

ENVIRONMENT AND SOCIAL MANAGEMENT AND MONITORING PLAN
ARBAJAHAN WATER SCHEME LOCATED IN ARBAJAHAN LOCATION, ARBAJAHAN WARD, WAJIR WEST
SUB-COUNTY, WAJIR COUNTY

| E & S impacts and their Sources | Proposed Mitigation Measure | Monitoring Measurement | and Responsible Entity | Supervising Agency |
|---|---|---|---|---|
| Preconstruction Phase | | | | |
| Land acquisition Loss of pasture land Fencing of land restrict free movement of animals and people. Grievances related to land take/transfer The proposed pipelines, solar farm, elevated, storage tank, sanitation block, livestock holding area and livestock troughs for Arbajahan Water Supply Scheme will require approximately 10.44 acres. The land is expected to be transferred from community to public ownership. | <ul style="list-style-type: none"> The project alignment must avoid private land as the project component does not include outright land acquisition Align water pipelines along public roads and spaces to avoid any physical and/or economic displacement as much as possible, or infringement on the land rights holders | Approved project design that is not affecting private land owners | Engineering consultant E&S Specialists | WSTF MoWSI |
| | <ul style="list-style-type: none"> Complete the process of land transfer from community to public before the operation of the project | Valid allotment letters/title deeds for the scheme | WAJWASCO County Government of Wajir | WSTF National Land Commission |
| | <ul style="list-style-type: none"> Hold community consultations to discuss the final design of the scheme, the associated impacts and project implementation timelines before construction | Minutes of disclosure meeting, Agenda and attendance register | WAJWASCO County Government of Wajir | WSTF NEMA |
| | <ul style="list-style-type: none"> Follow the land take procedures outlined in the project ESMF | Compliance report | Consultant | WSTF MoWSI National Land Commission |
| Construction Phase | | | | |

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| Potential soil erosion Site Excavation, Earthworks for Construction Works: Clearing vegetation for borehole infrastructure, water kiosks, pipelines, and livestock water troughs, Excavation of trenches for foundations and trenches, Storage of excavated spoilt soil and construction materials, Uncontrolled surface run-off from construction site Spillage of water during borehole testing, | <ul style="list-style-type: none"> Develop and implement soil erosion control measures | Number of soil erosion control measures in the program of works, amount of resources set for soil erosion control | Contractor Supervision Consultant | NEMA |
| | <ul style="list-style-type: none"> Minimize and restrict vegetation removal to the project footprint. | Project design that considers areas with minimal vegetation, Amount of vegetated area spared by the project | Supervision Consultant | |
| | <ul style="list-style-type: none"> Expedite back-filling and compaction of excavated soil. | Number trenches that are backfilled and compacted | Contractor | |
| | <ul style="list-style-type: none"> Use existing access tracks to minimize the need for new tracks. | Number of enforcement measures to ensure use of the existing routes during site access | Contractor | |
| Soil and subsurface water pollution Spills of the fuel and hazardous chemicals stored at the site Fugitive spillage of fuel and used oil from equipment Poor management of construction and sanitation waste | <ul style="list-style-type: none"> Develop and implement soil pollution prevention measures to include storage of chemicals, procedure for fuelling at the site and | Availability of soil pollution measures in the program of works | Contractor/ Supervision Consultant | WSTF NEMA |
| | <ul style="list-style-type: none"> Ensure the waste oil, fuel, lubricants and other chemicals stores have an impervious surface | Number or availability of fuel and chemical stores with impervious surface | Contractor/ Supervision Consultant | WSTF |
| | <ul style="list-style-type: none"> Training workers on handling of the hazardous materials/wastes; provide appropriate tools/equipment for transfer of the hazardous materials | Training records and plans, attendance lists, number of workers trained | Contractor/ Supervision Consultant | NEMA |
| | <ul style="list-style-type: none"> Regular maintenance of machinery to control leaks. | Program of equipment maintenance | Contractor/ Supervision Consultant | WSTF |

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| | <ul style="list-style-type: none"> Engage NEMA registered waste handler | Valid waste handler license and filled waste tracking sheets | Contractor/ Supervision Consultant | NEMA |
| | <ul style="list-style-type: none"> Maintain spill response kits at the site. | Availability of a complete spill kit at the site | Contractor/ Supervision Consultant | WSTF |
| | <ul style="list-style-type: none"> Use of drip trays when carrying out minor servicing of equipment and fueling at the site | Availability of operational drip trays at the equipment servicing area | Contractor/ Supervision Consultant | NEMA |
| Air pollution through generation of excess dust Nuisance to neighbors Impaired visibility; Construction activities including Clearing vegetation, grading, and excavation works, use of cement, movement of vehicles and equipment. Wind blowing on bare surfaces and potential dust storms Demolition works: Removal of old, worn-out infrastructure or equipment | <ul style="list-style-type: none"> Sprinkle water on dusty surfaces to suppress dust at the site and when working near dust sensitive receptors | Evidence of watered working areas where applicable | Contractor/ | WSTF NEMA |
| | <ul style="list-style-type: none"> Equip workers who are directly in the location where dust is dispersed with dust masks. | Number of workers with appropriate dust masks | Contractor | |
| | <ul style="list-style-type: none"> Training the workers on air quality hazards | Air Quality Training included in the EHS staff induction Training records | Contractor Supervision Consultant | |
| Exhaust emissions from vehicles, including particulate matter (PM), carbon monoxide (CO), and nitrogen oxides (NOx), can contribute to air quality deterioration and pose health risks | <ul style="list-style-type: none"> Scheduled maintenance of the machinery to reduce emissions including carbon monoxide, oxides of nitrogen. | Evidence of site-specific equipment planned maintenance schedule | Contractor/ Supervision Consultant | WSTF NEMA |

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| Noise and vibrations Material transportation: Movement of trucks and loaders. Excavation and construction: Digging and concrete works. Use of powered equipment. Borehole testing: Noise from pump flow tests. | <ul style="list-style-type: none"> All Construction near noise sensitive receptors like schools, hospitals and residential houses should implement measure to minimise production of extra noise. | Noise control measures included in the program of works | Contractor/ Supervision Consultant | NEMA County Department of Environment |
| | <ul style="list-style-type: none"> All equipment should be maintained in good mechanical order and fitted with the appropriate silencers, mufflers, or acoustic covers where applicable. Lubricating and regular repair of equipment and machinery. | Relevant planned maintenance scheduled of the equipment available at the site Noise rating of the equipment | Contractor/ Supervision Consultant | |
| | <ul style="list-style-type: none"> Pneumatic drills and other noisy appliances should not be used after normal working hours. | Evidence of no night working policy at the site | Contractor/ Supervision Consultant | |
| | <ul style="list-style-type: none"> Workers exposed to occupational noise should be given noise protection equipment such as earmuffs and be taught how to use them and supervised to ensure such safety procedures are being adhered to. | Number of workers working in noisy environment with appropriate PPE for noise | Contractor/ Supervision Consultant | |
| | <ul style="list-style-type: none"> The public should be informed that short periods of noise may be inevitable but prior warning of when noisy activities are to take place and the days and times noise of when they could be expected should be widely publicized before the activity takes place. | Noise warning signs where applicable, evidence of noise agenda in the community consultation meeting | Contractor Supervision Consultant | |
| Loss and disturbance of the vegetation Introduction of alien invasive species Site clearing, Excavation works, and pipeline laying disrupt habitats. Movement of vehicles on the vegetated areas | <ul style="list-style-type: none"> Mature trees and vegetation outside project site will not be cleared. | Evidence of Measures implemented to avoid clearing mature trees and vegetation outside project site | Contractor/ Supervision Consultant | Kenya Forest Service/ NEMA/ County Department of Environment |
| | <ul style="list-style-type: none"> No use of herbicides/ pesticides for vegetation clearing | Evidence of proper methods applied to clear vegetation | | |
| | <ul style="list-style-type: none"> Re-vegetation of disturbed areas with native plant species. | No of tree seedling planted | | |
| | <ul style="list-style-type: none"> Control of invasive alien plant species through monitoring and physical/manual removal of invasive species as they appear as well as | Availability and implementation of measures | | |

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| | routine cleaning of newly deployed machines to the sites | to identify and control alien species | | |
| Disruption of existing minimal fauna in the project area through excavation, vegetation clearing, and pipeline laying activities | <ul style="list-style-type: none"> Avoid clearing mature trees that are important habitats for birds and other small animals | Evidence of Measures implemented to avoid clearing mature trees and vegetation outside project site | Contractor/ Supervision Consultant | Kenya Forest Service/ Kenya Wildlife Service |
| | <ul style="list-style-type: none"> Create awareness among project staff (esp. plant operators) and local community on animal welfare and against animal harassment. | No of workers sensitized on protection of animals | Contractor | Kenya Wildlife Service |
| | <ul style="list-style-type: none"> Protection of the encountered wild animals | Availability, Awareness and implementation of measures to protect stray animals | Contractor | Kenya Wildlife Service |
| Traffic incidents and accidents Increased vehicles: More construction and supply vehicles on local roads. Narrow roads: Existing roads unable to accommodate increased traffic. Construction activities: Blockage or diversion of roads during works. Heavy equipment: Slow-moving machinery disrupting traffic flow. | <ul style="list-style-type: none"> Engage the road authority where the project will undertake road crossing and use of road reserve. Excavation of trenches should be carried in consultation with the concerned road authorities. | Evidence of consultation with relevant road departments and agencies where applicable | Contractor/ Supervision Consultant | Kenya Highways Authority (KeNHA) Kenya Rural Roads authority (KERRA) County Government of Wajir |
| | <ul style="list-style-type: none"> Erect warning signs of on-going works when pipeline crosses the road. | Availability of appropriate safety signs at the road crossing point | Contractor | County Government of Wajir |
| | <ul style="list-style-type: none"> Adequate care/caution is taken so as not to cause any hindrance to the movement of traffic. | Traffic (vehicle, human and livestock) control measures where applicable | Contractor | County Government of Wajir |

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| | <ul style="list-style-type: none"> Alternatives access ways should be communicated to the community where road cutting is taking place | Number and condition of the provided alternative routes | Contractor | County Government of Wajir |
| Short-term disruption of community activities Excavations along home accesses, business access and roads. | <ul style="list-style-type: none"> Implement the stakeholder engagement plan to ensure timely project information sharing with the community and stakeholders. Alternatives access ways should be communicated to the community. | Community consultation plan, Number of consultation meetings | Contractor/ Supervision consultant WAJWASCO | WAJWASCO |
| | <ul style="list-style-type: none"> Hoarding and installation of safety signs on road crossings. | Number of appropriate road signs installed | Contractor/ Supervision consultant WAJWASCO | |
| | <ul style="list-style-type: none"> Provide diversions or temporary passages where roads are closed due to works. Provide temporary accesses to business and homes on excavated sections. | Number and condition of the provided alternative routes | Contractor/ Supervision consultant WAJWASCO | |
| Labour conflicts and forced labour Recruitment and pay conflicts, working conditions and forced labour | <ul style="list-style-type: none"> Implement site Labor Management Procedures (LMP) for the project based on the project LMP | Availability of the site specific LMPs | Contractor supervision consultant | WSTF |
| | <ul style="list-style-type: none"> Contractors to be trained on the LMP for the project before site mobilization | Training records and attendance list | supervision consultant | WSTF |
| | <ul style="list-style-type: none"> Developing and implementing criteria (skills and qualifications) for all positions due for recruitment. | Availability of recruitment criteria Number of workers engaged through the criteria | Contractor | WSTF |
| | <ul style="list-style-type: none"> All the project workers to undergo induction and to be engaged formally via contract with start date, end date, job description, wage, disciplinary measures among others | Formal contracts the workers Number of workers with contract | Contractor | WSTF |

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| | <ul style="list-style-type: none"> Documenting relevant worker information including terms of employment. | Well documented worker information | Contractor | |
| | <ul style="list-style-type: none"> Ensure equal opportunity and fair treatment during recruitment. | Formal commitment by the consultant to offer equal opportunities Number of workers recruited through transparent process | Contractor | |
| | <ul style="list-style-type: none"> Protection of workers' legal right to form unions or other workers' organizations of their own choosing and to bargain collectively with their employers. | Human Resource Policy with workers' rights | Contractor | |
| | <ul style="list-style-type: none"> No employment of underage persons (under 18 years). | ID for all the employed persons Evidence of no child engaged | Contractor | |
| | <ul style="list-style-type: none"> Implement the workers grievance mechanism for all direct workers and contracted workers. | Availability of GRM that is relevant to Arbajahan site | Contractor | |
| | <ul style="list-style-type: none"> Compliance to labour relations practices as provided for by Kenya legislations and International Labour Organisation (ILO) | Legal register for the lot | Contractor | |
| | <ul style="list-style-type: none"> Advertising at the local villages and markets for any position that needs to be filled; and | Number of job adverts placed in the chief's office or common public area | Contractor | |
| | <ul style="list-style-type: none"> Sub-contractor requirement to submit a past forced labor performance declaration, and a declaration of ongoing Bidder commitment to prevent, monitor and report on any forced labor. | Evidence of submitted forced labor performance declaration | Contractor | |
| | <ul style="list-style-type: none"> Include in contracts with subcontractors/ suppliers/ manufacturers of materials (pipes, | Formal commitment to prevent forced labour | Contractor | |

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| | fittings, solar panels and equipment) obligations to prevent Forced Labor among the staff, employees, workers and any other person employed or engaged by the Subcontractor/ supplier/ manufacturer. | | | |
| Potential tension/conflicts between local communities and incoming workers over jobs, resources, or land. | <ul style="list-style-type: none"> Prioritize local labour force. | No of workers from Arbajahan area employed in the project | Contractor/Supervision consultant WAJWASCO | WSTF |
| Influx of workers leading to the spread of infectious diseases | <ul style="list-style-type: none"> Regular community engagements. | No of community engagements | Contractor/ WAJWASCO | WSTF |
| Increased competition for local resources: food, water, and other community resources. | <ul style="list-style-type: none"> Regular community and project workers training, awareness and sensitization on HIV/AIDS. | Training Plan Number of the workers trained. | Contractor/ WAJWASCO | WSTF |
| Social tensions: | | | | |
| Unresolved workers grievances | <ul style="list-style-type: none"> Implement clear and culturally sensitive GM and SEAH/GBV procedures at the project site. | Clear and culturally sensitive GM and SEAH/GBV procedures at the project site. | Contractor/ WAJWASCO | WSTF |
| Hiring of workers outside the project area | | | | |
| Increased demand on infrastructure: Strain on local transport, sanitation, and healthcare facilities. | <ul style="list-style-type: none"> Provide adequate and appropriate welfare conveniences for the staff-including washrooms, rest area and changing room | Number of sanitation conveniences and changing rooms for both genders Appropriate rest area | Contractor/ WAJWASCO | WSTF |
| Cultural disruption: Cultural differences between workers and the local community | <ul style="list-style-type: none"> Ensuring that children and minors are not employed directly or indirectly on the project. | Policy against child labour, Identification Numbers for all the employees | Contractor/ WAJWASCO | WSTF |
| Insecurity Existing Intra and inter community conflict | <ul style="list-style-type: none"> Prepare and implement a site Security Management Plan (SMP) in accordance with project Security Management Plan and SOPS. | Availability of approved site specific SMP. | Contractor/ WAJWASCO | WSTF County Government of Wajir |

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| Unresolved project, land and intertribal conflicts | <ul style="list-style-type: none"> The site specific SMP must be cleared by the E&S Team at the CPU before site mobilization Have sufficient emergency response plan before mobilizing to the field | | Contractor/ WAJWASCO | WSTF |
| | <ul style="list-style-type: none"> Use the county and community as entry points before mobilizing to the field | Evidence of consultation with CC | Contractor/ WAJWASCO | WSTF |
| Occupational Safety and Health (OSH) hazards Physical hazards: slips, trips, falls, and injuries from machinery or tools. Exposure to intermittent and occupational noise, dust, heat and chemicals, exposure to harsh climatic conditions, manual handling hazards, electrical hazards: Risks from installing solar panels and working with electrical systems, fall from height heights, falling objects hazards during steel tank erection Poor sanitary facilities may result in waterborne or communicable diseases. Traffic incidents and accidents at the site | <ul style="list-style-type: none"> Develop and implement a site-specific Health and Safety Action Plan based on the project Health and Safety Action Plan | Availability and implementation progress of the HSAP | Contractor/ Supervision consultant | DOSHS |
| | <ul style="list-style-type: none"> Register the construction site with DOSHS | Valid construction workplace certificate from DOSHS | Contractor | |
| | <ul style="list-style-type: none"> Undertake an appropriate Health and safety risk assessment and submit the report to DOSHS Wajir | DOSHS signed copy of RA report | Contractor | |
| | <ul style="list-style-type: none"> Induction of workers on health and safety before commencing works | Number of workers inducted | Contractor | |
| | <ul style="list-style-type: none"> Engage a qualified and competent health and safety officer for the lot | Qualification of the Health and safety officer at the site | Contractor | |
| | <ul style="list-style-type: none"> Ensure there are trained first aider and fire Marshalls | Number of trained first aider and fire marshals | Contractor | |
| | <ul style="list-style-type: none"> Conduct daily toolbox talks | Records of Tool Box Talks | Contractor | |
| | <ul style="list-style-type: none"> Provide appropriate personal protective equipment (PPE) to workers and training on appropriate use. (Reflective jackets, helmets, face masks, ear plugs gloves, safety boots, etc.) | No of workers with appropriate PPEs | Contractor | |

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| | <ul style="list-style-type: none"> There should be adequate provision of the requisite sanitation facilities for human waste disposal | Clean and convenient sanitation facilities | Contractor | |
| | <ul style="list-style-type: none"> Recording of all injuries that occur on site in the incident register, corrective actions for their prevention are instigated as Appropriate | Availability of incident register at the site Well filled incidents | Contractor | |
| | <ul style="list-style-type: none"> The contractor should have a WIBA insurance policy to cushion self and workers against loss of income or an accident on site | Workers with WIBA | Contractor | |
| | <ul style="list-style-type: none"> Ensure that all site personnel are provided with an adequate supply of safe drinking water, which should be at accessible points at all times. | Number of water points for the workers | Contractor | |
| | <ul style="list-style-type: none"> Provide conveniently accessible, clean, orderly, adequate and suitable washing facilities within the site. | Clean and convenient sanitation facilities | Contractor | |
| Community Health and Safety Traffic accidents and incidents. Noise Nuisance from Construction activities Dust and air pollution: Excavation and material handling can affect air quality, leading to respiratory issues. Spread of diseases: Interaction between workers and the | <ul style="list-style-type: none"> Ensure the safety of residents by providing safety signs at strategic places around the access roads. | No of road appropriate safety signs provided | Contractor/ Supervision consultant E & S Specialists WAJWASCO | |
| | <ul style="list-style-type: none"> All trenches must be barricade using the appropriate safety tape | Trenches with barricading tape | | |
| | <ul style="list-style-type: none"> Cordoning off working sites to protect the public or unauthorized persons | Area cordoned off | | |

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| <p>community may increase the risk of communicable diseases.</p> <p>Open trenches, unprotected construction area, and unsecured equipment pose safety risks to nearby residents and livestock</p> <p>Structural hazards: Poorly constructed facilities, such as water kiosks or tanks, may lead to accidents post-construction.</p> <p>Disruption of services: Temporary interruptions in water supply or access due to pipeline works.</p> | <ul style="list-style-type: none"> Use of signs and warnings on sites with high risks such as the elevated tank site | Number of appropriate safety signs installed at the construction site | | |
| | <ul style="list-style-type: none"> Reduce unnecessary speeding to control for accidents from the movement of pedestrians or livestock in the area. | Speed limit at the site and within the project area | | |
| | <ul style="list-style-type: none"> The elevated water tank to be installed a safe distance from human activities or property | Evidence of the consideration of community settlement in tank design | | |
| | <ul style="list-style-type: none"> The design and construction of the elevated steel tank to consider the changes in wind force in the area. | Approved design and construction methods | | |
| <p>Sexual exploitation and harassment (SEA-H)</p> <p>Potential SEAH risk among the workers at the project site</p> <p>Workers may take advantage of power imbalances to exploit local women or vulnerable individuals in the project area</p> <p>Lack of reporting mechanisms: Without proper channels, victims of SEAH or GBV may not report incidents due to fear of retaliation or lack of support.</p> | <ul style="list-style-type: none"> Engage competent GBV / social safeguard officer | <ul style="list-style-type: none"> Qualification of the GBV / social safeguard officer Number of incidences (both reported and unreported), their investigation, solution and closure according to the SEAH Response Plan | Consultant Contractor/Supervision Consultant Local Community Leaders WAJWASCO SEAH Expert MOWSI | MoWSI WSTF |
| | <ul style="list-style-type: none"> Conduct SEA-H sensitization to the workers during induction | No of workers sensitized | | MoWSI WSTF |
| | <ul style="list-style-type: none"> Background checks for the workers, subcontractors and suppliers. | Well documented procedures for background checks | | MoWSI WSTF |

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| | <ul style="list-style-type: none"> Conduct SEA-H sensitization to the community in the project area | No of community sensitization meeting | | MoWSI WSTF |
| | <ul style="list-style-type: none"> Ensure all the workers signs the CoC developed for the project and sensitization of staff on responsibilities related to the COC and consequences of non-compliance; project-level IEC materials; | Number of the signed CoC | | MoWSI WSTF |
| | <ul style="list-style-type: none"> Implement the project SEAH action plan with an Accountability and Response Framework as part of the C-ESMP. | Level of the SEAH plan implementation at the site | | MoWSI WSTF |
| | <ul style="list-style-type: none"> Response to SEA-H: including survivor-centered coordinated multi-sectoral referral and assistance to complainants according to standard operating procedures | Effective SEAH response plan | | MoWSI WSTF |
| Infringement of Children rights Engagement of children in construction works Sexual abuse of children in the project area by the project workers Exposing Drug and alcohol to children Workers working with the school | <ul style="list-style-type: none"> Domesticate the Labor Management Procedures (LMP) as part of the CESMP; | Level of the LMP implementation at the site | Contractor, Consultant WSTF | County Children's Department |
| | <ul style="list-style-type: none"> Develop and implement a Children Protection Strategy that will ensures minors are protected against negative impacts associated by the Project. | Availability and implementation status of Children Protection Strategy for the Lot | Contractor, Consultant WSTF | |
| | <ul style="list-style-type: none"> Training and signing of CoC by the project team sign, committing themselves towards protecting children, which clearly defines what is and is not acceptable behaviour; | Number of workers trained on and signed CoC | Contractor/ Supervision consultant | |
| | <ul style="list-style-type: none"> Children under the age of 18 years shall not be hired on site as provided by Child Rights Act (Amendment Bill) 2014. | No of the workers with national identification card numbers at the site | Contractor/ Supervision consultant | |

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| Infringement on Vulnerable and Marginal Groups (VMGs) rights Exclusion of vulnerable groups from consultations and inclusion in designs Failure to implement the Stakeholder Engagement Plan (SEP) | <ul style="list-style-type: none"> Schedule meetings at convenient times and locations to accommodate women, persons with disabilities, and other vulnerable groups. | Plan of public consultation that is appropriate for community | Contractor/ Supervision consultant | |
| | <ul style="list-style-type: none"> Focused engagements with the vulnerable groups. This will include dedicated consultations with the PWDs to understand their needs. | Number of VMGs identified and number of consultations carried out | Contractor/ Supervision consultant | |
| | <ul style="list-style-type: none"> Apply universal design in infrastructure to ensure accessibility for persons with disabilities to the water points. | Design that is user friendly to PWD | Supervision consultant | |
| | <ul style="list-style-type: none"> Ensure that consultations are culturally appropriate, accessible, including the use of sign language interpreters, braille, and vernacular languages. | Site specific GRM Involvement of site GRC | Supervision consultant | |
| Water losses through Water system leaks and loss of pressure Improper installation or maintenance, inadequate corrosion protection, stress from traffic and vibrations and overloading | <ul style="list-style-type: none"> Develop and implement a predictive scheme maintenance plan including sectional meters and pressure management systems, Regular pipeline surveillance and Burst reporting and response mechanism Prompt repair of detected leaks, and using high-quality pipes with appropriate materials. | Availability of predictive scheme maintenance plan | WAJWASCO Contractor/ Supervision consultant | |
| Depletion of groundwater resources due to over abstraction Over abstraction of ground water resources due to Excessive pumping | <ul style="list-style-type: none"> Ensure there is water abstraction permit all the time | Valid water abstraction permit | WAJWASCO | WRA |
| | <ul style="list-style-type: none"> Install the WRA approved telemetric meter and ensure monitoring of the yield. | Presence and/or number of working and calibrated telemetric meters | WAJWASCO | WRA |
| | <ul style="list-style-type: none"> Ensure quarterly payment of water use fee to WRA | Evidence of payment | WAJWASCO | WRA |

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| Failure to comply with WRA | <ul style="list-style-type: none"> Promote efficiency in water use among the beneficiary communities through consultation | Number of sensitization meetings | WAJWASCO | County Government of Wajir |
| | <ul style="list-style-type: none"> Conduct regular borehole discharge and water quality analysis. | Water quality analysis reports | WAJWASCO | |
| Contamination of water supply Exposure of water to pathogens at the storage facilities and from external sources Contamination of water sources by the livestock waste | <ul style="list-style-type: none"> The animal trough should be located at least 100m away from the boreholes. | Approved design and construction with the animal trough located | Contractor WAJWASCO | |
| | <ul style="list-style-type: none"> Fencing and protection of the borehole from livestock and wild animals. All the water tank areas should be fenced and have controlled entry | Well fenced and protected borehole area | Contractor WAJWASCO | |
| | <ul style="list-style-type: none"> The borehole area should be manned and should have controlled access | Availability of the security personnel at the borehole area | Contractor WAJWASCO | |
| | <ul style="list-style-type: none"> Community health and safety awareness meetings | No of meeting | Contractor WAJWASCO | |
| Outbreak and spreading of livestock diseases Presence of large herds of livestock at the watering area Animal movement: livestock moving between regions, spreading diseases and pests. Lack of vaccination: Insufficient vaccination programs leaving animals vulnerable. | <ul style="list-style-type: none"> Regular disease surveillance by the veterinary department and community | No of disease surveillances undertaken | County Department of Livestock WAJWASCO | |
| | <ul style="list-style-type: none"> Sensitization of the community on disease spread, monitoring and control | No of meetings | County Department of Livestock WAJWASCO | |
| | <ul style="list-style-type: none"> Livestock disease management plan be put in place by the veterinary department to ensure disease incidences are promptly responded to and addressed | Livestock Disease management plan in place | WAJWASCO | |

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| Vandalism of the water supply equipment Damages and recovery of valuable materials from the project infrastructure. | <ul style="list-style-type: none"> Sturdy fences and gates to limit access to vulnerable areas; | Well maintained fence | WAJWASCO | |
| | <ul style="list-style-type: none"> Proper lighting in public spaces to deter activity in darkness; | No of installed security lights where necessary | WAJWASCO | |
| | <ul style="list-style-type: none"> Ensure consistent follow-up with reporting and addressing vandalism to maintain deterrence; | Evidence of insecurity response measures at the scheme | WAJWASCO | |
| | <ul style="list-style-type: none"> Educational programs in schools to teach responsible behavior; | Number of the educational programs implemented | WAJWASCO | |
| | <ul style="list-style-type: none"> Public awareness campaigns about the harms of vandalism and supporting community policing. | Number of public awareness meetings | WAJWASCO | |
| Water-related conflict Resource scarcity especially during the dry periods: Limited availability leading to tensions between users. Environmental changes: Climate change or natural disasters exacerbating resource shortages. | <ul style="list-style-type: none"> Regular stakeholder engagements to facilitate open dialogue with community leaders and residents to address concerns and incorporate feedback into project design. Community awareness campaigns through training communities about project safety protocols, emergency procedures, and reporting mechanisms; | Number of public awareness meetings | WAJWASCO | WSTF County Government of Wajir |
| | <ul style="list-style-type: none"> Develop and operationalize grievance redress mechanism; | Availability of site specific GRM, Grievances recorded, addressed and closed | WAJWASCO | WSTF County Government of Wajir |
| | <ul style="list-style-type: none"> Promoting equitable access to water resources and services; | Evidence of involvement of the communities in | WAJWASCO | WSTF County Government of Wajir |

| E & S impacts and their Sources | Proposed Mitigation Measure | Monitoring and Measurement | Responsible Entity | Supervising Agency |
|---------------------------------|---|---|--------------------|------------------------------------|
| | <ul style="list-style-type: none"> Establishing systems to identify potential conflict triggers and respond proactively; | Effective GRM and SMP available at the site | WAJWASCO | WSTF County Government of Wajir |
| | <ul style="list-style-type: none"> Promoting responsible reporting and raising awareness of conflict issue; and | Number of public awareness meetings | WAJWASCO | WSTF County Government of Wajir |
| | <ul style="list-style-type: none"> Adopting the inter-community conflict resolution mechanisms; and | | | WSTF County Government of Wajir |

| Monitoring & Measurement | | Frequency |
|---|--|---|
| | | |
| GRC reports Public forums | | Quarterly |
| Reports on erosion incidents. Volume of disposed fill (m ³ /month). Regular status updates. Evidence of erosion control structures in place | | Monthly |
| Hazardous Waste Chain of Custody Forms. Incident response procedures. Water quality monitoring reports. Incident reports. Evidence of secondary containment structures; evidence of training on handling of hazardous materials | | Monthly |
| Air Quality Monitoring Report Reports on induction of drivers on site operation requirements Results from routine community engagement on dust concerns | | Daily inspections Monthly reports on monitoring status |
| Air Quality Monitoring Report | | Annual audits |
| Noise Monitoring Reports Reports on induction of drivers on speed limits Results from routine community engagement on noise and vibrations concerns | | Monthly |
| Tree planting Plan Report of Tree Planting Exercise | | Quarterly |
| Reports on programme to implement recommendations | | Monthly |

| Monitoring & Measurement | Frequency |
|--|--|
| Traffic Management Plan Results from routine community engagement on traffic concerns | Monthly |
| Number of community meetings Grievance related to access and livelihoods Traffic management plan Number of temporary accesses provided | Monthly |
| Well documented LMP at the site Training records with evidence of workers induction in labour and working conditions Well documented copies of Employment contracts with JD and terms of contract Formal human resource policy with commitment to offering equal employment opportunities to all gender Number of women employed at the site Site specific workers' grievance redress mechanism Job advertisements posted in both print and electronic media Formal and documented commitment against forced labour | Monthly |
| Number of workers at the site from the project area Number of public consultation meeting with influx agenda Formal GRM that is applicable to the site Availability of clean and well-maintained sanitation facilities for both genders | Prior to Commencement of Construction works Monthly Reporting on status |
| OSH training records and plans No. of workers trained, Available incident register report, Workers GRM | Monthly reporting on status Periodic OSH audits and inspections |

| Monitoring & Measurement | Frequency |
|--|--|
| Availability of safety procedures Training reports/tool box talks Workers wearing appropriate PPE Availability of adequate first aid facilities and trained first aiders on sites Records of Inspections and periodic OSH audits. Existence and validity of the WIBA policy | |
| Availability of appropriate road signs Barricading tapes and appropriate access restriction measures | Daily Regular Checks |
| GBV training records for the consultant GBV officer GBV sensitization records and plans for workers and community Signed CoCs for all the workers and subcontractors Site specific SEA-H prevention and control plan with clear reporting procedures Log frame to register SEA cases at the site with GBV cases reported, %/resolved/ referred Well documented SOP for GBV/SEAH at the site Updated County specific referral pathway | Daily Regular Check Quarterly Reporting on Status |
| Labour Management Procedures Signed CoCs No underage project workers Engagement with the sub county children department HIV/AIDS training plan, Records of VCT training. No. of workers trained and sensitized Presence of IEC materials. | Monthly |

| Monitoring & Measurement | Frequency |
|--|---|
| Presence of condom dispensers | |
| Evidence that the project was built as designed Water Scheme Operation and maintenance programs Meetings held with the community and relevant stakeholders Monthly records on non-revenue water | Routine checks Monthly reporting |
| Water Scheme Operation and maintenance programs Valid water abstraction permit Evidence of Telemetric meter and quarterly report. Community Burst reporting protocols | Quarterly |
| No. of Complaint Scheme specific GRM Training records Community water users plan | Monthly |
| Carry out analysis of physico- chemical and bacteriological parameters for water quality. | Routine checks Monthly reporting |
| Number of disease surveillance conducted No of Sensitization meetings held A livestock disease management plan | Routine Checks especially during drought periods when there is influx of livestock at watering points |
| Number of disease surveillance conducted No of Sensitization meetings held A livestock disease management plan | Routine checks |
| Number of community consultation meetings | Monthly reporting on status |

| Monitoring & Measurement | Frequency |
|--|-----------------------------|
| Fences with gates Security lighting Awareness creation activities | |
| Number of community consultation meetings Effective GRM Community awareness programmes Updated conflict management plan | Regular Checks |
| Number of disease surveillance conducted No of Sensitization meetings held A livestock disease management plan | Routine checks |
| Number of community consultation meetings Fences with gates Security lighting Awareness creation activities | Monthly reporting on status |
| Number of community consultation meetings Effective GRM Community awareness programmes Updated conflict management plan | Regular Checks |