

Bethlehem 21 Project

Environmental Sustainability for a Better Life: An Integrated Approach for Localizing Agenda 21 in the Bethlehem District

T3 "Creating Baseline Community Profiles"

Data Collection and Integration Report

Prepared by:



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Data Identification: Pressure-State-Response (PSR) Framework

The conceptual framework of the Organization for Economic Co-Operation and Development (OECD): Pressure-State-Response (PSR) has been used to identify the data types required to analyze and assess the environmental and socioeconomic conditions of the localities targeted by Bethlehem 21 Project. Table 1 outlines the information categories and data types required for the assessment, where the data types have been classified according to the PSR framework.

The PSR framework was used by the OECD to develop a core set of indicators for environmental performance reviews. The framework (Figure 1) is based on a concept of causality: human activities exert pressures (the "pressure" box) on the environment and change its quality and the quantity of natural resources (the "state" box). Society responds to these changes through environmental, general economic and sectoral policies (the "societal response"). The latter form a feedback loop to pressures through human activities. Accordingly, three broad types of indicators have been distinguished including the indicators of environmental pressures, indicators of environmental conditions and the indicators of societal responses. (Organization for Economic Co-Operation and Development, 1993)



Figure1: Pressure-State-Response Framework

Table 1:	The	Information	Categories	and Data	Types	Required	for th	e Assessment
			0					

Main Theme	Information Category "Theme"	Data Type	Data Category According to	Expected Data Availability
			The PSR Framework	"Geographical Level"
	Demography &	Population growth rate	Р	LL
	population	Fertility rate	R	DL
Population &	Housing	Floor area per person	S	LL
Society	Standard of life,	Percent of population living		DL
	employment, &	below poverty line	S	
	Poverty	Employment rate	R	LL
	Gender equality	Ratio of average female wage to male wage	R	DL
		Women per hundred men in the labor force	S	DL
		Ratio of literate women to men	S	DI
		Ratio of girls to boys in primary, secondary and	S	LL
		tertiary education		
	Education & education facilities	School enrolment ratio in primary and secondary	S	DL
		Adult literacy rate	\$	וח
		Number of Schools and	R	
		kindergartens	C C	
		schools	5	LL
		Class density (average number of students per class)	S	LL
	Health	Infant mortality rate	S	NL& DL
		Life expectancy at birth	S	NL & DL
		Population with adequate sewage disposal facilities	R	LL
		Population with access to safe drinking water	R	LL
		Percent of population with access to primary health care facilities	R	LL
	Consumption and production	Annual energy consumption per inhabitant	Р	NL
	patterns	Number of passenger cars per 100 inhabitants	Р	DL & LL
		Main telephone lines per 100 inhabitants	S	LL
Economic Activities	Economy	Employment distribution per economic activity	S	LL
	Agriculture	Use of agricultural pesticides	Р	LL
		Use of fertilizers per hectare	P	LL
		Share of irrigated agricultural	P	LL
		Agriculture water demand per	1	11
		irrigated area	Р	LL
		"Arable land" per capita	S	LL
	Industry	Industrial releases into water	P	DL & LL
	Energy	Share of consumption of	R	LL

		renewable resources		
	Transports	Density of the road network	S	LL
	Tourism	Number of nights per 100	Р	LL
		inhabitants		
		Number of bed-places per 100	Р	LL
		inhabitants		
		Number of international	Р	LL
		tourists per 100 inhabitants		
Lands & Areas	Land use and land	land uses		LL
	cover		<u>^</u>	
	Forests	Forest area	5	LL
		Forest protection rate	R	LL
	Urban systems	Urbanization rate	5	
		Loss of agricultural land due to	Р	DL & LL
		urbanization		DI
	Freshwater and	Annual withdrawals of		DL
E un dimensione e un t	wastewater	groundwater as of a percent of	D	
Environment		available water	Р	
		Daily per capita domestic	D	LL
		Water consumption	P	
		Drinking water use efficiency	K	LL
		Concentration of faecal	C	DL
		Conforms in freshwater	2	DI
		Biochemical oxygen demand in	c	DL
		Water Doules	3	
		Share of collected and treated		LL
		sowage system	D	
		Sewaye System	ĸ	
		troated on site	D	LL
	Soil vogotation		R C	11
	and desortification	"Arable land" change	5 C	
	Biological divorsity	Protoctod area as a porcent of	3	
		total area	D	DL & LL
	a ecosystems	Total expenditure on protected	IX.	NI
		areas management	R	IN L
		Threatened species	\$	NI
	Solid industrial	Generation of municipal solid	5	
	and hazardous	waste	Р	
	waste	Generation of bazardous		DI
	114010	wastes	Р	DL
		Generation of industrial solid		DI
		waste	Р	
		Distribution of municipal		LL
		wastes	S	
		Collection rate of household		LL
		wastes	R	
		Minimization of waste		LL
		production	R	
		Destination of municipal waste		LL
		(i.e. landfilling, incineration,		
		composting and recycling)	R	
		Expenditure on waste		LL
		management (collection and		
		treatment)	R	
		Cost recovery index of		LL
		municipal wastes	R	
	Air Quality	Emissions of greenhouse gasses	Р	NL & DL

	Emissions of sulphur oxides	Р	NL & DL
	Emissions of nitrogen oxides	Р	NL & DL

P = Pressure, S= State, R = Response

NL= National Level, DL = District Level, LL= Locality Level References: (United Nations, 2002) & (Blue Plan, 2000)

Data Collection & Integration into GIS

ARIJ project team members in cooperation with the technical employees from the involved local authorities/councils who received the on-job training on the Geographic Information System (GIS) and its applications were responsible for the collection and integration of the identified data into a harmonized GIS. The needs and recommendations of the involved local councils were taken into consideration and a harmonized GIS based information system was developed for each council. The following presents the relevant comprehensive metadatabase as well as a screen shot of the developed GIS based information system for each local council.

The Overall Metadatabase:

- Data Format:
 - a) Shapefile
 - b) Personal Geodatabase
 - c) Supporting Tables
- Aerial Photos:
 - a) Aerial Photo 2004, 1m Pixel Size, Full Coverage
 - b) Aerial Photo 2005, 25 cm /40cm Pixel Size, Partial Coverage
- Projection:
 - a) Cassini
 - b) Projected Coordinate System: Palestine Grid 1923
- Data Sources:
 - a) CAD Data
 - b) Aerial Photos Analyses
 - c) Reports and Statistics
 - d) Hard Copy Maps
 - e) Field Work
- Production Date: 30 October 2006 31 May 2007

AL Khader Municipality: Metadatabase

		Al Khader Mu	unicipality: Metadatabase		
ID	Laver Name	Type	Fields		No. of
10	Layor Hamo	. , , , , , , , , , , , , , , , , , , ,	Name	Туре	Records
1.	Main Features	Point	ID	Long	
			Name En	String	
			Name Ar	String	
			Туре	String	
			Telephone	Long	
				5	19
2.	Centerlines	Line	ID	Long	
			Name_En	String	
			Name_Ar	String	
			Туре	String	
			Width	Double	
			Length	Double	
					95
3.	Houses	Polygon	Parcel_ID	Short	
			Owner_Name	String	
			Code	String	
			Block_Number	Short	
			Block_Name	String	
			Parcel_Area	Double	
					971
4.	Sheets Boundaries	Polygon	ID	Long	
			Name	String	
			Area	Double	
					13
5.	Municipal Boundary	Polygon	ID	Long	
			Area	Double	
					1
6.	Parcels	Polygon	Parcel_ID	Short	
			Owner_Name	String	
			Code	String	
			Block_Number	Short	
			Block_Name	String	
			Parcel_Area	Double	
					862
7.	Solomon's Pools	Polygon	ID	Long	
			Area	Double	
					3
8.	Roads (Right of Way)	Polygon	ID	Long	
					1
9.	Landuse/Land Cover	Polygon	ID	Long	
			Level 1	String	
			Level 2	String	
			Level 3	String	

			Area	Double	
					466
10.	Aerial Photos	Raster	25cm, 2005	Full	
			1m. 2004	Full	
			, 2001		
11.	Industrial (industrial activities)	Point	Own.Name Ar.	String	
			Own.Name En.	String	
			Comp.Nam.Ar.	String	
			Comp.Nam.En.	String	
			Address	String	
			Street	String	
			Telephone	Long	
			Fax	Long	
			Sector	String	
			Activity Ar.	String	
			Activity En.	String	
			Commissioner	String	
			Class	String	
					7
12.	Kindergartens	Point	Name	String	
	Ŭ		Telephone	Long	
			Fax	Long	
			P.O.Box	Long	
			Teachers (M)	Short	
			Teachers (F)	Short	
			Students (M)	Short	
			Students (F)	Short	
			Directors (M)	Short	
			Directors (F)	Short	
			School Area	Double	
			Building Area	Double	
			Playground Ar.	Double	
			Class	String	
				0	2
13.	Schools	Point	Name	String	
			Telephone	Long	
			Fax	Long	
			P.O.Box	Long	
			Teachers (M)	Short	
			Teachers (F)	Short	
			Students (M)	Short	
			Students (F)	Short	
			Directors (M)	Short	
			Directors (F)	Short	
			School Area	Double	
			Building Area	Double	
			Playground Ar.	Double	
			Class	String	
					8
14.	Socioeconomic Data	Polygon			
14.1	Population Projected		Locality Name	Text	

1			NI I	
	End-Year population	Locality ID	Number	
		Projected Population 1998	Number	
		Projected Population 1999	Number	
		Projected Population 2000	Number	
		Projected Population 2001	Number	
		Projected Population 2002	Number	
		Projected Population 2003	Number	
		Projected Population 2004	Number	
		Projected Population 2005	Number	
		Projected Population 2006	Number	
		Projected Population 2007	Number	
		Population Increase (1997-	Number	
		2007) (%)		
				1
14.2	Population Growth	Locality Name	Text	
	Rate	Locality ID	Number	
		Growth Rate 1998 (%)	Number	
		Growth Rate 1999 (%)	Number	
		Growth Rate 2000 (%)	Number	
		Growth Rate 2001 (%)	Number	
		Growth Rate 2002 (%)	Number	
		Growth Rate 2003 (%)	Number	
	-	Growth Rate 2004 (%)	Number	
	-	Growth Rate 2005 (%)	Number	
	-	Growth Rate 2006 (%)	Number	
	-	Growth Rate 2007 (%)	Number	
				1
14.3	Population Distributio	Locality Name	Text	1
14.3	Population_Distributio	Locality Name Locality ID	Text Text	1
14.3	Population_Distributio n of Population by Sex	Locality Name Locality ID	Text Text Text	1
14.3	Population_Distributio n of Population by Sex	Locality Name Locality ID Locality Type Total Population - 1997	Text Text Text Number	1
14.3	Population_Distributio n of Population by Sex	Locality Name Locality ID Locality Type Total Population - 1997 Males - 1997	Text Text Text Number	1
14.3	Population_Distributio n of Population by Sex	Locality Name Locality ID Locality Type Total Population - 1997 Males - 1997	Text Text Text Number Number	1
14.3	Population_Distributio n of Population by Sex	Locality Name Locality ID Locality Type Total Population - 1997 Males - 1997 Females - 1997	Text Text Text Number Number Number	
14.3	Population_Distributio n of Population by Sex	Locality Name Locality ID Locality Type Total Population - 1997 Males - 1997 Females - 1997 % of Males	Text Text Text Number Number Number Number	
14.3	Population_Distributio n of Population by Sex	Locality Name Locality ID Locality Type Total Population - 1997 Males - 1997 Females - 1997 % of Males % of Females Soy Patia (male por 100	Text Text Text Number Number Number Number Number	
14.3	Population_Distributio n of Population by Sex	Locality Name Locality ID Locality Type Total Population - 1997 Males - 1997 Females - 1997 % of Males % of Females Sex Ratio (male per 100 females)	Text Text Text Number Number Number Number Number Number Number	
14.3	Population_Distributio n of Population by Sex	Locality Name Locality ID Locality Type Total Population - 1997 Males - 1997 Females - 1997 % of Males % of Females Sex Ratio (male per 100 females) Projected Population 2007	Text Text Text Number Number Number Number Number Number	
14.3	Population_Distributio n of Population by Sex	Locality Name Locality ID Locality Type Total Population - 1997 Males - 1997 Females - 1997 % of Males % of Females Sex Ratio (male per 100 females) Projected Population - 2007	Text Text Text Number Number Number Number Number Number Number	
14.3	Population_Distributio n of Population by Sex	Locality Name Locality ID Locality Type Total Population - 1997 Males - 1997 Females - 1997 % of Males % of Females Sex Ratio (male per 100 females) Projected Population - 2007 Males - 2007	Text Text Text Number Number Number Number Number Number Number Number	
14.3	Population_Distributio n of Population by Sex	Locality Name Locality ID Locality Type Total Population - 1997 Males - 1997 Females - 1997 % of Males % of Females Sex Ratio (male per 100 females) Projected Population - 2007 Males - 2007 Females - 2007	Text Text Text Number Number Number Number Number Number Number Number Number Number	
14.3	Population_Distributio n of Population by Sex	Locality Name Locality ID Locality Type Total Population - 1997 Males - 1997 Females - 1997 % of Males % of Females Sex Ratio (male per 100 females) Projected Population - 2007 Males - 2007 Females - 2007	Text Text Text Number Number Number Number Number Number Number Number Number	
14.3	Population_Distributio n of Population by Sex Population_Distributio	Locality Name Locality ID Locality Type Total Population - 1997 Males - 1997 Females - 1997 % of Males % of Females Sex Ratio (male per 100 females) Projected Population - 2007 Males - 2007 Females - 2007 Locality Name Locality ID	Text Text Text Number Number Number Number Number Number Number Number Text	
14.3	Population_Distributio n of Population by Sex Population_Distributio n of Population by Age Group and Sex	Locality Name Locality ID Locality Type Total Population - 1997 Males - 1997 Females - 1997 % of Males % of Females Sex Ratio (male per 100 females) Projected Population - 2007 Males - 2007 Females - 2007 Locality Name Locality ID	Text Text Text Number Number Number Number Number Number Number Number Text Number	
14.3	Population_Distributio n of Population by Sex Population_Distributio n of Population by Age Group and Sex	Locality Name Locality ID Locality Type Total Population - 1997 Males - 1997 Females - 1997 % of Males % of Females Sex Ratio (male per 100 females) Projected Population - 2007 Males - 2007 Females - 2007 Locality Name Locality ID Age Group	Text Text Text Number Number Number Number Number Number Number Number Text Number Number	
14.3	Population_Distributio n of Population by Sex Population_Distributio n of Population by Age Group and Sex	Locality Name Locality ID Locality Type Total Population - 1997 Males - 1997 Females - 1997 % of Males % of Females Sex Ratio (male per 100 females) Projected Population - 2007 Males - 2007 Females - 2007 Locality Name Locality Name Locality ID Age Group Total Population-1997	Text Text Text Number Number Number Number Number Number Number Number Text Number Number Number	
14.3	Population_Distributio n of Population by Sex Population_Distributio n of Population by Age Group and Sex	Locality Name Locality ID Locality Type Total Population - 1997 Males - 1997 Females - 1997 % of Males % of Females Sex Ratio (male per 100 females) Projected Population - 2007 Males - 2007 Females - 2007 Females - 2007 Locality Name Locality ID Age Group Total Population-1997 % of Population	Text Text Text Number Number Number Number Number Number Number Number Text Number Number Number Number Number	
14.3	Population_Distributio n of Population by Sex Population_Distributio n of Population by Age Group and Sex	Locality Name Locality ID Locality Type Total Population - 1997 Males - 1997 Females - 1997 % of Males % of Females Sex Ratio (male per 100 females) Projected Population - 2007 Males - 2007 Females - 2007 Females - 2007 Locality Name Locality Name Locality ID Age Group Total Population-1997 % of Population	Text Text Text Number Number Number Number Number Number Number Number Text Number Number Number Number Number Number Number Number	
14.3	Population_Distributio n of Population by Sex Population_Distributio n of Population by Age Group and Sex	Locality Name Locality ID Locality Type Total Population - 1997 Males - 1997 Females - 1997 % of Males % of Females Sex Ratio (male per 100 females) Projected Population - 2007 Males - 2007 Females - 2007 Females - 2007 Locality Name Locality Name Locality ID Age Group Total Population-1997 % of Population Number of Males	Text Text Text Number	
14.3	Population_Distributio n of Population by Sex Population_Distributio n of Population by Age Group and Sex	Locality Name Locality ID Locality Type Total Population - 1997 Males - 1997 Females - 1997 % of Males % of Females Sex Ratio (male per 100 females) Projected Population - 2007 Males - 2007 Females - 2007 Females - 2007 Locality Name Locality Name Locality ID Age Group Total Population-1997 % of Population Number of Males Number of Females	Text Text Text Number	
14.3 14.4 14.5	Population_Distributio n of Population by Sex Population_Distributio n of Population by Age Group and Sex Population_Distributio	Locality Name Locality ID Locality Type Total Population - 1997 Males - 1997 Females - 1997 % of Males % of Females Sex Ratio (male per 100 females) Projected Population - 2007 Males - 2007 Females - 2007 Females - 2007 Locality Name Locality ID Age Group Total Population-1997 % of Population Number of Males Number of Females	Text Text Text Text Number	
14.3	Population_Distributio n of Population by Sex Population_Distributio n of Population by Age Group and Sex Population_Distributio n of Households by	Locality Name Locality ID Locality Type Total Population - 1997 Males - 1997 Females - 1997 % of Males % of Females Sex Ratio (male per 100 females) Projected Population - 2007 Males - 2007 Females - 2007 Females - 2007 Locality Name Locality ID Age Group Total Population-1997 % of Population Number of Males Number of Females	TextTextTextTextNumber	

			Number of Households-1997	Number	
			Number of Population-1997	Number	
			% of Population	Number	
			Average Household Size - 1997	Number	
					12
14.6	Economic	Polygon	Locality Name	Text	
	Establishments		Economic activity	Text	
			Number of establishments- 1997	Number	
			Number of Persons engaged - 1997 (Both Sexes)	Number	
			Number of Males engaged - 1997	Number	
			Number of Females engaged - 1997	Number	
			Number of establishments- 2006	Number	
			Number of Persons engaged - 2006 (Both Sexes)	Number	
			Number of Males engaged - 2006	Number	
			Number of Females engaged - 2006	Number	
					11
15.	Climate Data	Polygon	Locality Name	Text	
			Locality ID	Text	
			Station Name	Text	
			Station ID	Number	
			Station Type	Text	
			Year	Number	
			Rainfall_Oct (mm)	Number	
			Rainfall_Nov (mm)	Number	
			Rainfall_Dec (mm)	Number	
			Rainfall_Jan (mm)	Number	
			Rainfall_Fab (mm)	Number	
			Rainfall Mar (mm)	Number	
			Rainfall Apr (mm)	Number	
			Rainfall May (mm)	Number	
					17
16.	Solid Waste Management	Polygon	Locality Name	Text	
			Locality ID	Number	
		l l	Locality Type	Text	
			Projected Population 2007	Number	
			Daily Per Capita Solid Waste	Number	
			Generation Rate_(Kg)		
			Daily Quantity of Solid Waste	Number	
			Delly Questity of Solid Wests	Number	
			Concreted (top)	Number	
			Appual Quantity of Solid Wasto	Number	
			Generated Calculated (top)	NULLIDEI	
			Annual Quantity of Solid Waste	Number	
		1			

-					
		1	Generated_(ton)		
			Authority Responsible for	Text	
			Collection and Disposal of		
			Solid Waste		
			Solid Waste Collection Rate	Number	
			Frequency of Collection	Text	
			Annual Quantity of Solid Waste	Number	
			Collected_Calculated_(ton)		
			Annual Quantity of Solid Waste	Number	
			Collected_(ton)		
			Solid Waste	Number	
			Composition_Percentage of		
			Plastic		
			Solid Waste	Number	
			Composition_Percentage of		
			Paper and Cardboard		
			Solid Waste	Number	
			Composition_Percentage of		
			Organic Materials		
			Solid Waste	Number	
			Composition_Percentage of		
			Metals		
			Solid Waste	Number	
			Composition_Percentage of		
			Glass		
			Solid Waste	Number	
			Composition_Percentage of		
			Others		
			Number of Collection	Number	
			Vehicles/Trucks (1 - 11 Tons)		
			Number of Collection	Number	
			Venicies/Trucks (18 - 24 CIVI)		
			Number of Collection Bins	Number	
			(Small 0.75 - 1.1 CIVI)		
			Number of Collection Bins	Number	
			(Large)	Taut	
			Final Disposal of Collected	Text	
			Solid Waste		
			X coordinate of the Disposal	Indumber	
			Sile_uliii	Number	
			Site utm	Number	
			Masta Management Dractice	Toyt	
			Frequency of Disposal	Text	
			Solid Wasto Disposal	Number	
			Solid Waste Disposal	Number	
		+	Solid Wasto Collection and	Number	
			Disposal Monthly Foos (MIS por	NULLING	
			bousehold)		
		+	% of Dopulation Who Day the	Number	
			Foos	Number	
					1
17	Water & Wastewater	Polyaon			
		1 01/9011	1	1	

	Management			
17.1	Water Supply and	Locality Name	Text	
	Consumption	Locality ID	Number	
		Locality Type	Text	
		Water Supply Utility	Text	
		Projected Population 2007	Number	
		Water Network Coverage	Number	
		2007 (% of Population)	Number	
		Total Water Supply Bulk	Number	
		Meters (CM)	Number	
		Daily Per Capita Water	Number	
		Supply (L)	Number	
		Physical Water Losses	Number	
		Daily Per Canita Water	Number	
		Consumption (1)	Number	
				1
17.2	Water	Spring ID	Number	
	Resources Springs	 Spring Name	Text	
	Resources_oprings	Ground elevation	Number	
			Number	
		Locality Name	Tovt	
		District	Toxt	
		Aquifor	Text	
		 Moon Discharge (CM/Vr)	Numbor	
		 V Coordinate utm	Number	
		X Coordinate_utm	Number	
		Y Coordinate_utm	numper	1
17.2	Westowator	Leoglity Name	Toxt	1
17.5	Concration		Numbor	
	Generation		Number	
		Locality Type	Numeron	
		Projected Population 2007	Number	
		Daily Per Capita water	number	
		Consumption_(L)	Niu una la la va	
		Daily volume of wastewater	namnn	
		Generated_(CM)		
		Annual Volume of Wastewater	Number	
		Annual Volume of Wastewater Generated_(CM)	Number	
		Annual Volume of Wastewater Generated_(CM) Daily Per Capita Wastewater	Number Number	
		Annual Volume of Wastewater Generated_(CM) Daily Per Capita Wastewater Generation_(L)	Number Number	
		Annual Volume of Wastewater Generated_(CM) Daily Per Capita Wastewater Generation_(L) Percentage of Population	Number Number Number	
		Annual Volume of Wastewater Generated_(CM) Daily Per Capita Wastewater Generation_(L) Percentage of Population Connected to Sewage Network	Number Number Number	
		Annual Volume of Wastewater Generated_(CM) Daily Per Capita Wastewater Generation_(L) Percentage of Population Connected to Sewage Network Number of Population	Number Number Number Number	
		Annual Volume of Wastewater Generated_(CM) Daily Per Capita Wastewater Generation_(L) Percentage of Population Connected to Sewage Network Number of Population Connected to Sewage Network	Number Number Number Number	
		Annual Volume of Wastewater Generated_(CM) Daily Per Capita Wastewater Generation_(L) Percentage of Population Connected to Sewage Network Number of Population Connected to Sewage Network Number of Population	Number Number Number Number Number	
		Annual Volume of Wastewater Generated_(CM) Daily Per Capita Wastewater Generation_(L) Percentage of Population Connected to Sewage Network Number of Population Connected to Sewage Network Number of Population Unconnected to Sewage	Number Number Number Number Number	
		Annual Volume of Wastewater Generated_(CM) Daily Per Capita Wastewater Generation_(L) Percentage of Population Connected to Sewage Network Number of Population Connected to Sewage Network Number of Population Unconnected to Sewage Network	Number Number Number Number Number	
		Annual Volume of Wastewater Generated_(CM) Daily Per Capita Wastewater Generation_(L) Percentage of Population Connected to Sewage Network Number of Population Connected to Sewage Network Number of Population Unconnected to Sewage Network Percentage of Population using	Number Number Number Number Number	
		Annual Volume of Wastewater Generated_(CM) Daily Per Capita Wastewater Generation_(L) Percentage of Population Connected to Sewage Network Number of Population Connected to Sewage Network Number of Population Unconnected to Sewage Network Percentage of Population using Cesspits for Wastewater	Number Number Number Number Number	
		Annual Volume of Wastewater Generated_(CM) Daily Per Capita Wastewater Generation_(L) Percentage of Population Connected to Sewage Network Number of Population Connected to Sewage Network Number of Population Unconnected to Sewage Network Percentage of Population using Cesspits for Wastewater Disposal	Number Number Number Number Number	
		Annual Volume of Wastewater Generated_(CM) Daily Per Capita Wastewater Generation_(L) Percentage of Population Connected to Sewage Network Number of Population Connected to Sewage Network Number of Population Unconnected to Sewage Network Percentage of Population using Cesspits for Wastewater Disposal Daily Volume of Wastewater	Number Number Number Number Number Number	
		Generated_(CM)Annual Volume of WastewaterGenerated_(CM)Daily Per Capita WastewaterGeneration_(L)Percentage of PopulationConnected to Sewage NetworkNumber of PopulationConnected to Sewage NetworkNumber of PopulationUnconnected to SewageNetworkPercentage of Population usingCesspits for WastewaterDisposalDaily Volume of WastewaterCollected by Sewage	Number Number Number Number Number Number	
		Generated_(CM)Annual Volume of WastewaterGenerated_(CM)Daily Per Capita WastewaterGeneration_(L)Percentage of PopulationConnected to Sewage NetworkNumber of PopulationConnected to Sewage NetworkNumber of PopulationUnconnected to SewageNetworkPercentage of Population usingCesspits for WastewaterDisposalDaily Volume of WastewaterCollected by SewageNetwork_(CM)	Number Number Number Number Number Number	

			Collected by Sowage		
			Notwork (CM)		
			Daily Volume of Wastewater	Number	
			Collected in Cesspits (CM)	Number	
			Annual Volume of Wastewater	Number	
			Collected in Cesspits_(CM)		
			Daily Wastewater Outflow of	Number	
			the Sewage Network_(CM)		
					1
17.4	Public Sewage		Locality Name	Text	
	Networks		Locality ID	Number	
			Availability of a Sewage	Text	
			Network		
			Construction Year of the Sewage Network	Number	
			Length of the Sewage	Number	
			Network (km)	Training of	
			Diameter of Main Sewer	Number	
			Lines_(inch)		
			Type of Sewage Collection	Text	
			System		
			Status of the Sewage Network	Text	
			Daily Wastewater Outflow of	Number	
			the Sewage Network_(CM)		
			The Outlet Pipeline of the Network Ends in	Text	
			X Coordinate of Pumping	Number	
			Station_utm		
			Y Coordinate of Pumping	Number	
			Station_utm		
			Daily Wastewater Inflow of the	Number	
			Pumping Station from Each		
			Final Disposal Mothod of the	Toyt	
			Effluent from the Pumping	Text	
			Station		
					1
17.5	Disposal of Wastewater		Final disposal method of	Text	
	Collected in Cesspits		wastewater collected in		
			cesspits		
			Name of the wadi/valley	Text	
			X Coordinate of the Discharge	Number	
			Point_utm		
			Y Coordinate of the Discharge	Number	
			Point_utm	Taut	
			Locality location in Relation to	Iext	
		<u> </u>	Discharge Point Location in	Text	
			Relation to Groundwater		
			Recharge Areas		
					1
18.	Agriculture	Polygon			
18.1	Agriculture_Statistics		Locality Name	Text	

		Locality ID	Number	
		Area of agricultural land	Number	
		(Dunum)		
		Area of cultivable land	Number	
		(Dunum)		
		Area of plastic houses (Dunum)	Number	
		Farming area (Dunum)	Number	
		Area of Vegetables(Dunum)	Number	
		Area of Almonds (Dunum)	Number	
		Area of Nuts (Dunum)	Number	
		Area of Apples (Dunum)	Number	
		Area of Olives (Dunum)	Number	
		Area of Grapes (Dunum)	Number	
		Area of Figs (Dunum)	Number	
				1
12 2				
10.2	Agriculture_Livestock	Locality Name	Text	
10.2	Agriculture_Livestock	Locality Name Locality ID	Text Number	
10.2	Agriculture_Livestock	Locality Name Locality ID Number of Sheep	Text Number Number	
10.2	Agriculture_Livestock	Locality Name Locality ID Number of Sheep Number of Goat	Text Number Number Number	
10.2	Agriculture_Livestock	Locality Name Locality ID Number of Sheep Number of Goat Number of broiler farms	Text Number Number Number Number	
10.2	Agriculture_Livestock	Locality Name Locality ID Number of Sheep Number of Goat Number of broiler farms Number of Broilers (thousand	Text Number Number Number Number	
10.2	Agriculture_Livestock	Locality Name Locality ID Number of Sheep Number of Goat Number of broiler farms Number of Broilers (thousand bird)	Text Number Number Number Number	
10.2	Agriculture_Livestock	Locality Name Locality ID Number of Sheep Number of Goat Number of broiler farms Number of Broilers (thousand bird) Number of layer farms	Text Number Number Number Number Number	
10.2	Agriculture_Livestock	Locality Name Locality ID Number of Sheep Number of Goat Number of broiler farms Number of Broilers (thousand bird) Number of layer farms Number of Layers (thousand	Text Number Number Number Number Number Number	
10.2	Agriculture_Livestock	Locality Name Locality ID Number of Sheep Number of Goat Number of broiler farms Number of Broilers (thousand bird) Number of layer farms Number of Layers (thousand bird)	Text Number Number Number Number Number Number	
10.2	Agriculture_Livestock	Locality Name Locality ID Number of Sheep Number of Goat Number of broiler farms Number of Broilers (thousand bird) Number of layer farms Number of Layers (thousand bird) Number of Beehives	Text Number Number Number Number Number Number Number	

A Screen shot of the Developed GIS Based Information System for AI Khader Municipality





Battir Village Council: Metadatabase

ID Layer Name Type Fields	No. of Records
Name	Records
Name Type	
1. Main Features Point ID Long	
Name_Ar String	
Type String	
Telephone Long	
	11
2. Centerlines Line ID Long	
Name_En String	
Name_Ar String	
Type String	
Width Double	
Length Double	
	95
3. Houses Polygon ID Short	
Code String	
	719
4. Boundary Polygon ID Long	
Area Double	
	1
5. Contour Lines Line ID Long	
Elevation Double	
	1,013
6. Roads (Right of Way) Polygon ID Long	
	1
7. Landuse/Land Cover Polygon ID Long	
Level 1 String	
Level 2 String	
Level 3 String	
Area Double	000
O Electric Delec Deint ID	998
8. Electric Poles Point ID Long	220
0 Uligh Voltage Deles Deint ID	228
9. High voltage Poles Point ID Long	22
10 Dailway Lino ID	22
TO. Ranway Line TD Long	1
11 Poads Edgolinos Lino ID	
	7/0
12 Aerial Photos Paster 25cm 2005 Eull	740
13 Schools Point Name String	
Telenhone Long	
Fax Long	
P O Box Long	
Teachers (M) Short	

[Topphore (E)	Chart	
				Short	
				SNOL	
			Students (F)	Short	
			Directors (M)	Short	
			Directors (F)	Short	
			School Area	Double	
			Building Area	Double	
			Playground Ar.	Double	
			Class	String	
					2
14.	Socioeconomic Data	Polygon			
14.1	Population Projected		Locality Name	Text	
	End-Year population		Locality ID	Number	
			Projected Population 1998	Number	
			Projected Population 1999	Number	
			Projected Population 2000	Number	
			Projected Population 2001	Number	
			Projected Population 2002	Number	
			Projected Population 2003	Number	
			Projected Population 2004	Number	
			Projected Population 2005	Number	
			Projected Population 2006	Number	
			Projected Population 2007	Number	
			Population Increase (1997-	Number	
			2007) (%)	Number	
					1
14.2	Population Growth Rate		Locality Name	Text	
			Locality ID	Number	
			Growth Rate 1998 (%)	Number	
			Growth Rate 1999 (%)	Number	
			Growth Rate 2000 (%)	Number	
			Growth Rate 2001 (%)	Number	
			Growth Rate 2002 (%)	Number	
			Growth Rate 2003 (%)	Number	
			Growth Rate 2004 (%)	Number	
			Growth Rate 2004 (%)	Number	
			Growth Rate 2005 (%)	Number	
			Growth Rate 2000 (%)	Number	
				Number	1
14.3	Population Distribution		Locality Name	Text	1
14.5	of Population by Sex			Text	
	or ropulation by sex		Locality Type	Toxt	
			Locality Type	Number	
			Total Population - 1997	Number	
			Males - 1997	Number	
			Females - 1997	Number	
			% of Males	Number	
			% of Females	Number	
			Sex Ratio (male per 100	Number	
			remaies)	NI.	
			Projected Population - 2007	Number	
			Males - 2007	Number	
1		1	Females - 2007	Number	

					1
14 4	Population Distribution		Locality Name	Text	
	of Population by Age			Number	
	Group and Sex		Age Group	Number	
			Total Population-1997	Number	
			% of Population	Number	
			Number of Males	Number	
		-	Number of Females	Number	
				Number	Λ
14 5	Population Distribution		Locality Namo	Toxt	4
14.0	of Households by			Number	
	Household Size			Number	
	Household Size		Household Size	Numper	
			Number of Households-1997	number	
			Number of Population-1997	Number	
			% of Population	Number	
			Average Household Size - 1997	Number	10
4.4.7					12
14.6	Economic Establishments	Polygon	Locality Name	Text	
			Economic activity	Text	
			Number of establishments- 1997	Number	
			Number of Persons engaged - 1997 (Both Sexes)	Number	
			Number of Males engaged -	Number	
			Number of Females engaged -	Number	
			Number of establishments-	Number	
			Number of Persons engaged - 2006 (Both Sexes)	Number	
			Number of Males engaged - 2006	Number	
			Number of Females engaged - 2006	Number	
					8
15.	Solid Waste Management	Polygon	Locality Name	Text	
			Locality ID	Number	
			Locality Type	Text	
			Projected Population 2007	Number	
			Daily Per Capita Solid Waste	Number	
			Generation Rate_(Kg)		
			Daily Quantity of Solid Waste	Number	
			Generated_Calculated_(ton)		
			Daily Quantity of Solid Waste Generated (ton)	Number	
			Annual Quantity of Solid	Number	
			Generated_Calculated_(ton)	Ni una la	
			Waste Generated_(ton)	Number	
			Authority Responsible for Collection and Disposal of	Text	

			Solid Waste		
			Solid Waste Collection Rate	Number	
			Frequency of Collection	Text	
			Annual Quantity of Solid	Number	
			Waste	Truinio or	
			Collected Calculated (ton)		
			Annual Quantity of Solid	Number	
			Waste Collected (ton)		
			Solid Waste	Number	
			Composition Percentage of		
			Plastic		
			Solid Waste	Number	
			Composition_Percentage of		
			Paper and Cardboard		
			Solid Waste	Number	
			Composition_Percentage of		
			Organic Materials		
			Solid Waste	Number	
			Composition_Percentage of		
			Metals		
			Solid Waste	Number	
			Composition_Percentage of		
			Glass		
			Solid Waste	Number	
			Composition_Percentage of		
			Others		
			Number of Collection	Number	
			Vehicles/Trucks (1 - 11 Tons)		
			Number of Collection	Number	
			Vehicles/Trucks (18 - 24 CM)		
			Number of Collection Bins	Number	
			(Small 0.75 - 1.1 CM)		
			Number of Collection Bins	Number	
			(Large)		
			Final Disposal of Collected	Text	
			Solid Waste		
			X Coordinate of the Disposal	Number	
			Site_utm	NI I	
			Y COORDINATE OF THE DISPOSAL	Number	
			Sile_ulm	Taut	
				Text	
			Frequency of Disposal	Text	
			Solid Waste Disposal	reamun	
			FEES_(INIS/ LUII)	Number	
			Disposal Monthly Face (NIS	Number	
			Disposal wonthing rees_(INIS		
			% of Dopulation Who Doy the	Number	
			Foos	Number	
			1 563		1
16	Water & Wastewater	Polygon			
10.	Management	rorygon			
16 1	Water Supply and		Locality Name	Text	
		1			1

Consumption		Locality ID	Numbor	
consumption			Toyt	
		Water Supply Utility	Text	
			Text	
		Projected Population 2007	Number	
		Water Network Coverage 2007 (% of Population)	Number	
		Total Water Supply_Bulk	Number	
		Meters_(CM)		
		Daily Per Capita Water	Number	
		Supply_(L)		
		Physical Water Losses	Number	
		Daily Per Capita Water	Number	
				1
16.2 Water Pesources	Springs	Spring ID	Numbor	1
10.2 Water Resources_	spi ings	Spring Name	Toyt	
			Numero	
		Ground elevation	Number	
			number	
		Locality Name	Text	
		District	Text	
		Aquifer	Text	
		Mean Discharge_(CM/Yr)	Number	
		X Coordinate_utm	Number	
		Y Coordinate_utm	Number	
				2
16.3 Wastewater Gener	ration	Locality Name	Text	
		Locality ID	Number	
		Locality Type		
		Projected Population 2007	Number	
		Daily Per Capita Water	Number	
		Consumption_(L)		
		Daily Volume of Wastewater	Number	
		Generated_(CM)		
		Annual Volume of Wastewater	Number	
		Daily Per Capita Wastewater	Number	
		Daily Per Capita Wastewater Generation_(L)	Number	
		Daily Per Capita Wastewater Generation_(L) Percentage of Population	Number Number	
		Daily Per Capita Wastewater Generation_(L) Percentage of Population Connected to Sewage Network	Number Number	
		Daily Per Capita Wastewater Generation_(L) Percentage of Population Connected to Sewage Network Number of Population	Number Number Number	
		Daily Per Capita Wastewater Generation_(L) Percentage of Population Connected to Sewage Network Number of Population Connected to Sewage Network	Number Number Number	
		Daily Per Capita Wastewater Generation_(L) Percentage of Population Connected to Sewage Network Number of Population Connected to Sewage Network Number of Population	Number Number Number Number	
		Daily Per Capita Wastewater Generation_(L) Percentage of Population Connected to Sewage Network Number of Population Connected to Sewage Network Number of Population Unconnected to Sewage	Number Number Number Number	
		Daily Per Capita Wastewater Generation_(L) Percentage of Population Connected to Sewage Network Number of Population Connected to Sewage Network Number of Population Unconnected to Sewage Network	Number Number Number Number	
		DefinitionDaily Per Capita WastewaterGeneration_(L)Percentage of PopulationConnected to Sewage NetworkNumber of PopulationConnected to Sewage NetworkNumber of PopulationUnconnected to SewageNetworkPercentage of Populationusing Cesspits for Wastewater	Number Number Number Number	
		DefinitionDaily Per Capita WastewaterGeneration_(L)Percentage of PopulationConnected to Sewage NetworkNumber of PopulationConnected to Sewage NetworkNumber of PopulationUnconnected to SewageNetworkPercentage of Populationusing Cesspits for WastewaterDisposal	Number Number Number Number	
		DefinitionDaily Per Capita WastewaterGeneration_(L)Percentage of PopulationConnected to Sewage NetworkNumber of PopulationConnected to Sewage NetworkNumber of PopulationUnconnected to SewageNetworkPercentage of Populationusing Cesspits for WastewaterDisposalDaily Volume of Wastewater	Number Number Number Number Number	
		DefinitionDaily Per Capita WastewaterGeneration_(L)Percentage of PopulationConnected to Sewage NetworkNumber of PopulationConnected to Sewage NetworkNumber of PopulationUnconnected to SewageNetworkPercentage of Populationusing Cesspits for WastewaterDisposalDaily Volume of WastewaterCollected by Sewage	Number Number Number Number Number	
		Daily Per Capita Wastewater Generation_(L) Percentage of Population Connected to Sewage Network Number of Population Connected to Sewage Network Number of Population Unconnected to Sewage Network Percentage of Population using Cesspits for Wastewater Disposal Daily Volume of Wastewater Collected by Sewage Network_(CM)	Number Number Number Number Number	
		Definition Generation_(L)Daily Per Capita Wastewater Generation_(L)Percentage of Population Connected to Sewage NetworkNumber of Population Connected to Sewage NetworkNumber of Population Unconnected to Sewage NetworkPercentage of Population using Cesspits for Wastewater DisposalDaily Volume of Wastewater Collected by Sewage Network_(CM)Annual Volume of Wastewater	Number Number Number Number Number Number	

			Daily Volume of Wastewater	Number	
			Conected in Cesspits_(CM)	Ni, una la la ra	
			Collected in Cesspits_(CM)	Number	
			Daily Wastewater Outflow of the Sewage Network (CM)	Number	
			the sewage network_(em)		1
16.4	Disposal of Wastewater		Final disposal method of	Text	
10.1	Collected in Cesspits		wastewater collected in	TOXE	
			cesspits		
			Name of the wadi/valley	Text	
			X Coordinate of the Discharge	Number	
			Point_utm		
			Y Coordinate of the Discharge	Number	
			Point_utm		
			Locality location in Relation	Text	
			to Groundwater Recharge		
			Areas	Tout	
			Polation to Groundwater	Text	
			Recharge Areas		
			Recharge Areas		1
17.	Agriculture	Polygon			
17.1	Agriculture Statistics		Locality Name	Text	
	5		Locality ID	Number	
			Area of agricultural land	Number	
			(Dunum)		
			Area of cultivable land	Number	
			(Dunum)		
			Area of plastic houses	Number	
			(Dunum)		
			Farming area (Dunum)	Number	
			Area of Vegetables(Dunum)	Number	
			Area of Almonds (Dunum)	Number	
			Area of Apples (Dupum)	Number	
			Area of Olives (Dunum)	Number	
			Area of Grapes (Dunum)	Number	
			Area of Figs (Dunum)	Number	
					1
17.2	Agriculture Livestock		Locality Name	Text	-
	5 1		Locality ID	Number	
			Number of Sheep	Number	
			Number of Goat	Number	
			Number of broiler farms	Number	
			Number of Broilers (thousand	Number	
			Number of laver farms	Number	
			Number of Lavers (thousand	Number	
			bird)		
			Number of Beehives	Number	
					1

A Screen Shot of the Developed GIS Based Information System for Battir Village Council





Za'tara Municipality: Metadatabase

	Z	a'tara Mun	icipality: Metadatabase		
ID	Layer Name	Туре	Fields		No. of
		51	Name	Туре	Records
1.	Main Features	Point	ID	Long	
			Name_Ar	String	
			Picture	String	
			Telephone	Double	
					14
2.	Centerlines	Line	ID	Long	
			Name_En	String	
			Name_Ar	String	
			Туре	String	
			Width	Double	
			Length	Double	
					79
3.	Houses	Polygon	ID	Long	
			Owner_Name	String	
					1,277
4.	Boundary	Polygon	ID	Long	
			Area	Double	
					1
5.	Contour Lines	Line	ID	Long	
			Elevation	Double	
					198
6.	Roads (Right of Way)	Polygon	ID	Long	
					8
7.	Landuse/Land Cover	Polygon	ID	Long	
			Level 1	String	
			Level 2	String	
			Level 3	String	
			Area	Double	
					1,527
8.	Electric Poles	Point	ID	Short	
					513
9.	High Voltage Poles	Point	ID	Short	
10			10		14
10.	Roads Edgelines	Line	ID	Long	0 (
4.4		1.1	10		96
11.	Water Pipes Net. (water network)	Line	D	Long	
			Diameter	Float	
			Length	Short	
					28
12.	Landuse	Polygon	ID	Long	
			Туре	String	
					83

13.	Aerial Photos	Raster	1m, 2004	Full	
14	Kindergartens	Point	Name	String	
1 1.		1 OIIIt	Telephone	Long	
			Fax	Long	
			P O Box	Long	
			Teachers (M)	Short	
			Teachers (F)	Short	
			Students (M)	Short	
			Students (F)	Short	
			Directors (M)	Short	
			Directors (F)	Short	
			School Area	Double	
			Building Area	Double	
			Playground Ar.	Double	
			Class	String	
				l	2
15.	Schools	Point	Name	String	
			Telephone	Long	
			Fax	Long	
			P.O.Box	Long	
			Teachers (M)	Short	
			Teachers (F)	Short	
			Students (M)	Short	
			Students (F)	Short	
			Directors (M)	Short	
			Directors (F)	Short	
			School Area	Double	
			Building Area	Double	
			Playground Ar.	Double	
			Class	String	
					5
16.	Socioeconomic Data	Polygon			
16.1	Population Projected	55	Locality Name	Text	
	End-Year population		Locality ID	Number	
			Projected Population 1998	Number	
			Projected Population 1999	Number	
			Projected Population 2000	Number	
			Projected Population 2001	Number	
			Projected Population 2002	Number	
			Projected Population 2003	Number	
			Projected Population 2004	Number	
			Projected Population 2005	Number	
			Projected Population 2006	Number	
			Projected Population 2007	Number	
			Population Increase (1997-	Number	
			2007) (%)		
				-	1
16.2	Population Growth Rate		Locality Name	lext	
			Locality ID	Number	
			Growth Rate 1998 (%)	Number	

		r			
			Growth Rate 1999 (%)	Number	
			Growth Rate 2000 (%)	Number	
			Growth Rate 2001 (%)	Number	
			Growth Rate 2002 (%)	Number	
			Growth Rate 2003 (%)	Number	
			Growth Rate 2004 (%)	Number	
			Growth Rate 2005 (%)	Number	
			Growth Rate 2006 (%)	Number	
			Growth Rate 2007 (%)	Number	
					1
16.3	Population_Distribution		Locality Name	Text	
	of Population by Sex		Locality ID	Text	
			Locality Type	Text	
			Total Population - 1997	Number	
			Males - 1997	Number	
			Females - 1997	Number	
			% of Males	Number	
			% of Females	Number	
			Sex Ratio (male per 100	Number	
			females)		
			Projected Population - 2007	Number	
			Males - 2007	Number	
			Females - 2007	Number	
					1
16.4	Population_Distribution		Locality Name	Text	
	of Population by Age		Locality ID	Number	
	Group and Sex		Age Group	Number	
			Total Population-1997	Number	
			% of Population	Number	
			Number of Males	Number	
			Number of Females	Number	
					4
16.5	Population_Distribution		Locality Name	Text	
	of Households by		Locality ID	Number	
	Household Size		Household Size	Number	
			Number of Households-1997	Number	
			Number of Population-1997	Number	
			% of Population	Number	
			Average Household Size - 1997	Number	
					12
16.6	Economic Establishments	Polygon	Locality Name	Text	
			Economic activity	Text	
			Number of establishments-	Number	
			1997		
			Number of Persons engaged -	Number	
			1997 (Both Sexes)		
			Number of Males engaged - 1997	Number	
			Number of Females engaged -	Number	
			Number of establishments-	Number	
			2006		

Number of Persons engaged - 2006 (Both Sexes) Number Number of Males engaged - 2006 Number Image: Number of Females engaged - 2006 Text Image: Number of Females engaged - 2006 Number Image: Number engage: Number of Females engage: Number Number Image: Number engage: Number						
Number Number of Kales engaged - 2006 Number 17. Climate Data Polygon Locality Name Text 17. Station Name Text Number 18. Station Type Text Number 19. Rainfall_Oct (mm) Number Rainfall_Cast (mm) Number 19. Rainfall_Cast (mm) Number Rainfall_Cast (mm) Number 19. Rainfall_Mar (mm) Number Rainfall_Mar (mm) Number 19. Rainfall_Mar (mm) Number Number Rainfall_Mar (mm) Number 19. Coality Type Text Daily Davatity of Solid Waste Generatid				Number of Persons engaged - 2006 (Both Sexes)	Number	
2006 Number of Females engaged - 2006 Number 17. Climate Data Polygon Locality Name Text 16. Climate Data Polygon Locality ID Text 17. Climate Data Station Name Text Text 17. Climate Data Station Name Text Text 18. Station Name Text Text Text 19. Station Type Text Number 10. Station Type Text Number 10. Rainfall_Oct (mm) Number Number 10. Rainfall_Dec (mm) Number Rainfall_Pab (mm) Number 10. Rainfall_Jan (mm) Number Rainfall_Mar (mm) Number 11. Rainfall_Mar (mm) Number Rainfall_Mar (mm) Number 11. Rainfall_Mar (mm) Number Text Text Text 12. Rainfall_Apr (mm) Number Daily Outprope Text Text Text Text				Number of Males engaged -	Number	
Number of Pentales engaged - Number 2006 7 17. Climate Data Polygon Locality Name Text 11. Climate Data Polygon Locality ID Text 11. Station Name Text Station Name Text 11. Station ID Number Number 11. Rainfall_Oct (mm) Number Number 11. Rainfall_Oct (mm) Number 11. Rainfall_Doc (mm) Number 11. Rainfall_Alow (mm) Number 12. Rainfall_May (mm) Number 13. Solid Waste Management Polygon Locality Name Text 14. Polygon Locality Name Text Text 13. Solid Waste Management Polygon Locality Name Text 14. Projected Population 2007 Number Daily Por Capita Solid Waste				2006 Number of Females engaged	Number	
Image: constraint of the second state of the seco				2006	Number	
17. Climate Data Polygon Locality Name Text Image: Construction of the second station of the second stating station of the second stating station of the second s						7
Image: station station light in lis light in lis light in light in light in light in ligh	17.	Climate Data	Polygon	Locality Name	Text	
Image: Station Name Text Station ID Number Station Type Text Number Rainfall_Oct (mm) Rainfall_Nov (mm) Number Rainfall_Dec (mm) Number Rainfall_Dec (mm) Number Rainfall_Cot (mm) Number Rainfall_Cot (mm) Number Rainfall_Cot (mm) Number Rainfall_Mar (mm) Number Rainfall_Dec (mm) <t< td=""><td>L</td><td></td><td></td><td>Locality ID</td><td>Text</td><td></td></t<>	L			Locality ID	Text	
Station ID Number Station Type Text Rainfall_Cot (mm) Number Rainfall_Nov (mm) Number Rainfall_And (mm) Number Rainfall_Aar (mm) Number Rainfall_Apr (mm) Number Rainfall_May (mm) <t< td=""><td></td><td></td><td></td><td>Station Name</td><td>Text</td><td></td></t<>				Station Name	Text	
Image: station Type Text Vear Number Rainfall_Oct (mm) Number Rainfall_Cot (mm) Number Rainfall_Nov (mm) Number Rainfall_Lan (mm) Number Rainfall_Lan (mm) Number Rainfall_And (mm) Number Rainfall_Mar (mm) <				Station ID	Number	
Year Number Rainfall_Cot (mm) Number Rainfall_Nov (mm) Number Rainfall_Loc (mm) Number Rainfall_Loc (mm) Number Rainfall_Lan (mm) Number Rainfall_An (mm) Number Rainfall_Mar (mm) Number Rainfall_Mar (mm) Number Rainfall_Mar (mm) Number Rainfall_Mar (mm) Number Rainfall_May (mm) Number Rainfall_fall Locality ID Number Number Rainty				Station Type	Text	
Image: space spac				Year	Number	
Image: space spac				Rainfall_Oct (mm)	Number	
Image: space spac	L			Rainfall_Nov (mm)	Number	
Image: space of the systemRainfall_Jan (mm)NumberNumberRainfall_Fab (mm)NumberRainfall_Mar (mm)NumberRainfall_Apr (mm)Numb				Rainfall_Dec (mm)	Number	
Rainfall_Fab (mm) Number Rainfall_Mar (mm) Number Rainfall_Apr (mm) Number Rainfall_Apr (mm) Number Rainfall_May (mm) Number Image: Comparison of the state of the st				Rainfall_Jan (mm)	Number	
Image: space spac				Rainfall_Fab (mm)	Number	
Rainfall_Apr (mm) Number Rainfall_May (mm) Number Rainfall_May (mm) Number Solid Waste Management Polygon Locality Name Text Locality ID Number Itext Itext Locality Type Text Itext Itext Locality Type Text Itext Itext Locality Type Text Itext Itext Locality Opercapita Solid Waste Number Number Itext Daily Per Capita Solid Waste Number Itext Itext Daily Quantity of Solid Waste Number Itext Itext Daily Quantity of Solid Waste Number Itext Itext Manual Quantity of Solid Waste Number Itext Itext Manual Quantity of Solid Number Itext Itext Itext Manual Quantity of Solid Number Itext Itext Itext Manual Quantity of Solid Number Itext Itext Itext Itext Manual Quantity of Solid Waste Itext Collection and Disposal of Solid Waste Itext </td <td></td> <td></td> <td></td> <td>Rainfall_Mar (mm)</td> <td>Number</td> <td></td>				Rainfall_Mar (mm)	Number	
Rainfall_May (mm) Number Image: Normal system Polygon Locality Name Text 18. Solid Waste Management Polygon Locality Name Text 18. Solid Waste Management Polygon Locality Name Text 18. Solid Waste Management Polygon Locality Type Text 19. Locality Type Text Daily Per Capita Solid Waste Number 10. Daily Quantity of Solid Waste Generated_(Kg) Number 10. Daily Quantity of Solid Waste Number 10. Daily Quantity of Solid Waste Number 11. Generated_(ton) Number 11. Annual Quantity of Solid Number 11. Annual Quantity of Solid Number 11. Annual Quantity of Solid Number 12. Annual Quantity of Solid Number 13. Authority Responsible for Collection and Disposal of Solid Waste Text 14. Solid Waste Collection Rate Number 14. Frequency of Collection Text 14. Annual Quantity				Rainfall_Apr (mm)	Number	
18. Solid Waste Management Polygon Locality Name Text 18. Solid Waste Management Polygon Locality Name Text 19. Locality Type Text Number 19. Locality Type Text Projected Population 2007 Number 19. Daily Per Capita Solid Waste Number Number 10. Daily Quantity of Solid Waste Number Solid Waste Number 10. Daily Quantity of Solid Waste Generated_Calculated_(ton) Number Solid Waste Number 10. Daily Quantity of Solid Waste Generated_Calculated_(ton) Number Solid Waste Number 10. Daily Quantity of Solid Waste Generated_Calculated_(ton) Number Solid Waste Solid Waste<				Rainfall_May (mm)	Number	
18. Solid Waste Management Polygon Locality Name Text Locality ID Number Text Number Locality Type Text Text Projected Population 2007 Number Number Daily Per Capita Solid Waste Number Number Generation Rate_(Kg) Daily Quantity of Solid Waste Number Daily Quantity of Solid Waste Generated_(ton) Number Daily Quantity of Solid Waste Generated_(ton) Number Manual Quantity of Solid Number Waste Generated_(ton) Annual Quantity of Solid Number Waste Generated_(ton) Number Mathority Responsible for Text Collection and Disposal of Solid Waste Solid Waste Solid Waste Solid Waste Collection Rate Number Number Manual Quantity of Solid Number Solid Waste Number Solid Waste Number Locality Solid Waste Collection Rate Number Solid Waste Number Solid Waste Solid Waste Collection Text Collected_Calculated_(ton) Number						7
Locality ID Number Locality Type Text Projected Population 2007 Number Daily Per Capita Solid Waste Number Generation Rate_(Kg) Daily Quantity of Solid Waste Number Daily Quantity of Solid Waste Number Generated_Calculated_(ton) Daily Quantity of Solid Number Mumber Generated_(ton) Daily Quantity of Solid Number Manual Quantity of Solid Number Mumber Mathority Responsible for Text Collection and Disposal of Solid Waste Solid Waste Mumber Mumber Manual Quantity of Solid Number Mumber Mumber Mathority Responsible for Text Collection and Disposal of Mumber Solid Waste Solid Waste Mumber Mumber Mumber Manual Quantity of Solid Number Mumber Mumber Mumber Solid Waste Collection Rate<	18.	Solid Waste Management	Polygon	Locality Name	Text	
Locality Type Text Projected Population 2007 Number Daily Per Capita Solid Waste Number Generation Rate_(Kg) Number Daily Quantity of Solid Waste Number Generated_Calculated_(ton) Number Daily Quantity of Solid Waste Number Generated_(ton) Mumber Annual Quantity of Solid Number Waste Generated_(ton) Annual Quantity of Solid Number Waste Generated_(ton) Annual Quantity of Solid Number Waste Generated_(ton) Authority Responsible for Text Collection and Disposal of Solid Waste Solid Waste Solid Waste Annual Quantity of Solid Number Yaste Collection Rate Number Yaste Collection Text Collection Text Collection				Locality ID	Number	
Projected Population 2007 Number Daily Per Capita Solid Waste Number Generation Rate_(Kg) Number Daily Quantity of Solid Waste Number Generated_Calculated_(ton) Number Daily Quantity of Solid Waste Number Generated_Calculated_(ton) Number Generated_(ton) Number Annual Quantity of Solid Number Waste Generated_Calculated_(ton) Annual Quantity of Solid Number Waste Generated_Calculated_(ton) Annual Quantity of Solid Number Waste Generated_Calculated_(ton) Number Authority Responsible for Text Collection and Disposal of Solid Waste Solid Waste Solid Waste Collection Rate Number Frequency of Collection Text Annual Quantity of Solid Number Kannual Quantity of Solid Number				Locality Type	Text	
Daily Per Capita Solid Waste Generation Rate_(Kg) Number Daily Quantity of Solid Waste Generated_Calculated_(ton) Number Daily Quantity of Solid Waste Generated_(ton) Number Daily Quantity of Solid Waste Generated_(ton) Number Annual Quantity of Solid Waste Generated_Calculated_(ton) Number Annual Quantity of Solid Waste Generated_Calculated_(ton) Number Annual Quantity of Solid Waste Generated_(ton) Number Authority Responsible for Solid Waste Text Solid Waste Solid Waste Solid Waste Number Annual Quantity of Solid Waste Number Authority Responsible for Solid Waste Text Annual Quantity of Solid Waste Number Annual Quantity of Solid Waste Number Collected_Calculated_(ton) Number				Projected Population 2007	Number	
Daily Quantity of Solid Waste Number Generated_Calculated_(ton) Daily Quantity of Solid Waste Number Generated_(ton) Daily Quantity of Solid Waste Number Generated_(ton) Annual Quantity of Solid Number Generated_(ton) Annual Quantity of Solid Number Waste Generated_Calculated_(ton) Number Manual Quantity of Solid Number Waste Generated_Calculated_(ton) Annual Quantity of Solid Number Mathority Responsible for Text Collection and Disposal of Text Solid Waste Solid Waste Collection Rate Number Mathority of Solid Number Annual Quantity of Solid Mumber Text Collection Text Collection Collected_Calculated_(ton) Solid Waste Collection Text Collection Text				Daily Per Capita Solid Waste	Number	
Generated_Calculated_(ton) Number Daily Quantity of Solid Waste Number Generated_(ton) Annual Quantity of Solid Number Generated_Calculated_(ton) Annual Quantity of Solid Number Generated_Calculated_(ton) Annual Quantity of Solid Number Mathematical Calculated_(ton) Annual Quantity of Solid Number Authority Responsible for Text Collection and Disposal of Solid Waste Solid Waste Solid Waste Collection Rate Number Frequency of Collection Text Annual Quantity of Solid Number				Daily Quantity of Solid Waste	Number	
Daily Quantity of Solid Waste Number Generated_(ton) Annual Quantity of Solid Number Waste Generated_Calculated_(ton) Number Annual Quantity of Solid Number Waste Generated_Calculated_(ton) Annual Quantity of Solid Number Annual Quantity of Solid Number Waste Generated_Calculated_(ton) Annual Quantity of Solid Number Vaste Generated_(ton) Text Authority Responsible for Text Solid Waste Text Solid Waste Solid Waste Number Solid Waste Number Frequency of Collection Rate Number Text Annual Quantity of Solid Number Maste Collected_Calculated_(ton) Collected_Calculated_(ton) Number Collected_Calculated_(ton) Number				Generated Calculated (ton)	Number	
Generated_(ton) Annual Quantity of Solid Number Waste Generated_Calculated_(ton) Number Annual Quantity of Solid Number Waste Generated_Calculated_(ton) Annual Quantity of Solid Number Waste Generated_(ton) Number Authority Responsible for Text Collection and Disposal of Solid Waste Solid Waste Solid Waste Collection Rate Frequency of Collection Text Annual Quantity of Solid Number Waste Collected_Calculated_(ton)				Daily Quantity of Solid Waste	Number	
Annual Quantity of Solid Number Waste Generated_Calculated_(ton) Annual Quantity of Solid Number Annual Quantity of Solid Number Waste Generated_(ton) Number Authority Responsible for Text Collection and Disposal of Solid Waste Solid Waste Solid Waste Frequency of Collection Text Annual Quantity of Solid Number				Generated (ton)	Number	
Waste Generated_Calculated_(ton) Annual Quantity of Solid Number Waste Generated_(ton) Number Authority Responsible for Text Collection and Disposal of Solid Waste Solid Waste Solid Waste Solid Waste Number Prequency of Collection Rate Number Annual Quantity of Solid Number Collected_Calculated_(ton) Number				Annual Quantity of Solid	Number	
Generated_Calculated_(ton) Generated_Calculated_(ton) Annual Quantity of Solid Number Waste Generated_(ton) Number Authority Responsible for Text Collection and Disposal of Solid Waste Solid Waste Solid Waste Collection Rate Number Frequency of Collection Text Annual Quantity of Solid Number Mathematical Collected_Calculated_(ton) Number				Waste	Number	
Annual Quantity of Solid Number Waste Generated_(ton) Number Authority Responsible for Text Collection and Disposal of Solid Waste Solid Waste Solid Waste Collection Rate Frequency of Collection Text Annual Quantity of Solid Number Vaste Collected_Calculated_(ton)				Generated Calculated (ton)		
Authority Responsible for Collection and Disposal of Solid Waste Text Solid Waste Number Frequency of Collection Text Annual Quantity of Solid Number Waste Collected_Calculated_(ton)				Annual Quantity of Solid	Number	
Authority Responsible for Text Collection and Disposal of Solid Waste Number Solid Waste Collection Rate Number Frequency of Collection Text Annual Quantity of Solid Number Waste Collected_Calculated_(ton)				Authority Desponsible for	Toyt	
Solid Waste Number Solid Waste Solid Waste Collection Rate Frequency of Collection Text Annual Quantity of Solid Number Waste Collected_Calculated_(ton)				Collection and Disposal of	Text	
Solid Waste Collection Rate Number Frequency of Collection Text Annual Quantity of Solid Number Waste Collected_Calculated_(ton)				Solid Waste		
Frequency of Collection Text Annual Quantity of Solid Number Waste Collected_Calculated_(ton)				Solid Waste Collection Rate	Number	
Annual Quantity of Solid Number Waste Collected_Calculated_(ton)				Frequency of Collection	Text	
Waste Collected_Calculated_(ton)				Annual Quantity of Solid	Number	
Collected_Calculated_(ton)				Waste		
				Collected_Calculated_(ton)		
Annual Quantity of Solid Number Waste Collected_(ton)				Annual Quantity of Solid Waste Collected_(ton)	Number	
Solid Waste Number				Solid Waste	Number	
Composition_Percentage of Plastic				Composition_Percentage of Plastic		
Solid Waste Number				Solid Waste	Number	1
Composition_Percentage of Paper and Cardboard				Composition_Percentage of Paper and Cardboard		

			Solid Wasto	Numbor	
			Composition Derecaters of	NULLIDEL	
			Organic Materials		
				Niu una la la ra	
			Solid Waste	Number	
			Composition_Percentage of		
			Metals		
			Solid Waste	Number	
			Composition_Percentage of		
			Glass		
			Solid Waste	Number	
			Composition_Percentage of		
			Others		
			Number of Collection	Number	
			Vehicles/Trucks (1 - 11 Tons)		
			Number of Collection	Number	
			Vehicles/Trucks (18 - 24 CM)		
			Number of Collection Bins	Number	
			(Small 0 75 - 1 1 CM)	Number	
			Number of Collection Rins	Number	
			(Large)	Marrider	
			Final Disposal of Collected	Text	
			Solid Waste	TOAL	
			X Coordinate of the Disposal	Number	
			Site_utm		
			Y Coordinate of the Disposal	Number	
			Site_utm		
			Waste Management Practice	Text	
			Frequency of Disposal	Text	
			Solid Waste Disposal	Number	
			Fees (NIS/ton)		
			Solid Waste Collection and	Number	
			Disposal Monthly Fees (NIS	Number	
			per household)		
			% of Population Who Pay the	Number	
			Foos	Number	
					1
19	Water & Wastewater	Polygon			
17.	Management	rorygon			
19.1	Water Supply and		Locality Name	Text	
	Consumption			Number	
			Locality Type	Text	
			Water Supply Utility	Text	
			Projected Population 2007	Numbor	
			Water Network Coverage	Number	
			2007 (% of Population)	Number	
			Total Water Supply Bulk	Number	
			Meters (CM)	Number	
			Daily Por Capita Water	Number	
			Supply (L)	NULLING	
			Physical Water Losses	Number	
			Daily Per Capita Water	Number	
			Consumption (L)		
					1

10.0	Masteria Conservation	1	La a Bhu Mana	Tarak	
19.2	Wastewater Generation		Locality Name	lext	
			Locality ID	Number	
			Locality Type		
			Projected Population 2007	Number	
			Daily Per Capita Water	Number	
			Consumption_(L)		
			Daily Volume of Wastewater	Number	
			Generated (CM)		
			Annual Volume of Wastewater	Number	
			Generated (CM)		
			Daily Per Capita Wastewater	Number	
			Generation (I)		
			Percentage of Population	Number	
			Connected to Sewage Network	Number	
			Number of Population	Numbor	
			Connected to Sowage Network	Number	
			Number of Deputation	Numbor	
				Number	
			Unconnected to Sewage		
			Network	Ni,	
			Percentage of Population	Number	
			using cesspits for wastewater		
			Disposal		
			Daily Volume of Wastewater	Number	
			Collected by Sewage		
			Network_(CM)		
			Annual Volume of Wastewater	Number	
			Collected by Sewage		
			Network_(CM)		
			Daily Volume of Wastewater	Number	
			Collected in Cesspits_(CM)		
			Annual Volume of Wastewater	Number	
			Collected in Cesspits_(CM)		
			Daily Wastewater Outflow of	Number	
			the Sewage Network_(CM)		
					1
19.3	Disposal of Wastewater		Final disposal method of	Text	
	Collected in Cesspits		wastewater collected in		
			cesspits		
			Name of the wadi/valley	Text	
			X Coordinate of the Discharge	Number	
			Point utm	Number	
			V Coordinate of the Discharge	Number	
			Point utm	Number	
			Locality location in Polation	Toyt	
			to Croundwater Pochargo	TEXL	
			Aroos		
			Discharge Deint Leastion in	Toyt	
			Discillar ye Pullit Lucation III	IGYL	
			Recharge Areas		4
0.0					1
20.	Agriculture	Polygon			
20.1	Agriculture_Statistics		Locality Name	lext	
			Locality ID	Number	

		Area of agricultural land	Number	
		(Dunum)		
		Area of cultivable land	Number	
		(Dunum)		
		Area of plastic houses	Number	
		(Dunum)		
		Farming area (Dunum)	Number	
		Area of Vegetables(Dunum)	Number	
		Area of Almonds (Dunum)	Number	
		Area of Nuts (Dunum)	Number	
		Area of Apples (Dunum)	Number	
		Area of Olives (Dunum)	Number	
		Area of Grapes (Dunum)	Number	
		Area of Figs (Dunum)	Number	
				1
20.2	Agriculture_Livestock	Locality Name	Text	
		Locality ID	Number	
		Number of Sheep	Number	
		Number of Goat	Number	
		Number of Goat Number of broiler farms	Number Number	
		 Number of Goat Number of broiler farms Number of Broilers (thousand	Number Number Number	
		 Number of Goat Number of broiler farms Number of Broilers (thousand bird)	Number Number Number	
		Number of Goat Number of broiler farms Number of Broilers (thousand bird) Number of layer farms	Number Number Number Number	
		Number of Goat Number of broiler farms Number of Broilers (thousand bird) Number of layer farms Number of Layers (thousand	Number Number Number Number Number	
		Number of Goat Number of broiler farms Number of Broilers (thousand bird) Number of layer farms Number of Layers (thousand bird)	Number Number Number Number Number	
		Number of Goat Number of broiler farms Number of Broilers (thousand bird) Number of layer farms Number of Layers (thousand bird) Number of Beehives	Number Number Number Number Number	

A Screen Shot of the Developed GIS Based Information System for Za'tara Municipality





Bethlehem Municipality: Metadatabase

	Bethlehem Municipality: Metadatabase						
חו	Laver Name	Type	Fields	No. of			
ID	Layer Name	туре	Name	Туре	Records		
1.	Parcels	Polygon	Parcel_ID	Short			
			Owner_Name	String			
-			Block_Name	String			
			Block_Number	Short			
					6,133		
2.	Centerlines	Line	ID	Long			
			Name_En	String			
			Name_Ar	String			
			Length	Double			
					453		
3.	Houses	Polygon	Parcel_ID	Long			
			Block_Name	String			
			Block_Number	Short			
					4,463		
4.	Boundary	Polygon	ID	Long			
			Area	Double			
					1		
5.	Contour Lines	Line	ID	Long			
			Elevation	Double			
6.	Roads (Right of Way)	Polygon	ID	Long			
_					1		
7.	Landuse	Polygon	Туре	String			
			Area	Double			
					8		
8.	Electric Network	Line	Туре	String			
0	Disalia	Deleveren	Dia da Marra	Churles et			
9.	BIOCKS	Polygon	Block_Name	String			
			BIOCK_INUMBER	Short			
			Area	Double	24		
10	Main Fosturos	Doint	Namo	String	30		
10.		PUIII		String			
			Туре	String	120		
11	Al Mabod Housos	Polygon	Sociooconomic data at		130		
11.	Al-Marieu Houses	rorygon	bousehold level and data				
			related to waster wastewater				
			and solid waste management				
					129		
12.	AI-Mahed Companies	Point	Name	String			
			Owner	String			
			Туре	Strina			
			Telephone	Long			
			Fax	Long			
				Ŭ	24		

12	Hotols	Doint	Namo	String	
15.	110(613	TOIL	Name	String	
			Classification	String	
				String	
			Beds_number	LONG	
			Street	String	
			Rooms_numb.	Long	
			Telephone	Long	
			Fax	Long	
					15
14.	Banks	Point	Name	String	
			Owner	String	
			Street	String	
			Telephone	Long	
			Fax	Long	
				Ŭ	8
15.	Churches	Point	Name	String	
-			Community	String	
					19
16	Christian Cemeteries	Point	Name	String	17
10.		TOIL	Name	String	Λ
17	Kindergartens	Point	Name	String	т
17.	Kindergartens	TOIL	Tolophono	Long	
			Fax	Long	
				Long	
				Long	
			Teachers (M)	Short	
			Teachers (F)	Short	
			Students (M)	Short	
			Students (F)	Short	
			Directors (M)	Short	
			Directors (F)	Short	
			School Area	Double	
			Building Area	Double	
			Playground Ar.	Double	
			Class	String	
					14
18.	Schools	Point	Name	String	
			Telephone	Long	
			Fax	Long	
			P.O.Box	Long	
			Teachers (M)	Short	
			Teachers (E)	Short	
			Students (M)	Short	
			Students (F)	Short	
			Directors (M)	Short	
	1		Directors (F)	Short	+
				Double	
				Double	
				Double	
				String	17
10		D 1 1	News		17
19.	Pharmacies	Point	Name	String	
			Official Name	String	

			Telephone	Long	
					17
20.	Laboratories	Point	Name	String	
			Official Name	String	
			Telephone	Long	
					15
21	Monasteries	Point	Name	String	
			Ranto	othing	3
22	Islamic Cemeteries	Point	Name	String	U
22.		1 Onite	Namo	otring	2
23	Hospitals	Point	Name	String	_
20.			Official Name	String	
			Telephone	Long	
			Fax	Long	
			Services	String	
			Beds	Short	
			Owner	String	
			Owner	String	Λ
24	Caroors	Doint	Namo	String	4
24.	Caleers	FUIII		String	-
			Trado Namo	String	
				Jong	
			Тетернопе	LONG	
25	Cantainara	Doint	Number	Chart	
25.	Containers	Point	Numper	Short	
			Validity	String	
			Quantity	String	24
27	Landuas (Land Cavor	Delugen		Long	24
20.	Landuse/ Land Cover	Polygon		Long	
				String	
			Level 2	String	
			Level 3	String	
			Area	Double	
07					
27.	Sub District	Polygon	ID	Short	
20	Traffla Classala	Delat	Ture	Chains	
28.	Traffic Signals	Point	l ype	String	-
		_	number	Long	
20	Aprial Disatas	Destar	25.000	Dent	
29.	Aerial Photos	Raster	25cm, 2005	Part	-
		_	Im, 2004	FUII	
20	Casia a su ancia Data	Dalaman			
30.	Socioeconomic Data	Polygon		Taut	-
30.1	Population Projected		Locality Name	Text	
	End-Year population			N I I-	
			Locality ID	Number	<u> </u>
			Projected Population 1998	Number	
			Projected Population 1999	Number	
			Projected Population 2000	Number	
			Projected Population 2001	Number	ļ
			Projected Population 2002	Number	
			Projected Population 2003	Number	ļ
			Projected Population 2004	Number	

		1		NL I	
			Projected Population 2005	Number	
			Projected Population 2006	Number	
			Projected Population 2007	Number	
			Population Increase (1997-	Number	
			2007) (%)		
					1
30.2	Population Growth Rate		Locality Name	Text	
			Locality ID	Number	
			Growth Rate 1998 (%)	Number	
			Growth Rate 1999 (%)	Number	
			Growth Rate 2000 (%)	Number	
			Growth Rate 2001 (%)	Number	
			Growth Rate 2002 (%)	Number	
			Growth Rate 2003 (%)	Number	
			Growth Rate 2004 (%)	Number	
			Growth Rate 2005 (%)	Number	
			Growth Rate 2006 (%)	Number	
			Growth Rate 2007 (%)	Number	
					1
30.3	Population_Distribution		Locality Name	Text	
	of Population by Sex		Locality ID	Text	
			Locality Type	Text	
			Total Population - 1997	Number	
			Males - 1997	Number	
			Females - 1997	Number	
			% of Males	Number	
			% of Females	Number	
			Sex Ratio (male per 100	Number	
			females)		
			Projected Population - 2007	Number	
			Males - 2007	Number	
			Females - 2007	Number	
					1
30.4	Population_Distribution		Locality Name	Text	
	of Population by Age		Locality ID	Number	
	Group and Sex		Age Group	Number	
			Total Population-1997	Number	
			% of Population	Number	
			Number of Males	Number	
			Number of Females	Number	
					4
30.5	Population_Distribution		Locality Name	Text	
	of Households by		Locality ID	Number	
	Household Size		Household Size	Number	
			Number of Households-1997	Number	
		[Number of Population-1997	Number	
			% of Population	Number	
			Average Household Size - 1997	Number	
					12
30.6	Economic Establishments	Polygon	Locality Name	Text	
			Economic activity	Text	
			Number of establishments-	Number	

			1997		
			Number of Persons engaged -	Number	
			1997 (Both Sexes)		
			Number of Males engaged -	Number	
			1997		
			Number of Females engaged -	Number	
			1997		
			Number of establishments-	Number	
			2006	Numera	
			Number of Persons engaged -	Number	
			2000 (Both Sexes)	Number	
				Number	
			Number of Females engaged -	Number	
			2006	Number	
					13
31.	Climate Data	Polygon			
31.1	Climate Data_B1 (rain		Locality Name	Text	
	gauge)		Locality ID	Text	
			Station Name	Text	
			Station ID	Number	
			Station Type	Text	
			Year	Number	
			Rainfall_Oct (mm)	Number	
			Rainfall_Nov (mm)	Number	
			Rainfall_Dec (mm)	Number	
			Rainfall_Jan (mm)	Number	
			Rainfall_Fab (mm)	Number	
			Rainfall_Mar (mm)	Number	
			Rainfall_Apr (mm)	Number	
			Rainfall_May (mm)	Number	_
0.1.0					7
31.2	Climate Data_B2		Locality Name	Text	
	(metrological station)		Locality ID	Text	
			Station Name	lext	
			Station ID	Number	
			Station Type	lext	
			Year	Number	
			Month	lext	
			Rainfall (mm)	Number	
			Wind Speed (m/s)	Number	
			Termeneture (20)	Number	
				Number	
			Relative Humidity (%)	redmuni	E1
32	Solid Waste Management	Polyaon	Locality Name	Text	51
02.		1 01,9011		Number	
		+		Text	
		+	Projected Population 2007	Number	
		1	Daily Per Capita Solid Waste	Number	
			Generation Rate (Kg)		
			Daily Quantity of Solid Waste	Number	

Generated_Calculated_(ton)	
Daily Quantity of Solid Waste	Number
Generated_(ton)	
Annual Quantity of Solid	Number
Waste	
Generated_Calculated_(ton)	
Annual Quantity of Solid	Number
Waste Generated_(ton)	
Authority Responsible for	Text
Collection and Disposal of	
Solid Waste	
Solid Waste Collection Rate	Number
Frequency of Collection	Text
Annual Quantity of Solid	Number
Waste	
Collected Calculated (ton)	
Annual Quantity of Solid	Number
Waste Collected (ton)	
Solid Waste	Number
Composition Percentage of	
Plastic	
Solid Waste	Number
Composition Percentage of	
Paper and Cardboard	
Solid Waste	Number
Composition Percentage of	
Organic Materials	
Solid Waste	Number
Composition Percentage of	
Metals	
Solid Waste	Number
Composition Percentage of	
Glass	
Solid Waste	Number
Composition Percentage of	
Others	
Number of Collection	Number
Vehicles/Trucks (1 - 11 Tons)	
Number of Collection	Number
Vehicles/Trucks (18 - 24 CM)	
Number of Collection Bins	Number
(Small 0.75 - 1.1 CM)	
Number of Collection Bins	Number
(Large)	
Final Disposal of Collected	Text
Solid Waste	
X Coordinate of the Disposal	Number
Site_utm	
Y Coordinate of the Disposal	Number
Site_utm	
Waste Management Practice	Text
Frequency of Disposal	Text
Solid Waste Disposal	Number

			Ecos (NIS /top)		
				NI I	
			Solid waste Collection and	Number	
			Disposal Monthly Fees_(NIS		
			per household)		
			% of Population Who Pay the	Number	
			Fees		
					1
33.	Water & Wastewater	Polygon			
	Management	55			
33.1	Water Supply and		Locality Name	Text	
	Consumption		Locality ID	Number	
				Tovt	
			Water Supply Utility	Toxt	
			Draiacted Deputation 2007	Number	
			Projected Population 2007	попрет	
			Water Network Coverage	Number	
			2007_(% of Population)		
			Total Water Supply_Bulk	Number	
			Meters_(CM)		
			Daily Per Capita Water	Number	
			Supply_(L)		
			Physical Water Losses	Number	
			Daily Per Capita Water	Number	
			Consumption (L)		
					1
33.2	Wastewater Generation		Locality Name	Text	-
00.1			Locality ID	Number	
				Number	
			Projected Population 2007	Numbor	
			Daily Der Capita Water	Number	
			Consumption (1)	Number	
				N.L	
			Daily volume of wastewater	neamun	
			Generated_(CM)		
			Annual Volume of Wastewater	Number	
			Generated_(CM)		
			Daily Per Capita Wastewater	Number	
			Generation_(L)		
			Percentage of Population	Number	
			Connected to Sewage Network		
			Number of Population	Number	
			Connected to Sewage Network		
			Number of Population	Number	
			Unconnected to Sewage		
			Network		
			Percentage of Population	Number	
			using Cessnits for Wastewater		
			Disposal		
		}	Daily Volumo of Wastowator	Number	
			Collected by Soward	Numbel	
			Annual volume of Wastewater	Number	
			Collected by Sewage		
			Network_(CM)		
			Daily Volume of Wastewater	Number	

			Collected in Cesspits (CM)		
			Annual Volume of Wastewater	Number	
			Collected in Cesspits_(CM)		
			Daily Wastewater Outflow of	Number	
			the Sewage Network_(CM)		
					1
33.3	Public Sewage Networks		Locality Name	Text	
			Locality ID	Number	
			Availability of a Sewage	Text	
			Network		
			Construction Year of the	Number	
			Sewage Network		
			Length of the Sewage	Number	
			Network_(km)		
			Diameter of Main Sewer	Number	
			Lines_(inch)		
			Type of Sewage Collection	Text	
			System Status of the Sowage Network	Toxt	
			Daily Wastowator Outflow of	Number	
			the Sewage Network (CM)	NULLIDEL	
			The Outlet Pipeline of the	Tovt	
			Network Ends in	TEXT	
			X Coordinate of Pumping	Number	
			Station utm	- Turnson	
			Y Coordinate of Pumping	Number	
			Station_utm		
			Daily Wastewater Inflow of	Number	
			the Pumping Station from		
			Each Network_(CM)		
			Final Disposal Method of the	Text	
			Effluent from the Pumping		
			Station		
0.0 4					2
33.4	Disposal of Wastewater		Final disposal method of	Text	
	collected in Cesspits		wastewater collected in		
			Vesspits	Toyt	
			V Coordinate of the Discharge	Number	
			Point utm	NULLIDEL	
			Y Coordinate of the Discharge	Number	
			Point utm	Trainis of	
			Locality location in Relation	Text	
			to Groundwater Recharge		
			Areas		
			Discharge Point Location in	Text	
			Relation to Groundwater		
			Recharge Areas		
					1
34.	Agriculture	Polygon		_	
34.1	Agriculture_Statistics		Locality Name	Text	
			Locality ID	Number	
			Area of agricultural land	Number	

		(Dunum)		
		Area of cultivable land	Number	
		(Dunum)		
		Area of plastic houses	Number	
		(Dunum)		
		Farming area (Dunum)	Number	
		Area of Vegetables(Dunum)	Number	
		Area of Almonds (Dunum)	Number	
		Area of Nuts (Dunum)	Number	
		Area of Apples (Dunum)	Number	
		Area of Olives (Dunum)	Number	
		Area of Grapes (Dunum)	Number	
		Area of Figs (Dunum)	Number	
				1
34.2	Agriculture_Livestock	Locality Name	Text	1
34.2	Agriculture_Livestock	Locality Name Locality ID	Text Number	1
34.2	Agriculture_Livestock	Locality Name Locality ID Number of Sheep	Text Number Number	1
34.2	Agriculture_Livestock	Locality Name Locality ID Number of Sheep Number of Goat	Text Number Number Number	1
34.2	Agriculture_Livestock	Locality Name Locality ID Number of Sheep Number of Goat Number of broiler farms	Text Number Number Number Number	1
34.2	Agriculture_Livestock	Locality Name Locality ID Number of Sheep Number of Goat Number of broiler farms Number of Broilers (thousand	Text Number Number Number Number Number	1
34.2	Agriculture_Livestock	Locality Name Locality ID Number of Sheep Number of Goat Number of broiler farms Number of Broilers (thousand bird)	Text Number Number Number Number Number	1
34.2	Agriculture_Livestock	Locality Name Locality ID Number of Sheep Number of Goat Number of broiler farms Number of Broilers (thousand bird) Number of layer farms	Text Number Number Number Number Number	1
34.2	Agriculture_Livestock	Locality Name Locality ID Number of Sheep Number of Goat Number of broiler farms Number of Broilers (thousand bird) Number of layer farms Number of Layers (thousand	Text Number Number Number Number Number Number Number	1
34.2	Agriculture_Livestock	Locality Name Locality ID Number of Sheep Number of Goat Number of broiler farms Number of Broilers (thousand bird) Number of layer farms Number of Layers (thousand bird)	Text Number Number Number Number Number Number Number	1
34.2	Agriculture_Livestock	Locality Name Locality ID Number of Sheep Number of Goat Number of broiler farms Number of Broilers (thousand bird) Number of layer farms Number of Layers (thousand bird) Number of Beehives	Text Number Number Number Number Number Number Number	

A Screen Shot of the Developed GIS Based Information System for Bethlehem Municipality

- E Blocks
 - 🛨 🔲 Hospitals
 - 🛨 🔲 Hotels
 - 🛨 🔲 Main Features
 - 🕀 🔲 Banks
 - 🛨 🗌 Churches
 - 🛨 🔲 Christian Cemetry

 - Heritage_Sites
 Islamic Cemetry
 - ☑ ☐ Islamic Celled
 ☑ ☐ Monastery
 - Medical Laboratories
 - 🗉 🗌 Pharmacies
 - 🗉 🔲 Schools
 - 🗄 🗌 contour_Clip1
 - 🕀 🔲 Subdistrict
 - 🛨 🔲 Centerline
 - 🖭 🔲 Almahed_Shops
 - 🗄 🗌 Mahed_Companies
 - 🖭 🗌 Şouvenir_Shops
 - 王 🗌 Garbages_Mahed

 - 🖭 🗌 Almahed_Houses_Fina
 - 🛨 🗌 Roads
 - 🛨 🗌 Houses
 - 🛨 🔲 Segregation Wall
 - 🗄 🗌 Landuse
 - 🕀 🔲 Stairs
 - 🛨 🗌 ELE
 - 🛨 🗌 Parcels
 - 🖭 🗌 Agriculture
 - 🗄 🔲 Socioeconomic Data
 - 🛨 🔲 Climate
 - 표 🔲 Water and Wastewater
 - 🛨 🔲 Solid Waste
 - 🛨 🔲 Municipal Boundary
 - E LULC
 - 🛨 🔲 tin
 - 🗄 🔲 RectifyBethlehem2005.tif
 - 王 🗌 RectifyBethlehem2004.tif



Beit Sahour Municipality: Metadatabase

	Beit	t Sahour Muni	cipality: Metadatabase		
ID	Fields				No. of
ID	Layer Name	Type	Name	Туре	Records
1.	Parcels	Polygon	Parcel_ID	Short	
			Owner_Name	String	
			Code_Number	String	
			Block_Number	Short	
			Landuse	String	
			Area	Double	
			Site	String	
					2,222
2.	Road Network	Line	ID	Long	
			Name	String	
			Width	Double	
			Length	Double	
			Condition	String	
					409
3.	Buildings	Polygon	Owner Name	String	
			Date of Built	String	
			No. of Build.	String	
			Threatened	String	
			Area	Double	
			Z-Condition	String	
			Height-Floor	Double	
			House Number	String	
			Code Number	String	
			Landuse	String	
			Elevation	Double	
			Photos	String	
			House Code	String	
					2,377
4.	Boundary	Polygon	ID	Double	
			Area	Double	
					1
5.	Contour Lines	Line	ID	Long	
			Elevation	Double	
					10,059
6.	Roads (Right of Way)	Polygon	ID	Long	
					1
7.	Landuse	Polygon	Туре	String	
			Area	Double	
					66
8.	Updates Buildings	Polygon	Same As Buildings	String	0.2 (
0					306
9.	BIOCKS	Polygon	Block_Number	Double	
			Area	Double	05
10					25
10.	Garbage Bins	Point	ID	Long	

			Туре	String	
					106
11.	Water Pipes	Line	ID	Short	
			Diameter	Long	
					334
12.	Designed Roads	Line	Same As Roads		
					16
13.	Illegal Jerusalem Border	Line	ID	Short	
	5				1
14.	Military Streets	Line	ID	Short	
					2
15.	Industrial Area	Polygon	ID	Double	
			Area	Double	
					1
16.	Electric Cupboard	Point	ID	Double	
			Туре	String	
			X Coordinate	Double	
			Y Coordinate	Double	
					6
17.	High Tension Electric Towers	Point	X Coordinate	Double	
			Y Coordinate	Double	
					19
18.	Transformers	Point	X Coordinate	Double	
			Y Coordinate	Double	
				Bound	5
19	High Voltage Electric Poles	Point	X Coordinate	Double	0
			Y Coordinate	Double	
					63
20	Low Voltage Electric Poles	Point	X Coordinate	Double	
20.		1 onne	Y Coordinate	Double	
			Type	String	
			.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	- Cti nig	1.139
21.	High Voltage Over-head Electric Net.	Line	Length	Double	.,,
					100
22.	Low Voltage Over-head	Line	Length	Double	
					558
23.	High Voltage Underground Cable	Line	Length	Double	000
					415
24.	Proposed Electric Line Panel	Polygon	Name	String	
			Kind	String	
			Position	String	
					18
25.	Natural Blocks	Polygon	Area	Double	
			Number	Double	
			Area Included	Double	
					15
26.	Proposed Streets	Line	ID	Double	
					20
27.	Sewage Lines	Line	Name	String	

			Diameter	Double	
			Length	Double	
			Existence	String	
				otring	206
28	Manholes	Point	ID	Double	200
20.		1 Onit	Main Manhole	String	
				String	1 500
29	Proposed Sewage Lines	Line	ID	Double	1,500
27.	Troposed Settinge Enles	LING		Double	5
30	Proposed Manholes	Point	ID	Double	5
50.		TOIL	Diameter	Double	
			Line Number	Double	
				Double	100
31	Pumping Stations	Polygon	Name	String	100
51.		Totygon		String	2
32	Social Services	Point	ID	Double	2
02.		TOIL		Double	78
33	Social Services	Polygon	Area	Double	70
00.		rorygon	7-Condition	String	
			Height-Floor	Double	
			House Number	String	
			Code Number	String	
				String	
			Photos	String	
				String	<u>81</u>
3/	Designed Roads	Line	Length	Double	01
54.	Designed Roads	LINC	Type	String	
			Name	String	
			Width	Doublo	
			Aroa	Double	
			Condition	String	
			Condition	String	16
21	Wator Valvos	Point	ID		10
54.		FUIII	ID		2
25	End Can (Prossure Zoning)	Point	ID		3
55.	Life Cap. (Fressure Zonnig)	FUIII	ID		1
26	TIN	Pastor			4
30.		Dastor			
20	Hill_shade	Pastor			
20	Flow Direction	Pastor			
J7. 40		Pastor			-
40. /1	Watershed	Dastor			
41. //2	Aprial Photos	Raster	25cm 2005	Part	
42.		Nastel	1m 2004	Full	
			1111, 2004	Tull	
12	Sociooconomic Data	Polygon			
43.	Dopulation Projected End	FUIYYUII	Locality Name	Toyt	
40.1	Year nonulation			Number	
			Drojected Dopulation 1000	Number	
			Projected Population 1000	Number	
			Projected Population 2000	Number	
			Projected Population 2000	Number	
	1	1	i ojected i opulation 2001	NULLING	

		Projected Population 2002	Number	
		Projected Population 2003	Number	
		Projected Population 2004	Number	
		Projected Population 2005	Number	
	-	Projected Population 2006	Number	
		Projected Population 2007	Number	
	-	Population Increase (1997-	Number	
		2007) (%)		
				1
43.2	Population Growth Rate	Locality Name	Text	
		Locality ID	Number	
		Growth Rate 1998 (%)	Number	
		Growth Rate 1999 (%)	Number	
	-	Growth Rate 2000 (%)	Number	
	-	Growth Rate 2001 (%)	Number	
	-	Growth Rate 2002 (%)	Number	
	-	Growth Rate 2003 (%)	Number	
	-	Growth Rate 2004 (%)	Number	
		Growth Rate 2005 (%)	Number	
	-	Growth Rate 2006 (%)	Number	
	-	Growth Rate 2007 (%)	Number	
				1
43.3	Population_Distribution of	Locality Name	Text	
	Population by Sex	Locality ID	Text	
		Locality Type	Text	
		Total Population - 1997	Number	
	-	Males - 1997	Number	
	-	Females - 1997	Number	
	-	% of Males	Number	
	-	% of Females	Number	
	-	Sex Ratio (male per 100	Number	
		females)		
		Projected Population - 2007	Number	
		Males - 2007	Number	
		Females - 2007	Number	
				1
43.4	Population_Distribution of	Locality Name	Text	
	Population by Age Group and	Locality ID	Number	
	Sex	Age Group	Number	
		Total Population-1997	Number	
		% of Population	Number	
		Number of Males	Number	
		Number of Females	Number	
				4
43.5	Population_Distribution of	Locality Name	Text	
	Households by Household	Locality ID	Number	
	Size	Household Size	Number	
		Number of Households-1997	Number	
		Number of Population-1997	Number	
		% of Population	Number	
		Average Household Size -	Number	
		1997		

					12
43.6	Economic Establishments	Polygon	Locality Name	Text	
40.0			Economic activity	Text	
			Number of establishments-	Number	
			1997		
			Number of Persons engaged	Number	
			- 1997 (Both Sexes)		
			Number of Males engaged -	Number	
			1997		
			Number of Females engaged - 1997	Number	
			Number of establishments- 2006	Number	
			Number of Persons engaged -2006 (Both Sexes)	Number	
			Number of Males engaged -	Number	
			2006		
			Number of Females engaged - 2006	Number	
					11
44.	Climate Data	Polygon	Locality Name	Text	
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Locality ID	Text	
			Station Name	Text	
			Station ID	Number	
			Station Type	Text	
			Year	Number	
			Rainfall_Oct (mm)	Number	
			Rainfall_Nov (mm)	Number	
			Rainfall_Dec (mm)	Number	
			Rainfall_Jan (mm)	Number	
			Rainfall_Fab (mm)	Number	
			Rainfall_Mar (mm)	Number	
			Rainfall_Apr (mm)	Number	
			Rainfall_May (mm)	Number	
					17
45.	Solid Waste Management	Polygon	Locality Name	Text	
			Locality ID	Number	
			Locality Type	Text	
			Projected Population 2007	Number	
			Daily Per Capita Solid Waste	Number	
			Generation Rate_(Kg)		
			Daily Quantity of Solid Waste	Number	
			Generated_Calculated_(ton)		
			Daily Quantity of Solid Waste Generated_(ton)	Number	
			Annual Quantity of Solid	Number	
			Waste		
			Generated_Calculated_(ton)		
			Annual Quantity of Solid	Number	
			Waste Generated_(ton)		
			Authority Responsible for	Text	
			Collection and Disposal of Solid Waste		

			Solid Waste Collection Rate	Number	
			Frequency of Collection	Text	
			Annual Quantity of Solid	Number	
			Waste		
			Collected_Calculated_(ton)		
			Annual Quantity of Solid	Number	
			Waste Collected_(ton)		
			Solid Waste	Number	
			Composition_Percentage of		
			Plastic	NL L	
			Solid Waste	Number	
			Composition_Percentage of Paper and Cardboard		
				Numbor	
			Composition Percentage of	Number	
			Organic Materials		
			Solid Waste	Number	
			Composition Percentage of		
			Metals		
			Solid Waste	Number	
			Composition_Percentage of		
			Glass		
			Solid Waste	Number	
			Composition_Percentage of		
			Others		
			Number of Collection	Number	
			Vehicles/Trucks (1 - 11		
			Tons)	N I	
			Number of Collection	Number	
			Number of Collection Pinc	Number	
			(Small 0.75 \pm 1.1 CM)	Number	
			Number of Collection Bins	Number	
			(Large)	Number	
			Final Disposal of Collected	Text	
			Solid Waste		
			X Coordinate of the Disposal	Number	
			Site_utm		
			Y Coordinate of the Disposal	Number	
			Site_utm		
			Waste Management Practice	Text	
			Frequency of Disposal	Text	
			Solid Waste Disposal	Number	
			Fees_(NIS/ton)		
			Solid Waste Collection and	Number	
			Disposal Monthly Fees_(NIS		
			per nousenoid)	Number	
			% of Population who Pay the	number	
					1
46	Water & Wastewater	Polyaon			1
10.	Management	1 0199011			
46.1	Water Supply and	1	Locality Name	Text	

	Consumption	Locality ID	Number	
		Locality Type	Text	
		Water Supply Utility	Text	
		Projected Population 2007	Number	
		Water Network Coverage	Number	
		2007_(% of Population)		
		Total Water Supply_Bulk	Number	
		Meters_(CM)		
		Daily Per Capita Water	Number	
		Supply_(L)		
		Physical Water Losses	Number	
		Daily Per Capita Water	Number	
		Consumption_(L)		
				1
46.2	Wastewater Generation	Locality Name	Text	
		Locality ID	Number	
		Locality Type		
		Projected Population 2007	Number	
		Daily Per Capita Water	Number	
		Consumption_(L)		
		Daily Volume of Wastewater	Number	
		Generated_(CM)		
		Annual Volume of	Number	
		Wastewater Generated_(CM)		
		Daily Per Capita Wastewater	Number	
		 Generation_(L)	N	
		Percentage of Population	Number	
		Connected to Sewage		
		Network	Numeron	
		Connected to Sowage	Number	
		Network		
		Number of Population	Number	
		Unconnected to Sewage	Number	
		Network		
		Percentage of Population	Number	
		using Cesspits for	Number	
		Wastewater Disposal		
		Daily Volume of Wastewater	Number	
		Collected by Sewage		
		Network_(CM)		
		Annual Volume of	Number	
		Wastewater Collected by		
		Sewage Network_(CM)		
		Daily Volume of Wastewater	Number	
		Collected in Cesspits_(CM)		
		Annual Volume of	Number	
		Wastewater Collected in		
		 Cesspits_(CM)		
		Daily Wastewater Outflow of	Number	
		the Sewage Network_(CM)		4
44.0			Taul	1
46.3	Public Sewage Networks	Locality Name	lext	

			Locality ID	Number	
			Availability of a Sewage	Text	
			Network		
			Construction Year of the	Number	
			Sewage Network		
			Length of the Sewage	Number	
			Network_(km)		
			Diameter of Main Sewer	Number	
			Lines_(inch)		
			Type of Sewage Collection	Text	
			System		
			Status of the Sewage	Text	
			Network		
			Daily Wastewater Outflow of the Sewage Network_(CM)	Number	
			The Outlet Pipeline of the	Text	
			Network Ends in		
			X Coordinate of Pumping	Number	
			Station_utm		
			Y Coordinate of Pumping	Number	
			Station_utm		
			Daily Wastewater Inflow of	Number	
			the Pumping Station from		
			Each Network_(CM)		
			Final Disposal Method of the	lext	
			Station		
			51411011		1
46.4	Disposal of Wastewater		Final disposal method of	Text	1
10.1	Collected in Cesspits		wastewater collected in	TOXT	
	concerca in cosspires		cesspits		
			Name of the wadi/valley	Text	
			X Coordinate of the	Number	
			Discharge Point utm		
			Y Coordinate of the	Number	
			Discharge Point utm		
			Locality location in Relation	Text	
			to Groundwater Recharge		
			Areas		
			Discharge Point Location in	Text	
			Relation to Groundwater		
			Recharge Areas		
					1
47.	Agriculture	Polygon			
47.1	Agriculture_Statistics		Locality Name	fext	
			Locality ID	Number	
			Area of agricultural land	Number	
			(Dunum)		
			Area of cultivable land	Number	
			(Dunum)	Name	
			Area of plastic houses	Number	
			(Dunum)	Number	

		Area of Vegetables(Dunum)	Number	
		Area of Almonds (Dunum)	Number	
		Area of Nuts (Dunum)	Number	
		Area of Apples (Dunum)	Number	
		Area of Olives (Dunum)	Number	
		Area of Grapes (Dunum)	Number	
		Area of Figs (Dunum)	Number	
				1
47.2	Agriculture_Livestock	Locality Name	Text	
	-	Locality ID	Number	
		Number of Sheep	Number	
		Number of Goat	Number	
		Number of broiler farms	Number	
		Number of Broilers	Number	
		(thousand bird)		
		Number of layer farms	Number	
		Number of Layers (thousand	Number	
		bird)		
		Number of Beehives	Number	
				1

A Screen Shot of the Developed GIS Based Information System for Beit Sahour Municipality

🖃 🥩 Layers

- 🗄 🔲 Land Marks
- 🗄 🔲 Segregation Wall
- 😟 🔲 Water Network

- + C Roads
- 🛨 🔲 Social Services
- + Houses
- 🛨 🔲 Houses Updated 2005
- 🛨 🗌 Parcels
- 🖭 🔲 Contour Lines
- 🖭 🗌 Agriculture
- 🛨 🔲 Socioeconomic Data
- 王 🗌 Climate
- 표 🔲 Water and Wastewater
- 🛨 🔲 Solid Waste
- 🛨 🗌 OldCore
- 표 🔲 Antique Area
- 庄 🔲 Beitsahour_Bethlehem_Boi
- 🛨 🔲 Industrial Area
- 🛨 🔲 Natural Blocks
- 🛨 🔲 Blocks
- 표 🔲 Organized BeitSahour
- 🛨 🔲 BeitSahour Border
- 主 🔲 Extended BeitSahour
- 🛨 🔲 Land Use
- 🛨 🔲 RectifyBeitSahor2005
- 庄 🔲 RectifyBeitSahor2004



Ed Doha Municipality: Metadatabase

	Ed	Doha Munici	pality: Metadatabase		
ID	Layer Name	Туре	Fields		No. of
		51	Name	Туре	Records
1.	Main Features	Point	ID	Long	
			Name	String	
			Telephone	Long	
			Picture	String	
				5	19
2.	Centerlines	Line	ID	Long	
			Name	String	
			Width	Double	
			Length	Double	
					104
3.	Houses	Polygon	Parcel_ID	Short	
			Owner_Name	String	
			Code	String	
			Block_Number	Short	
			Block_Name	String	
			Parcel_Area	Double	
					1,266
4.	Blocks	Polygon	ID	Long	
			Area	Double	
					8
5.	Municipal Boundary	Polygon	ID	Long	
			Area	Double	
					1
6.	Parcels	Polygon	Parcel_ID	Short	
			Owner_Name	String	
			Code	String	
			Building Area	Double	
			No. of Floors	Short	
			Parcel_Area	Double	
					1,200
7.	Roads (Right of Way)	Polygon	ID	Long	
					1
8.	Landuse/Land Cover	Polygon	ID	Long	
			Level 1	String	
			Level 2	String	
			Level 3	String	
			Area	Double	
					578
9.	Manholes	Polygon	Name	String	
			Diameter	Long	
			Depth	Long	
			Туре	String	
					502

10	Sewage Pines	Line	Pine Name	String	
10.		LIIIC	Diameter	Long	
			Length	Long	
			Slopo	Long	
			310pe	LUIIg	1 060
11.	Industrial (industrial activities)	Point	Own.Name Ar.	String	1,000
			Own.Name En.	String	
			Comp.Nam.Ar.	String	
			Comp.Nam.En.	String	
			Address	String	
			Street	String	
			Telephone	Long	
			Fax	Long	
			Sector	String	
			Activity Ar.	String	
			Activity En.	String	
			Commissioner	String	
			Class	String	
					44
12	Kindergartens	Point	Name	String	
			Telephone	Long	
			Fax	Long	
			P O Box	Long	
			Teachers (M)	Short	
			Teachers (F)	Short	
			Students (M)	Short	
			Students (F)	Short	
			Directors (M)	Short	
			Directors (F)	Short	
			School Area	Double	
			Building Area	Double	
			Playaround Ar	Double	
				String	
			01033	Stillig	3
12	Schools	Point	Name	String	5
15.	3010013	TOIL	Telephone	Long	
			Fax	Long	
			P O Box	Long	
			Teachers (M)	Short	
			Teachers (F)	Short	
			Students (M)	Short	
			Students (M)	Short	
			Directors (M)	Short	
			Directors (F)	Short	
			School Area		
			Building Aroa	Doublo	
				Double	
			Class	String	
			01033	String	5
1/	Aerial Photos	Rastor	25cm 2005	Dart	5
17.		Naster	1m 2001	Full	
			1111, 2004	1°UH	

15	Socioeconomic Data	Polygon			
15.1	Population Projected End-	rorygon	Locality Name	Text	+
10.1	Year population			Number	-
			Projected Population 1998	Number	+
			Projected Population 1999	Number	+
			Projected Population 2000	Number	+
			Projected Population 2001	Number	+
			Projected Population 2002	Number	+
			Projected Population 2003	Number	
			Projected Population 2004	Number	+
			Projected Population 2005	Number	+
			Projected Population 2006	Number	
			Projected Population 2007	Number	+
			Population Increase (1997-	Number	
			2007) (%)	Number	
			2007) (10)		1
15.2	Population Growth Rate		Locality Name	Text	
			Locality ID	Number	
			Growth Rate 1998 (%)	Number	
			Growth Rate 1999 (%)	Number	+
			Growth Rate 2000 (%)	Number	1
			Growth Rate 2001 (%)	Number	+
			Growth Rate 2002 (%)	Number	1
			Growth Rate 2003 (%)	Number	
			Growth Rate 2004 (%)	Number	
			Growth Rate 2005 (%)	Number	1
			Growth Rate 2006 (%)	Number	
			Growth Rate 2007 (%)	Number	
					1
15.3	Population_Distribution of		Locality Name	Text	
	Population by Sex		Locality ID	Text	
			Locality Type	Text	
			Total Population - 1997	Number	1
Projected Population 2005Projected Population 2007Projected Population 2007Population Increase (1997-2007) (%)15.2Population Growth RateLocality NameLocality IDGrowth Rate 1998 (%)Growth Rate 1999 (%)Growth Rate 2000 (%)Growth Rate 2007 (%)Depulation Distribution ofPopulation by SexLocality IDLocality IDMales - 1997Males - 1997% of Males% of Females% of Females% of FemalesProjected Population - 2007Males - 2007Males - 2007Males - 2007Population by Age GroupAge GroupAge GroupTotal Population -1997Age GroupTotal Population -1997	Number	1			
			Females - 1997	Number	
			% of Males	Number	
			% of Females	Number	
			Sex Ratio (male per 100	Number	
			females)		
			Projected Population - 2007	Number	
			Males - 2007	Number	
			Females - 2007	Number	
					1
15.4	Population_Distribution of		Locality Name	Text	
	Population by Age Group		Locality ID	Number	
	and Sex		Age Group	Number	
			Total Population-1997	Number	
			% of Population	Number	
			Number of Males	Number	
			Number of Females	Number	

					4
15.5	Population_Distribution of		Locality Name	Text	
	Households by Household		Locality ID	Number	
	Size		Household Size	Number	
			Number of Households-1997	Number	
			Number of Population-1997	Number	
			% of Population	Number	
			Average Household Size -	Number	
			1997		
					12
15.6	Economic Establishments	Polygon	Locality Name	Text	
			Economic activity	Text	
			Number of establishments- 1997	Number	
			Number of Persons engaged	Number	
			Number of Males engaged -	Number	
			Number of Females engaged - 1997	Number	
			Number of establishments- 2006	Number	
			Number of Persons engaged -2006 (Both Sexes)	Number	
			Number of Males engaged - 2006	Number	
			Number of Females engaged - 2006	Number	
					12
16.	Solid Waste Management	Polygon	Locality Name	Text	
			Locality ID	Number	
			Locality Type	Text	
			Projected Population 2007	Number	
			Daily Per Capita Solid Waste Generation Rate (Kg)	Number	
			Daily Quantity of Solid Waste	Number	
			Generated_Calculated_(ton)	Number	
			Waste Generated_(ton)	Митрег	
			Annual Quantity of Solid Waste Generated Calculated (ton)	Number	
			Annual Quantity of Solid Waste Generated_(ton)	Number	
			Authority Responsible for Collection and Disposal of Solid Waste	Text	
			Solid Waste Collection Rate	Number	
		+	Frequency of Collection	Text	
			Annual Quantity of Solid	Number	
			Waste Collected Calculated (ton)		

			Annual Quantity of Solid	Number	
			Waste Collected_(ton)		
			Solid Waste	Number	
			Composition_Percentage of		
			Plastic		
			Solid Waste	Number	
			Composition_Percentage of		
			Paper and Cardboard		
			Solid Waste	Number	
			Composition_Percentage of		
			Organic Materials		
			Solid Waste	Number	
			Composition_Percentage of		
			Metals		
			Solid Waste	Number	
			Composition_Percentage of		
			Glass		
			Solid Waste	Number	
			Composition_Percentage of		
			Others		
			Number of Collection	Number	
			Venicles/Trucks (1 - 11		
			Tons)	N	
			Number of Collection	Number	
			Venicles/Trucks (18 - 24 CM)	N	
			Number of Collection Bins	number	
			(Small 0.75 - 1.1 CM)		
			(Large)	number	
			Final Disposal of Collected	Text	
			Solid Waste		
			X Coordinate of the Disposal Site utm	Number	
			Y Coordinate of the Disposal	Number	
			Site utm		
			Waste Management Practice	Text	
			Frequency of Disposal	Text	
			Solid Waste Disposal	Number	
			Fees_(NIS/ton)		
			Solid Waste Collection and	Number	
			Disposal Monthly Fees_(NIS		
			per household)		
			% of Population Who Pay the	Number	
			Fees		
					1
17.	Water & Wastewater Management	Polygon			
17.1	Water Supply and		Locality Name	Text	
	Consumption		Locality ID	Number	
			Locality Type	Text	
	1		Water Supply Utility	Toxt	
				TEXL	
			Projected Population 2007	Number	

		2007_(% of Population)		
		Total Water Supply_Bulk	Number	
		Meters (CM)		
		Daily Per Capita Water	Number	
		Supply (L)		
		Physical Water Losses	Number	
		Daily Per Canita Water	Number	
		Consumption (1)	Number	
				1
17.0	Wastowator Concration	Locality Namo	Toxt	1
17.2	Wastewater Generation		Number	
			Inamper	
		Locality Type		
		Projected Population 2007	Number	
		Daily Per Capita Water	Number	
		Consumption_(L)		
		Daily Volume of Wastewater	Number	
		Generated_(CM)		
		Annual Volume of	Number	
		Wastewater Generated_(CM)		
		Daily Per Capita Wastewater	Number	
		Generation_(L)		
		Percentage of Population	Number	
		Connected to Sewage		
		Network		
		Number of Population	Number	
		Connected to Sewage		
		Network		
		Number of Population	Number	
		Unconnected to Sewage		
		Network		
		Percentage of Population	Number	
		using Cesspits for	i tuini o oi	
		Wastewater Disposal		
		Daily Volume of Wastewater	Number	
		Collected by Sewage	Number	
		Network (CM)		
		Appual Volume of	Number	
		Wastewater Collected by	Number	
		Sewage Network (CM)		
		Daily Volume of Wastowator	Numbor	
		Collocted in Cosspits (CM)	Number	
		Appual Valume of	Number	
		Allitudi Volume ol	Number	
		Cesspits_(CM)	Numerie en	
		Daily wastewater Outflow of	reamun	
		the sewage ivetwork_(CM)		4
17.0	Dublic Courses Made		Taut	
17.3	Public Sewage Networks	Locality Name	lext	
		Locality ID	Number	
		Availability of a Sewage	Text	
		Network		
		Construction Year of the	Number	
		Sewage Network		

		Length of the Sewage	Number	
		Network_(km)		
		Lines_(inch)	Number	
		Type of Sewage Collection System	Text	
		Status of the Sewage Network	Text	
		Daily Wastewater Outflow of the Sewage Network_(CM)	Number	
		The Outlet Pipeline of the Network Ends in	Text	
		X Coordinate of Pumping Station_utm	Number	
		Y Coordinate of Pumping Station_utm	Number	
		Daily Wastewater Inflow of the Pumping Station from Each Network_(CM)	Number	
		Final Disposal Method of the Effluent from the Pumping Station	Text	
				1
17.4	Disposal of Wastewater Collected in Cesspits	Final disposal method of wastewater collected in cesspits	Text	
		Name of the wadi/valley	Text	
		X Coordinate of the Discharge Point_utm	Number	
		Y Coordinate of the Discharge Point_utm	Number	
		Locality location in Relation to Groundwater Recharge Areas	Text	
		Discharge Point Location in Relation to Groundwater Recharge Areas	Text	
		-		1

A Screen Shot of the Developed GIS Based Information System for Ed Doha Municipality



Beit Jala Municipality: Metadatabase

	Beit Jala Municipality: Metadatabase						
ID	Layer Name	Type	Fields		No. of		
		51	Name	Туре	Records		
1.	Parcels	Polygon	Parcel_ID	Short			
			Owner Name	String			
			Landuse	String			
			Block Number	Short			
			_		2,738		
2.	Centerlines	Line	ID	Long			
			Name_En	String			
			Name_Ar	String			
			Length	Double			
			Туре	String			
			Telecommun.	String			
			Seawage	String			
			Electricity	String			
			Pavement	String			
			MasterPlan	String			
			Width	Double			
					346		
3.	Houses	Polygon	Parcel_ID	Long			
			Block_Name	String			
			Block_Number	Short			
			Financial Data	String			
					9,816		
4.	Houses Licenses	Polygon	Street Name	String			
			H-Code	String			
			ТОР	String			
			LOP	String			
			Status	String			
			Landuse	String			
			Condition	String			
			Area	Double			
_			10		2,832		
5.	Boundary	Polygon	ID	Long			
			Area	Double	1		
1	O and a set the set	L in a			1		
6.	Contour Lines	Line	ID Flowetien	Long			
			Elevation	Double	2 470		
7	Deads (Dight of May)	Deluger	ID		3,470		
1.		Polygon	עו 	LONG	1		
0	Landuso	Dolygon	Туро	String	1		
0.	Lanuuse	PUIYYUII	Aroa	Doublo			
			AICO	Double	67		
0	Blocks	Polygon	Block Namo	String	07		
7.	DIUCKS	FUIYYUII	Plock Number	Short			
			DIOCK_INULLIDEL	SHULL			

			Area	Double	
					35
10.	Tourism & Recreation Areas	Point	Name	String	
			Туре	String	
				Ŭ	8
11.	Education	Point	Name	String	
			Туре	String	
				Ŭ	11
12.	Gas Stations	Point	Name	String	
			Туре	String	
					2
13.	Medical Centers	Point	Name	String	
			Туре	String	
					6
14.	Religious Areas	Point	Name	String	
	Ť		Туре	String	
					9
15.	Sport	Point	Name	String	
	· · ·		Туре	String	
					1
16.	Social Services	Point	Name	String	
			Туре	String	
					9
17.	Israeli Occupation	Point	Name	String	
			Туре	String	
					4
18.	Segregation Wall	Line	Name	String	
					19
19.	Kindergartens	Point	Name	String	
			Telephone	Long	
			Fax	Long	
			P.O.Box	Long	
			Teachers (M)	Short	
			Teachers (F)	Short	
			Students (M)	Short	
			Students (F)	Short	
			Directors (M)	Short	
			Directors (F)	Short	
			School Area	Double	
			Building Area	Double	
			Playground Ar.	Double	
			Class	String	
					7
20.	Schools	Point	Name	String	
		<u> </u>	Telephone	Long	
			Fax	Long	
		<u> </u>	P.O.Box	Long	
			Teachers (M)	Short	
			Teachers (F)	Short	
		1	Studopte (M)	Short	
				SHULL	
			Students (M) Students (F)	Short	

		1			
		1	Directors (F)	Short	
			School Area	Double	
			Building Area	Double	
			Playground Ar.	Double	
			Class	String	
					11
21.	TIN (Triangulated Irregular Network)	Raster	Elevation		
22	Aprial Dhatas	Destar	25 am 2005	Dort	
ZZ.	Aeriai Photos	Raster	25CM, 2005	Part	
			Im, 2004	FUII	
23.	Industrial (industrial activities)	Point	Own.Name Ar.	String	
			Own.Name En.	String	
			Comp.Nam.Ar.	String	
			Comp.Nam.En.	String	
			Address	String	
			Street	String	
			Telephone	Long	
			Fax	Long	
			Sector	String	
			Activity Ar.	String	
			Activity En.	String	
			Commissioner	String	
			Class	String	
				<u>J</u>	34
24.	Socioeconomic Data	Polygon			
24.1	Population Projected End-	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Locality Name	Text	
	Year population		Locality ID	Number	
			Projected Population 1998	Number	
			Projected Population 1999	Number	
			Projected Population 2000	Number	
			Projected Population 2001	Number	
			Projected Population 2002	Number	
			Projected Population 2003	Number	
			Projected Population 2004	Number	
			Projected Population 2005	Number	
			Projected Population 2006	Number	
			Projected Population 2007	Number	
			Population Increase (1997-	Number	
			2007) (%)		
					1
24.2	Population Growth Rate		Locality Name	Text	
	,		Locality ID	Number	
		1		-	1
			Growth Rate 1998 (%)	Number	
1			Growth Rate 1998 (%) Growth Rate 1999 (%)	Number Number	
			Growth Rate 1998 (%) Growth Rate 1999 (%) Growth Rate 2000 (%)	Number Number Number	
			Growth Rate 1998 (%) Growth Rate 1999 (%) Growth Rate 2000 (%) Growth Rate 2001 (%)	Number Number Number Number	
			Growth Rate 1998 (%) Growth Rate 1999 (%) Growth Rate 2000 (%) Growth Rate 2001 (%) Growth Rate 2002 (%)	Number Number Number Number Number	
			Growth Rate 1998 (%) Growth Rate 1999 (%) Growth Rate 2000 (%) Growth Rate 2001 (%) Growth Rate 2002 (%) Growth Rate 2003 (%)	Number Number Number Number Number Number	
			Growth Rate 1998 (%) Growth Rate 1999 (%) Growth Rate 2000 (%) Growth Rate 2001 (%) Growth Rate 2002 (%) Growth Rate 2003 (%) Growth Rate 2004 (%)	Number Number Number Number Number Number Number	

-	1		1		
			Growth Rate 2005 (%)	Number	
			Growth Rate 2006 (%)	Number	
			Growth Rate 2007 (%)	Number	
					1
24.3	Population_Distribution of		Locality Name	Text	
	Population by Sex		Locality ID	Text	
			Locality Type	Text	
		-	Total Population - 1997	Number	
			Males - 1997	Number	
			Females - 1997	Number	
			% of Males	Number	
			% of Females	Number	
			Sex Ratio (male per 100	Number	
			females)		
			Projected Population - 2007	Number	
			Males - 2007	Number	
		-	Females - 2007	Number	
					1
24 4	Population Distribution of		Locality Name	Text	
21.1	Population by Age Group			Number	
	and Sex		Age Group	Number	
			Total Population-1997	Number	
		-	% of Population	Number	
		-	Number of Males	Number	
			Number of Females	Number	
			Number of Females	Number	Δ
24 E	Deputation Distribution of		Locality Name	Toxt	4
24.0	Households by Household			Text	
	Size		Locality ID	Number	
			Household Size	Number	
			Number of Households-1997	Number	
			Number of Population-1997	Number	
			% of Population	Number	
			Average Household Size -	Number	
			1997		
					12
24.6	Economic Establishments	Polygon	Locality Name	Text	
			Economic activity	Text	
			Number of establishments- 1997	Number	
			Number of Persons engaged	Number	
			Number of Males engaged -	Number	
			1997	Nice 1	
			- 1997	Number	
			Number of establishments- 2006	Number	
			Number of Persons engaged -2006 (Both Sexes)	Number	
			Number of Males engaged - 2006	Number	

			Number of Females engaged	Number	
			- 2006		11
25	Solid Wasto Managomont	Dolygon	Locality Namo	Toxt	11
23.	Sond Waste Management	rorygon		Numbor	
				Toyt	
			Drainested Deputation 2007	Number	
			Projected Population 2007	Number	
			Generation Rate_(Kg)	митрег	
			Daily Quantity of Solid	Number	
			Waste		
			Generated_Calculated_(ton)		
			Daily Quantity of Solid	Number	
			Waste Generated_(ton)		
			Annual Quantity of Solid	Number	
			Waste		
			Generated_Calculated_(ton)		
			Annual Quantity of Solid	Number	
			Waste Generated_(ton)		
			Authority Responsible for	Text	
			Collection and Disposal of		
			Solid Waste		
			Solid Waste Collection Rate	Number	
			Frequency of Collection	Text	
			Annual Quantity of Solid	Number	
			Waste		
			Collected_Calculated_(ton)		
			Annual Quantity of Solid	Number	
			Waste Collected_(ton)		
			Solid Waste	Number	
			Composition_Percentage of		
			Plastic		
			Solid Waste	Number	
			Composition_Percentage of		
			Paper and Cardboard		
			Solid Waste	Number	
			Composition_Percentage of		
			Organic Materials		
			Solid Waste	Number	
			Composition_Percentage of		
			Metals		
			Solid Waste	Number	
			Composition_Percentage of		
			Glass		
			Solid Waste	Number	
			Composition_Percentage of		
			Others		
			Number of Collection	Number	
			Vehicles/Trucks (1 - 11		
			Tons)		
			Number of Collection	Number	
			Vehicles/Trucks (18 - 24 CM)		
			Number of Collection Bins	Number	

	· · · · · · · · · · · · · · · · · · ·				
			(Small 0.75 - 1.1 CM)		
			Number of Collection Bins	Number	
			(Large)		
			Final Disposal of Collected	Text	
			Solid Waste		
			X Coordinate of the Disposal	Number	
			Site utm		
			Y Coordinate of the Disposal	Number	
			Site utm		
			Waste Management Practice	Text	
			Frequency of Disposal	Text	
			Solid Waste Disposal	Number	
			Fees (NIS/ton)	Number	
			Solid Waste Collection and	Number	
			Disposal Monthly Fees (NIS	Number	
			per household)		
			% of Population Who Pay the	Number	
			Foos	Number	
			1663		1
24	Water & Wastewater	Delvgen			1
20.	Management	Polygon			
26.1	Water Supply and		Locality Name	Text	
20.1	Consumption			Number	
	consumption			Toyt	
			Motor Supply Utility	Text	
			Water Suppry Utility	Text	
			Projected Population 2007	number	
			Water Network Coverage	Number	
			2007_(% of Population)		
			Total Water Supply_Bulk	Number	
			Meters_(CM)		
			Daily Per Capita Water	Number	
			Supply_(L)		
			Physical Water Losses	Number	
			Daily Per Capita Water	Number	
			Consumption_(L)		
					1
26.2	Wastewater Generation		Locality Name	Text	
			Locality ID	Number	
			Locality Type		
			Projected Population 2007	Number	
			Daily Per Capita Water	Number	
			Consumption_(L)		
			Daily Volume of Wastewater	Number	
			Generated_(CM)		
			Annual Volume of	Number	
			Wastewater Generated_(CM)		
			Daily Per Capita Wastewater	Number	
			Generation_(L)		
			Percentage of Population	Number	
			Connected to Sewage		
			Network		
			Number of Population	Number	
			Connected to Sewage		

	[
		Network		
		Number of Population	Number	
		Unconnected to Sewage		
		Network		
		Percentage of Population	Number	
		using Cesspits for		
		Wastewater Disposal		
		Daily Volume of Wastewater	Number	
		Collocted by Sowage	Number	
		Notwork (CM)		
			Numera	
		Annual volume of	nation	
		Wastewater Collected by		
		Sewage Network_(CM)		
		Daily Volume of Wastewater	Number	
		Collected in Cesspits_(CM)		
		Annual Volume of	Number	
		Wastewater Collected in		
		Cesspits_(CM)		
		Daily Wastewater Outflow of	Number	1
		the Sewage Network (CM)		
				1
26.3	Public Sewage Networks	Locality Name	Text	
20.5	i done sewage networks		Number	
			Toyt	
		Availability of a sewage	Text	
		Network	Ni, una la la ra	
		Construction year of the	number	
		Sewage Network		
		Length of the Sewage	Number	
		Network_(km)		
		Diameter of Main Sewer	Number	
		Lines_(inch)		
		Type of Sewage Collection	Text	
		System		
		Status of the Sewage	Text	
		Network		
		Daily Wastewater Outflow of	Number	
		the Sewage Network (CM)		
		The Outlet Pipeline of the	Text	1
		Network Ends in	10/11	
		X Coordinate of Pumping	Number	+
		Station utm	Namber	
		V Coordinate of Dumping	Number	
		f coordinate of Fulliping	Number	
			Nu veste o co	
		Daily wastewater inflow of	Number	
		the Pumping Station from		
		Each Network_(CM)		
		Final Disposal Method of the	Text	1
			TOXE	
		Effluent from the Pumping	TOXE	
		Effluent from the Pumping Station		
		Effluent from the Pumping Station		1
26.4	Disposal of Wastewater	Effluent from the Pumping Station Final disposal method of	Text	1
26.4	Disposal of Wastewater Collected in Cesspits	Effluent from the Pumping Station Final disposal method of wastewater collected in	Text	1

			Name of the wadi/valley	Text	
			X Coordinate of the	Number	
			Discharge Point_utm		
			Y Coordinate of the	Number	
			Discharge Point_utm		
			Locality location in Relation	Text	
			to Groundwater Recharge		
			Areas		
			Discharge Point Location in	Text	
			Relation to Groundwater		
			Recharge Areas		
					1
27.	Agriculture	Polygon			
27.1	Agriculture_Statistics		Locality Name	Text	
			Locality ID	Number	
			Area of agricultural land	Number	
			(Dunum)		
			Area of cultivable land	Number	
			(Dunum)		
			Area of plastic houses	Number	
			(Dunum)		
			Farming area (Dunum)	Number	
			Area of Vegetables(Dunum)	Number	
			Area of Almonds (Dunum)	Number	
			Area of Nuts (Dunum)	Number	
			Area of Apples (Dunum)	Number	
			Area of Olives (Dunum)	Number	
			Area of Grapes (Dunum)	Number	
			Area of Figs (Dunum)	Number	
					1
27.2	Agriculture_Livestock		Locality Name	Text	
			Locality ID	Number	
			Number of Sheep	Number	
			Number of Goat	Number	
			Number of broiler farms	Number	
			Number of Broilers	Number	
			(thousand bird)		
			Number of layer farms	Number	
			Number of Layers (thousand	Number	
			bird)		
			Number of Beehives	Number	
					1

A Screen Shot of the Developed GIS Based Information System for Beit Jala Municipality

🖻 🥩 Layers

🛨 🔲 Tourism & Recreation 🛨 🔲 Educational 🛨 🔲 Gas_Station 🛨 🔲 Kindergarten 🛨 🗌 Industrial 🛨 🔲 Israeli_Occupation 🛨 🗌 Medical 🛨 🗌 Religious 🛨 🔲 Social Services \pm 🗌 Sports 🛨 🔲 SegregationWall_BeitJala. 🛨 🗌 Centerlines 🛨 🗌 Roads_Poly 🛨 🗌 Houses 🛨 🔲 Socioeconomic Data 🛨 🗌 Agriculture 🛨 🔲 Water and Wastewater 🛨 🔲 Solid Waste 🛨 🔲 MP_Landuse 🛨 🔲 Municipality Boundary + Blocks 🛨 🗌 roads 🛨 🗌 Parcels E LULC 🛨 🗌 tin 🛨 🔲 RectifyBeitJala2005.tif 🖭 🗌 RectifyBeitJala2004.tif



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