

PALESTINIAN NATIONAL AUTHORITY

**JERICHO REGIONAL DEVELOPMENT
STUDY PROJECT IN PALESTINE**

FINAL REPORT

SUMMARY

August 2006

JAPAN INTERNATIONAL COOPERATION AGENCY

KRI International Corp.

Nippon Koei Co., Ltd.

Preface

In response to the request from the Palestinian National Authority (PNA), the Government of Japan decided to execute the “Jericho Regional Development Study Project in Palestine” and entrusted the Study to the Japan International Cooperation Agency (JICA).

JICA dispatched a study team to Palestine over the period from October 2005 to August 2006. The Study Team consists of experts assigned by KRI International Corp. and Nippon Koei Co., Ltd. and was headed by Mr. Hajime Koizumi as Team Leader.

The Study Team held a series of discussions with relevant officials from the PNA and local governments as well as stakeholders in the private sector and the community. It also conducted related field surveys, workshops, and quick impact projects. After returning to Japan, the Study Team made further studies and analysis and compiled the final results in this report.

I hope that this report will contribute to development of the Jericho and Jordan Rift Valley area and will enhance the friendly relationship between Palestine and Japan.

I wish to express my sincere appreciation to the concerned officials and people of Palestine for their close cooperation extended to the Study Team.

August 2006

Kazuhisa Matsuoka
Vice President
Japan International Cooperation Agency

Mr. Kazuhisa Matsuoka
Vice President
Japan International Cooperation Agency

Dear Mr. Matsuoka

Letter of Transmittal

We are pleased to submit to you the Final Report of the Jericho Regional Development Study Project in Palestine. The report has been completed by the joint efforts of the Palestinian counterparts and the JICA Study Team between October 2005 and September 2006.

A participatory planning approach was applied and more than 50 meetings were held for discussions between the members of the Steering Committee, Technical Committee and Working Groups formed for the execution of this Study. The participatory approach was also taken for the implementation of three quick impact projects. This Final Report, therefore, is the fruit of excellent collaboration and cooperation between the Palestinian and JICA experts.

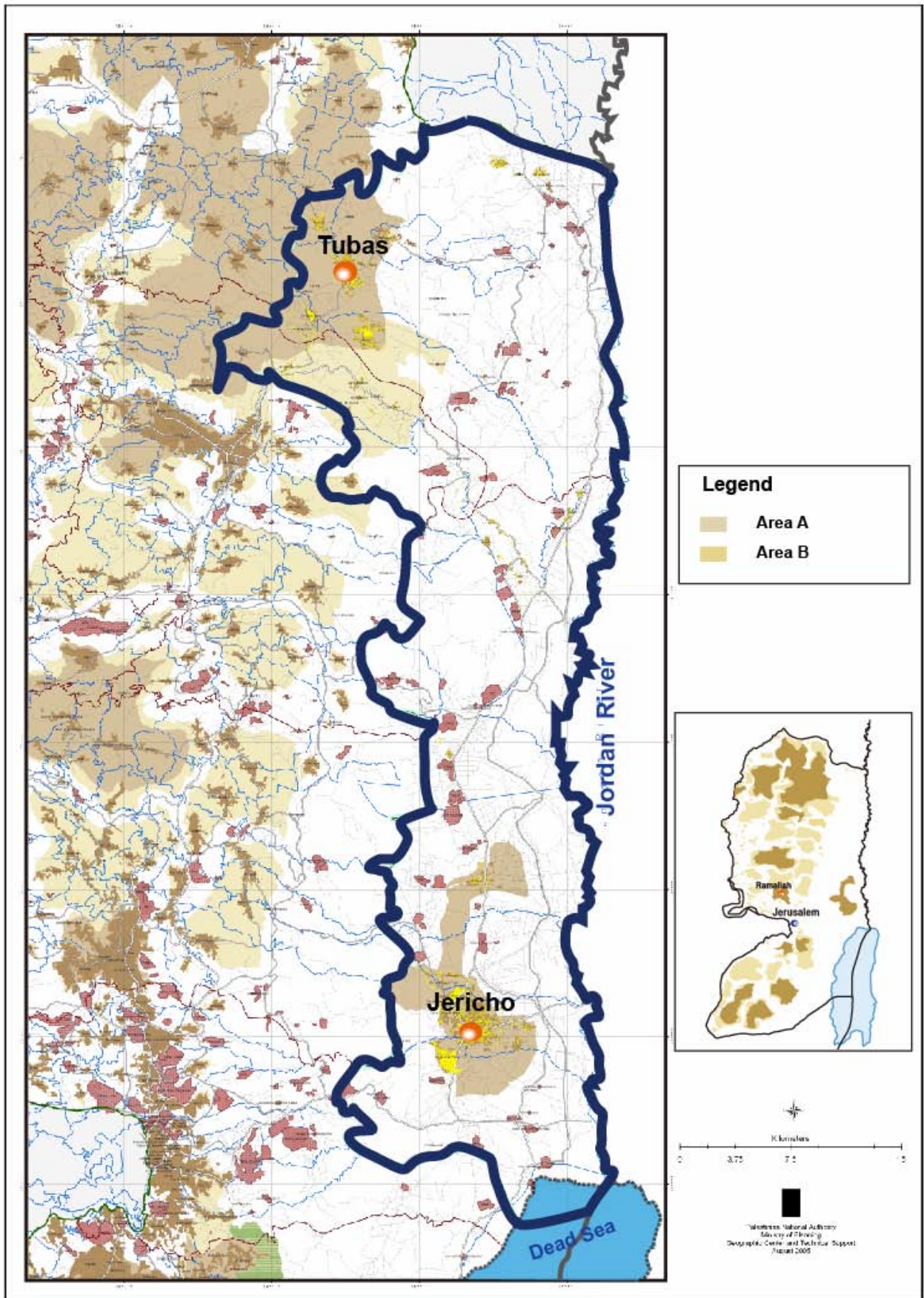
Despite various hardships and difficulties prevailing in the Study area at the moment, the Jericho and Jordan Rift Valley area has a large potential for development, particularly in agriculture and tourism. The regional potential should be developed in a harmonized and integrated manner so that the regional development programs could turn out to be more effective and sustainable. Development efforts in this region are expected to build the confidence of stakeholders in the region and the West Bank as well as among the people in neighboring countries.

The Study Team wishes to take this opportunity to express heartfelt gratitude to all Palestinian experts and people that have cooperated in the completion of this Study. Without such cooperation of the authorities and people in the region, the Study could not have been completed so successfully in a relatively short period.

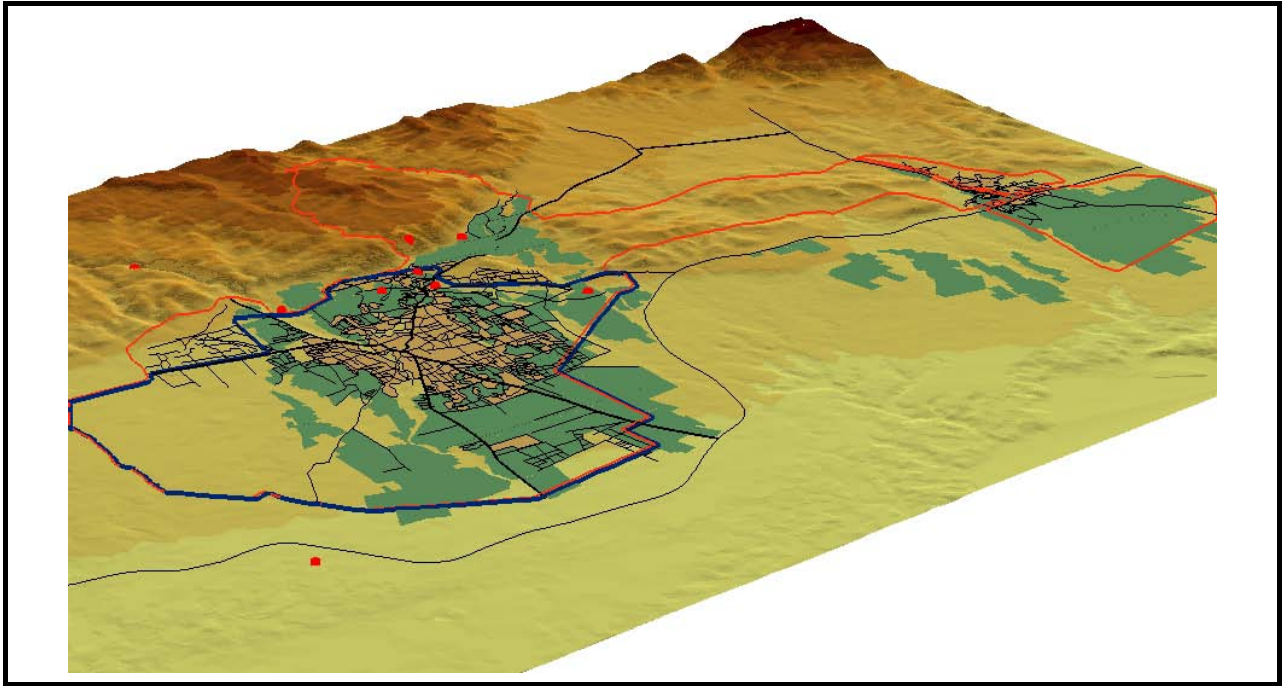
Very Truly Yours,

August 2006

Hajime Koizumi
Study Team Leader



Study Area Map



Source: JICA Study Team

Computer Graphic of the Greater Jericho Area



Jericho City Viewed from Mount Temptation

Jericho Regional Development Study

Summary

Table of Contents

1	Introduction	S-1
2	Uniqueness of The Jericho Region	S-2
3	Development Efforts.....	S-4
4	Objectives of Jericho Regional Development.....	S-6
5	Development Frameworks.....	S-8
6	Integrated Regional Development Plan.....	S-12
7	Social and Community Development Program	S-18
8	Agriculture and Agribusiness Development Program	S-22
9	Tourism and Urban Environment Program	S-30
10	Conclusions and Recommendations	S-38

Annex: List of Study Members

Attachment: Electric Version of Summary and Main Reports (CD)

Currency Equivalents

**USD 1 = NIS 4.5 = JPY 116
as of July 2006**

1 INTRODUCTION

In September 1993, the Declaration of Principles (Oslo Accords) was officially signed between the Palestinian Liberation Organization (PLO) and the Government of State of Israel. In essence, the Accords affirm the Palestinian right to self-government within the West Bank and Gaza through the creation of the Palestinian Authority. Permanent issues such as Jerusalem, refugees, Israeli settlements in the area, security and borders were deliberately excluded from the Accords and left to be decided.

Multi and bilateral donors, at the same time, initiated support for this framework by extending their assistance activities in various fields. The creation of the new framework for the Palestinian society went smoothly with an annual average economic growth rate of 6.4% from 1995 to 2000.

In May 2005, the President of the Palestinian National Authority (PNA) visited Japan and official discussions with the Japanese government were held. At that time, the Japanese government made a commitment to assist PNA financially and technically.

This Study on Jericho Regional Development has been conducted with two objectives; i.e., (i) to formulate a Regional Development Plan for the Jericho and Jordan Rift Valley area targeting the year 2015, and (ii) to enhance the capacity to formulate and implement a regional development program through on-the-job training and workshops to be held in the course of the Study. The Study covers the Jericho and Jordan Rift Valley area (Jericho governorate, Tubas district, and part of Nablus governorate) with the current population estimated to be about 88,900.

For the execution of the Study, PNA has formulated a Steering Committee formed by representatives of the concerned authorities. Under the Steering Committee, a Technical Committee and five Working Groups (WGs) have been formed, mainly by the staff of PNA and local governments, to discuss various technical issues related to the Master Plan formulation. A participatory planning approach has been applied and nearly 50 WG meetings have been held in the course of the Study. The participatory approach has also been applied to the implementation of three pilot quick impact projects.

Joint Discussions		Pilot Quick Impact Projects	
Steering Committee:	2 times	1.	Olive oil processing and marketing, in 'Aqqaba, Tubas
Technical Committee:	8 times	2.	Rehabilitation of well for water saving agriculture demonstration, in Furush Beit Dajan
Working Group Meetings:	42 times	3.	Demonstration of brackish water agriculture in Jericho city
Spatial Plan WG	(8)		
Social Service WG	(13)		
Agriculture/Water WG	(7)		
Tourism WG	(6)		
Urban Planning WG	(8)		

The plan formulation was conducted from October 2005 to March 2006, and the formulation of implementation programs with the operation of quick impact projects has lasted until August 2006. Capacity building for planning and implementation has been executed throughout the Study period, particularly by means of joint discussions at the Workshops and WG meetings, as well as collaboration in the quick impact project operations.

2 **UNIQUENESS OF THE JERICHO REGION**

The Jericho and Jordan Rift Valley area has various unique qualities that would make an integrated development plan attractive to the people in and around the region.

Cultural Heritage

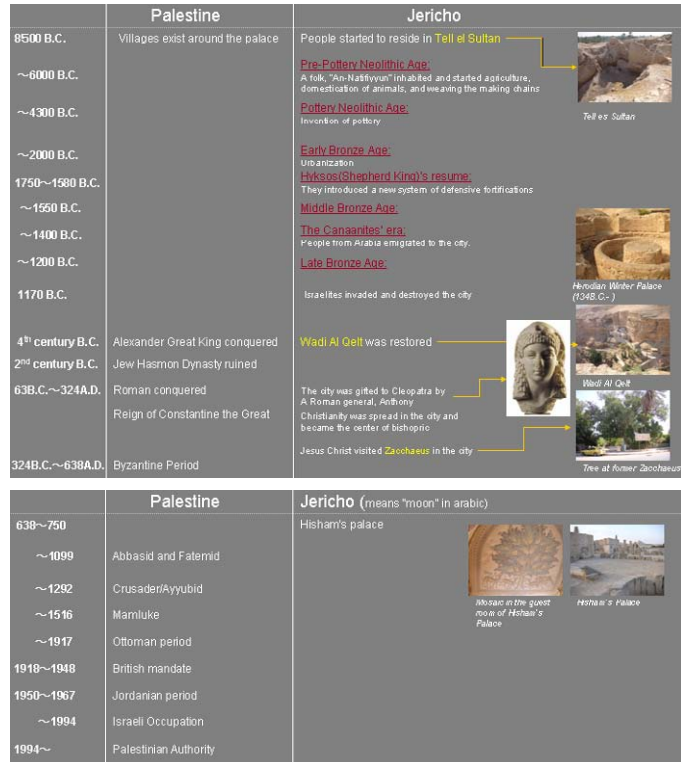
The Jericho area has 532 archaeological sites and features, while Tubas district has 489 archaeological sites and features. Only 25 archaeological sites have been excavated so far. As shown in the chronology, the Jericho and Jordan Rift Valley area has had a unique impact on history, religions and cultures.

Topographical Uniqueness

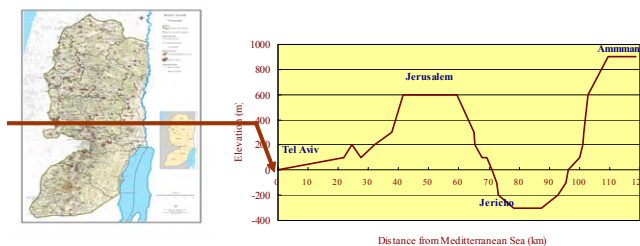
The Jericho and Jordan Rift Valley area has a uniqueness in its topography, categorized into three areas based on elevation; the central highlands (700-900 m in elevation), the eastern slopes, and the Jordan Rift Valley area. The lowest point is the Dead Sea at 410 m below mean sea level.

Climatological Uniqueness

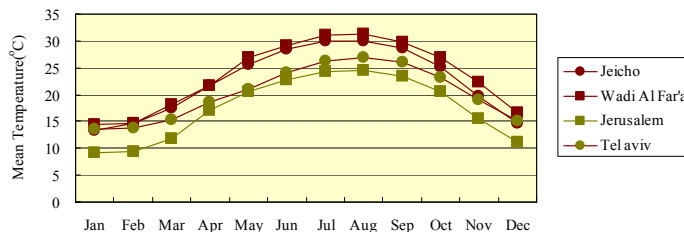
The Jordan Rift Valley is warmer and much drier than other areas on the West Bank. Such a climatological uniqueness affects the characteristics of soils and water resources, as well as agriculture in the Valley. The average annual rainfall is 168 mm in Jericho, 240 mm in Wadi Al Far'a, and 429 mm in Tubas. The coolest month is January (mean temperature of 13.3°C in Jericho), and the warmest month is July or August (30.0°C). The winter season in Jericho is 5°~10°C warmer than the highland areas, and it makes the Jericho area attractive to farmers and tourists.



Source: Jericho City and other publications
Figure S-1 Historical Chronology of the Jericho Region



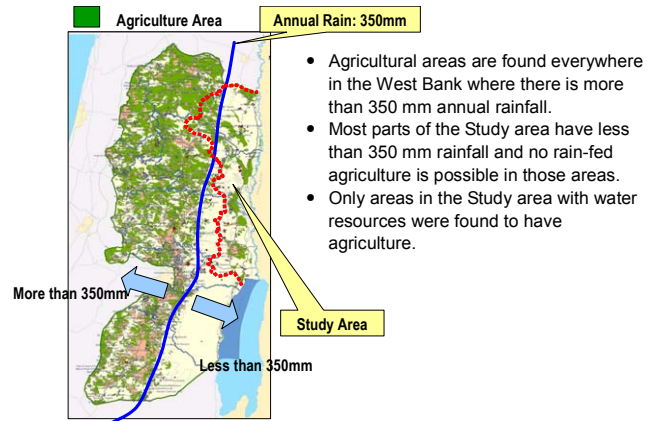
Source: MoP / JICA Study Team
Figure S-2 Cross Section of the West Bank



Source: MoA
Figure S-3 Monthly Mean Temperature

Limited Water Resources

Water resources are scarce in the West Bank. The irrigated area is estimated to be about 101,620 dunums in the West Bank and 53,160 dunums in the Jordan Rift Valley area. The West Bank consumes 89.14 MCM/year of water, while the Jericho and Rift Valley area is using 52.12 MCM/year. The high irrigation rate in the Jordan Rift Valley area is due to the fact that the annual rainfall (approximately 200 mm) is insufficient for rain-fed agriculture.

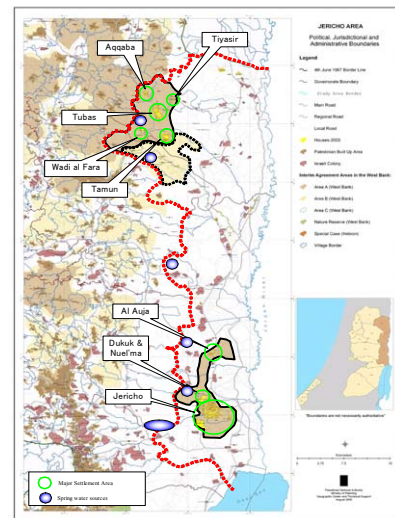


Source: MoP

Figure S-4 Existing Agriculture Area

Scattered Residential Area

While the Jericho and Jordan Rift Valley area represents 18.1% of the West Bank and Gaza, the current population is estimated to be around 88,900 or 2.4% of the Palestinian population. The population density (86 persons/km²) is much lower than the density of the West Bank (390 persons/km²) and Gaza Strip (3,520 persons/km²). The residential areas exist around the water resources, particularly at the source of spring water along the eastern slope of the Jordan Rift Valley.



Source: MoP

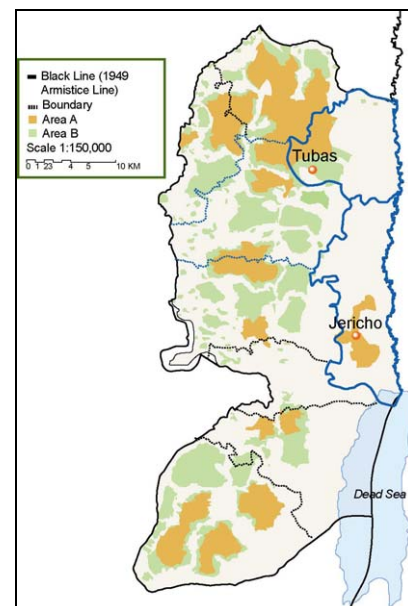
Figure S-5 Major Residential Areas and Water Sources

Crossroads of Corridors

Historically, Jericho was an oasis city connecting the Asian, African and European continents. Since east-west and north-south corridors crisscrossing at Jericho have been developed, Jericho has been serving as an intermediate place for cultures and trades.

Security Situation

Based on the Oslo Accords, the West Bank has been classified into three Areas in accordance with the degree of autonomy accredited. Jericho and Tubas municipalities are classified into Area A (148 km² or 13.6% of the Study area) where the highest degree of autonomy has been admitted. The remaining lands are designated as Area B (58 km² or 5.3%) and Area C (881 km² or 81.1%). The security situation in the Jericho and Jordan Rift Valley area remains relatively stable especially in Jericho city and its vicinity.



Source: MoP

Figure S-6 Classification of Areas A, B, C

3 DEVELOPMENT EFFORTS

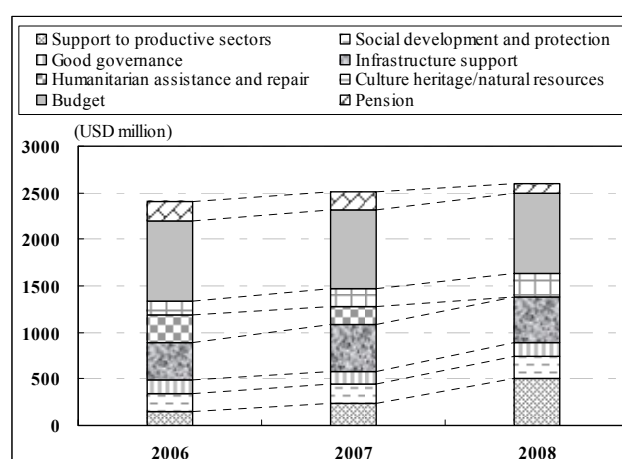
Development Plans

The Medium Term Development Plan (MTDP) for 2006-2008 was drafted at the end of 2005, updating the MTDP for 2005-2007. Both MTDPs have been formulated on the basis of the Millennium Development Objectives set under the Decree issued in September 2005 as follows.

- (i) Establishment of an independent democratic Palestinian state;
- (ii) Establishment of a modern economy, working with human capital as the highest priority resource;
- (iii) Provision of social care and protection for all citizens; and
- (iv) Protection and development of natural resources, including land, water, the environment and energy sources.

The MTDP budgetary investment requirements for social and human physical development and creation of an environment for private sector growth are substantial. The figure demonstrates the investment requirements of the MTDP.

The MTDP is combined with another pillar, i.e., the Medium Term Fiscal Framework (MTFF). The recent performance of the revenue and expenditure and their projection for 2006-2008 under the MTFF is shown in the table.



Source: MTDP for 2006-2008

Figure S-7 MTDP Investment Requirement

Table S-1 Palestinian Financial Performance and Projection

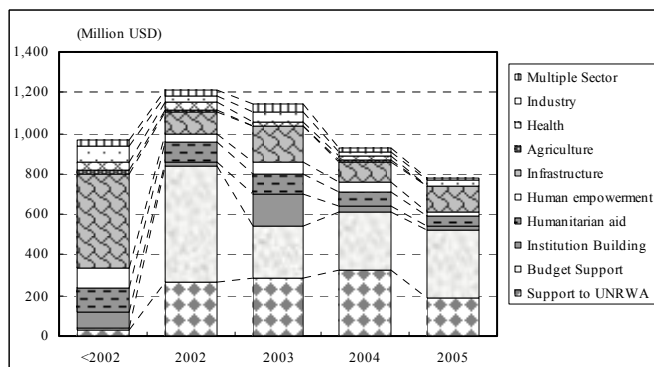
	2002	2003	2004	2005	2006	2007	2008
Revenue	257	763	947	1,078	1,132	1,188	1,248
Expenditure	957	1,047	1,340	1,547	1,783	1,894	2,015
<i>Items in the Expenditure</i>							
Wages and salaries	626	744	874	1,017	1,174	1,285	1,407
Current expenditures and transfers	331	303	466	530	609	609	608
Net lending	0	175	147	280	200	125	75
Tax pay back	5	16	16	20	20	21	23
Balance	- 705	- 475	- 556	- 769	- 871	- 852	- 865
External budget support	502	261	352	390	871	852	865
Other financing sources*	203	214	204	379	0	0	0

Source: MoP

As is obvious from the above table, PNA depends heavily on external budgetary support. Such support is required for public reform, social and humanitarian assistance, and basic service delivery for the Palestinian people.

Cooperation of International Donors

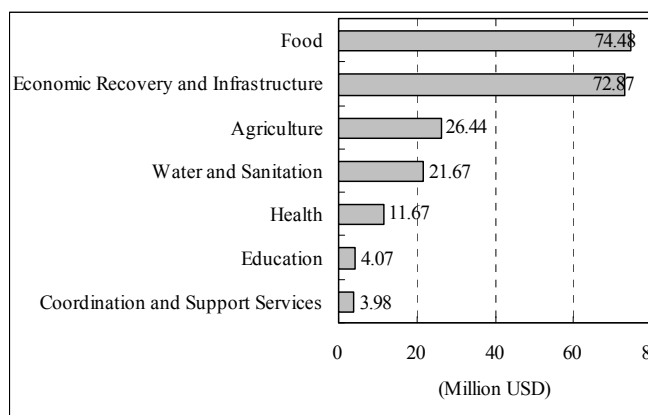
To support the efforts of the Palestinian people, international donors have been extending assistance in various fields. As shown in the figure, support to the UN Relief and Works Agency (UNRWA) and budgetary support to PNA represent a major part of annual disbursements by international donors.



Source: MoP

Figure S-8 Disbursement of International Donors

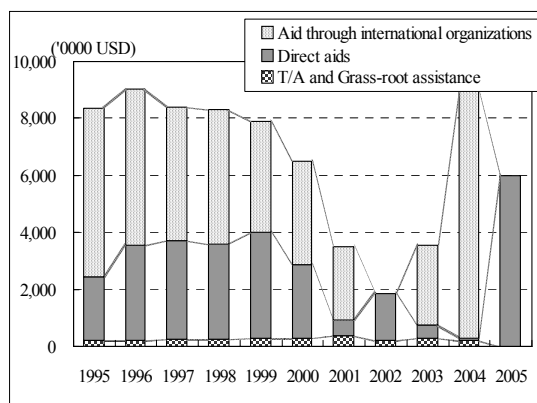
UN agencies have been leading the international support to the Palestinian people, including the support through UNRWA. Together with international NGOs, UN agencies have set up an annual program for assistance, called the Consolidated Appeals Process (CAP). For instance, the CAP for 2006 is programmed to support such sectors as food security and agriculture, economic recovery and infrastructure, water and sanitation, and health and education as shown in the figure.



Source: CAP 2006

Figure S-9 CAP for 2006 by Sector

On the other hand, the Government of Japan has been extending financial and technical assistance to Palestine since the Oslo Accords in 1993. The Japanese assistance has been mainly focused on emergency and humanitarian assistance, support in administrative reforms, support toward a self-dependent economy, and promotion of confidence building through development cooperation. In May 2005, the Japanese government committed to assist the Palestinian people with a total amount of US\$100 million.



Source: MoFA, Japan (as of September 2005)

Figure S-10 Japanese Assistance to Palestine

Since 2005, JICA has been extending technical cooperation in three programs, i.e., (i) Improvement in Local Governance System in Palestine (2005-2008), (ii) Capacity Development on Solid Waste Management in Jericho and Jordan Rift Valley (2005-2008), and (iii) Improving Reproductive Health with a Special Focus on Maternal and Child Health (2005-2008).

4 OBJECTIVES OF JERICHO REGIONAL DEVELOPMENT

SWOT Analysis for Regional Development

A SWOT analysis for development of the Jericho and Jordan Rift Valley area was jointly made at the Second Workshop held in November 2005. More than 80 participants, mainly from central and local governments, discussed the Strengths, Weaknesses, Opportunities and Threats of the region for setting a vision for the future and the objectives of Jericho Regional Development. The results of the SWOT analysis indicate the direction of regional development as follows:

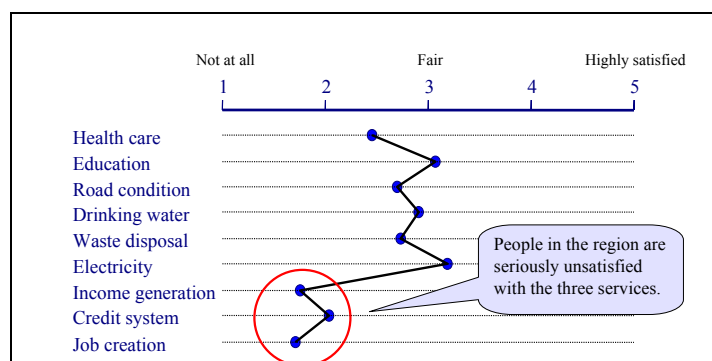


Workshop held to discuss the Vision for the Future

- (i) Potential of productive sector development is to be maximized on the basis of natural and historical resources of the region, particularly in the agriculture and tourism sectors;
- (ii) Regional development in the Jericho and Jordan Rift Valley area is to be integrated into the overall economic and social development of the West Bank and Gaza, particularly in the improvements in social services and human resource development;
- (iii) The environment in the region is to be protected to ensure sustainable regional development; and
- (iv) Confidence building is to be promoted among the people within the region, in the West Bank, and then in Gaza, as well as with the neighboring countries.

People's Needs

A socioeconomic survey (505 responses) was conducted to verify the people's needs and priority in regional development. The degree of satisfaction by the respondents for the public services revealed the fact that major social services are more or less tolerable despite various difficulties, but the people in the region are quite un-satisfied with the public support in income generation, credit systems and job creation.



Source: JICA Study Team

Figure S-11 Degree of Satisfaction of Respondents

Objectives of Jericho Regional Development

With the identified development direction and specific areas of focus, as well as based on the discussions with stakeholders on the vision for the future, the Jericho Regional Development Plan will be formulated with the following objectives.

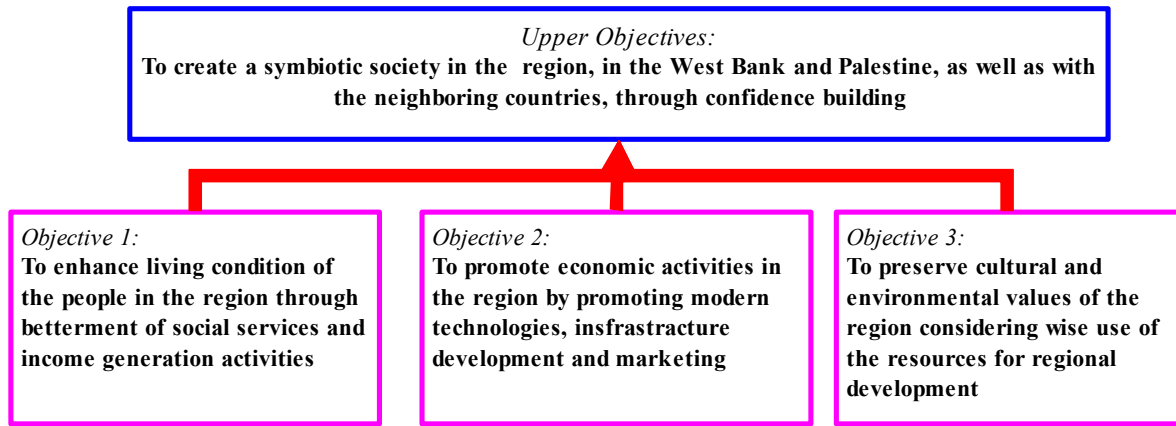


Figure S-12 Objectives of Jericho Regional Development

“To enhance the living condition of the people in the region” has been set, paying due attention to the needs of the people in the region. The unsatisfactory level of social services would be mainly due to the weak government capability as well as the unorganized community activities.

“To promote economic activities in the region” is focusing on the agriculture sector, making utmost use of the natural advantages of the Jordan Rift Valley. With the natural advantages, processing and marketing of agricultural products should be enhanced for better economic performance by applying modern technologies and infrastructure development.

“To preserve the culture and environment of the region” is to attain sustainable development, preserving cultural and environmental resources. The tourism sector has a great potential for future development. At the same time, improvement in the environmental condition and urban amenities is essential to make use of the high development potential in the tourism sector.

Further, it is proposed to establish a supreme objective “to create a symbiotic society in the region”. Such a symbiotic or convivial society could be created through mutual understanding, mutual confidence and mutual trust among the people and entities in the region, as well as among the neighboring countries, regardless of their ethnicities, ideologies, religions and politics. This supreme objective will no doubt contribute to peace building in the West Bank and Gaza.



5 DEVELOPMENT FRAMEWORKS

Population and Employment

The population in 2005 was 3.76 million in the West Bank and Gaza, including 2.37 million in the West Bank. In the Jericho and Jordan Rift Valley area, there are 88,900 residents—42,260 in the Jericho governorate and 46,640 in Tubas district. The annual average population growth rate in the Jordan Rift Valley between 1997 and 2005 is 3.7%.

Based on the population projection for the West Bank by the PCBS, the *natural increase in population* in the Jericho and Jordan Rift Valley area is estimated to be about 103,000 in 2010 and 116,000 in 2015. The Jordan Rift Valley population is predicted to grow at an average annual rate of 2.7% in the period 2005-2015. The proportion of working age population will increase from 55.6% in 2005 to 58.6% in 2010 and 61.1% in 2015.

Table S-2 Population Framework in Jordan Rift Valley Area

Locality	2005	2010	2015	CAGR
Palestinian Territory	3,762,005	4,409,684	5,091,314	3.1%
West Bank	2,372,216	2,736,899	3,110,489	2.7%
Jericho Governorate	42,268	48,777	55,258	2.7%
Tubas District	46,644	53,826	60,978	2.7%
Study Area	88,912	102,603	116,237	2.7%
Study Area (Excl. Camps)	75,221	86,803	98,337	2.7%

Source: PCBS and JICA Study Team estimation

Macroeconomic Framework

Three alternative macroeconomic scenarios are contemplated for the West Bank economy:

- (i) High growth case : “Economic Recovery” scenario
- (ii) Moderate growth case : “Pre-Intifada” scenario
- (iii) Low growth case : “Status Quo Plus” scenario.

Selected macroeconomic indicators for each case are tabulated. The high growth case is based on the “Permanent Resolution” scenario proposed in the MTDP, while the low growth case is the “Status Quo” scenario. The moderate growth case is proposed so as to recover the GDP to the level of the economic growth attained in 1994-1999. The average annual growth rates are 8.5% for the high growth case, 4.0% for the moderate case, and 1.5% for the low growth case.

Table S-3 Macroeconomic Frameworks for the West Bank

Scenario		2005	2010	2015
High Growth	GDP (Mill. US\$)	3,058.6	4,966.7	6,900.7
	Real Growth Rate (%)	7.3%	8.4%	6.8%
	GDP per Capita (\$) (US\$)	1,289.3	1,814.7	2,218.5
	Real Growth Rate (%)	4.0%	5.5%	4.1%
Moderate Growth	GDP (Mill. US\$)	3,011.6	3,817.3	4,461.0
	Real Growth Rate (%)	5.7%	4.4%	4.0%
	GDP per Capita (\$) (US\$)	1,269.5	1,394.8	1,434.2
	Real Growth Rate (%)	2.5%	1.6%	0.6%
Low Growth	GDP (Mill. US\$)	2,936.0	3,174.5	3,411.3
	Real Growth Rate (%)	3.0%	1.5%	1.4%
	GDP per Capita (\$) (US\$)	1,237.7	1,159.9	1,096.7
	Real Growth Rate (%)	-0.1%	-1.2%	-1.1%

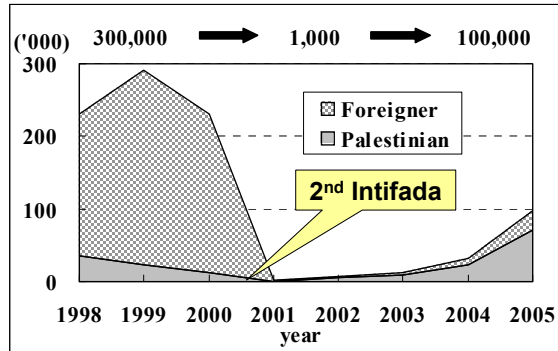
Source: JICA Study Team estimation

The macroeconomic scenarios have been discussed at the Working Group meetings and Workshops, and it has been agreed by the participants that a minimum of 2.7% in the GDP growth rate is needed to keep the same GDP per capita level towards 2015.

Tourism Development Framework

Jericho has a great number of historical heritage sites and is located at the crossroads of the east-west tourist corridor from Jerusalem to Amman and the north-south tourist corridor from Tiberias to Eilat. Since the number of tourists and visitors has a great impact on regional development, the tourist arrivals are regarded as a framework for the plan formulation.

The table shows the number of visitors to Jericho for the period from 1998 to 2005. Before the Second Intifada, visitors to Jericho were 230,000-250,000 per annum, but they drastically dropped after the Intifada, though it gradually recovered to the level of around 100,000 in 2005. Tourist arrivals in Jericho have a strong seasonal fluctuation. This comes from the climatic variation and school season. The winter climate is mild and attracts many wintering tourists.



Source: MoTA, Jericho Branch

Figure S-13 Numbers of Visitors to Jericho

The table shows the alternative scenarios for visitors to Jericho. Alternative I assumes the status quo plus some improvement in the security conditions, while Alternative II presumes the recovery to the pre-Intifada status. Alternative III envisages free mobilization and improvement in various tourism attractions.

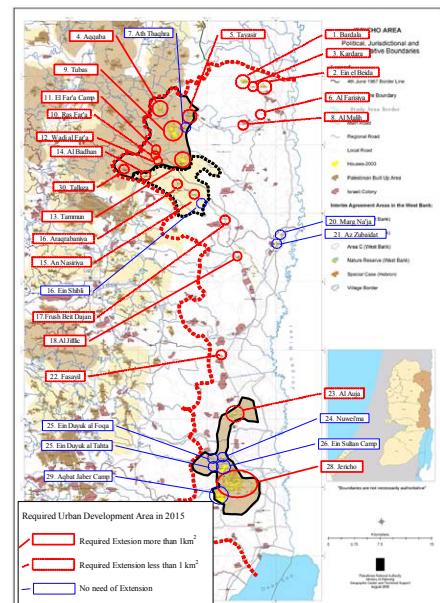
Table S-4 Alternative Tourism Frameworks for Visitors to Jericho

	2004	2010			2015		
	Actual	Alt. I	Alt. II	Alt. III	Alt. I	Alt. II	Alt. III
Tourist Arrivals in Jericho	98,248	200,000	400,000	1,000,000	300,000	670,000	1,760,000
Overnight Tourists	33,000	125,000	240,000	600,000	187,500	402,000	1,056,000
Average Duration of Stay (nights)	1.0	1.5	2.5	4	1.5	2.5	4
Bed Nights	33,000	187,500	600,000	2,400,000	187,500	600,000	2,400,000
Hotel Rooms	323	323	386	967	323	386	967
Employment	250	2,650	3,100	4,600	3,000	6,700	17,600
Tourism Receipts	\$ 12 mill	\$ 42 mill	\$ 101 mill	\$ 350 mill	\$ 68 mill	\$ 251 mill	\$ 1,056 mill

Land Use Framework

Through discussions at the Spatial Planning Working Group, it has been agreed that the built up area would increase by 63% from 18.7 km² in 2005 to 29.3 km² in 2015. Those communities located in Areas A and B would have less difficulty in extending the built-up area, but the villages located in Area C have serious difficulties. For instance, Al Jiftlik village located in Area C has a built-up area of 0.12 km² for 4,000 (residents), equivalent to 30 m²/person at the moment.

On the other hand, potential areas for agricultural development have been assessed on the basis of the current land use, topography, soils and the environmental considerations.



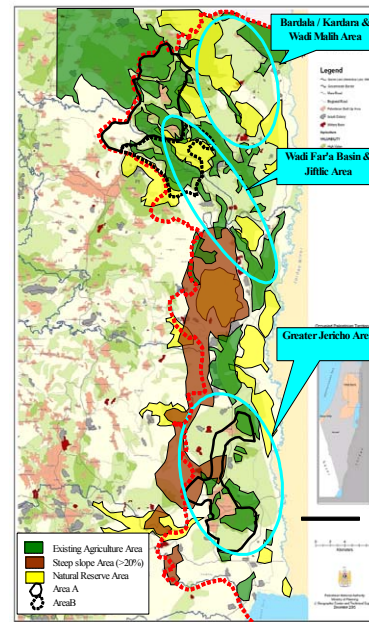
Source: JICA Study Team and MoP

Figure S-14 Location of Built-up Area

Bardala/Kardara and Wadi Malih Area is located to the north of the Jordan Rift Valley. The population is sparse and sizable unused land areas exist. This area has been identified as a future development zone.

Wadi Far'a Basin and Jiftlik Area has been identified to be a major agricultural area. Water resources are available along the Wadi Far'a River, inclusive of potential water harvesting. However, a major part of this area belongs to Area C.

Greater Jericho Area has a sizable unused flat land that extends to the south of Jericho city as well as between Jericho city and Al 'Auja village. Several spring water resources are available in this area. In the Greater Jericho Area, however, various activities such as tourism, agro-processing, industries, and trades are envisaged, and the agricultural land should be designated from the broader perspective.



Source: MoP / JICA Study Team
Figure S-15 Potential Area for Agricultural Development

The agricultural development potential, in terms of land availability, is summarized in the following table:

Table S-5 Development Potential for Agricultural Land Extension

1 Sub-Region	2 Area (km ²)			3 Existing Agricultural Area (Km ²)	4 Potential Agricultural Area for Future (Km ²)	5 = 3+4 Total Area for Agriculture Development (Km ²)	6 Natural Reserve Area (Km ²)
	Area A & B	Area C	Total				
Bardala /Kardara and Wadi Malih	0	275	275	21 (7.6%)	93 (33.8%)	114 (41.4%)	58 (21.0%)
Wadi Far'a and Jiftlik	87	129	216	110 (51.0%)	40 (18.5%)	150 (69.4%)	24 (11.1%)
Greater Jericho	69	278	347	87 (25.0%)	88 (25.3%)	175 (50.4%)	18 (5.1%)
Total	156	682	838	218	221	439	100

Source: JICA Study Team

Water Availability and Demand Framework

In the Jordan Rift Valley area, 19 springs originate from the eastern aquifer and discharge to the eastern slope of the Valley. Total discharge is estimated to be about 42 MCM/year. The spring water resources are generally located far from the demand areas. There are leakage, seepage and evaporation losses estimated to be about 30% of spring water or 15 MCM/year.

The Palestinian right of extraction of groundwater from the eastern aquifer is 54 MCM/year, and 78 MCM/year for further development. The current groundwater extraction from the existing wells is estimated to be about 10 MCM/year. Accordingly, the currently available water resources in the Jericho and the Jordan Rift Valley area are assumed as summarized in the following table.

Table S-6 Available Water from Easter Aquifer in Jordan Rift Valley

Water Resources	Springs (MCM/year)	Wells (MCM/year)	Total (MCM/year)
Annual Available Volume	27	10	37

Source: JICA Study Team estimate

In the Jordan Rift Valley, three new water resources could be made available in the short and medium term. They are: (i) floodwater in wadi basins in the Jordan Rift Valley, (ii) recycled water from wastewater treatments plants in major cities/towns, and (iii) brackish water on the lower terrace of the Jordan Rift Valley. Floodwater in wadis is the most probable new water resource of the future. PWA estimates that the development potential would reach 28.5 MCM/year. The captured flood water would be recharged into the groundwater aquifer so that additional wells could be developed, or it would be stored in surface reservoirs with dams on wadis though it depends on the geological condition. Water recycling from wastewater will be another water resource for irrigation purposes. Technologies have already been disseminated. Wastewater from major cities on the central highland in the West Bank, such as Nablus, Ramallah, and East Jerusalem would flow down to the Jordan River basin. By assuming further improvements in the sewerage network systems in such cities, it is expected that about 15 MCM/year of recycled water might be made available for irrigation.

On the other hand, water demand for municipal and industrial uses in the Valley is estimated to be around 7.8 MCM/year in 2015.

Agricultural water demand is estimated on the basis of water-saving agriculture with the assumed production efficiency of NIS5.07/CM of water which is equivalent to 202% of the present efficiency. This means that the agricultural water requirements in 2015 for the same production amount will be half of the present water demand.

Taking the actual GRDP growth in the West Bank up to 2005, and estimated future GRDP growth from 2005 to 2015, agricultural production and water demand has been estimated as summarized in the following table. The water allocation for agriculture is assumed to be 40.5 MCM, which is only 3.8% higher than the present water consumption.

Table S-7 Assumed Agricultural Production and Water Requirement

	2003	2004	2005	2015
Agricultural Production (mil. US\$)	74.6	74.0	80.8	156.3
Population	86,081	86,077	88,912	116,237
Per Capita Agri. Product (US\$)	866.6	859.6	908.6	1,344.9
GRDP Growth Rate (%)		-0.8	5.7%	4.4%
Water Demand (mil.m3) (same cropping pattern 2005-2015)	39.0	-	-	81.8
Water Demand (mil.m3) (water saving agricultural approach)	-	-	-	40.5

Source: JICA Study Team estimate

6 INTEGRATED REGIONAL DEVELOPMENT PLAN

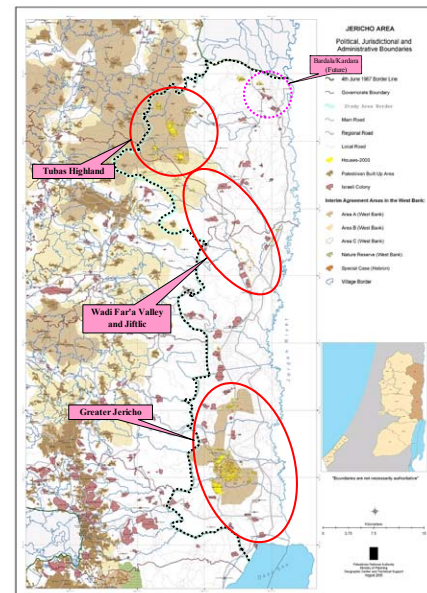
Basic Strategy

The following six basic strategies are proposed in formulating an integrated regional development plan for the Jericho and Jordan Rift Valley area.

- Basic Strategy 1:* Jordan Rift Valley is treated as one cluster, strengthening linkages within the region.
- Basic Strategy 2:* Inter-regional linkages are to be strengthened.
- Basic Strategy 3:* Focal sub-regions are identified for efficient investment.
- Basic Strategy 4:* Flexible development scenarios are set to be adjustable to future changes.
- Basic Strategy 5:* Strengthening local governance and CBOs is to be emphasized.
- Basic Strategy 6:* Capacity building is integrated into regional development and sector development activities.

Administratively, the regional development plan encompasses 26 local government units (LGUs) in Jericho governorate, Tubas district and part of Nablus governorate. These LGUs will be integrated to form a cluster for social and economic development as well as for the protection of the environment.

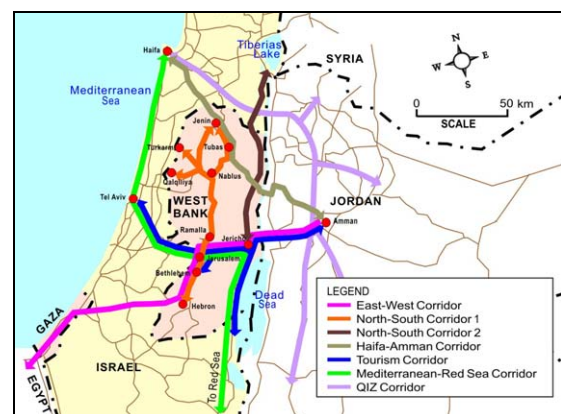
With respect to the *Basic Strategy 3*, three sub-regions are identified, i.e., (i) the Greater Jericho Area, (ii) Wadi Far'a Valley and Al Jiftlik area, and (iii) Tubas Highland area. In addition, the Bardala/Kardara area in the northern Rift Valley in Area C will receive focus in future development. The selection of the focal sub-regions is greatly affected by the current administrative classification into Area A (13.6% of the Study area), B (5.3%) and C (81.1%).



Source: MoP/JICA Study Team
Figure S-16 Proposed Urban Centers

Spatial Structure

In identifying the spatial structure of the Jericho and Jordan Rift Valley area, the regional transportation network has been taken into account. With due consideration of the current transport situations, the strategic importance from development perspectives and the regional development strategy, a total of seven corridors have been identified for promotion of smooth movement of people and goods. These would not only serve the people in the Jericho area, but also function as regional development corridors in Western Asia and the Middle East.



Source: JICA Study Team
Figure S-17 Regional Corridors

Integration of the West Bank and Gaza would be the paramount issue for further regional spatial planning. Gaza is recognized as one of the highest population density areas with 3,500 persons/km², to which strong ties with the West Bank are essential to lead the Palestinian economy. At the same time, the gateway function in Jericho would be strengthened for regional integration. *Amman – Jericho – East Jerusalem – Bethlehem – Hebron – Gaza – Egypt* could be the main international corridor in the region.

Ramallah would be developed as an administrative center of the West Bank. The linkage between Ramallah and East Jerusalem would be strengthened in the future. Based on that, the North-South Corridor 1 via *Jenin – Nablus – Ramallah / East Jerusalem / Bethlehem – Hebron* would become a north-to-south axis. Major cities in the northern West Bank would develop rather independently, as they have the essential functions for economic and administrative activities as a result of the unexpected isolation or decentralization for the past five years. *Decentralization shall be promoted* and effective linkage among the cities should be developed.

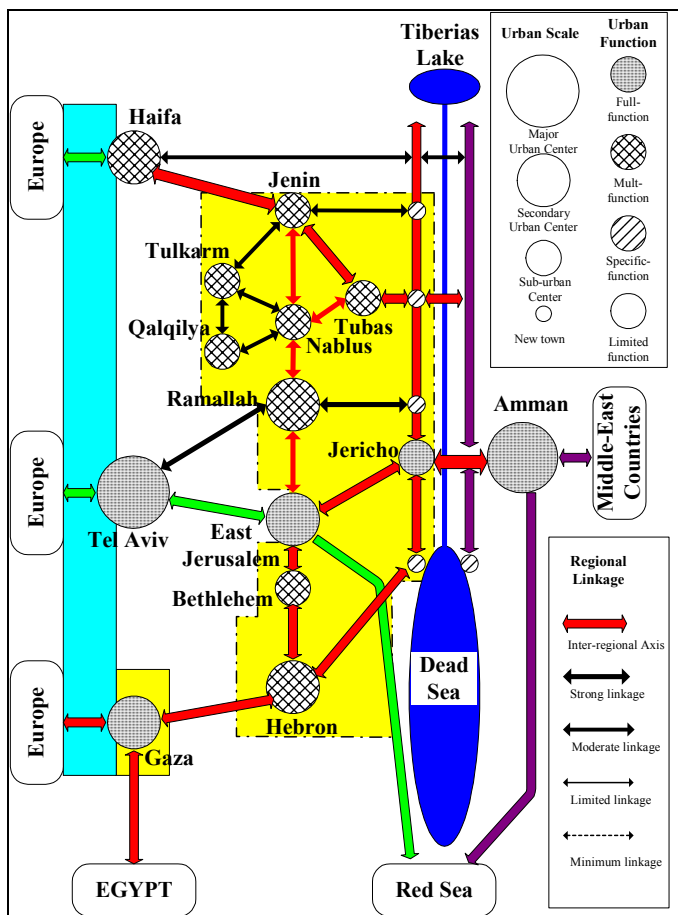


Figure S-18 Future Spatial Structure for West Bank

Integration of the Jordan Rift Valley into the cross-border activities between Palestine, Jordan and Israel is another focal issue for further development of the region. The Jordan Rift Valley is expected to be an agro-based industry center that would integrate the Jordan side, which should not be a competitor but a partner for the promotion of export oriented agricultural business targeting the European and Gulf markets.

Spatial Plan for Jericho and Jordan Rift Valley

A spatial plan for the Jericho and Jordan Rift Valley area is elaborated on the basis of the spatial structure for the West Bank and Gaza, as well as the results of assessments on land and water resources.

Water Axis

Four water axes are identified for the regional development plan, i.e., (i) Wadi Far’a, (ii) Wadi Qilt (iii) Wadi Auja, and (iv) Wadi Malih. The Wadi Far’a basin is the largest watershed in the Jordan Rift Valley having surface water throughout the year. The valley is recognized as high potential for agricultural development with adequate water harvesting facilities. The Wadi Qilt basin, located in

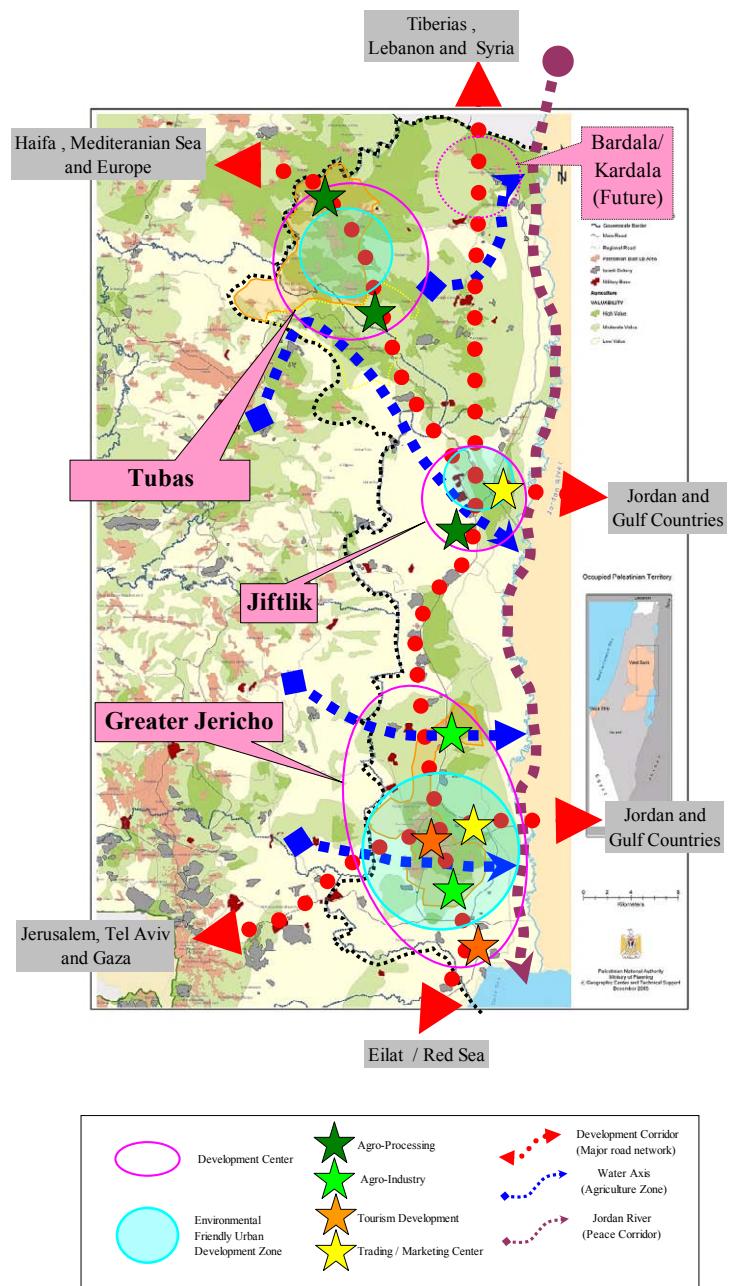
the southern part of the Jordan Rift Valley, passes through Jericho City and it would sustain the Greater Jericho urban and tourism development. The Wadi ‘Auja basin is located to the north of Greater Jericho, with stable supply of spring water and sizable un-used flat land. The Wadi Malih basin in the northern Jordan Rift Valley could be developed as a new center for agro-based activities in the future.

Urban Centers

Three urban centers have been identified in (i) the Greater Jericho Area, (ii) Tubas Highland, and (iii) the Jiftlik Zone. The Greater Jericho area is to develop as a regional center with multiple urban functions, such as tourism development, agro-processing, and international trade and logistics. The total area is 347 km² (including Area C of 278 km²). Tubas Highland, including Tubas, Tammun, ‘Aqqa and Tayasir, on the northern hilly edge of the Jordan Rift Valley, is in Area A with adequate rainfall for rain-fed cultivation. Located between Jenin and Nablus, the economic and social activities in Tubas Highland are dependent on these cities. The area would have potential for agro-industry based on production in the sizable agricultural lands extending to the west. The Jiftlik Zone, located at the crossing point of the Jordan Rift Valley and Wadi Far’as Valley, will serve as a gateway to Jordan through Damiya Bridge. The area is in the center of the Jordan Rift Valley and at the most suitable location to collect products from the whole Jordan Rift Valley and to export them to Jordan and the Gulf countries.

Tourism Centers

Though numerous potential tourism attractions exist in the region, the most valuable tourism resources are concentrated in and around Jericho city. Jericho could be developed as an international tourism center for cultural and resort tourism. Strengthening the linkage with the surrounding tourism



Source: JICA Study Team

Figure S-19 Spatial Plan for Jericho and Jordan Rift Valley Area

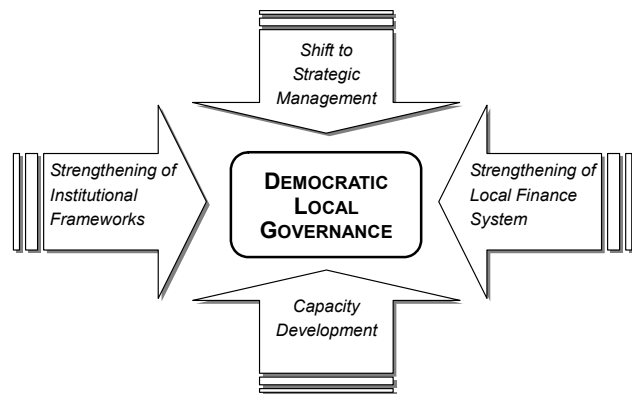
spots such as Amman, Jerusalem, Bethlehem and Egypt would be a key strategy for tourism development.

Agriculture and Agribusiness Zones

Agriculture is the main economic activity in the Jericho and Jordan Rift Valley area. However, there is a limitation in development potential for expansion due mainly to the limitation of land and water resources. Given the situation, promotion of water saving agriculture is proposed. Processing and agro-industry will be developed with some effective marketing strategies. The lower Jordan Rift Valley is identified as a fresh vegetable and tree cropping zone, and a packaging industry for export of products could be promoted. Along the Wadi Far’a valley and Tubas Highland, several types of agro-industries would be promoted.

Local Governance and Institutional Strengthening

Local governance in PNA needs to be further strengthened in order to play a pivotal role in enhancing socioeconomic development in the Jericho and Jordan Rift Valley area. To transform it into a more democratic local governance that would positively support the enhancement of human security, PNA would need to actively intervene in the four areas: (i) strengthening institutional frameworks, (ii) shifting to strategic management, (iii) strengthening the local finance system, and (iv) developing capacity in local governance.



Source: JICA Study Team

Figure S-20 Strategies in Local Governance

Strengthening of the institutional frameworks is essential to review and reassign the roles and responsibilities in local administration among MoLG, LGUs, and JCspds to promote decentralization. The items to be focused on are: (i) to revise local government law, (ii) to accelerate the merger of small LGUs, and (iii) to deliver a wider range of services by JCspds.

Local governance in PNA, including that of the Jordan Rift Valley area, should shift to employing a strategic management approach in developing its systems and structures, with specific focus on: (i) formulation of local level development plans, (ii) introduction of monitoring and evaluation systems (linked with performance-based program budgets), and, (iii) strengthening of relationships with private and community sectors. Specific attention should be paid to the enhancement of local finance. MoLG should continue to make efforts to: (i) increase collection rates of utility-user charges, (ii) increase tax revenues, and (iii) strengthen local fiscal management.

Considerable emphasis is also put on capacity development in the local governance system at all levels. MoLG should fully utilize the Training Center in Jericho, which has been established through the JICA-supported local government project, to strengthen the capabilities of a range of stakeholders in local governance. The training needs assessment study has identified seven areas as weak aspects of employees’ capabilities, and this Study has further added another area. It is proposed that training programs be formulated based on such areas as knowledge clusters.

Environmental Protection

Several environmental issues should be carefully addressed in the development plan formulation and implementation, as illustrated in the following.

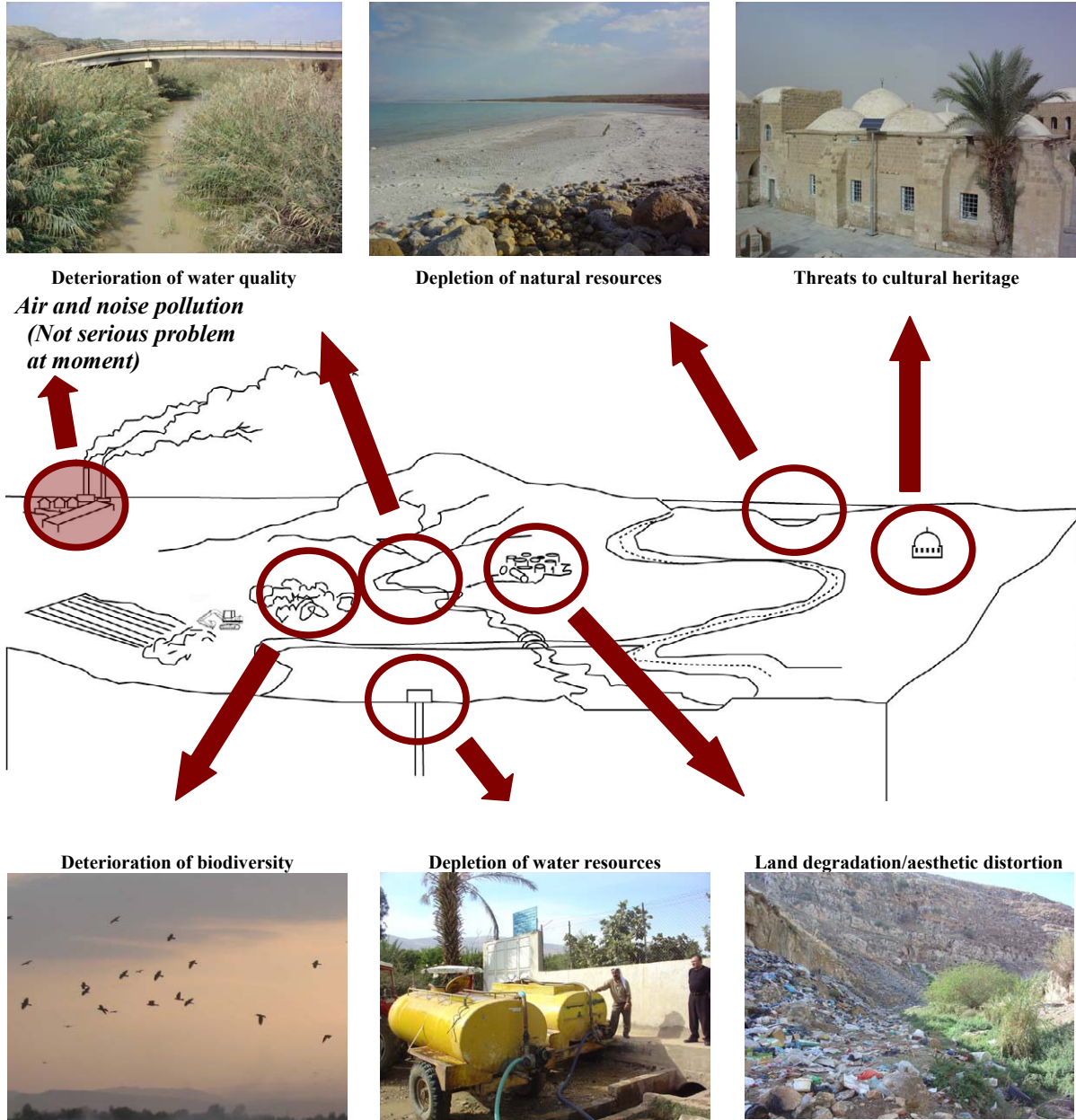


Figure S-21 Environmental Issues for Consideration

Coordination among the related agencies remains an area needing to be improved for the effective and efficient management of the environment in the Jericho and Jordan Rift Valley area. Environmental management cannot be merely handled by the central or local public authorities. It would be better to mobilize the private sector, NGOs and other non-governmental institutions, as well as the people and communities in the region as a whole.

Program Formulation for Regional Development

Programs for the Jericho regional development plan have been formulated to meet the objectives set forth under this Study, in due consideration of the issues and frameworks as discussed.

Table S-8 Objectives and Major Issues of Jericho Regional Development

Objectives	Major Issues to be addressed	Related Sector
To enhance the living condition of the people in the region	<ul style="list-style-type: none"> Income generation Promotion of activities for community based organization Improvement of social infrastructures Improvement of women’s health Capacity development of local governments Improvement of solid waste management capacity Improvement of water supply systems 	Social (health and education), Water supply, Environment, Agriculture and Tourism, Institutional capacity building
To promote economic activities in the region	<ul style="list-style-type: none"> Strengthening of water management capacity Improvement of agriculture and livestock technologies Investment promotion Promotion of agro-industry and marketing activities Capacity development of central/local government administration, Improvement of water quality and land use management 	Water resources, Agriculture, Trade and Industry, Environment, Institutional capacity building
To preserve cultural and environmental values of the region	<ul style="list-style-type: none"> Creation of vision for urban development Institutional set-up for land use and urban planning Improvement of urban environment, such as water quality and solid waste management Improvement of tourism infrastructures Promotion of tourism industry 	Tourism, Urban development, Urban environment, Infrastructure, Institutional capacity building

Strengthening of local governance and environmental protection are common to three different objectives of the Master Plan. Environmental protection is fundamental to realize sustainable regional development. Local governance improvement is another common issue necessary to meet all objectives of the Jericho Regional Development Plan. It is proposed that these two programs become “core programs” for the integrated regional development plan. Further, various sector-based programs are integrated in the light of three objectives. It is proposed that the sector-based programs are integrated into three programs, i.e., (i) Social and Development Program, (ii) Agriculture and Agribusiness Program, and (iii) Tourism and Urban Environmental Program.

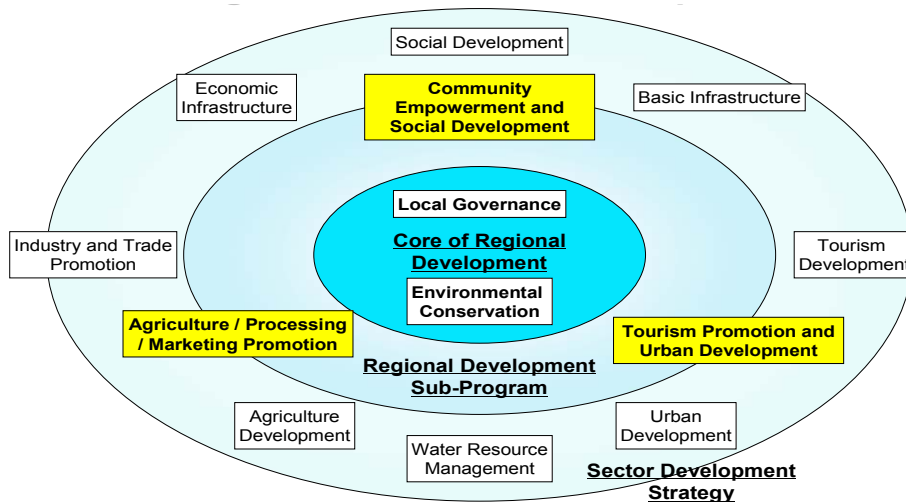


Figure S-22 Regional and Sector Development Linkages