مؤسسة شباب سبأ للتنمية
Sheba Youth Foundation for Development



Roadmap for
the Water Sector in Taiz

A multi-phase vision to improve water service and strengthen local mediation

2025 - 2028

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Executive Summary

Taiz Water Roadmap

From Crisis to Sustainability

2025 - 2028

Taiz, Yemen's third largest governorate, lies at the heart of the country and has long been recognised for its cultural dynamism, civic activism and strategic geography. However, since the outbreak of the Yemeni civil war in 2015, the governorate has become one of the most physically and politically divided urban areas in the country. The urban area is divided between the Internationally Recognised Government (**IRG**), which controls the western urban centre, and Ansar Allah (the de facto authority), which controls the eastern Al-Hawban area.

The administrative and geographical division in Taiz has created a deep humanitarian crisis, especially in the water sector, where the city faces the worst water crisis in Yemen; 2.5 million people rely on only 21 working wells (out of 95 wells) that produce no more than (2000 m3/day), which is not enough to cover 5% of its daily needs, especially since the war has caused the suspension of 27 strategicwells located in active frontlines with a productivity of (9,706 m^3/day), and according to the 2024 IFSC survey, about 96% of the city's households suffer from the absence of safe water, which increases the risk of Cholera widespread and malnutrition for more than 600,000 people. In this context, this roadmap (2025-2028) sets a practical path, consistent with the direction of the Yemeni government and humanitarian partners and the private sector, to restore water service to a level that can secure at least 70% of the city's needs by the end of 2028.

The plan is based on a tripartite partnership between the Local Water and Sanitation Corpor tion – Taiz (**LWSC**), local authorities in both Taiz City and Al-Hawban area, and civil society organisations led by Sheba Youth Foundation for Development (**SYF**), based on local medition that has partially neutralised the service since 2020. This mediation was transformed into an integrated programme based on three parallel tracks:

- **References:** 1- IPC Yemen Acute Malnutrition Analysis Nov2023 - Oct2024 Report Published on Aug2024.

- **Restoring trust and immediate operation**

  through the activation of six steps, starting with preparation and ending with the signing of an agreement to restore water pumping from both Al-Haima and Habir water wells located in Al-Hawban area.

- **Joint management and good governance**

  to reunite the efforts of the two divided governance of administrative units, coordination of their functions, and making them more responsive to inclusiveness while relying on a gender perspective in administrative processes at different levels and functions. It is also important to take into account the best practices in public administration that give it the character of integrity and justice, while paying due attention to the operation of the financial system by launching a digital billing and collection system aimed at resuming revenues from scratch and achieving a collection rate of approximately 40% of issued invoices within the first three years, based on the results achieved by other Yemeni governorates after automating collection mechanisms and launching community awareness campaigns.

- **Expansion and sustainability**

  aimed at rehabilitating wells located on active frontlines and improving the water distribution network to reduce losses to less than 25%.

  Upon completion of these phases, the daily pumping capacity will double from the current 2,000 m3 to more than 10,000m^3, which translates to a minimum of 11 litres per person per day. By 2028, 70% of the city's needs will be pumped through the rehabilitation of Al-Haima and Habir wells in Al-Hawban area. This transformation will reduce the burden of purchasing water transported by tankers by up to 60% for low-income families, especially with the rise in the price of a 2 cubic meters water tanker to 40,000 Yemeni Rials, equiva lent to $14.8 USD at the time of preparing this document. It will also reduce cases of acute diarrhoea among children under five by approximately 30%, according to UNICEF estimates for similar projects . It will also lead to the neutralization of the water sector from the conflict through a joint management mechanism between the two parties.

The document recommends several urgent measures to ensure successful implementation, including providing political and security guarantees, empowering the management of the institution, and activating monitoring and follow-up systems. At the same time, it emphasises the need for continued humanitarian funding and the avoidance of potential political and security risks.

A call to action:

The roadmap calls on the Yemeni government, local authorities in Taiz City and Al-Hawban area, UN agencies, and international donors to formally adopt this document during the third quarter of 2025, and secure the funding and security guarantees necessary to begin trial water pumping. Seizing this opportunity will protect the right to water for Taiz City residents, promote community stability, establish transparency and accountability in the management of public resources, in line with the Sustainable Development Goals, particularly **"SDG"** 6 (Ensure availability and sustainable management of water and sanitation for all), and set an exemplary precedent in neutralising essential services from conflict. It paves the way for broader recovery efforts in the health and nutrition sectors.

Introduction

Taiz is the most densely populated governorate in Yemen and a pivotal urban centre, yet its residents spend up to a third of their income to buy scarce water that is transported via expensive and unsafe tankers. The main wells located in Al-Haima and Habir on active frontlines have been inoperable since 2015, and the management and staff of the Local Water and Sanitation Corporation have split between Taiz City and Al-Hawban area, reducing water pumping to about 2,000 m^3/day - less than a tenth of the actual need. This led to an increase in Cholera cases and worsening malnutrition; 2024 data shows that nine out of ten households in Taiz City do not have access to safe drinking water.

Before the outbreak of the war that has been ongoing since 2015, there were six water basins in Taiz governorate, comprising around 65 wells. These wells were the main source of supply for the public water network in the governorate. The wells with abundant water resources are located in three large water basins under the control of the de facto authorities in Al-Hawban area. Two of these basins are on active frontlines, meaning that none of the parties can benefit from them unilaterally. On the other hand, only one basin, known as the "**Emergency basin**" as it was called before the war, is under the authority of the IRG and contains 22 wells. It was relied upon in emergencies when pumping from the other main basins was interrupted. However, due to the high dependence on this single basin by the population living in the part of under the control of IRG, its water resources were depleted, which led to its low capacity to meet the needs of the population due to the low water level, and the suffering of the population increased as a result of water scarcity, and the signs of a water crisis began to emerge.

In response to these challenges, a local mediation initiative emerged in 2020, led by SYF, to consolidate the concept of neutralising water services from the conflict through effective community mediation aimed at restarting the water wells and building joint consensus between the government authorities in Taiz City and Al-Hawban area.

- **References:** 4- IPC Yemen Acute Malnutrition Analysis Nov2023 - Oct2024 Report Published on Aug2024.

  5- Al-Aghbary, Ola, and Labib Shafi. "Women's Local Mediation Efforts in the Water Issue in Taiz Governorate: Case Study." Taiz: Sheba Youth Foundation for Development and UN Women, January 2023.

These efforts resulted in a preliminary agreement to prepare a technical, administrative and security roadmap that outlines a sustainable solution to this complex service issue.

This document presents a practical vision with a timeframe extending to 2028. It was prepared under the Peace Support Facility (**PSF**) project, implemented by the United Nations Development Programme and funded by the German government and the European Union. The vision was developed through a participatory methodology that engaged executive authorities, technical partners, and local community representatives. The process aimed to develop a viable plan to strengthen local governance, mobilize multi-source funding, and ensure interventions are aligned with national priorities, local authority plans, and the strategies of humanitarian and development partners. The document was prepared in close coordination with the Office of Planning and International Cooperation and the Local Water and Sanitation Corporation in Taiz Governorate, to ensure its integration with the directions of the two entities and meet the actual needs in the water sector in the governorate.

The roadmap for the water sector in Taiz Governorate represents a pivotal step toward organizing and directing joint efforts within this vital public service sector.

This roadmap has been prepared in coordination with the relevant authorities, foremost among them the Local Water and Sanitation Corporation, which has officially approved and adopted the document as a reference framework to harmonize future interventions.

This official adaptaion underscores the importance of collective action and the necessity of having a clear and comprehensive vision to address the long-standing challenges in the water sector and to enhance the efficiency of services provided to citizens.

The document also reflects the first priority of the Economic and Social Development Plan for Taiz Governorate 2024-2026, which is to strengthen local peacebuilding, reconciliation, and mediation efforts, especially those related to restoring some basic services and expanding their scope of work at the district level.

As a reference working document, this plan lays the foundations for moving from emergency treatments to sustainable institutional solutions, and is a qualitative contribution towards strengthening the resilience of local institutions, restoring trust between the components of society, and ensuring the human right to water as a vital entry point to achieve the triple approach of Humanitarian-Development-Peace Nexus (**HDPN**).

Moreover, this document includes the procedural nature that defines how to achieve the goal of improving beneficiaries' access to water. It also emphasises the importance of a strong management of the institution capable of creating a stimulating work environment and making appropriate decisions to achieve what is required in each of the three phases of implementing this roadmap, adhering to the planned time period, the level of cooperation required, and how to prioritise and organise.

Roadmap Objectives

1. 
   Mapping solutions to the challenges facing the water sector in Taiz, to access the main water sources by restarting and pumping water from Al-Hawban wells to the collection reservoirs in Taiz City.

2. 
   Design effective local mediation mechanisms with the participation of the various parties, in order to reach effective coordination or joint management of the water resource between the two parties.

3. 
   Provide a common understanding that can be agreed upon, leading to the signing of an agreement to re-pump water from Al-Hawban area to Taiz City.

4. 
   Improving beneficiaries' access to water services provided by the Local Water and Sanitation Corporation - Taiz City.

- **References:** 6- Taiz Governorate Secretariat (Ministry of Planning and International Cooperation) , (2023, November), Taiz Economic and Social Development Plan 2024-2026.

Roadmap Pathways

The roadmap includes three main tracks, each consisting of specific implementation steps, as follows:

Track one: Building Trust

Based on the intensive efforts and contacts undertaken by SYF with various stakeholders, a local mediation team of stakeholders was formed in 2020 (Annex 1-5). Women media tors played a pivotal role in leading the local mediation processes and dealing with the complexities of the water sector under great challenges and difficulties. The team focused mainly on building trust between the two parties, which allowed reaching a consensus on the importance of joint work on the water sector, with the aim of reaching an agreement that establishes sustainable mechanisms to restore water pumping to Taiz City.

This process includes six main steps:

1 Preparation

- Identifying the actors and influencers of the water sector in Taiz.
- Forming the coordination team that manages the mediation and information gathering tasks.

2 Analyzing the current situation

Achieving an accurate analysis of the current situation of the water issue in Taiz, especially the re-pumping of the water basins located in Al-Hawban area or common areas, requires the implementation of several activities that can be summarised as follows:

- Conducting a series of meetings and focus groups with relevant parties to collect information on the current status of the water sector in detail. (According to the prepared templates).
- Carrying out field activities such as surveying wells in all agreed areas, including those available in Al-Hawban area, inside the city and in active frontlines.
- Collect technical data related to the operational readiness of each well (depth, production capacity, infrastructure, maintenance requirements).
- Develop a classification of water wells based on the prioritization of the need for rehabilitation and operation.

- Mapping past and current international and local interventions through meetings and field visits.
- Holding a consultative workshop on the project to identify potential local, international, governmental, and private sector funding sources.
- Holding a discussion workshop on risk management.

Initially, the visualisation of the current situation relates to two main axes (the technical axis - the administrative and financial axis), and we will address them as follows:

First: Technical axis

A. Water sources

Taiz City residents currently rely solely on water pumped from wells located within the city, and their productivity is very low and insufficient comparing to the needs of the city's residents. Available statistics indicate that out of the 95 wells owned by the corporation, only 29 internal wells (solar-powered) currently supply water to Taiz City. These wells produce approximately 3,000 cubic meters of water per day, equivalent to 16% of the previous total production of 18,000 cubic meters per day, noting compared to the actual demand of the city's residents estimated at 40,000 cubic meters per day. In contrast, there are 27 wells with an estimated daily production of 9,706 cubic meters of water, but they are out of service due to damage sustained by the conflict. They are also located in dangerous areas on the active frontlines. (For more details, please see the tables below, which were shared by the Local Water and Sanitation Corporation- Taiz Governorate).

Name of the water field	Location of the water field	Previous status (before the war)			Current status		
		Number of wells		Capacity Production in cubic metres per day	Number of wells		Capacity Production Capacity in cubic metres per day
		Number of active wells	Number of suspended wells		Number of active wells	Number of suspended wells	
North Field	Al-Haima and Habir	10	13	4,625	0	23	0
North East Field	Al-Hawjalah And Al-Aaerah areas	19	29	7,250	0	19	0
Western Field	Al-Dhabab area	9	0	4,726	0	0	0
Taiz City Neighbour hoods	City Field Wells	38	0	4,400	29	1	2,100

Table 1: The difference between the conditions of water fields before and after the war.

B. Wells' Operating Power

Number of wells powered by solar energy and night-time pumping generators	Gap	Number of wells powered by diesel	Gap
28	5 wells need solar power systems.	All wells are powered by Diesel-powered electric generators.	5

Table ❷: Wells' operating power.

C. City Water Supply Disrupted as Frontline Pumping Stations Shut Down

The Local Water and Sanitation Corporation's equipment and facilities located in or near the active frontlines are currently inaccessible due to the military arrangements in those areas, which had made it difficult for engineers and specialists to access.

According to the Local Water and Sanitation Corporation, the number of wells located in the active frontlines (27 wells), with a productivity of 9,706 cubic metres of water per day, representing nearly half of the total water production.

Second: Administrative and Financial

The Corporation is currently underperforming, with many departments unable to fulfil their essential responsibilities. For instance, revenue collection is very weak, and key income streams such as sewage service fees are being neglected. In addition, the wide gap between water production costs and the low tariff charged per cubic meter of water further restricts the corporation's ability to fund operations and maintenance. The lack of financial and administrative directors also hampers daily management. Overall, the system faces significant water losses, which heighten financial strain and reduce efficiency. Despite all these difficulties, there are some aspects that can be built upon. The Local Water and Sanitation Corporation is considered one of the few institutions that has been relatively successful in maintaining a kind of coordination and understanding between the two administrations operating in Taiz City and in Al-Hawban area, thanks to the efforts of local mediation and the cooperation of the local authorities in the governorate.

There is also joint technical cooperation to provide spare parts and technical support for facilities located in Al-Hawban area. In addition, the salaries of all employees are paid from the interim capital, Aden, despite the geographical division of administrative and financial tasks. This form of cooperation has contributed to maintaining the continuity and cohesion of the corporation and preventing its complete division.

The presence of an effective management team within Taiz City, working to restore and activate the staff, build their capacities, coordinate with donors to rehabilitate and operate the city's main water sources, pump water into the city's main reservoirs, organize water distribution to all beneficiaries, and operate the financial management and collection system, all of these measures will contribute to strengthening institutional capacity and improving resources. These measures can be considered an important step toward establishing joint management and implementing the roadmap as required. Conversely, maintaining the current administrative and financial situation significantly reduces the chances of restoring institutional capacity and forming joint management, thus weakening efforts to implement the roadmap for the water sector in Taiz governorate.

3 Strengthening Trust Building and Community Communication

The initial conceptualisation of enhancing trust building and community communication is based on the following actions:

- Conducting informal meetings with local community leaders from both parties to promote trust-building practices between the two parties and extend them within the community.
- Engagement of neutral parties (international and local) to contribute to building bridges of communication and ensure that they are not affected by any changes that may occur in the general circumstances.
- Conducting official meetings with the civilian and military leaders of both parties.

4 Trail Pumping

- Holding a meeting with both parties at the level of administrative and technical leaders to discuss the trial pumping from Al-Haima and Habir wells to the corporation’s reservoirs in the city.
- Determine the details of the trial pumping in terms of pumping date, quantities, specific time, proposed trial period and other technical details, in the presence of members of the mediation committee.

5 Drafting the Mediation Proposal

Preparing a draft mediation initiative (an agreement between both parties) that represents a summary of the efforts reached by the mediation process, including the operating mechanism, pumping, protection, task sharing, the role of governmental and international bodies, project sustainability, and mutual guarantees.

6 Negotiation and signing

Presenting the mediation initiative to the concerned parties for comments and drafting the final version of the initiative accordingly.

Signing the mediation initiative and start the implementation process of the plan.

Expected results to be achieved upon completion of the first track

- Improved coordination in the water sector, due to the formation of the coordination team.
- Improved overall understanding of the water issue, identifying its technical, financial, and administrative complexities systematically, and identifying international and local interventions in the water sector.
- Increased level of mutual trust between the parties and the community.
- The existence of a legal mechanism that regulates the mutual obligations between the two parties related to the water sector and thus determines how to fulfil these obligations.

Track two: Joint Management and Good Governance

This track focuses on reactivating the corporation's departments (financial, administrative, technical, commercial, etc.), enhancing performance levels, and strengthening governance through accountability, integrity, transparency, and justice. It also emphasizes financial improvements, such as reviewing the current tariff for services provided by the corporation, reactivating the billing system, improving the collection process, and reinforcing oversight.

Additionally, a joint management team will be formed to operate the wells (Al-Haima, Habir). In its first stage, this team will concentrate on operation and maintenance to ensure water pumping from the wells (Al-Haima, Habir). The team will be composed of the Local Water and Sanitation Corporation staff from Taiz City and Al-Hawban area, with each entity responsible for water distribution as well as all financial and administrative procedures within its scope.

Below is a table of the main tasks of this track:

General note: All tables in this section were prepared based on the results of the technical workshops coordinated and led by Sheba Youth Foundation for Development within the PSF project implemented by the United Nations Development Programme (UNDP), with the participation of local water and sanitation teams in Taiz City and Al-Hawban area, during the period from February to June 2025.

N	Main tasks	Activities
1	Activate the tasks and functions of the organisation	■ Prepare an organizational structure for the Local Water and Sanitation Corporation in line with the services provided. ■ Restore the corporation's staff and build their capacities through a clear rehabilitation programme. ■ Appoint department managers and department heads for the vacant departments and sections according to the functional structure that will be amended. ■ Implement awareness campaigns for subscribers to pay their bills and maintain the continuity of services. ■ Follow up the activation of the different departments of the corporation. ■ Continuous supervision of the departments' implementation of various activities.

2	Issuing water and sewage bills	■ Activating the financial system with all the necessary equipment and procedures required for the billing process. ■ Issuing water and sewage bills.
3	Reviewing the tariffs for all services provided by the organisation, such as water and sewage	■ Prepare proposals for tariffs based on operating costs, the ability of subscribers to pay and the level of service provided. ■ Develop tariffs for sewerage in areas that do not have access to water and for government and commercial consumers. ■ Present the tariff proposals to the Board of Directors for approval.
4	Assigning a joint management team to pump water from the wells (Al-Haima, Habir)	■ Forming a joint management team of employees from both sides of the Local Water and Sanitation Corporation to submit an estimated budget proposal (monthly) for the operation and pumping of water from the wells (Al-Haima, Habir) to Taiz City. ■ Develop a plan for the operation, pumping and maintenance of the wells. ■ Supervise the operation work and distribute water to the two sides according to the agreed quantities. ■ Coordinate with the security authorities to control violators and oblige subscribers to pay the value of the bills, as well as coordinate with the neighborhood leaders to work with the corporation. ■ Submit monthly reports.

5	Organise financial and administrative procedures and processes in the Water Corporation in accordance with the principles of good governance	■ Appoint a highly qualified team (management of the corporation), responsible for implementing all the tasks and functions of the corporation and the implementation of the roadmap. ■ Provide the necessary funds to meet the costs of operation and maintenance, especially those related to the operation of (Al-Haima, Habir) wells. ■ Provide the necessary regulations to promote transparency and good governance in administrative, financial and technical aspects. ■ Provide a media platform to communicate with the public and publish information and data related to the corporation's services and make them available to the public. ■ Activating the internal and external monitoring roles (Technical Control Department in the Corporation, Audit Department in the Corporation, Supervision of the Central Organization for Control and Auditing).

Table 3 : The main tasks in the path of joint management and good governance

Results expected to be achieved upon completion of the second track

- Improved organisational performance through an integrated organisational management of tasks and functions.
- Regularity of administrative procedures and processes, through a regulation that organises the work of different departments, defines the functions assigned to each of them, and separates overlapping tasks between these departments.
- Regularity of financial procedures and operations, due to the determination of tariffs for services provided by the corporation, such as water and sanitation.
- Improved financial position of the corporation as a result of issuing water and sewage bills and starting the collection process.
- Continuous flow of water through the network and its delivery to beneficiaries, as there is a joint administration that organises the operation of water wells in Al-Hawban area and the pumping of water to Taiz City.
- Stability of procedures due to the existence of a continuous coordination mechanism with the security and military authorities on both sides.
- Improved oversight as a result of activating the role of internal and external oversight bodies.
- Improved relationship between the Local Water and Sanitation Corporation and the beneficiaries due to the existence of communication channels such as the corporation's media platform.

Third track: Expansion and sustainability

The main objective of this track is to expand the building of trust and peace between the two sides based on the progress achieved in the first and second tracks, by targeting the operation of the new wells located in the active frontlines, and this requires working on three levels as follows:

Level One: Military and security Arrangements

At this level, the attention is focused on encouraging support for local mediation efforts between the two parties by political, military, and security authorities. This is aimed at achieving a specific outcome: neutralizing the Water Corporation and its facilities from the conflict; ensuring secure and facilitating access for operators and technicians to the well sites located on active frontlines to carry out required maintenance; and providing the necessary support for the operation and rehabilitation of damaged water infrastructure facilities. Ensuring the success of procedures at this level is of paramount importance, as it is a necessary condition for implementing the requirements for the next levels.

Working at this level requires basic communication measures, including a number of meetings and workshops with security and military authorities, attended by representatives from the Local Water and Sanitation Corporation and the mediation committee. During these meetings, the wells that technical teams will be working on, located on active frontlines, are identified. A specific mechanism for neutralizing these wells is agreed upon in partnership with the other party to enable the wells to be reactivated.

General note: All tables in this section were prepared based on the results of the technical workshops coordinated and led by Sheba Youth Foundation for Development within the PSF project implemented by the United Nations Development Programme (UNDP), with the participation of local water and sanitation teams in Taiz City and Al-Hawban, during the period from February to June 2025.

N	Main tasks	Activities
1	Prepare a preliminary conceptualisation of the wells and areas targeted by the restart process and located in the active frontlines as a first phase.	■ Holding a workshop for the joint team. ■ Coordinating with local, military and security authorities to secure engineers' access to well sites. ■ Working to provide the requirements of the military side to secure the infrastructure sites in the active frontlines.
2	Briefing military and security leaders on the local mediation project to restore water pumping.	■ Conducting visits and meetings with local authorities and relevant authorities from both sides to present the draft roadmap to them. ■ Holding a number of meetings and workshops with military and security leaders.

Table 4: The main tasks required to be carried out at the level of military and security arrangements.

Expected results to be achieved upon completion of the first level (military and security arrangements)

- A clear and complete understanding of the damage to the water infrastructure facilities located in active frontlines.
- Sustainability of water services and operations due to guarantees (commitments) to neutralise the water issue provided by the military and security authorities on both sides.
- Improved infrastructure of water installations and facilities located in the active frontlines due to the access of technical teams to the damaged water facilities and the security of their movements to fulfil their tasks.
- Improved communication between the two parties due to the presence of a liaison team from both sides, reinforced by liaison officers.
- The effectiveness of local mediation efforts and the continuity of the roles they play in the water sector.
- The existence of a coordination and communication plan, with the participation of local mediators, to ensure the access of engineers and operators to the Local Water and Sanitation Corporation 's facilities in the active frontlines.
- A visualisation of the financial requirements of the military auxiliaries.
- Humanitarian organisations operating in Yemen are mobilising to provide financial resources to operate the wells (Al-Haima, Habir) and provide operational requirements.

Level two: Technical and Technological Arrangements

The second level of technical and technological arrangements requires the joint management team to develop a plan for the operation and pumping of water from Al-Haima and Habir wells to the collection reservoirs in Taiz City, prepare a budget for the operation and maintenance process and provide all operational requirements, and in turn, the Local Water and Sanitation Corporation in Taiz City's side will develop a clear, detailed and chronic plan for the distribution of water to subscribers and maintenance of the water distribution network and domestic connections.

As for the rehabilitation of the water wells, facilities and equipment of the Local Water and Sanitation Corporation located in the active frontlines, it can be accomplished through three steps, with a proposal to start rehabilitating the damaged water infrastructure facilities as follows:

Step one:

Start rehabilitating damaged water infrastructure facilities in safe locations in the north of the city:

- Rehabilitate the Al-Aamerah field wells and pumping lines to pumping station No. 1 located in Al-Hawjalah, which is far away from the active frontlines.

Second step:

Rehabilitate damaged water facilities located in the active frontlines as follows:

- Rehabilitation of Pumping Station No. (1) located in Al-Hawjalah area.
- Rehabilitation of Al-Hawjalah and Wadi Hadid wells and pumping lines.
- Rehabilitation of the pumping line from Station No. (1) located in Al-Hawjalah area to Station No. (2) located in Al-Guhaim area.
- Rehabilitation of Station No. (2) located in Al-Guhaim area and the pumping line to the Local Water and Sanitation Corporation's station inside the city.

Third step:

- Rehabilitate the facilities and equipment of Al-Dhabab field.

For detailed information on these steps, please refer to: (Concept note on Water Supply Intervention in Taiz City - Concept note on Water Supply Intervention in Taiz City_Final-2) prepared by the WASH Taiz Task Force.

Below is a table showing the tasks and activities at the second level (technical and technological arrangements) within the third track of the map, which is the expansion and sustainability track

N	Main tasks	Activities
1	Operating and pumping water from (Al-Haima, Habir) wells to the city	■ Prepare a chronic plan for the operation and pumping of water from (Al-Haima, Habir) wells to Taiz City. ■ Prepare a list of operational needs for the pumping process. ■ Prepare a coordination plan with the security and military authorities and local mediators related to determining pumping and operating times. ■ Forming a technical and engineering team to address emergency imbalances that would represent an obstacle to the operation process.
2	Distributing water to areas of the city according to a clear and fair plan	■ Prepare a clear and chronic water distribution plan for different neighborhoods and areas, including the number of subscribers and the quantities of water distributed. ■ Prepare specifications and schedules of quantities required to carry out the rehabilitation of the distribution network according to the areas. ■ Forming technical teams to maintain the connections during the water distribution process. ■ Coordinate with local authorities to finance the rehabilitation of water distribution networks. ■ Coordinate with neighborhood leaders before water distribution to spread awareness in their areas about the importance of water conservation, use of floats, and reporting waste. ■ Coordinate with police departments to arrest violators and trespassers on the water network.
3	Rehabilitation of water facilities located in active frontlines	Humanitarian and relief organisations operating in Yemen undertake the following activities ■ Conduct technical assessments of the rehabilitation needs of water and sanitation infrastructure facilities in active frontlines when access to the sites is secured. ■ Prepare specifications, tables of quantities and estimated costs for the rehabilitation of water and sanitation infrastructure facilities in active frontlines. ■ Implementation of the rehabilitation of water and sanitation infrastructure facilities in the active frontlines.

Table 5 : The main tasks required to be carried out at the level of technical and technological arrangements

Expected results to be achieved upon completion of Level 2 (Technical and Technological Arrangements)

- Improved long term planning for the operation and pumping of water from (Al-Haima, Habir) wells, with clarity of the operational requirements included in the list of operational requirements for pumping.
- Technical readiness for implementation through the presence of an engineering and technical team that is ready to address emerging challenges.
- Improving the long-term planning process related to the distribution of water to the neighbourhoods and districts of Taiz City.
- Availability of the technical data needed to complete engineering tasks, such as technical specifications documents and bills of quantities for the rehabilitation of (damaged water facilities in the active frontlines, water distribution networks and household connections).
- The readiness of humanitarian and relief organisations operating in Yemen, which have become capable of carrying out the rehabilitation of damaged facilities in the active frontlines.
- The readiness of local authorities to rehabilitate some water networks within Taiz City.

Level three: Joint work with stakeholders (public sector, private sector, international actors, local and international civil society organisations)

A meeting will be arranged with donors in the presence of local authorities, representatives of the Local Water and Sanitation Corporation on both sides, representatives of the private sector, and civil society organisations to present the roadmap and coordinate mechanisms to obtain the necessary funding to implement the unfinished phases of the roadmap for the water sector until the process of re-pumping water from Al-Hawban wells and conflict areas is achieved.

Expected results to be achieved upon completion of the third level (Joint work with stakeholders)

- Gaining the interest of donors and UN agencies in all the effective solutions included in the roadmap for the water sector in Taiz, and joint work by all stakeholders to provide the necessary funding.
- Improving the coordination mechanism through the establishment of a water group with the participation of local authorities and all UN agencies and international organisations.
- Local authority and private sector participation in the funding needed to re-pump water.
- Expanding local mediation efforts as a community-based conflict resolution mechanism and achieving positive results at this level.

Proposed Implementation Timeline

This roadmap has been designed with a timeframe of 2025-2028. There are a number of issues that need to be addressed during time management and implementation of the roadmap.

- The roadmap includes three parallel tracks that are important to launch at the same time, however, the second (joint-management and good governance) and third (expansion and sustainability) tracks are interlinked: the operation of Al- Haima and Habir wells depends on the support of local authorities on both sides of the water sector roadmap to start the coordination process, the rehabilitation needs assessment work for damaged facilities in active frontlines depends on ensuring access of technical staff to those sites, and the funding of the rehabilitation of damaged facilities is linked to the pumping from Al-Haima and Habir wells to the city. As a condition set by humanitarian and relief organisations working in Yemen, there is a strong interdependency between the key milestones of the first track (building trust), and this is also true for the other key milestones of the other two tracks. Start and completion dates should be determined accordingly.
- It is not easy to propose precise dates for these milestones because there are many factors that influence these dates, including the objectives and efficiency of the Water Corporation's management, its functioning and available resources, and effective coordination with humanitarian partners and local authorities. Therefore, one of the primary tasks of the corporation's management is to review and determine the best estimates of the dates indicated in the tables for each of the key tasks, thereby creating a visual timeline for the roadmap. Likely, these dates will not be as accurate as they should be and will need to be adjusted. It is better in practice to have detailed timelines for each of the milestones depending on the size and complexity of the projects related to the milestone.

This way, knowing the details of the task activities, it may be possible to make more realistic estimates of how long each milestone will take.

N	Main tasks	Stakeholders	Timeframe (Month) 6	12	18	24	30	36	42	48
	Track 1: Administrative and financial aspects and (Joint-management)									
1	Activating the organisation's departments	Local Water and Sanitation Corporation, Local Authorities, Regulatory Authorities	◉	◉	○	○	○	○	○	○
2	Issuing water and sewage bills on a regular basis	Local Water and Sanitation Corporation, local authorities, regulators	◉	◉	◉	◉	◉	◉	◉	◉
3	Prepare proposals for water and sanitation tariffs	Local Water and Sanitation Corporation, local authorities, regulators	◉	◉	○	○	○	○	○	○
4	Appointing a team (Joint-management) to pump water from Al-Haima and Habir wells	Local Water and Sanitation Corporation, Board of Directors, Ministry of Water	◉	◉	◉	◉	◉	◉	◉	◉
5	Applying the principles of good governance in the Local Water and Sanitation Corporation	Local Water and Sanitation Corporation, Board of Directors, humanitarian and relief organisations working in Yemen	◉	◉	◉	◉	◉	◉	◉	◉
	Track 2: Political, Security, Military and Military Aspects and Local Mediation									
1	Support the preparation and implementation of the water sector roadmap.	Local authorities	◉	◉	◉	◉	◉	◉	◉	◉
2	Secure access to water infrastructure sites on active frontlines	Local authorities, Local Water and Sanitation Corporation, humanitarian and relief organisations operating in Yemen	◉	◉	◉	◉	◉	◉	◉	◉
3	Continued efforts of local mediation and peacebuilding on the water issue	Local authorities, Sheba Youth Foundation for Development, Mediation Committee, humanitarian partners	◉	◉	◉	◉	◉	◉	◉	◉
4	Securing access to water infrastructure sites on active frontlines	Mediation Committee, Local Authorities, Local Water and Sanitation Corporation.	◉	◉	◉	◉	◉	◉	◉	◉
5	Providing military requirements	Mediation Committee, local authorities, humanitarian and relief organisations operating in Yemen	◉	◉	◉	◉	◉	◉	◉	◉

	The third track: Technical aspect and rehabilitation of water facilities		
1	Operation and pumping of water from wells (Al-Haima - Habir) to the city	Local Water and Sanitation Corporation, Local Authority	
2	Distributing water to the city areas according to a clear and fair plan	Local Water and Sanitation Corporation, Local Authorities	
3	Rehabilitation of water facilities in the active frontline	Local Water and Sanitation Corporation, humanitarian and relief organisations working in Yemen	

Table 6: Proposed timeline for the implementation of the roadmap.

Potential risks

- Weak oversight of roadmap implementation by local authorities, with different prioritisation affecting their work agendas.
- Changing donor funding strategies due to regional and international developments.
- Continued weakness in the functions of water institutions.
- The deterioration of the security situation in the active frontlines.
- The lack of available funding provided by humanitarian and relief organisations operating in Yemen for the water and sanitation sector in Taiz governorate.
- Weak community support for the services provided by the Local Water and Sanitation Corporation.
- Weak oversight by local authorities on the implementation of the roadmap.
- Weak official and community oversight of the Local Water and Sanitation Corporation's performance.
- The impact of the designation of Ansar Allah forces as a terrorist group by the US administration.
- Frustration caused by unregulated competition between HDPN partners, which may result in new interventions based on previous efforts without reference to the original initiators, especially between peacebuilding and humanitarian actors.

Risks	Mitigation
Weak oversight by local authorities	Forming joint oversight committees, holding regular meetings for monitoring and evaluation, and submitting regular reports to the local authorities and partners.
Changing donor policies	Diversify funding sources (local, private, expatriate, civil society organisations) and develop alternative plans for interim implementation.
Weak institutional performance	Implement capacity building and rehabilitation programmes, provide regular technical support, and activate internal and external monitoring and evaluation of performance.
The deterioration of security situation	Flexibility in implementing activities, obtaining official guarantees to secure teams' access, and using local mediators when needed.
Lack of funding	Strengthen advocacy efforts with donors, engage development partners, and focus on low-cost, high-impact activities.
Weak community support	Implementation of community awareness campaigns, engaging local leaders and stakeholders, and activating feedback and complaints channels.
Weak oversight	Forming community and external oversight committees, and publishing performance reports and financial data in a transparent manner.
Influence of political decisions	Devoting the attention to the humanitarian and technical dimension in all project activities, and adopt neutral and non-political communication channels.
Competition between organisations	Activating joint coordination platforms and ensuring that all efforts are documented and attributed to the initiators to avoid duplication and frustration.

Table 7 : Potential risks and their mitigation

Monitoring and Evaluation Mechanisms

The monitoring and evaluation mechanism aims to ensure the implementation of the roadmap according to the set plans, measure the achievement of interim and final goals, and provide a reliable database for decision-making and continuous development. The M&E methodology is based on international standards, considering the specificity of the local context of Taiz governorate.

Organizational Structure for Monitoring and Evaluation

- **Formation of a monitoring and evaluation committee**
  Consists of representatives from the Local Water and Sanitation Corporation, local authorities, civil society organisations, humanitarian partners, and independent experts when needed.
- **Identify field focal points**
  In the beneficiary neighbourhoods and areas, in order to collect feedback and submit periodic reports.
- **Engage the local community**
  In the verification and evaluation processes, through questionnaires, periodic surveys and community listening sessions.

Key Performance Indicators (KPIs)

Indicator	Measurement mechanism	Annual target	Implementation entity
Number of qualified or operational wells	Technical reports/field visits	(Target to be determined)	Technical committee
Volume of water distributed (cubic metres/month)	Operation and monitoring records	(Target to be determined)	Operational team
Collection rate (%)	Financial reports	(Target to be determined)	Financial management unit
Beneficiary satisfaction (Scale 1-5)	Satisfaction questionnaires/surveys	4<	Follow-up committee
Number of complaints and enquiries handled	Complaints log	(Target to be determined)	Point of contact
Number of community and awareness meetings	Activity reports	(specify target)	Awareness team
Number of coordination meetings	Meeting minutes	(Target to be determined)	Coordination committee

Table 8: KPIs for the M&E plan.

Data collection and verification mechanisms

- **Periodic reports**
  Prepare monthly and quarterly reports summarising progress, challenges, and lessons learned.
- **Field visits**
  The committee organises periodic unannounced and scheduled visits to verify the progress of activities on the ground.
- **Opinion surveys and beneficiary satisfaction surveys**
  Conducted at least twice a year, with results analysed to measure impact and community satisfaction.
- **Collecting and analysing complaints and suggestions**
  Through direct channels (complaint boxes, hotlines, or digital platforms) and analysing them to take corrective action.

Interim and final evaluation mechanisms

Midterm Review:

Conducted halfway through the implementation period, it includes a comprehensive review of indicators and impact and recommendations for improvement or correction.

Final Evaluation:

At the end of the project, to assess the overall achievement, lessons learnt, and document the experience as a reference for future projects.

Feedback and continuous improvement mechanism

- A regular meeting is dedicated to discussing follow-up reports and reviewing the results with stakeholders.
- The implementation path and action plans are adjusted according to the follow-up results and developments.
- Summaries of follow-up results are published transparently through the Local Water and Sanitation Corporation's media platforms, inviting community interaction and accountability.

Documentation and reporting

- All stages of monitoring and evaluation are documented in official records.
- A periodic report is sent to local authorities and supporters, including quantitative data, qualitative analysis, and practical recommendations.
- The confidentiality and privacy of beneficiaries is respected when collecting and analysing information.

Critical Success Factors

Several critical success factors may affect the implementation of the roadmap and therefore require special attention, summarised below:



The will of the local political and military authorities to maintain their support for this roadmap at its optimal level at all times and throughout all phases of the roadmap.



Activating the Local Water and Sanitation Corporation's departments and performing all its financial, administrative and technical functions with the required efficiency.



Activating the Board of Directors of the Local Water and Sanitation Corporation by the various stakeholders, due to its importance in overseeing the implementation of all tracks of the roadmap and ensuring its optimal implementation.



Continued support of humanitarian and relief organisations operating in Yemen for the rehabilitation of the water infrastructure in Taiz.



All concerned parties recognise the essential role of capacity-building for the Local Water and Sanitation Corporation.



Formation of a monitoring committee to implement the water roadmap.



Establish mechanisms to evaluate and measure the impact of the implementation process and make appropriate adjustments based on the feedback.

Annexes

Annex 1 : Names of the members of the local mediation committee

N	Names	Position
1	Ola Al-Aghbari	Executive Director of Sheba Youth Foundation for Development
2	Mouin Al-Obaidi	Lawyer and local mediator
3	Samir Al-Sebai	Local mediator

Note: In a previous period, the committee utilised mediators: Abdullah Shaddad and Abdullatif Al-Maradi.

Annex 2 : Names of the members of the Water Coordination Committee (WCC)

N	Names	Position
1	Ola Al-Aghbari	Executive Director of Sheba Youth Foundation for Development
2	Mouin Al-Obaidi	Local mediator
3	Samir Al-Sebai	Local mediator
4	Water Corporation Management	Representative
5	Nabil Jameel	General Manager of the Office of MOPIC
6	Colonel Samir Al-Ashbat	Assistant Director of Security for Neighbourhood Affairs

Annex 3 : Concept note on water supply intervention in Taiz City, prepared by WASH Taiz Task Force.

Annex 4 : Simplified Monitoring and Evaluation Matrix Template

Indicator	Baseline	Target	Measurement source/mechanism	Frequency	Responsible	Notes
Number of qualified or operational wells	...	...	Technical Reports/Field Visits	Quarterly	Technical Committee	
Volume of water distributed (m^3/month)	...	...	Operating records	Monthly	Operating team	
Revenue Collection Percentage (%)	X%	.Y%	Financial reports	Monthly	Financial management	
Customer Satisfaction (1-5)	...	>4	Customer Satisfaction Survey	Semi-annual	Follow-up Committee	
Number of complaints received and handled (%)	...	100% addressed	Complaint log	Quarterly	Community Liaison Point	
Number of awareness campaigns and community meetings	...	...	Activity reports	Semi-annual	Awareness team	
Number of Coordination Meetings	...	...	Minutes of the meetings	Monthly	Coordinating Committee	
Number of meetings of the Mediators Committee with the parties	...	...	Meeting reports and minutes	Quarterly	Mediators Committee	Reflects mediation activation
Number of cases/-conflicts resolved through the Mediators Committee	...	...	Mediation reports	Quarterly	Mediators Committee	To measure the effectiveness of the intervention
Satisfaction of the parties with the role of the Coordinating Committee and the mediators	...	≥4 out of 5	Annual questionnaire addressed to the parties	Monthly	Follow-up committee	To measure trust and sustainability

Annex 5 : Memorandum on the LWSC's Approval of the Roadmap

الجمهورية اليمنية
وزارة الميـــاه والبيئـــة
المؤسسة المحلية للمياه والصرف الصحي
محافظـــة تعـــز

Republic Of Yemen
Ministry Of Water & Environment
Water & Sanitation Local Corporation
Taiz Governorate

إشـارة :- .....
التاريخ :- .....

Ref :- .....
Date:- .....

المؤسسة المحلية للمياه والصرف الصحي
محافظة تعز
الصـــادر
الرقم : 0480
التاريخ: 2/1/2025م
الوقت: 1:

الإخوة / مؤسسة شباب سبأ للتنمية المحترمون

تهديكم المؤسسة المحلية للمياه والصرف الصحي –أطيب التحايا وبعد . . .

الموضـوع / اعتمـاد خـارطـة الطريـق

بدايـة نتقدم لعنـايتكم بجزيل الشكر والعرفـان لوقـوفكم صفا الى جانـب المؤسسـة ومسـاهمتكم الفاعلـة في تمكينها من العودة لتقديم خدماتها في مجال امدادات المياه وخدمات الصرف الصحي لمدينة تعز المحاصرة.

بالإشارة الى الموضوع اعلاه ،،، إلى التعاون القائم بين المؤسسة المحلية للمياه والصرف الصحي – تعز، ومؤسسة شباب سبأ في إعداد خارطة الطريق لقطاع المياه والصرف الصحي في محافظة تعز، فإننـا نشيد بالجهود المبذولة في إعداد هذه الوثيقة التي تمثل أداة مهمة للتخطيط والتنسيق المستقبلي.

وعليـــه :/ فإننا نؤكد أن هذه الخارطة تعتبر معتمدة من قبل المؤسسة المحلية للمياه والصرف الصحي – تعز، وسيتم الاسترشاد بها في عمليات التخطيط وتطوير المشاريع ذات الصلة.

شاكرين تعاونكم الدائم لما فيه المصلحة العامة . . .

وتقبلـوا خالـص التحيـة والتقدير ،،،

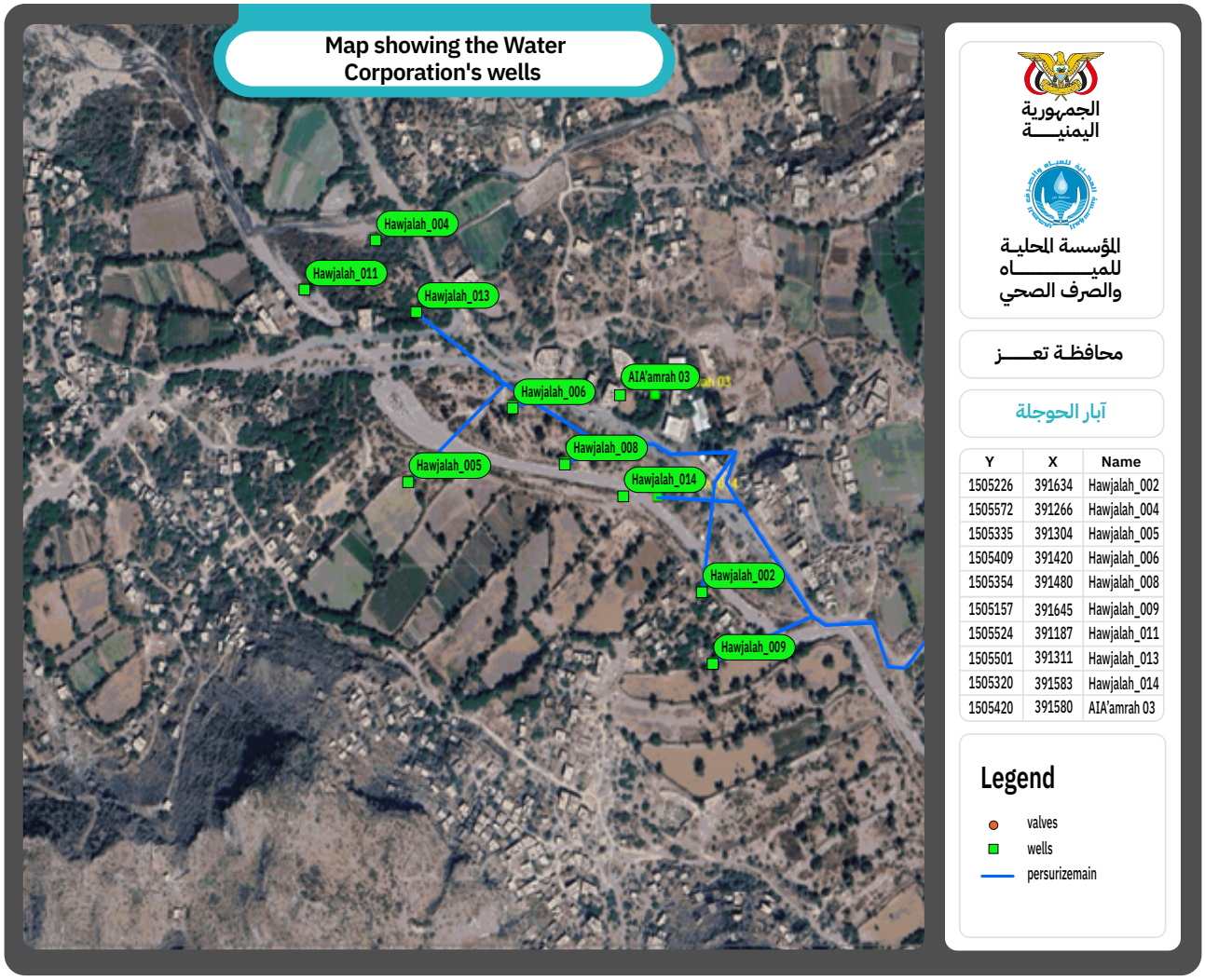
مدير عام المؤسسة

م / وثيق عبدالمولى الاغبري

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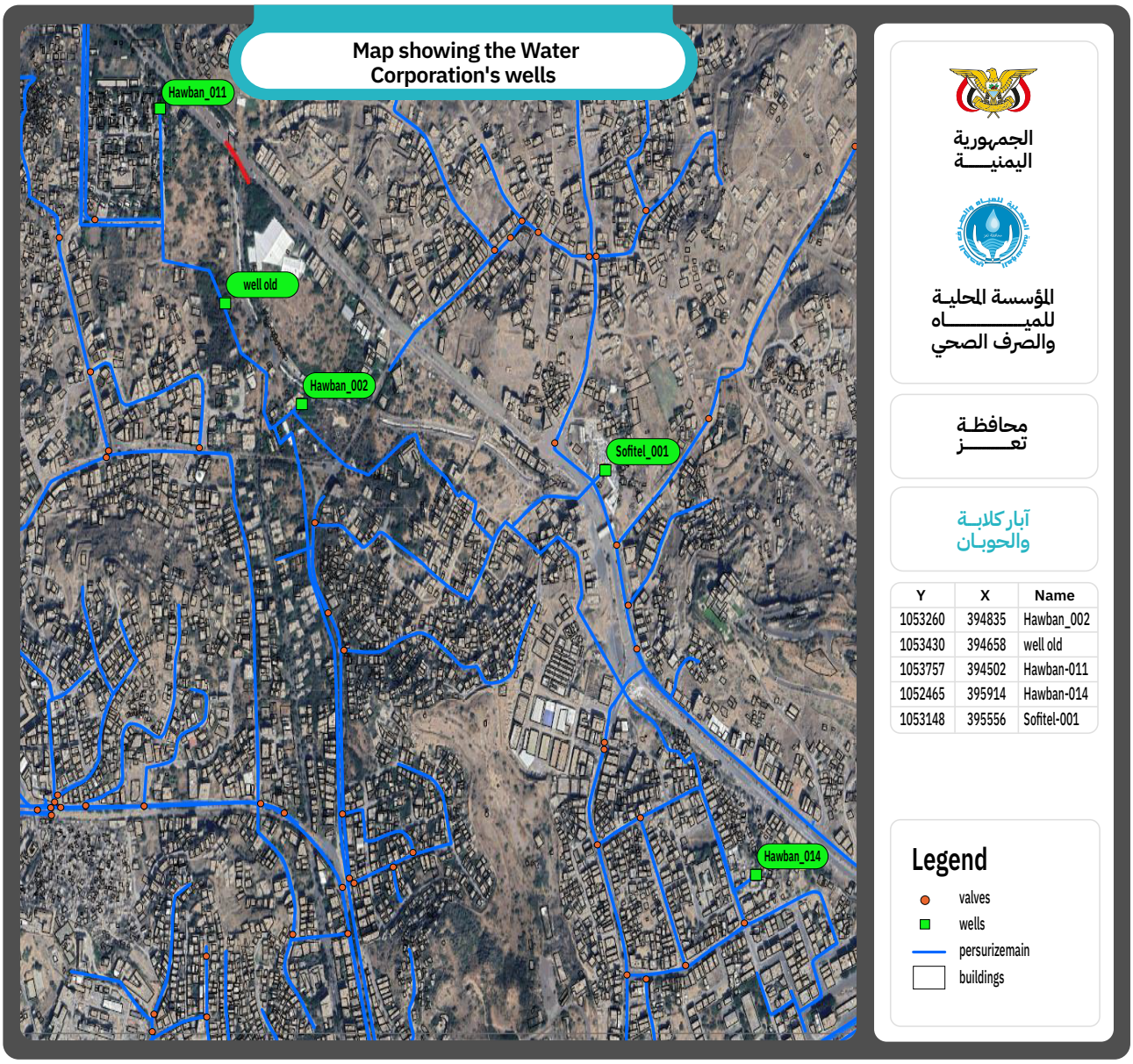
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Annex 6 : Map of Al-Hawjalah Wells



Y	X	Name
1505226	391634	Hawjalah_002
1505572	391266	Hawjalah_004
1505335	391304	Hawjalah_005
1505409	391420	Hawjalah_006
1505354	391480	Hawjalah_008
1505157	391645	Hawjalah_009
1505524	391187	Hawjalah_011
1505501	391311	Hawjalah_013
1505320	391583	Hawjalah_014
1505420	391580	AlA'amrah 03

Annex 7 : Map of Kalaba and Al-Hawban wells



- **References:** https://www.mopic-taiz.com/wp-content/u loads/2023/11/Taiz-Econmic-and-Social-Development-Plan-3-1.pdf

  https://www.ipcinfo.org/fileadmin/user_upload/ipeinfo/docs/IPC Yemen Acute Malnutration Analysis Aug2024.pdf

References

Taiz Municipality (Ministry of Planning and International Cooperation). (November 2023). Taiz Economic and Social Development Plan 2024-2026. Retrieved from https://www.mopic-taiz.com/wp-content/uploads/2023/11/Taiz-Economic-and-Social-Development-Plan-3-1.pdf

Integrated Progressive Classification of Food Security (IPC). (2024, August). Yemen: Analysis of acute malnutrition (November 2023 - October 2024). Integrated Progressive Classification of Food Security programme. Retrieved from https://www.ipcinfo.org/fileadmin/user_upload/ipcinfo/docs/IPC_Yemen_Acute_Malnutrition_Analysis_Aug2024.pdf

UNICEF. (2024). Water and environmental sanitation in Yemen: Assessment reports and analytical studies. Retrieved from https://www.unicef.org/yemen/water-sanitation-and-hygiene

Ola Al-Aghbari, and Labib Shaif. (2023, January). Women's local mediation efforts in the water issue in Taiz Governorate: A case study. Taiz, Yemen: Sheba Youth Foundation for Development and UN Women Programme. Retrieved from https://www.shebayouth.org/publications/Women-Local-Mediation-Taiz-CaseStudy.pdf

Taiz Water and Sanitation Working Group, Ministry of Water and Environment, Local Water and Sanitation Corporation, Yemen Water and Sanitation Working Group. (2023). Concept note on water supply interventions in Taiz city. Yemen Water and Environmental Sanitation Working Group. Retrieved from https://response.reliefweb.int/yemen/water-sanitation-hygiene

Sheba Youth Foundation. (2024, January). Women's local mediation efforts in the water issue in Taiz Governorate: A case study. Taiz, Yemen. Retrieved from https://www.shebayouth.org/wp-content/uploads/2024/01/Womens-Local-Mediation-Efforts-in-the-Water-Issue-in-Taiz-Governorate-Case-Study.pdf

Sheba Youth Foundation. (2024). Women mediating the water sector in Taiz: A case study. Taiz, Yemen: Sheba Youth Foundation. Retrieved from https://www.shebayouth.org/publications/Women-Mediating-Water-in-Taiz.pdf

References

Al-Aghbary, O., & Shafi, L. (2023, January). Women's Local Mediation Efforts in the Water Issue in Taiz Governorate: Case Study. Taiz, Yemen: Sheba Youth Foundation for Development & UN Women. Retrieved from -https://www.shebayouth.org/publications/Women-Local-Mediation-Taiz CaseStudy.pdf

_IPC. (2024, August). Yemen: Acute Malnutrition Analysis, November 2023 October 2024. Intgrated Food Security Phase Classification (IPC). Retrieved from https://www.ipcinfo.org/fileadmin/user_upload/ipcinfo/docs/IPC_Yemen_Acute_Mal nutrition Analysis Aug2024.pdf

,Sheba Youth Foundation. (2024). Women Mediating Water in Taiz: Case Study. Taiz Yemen: Sheba Youth Foundation. Retrieved from https://www.shebayouth.org/publications/Women-Mediating-Water-in-Taiz.pdf

Sheba Youth Foundation. (2024, January). Women's Local Mediation Efforts in the Water Issue in Taiz Governorate: A Case Study. Taiz, Yemen: Sheba Youth Foundation. Retrieved from -https://www.shebayouth.org/wp-content/uploads/2024/01/Womens-Local Mediation-Efforts-in-the-Water-Issue-in-Taiz-Governorate-Case-Study.pdf

.Taiz Governorate Secretariat (Ministry of Planning and International Cooperation). (2023, November) Taiz Economic and Social Development Plan 2024–2026 Retrieved from -https://www.mopic-taiz.com/wp-content/uploads/2023/11/Taiz-Economic-and Social-Development-Plan-3-1.pdf

Taiz WASH Taskforce, Ministry of Water & Environment, Local Water & Sanitation Corporation, Yemen WASH Cluster. (2023). Concept Note on Water Supply Intervention in Taiz City. Yemen WASH Cluster. Retrieved from https://response.reliefweb.int/yemen/water-sanitation-hygiene

UNICEF. (2024). Yemen: Water, Sanitation and Hygiene (WASH) – sectoral reports and meta-analysis. Retrieved from https://www.unicef.org/yemen/water-sanitation-and-hygiene


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Sheba Youth Foundation for Development


المحلية للمياه والصرف الصحي
محافظة تعز

2025 - 2028