

Wadi Fukin Village Profile



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Background

This booklet is part of a series of booklets, which contain compiled information about each city, town, and village in Bethlehem Governorate. These booklets came as a result of a comprehensive study of all localities in Bethlehem 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 Azahar Needs Assessment," the project funded by the Spanish Agency for International Cooperation for Development (AECID) and the Azahar Program.

The "Village Profiles and Azahar Needs Assessment" was designed to study, investigate, analyze and document the socio-economic conditions and the needed programs and activities to mitigate the impact of the current unsecure political, economic and social conditions in Bethlehem Governorate with particular focus on the Azahar program objectives and activities concerning water, environment, and agriculture.

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 Bethlehem 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 the focus on the agricultural sector.

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

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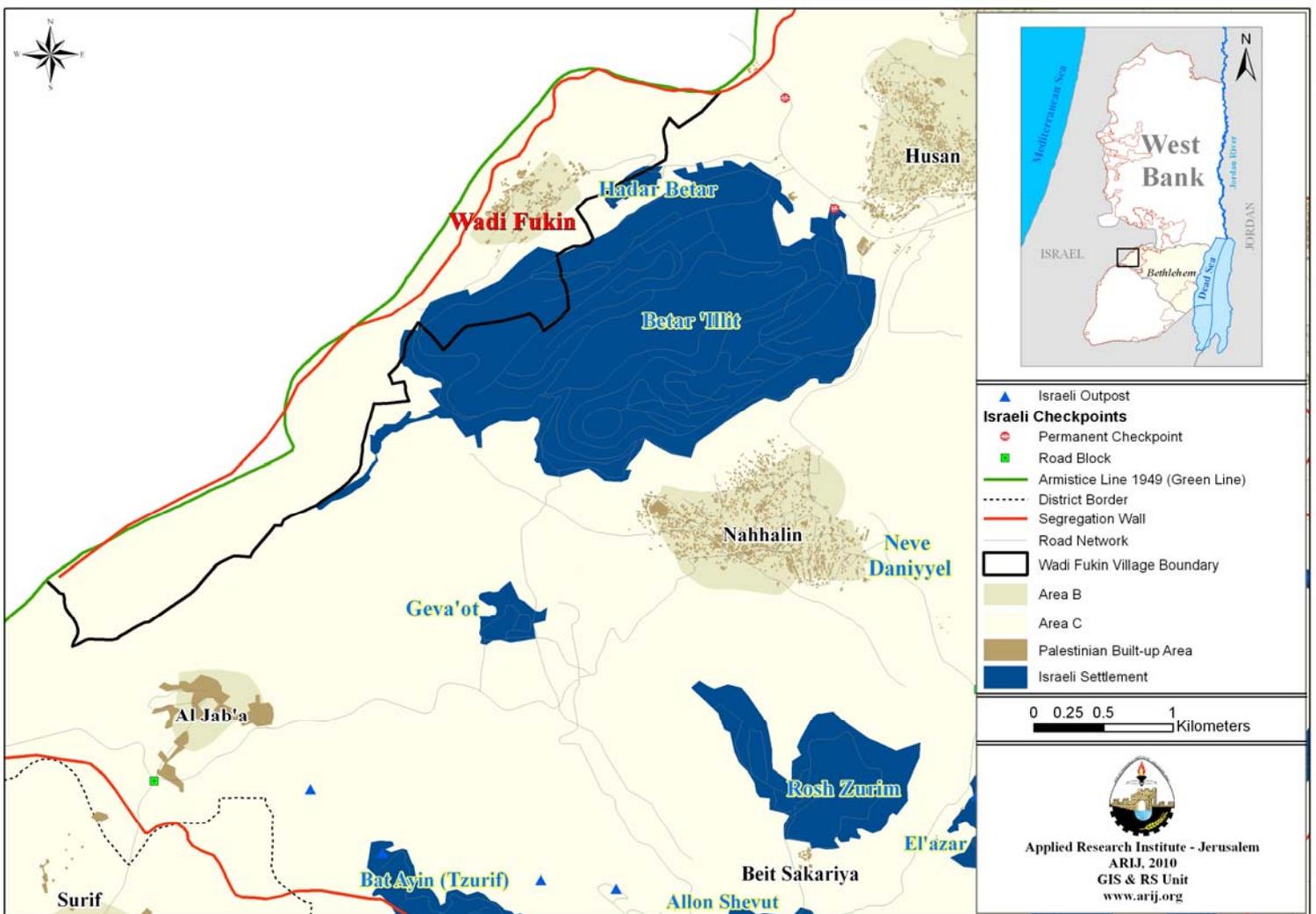
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Wadi Fukin Village Profile

Location and Physical Characteristics

Wadi Fukin is a Palestinian village in Bethlehem Governorate located 9.4km (horizontal distance) south-west of Bethlehem City. Wadi Fukin is bordered by Nahhalin village to the east, Husan village to the north, the 1949 Armistice Line (the Green Line) to the west, and Al Jab'a village to the south (See map 1).

Map 1: Wadi Fukin location and borders



Wadi Fukin is located at an altitude of 643m above sea level with a mean annual rainfall of 616mm. The average annual temperature is 16° C, and the average annual humidity is about 61 percent (ARIJ GIS, 2009).

Since 1995, Wadi Fukin has been governed by a village council which is currently administrated by five members appointed by the Palestinian Authority. There is also one employee working in the council. The village council owns a permanent headquarters.

It is the responsibility of the village council to provide a number of services to the residents of Wadi Fukin, including:

1. Infrastructure services such as water and electricity.
2. Solid waste collection, road construction and restoration, street cleaning, and social development services.
3. Implementation of projects and case studies for the village.

History

According to history books, the origin of the word Fukin goes back to the Aramaic word Suk, meaning thistle, it was then distorted to Fuk, and with time it was collected in the Arabic language to become Fukin rather than Sukin, thus Wadi Fukin means the Valley of Thistle.

The history of the village of Wadi Fukin goes back 1800 years, and the residents of Wadi Fukin are indigenous.

Photo of Wadi Fukin

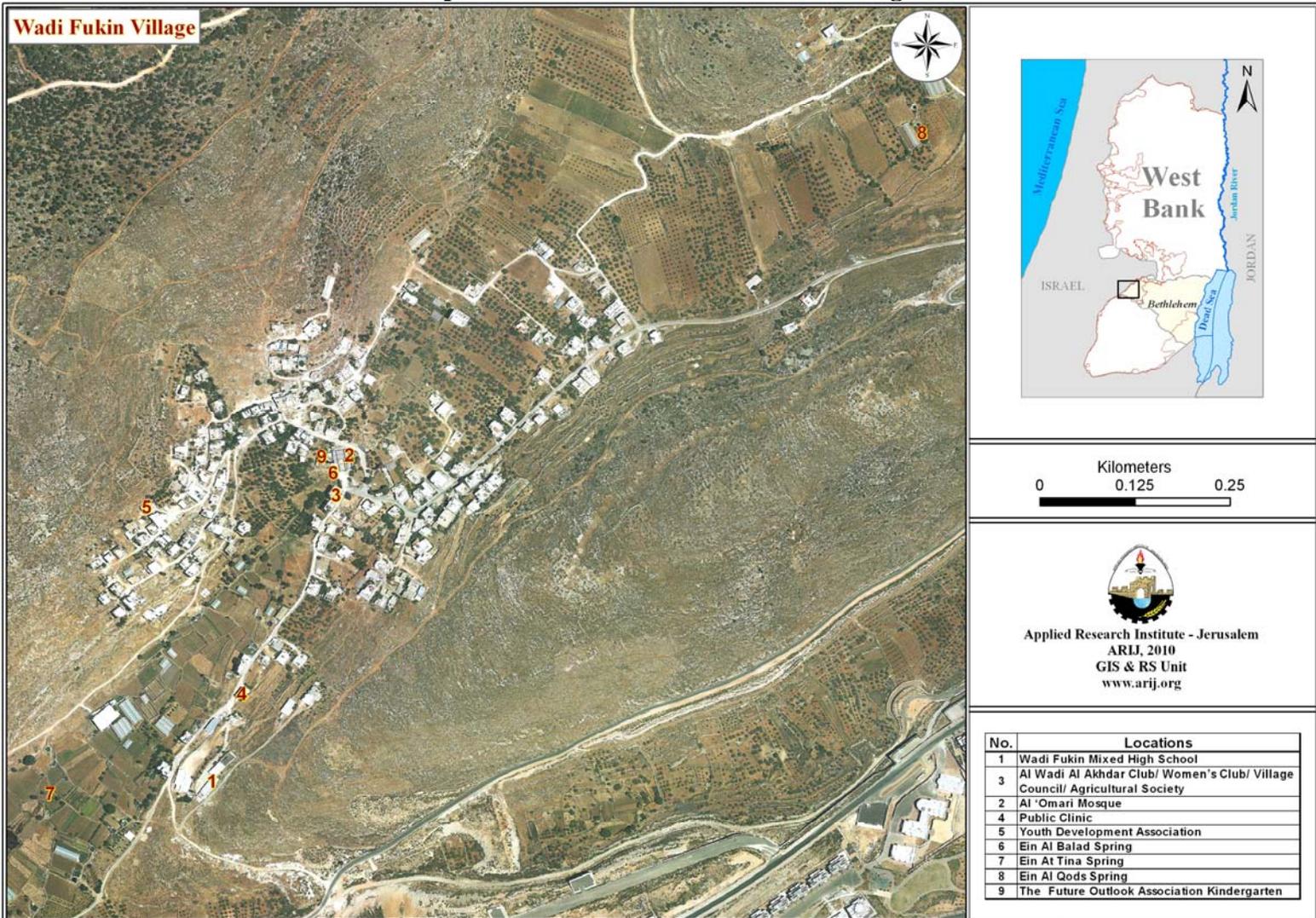


Religious and Archaeological Sites

In terms of religious establishments, there is only one mosque in Wadi Fukin: Wadi Fukin Al Kabeer Mosque.

As for the archaeological sites in the village, there is Al Kabeer mosque which was built on the ruins of Al 'Omari mosque,, the Canaanite and Romanian Khirab, and the old water channels (See map 2).

Map 2: Main locations in Wadi Fukin village



Population

According to the Palestinian Central Bureau of Statistics (PCBS), the total population of Wadi Fukin in 2007 was 1,168; of whom 588 are males and 580 are females. There are 217 households living in 244 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 Wadi Fukin is as follows: 36.3 percent are less than 15 years, 58.6 percent are between 15 - 64 years, and 5.1 percent are 65 years and older. Data also showed that the sex ratio of males to females in the village is 101.4:100, meaning that males constitute 50.4 percent of the population, and females constitute 49.6 percent of the population.

Families

The inhabitants of Wadi Fukin are composed of several families, mainly: Sukkar, Attiya, Mifrih, Al Hroub, Al Aqra' and Assaf family.

Education

According to the results of the PCBS Population, Housing and Establishment Census-2007, the illiteracy rate among Wadi Fukin population is about 4.38 percent, of whom 78.4 percent are females. Of the literate population, 11.5 percent can read and write, 22.1 percent had elementary education, 34.1 percent had preparatory education, 18 percent had secondary education, and 14.3 percent completed higher education. Table 1, shows the educational level in the village of Wadi Fukin, by sex, and educational attainment in 2007.

Sex	Illiterate	Can read & write	Elementary	Preparatory	Secondary	Associate Diploma	Bachelor	Higher Diploma	Master	PhD	Total
M	8	42	84	143	79	27	35	2	3	-	424
F	29	51	94	132	66	21	26	-	1	-	420
T	37	93	178	275	145	48	61	2	4	-	844

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

In regards to the basic and secondary education institutions and schools in Wadi Fukin in the academic year 2008/2009, there is only one public mixed school in the village, run by the Palestinian Ministry of Higher Education, and no private schools. See Table 2.

In the village there is a total number of 298 students, 17 teachers, and 12 classes (Directorate of Education in Bethlehem, 2009). It should be noted here that the average number of students per teacher in the school is nearly 18, while the average number of students per class is approximately 25 (Directorate of Education in Bethlehem, 2009).

School Name	Supervising Authority	Sex
Wadi Fukin Mixed High School	Governmental	Mixed

Source: Directorate of Education in Bethlehem, 2009

Furthermore, there is one kindergarten in Wadi Fukin run by a charitable society which has 44 children (Wadi Fukin Village Council, 2009).

Health Status

There are some health facilities available in Wadi Fukin village; a health clinic run by the public sector which works one day a week, the Health Work Committees which works in the same clinic another day in the week, and a center for the childhood and motherhood, which is run by the government.

In emergency cases, residents of Wadi Fukin use Bethlehem hospitals and health centers. However, the major health problem in Wadi Fukin is the absence of an emergency crew during the night shift for the emergency cases, and there is no clinic or doctor available at night.

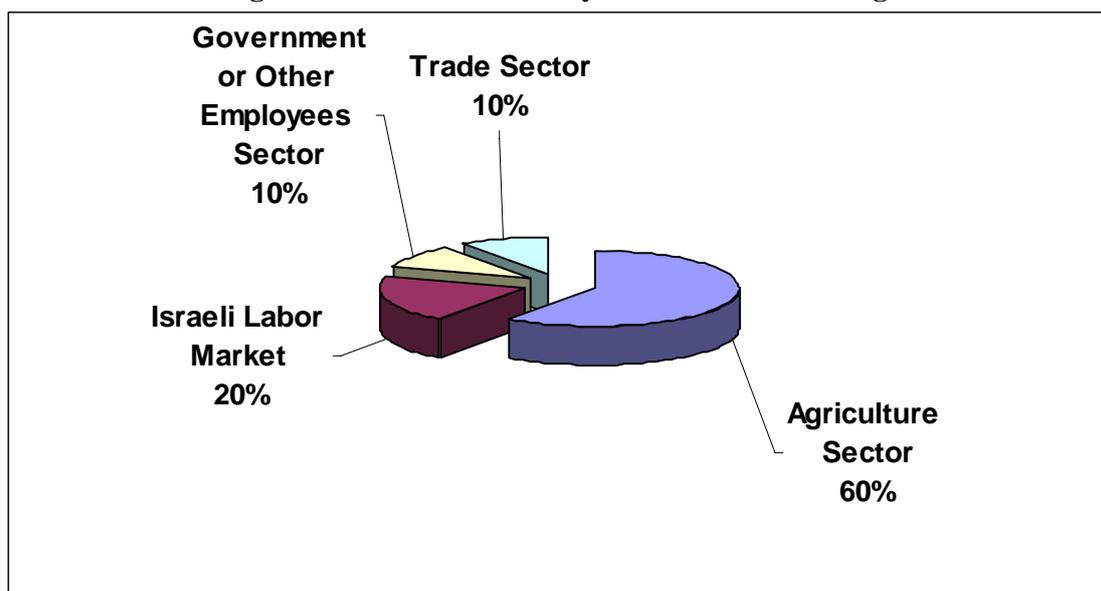
Economic Activities

The economy in Wadi Fukin is dependent on several economic sectors, mainly: the agriculture sector, which absorbs 60 percent of the village workforce (See Figure1).

The results of a field survey for the distribution of labor by economic activity in Wadi Fukin are the following:

- Agriculture Sector (60%)
- Israeli Labor Market (20%)
- Government or Private Employees Sector (10%)
- Trade Sector (10%)

Figure 1: Economic Activity in Wadi Fukin Village



Wadi Fukin village has no economic or industrial activities; there is only one stone quarry, one tailor, one mechanic, and 6 groceries.

The unemployment rate in the village of Wadi Fukin has reached 40 percent. It was found that the most vulnerable social groups in the town, as a result of Israeli actions, are as follows:

- 1 – Workers in agricultural sector.
- 2 – Workers in the educational sector.
- 3 – Workers in the health sector
- 4 – Workers in transportation.

Labor Force

According to the PCBS Population, Housing and Establishment Census-2007, 34.8 percent of Wadi Fukin population was economically active, of whom 82 percent were employed, 65.2 percent were not economically active, 58.5 percent were students, and 28.7 percent were housekeepers (See table 3).

SEX	Economically Active				Not Economically Active						Total
	Employed	Currently Unemployed	Unemployed (Never worked)	Total	Students	House-keeping	Unable to work	Not working & Not looking for work	Other	Total	
M	200	41	-	241	148	-	28	4	3	183	424
F	41	7	5	53	174	158	28	-	7	367	420
T	241	48	5	294	322	158	56	4	10	550	844

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

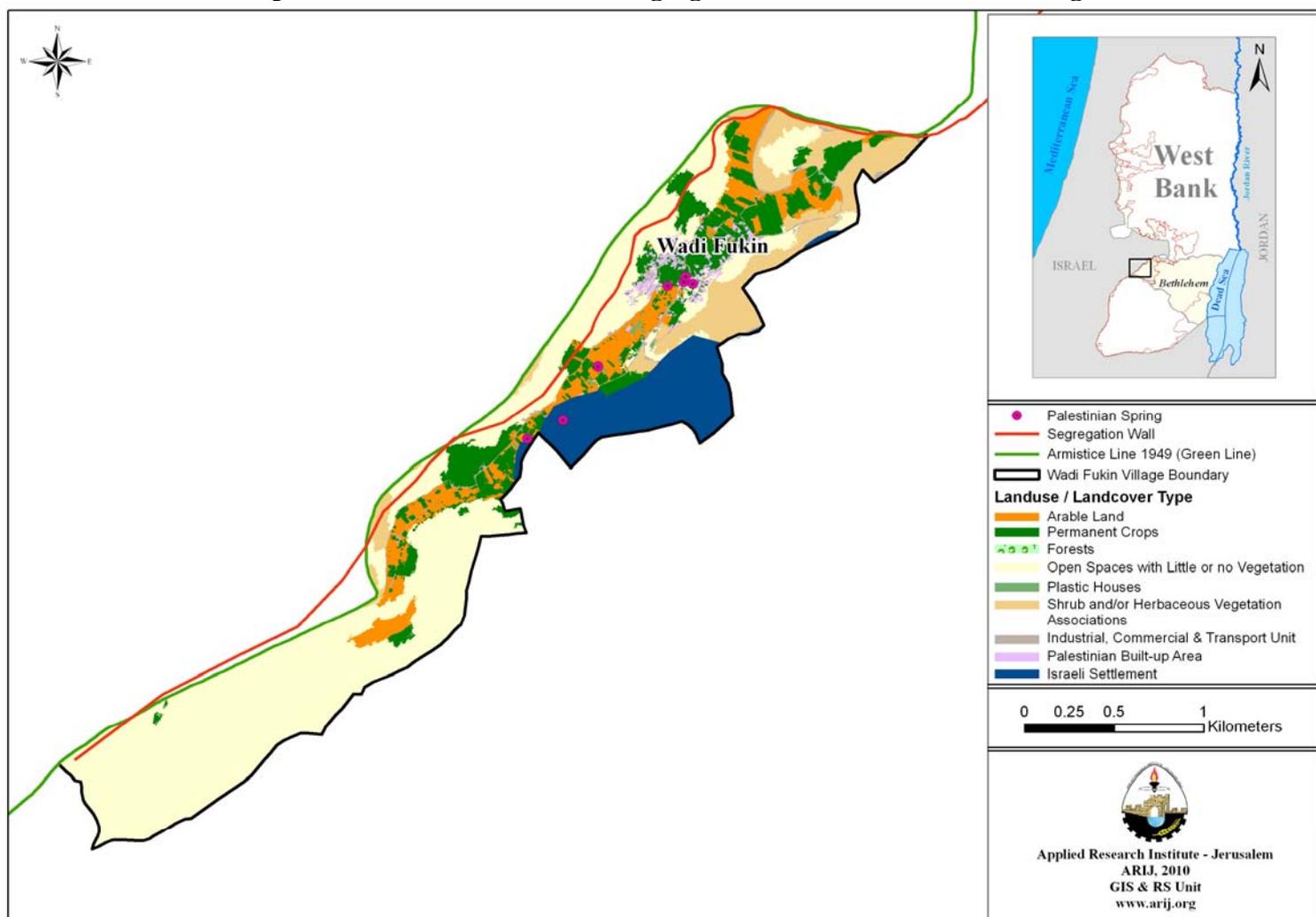
Agricultural Sector

Wadi Fukin lies on a total area of about 3,262 dunums of which 2,744 dunums are considered arable land, and 51 dunums are residential land (See table 4 and map 3).

Total Area	Built up Area	Arable Land (2,744)					Area of Industrial, Commercial & Transport Unit	Area of Settlements and Military Bases
		Seasonal Crops	Permanent Crops	Greenhouses	Forests	Open Spaces and Rangelands		
3,262	51	345	495	11	2	1,891	80	387

Source: GIS unit – ARIJ, 2009

Map 3: Land use/land cover and Segregation Wall in Wadi Fukin Village



Agriculture production in Wadi Fukin depends mostly on rainwater. As for irrigated fields, they depend on water springs and domestic harvesting cisterns.

Table 5 shows the different types of rain-fed and irrigated open-cultivated vegetables in Wadi Fukin. The most common crop cultivated within this area is tomato.

Fruity vegetables		Leafy vegetable		Green legumes		Bulbs		Other vegetables		Total area	
RF	Irr.	RF	Irr.	RF	Irr.	RF	Irr.	RF	Irr.	RF	Irr.
7	34	0	23.5	0	13	0	12	0	6	7	88.5

Rf: Rain-fed, Irr: Irrigated

Source: Palestinian Ministry of Agriculture, 2007

There is also 11 dunums of land on which there are greenhouses planted with different vegetables, mainly: cucumber and tomato.

And another one dunum area planted with two types of aromatic medical plants; mint and sage, fed by rain water.

Table 6 shows the different types of fruit trees planted in the area. Wadi Fukin is famous with olive cultivation, as there are 370 dunums planted with olive trees.

Olives		Citrus		Stone-fruits		Pome-fruits		Nuts		Other fruits		Total area	
Rf	Irr.	Rf	Irr.	Rf	Irr.	Rf	Irr.	Rf	Irr.	Rf	Irr.	Rf	Irr.
370	0	0	0	8	0	0	0	3	0	10	0	391	0

Rf: Rain-fed, Irr: Irrigated

Source: Palestinian Ministry of Agriculture, 2007

As for the field crops and forage in Wadi Fukin, cereals, in particular wheat and barley are the most cultivated crops covering an area of about 100 dunums, while forage crops, such as bitter vetch and common vetch are the second most cultivated crops (See table 7).

Cereals		Bulbs		Dry legumes		Oil crops		Forage crops		Stimulating crops		Other crops		Total area	
Rf	Irr	Rf	Irr	Rf	Irr	Rf	Irr	Rf	Irr	Rf	Irr	Rf	Irr	Rf	Irr
100	0	0	0	15	0	17	0	0	0	0	0	0	0	132	0

Rf: Rain-fed, Irr: Irrigated

Source: Palestinian Ministry of Agriculture, 2007

The field survey shows that most of the residents in Wadi Fukin are rearing and keeping domestic animals such as sheep, goats, broiler chickens, and bees (See Table 8).

Cows*	Sheep	Goats	Camels	Horses	Donkeys	Mules	Broilers	Layers	Bee Hives
0	302	404	0	3	14	10	0	22,000	200

*Including cows, bull calves, heifer calves and bulls

Source: Palestinian Ministry of Agriculture, 2007

There are about 15 kilometers of agricultural road in the village suitable for vehicles, tractors and agricultural machinery.

Institutions and Services

Wadi Fukin has a number of local institutions and associations that provide services to various segments of society: children, youth, and women. The services are in the areas of culture, sports and others, including: (Wadi Fukin village council, 2009)

- **Wadi Fukin Village Council:** Founded in 1995 by the Ministry of Local Government with the goal of taking care of all the issues in the village and providing all kinds of services to its population.
- **The Youth Development Society:** founded in 1998, and is interested in all youth issues and activities.
- **Sport Club:** founded in 1973 and deals with sport activities.
- **Agricultural Society:** founded in 1975 to assist and support the farmers in Wadi Fukin village and to help in the development of agriculture.
- **Women's Club:** founded in 2001 to look after women's issues.

Infrastructure and Natural Resources

Electricity and Telecommunication Services:

Wadi Fukin has been connected to a public electricity network since 1980; served by Jerusalem Electricity Company, which is the main source of electricity in the village. Approximately 98.1 percent of the housing units in the village are connected to the network, and 0.5 percent are dependent on private generators for electricity, while the source of electricity is unknown for the remaining units (1.4%) (Central Bureau of Statistics, 2007).

Furthermore, Wadi Fukin is connected to a telecommunication network and approximately 30.1 percent of the housing units within the village boundaries are connected to phone lines (Central Bureau of Statistics, 2007).

Transportation Services:

Private cars are the main means of transportation in Wadi Fukin, followed by a low percentage of public buses and taxis. As for the road network in the village; there are a total of 15km of main paved, but in bad condition roads, and a total of 5km secondary, paved and in bad condition roads (Wadi Fukin village council, 2009).

Water Resources:

Wadi Fukin is provided with water by the West Bank Water Authority, through the public water network established in 1982, and about 98.6 percent of the housing units are connected to the water network, while the source of water supply is unknown for the remaining units (1.4%) (Central Bureau of Statistics, 2007). The quantity of water supplied to Wadi Fukin in 2008 was about 34431 cubic meters/year therefore the estimated rate of water supply per capita is about 85 liters/day (PWA, 2008).

Here it should be noted that many Wadi Fukin citizens do not in fact consume this amount of water due to water losses, which are about 3 percent, and which usually happen at the main source and at the household level, this percentage is considered low compared with other communities because the drinking water network was restored in 2008 (Wadi Fukin Village Council, 2009), thus the rate of water consumption per capita in Wadi Fukin is 80 liters per day. This is a low rate compared with the minimum quantity proposed by the World Health Organization, which is 100 liters per capita per day.

Also, located in Wadi Fukin are 15 rainwater harvesting cisterns and 11 water springs used for agricultural purposes (Wadi Fukin Village Council, 2009).

Sanitation:

Wadi Fukin lacks a public sewage network; most of the population uses cesspits as means for wastewater disposal. According to the results of Community Survey conducted by the PCBS in 2007 and the data provided from PWA, the majority of Wadi Fukin housing units (98.1%) use cesspits as a major means for wastewater disposal, and 0.5 percent of the housing units have no means for wastewater disposal, while it is unknown for the remaining units (1.4%). .

Based on the estimated daily per capita water consumption, the estimated amount of wastewater generated per day is approximately 72 cubic meters, or 26,280 cubic meters annually. At the individual level in the village it is estimated that the per capita wastewater generation is approximately 64 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 which poses a threat to the environment and the public health.

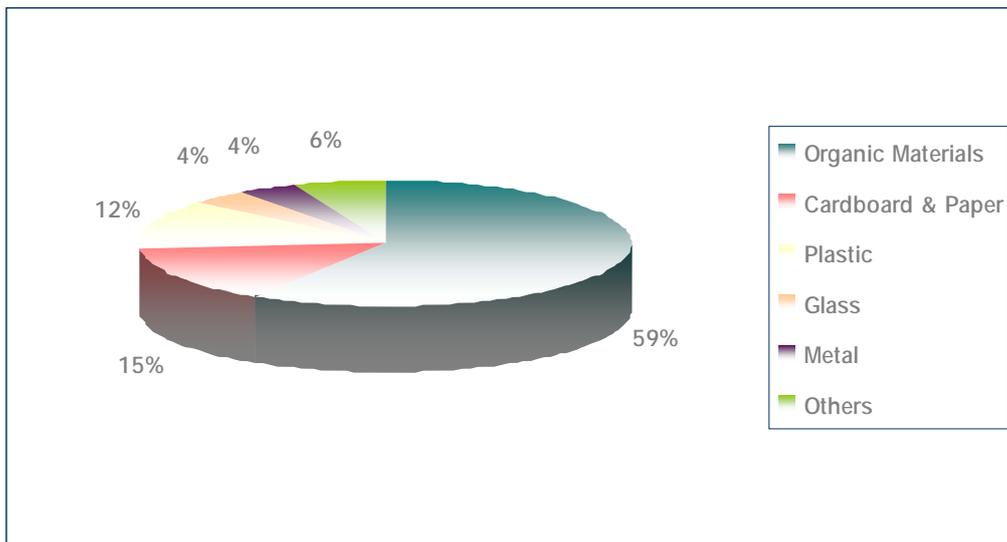
Solid Waste Management:

The Joint Service Council of the western countryside 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 village, which is currently represented by solid waste collection and disposal. Due to the fact that the process of solid waste management is costly, a monthly fee has been charged on the population serviced by

domestic solid waste collection and transportation services which is about 10 NIS/month. However, the collected fees are not considered sufficient for a good management of solid waste.

Most of the population in Wadi Fukin benefit from the solid waste services, where waste is collected from households, institutions, shops, and public squares in plastic bags and then transferred to 10 containers, with a capacity of 1.1 cubic meters each, spread throughout the neighborhoods. The village council collects the solid waste from the containers two days a week and transports it to Yatta’s dumping site in Hebron governorate, 60km from Wadi Fukin. The common method for solid waste treatment in Hebron dumping site is setting waste on fire or sometimes burying it. In the future, the solid waste will be disposed in Al Maniya landfill which will be established in Bethlehem governorate. It should be mentioned here that household waste, industrial, and medical solid waste are collected together and dumped into the same landfill, with the absence of any special system for separation and/or collection. The largest volume of solid waste is household waste which makes up around 45-50 percent of total capacity of solid waste.

The daily per capita rate of solid waste production in Wadi Fukin is 0.7kg. Thus the estimated amount of solid waste produced per day from the Wadi Fukin residents is nearly 790kg, or 289 tons per year. The major amount of household solid waste is composed of organic materials, followed by paper and cardboard, and then plastic as shown in the figure:



Environmental Conditions

Like other villages in the governorate, Wadi Fukin experiences several environmental problems which must be addressed and solved; these problems can be identified as follows:

Water:

Wadi Fukin suffers only from two issues;

- 1) The contamination of some water springs making it unsuitable for human consumption.
- 2) The lack of domestic rain water harvesting cisterns.

Wastewater Management:

The absence of a public sewage network, thus, the use of cesspits for the disposal of wastewater, and the discharge of wastewater in the streets, especially in winter, because the citizens can not afford the high cost of sewage tankers, causes environmental damages, health problems, and the spread of epidemics and diseases in the village. 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 and thus makes 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 the need to use sewage tankers from time to time. Moreover, 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 and the residents' health.

Solid Waste Management:

The lack of a central sanitary landfill to serve Wadi Fukin and the other communities in the governorate is due mainly to the obstacles created by the Israeli authorities for local and national institutions, like granting licenses to establish such a landfill, because the appropriate land is within Area C, under the Israeli control. In addition, the implementation of such projects depends on funding from donor countries. Thus, the lack of a sanitary landfill is a hazard risk for the health, a source of pollution to the groundwater and soil through the leachate produced from the solid waste, and it produces bad odors and distortion of the landscape.

There is an absence of a system in the village and the governorate in general that separates hazardous waste from non-hazardous waste, consequently hazardous solid waste is collected with non-hazardous waste and transported to Yatta's landfill for disposal by burning.

Other problems:

- The limited role of the village council, like other councils and municipalities, in providing only certain services, without considering other various aspects for development.

Impact of the Israeli Occupation

Wadi Fukin is bordered by two Israeli settlements from its east and northern side; Betar 'Illit and Hadar Betar, Al Jab'a village from the south, and the Green Line from the west, where the Israeli Segregation Wall is planned to be built. According to Oslo Agreement signed between the Israeli government and the Palestinian National Authority in 1995, Wadi Fukin village was divided into two parts; B and C, as shown in Table 9.

Land Classification	Area (dunum)	% of the Total Area
Area A	0	0
Area B	277	7.3
Area C	3540	92.7
Total Area	3817	100

Source: GIS unit –ARIJ 2009

After the Israeli occupation of the West Bank and Gaza Strip in 1967, the Israeli authorities confiscated large areas of Palestinian land for the construction of Israeli settlements, bypass roads and military bases. Wadi Fukin village, like many other Palestinian villages and towns in the West Bank, was exposed to Israeli violations over the continuous years of Israeli occupation, where Israel has built two Israeli settlements on the territory of Wadi Fukin village (Table 10).

Settlement	Year of establishment	Settlers (2008)	Total Area of the Settlement (dunum)
Hadar Betar	1978	30	7
Betar 'Illit	1985	34700	379
Total area		34730	386

Source: GIS & Urbanization units –ARIJ 2009

The Segregation Wall

The recent amendment of the Israeli racist Segregation Wall plan in the West Bank, issued on April 30, 2007, shows that Wadi Fukin village and the neighboring villages (Battir, Husan, Nahhalin , Al Walaja, Khallet 'Afana, Khallet Al Balluta, and Beit Sakariya), will be isolated from the rest of Bethlehem Governorate. This separation will cause a painful reality for these Palestinian villages by depriving the citizens' access to many services that exist only in city centers like police, fire stations, ambulance, hospitals, health centers, and universities, etc. The countryside in Bethlehem Governorate will also lose the bigger part of its agricultural land, which is considered the main source of income for many residents, as the Segregation Wall separates it from its owners. According to the updated Segregation Wall plan published on the web page of the Israeli Ministry of Defense on April 30, 2007; the Segregation Wall will extend for 4.6km on

Wadi Fukin lands; thus isolating 3781 dunums of the village agricultural lands, forests and open spaces.

Since 2000, the Israeli occupation forces have uprooted 250 olive trees and 100 stone-fruit trees. The village is also subjected to a permanent military checkpoint (Wadi Fukin Village Council, 2009).

Development Plans and Projects

Implemented Projects

Wadi Fukin village council has implemented several development projects in Wadi Fukin, during the years 2006 to 2009, as shown in Table 11.

Name of the Project	Type	Year	Donor
Construction of agricultural roads	Infrastructure	2006	Future Outlook Association
Construction of a floor for Wadi Fukin mixed school	Infrastructure/ Educational	2008	Palestinian Economic Council for Development and Reconstruction (PECDAR)
Construction of a community headquarters in the Village	Social	2007	Future Outlook Association
Restoration and rehabilitation of the drinking water network	Infrastructure/ Water	2008	Ministry of Finance & Ministry of Local Government
Employment project for the unemployed	Social	2008	UNRWA
Rehabilitation of three springs	Infrastructure/ Water	2009	Wadi Fukin Village Council & the Water and Environmental Development Organization (WEDO)

Source: Wadi Fukin Village Council, 2009

Proposed Projects

Wadi Fukin village council, in cooperation with the civil society organizations in the village and the village 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 village. The projects are as follows, in order of priority, from the viewpoint of the participants in the workshop:

1. Establishment of a wastewater treatment plant.
2. Studying the soil structure and working on improving it.
3. Providing seeds and fodder, plant and animal treatments, establishing greenhouses and modernizing the irrigation networks.
4. Restoration of the main drinking water network.
5. Providing group projects such as food processing and other income-generating projects.
6. Conducting awareness campaigns for the population.
7. Using modern methods of irrigation.
8. Restoration of the village school which was exposed to Israeli bombings.

Locality Development Priorities and Needs

Wadi Fukin suffers from a significant shortage of infrastructure and services. Table 12 shows the development priorities and needs in the village, from the village council's point of view (Wadi Fukin Village Council, 2009):

No.	Sector	Strongly Needed	Needed	Not a Priority	Notes
Infrastructural Needs					
1	Opening and Pavement of Roads	*			37km*
2	Rehabilitation of Old Water Networks		*		3km
3	Extending the Water Network to Cover New Built up Areas	*			1km
4	Construction of New Water Networks			*	
5	Rehabilitation/ Construction of New Wells or Springs	*			
6	Construction of Water Reservoirs	*			3,000 m ³
7	Construction of a Sewage Disposal Network	*			
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	*			

*7km is a main road, 10km internal road and 20km agricultural road

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