Role of Utilities Performance Monitoring Unit (UPMU)/ Ministry of Water and Irrigation in Governing Jordanian Water Utilities for

The 15th Gulf Water Conference 28 - 30 April 2024, Doha - Qatar

Dr. Ahmad Abdellatif Alazzam UPMU Director





الرؤيا VISION



Enhancing the capabilities of Jordanian Water Utilities to provide the best services to customers in an effective and efficient manner

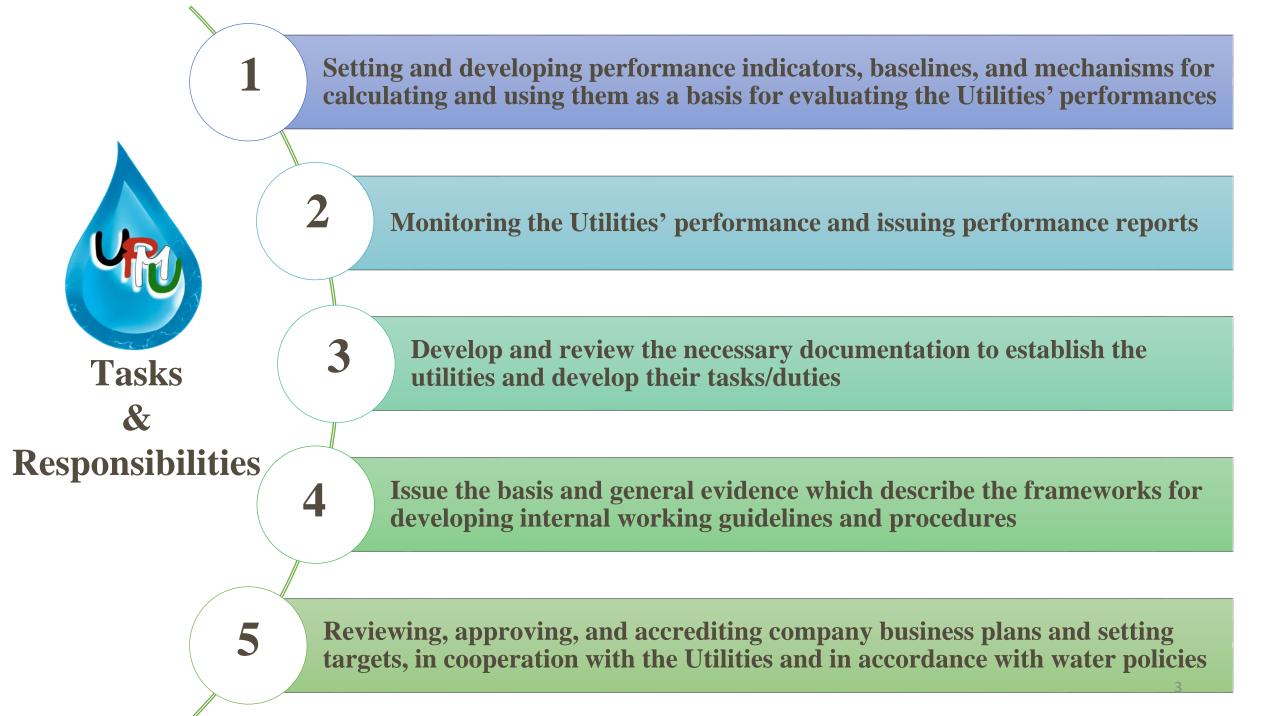
تعزيز قدرات شركات المياه لتقديم الخدمات الفُضلى للمستهلكين بكفاءة وفاعلية

الرسالة MISSION



Monitoring the Jordanian Water Utilities' performance against an agreed set of indicators, setting performance targets to evaluate and compare performance, and recommending incentives and penalties accordingly, while taking into consideration the need to enhance the Utilities' financial sustainability

مراقبة اداء شركات المياه الاردنية بناء على الموشرات المتفق عليها ووضع اهداف محددة للشركات ليصار الى (التقييم، المقارنة والتنسيب بمنح الحوافز او العقوبات) حسب المقتضى مع الاخذ بعين الاعتبار تعزيز الملاءة المالية للشركات

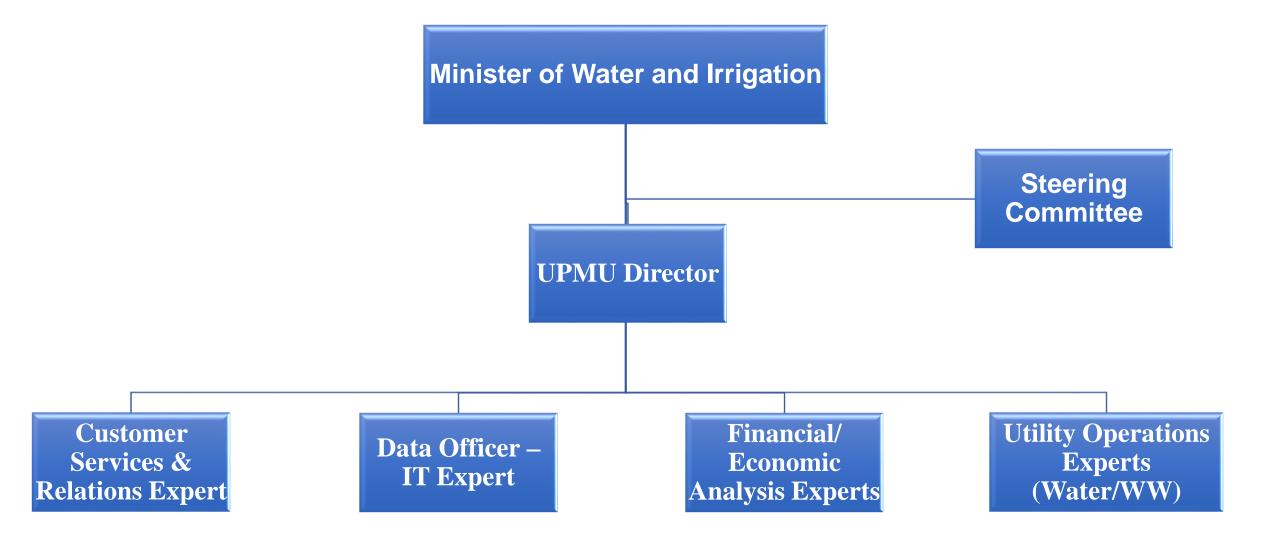




UPMU organization structure









Important stations of UPMU





Jan.2019 The UPMU was established by WAJ BOD

Dec. 2020

Feb. 2020 Develop the monitoring tool

March Y.Y.) Employees were onboard

Nov. 2020 Prepare the first Utilities Performance Monitoring Report for the year 2019

Set Performance Targets (Benchmarking) started with Aqaba WC in 2020, YWC in 2021 and Miyahuna in 2022

Develop a Memorandum of Understanding (MOU) between WAJ and Utilities to exchange experiences and capacity building

Conduct a financial Study and Recommendation for Further Development of Jordanian Water Utilities

June 2021

Dec. 2020



Important stations of UPMU





June,Oct.

Two round table discussions to assess the NRW more accurately and agree on methodologies to estimate real/apparent losses



July ۲۰۲2

Organized Two trainings sessions in Business Plans & Customer Services Minimum Standard Guidelines



Important stations of UPMU





Sep. 2022

Prepare the 3rd Utilities Monitoring Report for Jordanian Water Utilities for year 2021



June ۲۰۲3

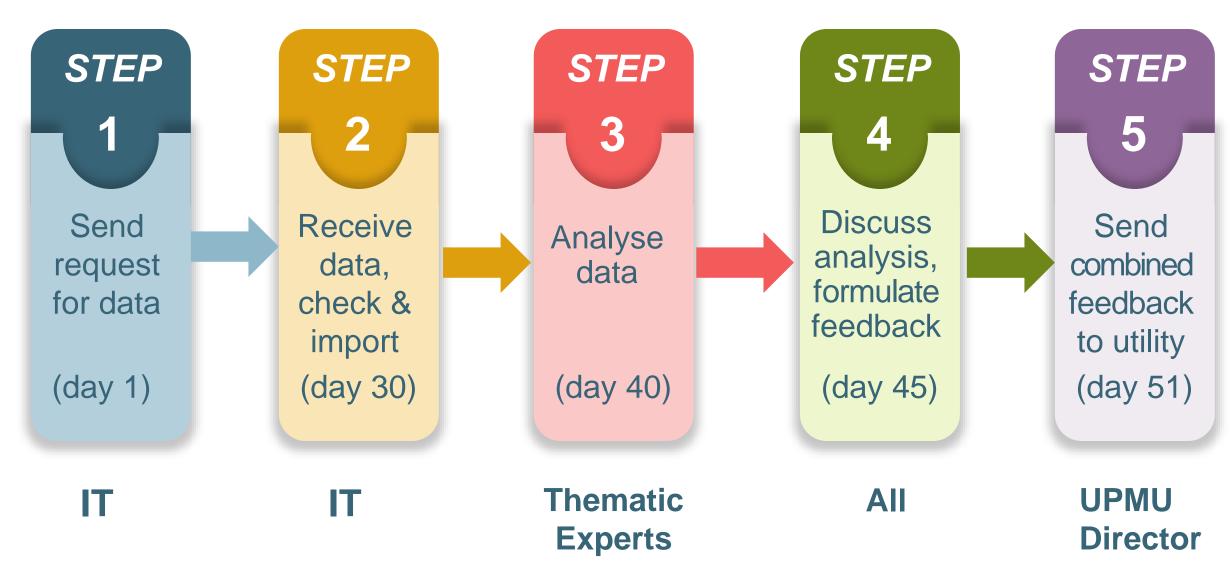
Prepare the draft monitoring report for year 2022



Data collection steps in UPMU







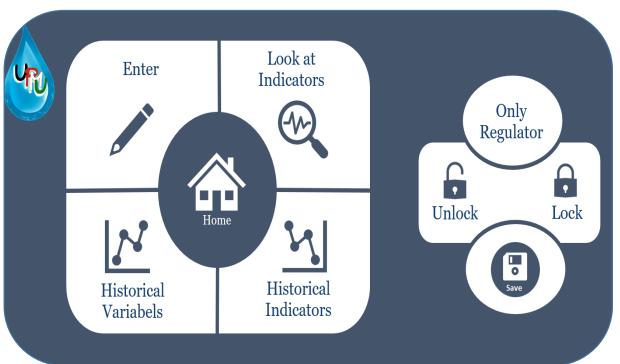


UPMU Monitoring tool





Consolidated sheet



Master sheet



Enter Data From Utilities



Import Data



Data Analysis
By UPMU



Quality of service regulation





Performance Indicators

Key Performance Indicators (10 KPI's)

Lower Level Performance Indicators (33 PI's)

Indicators derived from national strategies (11 Pl's)

Operation Efficiency

Ccustomer Service Efficiency

Financial Efficiency

HR Efficiency

54 Indicators, for 4 efficiencies, fed by 180 variables

Quality of Performance Indicators

UPMU began to assess the quality of the indicators starting 2021 report based on the validity and reliability of variables to calculate:

- The credibility of indicator is good
- The credibility of indicator is acceptable
- The credibility of indicator is not good



List of KPIs



- 1 Microbiological water quality compliance
- 2 Continuity of supply
- 3 New connection efficiency
- 4 "No water" complaints per 1000 subscribers
- Water consumption per capita (residential subscribers)

- 6 Non-Revenue Water
- 7 Collection Efficiency (Customers)
- Operating cost coverage ratio (revenues)
- 9 Employees per 1000 subscribers
- 10 Training per employee



Annual Report Content (Structure)





- Introductory: Minister Speech, Foreword by UPMU Director, About UPMU & Report Methodology
- Analysis:
 - Utilities key data
 - Performance of Water Utilities
- Performance Targets (Benchmarking)
- Thematic team
- Recommendations
- Appreciation
- Next Steps



Utilities key data - 2022





Key Data	Miyahuna (Amman,Zarqa,Madaba)	AW (Aqaba)	YWC (Irbid,Mafraq,Ajloun,Jarash)
Area [Km ²]	13,286	6,905	28,990
Population [Nr]	6,584,700	222,800	3,236,000
Average number of people served per subscriber [Nr]	6.6	5.5	8.7
Estimated Water Service Coverage [%]	98	100	98
Water Subscribers [Nr]	1,028,813	46,147	377,143
Length of Water Network [km]	15,214	1,117	11,698
Wastewater Coverage [%]	78	91	47
Sewage Subscribers [Nr]	819,898	37,993	160,372
Length of Sewage Network [km]	5,333	332	1,887
Water Distributed [MCM]	319.588	26.336	114.498
Employees [Nr]	2,240	337	1,286



Some of the Indicators for year 2022





Performance Indicators	Miya	huna	AW		YWC	
	2021	2022	2021	2022	2021	2022
Microbiological water quality compliance [%]	99.7	99.9	100	100	100	100
Water consumption per capita per day (Residential Subscribers) [LCD]	53.6	52.9	87.9	75.3	46.4	44.1
Non-Revenue Water [%]	44.6	42.8	33.3	33.1	50.3	51.1
Continuity of supply [% of time]	21.3	21.3	100	100	5.4	5.4
Collection Efficiency (Customers) [%]	95.6	95.9	91.6	80.8	73	87.2
Operating cost coverage ratio (revenues) [%]	99.9	100	134.5	119.9	63.4	60.8
Employees per 1,000 subscribers (W&WW) [No/1,000 subscribers]	1.3	1.2	4.2	4.0	2.6	2.4
Training per employee [Hour/Employee]	5	7.6	13.8	15.3	0.8	2.4



Recommendations



- Based on the outcomes of the report, UPMU extract recommendations for the Utilities
- The Utilities should take these recommendations into consideration and imbedding them into their business plans
- UPMU follows the implementation of recommendations

		ı	Utilities Performance Monitoring recommendations from the r	_	•	•								
Nom.		Recommendation				Miyahuna	AW	YWC						
1			does not have smart water meters, Miyahuna and AW could be their experiences of smart meters with YWC			d		~						
2	YWC is to compile the manual registers and spreadsheets which manage new connection documentation from operating units					Utilities P				-	Unit (UPMU)			
3			"no water" complaints needs to identified t a more transparent picture	No	om.			commen				Miyahuna	AW	YWC
4	YW	C to in	tensify training programs for the staff	-		Utilities should crea				s to gathe	r information on all	,		
5	<u> </u>	port U	tilities to look for new energy efficiency	1	1 activ	ities. This should c reliable information eholders with the da	ollect, u	pdate, a can assis	nd ana	lyse data	to obtain accurate	*	1	1
7	As-		Utilities Performance N Recommendations f		oring U	nit (UPMU)					rgency response seen challenges summer season	*	1	1
	m	No.	Recommenda	ation			Miy	ahuna	AW	YWC	by developing a			\vdash
8	The UPMU advises the Call Centre at Miyahuna to complaints received to minimize the repetition of complain					3	✓			o carry out their	*	1	1	
9	lo	2	The UPMU advises Miyahuna to apply Int Centre to check the creditability of "solved			ocedures to the Cal	1	✓			ness and create t all segments of water resources	✓	~	•
10	ur	3	The Utilities must, as per the Assignment WAJ, update their business plans to in consideration the UPMU's recommendation	aprove	ements to e perform	ney signed with the mance, taking int	e)	~	~	~	performance in q existing pumps			1
11	th Ut ap	4	The Utilities are advised to revise their dis distribution equality between customers.		tion scher	nes to ensure wate	r	~	~	~	water distribution bution by gravity			1
	ar Se	5	YWC should empower and activate NRW them in this aspect.	and E	nergy un	ts. Donors can hel	,			1	n to keep it within			1
12	er	6	The UPMU again advises AW to segregate collections in the accounting and billing sy			f billing from othe	r		1		aving sources of	1	1	1
13	۲۷	7	Studies should take place to ensure tariff a	adequa	acy to co	ver operating costs		~	1	1			1	1
14	Ut th	8	The UPMU advises the Utilities to increase procedures and reduce the outstanding re				1	~	1	~	private sector	1	1	1
	re	9	The Utilities are advised to concentrate me their staff capacity building and alloca budget.					~	~	~	ollections in their	,	·	Ť
		10	Miyahuna/ Zarqa governorate should connection procedures.	take	action	to accelerate nev	r	✓			rom wastewater			✓
	The UPMU strongly recommends that, the Utilities enhibility public awareness to all targeted customers to use water wasting it, and to apply penalties as appropriate.					~	~	~	es ar structure and	*	1	✓		
	The UPMU recommends that YWC should seek better optio performance in wastewater treatment plants and re-use sys				3			1	e internal control			'		
	The Utilities are advised to search for effective, cost s renewable energy.			saving sources o	f	~	~	~	s to improve staff	✓	✓	✓		
The UPMU advises the Utilities to promote private sect their business activities.					or participation i	1	~	~	~					
The Utilities are strongly advised to increase of the on their liquidity.				ase co	llections	to reflect positivel	v	✓	1	-		15		





No.	Recommendation as per 2021 Monitoring Report	Jordan Water Utility (Miyahuna)	Aqaba Water Utility (AW)	Yarmouk Water Utility (YWC)
1	The UPMU advises the call center at Miyahuna to consider filtering complaints received to minimize the repetition of complaints.	Currently, direct inquiries are made to the customer's phone to confirm the presence of any open, unresolved complaints, in order to avoid registering a new complaint.	Done through the main call center managed by Miyahuna	Done through the main call center managed by Miyahuna
2	The UPMU advises Miyahuna to apply internal audit procedures to the call centre to check the creditability of "solved complaints".	Currently, a callback system is being implemented at the Central Call Center whenever possible and based on the type of complaints received from customers, such as water leakage, interruption of water supply, sewage overflows, etc. Additionally, an analysis is conducted on all incoming complaints on a daily basis, including response time to the complaint. Furthermore, the internal audit and control unit within the Miyahuna takes random samples of customer complaints for verification, either through call back or field audit visits.	Done through the main call center managed by Miyahuna	Done through the main call center managed by Miyahuna
3	The Utilities must, as per the signed Assignment Agreements with the WAJ, update their business plans to improve performance, taking into consideration the UPMU's recommendations.	Awaiting the implementation of the master plan to determine the project priorities within the Utility and update the strategic plan. It is worth noting that current implementation plans are being developed to achieve the objectives.	AW updates its operational plans in all departments at the beginning of each year. Currently, the Utility is in the process of updating its five-year strategic plan (2023-2027).	Currently, work is underway to prepare a strategic plan (2023-2027) based on the national water strategy. This plan aims to enhance YWC performance, and monitor the required duties and tasks to improve the level of services provided.
4	The Utilities are advised to revise their distribution schemes to ensure water distribution equality between customers.	Due to the shortage of water quantities, it is not possible to operate the networks according to the design. However, Miyahuna is implementing additional water pipe lines to reinforce hotspots to ensure water delivery to customers.	All areas within Aqaba city receive water supply 24/7. However, for areas located outside of Aqaba city with intermittent supply, there is a water distribution program. Customers in those areas are regularly notified about it.	A water distribution program has been prepared for all governorates, currently being implemented based on the availability of water.
5	YWC should empower and activate NRW and energy units. Donors can help them in this aspect.	x	x	The Energy Unit has been established in collaboration with GIZ, and its staff have been trained. There are efforts to explore





				opportunities to improve energy consumption. The NRW Unit exists but lacks personnel and teams to carry out it activities.
6	The UPMU again advises AW to segregate the collection of billing from other collections in the accounting and billing system.	x	Currently, work is being conducted with the Information Technology Unit to segregate collection of billing from other collections in the accounting and ERP systems.	x
7	Studies should take place to ensure tariff adequacy to cover operating costs.	No studies are done up-to date. In 2024, Miyahuna with support UPMU-GIZ will prepare a proposals for tariffs covering O&M costs as until now Miyahuna are under unified tariff	No studies are done up-to date. In 2024, AW with support UPMU-GIZ will prepare a proposals for tariffs covering O&M costs as until now AW are under unified tariff	No studies are done up-to date. In 2024, YWC with support UPMU-GIZ will prepare a proposals for tariffs covering O&M costs as until now YWC are under unified tariff
8	The UPMU advises the Utilities to increase their efforts to improve collection procedures and reduce the outstanding receivable balance.	Miyahuna has demonstrated excellent performance in revenue collection, and it has been rewarded by KFW during the COVID-19 pandemic. Miyahuna is striving to increase the collection rate through several means, such as: Sending text messages to customers' concerning outstanding dues. Issuing warning messages for fund reservations under the Public Funds Law (Amiri Law). Implementing service cutoffs. conducting awareness campaigns. Increasing field visits to big customers. Addressing government entities to settle their outstanding dues.	AW has prepared a report that includes all outstanding dues and the aging of those dues until November 30, 2022. There are current plans to increase revenue collection, the Public Funds Law (Amiri Law) has been activated. Continuous and disconnection campaigns are being implemented.	The work has been carried out by applying the Public Funds Law (Amiri Law) through private sector participation by outsourcing the following: meter reading, billing issuance and collection; applying monthly installments for outstanding dues; applying incentive scheme for the staff.
9	The Utilities are advised to concentrate more on training courses to enhance their staff capacity building and allocating sufficient provisions in the budget.	The number of training hours for employees was increased during 2022. During the years 2020-2021, virtual training was applied due to the COVID-19 pandemic. However, it was not available to all employees due to the lack of necessary equipment.	During 2022, a total of 5,070 training hours were provided to 287 employees in AW. Agreements were also made with WAJ and Miyahuna to train employees through the TOT program. Some AW staff were trained to coordinate with WAJ for the	Over 100 employees have been trained in the field of water losses, health, and public safety through funding from donors such as GIZ.





			implementation of the national strategy	
10	Miyahuna - Zarqa Governorate should take action to accelerate new connection procedures.	 Review the technical and financial conditions for the execution of household connections, including penalties for delays to ensure contractors adhere to the deadlines. Keeping in mind difficult to get permits to excavate in the new asphalted streets from Zarqa Municipality. 	x	x
11	The UPMU strongly recommends that the Utilities enhance and extend public awareness to all targeted customers to use water wisely and avoid wasting it, and to apply penalties as appropriate.	138 awareness sessions were conducted during 2022 for various segments of society to raise awareness about the importance of water conservation. Additionally, 200,000 printed brochures were issued, and the utility has a strong presence on various social media platforms, producing 100 awareness videos. The awareness campaign's publications reached the vast majority of Miyahuna's customers.	There is an awareness program launched by AW that includes printed materials and videos. In addition, there are existing awareness campaigns through radio broadcasts 20 times a day and various communication channels, focusing on smart meters, billing, and monthly invoices. Furthermore, advertisements are displayed on the main streets of Aqaba city, along with a fixed panel at the customer service center of the company.	YWC is currently conducting several awareness campaigns through the Communication and Media Department. These campaigns involve distributing informative brochures and delivering lectures in mosques, schools, and women's unions. Additionally, they send out awareness messages through various social media platforms, in addition to maintaining a dedicated page for the company.
12	The UPMU recommends that YWC should seek better options for improving performance in wastewater treatment plants and re-use systems.	x	х	 Preventive maintenance has been activated for the stations. Spare parts have been provided for existing WWTPs. Advanced treatment units have been rehabilitated. Rehabilitation of four WWTPs is in progress (Fawara, Duqra, Ramtha, Al Shalaleh).
13	The Utilities are advised to search for effective, cost saving sources of renewable energy.	 The utility has established an energy unit. Implementation of the solar panel project at the lower east Wadi Al-Seer reservoir. Work is ongoing on the mega project at the Zara Ma'in station in coordination with the Water Authority. A hydropower project has been implemented at the Khaww and Abu Alanda reservoirs, which will be operational in the near future. 	Approval has been obtained to utilize renewable energy generated at the Mathkour well. 50 kilowatts per hour are being generated at the WWTP. Solar panels have been installed at Rahma, Al-Risha wells, and the headquarters building.	Work is currently underway through the Energy Unit and the GIZ project to search for efficient renewable energy sources in order to reduce costs and improve energy efficiency.





			 Biogas technology is being used in WWTPs. Micro-turbine hydroelectric technology is being used at various sites. Currently, efforts are underway to pursue alternative energy projects as part of discussions with the World Bank to finance some projects, which will contribute to reducing electricity costs and enable Miyahuna to utilize its operational budget effectively. 		
1	14	The UPMU advises the Utilities to promote private sector participation in their business activities.	Miyahuna adopts the principle of private sector participation in many of its projects through outsourcing various activities to reduce expenses and improve work quality. For example, Miyahuna outsourced tasks such as reinstatement of excavation and maintenance contracts. The utility also awarded performance-based contracts to the private sector to reduce losses in four areas. Miyahuna is working with the Ministry of Water and Irrigation and the International Finance Corporation (IFC) to launch a public-private partnership (PPP) project to reduce losses in areas that constitute approximately 30% of the capital city.	Partnership with the private sector is carried out through contractors in the installation of new house connections and replacement of the old pipelines. Additionally, there is a partnership with the private sector, through a private company operating the North Aqaba WWTP.	A local company has been awarded a project to carry out the following activities: meter reading, billing issuance and collection.
]	15	The Utilities are strongly advised to increase collections to reflect positively on their liquidity.	Similar to recommendation 8	Similar to recommendation 8	Similar to recommendation 8



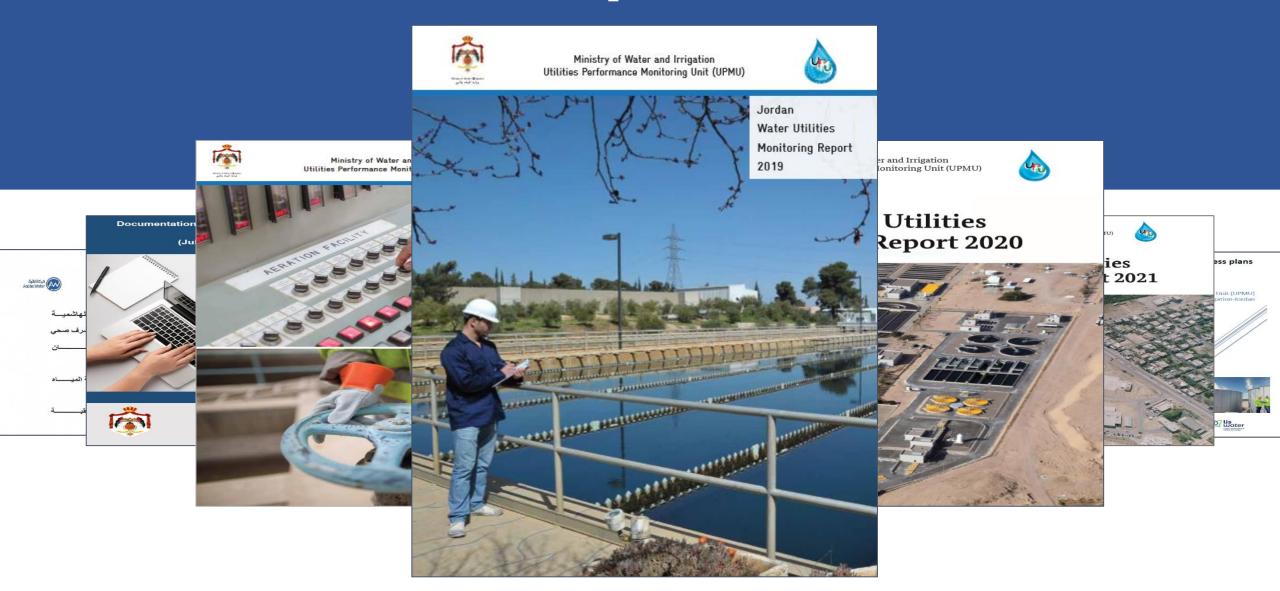
Impact of the UPMU on Jordan's Water Utilities



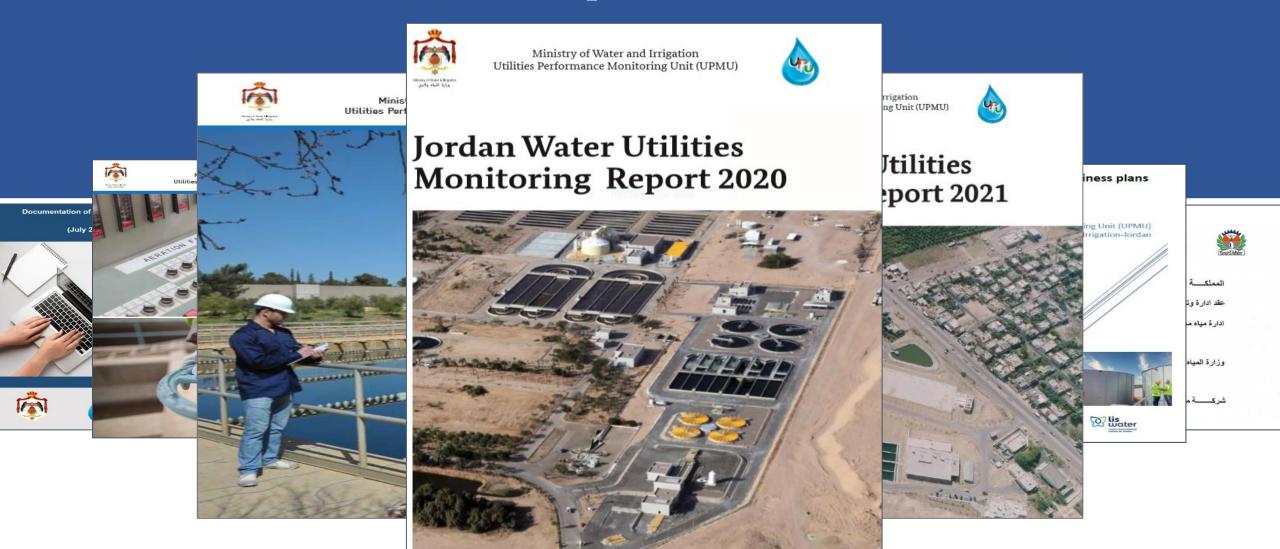
- Periodically following up on performance indicators led to:
 - Maintaining high water quality
 - > Improve effluent quality
 - Reduction non revenue water percentage
 - > Improve collection efficiency
 - Cover operating and maintenance cost
- Updating their business plans by relying the business plans guide lines that prepared by UPMU
- Creating a reliable aggregated database over a five-year
- Exchange experiences and capacity building between Utilities
- Enhance their performance to achieve targets



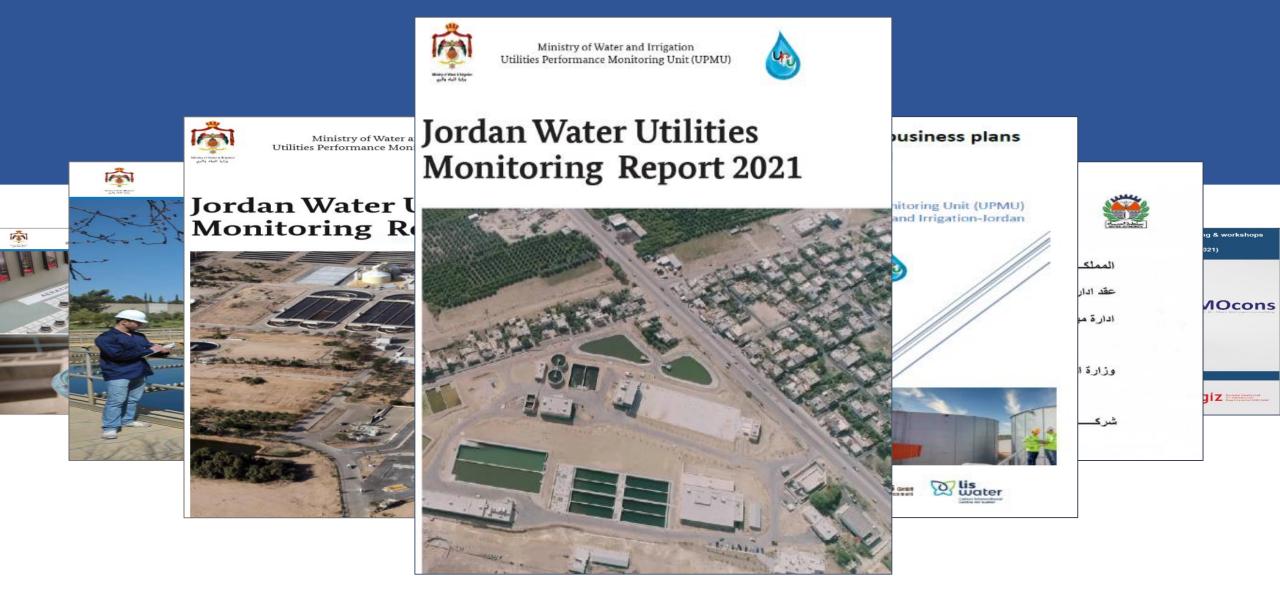
First output slim report for the first three quarters 2019



Jordan Water Utilities Monitoring Report 2019



Jordan Water Utilities Monitoring Report 2020



Jordan Water Utilities Monitoring Report 2021

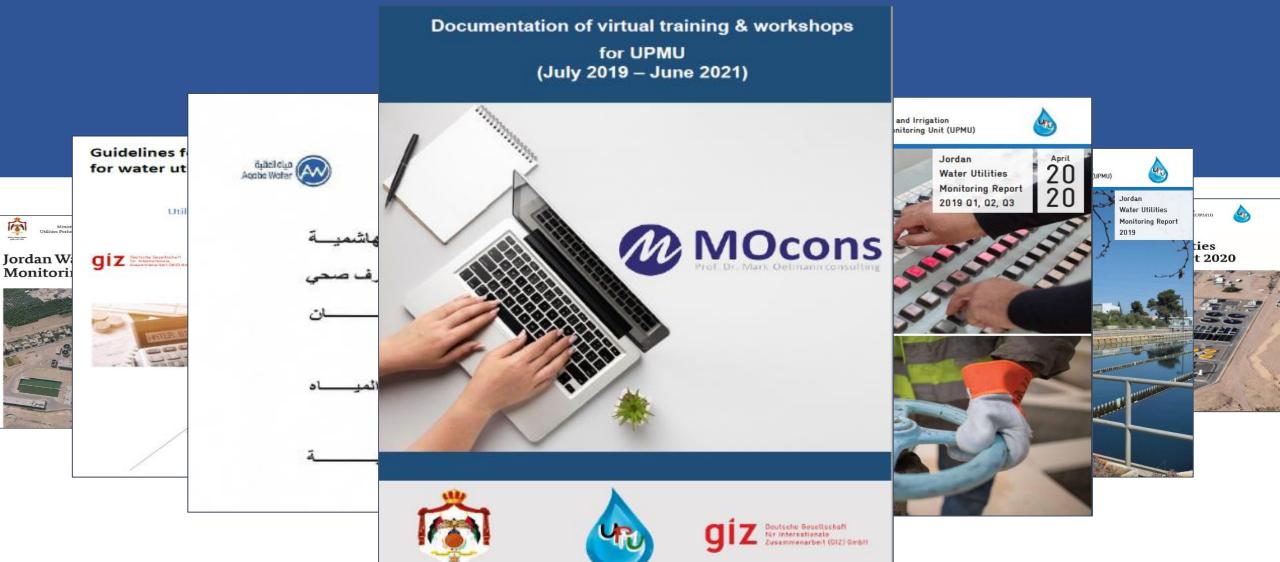


Guidelines for developing business plans for water utilities in Jordan

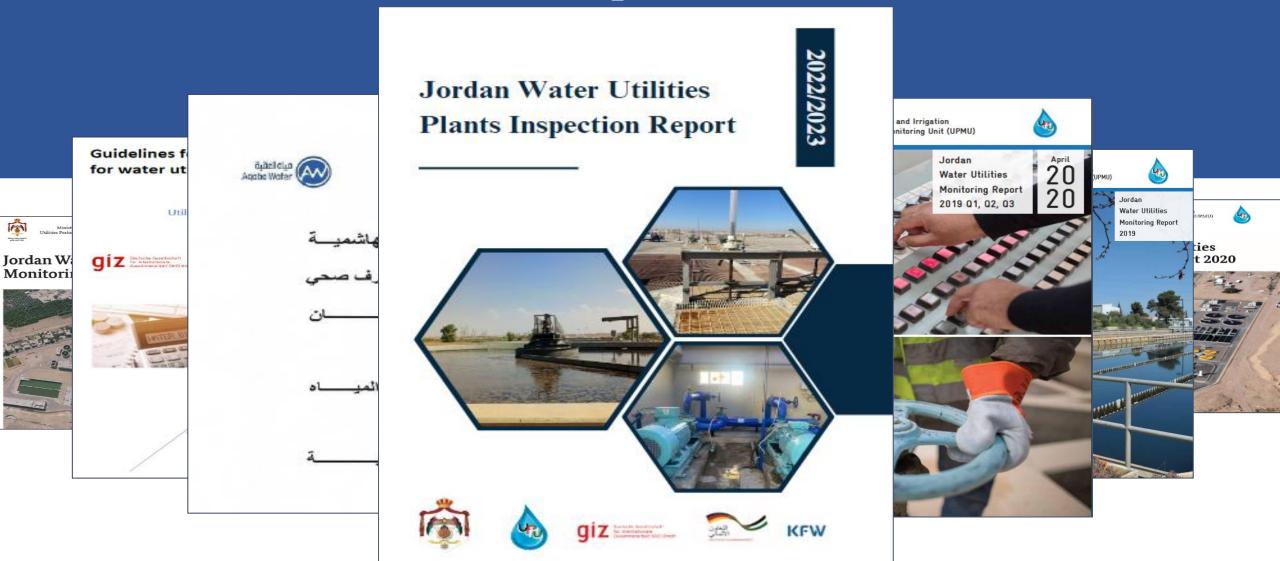




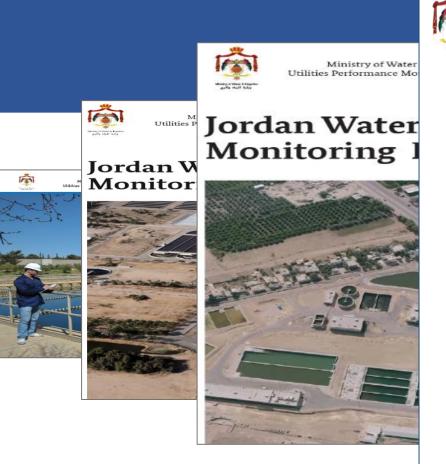
Management Contracts for the southern governorates (Karak, Tafileh and Ma'an)



Documentation of virtual training & workshops for UPMU



Jordan water utilities plants inspection report_2022/2023





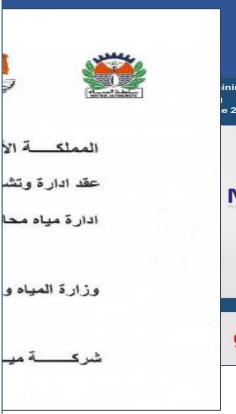


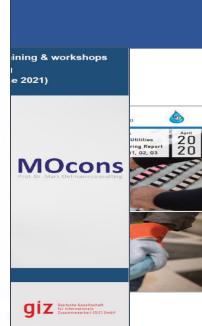


Customer Service Minimum Quality Standard Guideline

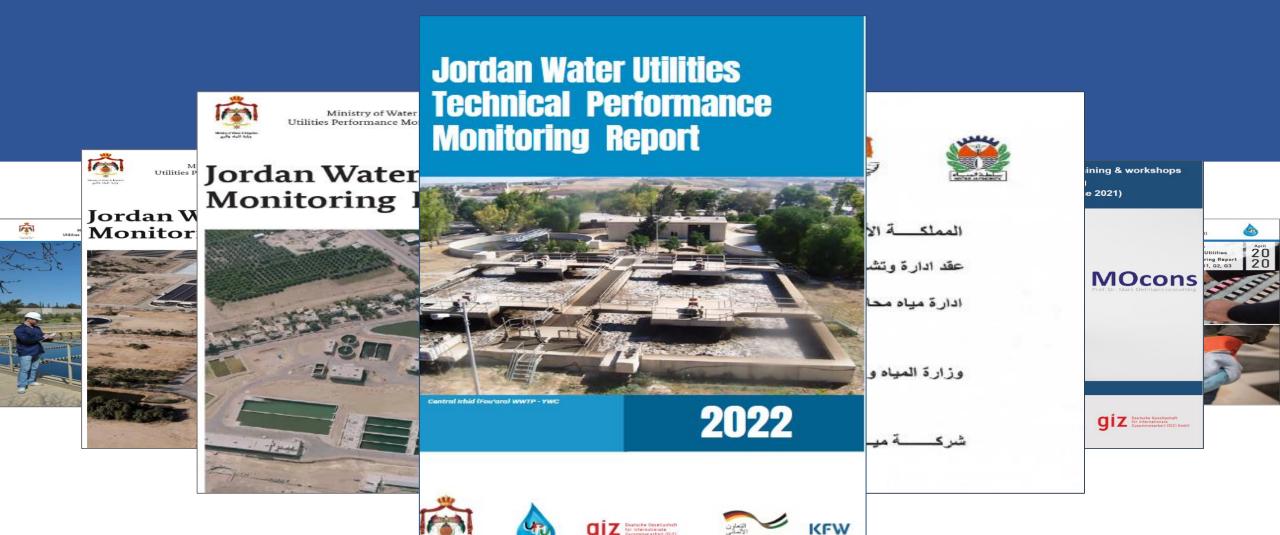
June 2023

By GIZ Customer Service Expert Radwan Akkash





Customer Service Minimum Quality Standard Guideline



Jordan Water Utilities Technical Performance Monitoring Report



Roadmap Financial Mechanism to Finance UPMU Beyond Donners Support

























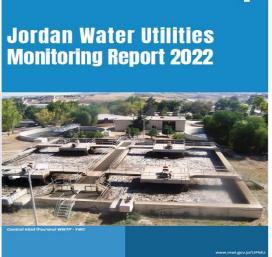














Next Steps/Road Map for UPMU



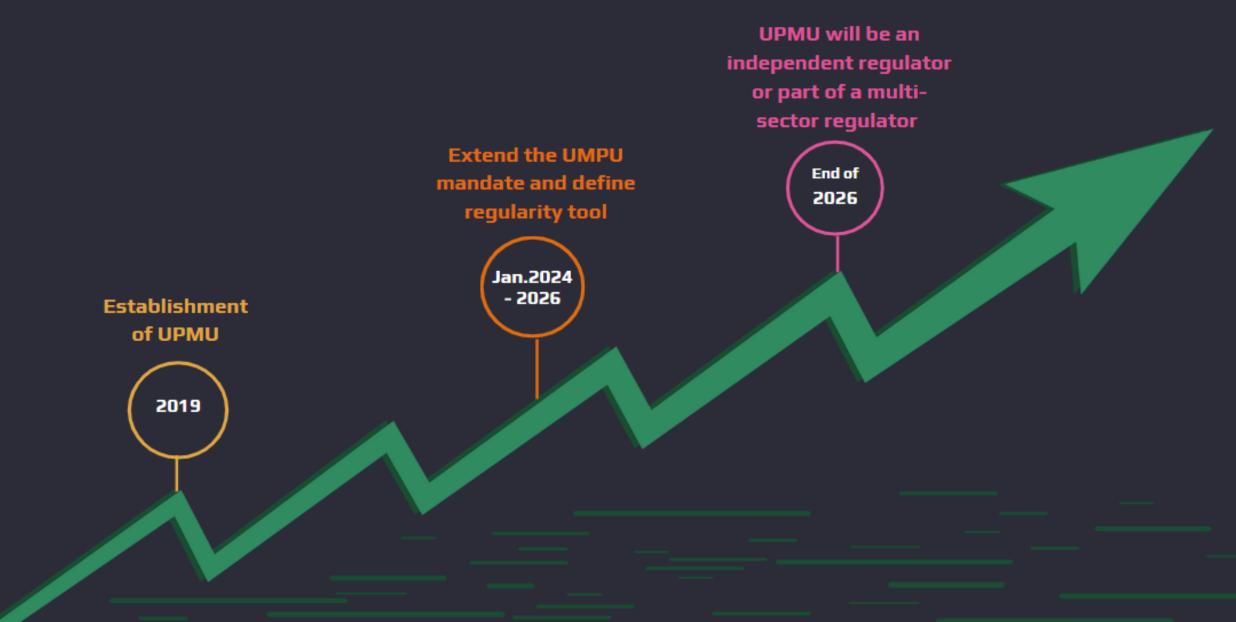


- 1 Extend the UPMU mandate to become an independent regulator, or as part of a multisector regulator by 2026
- 2 Define all regulatory tools and guidelines for full independent regulator
- Initiate benchmarking between local utilities and regional similar utilities
- Ensure that the Utilities have emergency plans
- Organize knowledge exchange between the Utilities on best market practices
- Extend the current inspection protocol to cover all areas for inspection



- The Ensure that the Utilities are including in their BP the UPMU recommendations and the set performance targets.
- Review with Utilities the

 Assignment agreement & Article of
 Association to get them approved
 from the WAJ's general assembly.
- Review/distribute the Customer
 Services Minimum Standard
 Guideline & Commercial
 Relationship Management
 Standard Guideline.
- 10 Develop a concept of incentives and penalties for the Utilities
 - Develop the current data management information system that used at UPMU to a platform (Dashboard)



Thank You