



Water and Wastewater Service Performance Monitoring in Palestine, an Economic Instruments for Service Efficiency Improvement and Sustainability

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Overview

- Water challenges in Palestine :political, operational, governance and financial viability
- financial and commercial viability of water and wastewater service providers in the West Bank and Gaza study 2018
- Conclusions
- Recommendation: Road Map

Sector General Challenges:

One of the lowest per capita water availability in the region

Territorial fragmentation leading to different approaches and many different water service providers

Operational inefficiencies lead to interruption, high NRW and pollution, poor collection efficiency

Insufficient customer satisfaction

Insufficient ring-fencing of revenues in the water sector

Chronic under investment for infrastructure development

Inadequate information system and transparency

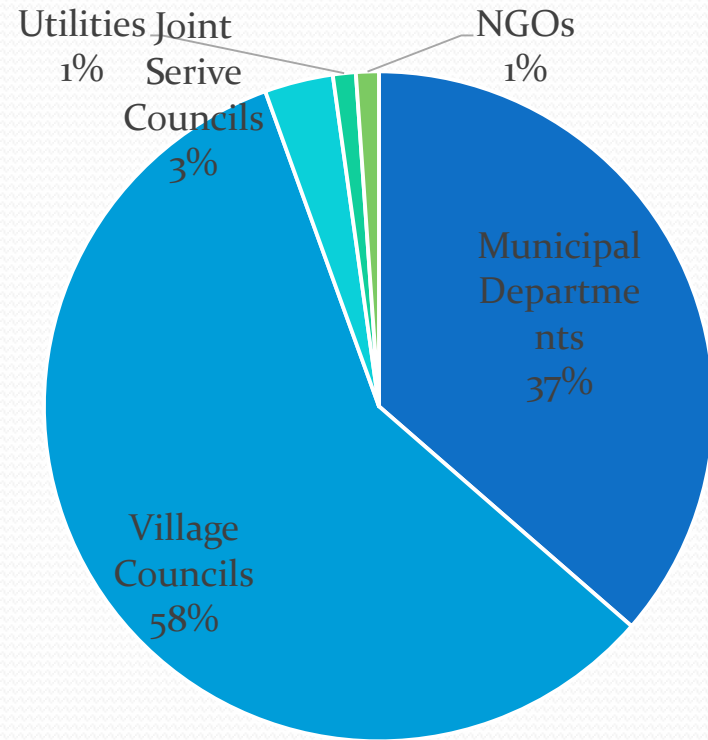
Insufficient corporate governance

Water Supply

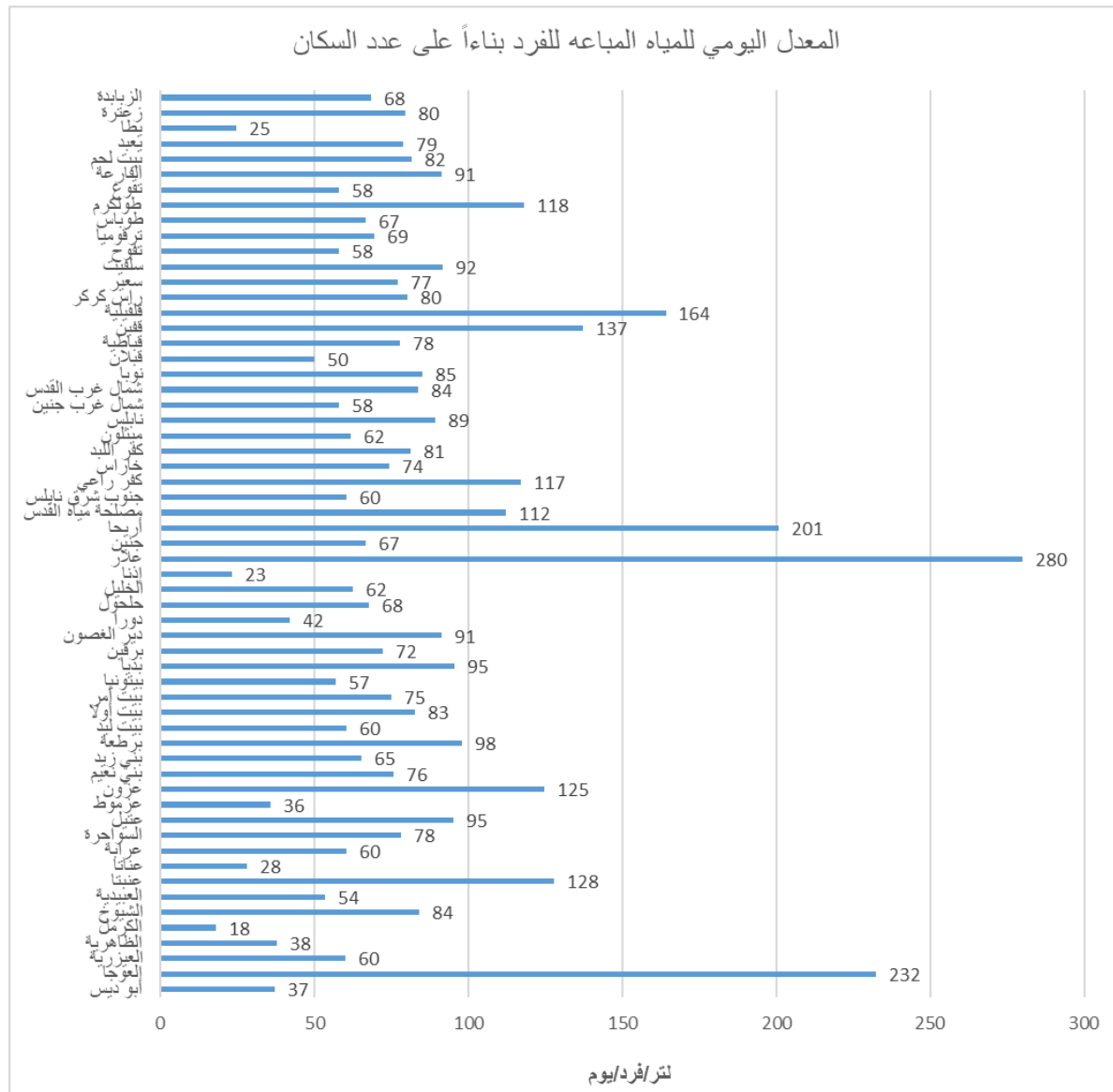
Water supply				
	West Bank		Gaza Strip	
	MCM/year			
	2016	2030	2016	2030
Supply requirement (Domestic demand) in 2030^b	152	209	100	135
Groundwater/natural resources ^c	48	48	84	30
Desalination ^d	0	0	6	6
Mekorot purchase	69	69	10	20
Water harvesting	0	0	0	0
Subtotal	117	117	100	56
NRW ^e	51		38	
Total supply (supply-NRW)	66		62	
Supply gap	80	92	38	79

Type of Service Providers

Type of Service Providers	No
Water services	272
wastewater services	73
desalination	156
farming water Users Associations	3

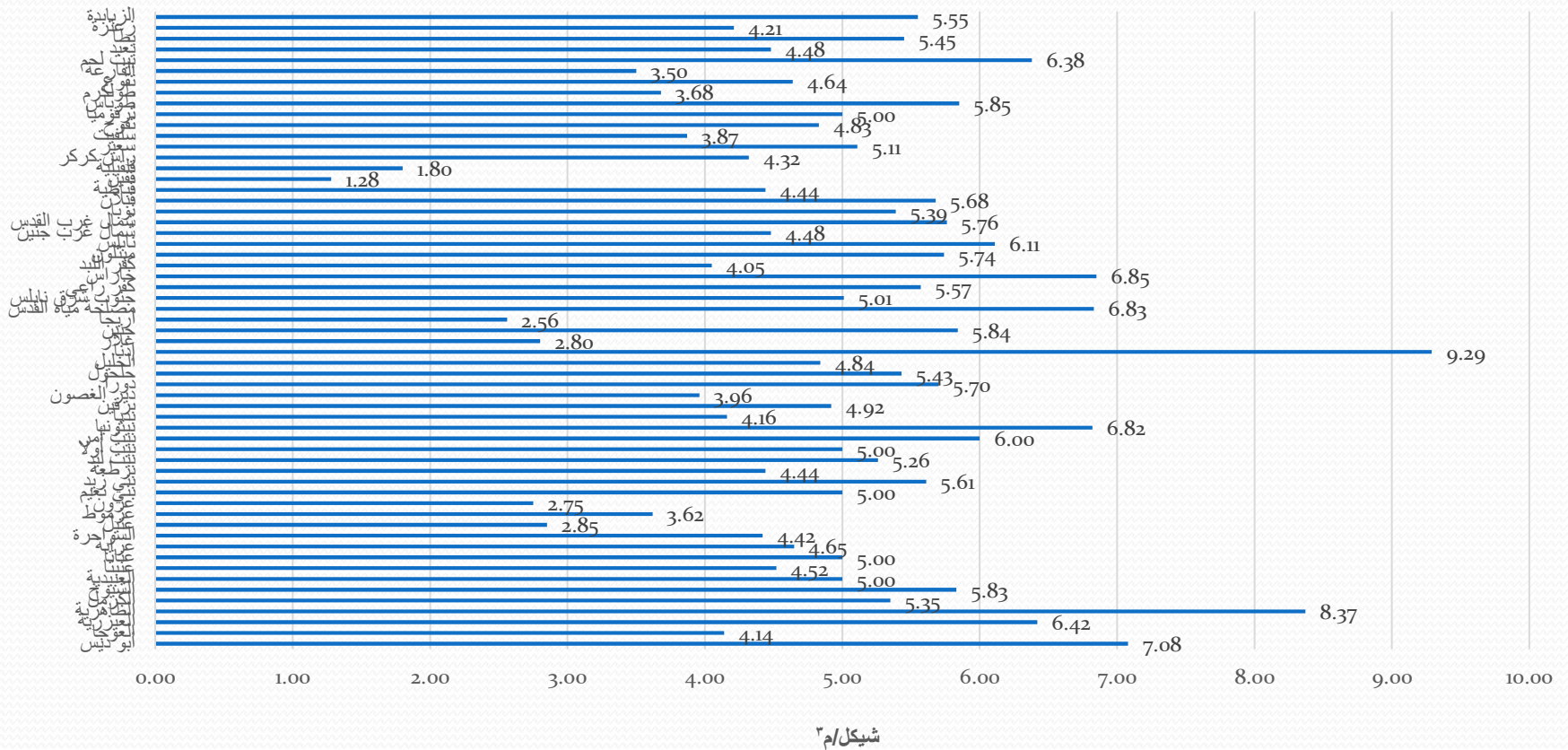


Water Availability: l/c/d



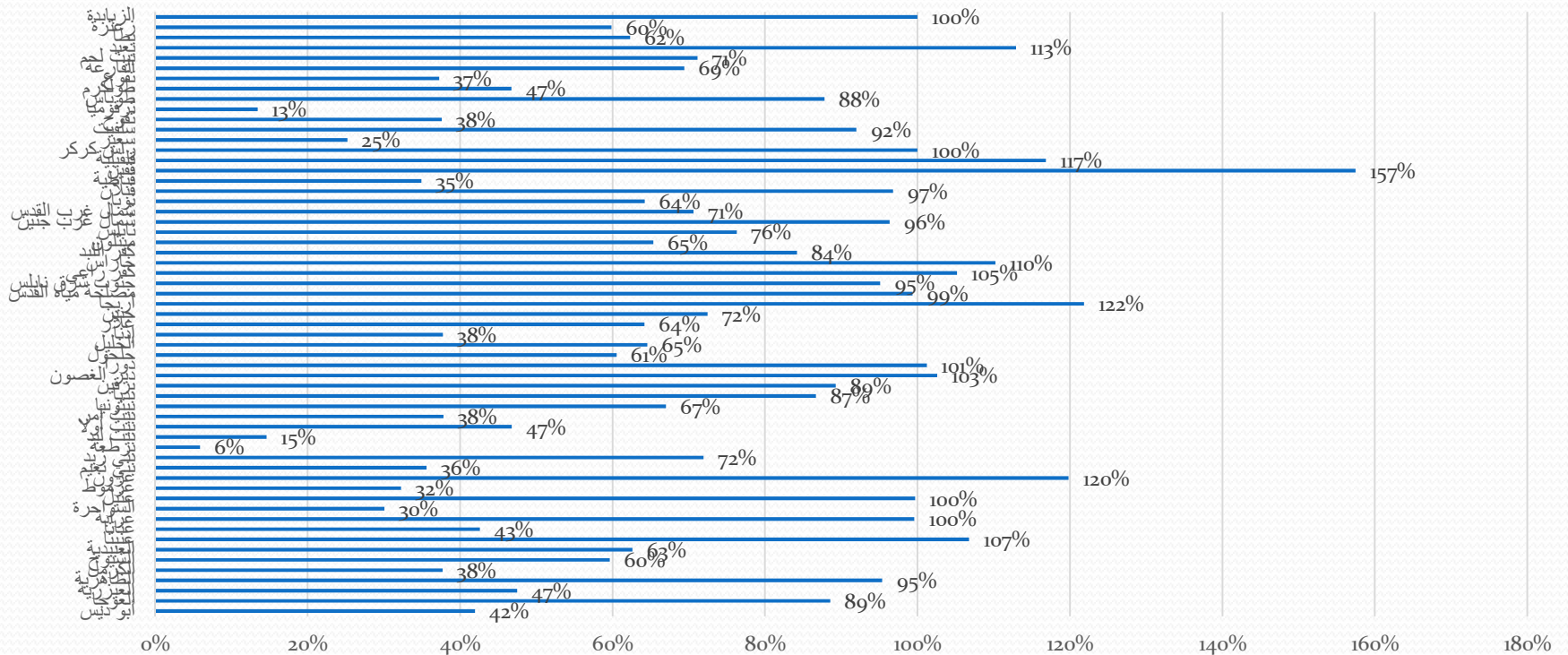
Cost Variations: selling prices

Selling prices



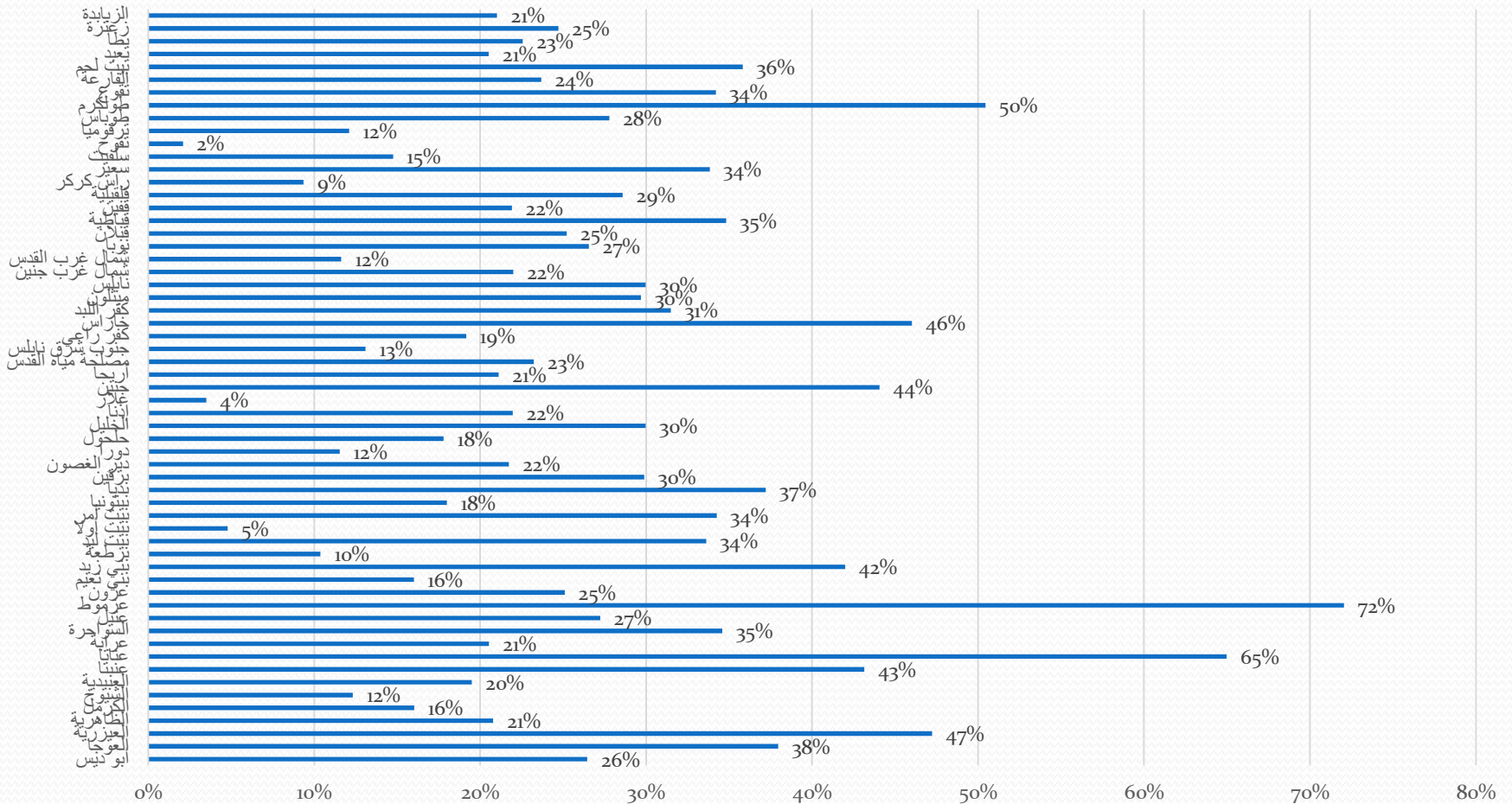
Collection Efficiency

كفاءة التحصيل (الجبائية) - خدمة المياه



NRW Percentages

النسبة المئوية للمياه غير المحاسب عليها



Profitability 2017:

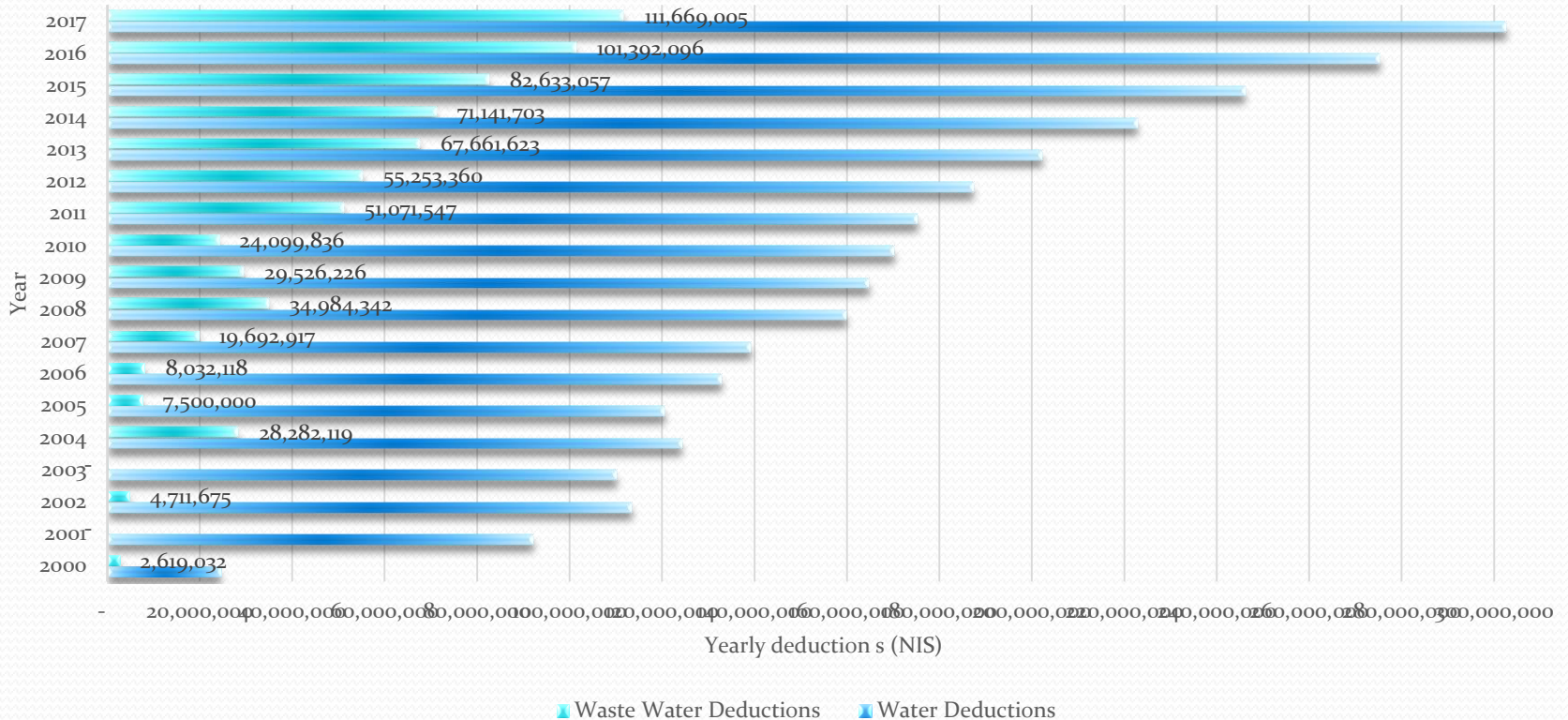
Service provider/region	Selling price water	Total costs	Profit/loss
Gaza			
Municipality	2.39	3.45	-1.06
Utility			
West Bank			
Cooperative assoc.	7.08	6.16	0.92
JSC	5.19	5.80	-0.61
Municipality	4.03	4.85	-0.82
Utility	5.66	7.32	-1.67
Village Council	1.49	7.24	-5.75

Estimation of the recovery deficit of the whole sector for 2017 (values in million NIS)

Service provider/region	Total billed	Total paid water fees	Sector recovery deficit
Gaza			
Municipality	67.2	34.7	-32.5
Utility	15.3	4.8	-10.6
Total	82.5	39.4	-43.1
West Bank:			
Cooperative assoc.	6.5	2.2	-4.2
JSC	30.0	22.0	-8.0
Municipality	206.9	126.6	-80.3
Utility	113.2	99.5	-13.7
Village Council	37.9	27.7	-10.2
Total	394.5	278.1	-116.4
Grand Total	476.0	317.5	158.4

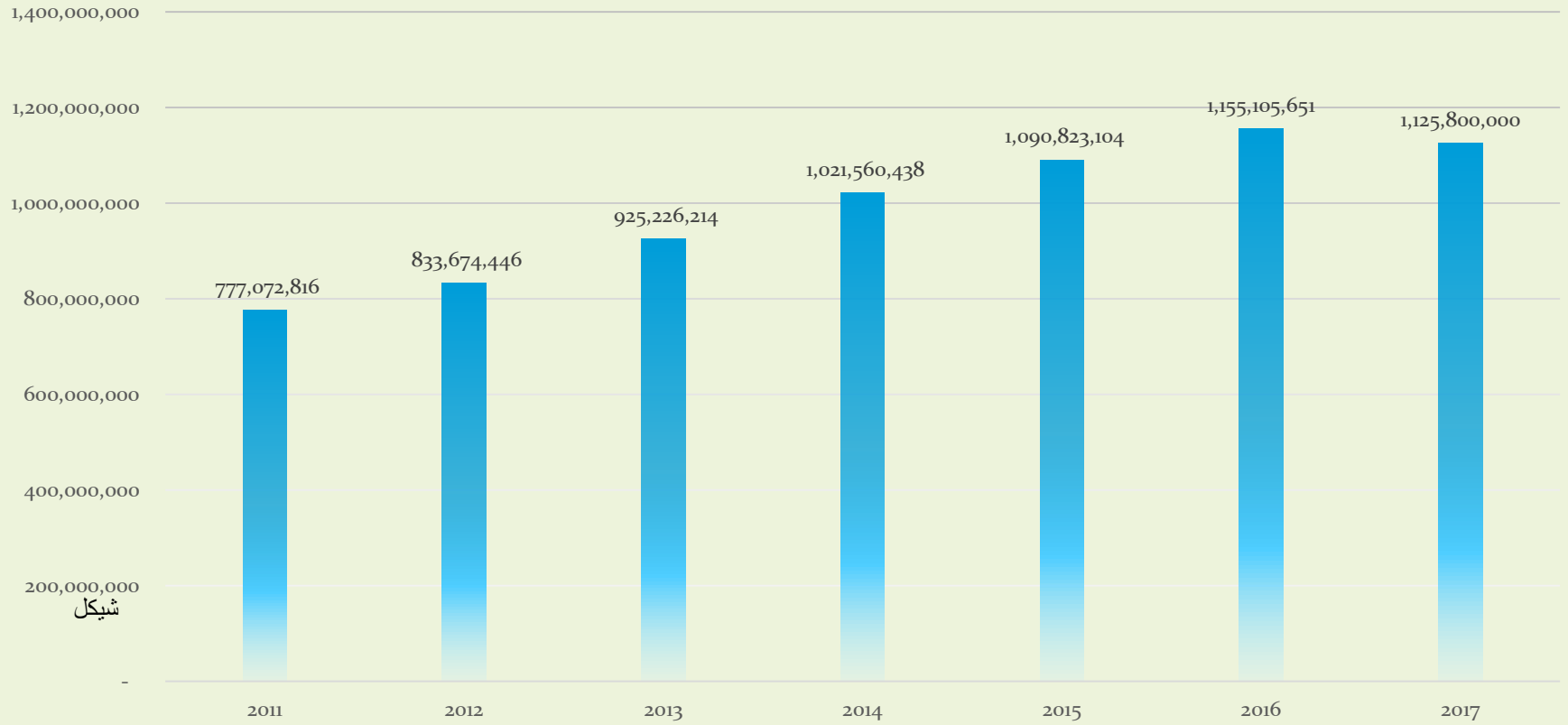
Wastewater Related Deductions

Total amounts deducted (2000-2017)



Indebtedness of SPs

مديونية مرافق ودوائر المياه لدائرة مياه الضفة الغربية



Data Used in the Analysis

- WSRC National Tariff Survey 2015; updated 2017
- Performance monitoring reports 2014-2017
- WSRC data base (WRIS) (covering 233 variables)

Data Variables Used in the Analysis

- Service area (population), persons served and number of connections;
- Supplied, invoiced and paid volumes of water per type of consumer and service provider
- Invoiced (accrual) and paid (cash) amounts by consumers/polluter for supplied volumes of water,
- Collection efficiency
- Use of pre-paid meters,
- Billing and collection administrative systems used;
- Tariff structure;
- Total and operational costs for water supply and wastewater management
- Non-Revenue-water figures and the relationship to operational costs

Results and Main Findings:

- Tariffs are the means to recover costs of providing water and wastewater services;
- Municipalities achieve constantly higher service outcomes than village councils;
- Merging LGUs in larger entities to promote economics of scale,
- Collection efficiencies can be promoted through a multitude of actions, ranging from pre-paid meters, to decentralized collection and payment plans for defaulters,
- Services management is “politicized”.

Conclusion & Recommendations

- **Technical Recommendations**

- SP categorization,
- Tarif components benchmarking
- Asset registration and depreciation inclusion in the tariff
- Encourage service providers to gradually install prepaid meters for all users
- To assess and update customer data bases including payment history and water meter data for each user/ connection

- **Policy Recommendations**

- Continuation of the efforts to build regional service providers involving several municipalities

Road Map for Economic Viability

- Regrouping service providers in larger and autonomous units, like utilities and JSC
- Defining individual targets of operators by the WSRC
- Strengthening public awareness and stimulating client orientations
- Increase the prepaid meters coverage
- Strengthening management and operational capacities
- Strengthening billing and collection procedures and system, including updating customer database

Road Map, continued..

- Carry out value chain analysis of the operators to see where cost reduction and performance improvement could be achieved
- Review the options for outsourcing activities and possibly PPP
- Target asset management and valuation, which would form the basis for defining the depreciation of assets
- Reduce the percentage of non-revenue water, through institutional, operation and maintenance planning

Road Map Presentation to SP

- For each intervention, a SWOT analysis was provided:
 - (Strengths, Weaknesses, Opportunities, and Threats)

As well as :

How to profit from the strengths

How to avoid the impact of weaknesses

How to take advantage of opportunities

How to counter Threats

Cost of each potential intervention,

Time frame and responsibilities

Final Remarks

- Regardless of potential improvements, the water issue is still political;
- Limited improvements can be achieved while resources are under Israeli control.
- The best scenario for improvement has a maximum based on reduction percentages of NRW



Thank you

THANK YOU ALL