Ministry of Water and Irrigation

Utilities Performance Monitoring Unit (UPMU)

Status of UPMU
7th June 2020

Presented by
Dr. Ahmad AlAzzam
UPMU Director

Start-up point : Old version of variables and indicators (Aug.- Oct. 2019)

Discuss Old version of variables and indicators with water companies	Review National water strategy (2016-2025) - result based action Plan- and extract additional variables/ indicators	Categorized the variables into four categories : Operational, Customer services, Finance, and HR"

New variables and indicators – Preliminary version (Nov. 2019- Jan. 2020)

Distribute / Receive feedback from water companies	UPMU Staff on board	Produce version II of variables and indicators	Categorized the Performance indicators (PI) into three levels: Key PI , Lower Level PI and National strategy PI.

Variables and indicators – Ready to go (in progress)

Produce consolidated excel sheet	**Distribute sheets to water companies to collect (Q1+Q2+Q3 -FY19)data**	**Provide technical assistance for the water companies when needed**	**Chain of site visits to water companies to ensure accountability.**

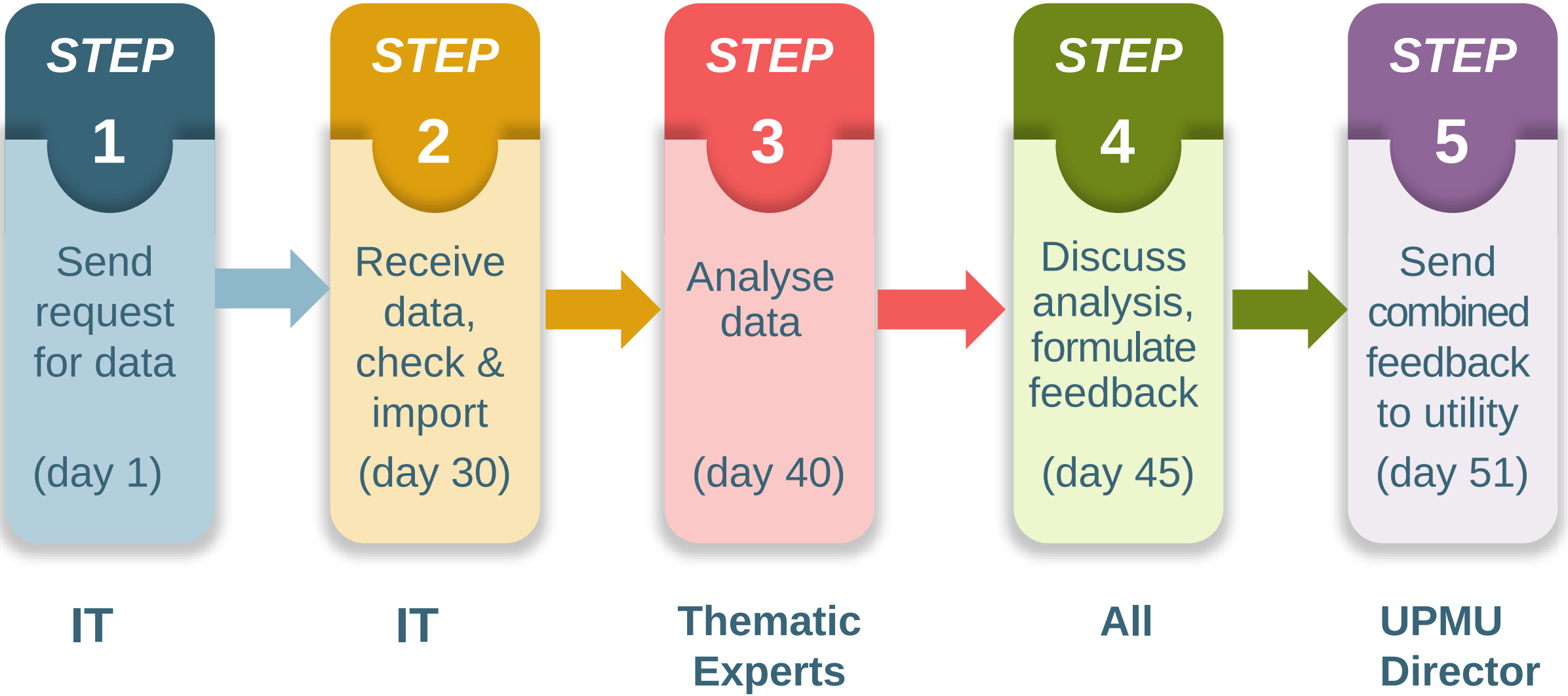
COVID 19

Produced version 3 of variables end of April	**1st out put: (Q1,Q2,Q3 FY19) Slim Report May 2020**	**Distribute sheets to water companies to collect (Annual FY19) data +Q12020**	**2rd Out put: Annual Monitoring Performance Report FY19, with Recommendation July 2020**	**3nd Output : Q1 FY20 Slim Report August 2020**

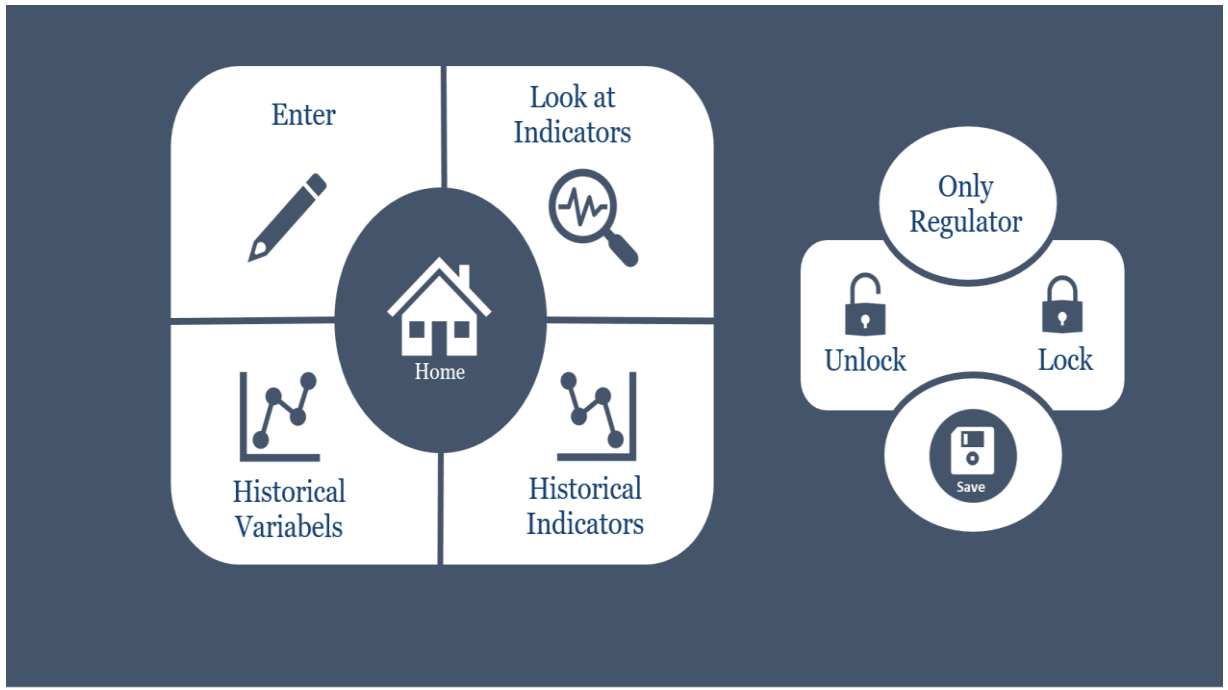
Milestones

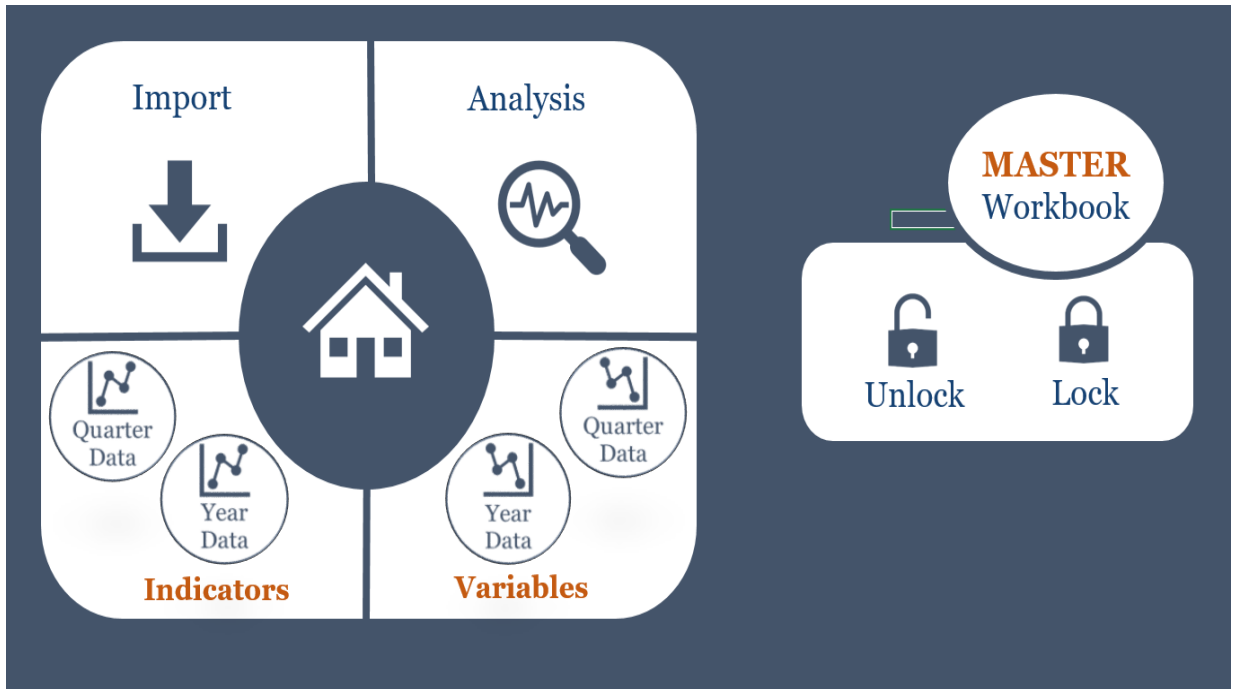
Update 28.05.2020

Num	Date	Milestone	Responsibilities Assign to :
1	31-May-20	Send the Developed Consolidated Excel Sheet for Annual year 2019 and Q1 2020 to the three utilities	UPMU IT Expert
2	1 June to 30 June 2020	Provide technical assistance to the utilities to fill the consolidated excel sheet from 1 June till 30 June, through site visit to the utilities	UPMU and GIZ Project staff
3	01-Jul-20	Send the Developed Consolidated Excel Sheet for Q2 2020 to the three utilities	UPMU IT Expert
4	01-Jul-20	Receive Q1 FY20 data from three water utilities	UPMU IT Expert
5	01-Jul-20	Receive Q4 and annual monitoring data FY19 from three water utilities	UPMU IT Expert
6	20-Jul-20	UPMU staff review the received data for Q4 and annual monitoring data FY19	UPMU / Dirk /and GIZ Project staff
7	21-Jul-20	Support UPMU staff in developing the draft annual monitoring report FY19 "until Mid of August"	Dirk /and GIZ Project staff
8	16-Aug-20	In addition, UPMU staff review the received data " Q1 FY20" and draft slim report for Q1 FY20 until end of August	UPMU / Dirk /and GIZ Project staff
9	16-Aug-20	Edit and design the annual monitoring report FY19 until early September	UPMU Director and GIZ Project
10	16-Aug-20	Receive Q2 FY20 from water utilities	UPMU IT Expert
11	01-Sep-20	Submit FY19 annual monitoring report (English version) to the Minister	UPMU director
12	10-Sep-20	Finalize slim report for Q1 FY20 and submitt to Minister	UPMU / Dirk /and GIZ Project staff
13	15-Sep-20	Translate the annual monitoring report FY19 to Arabic " ready"	UPMU and GIZ Project
14	20-Sep-20	Submit FY19 annual monitoring report (English and Arabic version) to different Stakholders in officail Cermony	UPMU and GIZ Project
15	25-Sep-20	In addition, UPMU staff review the received data " Q2 FY20" and draft slim report for Q2 FY20	UPMU / Dirk /and GIZ Project staff
16	30-Sep-20	Finalize slim report for Q2 FY20 and submitt to Minster	UPMU / Dirk /and GIZ Project staff
17	01-Oct-20	Send the Develop Consolidated Excel Sheet for Q3 2020 to the three utilities	UPMU IT Expert
18	15-Oct-20	Develop sustainable financial plan for 2021	UPMU and GIZ Project


STEP 1
Send request for data
(day 1)
IT
STEP 2
Receive data, check & import
(day 30)
IT
STEP 3
Analyse data
(day 40)
Thematic Experts
STEP 4
Discuss analysis, formulate feedback
(day 45)
All
STEP 5
Send combined feedback to utility
(day 51)
UPMU Director

Home Page of Consolidated and Master sheet :

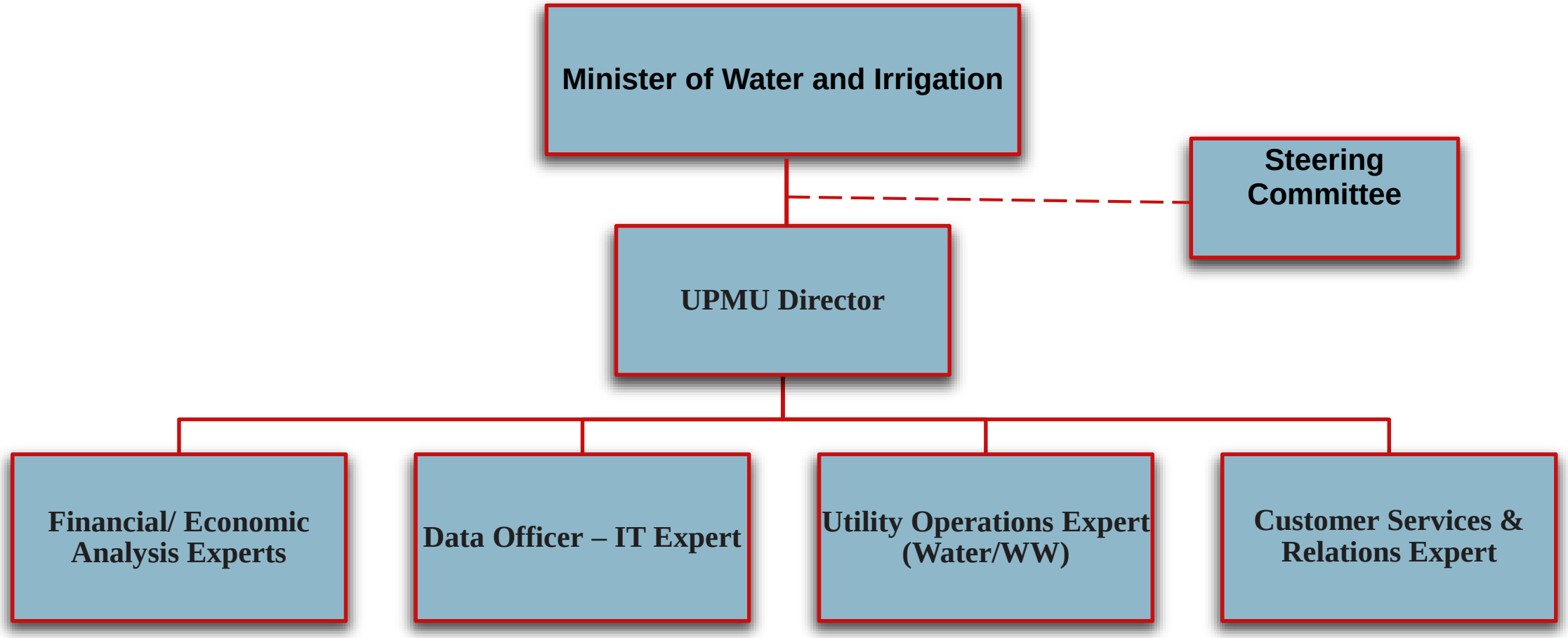




Enter Data From Utilities → Import Data → Data Analysis By UPMU

[Video for Consolidate Sheet and Master Sheet]

UPMU Structure - March 2020



Steering Committee

- Steering committee was established early 2019 to supervise the UPMU, chaired by H.E the Minister of Water and Irrigation, with the following members
  - H.E. Secretary General of WAJ
  - H.E. Secretary General of MWI
  - H.E. Secretary General of JVA
  - Director of Legal Affairs in MWI
  - Assistant Secretary General for Financial Affairs – WAJ
  - Donors Representative
  - King Abdullah II Centre of Excellence Representative

Tasks and responsibilities of the UPMU

- Monitor the performance of the utilities and issue performance reports
- Set and develop KPI targets and mechanisms for their calculation, compare and evaluate the utilities' performances on their basis
- Develop and review the necessary documentation to establish the utilities and develop their tasks/duties
- Issue **the basis and general evidence** which describe the frameworks for developing internal working guidelines and procedures, such as staff and financial guidelines
- Recommend updates on laws, legislation and regulations
- Review and recommend tariff (includes review of cost, tariffs, required subsidies options analysis for the Cabinet)
- Incentive/penalties on service delivery with the approval of general assembly of WAJ
- Review and accredit Companies Business Plans and set targets

Performance Indicators

- The UPMU has defined the 10 Key Performance Indicators (KPI) for assessing and comparing the utilities' overall performance
  - 8 are of these KPIs are monitored and reported in the Quarterly and Annual Performance Reports
  - 2 are only monitored annually and are reported in the Annual Performance Report
  - (O: 2, SQ: 4, F: 2, HR: 2)
- The UPMU has defined 27 Lower Level Performance Indicators (PI)
  - 13 are calculated on both a quarterly and annual basis
  - 14 are only calculated annually
- The UPMU has also developed a set of 11 indicators to monitor progress in the implementation of the National Water Strategy 2016 – 2025 and related policies

List of Lower Level Indicators and Indicators derived from national strategies

Num	Key Performance Indicators	Explanation	Formula	Period for regulatory evaluation	Unit
1	Microbiological water quality compliance	Percentage of the total number of microbiological tests of treated water performed that comply with the applicable standards.	=(Compliant microbiological tests/Microbiological water quality tests performed) * 100	quarterly & annually	%
2	Continuity of supply	Percentage of hours when the (intermittent supply) system is pressurised	= Number of hours per week that the system is pressurized / (7*24) * 100	quarterly & annually	% of time
3	New connection efficiency	Percentage of connections installed within the specified target time	= New water connections type 1 and type 2 within a target time / New water connections type 1 and type 2 requested * 100	quarterly & annually	% of requests
4	Water service complaints per subsciber	Number of quality of service (water quality, "no water") complaints per 1000 subscribers per year	= (Water Quality Complaints + Complaints of "No Water Supply") / (Active subscribers*1000)	quarterly & annually	No. Complaints/1000 connections/year)
5	Water consumption per capita (residential subscribers)	Average daily water consumption per capita	quarterly = Residential billed volume*1000/90/Population supplied (water) annually = Residential billed volume*1000/365/Population supplied (water)	quarterly & annually	L/cap/d
6	Non-Revenue Water	Percentage of system input volume not being billed	= Water produced + Imported treated water - Exported treated water - Billed consumption) / (Water produced + Imported treated water - Exported treated water) * 100	quarterly & annually	% of system input
7	Collection ratio	Percentage of revenues collected from billed amounts during reporting period	= (Total collection from water sales - Collection for past periods + Total collection from wastewater services - Collection for past periods) / Amount billed in period * 100	quarterly & annually	%
8	Operating cost coverage ratio	Total collection from water and wastewater services compared to total operation and maintenance costs	= Total collection water and wastewater services / Total operation and maintenance costs water and wastewater services * 100	quarterly & annually	%
9	Employees per 1000 subscribers	Number of full time equivalent employees per 1000 water subscribers and wastewater subscribers	= Total number of employees / ((Total water subscribers + Total sewer subscribers) /1000))	annually	No/1000 subscribers
10	Training per employee	Number of training hours per employee during reporting period	= Total number of training hours in reporting period / Total number of employees	annually	h/employee

First Short monitoring report ?

- Launch the UPMU activities
- Introduce the new consolidated sheet developed by the UPMU
- Run and test the new set of variables and KPI's
- Piloting of the first report (Q1,2, 3 -2019) and building capacity of new staff

➢ **Notes**

- Validation of data collection faced interruption due to COVID-19
- Outcomes of report are only an indication for next follow up annual report 2019

Comparison of the size of utilities, Quarter III 2019

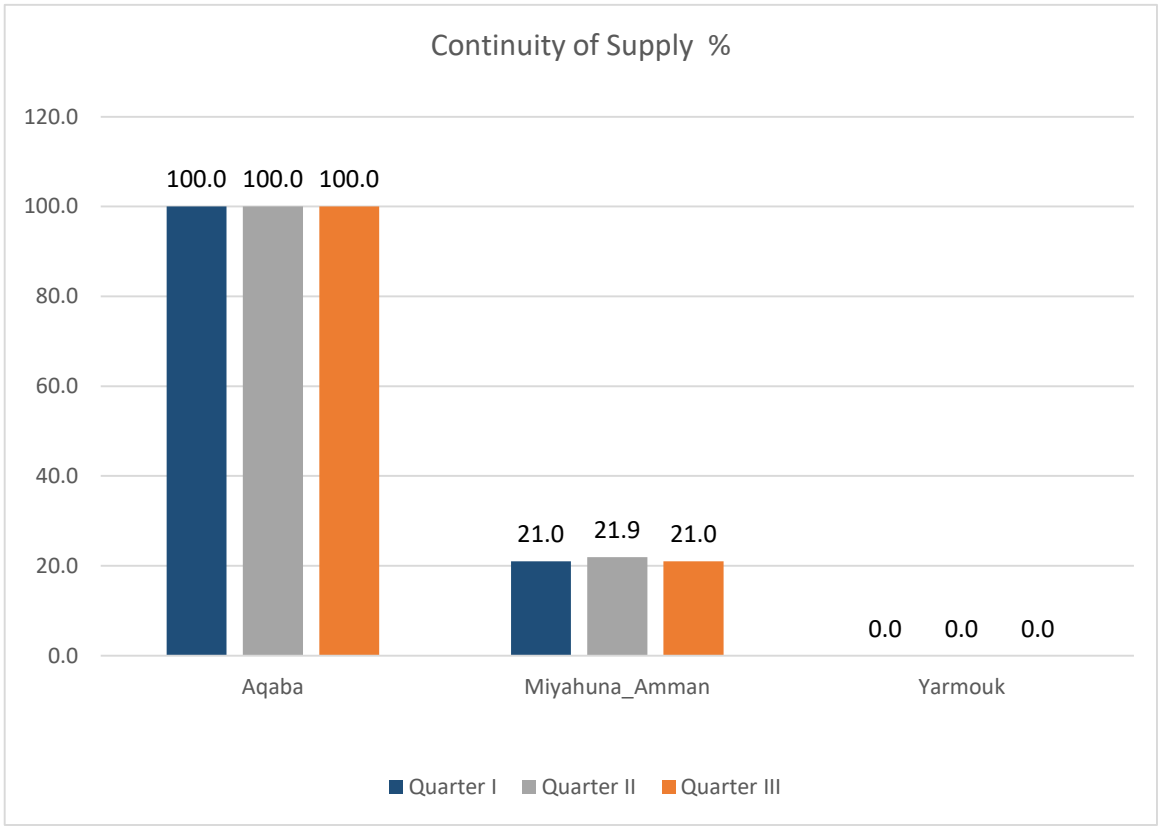
	Total water subscribers	Total sewer subscribers	Total number of employees	Water distributed [m³]	Authorized consumption [m³]	Total billing for water [JOD]
Aqaba	43,226	37,247	334	7,832,581	4,752,247	4,676,797
Miyahuna Amman	664,313	538,797	1,525	67,446,290	43,200,369	26,820,126
Yarmouk	351,009	146,361	1,521	27,060,478	14,312,391	13,971,296

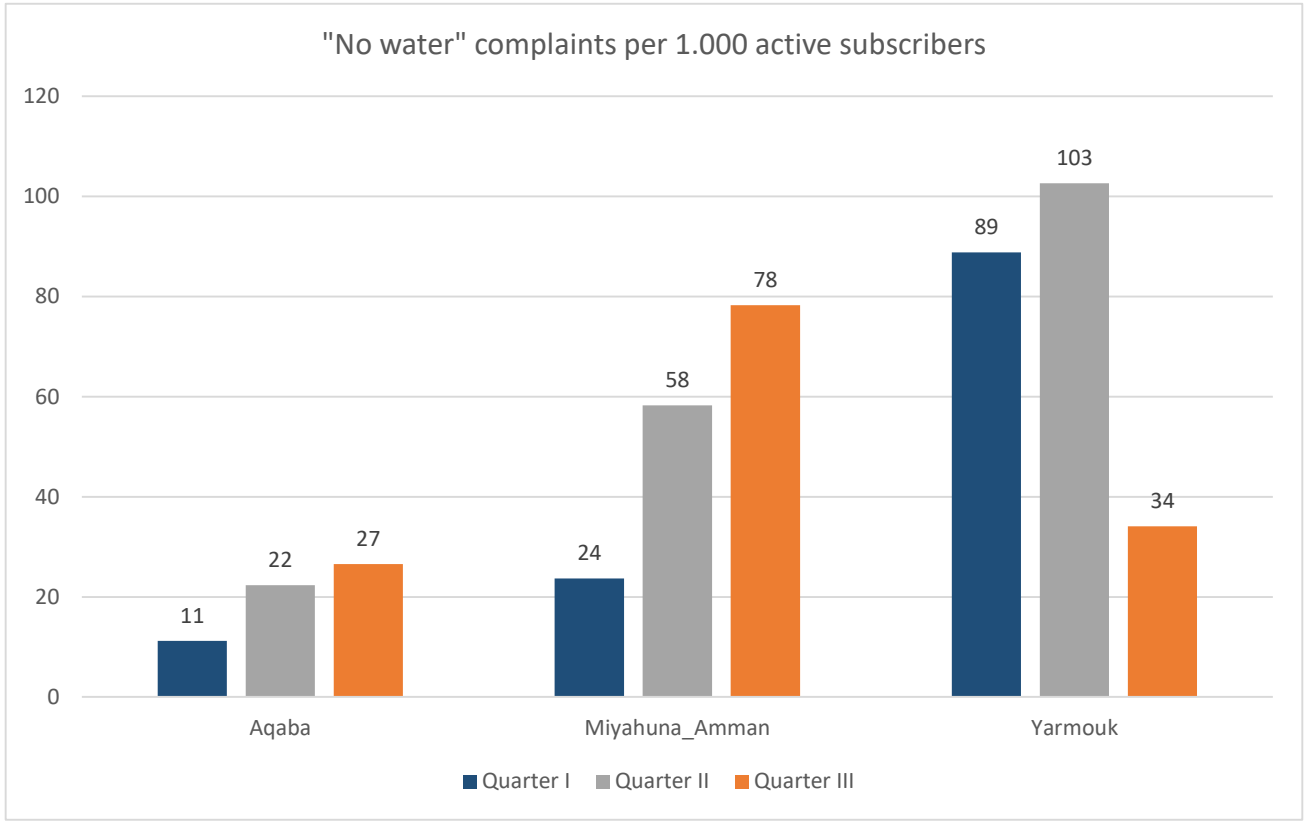
Service Quality

- The first group of indicators (KPI's) looks at aspects that describe the quality of service experienced by the customers of individual utilities
- The indicators address the water quality, service reliability, complaints and responsiveness of the service providers

Outcome "service quality":

- *Investigate inequalities in distribution during the summer, where high consumption by some subscribers might leave others with insufficient water supplies.*
- *Since the number of complaints related to water quality is minimal, the UPMU has changed this KPI to only reflect "no water" complaints.*


Continuity of Supply %
120.0
100.0
80.0
60.0
40.0
20.0
0.0
100.0 100.0 100.0
21.0 21.9 21.0
0.0 0.0 0.0
Aqaba
Miyahuna_Amman
Yarmouk
Quarter I
Quarter II
Quarter III

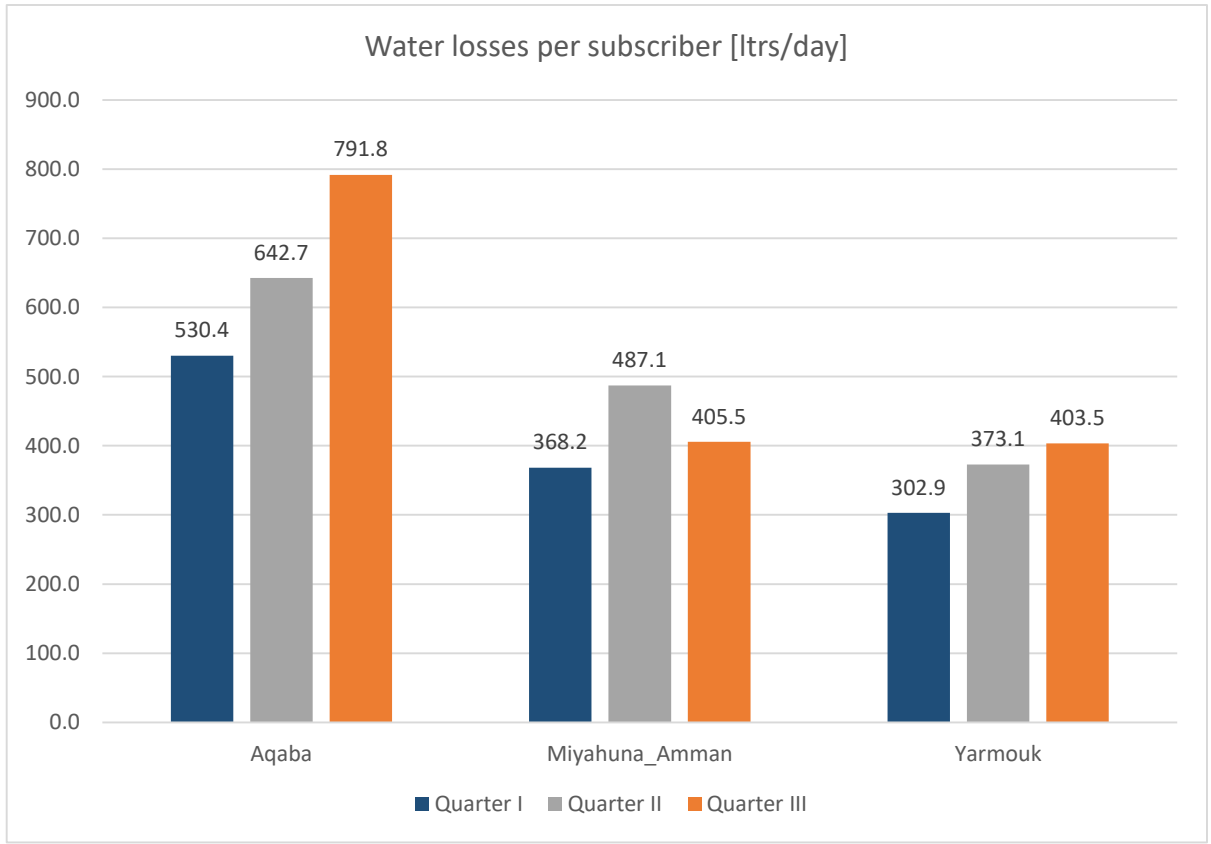

"No water" complaints per 1.000 active subscribers
120
100
80
60
40
20
0
11 22 27
24 58 78
89 103 34
Aqaba
Miyahuna_Amman
Yarmouk
Quarter I
Quarter II
Quarter III

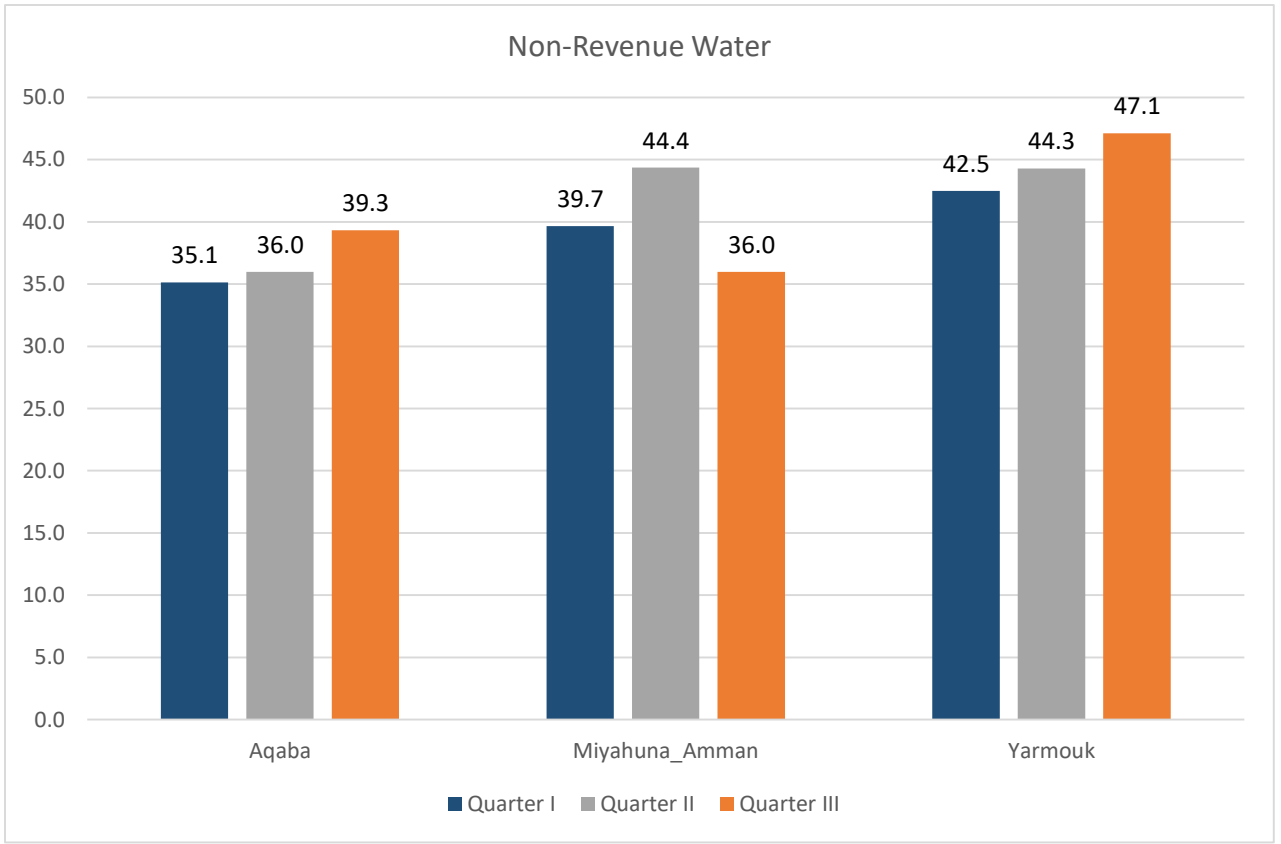
Water Resources Efficiency

- The second group of indicators provides an overview on the volumes of water produced, distributed and lost by the utilities in the supply process
  - Water resources used per capita per day in ltrs
  - NRW
  - Water losses per subscribers “ltrs/day”
  - Water losses per km main length “m³/day”

Outcome “water resources efficiency”:

- *Work with the utilities to assess Non-Revenue-Water more accurately using the three related indicators and agreeing on methodologies to estimate real/technical losses which, according to international standards, are high for a water-scarce country.*
- *Assess the utilities’ compliance with supply schedules.*


Water losses per subscriber [ltrs/day]
900.0
800.0
700.0
600.0
500.0
400.0
300.0
200.0
100.0
0.0
530.4
642.7
791.8
368.2
487.1
405.5
302.9
373.1
403.5
Aqaba
Miyahuna_Amman
Yarmouk
Quarter I
Quarter II
Quarter III

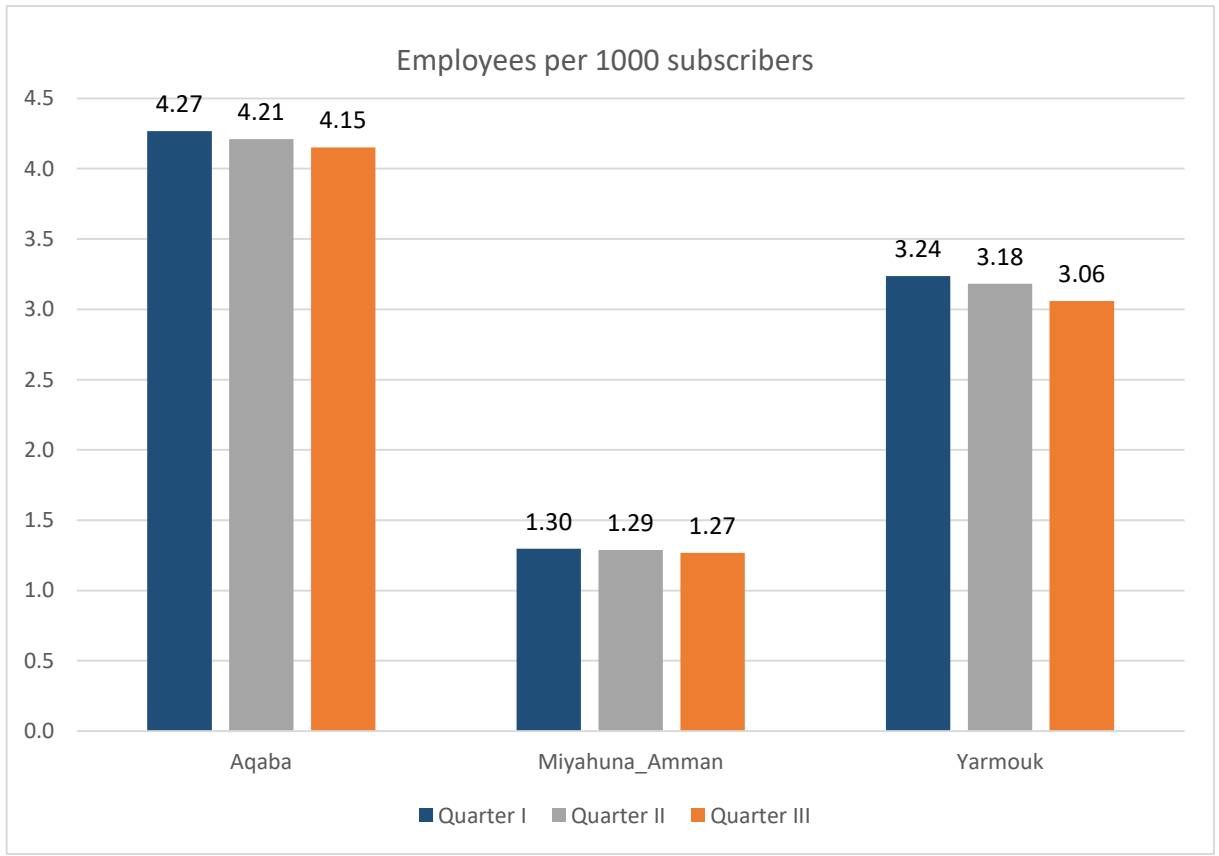

Non-Revenue Water
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
35.1
36.0
39.3
39.7
44.4
36.0
42.5
44.3
47.1
Aqaba
Miyahuna_Amman
Yarmouk
Quarter I
Quarter II
Quarter III

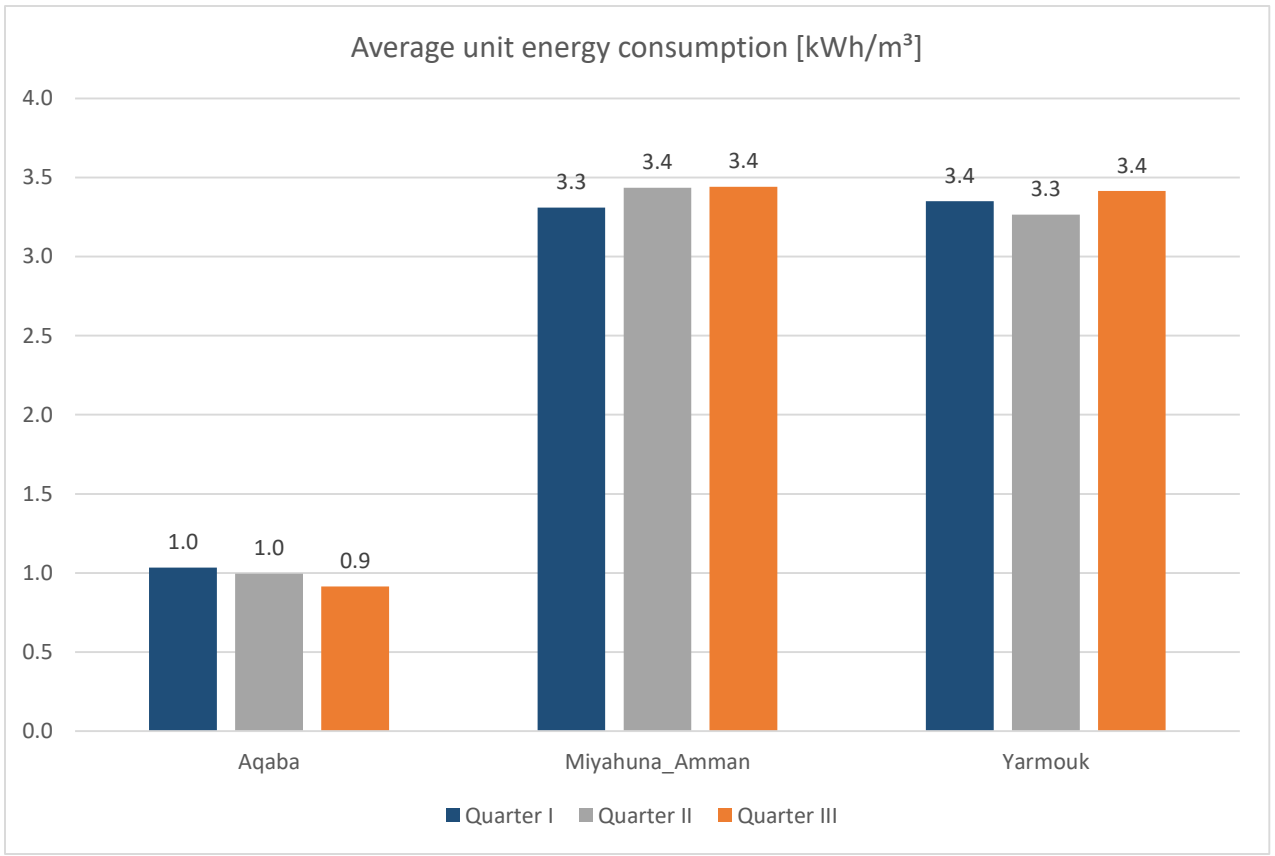
Operational Efficiency

- The third group of indicators provides an overview on the efficiencies of the utilities in the following fields
  - Employees per 1000 subscribers
  - Preventive maintenance of pumps
  - Average unit energy consumption “KWh/m3”
  - Speed of repairs of failures “% Compliance”
  - Training per employee

Outcome “operational efficiency”:

- *Request utilities to develop and implement preventive maintenance programs to maintain their assets.*
- *Promote measures that could add benefit by improving energy efficiency.*
- *Request utilities to monitor and record the speed of repairs and set target times for each utility.*
- *Require utilities to develop and implement suitable staff development and training plans.*


Employees per 1000 subscribers
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
4.27
4.21
4.15
1.30
1.29
1.27
3.24
3.18
3.06
Aqaba
Miyahuna_Amman
Yarmouk
Quarter I
Quarter II
Quarter III


Average unit energy consumption [kWh/m³]
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
1.0
1.0
0.9
3.3
3.4
3.4
3.4
3.3
3.4
Aqaba
Miyahuna_Amman
Yarmouk
Quarter I
Quarter II
Quarter III

Financial Performance

- The fourth group of indicators provides an overview on the financial efficiencies of the utilities
- Data for some of these indicators is only available on annual basis

Outcome "financial performance efficiency":

- Since the report does not cover a full year; *This will be dealt with in the year 2019 report "Annual Report", based on complete and audited data.*

Road Map

The core activities and responsibilities of the UPMU are now specified. The following activities are listed in the UPMU road map for the year 2020

- Identify sustainable finance plan for UPMU
- Prepare Vision, Mission statement for the UPMU
- Development of an inspection protocol to validate data
- Development of a concept to support utilities to improve data collection
- Development of principles for interacting with the utilities and other stakeholders
- Development of customer service guidelines
- Prepare a financial concept for utilities, based on the results of the financial study which will be carried out this year

Road Map

- Identify the three to five biggest challenges that the utilities are facing and risks that the water sector are facing over the next years
- Develop a concept for an incentive and penalty scheme
- Merge data for Miyahuna- Amman with Madaba and Zarqa into one entity
- The UPMU must ensure that utilities to have emergency plans in place, which are aligned to the water sector plan
- Develop performance targets (benchmarking system)

Thank you