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THE ACADEMY FOR EDUCATIONAL DEVELOPMENT

THE WATER EFFICIENCY AND PUBLIC INFORMATION FOR ACTION (WEPIA)

**In cooperation with
THE ROYAL SOCIETY FOR THE CONSERVATION OF
NATURE**

CAPACITY BUILDING PROJECT IN AMMAN, IRBID AND AQABA

REPORT

April, 2001

1. Water supply and conservation

- ? There is a significant and great difference between Aqaba and other regions. While virtually all households in Amman and Irbid report receiving water supply only 1-2 times per week, the majority of those in Aqaba do so at least 5 times per week.

Frequency of water supply

Base: all respondents

	Total	Amman	Irbid	Aqaba
	(1029)	(342)	(413)	(274)
	%	%	%	%
1-2 times per week	69	91	92	6
3-4 times per week	6	4	5	10
5 times per week	3	*	*	11
6 times or more per week	17	2	*	61
Don't know	<u>5</u>	<u>3</u>	<u>3</u>	<u>12</u>
Total	100	100	100	100

- ? Virtually all households in Aqaba feel that the supply is sufficient. In spite of a less frequent supply, about two out of three households in Amman and Irbid also describe the amount received as being sufficient.

Sufficiency of supply

Base: all respondents

	Total	Amman	Irbid	Aqaba
	(1029)	(342)	(413)	(274)
	%	%	%	%
Is sufficient	73	64	67	91
Is not sufficient	<u>27</u>	<u>36</u>	<u>33</u>	<u>9</u>
Total	100	100	100	100

? In all 3 regions, the majority of households have taken steps to conserve water, many apparently employing different actions. There is strong evidence that households are rationing by using only when necessary in addition to more specific steps such as using a bucket (rather than hose) to clean the car, sweeping rather than washing floors and reducing the frequency of laundry.

Checking for leakages and maintenance/ repair is not particularly common(although this is more likely to be observed among households in Aqaba)and the use of water saving devices has not yet become widespread.

Actions to conserve water

Base: all respondents

	Total	Amman	Irbid	Aqaba
	(1029)	(342)	(413)	(274)
	%	%	%	%
Using only when necessary	50	50	49	49
Use bucket to clean car	39	40	43	32
Sweeping rather than washing floors	36	35	41	30
Reduced frequency of laundry	31	28	34	28
Maintenance/repair	28	23	26	37
Checking for leakages	21	18	20	25
RE-use of water	14	16	15	11
Install water saving device faucets	9	9	6	12
Bottles in toilet tanks	9	9	6	12
Other	1	1	1	1
Nothing	11	15	6	12

2. Laundry habits

? Non – automatic washing machines are the most widely found, more so in Irbid than the other two regions.

Type of washing machine

Base: all respondents

	Total	Amman	Irbid	Aqaba
	(1029)	(342)	(413)	(274)
	%	%	%	%
Non- automatic twin tub	44	48	47	34
Non – automatic single tub	24	16	28	28
Any non – automatic	68	64	75	62
Automatic front loading	15	16	10	20
Automatic top load	15	17	14	15
Any automatic	30	33	24	35
No machine	<u>2</u>	<u>2</u>	<u>1</u>	<u>3</u>
Total	100	100	100	100

? Laundry frequency averages just under twice per week in Amman and Irbid but is higher in Aqaba

Frequency of Laundry

Base: all washing machine -owners

	Total	Amman	Irbid	Aqaba
	(1005)	(331)	(408)	(266)
	%	%	%	%
1-2 times per week	84	87	87	74
3-4 times per week	13	10	1	22
5 times or more per week	2	2	2	4
Less than one week	<u>1</u>	<u>1</u>	<u>*</u>	<u>*</u>
Total	100	100	100	100
Average frequency (times per week)	1.8	1.6	1.7	2.0

- ? The number of loads per wash ranges from 1 to 5 or more, obviously depending upon personal need and habit. The average is over 4 in Amman and Irbid but lower in Aqaba(where frequency is greater).

Number of loads per wash

Base: all washing machine -owners

	Total	Amman	Irbid	Aqaba
	(1005)	(331)	(408)	(266)
	%	%	%	%
1 Load	5	5	4	5
2 Loads	11	10	10	14
3 loads	19	21	15	23
4 Loads	24	22	25	25
5+ loads	41	42	46	33
Total	100	100	100	100
Average (loads per weeks)	4.3	4.3	4.4	4.0

- ? Simple multiplication of the total number of washing occasions by the average number of loads gives a total number of loads per household in each area of:

	Total no. of washing occasions	Average no. of loads	Total no. of loads	Average loads per household per week
Amman	532	4.3	2288	6.9
Irbid	696	4.4	3062	7.5
Aqaba	539	4.0	2156	8.1

3. Cars and gardens

? About half of the households covered by the survey owned a car, the average number of cars owned among all households being less than one.

Car ownership

Base: all respondents

	Total	Amman	Irbid	Aqaba
	(1029)	(342)	(413)	(274)
	%	%	%	%
No car owned	46	44	45	50
One car	43	44	45	41
Two car	9	11	8	8
Three or more cars	<u>2</u>	<u>1</u>	<u>2</u>	<u>1</u>
Total	100	100	100	100
Average per household	0.7	0.7	0.7	0.6
Average among car owners	1-2	1-2	1-2	1-2

? Frequency of car washing ranges widely from less than once per week to four or more times per week although once per week is most common. Amman residents are more likely to be frequent washers.

Frequency of car washing

Base: all car owners

	Total	Amman	Irbid	Aqaba
	(556)	(194)	(226)	(136)
	%	%	%	%
Once per week	56	50	61	60
2-3 times per weeks	23	32	20	17
4+ times per weeks	4	5	2	1
Less than once per week	<u>17</u>	<u>13</u>	<u>17</u>	<u>22</u>
Total	100	100	100	100

? About four out of five car owners report washing their vehicles themselves but the habit of going to the car wash is significantly more prevalent in Aqaba.

Among those washing cars themselves, use of a bucket outweighs using a hose, but less so in Aqaba than elsewhere.

How cars washed

Base: all car owners

	Total	Amman	Irbid	Aqaba
	(556)	(194)	(226)	(136)
	%	%	%	%
Use a hose	16	10	17	22
Use a bucket	62	70	68	40
Go to car wash	<u>22</u>	<u>20</u>	<u>15</u>	<u>38</u>
Total	100	100	100	100

? Households in Irbid are noticeably more likely to have a garden than those in Amman or Aqaba. Frequency of watering gardens averages between once and twice per week in Amman and Irbid but is over twice per week in Aqaba .

Frequency of watering the garden

Base: all respondents

	Total	Amman	Irbid	Aqaba
	(1029)	(342)	(413)	(274)
	%	%	%	%
No garden	48	61	31	56
Have garden	52	39	69	44
Which water:				
Average times per week	1.6	1.7	1.3	2.4

4. Water storage and rain water collection

- ? By far the predominant means of water storage is in tanks. About half of the households in Irbid report having a reservoir compared to a quarter in Amman but very few in Aqaba.
- ? Collection of rain water is relatively common in Irbid (43% of households) but negligible in Amman (6%) and Aqaba (5%)

Means of water storage

Base: all respondents

	Total	Amman	Irbid	Aqaba
	(1029)	(342)	(413)	(274)
	%	%	%	%
Water tanks	99	99	99	100
Reservoirs	28	25	45	4
Other	1	1	1	*

5. Plumbing fixtures, leakage and repairs

? Among the households interviewed, the average number of faucets inside the house was about 5 and the average number of external faucets was 1.

	Average no. of internal faucets	Average no. of external faucets
Amman	4.9	0.8
Irbid	5.0	1.3
Aqaba	5.4	1.1

? The proportion of households reporting leaking faucets ranged from 23% in Irbid to 19% in Aqaba and 15% in Amman. The predominant reasons for failing to effects repair being cost, lack of time and a lack of know how.

? The proportions of households having Turkish style and western style bathrooms show a noticeable difference to previous surveys, Turkish being more prevalent and western style less so than previously observed.

	% having Turkish style bathroom	% having western style bathrooms
Amman	83	59
Irbid	94	53
Aqaba	96	67
Fuheis survey	33	96

? Toilet tanks were more common in Aqaba than the other two areas. Among those with toilet tanks, about one in five reported having a dual flush system.

	% having toilet tanks	% of toilet tanks having dual flush
Amman	52	20
Irbid	42	22
Aqaba	67	15

- ? Among those having toilet tanks the 6 liter capacity was most common overall. However, a significant proportion were unaware of the capacity.

Size of toilet tank

Base: all having tanks

	Amman	Irbid	Aqaba
	%	%	%
6 liter	48	33	44
12 liter	16	30	21
Other capacity	7	6	8
Don't know	29	31	27
Total	100	100	100

- ? 10% of those having a toilet tank reported leakage. Cost, lack of time and lack of know are cited as the main reasons for failure to repair.
- ? Virtually all (94%) of households in those areas have a shower, most having one unit only. Only 4% of these reported a leakage in the shower unit.
- ? The majority (77%) of households claim that it takes only 1-2 days to have any leaks repaired. 53% rely on a plumber for such work and 30% rely on the head of household.

6. Water billing

- ? The great majority of households report receiving their water bill every 3 months, a frequency which is similar across all 3 areas:

	% every 3 months
Amman	87
Irbid	93
Aqaba	90

- ? The reported amount of the water bill ranges widely from over JD 100 per cycle to as little as JD 2.00 cycle. The average bill across the 3 areas was JD 30.3, a level which is broadly similar in each area:

	Average bill
Amman	JD 31.8
Irbid	JD 27.7
Aqaba	JD 28.9

- ? About half the households in each area believe that they pay for as much as they consume, about a third feel that they pay for more than they consume.

Bill compared to consumption

Base: all respondents

	Total	Amman	Irbid	Aqaba
	(1029)	(342)	(413)	(274)
	%	%	%	%
Pay as much as consumed	52	53	54	49
Pay more than consumed	31	29	30	35
Pay less than consumed	4	4	4	4
Don't know	13	14	12	12
Total	100	100	100	100

7. Water saving devices.

? Spontaneous awareness of water saving devices is relatively high but lower in Amman than the other regions:

Spontaneous awareness of water saving devices

Base: all respondents

	%
Amman	65
Irbid	75
Aqaba	76

? In Aqaba, 70% of respondents claimed to have heard of any of the three devices described to them. The level was slightly lower (60%) in Amman and Irbid.

? Aerators for faucets were the most likely to be known.

Awareness of specific devices

Base: all respondents

	Total	Amman	Irbid	Aqaba
	(1029)	(342)	(413)	(274)
	%	%	%	%
Aerators on faucets	45	46	41	51
Aerators on showers	32	30	31	35
Toilet tank with 6 liter capacity	29	30	26	32
None of these	37	40	40	30

* About three – quarters of respondents claimed that they would be willing to install such devices in their homes, a level which is similar across the three areas (Amman 75%, Irbid 76%, Aqaba 74%).