# 'Ein Siniya Village Profile



Prepared by



 $The \ Applied \ Research \ Institute-Jerusalem$ 

Funded by



**Spanish Cooperation** 

2012

# Acknowledgments

ARIJ hereby expresses its deep gratitude to the Spanish Agency for International Cooperation for Development (AECID) for their funding of this project.

ARIJ is grateful to the Palestinian officials in the ministries, municipalities, joint services councils, village committees and councils, and the Palestinian Central Bureau of Statistics (PCBS) for their assistance and cooperation with the project team members during the data collection process.

ARIJ also thanks all the staff who worked throughout the past couple of years towards the accomplishment of this work.

# **Background**

This report is part of a series of booklets, which contain compiled information about each city, town, and village in the Ramallah Governorate. These booklets came as a result of a comprehensive study of all localities in Ramallah 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 "Village Profiles and 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 Ramallah Governorate.

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 Ramallah 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 <a href="http://vprofile.arij.org">http://vprofile.arij.org</a>.

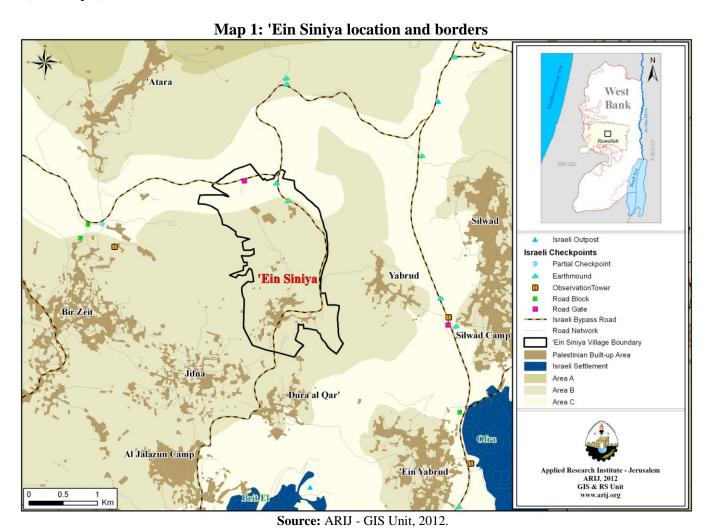
# **Table of Contents**

Location and Physical Characteristics	4
History	5
Religious and Archaeological Sites	6
Population	6
Education	7
Health Status	
Economic Activities	
Agricultural Sector	9
Institutions and Services	12
Infrastructure and Natural Resources	12
Environmental Conditions	14
Impact of the Israeli Occupation	15
Development Plans and Projects	16
Implemented Projects	16
Proposed Projects	16
Locality Development Priorities and Needs	17
References:	18

# 'Ein Siniya Village Profile

## **Location and Physical Characteristics**

'Ein Siniya is a Palestinian village in the Ramallah Governorate located 7.8km north-east of Ramallah City. 'Ein Siniya is bordered by Yabrud village to the east, Silwad town to the north, Jifna and Bir Zeit villages to the west, and Jifna, Dura al Qar', and 'Ein Yabrud lands to the south (ARIJ GIS Unit, 2012) (See Map 1).



Ein Siniya is located at an altitude of 647m above sea level with a mean annual rainfall of 601mm. The average annual temperature is 16°C and the average annual humidity is approximately 60.4% (ARIJ GIS Unit, 2012).

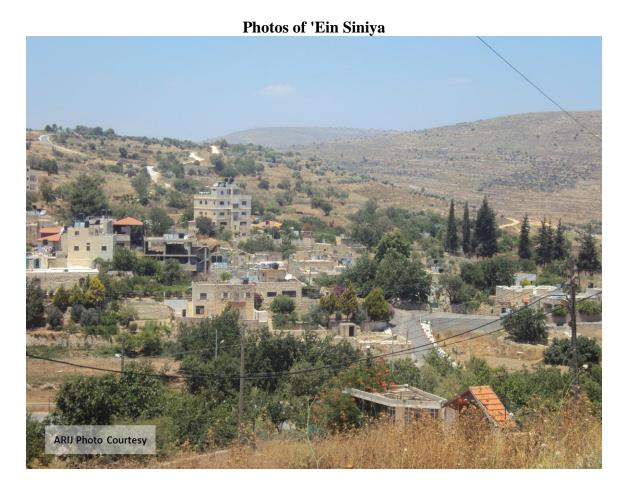
Since 1996, 'Ein Siniya has been governed by a village council which is currently administrated by 7 members appointed by the Palestinian National Authority. The village council is included within the Joint Services Council for Dura al Qar' and 'Ein Siniya, and it owns a permanent headquarters and a vehicle for the collection of solid waste ('Ein Siniya Village Council, 2011).

It is the responsibility of the Village Council to provide a number of services to the residents of 'Ein Siniya, including ('Ein Siniya Village Council, 2011):

- Infrastructure services, such as water and electricity provision and management.
- Solid waste collection, road construction and restoration, street cleaning, and social services.
- Provision of transportation.
- Provision of a sewage network.

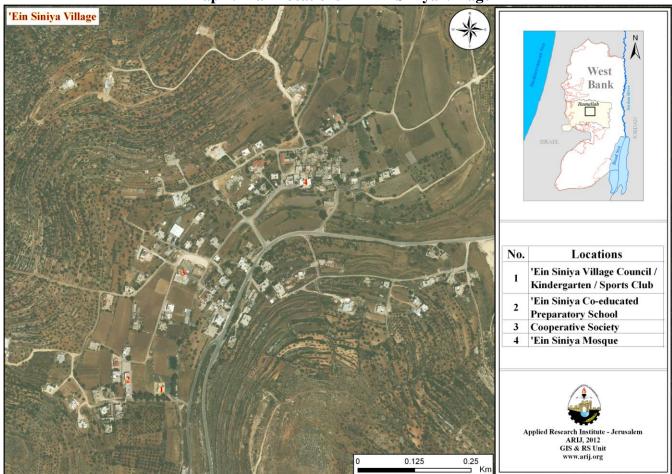
## **History**

'Ein Siniya village's name derives from two words, 'Ein,' (meaning 'spring') and 'Siniya'. The name was adapted from the word 'sin', and the village was named by the crusaders during their period of rule in the region (Al Dabbagh, 1991). Its residents are descendants of the village's native citizens (Ein Siniya Village Council, 2011) (See photo below for 'Ein Siniya village).



## **Religious and Archaeological Sites**

There is one mosque in the village, 'Ein Siniya Mosque. There are a few sites of archaeological interest in the village, principally Khirbet Shattah which contains walls, foundations, and tombs carved in rocks ('Ein Siniya Village Council, 2011) (See Map 2).



Map 2: Main locations in 'Ein Siniya Village

Source: ARIJ - GIS Unit, 2012.

# **Population**

According to the Palestinian Central Bureau of Statistics (PCBS), the total population of 'Ein Siniya in 2007 was 668, of whom 328 were male and 340 female. There were 136 households living in 169 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 'Ein Siniya was as follows: 35.2% were less than 15 years of age, 57.9% were between 15

and 64 years of age, and 6% were 65 years of age or older. Data additionally showed that the sex ratio of males to females in the village is 96.5:100, meaning that males and females constitute 49.1% and 50.9% of the population respectively.

#### **Families**

'Ein Siniya residents are from several families, mainly the Ma'alla, Khater, Abu al Hajj, Dar Ali, Abu ash Sheikh, Bazrooq, Mousa and Al Hallaq families ('Ein Siniya Village Council, 2011).

## **Education**

According to the results of the PCBS Population, Housing and Establishment Census-2007, the illiteracy rate among 'Ein Siniya population was approximately 7.6%, of whom 73.7% were female. Of the literate population, 5.4% could only read and write with no formal education, 20.2% had elementary education, 28.7% had preparatory education, 20.4% had secondary education, and 17.6% completed higher education. Table 1 shows the educational level in the village of 'Ein Siniya by sex and educational attainment in 2007.

Table 1: 'Ein Siniya population (10 years of age and above) by sex and educational attainment

S E x	Illiterate	Can read & write	Elementary	Preparatory	Secondary	Associate Diploma	Bachelor	Higher Diploma	Maste r	PhD	Unknown	Total
M	10	13	44	74	51	26	21	-	2	1	-	242
F	28	14	57	69	51	20	16	-	1	1	ı	257
T	38	27	101	143	102	46	37	-	3	2	-	499

Source: PCBS, 2009.

There is one governmental co-educational school in the village, 'Ein Siniya Co-educated Elementary School, which is run by the Palestinian Ministry of Higher Education (Directorate of Education in Ramallah, 2011).

In the village there are 182 students, 16 teachers, and 10 classes (Directorate of Education in Ramallah, 2011). The average number of students per teacher in the school is nearly 11, while the average number of students per class is approximately 18.

However, due to the lack of secondary level schools for males and females in the village, students of 'Ein Siniya village attend Bir Zeit village's schools or Ramallah Governorate's schools, 5km and 10km from the village respectively ('Ein Siniya Village Council, 2011).

The educational sector in the village suffers some obstacles, mainly the insufficient number of students in classes 'Ein Siniya Village Council, 2011).

## **Health Status**

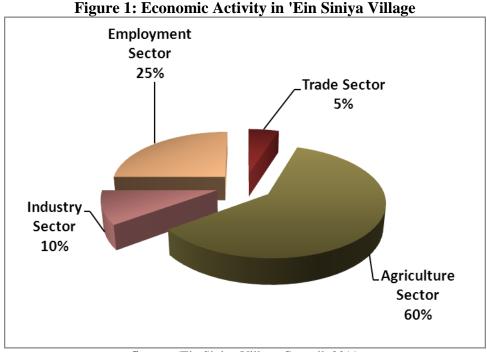
There are no health facilities or services available in 'Ein Siniya village. Therefore, residents of 'Ein Siniya use a health center in Dura al Qar' village or go to Ramallah health center in Ramallah city, 2km and 10km from the locality respectively ('Ein Siniya Village Council, 2011).

## **Economic Activities**

The economy in 'Ein Siniya is dependent on several economic sectors, mainly the agricultural sector, which absorbs 60% of the village workforce ('Ein Siniya Village Council, 2011) (See Figure 1).

The results of a field survey conducted by ARIJ in 2011 for the distribution of labor by economic activity in Ein Siniya are as follows:

- Agriculture Sector (60%).
- Government or Private Employees Sector (25%).
- Industry (10%).
- Trade Sector (5%).



Source: 'Ein Siniya Village Council, 2011

Ein Siniya village has some industrial facilities, including a can factory. There are also 5 groceries in the village, one services office, one professional workshop, and an olive oil-press. The unemployment rate in Ein Siniya reached approximately 10% in 2011 (Ein Siniya Village Council, 2011).

#### **Labor Force**

According to the PCBS Population, Housing and Establishment Census-2007, 32.3% of the 'Ein Siniya labor force was economically active, of whom 84.5% were employed, and 67.3% were not economically active, of whom 47.9% were students and 33% were housekeepers (See Table 2).

Table 2: 'Ein Siniya population (10 years of age and above) by sex and employment status-2007

S		Economica			ľ	Not Econo	mically Active					
E X	Employed	Currently Unemployed	Unemployed (Never worked)	Total	Students	House- keeping	Unable to work	Not working & Not looking for work	Other	Total	Un- known	Total
M	112	12	7	131	82	-	14	12	2	110	1	242
F	24	3	3	30	79	111	27	4	5	226	1	257
T	136	15	10	161	161	111	41	16	7	336	2	499

Source: PCBS, 2009.

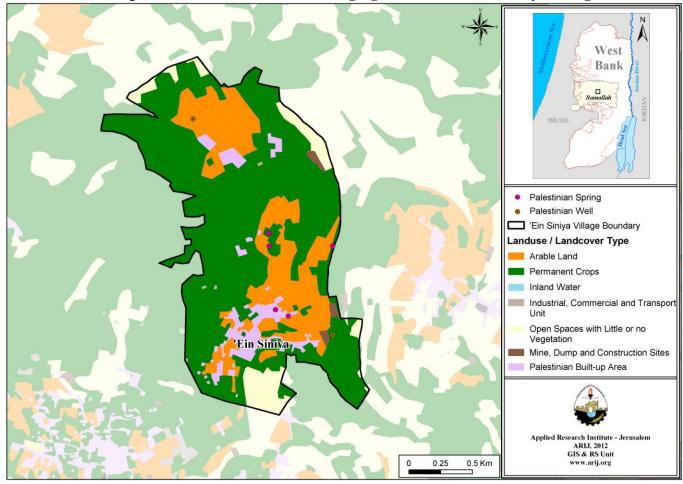
# **Agricultural Sector**

'Ein Siniya has a total area of around 3,196 dunums of which 2,782 are arable land and 187 dunums are registered as 'residential' (See Table 3 and Map 3).

Table 3: Land use and land cover in 'Ein Siniya village in 2010 (area in dunum)

Total	Built up	1	Agricultura (2,782			Inland water	Forests	Open Spaces	Area of Industrial,	Area of Settlements, Military
Area	Area	Permanent Crops	Green- houses	Range- lands	Arable lands				Commercial & Transport Unit	Bases & Wall Zone
3,196	187	2,057	0	0	725	1	0	203	24	0

Source: ARIJ – GIS Unit, 2012.



Map 3: Land use/land cover and Segregation Wall in 'Ein Siniya Village

Source: ARIJ - GIS Unit, 2012.

Table 4 shows the different types of rain-fed and irrigated open-cultivated vegetables in 'Ein Siniya. The most commonly cultivated crop within this area is tomatoes.

Table 4: Total area of rain-fed and irrigated open cultivated vegetables in 'Ein Siniya village (dunum)

Fruity vegetables			Leafy egetable le		Green legumes		Bulbs		Other vegetables		Total Area	
RF	Irr.	RF	Irr.	RF	Irr.	RF	Irr.	RF	Irr.	RF	Irr.	
20	47	0	13	10	0	3	0	8	7	41	67	

Rf: Rain-fed, Irr: Irrigated

Source: Palestinian Ministry of Agriculture, 2009

Table 5 shows the different types of fruit trees planted in the area. 'Ein Siniya is famous for olive cultivation; there are 1,013.5 dunums of land planted with olive crops in the village.

Table 5: Total area of fruit and olive trees in 'Ein Siniya village (dunum)

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.
1,013.5	0	0	0	16	0	0	0	21	0	30	0	1,080.5	0

Rf: Rain-fed, Irr: Irrigated

Source: Palestinian Ministry of Agriculture, 2009

In terms of field crops and forage in 'Ein Siniya, cereals (particularly wheat and barley) are the most cultivated, covering an area of about 60 dunums, in addition to the cultivation of dry legumes such as chickpeas and beans (See Table 6).

Table 6: Total area of field crops in 'Ein Siniya village (dunum)

Cereals		Bulbs		Dry		Oil F		Fora	Forage Stimula		Stimulating C		Other		
			legumes		ies	crops cro		crop	s crops		crops			Area	
Rf	Irr	Rf	Irr	Rf	Irr	Rf	Irr	Rf	Irr	Rf	Irr	Rf	Irr	Rf	Irr
60	0	18	0	30	0	0	0	25	0	0	0	0	0	133	0

Rf: Rain-fed, Irr: Irrigated

Source: Palestinian Ministry of Agriculture, 2009

The difference between the two sets of results obtained from the Ministry of Agriculture and by ARIJ's GIS Unit in sizes of agricultural areas is explained by the fact that the Ministry of Agriculture and the Palestinian Central Bureau of Statistics (2010) conducted a survey which used a definition of agricultural areas based on land ownership. Therefore, 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. ARIJ's survey, however, indicated the existence of a high proportion of small and fragmented holdings (home gardens) throughout the occupied Palestinian territories, thus accounting for the larger area of agricultural holdings calculated by ARIJ.

The field survey conducted by ARIJ staff shows that 1% of the residents in 'Ein Siniya rear and keep domestic animals such as sheep, goats, and chickens (See Table 7).

Table 7: Livestock in 'Ein Siniya village

Cows*	Sheep	Goats	Camels	Horses	Donkeys	Mules	Broilers	Layers	Bee Hives
0	90	177	0	0	0	0	20,000	0	0

<sup>\*</sup> Including cows, bull calves, heifer calves and bulls **Source:** Palestinian Ministry of Agriculture, 2009

There are approximately 5 kilometers of agricultural roads suitable for vehicles in the village (Ein Siniya Village Council, 2011).

#### **Institutions and Services**

'Ein Siniya village has no governmental institutions. The village does have two local institutions ('Ein Siniya Village Council, 2011):

- **'Ein Siniya Village Council**: Founded in 1996 by the Ministry of Local Government with the goal of taking care of issues in the village and providing various services to its population.
- The Cooperative Society for Olive Oil-pressing: Founded in 1964 with the purpose of providing services concerning olives and olive oil.

#### **Infrastructure and Natural Resources**

#### **Electricity and Telecommunication Services:**

Ein Siniya has been connected to a public electricity network since 1964. It is served by Jerusalem Electricity Company, which is the main source of electricity in the village, and approximately all housing units in the village are connected to the network. However, the village residents face some problems concerning electricity, primarily ('Ein Siniya Village Council, 2011):

- 1. The weak electrical current.
- 2. The network is in need of renovation.
- 3. The network is in need of expansion.

'Ein Siniya is connected to a telecommunication network and approximately 100% of the housing units within the village boundaries are connected to phone lines ('Ein Siniya Village Council, 2011).

#### **Transportation Services:**

There are 3 taxis and 20 private cars as transportation in 'Ein Siniya village. However, there are not sufficient vehicles in the village to meet residents' transport needs ('Ein Siniya Village Council, 2011). There are 3km of main roads and 1km of secondary roads in the village, all of which are paved and in good condition (See Table 8) (Ein Siniya Village Council, 2011).

#### **Water Resources:**

Ein Siniya is provided with water by Jerusalem Water Authority through the public water network established in 1972. Approximately all housing units are connected to this network ('Ein Siniya Village Council, 2011). The quantity of water supplied to 'Ein Siniya in 2010 was approximately 27,115 cubic meters (Jerusalem Water Authority, 2011); therefore, the average rate of water supply per capita in 'Ein Siniya'is 111.2 liters per day. Additionally, there are 5 public springs in the village with a daily average pumping rate of 140 cubic meters, used for the irrigation of agricultural lands ('Ein Siniya'Village Council, 2011). The village has a public water reservoir with a capacity of 1000 cubic meters ('Ein Siniya'Village Council, 2011).

To determine water costs, the water authority has adopted an upward rate where the price of water increases with increasing consumption. Table 8 shows the price of water by category of consumption.

Table 8: Water tariffs of Jerusalem Water Authority adopted since 01.01.2012

Consumption Category (m³)	Domestic (NIS/m³)	Industrial (NIS/m³)	Tourist (NIS/m³)	Commercial (NIS/m³)	Public Institutions (NIS/m³)
0 - 5	4.5	5.6	5.6	5.6	5.4
5.1 – 10	4.5	5.6	5.6	5.6	4.5
10.1 - 20	5.6	6.8	6.8	6.8	5.6
20.1 – 30	6.8	8.1	8.1	8.1	6.8
30.1+	9	9.9	10.8	9	9

**Source:** Jerusalem Water Authority, 2012

#### **Sanitation:**

Ein Siniya has a public sewerage network established in 2005 (Ein Siniya Village Council, 2011). According to the results of a community survey conducted by the Applied Research Institute – Jerusalem (ARIJ) in 2010 as part of the project 'A Proposed Environmentally Sound Wastewater Management System for the West Bank', only 7% of 'Ein Siniya housing units use the sewage network as a means for wastewater disposal, while the rest of housing units (93%) use cesspits (ARIJ & CENTA, 2010).

Based on the estimated daily per capita water consumption, the estimated amount of wastewater generated per day is approximately 44 cubic meters or 16,000 cubic meters annually. At the individual level in the village it is estimated that per capita wastewater generation is 57 liters per day, depending on the consumption rate. The estimated amount of wastewater collected through the sewerage network is approximately 1,120 cubic meters annually. Approximately 14,880 cubic meters of wastewater is collected by cesspits and discharged by wastewater tankers. The wastewater collected by cesspits is discharged by wastewater tankers directly to open areas or nearby valleys with no regard for the environment. There is no wastewater treatment either at the source or at the disposal sites and this poses a serious threat to both environmental and public health (ARIJ-WERU, 2012).

#### **Solid Waste Management:**

The Joint Services Council "Group V" for Solid Waste is responsible for the collection and disposal of solid waste generated by citizens and establishments in the village. As the process of solid waste management is costly, a monthly fee of 20 NIS is charged to the population served by domestic solid waste collection and transportation services. However, the collected fees are not sufficient for good management of solid waste; only 60% of these fees are collected from the citizens (Ein Siniya Village Council, 2011).

Most of the population in 'Ein Siniya benefit from the solid waste services, whereby waste is collected from households, institutions, shops, and public squares in plastic bags and then transferred to 160 containers, each with a capacity of 1 cubic meter, spread amongst the neighborhoods. The Joint Council

collects the solid waste from the containers twice a week and transports it using a waste vehicle to 'Atara dumping site, 7km from the locality, where it is burnt and buried (Ein Siniya Village Council, 2011

The daily per capita rate of solid waste production in 'Ein Siniya is 0.7kg. Thus the estimated amount of solid waste produced per day from the 'Ein Siniya residents is nearly 0.5 tons, or 171 tons per year (ARIJ-WERU, 2012).

### **Environmental Conditions**

Like other villages and towns in the governorate, 'Ein Siniya 'experiences several environmental problems which must be addressed and solved. These problems can be identified as follows:

#### **Wastewater Management**

• The absence of a public sewage network in some neighborhoods (93%) forces the village residents to use unhygienic cesspits for the disposal of wastewater, and to discharge wastewater in the streets. This is particularly common in winter, as citizens cannot afford the high cost of sewage tankers during this period. These methods facilitate environmental damage, health problems, and the spread of epidemics and diseases in the village. This wastewater also contaminates the groundwater because most cesspits are built without lining, allowing wastewater to enter into the ground and avoiding the need to use sewage tankers. Moreover, the untreated wastewater collected from cesspits by sewage tankers is disposed of in open areas without concern for the damage it causes to the environment and to residents' health.

#### **Solid Waste Management:**

- The lack of a central sanitary landfill to serve 'Ein Siniya and the other neighboring communities in the governorate is due mainly to the obstacles created by the Israeli authorities for local and national institutions in granting licenses to establish such a landfill, because the appropriate land is within Area C and under Israeli control. Additionally, the implementation of such projects depends on funding from donor countries. The lack of a sanitary landfill is a source of pollution to the groundwater and soil through the leachate produced from the solid waste, and produces bad odors and distortion of the landscape.
- There is no system in the village and the governorate in general to separate hazardous waste from non-hazardous waste. Consequently hazardous solid waste is collected with non-hazardous waste and transported to 'Atara landfill for disposal.

14

## **Impact of the Israeli Occupation**

#### Geopolitical status in 'Ein Siniya Village

According to the Oslo II Interim Agreement signed in 28<sup>th</sup> September 1995 between the Palestinian Liberation Organization (PLO) and Israel, 'Ein Siniya village was divided into areas "B" and "C". Approximately 2578 dunams (80.7% of the village's total area) were assigned as area B, where the Palestinian National Authority (PNA) has a complete control over civil matters but Israel continues to have overriding responsibility for security. Area B constitutes most of the inhabited Palestinian areas, including municipalities, villages and some camps. It is worth mentioning that all of the village's population resides in area B. The rest of the village's area, constituting 618 dunams (19.3% of the total area), is classified as area C, 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 consent or authorization by the Israeli Civil Administration. It is worth mentioning that most of the population in 'Ein Siniya village resides in area C and most of the lands lying within area C in the village are agricultural areas (table 9).

Table 9: The Geopolitical Divisions of 'Ein Siniya Village according to Oslo II Agreement 1995 – Ramallah Governorate

Classification	Area in dunams	Percent from Total village area
Area A	0	0
Area B	2578	80.7
Area C	618	19.3
Nature Reserve	0	0
Total	3196	100

Source: Source: ARIJ-GIS, 2011

## 'Ein Siniya Village and the Israeli Occupation Practices

The Israeli Government confiscated hundreds of dunams of land in 'Ein Siniya for the construction of bypass road 465 to connect Israeli settlements surrounding the village. The real threat of bypass roads lies in the buffer zone formed by the Israeli Occupation Force (IOF) along these roads, extending approximately 75 m on each side of the road. These buffer zones dramatically increase the total area of land affected by the construction of the bypass roads.

Following the outbreak of the second Palestinian Intifada in September 2000, the Israeli occupation authorities established military checkpoints on the village lands. This includes an iron gate and two dirt checkpoints on the northern entrance of the village which they closed. It should be mentioned here that the northern entrance of the village is connected to the bypass road 465 which leads to the 'Oyoon al Haramiya area in the village. This was considered the main road linking the two cities of Ramallah and Nablus. Since then, Palestinians have been forced to walk long distances and go through Israeli checkpoints to travel between Ramallah city and the surrounding villages and the

15

cities north of the West Bank. These checkpoints aim at restricting and controlling the movement of Palestinian citizens.

## **Development Plans and Projects**

#### **Implemented Projects**

'Ein Siniya Village Council has implemented several development projects in 'Ein Siniya during the past five years (See Table 10).

Table 10: Implemented Development Plans and Projects in 'Ein Siniya during the Last Five Years

Name of the Project	Type	Year	Donor
Changing the whole internal network	Infrastructure	2005	Ministry of Finance
Changing the water main lines	Infrastructure	2005	USAID
Establishment of a water reservoir with a capacity of 1000m <sup>3</sup>	Public Services	2011	USAID
Road infrastructure	Infrastructure	2010	Ministry of Finance
Providing street lighting	Infrastructure	2010	Ministry of Finance
Establishing sewerage lines	Infrastructure	2005	USAID
Establishing sewerage lines	Infrastructure	2011	KFW
Expanding the water network in the housing area	Infrastructure	2010	Ministry of Finance
Source: 'Ein Siniya Village Council, 2011		•	

## **Proposed Projects**

Ein Siniya Village Council, in cooperation with the civil society organizations in the village and the village residents, hopes to implement several projects in the coming years. The project ideas were developed during the PRA workshop conducted by ARIJ staff in the village. The projects are as follows, in order of priority from the perspectives of the participants in the workshop:

- 1. Providing institutional support to help establish a farming society in the village.
- 2. Fencing approximately 80 dunums of agricultural lands that are being threatened by wild animals such as pigs and stray dogs.
- 3. Providing a tractor and the necessary equipment to help farmers in plowing, transferring water and trees, and taking care of their lands.
- 4. Financing small agricultural development projects to serve poor families in the village, such as sheep, poultry, and bees.
- 5. Establishing household agricultural cisterns for irrigation and drinking (10 cisterns).
- 6. Constructing an additional building for the school that includes a library, a scientific laboratory, an educational guide room, a housekeeping room, and a gymnasium.
- 7. Renovating all old houses in the village and constructing retaining walls around them to protect and preserve them.

# **Locality Development Priorities and Needs**

'Ein Siniya suffers from a significant shortage of infrastructure and services. Table 12 shows the development priorities and needs in the village according to the village council's feedback ('Ein Siniya Village Council, 2011).

Table 12: Development Priorities and Needs in 'Ein Siniya

	Table 12: Development Priorit				
No.	Sector	Strongly	Needed	Not a	Notes
		Needed		Priority	
	Infrastructu	ral Needs			
1	Opening and Pavement of Roads	*			6.5km*
2	Rehabilitation of Old Water Networks			*	
3	Extending the Water Network to Cover New Built up			*	
	Areas			•	
4	Construction of New Water Networks			*	
5	Rehabilitation/ Construction of New Wells or	*			3 springs
	Springs				
6	Construction of Water Reservoirs			*	
7	Construction of a Sewage Disposal Network	*			4km
8	Construction of a New Electricity Network	*			2km
9	Providing Containers for Solid Waste Collection	*			50 containers
10	Providing Vehicles for Collecting Solid Waste	*			1
11	Providing a Sanitary Landfill	*			
	Health M	Needs			
1	Building of New Clinics or Health Care Centres	*			1 health clinic
2	Rehabilitation of Old Clinics or Health Care Centres			*	
3	Purchasing of Medical Equipment and Tools			*	
	Educationa	al Needs			
1	Building of New Schools	*			secondary level
2	Rehabilitation of Old Schools			*	
3	Purchasing of New Equipment for Schools	*			preparatory level
	Agricultur	e Needs			
1	Rehabilitation of Agricultural Lands	*			50 dunums
2	Building Rainwater Harvesting Cisterns	*			15 cisterns
3	Construction of Barracks for Livestock			*	
4	Veterinary Services			*	
5	Seeds and Hay for Animals			*	
6	Construction of New Greenhouses	*			3 greenhouses
7	Rehabilitation of Greenhouses			*	
8	Field Crops Seeds	*			
9	Plants and Agricultural Supplies	*			
			•		•

<sup>\* 2</sup>km are main roads, 1.5km are sub-roads and 3km are agricultural roads.

Source: 'Ein Siniya Village Council, 2011.

## **References:**

- Al Dabbagh, M. Our Country, Palestine; Chapter 8, Part Two. Kafr Qari' Palestine. Dar al Huda Press, 1991.
- Applied Research Institute Jerusalem (ARIJ), 2012. Geographic Information Systems and Remote Sensing Unit Database. Bethlehem Palestine.
- Applied Research Institute Jerusalem (ARIJ), 2012. *Geographic Information Systems and Remote Sensing Unit; Land Use Analysis* (2010) Half Meter High Accuracy. Bethlehem Palestine.
- Applied Research Institute Jerusalem (ARIJ). 2012. Water & Environment Research Unit Database (WERU). Bethlehem Palestine.
- Applied Research Institute Jerusalem (ARIJ) & Spanish Centre of New Water Technologies (CENTA) (2010). A Proposed Environmentally Sound Wastewater Management System for the West Bank. 2010. Bethlehem – Palestine.
- 'Ein Siniya Village Council, 2011.
- Jerusalem Water Authority (for Ramallah & Al Bireh areas) (2011). Detection showing the amount of water sold from 1/1/2010 till 31/12/2010. Ramallah Palestine.
- Jerusalem Water Authority (2012). Jerusalem Water Authority's Website; Data Retrieved on the first of March. <a href="http://www.jwu.org/newweb/atemplate.php?id=87">http://www.jwu.org/newweb/atemplate.php?id=87</a>
- Ministry of Education & Higher Education (MOHE) Ramallah, 2011. Directorate of Education; A database of schools (2010/2011). Ramallah Palestine.
- Palestinian Central Bureau of Statistics. 2009. Ramallah, Palestine: General Census of Population and Housing Censuses, 2007.
- Palestinian Ministry of Agriculture (MOA), 2009. Directorate of Agriculture data (2008/2009).
  Ramallah Palestine.