## General information معلومات عمومی

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| **FCDO – Driving Action for Wellbeing to Avert Mortality (DAWAM) Project**  **تلاش برای رفا و کاهش مرگ و میر** | |
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| **Administration of survey** | **مدیریت سروی** |
| Name of province: | Ghor |
| Name of district: | Saghar |
| Name of health center | Fask |
| Health Center Type: please select one ( H3, CHC,BHC,SHC) | SHC |
| Building ownership (private or governmental) | Government |
| Number of clinic personnel | 7 |
| Number of patients visited in clinic (daily basis) | 70 |
| Number of hospitalized patients (the max capacity) | N/A |
| Name of surveyor(s) | Gh Farooq & Riazaddin |
| DATE of survey | 07-June-24 |

## Description of workتشریح کار

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| **Scope of intervention**  **عرصه حمایت** | | **All three component require major maintenance:** | |
| **Perimeter protection** | | The provision and improvement of Water, Sanitation, and Hygiene (WASH) facilities play a pivotal role in safeguarding human health and overall well-being. These initiatives serve multifaceted purposes, ranging from the prevention of waterborne and diarrheal diseases to the control of vector-borne illnesses. Additionally, they contribute to the enhancement of health and nutrition outcomes, mitigate the risk of epidemics, and foster dignity and safety among communities. Economically, investing in WASH facilities yields significant benefits, while also ensuring environmental protection and alignment with international sustainability and health standards.  To enhance the capacity of healthcare workers to uphold hygiene standards, ActionAid is committed to revitalizing and enhancing existing Water, Sanitation, and Hygiene (WASH) facilities in targeted Healthcare Facilities (HCFs). | |
| **Clinic map** نقشه کلینیک | | | |
| GPS of HCF: Please collect the GPS related HCF building جی پی اس نقاط کلیدی: لطفا جی پی کلنیک مربوطه را بگیرید: | | | |
| 1 | N: 33°, 125´, 46.65” | | E: 63°, 43´, 11.19” |
| Please draw a freehand sketch of the HCF facility; point out : Main building – Sanitation facilities, water source , waste disposal site ) | | | |
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## Project feasibilityامکان پذیری پروژه

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| **Parameters inspection and findings**  **بررسی پارامترها و یافته ها** | Background information: The Fask Healthcare Facility was constructed several years ago by the people contribution. This facility employs a diverse team, including one male doctor, a midwife, a female vaccinator, a female nutritional consultant, a female health promoter, a female Targeted Supplementary Feeding Program (TSFP) worker, and a male guard.  The healthcare facility is equipped with designated rooms for the Outpatient Department (OPD), nutrition services, delivery, vaccination, pharmacy, Maternal and Child Health (MCH), and stock storage. It is located in Fask Village, part of the Saghar District in Ghor province. On average, the facility serves 70 outpatients daily. Water source For both clinical use and drinking purposes, the water supply at the Fask Healthcare Facility (HCF) is provided by a public spring. During the survey, the water showed bad water yield and quality. However, during the cultivation season, the community relies heavily on this water source for agricultural purposes. Consequently, the spring becomes insufficient to meet both agricultural and drinking water needs.  As a result, the lack of water during this period is one of the biggest issues faced by the HCF, severely impacting its operations and the health and well-being of both staff and patients. Water storage and distributionWater Tanks There isn’t any water storage tank in the clinic, they are storing the water with jerry can for their daily uses.  However, the jerry can they are using for water storing firstly it’s not sufficient for the clinical use, secondly it impacts the quality of the water severely. Increasing the volume of cold water storage is necessary to ensure a consistent and reliable water supply for the HCF. Water supply network The isn’t any water supply system in the clinic main building and it’s a big issue that impacts the clinical hygiene and sanitary purpose. Stand Tap There isn’t aby stand tap in the clinic area. Hand washing There aren’t any hand washing sinks in the clinic Bathroom There is only one bathroom inside the building.  The bath is made of local material and there isn’t any modern fixtures in the bath. Septic Tank, Toilets and latrines There isn’t any septic tank and toilet in the Fask SHC area and they are using from a dry pit latrine with unsealed pit. Septic Tank: The Healthcare Facility (HCF) has no septic tank. Waste management The isn’t any waste management method in Fask Healthcare Center: Waste collection and separation: They are using from a traditional method for waste collection which is burying the sharp wastes and burning the cartons and other burnable waste to their houses. Incineration Not available Sharp pits Not available Organic waste pit: Not available |
| **Technical solution in compliance with MoPH/WHO standards**  **راه حل تخنیکی مطابق ستندرد های وزارت صحت عامه وسازمان صحی جهان** | Water source **Quantity Perspective:** The Fask Sub Health Center (SHC) faces significant challenges due to lack of water. To address this issue, ActionAid plans to dig a bore well with a depth of 40 meters and a diameter of 12 inches. Additionally, an apron will be constructed on top of the bore well to provide protection and control.  **Borehole Design and Justification:** The bore well will be designed to ensure a sustainable and reliable water supply. Based on ActionAid's technical observations from dug wells in this area, it has been identified that the region contains a productive aquifer layer located between 15 and 40 meters below ground. This assessment informs our borehole design and expected yield:   * **Depth and Diameter:** The bore well will reach a depth of 40 meters with a diameter of 12 inches, sufficient to fully penetrate the aquifer layer and ensure a consistent water flow. * **Sanitary Seal:** A sanitary seal, extending at least 2 meters below the ground surface, will be implemented using cement grout to prevent contaminants from entering the well. * **Casing and Screen:** The well will be cased with high-quality PVC casing to support the well structure and prevent collapse * **Pumping Test Conditions:** To determine the well’s capacity and ensure its efficiency, a pumping test will be conducted under the following conditions: * **Duration:** The pumping test will be conducted over a 24-hour period to assess the well’s performance and sustainability. * **Discharge Rate:** The test will start at a low discharge rate, gradually increasing to determine the optimal yield without over-extracting the aquifer. * **Water Level Monitoring:** Continuous monitoring of the water levels during the test will help in understanding the aquifer’s recharge rate and the well’s impact on the water table.   **Expected Yield:** Given the favorable conditions of the aquifer layer between 15 and 40 meters underground, we anticipate that the bore well will yield approximately 3000 to 4,000 liters per hour. This yield is expected to meet the daily water requirements of the health center by incorporating these design features and conducting thorough testing, we aim to secure a clean, safe, and sustainable water source for the Fask Sub Health Center, ultimately improving the health and well-being of the community it serves.   * Quality Perspective: ActionAid is committed to ensuring that the water from the borewell meets the highest standards of quality. As part of this effort, water quality testing will be conducted during the drilling process to ensure compliance with the WHO water quality standards. The results of the water analysis will be documented and included in the table below.  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Parameters | Turbidity (NTU | Color | Odor | Water Temperature | TTC (CFU/100ml | PH | TDS | Arsenic | | WHO Guideline | <5 NTU | None Detected | Not Offensive | 25C° - 30C° | 0/100ml | 6.5 to 8.5 | 1000 ppm | 10µg/l | | Lab Result |  |  |  |  |  |  |  |  |  Hand Pump installation and Well Apron construction: We propose the installation of a hand pump alongside the existing solar pump on the borewell. This dual pump system will ensure a consistent and reliable water supply to the Healthcare Facility (HCF). In the event of any issues with the solar pump, the hand pump will serve as a reliable backup, allowing the HCF to continue accessing water from the well without interruption.  Furthermore, to mitigate the risk of potential contamination to the underground water source, we have designed a proper apron. This apron will not only protect the well but also effectively divert surface water away from the vicinity of the well, minimizing the risk of contamination. Water storage and distributionWater tank (water availability)  |  |  | | --- | --- | | **WHO suggested minimum water quantities in health care facilities** | | | Use | Guideline quantity | | Outpatients | 5 liters/consultation | | In patients | 40–60 liters/patient/day | | Operating theatre / maternity | 100 liters/intervention | | Dry or supplementary feeding center | 0.5–5 liters/consultation | | Wet supplementary feeding center | 15 liters/consultation | | Inpatient therapeutic feeding center | 30 liters/patient/day | | Cholera treatment center | 60 liters/patient/day | | Severe acute respiratory diseases isolation center | 100 liters/patient/day | | Viral hemorrhagic fever isolation center | 300–400 liters/patient/day |  |  |  |  |  | | --- | --- | --- | --- | | **Total daily water demand of Fask Health Care Center** | | | | | Type of user | # of user | Consumption norm (Liters /day) | Total daily demand | | Outpatients | 70 | 5 | 350 | | clinic personnel | 7 | 110 | 770 | | **Total daily water need** | | | **1120** | | Required water for 48 hours to avoid any shortage | | | **2240** |   To ensure an uninterrupted water supply for at least 48 hours, it's imperative to have adequate water storage capacity. Based on our calculations, we recommend the installation of a single water tank with a storage capacity of 2000 liters. The water tank is factory-made from high-density polyethylene, ensuring durability, lightness, and ease of handling. It’s perfectly smooth inner surface allows for easy cleaning with traditional detergents. The tank is supplied with a top screwed lid and includes all necessary accessories and fittings and the new 1000-liter storage tank shall be connected to the new toilets to cover it’s water for two hand washing sinks and four flash tanksSolar System: Install the solar panels on the healthcare center’s rooftop, ensuring they are tightly secured against wind and theft. Position them for optimal sunlight and proper tilt. Although relocation is possible, consistent sunlight exposure is crucial for efficient energy production.  Fortunately, as far as there is enough space available on the roof Fask building. Therefore, the solar will be installed there. And the solar will be protected by a fixed lockable frame.  Submersible pump: We need the PEDROLLO product the submersible model: 4SR2/13 because it is a suitable pump for our system it’s flowrate is 1.2m3/hour. the well probe should be installed in the system to prevent the pump from running dry.  Total required pipe: only a 110-m pipe is needed from the well to the water tank.  Metallic box for protecting Inverter: To protect the Inverter, it needs to be installed in a metallic box that could be a safe place for the inverter.  Solar Panels: Solar sizing calculation indicates that we should use 4 numbers of Solar panel PROPSOLAR 270W Poly crystalline 37.9V 9.22A for running the system. (for more details please have a look at the attached solar sizing calculation in PDF file).  Inverter: The Controller Inverter FRECON IP65 1.5kw 220V made in China is designed for this system and can control the fluctuation of the electrons and prevent the pump from most breakdown.  Note: If the specified brand of solar panels or any other listed accessories are unavailable, the supplier must obtain written approval from the AAA WASH Specialist or an authorized technical team member for an alternative and changes. This ensures that any substitute meets the project's technical requirements and maintains quality standards.  Remember!  Each solar pump item needs to be supplied by a registered customs license seller with the following standard certifications:  FCC C009911 Standard, ISO 0991:2000 Standard, UL Standard, TUV Standard Water reticulation within the HCH premises: To optimize the existing distribution system and accommodate the addition of new facilities, it's imperative to connect it to the new borewell and extend it to the newly constructed toilets, handwashing sinks, and handwashing stations. This will ensure efficient water distribution throughout the facility. To achieve this, we will utilize PE pipes with a diameter size of 1 inch, PN 10-bar.  Moreover, to guarantee the longevity and reliability of the system, the pipes will be buried at a depth of at least 80 cm from the ground level. This strategic placement not only protects the pipes from external damage but also helps maintain consistent water flow, particularly during colder seasons when the risk of freezing is heightened.  With a total length of 100 meters, these PE pipes will seamlessly integrate with the existing distribution network, facilitating uninterrupted water supply to the newly established amenities. By preventing leakages and minimizing water wastage, this comprehensive approach not only enhances the functionality of the system but also promotes sustainability and responsible resource management. Existed Stand Taps As part of our plan, we aim to construct a strategically located handwashing station adjacent to the entrance door. This station will feature a valve box and receive water supply from two sources: the existing tap and a new water tank. This dual-source system is designed to ensure continuous availability of water, even during periods when the community water supply network may experience shortages or dry spells.  The construction of the handwashing station will adhere to the following specifications:   * The structure of the handwashing station will be constructed in accordance with the provided drawing, ensuring its stability and functionality. * To prevent freezing during colder weather conditions, the pipes will be insulated using glass wool, safeguarding the water supply and maintaining usability throughout the year. * The existing taps will be replaced with MOGOUL type taps, specifically 0.5 size brass 100% Mogul taps. This upgrade will enhance durability and reliability, ensuring consistent water flow and minimizing maintenance requirements over time.   By implementing these measures, we aim to create a robust and reliable handwashing station that can effectively serve the needs of the community, promoting hygiene and safeguarding Hand washing sink The installation of handwashing sinks within healthcare facilities is paramount for effective infection control, adherence to hygiene standards, and the enhancement of overall health outcomes. By ensuring that healthcare workers, patients, and visitors have easy access to handwashing facilities, the spread of infections can be significantly reduced, thereby supporting compliance with protocols and minimizing health risks. This initiative ultimately results in lower infection rates, heightened staff productivity, improved patient care, and an overall safer environment within the healthcare setting.  Moreover, the presence of handwashing sinks fosters hygiene awareness, contributing to broader public health initiatives and promoting a culture of cleanliness and wellness. To address this critical need, ActionAid has outlined plans to install a total of 10 handwashing sinks in key sections of the building, including the male female (OPD), nutrition services, vaccination room and delivery room.  Additionally, three of these sinks will be allocated to the male and female toilets situated behind the main building of the Fask Healthcare Facility (HCF).  Each handwashing sink will be equipped with essential amenities, including a shelf for soap and a mirror with shelves, ensuring convenience and practicality for users. These sinks will be securely fixed onto the walls, providing stability and durability for long-term use. Notably, the existing sinks, while functional, will receive enhancements in the form of supplied shelves for soap and mirrors with shelves, further elevating the hygiene standards within the facility.  Septic Tank, Toilets and latrines  ActionAid has devised plans to construct two male and two female toilets equipped with flash tanks and one for the delivery room. Additionally, these new facilities will be designed to accommodate Peoples with Disabilities (PWDs), incorporating both ramp and stand toilets.  In terms of infrastructure, the water supply for these toilets will be connected to a new 1000-liter water tank, ensuring consistent access to water. Furthermore, the sewer pipes will be connected to a septic tank to manage waste effectively. All construction and plumbing work will adhere closely to the specifications outlined in the relevant drawings, ensuring the durability and functionality of the new facilities. Septic Tank: ActionAid plans to construct a septic tank with the following measures:   * Digging of the septic tank place. * Constructing of wall with stone masonry. * Plaster the walls to enhance durability and prevent leaks. * Construct an RCC slab to cover the septic tank securely. * Construct a pit for draining the liquid waste from the septic tank. * Install sewerage plumbing in accordance with the related drawings.  Waste managementAccording to WHO’s requirements, the perimeter of healthcare facilities must not only be protected against clinical hazardous waste but also be secure from domestic waste generated within these facilities. To achieve the desired optimal hygienic conditions, ActionAid intends to equip and upgrade the current solid waste management system at Fask Health Care Center. The planned enhancements are as follows:   * Incinerator Construction: The incinerator will be constructed with a pit made from reinforced cement concrete (RCC) and brick masonry, following the specified drawings. * Waste Disposal Pits: To secure and protect the organic waste disposal pit (for placental waste) and the hazardous waste disposal pit (for sharp wastes), the slabs should be repaired and reinforced to ensure they are impervious to rainwater infiltration. * Incineration Area Security: The incineration area will be protected by erecting a fence with GI pipe poles and fence gates to prevent unauthorized access. The floor will be made of 10 cm thick plain cement concrete (PCC). Proper surface sloping will be incorporated to ensure effective drainage of rainwater from the incineration area. |

## Period of workمدت زمان کار

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| **Start Dateتاریخ شروع** | 01-july-2024 |
| **End Dateتاریخ ختم** | 31-sept-2024 |

## Summary of BoQ

Bill of Quantity and Technical drawings are attached to this Upgrading plan.

بل تعداد و رسامی های تخنیکی به این پلان پروژه ضمیمه شده است.

### Note:

An allocation of 5% of the total cost has been designated for miscellaneous and unexpected expenses. Contractors may claim overspend only when changes in the definable feature of work are recommended and approved by the Action Aid superintendent and AAA budget holder.

## Signatoriesامضا کننده گان

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| --- | --- | --- | --- | --- | --- |
| ActionAidاکشن اید | | | DopH and HCF agents نماینده ریاست صحت عامه ومرکزصحی | | |
| Name and position  نام و وظیفه | Date  تاریخ | Signature  امضا | Name and position  نام و وظیفه | Date  تاریخ | Signature  امضا |
| Project Coordinator  کوردیناتور پروژه |  |  |  |  |  |
| WASH Specialist  متخصص واش |  |  |  |  |  |
| Program Manager  مدیر پروگرام |  |  |  |  |  |