Survey was conducted in order to observe the perceptions, views and opinions of the owners and managers of enterprises in Palestine, Jordan, Israel and UAE. In the course of the Survey, many enterprises, especially those from Palestine pointed out difficulties in terms of movement and access of goods as well as people. It implies that how to improve movement and access inside and across the West Bank is one of the most crucial conditions for the potential investors and enterprises to take interest in the agro-industrial park. In the meantime, import limitations due to Israeli security measures are also identified as one of the constraints in the operation of Palestinian enterprises.

In this Part 1, an interview survey on movement and access and import limitation is conducted in order to identify major difficulties and constraints facing Palestinian companies in the West Bank. It also aims to draw ideas for improvement in movement and access and in import limitations. Those ideas will be further studied in view of application to the agro-industrial park to be located in the Jericho area.

#### **(1) Outline of Interview Survey**

The objective of the Survey is to identify difficulties and constraints in movement and access and import limitation facing Palestinian enterprises in the West Bank, in each stage of their supply chain.

Surveyed companies are selected according to the following selection criteria.

- Company which sells products in multiple cities in the West Bank
- Company which exports products or is willing to export
- Company which procures raw materials and equipment from abroad

According to the above criteria, 16 companies which are actively operating in the West Bank are selected from the field of agribusiness, food processing, pharmaceutical and supporting industries such as packaging materials and freight. Those industries are selected assuming those will be the main industries that will operate in the agro-industrial park in Jericho. Table 3.4.1 shows the surveyed companies with their location, type of business, procurement places of raw materials and equipment and the main markets.

The Survey is conducted as a face-to-face interview with each company's representatives during the period from January 23 to 29, 2008. As well as general information on their business operation, information on difficulties and constraints they face in each stage of their supply chain and ideas for better implementation of the agro-industrial park are collected.

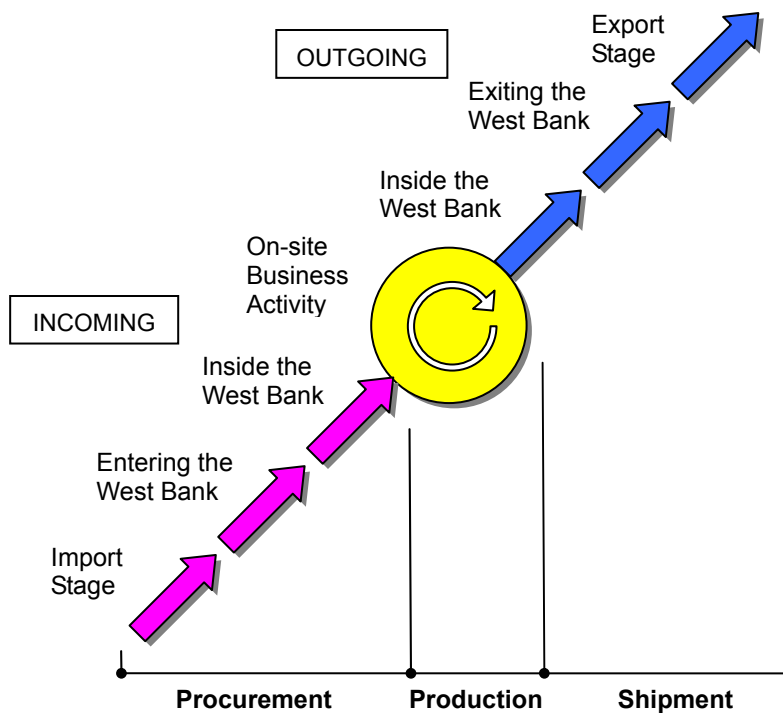
**Table 3.4.1 List of Surveyed Companies**

No.	Name of Company	Location	Type of Business	Procurement			Market		
				WB	I	O	WB	I	O
1	Al Awaeal	Jericho	Agribusiness	✓	✓			✓	✓
2	Khaizaran Agrobusiness Company	Tubas	Agribusiness	✓	✓				✓
3	Al Nasir Factory and Mills	Jenin	Food processing- herb products	✓		✓	✓		✓
4	Zadna Agrobusiness Company	Tubas	Food processing- canned products	✓		✓	✓	(✓)	✓
5	Al Zaytoon Agricultura Industries Co., Ltd	Salfit	Food processing- olive oil	✓	✓	✓	✓	✓	✓
6	Al Jebrini Dairy Company	Hebron	Food processing- dairy	✓		✓	✓		
7	Arab Inshai Project	Jericho	Food processing- dairy	✓	✓	✓	✓		
8	Salwa Food Co., Ltd.	Ramallah	Food processing- processed meat		✓	✓	✓		✓
9	Palestine Poultry Co	Tulkarm	Food processing- processed meat	✓		✓	✓		
10	Sinokrot Animal Feed Factory	Ramallah	Food processing- animal feed		✓	✓	✓		
11	Golden Wheat Milling Company	Ramallah	Food processing- cereal mills		✓	✓	✓		
12	Qasrawi Industrial and Trade Company	Hebron	Food processing- snacks	✓		✓	✓		
13	Pharmacare PLC.	Ramallah	Pharmaceuticals			✓	✓		✓
14	Jerusalem Pharmaceuticals	Ramallah	Pharmaceuticals	✓		✓	✓		✓
15	Tech Plast Co. for Industrial Engineering	Ramallah	Plastic packaging materials		✓	✓	✓		
16	Jerusalem Express Freight	Ramallah	Freight	✓	✓	✓	✓	✓	✓

WB: the West Bank, I: Israel, O:Overseas

(✓) East Jerusalem

Figure 3.4.1 shows a model of supply chain. In order to identify difficulties and constraints regarding import and movement of raw materials and products, the information collected in the interview survey is classified and summarized in each stage of the supply chain.



**Figure 3.4.1 Model of Supply Chain**

In the above figure, “Import Stage” means the procurement of raw materials and equipment from other countries including Israel. “Entering the West Bank” shows the process of entering the West Bank, which include commercial terminals and the Allenby Bridge. “Inside the West Bank” shows the movement of raw material within the West Bank until it reaches the production point. Passing through the “On-site Business Activity”, “Inside the West Bank” shows the movement of finished products within the West Bank. “Exiting the West Bank” shows the process the products go through in commercial terminals or the Allenby Bridge to exit the West Bank. “Export Stage” shows the distribution to the export market.

## **(2) Identification of Constraints in Supply Chain**

The information obtained in the Survey is classified and analyzed according to industry (agribusiness, food processing and pharmaceutical). As a result, the following difficulties and constraints in respect of the movement of goods and import limitation of raw materials and equipment are identified.

### **Identified Constraints in Supply Chain- Movement of Goods**

#### **Delay in Delivery**

Most of the surveyed companies pointed out delay in delivery due to process of security inspections at checkpoints and commercial terminals and back to back process at commercial terminals. Additionally, in order to avoid some congested or strict checkpoints (such as Awarta, Huwwara near Nablus and Tyasir near Tubas) or because of closure of checkpoints, Palestinian companies choose to take a detour even though it is a narrow, sloping and winding road. Some checkpoints and road sections require permit to go through, and if the permit is not issued the companies are obliged to take a detour. Such detour is pointed out as another cause of delay.

#### **Unpredictability of Delivery**

Unpredictability of delivery is also pointed out by numbers of surveyed companies. Delivery time is unpredictable mainly because the time required to go through checkpoints and commercial terminals often varies. Closure of checkpoints and terminals for Israeli holidays or for any other reasons is not notified of in advance, thereby resulting in further delay and leading to unpredictability of delivery. In order to deal with this unpredictability of delivery, many companies choose to keep buffer stock for a couple of months or more even if it raises the risk of wasting the raw material.

#### **Increase in Transportation Cost**

Increase in transportation cost is ascribed firstly to extension of travel time, especially for companies using refrigerating trucks for perishable products. Two vehicles' arrangement for

back to back at commercial terminals and the Allenby Bridge for entering and exiting the West Bank accumulate the transportation cost as well. Increase in transportation cost is a serious problem to all Palestinian industries as it raises the price of products and thus makes Palestinian products less competitive in the international market.

### **Damages to Raw Materials/ Products**

Three reasons are identified for damages to raw materials and products. One is the back to back process which is carried out at commercial terminals and the Allenby Bridge when entering and exiting the West Bank. The process can spoil perishable products such as processed food (meat products, dairy products) and fresh vegetables and fruits particularly in summer time. The back to back process is also causing the products to fail in the criteria of ISO (International Organization for Standardization) or HACCP (Hazard Analysis and Critical Control Point) where the products must be controlled under certain conditions at all times. The second reason is road conditions, which also causes damages to perishable products by vibration and extended travel time. Another reason is inappropriate handling of goods in the process of security inspection at checkpoints, commercial terminals, the Allenby Bridge and air/sea port. Perishable products and food products often require special attention in handling in order to keep the quality as well as to satisfy required standard. It is also a serious concern to the pharmaceutical industry because their raw materials and products are sensible chemical products which sometimes are susceptible to air, light and humidity.

### **Identified Constraints in Supply Chain- Import Limitation**

Although PNA applies the Israeli import policy, there are items that are prohibited from importing into the West Bank and Gaza. According to PalTrade (Palestine Trade Center), import limitation into the West Bank and Gaza is as follows.

- All sources for internationally controlled substances such as narcotic drugs and psychotropic substances.
- Pornography publications, hate literature and other materials contrary to generally accepted public morals, human, animal & plant health or national security (i.e., counterfeit money).
- Imports of motor vehicles older than 3 years, according to art. 3, par. 11 (a) in the Paris Protocol.
- Imports from countries, which prohibit or limit imports from Israel, mainly countries that do not have diplomatic relations with Israel. Goods listed in list A1, A2 and represent the only exception.
- International embargoes applied by organizations of which Israel is part.

Of all listed above, the limitation on “all sources for internationally controlled substances” is a serious concern for many Palestinian industries. The list contains numbers of chemical substances that are necessary in food processing, pharmaceutical and other industries including agriculture. For example, certain fertilizers containing urea cannot be imported.

For pharmaceutical industry, in particular, most of the chemical substances on the list are indispensable for the operation of its production lines. In reality, although those substances are prohibited, they can be procured with special permit from Beit El. Nevertheless pharmaceutical companies find it problematic for two reasons. Firstly, the process of obtaining the permit takes a long time, and secondly, it can be rejected even when they fill in all required detailed information in the application. Even with the special permit, in some cases imported materials can be blocked at the port of arrival for a long time, or in the worst case the materials can be confiscated at Israeli customs. This uncertainty in the process of procurement makes each company’s production planning difficult unless each of them has contingency plans, and once the raw material cannot clear the customs it causes a serious financial damage to each but there is no compensation as insurance companies are often reluctant to provide Palestinian firms with insurance policies to cover such damage.

### (3) Ideas for Improvement

As stated in the previous section, there are several constraints on movement and access, and import limitation, faced by enterprises in the West Bank. Most of constraints are related to security inspection at checkpoints and commercial terminals. As a result of such constraints, enterprises suffer from delay in delivery, unpredictability of delivery, increase in transportation cost, and from time to time damages to raw materials and products. For the purpose of relaxing such constraints, the Study Team proposes several ideas for improvement in movement and access, and import limitation. Ideas for improvement in movement and access are categorized into operational improvement, facility improvement, and institutional improvement.



**Figure 3.4.2**  
**Ideas for Improvement in Movement and Access**

### **Operational Improvement**

#### ***Idea 1: Increase in efficiency and handling capacity at checkpoints and commercial terminals***

Increase in efficiency and handling capacity will aim at reducing the time spent for security inspection at checkpoints and commercial terminals. It would be achieved by increasing the number of staff or by extending the opening hours of checkpoints and terminals. According to the survey, commercial vehicles have to wait for hours in a long queue at certain strict checkpoint, which leads to delay in delivery and high transportation cost. For products such as perishable and dairy products, it is very important to deliver products without any loss of time and predict the arrival time to the market.

#### ***Idea 2: Facilitation of smooth passage of registered drivers and vehicles***

Facilitation of smooth passage will become possible by the issuance of special permits for registered drivers and vehicles. Such permits should be obtainable only to “trusted” drivers and vehicles for carrying goods being notified of in advance, as explained below. It would be more efficient if there is an arrangement that drivers with special permits could pass through checkpoints without being stopped for unloading goods to outside for security inspection.

#### ***Idea 3: Advance notification of shipment to security authorities***

Similarly, notification of shipment (date and time of delivery, driver’s name, vehicle’s number, contents, destination, etc.) to security authorities in advance will help reducing the time needed for inspection. In fact, the Allenby Bridge Terminal has already introduced the advance notification system (24 hours advance notice). The issuance of special permit and advance notification system is a means to identify “trusted” drivers and vehicles at checkpoints and commercial terminals for accelerating procedures.

#### ***Idea 4: Careful treatment for perishable and sensitive products***

At the time of entering/exiting the West Bank, a back to back system is applied to goods at commercial terminals. In addition, security personnel sometimes requires unloading of goods to outside on an ad hoc basis at checkpoints. Perishable products and sensitive products such as pharmaceutical products are vulnerable to change of temperature, sunlight and heat during summer. Many food enterprises use refrigerating vehicles for avoiding degradation of products. Under such circumstances, arrangements for special treatment for perishable and sensitive products to minimize damages to products are needed, i.e., carrying out security checks in the shade to avoid exposure to heat and sunlight, and a careful handling of goods, particularly during the back to back process.



***Idea 5: Announcement of closure and opening hours of checkpoints and commercial terminals***

From time to time, sudden closure of checkpoints and commercial terminals affects or even stops delivery of products inside/from/to the West Bank. It is possible to change the route if drivers know the closure in advance. Thus, it will be helpful to announce closure and any change of opening hours of checkpoints and commercial terminals to the public.

**Table 3.4.2 Effects on Movement and Access Constrains (Operational Improvement)**

	<i>Idea 1</i>	<i>Idea 2</i>	<i>Idea 3</i>	<i>Idea 4</i>	<i>Idea 5</i>
Delay in Delivery	✓	✓	✓		✓
Unpredictability	✓	✓	✓		✓
Transportation Cost	✓	✓	✓		✓
Damage to Products	✓	✓	✓	✓	✓

**Facility Improvement**

***Idea 6: Increase in capacity of facilities at commercial terminals***

Currently, commercial vehicles sometimes have to wait for security inspection in a long queue at commercial terminals. Inside terminals, the back to back process is time consuming due to limited capacity of facilities. At the Allenby Bridge Terminal, because of limited space and a single scanner, only two trucks can enter to unload/load at the same time. Therefore, increase in capacity of facilities such as expansion of unloading/loading area will be one measure for the acceleration of procedures.

***Idea 7: Priority lanes for perishable and sensitive products***

Concerning the time spent for security inspection and back to back process, perishable and sensitive products which are vulnerable to change of temperature, sunlight and heat have to be handled without any loss of time. However, in most cases, such preferential treatment for those products does not exist. Priority lanes for perishable and sensitive products will allow vehicles carrying those products to go without waiting. In addition to the use of a priority lane, an arrangement for minimizing security inspection without unloading goods to outside will be needed to keep the quality of products.

***Idea 8: Establishment of warehouse and/or cooling facility at commercial terminals***

The last idea for facility improvement is establishment of warehouse and/or cooling facility at commercial terminals. During the back to back process, as mentioned before, some products should be stored in a warehouse or cooling facility for preventing degradation of products. Nowadays, ISO22000 and HACCP require appropriate means of storage and delivery for food

security. Products which are carried by refrigerating vehicles are easily damaged once they are taken out of the vehicles to outside. Therefore, it is necessary to store certain products in a warehouse and/or cooling facility without being exposed to sunlight and outside air.

### **Institutional Improvement**

#### ***Idea 9: Joint Procurement/Delivery System***

Joint procurement/delivery system is a system among enterprises, which means that a “trusted” delivery/transport company collects goods for/from enterprises and takes a necessary procedure for security inspection on behalf of those enterprises. Therefore, each enterprise does not have to arrange for smooth passage of checkpoints and commercial terminals. Such a system will contribute to the reduction of transportation cost for each enterprise and more importantly, minimization of security inspection along with the issuance of special permit to “trusted” delivery/transport company and advance notification system, as explained earlier.

**Table 3.4.3 Effects on Movement and Access Constraints (Facility and Institutional Improvement)**

	<i>Idea 6</i>	<i>Idea 7</i>	<i>Idea 8</i>	<i>Idea 9</i>
Delay in Delivery	✓	✓		
Unpredictability	✓	✓		
Transportation Cost	✓	✓	✓	✓
Damage to Products	✓	✓	✓	

### **Improvement in Import Limitation**

#### ***Idea 10: Arrangement for import of restricted materials***

There exists unpredictability of importing certain materials which are regarded as restricted items for security reasons. They are mainly chemicals and many of raw materials for pharmaceutical production such as H<sub>2</sub>O<sub>2</sub> (Hydrogen Peroxide). Some fertilizer is also regarded as a restricted material. Considering the dependency on imported raw materials for Palestinian industries, it is crucial to procure raw materials in a convincing way by agreeing between PNA and the Israeli authorities on an arrangement for removing unpredictability caused by import limitation.

#### **(4) Application to the Agro-industrial Park**

### **Improvement in Movement and Access**

For the purpose of procuring raw materials to and delivering products from the agro-industrial park in Jericho, highly used checkpoints and commercial terminals which are adjacent to the agro-industrial park are: Jericho DCO checkpoint, Jericho North checkpoint (Yitav

checkpoint), Mousa Alami checkpoint and the Allenby Bridge Terminal. Therefore, measures for improvement should be introduced at the above mentioned checkpoints and commercial terminal in the first place.

According to the Israeli Airport Authority which is a managing organization of the Allenby Bridge Terminal, the number of commercial trucks passing the Allenby Bridge Terminal is 80 trucks per day (50 trucks for outgoing and 30 trucks for incoming) and the capacity of the terminal is sufficient for the time being. Therefore, considering the scale of operation and the expected increase in commercial vehicles in the agro-industrial park, the Study Team proposes the implementation of ideas for improvement according to the stage-wise development. Operational improvement will take place as short-term improvement before the second stage in 2012, which will be followed by facility and institutional improvement as long-term improvement before the third stage in 2015.

Some measures are applied to both the checkpoints (as shown with red CP below) and the terminal (as shown with blue TML below), whereas others are applied to either of them. For example, it should be mentioned that the Allenby Bridge Terminal has already introduced the facilitation of smooth passage and advance notification system (24 hours advance notice) for all commercial vehicles. Joint procurement/delivery system will be introduced before the third stage when tenants in the agro-industrial park agree on such a system. For the implementation of joint procurement/delivery system, as mentioned before, the coordination with the issuance of special permits and an advance notification system will be required.

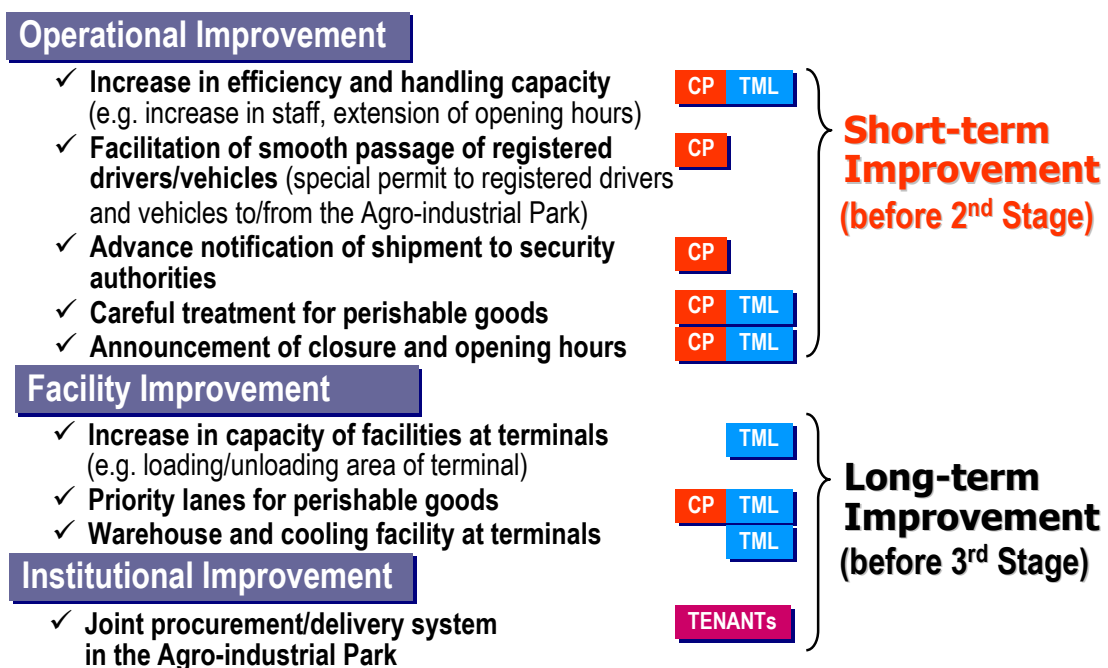


Figure 3.4.3 Ideas for Better Implementation of the Agro-industrial Park

### **Improvement in Import Limitation**

Since the pharmaceutical industry is one of the target industries in the agro-industrial park, it is worthwhile to consider the issue of import limitation with the Ministry of National Economy, the Ministry of Health, the Union of Palestinian Pharmaceutical Manufactures and pharmaceutical enterprises as soon as possible.

As stated earlier, pharmaceutical enterprises can import such restricted items for security reasons by applying to the Ministry of Health in PNA and to Israeli authority through Beit El. However, the application is not always accepted, which is a source of unpredictability for the enterprises. One idea will be an arrangement for enterprises in the agro-industrial park to be able to import raw materials any time with certain conditions such as usage proof (date, quantity, means, etc.) of restricted items. Though it seems difficult for each enterprise to negotiate or resolve the issue of import limitation by itself, it will be reasonable to consider a collective arrangement for enterprises in the agro-industrial park.

### **3.5 Role-sharing in Implementation**

The basic approach for role-sharing between public- and private-sector in this kind of industrial area development is that the public sector shall undertake off-site infrastructure development such as access road, water supply pipeline and main power transmission, while the private sector would implement on-site development to create real estate of market value.

However, there is no clear boundary in the role-sharing in a practical sense. Sometimes the private sector would bear part of the cost for widening the access road even if the road is a public road. On the contrary, the public sector would construct some facility (e.g. solar energy generation with advanced technology) which is exclusively used for the on-site development area for the public purpose of monitoring and dissemination of it. In this wise, boundary of the role-sharing may alter depending on what, why, where and how the infrastructures/facilities would be developed. Therefore role-sharing could not be fixed at this premature stage of planning, which will be discussed repeatedly in accordance with the progress of the further engineering study in the Part 2 and Part 3.

In principle, the off-site infrastructure/facility all over the development shall be developed under the responsibility of the public sector because they would serve not only the factories in the agro-industrial park but also others somehow in the region. The public sector may ask the private sector for some type of monetary contribution or in-kind for developing the infrastructure/facility, but it would depend to what extent the infrastructure/facility would be occupied in use by the agro-industrial park.

<b>1<sup>st</sup> Stage</b> 2009-2011	<b>2<sup>nd</sup> and 3<sup>rd</sup> Stage</b> 2012-2014 / after 2015
<p><b>Off-site Infra./facility</b></p> <ul style="list-style-type: none"> <li>✓Access road improvement</li> <li>✓Water supply pipeline</li> <li>✓Power transmission</li> </ul>	<p><b>Off-site Infra. /facility</b></p> <ul style="list-style-type: none"> <li>✓Cargo access development</li> <li>✓Water supply enhancement</li> <li>✓Power transmission expansion</li> </ul>
<p><b>On-site Infra. /facility</b></p> <ul style="list-style-type: none"> <li>✓Land preparation including on-site common infra.</li> <li>✓Center facility with functions such as product display, business meeting, sales, etc.</li> </ul>	<p><b>On-site Infra. /facility</b></p> <ul style="list-style-type: none"> <li>✓Land preparation including on-site common infra.</li> <li>✓Factories/enterprises</li> </ul>

**Figure 3.5.1 Infrastructure/Facilities by Development Stage (tentative)**

On the other hand, the on-site infrastructure/facility shall be developed basically by the private sector (developer) as aforementioned. However, public support would be needed in the first stage since the necessary conditions, such as stable supply of high quality and safe products, optimal water supply, and improvement in movement and access, in order to attract investors to the agro-industrial park would not be matured yet by this stage. Therefore, a kind of PPP (Public and Private Partnership) would be required for implementation of the first stage.

The basic idea for PPP in the first stage is that from the majority to all of the investment for facility construction and service providing would be undertaken by the private sector, while the public sector would be asked to bear some part of the investment depending on the public nature of the facilities.

The on-site infrastructure/facility development in the second and third stage should be fully undertaken by the private sector after the prerequisites are all matured enough to attract investors to the agro-industrial park. What the public sector could do for the successful implementation is to further enhance those prerequisites, to support the private sector in investment promotion, and to assist some part of the on-site infrastructure/facility if they would meet public policy or program. For instance, assuming that waste water treatment plant or/and solid waste recycling plant would be installed as common facilities in the agro-industrial park, the public sector may support the construction for the possible reasons of service providing capability to the surrounding communities, or environmentally friendly pilot project.

## CHAPTER 4 FURTHER STUDY SCHEDULE

### 4.1 Time Table of the Study

The further Study would continue in accordance with the stakeholders meetings, i.e. Ministerial Meeting and Technical Level Meeting, in close relation to other JICA activities.

The Part 2 is scheduled to commence in the middle of April 2008 and last until the middle of July 2008. The results of the Part 2 will be reported to the Fifth Technical Level Meeting to further discuss specific issues to be identified during the Part 2. The Part 3 from September to November 2008 would be the final stage of the Feasibility Study on the Agro-industrial Park Development, of which the results shall be reported to the Seventh Technical Level Meeting in order to further discuss necessary actions to be taken for the successful implementation of the agro-industrial park.

Year	'07	2008											
Month	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Feasibility Study</b>		<b>Part 1</b>			<b>Part 2</b>			<b>Part 3</b>					
<b>Other JICA's Activities in 2008 for "Corridor for Peace and Prosperity"</b>		<ul style="list-style-type: none"> <li>➤ The Project for Improvement of Local Governance System (Community Empowerment Component)</li> <li>➤ The Project for Strengthening Support System Focusing on Sustainable Agriculture in the JRRV</li> <li>➤ The Feasibility Study on Water Resources Development and Management in the JRRV</li> </ul>											
<b>Stakeholders Meetings</b>	<b>Ministerial Meeting</b>												
							□						
	<b>Technical-Level Meeting</b>												
	● 3rd				○ 4th			○ 5th		○ 6th			○ 7th

Figure 4.1.1 Further Study Schedule

### 4.2 Scope of Work for the Part 2 and Part 3

The main components of the Part 2 are “investment demand and promotion strategy” and “preliminary planning on agro-industrial park”, while the Part 3 consists of “investment promotion” and “agro-industrial park development plan”. Detailed scope of work for the Part 2 and Part 3 are as follows:

**(1) The Part 2**

**Investment Demand and Promotion Strategy**

**Demand Analysis (Potential Investors Survey)**

This study component is scheduled to be undertaken from April to July 2008. Target industries/products to promote investment for the agro-industrial park are as follows:

- ✓ Agri-business (high value-added commodities such as cherry tomato, dates, sweet pepper, etc. are the target products)
- ✓ Agro-industry (processed vegetables and fruits, olive oil, etc. are the target products)
- ✓ Food processing industry (meat products, dairy products, snacks and confectionary, etc. are the target products)
- ✓ Pharmaceutical (generic drugs, nutrient supplements, etc. are the target products)

Target enterprises to survey will be sampled<sup>10</sup> from potential enterprises in Palestine, Jordan, the Gulf countries and EU taking high interest in the agro-industrial park. The survey will focus on the following items to clarify:

- ✓ Possible scale of investment, production size and target market
- ✓ Requirements for procurement of raw materials and equipment
- ✓ Key determinants for investment (movement and access and other constraints)

**Strategy and Action Plan for Investment Promotion**

This study component aims at institutional strengthening of relevant PNA agency that would be in charge of investment promotion activities. The likely agencies are PIEFZA or a new functional unit (e.g. investment promotion unit) to be established as proposed in the Phase I Study. For this, the Study Team will study and prepare necessary procedures as follows:

- ✓ Organizational arrangement for investment promotion activities (TOR of the organization)
- ✓ Preparation of action plan for investment promotion activities
- ✓ Supporting budgetary arrangement for the activities

**Preliminary Planning on Agro-industrial Park**

**Soil exploitation, geographical and topographic Survey**

Several engineering surveys<sup>11</sup> will be conducted encompassing the site<sup>12</sup>. They are

<sup>10</sup> The number of samples is estimated to be 500 to 2,000, which need to be statistically determined in consideration of type of question, the number of options to select for answer, etc. before commencement of the Part 2.

<sup>11</sup> These engineering works could be subcontracted to the reliable national firms who are rich in the past experience in the same field with foreign/international organization.

topographic survey with contour at one to five meter intervals, soil exploitation and geographical survey which would verify the physical relevancy of the site for development.

#### Land Use of Each Stage

Preliminary land use plans of each development stage, i.e. 1<sup>st</sup> Stage, 2<sup>nd</sup> Stage and 3<sup>rd</sup> Stage will be made at an appropriate scale between 1/1,000 and 1/5,000, incorporating such land use as factory area, cargo handling and distribution area, central common service area, common infrastructure area (inner road, pedestrian, power transforming facility, greenbelt and open space and so forth), etc.

#### Off-site Infrastructures and facilities

Access Road: Access road for the initial development stage (1<sup>st</sup> Stage) and the alternative cargo access road for the future stages (2<sup>nd</sup> and 3<sup>rd</sup> Stage) will be studied and planned in parallel. Necessary factors for implementation such as possibility and procedure of land acquisition, cargo traffic to be generated in each stage, and specification of required facilities will be contemplated and reflected in the planning. This result will be presented to the Technical Level Meeting as one of the most crucial outputs from the Study.

Water Supply: Preliminary scenarios for optimal water supply will be studied and planned in cooperation with the Feasibility Study on Water Resource Development and Management incorporating the possible options, i.e. water-saving from agriculture use, purchase of bulk water from Mekorot and rehabilitation of the existing water resource (*Qilt Spring*). If and when other possible options come forth, that could be incorporated too. For this, it is requested to the stakeholders to provide the latest data and information as well as suggestion/comments from a technical point of view. This result will also be presented to the Technical Level Meeting as one of the most crucial outputs from the Study.

Power: Transmission and distribution facility plan will be studied and planned for each development stage, in consultation with JDECO.

#### On-site Infrastructures and facilities

Facilities such as cargo handling and distribution, waste water treatment and solid waste management are considered to be key on-site facilities to make the agro-industrial park of market value. Since the cargo handling and distribution function should be closely related to the security measures for practical reasons, close communication/discussion need to be made in the course of planning with the relevant Israeli authorities. As for waste water treatment and

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<sup>12</sup> For surveying the site, it is necessary to be approved by the land owners. In addition, especially for the land in Area C, agreement would be necessary from Israeli authorities in advance.



solid waste management<sup>13</sup>, both parties (PNA and Israel) would pay careful attention since these facilities relate quite a bit to the environmental concern. For this, necessary consultation shall be made with the relevant authorities.

#### Social and Environmental Consideration

A draft EIA (Environmental Impact Assessment) report needs to be prepared and submitted to the EQA (Environmental Quality Authority) according to the official guideline<sup>14</sup> of PNA. The report would describe key items on social and environmental consideration, such as valued environmental components, spatial boundaries and time frame of the project, and results of consultation with stakeholders<sup>15</sup>. At the same time, the Study would report the progress of work on social and environmental considerations to the JICA headquarter following the official guideline.

#### Preliminary Cost Estimate

Preliminary cost estimate will be made by the end of the Part 2, by type of facility as well as alternatives/options.

## **(2) The Part 3**

### **Investment Promotion**

#### Technical Assistance to PNA's investment promotion

Base on the action plan for investment promotion prepared in the Part 2, the Study will assist the PNA agency in capacity improvement in order for them to implement promotion activities. This technical assistance would be extended mainly in a form of OJT (on-the-job training) through a Japanese expert who has rich experience in the field of investment promotion.

#### Public Relation

In parallel with the technical assistance mentioned above, necessary materials for public relation and investment promotion will be made in collaboration with the PNA agency. Such media as brochures (pamphlet), websites, and computer graphics of the future agro-industrial park are the likely candidates to be created for public relation.

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<sup>13</sup> For both waste water treatment and solid waste management facility (waste recycling plant), preliminary engineering studies will be made in the Part 2, which would assess needs, relevance and effect/impact of the facilities. Then if they are assessed appropriate and worthwhile implementing, the Part 3 would follow up in further planning.

<sup>14</sup> The Palestinian Environmental Assessment Policy; April, 2000

<sup>15</sup> For detail, refer to Annex 3: TOR for Environmental Impact Assessment of the Phase I Report.

## **Agro-industrial Park Development Plan**

### **Land Use Plan**

Following the preliminary land use plan of each development stage which is prepared in the Part 2, the final version of the land use plan will be made. The Japanese expert in charge of this work will also supervise the computer graphics for public relation, if it is required.

### **Infrastructures and Facilities Development Plan**

Planning work on all the infrastructures and facilities, both off-site and on-site, will be completed and compiled as engineering documents by the end of October 2008, after necessary technical consultations with the relevant stakeholders.

### **Cost Estimate and Financing Plan**

Cost estimate will be elaborated in parallel with the finalization of the engineering documents on infrastructures and facilities. In the meantime, financial plans for each stage by type of infrastructure/facility will be prepared through discussions with the relevant stakeholders. Since the first stage development is schedule to be ground-breaking in 2009, according to the provisional time frame of the development, a clear financial scheme is necessary at least for the first stage.

### **Economic and Financial Evaluation**

Given the detailed cost estimate and after calculation of the expected benefit/profit in each stage, economic evaluation as well as financial evaluation will be made in order to quantitatively verify relevance of the development by stage.

### **Social and Environmental Consideration (*continued*)**

The final EIA report will be prepared and submitted to the EQA by the middle of October 2008 after holding a public consultation meeting inviting a wide range of stakeholders. The report will be officially reviewed by the members of EAC (Environmental Assessment Committee) for four weeks after submission of the report. If any comments/requirements received from the EQA as a result of the review, the Study will immediately deal with them and submit the revised report again to the EQA for obtaining the approval.

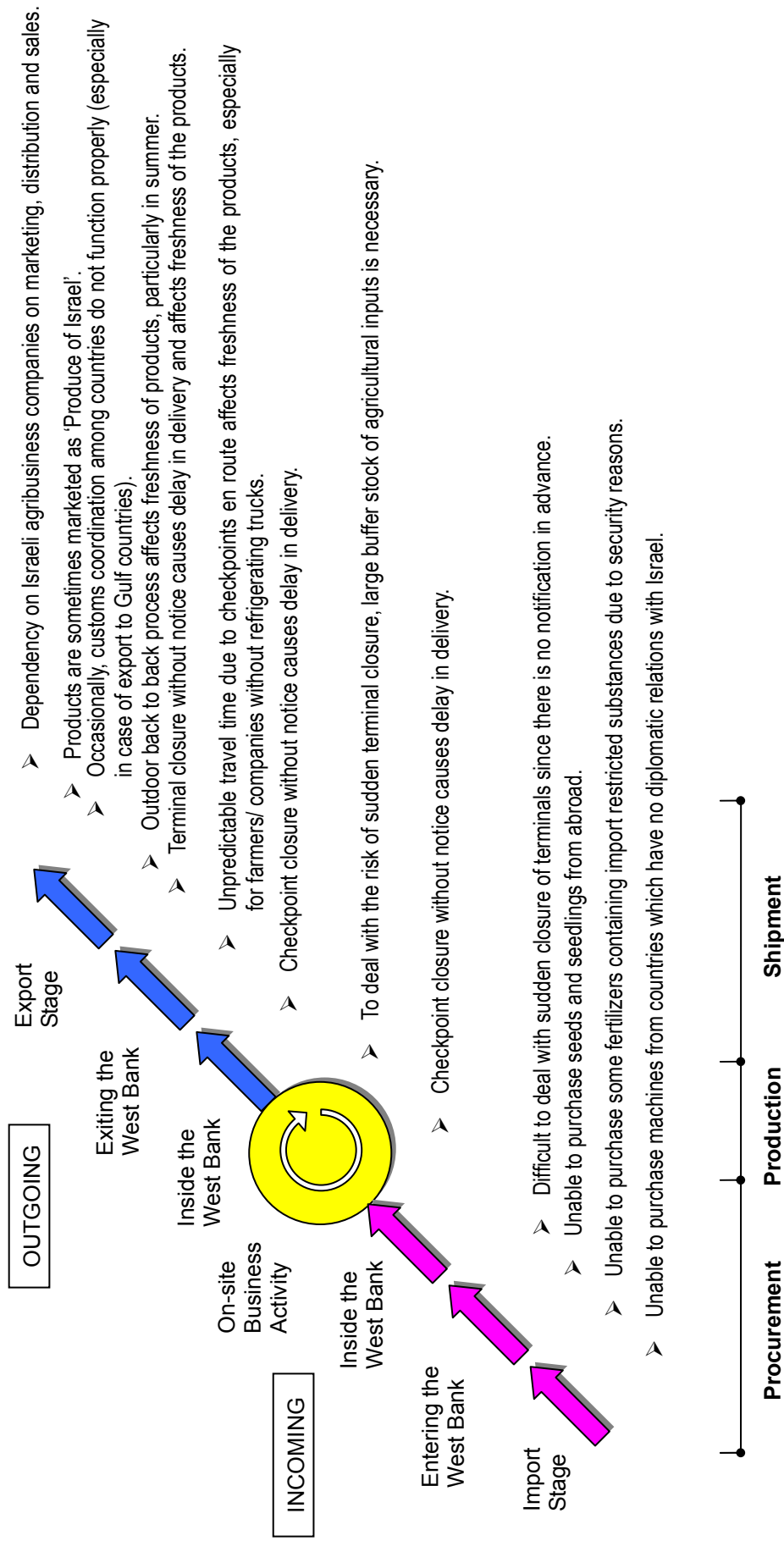
### **Implementation Scheme of the Agro-industrial Park Development and Management**

In collaboration with the financial expert who is in charge of the cost estimate and financing plan, another institutional expert will undertake the organization of an implementation scheme for each development stage. Since the first stage development is tentatively scheduled to commence in 2009, an effective implementation scheme needs to be prepared and shared among the stakeholders at least for the first stage.

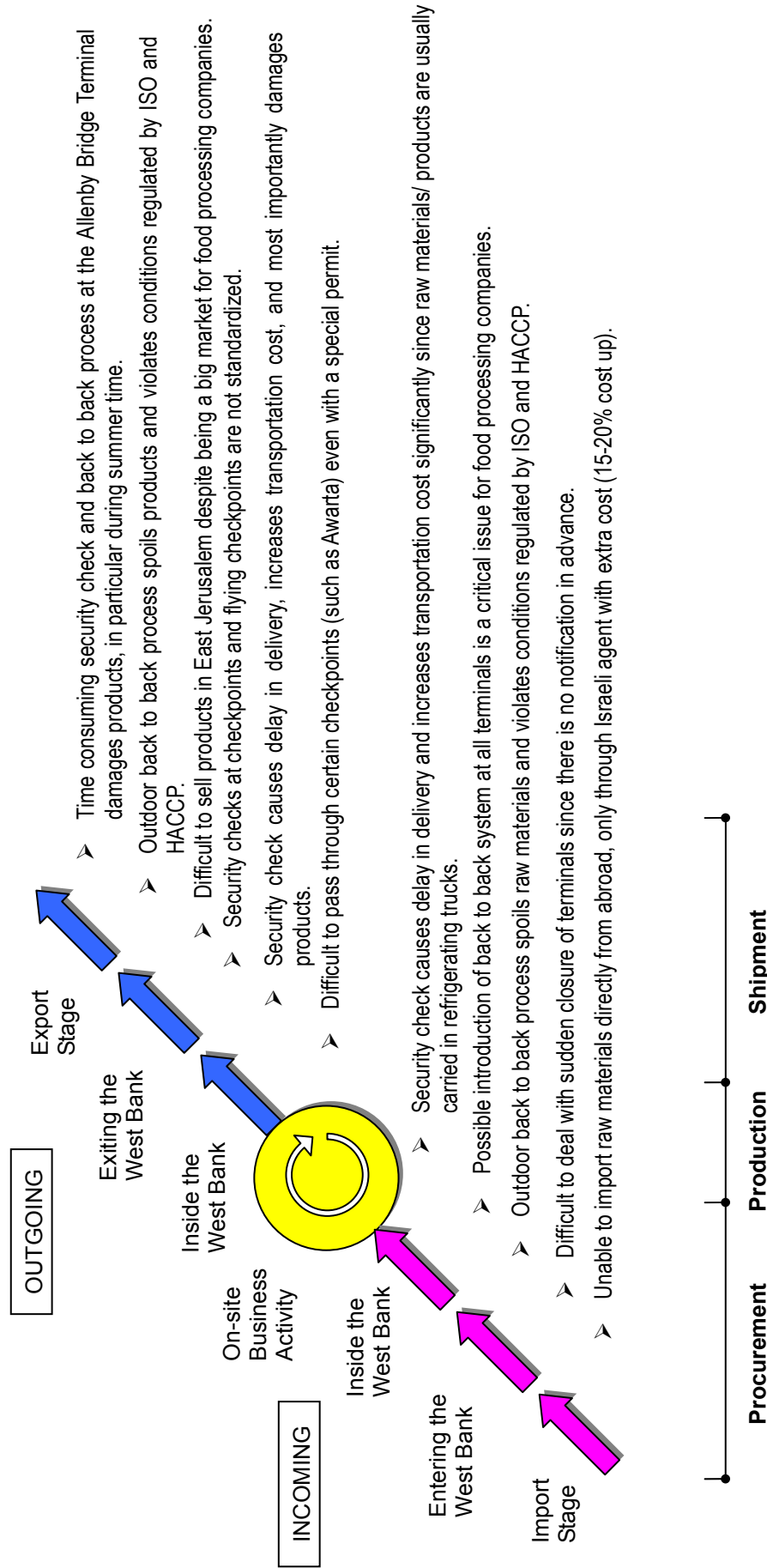
## **ANNEX 1**

### **Summary of Interview Survey on Movement and Access and Import Limitation: by Industry (Agribusiness, Food Processing and Pharmaceutical)**

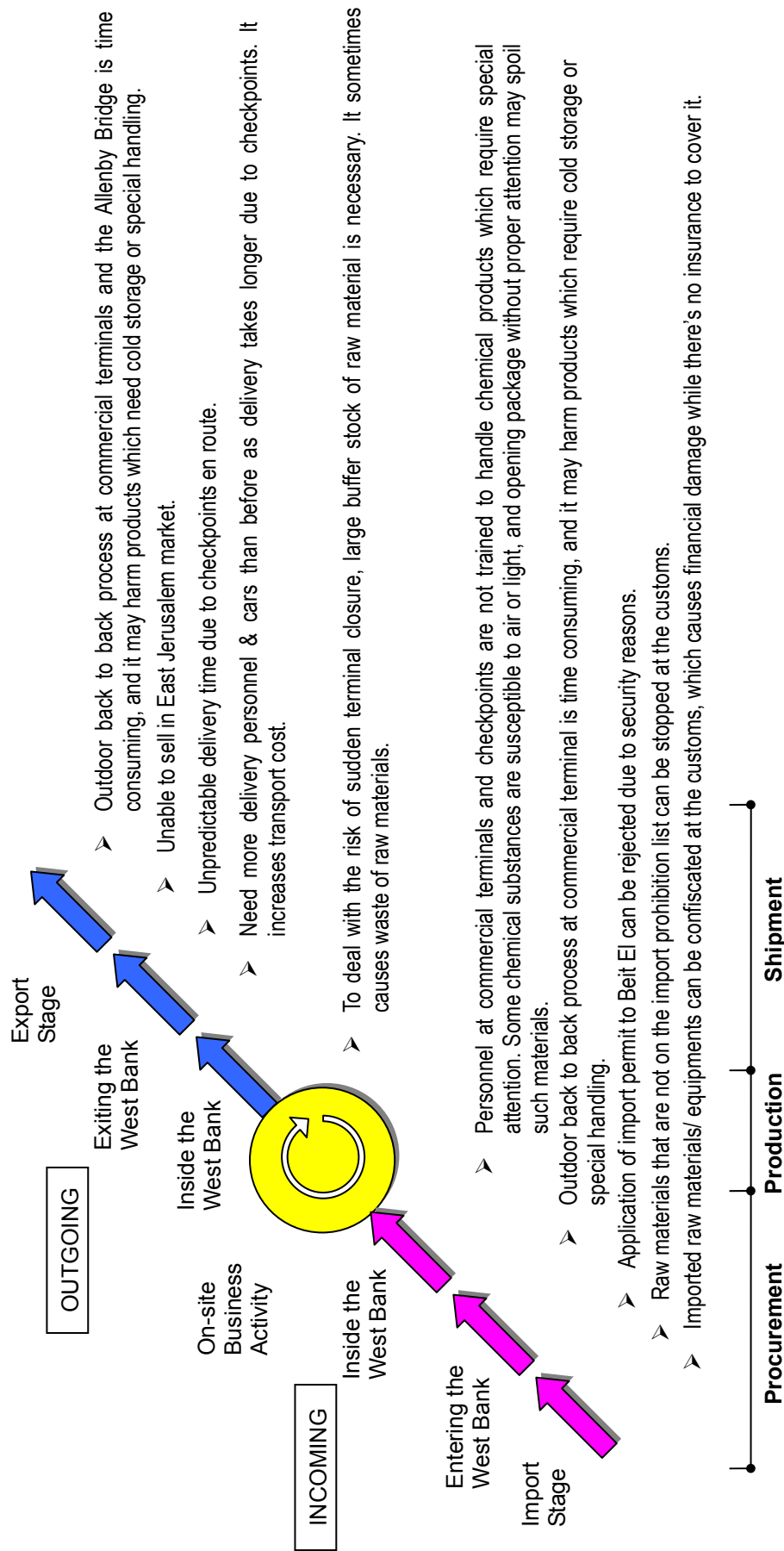
## Constraints in Supply Chain: Agribusiness



## Constraints in Supply Chain: Food Processing



## Constraints in Supply Chain: Pharmaceutical

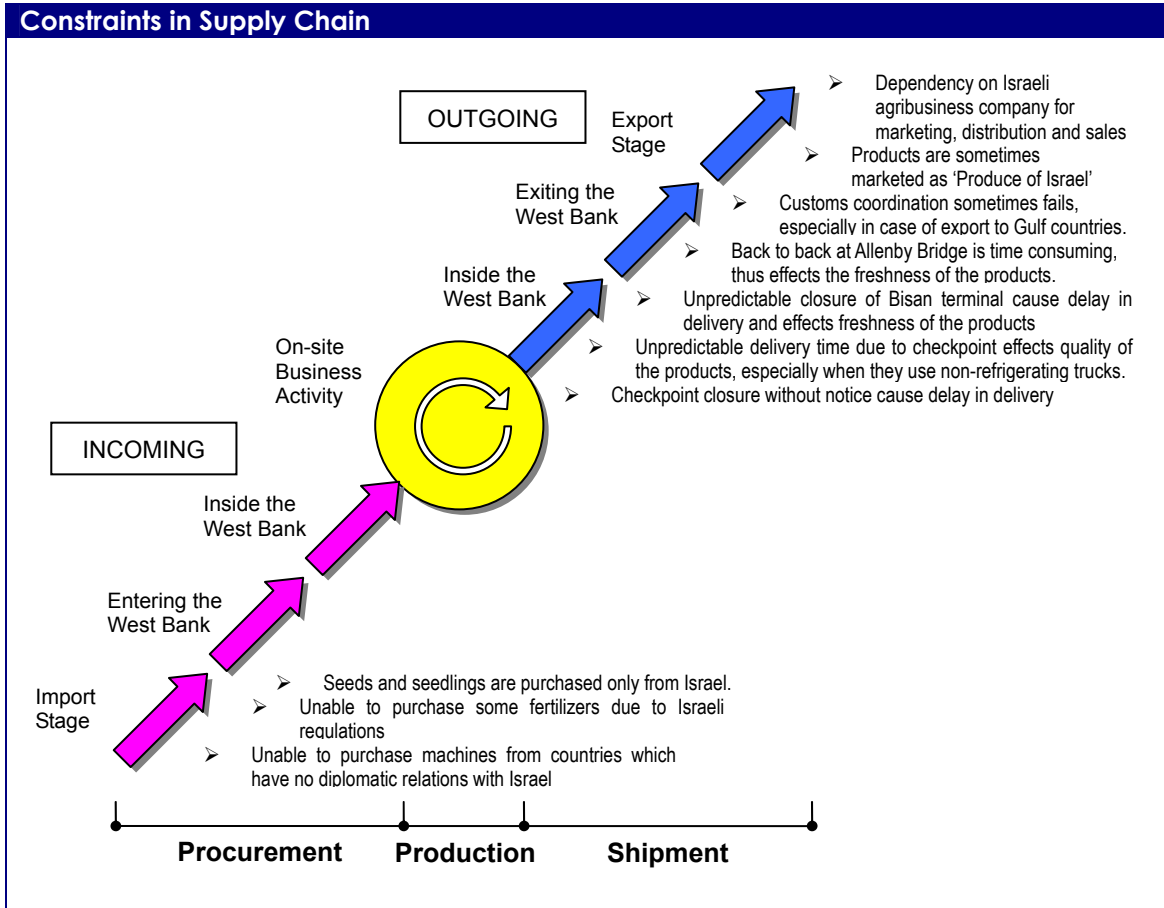
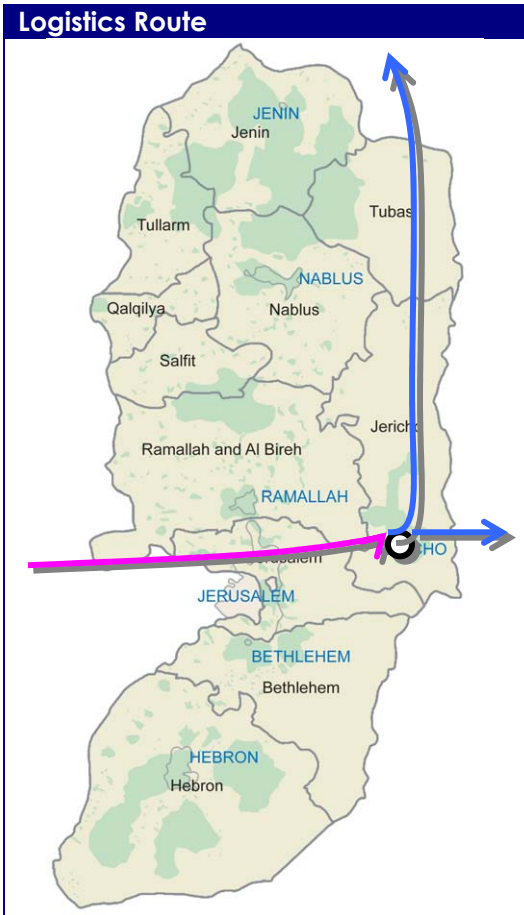


## **ANNEX 2**

### **Summary of Interview Survey on Movement and Access and Import Limitation: by Company**

\*Summary of Interview Survey in this Annex is based on the interviews.  
The responsibility for the wording of this summary lies with the study team.

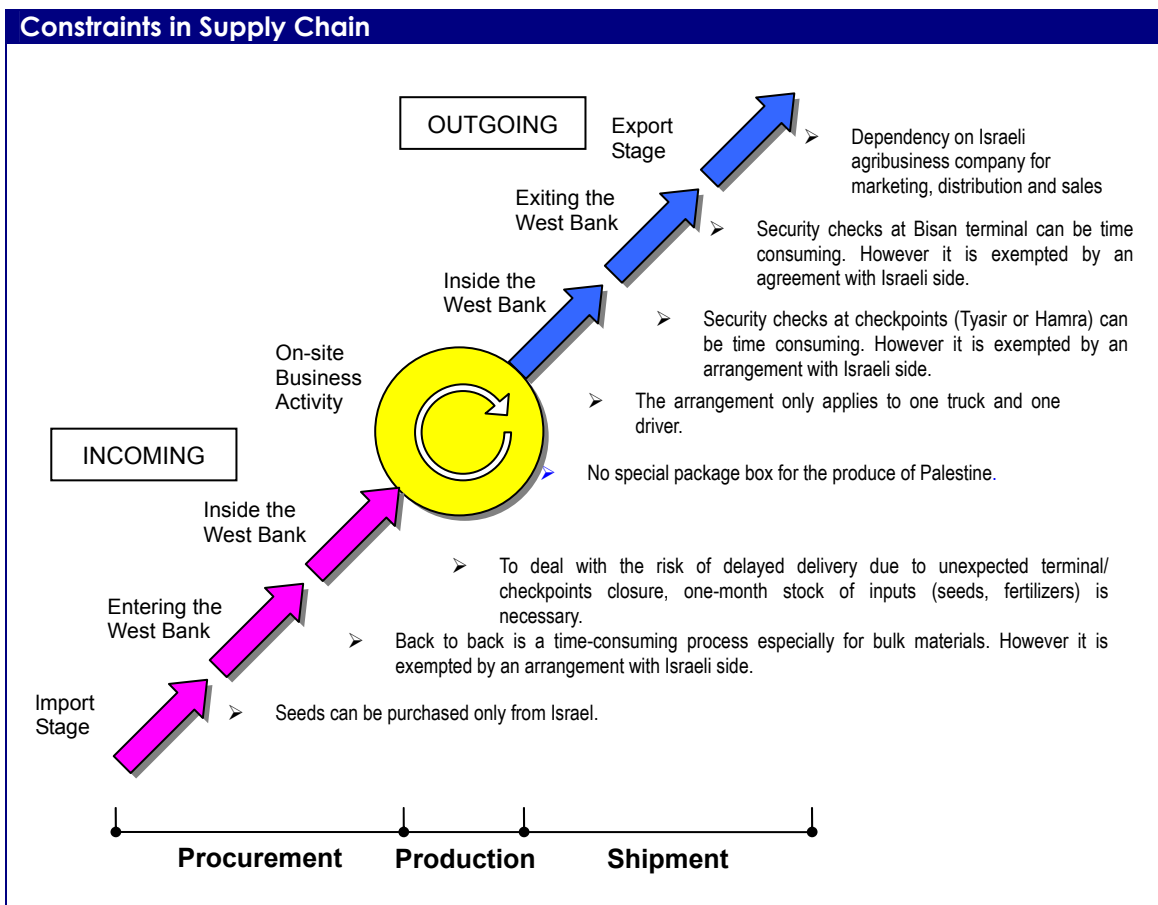
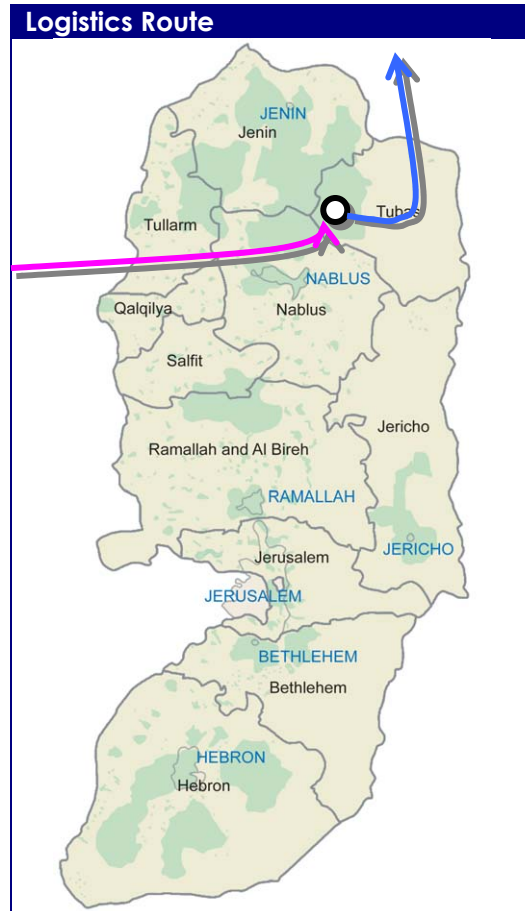
Company Profile	
Name & Address:	Al Awaal/ Jericho
Type of Industry/Products:	Agriculture/ Fresh vegetable (Cherry tomato, cucumber etc.)
Business Outline:	The company export fresh vegetables such as cherry tomato, cucumber, paprika etc. to Israel and European market trough Israeli agribusiness firms. EurepGAP/GlobalGAP and Organic(Netherlands) certified
Key Findings on Movement and Access:	<b>OUTGOING</b>
	<ul style="list-style-type: none"> <li>✓ Inside the WB: Checkpoint closure without notice cause delay in delivery. Unpredictable delivery time due to checkpoints effects freshness of the products.</li> <li>✓ Exiting the WB: Back to back at Allenby Bridge is time consuming, thus effects freshness of the products.</li> <li>✓ Export Stage: Customs coordination sometimes fails, especially in case of export to Gulf countries.</li> </ul>
Key Findings on Import Restriction:	
	<ul style="list-style-type: none"> <li>✓ Unable to purchase less expensive machines from Arab countries which have no diplomatic relations with Israel</li> <li>✓ Unable to import seeds and seedlings except from Israel.</li> </ul>



Summary of Interview Survey in this Annex is based on the interviews. The responsibility for the wording of this summary lies with the Study Team.

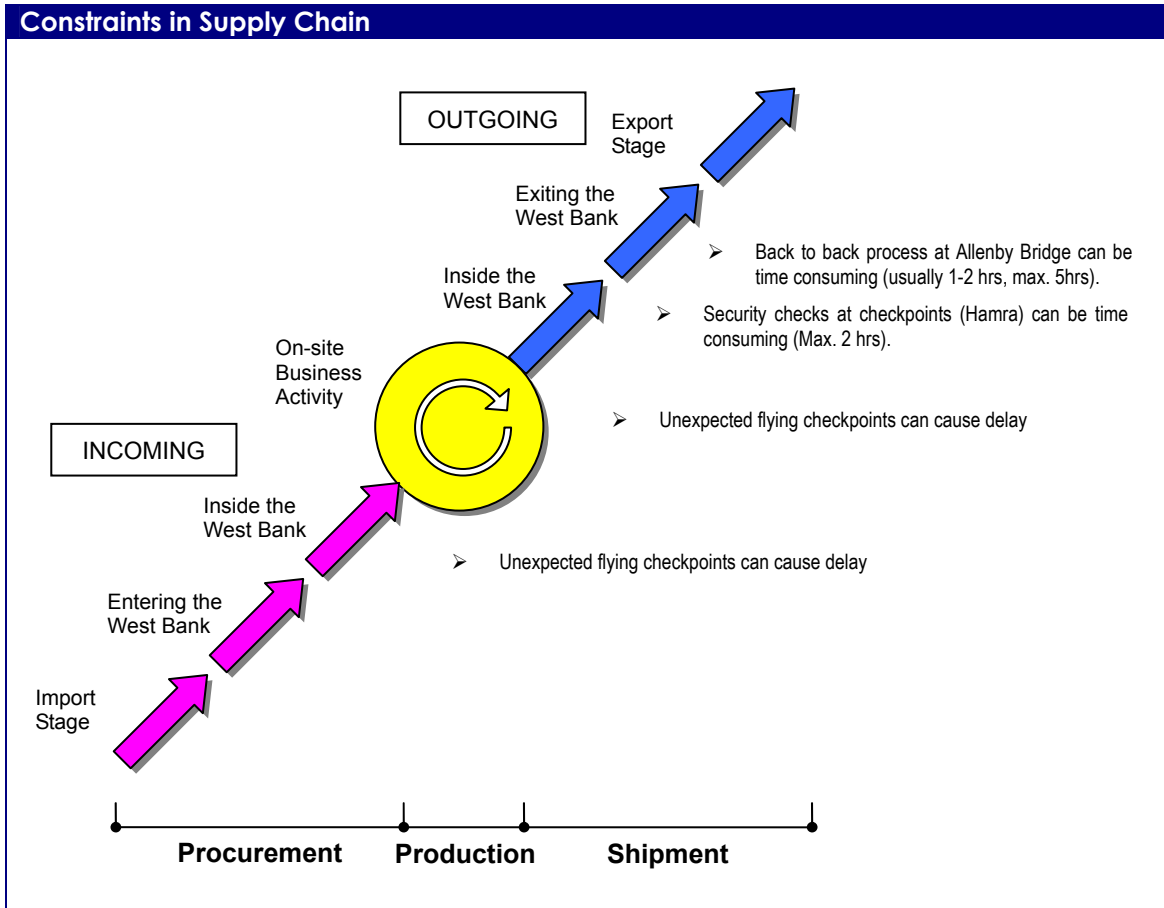
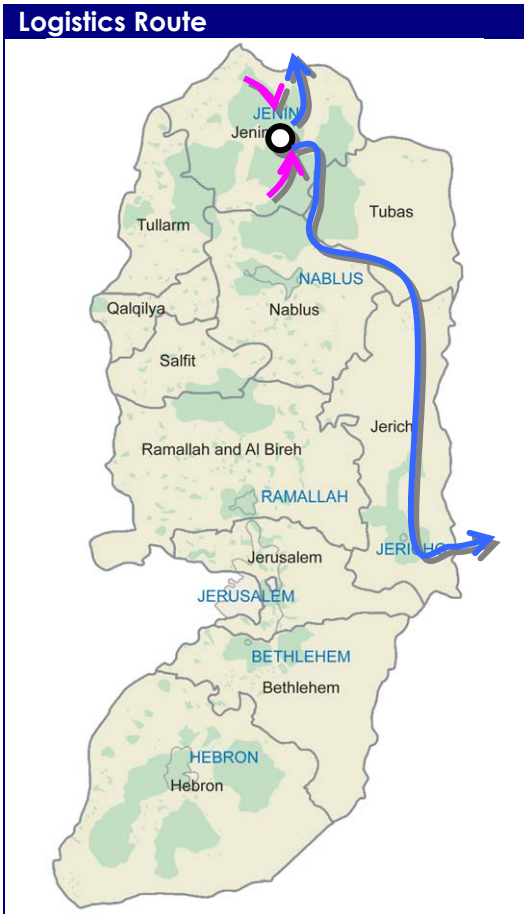


Company Profile	
Name & Address:	Khaizaran Agrobusiness Company/ Tubas
Type of Industry/Products:	Agriculture/ Fresh herb (Chive, Rucola, Tarragon etc.)
Business Outline:	Established in 2005. It started to grow and export herb with assistance from USAID PAPA Project. With exclusive contract with Israeli agribusiness firm, 100% of products are exported to EU market and Russia. EurepGAP certified.
Key Findings on Movement and Access:	
<u>INCOMING</u>	
✓	Inside the WB: To deal with the risk of delayed delivery due to unexpected terminal/ checkpoint closure, large stock of agricultural inputs is necessary.
<u>OUTGOING</u>	
✓	Inside the WB: Although security checks at checkpoints and terminal is time consuming process. However, due to an agreement with Israeli authority with the facilitation of USAID, the company is exempted from security checks. However, it applies only to one truck and one driver.
Key Findings on Import Restriction:	
✓	All necessary inputs are purchased from Israel. However, this is partly due to the exclusive contract with Israeli Agribusiness company which defines all specification related to its growing process.



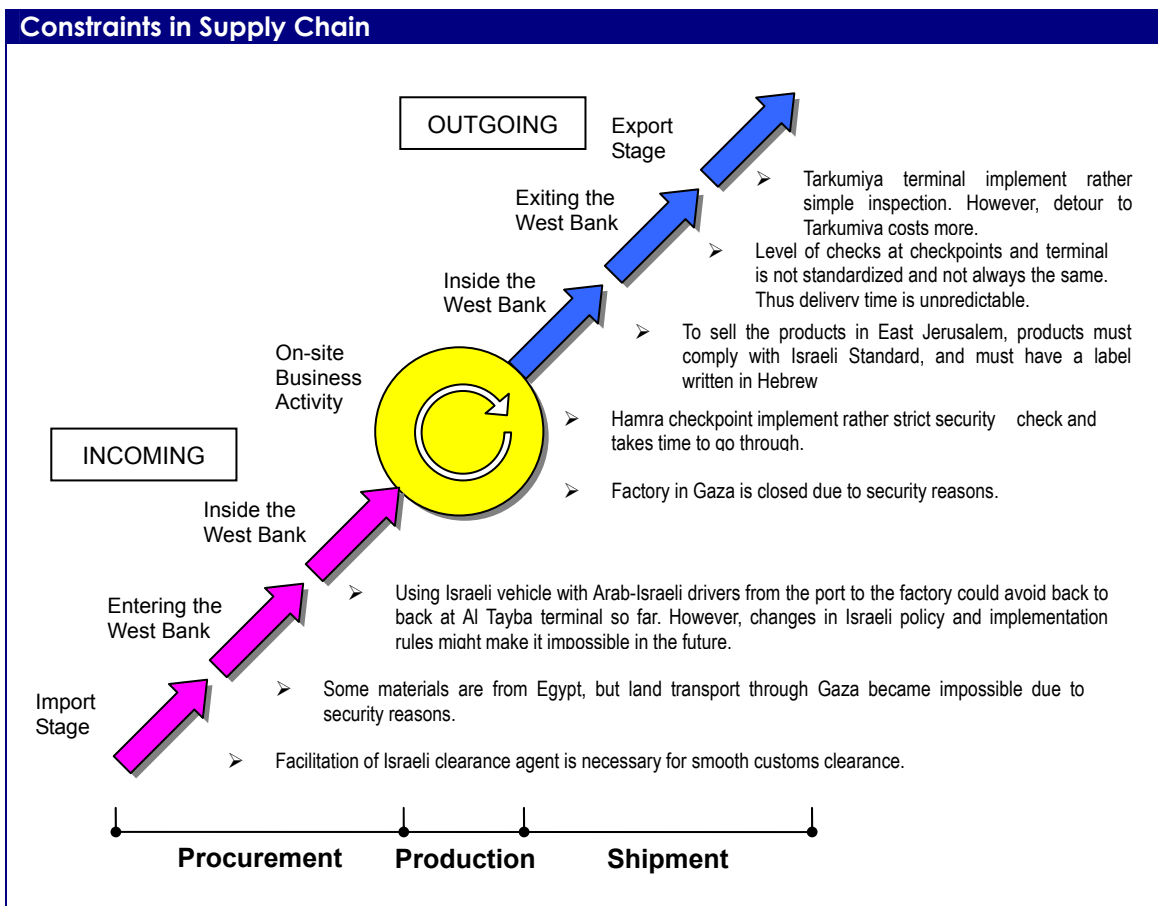
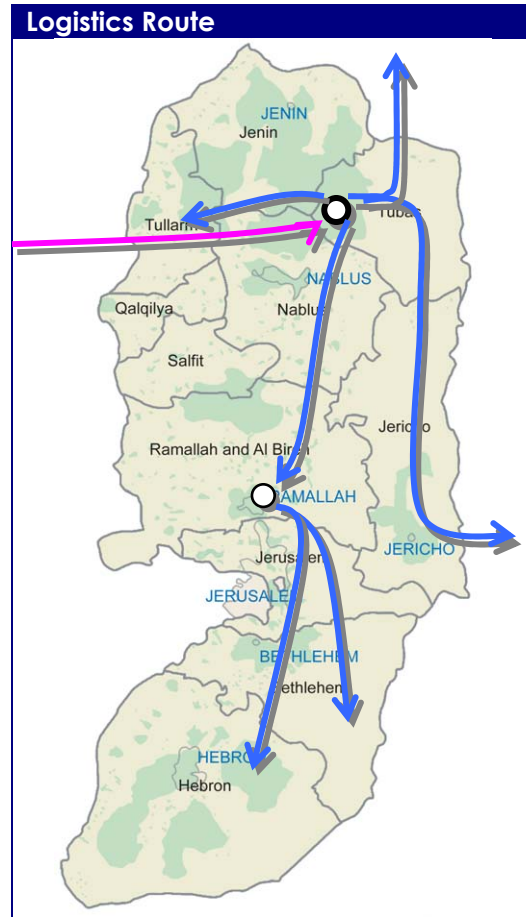
Summary of Interview Survey in this Annex is based on the interviews. The responsibility for the wording of this summary lies with the Study Team.

Company Profile	
Name & Address:	Al Nasir Factory and Mills/ Jenin
Type of Industry/Products:	Food Processing/ Traditional Herb Products (Za'tar, Freeka etc.)
Business Outline:	Established in 2001, 20 employees. The company is exporting approx.40 tons/month of traditional herb products which are produced by local contract farmers and women's cooperatives to Jordan, Yemen, Syria and Gulf countries. Most of the products are exported with some exception of local distribution and purchase by Arab-Israeli from northern part of Israel.
Key Findings on Movement and Access:	
<u>INCOMING</u>	<ul style="list-style-type: none"> <li>✓ Inside the WB: There aren't many checkpoints around Jenin, unexpected flying checkpoints can cause delay.</li> </ul>
<u>OUTGOING</u>	<ul style="list-style-type: none"> <li>✓ Exiting the WB: Back to back process at Allenby Bridge can be time consuming (usually 1-2 hours, maximum 5 hours). However the products are not sensitive as fresh products it doesn't raise much problem.</li> </ul>
Key Findings on Import Restriction:	<ul style="list-style-type: none"> <li>✓ Packaging equipment is imported from Turkey, but it was before the intifada thus there wasn't much problem in import process. Spare parts are locally available.</li> </ul>



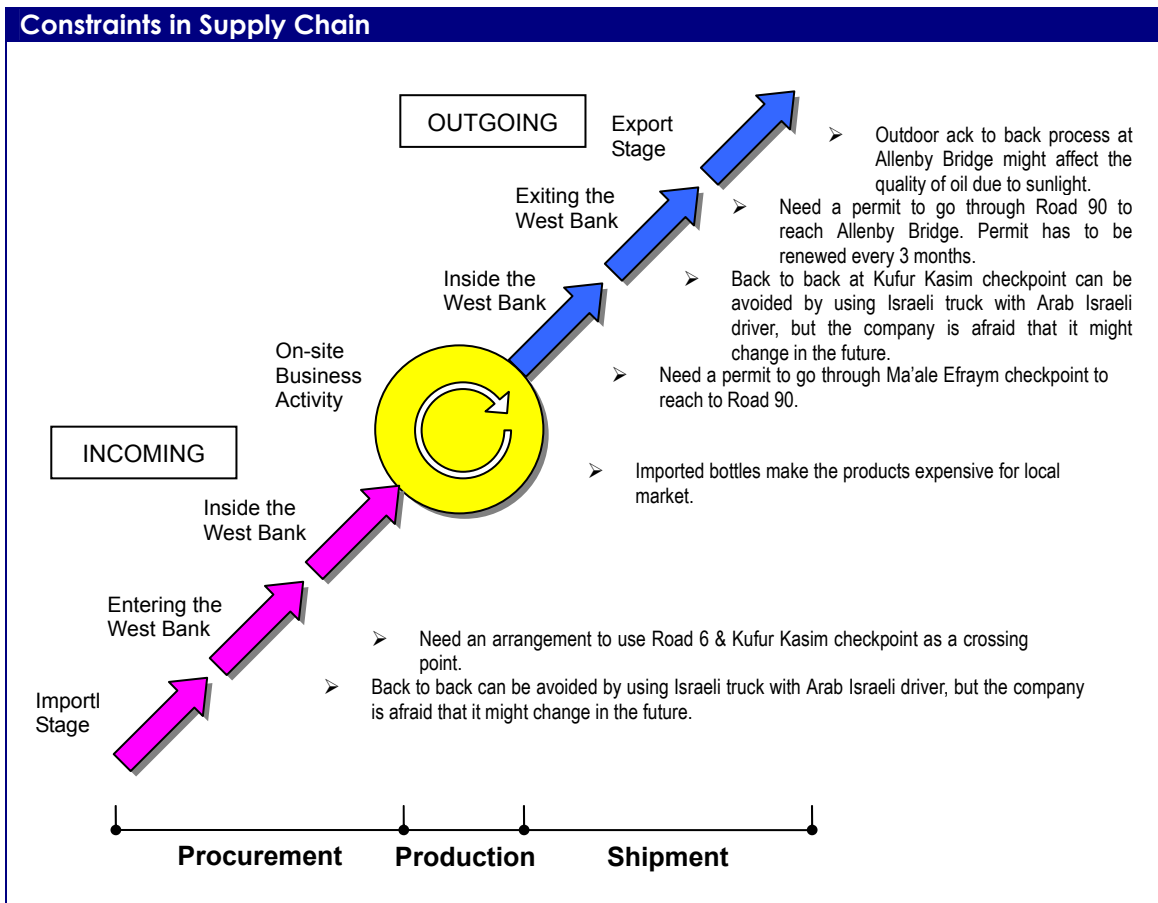
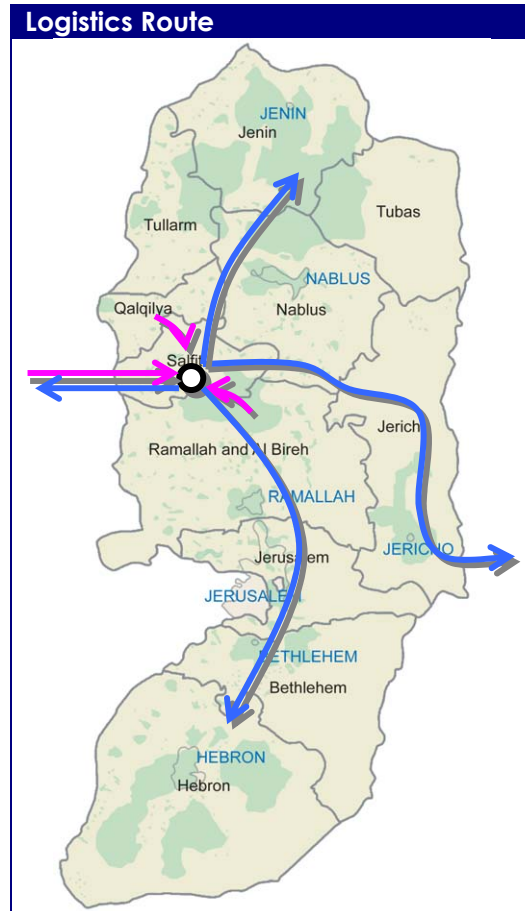
Summary of Interview Survey in this Annex is based on the interviews. The responsibility for the wording of this summary lies with the Study Team.

Company Profile	
Name & Address:	Zadna Agrobusiness Company / Tubas
Type of Industry/Products:	Food processing/ Vegetable pickles
Business Outline:	Production is only from May to July. All vegetables are procured from local contract farmers. Main markets are WB and Gaza (60%), East Jerusalem (30%), and export market such as Jordan, Kuwait, US and UK (10%).
Key Findings on Movement and Access:	
<b>INCOMING</b>	
✓	Entering the WB: Using Israeli vehicle with Arab-Israeli drivers could avoid back to back at Al Tayba so far. However, the company fears that the changes in Israeli policy and implementation rules might make it impossible in the future.
<b>OUTGOING</b>	
✓	Inside the WB/Exiting the WB: Level of security checks at checkpoints and terminals are not always the same. Thus delivery time is unpredictable.
✓	Inside the WB: Hamra checkpoint implement rather strict security checks and it takes time to go through.
Key Findings on Import Restriction:	
✓	Although packaging materials (cans and jars) are imported from Turkey and Egypt, procurement is done only once a year. All vegetables for the products are purchased from local contract farmers, thus the company is not very susceptible to import restriction.



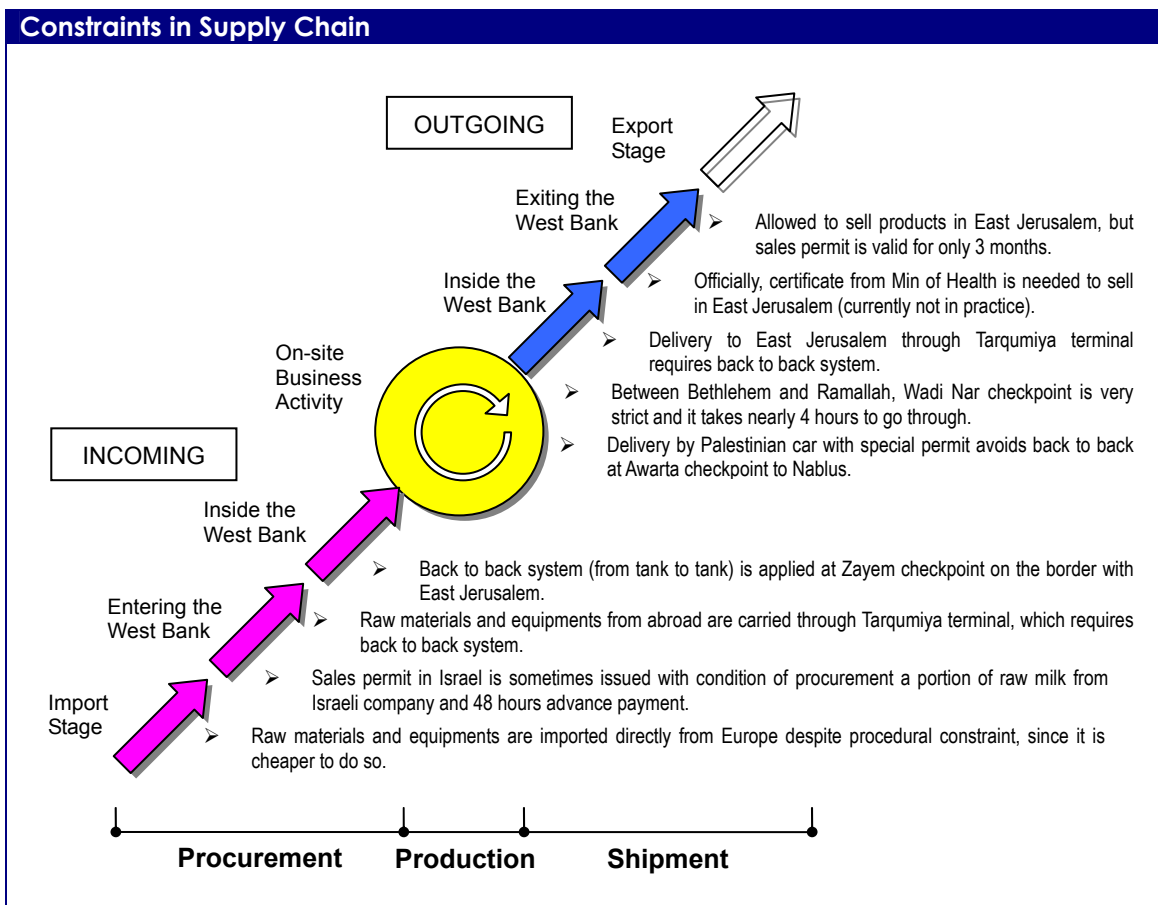
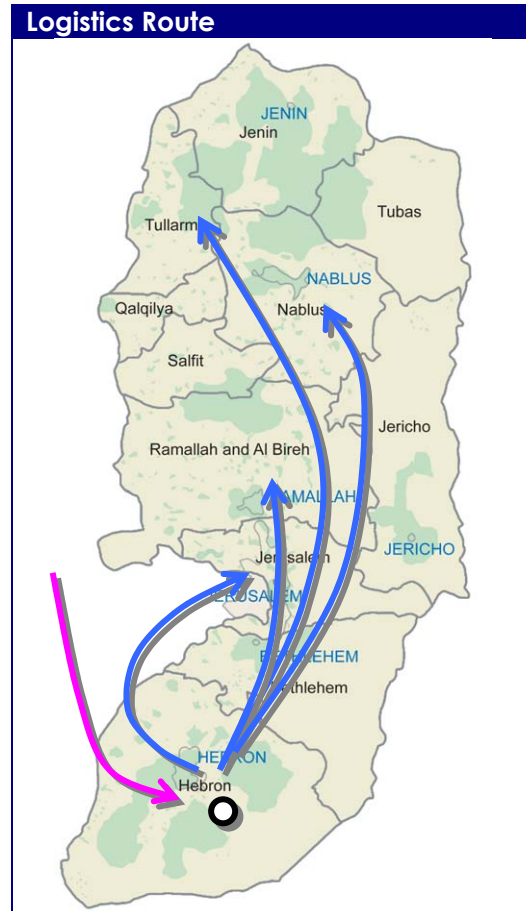
Summary of Interview Survey in this Annex is based on the interviews. The responsibility for the wording of this summary lies with the Study Team.

Company Profile	
Name & Address:	Al Zaytoon Agricultural Industries Co. Ltd/ Salfit
Type of Industry/Products:	Food Processing/ Olive Oil
Business Outline:	Established in 2006, 10 employees. The company produces and exports olive oil to Yemen, Saudi Arabia and other Gulf countries.
Key Findings on Movement and Access:	
<b>INCOMING</b>	
✓	Entering the WB: Kufur Kasim checkpoint on Road 6 as a crossing point with an arrangement with DCO. Use of Road 6 needs permit, but back to back can be avoided by using a Israeli vehicle with an Arab Israeli driver.
<b>OUTGOING</b>	
✓	Inside the WB: Need a permit to go through Ma'ale Efraym checkpoint to enter the Jordan Valley.
✓	Exiting the WB: Need a permit to use Road 90. Permit is valid only for 3 months.
✓	Exiting the WB: Outdoor back to back process might affect the quality of oil.
Key Findings on Import Restriction:	
✓	Pressing and bottling machine is imported from Turkey. The company sends its staff to Turkey for trainings on operation & maintenance. Spare parts are purchased locally or imported from Turkey.



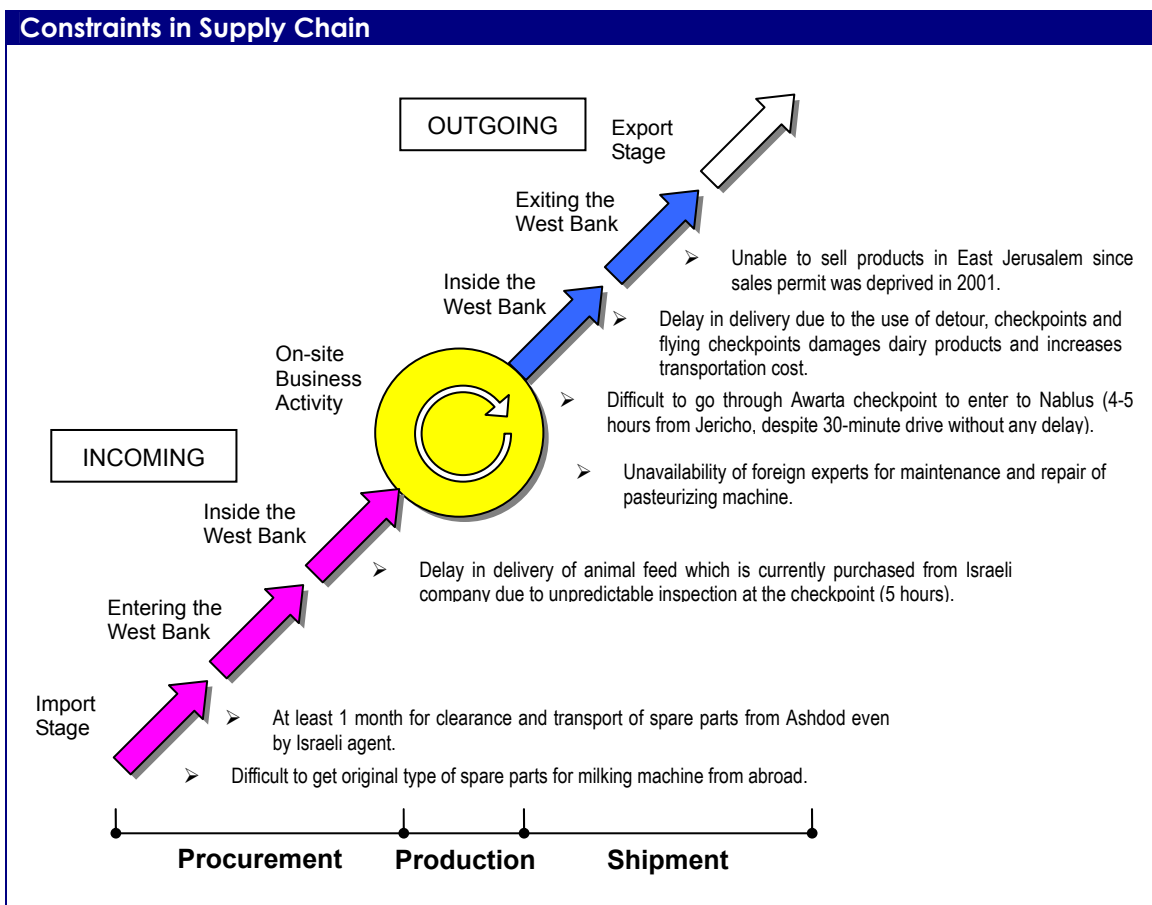
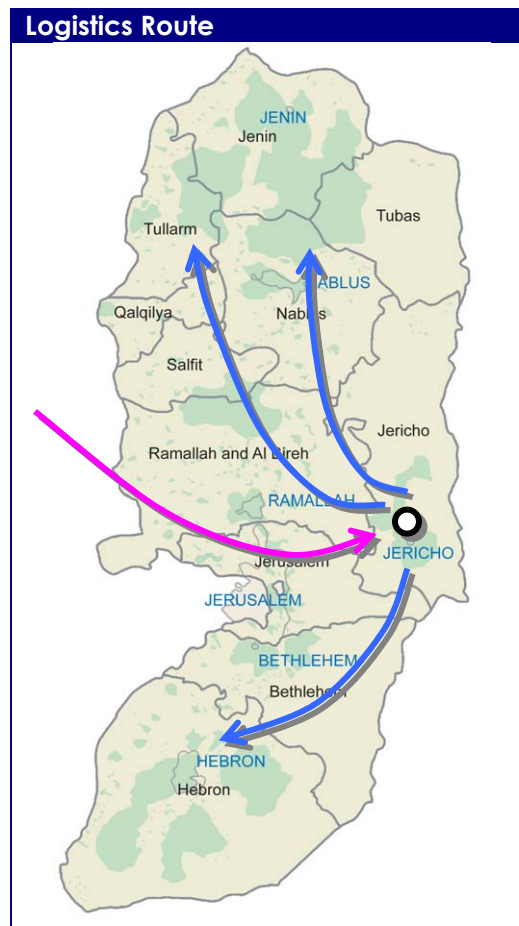
Summary of Interview Survey in this Annex is based on the interviews. The responsibility for the wording of this summary lies with the Study Team.

Company Profile	
Name & Address:	Al Jebrini Dairy Company/Hebron
Type of Industry/Products:	Food Processing/Dairy Products
Business Outline:	Producing long-life milk (UHT), yogurt, lebaneh, cheese, salads etc. Company procures raw milk within Palestine while packaging materials and equipments are procured from Europe. Sales markets are within the WB and East Jerusalem, though it will start to export products to Jordan soon.
Key Findings on Movement and Access:	<p><b>INCOMING</b></p> <ul style="list-style-type: none"> <li>✓ Entering WB: Back to back system at Tarquimiya terminal.</li> </ul> <p><b>OUTGOING</b></p> <ul style="list-style-type: none"> <li>✓ Inside WB: Strict inspection at Wadi Nar checkpoint, which affects dairy products and increases transportation cost.</li> <li>✓ Exiting WB: Back to back system at Tarquimiya terminal.</li> <li>✓ Exiting WB: Sales in East Jerusalem is required to hold sales permit which is valid for only 3 months.</li> </ul>
Key Findings on Import Restriction:	



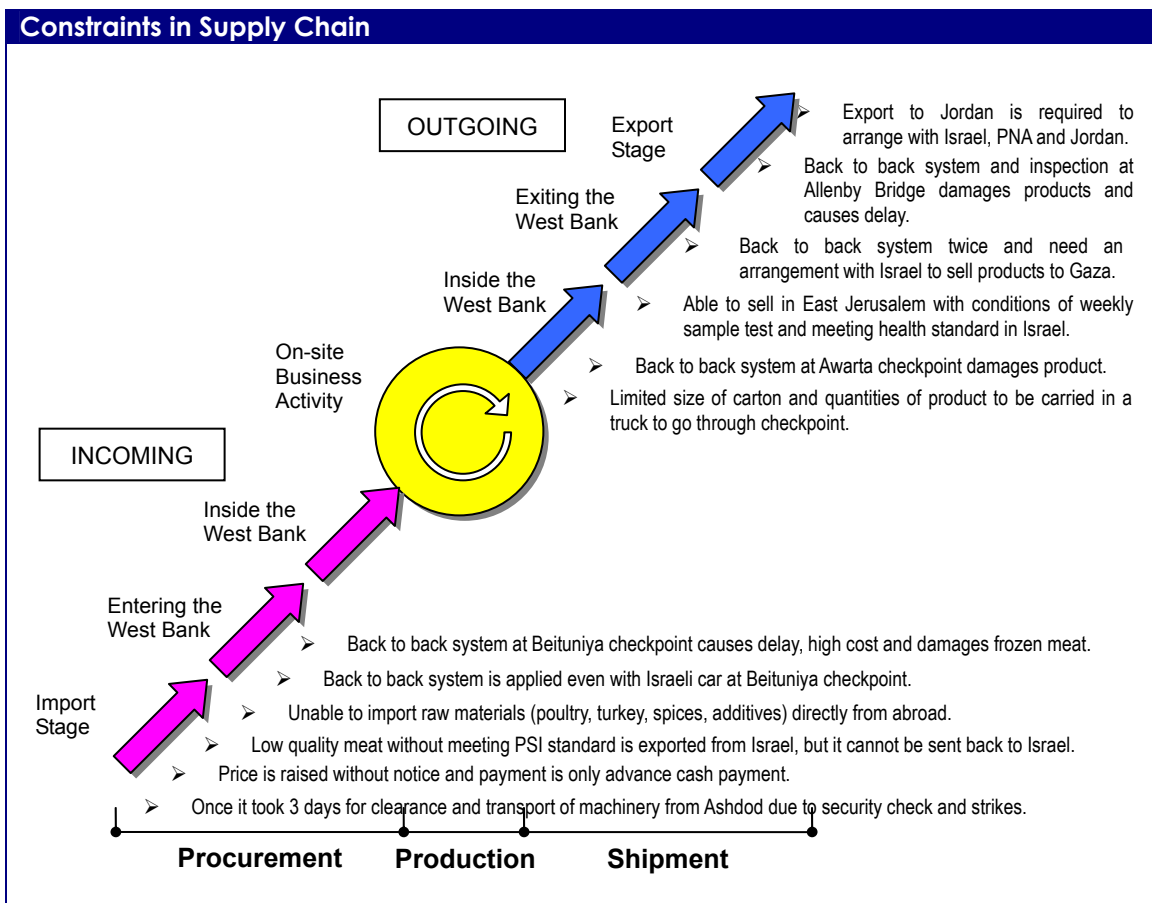
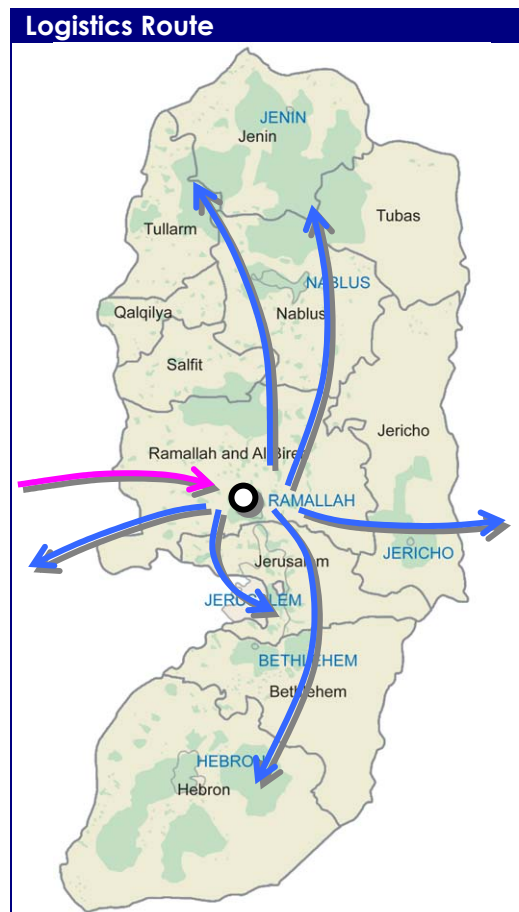
Summary of Interview Survey in this Annex is based on the interviews. The responsibility for the wording of this summary lies with the Study Team.

Company Profile	
Name & Address:	Arab Inshai Project/Jericho
Type of Industry/Products:	Food Processing/Dairy Products/Milk, Cheese, Yogurt, Lebaneh
Business Outline:	Raising cows in their own farm and producing dairy products. Sale markets are major cities within the West Bank except East Jerusalem and they do not export their products.
Key Findings on Movement and Access:	
<b>INCOMING</b>	
✓ Import Stage:	Time spent for clearance at Ashdod (spare parts).
✓ Inside WB:	Delay in delivery of raw materials (animal feed)
<b>OUTGOING</b>	
✓ Inside WB:	Difficult to pass through Awarta checkpoint.
✓ Inside WB:	Delay in delivery and unpredictable driving time is a critical issue for dairy products.
✓ Exiting WB:	Unable to reach East Jerusalem market.
Key Findings on Import Restriction:	
✓ Import Stage:	It takes time for clearance of spare parts at Ashdod.



Summary of Interview Survey in this Annex is based on the interviews. The responsibility for the wording of this summary lies with the Study Team.

Company Profile	
Name & Address:	Salwa Food Co., Ltd./Ramallah
Type of Industry/Products:	Food Processing/Processed Meat/Mortadella
Business Outline:	Producing mortadella from poultry and turkey. Major sales markets are the West Bank, Jordan, Iraq and UAE. Company is ISO22000 certified.
Key Findings on Movement and Access:	
<b>INCOMING</b>	
✓ Import Stage:	Time spent for clearance (machinery) at Ashdod.
✓ Entering WB:	Back to back system causes delay, increases transportation cost and damages raw materials (frozen meat).
<b>OUTGOING</b>	
✓ Inside WB:	Limited size and quantities of products to be carried in a truck to go through checkpoint.
✓ Inside WB:	Back to back system outside damages products
✓ Exiting WB:	Back to back system at Allenby bridge causes delay, increases cost and damages products.
Key Findings on Import Restriction:	
✓ Import Stage:	Unable to import raw materials directly from abroad.



Summary of Interview Survey in this Annex is based on the interviews. The responsibility for the wording of this summary lies with the Study Team.

## Company Profile

### Name & Address:

Palestine Poultry Co./Tulkarem

### Type of Industry/Products:

Agribusiness /Hatching Eggs, Chicks, Animal Feeds

### Business Outline:

Producing hatching eggs, one-day-old chicks and various animal feeds. Company owns hatchery and animal feed factory and recently built its own slaughter house. Raw materials and equipments are all procured from abroad, such as USA and EU. Sales markets are major cities in the West Bank and hatching eggs and chicks are sold in Gaza.

### Key Findings on Movement and Access:

#### INCOMING

- ✓ Entering WB: Back to back is needed to enter the WB.

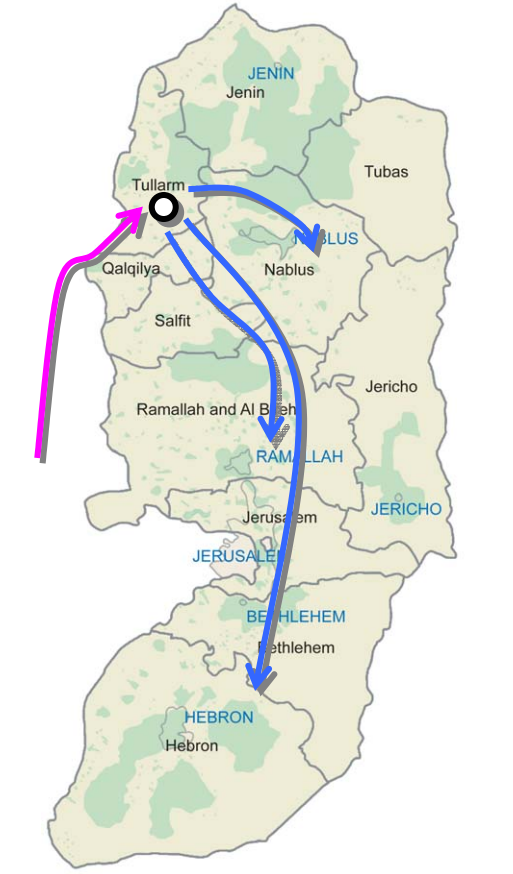
#### OUTGOING

- ✓ Inside WB: If roads are not asphalt-paved, damages to eggs and chicks are tremendous.
- ✓ Inside WB: One-year-old chick has to be transported within three hours and delay in delivery is not acceptable.

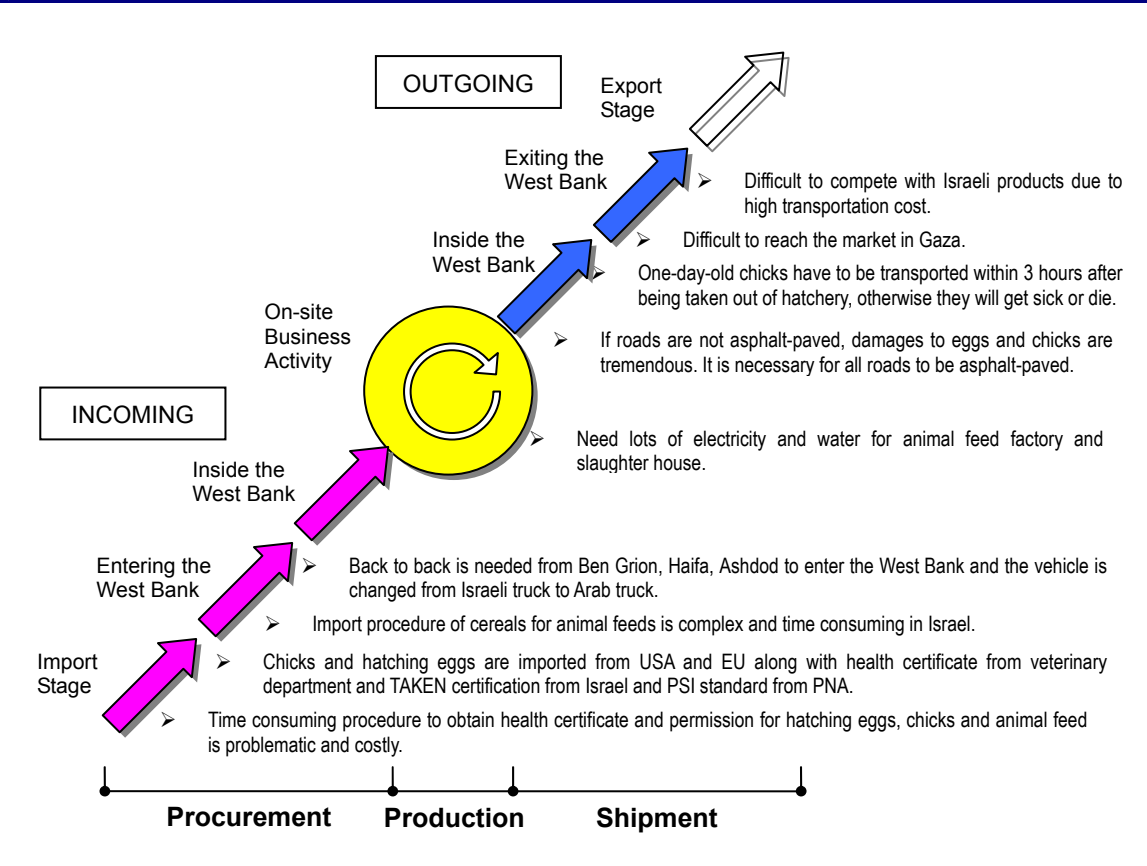
### Key Findings on Import Restriction:

- ✓ Import Stage: Time consuming procedure to obtain health certificate and permission to import hatching eggs, chicks and animal feeds.

## Logistics Route



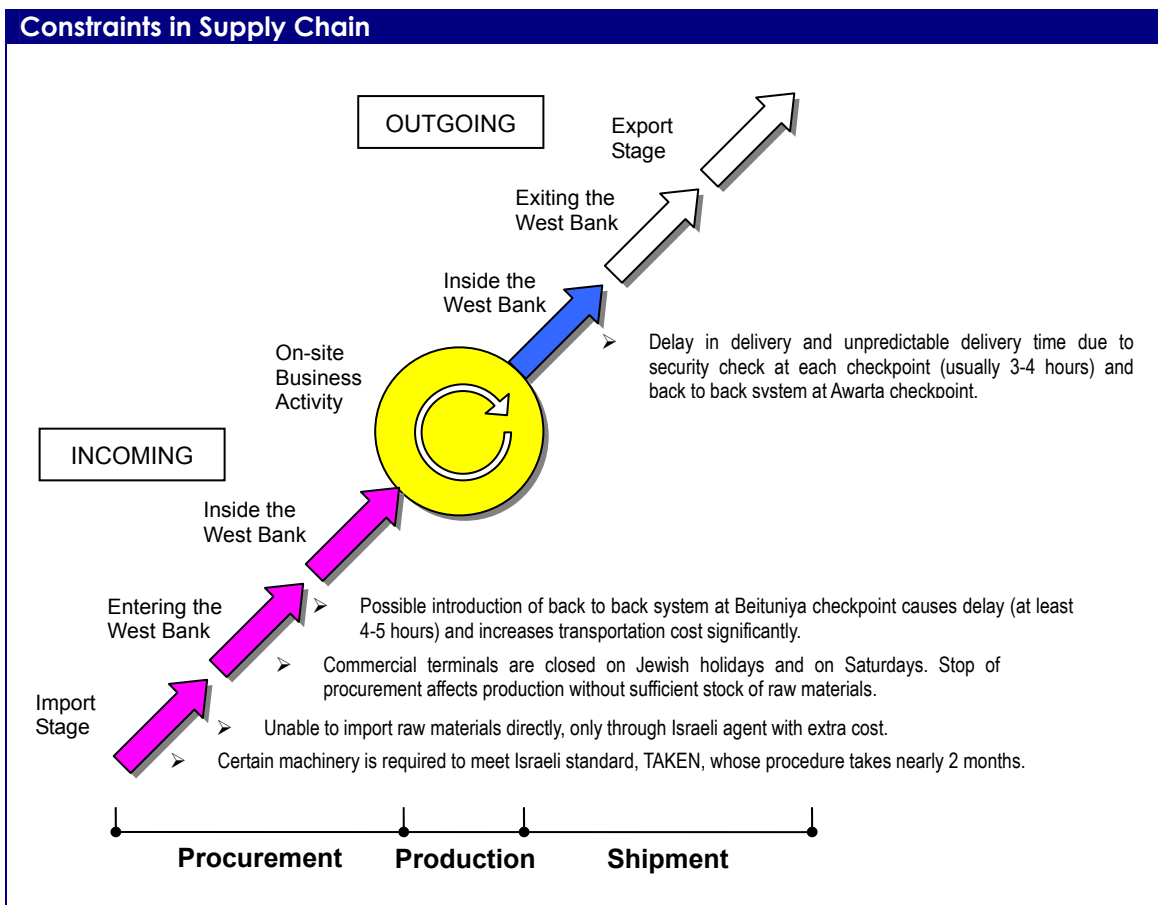
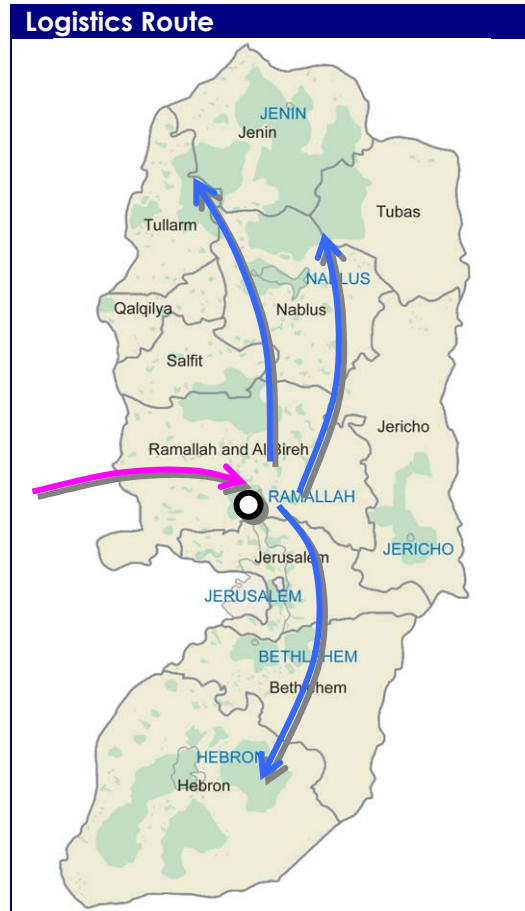
## Constraints in Supply Chain



Summary of Interview Survey in this Annex is based on the interviews. The responsibility for the wording of this summary lies with the Study Team.

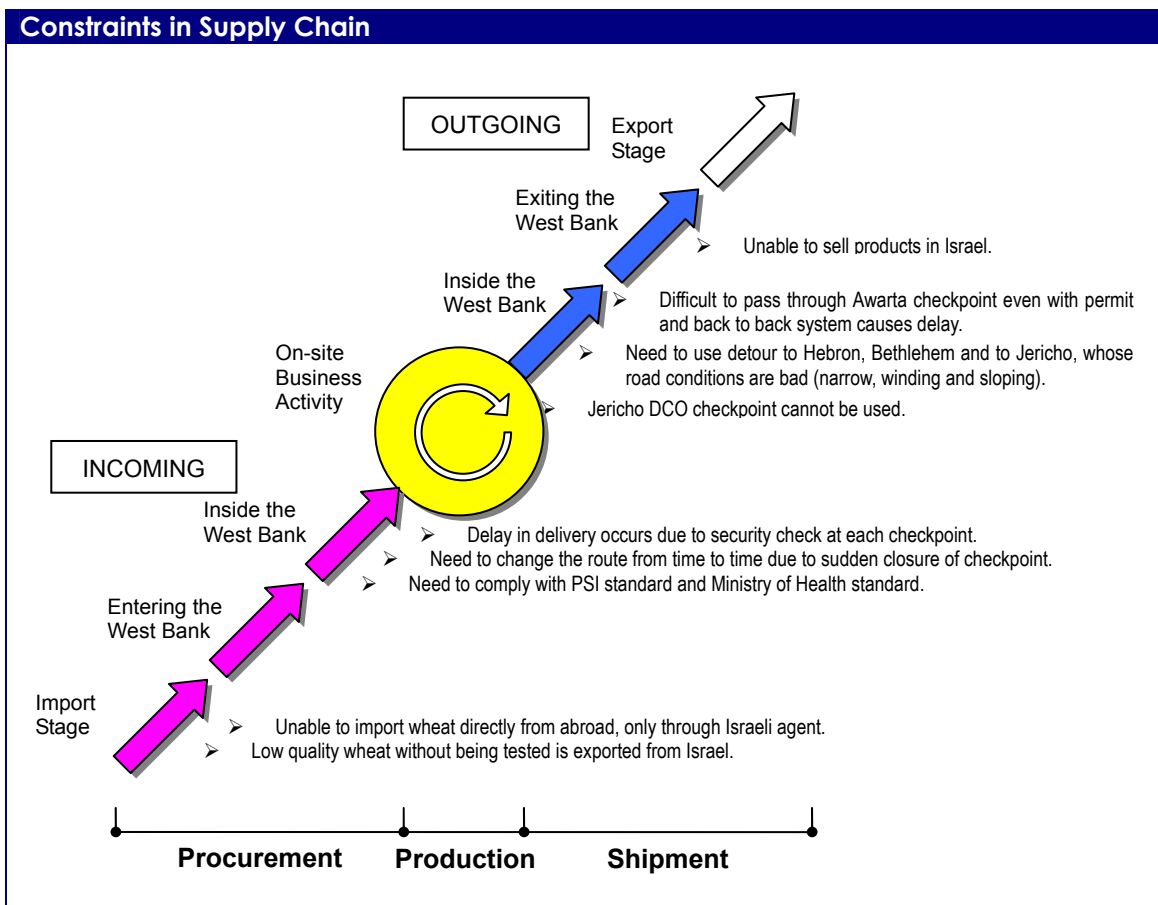
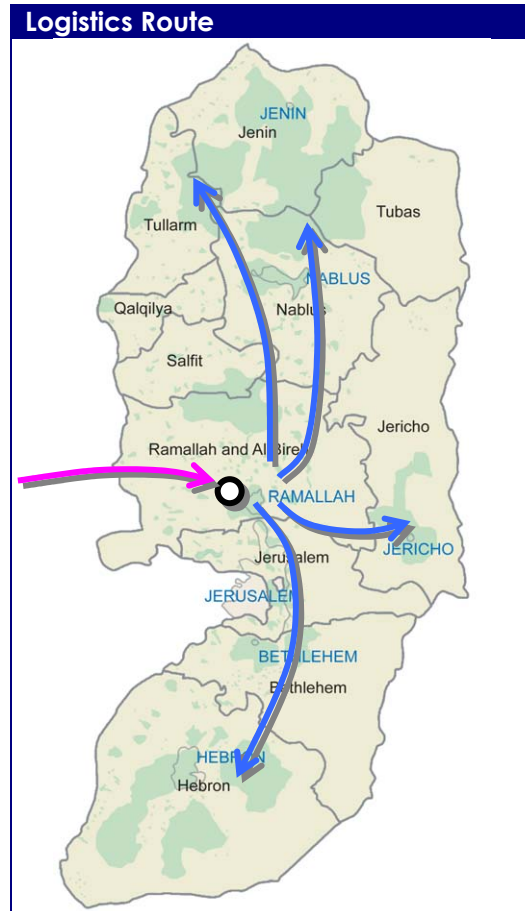


Company Profile	
Name & Address:	Sinokrot Animal Feed Factory/Ramallah
Type of Industry/Products:	Food Processing/Animal Feeds
Business Outline:	Producing animal feeds for all kinds of animals. Sales markets are major cities within the West Bank. Raw materials such as wheat, barley, soya and vitamin are procured from Israel, but originally from USA, Canada, Australia, and Argentine.
Key Findings on Movement and Access:	<p><b>INCOMING</b></p> <ul style="list-style-type: none"> <li>✓ Entering WB: Closure of commercial terminals stops procurement, which affects production.</li> <li>✓ Entering WB: Possible introduction of back to back system causes delay and increases transportation cost.</li> </ul> <p><b>OUTGOING</b></p> <ul style="list-style-type: none"> <li>✓ Inside WB: Back to back system at Awarta checkpoint and security check at each checkpoint causes delay in delivery and unpredictable delivery time.</li> </ul>
Key Findings on Import Restriction:	<ul style="list-style-type: none"> <li>✓ Import Stage: Unable to import raw materials directly from abroad, only through Israeli agent with extra cost.</li> </ul>



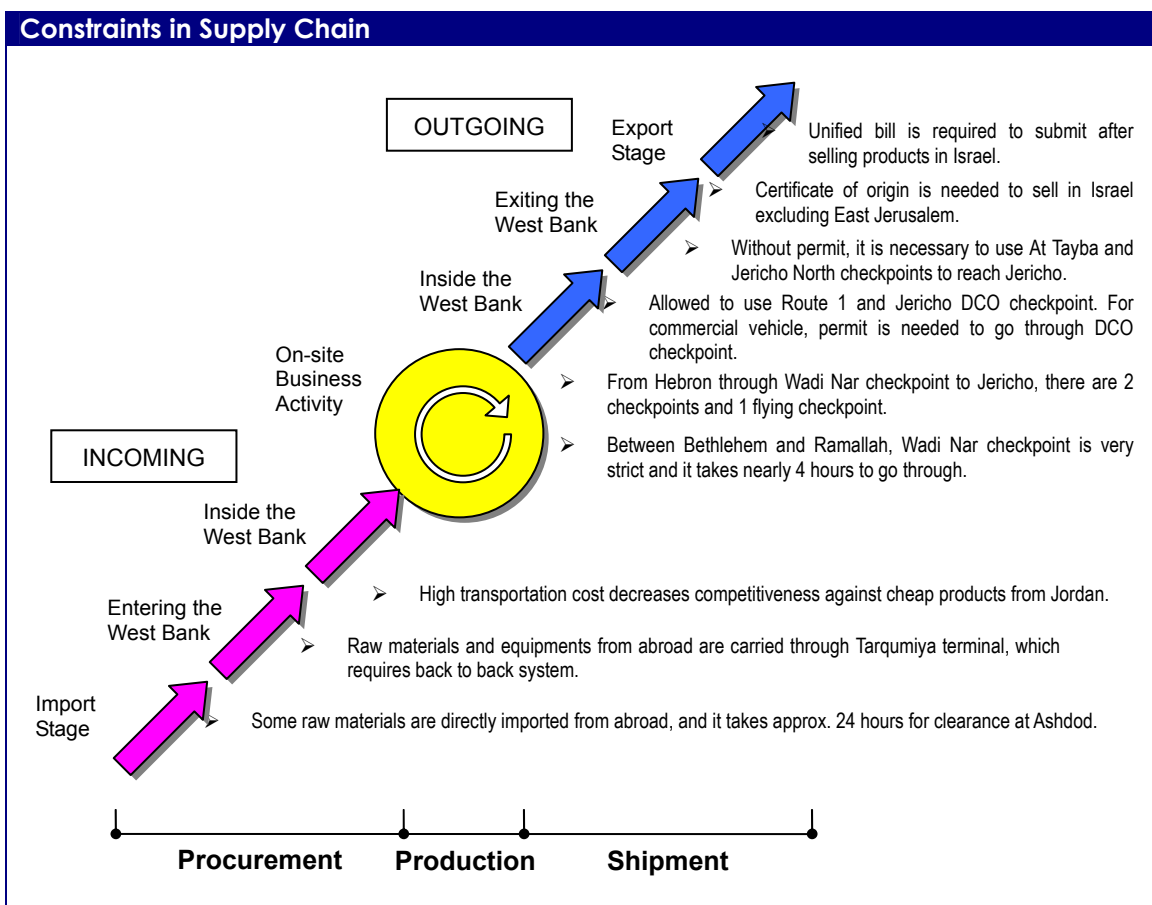
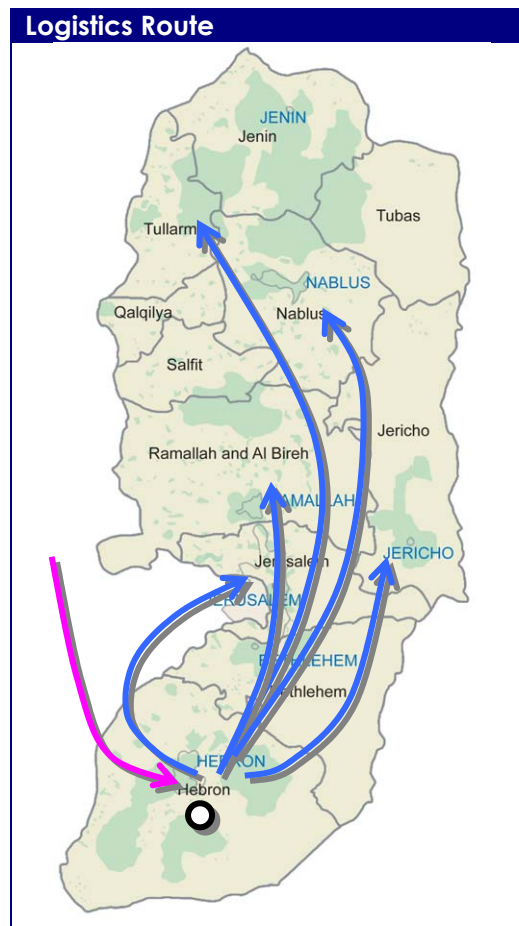
Summary of Interview Survey in this Annex is based on the interviews. The responsibility for the wording of this summary lies with the Study Team.

Company Profile	
Name & Address:	Golden Wheat Milling Co./Bir Zeit
Type of Industry/Products:	Food Processing/Wheat Milling/Flour, Semolina
Business Outline:	Producing flour and semolina from wheat procured from Israel. Sales markets are major cities in the West Bank.
Key Findings on Movement and Access:	
<b>INCOMING</b>	
✓	Inside WB: Delay in delivery occurs due to security check at each checkpoint.
✓	Inside WB: Need to change the route from time to time due to sudden closure of checkpoint.
<b>OUTGOING</b>	
✓	Inside WB: Use of bypass roads also causes delay and their road conditions are bad.
✓	Inside WB: Difficult to pass through Awarta checkpoint even with permit and back to back system causes delay.
✓	Exiting WB: Unable to sell products in Israel.
Key Findings on Import Restriction:	
✓	Import Stage: Unable to import raw materials (wheat) directly from abroad.



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Company Profile	
Name & Address:	Qasrawi Industrial and Trading Co./Hebron
Type of Industry/Products:	Food Processing/Snacks, Potato Chips
Business Outline:	Producing snacks and potato chips within the West Bank. Raw materials such as potato starch, potato flake and corn grits are procured from abroad, while flour, wheat and corn are purchased from local market. Sales markets are major cities in the West Bank including East Jerusalem and Jericho.
Key Findings on Movement and Access:	
<b>INCOMING</b>	
✓	Entering WB: Back to back system at Tarquimiya terminal.
<b>OUTGOING</b>	
✓	Inside WB: It takes nearly 4 hours to go through Wadi Nar checkpoint between Ramallah and Bethlehem.
✓	Inside WB: For commercial vehicle, permit is needed to go through Jericho DCO checkpoint adjacent to Route 1.
✓	Exiting WB: Unified bill is required to submit after selling products in Israel, but sometimes it is not available.
Key Findings on Import Restriction:	
✓	Import Stage: It takes time (24 hours) for clearance at Ashdod regarding some raw materials.



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## Company Profile

### Name & Address:

Pharmacare PLC./ Ramallah

### Type of Industry/Products:

Pharmaceutical/ Generic Medicines

### Business Outline:

Established in 1985, 220 employees. While the main markets are WB and Gaza (75%), products are also exported to Jordan, former USSR and African countries (25%). The firm obtained European GMP recently and envisages expanding to European market.

### Key Findings on Movement and Access:

#### INCOMING

- ✓ Entering the WB: IDF personnel at Beitunia terminal are not trained to handle chemical products which require special attention.

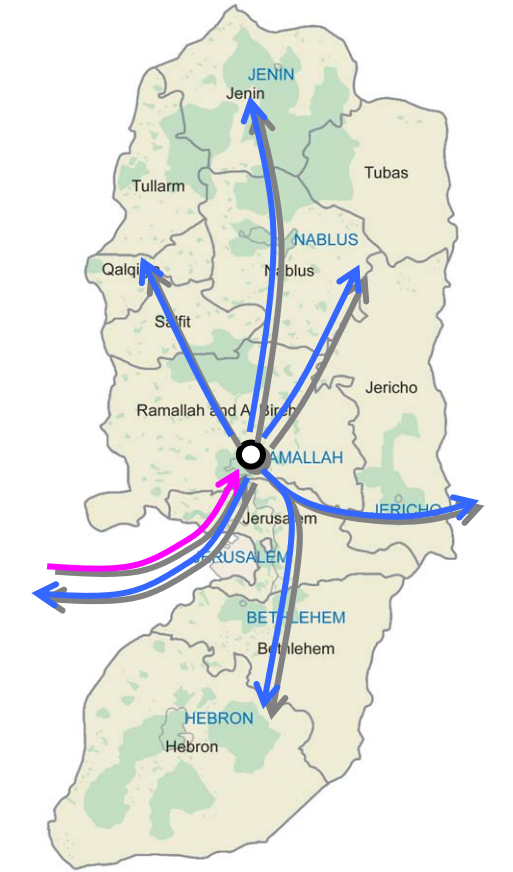
#### OUTGOING

- ✓ Inside the WB: Delivery time is unpredictable due to checkpoints and terminal. More delivery personnel & cars are necessary as delivery time takes longer than before.
- ✓ Exiting the WB: Back to back process at Beitunia may harm some products which need cold storage. There's no cold storage facility.

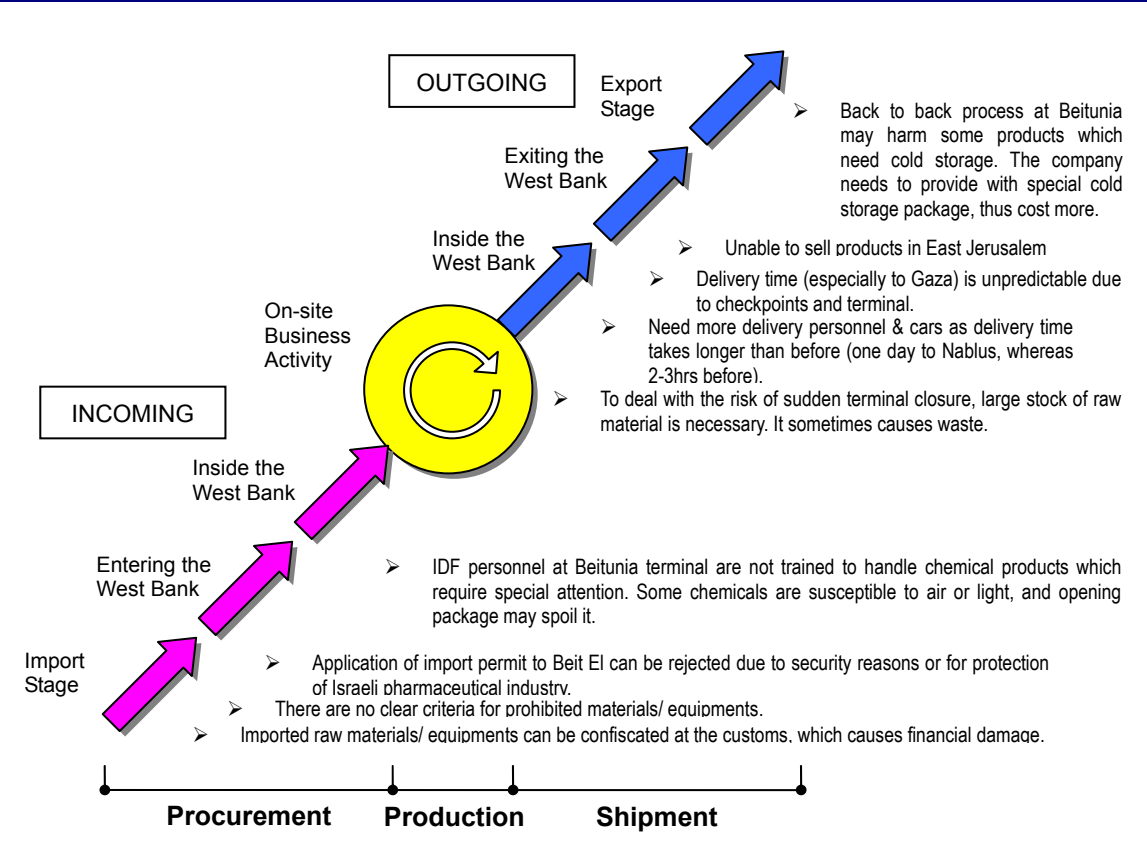
### Key Findings on Import Restriction:

- ✓ Application of import permit to Beit El can be rejected due to security reasons or for protection of Israeli pharmaceutical industry. However, there are no clear criteria for prohibited materials or equipments.
- ✓ Even the import permit is accepted, raw materials/ equipments can be confiscated upon arrival at the customs, which causes financial damage.

## Logistics Route

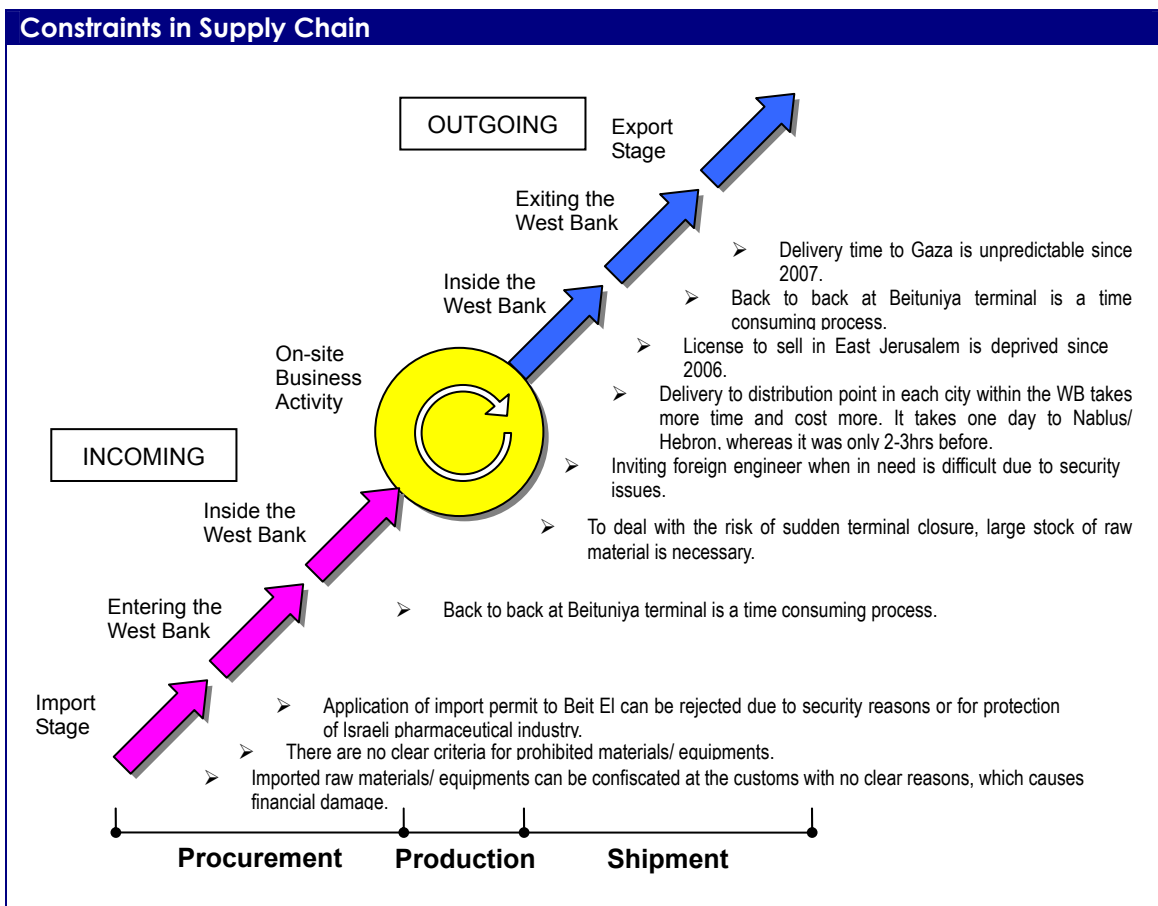
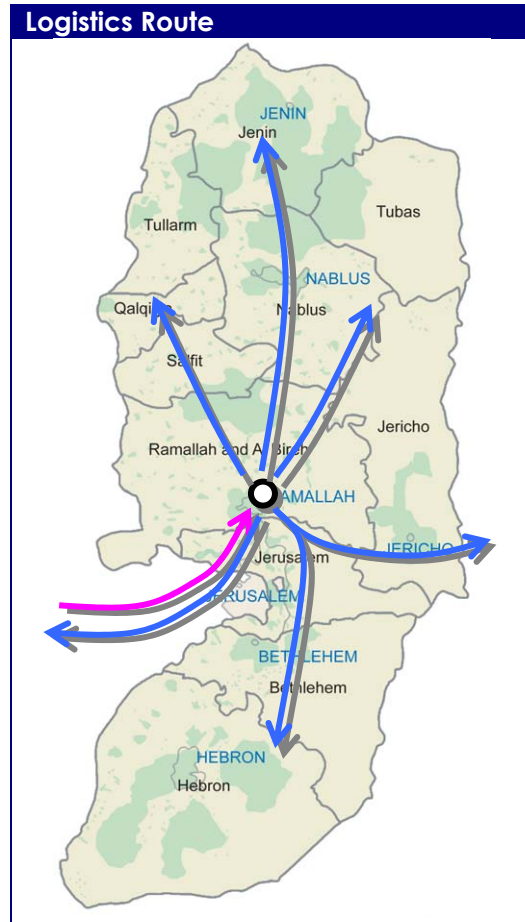


## Constraints in Supply Chain



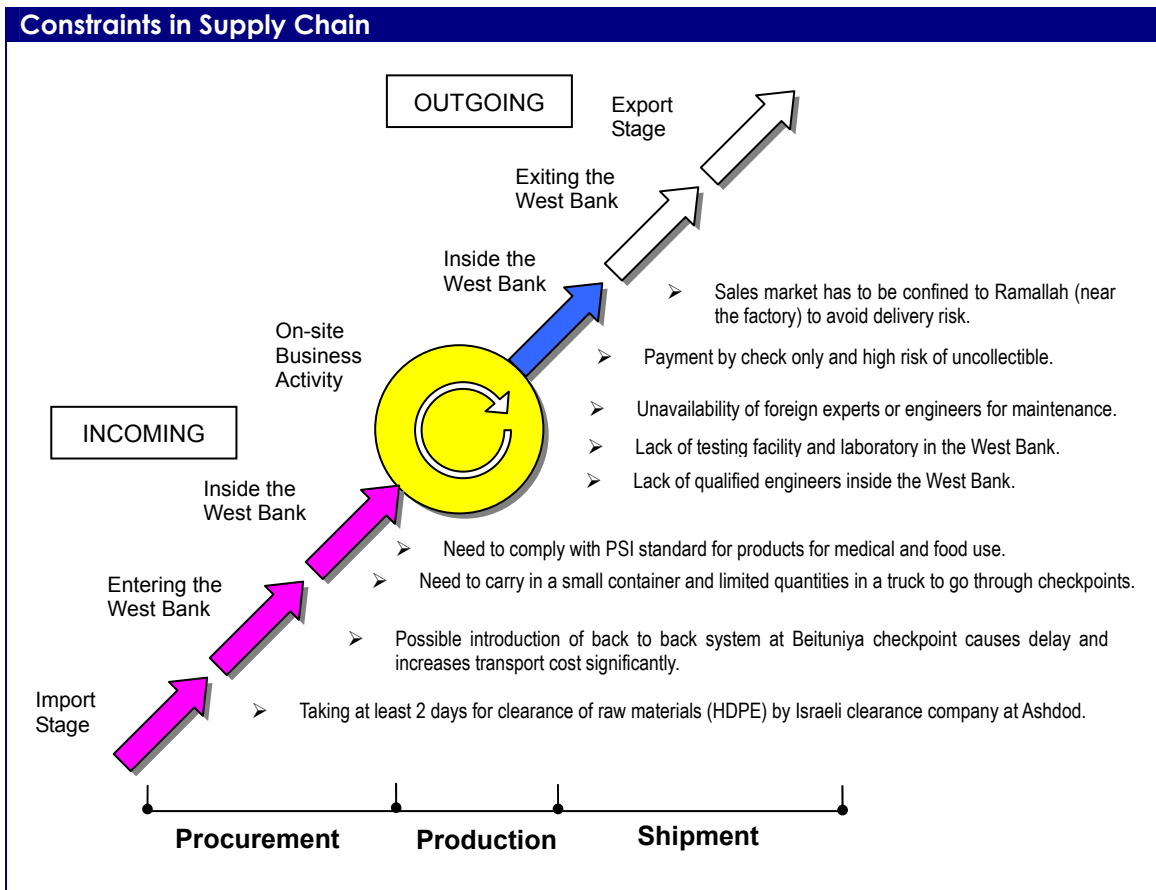
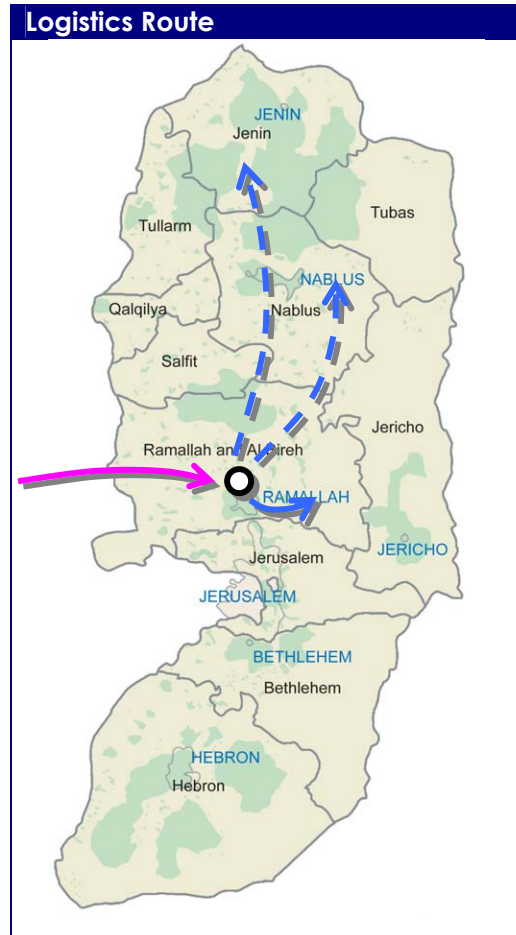
Summary of Interview Survey in this Annex is based on the interviews. The responsibility for the wording of this summary lies with the Study Team.

Company Profile	
Name & Address:	Jerusalem Pharmaceuticals./ Al Bireh- Ramallah
Type of Industry/Products:	Pharmaceutical/ Generic Medicines
Business Outline:	Established in 1969, 300 employees. While the main markets are WB and Gaza (90%), products are also exported Jordan, former USSR and African countries (10%). ISO 9001, ISO 15001 and Palestinian GMP certified.
Key Findings on Movement and Access:	<p><b>INCOMING</b></p> <ul style="list-style-type: none"> <li>✓ Entering the WB: Back to back at Beitunia terminal is a time consuming process.</li> </ul> <p><b>OUTGOING</b></p> <ul style="list-style-type: none"> <li>✓ Inside the WB: Delivery to distribution point in each city within the WB takes more time and cost more. It takes one day to Nablus/ Hebron, whereas it was only 2-3hrs before.</li> <li>✓ Inside the WB: License to sell in East Jerusalem is deprived since 2006.</li> <li>✓ Exiting the WB: Back to back at Beitunia terminal is a time consuming process.</li> <li>✓ Exiting the WB: Delivery time to Gaza is unpredictable since 2007.</li> </ul>
Key Findings on Import Restriction:	<ul style="list-style-type: none"> <li>✓ Application of import permit to Beit El can be rejected due to security reasons or for protection of Israeli pharmaceutical industry. However, there are no clear criteria for prohibited materials or equipments.</li> <li>✓ Even the import permit is accepted, raw materials/ equipments can be confiscated upon arrival at the customs with no clear reasons, which causes financial damage.</li> </ul>



Summary of Interview Survey in this Annex is based on the interviews.  
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Company Profile	
Name & Address:	Tech Plast Co. for Industrial Eng. & General Trading/Ramallah
Type of Industry/Products:	Packaging Materials/Plastic cases, Plastic containers
Business Outline:	Producing packaging materials such as plastic cases and containers for medicine, sweets, cosmetics, agricultural products. HDPE (raw materials) is procured from China. Sales markets are major cities within the West Bank.
Key Findings on Movement and Access:	
<b>INCOMING</b>	
✓ Import Stage:	Time spent for clearance of raw materials (HDPE) at Ashdod.
✓ Entering WB:	Introduction of back to back system causes delay and increases transportation cost.
✓ Inside WB:	Limited quantities to be carried in a truck to go through checkpoint.
<b>OUTGOING</b>	
✓ Inside WB:	To avoid transport and delivery risk, sales market has to be confined to Ramallah (near the factory).
Key Findings on Import Restriction:	
✓ Import Stage:	It takes at least 2 days for clearance of raw material (HDPE) at Ashdod.



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