التعاون الألماني
DEUTSCHE ZUSAMMENARBEIT

giz

الجمهورية اليمنية
وزارة المياه والبيئة

Summary Report

Performance Monitoring of Urban Water Supply and Sanitation Utilities

Year 2012

Water Sector Program
Coordination of Emergency Measures

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Abbreviations and Acronyms

MWE	Ministry of Water & Environment - Yemen
WSS	Water & Sanitation Sector
WSP	Water Sector program
BMZ	Federal Ministry for Economic Cooperation and Development - Germany
UWSS	Urban Water & Sanitation Sector
PIIS	Performance Indicators Information System
KfW	Entwicklungsbank
ICRC	International Committee of the Red Cross
WB	World Bank

Contents

1 Background

The GIZ water program is presenting the final results of the performance indicators report of the Yemeni Urban Water Sector. This process started in January 2011 when the political crisis started to throw its shadow on the water sector in Yemen. Since that time The GIZ WSP decided to help the water local corporations & utilities in improving water supply and sanitation services for population.

In order to trace the level of services provided and performance of each water utility, the annual consolidated report of 2011 was discussed among the stakeholders in a workshop held in mid of 2012.

For 2012, quarterly reports were prepared and shared also with the main stakeholders like MWE (LCs & Autonomous Utilities), Development partners (such as WB, Netherland etc.); ICRC and other relief agencies working in the water sector.

The Yemen German WSP concentrated its effort in providing technical assistance during the crisis period in the managerial, financial and awareness areas.

The German government donated about 10 mi € for the WSS LCs & utilities that suffered from the crises, KfW on behalf of the Federal Ministry for Economic Cooperation and Development (BMZ) started a Water Crisis Program for the UWS with direct coordination with MWE and GIZ WP to identify the local corporations and public utilities that are eligible for the program based on the performance monitoring reports, The goal of this program is to provide the essential need to improve the level of service such as generators, pumps, spare parts etc., that was for most of the surveyed utilities which suffered a severe damage in equipment and lead to their inability to provide water to people .Total number of LCs & utilities covered in this program are around 16 LC & Utility.

The GIZ WSP tried in each report to remind the readers from the LCs and Utilities that the purpose of performance monitoring is to show the trend of performance for utilities in terms of operational, financial and technical aspects. To do so, monthly follow up of data and indicators is needed to identify utilities that are underperforming. Although LCs and utilities pledged to exchange data with the WSP on monthly basis, unfortunately some LCs and utilities did not fulfill their commitment.

This report covers the period between January to December 2012 through which it is possible to measure the performance trend during the period after the crisis showing how the performance has improved in some utilities, and remained as it is in other utilities which raises here some questions about whether the improved performance of some utilities was a result of quasi-political and security stability in the country and/or emergency measures taken by the management to tackle the business impediments to improve the performance.

2 Reporting Process

Data Collection was supported by the PIIS Performance Indicators Information System PIIS, As a result of absence of the central unit of PIIS in the Ministry of Water and Environment, GIZ WSP undertook this activity as a kind of emergency measures and temporary support for MWE to monitor the performance of the UWSS in Yemen during and post crises period.

The GIZ WSP tried as much as possible to include more Utilities and LCs in this report, where the number total of utilities in this report reached 21 LC and Utility shown below:

Local Corporations (LCs)	Utilities (U)
1- Sana'a LC	14- Mocha U
2- Aden LC	15- Zabid U
3- Taiz LC	16- Al-Mansouriah U
4- Rada' LC	17- Bajil U
5- Seyuon (LC)	18- Bait Al-Faqih U
6- Mukalla (LC)	19- Al-Sheher U
7- IBB (LC)	20- Al-Mahweet U
8- Hodeida LC	21- Yareem U
9- Hajjah (LC)	
10- Amran (LC)	
11- Dhamar (LC)	
12- Sa'dah (LC)	
13- Al-Dalea (LC)	

In this regards, we draw the attention of all readers to note that plausibility of the data indicated in this report rests on the responsibility of the LCs and Utilities. Accordingly, data compiled is subjected to plausibility and reliability check by sharing it with the utilities to revise the results for clearance.

GIZ WSP had compared the 2012 indicators with 2011, which is the actual year of the crisis, to perceive how the situation developed in a negative or positive pattern.

Although there are some complaints of low improvement status in some utilities, Nonetheless, the preliminary analysis of this report create some enthusiasm of improved situation in the sector, and this improvement may not rise to the level of performance expected in the normal situation, but it can be accepted showing an improvement in the trend, and particularly dedicated to the transition phase in Yemen which could be called the recovery period in terms of development.

3 Conclusions

The Annexes below show detailed analysis of performance indicators for each LC/Utility. As stated before there is a noticeable improvement that can be attributed to several factors. This improvement nearly achieved by most LCs & utilities in the urban sector.

The report focused on selected key indicators that reflect the condition of each LC/Utility namely financial, administrative and service delivery indicators.

The LCs/Utilities in 2012 were able to manage and restore the confidence of the subscribers through improved frequency of water supply .The main factor was the normal resumption of electric supply which used to cause several electricity block out. In addition, the equipment provided by the emergency program (kfw) and other relief agencies such as the ICRC had contributed to a large extent to improve the operational capacity of the utilities.

Due to the fact that subscribers are receiving an improved service provision and as a result of this satisfaction they are now willing to pay the bills. The average revenue of domestic connection reached to 87% in 2012 which was 82% in 2011. It is pleasing to observe that the government fulfilled its pledges and paid the government bills that equal the rate 191% in 2012 compared to 47% in 2011.The commercial sector also showed increasing results where 2012 witnessed full commitment by the commercial consumers to achieve 92% commercial bills collection.

Due to the fact of developed level of collection for domestic, government and commercial. Most LCs/Utilities were able as result of improved collected revenues to cover its operational costs, unlike some LCs & Utilities such as Seyuon, Mocha, Bait Alfaqih and Al-Mahweet which could not raise its financial revenues and thus encountered financial constraints.

Increase of non-revenue water is still a problem to control in Yemen; where non-revenue water adversely affected the water resources and water as a commercial commodity. LCs like Sana'a, Dhamar , Al-Dalea and Al-Hodeidah recorded high ratios of water loss .The Utilities had to pay more attention towards network maintenance, illegal connection in particular, and influential consumers who refuse to pay their bills.

Last but not least, The GIZ WSP can notice a glimmer of hope of gradual improvement of urban water sector; the stakeholders should now start to plan for rehabilitation or/and development phase. The Government should give high priority for the water sector, allocating sufficient funds for sector development. In addition, it's highly recommended that the MWE, LCs and Utilities undertake a program to enhance their project implementation capacity to embrace local and external funds and grants.

Annex 1 Analysis of Performance Indicators

Sana'a

1. Collection Efficiency
    1. Domestic collection: shows a marked improvement from 69% in 2011 to 81% in 2012. The improvement in collection revenues is a result of improved water supply services in the beginning of 2012.
    2. Governmental collection: increase from 58% in 2011 to 89% in 2012.
    3. Commercial: increased steadily from 55% in 2011 to 77% in 2012 due to improved service provision.
2. Operational actual cost coverage: increased slightly from 85% in 2011 to 93% in 2012.
3. Non-Revenue Water: increased significantly to 40% in 2012 compared to 32% in 2011.
4. Continuity of water supply: usually varies upon areas supply for 3-4 times per month.

Aden

5. Collection Efficiency
    1. Domestic collection: shows no significant improvement in the domestic collection from the previous year. The domestic collection efficiency is 51% in 2011 and 53% in 2012.
    2. Governmental collection: increased considerably from 26% in 2011 to 194% in 2012.
    3. Commercial: increased from an average of 83% in 2011 to 93% in 2012.
6. Operational actual cost coverage: had increased significantly from an average of 62% in 2011 to 124% in 2012.
7. Non-Revenue Water: increased slightly from 33% to 35% in 2011.
8. Continuity of water supply: decreases to 14 – 16 hours a day in the beginning of the year due to the continuous electricity cuts. Average annual supply is counted to be 13 h per day.

Taiz

9. Collection Efficiency
    1. Domestic collection: A slight increase of 2% from 2011 to reach 75% in 2012 compared to 73% in 2011.
    2. Governmental collection: increases due to government support from 87% in 2011 to 151% in 2012.
    3. Commercial: increases by 56% over the last year to become 123% in 2012 compared to 67% in 2011.
10. Operational actual cost coverage: increases from 85% in 2011 to 102% in 2012.
11. Non-Revenue Water: increases slightly by 2% from 21% to 23% in 2012.

12. Continuity of water supply: water supply remain the lowest among LCs for reasons of scarce water resources in Taiz, Urban people in the city usually receive the service mostly one every forty days to 2 months minimum.

Mukala

13. Collection Efficiency
    1. Domestic collection: increases slightly from 87% in 2011 to 92% in 2012.
    2. Governmental collection: increased twice average from 70% in 2011 to 123% in 2012.
    3. Commercial: increased slightly to 91% in 2012 compared to 87% in 2011.
14. Operational actual cost coverage: kept increasing from 103% in 2011 to be 116% in 2012.
15. Non-Revenue Water: increased 4% in average from 35% 2011 to 39% in 2012.
16. Continuity of water supply: is constantly supplied at a rate of 8 hours daily till June.

Hodeidah

17. Collection Efficiency
    1. Domestic collection: increased remarkably from 68% in 2011 to 79% in 2012.
    2. Governmental collection: The LC earned to 249% in 2012 from 14% in 2011.
    3. Commercial: increased 2% in average from 76% in 2011 to 78% in 2012.
18. Operational actual cost coverage: was significantly increased from 51% in 2011 to 140% in 2012.
19. Non-Revenue Water: decreased in average from 44% 2011 to 40% in 2012.
20. Continuity of water supply: 24hours a day.

Dhamar

21. Collection Efficiency
    1. Domestic collection: increased to 84% in 2012 compared to 82% in 2011.
    2. Governmental collection: improved remarkably to 214% in 2012 compared to 41% in 2011.
    3. Commercial: decreases slightly by 1% to be 80% in 2012.

- Operational actual cost coverage: improved from 67% in 2011 to 101% in 2012.
- Non-Revenue Water: decreased by 2% in average from 48% 2011 to 46% in 2012.
- Continuity of water supply: reached to 24 hours a day at end of the year.

Rada'a

- Collection Efficiency
  - Domestic collection: raised to 85% for 2012 compared to 82% in 2011..
  - Governmental collection: increase revenue from 8% in 2011 to 106% in 2012.
  - Commercial: remain the same from 89% in 2011 to 88% in 2012.

- Operational actual cost coverage: decreases by 1% to be 81% in 2012 compared to 82% in 2011.
- Non-Revenue Water: increased significantly by 9% in 2012 which was 22% in 2011 compared to 31% in 2012.
- Continuity of water supply: Poorly deteriorated to supply the customer one time a week in average.

Al Mansouriah

- Collection Efficiency
  1. Domestic collection: showed a slight decline to reach 90% in 2012 compared to the average of 96% in 2011.
  2. Governmental collection: Achieved the most tremendous government collection to hit 652% of collection in 2012.
  3. Commercial: declined from 94% in 2011 to 78% in 2012.
- Operational actual cost coverage: increased significantly by 76% in average to reached to 162% in 2012 compared to 86% in 2011
- Non-Revenue Water: increased slightly 3% to reach 20% in 2012.
- Continuity of water supply: supplied to customer up to 22 h per day.

Ibb

- Collection Efficiency
  1. Domestic collection: decreased 8% in 2012 to reach 94%
  2. Governmental collection: increased dramatically from 49% in 2011 to 134% in 2012.
  3. Commercial: increased to 88% in 2012 compared to 79% in 2011.
- Operational actual cost coverage: stayed above 100% in both years with 29% increase in 2012 compared to 2011.
- Non-Revenue Water: increased 2% in average from 23% in 2011 to 25% in 2012.
- Continuity of water supply: 24hours every 2 days a week.

Al-Sheher

- Collection Efficiency
  1. Domestic collection: decreased by 1% from 90% in 2011 compared to 89% in 2012.
  2. Governmental collection: showed double increments from 52% in 2011 to 131% in 2012. The collection efficiency reached to 100% in February 2012.
  3. Commercial: dropped by 7% from 75% in 2011 compared to 82% in 2012.
- Operational actual cost coverage: increased by 11% in average in 2012. The cost coverage still progressing and reached to 98% in 2012 compared to 87% in 2011.
- Non-Revenue Water: increased by 4% in 2011 to reach 30% in 2012.
- Continuity of water supply: supplied 18 hours a day.

Seyuon

- Collection Efficiency
  1. Domestic collection: increased 8% in average to reach 88% in 2012.
  1. Governmental collection: increased incredibly from 56% 2011 to 167 % in 2012.
  2. Commercial: increased slightly from 76% 2011 to 90% 2012.
- Operational actual cost coverage: improved from 81% in 2011 to 106% in 2012.
- Non-Revenue Water: remains to be 29% in 2011 & 2012.
- Continuity of water supply: in average supplied 24 hours a day.

Mocha

- Collection Efficiency
  1. Domestic collection: declined from 105% 2011 to 96% in 2012.
  2. Governmental collection: increased from 37% in 2011 to 172% in 2012.
  3. Commercial: dropped from 98% in 2011 to 93% in 2012.
- Operational actual cost coverage: Rise from 78% in 2011 to 109% in 2012
- Non-Revenue Water: remained the same from 23% in 2011 to 23% 2012.
- Continuity of water supply: 24 hours a day.

Zabid

- Collection Efficiency
  2. Domestic collection: remains same in average of 100% in 2011 & 2012.
  3. Governmental collection: increased incredibly from 32% 2011 to 225 % in 2012.
  4. Commercial: remain stable at 96% for 2011 and 2012.
- Operational actual cost coverage: increased from 85% in 2011 to 114% in 2012. The good collection efficiency in January, February, March, May and June reached to 100% for domestic and commercial customers reflected positively to improve the operational cost coverage in average and in these months to reach 100%.
- Non-Revenue Water: remains same in average of 19% in 2011 & 2012
- Continuity of water supply: regressed in the last 6 month to 6-8 h per day.

Bajil

- Collection Efficiency
  1. Domestic collection: improved 6% in average to reach 87% in 2012 compared to 81% in 2011.
  2. Governmental collection: increased unexpectedly from 100% in 2011 to 292% in 2012.
  3. Commercial: increased from 84% in 2011 to 87% in 2012.

- Operational actual cost coverage: increased by 31% in average to reach 104% in 2012 compared to 73% in 2011.
- Non-Revenue Water: increased by 1% in 2012 to reach 24 %.
- Continuity of water supply: once a week.

Bait Alfaqih

- Collection Efficiency
  1. Domestic collection: increased slightly from 81% in 2011 to 97% in 2012.
  2. Governmental collection: dropped significantly from 100% 2011 to 12% in 2012.
  3. Commercial: increased by 5% from 93% in 2011 to 98% in 2012.
- Operational actual cost coverage: decreased to 76% in 2012 and was 90% in 2011 due to the low collection efficiency
- Non-Revenue Water: improved by 4% in 2012 from 22% in 2011 compared to 18% in 2012.
- Continuity of water supply: stayed at the same level of 14 hours per day

AlMahweet

- Collection Efficiency
  1. Domestic collection: increased by 9% in average and reached to 86% in 2012 compared to 77% 2011.
  2. Governmental collection: increased dramatically from 42% in 2011 compared to 241% in 2012.
  3. Commercial: increased to 86% in 2012 compared to 58% in 2011.
- Operational actual cost coverage: decreased from an annual average of 54% 2011 to 80% in 2012 as a result of low collection efficiency.
- Non-Revenue Water: increased by 2% in average to reach 25% compared to 23% in 2011
- Continuity of water supply: 24 hours for a day in a month.

Hajjah

- Collection Efficiency
  1. Domestic collection: Increased steadily by 19% in average to reach 96% in 2012 compared with 77% in 2011.
  2. Governmental collection: increased remarkably to 184% in 2012 compared to 2011 (66%).
  3. Commercial: increased significantly from 90% in 2011 to 107% in 2012.
- Operational actual cost coverage: increased significantly by 48% on average and reached 121% in 2012 compared with 73% in 2011
- Non-Revenue Water: increased from 12% 2011 to 13% 2012.
- Continuity of water supply: Once a week

Amran

- Collection Efficiency
  1. Domestic collection: minor drop in collection but still remains more than 100% in 2011 and 2012.
  2. Governmental collection: increased hugely from 23% in 2011 to 285% in 2012.
  3. Commercial: increased significantly to 103% in 2012 compared to 80% 2011.
- Operational actual cost coverage: increased considerably in February and March 2012 to reach the average of 136% in 2012 compared to 87% in 2011.
- Non-Revenue Water: decreased to 16% in 2012 compared to 22% in 2011.
- Continuity of water supply: One time a week

Sa'dah (Data Available till September 2012)

- Collection Efficiency
  1. 1Domestic collection: remains the same average 71% in 2011 & 2012..
  2. Governmental collection: dropped from 23% 2011 to 10% in 2012.
  3. Commercial: slight decrease from 108% in 2011 to 105% in 2012.
- Operational actual cost coverage: decreased to 59% in 2012 and was 94% in 2011
- Non-Revenue Water: increased by 3% in 2012 from 33% in 2011 compared to 36% in 2012.
- Continuity of water supply: stayed at the same level of 17-20 hours per day

Al-Dalea

- Collection Efficiency
  1. Domestic collection: weak collection reaches 34% in 2012.
  2. Governmental collection: annual collection of 55% in 2012.
  3. Commercial collection: showed significant collection of about 233% in 2012.
- Operational actual cost coverage: disastrous average of collection 20% in 2012 for cost coverage.
- Non-Revenue Water: high rate of water loss about 44% in 2012.
- Continuity of water supply: 1-2 times in a month.

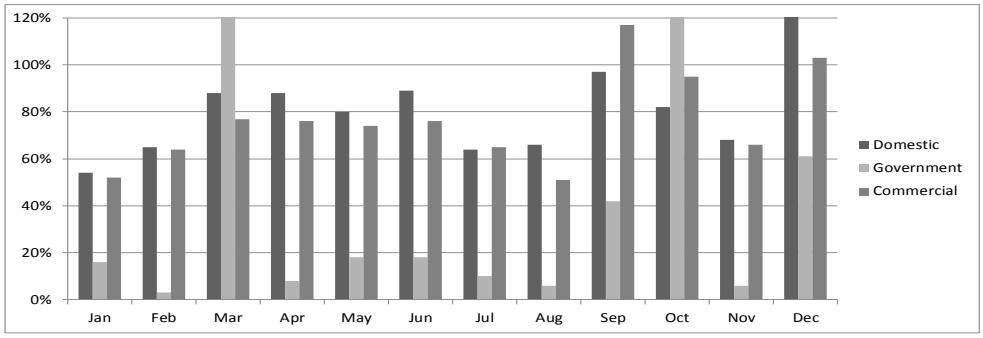
Yareem

- Collection Efficiency
  4. Domestic collection: improved to 98% in 2012.
  5. Governmental collection: low collection of 26% in 2012.
  6. Commercial: increased to 81% in 2012.
- Operational actual cost coverage: collection covers about 87% of cost in 2012.
- Non-Revenue Water: show good rate of water losses 19%.
- Continuity of water supply: varies between 2-3 times per month.

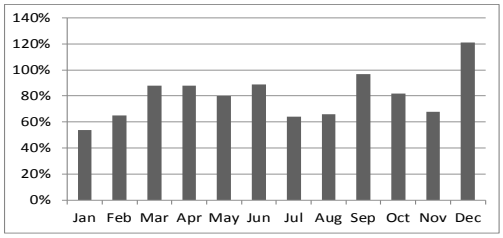
Annex 1 Chart of Indicators

Sana'a LC Jan-Dec 2012

1 Collection Efficiency for Domestic,Government & Commercial

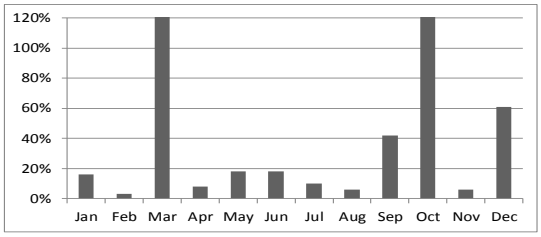


2 Collection Efficiency for Domestic



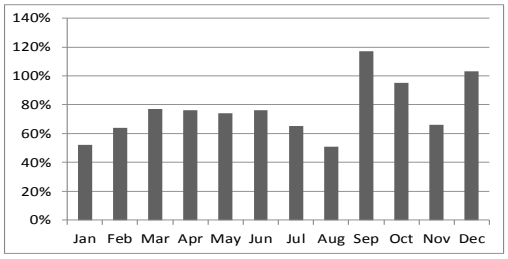
average 2011: 69%
average 2012: 81%

3 Collection Efficiency for Government



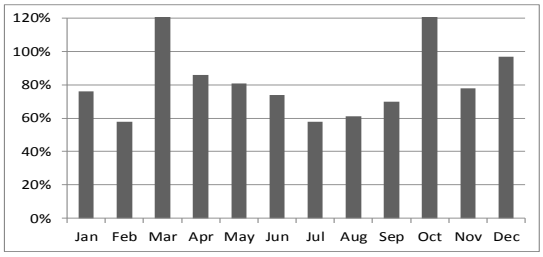
average 2011: 58%
average 2012: 89%

4 Collection Efficiency for Commercial



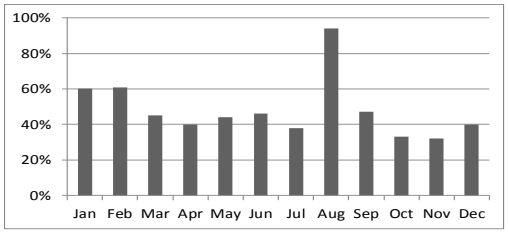
average 2011: 55%
average 2012: 77%

5 Operational Actual Cost Coverage



average 2011: 85%
average 2012: 93%

6 Non Revenue Water



average 2011: 32%
average 2012: 49%

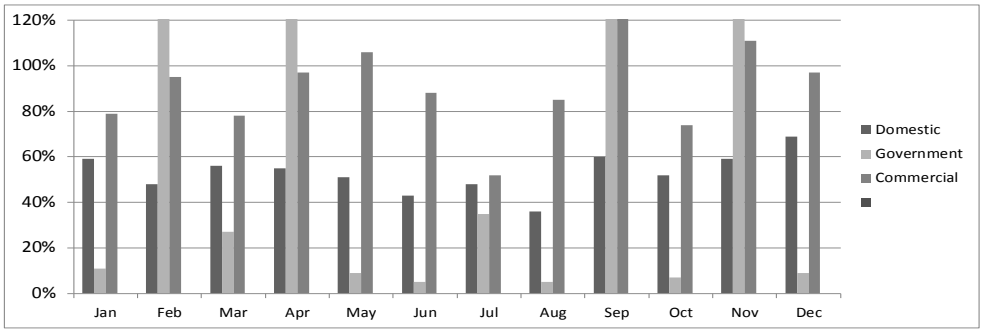
7 Continuity of Water Supply

Month	Daily	Weekly		Monthly	
	Hours/Day	Hours/Day	Day/Week	Hours/Day	Day/Month
Jan				5	3
Feb				5	3
Mar				5	4
Apr				5	4
May				5	3
Jun				5	4
Jul				5	3
Aug				5	3
Sep				5	3
Oct				6	4
Nov				6	4
Dec				6	4

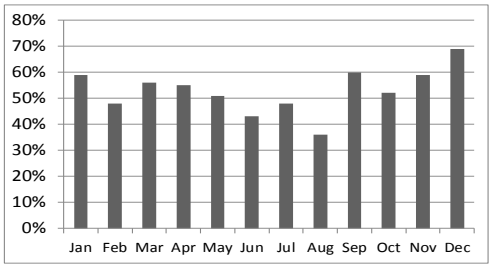
Comment :

Aden Jan-Dec 2012

1 Collection Efficiency for Domestic,Government & Commercial

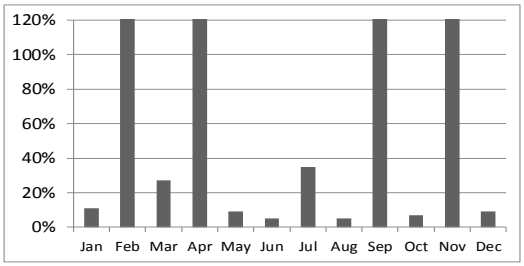


2 Collection Efficiency for Domestic



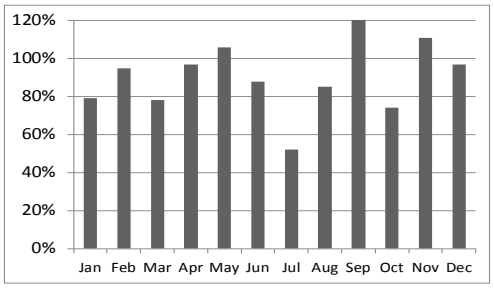
average 2011 51%
average 2012 53%

3 Collection Efficiency for Government



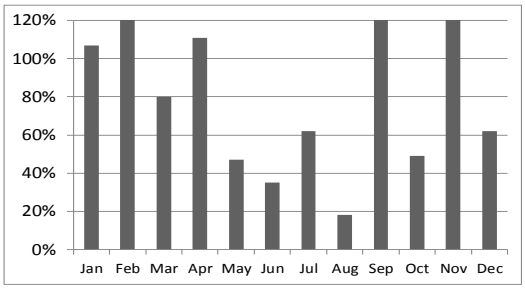
average 2011:28% 26%
average 2012: 62% 194%

4 Collection Efficiency for Commercial



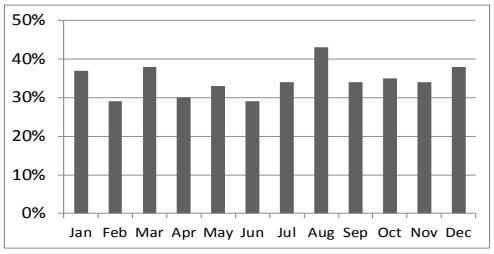
average 2011 83%
average 2012 93%

5 Operational Actual Cost Coverage



average 2011:71% 62%
average 2012:87% 124%

6 Non Revenue Water



average 2011 33%
average 2012 35%

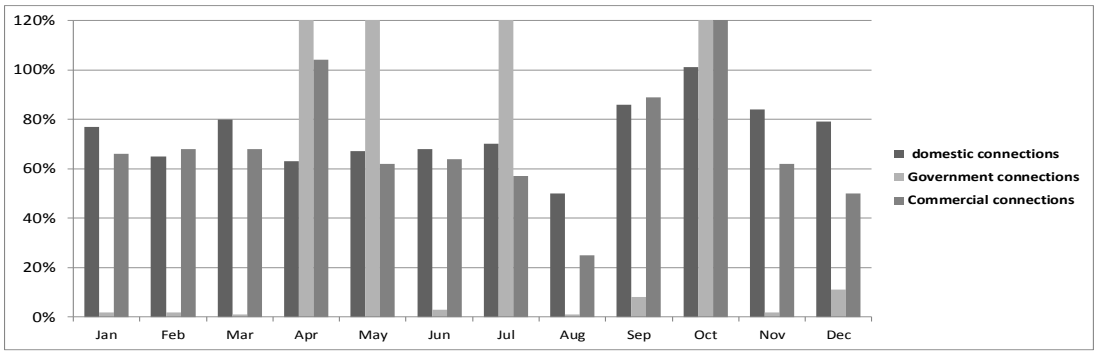
7 Continuity of Water Supply

Month	Daily	Weekly		Monthly	
	Hours/Day	Hours/Day	Day/Week	Hours/Day	Day/Month
Jan	14-16				
Feb	14-16				
Mar	14-16				
Apr	14-16				
May	8 -- 10				
Jun	5 -- 8				
Jul	14-17				
Aug	16-19				
Sep	16-20				
Oct	16-20				
Nov	17-20				
Dec	17-21				

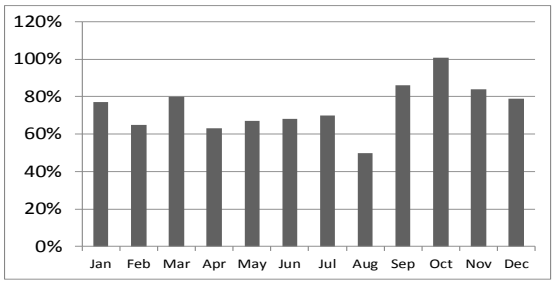
Comment

Taiz Jan-Dec 2012

1 Collection Efficiency for Domestic,Government & Commercial

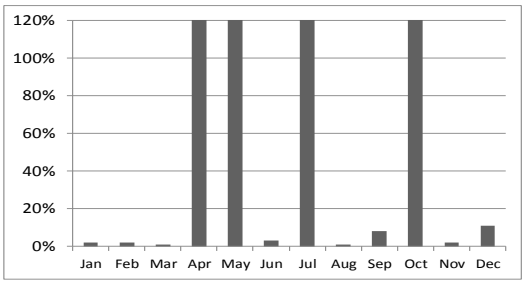


2 Collection Efficiency for Domestic



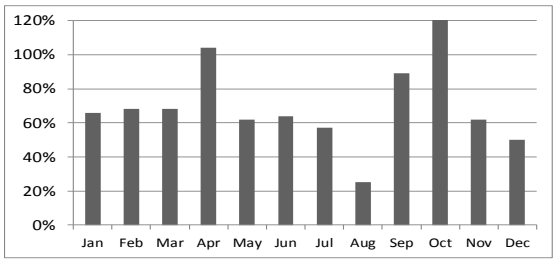
average 2011: 73%
average 2012: 75%

3 Collection Efficiency for Government



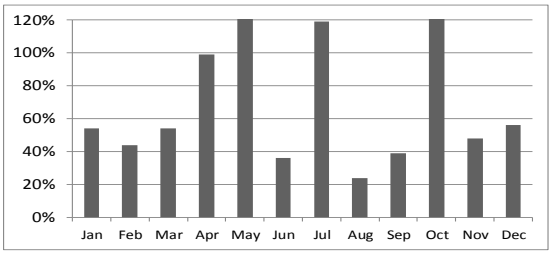
average 2011: 87%
average 2012: 151%

4 Collection Efficiency for Commercial



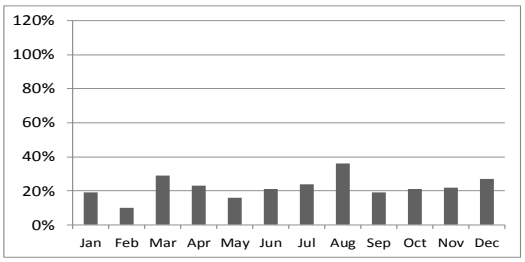
average 2011: 67%
average 2012: 123%

5 Operational Actual Cost Coverage



average 2011: 85%
average 2012: 102%

6 Non Revenue Water



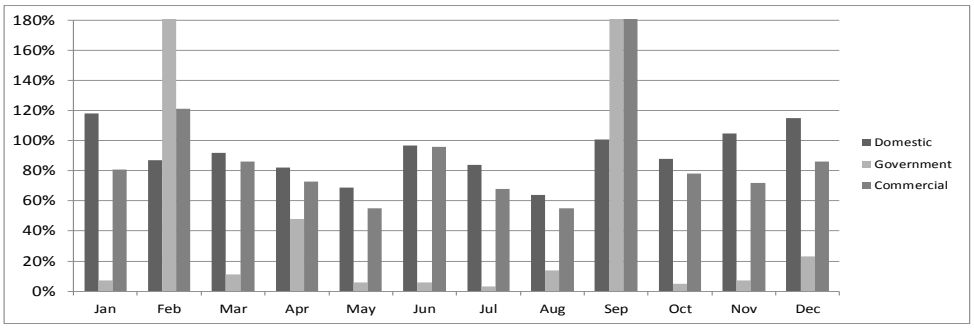
average 2011: 21%
average 2012: 23%

7 Continuity of Water Supply

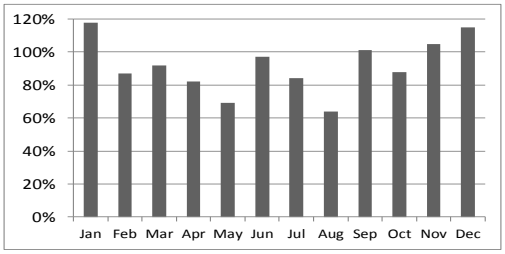
Month	Monthly		Two Months	
	Hours/Day	Day/Month	Hours/Time	Time/Two months
Jan			75	1
Feb			75	1
Mar			80	1
Apr			80	1
May	90	1		
Jun	90	1		
Jul	72	1		
Aug				1
Sep				1
Oct			24	4--5
Nov			24	4--5
Dec			24	4--5

Mukala Jan-Dec 2012

1 Collection Efficiency for Domestic,Government & Commercial

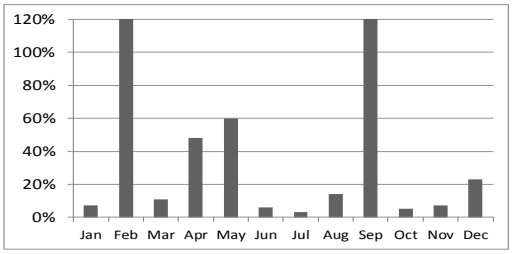


2 Collection Efficiency for Domestic



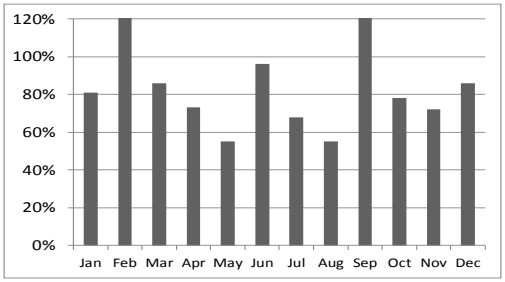
average 2011: 87%
average 2012: 92%

3 Collection Efficiency for Government



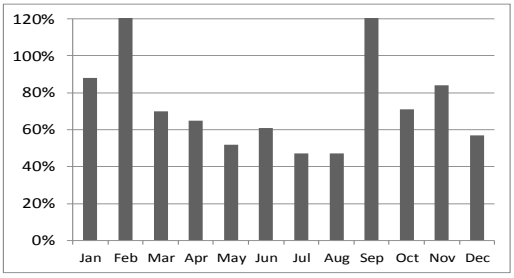
average 2011: 70%
average 2012: 123%

4 Collection Efficiency for Commercial



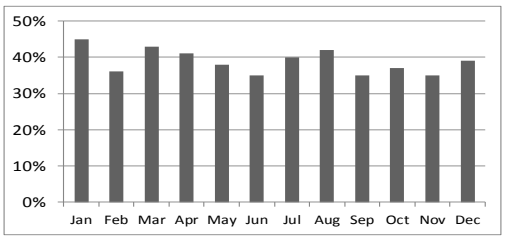
average 2011: 87%
average 2012: 91%

5 Operational Actual Cost Coverage



average 2011: 103%
average 2012: 116%

6 Non Revenue Water



average 2011: 35%
average 2012: 39%

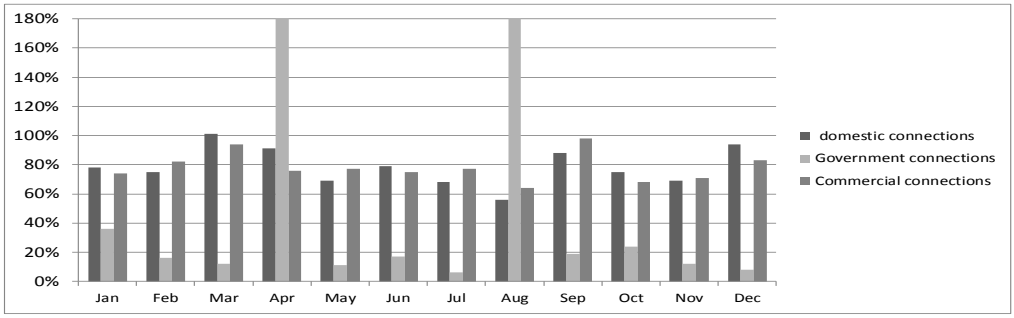
7 Continuity of Water Supply

Month	Daily	Weekly		Monthly	
	Hours/Day	Hours/Day	Day/Week	Hours/Day	Day/Month
Jan	12				
Feb	12				
Mar	12				
Apr	8				
May	8				
Jun	8				
Jul	8				
Aug	8				
Sep	8				
Oct	12				
Nov	12				
Dec	12				

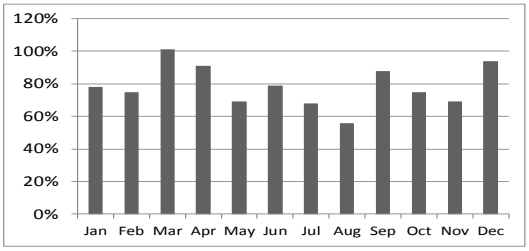
Comment

Hodeidah Jan-Dec 2012

1 Collection Efficiency for Domestic,Government & Commercial

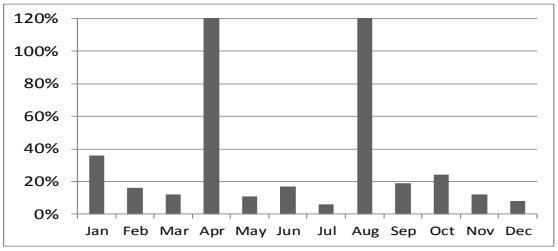


2 Collection Efficiency for Domestic



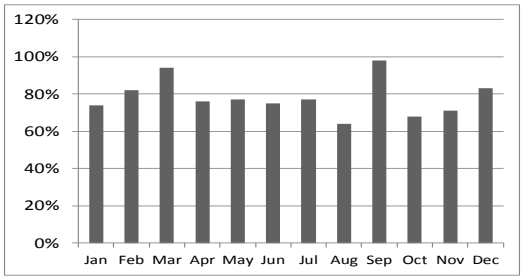
average 2011: 68%
average 2012: 79%

3 Collection Efficiency for Government



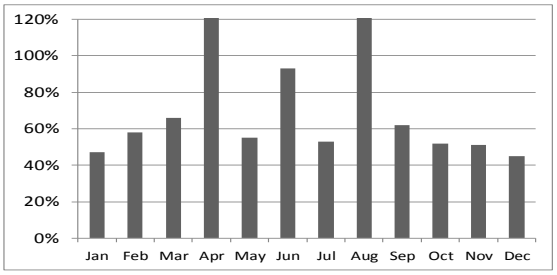
average 2011: 14%
average 2012: 249%

4 Collection Efficiency for Commercial



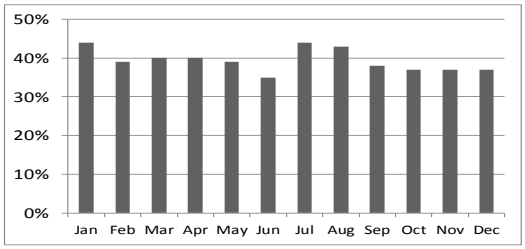
average 2011:76%
average 2012:78%

5 Operational Actual Cost Coverage



average 2011: 51%
average 2012: 140%

6 Non Revenue Water



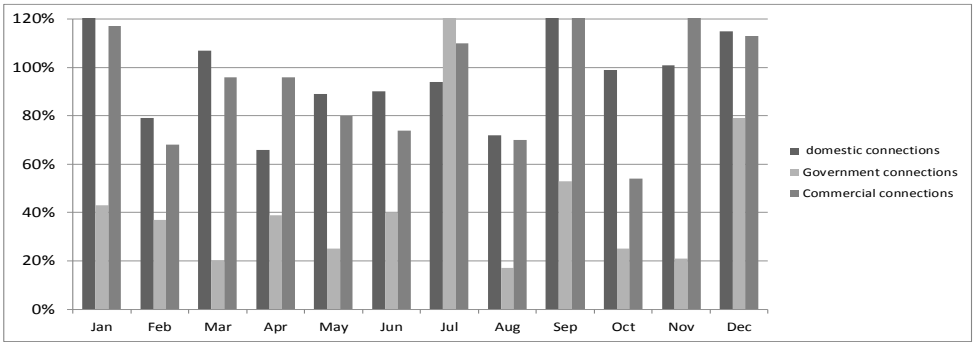
average 2011: 44%
average 2012: 40%

7 Continuity of Water Supply

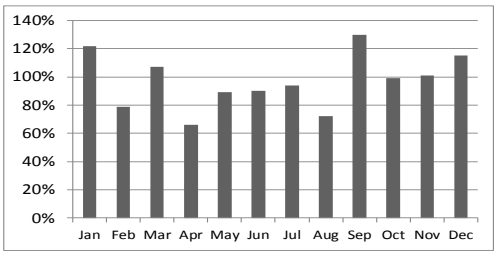
Month	Daily	Weekly		Monthly	
	Hours/Day	Hours/Day	Day/Week	Hours/Day	Day/Month
Jan	24				
Feb	24				
Mar	24				
Apr	24				
May	24				
Jun	24				
Jul	24				
Aug	24				
Sep	24				
Oct	24				
Nov	24				
Dec	24				

Mocha Jan-Dec 2012

1 Collection Efficiency for Domestic,Government & Commercial

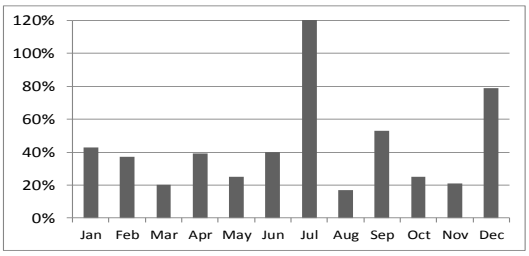


2 Collection Efficiency for Domestic



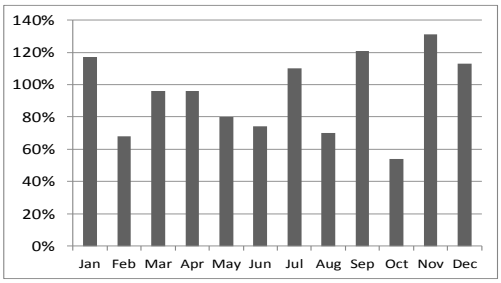
average 2011: 105%
average 2012: 96%

3 Collection Efficiency for Government



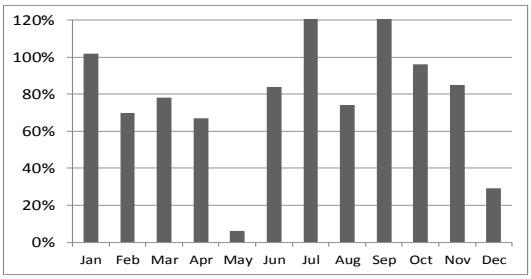
average 2011: 37%
average 2012: 172%

4 Collection Efficiency for Commercial



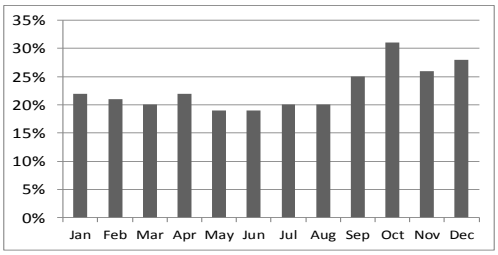
average 2011: 98%
average 2012: 93%

5 Operational Actual Cost Coverage



average 2011: 78%
average 2012: 109%

6 Non Revenue Water



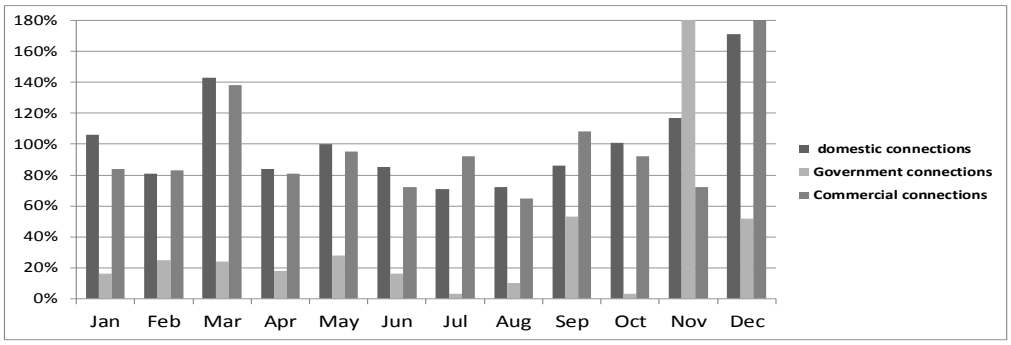
average 2011: 23%
average 2012: 23%

7 Continuity of Water Supply

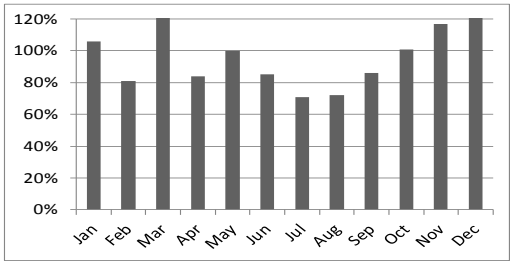
Month	Daily	Weekly		Monthly	
	Hours/Day	Hours/Day	Day/Week	Hours/Day	Day/Month
Jan	24				
Feb	24				
Mar	24				
Apr	24				
May	24				
Jun	24				
Jul	24				
Aug	24				
Sep	24				
Oct	24				
Nov	24				
Dec	24				

Zabid Jan-Dec 2012

1 Collection Efficiency for Domestic,Government & Commercial

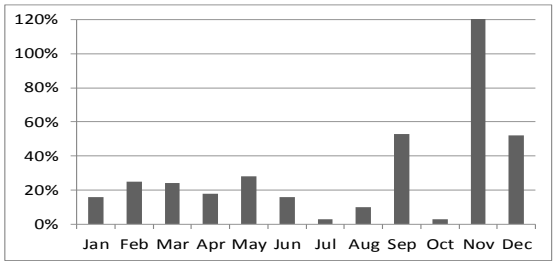


2 Collection Efficiency for Domestic



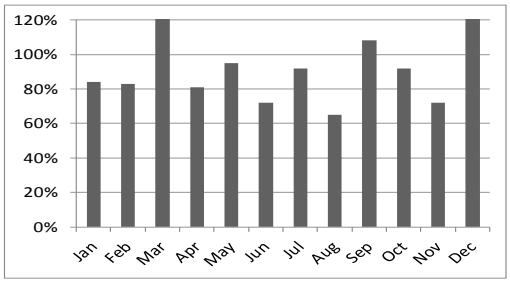
average 2011: 100%
average 2012: 100%

3 Collection Efficiency for Government



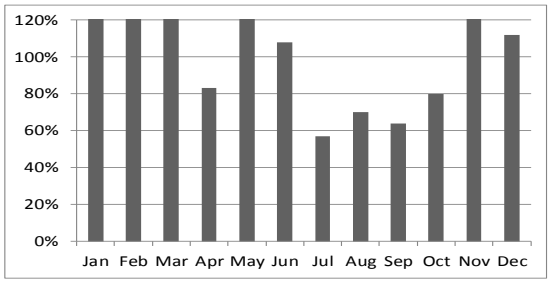
average 2011: 32%
average 2012: 225%

4 Collection Efficiency for Commercial



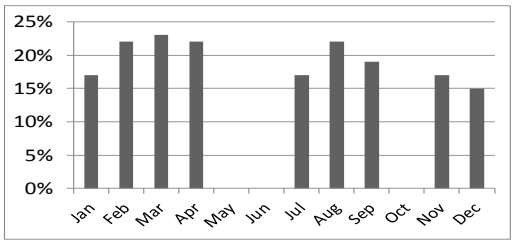
average 2011: 96%
average 2012: 96%

5 Operational Actual Cost Coverage



average 2011: 85%
average 2012: 114%

6 Non Revenue Water



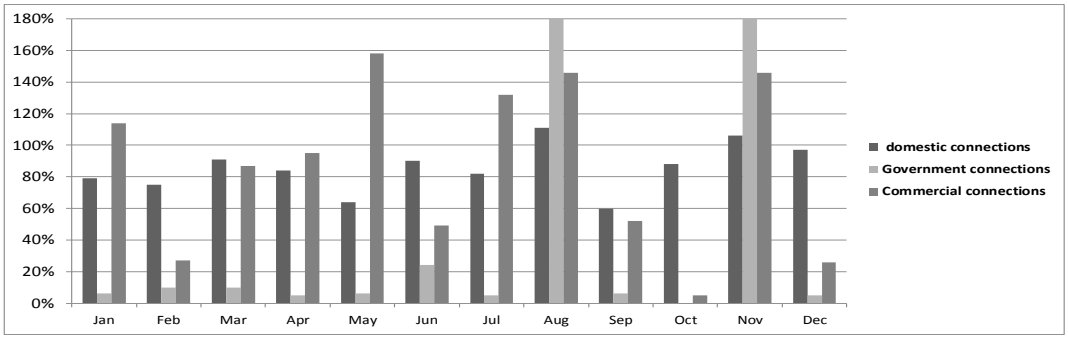
average 2011: 19%
average 2012: 19%

7 Continuity of Water Supply

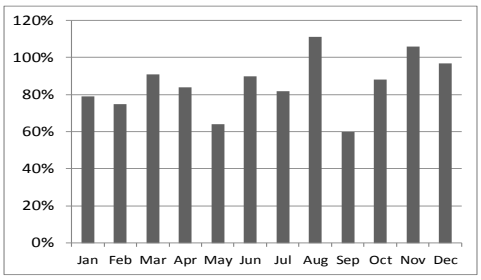
Month	Daily	Weekly		Monthly	
	Hours/Day	Hours/Day	Day/Week	Hours/Day	Day/Month
Jan	24				
Feb	24				
Mar	24				
Apr	24				
May	24				
Jun	24				
Jul	6				
Aug	6				
Sep	6				
Oct	8				
Nov	8				
Dec	8				

Al-Mahweet Jan-Dec 2012

1 Collection Efficiency for Domestic,Government & Commercial

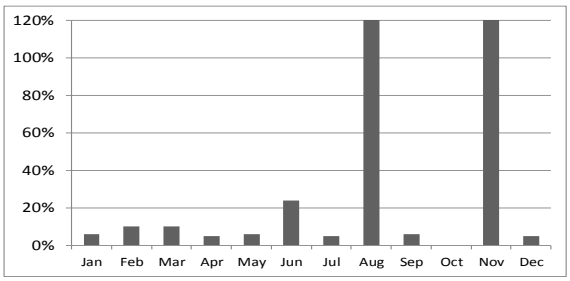


2 Collection Efficiency for Domestic



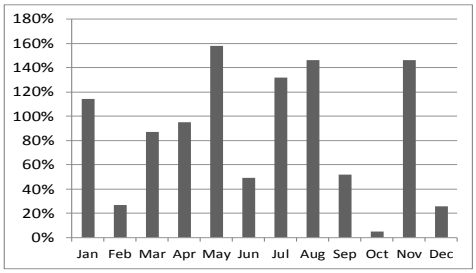
average 2011: 77%
average 2012: 86%

3 Collection Efficiency for Government



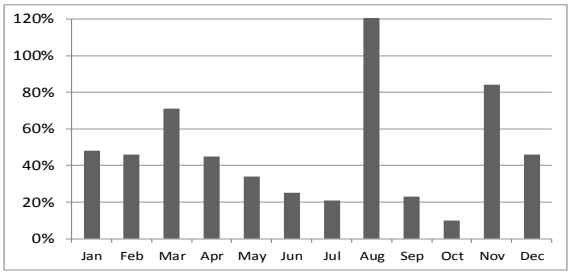
average 2011: 42%
average 2012: 241%

4 Collection Efficiency for Commercial



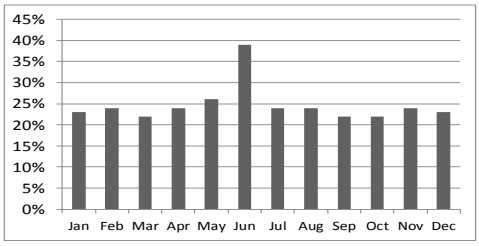
average 2011: 58%
average 2012: 86%

5 Operational Actual Cost Coverage



average 2011: 54%
average 2012: 80%

6 Non Revenue Water



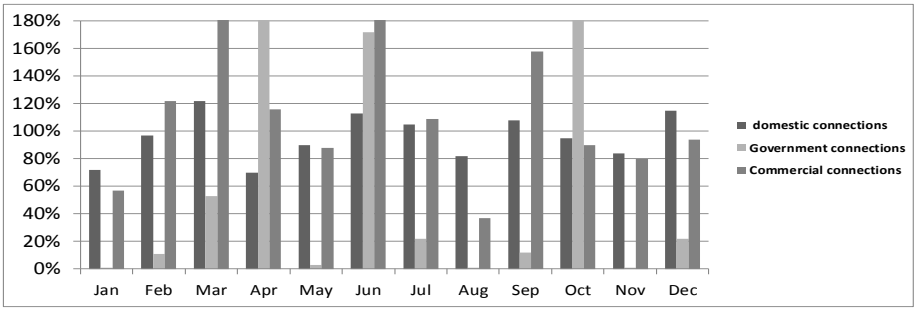
average 2011: 23%
average 2012: 25%

7 Continuity of Water Supply

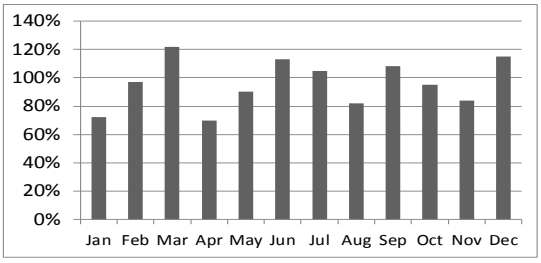
Month	Daily	Weekly		Monthly	
	Hours/Day	Hours/Day	Day/Week	Hours/Day	Day/Month
Jan				24	1
Feb				24	1
Mar				24	1
Apr				24	1
May				24	1
Jun				24	1
Jul				24	1
Aug				24	1
Sep				24	1
Oct				24	1
Nov				24	1
Dec				24	1

Hajjah Jan-Dec 2012

1 Collection Efficiency for Domestic,Government & Commercial

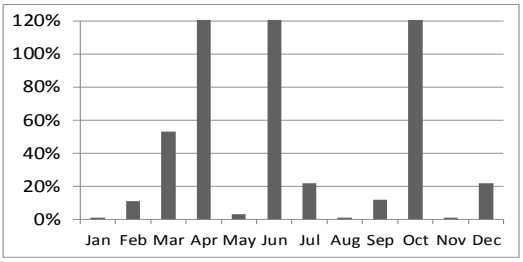


2 Collection Efficiency for Domestic



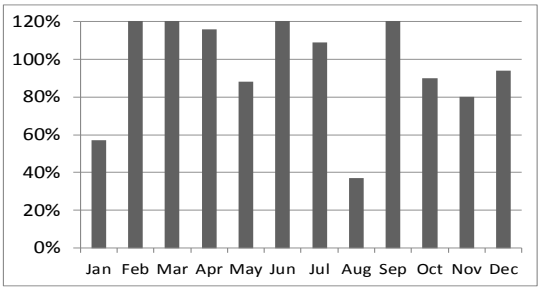
average 2011: 77%
average 2012: 96%

3 Collection Efficiency for Government



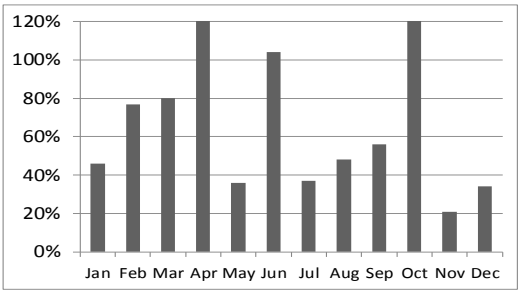
average 2011: 66%
average 2012: 184%

4 Collection Efficiency for Commercial



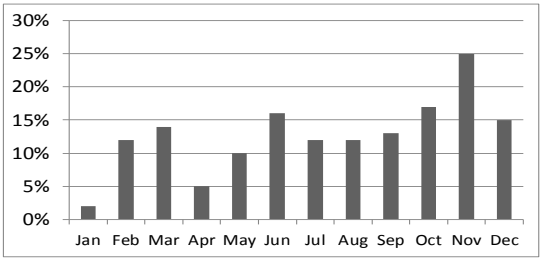
average 2011: 90%
average 2012: 107%

5 Operational Actual Cost Coverage



average 2011: 73%
average 2012: 121%

6 Non Revenue Water



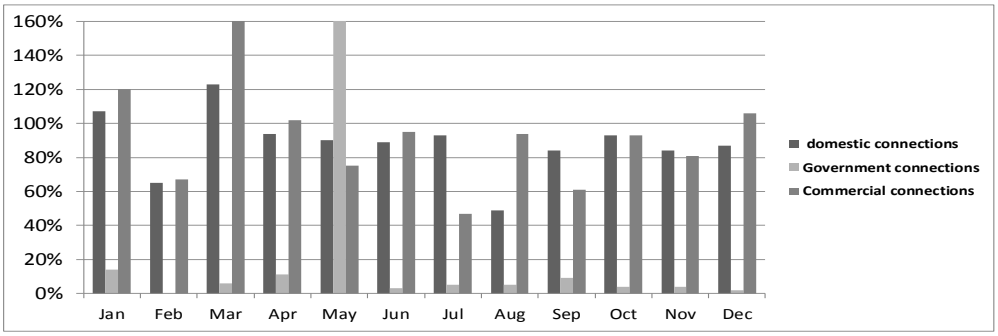
average 2011: 12%
average 2012: 13%

7 Continuity of Water Supply

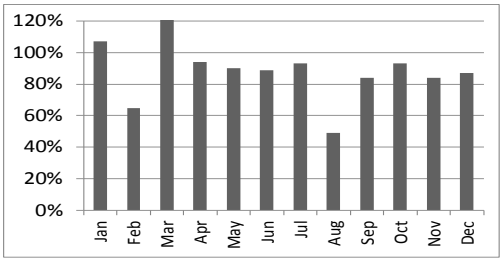
Month	Daily	Weekly		Monthly	
	Hours/Day	Hours/Day	Day/Week	Hours/Day	Day/Month
Jan				12	2
Feb				12	2
Mar		18	1		
Apr		18	1		
May		18	1		
Jun		18	1		
Jul		24 _ 10	1		
Aug		24 _ 10	1		
Sep		24 _ 10	1		
Oct		24 _ 10	1		
Nov		24 _ 10	1		
Dec		24 _ 10	1		

Bajil Jan-Dec 2012

1 Collection Efficiency for Domestic,Government & Commercial

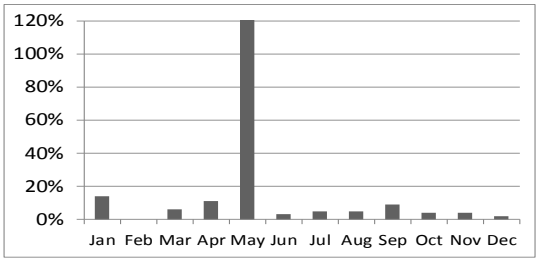


2 Collection Efficiency for Domestic



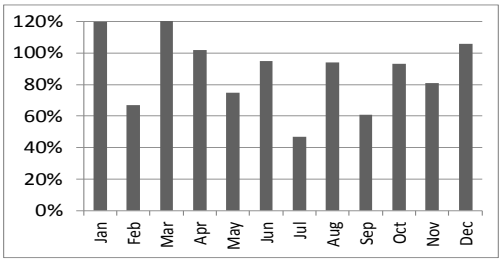
average 2011: 81%
average 2012: 87%

3 Collection Efficiency for Government



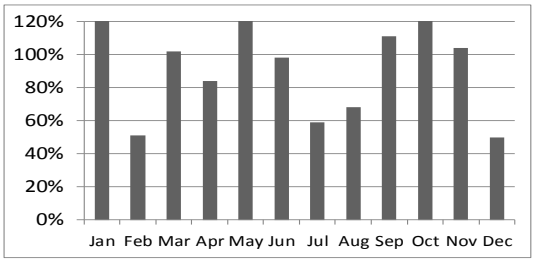
average 2011: 100%
average 2012: 292%

4 Collection Efficiency for Commercial



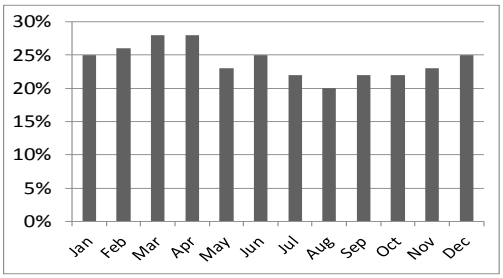
average 2011: 84%
average 2012: 87%

5 Operational Actual Cost Coverage



average 2011: 73%
average 2012: 104%

6 Non Revenue Water



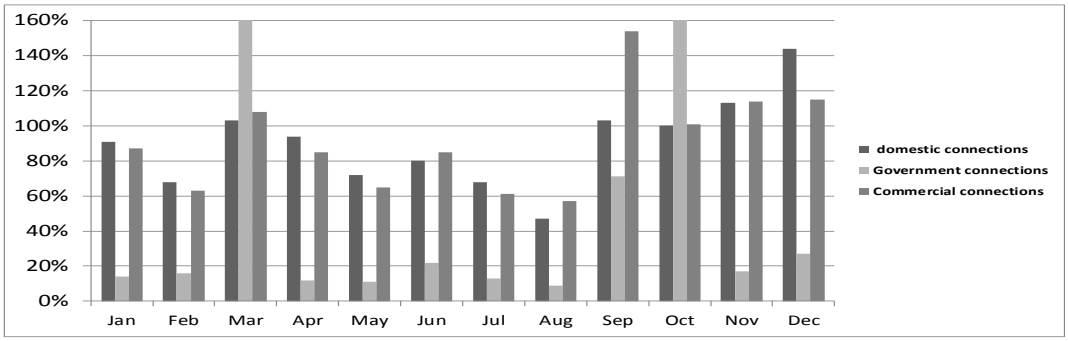
average 2011: 23%
average 2012: 24%

7 Continuity of Water Supply

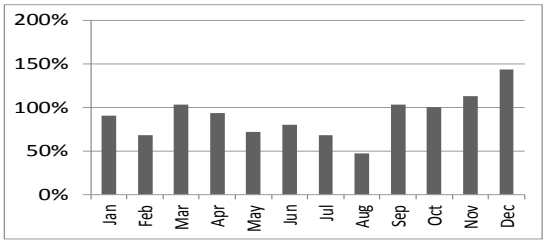
Month	Daily	Weekly		Monthly	
	Hours/Day	Hours/Day	Day/Week	Hours/Day	Day/Month
Jan		24	1		
Feb		24	1		
Mar		24	1		
Apr		24	1		
May		24	1		
Jun		24	1		
Jul		24	1		
Aug		24	1		
Sep		24	1		
Oct		24	1		
Nov		24	1		
Dec		24	1		

Seyoun Jan-Dec 2012

1 Collection Efficiency for Domestic,Government & Commercial

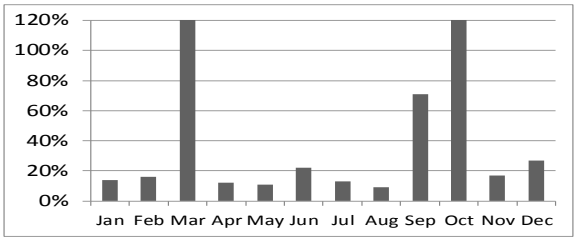


2 Collection Efficiency for Domestic



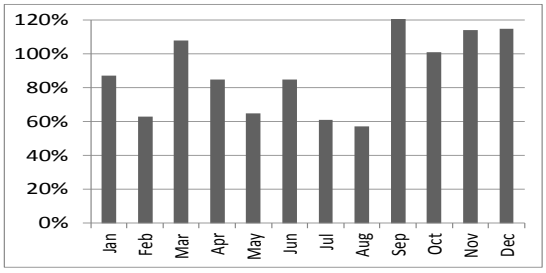
average 2011: 79%
average 2012: 88%

3 Collection Efficiency for Government



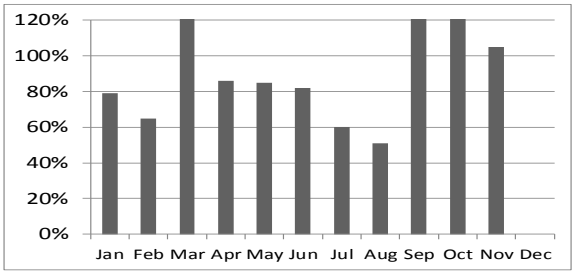
average 2011: 56%
average 2012: 167%

4 Collection Efficiency for Commercial



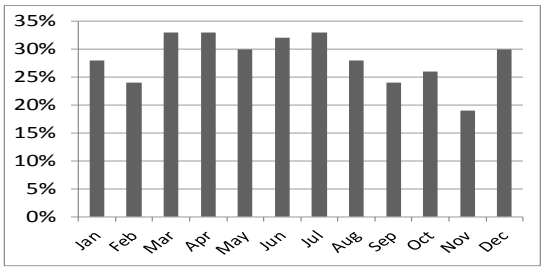
average 2011: 76%
average 2012: 90%

5 Operational Actual Cost Coverage



average 2011: 81%
average 2012: 106%

6 Non Revenue Water



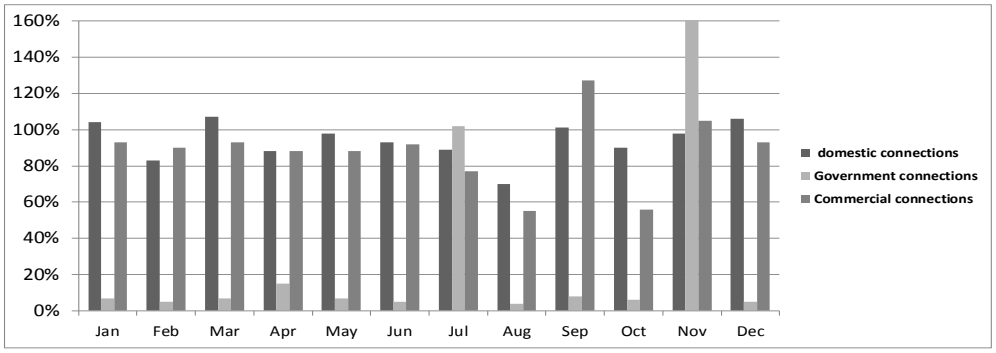
average 2011: 29%
average 2012: 29%

7 Continuity of Water Supply

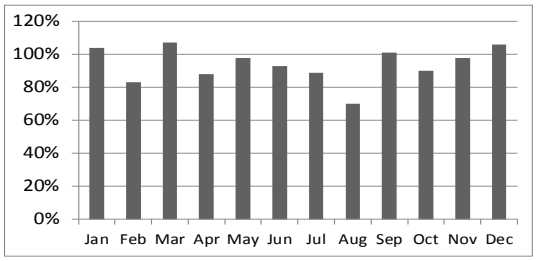
Month	Daily	Weekly		Monthly	
	Hours/Day	Hours/Day	Day/Week	Hours/Day	Day/Month
Jan	24				
Feb	24				
Mar	24				
Apr	24				
May	24				
Jun	24				
Jul	24				
Aug	24				
Sep	24				
Oct	24				
Nov	24				
Dec	24				

IBB Jan-Dec 2012

1 Collection Efficiency for Domestic,Government & Commercial

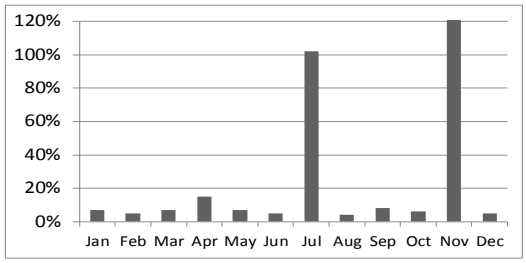


2 Collection Efficiency for Domestic



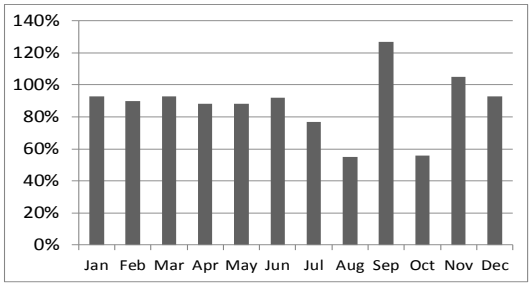
average 2011: 86%
average 2012: 94%

3 Collection Efficiency for Government



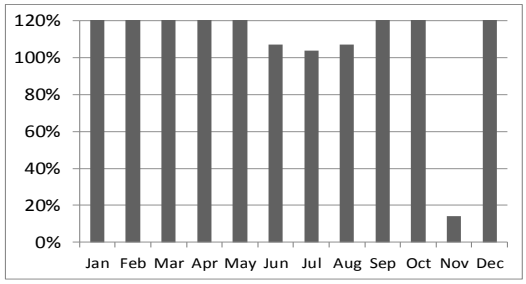
average 2011: 49%
average 2012: 134%

4 Collection Efficiency for Commercial



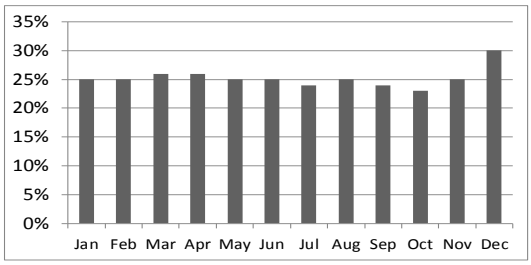
average 2011: 79%
average 2012: 88%

5 Operational Actual Cost Coverage



average 2011: 123%
average 2012: 152%

6 Non Revenue Water



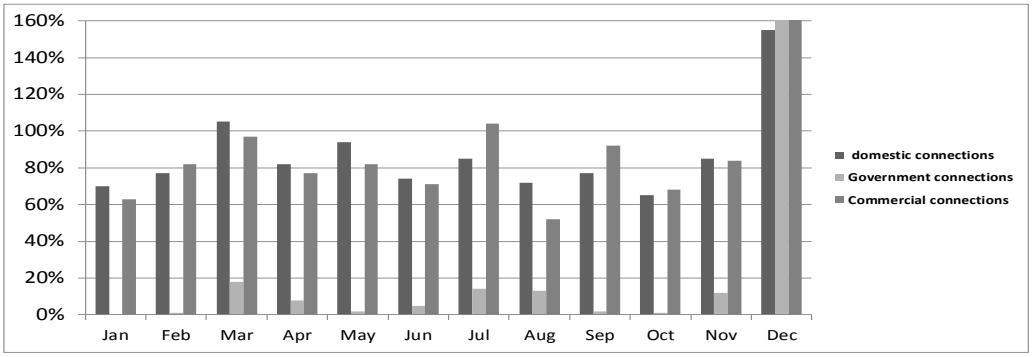
average 2011: 23%
average 2012: 25%

7 Continuity of Water Supply

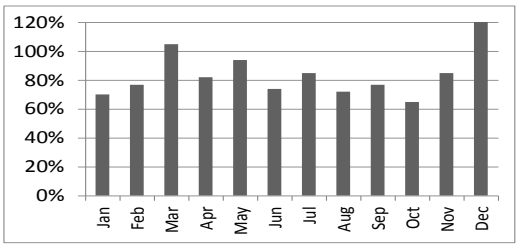
Month	Daily	Weekly		Monthly	
	Hours/Day	Hours/Day	Day/Week	Hours/Day	Day/Month
Jan		24	2		
Feb		24	2		
Mar		24	2		
Apr		24	2		
May		24	2		
Jun		24	2		
Jul		24	2		
Aug		24	2		
Sep		24	2		
Oct		24	2		
Nov		24	2		
Dec		24	2		

Rada'a Jan-Dec 2012

1 Collection Efficiency for Domestic,Government & Commercial

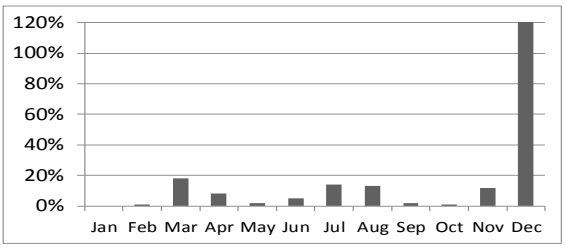


2 Collection Efficiency for Domestic



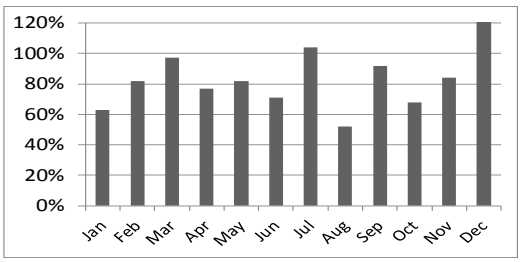
average 2011: 82%
average 2012: 85%

3 Collection Efficiency for Government



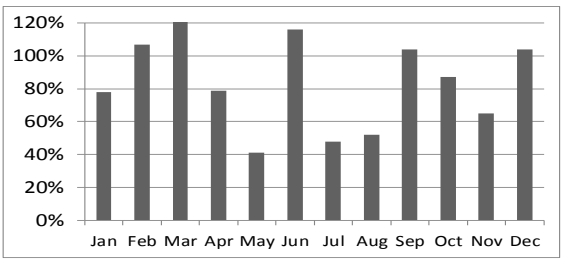
average 2011: 8%
average 2012: 106%

4 Collection Efficiency for Commercial



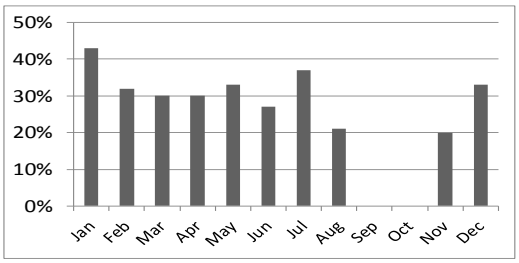
average 2011: 89%
average 2012: 88%

5 Operational Actual Cost Coverage



average 2011: 82%
average 2012: 81%

6 Non Revenue Water



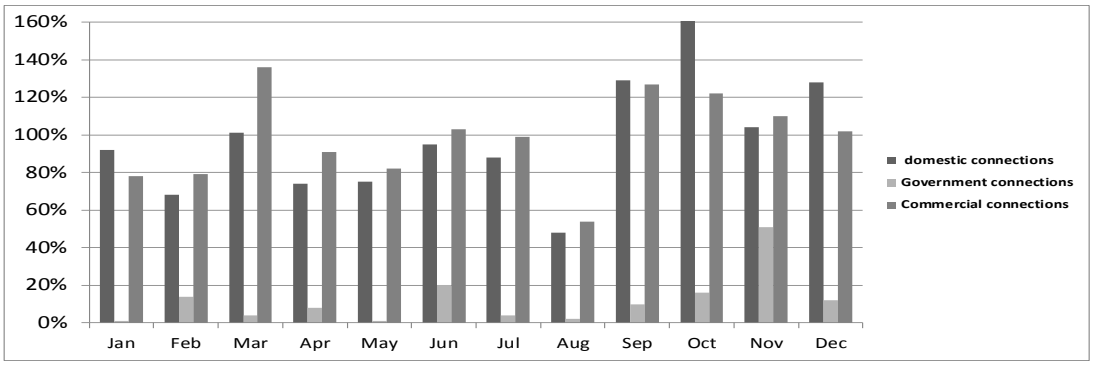
average 2011: 22%
average 2012: 31%

7 Continuity of Water Supply

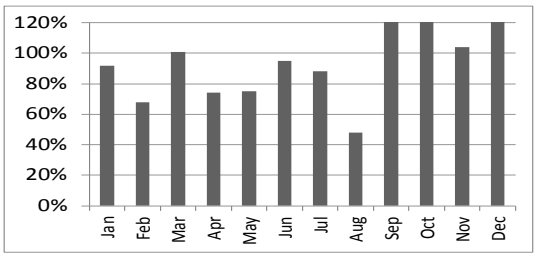
Month	Daily	Weekly		Monthly	
	Hours/Day	Hours/Day	Day/Week	Hours/Day	Day/Month
Jan		24	4		
Feb		24	4		
Mar		24	4		
Apr		24	4		
May		24	1		
Jun		24	1		
Jul		24	1		
Aug		24	1		
Sep		24	1		
Oct		24	1		
Nov		24	1		
Dec		24	1		

Bait Alfaqih Jan-Dec 2012

1 Collection Efficiency for Domestic,Government & Commercial

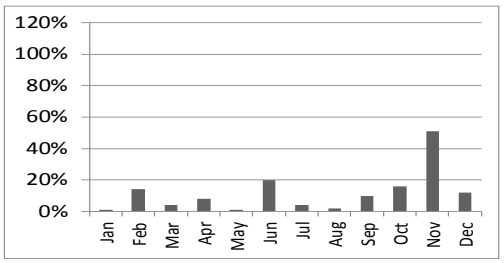


2 Collection Efficiency for Domestic



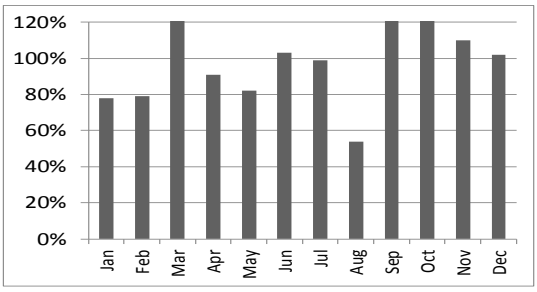
average 2011: 81%
average 2012: 97%

3 Collection Efficiency for Government



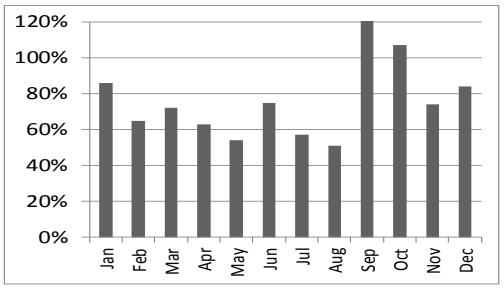
average 2011:100%
average 2012 12%

4 Collection Efficiency for Commercial



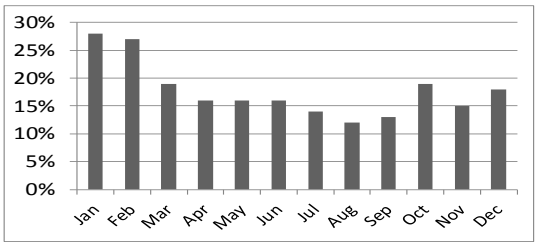
average 2011: 93%
average 2012: 98%

5 Operational Actual Cost Coverage



average 2011: 90%
average 2012 76%

6 Non Revenue Water



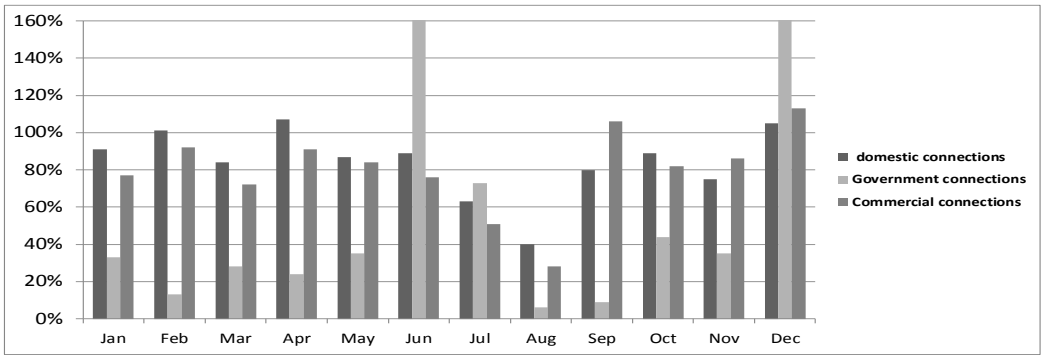
average 2011: 22%
average 2012: 18%

7 Continuity of Water Supply

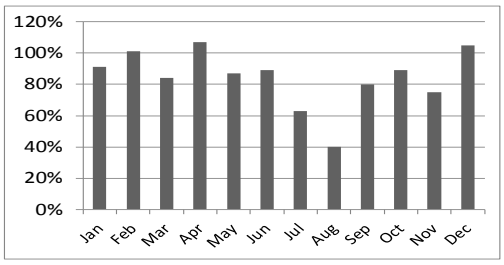
Month	Daily	Weekly		Monthly	
	Hours/Day	Hours/Day	Day/Week	Hours/Day	Day/Month
Jan	15				
Feb	15				
Mar	15				
Apr	15				
May	15				
Jun	15				
Jul	14				
Aug	14.3				
Sep	13.7				
Oct	14				
Nov	13				
Dec	13				

Dhamar Jan-Dec 2012

1 Collection Efficiency for Domestic,Government & Commercial

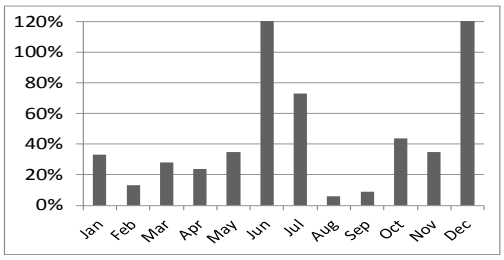


2 Collection Efficiency for Domestic



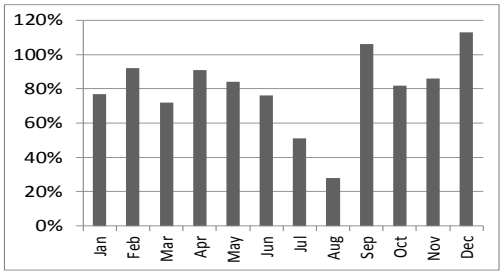
average 2011: 82%
average 2012: 84%

3 Collection Efficiency for Government



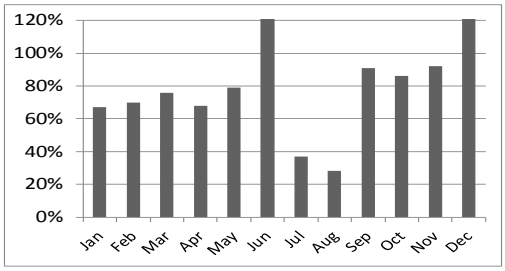
average 2011: 41%
average 2012: 214%

4 Collection Efficiency for Commercial



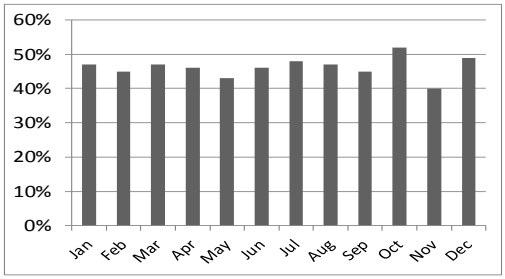
average 2011: 81%
average 2012: 80%

5 Operational Actual Cost Coverage



average 2011: 67%
average 2012: 101%

6 Non Revenue Water



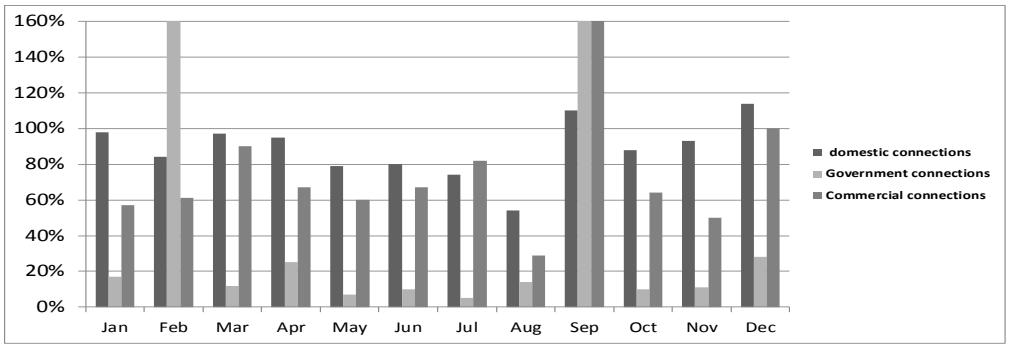
average 2011: 48%
average 2012: 46%

7 Continuity of Water Supply

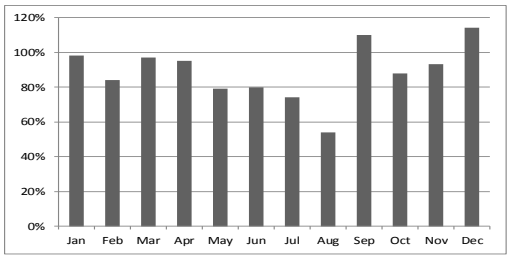
Month	Daily	Weekly		Monthly	
	Hours/Day	Hours/Day	Day/Week	Hours/Day	Day/Month
Jan	16 -24				
Feb	16 -24				
Mar	16 -24				
Apr	16 -24				
May	20 -24				
Jun	20 -24				
Jul	20-24				
Aug	20-24				
Sep	20-24				
Oct	24				
Nov	24				
Dec	24				

AlSheher Jan-Dec 2012

1 Collection Efficiency for Domestic,Government & Commercial

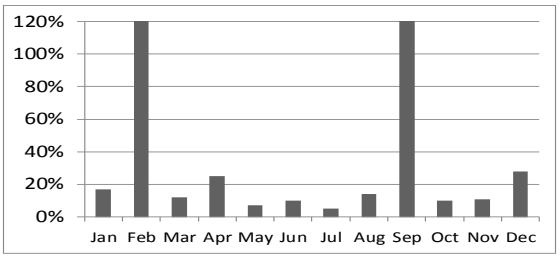


2 Collection Efficiency for Domestic



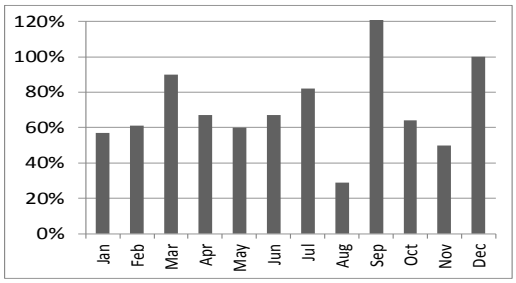
average 2011: 90%
average 2012: 89%

3 Collection Efficiency for Government



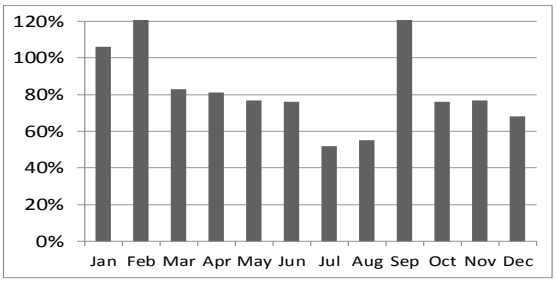
average 2011: 52%
average 2012: 131%

4 Collection Efficiency for Commercial



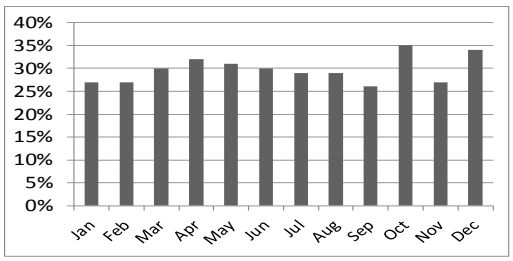
average 2011: 75%
average 2012: 82%

5 Operational Actual Cost Coverage



average 2011: 87%
average 2012: 98%

6 Non Revenue Water



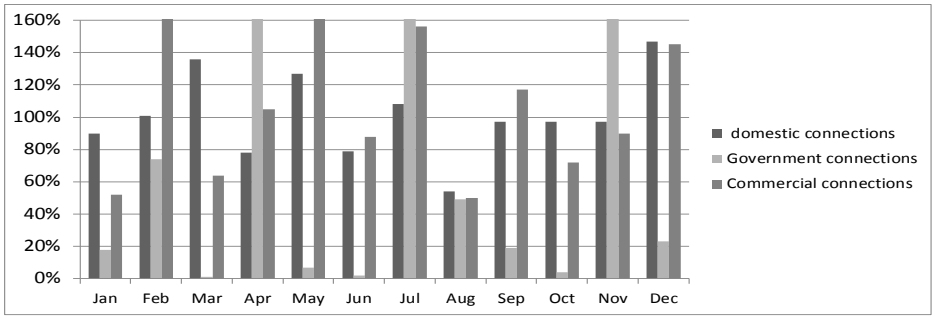
average 2011: 26%
average 2012: 30%

7 Continuity of Water Supply

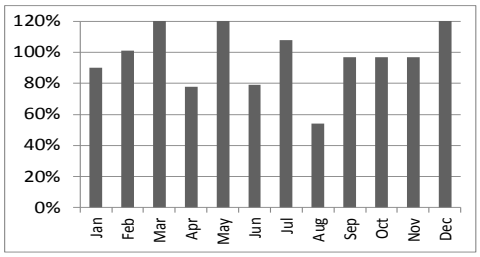
Month	Daily	Weekly		Monthly	
	Hours/Day	Hours/Day	Day/Week	Hours/Day	Day/Month
Jan	24				
Feb	24				
Mar	24				
Apr	18				
May	18				
Jun	18				
Jul	18				
Aug	18				
Sep	18				
Oct	24				
Nov	24				
Dec	24				

Amran Jan-Dec 2012

1 Collection Efficiency for Domestic,Government & Commercial

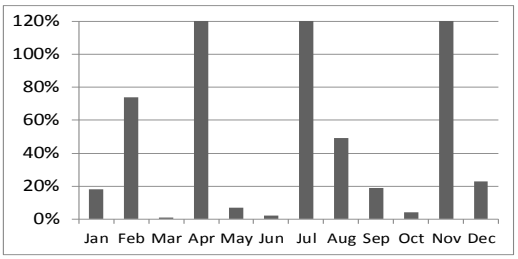


2 Collection Efficiency for Domestic



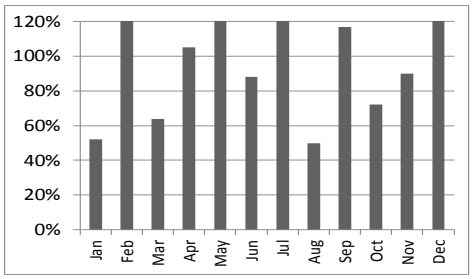
average 2011: 100%
average 2012: 101%

3 Collection Efficiency for Government



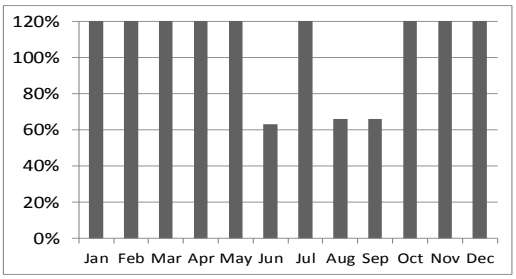
average 2011: 23%
average 2012: 285%

4 Collection Efficiency for Commercial



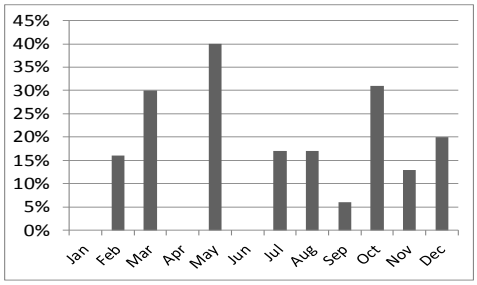
average 2011: 80%
average 2012: 103%

5 Operational Actual Cost Coverage



average 2011: 87%
average 2012: 136%

6 Non Revenue Water



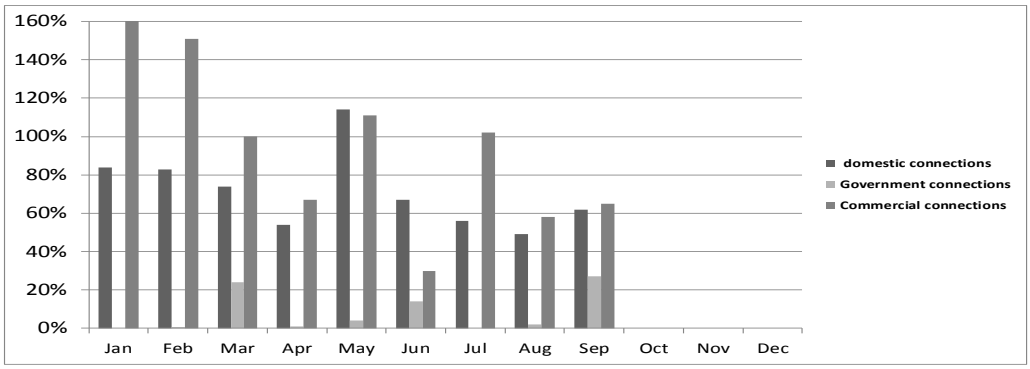
average 2011: 22%
average 2012: 16%

7 Continuity of Water Supply

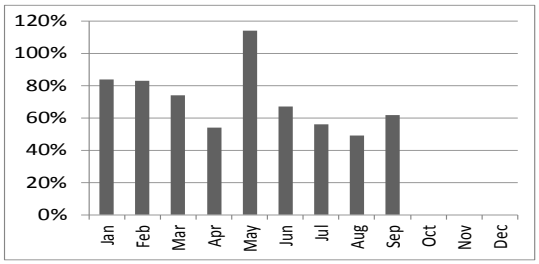
Month	Daily	Weekly		Monthly	
	Hours/Day	Hours/Day	Day/Week	Hours/Day	Day/Month
Jan					
Feb					
Mar					
Apr					
May					
Jun					
Jul					
Aug					
Sep					
Oct					
Nov					
Dec					

Sa'adah Jan-Sept 2012

1 Collection Efficiency for Domestic,Government & Commercial

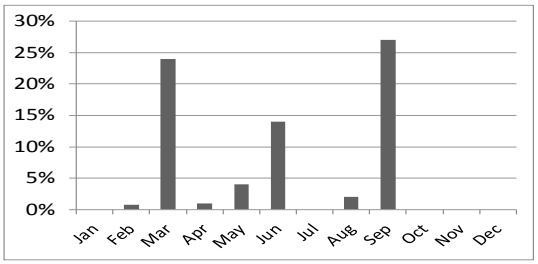


2 Collection Efficiency for Domestic



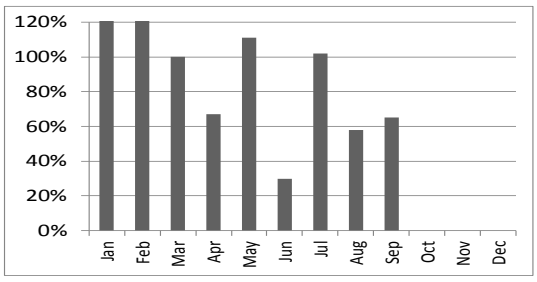
average 2010: 71%
average 2011: 71%

3 Collection Efficiency for Government



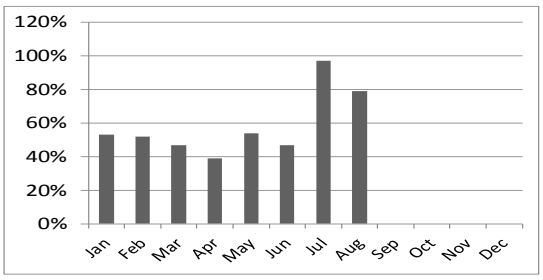
average 2010: 23%
average 2011: 10%

4 Collection Efficiency for Commercial



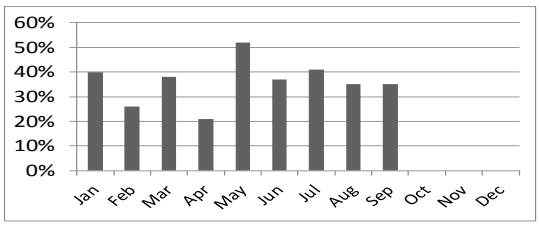
average 2010: 108%
average 2011: 105%

5 Operational Actual Cost Coverage



average 2010: 94%
average 2011: 59%

6 Non Revenue Water



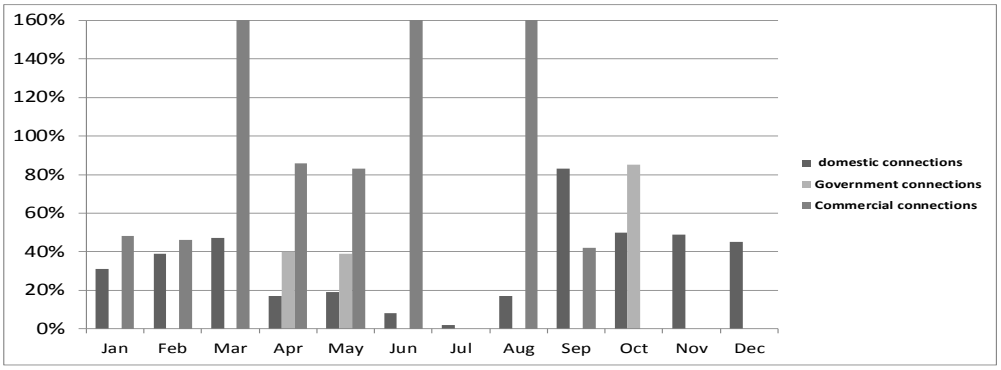
average 2010: 33%
average 2011: 36%

7 Continuity of Water Supply

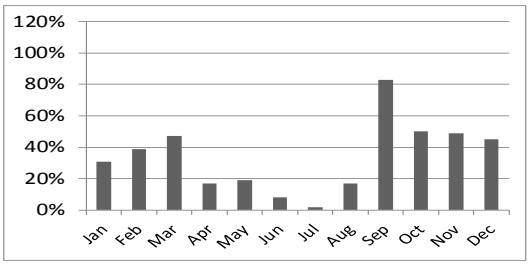
Month	Daily	Weekly		Monthly	
	Hours/Day	Hours/Day	Day/Week	Hours/Day	Day/Month
Jan	20				
Feb	20				
Mar	19				
Apr	19				
May	17				
Jun	20				
Jul	20				
Aug	19				
Sep	20				
Oct					
Nov					
Dec					

Al-Dalea Jan-Dec 2012

1 Collection Efficiency for Domestic,Government & Commercial

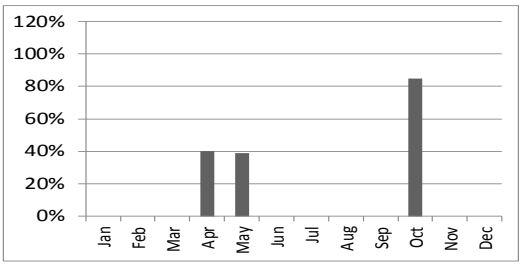


2 Collection Efficiency for Domestic



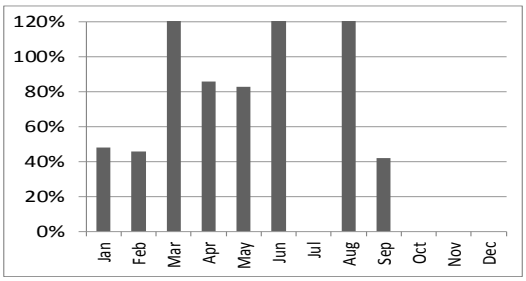
average 2012: 34%

3 Collection Efficiency for Government



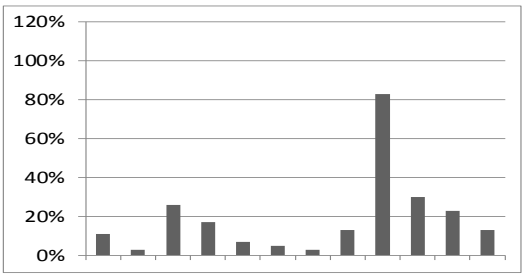
average 2012: 55%

4 Collection Efficiency for Commercial



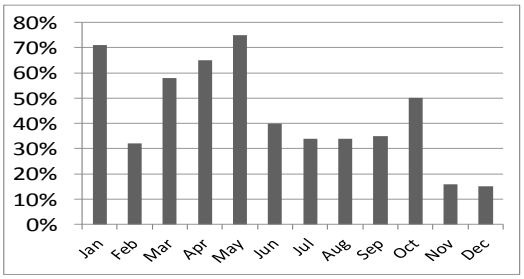
average 2012: 233%

5 Operational Actual Cost Coverage



average 2012: 20%

6 Non Revenue Water



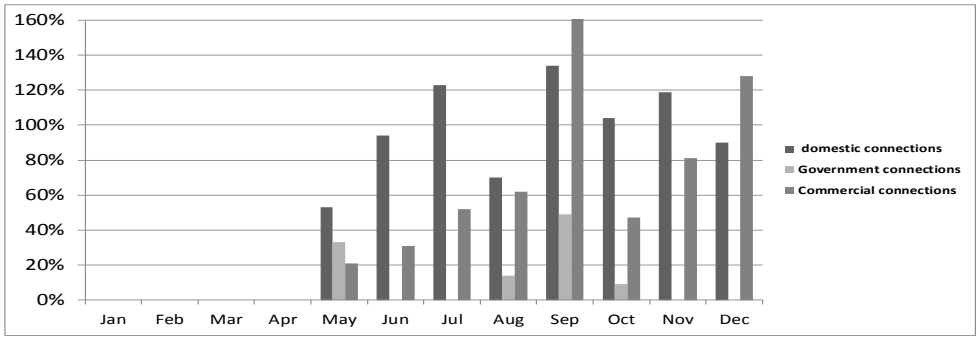
average 2012: 44%

7 Continuity of Water Supply

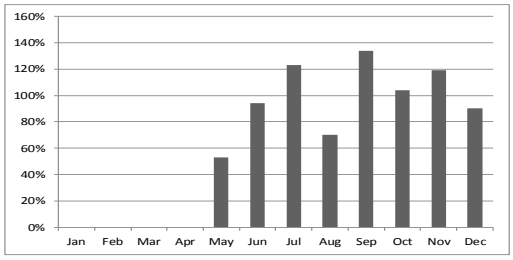
Month	Daily	Weekly		Monthly	
	Hours/Day	Hours/Day	Day/Week	Hours/Day	Day/Month
Jan				2	1
Feb				2	1
Mar				2	1
Apr				2	1
May				2	1
Jun				1	1
Jul				1	1
Aug				3	2.5
Sep				3	2.5
Oct				3	2.5
Nov				3	2.5
Dec				1	1.5

Yareem Jan-Dec 2012

1 Collection Efficiency for Domestic,Government & Commercial

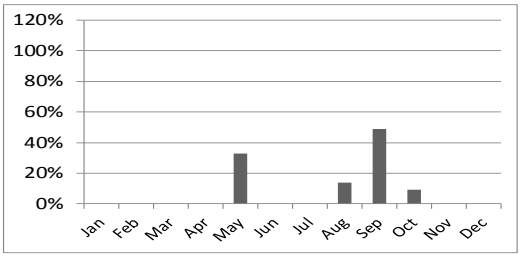


2 Collection Efficiency for Domestic



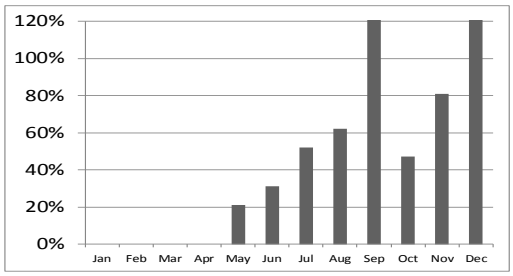
average 2012: 98%

3 Collection Efficiency for Government



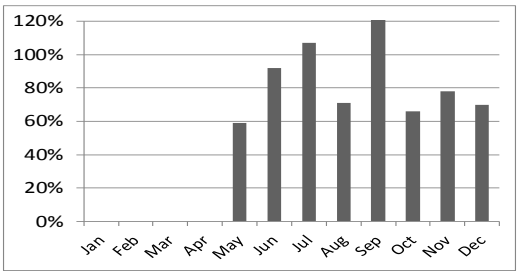
average 2012: 26%

4 Collection Efficiency for Commercial



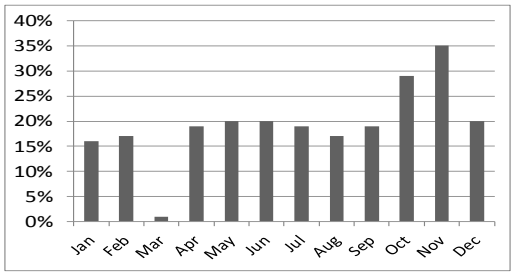
average 2012: 81%

5 Operational Actual Cost Coverage



average 2012: 87%

6 Non Revenue Water



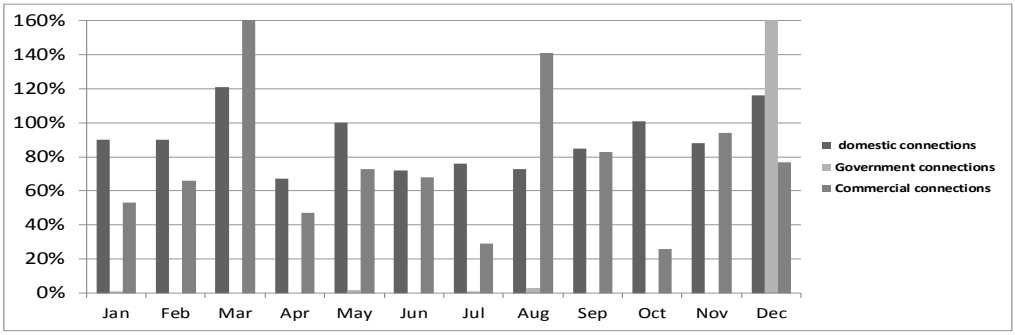
average 2012: 19%

7 Continuity of Water Supply

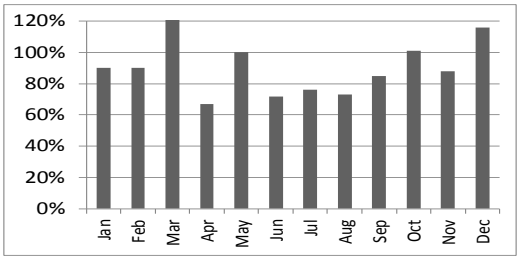
Month	Daily	Weekly		Monthly	
	Hours/Day	Hours/Day	Day/Week	Hours/Day	Day/Month
Jan					
Feb					
Mar					
Apr					1
May					1
Jun					1
Jul					2
Aug					2
Sep					2
Oct					2
Nov					3
Dec					3

Al-Mansouriah Jan-Dec 2012

1 Collection Efficiency for Domestic,Government & Commercial

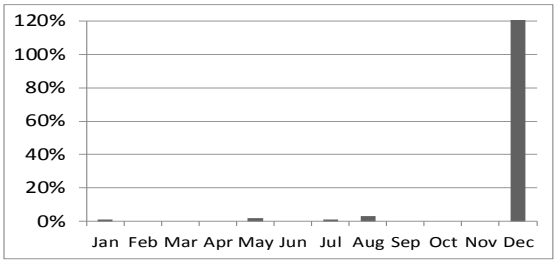


2 Collection Efficiency for Domestic



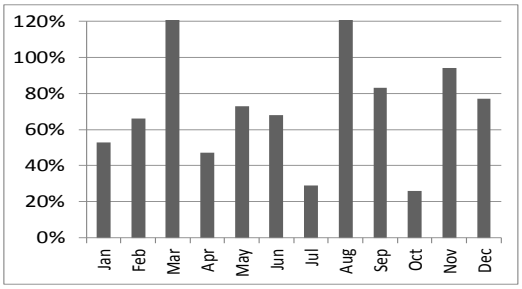
average 2011: 96%
average 2012: 90%

3 Collection Efficiency for Government



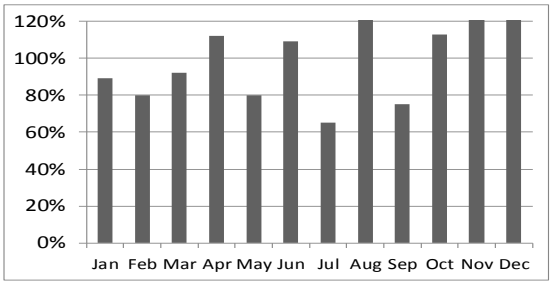
average 2011: 5%
average 2012: 652%

4 Collection Efficiency for Commercial



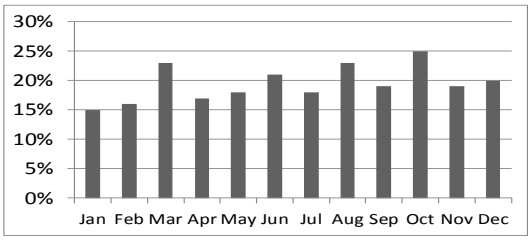
average 2011: 94%
average 2012: 78%

5 Operational Actual Cost Coverage



average 2011: 86%
average 2012: 162%

6 Non Revenue Water



average 2011: 17%
average 2012: 20%

7 Continuity of Water Supply

Month	Daily	Weekly		Monthly	
	Hours/Day	Hours/Day	Day/Week	Hours/Day	Day/Month
Jan	22				
Feb	22				
Mar	22				
Apr	22				
May	22				
Jun	22				
Aug	22				
Sep	22				
Oct	22				
Nov	18				
Dec	18				

Annex 2 Table of Indicators

PIIS 2011-2012

No.	LC/Utility	Collection Effeciency Domestic		Collection Effeciency Government		Collection Effeciency Commercial		Operational actual cost coverage (Average)		Non-revenue water (Average)	
		2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
1	Aden	51%	53%	26%	194%	83%	93%	62%	124%	33%	35%
2	Sana'a	69%	81%	58%	89%	55%	77%	85%	93%	32%	40%
3	Taiz	73%	75%	87%	151%	67%	123%	85%	102%	21%	23%
4	Mukala	87%	92%	70%	123%	87%	91%	103%	116%	35%	39%
5	Hodeidah	68%	79%	14%	249%	76%	78%	51%	140%	44%	40%
6	Dhamar	82%	84%	41%	214%	81%	80%	67%	101%	48%	46%
7	Rada'a	82%	85%	8%	106%	89%	88%	82%	81%	22%	31%
8	Al Mansouriah	96%	90%	5%	652%	94%	78%	86%	162%	17%	20%
9	Ibb	86%	94%	49%	134%	79%	88%	123%	152%	23%	25%
10	Alsheher	90%	89%	52%	131%	75%	82%	87%	98%	26%	30%
11	Seyuon	79%	88%	56%	167%	76%	90%	81%	106%	29%	29%
12	Mocha	105%	96%	37%	172%	98%	93%	78%	109%	23%	23%
13	Zabid	100%	100%	32%	225%	96%	96%	85%	114%	19%	19%
14	Bajil	81%	87%	100%	292%	84%	87%	73%	104%	23%	24%
15	Bait Alfaqih	81%	97%	100%	12%	93%	98%	90%	76%	22%	18%
16	AlMahweet	77%	86%	42%	241%	58%	86%	54%	80%	23%	25%
17	Hajjah	77%	96%	66%	184%	90%	107%	73%	121%	12%	13%
18	Amran	100%	101%	23%	285%	80%	103%	87%	136%	22%	16%
19	Sa'adah	71%	71%	23%	10%	108%	105%	94%	59%	33%	36%
20	AlDalea		34%		55%		233%		20%		44%
21	Yareem		98%		26%		81%		87%		19%

Annex 3 Frequency of Water Supply

No.	LC/Utility	2011					2012				
		Daily	Weekly		Monthly		Daily	Weekly		Monthly	
		Hours/Day	Hours/Day	Day/Week	Hours/Day	Day/Month	Hours/Day	Hours/Day	Day/Week	Hours/Day	Day/Month
1	Aden	16					15				
2	Sana'a				21	2.8				5.25	3.5
3	Taiz					1.3d/2month					1.8d/2month
4	Mukala	10					10				
5	Hodeidah	13					24				
6	Dhamar	13					21				
7	Rada'a		24	2				24	2		
8	Al Mansouriah	12.5					21				
9	Ibb		12	1				24	2		
10	Alsheher	14					21				
11	Seyuon	24					24				
12	Mocha	14					24				
13	Zabid	12					15.5				
14	Bajil				13	3.75		24	1		
15	Bait Alfaqih	14					14				
16	AlMahweet				9	1.8				24	1
17	Hajjah		12.8	1.6				17	1		
18	Amran	6									
19	Sa'adah						19				
20	AlDalea									2	1.5
21	Yareem										1.8

Remarks:

The LCs and Utilities which shows improved service delivery in 2012 are Sana'a, Hodeidah, Dhamar, Al-Mansouriah, Ibb, Al-Sheher, Al-Mocha, Zabid, and Bajil.

This improvement can mostly be attributed to resumption of regular power supply, availability of diesel fuel and emergency assistance by GIZ. KfW and other relief agencies mainly the ICRC.