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A Survey of Water Conservation Knowledge, Attitude and Practices of 35 Mayors in Northern Jordan

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Mayors' Survey in Jordan

Introduction

This report summarizes the key findings from the mayors' survey which was conducted in the northern governorates of Irbid, Jerash, Ajloun and Mafraq . The survey consists of thirty one interviews with mayors and covers several important themes about water usage and conservation. Here we focus on interpreting the results and providing recommendations

Section 1: Municipal sources of water

Virtually all respondents declare that WAJ supplies water once a week in summer On the other hand, we observe differences in winter While two-thirds of the mayors interviewed say that the WAJ supply is once a week, a third say that it is more often, usually twice a week

Knowledge of water supply frequency is high and consistent. By contrast, only a small minority of mayors are aware of the quantity allocated.

Recommendation: an effort needs to be made to make mayors more aware of the quantities of water allocated. Since water is a critical resource for municipalities, it is necessary that mayors and other municipal leaders monitor water supply.

All respondents attribute water supply allocation to WAJ. Nearly all mayors see that WAJ allocates water for domestic use. Only a few see allocation to other uses such as parks, industry, government buildings and army camps.

We note a disagreement among respondents when it comes to whether or not there is a water policy that determines this allocation. Two-thirds believe that there is no policy

Recommendation: the disagreement indicates that there is probably uneven information about water policy and allocation decisions. It is important to clarify such information and make it available to all municipalities on a consistent basis.

The majority of mayors claim that there exist other water resources within their municipal jurisdiction. Almost half point out underground wells, and fewer mention fountains and collected rainwater. Only 2 out of 31 mayors say that their town owns wells 5 out of 31 say that private wells exist and these are metered.

One out of two mayors claim to work closely with the WAJ officer based in the municipality

Recommendation: It is worthwhile to understand why only half of mayors collaborate closely with the WAJ officers. Once again, there is evidence that WAJ information and influence is uneven throughout the country. It is vital to increase this number of mayors who work closely with WAJ officers.

The interviewees are unanimous in their claim that their municipality does not reuse any of its water and only one mayor says that his town harvests water. Furthermore, none of the mayors have a water treatment plant.

Recommendation: it is critical to develop programs and infrastructure to reuse and harvest water. In particular, aspects of domestic and industrial water consumption can be accomplished with reused water. It is worthwhile to conduct a usage segmentation and raise awareness on what uses can be met with reused water.

Section 2: Municipal use of water

Most mayors do not know how much water is allocated to municipal use. 13 out of 31 say, however, that is 5% or less.

On the other hand, 18 out of 31 say that between 75% and 99% is allocated to domestic use

Virtually all the mayors (except two) have no idea how much water goes to industrial use
And nearly as many do not know how much goes to agriculture.

Recommendation: There is a lack of knowledge on the different uses of water in the main sectors. Efforts are required to bridge this knowledge gap.

The mayors selected in this sample come from a range of town sizes, from less than 3000 to over 350,000.

Most mayors see medium high population growth rates (due to birth) in their towns. However, four see fast rates of over 10% -- these locations are in urgent need for water conservation. Most mayors are not aware of the growth rate of immigration.

The number of municipal employees varies considerably, just like town size. Basically, about half report few employees (less than 30) and six report many (over 100)

The size of the water bill for the main municipal building varies considerably. There is no significant skew toward small, medium, or large values.

As far as the water bill for the last quarter, the majority of respondents claim that it is between 10 and 100, of which a large share fall between 10 and 50.

The majority of respondents say that they have a water shortfall. However, most of these respondents do not know the shortfall quantity.

Recommendation: it is important to increase mayors' knowledge about water quantities. More precise information on cubic meters is a key to improved water management

Virtually all mayors say that water is stored for their municipal buildings in tanks. Only 6 out of 31 mention underground reservoirs. Moreover, the majority claim that these buildings do not have pumps to pump water to each floor. In addition, most mayors do not have their own maintenance staff to make repairs in the buildings. None of the mayors have employee housing. Finally, virtually none of the mayors apply specific codes and standards for building construction (and water supply/fixtures) different from those of the Ministry of Public Works

On the other hand, 30 mayors claim to be willing to consider a voluntary code and promote it that could make water use more efficient. The majority, furthermore, believe that they ought to be personally responsible for its implementation. Moreover, nearly half claim that adoption of such a code requires education of the public. Over half further claim that is important to bring offers from specialized companies. The main barrier to such a code is seen to be financial as opposed to issues of coordination, expertise, and authority. Finally, the majority see that the adoption of such a code would benefit water saving.

Recommendation: Is worthwhile to take advantage of this openness to implement a water saving code. The mayor is in an excellent position to promote water conservation. The implementation of the code is in synergy with other projects such as public education about water saving and the encouragement of specialized companies. The fact that mayors do not see any major organizational barriers to the establishment of such a code indicates that a water saving policy can be handled efficiently with current government structures

Most municipalities own cars, and about half own four or more cars. Municipal cars are washed less frequently than private cars (a reference to the other surveys). Nevertheless, about a third of the mayors claim that the municipal cars are washed at least once a week. The vast majority of mayors say that the cars are washed at gas stations.

Recommendation: It is important for the municipal government to set an example to the citizens. Efforts need to be made to encourage more car washing by employees with buckets. The municipality can also hire young people to wash the municipal cars as well encourage the foundation of youth car wash groups as part of a water saving promotional campaign

About 50% of the mayors said they have parks in their jurisdiction and these use primarily fresh water. Only one in 14 cases uses recycled water. There is obvious some wastage here. Most mayors have not heard of desert landscaping but would be interested in learning more about this technique.

Recommendation: parks and public spaces contribute to the local quality of life and are therefore very important for municipalities. However, parks consume a lot of water. This is why the application of new techniques that make public space more aesthetic without using water ought to be encouraged.

Virtually all mayors are interested in water consumption efficiency in municipal buildings by installing WSDs (although only 2 out of 31 already have such devices). Furthermore, the majority have the budget to install such devices and are willing to provide training to the maintenance staff.

Most mayors do not report leakage problems in their municipal networks. Of the 11 who report such problems, 5 claim there are no plans to fix them.

Half of the respondents know how much water is lost in the network, of which 7 claim that the losses are greater than 25%. The majority do not know how much water is lost due to illegal tapping.

Recommendation: we see an opportunity to develop water conservation efficiency via municipalities. There is a lot of good will on the part of the mayors. Unfortunately, however, there is also a lack of knowledge about water losses. Improved information of water losses and illegal tapping estimates would be beneficial.

Section 3: Domestic water use

About two-thirds of the mayors estimate that their towns have grown over 10% in the last years. Demographic growth is the main driver of water consumption. Moreover, most mayors agree that their citizens complain about water shortages

19 out of 31 mayors say they do not need new constructions to harvest rainwater and most of these attribute responsibility for harvesting to municipalities.

One of the most striking findings from this survey is that the vast majority of mayors claim that their municipality does not have education programs for citizens. This is despite the fact that almost half (13 out of 31) have a budget for environmental education. Moreover, 29 out of 31 would be interested in participating in a campaign to improve water efficiency and most would be willing to use municipal buildings for lectures and seminars

The mayors in the sample see a variety of problems about citizen use of water, although the main issue is about wasting water/not-conserving water.

In addition, most mayors could consider promoting devices (WSDs) and would even use them in their own homes.

Recommendation: It is urgent to develop educational programs that can be implemented by the mayors' office. The mayors will be highly supportive of such a campaign

Section 4: Industrial, agricultural and commercial use of water

Only one of the mayors says that there is an industrial zone in their town In fact, the largest private sector buildings tend to be tile factories and private schools.

As far as enterprises and water use, the mayors see a variety of organizations that use the most water; however, there is a greater perception that private schools use the most

About two-thirds of the mayors say that there is agricultural land within their jurisdiction Most claim that this land is primarily devoted to olives. Despite the importance of agriculture and the large number of people employed in that sector, only a few mayors state that there are farmers' associations in their municipalities.

Another finding is that most towns do not have a chamber of commerce, but most have a NGO in operation.

Recommendation: The absence of farmer associations and chambers of commerce implies a lack of important networks to promote water conservation campaigns. This means more effort must be channelled into the mayor's office.

Section 5: General questions

The mayors in the sample are all male, mostly middle age, but with diverse educational backgrounds. Almost half have a university degree. Over half have occupied the position for at least two years.

Most respondents see the principle issues to confront to be water shortages and worn-out networks followed by water pollution/quality. Two-thirds claim to have met with their fellow mayors on these issues. They see their most common problem as revolving around water shortages and bad distribution.

If they were to discuss water issues at a conference, over half would highlight the need to renew/improve infrastructure, better allocation to citizens, and education programs

Finally, there seems to be little contact with the Ministry of Environment and Municipal Affairs on water issues.

Recommendation: mayors are central figures in local governments and an excellent conduit for promoting water conservation programs. They are highly involved with water issues and meet with other mayors to discuss problems and solutions. More effort needs to be made, however, to increase the contacts and communication with the Ministry.