

ANNEX C3: DRAFT ESA AND RECORD OF PUBLIC CONSULTATION

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Appendix 1: Environmental Scoping Session

- Invitation Letters and Scoping Session Agenda
- Summary of the Environmental and Social Assessment Study
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1 INTRODUCTION

The construction of the Disi-Mudawarra water conveyance system will affect all of the current and future population in the project area and to a certain extent the natural and the built up environment as well as the status of water resources in Jordan. Towards the end of the environmental and social assessment study of this project, three public consultation sessions on the findings of the draft ESA (second phase consultation) were implemented in the areas of Abu-Alanda, Amman and Aqaba. The following are the main objectives of the public second phase consultation sessions:

- To present to project-affected groups the findings of the Environmental and Social Assessment (ESA) Study;
- To provide the consulted groups with the relevant ESA material; and
- To inform the public that the ESA study will be made available at a public place accessible to project-affected groups and local non-governmental organizations (NGOs).

2 SECOND PHASE CONSULTATION METHODOLOGY

Three second phase consultation sessions were held in Abu-Alanda, Amman and Aqaba consecutively. The aim of these sessions was to inform the community representatives of the areas influenced by the Disi-Mudawarra to Amman water conveyance project, of the results of the water sector assessment and the environmental and social assessment of the project. Abu-Alanda consultation session targeted the areas of Abu Alanda, Khirbet Es-Suq, and El-Quesmeh whereas Amman session targeted Amman, Madaba and Al Jiza areas. Aqaba consultation session hosted the target population of Disi, Aqaba, Tafileh, Ma'an and Alqatraneh areas.

For Amman and Aqaba second phase consultation sessions, the preparations involved formal invitation letters from the Client to attend the sessions at 9:30 A.M. on Tuesday, November 18th, 2003 at Amra Hotel in Amman, and at 10:00 A.M. on Thursday, November 20th, 2003 at the Radisson SAS Hotel in Aqaba. These invitations were circulated to the potentially concerned agencies, NGOs, and community representatives (see **Appendix 1**). An agenda for the sessions and a summary of the study results were sent with the formal letters by fax in order to give the invitees an overview of the consultation sessions beforehand (see **Appendix 1**). For the purpose of the sessions, background material to the project was presented and described in a handout prepared in both, Arabic and English, and distributed at the consultation sessions (see **Appendix 1**).

Abu-Alanda second phase consultation session was scheduled at 10:00 A.M. on Thursday, November 13th, 2003 at Abu-Alanda Municipality Hall. Invitation to the session was done by door-to-door visits to randomly selected residences and commercial shops along the portion of the conveyor route passing through the areas of Abu-Alanda, Khirbet Es-Suq, and El-Quesmeh. The Consultants stopped at each of the randomly selected residences and commercial shops where they presented to the individuals a briefing about the project, informed them about the purpose, the date, and place of the consultation session, and had a discussion with them about their concerns regarding the project especially its implementation phase.

As scheduled, the second phase consultation sessions were held on November 13th, 18th and 20th. In Abu-Alanda, 43 people attended (see **Appendix 1**). The session started with a presentation of the project details and the environmental and social assessment by Dr. Sawsan Himmo project team leader from the Consolidated Consultants. After that, the attendees raised several issues that will be discussed in the next section.

In Amman, 93 people were invited; however, 48 attended from several ministries, universities, non-governmental organizations (NGOs) and companies (see **Appendix 1**). The session started with an opening statement from the Ministry of Water and Irrigation (MWI) representative, Eng. Fayez Bataineh, who highlighted the Ministry's efforts in pursuing projects that would augment Jordan's water resources and assist in meeting the country's water demand. Following the opening statement, Dr. Sawsan Himmo presented a description of the project and the results of its environmental and social assessment.

In Aqaba, 49 people were invited but 28 attended (see **Appendix 1**). The session proceeded in a similar procedure as that of Amman. But after the end of the session, the Sheikhs of Disi area were requested to stay and have an open discussion with the Consultants about their concerns regarding the Disi project and about any issue that they might require further clarification.

The participants in all the areas commented on the various aspects of the project and the likely areas of impact. Those comments are discussed in the section of the "Results of the Second Phase Consultation Sessions" below.

3 RESULTS OF SECOND PHASE CONSULTATION

The environmental and social issues of concern identified during the three second phase consultation sessions are presented below.

3.1 Issues Identified at Abu Alanda

The discussions during the door-to-door invitations for Abu Alanda second phase consultation session revealed some issues that were of particular concern to the inhabitants of the session's target areas. These are summarized as follows:

- Contractor compliance to proper procedures of implementation and construction.
- Issue of holes being dug and left open for a long time without any protection and without providing access roads to pass at places where these holes interrupt entrance into commercial shops along the road.
- Issue of damaging utilities and interrupting the services provided by those utilities.
- Concern that at the end of the construction the Contractor does not restore the streets back to their original conditions.

The environmental and social issues of concern identified during the consultation session discussions were as follows:

- Duration of the implementation period.
- The difference in water level between Disi and Amman.
- Problems faced in Libya during the execution of a similar water project.
- The funding source for the project.
- The total cost of implementing the project.
- Whether the contractor is local or international Contractor.
- Concern towards the fact that the Disi water is a non-renewable resource.
- Whether the Disi project will lead to a change in the water tariff.
- The effect of the project on the Cave of Seven Sleepers area, the Mosque and the people in the area.
- Whether the project is still under study or in the tendering phase.

3.2 Issues Identified at Amman

The environmental and social issues of concern identified during the discussions at Amman consultation session were as follows:

- Whether the Disi project will lead to a change in the water tariff.
- The need to have coordination between the Ministry of Water and Irrigation and the Ministry of Public Works and Housing regarding the route of the Disi Conveyor.
- The date of execution of the project.
- Emphasis on the role and the need for coordination with the Ministry of Environment regarding the Environmental and Social Assessment study of the Disi project.
- Definition of the role and the support requested from the NGOs regarding the Disi project.

- The psychological impact of conveying the Disi water to Amman on the people of the Disi area and whether there will be any compensation or income generation to the locals of the Disi area.
- The study of the combined effect of the gas pipeline project and the Disi water project, since they have the same route.
- The environmental and psychological impacts on the local people in the Disi area because of the termination of contracts for agricultural farms and the consequent loss of work opportunities.
- Benefits to be gained by the residents of Al Jiza area and the locals of Disi area.
- Request to re-look into the number of Jordanian workers employed by those agricultural farms and the economic returns associated with investing part of Disi water in agricultural activities.
- Availability of water after 100 years.
- Impact of mixing the Disi water at Dabouq water tank in Amman.
- Adequacy of the distance between the Disi conveyor and the electricity poles.
- Emphasis of the need to take measures to reduce water loss in the conveyor and distribution network.
- Importance of agriculture for the Jordanians.
- Concern for the sustainability of the Disi environmental and social assessment study.
- Highlight on the benefits of increasing the water quantities supplied to Amman.
- At present, the Disi project is the cheapest way of providing water for Amman.
- The belief that development should be encouraged in the water resources rich areas instead of investing in conveying water resources to areas with water scarcity.

3.3 Issues Identified at Aqaba Session

There was active participation at Aqaba's session and several important issues were raised. These were as follows:

- Request to provide training for locals from Disi area in order to employ them in the operation of the Disi project. Also, it was suggested that the project Contractor allocates a number of annual scholarships for university and technical education.
- To have the wells, pumping stations and any other project structure that is visible within the boundaries of the Rum Reserve designed to be in harmony with their surrounding environment especially that the area is a touristic one.
- The need for coordination between the National Electricity Company and the Ministry of Water and Irrigation regarding the visual impact of the electricity poles to be erected for the purpose of the Disi project.
- The coordination between the gas pipeline project and the Disi water project.
- The long term benefits of the Disi project.
- The addition of one fils on the water bill (Fils of Disi) for the purpose of development of the Disi area.
- The alternative sources of water for the Disi people since the Disi water is nonrenewable.
- Request to provide Disi people with employment opportunities.
- The right of the Disi people to have drinking water and give the organizations the right to dig alternative wells for agricultural activities and livestock.

- Provide shades on the conveyor road for the herders.
- The effect of the project on the quality of the Disi water.
- Issue of land acquisition and who will be responsible for acquiring the needed areas.
- The Sheikhs of the Disi area emphasized their request to have social development in their area.
- Measures that will be adopted by the Ministry of Water and Irrigation to ensure that the Contractor conforms to the environmental and social management plan.
- Whether the Disi project will lead to a change in the water tariff.
- The effect of the project on small-scale agriculture.
- The privatization of the Aqaba Water Authority.

4 QUESTIONS AND COMMENTS AT THE SECOND PHASE CONSULTATION SESSIONS

4.1 Questions and Comments at the Abu Alanda Consultation Session

Q1. What is the duration of the project construction?

- The duration of the project implementation is 4.5 years starting from the end of the year 2003.

Q2. What is the difference in the water conveyance level between Disi area and Amman?

- Water will be pumped from Dubaydeb well field to the control tank at Batn El -Ghoul and then by gravity to Amman. The pumping head in each station is 160 m and the details of the pumps are present in the handouts provided.

Q3. During the execution of the Great Man Made River in Libya, problems were faced with the geology of the land and some changes had to be done to the project route. This necessitated further acquisition of land and compensations to the land owners. Are measures considered in case similar problems arise regarding the Disi project?

- A geotechnical study has already been done starting from the well fields to the water tank then to Amman. But this does not exempt the contractor from his responsibility to verify the geotechnical parameters.

Q4. Who is the funding agency for the Disi project?

- The project will be implemented according to the “Build, Own and Transfer” (BOT). 50% of the project will be funded by the Jordanian Government, who will be guaranteed by the World Bank, and the other 50% will be paid by the Contractor who will own the project for 40 years.

Q5. Why did Libya withdraw from funding the project?

- Libya did not withdraw.

Q6. What is the cost of the project?

- The cost of the project is around 450 million Jordanian Dinars (JD).

Q7. Will the contracting company be a local or international one?

- The contracting company will be international company with a local subcontractor, but the responsibility will be on the international contractor.
- Other projects being considered to alleviate the water shortage problem include desalination and the Red-Dead Sea project.

Q8. Is the Disi water a non-renewable water resource?

- Yes, the Disi water is a non-renewable resource. However, if the water is drawn at a rate of 100 MCM/year, the water will be enough for 100 years. But the project will be operated for a period of 40 years. If the estimates were wrong, it is possible to use the pipeline to convey desalinated water from Aqaba.

Q9. In Libya, the first study of the Great Man Made River project revealed that the water was fresh. However, later on they discovered that it was saline. So what about the Disi water?

- Many water quality studies were conducted and all of them indicated that the Disi water is of high quality.

Q10. Will the cost of water change?

- The Jordanian Government will fund 50% of the project's cost in order to make sure that the water price will not rise.

Q11. What are the impacts of the project on the Cave of Seven Sleepers area, the Mosque and the people there?

- The conveyor route was supposed to pass by Amman-Madaba Bridge and the Cave Of Seven Sleepers. But it was deviated to pass in a small road with small shops and pass around the area of the Cave to prevent any negative impacts.

Q12. Is the project still under study since there is no contractor yet?

- The final design of project will be prepared by the contractor under the BOT contract.

4.2 Questions and Comments at Amman Consultation Session

Q1. What route the conveyor follows and what is the relation between it and the roads for which the Ministry of Public Works and Housing is responsible?

- ❑ Part of the route passes through the desert and another part runs along the desert highway before reaching Amman. Coordination between the Ministry of Water and Irrigation and the Ministry of Public Works and Housing took place since the beginning of the project. Official letters are available and recently coordination was resumed to ensure efficient implementation of the project with the minimal disruption and damage. During the final design of the project by the contractor, coordination with the Ministry of Public Works and Housing will continue.

Q2. The Ministry of Public Works and Housing commented that sometimes water projects pass through urban areas and when the Water Authority is requested to change the alignment, the reply is always that there is no enough budget. Therefore, it is better to coordinate from the beginning.

- ❑ Coordination was established from the beginning of the project in the nineties and will continue. The design drawings are already available at the Ministry of Public Works and Housing.

Q3. When will the project execution start?

- ❑ It is expected to start next year. This project will be implemented using the BOT. The contractors' offers are now under evaluation, once completed a decision will be made to select the successful bidder and the agreement will be signed.

Q4. Representative of the Ministry of Environment commented that there has not been any coordination with the MOE and according to the new environmental law, the Ministry of Water and Irrigation should provide MOE with the Terms of Reference for the project but that did not take place. Why?

- ❑ The Terms of Reference was issued prior to establishing MOE. Nevertheless, The Ministry of Environment was invited to participate in the consultation session in addition to sending a copy of the final draft of the report to get its approval. Then MOE sent a letter stating that it has no objections and requesting copies of the final report, which will be sent as soon as it is ready.

Q5. What is the role of the non-governmental organizations (NGOs)? Will they be asked for assistance?

- ❑ The NGOs were invited for the first phase consultation session and now to the second phase consultation session. The NGOs were informed about the Disi project in order to get their feedback on both positive and negative impacts and it is expected that they will play a big role in transmitting the information to the affected people. Yes, they will be asked for assistance during the project implementation.

Q6. What is the psychological effect of drawing the Disi water on the people of Disi? Is there any compensation for drawing the water from their area?

- It is not expected to have any effects as the population in the Disi area does not exceed hundreds and even if we included the area of Aqaba and Ma'an, these areas use only 16 MCM of the Disi water which represents part of the quantity to be pumped to Amman. The people will continue to get their share and no compensation will be given as all natural resources are owned by the Government.

Q7. It was suggested that it is better to relocate people according to water rich areas and not draw water to where people are living.

- Development and relocation is not the responsibility of the Ministry of Water and Irrigation. The role of the Ministry is only to provide water to the people wherever they live.

Q8. Will the 100 MCM of water which will be drawn from the Disi basin be renewed and what is the geological effect of drawing the water?

- No, the Disi aquifer is non-renewable. If the water is drawn at an average rate of 100 MCM/yr it will be sufficient for 100-150 years. As for the geological effect, such studies are available and no damages were recorded.

Q9. The gas pipeline project will be implemented along the same route as that of the Disi water project. Was the combined effect of the two projects studied?

- The gas pipeline is not implemented by MWI; nevertheless this has been taken into consideration. For a distance of 100 km, both projects will be on the same line. Therefore, coordination between the Ministry of Water and Irrigation and the Ministry of Energy and Mineral Resources took place to identify the distance between the two lines, which will be 20 m.

Q10. The share of water in Amman is a big one. In 2011 the Disi farms will be closed. What will be the environmental and psychological effect on the local people there?

- Although most of the area residents are farmers, less than 10% of the large-scale farms employees are Jordanian. However, the damage caused by agriculture because of the use of the high quality Disi water exceeds the returns from these farms. Nevertheless, the project will try as much as possible to absorb the unemployed people.

Q11. How do the people along the conveyor route in Madaba and Amman benefit from the project?

- The Ministry provides Madaba governorate with its share of water and then the distribution of water to other area is its responsibility. The people will be affected by the excavation works, but we have to cooperate in order to mitigate these impacts as much as possible. The contractor will not start execution unless he is committed to all the environmental safety issues. Providing water to Amman does not mean giving Amman the priority but Jordan financial status is not a good one and it is hard to get funding and that is why the Ministry of Water and Irrigation decided to implement the project in the BOT contract.

Q12. The data on the agricultural companies are not accurate. The contracts end in 2015 and the percentage of workers is not 10%. In the southern companies there are 500-600 employees; 90% of them are Jordanian and 50% are locals from the area. When we came into Mudawarra, it was a desert. But now it is green and gives returns and it saved Jordan 10 billion USD of export.

- The information we got is different from what is stated. Nevertheless, we are ready to meet and check this information and these companies will not be closed haphazardly.
- The agreements with these companies have been signed by the Ministry of Finance. The information available in the Ministry of Water and Irrigation (MWI) state that the contracts end in 2011 and what happens after that is the responsibility of the Government.
- The Disi project is not against investment; on the contrary it encourages it by providing water to the people
- The cost of the southern farms is high because of the high cost of water

Q13. Because of the exaggerated pumping of water in the area, the level of water has decreased. Are the companies of the south responsible for this loss (40 wells)?

- To a certain extent yes, as the withdrawal for domestic purposes is only 16MCM while the farm are pumping more than 75 MCM/year.

Q14. Will the water be available after 100 years? Will the coming water be mixed with that in the Dabouk tank? And how will the water bill be affected and how will the pumping be? Have the water networks been studied?

- The water can be available for 100 years and the contractor will transfer the project after 40 years to MWI. There is an assessment of the pumping and the draw down of the project to reflect the availability of Disi water.
- Yes, the water will be mixed with the water available at Dabuk reservoir.
- The pumping will increase but it will not reach 7 days a week and but there will be a reliability for 48 hours of pumping. Whether the cost will increase or decrease is another issue.
- The water supply networks in Amman and other areas have been studied under separate projects and are currently being rehabilitated.

Q15. MWI declared that there will be an increase in the cost of water. Have the effect of this increase been studied? Why did no the study tackle this issue?

- The willingness to pay has been studied in a separate study and it was revealed that the citizen is not willing to pay more. However, the increase will take into consideration the poor by having block rates. There is a complete modification of the water tariff in Jordan.

Q16. What are the distances from the electricity poles? What are the measures to reduce the water loss?

- The maps have been sent to the three electricity distribution companies especially that these companies will be responsible for providing electricity for the project. The distance from the electrical poles has been studied and the ratio is acceptable.
- There will be water loss but it will not exceed 3.5 – 4.5% and this is a result of operating the system and not a breakage in the pipe. Any breakage will result in

stopping the operation of the whole Disi pipeline. In addition, the contractor will operate the project and all water losses will be translated into financial losses to him. So the Contractor will want to make sure to take measures to make the loss as minimal as possible.

Q17. What is the price of the cubic meter of water?

- Will be defined later.

Q18. Comment: Most of the areas take more water per capita than Jordan.

Q19. Why does the agricultural sector have to be reduced especially when our country is neither an industrial nor a touristic one?

- The point is to reduce the use of fresh water and replace it with treated wastewater for the agricultural sector not to deprive it from getting water. The Ministry is also implementing rehabilitation projects for the water supply network to reduce the water.

Q20. The Azraq Oasis water has been reduced because of the excessive pumping although there was an environmental study for pumping the water. What if Disi environmental and social study failed to reflect the accurate consequences as did the Azraq Oasis study?

- In the case of Azraq, there was no environmental impact assessment that covers the water pumping to Amman. This study is the first in the region to cover all issues and it tackled the issues based on that the water is non-renewable. The presentation covers all the mitigation measures.
- There is planning in Jordan but the political situation in Jordan between 1976-1991 led to an unexpected population increase, but the Ministry managed to cover the required demand of the sudden population increases by increasing the pumping rates.

Q21. Comment: The increase in the provision of water for the citizens will be beneficial since the amount of wastewater will increase and thus the Jordan Valley will have access to greater quantity of treated wastewater. Thus, if the fresh water has decreased we should encourage the farmers to use treated wastewater in addition to adopting the option of cash crops, which will increase the income of farmers.

Q22. Comment: Currently, the Disi project is the cheapest option available for Jordan. So if we did not make use of it now what would be its benefit after 50 years? In addition, the pipeline has been studied in a condensed and accurate way. The project is the result of planning in the Ministry of Water and Irrigation for Jordan which is one of the most developed countries in the field of water. Leakage might happen in a pump or tap but will be minimal and controlled. Moreover, the reduction in the leakage from 50% to 40% is not a simple matter. There are policies and strategies for water developed by the MWI. Also a budget of one billion cubic meters of water is very low and so fresh water used for agriculture has to be replaced by treated wastewater. If after 40 years the Disi water is unavailable, desalinated water from Aqaba will replace it and will be conveyed through the Disi Conveyor to Amman.

Q23. Has the nutritional value of the crops been studied?

- ❑ We should think first of the drinking water and then think about food security. Agriculture consumes 65% of the water and contributes only 2.5% in the national GDP. But for social reasons it is still present. Reclaimed wastewater from treatment plants is useful for agriculture.

Q24. Were the local community consulted? Will they benefit from the project?

- ❑ The area of the project is not a populated area. Despite the fact that the location of the pipeline is far from the locals, the project will try to employ as many people as possible during execution and operation for 40 years and it will also give the people of Disi the priority to work in the project. As for sustainable development, it is not the responsibility of the Ministry of Water and Irrigation.

Q25. Wafa Company for agriculture has received a letter from the consultant asking about the number of workers which shows that the study is not complete yet. We have come to enrich the project and not to attack it.

- ❑ To double check the number of workers provided by related authorities, these letters were sent. The study is reaching its end and these sessions are held to inform the people about the results and take any additional feedback. There is an agreement between the government and the farmers. When we first planned for the project we looked at the agreements and they were valid till 2011. After that, the government has the right to end these contracts. The farms of Disi pump 70 MCM. So we do not oppose agriculture; we are just saying that the agricultural pattern will change.
- ❑ Consolidated Consultants provided the Ministry with the number of workers to reveal facts. Furthermore, the Disi project is not related to farmers and agriculture. Agriculture is controlled by agreements. The project will also improve the water of the King Talal Dam and benefit the farms of the Jordan Valley and improve the water quality there.

Q26. Is there a signature from Saudi on pumping the water?

- ❑ The area of the Disi basin is 60,000 km², the share of Jordan is only 3,000 km². Saudi Arabia has welcomed the project.

4.3 Questions and Comments at Aqaba Consultation Session

- Q1. The Aqaba Special Economic Zone Authority thanked the Ministry and the Consultant for coming back to present the final study results. A brief was provided on the water sector in Aqaba and that the authority is in the process of establishing a private water company. The positive impacts of the Disi Project are more than the negative impacts, which will mainly occur during the construction phase. It is essential to have coordination with Aqaba Port Authority as mentioned in the presentation to have easier flow of pipes. It is also important to have coordination with the authority responsible for construction of the gas pipeline, which will reduce duplication of efforts.**
- Q2. What is the long term benefit of the project especially that some projects were implemented in the Disi and Queira area but did not benefit the area?**
- The project starts from Disi but its objective is not social development of the Disi area. We cannot control the contractor regarding individuals he employs. But the rules of employment ensure the benefit of Jordanians. Consequently, it is logical that the contractor will employ the locals in Disi area.
- Q3. Why not to add the “Fils” of the Disi on the water bill? Is the basin non-renewable? If it is non-renewable, what are the other options for the locals?**
- This is a political issue. The cost of water desalination has decreased dramatically to 0.3-0.4 JD. If it decreased further, the government kept its right to save the Disi non-renewable water source and replace it with desalinated water.
- Q4. Comment: The people in the area are not Bedouins anymore. They became farmers. There remains a need to find alternatives for the people who will lose their jobs because of closing the Disi farms.**
- Q5. Comment: If the Disi water was for the Disi people they would not have agreed on drawing the water. For Bedouins, water should be shared with all people and not only for the residents of the area. However, they do request that the residents of the area to have a share in the employment. And since the Disi water is non-renewable and will be exploited, we want the drinking water to be available to the Disi people and give the agricultural cooperations the right to dig alternative wells.**
- Q6. Comment: Provide shades for the herders. Also implement the “Fils” of Disi so that it can be used to develop the area.**
- As far as the “fils” is concerned, this is an issue controlled by regulations that we cannot interfere with. But the issue of providing employment for the people of Disi will be given special attention.
 - As for the shades for the herders, when plans are laid we plan for all people without differentiating between people living in Amman and others. But to be realistic, Amman is the capital and the industrial and commercial centre and therefore is a special case.
 - There is a plan for 10 years and that’s why 5 emergency outlets to be installed.

Q7. Will the project affect the quality of the water negatively?

- The “Dhuleil” basin was exploited and its water quality was greatly degraded due to agricultural activities. 90% of the Disi is non-renewable. So the effect is the reduction in the water level. However, Aqaba has been using the water since 1991 and so is Saudi Arabia and the water quality has not been affected.

Q8. Will there be protection of the pipeline from land ownership?

- Yes.

Q9. Did you study using the Red-Dead Sea water instead of the Disi?

- There is difference between the two projects. The Disi project is a Jordanian one but the Intersea project is a regional one and its cost is very high. Jordan cannot afford it alone and the main objective of this inertsea project is protecting the Dead Sea.

Q10. Is the basin to Taima’ and Saudi the same as that of Disi?

- Yes. But the bigger ratio is for Saudi Arabia and they welcomed the project.

Q11. Will the project benefit the local people of Disi in terms of employment? And how?

- There is no such regulation placed for the contractor because it would impose a high financial burden. However, from financial, political and security aspects, it is easier for the contractor to employ the locals.

Q12. Comment: It is advised that the locals be employed in the project.

- Just for information, this project is not a development project but employing the people will be a benefit from the project.

Q13. Electrical technicians are needed in the project, which the contractor will operate. Thus, it is suggested that the contractor gives 5 university education scholarships and 20 technicians in order to get the people educated and trained to work in the project.

- There is a plan to train the Jordanian workers during the execution of the project but we can not force the contractor to provide scholarships for university education.

Q14. Are there any close pumping stations to the wells?

- There is one pump in the area of Batn El-Ghoul.

Q15. Will the design of the project and the wells be in harmony with the environment specially in Wadi Rum which is a touristic area?

- Yes. The contractor will be requested to keep the structural appearance of the pump stations in harmony with the appearance of Rum Reservation area. No approval will be granted until his designs are within specifications.

Q16. Comment: It is important for us to know the exact location of the pumping station and any exposed building.

- The design will be done by the contractor. So we will ask him to design and implement the pumping station in accordance with the nature of the area and we will present it to the Aqaba Special Economic Zone Authority and the Rum Reserve to get their opinion.

Q17. Comment: It appears that the ESA study has taken into account all the negative impacts on the project area and the archaeological sites by which the conveyor will pass and provided mitigation measures to eliminate or minimise their effects.

Q18. As mentioned by the representative of Rum Reserve, it was requested that the design of the pumping stations and any building related to the Disi project to be designed in harmony with the setting of the site and responsive to the prevailing conditions. This aspect should be part of the Terms of Reference to the Contractor.

- Yes it will be part of the terms of Reference.

Q19. Will the road from Disi to Mudawarra be paved with asphalt?

- It is a benefit to the Contractor to have a paved the road from Disi to Mudawarra. Also, one of the Contractors has suggested developing a pipe factory in Jordan. This is encouraged by the Ministry of Water and Irrigation especially that in case such a factor is developed it will be in areas near the project route. However, it should be emphasized that the Disi-Mudawarra to Amman Water Conveyance System is not a social development project.

Q20. Was the National Electricity Company informed about the conveyor route? Also, the Contractor should take the approval of the Planning Agency with respect to the Electricity Transmission Lines in order to ensure that the locations of those transmission lines do not intervene with the delineation of lands and cause negative impacts on the environment.

- Yes they were informed and coordination with the National Electricity Company and the Electricity Distribution Companies took place as they will provide the electricity for the different components of the project. Steps will be taken to ensure the coordination with the planning authorities regarding the transmission lines to avoid negative impacts on the environment.

Q21. To what extent will the Ministry be able to commit the Contractor to the environmental aspects of the project and the issues of land acquisition?

- First of all, the land acquisition has already been completed by the government and the Contractor is not responsible for the issue of land acquisition. With respect to the environmental aspects, the Contractor will be provided with the Environmental and Social Assessment Study and will be requested to abide by all the mitigation measures identified. Discussions will be held between the Contractor and the Ministry to ensure that the contractor plan is developed in conformity with ESMP provided in the study and that it includes all identified mitigation measures. The contractor will be requested to provide his commitment to consider all environmental aspects identified in the ESA

reports. This commitment will be part of the construction contract as well as the operation contract.

Q22. Most of the residents of Disi area depend on agricultural activities for living. Will the Disi-Mudawarra Water Conveyance System affect the small scale agricultural activities in the Disi area?

- ❑ First, there should be a differentiation between agriculture as a social activity and that as an economic activity. Also water use is determined by the policy of the Ministry of Water and Irrigation. The Ministry in general responds to the demands of the distant areas. So, if the residents of the area gathered and formed a social corporation and then presented a request for water well for the corporation, the government will be responsive to their demands.

Q23. At which stage is the project now?

- ❑ The project was proposed in 2001, but it was delayed due to certain regional conditions such as the War on Iraq. However, now technical offers have been submitted along with the financial offers. The revision of the technical offers will be finalized within one month, after which the financial offers will be opened and the winning bidder announced. The bidders are consortiums of mainly international companies. The duration of project implementation is 56 months.

Q24. Will the Disi project affect the future water prices?

- ❑ There will be a revision of the water tariffs all over Jordan.

Q25. Comment: In response to the idea that water should be a free commodity, it should be noted that these days water is a commodity and the government can no longer deliver it to the people free of charge. In addition, the average price of 0.3-0.4 JD/m³ charged by the government is below the actual water cost. Most important, it should be noted that when the concerned authorities develop the water pricing policies, they account for social factors.