



Water crisis in Taiz city

A carelessness or Siege ?

Policy Paper

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Promote Good Governance in Taiz Governorate



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Executive Summary

Taiz governorate is suffering a long-standing water crisis, which has worsened since the 1990s with urban expansion, high population growth and it has also increased because of the outbreak of armed conflict, failure of strategic projects (Mokha station to desalinate water).

Before the outbreak of the war in April 2015, Taiz was still one of Yemeni's areas which suffer of water crisis, with water was reaching homes every 40 days, but the war exacerbated suffering and the governmental water corporation stopped pumping water into homes.

For Taiz city - the capital of the governorate of the same name - the water crisis has taken a tragic form since the outbreak of the armed conflict in the province and the siege imposed by the forces of (Ansar Allah) on the city, as the armed conflict continued for more than seven years, most of the main activities stopped. As water from the local establishment ceased to arrive, most residents relied on the purchase of water transported by truck (water tank) at high prices at equivalent to 3 times of its value.

As the ongoing siege, and the stopped of water pumped in the areas under the control of (Ansar Allah), Al-Dhabab area - the western suburb of Taiz- became the only source of water for the city's citizens, causing huge pressure on water wells in Al- Dhabab, and the price of selling water is doubled.

To face and ease this crisis, relief organizations and local initiatives - supported by philanthropists - intervened by distributing water tanks in the areas and bottling them permanently, these interventions cover only 15% of Taiz's water need. In fact, the water tanks has somewhat contributed to alleviating the crisis, but on the other side they have caused a burden on vulnerable women and children. Bringing water from distribution points or from some mosque requires a lot of time and effort, which may prevent children from studying or endanger their lives, many children have become victims and wounded when they were on their way to bring water.

This paper discusses the water crisis in Taiz city by exploring the positions and policies of official institutions, most notably the local authority and the local water and sanitation Corporation, as well as the interventions of international and local organizations, the paper also concludes with suggestions, solutions and recommendations that will mitigate the crisis and contribute to the solution of the problem







Introduction

Taiz city has been suffering of an acute water service crisis for almost eight years; As a result of the ongoing war in the province between the internationally recognized Yemeni government forces and the Ansar Allah Houthi group. This crisis affects the lives of hundreds and thousands of residents, it is the most missing services in the highest city in term of number of population that reaches to 1815,664 Million inhabitants - according to the Central Statistical Organization - in the city's three directorates (Al-Qahera, Al-Mudhaffer , Salah).

The majority of the citizens of Taiz city suffer from the inaccessibility of water, and the ongoing war, business deteriorated and the economic situation in the country deteriorated have increased their suffering, as well as the continued siege of the city. These three districts represent the most important because they are the center of the governorate and today's most densely populated.

This paper focuses on the water crisis in the three districts (AI-Qahera, AI-Mudhaffer, Salah) which are under the control of the legitimate Government, that has burdened the population for years, with a view to study the problem, setting appropriate solutions and providing more realistic recommendations that help to alleviate the suffering of families and their particular effects on women and children.

The researchers adopted a research plan, which included interviews with representatives of the local water and sanitation corporation in Taiz and the Office of Planning and International Cooperation as well as, the Statistics Office. The researchers also relied on open-source information from reports, writings and other interviews with civil society organizations, relevant activists and local community members.







Background and Context

Yemen is ranked among the world's poorest countries' indicators of per capita share of water. The per capita water available annually is 140 cubic meters, which is less than the recognized water scarcity limit of 1,000 cubic liters. ⁽¹⁾ Yemen's population relies heavily on groundwater, where they receive about 70% of fresh water, most of them are used in agricultural production. If the current levels of water extraction continue, Yemen's reserves will be depleted within two to three decades. ⁽²⁾ The extreme scarcity of water over decades has been one of Yemen's most serious development challenges.

For Taiz city - the capital of the province of the same name - the water crisis has worsened in it since the 1990s with urban expansion, high population growth. And to avoid this deficit, the Engineer Watheeq AI-Aghbari - who is the director of the Production Unit of the Water Corporation - asserted that, the Water Corporation drilled more ambulatory wells at the turn of the millennium. ⁽³⁾ But the wells which totally reached 70 feeding Taiz city, even before the war of 2015 only cover the need of 58 percent of Taiz population, to per capita share of water reach to 34 liters per day.

Before the war started in early April 2015, Taiz was still one of the most suffering areas in Yemen with water. water was reaching homes every 40 days. However, the war exacerbated the suffering and the Public Water Corporation stopped pumping water into homes since its outbreak. ⁽⁴⁾

As the political crisis unfolded throughout the country, the Arab Alliance announced in March, 2015 to begin the war against Ansar Allah group. Taiz was one of the most affected cities in Yemen. The ongoing crisis escalated until the present, and the city was divided between the two conflict parties. The main roads to and from the city were blocked, as well as the near-total or partial destruction of most infrastructure. Government Corporations, including the Water Corporation, had the largest share in destruction. Most of the employees were displaced and pumping stopped from most of the main wells (48 wells) because of their existence in the clashes areas, or in areas under the control of Ansar Allah group.

The ongoing conflict has led to deteriorating water situation in Taiz city, and water service coverage has decreased by 32% compared to 2014, in which water supply coverage used to reach 80%.⁽⁵⁾ Most of the people has become dependent on buying water which transferred by trucks at expensive prices. During the second year of the war, the Coalition of Humanitarian Relief - Taiz reported that the lack of electricity and water services amounted 100%, and 1.6 million of people needed urgent relief in drinking water.

⁵ The researchers' Interviews with activists and citizens.





^{1 &}quot;Water Crisis in Yemen" Colleen Eckvahl, Dec. 14 ,2013, https://borgenproject.org/water-crisis-inyemen/

² The researchers' Interview with the officials of the Local Water Corporation

³ The researchers' Interview with the director of the Office of Planning and International Cooperation

⁴ The researchers' Interviews with Sheba Youth Foundation and employees at international organization.



According to local activists, the prices of water brought by trucks have risen to 3 times, while the trucks need 4 or 5 days to deliver water into Taiz. Therefore, most people are forced to rely on the purchase water from water tanks and the use of recycled wastewater. ⁽⁶⁾ And in drinking water, the majority of people are dependent on relief assistance provided by local and international organizations that distribute water in areas by tanks.

Due to the ongoing siege, Al-Dhabab area - the western suburb of Taiz - is became the only source for bringing water to the city's people, causing severe pressure on the water wells in Al-Dhabab, as a result of which the duration and price of the water sale is increased exponentially. before the war, the bringing water process from Al-Dhabab wells in west of Taiz, was taking less than one hour, with a low price not exceeding the amount 1500 Yemeni Riyal, for one water tank, with capacity 6000 liters, but today, according to Adel Hassan, owner of a desalination station for drinking water- it costs approximately 12 hours, with amount of 20.000 thousand Riyals.

^{6 &}quot; Taiz is struggling thirstiness ", Al-Mua'atasim Al-Jalal, Khuyut Platform, March 22 2021, https://www.khuyut.com/blog/1122







The reality of water in Taiz city and the people' needs

The number of wells belonging to the Water Corporation in Taiz is 94, distributing over three fields: Al-Haimah, Al-Dhabab and Al-Hawjalah, as well as ambulatory wells spread in the city and in Al-Huban, where they reach about 24 Wells which feeding the city with water, with daily production 3000 M3, covering (10%) of the real need, that are the ambulatory wells that was operated by electricity before the war, and (23) well in the areas of Al-Haimah, Habir and Sha'ab Raihan, which produce about (5300 M3) per day is pumped to Al-Huban area and no pumped into the city even though the population of Al-Huban does not exceed (20%) of the city's population,⁽⁷⁾ plus 6 new wells added to the city wells.

In addition, there are 7 wells in AI-Dhabab field with daily productivity (2,700 M3) per day, together with 14 wells in AI-Hawjalah and AI-Amera with daily productivity (4,100 M3), all of them are stopped since the outbreak of the war in conflict areas. Another field in the AI-Hoban area and the number of wells in it are (12) which operate with daily production (1800 M3) from which water is pumped to the AI-Hoban area and no pumped to the inside of city. ⁽⁸⁾

In general, Taiz has a water basin that pumps about (2000 M3) a day , it feeds the city through the Public Water Corporation. This basin has stopped pumping for the city's wells since February 2019, Authorities in Taiz of the internationally recognized Government are accusing the group of Ansar Allah (AI-Houthi)- which controls the eastern parts of the city where the basin is located - on the deliberate stopping of the pump from that time, and this exacerbating the suffering of people in this vital sector from which Taiz needs adequate need is (35) thousand cubic liters per day with a deficit estimated at (145%) with the increasing decline of water springs, which were pumping about six years ago (17) thousand cubic litres per day, according to the Water Corporation's estimate.⁽⁹⁾

Since the beginning of the conflict, the proportion of families in the directorates of Taiz city (Al-Qahera, Al-Mudhaffer, Salah) which get the public water system has decreased from 85% of families in 2014 to (24%) In 2018, And about (25%) of households depend on buying water from the private sector, including private water tanks, while 34% of families get water from wells ⁽¹⁰⁾. While the proportion of people using rainwater, tanks, wells or protected springs as the main source of water for drinking purposes and other household needs reached 50%, ⁽¹¹⁾ the price of a drinking water tank with a capacity of 4000 thousand liters has risen to 20000 Yemeni Riyal at 5 Riyal per liter.⁽¹²⁾

¹² Water scarcity in Yemen: the country's forgotten conflict , 12 The Guardian ,Frederika Whitehead, April 2, 2015



⁷ World Bank Group, The Constant Evaluation for Needs in Yemen, Third Phase, 2020.

⁸ Yemen: For Climate Flexibility and Human Security in the Country threatening with Absence of Food Security, Yemen Future, Dastin C Sheen, Aug 4 2022.

⁹ The Report of Water Shortage and Dry Wells in Taiz, Surviving to death, Sahar Mohammed , Nov 10 2021, Daraj Platform, https://daraj.com/82364/

¹⁰ so critically short of water in war that children are dying fetching it, Farooq Al-Kamali, World Bank Blogs, 22 March 2016, https://blogs.worldbank.org/ar/arabvoices/yemen-so-critically-short-of-water.

^{11.} Damage Assessment Report of 12 Local Water Supply Institutions, Yemen's Water Sector, GIZ, 2018.



The Public Water Corporation relies on the support of UNICEF to operate water pumping generators into the city's areas which supply them with about 150 litres of diesel, with no operating expense from the local authority or revenue to the Corporation. According to Hassan Al-Mujahid - Director of Water Corporation in Taiz: "There are 18 working wells in the city that cover only 15% of the general need, we cover only minor parts of the departments of Al-Qahera and Al-Mudhaffer, we do not cover and pump to Salah because of its height, ", asserting that pumping sometimes stops for up to 25 days; due to the lack of diesel ".⁽¹³⁾

The wells of Wadi Al-Dhabab, Dimna and Salty wells in the city are not enough to cover the needs of the city's three directorates (Al-Qahera, Al-Mudhaffer, Salah). Some owners of water tanks seek to obtain them from nearby rural areas, and there they face additional difficulties in relation to the rugged road, which costs double fuel to the vehicle, which is borne by the consumer, and refusal-villagers reject to fill the tanks coming from the city; due to their water limitations, allowing its exit means draining their need from it.

13 GIZ, ibid





Local Corporation for Water (Damages and Challenges)

The city's water supply is the responsibility of the Local Water Corporation, which has a council, composed of representatives of central and local government and community. Taiz Local Water and Sanitation Corporation was established by General Decree No. 20 in 2001.⁽¹⁴⁾

Taiz Local Water Corporation provides water supply services which has another additional service: Issuing invoices, installing and transporting meters, returning water after separation and other services of interest to consumers. ⁽¹⁵⁾ Taiz is considered one of Yemen's major industrial centers. In order to provide water, a small desalination station was built near AI-Mocha to provide partial supplies to Taiz, which would have been expanded, but the project was interrupted because of the war. ⁽¹⁶⁾

Due to the active conflict areas within the city, the Local Water and Sanitation Corporation of Taiz is unable to provide water supplies to some of these areas. Each area of conflict areas has its own wells.⁽¹⁷⁾

There are significant challenges in fuel supply for well operation as the amount needed is estimated at (-109,336) liters per month and is currently only a small portion of available. ⁽¹⁸⁾

The war caused a variety of damage to the assets of the Local Water Corporation. The Corporation's building and its facilities were subjected to various missiles that caused partial destruction of the Corporation's buildings, costing 494,500 USD ⁽¹⁹⁾. Damage to the Corporation's furniture, machinery, warehouses, transport vehicles and water

The apparent water grid is fully damaged and we are now seeking to prepare a study and submit it to international and local organizations for rehabilitation

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¹⁴ Report of Armed Conflict Damage observing on Public Services in Taiz.

¹⁵ Report about the observations on what reported in Urban Profiling File of Taiz city issued by UN-Habitat and the Sectoral Needs Priorities, Taiz Governorate Planning Office, 2022.

¹⁶ Taiz Governorate Planning Office Report.

¹⁷ Report of Armed Conflict Damage observing on Public Services in Taiz, Resource Foundation for Development and Human Rights

¹⁸ Yemen: groundwater depletion and possible solutions, Maha Al-Salehi, Holm Akhdar , May 18, 2022, https://holmakhdar.org/reports/6008/

¹⁹ Warnings of a water crisis in Taiz, Mazen Faris, Al-Mushahid Site, December 22, 2020, https://almushahid.net/69560/

pumping stations have been destroyed and looted and that estimated to more than 3.922,200 USD. $^{\rm (20)}$

The state of damage caused to Public Water Corporation building's infrastructure in Taiz city, specifically in its buildings, hangars and water tanks amounts by between 40% to 60%. ⁽²¹⁾ Currently, the corporation operates partially at about 36% of infrastructure, while 40% of infrastructure is not operational at all. The districts of Al-Mudhaffer and Salah are influenced more than the other districts. Whereas there is a main critical and sensitive infrastructure, such as the wastewater desalination station, water pumping stations and water collection structures, which are either not operational at all or operating at low capacity. ⁽²²⁾

In addition, the Local Water Corporation faces the significant challenge in the decrease of the staff numbers to manage and operate the basic and vital facilities . Before April 2015, the corporation was staffed by 823 employees in both sexes, (23) most of them were displaced to rural governorates or other cities, and the interruption of the central and local institution's budgets caused their salaries to be cut for three years, in excess of 14 million Yemeni Riyals (24). Local Water Corporation complains about the lack of an adequate operating budget to maintain continuity in the operation of wells in the city as well as the maintenance equipment of the water grid. The necessary operating expenses are estimated at 14.439 million YR per month, while only 80 employees are currently working within the management cadre of the corporation, and it is currently unable to derive its debt from citizens and traders which estimated at 400 million YR. It also does not issue the invoices of the services which currently provides to some areas.

As a result of the population's extreme need, in many instances water tanks provided by organizations and philanthropists cause disputes among beneficiaries, although interventions of this kind do not do the trick.

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 $^{24\ {\}rm The\ researchers'}\ {\rm Interviews\ with\ a\ number\ of\ citizens\ in\ Taiz\ city,\ 10\ {\rm August\ 2022}\ }$



²⁰ Taiz Water Crisis and Ineffective Emergency Plan, Olla Al-Haddad, Al-Mushahid Site, March 11, 2019, https://almushahid.net/40615/

²¹ The researchers' Interview with Nabil Jamel - the General Director of the Office of Planning & International Cooperation in Taiz governorate - August 11, 2022

²² Policy paper of Taiz Consultation Group entitled "Water in Taiz, Problems and Solutions". Issued on February 2021.

²³ The researchers' Interviews with officials from the Water and Sanitation Corporation in Taiz Governorate, 5 August, 15 August, 11 August 2022



Charity water tanks- the insecured alternative

During the ongoing war over more than seven years, most basic services have ceased in Taiz city and as water from the local institution ceased to arrive, local organizations diversified their sources of support from international organizations and charitable initiatives to allocate a part of support funds for the provision of free water, through water tanks distributed in residential areas, filled almost regularly according to availability of necessary support, the share of the entire family is 60 liters often. In all, these relief interventions cover only 15 % of Taiz's water need, on the other hand, it constitutes a burden on the vulnerable group of women and children who are often responsible for bringing water.

According to Fuad Saif - an area below Beerbasha west of the city - he has been able to secure a tank with 3,000-litre, which is fill almost daily from a local organization, covering some of the needs of the area where it is located, by forty liters per family per day.

Fuad Saif describes to "Khuyut platform" the case of the beneficiaries of the water tanks: "The people of the area are scrambled immediately when hearing the generator of the tank; to obtain water first and securing their today's need; this requires looking at another funder so that we can distribute the quantities even its minimum".

The water crisis in Taiz diverted young children to work in bringing water to their homes.

Despite armed confrontations hundreds of children are spreading through the streets of the city carrying gallons and going to bring water from the near mosques or from tanks placed by charitable initiatives and civil organizations in the areas, there are a lot of children who were killed and wounded while their way to bring water.

Bringing water from distribution points or from some mosque requires a lot of time and effort which may prevent children from other activities such as studying. In 12 April 2022, a water truck accidentally ran over a number of people in the Al-Jahmaliya area in Taiz when they were gathering for water, leaving more than 7 women and children victims.

Mira Hizam (8 years old) says: " when the school stopped, my mother sent me to bring water from the area mosque or water tank near us. I go five times in the morning and twice in the evening I go with my mother and sometimes alone, when we heard about the killing of children who went to bring water, my mother prevented me to go again for two days, but later she asked me to go to bring water after we finished the available water of drinking and washing clothes.

According to the reports of the international organizations, Taiz city is suffering from a severe and chronic water crisis, which is now more acute due to the continuing of the armed confrontations in the city, sometimes causing conflicts among the people as a result of the extreme need for water, which is extremely scarce during the war periods. The stranglehold siege imposed for the city has made the process of bringing water from outside the house risky. According to field statistics, the number of casualties and victims during the bringing of water exceeded 80 cases.







Local Authority "Ineffective Contingency Plan"

As part of its efforts to solve the water problem, the local authority in March 2019 develop a contingency plan to reduce the water crisis in the city's directorates, the plan included a number of measures, most notably preventing the passage of trucks of water tanks to Qat farms , the assignment of the Transport office with the Supply and Trade Office and the Water Resources Authority, about the establishment of a fixed price, Stop manipulating of the price of selling and buying water , as well as the operation of wells parked inside the city, whether private or public. The local authority in the governorate has admitted a document specifying the prices of water tanks, but most owners of water vending trucks did not adhere to it.

The failure of Local Water Corporation to implement local authority water resolutions is due to the tanks which are not controlled by Local Water Corporation. And the responsible for this are the stakeholders in the Governorate and Trade Office. In fact, the local authority does not have a clear management vision, in addition to the lack coordination among its offices, to enforce the decisions made, which has been manifested more than once and with more than one decision, notably the decision to set prices for water tanks, and the decision to set the price of commercial electricity.

According to officials of the Local Corporation for Water and Sanitation, the Corporation was able to rehabilitate the ambulatory wells that relied on electricity inside the city, which are 21 wells, and rehabilitate the endowments' wells. Production of these wells reached between 20 and 30 thousand cubic meters. But they cover only minor parts of the Al-Qahera and Al-Mudhaffer districts, and may sometimes stop to operate for about a month; because of the lack of diesel provided by humanitarian organizations.

According to the office of Planning and International Cooperation's Director in the governorate ,there is a new policy of dealing with humanitarian interventions by directing support and assistance in sustainable projects the central authorities in the capital Aden, this new policy represents part of the Ministries of Water and Planning works, to serve the operation of the water institution, rehabilitation of the grid, water provision and conclusion of agreements and with donors, in isolation from the role of stakeholders in Taiz. In order to promote such indiscriminacy, some international organizations are engaging with the Office of Social Affairs without returning to the Office of Planning and International Cooperation on Donor Interventions, making it in waste.







International Organizations "Interventions and Challenges"

According to a previous policy paper, the volume of interventions of organizations in the water sector in Taiz city during two years (2019 - 2020), amounted to (8,907,000 USD), (3,116,092 EUR) and (11,780 CAD) and according to officials of the Local Water corporation, UNICEF interventions for the corporations' wells with diesel, have made a positive difference in the ability of Water corporation to deliver water to many of the city's areas during intermittent periods.

The local authority believes that most interventions by international and local organizations take the form of water distribution points and this approach has continued since the beginning of the armed conflict in Taiz. The situation in the city of Taiz continues to be treating as an emergency, this means that its interventions continue to seek to deliver water to the population as agreed. without taking into account the main causes of the crisis or adopting sustainable interventions.

Regardless of their impact, Taiz Water Corporation officials considered the distribution points to be (plastic water tanks) located in some of the city's areas have alleviated the suffering of people under the difficult economic conditions, in addition to its reaching to the residential areas where there is no water supply system. However, citizens consider that the utilization of distribution points are feasible and not quite enough.

Amount	Currency
8,907,000	USD
3,116,092	EUR
11,780	CAD

Table showing the volume of interventions in the water and sanitation sector in Taiz during 2019-2020.

According to the results of the researchers' interviews with the officials of the Water and Sanitation Corporation in Taiz, the largest amount of humanitarian interventions in the local water corporation goes to the sanitation sector, while the water sector received little; due to the absence of water sources that impede international organizations.

According to officials of the Local Water Corporation, most donor organizations, especially the United Nations, refuse to intervene in the drilling of wells in accordance with their policies, with the exception of the Kuwaiti Relief and Qatar Red Crescent, because the Water sources are low against the population size of the city, which is embracing a large wave of displacement, this is the main reason of the lack of people to come into reach with the organizations' intervention in the water sector.





In an effort to develop solutions to the water file in Taiz, and depending on local mediation efforts to pump water from areas controlled by (Ansar Allah) to the city center, UNICEF intervened in the provision of fuel for Al-Haima field located in the Houthis' control areas for the purpose of pumping water to the inside city, but the pumping stopped only two days after started. According to Water Corporation officials, a team of local mediators still continuing to lead negotiations in order to re-bring water supplies from AI-Haima to Taiz Water Corporation's reservoirs.

Some people and activists who are interested in the Water Sector believe that there have been tangible interventions, most notably the delivery of water tanks to the Corporation, through the mediation led by the Sheba Youth Foundation, by this step the corporation has been able to repair the supply grid and pump water into four residential blocks in the city.

The role of the **Planning Office** is absent in directing the interventions, because any agreements in the water sector arrive ready and have been signed between the Ministry of Water and donor organizations _____









Positive Indicators

During preparing this paper, the two researchers received confirmations by local authority officials and Local Water Corporation about some interventions to drill new water wells that will contribute to alleviating the water crisis in Taiz city. Where some organizations have recently been engaged in sustainable projects, including The Kuwaiti Association and Council Norwegian, where they are digging new wells and linking them to the main grid line and their other projects are being studied in this regard. While Water corporation officials say that the corporation is implementing a project funded by The Kuwaiti Association which involving the drilling of six new wells that will contribute to covering a proportion of the deficit in some areas of the city. There is also a study carried out with the University of Taiz to dig 10 wells in Al-Dhabab area and link them to the pumping tube and to the climate depots in the city along with the old wells in the same area.

The information obtained by the researchers indicated that The Kuwaiti Association had supported a project of digging 11 wells and connect them with the grid, 6 of them are fully equipped and 2 are failed; due to the lack of water, the wells produce one and a half litres per second, the rest of wells are processed, and there is another work on another project, namely, linking 2 wells of Al-Dhabab (Hithran field) to the grid, this project is implemented by the Norwegian Refugee Council, whereas the maintenance of the third well has been hampered by its proximity to seam areas.

Many previous attempts and policies had been unsuccessful, yet attempts continued to be at the forefront of the Water and Local Authority's work, owing to weak joint coordination and entrenched management of the water file. Because of the popular demands, Water Foundation began a test distribution to determine the status of the internal supply grid to many of the city's areas after the intervention of international and local organizations and associations, The grid's status is found to be devastating and in need of reform and intervention by donor organizations according to a study .The researchers concluded that there was no clear and precise plan for distribution in the current state of the water sector according to the latest test pump data.







Solution's Suggestions and Recommendation

Solutions

1. Organize the intervention processes for the organizations in Water Sector, this is the task of the Local Authority, because it is responsible for Local Water Corporation and the Office of Planning and International Cooperation, It can practice pressure in the side of setting a minute intervention mechanism and setting a treatment in order to achieve tangible impact through designing A work coordination mechanism to benefit from the support.

Through conducting the interviews and following the open-sources, the researchers noticed that:

- 1.1. Arrange the current interventions in organized way and according to a real study through experts, the Local Water Corporation and the Office of Planning and International Cooperation, and drawing up an intervention map from drilling to proper pumping to the city's elevated reservoirs.
- 1.2. Governance of organizations' intervention and obligation of water institution, Office of Planning & International Cooperation and Office of Social Affairs & Labour to establish a realistic mechanism of intervention and coordination with the Ministries of Water, Planning and Social Affairs.
- 1.3. The establishment of a local committee of the Water Foundation and civil society to negotiate water neutralization in Taiz city in order to alleviate the suffering of the residents of the province.
- 2. Prioritize the provision of water sources, as the two researchers found that most international organizations refuse to intervene in well drilling, justifying that there are no real studies to ensure successful well drilling intervention The local authority must therefore seek donors to finance programs for the preparation of scientific studies for the search of water sources, So that organizations can intervene in the drilling of water sources, provided that they are competent to intervene in the drilling of wells only, Other organizations undertake equipment such as equipment, grids and lines.
 - 2.1. The local authority should form an engineering team to search for new water sources with good productivity and market them to donors to start digging wells, so that organizations can intervene in the extension of main and subsidiary pumping lines.
 - 2.2. The local authority and the Water Corporation should stop urgent relief projects; as it wastes support in consumer projects, directing support in the repair of the water system and damage to the water corporation.
 - 2.3. The Water corporation should carefully study the status of the residential areas's intranet and sub-lines and assess the extent of damage and work to provide it to donors and the Reconstruction Commission for urgent repairs.







Recommendation

- The Local Water Corporation should do a study on how to deal with debts, its extraction and the benefit from
- Conduct discussion meetings and workshops with the international organizations and interested activists to discuss water crisis and arranging the interventions of organizations and donors.
- The Local Authorities and security forces to adapt the environment to organizations interventions in the Water Sector and provide the complete protection from any security risks.
- The Local Water Corporation should submit requests its needs to the countries and donors: processing the problem of diesel lack to operate the wells, Providing a request to donors to provide a solar energy system to operate the pumps to more than a well.
- Monitoring activating on the organizations' interventions in the water sectors with coordination with The Central Organization for Control and Auditing in the governorate.
- The Local Water Corporation should establish a unit for studies regarding to the wells' drilling, in addition to produce solutions for water problem.
- The Local Water Corporation should establish a unit for information about the corporation and its work and archive, ...etc. in order to benefit the researchers, students and who are interested in





References and Resources

- 1. "Water Crisis In Yemen " Colleen Eckvahl, Dec. 14 ,2013, https://borgenproject.org/watercrisis-in-yemen/
- 2. The researchers' Interview with the officials of the Local Water Corporation
- 3. The researchers' Interview with the director of the Office of Planning and International Cooperation
- 4. The researchers' Interviews with Sheba Youth Foundation and employees at international organization
- 5. The researchers' Interviews with activists and citizens
- 6. "Taiz is struggling thirstiness ", Al-Mua'atasim Al-Jalal, Khuyut Platform ,March 22 2021, https://www.khuyut.com/blog/1122
- 7. World Bank Group , The Constant Evaluation for Needs In Yemen, Third Phase , 2020
- 8. Yemen: For Climate Flexibility and Human Security in the Country threatening with Absence of Food Security , Yemen Future , Dastin C Sheen, Aug 4 2022
- 9. The Report of Water Shortage and Dry Wells in Taiz, Surviving to death , Sahar Mohammed , Nov 10 2021 , Daraj Platform, https://daraj.com/82364/
- 10. so critically short of water in war that children are dying fetching it, Farooq Al-Kamali, World Bank Blogs, 22 March 2016, https://blogs.worldbank.org/ar/arabvoices/yemen-socritically-short-of-water
- 11. Damage Assessment Report of 12 Local Water Supply Institutions, Yemen's Water Sector, GIZ, 2018
- 12. Water scarcity in Yemen: the country's forgotten conflict, The Guardian, Frederika Whitehead, 2 April 2015
- 13. GIZ, ibid
- 14. Report of Armed Conflict Damage observing on Public Services in Taiz
- 15. Report about the observations on what reported in Urban Profiling File of Taiz city issued by UN-Habitat and the Sectoral Needs Priorities, Taiz Governorate Planning Office, 2022.
- 16. Taiz Governorate Planning Office Report
- 17. Report of Armed Conflict Damage observing on Public Services in Taiz, Resource Foundation for Development and Human Rights
- 18. Yemen: groundwater depletion and possible solutions , Maha Al-Salehi, Holm Akhdar , May 18, 2022, https://holmakhdar.org/reports/6008/
- 19. Warnings of a water crisis in Taiz, Mazen Faris, Al-Mushahid Site, December 22, 2020, https://almushahid.net/69560/
- 20. Taiz Water Crisis and Ineffective Emergency Plan, Olla Al-Haddad , Al-Mushahid Site, March 11, 2019, https://almushahid.net/40615/
- 21. The researchers' Interview with Nabil Jamel the General Director of the Office of Planning & International Cooperation in Taiz governorate August 11, 2022
- 22. Policy paper of Taiz Consultation Group entitled "Water in Taiz, Problems and Solutions". Issued on February 2021
- 23. The researchers' Interviews with officials from the Water and Sanitation Corporation in Taiz Governorate, 5 August, 15 August, 11 August 2022
- 24. The researchers' Interviews with a number of citizens in Taiz city, 10 August 2022.







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IYSO

Improve Your Society Organization is a non-governmental independent organization concentrating at peacebuilding, Youth and Women Empowerment, Promoting Good Governance, Climate Action and Research and Studies.

IYSO has started as a voluntary social initiative in 2010 and it has been legally registered as an organization since 2015.



POMED

The Middle East Democracy Project (POMED) is a regional civil society partnerships programme that demonstrates POMED's efforts in building the capacity of selected policy NGOs in the Middle East and North Africa as well as enhancing their effectiveness and increasing their impact.





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