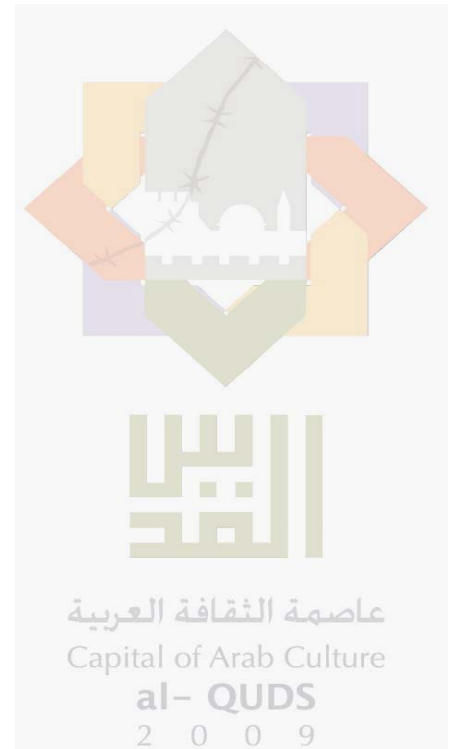
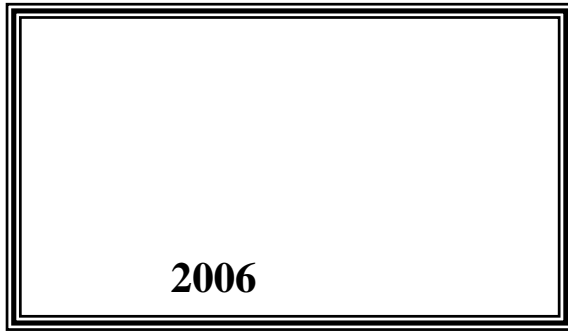


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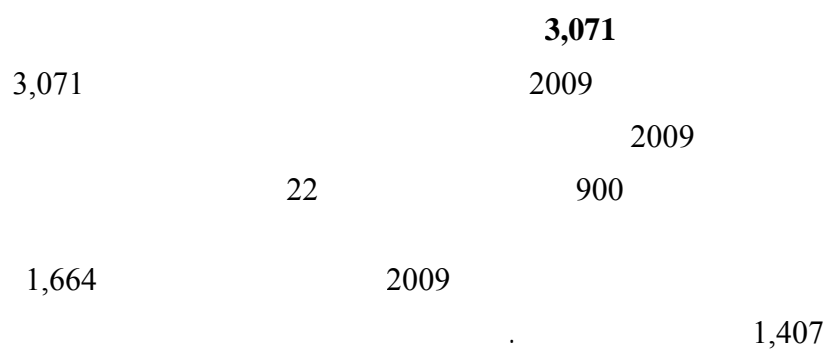
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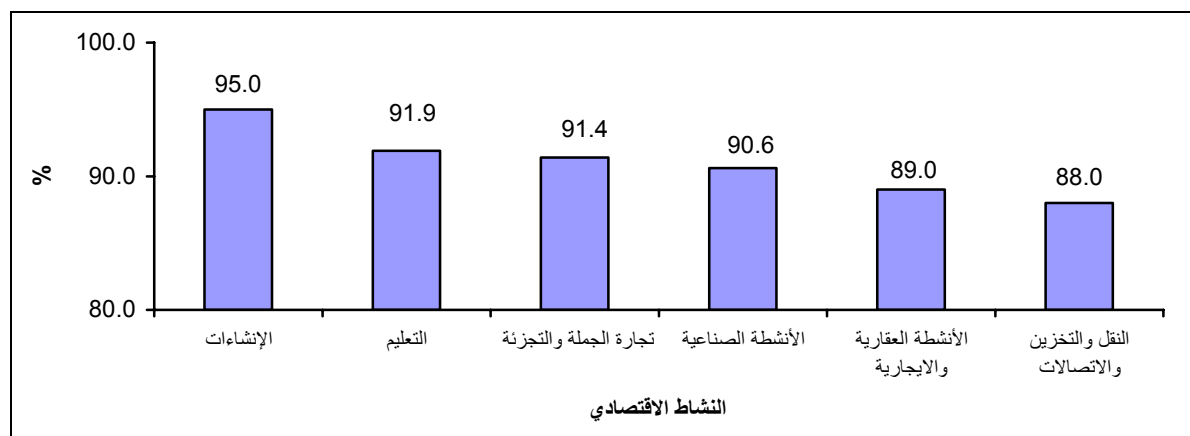
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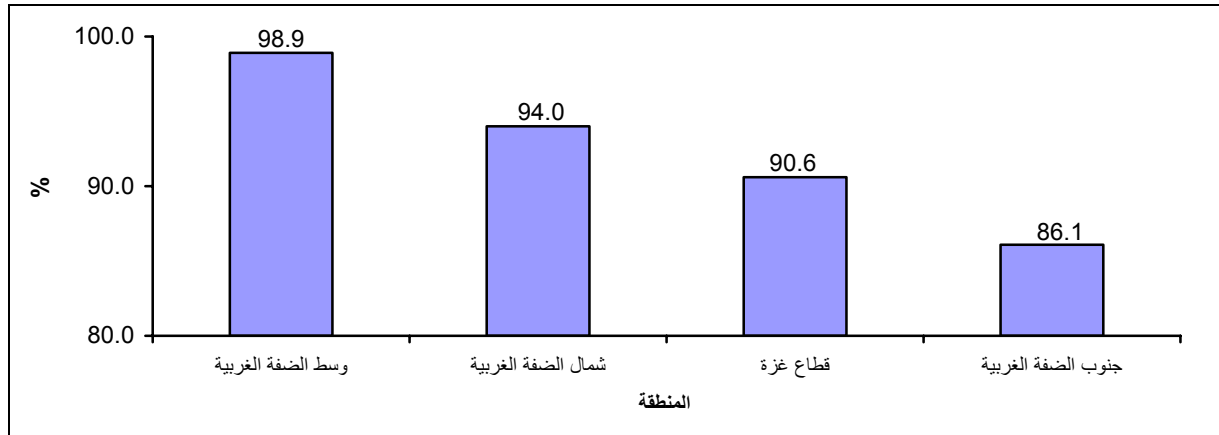
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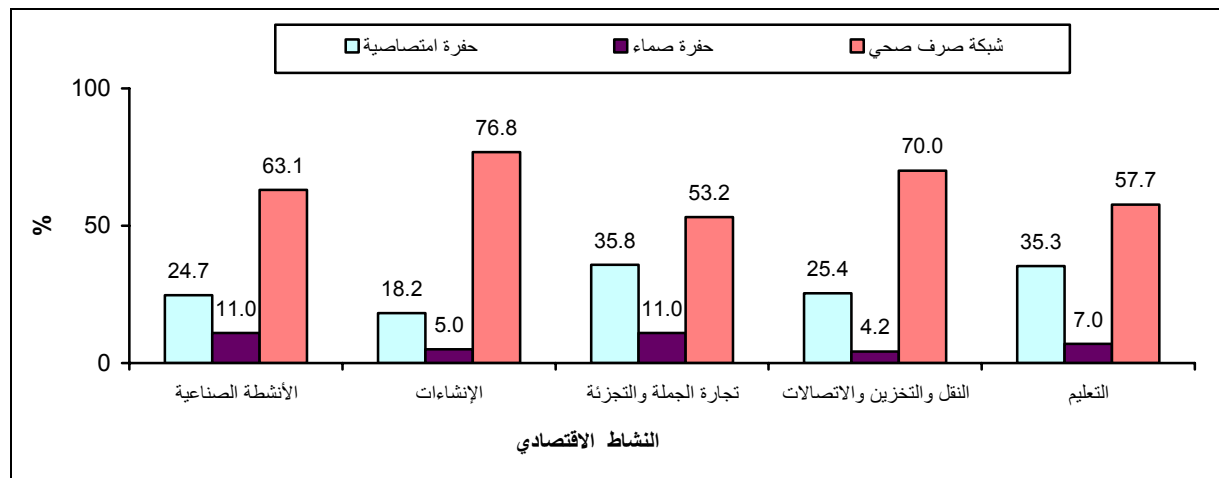
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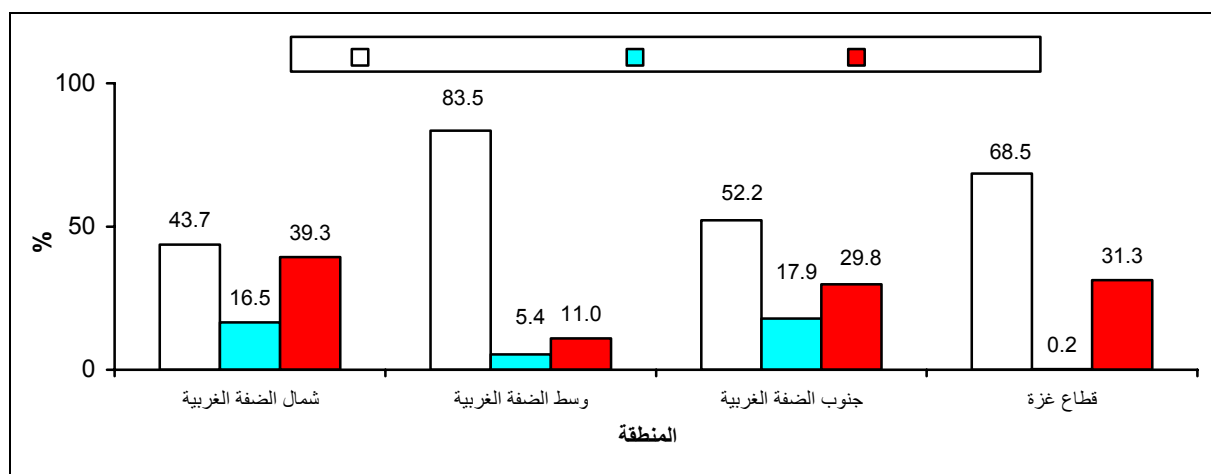


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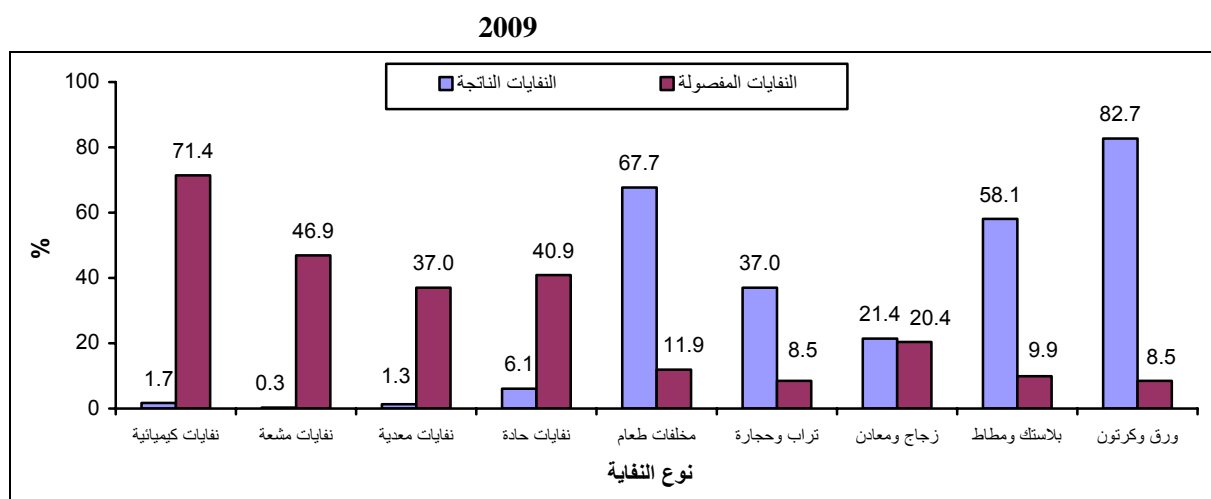
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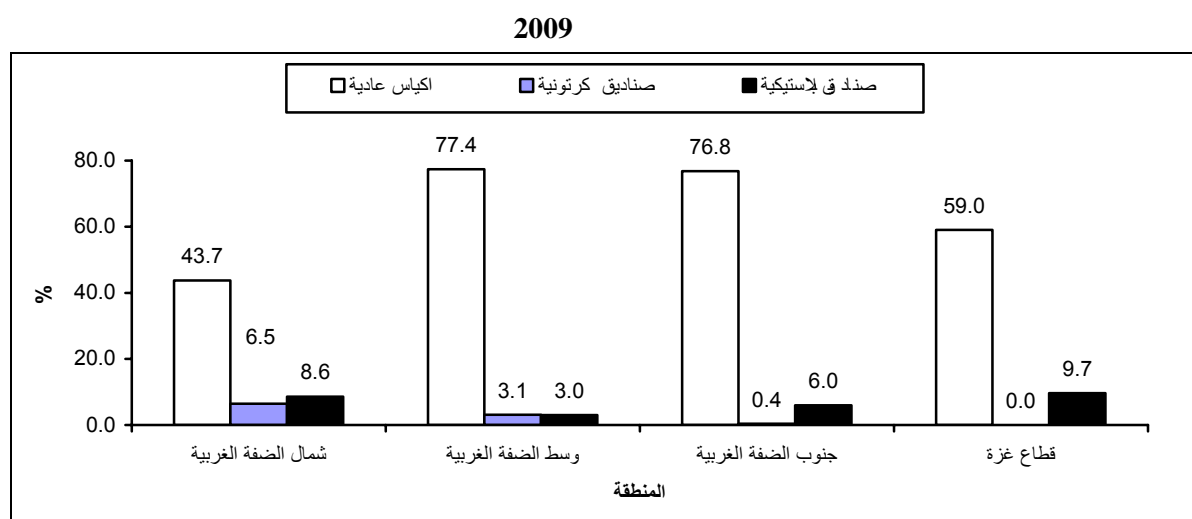


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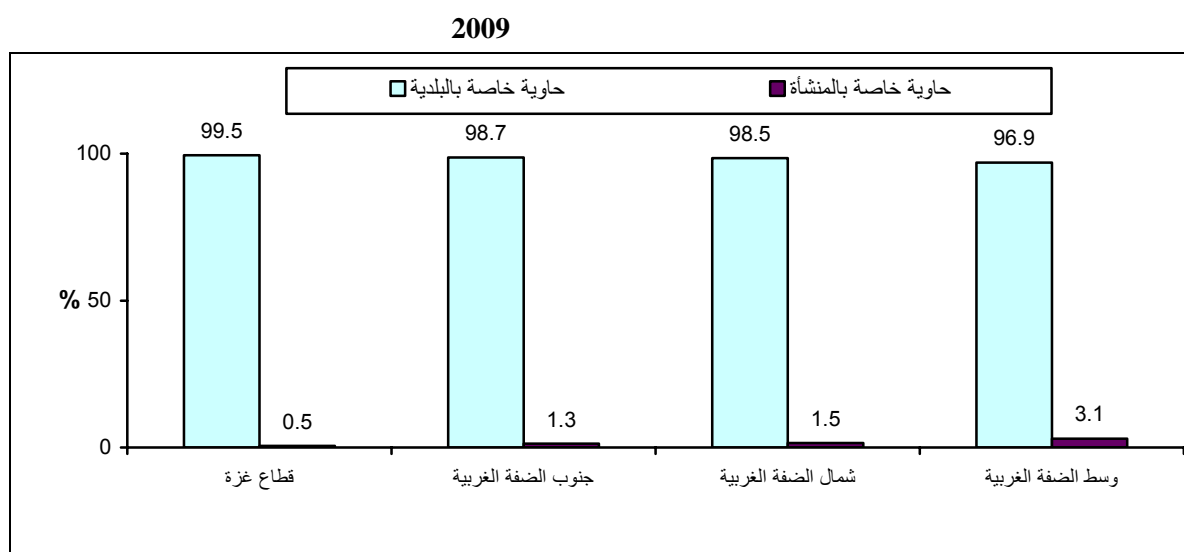
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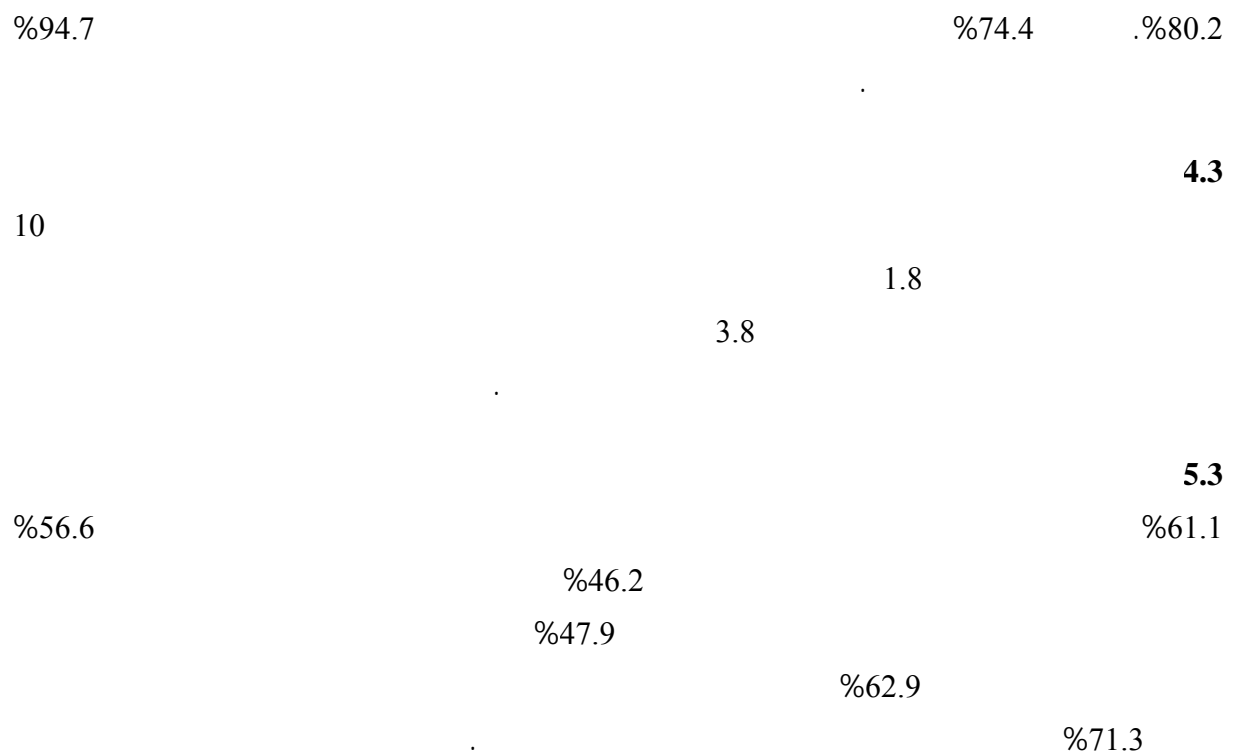
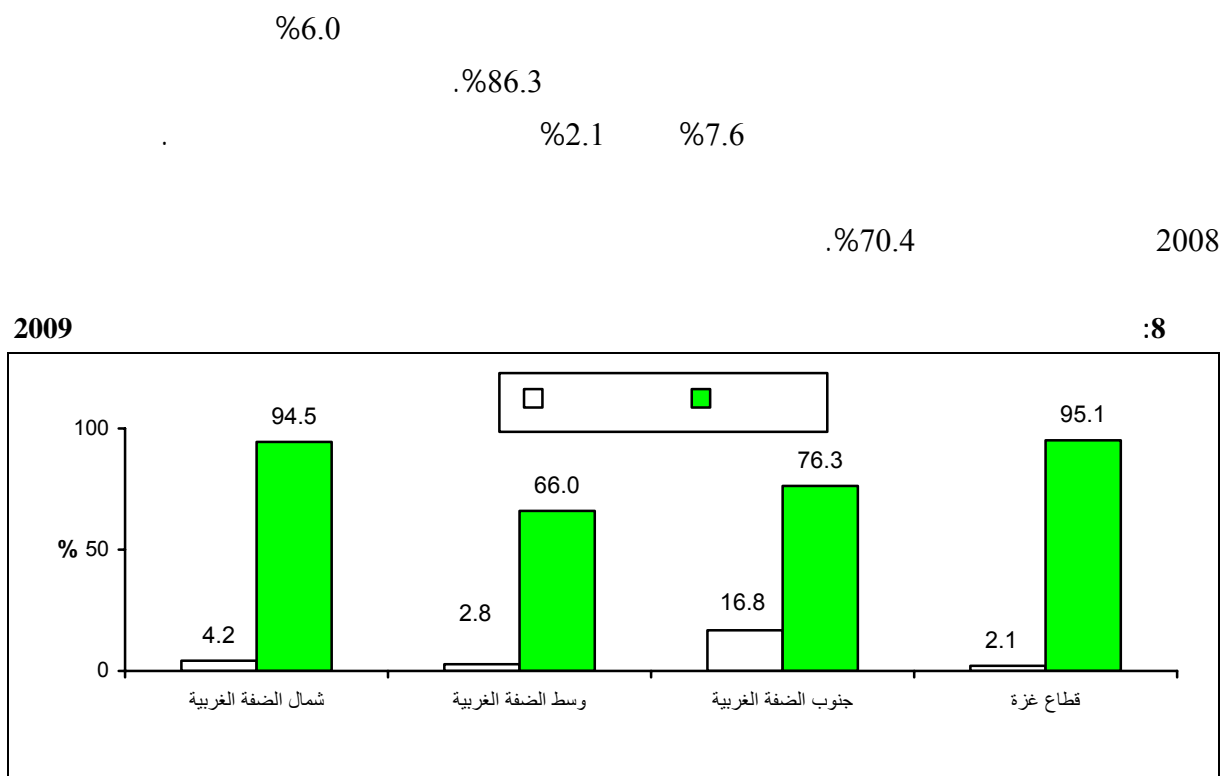
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Tables

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Table1: Main Selected Environmental Indicators about the Activity of the Economic Establishments in the Palestinian Territory for the Years 2003, 2004, 2006, 2008 and 2009

Indicator	2009	2008	2006	2004	2003	
Percentage Distribution of Economic Establishments by Means of obtaining water for normal uses						
Water network	92.0	87.5	86.7	93.6	93.2	
Water tanks	1.1	2.5	3.4	3.0	1.3	
Collection rain water well	6.7	6.1	6.7	2.4	4.1	
Others	0.2	3.9	3.2	1.0	1.4	
Wastewater disposal method						
Wastewater network	59.9	66.4	66.8	67.9	72.7	
Tight cesspit	10.0	10.0	8.2	8.1	3.6	
Porous cesspit	29.9	21.9	21.1	20.2	23.6	
Others	0.2	1.7	3.9	3.8	0.1	
Doer of transporting solid waste						
The establishment	6.0	22.5	9.3	14.5	19.4	
Local Authority	86.3	70.4	79.6	76.1	76.1	
Private contractor	0.3	1.5	0.8	1.9	0.9	
Others*	7.4	5.6	10.3	7.5	3.6	*

*: Others include UNRWA and Jerusalem municipality

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2009

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Table 2: Quantity of Consumed Water in the Economic Establishments in the Palestinian Territory by Economic Activity, 2009

Economic activity	(m^3) Quantity of Consumed Water (m³/Month)	
Palestinian Territory	3,071,174	
Industrial activities	830,260	
Constructions	22,058	
Whole sale, retail & repairs	900,215	
Hotels & restaurants	271,997	
Transport, storage & communications	107,942	
Real estate, renting & business activities	82,916	
Education	83,467	
Health & social work	172,390	
Community, social & personal services	599,929	

2009

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Table 3: Quantity of Consumed Water in the Economic Establishments in the Palestinian Territory by Region, 2009

Region	(m^3) Quantity of Consumed Water (m³/Month)	
Palestinian Territory	3,071,174	
West Bank	1,664,192	
North of West Bank	498,124	
Middle of West Bank	787,007	
South of West Bank	379,061	
Gaza Strip	1,406,982	

2009

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Table 4: Percentage Distribution of Economic Establishments in the Palestinian Territory by Means of Obtaining Water and Economic Activity, 2009

Economic activity	Means of Obtaining Water					
	Total	Others	Water tanks	Collection rain water well	Water network	
Palestinian Territory	100	0.2	6.7	1.1	92.0	
Industrial activities	100	1.2	5.3	2.9	90.6	
Constructions	100	1.1	2.1	1.8	95.0	
Whole sale, retail & repairs	100	0.0	8.6	0.0	91.4	
Hotels & restaurants	100	0.0	1.3	2.1	96.6	
Transport, storage & communications	100	0.4	9.4	2.2	88.0	
Real estate, renting & business activities	100	0.1	8.9	2.0	89.0	
Education	100	0.0	5.1	3.0	91.9	
Health & social work	100	0.2	1.3	0.0	98.5	
Community, social & personal services	100	0.0	3.7	2.4	93.9	

2009

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Table 5: Percentage Distribution of Economic Establishments in the Palestinian Territory by Means of Obtaining Water and Region, 2009

Region	Means of Obtaining Water					
	Total	Others	Water tanks	Collection rain water well	Water network	
Palestinian Territory	100	0.2	6.7	1.1	92.0	
West Bank	100	0.3	5.9	1.1	92.7	
North of West Bank	100	0.7	4.0	1.3	94.0	
Middle of West Bank	100	0.1	1.0	0.0	98.9	
South of West Bank	100	0.0	12.2	1.7	86.1	
Gaza Strip	100	0.1	8.3	1.0	90.6	

2009

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Table 6: Percentage Distribution of Economic Establishments in the Palestinian Territory by Wastewater Disposal Method and Economic Activity, 2009

Economic activity	Wastewater Disposal Method					
	Total	Others	Porous cesspit	Tight cesspit	Wastewater network	
Palestinian Territory	100	0.2	29.9	10.0	59.9	
Industrial activities	100	1.2	24.7	11.0	63.1	
Constructions	100	0.0	18.2	5.0	76.8	
Whole sale, retail & repairs	100	0.0	35.8	11.0	53.2	
Hotels & restaurants	100	0.0	19.7	6.0	74.3	
Transport, storage & communications	100	0.4	25.4	4.2	70.0	
Real estate, renting & business activities	100	0.0	8.8	6.1	85.1	
Education	100	0.0	35.3	7.0	57.7	
Health & social work	100	0.1	17.9	8.3	73.7	
Community, social & personal services	100	0.0	27.7	8.9	63.4	

2009

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Table 7: Percentage Distribution of Economic Establishments in the Palestinian Territory by and Region, 2009

Region	Wastewater Disposal Method					
	Total	Others	Porous cesspit	Tight cesspit	Wastewater network	
Palestinian Territory	100	0.2	29.9	10.0	59.9	
West Bank	100	0.3	29.3	14.2	56.2	
North of West Bank	100	0.5	39.3	16.5	43.7	
Middle of West Bank	100	0.1	11.0	5.4	83.5	
South of West Bank	100	0.1	29.8	17.9	52.2	
Gaza Strip	100	0.0	31.3	0.2	68.5	

2009

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Table 8: Estimated Monthly Quantity of Produced Solid Waste From the Economic Establishments in the Palestinian Territory by Economic Activity, 2009

Economic activity	(/) Estimated quantity (Kg/Month)	
Palestinian Territory	7,807,012	
Industrial activities	3,440,352	
Constructions	347,623	
Whole sale, retail & repairs	2,188,354	
Hotels & restaurants	571,415	
Transport, storage & communications	39,915	
Real estate, renting & business activities	207,037	
Education	241,255	
Health & social work	305,185	
Community, social & personal services	465,876	

2009

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Table 9: Estimated Monthly Quantity of Produced Solid Waste From the Economic Establishments in the Palestinian Territory by Region, 2009

Region	(/) Estimated quantity (Kg/month)	
Palestinian Territory	7,807,012	
West Bank	6,308,349	
North of West Bank	2,192,317	
Middle of West Bank	2,118,715	
South of West Bank	1,997,317	
Gaza Strip	1,498,663	

2009

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Table 10: Percentage of Economic Establishments in the Palestinian Territory by Type of Produced Solid Waste and Economic Activity, 2009

Economic activity	Type of Produced Solid Waste									
	Chemical Waste	Radioactive Waste	Infectious Waste	Sharp Waste	Food Wastes	Soil & Stones	Glass & Metals	Plastic & Rubber	Paper & Cartoon	
Palestinian Territory	1.7	0.3	1.3	6.1	67.7	37.0	21.4	58.1	82.7	
Industrial activities	1.1	0.0	1.1	11.6	72.8	39.8	39.9	46.5	63.3	
Constructions	0.0	0.0	1.4	4.6	70.6	51.0	21.1	43.0	85.4	
Whole sale, retail & repairs	1.2	0.0	0.3	4.0	63.1	37.7	12.9	65.4	84.1	
Hotels & restaurants	0.0	0.0	2.1	1.6	89.4	26.4	35.4	59.3	92.5	
Transport, storage & communications	0.2	0.6	0.4	2.2	71.1	41.8	11.6	44.4	90.7	
Real estate, renting & business activities	0.9	0.6	0.9	2.1	73.4	35.2	25.2	39.8	93.7	
Education	0.0	0.0	0.0	0.4	86.0	34.5	15.4	59.1	99.7	
Health & social work	12.3	4.2	17.8	29.1	59.9	30.1	28.6	57.4	89.3	
Community, social & personal services	2.9	0.4	0.1	5.0	70.4	36.4	29.6	45.9	89.6	

2009

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Table 11: Percentage of Economic Establishments in the Palestinian Territory by Type of Produced Solid Waste and Region, 2009

Region	Type of Produced Solid Waste									المنطقة
	Chemical Waste	Radioactive Waste	Infectious Waste	Sharp Waste	Food Wastes	Soil & Stones	Glass & Metals	Plastic & Rubber	Paper & Cartoon	
Palestinian Territory	1.7	0.3	1.3	6.1	67.7	37.0	21.4	58.1	82.7	
West Bank	2.2	0.4	1.7	5.7	71.6	14.4	23.3	57.6	81.5	
North of West Bank	0.8	0.3	1.3	3.2	60.4	16.0	20.2	65.7	80.4	
Middle of West Bank	6.8	0.4	2.8	14.3	85.8	22.5	33.1	57.8	91.1	
South of West Bank	1.0	0.4	1.4	3.2	78.8	5.3	20.7	44.1	75.5	
Gaza Strip	0.3	0.0	0.4	7.1	58.1	93.2	16.5	59.2	85.8	

2009

Table 12: Percentage of Economic Establishments in the Palestinian Territory that Produce Solid Waste and Separate it by Type of Solid Waste and Economic Activity, 2009

Economic activity	Type of Separated Solid Waste									
	Chemical Waste	Radioactive Waste	Infectious Waste	Sharp Waste	Food Wastes	Soil & Stones	Glass & Metals	Plastic & Rubber	Paper & Cartoon	
Palestinian Territory	71.4	46.9	37.0	40.9	11.9	8.5	20.4	9.9	8.5	
Industrial activities	28.2	0.0	12.1	28.3	13.6	14.6	16.5	12.2	13.6	
Constructions	0.0	0.0	0.0	12.8	7.3	5.8	15.3	10.1	8.5	
Whole sale, retail & repairs	99.6	0.0	0.0	43.2	11.3	6.1	26.9	8.7	6.2	
Hotels & restaurants	0.0	0.0	0.0	100.0	13.1	11.1	23.0	10.6	11.1	
Transport, storage & communications	0.0	0.0	0.0	35.4	12.0	5.1	21.8	10.2	9.2	
Real estate, renting & business activities	100.0	100.0	100.0	20.0	7.4	3.0	7.2	6.7	7.2	
Education	100.0	0.0	0.0	78.0	10.2	6.1	15.6	7.3	10.3	
Health & social work	58.5	50.8	51.0	61.2	21.6	23.1	35.7	25.4	21.8	
Community, social & personal services	54.9	0.0	100.0	21.0	10.5	9.0	11.2	8.3	7.5	

2009

Table 13: Percentage of Economic Establishments in the Palestinian Territory that Produce Solid Waste and Separate it by Type of Solid Waste and Region, 2009

Region	Type of Separated Solid Waste									المنطقة
	Chemical Waste	Radioactive Waste	Infectious Waste	Sharp Waste	Food Wastes	Soil & Stones	Glass & Metals	Plastic & Rubber	Paper & Cartoon	
Palestinian Territory	71.4	46.9	37.0	40.9	11.9	8.5	20.4	9.9	8.5	
West Bank	74.1	46.9	38.0	51.6	15.4	29.1	25.5	13.6	11.7	
North of West Bank	11.6	0.0	14.6	5.5	1.3	3.2	4.0	1.2	1.3	
Middle of West Bank	88.5	96.4	60.0	75.1	41.3	69.7	61.8	41.3	39.7	
South of West Bank	73.7	67.1	39.2	44.0	10.7	22.3	13.6	15.0	3.3	
Gaza Strip	25.9	0.0	25.0	19.5	1.1	0.6	2.7	0.9	0.8	

2009

Table 14: Percentage Distribution of Economic Establishments in the Palestinian Territory Which Perform Solid Waste Separation by the Means Where Separated Solid Waste Put in and Economic Activity, 2009

Economic activity	The Means Where Separated Solid Waste Put in							
	Total	Others	Plastic boxes	Metal boxes	Carton boxes	Special bags	Nylon bags	
Palestinian Territory	100	2.1	4.0	3.9	2.7	12.3	75.0	
Industrial activities	100	6.2	5.9	12.2	0.8	12.8	62.1	
Constructions	100	1.4	0.0	2.7	0.0	6.2	89.7	
Whole sale, retail & repairs	100	1.1	2.2	1.1	4.3	7.6	83.7	
Hotels & restaurants	100	0.0	2.8	0.0	1.4	14.4	81.4	
Transport, storage & communications	100	2.4	2.7	0.0	1.7	24.4	68.8	
Real estate, renting & business activities	100	3.6	4.2	5.1	0.0	25.6	61.5	
Education	100	0.0	4.0	0.0	0.0	17.0	79.0	
Health & social work	100	1.2	9.7	5.3	3.5	18.9	61.4	
Community, social & personal services	100	0.0	0.9	0.0	0.0	18.4	80.7	

2009

Table 15: Percentage Distribution of Economic Establishments in the Palestinian Territory Which Perform Solid Waste Separation by the Means Where Separated Solid Waste Put in and Region, 2009

Region	The Means Where Separated Solid Waste Put in							
	Total	Others	Plastic boxes	Metal boxes	Carton boxes	Special bags	Nylon bags	
Palestinian Territory	100	2.1	4.0	3.9	2.7	12.3	75.0	
West Bank	100	2.1	3.7	3.9	2.8	11.8	75.7	
North of West Bank	100	8.9	8.6	10.6	6.5	21.7	43.7	
Middle of West Bank	100	1.3	3.0	3.1	3.1	12.1	77.4	
South of West Bank	100	3.7	6.0	5.9	0.4	7.2	76.8	
Gaza Strip	100	2.7	9.7	2.1	0.0	26.5	59.0	

2009

Table 16: Percentage Distribution of Economic Establishments in the Palestinian Territory Which Perform Solid Waste Separation by the Periodicity of Separated Solid Waste Collection and Economic Activity, 2009

Economic activity	Periodicity (Weekly) ()				
	Total	7 7 times and more	6-4	3-1	
Palestinian Territory	100	8.4	36.4	55.2	
Industrial activities	100	7.4	32.8	59.8	
Constructions	100	2.3	29.5	68.2	
Whole sale, retail & repairs	100	0.0	35.8	64.2	
Hotels & restaurants	100	27.3	28.9	43.8	
Transport, storage & communications	100	13.2	35.6	51.2	
Real estate, renting & business activities	100	4.1	23.7	72.2	
Education	100	18.8	49.5	31.7	
Health & social work	100	24.0	36.6	39.4	
Community, social & personal services	100	17.0	56.0	27.0	

2009

Table 17: Percentage Distribution of Economic Establishments in the Palestinian Territory Which Perform Solid Waste Separation by the Periodicity of Separated Solid Waste Collection and Region, 2009

Region	Periodicity (Weekly) ()				
	Total	7 7 times and more	6-4	3-1	
Palestinian Territory	100	8.4	36.4	55.2	
West Bank	100	8.7	35.6	55.7	
North of West Bank	100	5.0	28.2	66.8	
Middle of West Bank	100	9.2	40.2	50.6	
South of West Bank	100	7.1	15.3	77.6	
Gaza Strip	100	2.0	54.8	43.2	

2009

Table 18: Percentage Distribution of Economic Establishments in the Palestinian Territory Which Perform Solid Waste Separation by the Transportation Method of Separated Solid Waste Inside the Establishment and Economic Activity, 2009

Economic activity	Method of Separated Solid Waste Inside the Establishment				
	Total	Both methods	Special tools	Manually	
Palestinian Territory	100	0.8	5.0	94.2	
Industrial activities	100	2.8	8.7	88.5	
Constructions	100	0.8	1.2	98.0	
Whole sale, retail & repairs	100	0.0	5.4	94.6	
Hotels & restaurants	100	1.3	0.5	98.2	
Transport, storage & communications	100	0.0	3.4	96.6	
Real estate, renting & business activities	100	2.6	12.2	85.2	
Education	100	0.0	0.9	99.1	
Health & social work	100	0.2	2.5	97.3	
Community, social & personal services	100	0.0	0.0	100	

2009

Table 19: Percentage Distribution of Economic Establishments in the Palestinian Territory Which Perform Solid Waste Separation by the Transportation Method of Separated Solid Waste Inside the Establishment and Region, 2009

Region	Method of Separated Solid Waste Inside the Establishment				
	Total	Both methods	Special tools	Manually	
Palestinian Territory	100	0.8	5.0	94.2	
West Bank	100	0.8	5.0	94.2	
North of West Bank	100	1.7	9.4	88.9	
Middle of West Bank	100	0.5	5.2	94.3	
South of West Bank	100	2.1	2.6	95.3	
Gaza Strip	100	0.2	4.8	95.0	

2009

Table 20: Percentage Distribution of Economic Establishments in the Palestinian Territory by the Means Where Non-Separated Solid Waste Put in and Economic Activity, 2009.

Economic activity	The Means Where Non-Separated Solid Waste Put in							
	Total	Others	Plastic boxes	Metal boxes	Carton boxes	Special bags	Nylon bags	
Palestinian Territory	100	0.8	8.2	2.2	4.8	9.7	74.3	
Industrial activities	100	4.9	11.1	9.8	3.9	6.2	64.1	
Constructions	100	7.2	7.5	6.0	1.3	5.4	72.6	
Whole sale, retail & repairs	100	0.0	8.5	0.3	6.6	9.0	75.6	
Hotels & restaurants	100	0.0	3.9	2.8	4.2	13.3	75.8	
Transport, storage & communications	100	0.0	14.3	1.2	0.7	2.7	81.1	
Real estate, renting & business activities	100	0.0	2.7	2.1	1.8	16.1	77.3	
Education	100	0.0	9.7	1.4	0.0	18.1	70.8	
Health & social work	100	0.0	4.7	0.0	0.0	17.1	78.2	
Community, social & personal services	100	0.0	6.9	1.8	0.5	11.0	79.8	

2009

Table 21: Percentage Distribution of Economic Establishments in the Palestinian Territory by the Means Where Non-Separated Solid Waste Put in and Region, 2009

Region	The Means Where Non-Separated Solid Waste Put in							
	Total	Others	Plastic boxes	Metal boxes	Carton boxes	Special bags	Nylon bags	
Palestinian Territory	100	0.8	8.2	2.2	4.8	9.7	74.3	
West Bank	100	1.0	9.0	2.4	6.6	6.8	74.2	
North of West Bank	100	1.3	11.8	1.7	11.4	9.3	64.5	
Middle of West Bank	100	0.0	1.4	2.8	2.4	7.6	85.8	
South of West Bank	100	0.9	8.0	3.5	0.5	2.0	85.1	
Gaza Strip	100	0.5	6.3	1.8	0.8	16.0	74.6	

2009

Table 22: Percentage Distribution of Economic Establishments in the Palestinian Territory by the Transportation Method of Non-Separated Solid Waste Inside the Establishment and Economic Activity, 2009

Economic activity	Method of Non-Separated Solid Waste Inside the Establishment				
	Total	Both methods	Special tools	Manually	
Palestinian Territory	100	0.4	1.3	98.3	
Industrial activities	100	2.7	5.2	92.1	
Constructions	100	1.2	2.0	96.8	
Whole sale, retail & repairs	100	0.0	0.0	100.0	
Hotels & restaurants	100	0.1	2.0	97.9	
Transport, storage & communications	100	0.0	0.8	99.2	
Real estate, renting & business activities	100	0.0	1.6	98.4	
Education	100	0.2	2.3	97.5	
Health & social work	100	0.1	2.4	97.5	
Community, social & personal services	100	0.0	1.2	98.8	

2009

Table 23: Percentage Distribution of Economic Establishments in the Palestinian Territory by the Transportation Method of Non-Separated Solid Waste Inside the establishment and Region, 2009

Region	Method of Non-Separated Solid Waste Inside the Establishment				
	Total	Both methods	Special tools	Manually	
Palestinian Territory	100	0.4	1.3	98.3	
West Bank	100	0.4	1.6	98.0	
North of West Bank	100	0.4	1.5	98.1	
Middle of West Bank	100	0.3	1.6	98.1	
South of West Bank	100	0.7	1.7	97.6	
Gaza Strip	100	0.4	0.6	99.0	

2009

Table 24: Percentage Distribution of Economic Establishments in the Palestinian Territory by the Periodicity of Non-Separated Solid Waste Collection and Economic Activity, 2009

Economic activity	Periodicity (Weekly) ()				
	Total	7 7 times and more	6-4	3-1	
Palestinian Territory	100	7.6	33.2	59.2	
Industrial activities	100	9.0	41.1	49.9	
Constructions	100	2.6	45.4	52.0	
Whole sale, retail & repairs	100	5.8	29.0	65.2	
Hotels & restaurants	100	20.0	26.5	53.5	
Transport, storage & communications	100	5.9	43.1	51.0	
Real estate, renting & business activities	100	5.2	34.2	60.6	
Education	100	10.5	49.3	40.2	
Health & social work	100	9.3	41.3	49.4	
Community, social & personal services	100	9.9	38.9	51.2	

2009

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Table 25: Percentage Distribution of Economic Establishments in the Palestinian Territory by the Periodicity of Non-Separated Solid Waste Collection and Region, 2009

Region	Periodicity (Weekly) ()				
	Total	7 7 times and more	6-4	3-1	
Palestinian Territory	100	7.6	33.2	59.2	
West Bank	100	5.0	27.8	67.2	
North of West Bank	100	3.7	21.2	75.1	
Middle of West Bank	100	8.5	48.6	42.9	
South of West Bank	100	5.6	28.6	65.8	
Gaza Strip	100	13.1	44.8	42.1	

Table 26: Selected Indicators for the Solid Waste Treatment in the Economic Establishments in the Palestinian Territory, 2009

Indicator	value	
Percentage of Economic Establishments by Presence of Solid Waste Treatment	2.2	
Percentage Distribution of Economic Establishments that Perform Treatment by Type of Treatment		:
Open burning	61.7	
Incineration	0.3	
Buried	3.7	
Chemical treatment	16.2	
Disinfection	7.1	
Mechanical treatment	4.9	
Isolation	3.4	
Dilution	2.7	
Total	100	
Percentage Distribution of Economic Establishments that Perform Treatment by Periodicity of Treatment (Monthly)		
From 1 to 3 times	60.0	3 - 1
From 4 to 6 times	16.4	6 - 4
7 times and more	23.6	7
Total	100	
Percentage Distribution of Economic Establishments that Perform Treatment by Doer of Treatment		
The establishment	79.3	
Other establishment	20.6	
Both	0.1	
Total	100	

2009

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Table 27: Percentage Distribution of Economic Establishments in the Palestinian Territory by How to deal directly with waste after collected from the Establishment and Economic Activity, 2009

Economic activity	How to deal directly with waste after collected from the Establishment						
	Total	Others	Establishment throw out the waste randomly	Establishment transfer the waste to the nearest dump site	Local authority collect the waste directly from Establishment	Establishment transfer the waste to the nearest container	
Palestinian Territory	100	3.9	1.9	1.5	11.6	81.1	
Industrial activities	100	4.4	3.5	5.6	12.2	74.3	
Constructions	100	3.4	1.8	3.0	5.3	86.5	
Whole sale, retail & repairs	100	4.8	1.9	0.3	12.6	80.4	
Hotels & restaurants	100	2.8	1.2	1.3	6.5	88.2	
Transport, storage & communications	100	1.1	2.2	2.2	4.6	89.9	
Real estate, renting & business activities	100	1.9	1.6	0.0	8.4	88.1	
Education	100	1.5	1.2	1.4	12.6	83.3	
Health & social work	100	0.9	0.6	2.6	10.2	85.7	
Community, social & personal services	100	1.5	0.5	1.8	10.2	86.0	

2009

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Table 28: Percentage Distribution of Economic Establishments in the Palestinian Territory by How to deal directly with waste after collected from the Establishment and Region, 2009

Region	How to deal directly with waste after collected from the Establishment						
	Total	Others	Establishment throw out the waste randomly	Establishment transfer the waste to the nearest dump site	Local authority collect the waste directly from Establishment	Establishment transfer the waste to the nearest container	
Palestinian Territory	100	3.9	1.9	1.5	11.6	81.1	
West Bank	100	5.2	2.5	1.8	12.2	78.3	
North of West Bank	100	6.9	1.0	1.5	17.6	73.0	
Middle of West Bank	100	0.7	0.5	2.0	8.1	88.7	
South of West Bank	100	6.0	6.7	2.1	6.5	78.7	
Gaza Strip	100	0.6	0.5	0.8	10.0	88.1	

2009

Table 29: Percentage Distribution of Economic Establishments in the Palestinian Territory by Type of Container which used for Solid Waste Collection and Economic Activity, 2009

Economic activity	Type of Container					
	Total	Establishment closed container	Establishment open container	Municipality closed container	Municipality open container	
Palestinian Territory	100	0.8	0.7	12.7	85.8	
Industrial activities	100	0.6	2.6	10.7	86.1	
Constructions	100	0.0	0.7	6.3	93.0	
Whole sale, retail & repairs	100	0.7	0.0	13.9	85.4	
Hotels & restaurants	100	0.0	0.3	21.7	78.0	
Transport, storage & communications	100	0.0	0.9	10.4	88.7	
Real estate, renting & business activities	100	0.1	0.2	7.5	92.2	
Education	100	1.2	0.6	11.5	86.7	
Health & social work	100	3.6	1.1	9.6	85.7	
Community, social & personal services	100	1.2	1.5	9.4	87.9	

2009

Table 30: Percentage Distribution of Economic Establishments in the Palestinian Territory by Type of Container which used for Solid Waste Collection and Region, 2009

Region	Type of Container					
	Total	Establishment closed container	Establishment open container	Municipality closed container	Municipality open container	
Palestinian Territory	100	0.8	0.7	12.7	85.8	
West Bank	100	1.1	0.8	17.9	80.2	
North of West Bank	100	0.6	0.9	11.6	86.9	
Middle of West Bank	100	2.5	0.6	34.9	62.0	
South of West Bank	100	0.6	0.7	12.3	86.4	
Gaza Strip	100	0.1	0.4	1.3	98.2	

2009

Table 31: Percentage Distribution of Economic Establishments in the Palestinian Territory by the Used Container Material Construction and Economic Activity, 2009

Economic activity	Container Material			
	Total	Plastic	Metal	
Palestinian Territory	100	4.2	95.8	
Industrial activities	100	4.8	95.2	
Constructions	100	0.4	99.6	
Whole sale, retail & repairs	100	4.7	95.3	
Hotels & restaurants	100	4.7	95.3	
Transport, storage & communications	100	4.7	95.3	
Real estate, renting & business activities	100	2.2	97.8	
Education	100	3.1	96.9	
Health & social work	100	2.6	97.4	
Community, social & personal services	100	2.2	97.8	

2009

Table 32: Percentage Distribution of Economic Establishments in the Palestinian Territory by the Used Container Material Construction and Region, 2009

Region	Container Material			
	Total	Plastic	Metal	
Palestinian Territory	100	4.2	95.8	
West Bank	100	5.8	94.2	
North of West Bank	100	8.0	92.0	
Middle of West Bank	100	6.4	93.6	
South of West Bank	100	1.8	98.2	
Gaza Strip	100	0.6	99.4	

2009

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Table 33: Percentage Distribution of Economic Establishments in the Palestinian Territory by the Used Container Volume and Economic Activity, 2009

Economic activity	Container volume (m ³) ()				
	Total	7 7 and more	6-4	3-1	
Palestinian Territory	100	4.5	28.6	66.9	
Industrial activities	100	10.7	34.9	54.4	
Constructions	100	2.2	28.2	69.6	
Whole sale, retail & repairs	100	3.2	27.6	69.2	
Hotels & restaurants	100	6.2	27.3	66.5	
Transport, storage & communications	100	6.6	33.6	59.8	
Real estate, renting & business activities	100	2.2	25.6	72.2	
Education	100	2.1	26.7	71.2	
Health & social work	100	1.3	23.1	75.6	
Community, social & personal services	100	4.2	29.6	66.2	

2009

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Table 34: Percentage Distribution of Economic Establishments in the Palestinian Territory by the Used Container Volume and Region, 2009

Region	Container volume (m ³) ()				
	Total	7 7 and more	6-4	3-1	
Palestinian Territory	100	4.5	28.6	66.9	
West Bank	100	5.4	34.1	60.5	
North of West Bank	100	2.7	22.6	74.7	
Middle of West Bank	100	13.3	40.2	46.5	
South of West Bank	100	2.5	46.4	51.1	
Gaza Strip	100	2.6	16.4	81.0	

2009

Table 35: Percentage Distribution of Economic Establishments in the Palestinian Territory by the Solid Waste Collection Place and Economic Activity, 2009

Economic activity	Solid Waste Collection Place				
	Total	Outside establishment	Inside establishment square	Inside establishment building	
Palestinian Territory	100	32.5	14.7	52.8	
Industrial activities	100	17.5	21.1	61.4	
Constructions	100	25.8	13.5	60.7	
Whole sale, retail & repairs	100	41.0	13.2	45.8	
Hotels & restaurants	100	18.0	17.4	64.6	
Transport, storage & communications	100	29.1	10.6	60.3	
Real estate, renting & business activities	100	15.6	7.2	77.2	
Education	100	27.0	27.4	45.6	
Health & social work	100	27.5	14.8	57.7	
Community, social & personal services	100	28.8	12.1	59.1	

2009

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Table 36: Percentage Distribution of Economic Establishments in the Palestinian Territory by the Waste Collection Place and Region, 2009

Region	Solid Waste Collection Place				
	Total	Outside establishment	Inside establishment square	Inside establishment building	
Palestinian Territory	100	32.5	14.7	52.8	
West Bank	100	26.0	16.1	57.9	
North of West Bank	100	26.9	10.5	62.6	
Middle of West Bank	100	32.0	12.7	55.3	
South of West Bank	100	19.9	27.8	52.3	
Gaza Strip	100	48.5	11.5	40.0	

2009

Table 37: Percentage Distribution of Economic Establishments in the Palestinian Territory by Distance Between Establishment and Waste Collection Place and Economic Activity, 2009

Economic activity	() Distance between establishment and the solid waste collection place (m)				
	Total	151 151 and more	150 - 51	50 50 and Less	
Palestinian Territory	100	7.9	22.0	70.1	
Industrial activities	100	10.2	18.2	71.6	
Constructions	100	12.3	31.4	56.3	
Whole sale, retail & repairs	100	8.8	22.0	69.2	
Hotels & restaurants	100	1.4	14.2	84.4	
Transport, storage & communications	100	20.4	24.9	54.7	
Real estate, renting & business activities	100	3.2	21.1	75.7	
Education	100	3.5	16.6	79.9	
Health & social work	100	0.8	36.9	62.3	
Community, social & personal services	100	3.8	22.3	73.9	

2009

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Table 38: Percentage Distribution of Economic Establishments in the Palestinian Territory by Distance Between Establishment and Waste Collection Place and Region, 2009

Region	() Distance between establishment and the solid waste collection place (m)				
	Total	151 151 and more	150 - 51	50 50 and Less	
Palestinian Territory	100	7.9	22.0	70.1	
West Bank	100	7.2	15.5	77.3	
North of West Bank	100	1.3	3.2	95.5	
Middle of West Bank	100	1.4	25.1	73.5	
South of West Bank	100	28.2	32.2	39.6	
Gaza Strip	100	8.9	30.8	60.3	

2009

Table 39: Percentage Distribution of Economic Establishments in the Palestinian Territory by the Doer of Solid Waste Disposal and Economic Activity, 2009

Economic activity	Doer of Solid Waste Disposal							
	Total	Jerusalem municipality	Others	UNRWA	Private contractor	Local Authority	The establishment	
Palestinian Territory	100	4.3	0.2	2.9	0.3	86.3	6.0	
Industrial activities	100	2.6	1.0	1.8	0.3	80.4	13.9	
Constructions	100	0.0	0.0	1.5	0.1	89.4	9.0	
Whole sale, retail & repairs	100	5.1	0.0	2.8	0.0	88.2	3.9	
Hotels & restaurants	100	6.1	0.0	0.3	0.0	83.6	10.0	
Transport, storage & communications	100	5.1	0.0	2.6	0.4	86.9	5.0	
Real estate, renting & business activities	100	5.4	0.0	1.3	1.7	82.9	8.7	
Education	100	2.5	0.0	6.5	0.0	86.8	4.2	
Health & social work	100	5.5	0.0	3.4	1.1	88.0	2.0	
Community, social & personal services	100	2.2	0.1	6.3	0.8	87.0	3.6	

2009

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Table 40: Percentage Distribution of Economic Establishments in the Palestinian Territory by the Doer of Solid Waste Disposal and Region, 2009

Region	Doer of Solid Waste Disposal							
	Total	Jerusalem municipality	Others	UNRWA	Private contractor	Local Authority	The establishment	
Palestinian Territory	100	4.3	0.2	2.9	0.3	86.3	6.0	
West Bank	100	6.3	0.2	3.1	0.1	82.7	7.6	
North of West Bank	100	0.0	0.4	0.7	0.2	94.5	4.2	
Middle of West Bank	100	27.2	0.1	3.7	0.2	66.0	2.8	
South of West Bank	100	0.0	0.1	6.8	0.0	76.3	16.8	
Gaza Strip	100	0.0	0.1	2.1	0.6	95.1	2.1	

2009

Table 41: Percentage Distribution of Economic Establishments in the Palestinian Territory by the Solid Waste Final Disposal Place and Economic Activity, 2009

Economic activity	Solid Waste Final Disposal Place					
	Total	Others	Disposed randomly	Private dumping site	Local Authority dumping site	
Palestinian Territory	100	2.9	1.9	15.0	80.2	
Industrial activities	100	2.2	3.6	15.5	78.7	
Constructions	100	0.6	4.6	25.1	69.7	
Whole sale, retail & repairs	100	3.4	1.9	14.9	79.8	
Hotels & restaurants	100	2.0	0.0	17.4	80.6	
Transport, storage & communications	100	1.1	0.6	13.3	85.0	
Real estate, renting & business activities	100	1.6	1.1	10.9	86.4	
Education	100	2.3	0.3	17.8	79.6	
Health & social work	100	3.4	0.0	15.8	80.8	
Community, social & personal services	100	2.7	0.9	14.7	81.7	

2009

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Table 42: Percentage Distribution of Economical Establishment in the Palestinian Territory by the Solid Waste Final Disposal Place and Region, 2009

Region	Solid Waste Final Disposal Place					
	Total	Others	Disposed randomly	Private dumping site	Local Authority dumping site	
Palestinian Territory	100	2.9	1.9	15.0	80.2	
West Bank	100	3.6	2.3	19.7	74.4	
North of West Bank	100	0.1	1.0	15.7	83.2	
Middle of West Bank	100	8.1	0.6	28.3	63.0	
South of West Bank	100	6.2	5.7	19.4	68.7	
Gaza Strip	100	0.9	0.8	3.6	94.7	

2009

Table 43: Percentage Distribution of Economic Establishments in the Palestinian Territory by the Weekly Periodicity of Final Disposal Waste and Economic Activity, 2009

Economic activity	Periodicity (Weekly) ()				
	Total	7 7 times and more	6-4	3-1	
Palestinian Territory	100	7.1	40.8	52.1	
Industrial activities	100	11.4	46.4	42.2	
Constructions	100	5.4	55.3	39.3	
Whole sale, retail & repairs	100	5.1	40.1	54.8	
Hotels & restaurants	100	9.3	34.3	56.4	
Transport, storage & communications	100	8.4	45.3	46.3	
Real estate, renting & business activities	100	10.0	34.6	55.4	
Education	100	7.7	41.6	50.7	
Health & social work	100	10.8	42.6	46.6	
Community, social & personal services	100	6.7	38.9	54.4	

2009

Table 44: Percentage Distribution of Economic Establishments in the Palestinian Territory by the Weekly Periodicity of Final Disposal Waste and Region, 2009

Region	Periodicity (Weekly) ()				
	Total	7 7 times and more	6-4	3-1	
Palestinian Territory	100	7.1	40.8	52.1	
West Bank	100	7.9	37.4	54.7	
North of West Bank	100	3.6	34.4	62.0	
Middle of West Bank	100	13.9	46.6	39.5	
South of West Bank	100	10.3	35.0	54.7	
Gaza Strip	100	5.0	49.2	45.8	

2009

Table 45: Selected Indicators for Environment Account in the Economic Establishments in the Palestinian Territory, 2009

Indicator	value	
Total Monthly Payment From Economic Establishments for Water Consumed	9,890,607	
Total Monthly Payment From Economic Establishments for Wastewater Disposal	1,769,173	
Total Monthly Payment From Economic Establishments for Waste Disposal	3,811,112	
Total	15,470,892	

2009

Table 46: Percentage Distribution of Economic Establishments in the Palestinian Territory by Establishments Evaluation for Used Water Quality and Economic Activity, 2009

Economic activity	Establishments Evaluation for Used Water Quality				
	Total	Bad	Fairly good	Good	
Palestinian Territory	100	14.4	24.5	61.1	
Industrial activities	100	7.2	22.3	70.5	
Constructions	100	12.8	32.6	54.6	
Whole sale, retail & repairs	100	19.3	23.2	57.5	
Hotels & restaurants	100	4.6	24.0	71.4	
Transport, storage & communications	100	11.8	32.1	56.1	
Real estate, renting & business activities	100	12.0	29.2	58.8	
Education	100	10.4	31.1	58.5	
Health & social work	100	4.0	35.5	60.5	
Community, social & personal services	100	12.4	25.2	62.4	

2009

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Table 47: Percentage Distribution of Economic Establishments in the Palestinian Territory by Establishments Evaluation for Used Water Quality and Region, 2009

Region	Establishments Evaluation for Used Water Quality				
	Total	Bad	Fairly good	Good	
Palestinian Territory	100	14.4	24.5	61.1	
West Bank	100	10.2	16.9	72.9	
North of West Bank	100	7.2	17.1	75.7	
Middle of West Bank	100	6.3	26.1	67.6	
South of West Bank	100	17.5	9.5	73.0	
Gaza Strip	100	24.4	42.2	33.4	

2009

Table 48: Percentage Distribution of Economic Establishments in the Palestinian Territory by Establishments Evaluation for Water Supply Service and Economic Activity, 2009

Economic activity	Establishments Evaluation for Water Supply Service				
	Total	Bad	Fairly good	Good	
Palestinian Territory	100	13.0	30.4	56.6	
Industrial activities	100	9.6	30.8	59.6	
Constructions	100	9.9	30.8	59.3	
Whole sale, retail & repairs	100	15.1	29.9	55.0	
Hotels & restaurants	100	8.9	31.9	59.2	
Transport, storage & communications	100	7.1	35.2	57.7	
Real estate, renting & business activities	100	14.9	29.6	55.5	
Education	100	11.3	38.7	50.0	
Health & social work	100	10.1	31.2	58.7	
Community, social & personal services	100	10.5	29.6	59.9	

2009

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Table 49: Percentage Distribution of Economic Establishments in the Palestinian Territory by Establishments Evaluation for Water Supply Service and Region, 2009

Region	Establishments Evaluation for Water Supply Service				
	Total	Bad	Fairly good	Good	
Palestinian Territory	100	13.0	30.4	56.6	
West Bank	100	8.9	25.7	65.4	
North of West Bank	100	8.6	25.4	66.0	
Middle of West Bank	100	6.4	27.3	66.3	
South of West Bank	100	11.3	24.9	63.8	
Gaza Strip	100	22.4	41.4	36.2	

2009

Table 50: Percentage Distribution of Economic Establishments in the Palestinian Territory by Establishments Evaluation for Wastewater Disposal Service Using Wastewater Network and Economic Activity, 2009

Economic activity	Establishments Evaluation for Wastewater Disposal Service Using Wastewater Network					
	Total	Not applicable	Bad	Fairly good	Good	
Palestinian Territory	100	40.1	2.4	11.3	46.2	
Industrial activities	100	36.9	4.7	15.3	43.1	
Constructions	100	23.2	6.6	9.7	60.5	
Whole sale, retail & repairs	100	46.8	0.9	9.7	42.6	
Hotels & restaurants	100	25.7	4.7	4.6	65.0	
Transport, storage & communications	100	30.0	2.2	13.5	54.3	
Real estate, renting & business activities	100	14.9	8.7	17.4	59.0	
Education	100	42.3	4.1	5.5	48.1	
Health & social work	100	26.3	3.2	9.5	61.0	
Community, social & personal services	100	36.6	2.7	12.6	48.1	

2009

Table 51: Percentage Distribution of Economic Establishments in the Palestinian Territory by Establishments Evaluation for Wastewater Disposal Service Using Wastewater Network Service and Region, 2009

Region	Establishments Evaluation for Wastewater Disposal Service Using Wastewater Network					
	Total	Not applicable	Bad	Fairly good	Good	
Palestinian Territory	100	40.1	2.4	11.3	46.2	
West Bank	100	43.8	2.3	9.2	44.7	
North of West Bank	100	56.3	1.0	5.5	37.2	
Middle of West Bank	100	16.5	5.8	23.1	54.6	
South of West Bank	100	47.8	1.5	1.5	49.2	
Gaza Strip	100	31.5	2.9	15.8	49.8	

2009

Table 52: Percentage Distribution of Economic Establishments in the Palestinian Territory by Establishments Evaluation for Quality of Container which Used for Solid Waste Collection and Economic Activity, 2009

Economic activity	Establishments Evaluation for Quality of Container which Used for Solid Waste Collection				
	Total	Bad	Fairly good	Good	
Palestinian Territory	100	9.2	42.9	47.9	
Industrial activities	100	8.5	31.6	59.9	
Constructions	100	11.7	25.7	62.6	
Whole sale, retail & repairs	100	8.5	52.3	39.2	
Hotels & restaurants	100	3.9	23.6	72.5	
Transport, storage & communications	100	7.2	32.7	60.1	
Real estate, renting & business activities	100	13.8	28.8	57.4	
Education	100	11.3	34.4	54.3	
Health & social work	100	12.7	26.2	61.1	
Community, social & personal services	100	14.0	32.7	53.3	

2009

Table 53: Percentage Distribution of Economic Establishments in the Palestinian Territory by Establishments Evaluation for Quality of Container which Used for Solid Waste Collection and Region, 2009

Region	Establishments Evaluation for Quality of Container which Used for Solid Waste Collection				
	Total	Bad	Fairly good	Good	
Palestinian Territory	100	9.2	42.9	47.9	
West Bank	100	7.2	42.0	50.8	
North of West Bank	100	7.1	55.2	37.7	
Middle of West Bank	100	3.5	37.2	59.3	
South of West Bank	100	10.3	24.3	65.4	
Gaza Strip	100	14.1	44.9	41.0	

2009

Table 54: Percentage Distribution of Economic Establishments in the Palestinian Territory by Establishments Evaluation for Comparing the Container Size with the Produced Waste Quantity and Economic Activity, 2009

Economic activity	Establishments Evaluation for Comparing the Container Size with the Produced Waste Quantity			
	Total	Fairly good	Good	
Palestinian Territory	100	37.1	62.9	
Industrial activities	100	27.4	72.6	
Constructions	100	27.6	72.4	
Whole sale, retail & repairs	100	42.6	57.4	
Hotels & restaurants	100	26.2	73.8	
Transport, storage & communications	100	23.6	76.4	
Real estate, renting & business activities	100	23.7	76.3	
Education	100	40.7	59.3	
Health & social work	100	30.1	69.9	
Community, social & personal services	100	37.5	62.5	

2009

Table 55: Percentage Distribution of Economic Establishments in the Palestinian Territory by Establishments Evaluation for Comparing the Container Size with the Produced Waste Quantity and Region, 2009

Region	Establishments Evaluation for Comparing the Container Size with the Produced Waste Quantity			
	Total	Fairly good	Good	
Palestinian Territory	100	37.1	62.9	
West Bank	100	34.5	65.5	
North of West Bank	100	42.8	57.2	
Middle of West Bank	100	25.5	74.5	
South of West Bank	100	28.9	71.1	
Gaza Strip	100	42.9	57.1	

2009

Table 56: Percentage Distribution of Economic Establishments in the Palestinian Territory by Establishments Evaluation for Periodicity of Waste Collection and Economic Activity, 2009

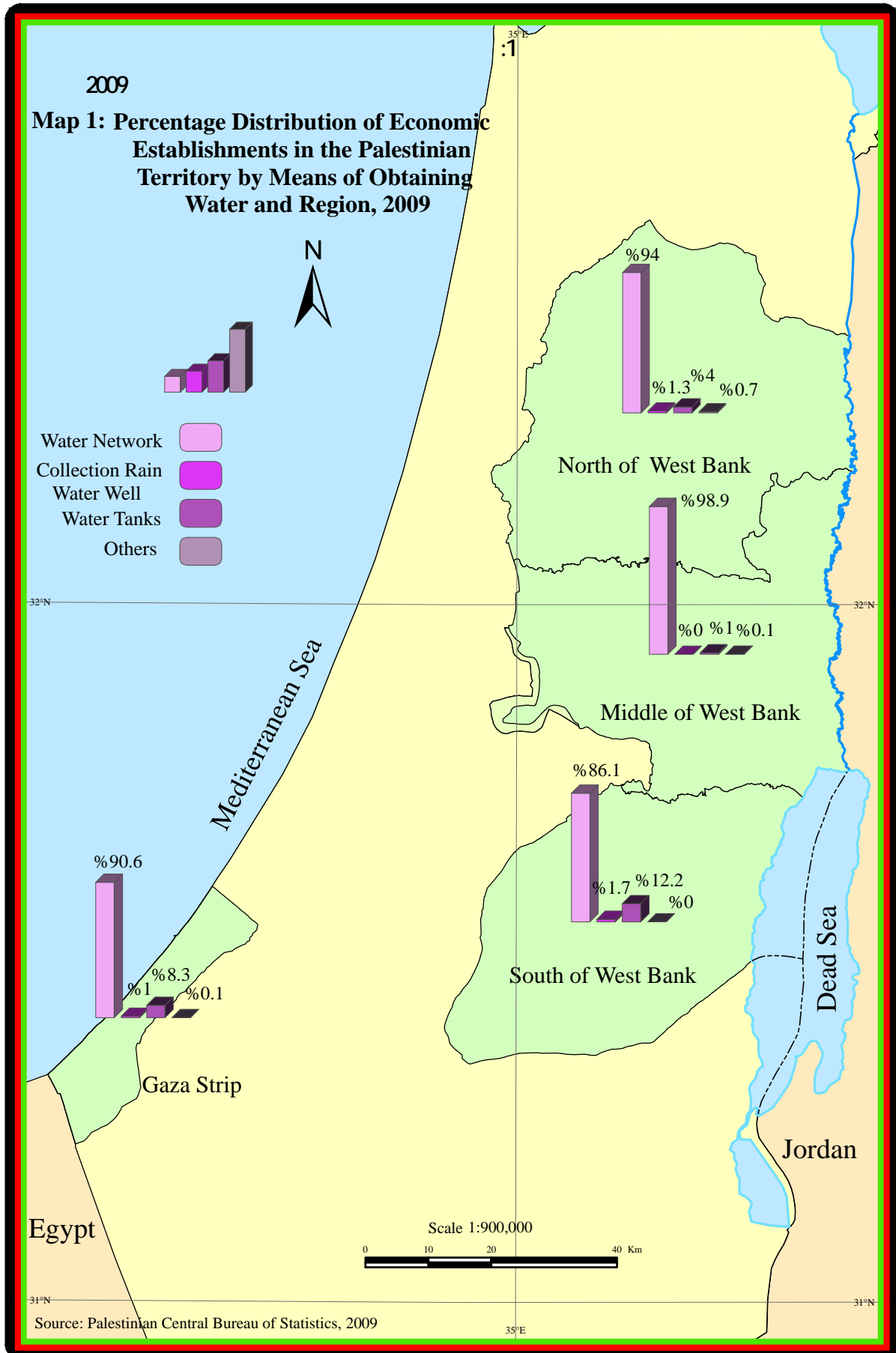
Economic activity	Establishments Evaluation for Periodicity of Waste Collection			
	Total	Fairly good	Good	
Palestinian Territory	100	28.7	71.3	
Industrial activities	100	21.4	78.6	
Constructions	100	21.5	78.5	
Whole sale, retail & repairs	100	32.1	67.9	
Hotels & restaurants	100	21.1	78.9	
Transport, storage & communications	100	18.6	81.4	
Real estate, renting & business activities	100	21.3	78.7	
Education	100	34.5	65.5	
Health & social work	100	23.5	76.5	
Community, social & personal services	100	31.9	68.1	

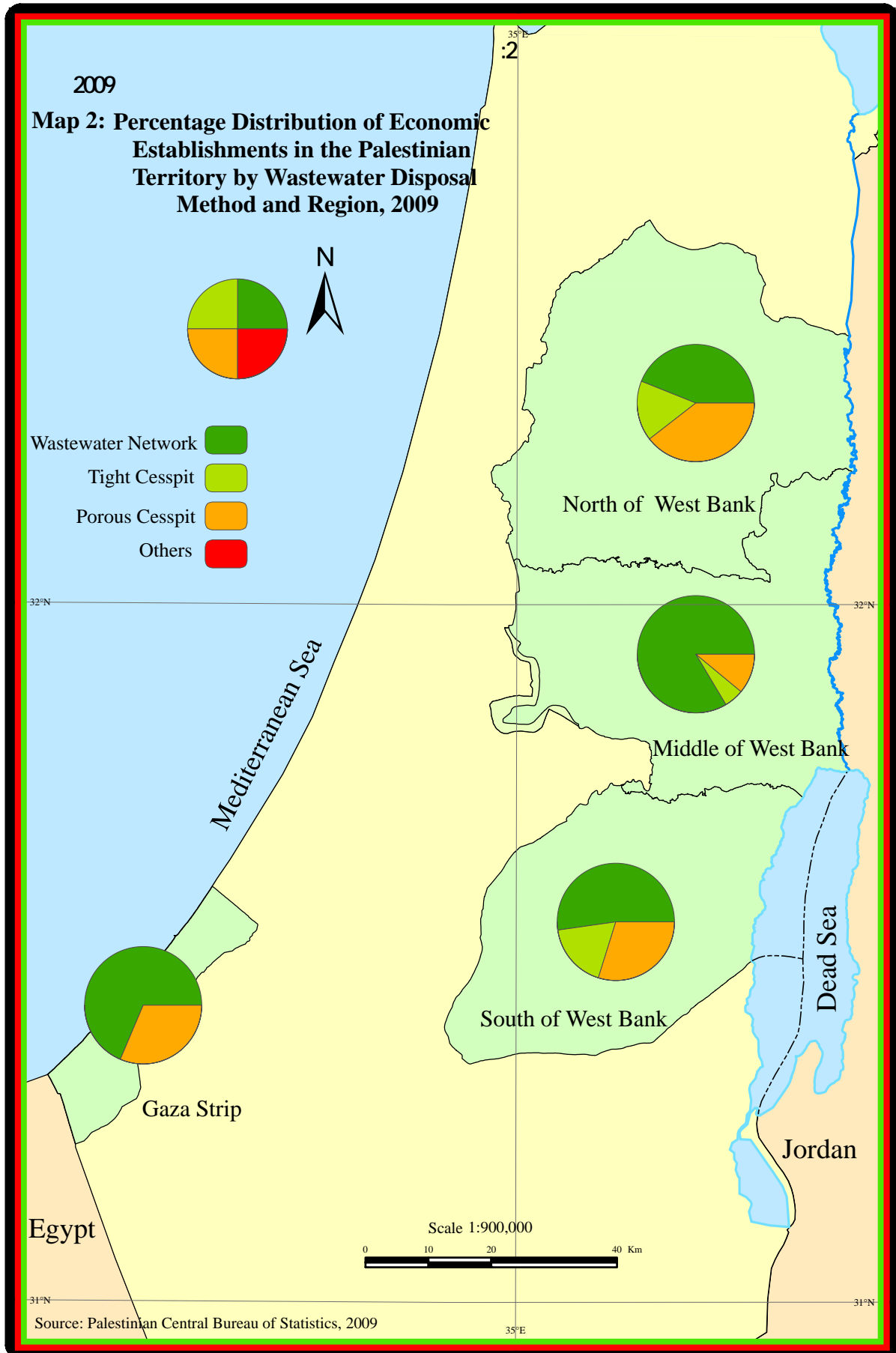
2009

Table 57: Percentage Distribution of Economic Establishments in the Palestinian Territory by Establishments Evaluation for Periodicity of Waste Collection and Region, 2009

Region	Establishments Evaluation for Periodicity of Waste Collection			
	Total	Fairly good	Good	
Palestinian Territory	100	28.7	71.3	
West Bank	100	23.8	76.2	
North of West Bank	100	28.2	71.8	
Middle of West Bank	100	21.0	79.0	
South of West Bank	100	19.0	81.0	
Gaza Strip	100	40.2	59.8	

Maps







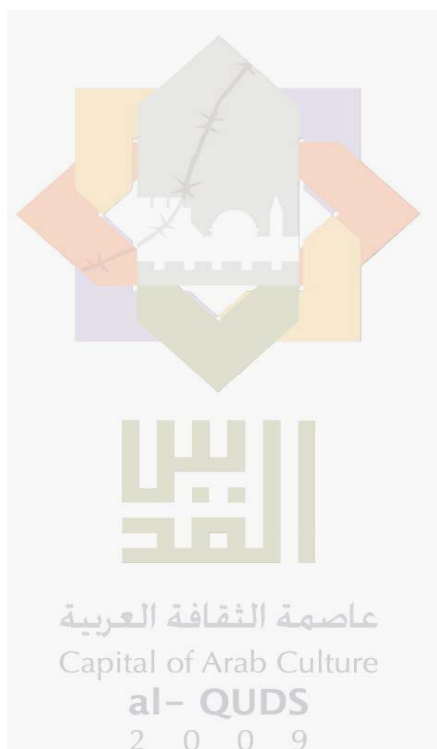
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All correspondence should be directed to:
**Palestinian Central Bureau of Statistics
P.O.Box 1647 Ramallah, Palestine.**

Tel: (972/970) 2 242 6340
Fax: (972/970) 2 242 6343
E-Mail: diwan@pcbs.gov.ps
web-site: <http://www.pcbs.gov.ps>

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Team Work

- **Report Preparation**
Maen Salhab
- **Maps Design**
Reham Dar Ali
- **Graphic Design**
Ahmad Sawalmeh
- **Dissemination Standard**
Hanan Janajreh
- **Preliminary Review**
Zahran Ikhlaiif
Mahmoud Abd-Alrahman
- **Final Review and Overall Supervision**
Mahmoud Jaradat
Ola Awad

Preface

The world attention has increased to provide environmental statistics in the economic sector. Providing such data participates in policy making and legislation that reduces the pressure on the environment. As in the rest of the world, the attention has greatly been increased in the Palestinian Territory to provide such data after many years of environment negligence and the absence of standards and rules during the period of the Israeli occupation.

We are pleased to publish this specialized statistical report about environment situation in the economic establishments in the Palestinian Territory. This report presents the main findings of the Environmental Economic Survey 2009. This survey is part of our official effort for creating and establishing the National Statistical System, and providing the necessary statistics to Palestinian policy-planners and decision-makers in environment and natural resources sector.

PCBS conducted the Environmental Economic Survey during the period 22/03/2009 to 28/05/2009, the main objective of the survey is to provide reliable data of environmental reality in the economic establishments in the Palestinian Territory, including the methods used to handle the solid waste and wastewater. It includes also the role of the local authority in providing the suitable environment that will reduce the negative effect of the different types of pollution in the economic sector.

This report presents the main findings of the Environmental Economic Survey. It is one of a series of expected reports to be published by PCBS on the environment and natural resources in Palestine according to the plan for the Environment Statistical Department, as a tool for describing the status of environment in the Palestinian Territory.

This report presents statistical data of water consumption in the economic establishments by water source, the methods of solid waste disposal and their main components, and the disposal of wastewater.

PCBS hopes that the main findings of this survey will contribute in improving the environmental status and minimizing the random depletion of natural resources, in addition to providing reliable and useful statistics for Palestinian planners and decision-makers.

September, 2009

**Ola Awad
Acting President**

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Executive Summary

The Palestinian Central Bureau of Statistics implemented the Environmental Economic Survey during the period 22/03/2009 to 28/05/2009. The survey aimed at covering the whole economic sectors. It provides data on the main indicators of environment in the economic establishments, including water, management of solid waste and wastewater.

Survey results showed that the average quantity of water consumed by economic establishments in the Palestinian Territory in 2009 was 3,071 thousand cubic meters per month. Geographically, the average quantity of water consumed by the economic establishments in the West Bank was 1,664 thousand cubic meters per month, and 1,407 thousand cubic meters per month in Gaza Strip.

Results showed that the main source for obtaining water in the economic establishments in the Palestinian Territory in 2009 was the public water network; 92.0% used this source compared with 87.5% in 2008. Geographically, the percentage of economic establishments that obtain water from the public water network in the West Bank was 92.7% of economic establishments, compared with 90.6% in Gaza Strip.

Data indicated that the percentage of economic establishments in the Palestinian Territory in 2009 that used wastewater network to dispose wastewater was 59.9%, compared with 29.9% using porous cesspits.

The results indicated that the economic establishments in the Palestinian Territory produced 7,807 tons of solid waste per month, divided into 6,308 tons produced by the economic establishments in the West Bank and 1,499 tons produced by the economic establishments in Gaza Strip.

The results indicated that the percentage of economic establishments that treat solid waste in the Palestinian Territory in 2009 was 2.2%, 61.7% of these economic establishments in the Palestinian Territory in 2009 use the open burning method in treating the solid waste, and 16.2% of the economic establishments used chemical treatment.

Data revealed that the percentage of the economic establishments in the Palestinian Territory in 2009 that dispose of their solid waste themselves was 6.0%, whereas the percentage of the economic establishments served by local authority disposal services was 86.3%. Also, data showed that 7.6% of the total economic establishments in the West Bank dispose of their solid waste by themselves compared with 2.1% of the total economic establishments in Gaza Strip.

Chapter One

Introduction

1.1 Introduction

This report provides statistical data on the main environmental indicators for the economic establishments in the Palestinian Territory, based on the Environmental Economic survey which was implemented during the period 22/03/2009 to 28/05/2009.

1.2 Survey Objectives

The main objective of the survey is to provide reliable data of environmental reality on the economic establishments in the Palestinian Territory, including the methods used to handle water, solid waste and wastewater. It includes also the role of the local authority in providing the suitable environment that will reduce the negative effect of the different types of pollution on the economic sector.

1.3 Report Structure

This report is divided into five chapters; the first chapter contains the introduction, aims and report structure. The second chapter contains the concepts and definitions in this report. The third chapter defines the main findings of the report. The fourth chapter explains the methodology of collecting and tabulated. The fifth chapter handles data quality through pointing the main notes on the data and estimations of the data sources of this report.

Chapter Two

Concepts and Definitions

Wastewater Network

System of collectors, pipelines, conduits and pumps to evacuate wastewater (rainwater, domestic and other wastewater) from any of the location paces generation either to municipal sewage treatment plant or to a location place where wastewater is discharged.

Solid Waste Disposal

Ultimate deposition or placement of refuse that is not salvaged or recycled.

Wastewater

Used water, typically discharged into the sewage system. It contains matter and bacteria in solution or suspension.

Dumping Site

Site used to dispose of solid wastes without environmental control.

Solid Waste

Useless and sometimes hazardous material with low liquid content, solid wastes include municipal garbage, industrial and commercial waste, sewage sludge, wastes resulting from agricultural and animal husbandry operations and other connected activities, demolition wastes and mining residues.

Pharmaceutical Waste

This includes pharmaceutical products, drugs and chemicals, which have been returned from wards, have been spilled or soiled, are out of date or contaminated, or are to be discarded for any reason.

Waste Collection

Collection or transport of waste to the place of treatment or discharge by municipal services or similar institutions, or by public or governmental and non-governmental corporations, specialized enterprises or general government. Collection of municipal waste may be selective, that's to say carried out for a specific type of product, or undifferentiated, in other words, covering all kinds of waste at the same time.

Open Burning

Out door burning of wastes such as lumber, scrapped cars, textiles, sawdust and so forth.

Cesspit

A well or a pit in which night soil and other refuse is stored, constructed with either tight or porous walls.

Establishment

An enterprise or part of an enterprise in which one group of goods and services is produced (with the possibility of having secondary activities).

Public Water Network

Is a network of main sub-assembly pipes expanded in the locality for the purpose of population distribution and delivery of potable water.

Wastewater Treatment

Process to render wastewater fit to meet environmental standards or other quality norms. Three broad types of treatment may be distinguished: mechanical, biological, and advanced.

A set of special symbols was used in the tables of this report

(-): Nil

(0): The value is less than (0.05)

Chapter Three

Main Findings

This chapter presents the main findings of the report, including the main environmental indicators for economic establishments in the Palestinian Territory in 2009.

3.1 Water

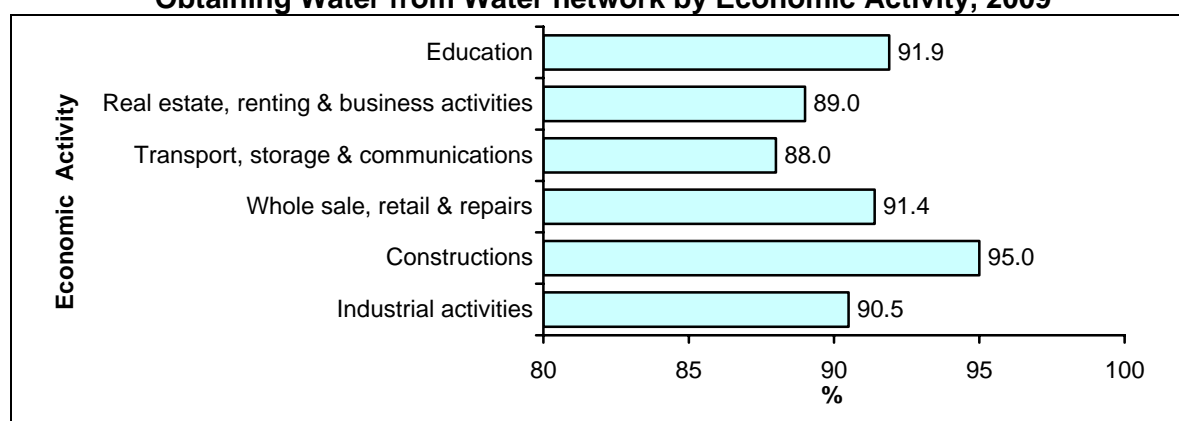
Economic establishments consumed around 3,071 thousands m³ of water/ month

Survey results showed that the average quantity of water consumed by economic establishments in the Palestinian Territory in 2009 was 3,071 thousand cubic meters per month. The average quantity of water consumed by the wholesale, retail and repairs sector establishments was 900 thousand cubic meters per month compared with 22 thousand cubic meters per month for constructions sector establishments. Geographically, the average quantity of water consumed by the economic establishments in the West Bank was 1,664 thousand cubic meters per month, and 1,407 thousand cubic meters per month in Gaza Strip.

Water network is the main source of water

Results showed that the main source for obtaining water in the economic establishments in the Palestinian Territory in 2009 was the public water network; 92.0% used this source compared with 87.5% in 2008.

Figure 1: Percentage of Economic Establishments in the Palestinian Territory which Obtaining Water from Water network by Economic Activity, 2009



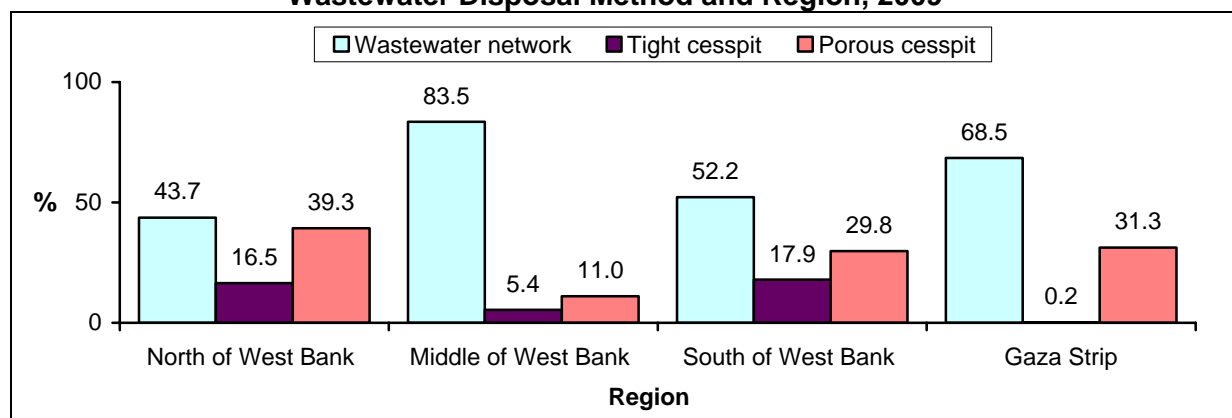
Geographically, the percentage of economic establishments that obtain water from the public water network in the West Bank was 92.7% of economic establishments, compared with 90.6% in Gaza Strip. The Middle of the West Bank ranked as the highest region that obtains water from the public water network, amounting to 98.9%, compared with 86.1% of the economic establishments in the South of the West Bank.

3.2 Wastewater

Wastewater network is the main method of disposing of wastewater

Data indicated that the percentage of economic establishments in the Palestinian Territory in 2009 that used the wastewater network to dispose of their wastewater was 59.9%, compared with 29.9% using porous cesspits.

Figure 2: Percentage of Economic establishments in the Palestinian Territory by Their Wastewater Disposal Method and Region, 2009



3.3 Solid Waste

Solid Waste Quantity

7,807 tons of solid waste produced monthly by economic establishments

The results indicated that the economic establishments in the Palestinian Territory produced 7,807 tons of solid waste per month, divided into 6,308 tons produced by the economic establishments in the West Bank and 1,499 tons produced by the economic establishments in Gaza Strip.

Solid Waste Components

The solid waste produced by 82.7% of the economic establishments contained paper and cartoon

82.7% of economic establishments in the Palestinian Territory produced waste that contained paper and cartoon, 67.7% of the economic establishments produced waste that contained food wastes, and 58.1% of economic establishments produced waste that contained plastic and rubber.

Solid Waste Separation

71.4% of the economic establishments which produced chemical waste separate this type of waste

The percentage of economic establishments that produced and separated chemical waste was 71.4%. The percentage of economic establishments in the Palestinian Territory in 2009 that used plastic bags to contain the collected separated solid waste was 75.0%, compared with 3.9% of the economic establishments that used metal boxes. Concerning the non-separated solid waste, the percentage of economic establishments that used plastic bags to contain these wastes was 74.3%, compared with 8.2% of the economic establishments that used plastic boxes.

Solid Waste Treatment

Less than 3% of the economic establishments treated solid waste

The results indicated that the percentage of economic establishments that treat solid waste in the Palestinian Territory in 2009 was 2.2%, 61.7% of these economic establishments in the

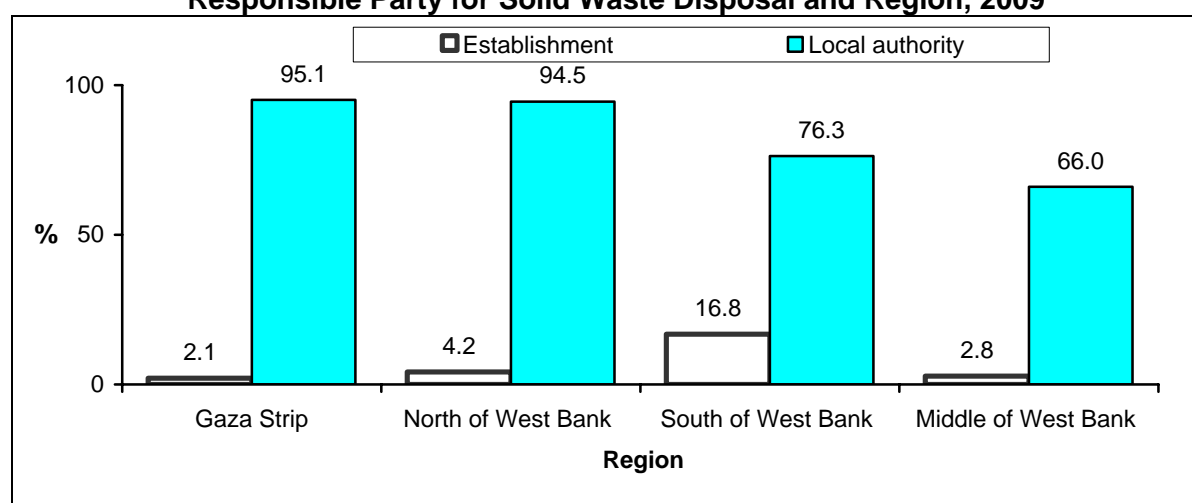
Palestinian Territory in 2009 use the open burning method in treating the solid waste, and 16.2% of the economic establishments used chemical treatment.

Solid Waste Disposal

More than 80% of the economic establishments served by local authority solid waste disposal services

Data revealed that the percentage of the economic establishments in the Palestinian Territory in 2009 that dispose of their solid waste themselves was 6.0%, whereas the percentage of the economic establishments served by local authority disposal services was 86.3%. Also, data showed that 7.6% of the total economic establishments in the West Bank dispose of their solid waste by themselves compared with 2.1% of the total economic establishments in Gaza Strip.

Figure 3: Percentage of Economic Establishments in the Palestinian Territory by the Responsible Party for Solid Waste Disposal and Region, 2009



Common solid waste disposal places are the local authority dumping sites

Data showed that 80.2% of economic establishments in the Palestinian Territory in 2009 disposed of their solid waste in local authority dumping sites. By region 74.4% of economic establishments in the West Bank in 2009 disposed of their solid waste in local authority dumping sites, compared with 94.7% in Gaza Strip.

3.4 Environmental accounts in the economic establishments

The total monthly payment by economic establishments for water consumed was NIS 10 million. NIS 1.8 million was the total monthly payment from economic establishments for wastewater disposal and the total monthly payment from economic establishments for waste disposal was NIS 3.8 million.

3.5 Economic establishments' evaluation of their environmental status

61.1% of economic establishments in the Palestinian Territory in 2009 evaluate the quality of the water they use as good quality, 56.6% of economic establishments evaluate the water supply service as good service, 46.2% of economic establishments evaluate the wastewater disposal service using a wastewater network as good service, 47.9% of economic establishments evaluate the quality of the container which used for solid waste collection as good quality, 62.9% of economic establishments evaluate the container size for the produced waste quantity as being a good size, and 71.3% of economic establishments evaluate the frequency of waste collection as good.

Chapter Four

Methodology

This chapter presents the scientific methodology used in the planning and implementation of the environmental economic survey, including the design of the survey tools and methods of collecting, processing and analyzing data.

4.1 Questionnaire

The environmental questionnaire was designed according to international standards and recommendations for the most important indicators, taking into account the special situation of Palestine. Many visits for economic establishments were made in order to improve the survey tools and to test the questionnaire before implementing the survey; consequently some modifications were made on the questionnaire and on the instructions following the visits.

4.2 Sample Design

The sample was a single-stage stratified cluster random sample using 3,922 Palestinian economic establishments distributed according to economic activities and governorates.

Target Population

All of the Palestinian economic establishments were included in the Economic Series Survey sample in the Palestinian Territory.

Sample Frame

The sampling frame was based on the Establishments' Census-2007 conducted by PCBS.

Stratification

Three levels of stratification were followed in designing the sample of the economic survey including:

1. Stratification by region: West Bank and Gaza Strip and classification according to governorates.
2. Stratification by economic activity according to ISIC3.
3. Stratification by employers group.

4.3 Fieldwork

Training Fieldworkers

The field workers were trained on the main skills before the start of data collection. The interviewers were trained on the environmental survey in training courses in three locations in the West Bank and one location in Gaza Strip. The trainers provided the participants with aims and definitions of the different indicators of the survey and how to fill in the questionnaire.

Data Collection

Field operations started on 22/03/2009 and lasted until 28/05/2009. The fieldwork team consisted of a coordinator and the directors of the fieldwork offices and field workers, and each team consisted of supervisors and five field workers.

During fieldwork 3,922 economic establishments were visited in the Palestinian Territory, the end results for the interview become as following:

interview results	Frequency	Percentage
Completed questionnaires	3,112	79.3
Completely closed	228	5.8
Temporarily closed	49	1.2
Not found unit	32	0.8
Did not practice any activity during the reference period	103	2.6
The economic activate are different	7	0.2
Refusal	247	6.3
Repeated	17	0.4
Israeli ownership	10	0.3
Others	117	3.1
Total	3,922	100

4.4 Data Processing

The data processing stage contained the following operations:

1. Editing before data entry: all questionnaires were edited again in the office using the same instructions adopted for editing in the fields.
2. Data entry: In this stage data were entered into the computer, using Access database.
3. The data entry program was prepared to satisfy a number of requirements such as:
 - Duplication of the questionnaire on the computer screen.
 - Check for logic and consistency of data entered.
 - Possibility for internal editing of questions answers.
 - Maintaining a minimum of digital data entry and fieldwork errors.
 - User-friendly handling.
 - Possibility of transferring data into another format to be used and analyzed using other statistical analytical systems such as SAS and SPSS.

Chapter Five

Data Quality

The concept of data quality consists of many aspects starting from the planning to the survey and on to the publishing method and data analysis. The main principles of statistical quality are accuracy, comparability, and data quality assurance procedures.

5.1 Accuracy

It includes many aspects of the survey, mainly statistical errors due to the sample, and also non statistical errors refers to the workers and survey tools, and includes also the response rates in this survey and their effect on the assumptions. This section includes:

Sampling Errors

These types of errors evolved as a result of studying a part of the society and not all of it, and because this survey is sample based, the data of this survey will be affected by sampling errors due to using a sample and not the whole frame of the society, and therefore differences appear compared with the actual values that could be obtained through a census. For this survey, variance calculations were made for amounts of water consumed in the economic establishments by region and activity, and the main source of obtaining water in the economic establishments by region and activity.

Table of Variance for Environmental Economic Survey 2009

Variable	Estimate		Standard Error	C.V %	%95Confidence Interval	
	Unit	Value				
Main source of water in the north of West Bank– Public Water Network	%	93.9	1.11	0.011	91.4	95.8
Consumed water - in the north of West Bank	M ³	498,124	71,673	0.236	357,603	638,645
Main source of water in the Industrial activities – Public Water Network	%	90.6	1.02	0.026	88.4	92.4
Consumed water in the industrial activities	M ³	830,260	77,067	0.092	679,164	981,355

Non Sampling Errors

Several measures were adopted to minimize the effects of these errors. The interviewers, editors and coders underwent intensive training and were provided with fieldwork manuals to consult when facing any problem.

The data entry program was designed in a way that allows error detection and correction. This applies particularly to logical errors that might not be discovered before data entry operations. A consistency check was also performed to assure accuracy after data entry.

These errors are due to non-response cases as well as the implementation of surveys. In this survey, these errors emerged because of (a) the special situation of the questionnaire itself which depends on type of estimation; (b) diversity of sources (e.g. the interviewers, respondent, editors, coders, data entry operator, etc).

It is important to mention that 5% from the sample of this survey was re-interviewed, and the results of this re-interview were reported by the supervisors. The re-interview shows the variance in estimation by interviewers for quantities of water consumed and solid waste

produced, when the interviewer who answers for the main survey questionnaire is different from the one who answers the re-interview questionnaire.

$$\begin{aligned}\text{None response rate} &= \frac{\text{Sum of none response cases}}{\text{Net sample}} \times 100\% \\ &= \frac{707}{3,922} \times 100\% = 18.1\%\end{aligned}$$

$$\begin{aligned}\text{Response rate} &= 100\% - \text{none response rate} \\ &= 100\% - 18.1\% = 81.9\%\end{aligned}$$

The none response cases were treated using adjustment groups (strata) and the following equation shows this

$$fg = \frac{\sum_{ng} wi - \sum_{o.c} wi}{\sum_{rg} wi}$$

Where

$\sum_{ng} wi$ Total weights in g group

$\sum_{o.c.g} wi$ Total weights over coverage

$\sum_{rg} wi$ Total weights responding in the survey

Each unit is given fg value for the interval lies in and finally we get $w'i$ using the following equation

$$w'gi = wi * fgi$$

5.2 Comparability

The data of the environmental economic survey is comparable geographically and against time; the results when comparing the data between different geographical areas and when comparing the data of this survey with the data of previous rounds were typical and there were no significant differences.

5.3 Data Quality Assurance Procedures

Several measures were made to ensure quality control in the survey, such as the training of the fieldworkers on main skills before the start of data collection, and conducting field visits to field researchers to ensure the integrity of data collection, in addition to conducting a re-interview for 5% of the economic establishments. Audit of questionnaires was carried out before data entry, and then a program was used that does not allow any mistakes during the process of data entry. Data was examined to ensure that they were free from errors not previously discovered. After the receipt of the raw data file, cleaning and inspection of the anomalous values was made, and also inspection of the consistency between the different questions on the questionnaire.

5.4 Special Technical Notes

This part presents the important technical notes on the indicators presented in the results of the survey:

- Data from the Gaza Strip should be handled carefully because of the economic situation which was dominant there during the implementation of the survey.
- Tables of water quantities (tables 2 and 3), and tables of solid waste quantities (tables 8, 9) were based on the estimations by respondents.
- The table of solid waste treatment (table 26) was published on the level of the Palestinian Territory because the number of observations was not sufficient for publishing on a level less than the Palestinian Territory level.
- Tables of container volumes (tables 33, 34), and tables of distance between the establishment and solid waste disposal place (tables 37, 38) were also based on the respondent estimation.

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