

Political Agitation and Water Shortages in the Hashemite Kingdom of Jordan

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Introduction

What are the political implications of water shortages in the Hashemite Kingdom of Jordan in the wake of the recent Syrian population influx? Do water shortages motivate political agitation or lead to political instability? My hypothesis argued, yes, water shortages significantly raise the cost of water for Jordanians which motivates political agitation and potentially leads to political instability. Via interviews and survey data, the study evaluated changes in political agitation since the 2011 beginning of the population influx and investigated regional differences in water policy and public participation in agitation. The hypothesis was confirmed. Rising water costs have placed an economic burden on local households and communities. Political agitation such as public demonstrations, protests or strikes about water shortages have been increasing in number and intensity since the beginning of the Syrian population influx. This relationship between shortage and agitation is strongly related to local differences in the effects of water shortages and the effects of uneven water policy on the regional level.

Lit review:

“Water conflict” has become an ubiquitous term in popular writings, political analysis, and journalism on environmental and security issues in the developing world, especially the Middle East and Africa. The United States Intelligence Community’s Global Water Security assessment concluded that “water challenges – shortages, poor water quality, floods – will likely increase the risk of instability and state failure, [and] exacerbate regional tensions.”¹ However, unlike popular and policy writings, scholarly literature is divided on the link between ecology

¹ Global Water Security: Intelligence Community Assessment (2 February 2012) Office of the Director of National Intelligence: United States of America

and conflict, both in theory and in empirical testing. Homer-Dixon first articulated the connection between environment scarcity and political conflict. Elites capture resources and deprive the impoverished and disempowered, inciting rebellion and unrest. Additionally conflict develops between a host community and migrant population fleeing scarcity.² Peluso and Watts counter that poor governance and institutions are to blame for both political conflict and ecological shortages or degradation.³ Alternatively, scarcity and shortages handicap a nation's political and economic development which reduces its institutional capacity to manage the instabilities caused by scarcity and shortages.⁴ De Soysa, however, argues that an abundance of resources incentivizes conflict for greater spoils.⁵ Martin examines the potential for conflict due to migration. He concludes that resource scarcity can actually produce constructive cooperation between migrants and hosts⁶

Empirical testing of the theoretical link between ecological scarcity and conflict is likewise conflicted. Hague and Ellingsen found a statistically significant correlation between multiple forms of environmental scarcity and political conflict. These results were not replicable Thielson's retrial which concludes that environmental scarcity has "limited explanatory power" with respect to political instability, compared to poverty and institutional inefficacies.⁷ Other

² Homer-Dixon, Thomas, "Environmental Scarcities and Violent Conflict: Evidence from Cases," *International Security* Vol. 19 No. 1, 1994

³ Peluso, Nancy Lee and Watts, Michael, "Violent Environments," in Nancy Lee Peluso and Michael Watts, eds, *Violent Environments* Cornell University Press, Ithaca, (2001)

⁴ Thielson, Ole Magnus, "Blood and Soil? Resource scarcity and armed internal conflict revisited." *Journal of Peace Research*, vol. 45, no. 6, 2008, <http://jpr.sagepub.com/cgi/content/abstract/45/6/801>

⁵ De Soysa, Indra, "Ecoviolence: Shrinking Pie or Honey Pot?" *Global Environmental Politics*, Vol. 2 No. 4 2002

⁶ Martin Adrian, "Environmental Conflict between Refugee and Host Communities" *Journal of Peace Research*, Vol. 42, No. 3 (2005). 329-346

⁷ Thielson, 802

empirical models yield different results. Levy et al. found a strong relationship between rainfall deviations, but not baseline water availability, and the incidence of internal conflict.⁸

This paper examines a single-state test case of the link between resource shortages and political agitation. Unlike the above literature I do not examine the link to outbreaks of conflict. Rather, I intend to robustly confirm the link between shortages and agitation, informing the investigation of a causal chain between shortage and conflict. Jordan is a natural experiment for this examination. Already water poor, Jordan suffered a recent and intense shock to its water resources due to the Syrian population influx. Thus we can observe the effect on the dependent variable of water availability and political agitation.

Background:

The Hashemite Kingdom of Jordan suffers from severe baseline water scarcity.⁹ 90% of Jordan receives less than 200 millimeters of rainfall per year. Rainfall is unevenly distributed and is highly variable. Furthermore, Jordan has minimal renewable freshwater resources within its border, at only 135 cubic meters per capita/year, making it one of the world's poorest countries in terms of per capita water resources.¹⁰ Ultimately the vast majority of Jordan's water resources consist of groundwater, and non-renewable aquifers, or fossil water.¹¹ Many aquifers have been reduced to brackish quality by overpumping. Pumping past safe levels prevents the aquifer from becoming replenished, depleting Jordan's fresh water resources.¹² In some areas pumping was

⁸ Levy et al. "Freshwater Availability Anomalies and Outbreak of Internal War: Results from a Global Spatial Time Series Analysis," *Human Security and Climate Change: An International Workshop*, 2005

⁹ Raddad, Khamis, "Water supply and water use statistics in Jordan," *International Work Session on Water Statistics, University of Jordan*, 2005, 1

¹⁰ Raddad, 1

¹¹ Raddad, 3

¹² Raddad, 3

cut by 75% so the aquifer could return to stable levels.¹³ Because of natural scarcity and man-made deterioration of the water supply, in Jordan water is rationed and pumped to certain regions on specific days at specific times.¹⁴

On top of this lack of supply, Jordan has received an ongoing influx of Syrian refugees since the start of the Syrian civil war in 2011. Over 589,000 Syrians have officially entered Jordan as refugees according to the UNHCR as of April 26 2014. The majority of these refugees are found in the north of Jordan, in the Mafraq Governate which includes the Zaatari refugee camp.¹⁵ Only about 30% of refugees live in camps, while 70% live within the rest of the general population.¹⁶ In areas in the north around the city of Mafraq, the population may have effectively doubled.¹⁷

This massive increase in demand has overburdened Jordan's water supply and caused a serious water shortage, especially in the north of Jordan.¹⁸ In the north, water distribution and management authority has been contracted to the French-based Yarmouk Water Company.¹⁹ Yarmouk has attempted to cope with this increase in demand in three ways: First by more strictly rationing the available amount of water, decreasing the amount distributed. Second, by staggering the delivery times to maximize access to the allotted amount of water. And third, by purchasing and distributing water from private wells. These wells are usually licensed to farmers by the government for agricultural purposes. The government has begun to increase the number of

¹³ Dr. Moayyad Shawayfah, Interview, 2013

¹⁴ Basil Basbous, Interview, 2013

¹⁵ UNHCR Syria Regional Refugee Response. *UNHCR Syria Regional Refugee Response*. Retrieved April 28, 2014, from <http://data.unhcr.org/syrianrefugees/country.php?id=107>

¹⁶ PBS, "Refugees Pour Out of Syria, but Number Entering Jordan Slows to Trickle" *PBS NewsHour* Sept. 6, 2013. Retrieved December 3, 2013, from http://www.pbs.org/newshour/bb/world/july-dec13/refugees_09-06.html

¹⁷ Shawayfah, 2013

¹⁸ Dr. Rida Adamat, 2013, Shawayfah, 2013

¹⁹ Basbous, 2013

licensed wells to expand the short term supply.²⁰ With all these new policies however, sometimes water still doesn't flow during a household's rationed time.

Hypothesis and Methods

So, given the added strain on a scarce resource, I argue that household expenditures have increased for Jordanians. This increase in cost, in turn, leads to an increase in the rate and intensity of political agitation about water shortages. Relying on primarily qualitative evidence, due my lack of access to official data on political agitation, I tested my hypothesis. I conducted three methods of information gathering: semi-structured interviews, structured interviews, and anonymous surveys.

I conducted five semi-structured interviews in Mafraq. Three of these surveys were conducted at Al Beit University on November 19th 2013 with Dr. Rida Al-Adamat, Dr. Moayyad Shawayfah, and Dr. Saad Al-Ayyash, experts on Jordanian water resources and current policy. The fourth semi-structured interview on municipal policy was conducted on November 19th 2013 at the Mafraq Department for Public Works with Engineer Khaldoun Shtayfat, and translated by my advisor Dr. Ismaiel Abuamoud. The fifth semi structured interview was conducted on November 26th 2013 at the Mafraq branch of the Yarmouk Water Company, with Head of Mafraq Department, Mr. Basel Basbous, translated by Mr. Mohanad Qatishat.

I conducted six structured interviews in the farming community of Sabha village in northern Jordan on November 22 2013. This research was designed to gain an understanding of the water circumstances in a rural community and gauge community members sentiments on a variety of subjects related to the political implications of water shortages. I was hosted by Ali Al-

²⁰ Basbous, 2013

Baqoum, Regional Manager of Training, Development and Consulting for the International Islamic Marketing Association. Mr. Al-Baqoum was my first participant, as well as my translator for the other interviews. I interviewed, Fahad Al-Baqoum, community member, Awadallah, a large vegetable farmer, Ahmed Turki, a small farmer, *Sheikh* Saifallah ‘Aid, the community’s *sheikh* or leader, and Brigadier General Ahmed Al-‘Aoun.

With the assistance of my advisor Dr. Ismaiel Abuamoud my surveys were distributed to 23 respondents at the Hashemite University of Jordan and 10 respondents from homestay families and around Amman. I chose Hashemite University because its location means respondents will likely be from a mix of middle and north Jordan. This broadened the demographic base of the study.

Results

My findings confirm a connection between political agitation and an increased economic burden placed on households and communities that suffer the brunt of acute water shortages. This increase in political agitation primarily took the form of protests, strikes and public demonstrations in communities across the north. This link was robust in the north of Jordan due to the greater impact of the Syrian population influx on regional water availability and therefore more severe shortages. Surveys showed there was essentially no connection between water shortages and political agitation outside of that region. Some of these activities did lead to a temporary break down in the rule of law and respect for authority. However, there was little evidence that the shortages produced any chronic or severe instability.

Cost:

According to Eng. Khaldoun Shtayfat of the Mafraq civil government the average monthly expenditure on water has increased over the past two years from 10 JD to 60-70JD.²¹ “My water expenses have increased from 10 JD to 80 JD [per month]. That’s 240 JD for 3 months!” explained Dr. Moayyad Shawayfah of Al Beit University in Mafraq.²² All of my interviews with water policy experts at Al Bait University corroborated the rapid increase in prices over the past few years. The amount of available water has decreased due to the Syrian population influx which has driven up the price as citizens can no longer rely on the government to provide adequate water services.

Similarly, my interviews with the rural community in Sabha emphasized the pervasive price increase for water across the north. All interviewed reported a doubling of their water expenditures since the beginning of the refugee influx.²³ Many reported that they were simply not receiving enough water from the existing pipelines. Costs have increased because households must satisfy an inelastic demand for water with expensive alternative sources. Many buy private water from delivery trucks. Fahad, a community member explained, “It is very expensive. I spend 15 JD per 6 cubic meters. It affects my salary and condition of life.”²⁴ A far more capital intensive option would be to dig a private well. These technically require a permit, though illegal drilling abounds which ultimately depletes the already highly vulnerable aquifer.²⁵

These additional economic burdens, coupled with the occasional failure of public water to flow for the allotted amount, or in some cases at all, constitute real deprivation for citizens in the north of Jordan. Their quality of life and available income have decreased since 2011.

²¹ Eng. Khaldoun Shtayfat, Interview, 2013

²² Shawayfah 2013

²³ Sabha Interviews, 2013

²⁴ Sabha Interviews, 2013

²⁵ Adamat, 2013

Demonstrations and Protests:

Political agitation in response to water shortages in north Jordan has dramatically increased since the beginning of influx of Syrian refugees in 2011. During the summer of 2013 the city of Mafraq experienced “daily protests” on the issue of water scarcity.²⁶ In fact, the rate of demonstrations prior to the Syrian influx was 5-10% the number of protests now occurring in response to water shortages. “Before 2 years ago we didn’t hear about demonstrations about water. Maybe if they existed they were on a smaller scale... You can be patient about food but not water,” explained Dr. Rida al-Adamat.²⁷ Daily complaints to the Mafraq Department for Yarmouk Water Company, have increased from 15-20 before the population influx to 90-100 today. Strikes over water policy were most acute during the height of the influx in 2012, with thirty different events. In 2013 the number has tapered to 10.²⁸

These strikes however, are sometimes less than tame. According to Mr. Basbous, Head of the Yarmouk Water Company Mafraq Department, the village of Ba’aj experienced one such event last year after Friday afternoon prayer. There was a strike in the main circle of the village, a major traffic artery for the community. The protesters barricaded the road, demanding water.²⁹ Eventually the strike was dispersed and the road reopened.

In a similar situation, Dr. Shawayfah described a recent circumstance where a neighbor took a road hostage, and ransomed it for water. The man set up a barricade and refused to

²⁶ Shtayfat 2013

²⁷ Adamat 2013

²⁸ Basbous 2013

²⁹ Basbous 2013

remove his blockade of the main thoroughfare until he received a tank of water. This strategy was ultimately successful. “Everyone in the village knows each other,” explained Dr. Shawayfah. “The police were his neighbors, so they brought him one of their tanks of water and he took down the barricade.”³⁰ Individual actions like this one are common. The fact that a citizen was able to effectively ransom a piece of public infrastructure for highlights the complicated interplay between institutional capacity and environmental constraints articulated in the literature review. In the face of environmental scarcity, Jordan lacked the institutional capacity to provide a basic service, but also lacked the institutional capacity to facilitate a legitimate channel to redress the citizen’s grievance.

Furthermore, reactions to the water shortage often have a tribal dimension where one tribe believes another rival is being granted favorable water treatment, or vice versa. Mr. Basbous provides an illuminative example:

The village of Qom Ahmar housed the water station that services the surrounding area. Occasionally, the villagers of Qom Ahmar would break into the water station to manipulate the water supply and maximize the water they received. This practice cut off the water supply for nearby villages, depriving them of their ration of water. Eventually the other villagers traveled to the water station in Qom Ahmar to determine what the problem was and found the Ahmaris hoarding the water supply. The situation devolved to the point that the responsible Qom Ahmar villagers locked themselves inside the station for 2 days to protect themselves from the irate villagers from the surrounding area. This standoff continued until the police had to come and solve the dispute.³¹

³⁰ Shawayfah 2013

³¹ Basbous 2013

Because of these tribal dynamics, many grievances about water shortages are dealt with using tribal customs and traditions before they need to be brought to the police and formal authorities. This evidence demonstrates the nuances of the political implications of water shortages. Shortages incentivized disputes over resources between subnational tribal/ethnic groups, which in turn incentivizes traditional, informal methods of conflict mediation.

Regional/Policy Differences:

The impact of water shortages on political agitation varies strongly based on region and policy impact. Agricultural communities, like Sabha have different water needs and different water policy than urban areas. Based on my interviews in Sabha, unlike Mafraq, this community did not experience significant political agitation in the past few years as a result of water shortages, despite the fact that most members of the community suffered a price hike for water expenditures.³² All those interviewed reported that they had never participated in any political demonstrations or protests of any kind in the past 2 years. Instead of protesting or holding highways for ransom, this community instead reacted to water shortages in a more traditional method of settling political grievances. The *sheikh* of the community headed a delegation of concerned citizens in discussions and complaints with the local water authority 2-3 times a week during the summer.³³

Why then has this community avoided political agitation, even when as described in previous examples, other rural villages responded to shortages with comparatively extreme political responses? The most likely answer appears to be a policy bias towards agricultural communities. According to Dr. Ayyash, one of the biggest causes of Jordan's water scarcity is

³² Sabha Interviews, 2013

³³ Sabha Interviews, 2013

the support and water subsidy that is assigned to the agricultural sector.³⁴ The government licenses private wells to agricultural communities. This causes overpumping that degrades the aquifers and contributes heavily to Jordan's water shortage. The policies that exacerbate the water shortage are the same ones that shelter agricultural communities like Sabha from the worst effects of the water shortage. Compare the shortages effect on the two communities: in Sabha, the monthly expenditure doubled, a hardship surely, but comparatively easier to bear than a six fold cost increase in Mafraq. Farming communities benefit disproportionately from water policy, while using significantly more water per-capita than cities like Mafraq. Cities which, in addition to being underserved by standing policy, are also host communities for an ever-growing number of refugees. Thus, areas like Sabha are sheltered from the true brunt of the water scarcity and the refugee influx, and consequently less likely to protest about the effects of a less severe water shortage.

Furthermore, regions farther removed from the massive population increase, like middle Jordan, react much differently to the water shortage. Based on my survey around Amman and in the Hashemite University, the vast majority of the sample population, predominantly from middle Jordan (53% living in Amman alone), oppose or strongly oppose the current water policy (72%).³⁵ However, only 25% of the sample participated in any political demonstrations or protests about water shortages in the past 2 years, implying that though water shortages are disliked, they are not the same dynamo of political agitation that they are in Mafraq and the north of Jordan. Amman Governate is a destination for 142,000 refugees.³⁶ However, Amman was already supporting the largest population in Jordan with more developed institutional structure

³⁴ Ayyash, 2013

³⁵ Survey, Topo D. 2013

³⁶ UNHCR, 2013

than the Mafraq Governate, the population of which effectively doubled in two years.³⁷

Furthermore, middle Jordan and Amman are served by the Disi Aquifer pipeline which does not extend farther north. “We probably have excess water in Amman,” explains Dr. Ayyash.”Most protests are about political reform, or corruption or the economic situation.”³⁸ Water shortages just aren’t a salient enough political issue in Amman or middle Jordan to motivate significant political agitation in and of themselves, because painful water shortages don’t really happen in Amman or middle Jordan. My surveying corroborates that explanation. When respondents were asked to rank a set of political issues in order of greatest to least importance, water scarcity ranked third behind tackling corruption and political reform. These findings emphasize the importance of subnational conditions on the political implications of water shortages.

Limitations:

This study was limited by its small sample size for surveys and homogenous demographic base. This study was also limited by language barriers and potentially limited by imperfections in translations. My identity as an *ajnabi* (foreigner) limited the cultural sensitivity of my observations or my understanding of what I observe due to my lack of lifelong experience with Jordanian culture. My study may have been limited by the nature of the questions I was asking, or by the fact that it was me who asked them, both of which may have caused subjects to be less comfortable answering honestly and openly. Constraints on access to official protest and public demonstration data prevented a stronger emphasis on quantitative analysis.

³⁷ Basbous 2013

³⁸ Ayyash 2013

Conclusion

The influx of Syrian refugees has dramatically increased the cost for northern Jordanians to satisfy their water needs. Interviews conducted in the north confirm that as a result, political agitation ranging from protests to strikes to sieges of water stations has increased in rate and intensity since 2011. Based on survey data, this effect was shown to be mediated by the uneven regional distribution of the refugee burden and by disparities in water policy between urban and rural demographics, as well as between middle and northern Jordan. This study relied primarily upon qualitative evidence gleaned from a range of interviews. Future research into this subject ought to utilize a larger and more diverse sample for the survey and more illuminating statistical analysis. A future study could also track data on protests/demonstrations and water shortages/water policy to look for correlations in timing or intensity. My study could be expanded upon to examine the impact water shortages has on the relationship between Syrian refugees and their host communities. This research, however, nonetheless demonstrates that political agitation over the rising costs of water increased following the refugee influx and is most pronounced in regions most affected by the refugee influx. Therefore, a strong causal relationship exists between water shortages and political agitation.

Resources

Interviews:

Adamat, R. (2013, November 19). Interview by D Toppo.

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Al-Baqoum et al, A. (2013, November 22). Interview by D Toppo. "Sabha interviews."

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from <http://data.unhcr.org/syrianrefugees/country.php?id=107>

Appendices

Written Informed Consent Form

1. Brief description of the purpose of this study

The purpose of this study is to investigate the political implications of water shortages in Jordan. Through these surveys the study hopes to discover the extent to which water shortages in Jordan motivate political and social demonstrations, activity, and unrest. The study seeks to determine if concerns over water shortages are linked to any other political concerns, especially the refugee influx, corruption, or the privatization of water management. The results of this survey will be used by the surveyor in future research. This is an anonymous survey and no names provided below will be involved included in the analysis or final product.

2. Rights Notice

In an endeavor to uphold the ethical standards of all SIT ISP proposals, this study has been reviewed and approved by a Local Review Board or SIT Institutional Review Board. If at any time, you feel that you are at risk or exposed to unreasonable harm, you may terminate and stop the interview. Please take some time to carefully read the statements provided below.

- a. **Privacy** - all information you present in this interview may be recorded and safeguarded. If you do not want the information recorded, you need to let the interviewer know.
- b. **Anonymity** - all names in this study will be kept anonymous unless the participant chooses otherwise.
- c. **Confidentiality** - all names will remain completely confidential and fully protected by the interviewer. By signing below, you give the interviewer full responsibility to uphold this contract and its contents. The interviewer will also sign a copy of this contract and give it to the participant.

Participant's name printed

Participant's signature and date

Interviewer's name printed

Interviewer's signature and date

Survey for Undergraduate Research Project

By Dante Toppo, School for International Training, Supervised by Dr. Ismaiel Abuamoud

Please answer as honestly and completely as possible.

Where in Jordan do you currently live?

Where are you originally from?

What is the highest level of education you have completed?

- a. Some secondary school
- b. Secondary school graduate
- c. Some college
- d. Bachelor's degree
- e. Master's degree
- f. PhD
- g. Other: _____

What is your current occupation?

Please rank these issues from most to least important:

Political reform, fighting corruption, water scarcity, the refugee crisis, economic development

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____

To what extent do you believe the following are a factor in Jordan's water shortage problem?

Mismanagement:

1 (not a factor)—2—3—4—5—6—7 (very important factor)

Corruption:

1 (not a factor)—2—3—4—5—6—7 (very important factor)

Privatization:

1 (not a factor)—2—3—4—5—6—7 (very important factor)

Refugee Influx:

1 (not a factor)—2—3—4—5—6—7 (very important factor)

Scarce water resources:

1 (not a factor)—2—3—4—5—6—7 (very important factor)

Waste:

1 (not a factor)—2—3—4—5—6—7 (very important factor)

Other: _____

1 (not a factor)—2—3—4—5—6—7 (very important factor)

To what extent do you support or oppose the government's current water policy?

- a. Strongly oppose
- b. Oppose
- c. Neutral
- d. Support
- e. Strongly support

To what extent do you support or oppose the government generally?

- a. Strongly oppose
- b. Oppose
- c. Neutral
- d. Support
- e. Strongly support

To what extent have you participated in a public demonstration or protest about water shortages in the past two years?

- a. Never
- b. Rarely (1-3 times)
- c. Occasionally (4-7 times)
- d. Regularly (7-12 times)
- e. Frequently (12+)

To what extent have you participated in *any* public demonstration or protest in the past two years?

- a. Never
- b. Rarely (1-3 times)
- c. Occasionally (4-7 times)
- d. Regularly (7-12 times)
- e. Frequently (12+)

To what extent do you support or oppose anti-government protests or political demonstrations?

- a. Strongly oppose
- b. Oppose
- c. Neutral
- d. Support
- e. Strongly support

Do you believe the water shortage situation will improve or get worse in the coming years?

- a. Definitely get worse
- b. Probably get worse
- c. Equal chance
- d. Probably improve
- e. Definitely improve

To what extent do you trust the government to manage and provide water services?

- a. No trust
- b. Minimal trust
- c. Moderate trust
- d. Completely trust

To what extent do you trust the government to manage and provide other essential services?

- a. No trust
- b. Minimal trust
- c. Moderate trust
- d. Completely trust

Do you receive adequate water for your household?

Do you pay more now for water now than you did in the past?

How do you manage your water use?

How has the water shortage affected your daily life?

بواسطة دانتى تويو ، مؤسسة التعلم العالمية ، بإشراف الدكتور اسماعيل أبو عامود

الرجاء الإجابة بأمانة و بشكل كامل قدر الإمكان.

أين في الأردن تعيش حاليا ؟
من أين أنت أصلا ؟

ما هو أعلى مستوى تعليمي وصلت إليه ؟
أ. ثانوي
ب. خريج مدرسة ثانوية
ج. كلية
د. درجة البكالوريوس
هـ. درجة الماجستير
و. دكتوراه
ز. أخرى : _____

ما هي مهنتك الحالية ؟

يرجى ترتيب هذه القضايا من الأكثر إلى الأقل أهمية :
الإصلاح السياسي ، محاربة الفساد ، ندرة المياه ، أزمة اللاجئين ، التنمية الاقتصادية

1. _____
2. _____
3. _____
4. _____
5. _____

إلى أي مدى تعتقد مما يلي عاملا في مشكلة نقص المياه في الأردن ؟
سوء الإدارة :

1 (ليس عاملا) -2-3-4-5-6-7 (عامل مهم جدا)
الفساد :

1 (ليس عاملا) -2-3-4-5-6-7 (عامل مهم جدا)
الخصخصة :

1 (ليس عاملا) -2-3-4-5-6-7 (عامل مهم جدا)
تدفق اللاجئين :

1 (ليس عاملا) -2-3-4-5-6-7 (عامل مهم جدا)
الموارد المائية الشحيحة :

1 (ليس عاملا) -2-3-4-5-6-7 (عامل مهم جدا)
النفائيات :

1 (ليس عاملا) -2-3-4-5-6-7 (عامل مهم جدا)
أخرى : _____

1 (ليس عاملا) -2-3-4-5-6-7 (عامل مهم جدا)

- إلى أي مدى تؤيد أو تعارض السياسة المائية الحالية للحكومة ؟
- أ. أعارض بشدة
 - ب . أعارض
 - ج . محايد
 - د . أدم
 - ه . أدم بشدة

- إلى أي مدى تؤيد أو تعارض الحكومة بشكل عام ؟
- أ. أعارض بشدة
 - ب . أعارض
 - ج . محايد
 - د . أدم
 - ه . أدم بشدة

- إلى أي مدى كنت قد شاركت في احتجاج عام أو مظاهرة عن نقص المياه في السنتين الماضيتين ؟
- أ. أبدا
 - ب . نادرا ما (1-3 مرات)
 - ج . في بعض الأحيان (4-7 مرات)
 - د . بانتظام (7-12 مرات)
 - ه . في كثير من الأحيان (12 +)

- إلى أي مدى كنت قد شاركت في أي احتجاج عام أو مظاهرة في العامين الماضيين ؟
- أ. أبدا
 - ب . نادرا ما (1-3 مرات)
 - ج . في بعض الأحيان (4-7 مرات)
 - د . بانتظام (7-12 مرات)
 - ه . في كثير من الأحيان (12 +)

- إلى أي مدى تؤيد أو تعارض الاحتجاجات المعارضة للحكومة أو المظاهرات السياسية ؟
- أ. أعارض بشدة
 - ب . أعارض
 - ج . محايد
 - د . أدم
 - ه . أدم بشدة

- هل تعتقد أن وضع نقص المياه سوف يتحسن أو سيزداد سوءا في السنوات القادمة ؟
- أ. بالتأكيد سيزداد سوءا
 - ب . ربما قد يزداد سوءا
 - ج . فرصة متساوية
 - د . ربما سيتحسن
 - ه . سيتحسن بالتأكيد

إلى أي مدى تثق بالحكومة لإدارة و تقديم خدمات المياه ؟
أ. لا ثقة

ب . الحد الأدنى من الثقة

ج . ثقة معتدلة

د . ثقة مطلقة

إلى أي مدى تثق بالحكومة لإدارة و توفير الخدمات الأساسية الأخرى ؟
أ. لا ثقة

ب . الحد الأدنى من الثقة

ج . ثقة معتدلة

د . ثقة مطلقة

هل تتلقى الماء الكافي لأسرتك ؟

هل تدفع أكثر على المياه الآن مما كنت عليه في الماضي ؟

كيف يمكنك إدارة استخدام المياه الخاصة بك ؟

كيف أثر نقص المياه على حياتك اليومية ؟