

Jericho City Profile



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Background

This report is part of a series of booklets, which contain compiled information about each city, village, and town in the Jericho Governorate. These booklets came as a result of a comprehensive study of all localities in Jericho Governorate, which aims at depicting the overall living conditions in the governorate and presenting developmental plans to assist in developing the livelihood of the population in the area. It was accomplished through the "Village Profiles and Needs Assessment;" the project funded by the Spanish Agency for International Cooperation for Development (AECID).

The project's objectives are to survey, analyze, and document the available natural, human, socioeconomic and environmental resources, and the existing limitations and needs assessment for the development of the rural and marginalized areas in the Jericho Governorate. In addition, the project aims at preparing strategic developmental programs and activities to mitigate the impact of the current political, social, and economic instability with special emphasize on agriculture, environment and water.

All locality profiles in Arabic and English are available online at <http://vprofile.arij.org>.

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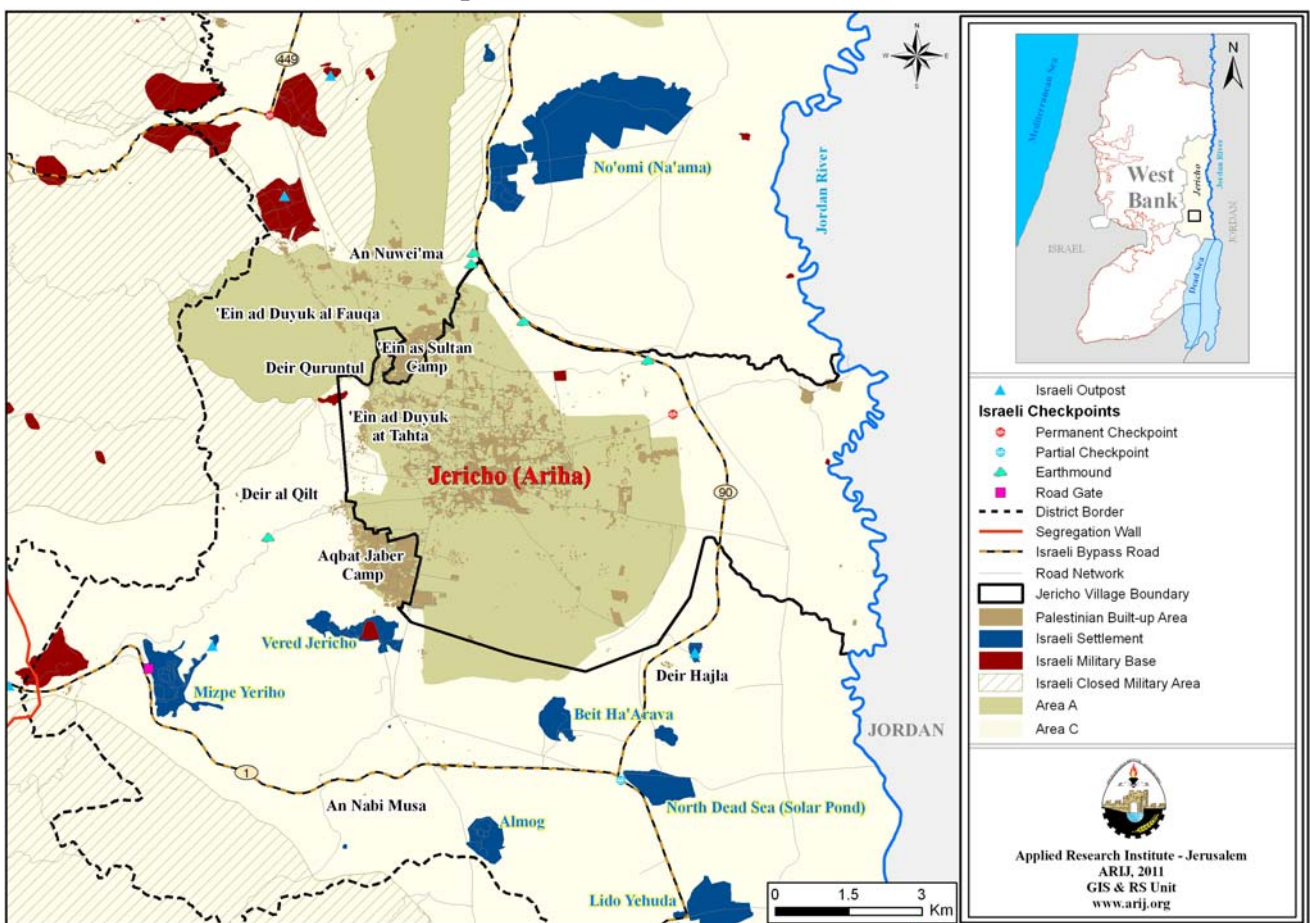
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Jericho City Profile

Location and Physical Characteristics

Jericho is the only city in Jericho Governorate and located to the south. Jericho is bordered by the Jordan River to the east, An Nuwei'ma town and 'Ein as Sultan camp to the north, 'Ein ad Duyuk al Foqa town to the west, and Aqbat Jaber camp and An Nabi Musa to the south¹ (ARIJ-GIS Unit, 2010) (See map 1).

Map 1: Jericho location and borders



Source: ARIJ - GIS Unit, 2011.

¹ The site and borders of local bodies have been identified in accordance with the Joint Technical Commission, for the demarcation of local bodies' borders for the purposes of the elections, which consists of representatives of the Ministry of Planning, the Ministry of Local Government, the Palestinian Central Bureau of Statistics and the Central Election Commission.

Jericho is located at an altitude of 273m below sea level with a mean annual rainfall of 133mm. The average annual temperature is 24 °C, and the average annual humidity is approximately 49.3% (ARIJ-GIS Unit, 2010).

Since 1930, Jericho has been governed by a Municipal Council, which is currently administrated by 14 members appointed by the Palestinian National Authority, in addition to 297 permanent employees. The Municipal Council which is located within the Joint Services Council of Jericho and owns a permanent headquarters, but does not own a vehicle for the collection of solid waste. However, it does possess 15 tractors, 5 pick-up cars, 2 bulldozers, 3 small hammers, and one metal detecting device (Jericho Municipal Council, 2011).

It is the responsibility of the Municipal Council to provide a number of services to the residents of Jericho, including (Jericho Municipal Council, 2011):

- Establishing and maintaining the drinking water network.
- Solid waste collection, road construction, pavement and rehabilitation, street cleaning and social development services.
- Organizing the city's construction and licensing processes.
- Implementing projects and case studies for the city.
- Providing public markets.
- Providing sanitary slaughterhouses and organizing the slaughter of animals.

History

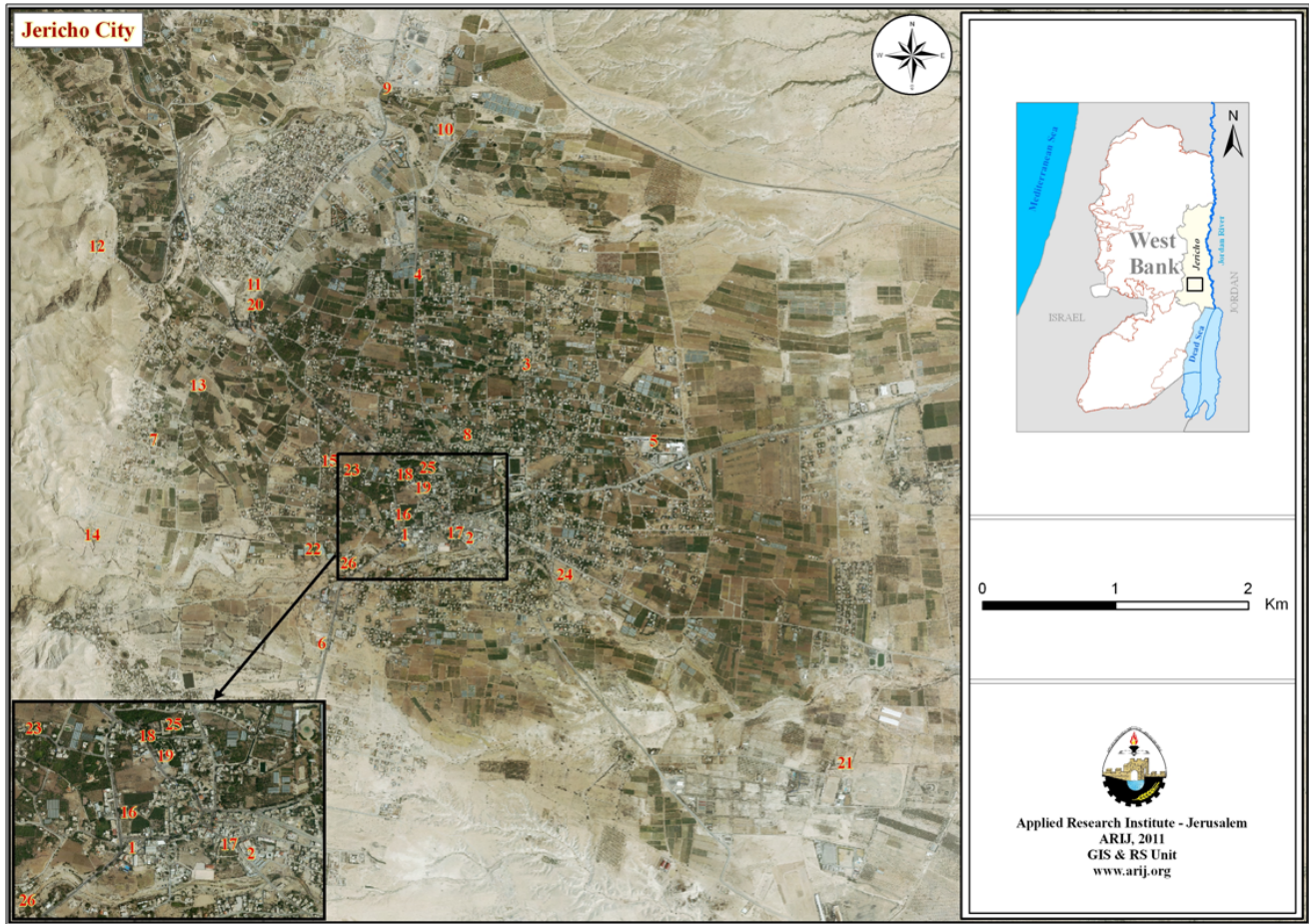
Jericho is one of the oldest cities; it is the first present in human history, in which we find the remains of the Stone Age revolution. This signifies a time period in which man quit the life of movement and travel in search of food and adopted a life of stability dependent on agriculture and the domestication of cattle, in particular, "wheat" and "capricorns". The establishment of the city dates back to ancient times, and as the oldest inhabited city ever, Jericho it dates back to the Stone Age (10 – 11 thousand years ago; almost before the 8th millennium BC). Jericho's historical significance peaked in the Canaanite Age followed by the Roman and Umayyad periods until the present time, during which Jericho has become Palestine's main winter resort. In addition, the water of 'Ein as Sultan, 'Ein ad Duyuk and Wadi al Qalt have played a key role in the formation of its importance for all people who resided here throughout history. However, Canaanite roots appear in Jericho city's Arabic name; Jericho is a city of the Canaanite moon god "Yarich", also, from the same triple source we find the word "Yarih" which means 'fragrance.' Jericho thus, is the aromatic city of the moon due to its orchards and flowers which have been forever present in the city. Additionally, in Hebrew, "Yariho" is the oldest city known in the Jewish Torah. In Syriac, "Ariha" means the smell or scent. The city of Jericho was called "Wadi As Saisaban, Valley of Sesban". It was given this name because of the abundance of a certain plant growing there; densely entwining round its groves like a fence, and still found there. It was also called, "Tall as Sultan" (the Hill of the Sultan) or " 'Ein Alisha' " (the Spring of Alisha'), as ancient Jericho was merely a small artificial hill called "Tall as Sultan", which is the precursor (origin) of the first city (Jericho Municipal Council, 2011 & Jericho Municipality, 2011a) (See photo 1 below for Jericho City).

Photo 1: General view of the residential area of Jericho City

Religious and Archaeological Sites

In terms of religious establishments, there are 9 mosques in the city; Jericho New, Jericho Old, Palestine, Qasr Hisham Al 'Estiraha, Al Muqata'a, Ad Duyuk, 'Abdo and Ar Rahma Mosques, and 5 churches; the Roman, the Latin Monastery, the Russian, the Coptic Monastery (old city) and the Coptic Monastery (Zacchaeus House) churches. As for archaeological sites, there are few, mainly: Hisham ben Abd al Malik Palace, Mount of Temptation (Jabal Qurontol), Jericho old hell (Tell as Samrat), 'Ein as Sultan spring, the Sycamore Tree, Herodoes Palace (Tulool al 'Alayeq), Tell as Sultan and As Sukkar Mills (Tawaheen as Sukkar); all of these sites are qualified for tourism (Jericho Municipal Council, 2011) (See Map 2).

Map 2: Main religious and historic sites in Jericho City



No.	Locations	No.	Locations	No.	Locations
1	Jericho New Mosque	10	Hisham Palace	19	The Russian Museum
2	Jericho Old Mosque	11	Tal as Sultan Area	20	'Ein as Sultan Spring
3	Palestine Mosque	12	Mount of Temptation (Mount Qurontol)	21	Ar Rahma Mosque
4	Qasr Hisham Mosque	13	Tal as Samrat Area	22	The House of Zaccus (Copteic Convention)
5	Al 'Estraha Mosque	14	Herodias Palace	23	Latin Patriarch (Pligrims Hotel)
6	Al Muqata'a Mosque	15	The Roman Church	24	Old Muslim Cemetery
7	Ad Duyuk Mosque	16	The Latin Convent Church	25	Coptic Monastery (Old City)
8	'Abdo Mosque	17	The Russian Church	26	Old Aquaduct Turkish Bridge
9	The Cemetery	18	The Sycamore Tree		

Source: ARIJ - GIS Unit, 2011.

Tell as Sultan (Old Jericho)

The site of 'Tell as Sultan' is located in the lower plain of the Jordan Valley, approximately 10 kilometers north of the Dead Sea. At the depth of 250 meters below sea level, and with a history that dates back to the Neolithic Period, it is the lowest and oldest town on earth. The mound is approximately 21 meters tall and covers an area of approximately one acre. The site is located close to the perennial

spring of 'Ein as Sultan and a mid-fertile land of alluvial soil, suitable for agriculture and associated with tropical summer climates and mild winter ones.

The site of 'Tell as Sultan' is identified with ancient Jericho having been mentioned in ancient historical and biblical sources. Recently, the name of Jericho appeared on a scarab from the second millennium BC.

The successive excavations uncovered the cultural history of the site, which stretches back 10,000 years. The earliest remains of the site belong to the Natufian culture; between the 10th and 8th millennia BC.

After being abandoned for a long while, the site was occupied during the Pottery Neolithic Period. The agriculturalists of 'Tell as Sultan' were the first to produce pottery as a result of an increase in their need for storage (See photo no. 2). Evidence of the Chalcolithic Period, which preceded the urban period, was not attested on the site; but rather in the cemeteries.

Photo 2: Tel as Sultan



During the early Bronze Age II, Jericho developed into major urban center. Several building phases were observed in the fortification area west of the mound. A large number of common burial sites from this period with no permanent dwellings, urban life was revived again during the Middle Bronze Age II, with a fortification consisting of a massive wall built of stone and glaucis, as well as a wall built on top.

The town was deserted in the Late Bronze Age (14th century BC), and the city wall of Jericho (of Joshua-invasion fame) was not found by archeologists, thus indicating a contradiction between the biblical narratives and archeological evidence. There are scant remains from the Iron Age and Persian periods, when the site was fully abandoned, and the center of ancient Jericho shifted to Telul al 'Alayiq in the Greco-Roman period (Ministry of Tourism and Antiquities – Department of Antiquities and Cultural Heritage, 2011).

Tawaheen as Sukkar (Sugar Mills)

One of the main economic activities in the Jordan Valley during the medieval period was the sugar industry as shown by both historical and archeological records. The Jordan Valley's sugar cane cultivation and mills were mentioned in several early Medieval, Arab and Frankish sources. 'Yaqut el Hamawi' was described Jericho in 1225 AD as a city famous for sugar cane and dates, and the sugar production process was described by Burchard of Mount Sion in 1283 AD.

The site of Tawaheen as Sukkar (Sugar Mills) is located in the lower foothills of Mount Quruntol in the Jordan Valley. The original function of the industrial zone is still preserved in the name of the site, Tawaheen as Sukkar, which means sugar mills. The site of Tawaheen as Sukkar in Jericho features a relatively well preserved industrial installation for manufacturing sugar.

The refinery is situated on five man-made terraces of considerable size on the slope below the higher aqueduct. The mill at Tawaheen as Sukkar was powered by water that was brought by aqueducts from the springs of An Nuwei'ma and 'Ein ad Duyuk at the north-eastern foot of Mount of Quruntol.

The production of sugar consists of several stages: planting the sugar cane, harvesting the cane, shredding, crushing, and pressing, boiling the juice, pouring it off and finally removing the crystallized sugar from the containers.

The material objects found during the excavation attest to different activities relating to sugar production. They consist primarily of; pottery vessels, pottery lamps, metal artifacts, coins, and a few Arabic inscriptions.

The excavation has revealed that Jericho was one of the main production centers in the Jordan Valley for sugar during the Crusader, Ayyubid and Mamluk periods (Ministry of Tourism and Antiquities – Department of Antiquities and Cultural Heritage, 2011).

Hisham's Palace

This site is located on the northern bank of Wadi Nuwei'ma, approximately 2km north of Jericho in the Jordan Valley, and is identified with the ruins of Khirbet al Mafjar. The site was attributed to Caliph Hisham ben Abd al Malik (724-743 AD) on the basis of some epigraphic materials, but today it is believed that his heir Al Walid II built the palace between 743 and 744 AD. The site was not the official residence of the Caliph but was used as a winter resort. The spectacular palace was destroyed in a severe earthquake in around 749 AD.

The architecture and the decoration of the palace were influenced by both Byzantine and Sassanian traditions. This is represented by the architectural style, paintings, fine stucco ornaments, and rich mosaic pavements. One statue, probably representing Caliph Al Walid, stood alone fully dressed, with a sword in his hand, black eyes, and covered with golden-brown hair. The colored mosaic floors uncovered in the bath frigidarium, the diwan, and the sirdab at Hisham's Palace represent a distinctive feature of early Islamic art (Ministry of Tourism and Antiquities – Department of Antiquities and Cultural Heritage, 2011).

Tulul Abu al 'Alayiq (Herod's Palace)

The Palestinian heritage site of 'Tulul Abu al 'Alayiq' is located along the river banks of Wadi al Qilt; 3kms southwest of Jericho. It is identified with the garden city of Jericho during the Greco-Roman period. It was the winter resort of the Herodian family.

During consecutive time periods, three palaces were constructed along with gardens and swimming pools, on the site of Tulul Abu al 'Alayiq.

A large industrial zone dating from the late Hellenistic period and early Roman period was uncovered in the northern area. At the edge of the ancient city, a large necropolis of approximately 50 tombs was discovered, containing inscriptions in Aramaic, Hebrew and Greek.

Tulul Abu al 'Alayiq had represented the main location of the city of Jericho during the Hellenistic and Roman periods, until the site was abandoned at the end of the Roman period; Jericho Byzantine city center was moved to the current location of Jericho city (Ministry of Tourism and Antiquities – Department of Antiquities and Cultural Heritage, 2011).

'Ein as Sultan

The perennial spring of 'Ein as Sultan is a significant water source, and of the 400 springs in the West Bank, it is the only one that almost singlehandedly waters a city (This Week in Palestine, 2010).

Sycamore Tree

Sycamore tree or Zacchaeus tree is located in the center of the city of Jericho. It has an important religious as well as archeological value; in one of those occasions (19 Gospel of Luke: 1-4) "He entered Jericho and was passing through. And behold, there was a man named Zacchaeus. He was a chief tax collector and was rich. And he was seeking to see who Jesus was, but on account of the crowd he could not, because he was small in stature. So he ran on ahead and climbed up into a sycamore tree to see him, for he was about to pass that way." (Luke 19:1-4 ESV) (Jericho, 2011).

Deir Quruntol (Mount of Temptation and its Monastery)

Byzantine-Christian Jericho was situated in and around the modern town. Several churches and monasteries have been discovered here, the most important of which is the Monastery of Temptation "Deir Quruntol". The mountain of temptation "Jabal Quruntol" rises about 350m above west of Jericho overlooking the Jordan Valley. Here, it is claimed that Jesus spent 40 days and nights fasting and meditating during the temptation of Satan. The thirty to forty caves on the eastern slopes of the mountain were inhabited by monks and hermits since the early days of Christianity (Jericho Municipality, 2011b).

Photo 3: Jabal Qruntol (Monastery of Temptation)



Deir Quruntol was established by Archimandrite Aframeos in 1892. The place dates back to the time of Christ, and has been renewed several times. The first to consider of maintaining its sanctity was Queen Helena; as she set up an old construction in 325 AD (Jericho Municipality, 2011b). It is worth mentioning that according to the Palestinian division of the village borders, Deir Quruntol (Quruntol Monastery) is located within Ad Duyuk al Foqa village boundaries. However, it has been historically over time associated with Jericho city, thus, the monastery was added to the religious and archeological sites of Jericho city; given city's historical and archeological importance.

Population

According to the Palestinian Central Bureau of Statistics (PCBS), the total population of Jericho in 2007 was 17,515; of whom 8,731 were male and 8,784, female. There were additionally registered to be 3,510 households living in 4,549 housing units.

Age Groups and Gender

The General Census of Population and Housing carried out by PCBS in 2007 showed the distribution of age groups in Jericho was as follows: 37% were less than 15 years, 55.5% between 15 - 64 years, whilst 3.2% fell in the 65 years and older category. Data additionally showed that the sex ratio of males to females in the city was 99.4:100, meaning that males and females constituted 49.8% and 50.2% of the population, respectively.

Families

Jericho residents are composed of several families, mainly: Al Barahma, Al Jalayta, Al 'Awajnah, As Saradih, Al Ghroof and Ar Romah families (Jericho Municipal Council, 2011).

Education

According to the results of the PCBS Population, Housing and Establishment Census-2007, the illiteracy rate among Jericho population was approximately 4.8%, of whom 72.2% were females. Of the literate population, 13% could only read and write, with no formal education, 25.5% had elementary education, 29.1% had preparatory education, 14.9% had secondary education, and 12.3% completed higher education. Table 1, shows the educational level in the city, by sex, and educational attainment (2007).

Table 1: Jericho population (10 years and above) by sex and educational attainment, 2007

Sex	Illite- rate	Can read & write	Elem- entary	Prepa- ratory	Second- ary	Associate Diploma	Bach- elor	Higher Diploma	Master	PhD	Un- known	Total
M	164	799	1,631	1,874	893	232	401	12	49	14	32	6,101
F	426	796	1,502	1,701	935	324	441	5	27	2	21	6,180
T	590	1,595	3,133	3,575	1,828	556	842	17	76	16	53	12,281

Source: PCBS, 2009. Population, Housing and Establishment Census-2007, Final Results

With regards to the basic and secondary education institutions and schools in Jericho in the academic year 2010/2011, there are 8 public and 5 private schools in the city run by the Palestinian Ministry of Education and Higher Education (Directorate of Education in Jericho, 2011) (See table 2).

In the city there are 5,242 students, 288 teachers, and 170 classes (Directorate of Education in Jericho, 2011), and it should be noted here that the average number of students per teacher in the school is nearly 18, whilst the average number of students per class is approximately 31 (Directorate of Education in Jericho, 2011).

Table 2: The Schools in Jericho by name, stage, sex, and supervising authority

School Name	Supervising Authority	Sex
Jericho Girls High School	Government	Females
Jericho Girls Elementary School	Government	Females
Hisham ben Abd al Malik High School	Government	Males
Al Buhturi Boys High School	Government	Males
Al Buhturi Boys Elementary School	Government	Mixed
Fatima az Zahra' Girls Elementary School	Government	Females
Zahrat al Mada'in Elementary School	Government	Males
Abu Bakr as Siddiq School	Government	Males
Terre Sancta Elementary School	Private	Mixed
Fransiscan Sisters School	Private	Mixed
Jericho Women Society School	Private	Mixed
Al Furqan Islamic School	Private	Mixed
Sira School for Special Education	Private	Mixed

Source: Directorate of Education in Jericho, 2011

Moreover, there are 8 local kindergartens run by private and other civil Christian bodies, with the total number of children between these, reaching (in 2011), 664. Table 3 shows these kindergartens according to their names and supervising authority.

Table 3: The Kindergartens in Jericho by name and supervising authority

Kindergarten Name	No. of Children	Supervising Authority
Sisters of Franciscan Kindergarten	140	Civil Christian
Al Amal Kindergarten	60	Private
Al Bara'em Kindergarten	41	Private
Al 'Eiman Islamic Kindergarten	50	Private
Al Jeel al Jadid Kindergarten	105	Private
Al Furqan Kindergarten	184	Private
Terra Sancta Kindergarten	58	Civil Christian
Al 'Esra' Charitable Society Kindergarten	26	Private

Source: Directorate of Education in Jericho, 2011

Nevertheless, the educational sector in Jericho suffers some obstacles; mainly the lack of adequately trained teachers (Jericho Municipal Council, 2011).

Health Status

There are a number of health centers available in Jericho City; a governmental hospital, 8 health centers, 18 general physician clinics, 19 specialized physician clinics, 2 radiology centers, 10 medical laboratories, one governmental motherhood and childhood center, 2 physiotherapy centers and 9 pharmacies, in addition to 5 ambulances owned by the Palestinian Red Crescent Society (Jericho Municipal Council, 2011) (See table 4).

Table 4 : The health facilities in Jericho City by number and supervising authority

Health Centers		No. of Centers According to Supervisory Body				
		Governmental	Private	UNRWA	NGO	Charitable Society
1	Physician Clinic	5	8	3	0	2
2	Specialized Doctor Clinic	8	5	3	0	3
3	Health Center	1	3	2	0	2
4	Hospital	1	0	0	0	0
5	Radiology Center	1	1	0	0	0
6	Medical Laboratory	2	5	1	0	2
7	Motherhood & Childhood Center	1	0	0	0	0
8	Physiotherapy Center	1	0	0	0	1
9	Other	0	0	0	0	0
10	Pharmacies	2	7	0	0	0

Source: Jericho Municipal Council, 2011

However, the health sector in the city suffers numerous obstacles and problems, including (Jericho Municipal Council, 2011):

1. The lack of required medical specialties.
2. The lack of modern diagnostic equipments in the health centers.

Economic Activities

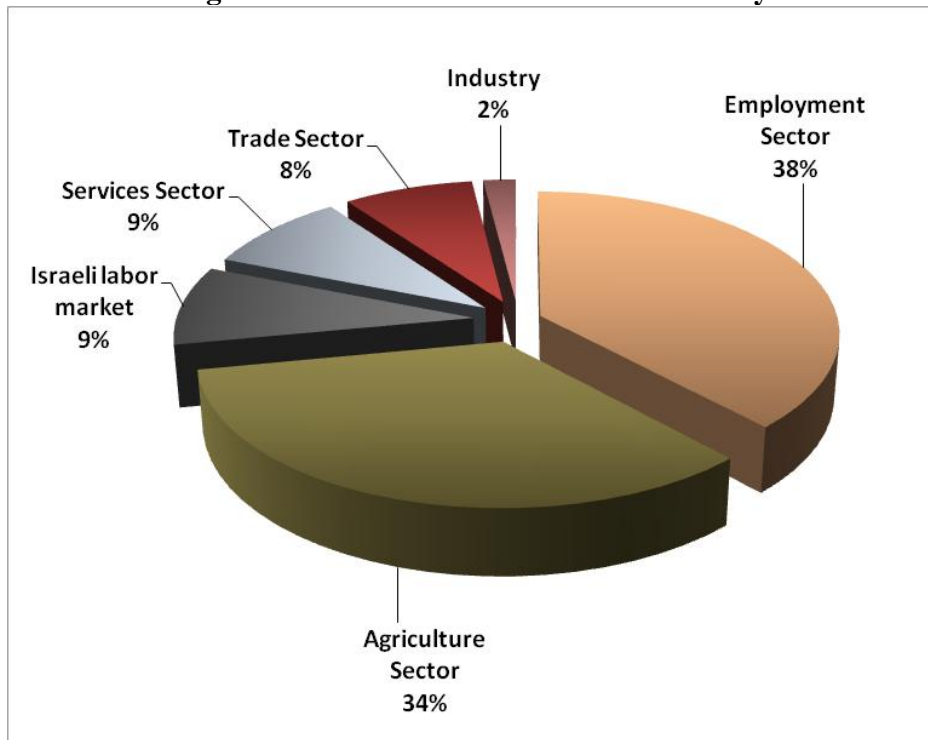
The economy in Jericho is dependent on several economic sectors, mainly: the employees sector, which absorbs approximately 38% of the city's workforce (Jericho Municipal Council, 2011) (See Figure1).

The results of a field survey conducted by ARIJ in 2011 in order to achieve the current study for the distribution of labor by economic activity in Jericho are as follows (Jericho Municipal Council, 2011):

- Government or Private Employees Sector (38%)
- Agriculture Sector (34%)
- Israeli labor market (9%)
- Services Sector (9%)

- Trade Sector (8%)
- Industry (2%)

Figure 1: Economic activities in Jericho City



Source: Jericho Municipal Council, 2011

In term of commercial, economic and industrial productions in Jericho City, there are a few, mainly: the Iron and Steel Factory and Gosheh Meat Factory. In addition, there are 85 grocery stores in the city, 5 bakeries, 6 butcheries, 20 fruits and vegetables stores, 52 professional workshops (carpentries, blacksmiths,.. etc.), 130 different services stores, 4 stores for agricultural tools, 3 agricultural nurseries and 18 places for tourism and picnics (Jericho Municipal Council, 2011).

However, the unemployment rate in 2011 reached around 8%, with it being discovered that the social groups most affected in the city as a result of the Israeli restrictions and procedures, were as follows (Jericho Municipal Council, 2011):

1. Workers in the agricultural sector.
2. Workers in the trade sector.
3. Workers in the industrial sector.
4. Former workers in Israel.
5. Workers in the services sector.
6. Workers in the employees sector.

Labor Force

According to the PCBS Population, Housing and Establishment Census-2007, 38.6% of Jericho labor force were economically active, of whom 91.5% were employed, 60.4% were not economically active; of whom 49.7% were students and 37.3% were housekeepers (See table 5).

Table 5: Jericho population (10 years and above) by sex and employment status

SEX	Economically Active				Not Economically Active						Un-known	Total
	Employed	Currently Unemployed	Unemployed (Never worked)	Total	Students	House-keeping	Unable to work	Not working & Not looking for work	Other	Total		
M	3,436	192	99	3,727	1,793	13	313	104	92	2,315	59	6,101
F	905	57	57	1,019	1,899	2,753	381	35	40	5,108	53	6,180
T	4,341	249	156	4,746	3,692	2,766	694	139	132	7,423	112	12,281

Source: PCBS, March 2009. Population, Housing and Establishment Census-2007, Final Results

Agricultural Sector

Jericho lies on a total area of around 58,701 dunums, of which 31,483 dunums are considered 'arable' land, and 4,195 are registered as 'residential' (See table 6 and map 3).

Table 6: Land use and land cover in Jericho City in 2010 (area in dunum)

Total Area	Built-up Area	Agricultural area [31,483 dunums]				Inland water	Forests	Open Space	Area of Industrial, Commercial & Transport Unit	Area of Settlements & Military Bases
		Permanent Crops	Green-houses	Range-lands	Arable lands					
58,701	4,195	6,577	580	4,926	19,400	69	0	22,130	741	83

Source: ARIJ – GIS unit, 2011

Agricultural production in Jericho depends mostly on springs and artesian wells. The city residents cultivate citrus fruits and bananas using these methods (Jericho & Al Aghwar Directorate of Agriculture – Jericho, 2011) (See table 7).

Table 7: Total area of cultivated lands in Jericho City (dunum)

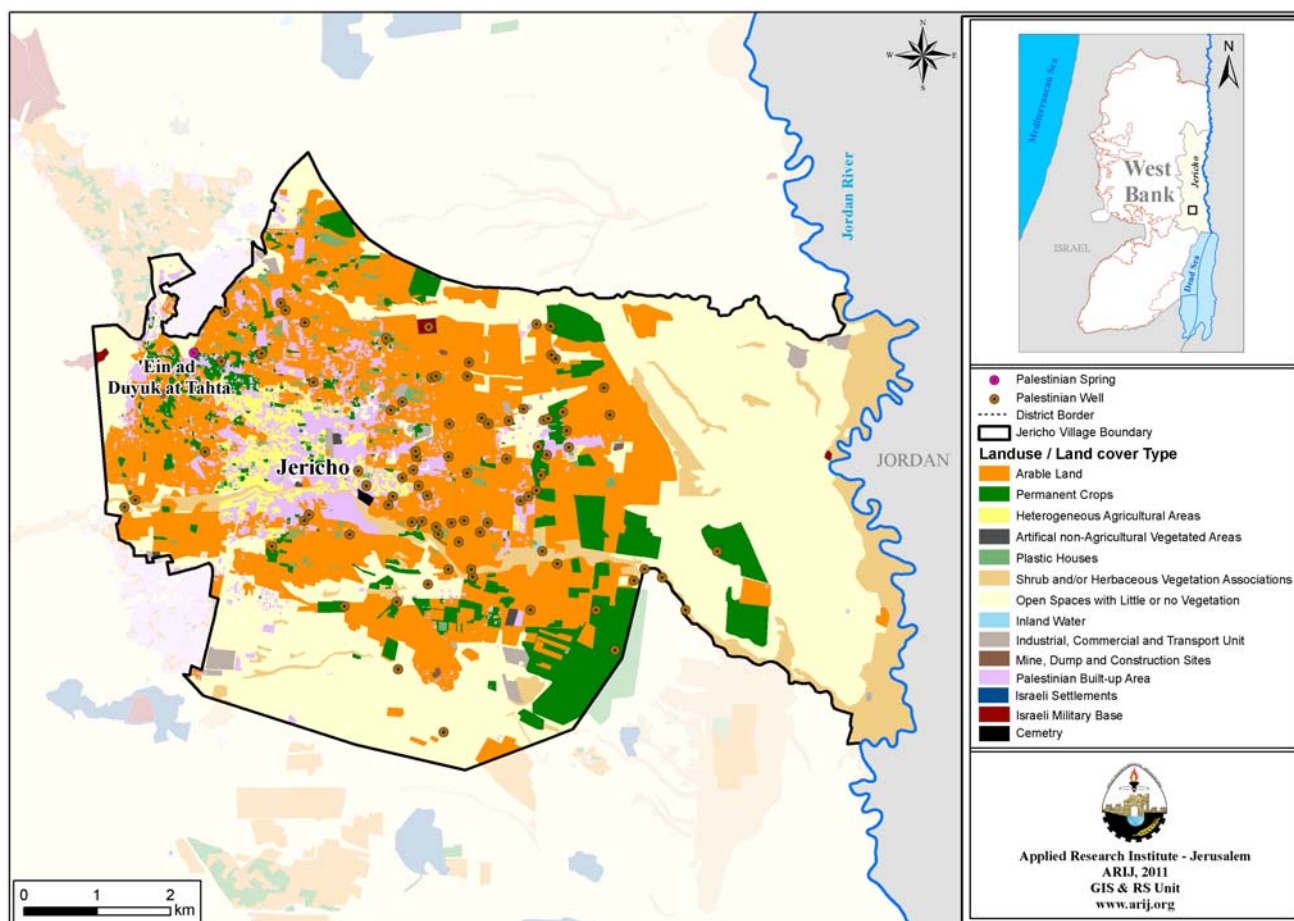
Vegetables	Citrus	Grapes	Palm		Banana	Total area
			area	No. of trees		
6,748	373	4	2,863	22,886	63	10,051

Source: Jericho & Al Aghwar Directorate of Agriculture – Jericho, 2011

The difference in the two sets of results of agricultural areas, obtained from the Ministry of Agriculture and by ARIJ's GIS Unit, is explained by the fact that the Ministry of Agriculture, who in combination with the Palestinian Central Bureau of Statistics (2011) conducted a survey considering a definition of agricultural areas based on the size of ownership. Thus, the areas included in the survey were those of

actual holdings of agricultural areas instead of seasonal ones. The survey did not consider fragmented and small seasonal cultivated areas in residential and agricultural areas which contains some springs. ARIJ’s survey however indicated the existence of a high proportion of small and fragmented holdings (home gardens) throughout the occupied Palestinian territories. This illustrates the bigger area of agricultural holdings calculated by ARIJ.

Map 3: Land use/land cover in Jericho City



Source: ARIJ - GIS Unit, 2011.

The field survey of ARIJ shows that only 74% of the residents in Jericho rear and keep domestic animals such as cows, sheep and bees (See Table 8).

Table 8: Livestock in Jericho City

Cows*	Sheep	Camels	Poultry	Bee Hives
479	9,156	78	15,000	1,185

* Including cows, bull calves, heifer calves and bulls

Source: Jericho & Al Aghwar Directorate of Agriculture – Jericho, 2011

There are also around 12 kilometers of agricultural roads in the city, divided as follows (Jericho Municipal Council, 2011) (See table 9).

Table 9: Agricultural roads in Jericho City and their lengths

Suitability of Agricultural Roads	Length (km)
For vehicles	4
For tractors and agricultural machinery only	8
For animals only	-
Unsuitable	-

Source: Jericho Municipal Council, 2011

However, the agricultural sector in the city suffers some problems and obstacles, mainly (Jericho Municipal Council, 2011):

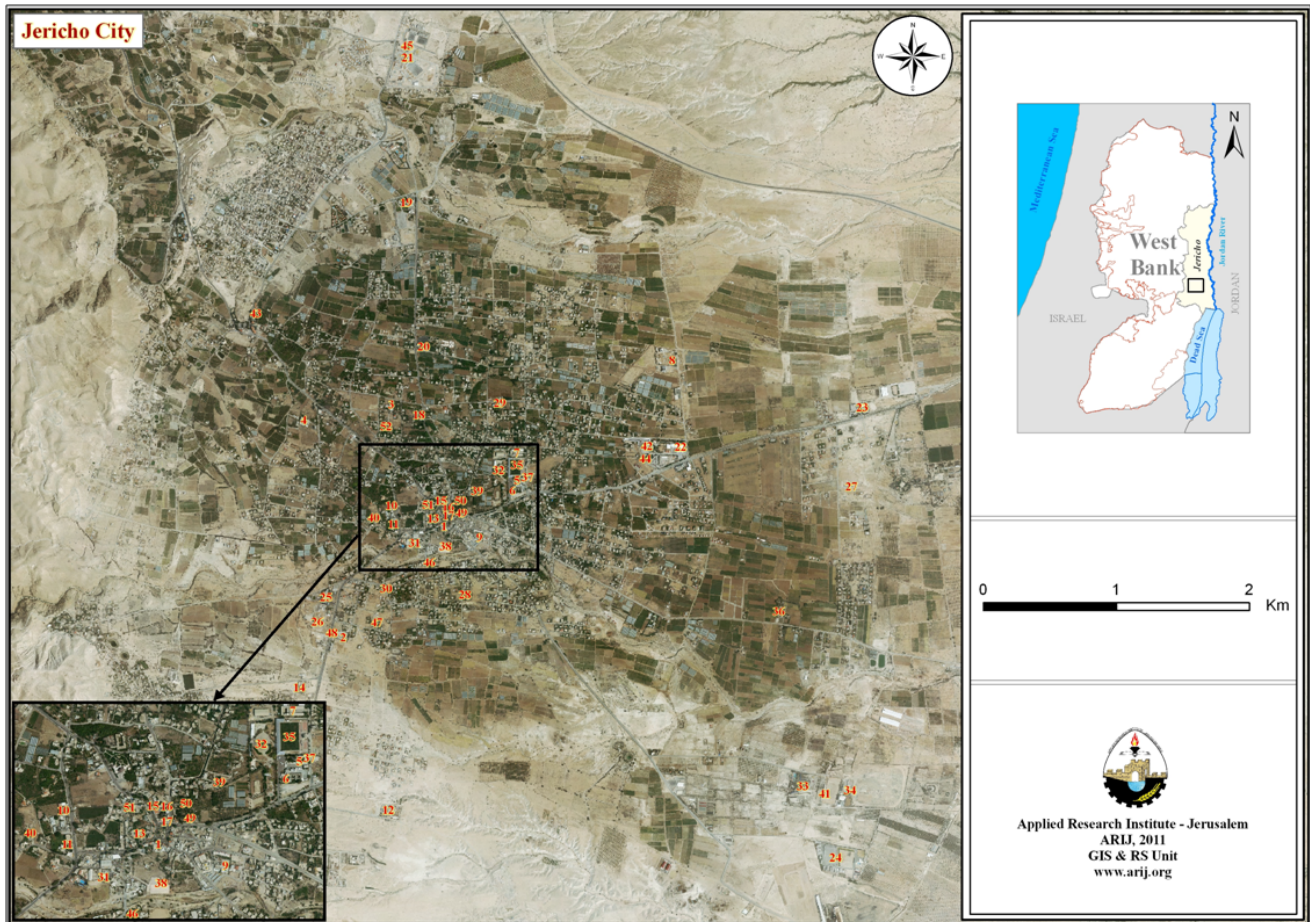
1. The lack of water sources.
2. The lack of capital for agricultural ventures.
3. The lack of workers in the field.

Institutions and Services

Jericho City has a few governmental institutions, including: an office for the Ministry of Agriculture, a police station, a national security center, a post office, an office for the Ministry of Action, an office for the Ministry of Social Affairs, a Chamber of Commerce, a fire station and an office for the Ministry of Interior, in addition to a number of local institutions and associations that provide services to various segments of society such as: children, youth, and women (map 4). The services are in the areas of culture, sports and others, including (Jericho Municipal Council, 2011):

- The Islamic Orphan Care Society.
- Al 'Eslah (Reformation) Charitable Society
- The Constructional Project Society.
- Hilal Ariha Sports Club
- Jericho Youth Sports Club.
- Baladna Sports Club
- Jericho Women Cooperative Society
- YWCA.
- YMCA.
- Al Berr be 'Abna' ash Shuhada' (Welfare to the Martyrs' Children) Society.
- Agricultural Relief.
- The Farmers Union Society.
- The Peasants Union Society.

Map 4: Private and public institutions and organizations in Jericho City



No.	Locations	No.	Locations	No.	Locations
1	Jericho Municipality	19	Security Sciences Faculty	37	The Municipal Theatre
2	Hisham Katf al Wad Elementary School	20	Jericho Governorate Headquarters	38	Jericho Youth Club
3	Hisham Old Elementary School	21	Police Academy	39	Jericho Hilal Club
4	Directorate of Education/ Fatima az Zahra' Elementary School	22	Bridge Terminal	40	Baladna Club
5	Al Buhturi Girls Elementary School	23	Border Police	41	Tourism Activating Body
6	Buhturi ad Dunya Girls Elementary School	24	Presidential Security Center	42	Jericho Directorate of Traffic
7	Jericho Girls High School	25	The Public Prosecution & Magistrate's Court	43	Jericho Cable Cars (Telepherique)
8	Ali ben Abi Talib Boys Elementary School	26	Reforming Prison (The Governorate)	44	Civil Defense
9	Jericho Women Society Co-educated Elementary School	27	Physiotherapy Center	45	The National Security Battalion
10	Franciscan Co-educated Elementary School	28	Al Bara'em Kindergarten	46	Services Negotiation
11	Terra Sancta Co-educated Elementary School	29	Al Furqan Kindergarten	47	Department of Public Works
12	Jericho New Hospital	30	Al Walajah Kindergarten	48	Bakr al Sidik Joint School
13	Jericho Health Center	31	Al 'Esra' Kindergarten	49	Post Office
14	The Red Crescent Hospital	32	Spanish Gardens	50	Department of Agricultural
15	Al 'Eslah Clinic	33	Papaya Park	51	Red Cross
16	Ash Shawwa Clinic	34	Palestinian Equestrian Club (Horse Riding Club)	52	Meteorological Service
17	Police Station	35	Jericho International Stadium		
18	Traffic Police	36	Al Bayyarah Park (Public Garden)		

Source: ARIJ – GIS Unit, 2011.

Infrastructure and Natural Resources

Electricity and Telecommunication Services

Jericho has been connected to a public electricity network since 1964, served by Jerusalem Electricity Company; this having since then, been the main source of electricity in the city. It is noted that approximately 99% of the housing units in the city are connected to this network (Jericho Municipal Council, 2011).

Furthermore, Jericho is connected to a telecommunication network and approximately 72% of the housing units within the city's boundaries are connected to phone lines (Jericho Municipal Council, 2011).

Transportation Services

There are 150 public taxis in addition to 4 public buses considered to be the main means of transportation in Jericho City (Jericho Municipal Council, 2011). As for the road network in the city; there are a total of 44.4km of designated 'main' roads (ARIJ-GIS Unit, 2011) and 215km of 'secondary' roads (See Table 10) (Jericho Municipal Council, 2011).

Table 10: Roads in Jericho City

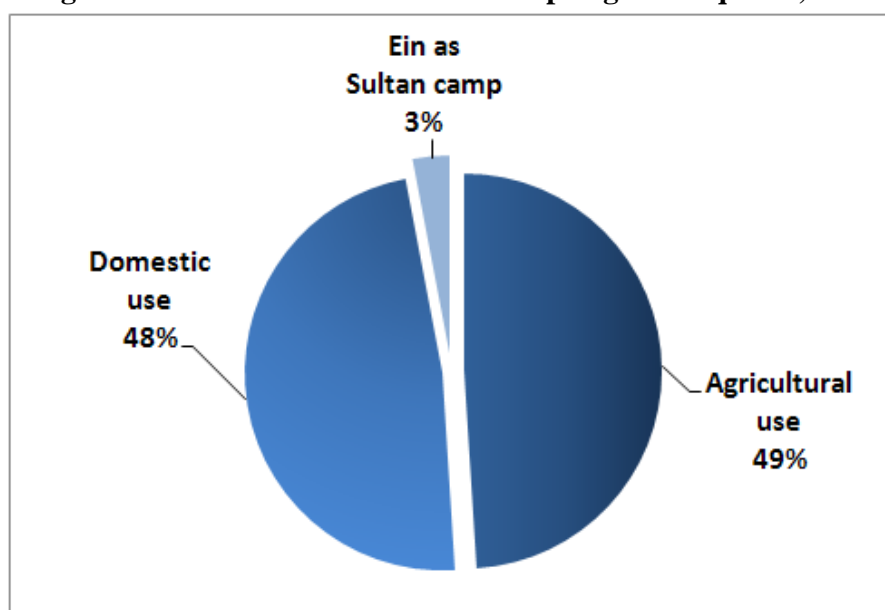
Status of Internal Roads	Road Length (km)	
	Main	Sub
Paved & in good condition	44.4	200
Paved but in poor condition	-	10
Unpaved	-	5

Source: Jericho Municipal Council, 2011

Water Resources

Jericho is currently being provided with water by 'Ein as Sultan water spring; Jericho Municipality provides the residents with the spring's water through the public water network established in 1955 (Jericho Municipal Council, 2011).

The average rate of water discharged from 'Ein as Sultan spring is approximately 650 cubic meters/ hour; the spring water is being distributed in specific quantities among the public water network, the agricultural channels and 'Ein as Sultan camp water network (Fig. 2). In 2009, the public water network was supplied with 310.7 cubic meters/ hour of the spring's water, which is equivalent to 48% of the spring's rate of discharge. Table 11 shows the amount of water consumed through the network according to type of use; the percentage of water loss through the network reaches about 23.7% (Palestinian Hydrology Group, 2011).

Figure 2: Allocation of 'Ein as Sultan spring water quotas, 2009

Source: Palestinian Hydrology Group, 2011

Table 11: Amount of water consumed by the public network

Type of Use	Amount Consumed (m ³ / h)	Quota (%)
Domestic	163.8	69.1
General	40.3	17
Agricultural	15.2	6.4
Commercial	12.6	5.3
Aqbat Jaber Camp	5.3	2.2
Total	237.2	100

Source: Palestinian Hydrology Group, 2011

The above table shows that the amount of water consumed in Jericho city in 2009 was approximately 2,031,363 cubic meters/ year; equivalent to 169,280 cubic meters/ month. Thus, the rate of water consumption per capita in Jericho was estimated at 225 liters per day. Moreover, the price of water in Jericho is the least among the Palestinian territories, as the cost of pumping the water available from 'Ein as Sultan spring is low; each cubic meter of water costs only 1.4 NIS (Jericho Municipal Council, 2011).

However, the amount of water used in agriculture, which was estimated (in 2009) at 229,680 cubic meters/ month, reaches farmers through agricultural channels at specific time periods. Moreover, a farmer can irrigate his land directly with the amount of water he received through channels, or he can keep it all or part of it in the ponds. The irrigation network consists of five channels (a, b, c, d, c d); each of which receives a certain amount of water. In addition, located in Jericho city are 99 private artesian wells used for agricultural purposes (ARIJ, 2010).

Furthermore, there are 4 public harvesting reservoirs in the city; the combined capacity of which reached 4,500 cubic meters (Jericho Municipal Council, 2011)

However, in addition to being an important historical and religious site as well as the main source of drinking and irrigation in the city; 'Ein as Sultan spring is publically owned of all residents of Jericho city and is not limited to certain people; all of which distinguishes it from any other private agricultural wells (Photo 4).

Photo 4: 'Ein as Sultan Spring



According to what is inherited; 'Ein as Sultan spring water is divided into two categories: The Bustani (Garden) and Felha (Agricultural) waters. The Bustani water is thought of as water for gardens and domestic use. It comprises one third of the spring's water with 15 dunums; with time share identical with real time, i.e. 1 hour for 1 hour. The felha water is inherited and can be sold but not attached to land. However, the Bustani water is linked to the land. Here the water time-share is sold or rented with the land. The Felha water comprises 2 thirds of the springs water. One hour of the Felha water comprises only 23 minutes of real time and can be sold or rented (Barghouthi, 2008).

Sanitation

Jericho lacks a public sewerage network with most of the city residents using cesspits as their main means of waste -water disposal (Jericho Municipal Council, 2011).

Based on the estimated daily per capita water consumption, the estimated amount of wastewater generated per day, is approximately 3,341 cubic meters, equating to 1.2 million cubic meters annually. At the individual level, it is estimated that the per capita wastewater generation is 191 liters per day. The wastewater collected by cesspits, is discharged by wastewater tankers directly to open areas or nearby valleys without any regard for the environment. Here it should be noted that there is no wastewater treatment either at the source or at the disposal sites and this poses a serious threat to both environment and public health (ARIJ-WERU, 2012).

Solid Waste Management

The Joint Services Council for Development and Planning for the Management of Solid Waste in Jericho & Al Aghwar is considered the official body responsible for managing solid waste, i.e. solid waste collection and disposal, generated from the citizens and establishments in the city, which is currently represented by solid waste collection and disposal. Whereas, the process of manual combining and sweeping of garbage from streets and public places is under the responsibility of Jericho Municipal Council; there is a section in the municipality for waste collection with 42 employees working in it. However, due to the fact that the process of solid waste management is costly, a monthly fee (approx. 10-20 NIS/month) has been charged on the population serviced by domestic solid waste collection and transportation services (Jericho Municipal Council, 2011).

Most of the population in Jericho benefit from the solid waste services, whereby waste is collected from households, institutions, shops, and public squares in plastic bags and then transferred to 313 containers², spread throughout the locality. The Council collects the solid waste from the containers once a day and transports it through a waste vehicle owned by the Joint Council to Jericho dumping site, located 5km in distance from the city center. The common method for solid waste treatment in this dumping site is through the burial of waste. The cost of discharging the solid waste in the dumping site is 20 NIS per ton (Jericho Municipal Council, 2011). It should be further commented upon that medical solid waste and hazardous wastes *are* being separated at the landfill; there being a specific area for each type of waste to be collected at³ (The Joint Services Council, 2012).

It should be noted here that Jericho sanitary landfill was established in 2007 with funding from the Japanese International Cooperation Agency (JICA). The landfill serves approximately 72.2% of Jericho and Al Aghwar Governorate area (PNA, 2010), as it covers Jericho city, An Nuwei'ma and 'Ein ad Duyuk al Foqa town, in addition to Aqbat Jaber and 'Ein as Sultan camps (The Joint Services Council, 2012).

² With capacities ranging between 1.1, 4, 8 and 10m³

³ For example, there are separate areas for slaughterhouse and medical wastes.

Through designing the landfill, the standards of Japan (Fukouka Theory); Semi aerobic system, were taken into consideration, as the landfill was lined by two layers of soil and a layer of high density plastic (HDPE) in order to prevent leakage of leachate into groundwater, in addition to the extension of a network of pipes to collect the leachate and discharge it into a pool made specially for the collection of leachate. Furthermore, pipes were installed to collect gas and release it into the air in order to get rid of it (The Joint Services Council, 2012). Table 12 shows some information about Jericho's use of sanitary landfill; its capacity, geographical scope and the number of served population. As shown in the table below, the work in the landfill was to be finished in 2011, thus, the Council is currently preparing a plan to expand the area of the landfill for 20 extra dunums.

Table 12: Information on Jericho sanitary landfill for solid waste

Area served by the landfill	Served population	Daily amount of waste (ton/day)	Capacity (m ³)	Landfill area (dunum)	Total area (dunum)	Life-time	Time of completion
Jericho city, Ad Duyuk & An Nuwei'ma town, and Aqbat Jaber & 'Ein as Sultan Camps (72.2% of Jericho & Al Aghwar Governorate)	32,368	33 - 35	53,000	10.3	26.5	4 years	2011

Source: The Joint Services Council for Development & Planning for the Management of Solid Waste in Jericho & Al Aghwar, 2012

Jericho city is characterized by the active internal tourism movement that takes place each year between mid November until the end of April of the following year, in addition to being the only crossing for the West Bank; which increases the production of waste. The estimated amount of solid waste produced per day from Jericho residents is nearly 30 tons, or 10,950 tons per year (The Joint Services Council, 2012).

Environmental Conditions

Like other villages and camps in the governorate, Jericho experiences several environmental problems which must be addressed and solved, which can be identified as follows:

Water Crisis

- The depletion and pollution of water sources by the Israeli occupation forces, which is represented by the following:
 1. The Israeli Occupation's full control over the Jordan River water: the occupation forces have prevented farmers from using major water sources close to the Jordan River. According to the Johnson plan of 1955, the Palestinians were robbed their right to legitimate and historic use of the Jordan River's waters, which amount to 250 million cubic meters annually. Moreover, transforming the Jordan River's water through the Israeli national carrier and through other Israeli projects had reduced the annual amount of water flowing through the river; from 1,320 million cubic meters in the fifties of the last century to less than 50 million cubic meters at present time (ARIJ, 2011). Due to Israeli policies and violations, not only did

the Jordan River suffer from deterioration in the amount of water flowing, but the quality of water flowing in the river had also suffered a significant deterioration, as it became of high salinity and a bad quality, all as a result of wastewater flowing from Israeli towns and villages and fish farming pools in Israel into the river (ARIJ, 2011).

2. Groundwater sources have been depleted through 'Mekorot' Israeli owned wells, which have been given a monopoly on the excavation, restoration, distribution and selling of water, whilst Palestinians have been forbidden from constructing new wells and/or restoring existing ones. 'Mekorot' Company, through the wells it owns, extracts large quantities of ground water, whereby it pumps the bulk of this water for the benefit of the illegal Israeli settlements, as settlers, mainly those in the Jordan Valley area, use huge quantities of water (ARIJ, 2011).
3. The discrepancies in access of water to all regions due to the increased consumption of water in the summer for non-domestic purposes; leading to low water pressure in the network (Jericho Municipal Council, 2011).

Wastewater Management

- The absence of a public sewage network means most city residents use cesspits for the disposal of wastewater (Jericho Municipal Council, 2011), and/or discharge wastewater in the streets, especially in winter, as citizens cannot afford the high cost of sewage tankers at this time. All of these actions cause environmental damages, health problems, and the spread of epidemics and diseases in the city. The use of cesspits pollutes the groundwater and water collected in domestic cisterns (rainwater harvesting cisterns) as the wastewater mixes with water and contaminates it, thus making it inappropriate for human consumption. This is due to the fact that most cesspits are built without lining, which allows wastewater to enter into the ground and avoids, on a sporadic basis, the need to use sewage tankers (ARIJ-WERU, 2012).
- The untreated wastewater collected from cesspits by sewage tankers is disposed of in open areas without taking into account the damage it causes to the environment as well as residents' health (ARIJ-WERU, 2012).

Impact of the Israeli Occupation

According to the Oslo II Interim Agreement signed in 28th September 1995 between the Palestinian Liberation Organization (PLO) and Israel, Jericho City was divided into areas "A" and "C". Approximately 32,183 dunums (55% of the total area) were assigned as area A, where the Palestinian National Authority (PNA) has a complete control over administrative and security matters. Most of the city's population resides in area "A" which constitutes a small proportion of the total area of the city. Area C constitute 26,518 dunums (45% of the total area), where Israel retains full control over security and administration related to the territory. In area "C" Palestinian building and land management is prohibited unless through a consent or authorization by the Israeli Civil Administration. Most of the lands lying within the area "C" are agricultural areas and open spaces (table 13).

Table 13: The Geopolitical Divisions of Jericho City according to the Oslo II Interim Agreement in 1995

Area	Area in dunums	Percent of total town area
Area A	32,183	55
Area B	0	0
Area C	26,518	45
Nature Reserve	0	0
Total	58,701	100

Source: Source: ARIJ-GIS Unit, 2011

Jericho and Israeli Occupation Practices

Many dunums have been lost in Jericho to Israeli confiscations to construct the Israeli bypass road no. 90, connecting Israeli settlements lying to the north of the city with those in al Aghwar and Israeli military bases surrounding the city. It is worth mentioning that the real threat of bypass roads lies in the buffer zone formed by the Israeli Occupation forces (IOF) along these roads, extending to approximately 75 m on the sides of the road (ARIJ-Urbanization & Monitoring Unit, 2011).

During years of occupation, Israel has also confiscated approximately 83 dunums in Jericho City to construct an Israeli military base in order to protect the surrounding Israeli settlements to the north of the city (ARIJ-Urbanization & Monitoring Unit, 2011).

Israeli Occupation Practices in Jericho City

On 29th March 2011, the Israeli sub-committee of planning and inspections affiliated to the Israeli Civil Administration presented notes to four Bedouin families from Arab al Ka'abnah, in the west of the city. The notes were stop-work orders to halt constructions in the area, on the pretext of building in Area C with no permit. The Israeli Civil Administration set a time limit of 3 days for the Palestinians to evacuate and dismantle their residential barracks; otherwise they will be displaced forcefully. It should be noted that the community of Arab al Ka'abnah in Al Mu'arrajat area provides an evidence of the Israeli plans to uproot the Palestinian existence from Al Aghwar. The threatened properties are owned by Oudeh Mousa Abed Ka'abnah, Marian Mohammad Rabi' Ka'abnah, Ahmed Mousa Rabi' Ka'abnah, and Mohammad Musa Rabi' Ka'abnah. The properties include 3 barracks for sheep and two houses made of tin.

Also on 21st of November 2011, Israeli bulldozers with the IOF and some officers from the Israeli Civil Administration raided the lands of the farmer Hassan Abdullah Erikat, to northeast of Jericho city, and they bulldozed around 18 dunums of corn producing cultivated lands, in addition to destroying the irrigation network which waters more than 120 dunums of the farmers lands. Before starting the bulldozing process, the IOF announced the area to be a "closed military area" and carried out the process which lasted for 3 hours. It is noted that none of the Palestinian decision-makers were allowed to access the area. With the completion of the process, an officer of the Israeli Civil Administration informed Erikat that piece of land was considered an Israeli government property and had to be evacuated. It is

worth mentioning that the bulldozing process of the agricultural lands and demolishing of agricultural facilities in the targeted area took place prior to harvesting season that was decided to be 10 days later of the land violation day (ARIJ-Urbanization & Monitoring Unit, 2011).

Development Plans and Projects

Implemented Projects

Jericho Municipal Council has implemented several development projects in Jericho, during the past five years (See Table 14).

Table 14: Implemented Development Plans and Projects in Jericho During the Last Five Years

Name of the Project	Type	Year	Donor
Extending Al Qadisiya St. water line	Infrastructure	2005	World Bank
Finishing the basement floor in the new library building	Services Buildings	2005	World Bank
Paving internal roads	Infrastructure	2005	USAID
Establishing the southern part of Fatima az Zahra' school	Services Buildings	2005	USAID
Restoring the northern part of Fatima az Zahra' school	Services Buildings	2005	USAID
Construction a 500m ³ capacity reservoir in the southern area	Water	2005	Pisa Municipality
Paving internal roads	Infrastructure	2005	USAID
Rehabilitating the Training Centre for Local Authorities within JICA programs	Services Buildings	2006	Japanese Government
Installing sun-protecting umbrellas and drinking water taps	Public Services	2006	UAE Red Crescent
Establishing Al Hisba new building	Services Buildings	2006	USAID
Establishing Al Hisba new building	Services Buildings	2006	Jericho Municipality
Rehabilitating the external works of Al Hisba new building	Public Services	2006	Government of Canada
Paving and rehabilitating roads	Infrastructure	2006	BADEA
Constructing 8 classrooms in Hisham ben Abd al Malik school	Services Buildings	2006	USAID
Rehabilitating the city center roundabout	Public Services	2006	UNDP
Paving roads/ the Suburbs	Infrastructure	2007	PECDAR
Rainwater drainage project	Water	2007	USAID
Expanding the drinking water network	Infrastructure	2007	USAID
Paving internal roads	Infrastructure	2008	USAID
Establishing the cafeteria in the Spanish Garden	Services Buildings	2008	Jericho Municipality

Constructing a reservoir (1000 cubic meters)	Water	2008	USAID
Paving Hisham Palace Street	Infrastructure	2008	USAID
Constructing Ad Duyuk at Tahta bridge	Infrastructure	2008	Islamic Development Bank
Paving Al Qadisiya St. (first phase)	Infrastructure	2008	French Government
Paving Al Qadisiya St. (second phase) and purchasing machinery	Infrastructure	2008	French Government
Constructing Al Hisba cafeteria	Services Buildings	2008	Jericho Municipality
Installing an umbrella in Al Hisba area	Services Buildings	2008	USAID
Doing filtering works in the Spanish Garden	Services Buildings	2008	MED COOPERATION
Paving Mahmoud Darwish street (third phase)	Infrastructure	2009-2010	Japanese Government
Paving internal roads in Al Hisba area	Infrastructure	2009	Jericho Municipality
Rehabilitating 'Ein as Sultan Spring garden	Services Buildings	2009-2010	UNDP & Alessandria
Maintaining the schools' electricity	Services Buildings	2009	Jericho Municipality
Internal roads project	Infrastructure	2009-2010	Japanese Government
Jericho Stadium project	Public Services	2009-2010	Ministry of Finance
Rehabilitating the roundabout	Public Services	2010-2011	USAID/ CEP
Establishing the physical therapy center	Services Buildings	2011	Italian Cooperation
Constructing Jericho Municipality headquarters	Services Buildings	2011	CHF/ USAID/ Jericho Municipality
Internal roads	Infrastructure	2011	European Union

Source: Jericho Municipal Council, 2011

Proposed Projects

Jericho Municipal Council, in cooperation with the civil society organizations in the city and the city residents, looks forward to the implementation of several projects in the coming years. The project ideas were developed during the PRA workshop that was conducted by ARIJ staff in the city. The projects are as follows, in order of priority, from the perspectives' of the participants in the workshop:

1. Providing needed funds to complete the sewage network project.
2. Solving the problem of the current landfill system.
3. Raising the efficiency of waste collection system in the city.
4. Eliminating the use of methyl bromide used in sterilizing the soil.
5. Limiting the use of decomposed plastic in agriculture.
6. Preserving vital legacies and determining protection zones in the governorate.
7. Fighting salinity and drought in the city.
8. Studying the mechanism of rainwater harvesting and its utilization in the city.
9. Considering the environmental aspects within the programs of tourism and industrial development.

Locality Development Priorities and Needs

Jericho suffers from a significant shortage of infrastructure and services. Table 15 shows the development priorities and needs in the city, according to the Municipal Council's feedback.

Table 15: Development priorities and needs in Jericho City

No.	Sector	Strongly Needed	Needed	Not a Priority	Notes
Infrastructural Needs					
1	Opening and Pavement of Roads			*	
2	Rehabilitation of Old Water Networks			*	
3	Extending the Water Network to Cover New Built up Areas	*			12km
4	Construction of New Water Networks			*	
5	Rehabilitation/ Construction of New Wells or Springs			*	
6	Construction of Water Reservoirs	*			1000 cubic meters
7	Construction of a Sewage Disposal Network	*			25km
8	Construction of a New Electricity Network			*	
9	Providing Containers for Solid Waste Collection			*	
10	Providing Vehicles for Collecting Solid Waste			*	
11	Providing a Sanitary Landfill	*			
Health Needs					
1	Building of New Clinics or Health Care Centres			*	
2	Rehabilitation of Old Clinics or Health Care Centres			*	
3	Purchasing of Medical Equipment and Tools			*	
Educational Needs					
1	Building of New Schools			*	
2	Rehabilitation of Old Schools			*	
3	Purchasing of New Equipment for Schools			*	
Agriculture Needs					
1	Rehabilitation of Agricultural Lands		*		
2	Building Rainwater Harvesting Cisterns			*	
3	Construction of Barracks for Livestock			*	
4	Veterinary Services			*	
5	Seeds and Hay for Animals			*	
6	Construction of New Greenhouses			*	
7	Rehabilitation of Greenhouses			*	
8	Field Crops Seeds			*	
9	Plants and Agricultural Supplies	*			

Source: Jericho Municipal Council, 2011

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