



FIELDNOTES FROM PROJECT RAINKEEP

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I thought it would be fun to publicize my fieldnotes on water-scarcity in Jordan; the notes represent solely my perspective and account of being in the field and formed part of a larger data set. The field research was undertaken in November and December 2005 as a component to acquiring my master's in Water Resources and Coastal Management from the University of Bergen in Norway. Please enjoy my (mainly) unfiltered rendition of being in the field!

A Bit about Cross-Cultural Research

Engaging in cross-cultural research involved problems with translation and accuracy of terms. For example, in explaining the physical structure of a cistern, I understood the word *lid* to refer to the cover over the hole while my translator referred to *lid* as the entire cement catchment area. These are known as “interpretations of categories” (Aase 1997:1). The concept of a lid had been placed into two different categories and this difference was not realized until I began to wonder why the funder, the Adventist Development Relief Agency, had done so little work in terms of restoration and achieving their overall project goals. Defining a cistern also signaled semantic differences. Was a cistern just the hole or was it the entire catchment area? And I recognized the shortcomings that I had as a non-Arabic speaker in rural Jordan and suspected that potentially interesting comments were not being translated due to a perceived lack of relevance to my research topic.

“The interview process went along so fast. I had to think quickly on my feet in order to get all the questions out and I still have questions. I have to really trust Nihad and her explanation and translation. I doubt that it is all being translated because there will be a long paragraph in Arabic boiled down to one or two sentences in English”.

There were also issues with the translation when asking about a household's water source. I discovered, once again in hindsight, that reliance on trucked in private water did not mean that the household did not have a government water supply via pipes directly to their home. Rather, a reliance on trucked in water was used as a last resort when the public supply could not provide sufficiently, which was mainly during the summer months.

In my field role, I had ascribed status as a Norwegian and acquired status as a student, both of which were relevant and understood by those I interviewed. In Jordan, the most important allegiance is through one's tribe (bint Talal 2004). When we approached a home, the initial communication was to exchange information about which tribe the household, my translator and driver, and myself belonged to. It was easily understood that my Norwegian ancestry was my tribe even though my place of residence was Canada. My ascribed status as a foreigner allowed me to pose questions considered common local knowledge and generally granted me higher status than those I was interviewing. In addition, my acquired status as a student resulted in the expectation that I should be asking many questions. I had the sense that the interviewees would allow for endless questions, potentially to show politeness to a foreigner.

Throughout the fieldwork I sensed a continual struggle to have the research goals understood by my translator, which was due to more than linguistic differences. She and I had little in common in respect to our lived experiences and I felt that these differences posed a problem in creating a common understanding. I formulated the questions and there is no guarantee that the Arabic translation retained my intended meaning. My most useful assistant and cultural informant was my Arabic teacher. Although our ascribed status sets differed, we had comparable achieved status sets (Linton 1936). She and I had had similar experiences, in that we were professionally-trained workers with higher education who were well-traveled and had lived abroad. Basically, we came from similar class positions and had similar social status. She was able to describe cultural behaviours in a way that I understood.

The ability to conduct research and study individuals is often actualized through elements of power in terms of who has it, how it is used and for what purposes (Wolf 1992). "When the Western anthropologist first strolls into a third-world village, she is a walking symbol of her native country's power, assuming ... she is white and accompanied by the boxes bristling with modern technology" (Wolf 1992:133). It must be recognized that my position as a researcher is embodied with unequal power relations and that those whom I interviewed likely were reacting to my global position of privilege as compared to theirs. I was grossly uncomfortable with this obvious

power divide, and made attempts to mitigate it. Although, it was never acknowledged that I needed my translator, driver and interview subjects. Without their co-operation, there would have been no firsthand data. I asked my translator how she thought my status could have altered the responses. In her opinion, people wanted to be friendly and by answering my questions they believed there was a potential for further aid money. Another concern was the “dual responsibility” I felt to the final audience (in this case my academic supervisors and the university) and to the informants (Wolf 1992:137). An openness to my research methods and data collection was just one aspect of this.

It should be noted that I didn't record the interviews so they are all filtered through my shorthand notes. The tenses switch back-and-forth because I am speaking to my translator Nihad about the interviewees. At times, the grammar is painful but that is either how it came out or how the shorthand reads. Towards the end of my interviews I tried to occasionally capture verbatim what Nihad said more as an experiment to demonstrate how the dialogue was being conveyed. At other times, I am actually speaking to Nihad or thinking, which is demonstrated by parentheses. Nihad was not present for the 'expert' interviews as these were conducted in English.

Also the names of towns and people are transliterated from Arabic to English and will therefore vary in the spelling. A waypoint GPS reading of each site was taken so that the location will be possible to re-visit.

Field Notes Unaltered

Household #1: Located at Turkmenia in Faysaliyya

Household Composition: Maid (f), mother-in-law, kids 1 female and 1 male

I photographed the cistern outside, two stones holding the lid down, Josef Aboulabrad, our host from the Municipality of Faysaliyya, asked at the door if we could come in. We took our muddy shoes off at the entrance and sat on with legs on the floor mats. Nihad introduced my purpose and the maid went and got the mother-in-law because she herself had only lived in that house for two years and had no memory of the project. Nihad reintroduced me. The old woman had very dry hands but a kind and gentle manner.

Was the cistern here before Project Rainkeep (PR)? Yes it was already present.

What did PR contribute? The safety lid and they built the trough for animals to drink from.

Was PR a good thing? Yes, it was a good thing because it protects their children.

How did they find out about PR? Neighbour heard about PR and went and asked for help and told PR that their neighbour needed help as well.

Is the cistern the main source for water? Yes, for people and animals.

What is the water quality like? It is filled with piped water, so the quality is good.

Does it catch rainwater? No never, rainwater is dirty.

How many families use the cistern? We will share with our neighbour if they don't have water.

Are your neighbours in your family? Yes, we are all in the same family.

How much water does your family use? A filled cistern will last about 20-30 days in the summer and longer in the winter.

How do people survive with water-shortages? They wait to do the chores like washing until the water trucks come.

When does the water truck come? Have to go and order water from the pumping station at El-Larish. This is where the water trucks fill up on water from the ground.

How do you feel about foreigners working with PR? Grateful.

What about the Iraqi engineer? I heard he made some mistakes. No, his work was good and there are no problems.

In the future, would it be good to have another project? Yes, this would be a good thing.

When do they have water-shortages? From the end of May to the beginning of October.

The water gets pumped every Wednesday. Men are responsible for ordering the water – that is men's work, women can't go there.

Who takes the water from the cistern? Woman. Every year the family grows so there is a bigger need for more cisterns.

How many families use this cistern? Four and they have one old cistern here and they asked for help from PR but they said "their work is done here". People don't have a lot of money so they need help.

The water system is from pumped groundwater (El-Larish) to cisterns – rooftop tanks – pipes in the house.

How deep is this cistern? 7 meters. Water quality is good because the water is warm in the winter and cold in the summer, must have something to do with nature.

Tell them that they can ask me any questions. The women laugh. The interview is over.

#Household 2: Located at Turkmenia in Faysaliyya

Household Composition: Mother, 4 sons, daughter-in-law

Other: This cistern had less water and the trough was broken, no stone to hold the lid in place.

Cistern is used for cleaning and animals, they don't use the water for drinking because the cistern is not clean enough. Things fall in like stones when they open the lid. The rooftop tank is used for drinking water. Sometimes we drink the water in the cisterns if there is nothing else.

Doesn't remember PR so well because it was 10 years ago (the second oldest son says, he was only a teenager then as he points to one of his younger brothers).

Was PR good? Yes, it is good for the children's safety and keeps objects out (the lid) and the trough building is good for the animals.

What did they use before PR to cover the cistern? They bought covers like a piece of metal to protect the children. Best thing about PR? Yes, main thing was the lid and trough.

How many families use the cistern? Four to five families and they allow others if they have a water-shortage.

How is it shared? Houses around the cistern can use them and across the street the same for them and their neighbours.

Is PR a good thing? Yes.

Do all the neighbours have cisterns? One used to have an old cistern but it is covered now. Neighbours don't have cisterns. One neighbour has a new cistern that he made two years ago.

ADRA promised better cisterns for people and animals in the future but never came back and didn't do anything. ADRA promised pumps from cisterns to tanks and troughs for the animals.

Are you mad at ADRA? No, his grandfather had hope for him and his neighbour to have pumps.

Why did ADRA do this? We are grateful but don't know why they didn't come back.

He suggests that someone should come back every five years.

Anybody have any questions for me? Yes, what is your name?

Water is cold in summer and warm in winter, this is good.

ADRA contributed the lid and trough and made the family dig (I try to explain sweat equity, which Nihad finds weird)

Do they think it was weird to have do dig? No, they think it was a good thing.

This cistern is forty years old and was made by exploding a hole.

Does the cistern collect rainwater? No, it is too high off the ground to collect rain.

Household 1 had no men present and the older woman spoke freely while household two the mother needed more prompting and it was the two oldest sons who spoke the most. What I notice about the conversation here is that both men and woman speak. The conversation seems equal in time and voice. Nihad has no problem taking me places and describing our purpose. The municipality was quick to supply us with one of their staff Josef, who towards the end asked for

my address, which Nihad asked me if I wanted to give it out to him. She said that she wouldn't give out her address to anyone other than family, that I couldn't give it out to everyone that I meet. So I listened to her and said no, tell him I have no address, that I am a nomad, that I am Bedoiun. She laughed. But Josef pressed on and asked for Labianca and where ADRA's main base is so I gave him Labianca's card (in the car) and said that ADRA is based in Canada. Josef said that Canada was also helping to take care of sheep in Faysaliyya. We tried to find two cisterns in Al-Yusra but didn't. Was told that they were behind this hill, after first walking up a hill, what we found were cisterns but they were not restored by ADRA. They were carved right into the limestone. One of them was a HUGE underground cave that had we fallen in.....

Some common themes were the willingness to share water with neighbours, the temperature of the water being warm in winter and cold in the summer as an indication of good water quality, numbers of families per cistern was the same, being grateful for PR, and cisterns present before PR.

Questions for myself – how is neighbour defined? What is the family unit? The brothers laughed when I asked if their sister-in-law was their sister.

What is my role in these homes? The oldest brother in household 2 seemed to be requesting me to get in touch with ADRA, which I offered to do but I had Nihad explain that I can't do anything – I have no wasta!! Wasta is a concept that elicits shy giggles from people.....don't quite understand why or what this is about.

The second oldest brother of household 2 says he wants to go to New York but says no money, no money chimes his younger two brothers.

Place: Hamed Bakir, World Health Organization, Amman Jordan

Setting: His office, I came 40 minutes early but only had to wait one minute. He spoke to me for about an hour, gave me a contact, and mentioned that I could go up to WHO library on the second floor. When I asked if he minded that I record the interview he said that he did mind, therefore, the following information has been rewritten based on my rapid notes that were taken during this lecture –style interview.

What is your educational background? Are you Jordanian? I am a civil engineer and I did my postgraduate degree with a focus on water in Britain. No, I am Palestinian/American or American/Palestinian however you say it.

What is Amman's main source of water? It is groundwater, the Jordan River..I wish to reframe from answering that because I do not want to give you incorrect information but I can give you the email of a friend who works in the Ministry of Water and Irrigation. She might be able to answer your questions about Jordan. I work on the regional area not specifically Jordan. Water-scarcity is a threat to health and that is our concern at WHO. In 1993 WHO was the first organization to look at water-scarcity in this way and then we held further conferences in 1996 and 2001 and 2003. We started talking about demand management then, which was a new idea for people. The "missing link" in water management is demand water management, which includes efficient use and allocation of water and environmental protection and pollution control of water.

When did Jordan start using demand management? WHO focuses on the region of Eastern Mediterranean that runs from Morocco to Syria to Sudan and includes twenty-three countries. What I could say about Jordan would be things that I have observed and is my opinion not facts.

In your article you mention some of the demands on the water supply – could you expand on those such as rapid population growth, urbanization, and socioeconomic development? I have

read in other articles it discussed that rapid population growth is related to the American involvement in Iraq and the need for people to return home or leave. I would be especially interested if you could expand upon the definition of socioeconomic development...This is what I call the three A's – Assessment, Analyse, and Action. There are underlying causes, structural causes, and water-management driven causes. (He tells a story about a child with diarrhea to illustrate the point of levels of analysis and action...the point is a bit lost on me...). Traditionally, water-management has been premised on the engineering idea that “we want” and okay the requested amount is supplied. This is what I call the “supply mentality” – you need more water and I give it to you. Now, there is a limit to the amount of water available which is affected by climate and geographical conditions, which the Gulf area can't do anything about so I tell them to forget about it because it goes beyond the control of water-management and population growth also goes beyond the control of water-management. Socioeconomic development changes due to health improvements, better education, and longer life expectancy – I call these structural causes. We can't deny a country wanting to grow and develop and expand their economy. There are enough people working on these things and public awareness. What I am talking about is management-induced conditions. The individual's consumption in the home means almost nothing. The domestic user is a small piece of the pie and doesn't matter that much. People are often wrong about that. Fifty percent of water waste is lost in the distribution system through leaky pipes, also water is significantly lost in industry and agricultural practices. There is a “water budget” that looks at water allocation for the three main sectors of domestic, industrial, and agriculture. This is an ad hoc distribution, not planned, and nobody knows why. If you look at water as money you have to ask who is bringing back a profit? If you give agriculture 70 dollars and they bring back 60 then the country is losing money but if you give 20 to industry and they bring back more then...but you also have to consider the social benefits of those who don't bring back more. You have to give to the sectors that are using the water more efficiently and give better returns to the economy. You have to also consider pollution as eating away at the resource. That is why pollution control is very important because it is no good if the water gets misused by pollution. People tend to use more water than they have, that is a problem. Supply management deals with structural, ie natural, conditions whereas demand management

deals with management-induced causes. Often people think that conservation of water is demand management but that is wrong. Conservation is a part of demand management.

Thank you that was a very good explanation. Basically, management-induced conditions lead to water-scarcity – water-shortage – water-stress, which leads to loss of development and to loss of health.

Where does tourism as a sector in the water budget fit into? It is of course better for the business if the tourist conserves water but “commercial applications” are making money. I think that there should be “no cheap water for tourists” – if they use they should pay for it. For example, if it costs 1 dollar per cubic meter the tourist is charged 5 dollars per cubic meter.

Have you seen improvements in the region with the practices of the largest water users, ie, in irrigation and leaky pipes? Accepting demand management took time. In 1998 I was invited to speak at a conference about Integrated Water Resource Management about the Gulf States. I decided to change my talk when I noticed in the program that the focus was on the resource and how to get at it rather than efficient use. I said that they needed to change right now at this conference. I think lots of governments are changing and making progress. In 2004 the Jordanian government sponsored a conference on water demand management.

Was the WHO responsible for starting the discussion about water demand management? No, the idea came from other places but the WHO has had a hand in helping to promote and define demand water management theory but the WHO is not the brainchild of it. The WHO is not a water-management agency, their concern is with health.

I have one last question. The project I am evaluating, Project Rainkeep, which was sponsored by ADRA, a branch of the Canadian government, worked on restoring cisterns. They felt it was important to have a verse from the Qu’ran inscribed on the side of each restored cistern. I have read a lot about the conjunction of Islam and water demand management theory; does the WHO

consider the principles of water use in the Qu'ran important to water demand management? No. Islamic, Christian, Jewish, Hindu water-management approach is not about religion. I am speaking personally and I am a Muslim myself. Islamic teaching doesn't harm nature and this may be the only religion that talks about nature in a practical manner and because Islam arose from the Saudi Arabian Peninsula where the climatic conditions are very harsh. Islam doesn't talk about water-management, or child protection, or quitting smoking, or anything like this but there are of course "religious channels" to communicate through about these things. No, there is no such thing as Islamic demand water management theory. I was asked to speak at a conference sponsored by the Canadian government about Islam and conservation and I said no because I don't believe it. The promotion of demand management is about management. In summary, demand management is about asking...someone says I need ten trucks of water and you ask why? Do you have a garden? Ok, you don't need the grass so we take away the water for that. Do you recycle water? Do you have water-saving appliances? It is the same if a farmer asks, for example, to grow bananas and wants 100 cubic meters. We ask is there a market for this? This is a feasibility study. Question the legitimacy of the use of water that is demand management.

So is desalination seen as supply management? Yes. But that doesn't mean that you can't develop more resources under demand management but you have to exhaust all the current resources before you develop more new ones.

I thanked him for meeting with me and he said that he wished he could be of more help!!

My thoughts about the interview: market? Feasibility? Water is money...I had to put aside my values and my politics in order to stay open to listen to Hamed. He explained things well and I feel like I have a better idea but I also feel like since he works on the regional he couldn't talk about the local, which I feel is the typical approach for big institutions. It was good to have some of my beliefs confirmed but also disappointing. He is positive that the situation is improving but it was also interesting that he only wanted to focus on water demand management and not the structural factors....I would think that would expand the knowledge but I guess having a simple

equation water = money is what works. I hope his Ministry contact pans out but after today I feel like I want to talk to some social activists!! Demand management is important and yes the Gulf has to work with what they have and I agree with this but still the mention of the market in conjunction with the importance of water doesn't bode well with me. A comment about the fieldnotes is that he spoke very eloquently and my chicken scratch does not do what he told me justice.

Household #3, Located at Al-Fayah, further down the road from Al-Faysaliyya

Household Composition: Three women, one teenager (f), three kids

Setting: We were approached by the teenage girl and she asked and we were invited in to sit in the entrance of the house. Served my first glass of rainwater tea!! Was very good and fresh, in fact, so good that I drank two glasses. Nihad introduced me. Note to self – get Nihad to type out in Arabic what she says about me. Midway in the interview we are offered breakfast but decline. I take Nihad's cue to decline but then when I say no she immediately asks if I am sure.

How did you here about PR? ADRA came here by themselves. The cistern was a disaster before PR.

The cistern was a disaster before PR? What was wrong with the cistern? It was not safe for children and it wasn't clean.

Did it collect rain before PR? Yes.

Now does it collect rain? We clean it every year, collect rain, and use the water for drinking and water for our trees.

How much rain is collected? Depends on the rain, If good, the cistern fills up.

How big is the cistern? 20 meters wide and twelve meters deep.

Is the cistern filled up with piped water? If the rainfall is not good then we use piped water.

Do you prefer piped or rain water? Rain. Rainwater tastes better.

I have never had rainwater! This tea is made from rainwater. This water is very clean.

How many families use this cistern? Four, all brothers and we allow anyone passing by to take water.

Hum, this is something I hear a lot. How often does this happen that a stranger takes water? Often, people are passing by often but more in the summer.

One woman, teenager, and kid leave. They had to go somewhere. Two women start talking.

The water is warm in the winter, this is good.

Why is this? Because it is so deep in the ground.

I tell them that they can ask me anything (they don't, and this is my attempt to demonstrate dual responsibility to my informants and the research ethics of the university).

Do they know where the other cistern is? Yes, close to here.

Are they a different family? Yes, another family.

The cistern is better than before because it is safer.

Why? Before ADRA the lid was made from stones then ADRA came and replaced the lid with an easier one.

Are they happy with ADRA's work? Yes, they are happy. It will be good if ADRA does more work in the future.

Do they need more cisterns as their families grow? They are satisfied with this cistern. It will remain the four families here as one gets married they build a new house and they have a need for their own cistern then.

In collecting the rainwater they can't open the lid for the first and second time when it rains because it is not clean. You have to wait until the third or fourth time it rains to collect the water. (I clarify. The rain washes the area around the cistern which cleans it).

Maybe this is a weird question...How much water do you drink as a person? As an individual? They can't answer how much for one person. (Nihad suggests asking about for the month. I explain that where I come from everything is measured, which she translates to them). Maybe one liter, five liters for tea for the household per day.

They mention that I can ask anything.

What type of farm do you have? Olives and grapes.

What uses the most water? Olives.

(Nihad says she wants to ask a question) Was ADRA good? Yes.

Everything about ADRA? Yes, but they only made the lid.

Not the trough? Yes, they did that one too.

But it is so short. This is because this used to be the lid before and the other one for the sheep (I don't quite understand)

Since you said I could ask anything, is it weird for me to come around and ask questions since PR was ten years ago? At first but when Nihad explained that it is research then it was okay.

Notes to self: I switch the tenses from you and they in the notes because it will all get changed in the translation through Nihad anyway. I asked her to ask "them" something and she says either "they" or "you" back to me. It went well. Very cute kids again both the boy and girl. The one woman inquired if I was married, to which Nihad replied no and I added no, not yet. These last two women were married to the brothers, which I clarified through Nihad that it is normal for the women to leave their family house. I didn't have any strong impressions from this interview. Interesting how water-sharing is ALWAYS mentioned after I ask how many households/families use the cistern. There must be a relation. I need to start asking about the Qu'ran inscription. Thus far it seems like PR restored cisterns for one family set and then their neighbour. I commented to Nihad about how great it is that everyone will talk to me and she replied that Jordanians are like that but especially people in the village. When we were driving back to Amman, Feeraz asked about my day as he had asked about the previous days when I started this morning. I notice that Nihad calls this "our work" and says our work is good now, which I agree with. I want her to feel active in this process. I also notice, maybe now that I am reading Fernea's book, that conversationally both genders seem equal but that Feeraz is given 2.5x the pay of Nihad, plus I noticed that she slipped him money for the gas today, and she gave him most of the green pepper and more of the yogurt sandwich. She shared her food with me. Hum...what is at work here? Inequality or just the idea that men eat more?

Place: At ACOR an interview with Basim Aziz, former director of ADRA Jordan, which had supported Project Rainkeep

I attempt to get an understanding of who he is by asking a bit about his educational background. I ask if I can take notes but even though he says yes he watches me as I do so.

We talk about the beginnings of the project. He says that USAID denied helping this project because they were worried about how the project would control pollution and how could they guarantee that the people would not use the cisterns to fill up with pumped water. He says it straight out – “The project didn’t succeed”. USAID was right. The people used pumped water and then they started using the water liberally and using more than they needed. They never cleaned the cisterns. There were so many negatives with the project.

What was positive about the project? Well before the people used to collect water in barrels and with the project they used cisterns.

I am trying to find the sites but there is no information...yes, when ADRA closed in Jordan by law the Ministry of Social Development took the files and the project director was a civil engineer from Iraq lives in New Zealand now. I didn’t go to more than one of the sites myself.

(He looks over the list) You won’t find them in Naiyat because that area is almost empty now. The sheikh we helped is most certainly dead now as I visited him five years ago and he was very sick. I tried to find the cisterns in Bani-Hameda and couldn’t find them myself. I know it was at the end of a village, one was for a school and the other one was across the street. There is another one on the way to Mount Nebo on a farm run by the Arab Woman’s Society.

What about in Ma’in? Yes, it is in the village, on the side of a hill. But you see this was ten years ago and people won’t know unless you find that person. The ones you found in Al-Faysaliyya are the easiest ones to find.

There was a list of 300 cisterns and thirty-two were chosen but some of the problems with the project was that the transportation was pricey and the project director lived in Amman and was hired for three-four months, at a high salary. Plus we needed Syrians to replaster the cisterns because they were specialists in this craft so we had to find the people and we needed to clean

the cisterns. The amount of work on some was more than on others. We had expected owner cooperation and we had the money from ADRA to spend in three months and then the families didn't want to help so they (the project) had to do the cleaning and it is terrible work. You have to come up every five minutes for some fresh air.

So then who started Project Rainkeep? Did it stem from Sten Labianca? No, I would say it was many people, the archaeology team in Madaba discovered that in Roman times the population in Jordan was higher than it is now and they were reliant on cisterns. They had found about 300 cisterns in the Madaba area. USAID wanted ACOR and ADRA to partner but ACOR wanted 42% of the budget. At that time they had applied for half a million so that was nearly 300,000 dollars, which is a lot of money. So then USAID didn't support the project but we had the money from ADRA.

Why didn't people clean the cisterns? They are lazy. And they use them for their gardens and animals. It is women who are doing the work but it is a man's job but the men don't want to do it.

And the project was just for people? Yes.

But I thought also for helping their animals. Yes, also to help their animals.

But not for their gardens. Yes, not for their gardens.

How did you select the thirty-two households from the list of three hundred? This was a pioneer project and we wanted to select villages far apart from one another. If it wasn't a pilot project we would have chosen one village and done the entire project in one area.

You won't find the cisterns. Jordan is a changing country. Let me tell you a story. The sheikh in Huwara told me that I could buy 1000 square meters for 1000 JD and now it is over 50,000 JD to buy land there. Jordan is developing and things are changed here now. If I buy some land and there is a small cistern on it – what I am going to do with it? (snorts). If someone has land that they bought for 500 JD then they won't sell it but if they get offered 30,000 - 40,000 JD then they sell it and move away. I think you will have a hard time finding the people. We know that 90% of village people move away every year so maybe you will find the cistern but not the people.

Yes, that is happening everywhere, in Canada too, people making a profit.

So who uses cisterns? Only in villages? Yes.

Another question I have is about placing the verse from the Qur'an on the cisterns, why was this important? The Qur'an verse reads "We created everything from water". There are three reasons why we did this. Number one – we wanted to show that this was not an American project, number two – the verse speaks about the importance of water to people, and number three – to prevent someone from damaging the cistern by showing who had worked on it.

I have read in Malcolm Russell's report that there were some disputes that arose from the project. After a cistern was restored someone else would appear and claim to own the land and the cistern then before the restoration work had begun...yes, that has to do with land and inheritance. The children share the land and different brothers can show up and claim to own the land.

We have been going to the municipalities to ask them if they know where the cisterns are located...No, they won't know. I would say that there are no files because when ADRA closed the Ministry of Social Development, the minister, said if it has to do with water I don't care. So we had no approval from anyone. There is no file anywhere about the project. There were files with everything – the location, the person's name, etc – but no more.

I personally think what I am working on now with reproductive health is much more interesting. We have four things we do. Number one – we give out birth control, UID's, tablets, pills, and condoms. Each woman is contacted four times personally has a follow-up at six-week intervals by a local woman from the area (I asked how they get the women to speak about such personal matters to a strangers). We work in the whole country in 140 towns. The Qu'ran speaks about withdrawal and we talk to them give them condoms. Number two – preventive breast cancer checks. Number three – Pre and postnatal care, and number four – STD's.

Who funds this? USAID.

He gives me his home telephone number and mentions that his wife is traveling so he doesn't go home before 7:30 or 8:00 pm but if I call and no-one answers then I call back...

My reactions: wow, here is the city/village divide. They are lazy? How does he know how these people are behaving when he only went to one of the sites? I don't get it. Where is he getting his statements from? Didn't like him. He was crisp in his responses although it was great that he come here to see he and he had some juicy quotes. Again, I found that I had to check my politics at the door in order to be able to listen to him. Good to know the problems of this project but I would like to focus on the positives.

Household #5, Located at Libb

Household Composition: Two women, one elderly, one elderly man, and three kids in the periphery to us. This cistern has no trough. We were brought into a lovely sitting room with red plush sofas and pillows. We were served rainwater coffee and rainwater tea. The elderly woman kept getting up and leaving the room.

Nihad explains who I am...and the interview starts. She confirms that it is okay that I write things down (almost seems like this is unimportant and by bringing it to people's attention makes it worse).

Do you remember when the project came? Yes, she was there. They came by themselves and said that they wanted to fix her cisterns. They came with workers.

Was she using the cistern previous to the project? Yes, for drinking.

To collect rainwater? Yes, before and after.

Can she collect enough rain or does she need tanks? Rain is enough. They don't need to buy water. Her neighbour can use the water if necessary.

How many households use the cistern? Eight but only to drink.

How do they get the water out of the cistern – with a bucket or a pump? With a bucket.

It is commented that this coffee is made from rainwater.

How big is the cistern? It is from Roman times. 25 meters deep and 7 meters wide.

Does it get filled up by the rain? Heavy rains yes. The first rain they don't open the lid to clean the area first (the channel here was filled with garbage) and then they collect the rain after it is clean and they leave the lid open until it fills.

How much water do they use? A filled cistern lasts how long? From winter to winter, one year.

When does it normally rain? When it starts raining, hard to predict. (Right, a stupid question gets a stupid answer!!)

What did ADRA fix? The lid.

Not the inside? No, just the lid.

After their cistern was fixed did their neighbours also want to fix a cistern? Their neighbours didn't say anything but ADRA fixed two others in the area. One was next to a school.

Does everyone in the area use cisterns? Don't know. Another family uses a cistern.

Are there pipes to the villages or do people have to use cisterns? There are pipes. Cisterns are only for drinking and piped water is used for cleaning the house and washing.

Is that because they prefer the taste of rain? Yes, it is more healthy and tastes better.

Do you ever have water problems? Nowadays no. In the past there wasn't enough water.

What has changed? Pipes came and the cistern water could just be used for drinking.

Can we ask about the inscription from the Qu'ran – why do they think it is important? No-one can live without water, everyone needs water. ADRA did that by themselves, we didn't ask. It is important because it shows the importance of water.

Did ADRA do good work? Yes they did.

Should they do more work in the future? They like the idea of this work continuing in the future.

They would be grateful.

Household #6, Located at Libb

Household Composition: Two women, an older neighbour greets us, man from the municipality sits in on the interview. They are waiting to clean so the room is in slight disarray. A TV blares on in the background coming from the room next door. We are served tea, which they tell us is made from rain (after they told us that they don't collect rain)

Nihad introduces me and we begin. She says the usual it is okay you can ask anything.

Were they here when the project came? Yes.

Did the project come here or did they go to it? ADRA came to them.

Were they using the cistern before and after? Yes, both.

To collect rain? No, for piped water and tankers. The area is not clean enough to collect rain (this I would agree with as the cistern is RIGHT beside a road).

It has never been used to collect rain? No.

What did ADRA fix? Only the lid.

How big is the cistern? 6 meters deep and 4 meters wide.

How many families use it? Two families and anyone else can use it. The water is also used for trees.

Is this their main source? No, rooftop tank is filled with piped and trucked water.

Are they satisfied with ADRA? Yes, it is good work.

What about future work? They would like this. People need their cisterns fixed.

Do their neighbours have cisterns? Their neighbour has but not fixed by ADRA. They only fixed cisterns alongside roads.

What else should I ask...oh! What about the inscription? They put the inscription on by themselves. She doesn't know why. (I ask Nihad if we should tell them why – I am referring to what Basim said so that people would know that the project is not American...she hastily says no, that would not be a good idea).

Have they ever had water problems? Yes in the past but no problems now because they have pipes now.

Do the pipes always provide enough water? It comes one day a week. It is enough.

How do they know when the water is coming? Is it advertised in the newspaper? No, the water authority tells them. Each town has a specific day.

How many hours does the water get turned on for? Half a day.

Any questions for me? Yes, why am I asking about the cisterns? I explain because my boss asked me to. That he is an archaeologist who had discovered many cisterns and he wanted to help the people of Jordan (here I take on Hilda's advice to say that the project was for the people, which it was!).

One of the women comments that other people would like their cisterns fixed.

What did they use before as lids? Metal but it was not as good.

Did they buy the metal or find it? They bought it in a market.

I suppose it was missing the hinge? Yes, it had no hinge.

Nihad decides to ask- What exactly did they like about ADRA's work? That they put a lid on it. (She tells me that she asked this because the other families mentioned children's safety).

Do they use buckets or pumps to get the water out of the cistern? Bucket.

Oh, one last question. Where does the piped water come from? Larish and el-Walla.

Is el-Walla groundwater? No, it is spring water.

Tell them I apologize for interrupting their cleaning. No, it is okay because we are waiting for the water from the pipes to be turned on.

Oh, Monday is the day for water here? Yes. She ends up by taking me outside and showing me the cistern. She scoops some water up and pours it dramatically back in to the cistern (it was a Kodak moment).

Household #7, Located at Libb

Household Composition: Three women, two elderly. One with facial tattoos. The cistern area is very clean and the only one that I have seen with stairs. The rainwater is collected from the roof of the neighbouring girl's school roof. When we arrive one of the women is scooping out water and pouring it through a cloth into a bucket. There is a lock on the lid but when she closes it she just hooks in the lock and doesn't snap it shut.

We are given chairs outside in the shade, me, Nihad, Feeraz, and man from Libb municipality who had accompanied us all day. The old woman sits on the ground. I try to offer my chair but she

refuses. I try again but she continues to protest so I sit down. I am unsure as to the protocol here, ie, how many times I should offer.

Nihad says you can ask her questions she has already been talking about the cistern. Oh, what did she say? She said that she collects rain.

Only rain in the cistern? They use the cistern for drinking for tea and coffee. And they used piped water to clean? Yes, for cleaning and washing.

Do they remember ADRA? Yes, use only rainwater in cisterns.

Did ADRA come by themselves? Yes, they came by themselves.

How big is the cistern? Doesn't know. It is very deep.

How many families use the cistern? Twelve and anybody in the village who wants or needs water can take it if they need it. But I noticed a lock on the lid....? That is to keep the children safe.

What did ADRA fix? Just the lid. They didn't fix the inside.

Can we ask about the Qu'ran inscription? It is a good thing because everyone needs water and that is what it says.

Did ADRA do a good job? Yes. Should they do work in the future? Yes, they would be grateful for work in the future.

Do they ever have water problems? No.

Tell them they can ask me anything. The youngest woman asks why I am asking about their cistern. I start to explain my boss etc and then I just say to Nihad you know why just tell them the answer (okay, we are both getting tired and this is lazy research but it is true!! Hopefully it doesn't set a precedent for Nihad to quit asking me, which I doubt. She is very good about telling me that I can ask anything and she asks all my questions even if I think that I already know the answer).

I ask Nihad what else we should ask. She says what about the steps? It is because it is high and it is easier to get water from the buckets.

Do they prefer to drink rainwater? Yes, they prefer it.

Do they know where piped water comes from? From the water authority.

Does the cistern ever get filled? Yes, in a good year when the rain comes. They only use it to drink from (meaning that is why there is enough water).

So all that cement work on the cistern was done before ADRA? No, it is ADRA's work.

So it was at ground level before? Yes, they did the lid. (I understand now – lid refers to everything about ground level and Nihad apologizes for not explaining this to me. I say it is no problem).

Household #8, Located at Libb

Notes: The Qu'ran inscription is removed. Nihad says that is because they use the cistern for haram – the toilet. The top is closed off and there is a black pipe feeding into it from the house. We don't interview anyone here. We are tired and they are obviously not collecting rainwater!!

Some of my day's thoughts: Decided to tell Nihad about most of what Basim said but I left out the part about him saying village people are lazy because she is from a village herself and I found this to be such a ridiculous statement. I am also working on finding common grounds with her and surprisingly at the end of the day we got on the topic of tattoos and she said she really likes them and wishes that they were not haram in Islam. I tell her that I have three big ones but I keep them covered here because I know that they are haram and she nods in agreement but then laughingly says to me that I must show her my tattoos one day. I guess what I am starting to feel today is that the patterns of the interviews and responses along with the diversity that exists amongst the participants is appearing. One of the sentences that I find to be prescription is whenever I ask how many families use the cistern a number is given and then closely followed by but their neighbour/family/stranger/anybody can take the water too if they need it. How does this sentiment fit in with Islam? Or is it a survival strategy developed in a harsh climate?

The inscription from the Qu'ran – could ADRA have placed it there because they themselves are a religious organization?

The toilet and haram...I am starting to wonder if my frequent requests to use the bathroom is bordering haram. I have noticed that Feeraz never asks and that Nihad has asked only once and I was surprised.

Household #9, Located at Al-Gyrat

Notes: This cistern was not by a house and across from an elementary school. When I asked the elderly man who had shown us the cistern he said it was owned by a Mahammoud and his brother. I inquired if it belonged to the school (I needed to check because Basim had said that ADRA had restored one in this area for a school). No, it did not belong to the school but to these two men. Who was it for? For the people and the houses nearest to the cistern.

But when we looked inside we found no water but Nihad speculates that this has to do with there being no rain lately. There were two rainwater harvesting holes in the ground beside the cistern that were covered with stones.

Household #10, Located at Al-Gyrat

Notes: This was the first cistern I had seen with a pump. Omrad Breizat, the elderly man, Feeraz, Nihad, and myself with two very small interludes with two different women. No kids but goats in the background. We all sat outside in the hot sun (it must have been close to 28 degrees Celsius). Nihad asks if she can explain who I am (the men are engaged in conversation). I tell her to go ahead. She has no qualms interrupting the men and directs her attention to Omrad.

She tells me that I can go ahead.

Did ADRA come here or did he go to them? ADRA came by themselves.

I have seen many cisterns in this area. Does he know why he was chosen? It depended on how many families were around the cistern.

How many families use this one? Ten and anyone else can use the cistern.

(Goats approach Feeraz's van, start to nibble at the passenger side mirror and door). The goats too? Yes. (we all laugh).

If the cistern is empty can anyone knock on the door of the house to get water from the pipes? Yes, he can help them with water from the rooftop tanker.

Do they use the cistern to collect rainwater? No, the water is piped in.

This is the first cistern that I have seen with a pump. What is it used for? It makes it easier to pump water to the rooftop tank.

There are lots of pipes around – the cistern is not used for irrigation? No, he doesn't have a farm. What did ADRA fix? Lid and cement trough.

Before ADRA was it just a hole in the ground? Yes.

Are they satisfied with ADRA's work? Yes, even though it was easy work the cistern is now safer for the children.

Can we ask about the inscription from the Qu'ran and why he thinks they put it on the cistern? ADRA put it on there by themselves to show the importance of water because we cannot live without water.

Side commentary from the elderly man to me: Jordan is a safe country. Anyone can walk around. I ask about the ferocious dogs. Feeraz laughs and then the elderly man responds that I shouldn't go to Iraq or Afghanistan.

An elderly woman, I think she lives in the neighbouring house, comes over and peeks at what I am writing. She throws out the comment that she had heard ADRA maybe wanted to finish their work. When Nihad asked her where she heard that the woman responded that she had heard it from the people here.

(The men are in a lively discussion)

Where does piped water come from? Wadi El-Haidon – it is pumped from there to here.

Nihad has a question – What do you use the cistern water for? For drinking, washing, cleaning, the animals.

(I realize I am being talked about by the old man when I hear the words ‘bint’ and ‘amrici’...Nihad doesn’t translate).

Is there ever a time when they didn’t have enough water? Yes, they had a problem two – three years ago because there was not enough from the pipes.

They don’t want to collect rain? Rainwater isn’t enough if they want to collect it as it is too irregular. There are three other cisterns on the property but ADRA didn’t fix them. Nihad explains that they probably leave the cisterns open for collection in case there is rain and if no rain they have the cistern that ADRA fixed.

(we share Arabic coffee from one cup, Omrad going around to each of us individually)

Are there other cisterns around here? The elderly man responds that there is one in El-Wasiyya just before we enter Al-Gyrat (this does indeed turn out to be restored cistern but not one done by PR).

And a trip to the bathroom ends with the wife of Omrad inviting me to stay with them.

My thoughts: It would be an interesting experiment to test out the water-sharing strategy and spend the summer months going through villages asking for water...I think that we were close to one of the other sites but Feeraz wouldn’t go because the old man told him that there were no cisterns there, that wasn’t the town. I might try and push it but it is also so far away, more than 1.5 hours from Amman so it may not be worth the hassle. HUNGRY!!! Celebrating American Thanksgiving now at ACOR.

Household #11, Located at Dilat Amteyrat

Notes: A teenage boy approached us when we got out of the van. Then a younger boy came over and a woman. It was the woman we spoke with. Feeraz was there too. We did a rapid-fire

interview around the cistern with the sun beating down on us and yet another chained up dog snapping away, eager to come over and attack us (in my opinion)!!

Nihad has a conversation with the teenage boy and finds out that the water in the cistern is rainwater and piped water combined. The cistern is 10 – 15 meters deep and is used for drinking and goats. To my untrained eye, I think that there is little water in the cistern.

Nihad asks me if I want to start and I tell her that it is best she describes me and my work first to the woman and asks if I can interview her. She does and I start...

Did ADRA come here or did they go to ADRA? They weren't here when ADRA did work.

Does the cistern belong to that house? (I point to the house she came out of) No, it belongs to their neighbour. The owner is Ahmed Arhyat. (Nihad says his last name many times before I manage to spell it). But then the owner sold the cistern to someone else who doesn't live here anymore.

So this new person just owns the cistern? And the land.

He lets everyone use the cistern? Yes.

Who fills it up with piped water (I refer to which household). She does.

Does she know where the water comes from? El-Larish.

Do women or men order the tanked in water? The men. (Here Nihad interjects that the teenage boy told us the wrong information that it is not piped water that is added to the cistern but tanks that are trucked in).

Do they ever not have enough water? Their cistern is almost empty alot.

How often do the tankers come? Every 20-30 days one tanker.

A tanker fills up the cistern? No, about halfway.

Is it a bad question to ask what that costs (I ask Nihad. She pauses and says no they mentioned the tankers so not). 20 JD (approx 200 NOK/\$40 CDN) for one tanker.

How many families use this cistern? Her family.

So not that house? (I point to the house that is also close to the cistern). No.

Does she find the water quality good? She says that because it is deep the cistern is not clean and it becomes mixed. So they wait until all the mix goes down and then they can drink the water.

So they don't use anything to filter it? No (the woman herself says no and laughs).

I ask Nihad if she has anything she want to ask and she says no.

Is there anything the woman wants to ask me? No.

The interview ends with the usual offer of tea, which Nihad declines as we have work to complete today. The teenage boy starts to scoop out some of the water with a bucket at the end of a rope.

Household #12, Located at Dlilat Amteyrat

Notes: There was no one around this cistern and there were no houses. There was some new construction close by and I wondered if there used to be a house there? I don't understand why ADRA would fix this cistern. There were two collection holes on the ground but the hole closest to the cistern had a big pile of donkey dung. There was water in this cistern but no-one come out to talk to us while we were looking at it, which makes me think that there was no owner or user in the area. The lid was gone and in its place there was a sheet of metal and two stones. The trough seemed a bit larger than the others and was approximately three meters long.

Notes to myself: A distinction is made between piped and tanked in water...I wonder how often this was misunderstood at the other sites. I have requested to go back to El-Larish as I would like to speak so someone who works there, although, the site looked unmanned and as we drove back into Amman today we passed two water filling stations. The first one I noticed had only one above-ground tank and the second one had many hoses and a row of trucks filling their tanks. I have also noticed many times before the agricultural cisterns that are above ground pits, sometimes lined with plastic and pipes hanging over the edge. There were lots of cisterns in this area today.

Five more households are interviewed but as the themes were appearing to be quite similar I have extracted some of the conversations.

Nihad and I stand on one side of the cistern while Feeraz conducts the interview (I am fine with this as I want them both to be involved....only later as I get dropped off does this work against me as Feeraz uses this as an argument for increasing his pay as he is doing more work with asking and driving far. I explain that some days we quit earlier so that it balances out but I ask Nihad to get an amount out of Feeraz, fearing the worst. He just wants for gas...an extra 5 JD (50 NOK/\$10 CDN) so I will give him an extra 10 JD (100 NOK) to keep him happy – hopefully! As I get out of the van I hope that I handled that situation correctly).

A man comes out and a kid to talk to us, this is the new house of Umm Abdullah, the woman's name we were using to find the cistern. I am amazed that we find it here as this is a large suburb area of Amman. This is also a weird location as it is quite far away and different from the other restoration sites. Turns out that a road is being built through the path of the cistern so it is not used. The trough has already been taken away and replaced by a ring of stones. When we look inside we find a ladder, a helmet, and an odd assortment of unidentifiable junk. What makes it possible to identify it as ADRA'S work is the inscription from the Qu'ran.

We speak with an elderly woman while standing around the cistern. A kid comes over as well and Feeraz goes back to his van. The woman goes to open the cistern but it is firmly tied shut. There is a space between the lid and the cement encasement. I don't see any collection holes on the ground, which I am mildly glad for as the area has mud and garbage all around it. When I asked to take a photo at the end of the interview, the elderly woman swept away some of the mud with her bare hands and then posed! The first time anyone has been willing to be photographed on his or her own initiative.

It looks like it is water delivery day for this area. The olive trees are glistening. At first the cistern appears to not be attached to any household and we wonder the purpose of fixing it. Two camels

graze in the background. Feeraz wants to check with the house across the street if they know who the owner is and they do! As I jump out of the van Nihad gently tells me to pull down my shirt....An interview is done with the elderly woman and she is the most animated talker we have met thus far. The interview is conducted in between pauses of her long monologues. I feel like I have to let this one just run its course, especially considering her dissatisfaction with ADRA. She mentions that the cistern is not good.

There is a long discussion and Nihad tells me that in the past they used to drink the water from the cistern but when the pipes came they stopped using it. They used to have sheep but now no because everyone is busy with their work and don't have time.

Before ADRA the cistern was good but the worker who did the work is not good. What did he do wrong? The lid is not good and they did not use enough cement.

My thoughts: Nihad is very good about just translating what I want and not answering the questions herself, which I have heard can be a problem with translators. This makes up for her potential language limitations. I feel bad about the wage discussion I had with Feeraz yesterday. I asked Nihad if everything is okay and if he is mad at me and she answers no, Feeraz is a good man...I tell her that it is hard for me and I want to be a good boss and she says yes I am a good person so I should worry but it seems as though she doesn't want to discuss this any further so I drop it.

The discussion strays away from water (as I feel like I have nothing else to ask) and leads into my marital status. Upon hearing that I am not married the elderly woman wonders why I am not married when I have such a good face. She offers to marry me to someone in the village. (we all laugh). The maid also says that I have a good face.

Do they think in the future there'll be enough water in Jordan? (Nihad tells me good question while Feeraz jumps in to explain and discuss the question). He thinks in the future there will be less water.

Do people see the government responsible for providing water? Uh...(oh-oh I am treading on politics and I can tell this is a more sensitive topic as there was a silence after the question) the government is responsible for water and it is their job to bring water but if Jordan doesn't have enough water naturally what can they do? (Nihad asks if I understand her use of the word natural). All the piped water comes from the water authority.

Feeraz and the brother discuss water shortages in Jordan as being a problem due to an increasing population. (Nihad and I discuss the role of Israel taking more than their share of water between Jordan, Syria, and Lebanon. I tell her that is the discussion outside of Jordan). I ask Nihad to ask if they blame Israel for taking more than their share? (Nihad explains the question. Feeraz jumps in the discussion too). The eldest brother answers that yes this is one of the reasons. I ask Nihad that she explained to them this is what we hear outside of Jordan? (I want to make the politicized discussion seem innocent – it is – but I am worried people might think that I am spy, as they might in Yemen, according to Eirik).

Feeraz talks about Jordan's lack of sea and coastline – the Dead Sea is unusable and the Red Sea is too small.

The eldest brother mentions that another problem is the climate. It is too hot, last year there was rain at this time but not this year.

We leave and I ask Nihad if it was okay that I asked about the government. She tells me that it is sensitive and people don't always like to talk about it with strangers.

Location: Wadi-El-Seer at the Ministry of Water and Irrigation, Dr. Nawar Sunna, director

(This interview was a bit messy as I spent the first bit trying to sort out who she was and what she could answer)

She also tries to sort me out. Like Bakir Hamed she asks if I am doing my PhD. I briefly explain PR and the interview process. She is interested and tells me how her focus is wastewater and cess pits. I show her a photo of a cistern on my camera. We understand then at we are talking about two different things – water management and wastewater management. I tell her that Bakir had recommended her so we try to muddle through what she can answer. I ask her for an organization chart after she gives me a breakdown of the ministry and, as I haven't yet, I ask if I can write things down since I know that I will not retain this information.

She tells me about a project they have through MEDA and USAID that is teaching school children about wastewater management through the implementation of cesspits at school in a focused area.

What are the main sources of water for Jordan? Groundwater and the only renewable groundwater source is the Disi aquifer, which supports Aqaba and agriculture. The Za water treatment plant is the only surface water.

How much water is available for drinking? (She gets out the water authority yearly report) two eighty-seven million cubic meters in product and two seventy –five million in distribution.

What about the areas that are not provided with piped water? Are there plans in the future to provide these areas with piped access? There is 99% coverage in Jordan and some of the areas fall outside of the district area and there is the problem with transport as some places are very far away (Nihad and I nod in agreement!). She continues, there is the priority to provide everyone but not everyone lives there legally. Some people build illegally. These people rely on tanked in water.

What about the Water Information System? This is the water master plan yes and is used to speculate into the future the water use until 2015 (I think she said 2015).

So this system allows for the water authority to regulate provision? No it is not operational, it is used for policy-making. Each governate is responsible for the extraction and distribution. We are working on a plan to digitalize all the information and combine the master plan with the operationalize aspects of each governate.

So when I have seen the water filling stations each governate is responsible for them? Yes. Some of it is the private sector that we have given licenses to if they meet the health standards.

Ah, so your department issues licenses.... Yes. We are not giving any licenses for private wells. Sixty-five percent is used by agriculture and we are trying to reduce this number by implementing wastewater treated water to be used in agriculture

I worked at the water district in Norway this summer and they definitely do not use demand management. Yes, they have enough water.

I have discussed demand management theory with Bakir Hamed - is that what is used by the water authority? It is managed from a different department than here but yes that is the policy. How is water delegated for each sector? The fees increase with increased usage, they are per cubic meter. What is it that the individual needs? (she asks herself). I think the number is 40 cubic meters a month.

So are the fees based on their intended usage? Yes, agriculture is the most expensive at 1 JD (10 NOK/ \$2 CDN) per cubic meter.

Domestic is the cheapest? Yes, drinking water is the cheapest. We try to uphold minimum health standards.

Do you agree with the water-scarcity index of 1000 cubic meters per person per year that is set by the United Nations and World Bank? Or are these figures set to western consumption patterns? Yes, I agree with them. These figures are very low. There is limited water here. The households only get water one day a week and they don't have very much that they can use.

We are developing a new wastewater plant for agricultural water in the Jordan Valley.

Are there any plans to use wastewater for drinking water, I read an article that Saudi Arabia has started doing this. No, there is no plans for that.

In agriculture do olives use the most water? No, they don't take much. We are very glad for the olive trees because they can survive on rain from five years ago. What takes the most is bananas and fruit in the Jordan Valley but it is important to have an agricultural sector.

From outside Jordan the lack of water is a big focus, is there any international support by foreign involvement to develop water projects in Jordan? Yes, the three big ones are GTZ, German, USAID, and JAKA, Japanese. The Canadians through IRDC but they are mainly interested in agriculture. The biggest donors are the first three.

I thank her and we leave.

My thoughts for the day: If this project was to be funded once again I would want to focus on this area of Al-Faysaliyya because these people have mentioned two key things: that they are poor and that there are many cisterns in the area.

In terms of how I conduct interviews, I have noticed that it is harder for me to take notes when I am interviewing the experts. I also feel more pressure to continually ask questions. I have to prompt discussion more than when I am out in the villages.

I had two meeting type of interviews. The Canada Fund meeting was helpful in that it was explained to me that the Fund was leaving CIDA and was going to fall under the jurisdiction of the Foreign Affairs department starting in 2006. The new priorities were going to be human rights and democracy and should water be accepted as a human right then the chances were good. Water has been declared a human right by the United Nations. I am to contact the Canada Fund in March 2006.

The other meeting was more of an explanation. Hilda and I watched the water conservation videos produced by the Royal Society for the Conservation of Nature together and I asked her to explain in detail the message. This is what I got.

The main message character is a drop of water drawn in the cartoon format; he speaks with a Lebanese dialect Hilda tells. The first ad in the series sets the storyline. A boy flying a kite in a green landscape quickly changes to a dry, dusty, desert environment. The message is that with this boy there will be a house and with water the landscape will become green. This infers that without water there will be no house = no boy. An Arabic expression is used 'beit bjemar' meaning house with family to convey the connotation of family. This first ad sets up the series. These ads are sponsored by the Canada Fund? Hilda tells me that agency names don't always translate well...hum...nor does most of the language I think!

Man can't sleep ad:

The message - The noise of the running water keeps him awake. The drop of water tells him that the problem can be solved not by ignoring the problem but by installing a seal.

The end of all the ads where the drop of water holds hands with the boy and walks towards the viewer out from a dark and shadowy forest and says: "Think of me and save water"

Toilet flushing ad:

The message - The best way to save water is with a bottle in the tank of the toilet. You will end up saving a tank of water.

Tooth brushing ad:

The message – Why don't you change your habit and turn off the tap. You could save water to brush your teeth for four times the amount.

Dishwashing ad:

The message – Put a plug in the sink. This will save water.

Car washing ad:

The message – The use of hose goes through water for 10 cars and you can get the same result with a bucket for your car.

Lawn watering ad:

The message – It is not good to water your plants when it is too hot out because the water will just evaporate.

When I ask Hilda what she thinks of the ads she says that they are good. She doesn't watch TV so this is the first time she has seen them but she heard about them. She remembers people saying that they were interesting and well planned ads.

I am having troubles sourcing these ads. I have no year, no producer other than the RSCN.

Interview with translator

Date: December 24th, 2005

Location: At ACOR Nihad and her sister, Withaina

How did you describe me to the families? I said you were a student from Norway doing research on ADRA's work with the cisterns.

Did you always mention that I was connected to ADRA? Yes, that you were doing research on their work.

Did the families sometimes ask if I was connected to ADRA? Yes.

Did they all ask this? Yes, every single one.

Did you say that I was working for ADRA. No, not working with but that you were a student doing research for your masters.

Why did they need to know if I am connected to ADRA? Because that was your focus so they should know that you weren't asking about other cisterns but those ADRA fixed.

What was the most important thing to tell them about me? That I was a student and that I was not working for ADRA.

Did me being a foreigner, single, a woman, non-Muslim or a guest influence how people would tell me things? What did any of these roles mean for how I was treated? Was there something people didn't want to tell me? They were not comfortable with the political issues about the Jordan River. That is the only thing that I noticed. Yes, it is because you are a foreigner that is the main reason. It is hard to talk to foreigners about politics.

Do you feel that the families answered me honestly? Would you have gotten different answers if you had gone alone? I think they did. No, the answer would be the same.

What are some important qualities for a person to gain respect in Jordan? I have been told to always accept the offers of tea and coffee, for example. That is a part of the manners – hospitality. You don't always have to say yes, like I said no to the breakfast because we didn't have the time, but people might be hurt if you say no.

Should I have taken gifts with me, like fruit, to the households? No this would have been unnecessary. People need help as you saw, they need their cisterns fixed. This is more important than the gifts. That's why they were welcoming to your research – they need more help. That is also why they are asking about ADRA still doing work. The most important thing they need is help.

Would you agree with me that Al-Faysaliyya is a good area for Phase II? Yes, this area is good because the houses with the cisterns are close together not like in Bani Hamida. I think that maybe they can do more in other areas too.

Did you notice a difference between what ADRA told me and told the villagers? Yes. ADRA broke promises and didn't finish their work. They just left Jordan.

Do you think that rainwater harvesting is important to do in Jordan? I think yes but very hard as it needs a lot of money.

What does it need money for? Ah, are you thinking of cloud formation that Israel did? Yes. No no I think about Israel making rain. Yes, we should collect rainwater. No it is not expensive.

What do you think the water availability will be like in the future? People increase every year. I think we will have little water in the future. There is no solution for the water problem (here Withaina jumps in for the first time).

Are you kept informed about water solutions by the government through the Ministry of Water or Ministry of Irrigation? On TV they tell us that there is little water and that we should be more responsible when using it. I know that we have agreements with Syrian and Egyptian governments to allow Jordan to have more water.

Are these ads to conserve water affective? Do people listen to them and change their behaviour? People in the countryside before the ads acted like this anyway. Not in the cities. In the countryside the water is especially a problem in the summer.

So is Hisban considered the countryside? Yes.

So you both have grown up doing this? Did your mom teach you? (This elicits giggles from them both) Yes, “we live in the problem” so we should be more careful. We have to be. We complain in the summer – we call – but this doesn’t work.

Do people buy tankers then in the summer in the countryside? Yes, sometimes we do.

Tanked water is much more expensive? Every week we buy 6-8 meters of water. This is 10 or 12 JDs.

Are the tankers privately owned? Yes, the government has the pipes.

Are people using more water? (Resounding) yes!! They wash cars, swimming pools. The cities are using more.

Then do you have less in the countryside because of the cities? The cities know that they have alot of water for all the day and we get in the pipes only one or two times a week in the countryside so people in the villages use less.

Is this a source of conflict between the cities and the countryside? Sometimes they think that they more educate, high class. Sometimes they look to people in villages as less civilized.

Sometimes they know specific traditional foods, like mansaf, and think that we eat it every Friday. Truly they are mistake.

So they think everyone eats mansaf? Yes, every day we only eat mansaf!! (They laugh)

But what about water? Do people in Hisban talk about people in Amman using too much water? Yes, everyone knows this.

You don't want to live in Amman? No I see no need. Only in summer when we have lack of water! Who should get more water? Industrial, agriculture, households, or tourism? It should be equal. Ever section needs water and should get what they need. Everything needs water.

According to the United Nations and others, Jordan is defined as water-scarce. Is there a term or concept that the government uses to convey this? (Here ensues a long discussion where I try to explain that water-scarcity is a part of an index that makes it so all foreigners can agree on what is being talked about...I am not sure that this was understood but this is a language/cultural context thing...we proceed anyway). The government tells us to be careful to allow for the next generation.

Do they say water shortage? Yes, all the time. The people in the countryside know this problem. We call this problem "tragedy of water" because we know this problem and are aware of it. We are scared when we hear water shortage.

How do you define a cistern? They are very important, especially for us outside the cities. It is like a support to us especially in the summer instead of pipes.

But the cistern is filled by tankers and not rain? Yes, usually tankers but sometimes rain too.

The cistern is the entire physical structure? Yes, trough, lid, hole.

But in Roman times it was just the hole? Yes. People are starting to use cisterns now again.

Do you have friends that have? Yes, a cousin.

Before that they didn't have one? No, we used to share ours with them.

Would it be a good idea for people to collect rainwater in the cities from their roofs? I don't know. They never use them this way. The rooftop tanks are filled with piped water.

But would it be possible to rainwater harvest from the roof? They don't use it like this. If they want to collect rain they need a cistern in the ground not on the roof. In the ground they can make a canal from the roof and can collect more. The rooftop tank is too high.

So they need a catchment system? Yes.

Does Islam have anything to say about water sharing? Yes, it is very important for everyone who needs water. For me, if I see someone I imagine that I am in that situation.

It is mentioned in the Qu'ran? Yes and the Prophet Muhammad said we should be aware and careful with water even if we have alot. He said that even if you live next to a river and have plenty that you should be careful.

My thoughts: Some great quotes – we live in the problem and tragedy of water in particular. I still always feel like we are on two separate pages when it comes to the meaning as our worlds are so different.

Location: GTZ/Ministry of Water and Irrigation, first Philipp Mageria and then Ali Shubat

Setting: I, of course, went in through the wrong door, which I presume was the ministry of water side. The ambience was shabby, the people all male, and the vibe not friendly for the estranged western female. When I got to the sixth floor a man immediately asked me if I needed help, which I did, and he kindly instructed me and walked me over to the GTZ side, in the process telling me that many people get lost here when looking for GTZ. And then it struck me, that this immediate response to offer assistance is something that I will miss, and that is unique to the cultural behaviour of people here in Jordan.

I explain to Philipp that I haven't been able to look through all the files he sent me because the server where I am staying is so slow. And this is very true. He first asks me to explain my project, which I am getting better at doing and I have noticed that I now use words like revitalization and phase two, almost rolling off my tongue!

I only have five questions to ask you because I know that the link you sent me was quite comprehensive.

To clarify, GTZ provides consultancy and IT database support in the form of the Water Information System towards the water policy making of Jordan's National Water Plan? What role does GTZ play in the water policy? We offer a program approach and have four components that are involved in policy and operational. GTZ is an implementing agency as agreed upon by the governments of Germany and Jordan in accordance to bilateral agreements.

How long has GTZ been in Jordan? I know that they are also in Yemen in water projects as I have a colleague doing work there who has been in contact with your counterparts in Yemen. Yes we have a big water project in Yemen. The Ministry of Water is the newest ministry in Jordan, which came about in 1993, but GTZ has been involved with the other JVA, JWA since the 1970's. They of course have been here since before then.

Is it possible to get a digital version of what you sent me in a more complete version? Is what you sent from the 1994 National Water Master Plan or is it more recent? Well it is from the website and that is what the Ministry says we can give is what is on the website. If you need more information please from a certain volume then please feel free to contact me. This version is from 2004.

Numerous authors refer to unaccounted-for-water (UAW) losses being as high as 56% in Jordan. Is this figure a part of the water budget? This is not a current figure; it is about 47% but even less in Amman. Some governorates it is higher and some lower. This is hard to measure. Yes it is a part of the master plan assumptions. It has to be calculated in as the water that has to be provided and if 47 of 100 of the supply is lost but it has still been supplied in the first place. The planning horizon for this plan until 2020 aims to have 16 or 17% UAW losses but this is optimistic. This is a shared loss. There are already loss reduction programs in Jerash, Kerak, and Amman supported by foreign development.

Does virtual water, food imports, play a role in the policies of the National Water Plan? Could the desire to be food self-sufficient lead to an increased allocation to agriculture? Do you know Tony Allan? He writes about this? Yes, I know Tony. In my personal opinion unfortunately for Jordan food self-sufficiency cannot be reached here. That is a sad reality. Jordan already imports 2.5 times their water availability through food. There are one billion unconventional sources expected to cover the demand. Politically motivated statements like food self-sufficiency is not possible.

When did demand management become a part of policy making? I want to place it in a historical frame of reference – could it have its roots in the green environmental movement of the seventies and then later the Brundtland sustainability commission?

I thank him for his time and leave. My thoughts for the day: The quest for information never ends. I made two contacts today and both of them could have led to much more.

Damn, and this is my last day!

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