

Scope of Work LOT 7

Rehabilitation of Indian Mark III Hand Pumps in Damboa

This Scope of Work covers the **rehabilitation of twelve (12) existing Indian Mark III hand pump boreholes** across selected communities in **Damboa LGA, Borno State**. The objective is to **restore full functionality, water safety, accessibility, and sustainability** of the hand pumps through mechanical, civil, and hygiene-related interventions, without drilling new boreholes.

The works shall be implemented in accordance with **Federal Ministry of Water Resources standards, State RUWASSA guidelines, WASH Cluster technical standards, and Sphere minimum standards**.

1. Site Mobilization and Demobilization

- Mobilization of all required tools, equipment, spare parts, and qualified personnel to project sites.
- Transportation of materials from the contractor's base to Damboa and project locations.
- Final demobilization and removal of tools and waste materials upon completion of works.

2. Dismantling of Existing Hand Pumps

- Careful dismantling of existing Indian Mark III hand pump assemblies.
- Removal of damaged or worn components including pump head parts, rods, riser pipes, and cylinders where required.
- Safe handling and proper handover to GBVS of dismantled components.

3. Borehole Flushing and Development

- Flushing and development of boreholes after dismantling to remove silt, debris, and stagnant water.
- Continued flushing until water is visually clear and free of excessive sediments.
- Preparation of boreholes for reinstallation of pump components.

4. Supply and Installation of Mark III Spare Parts

- Supply of **genuine and compatible Indian Mark III spare parts**, including but not limited to:
 - Pump head components

- Pump rods and couplings
- Riser pipes
- Cylinder, plunger, seals, and foot valve
- Installation and proper alignment of all components to ensure smooth operation and durability.
- Replacement shall be based on actual condition assessed during dismantling.

5. Repair or Construction of Concrete Apron

- Repair or reconstruction of damaged or missing **concrete aprons** around hand pump bases.
- Aprons shall be **barrier-free**, structurally sound, and properly finished.
- Construction or rehabilitation of **drainage channels** to divert wastewater away from the borehole and prevent contamination.

6. Construction of Soakaway Pits

- Construction of standard soakaway pits adjacent to hand pumps where absent or non-functional.
- Soakaways shall safely absorb wastewater from the apron drainage system.
- Works shall prevent pooling of water and environmental degradation around the water point.

7. Water Quality Testing

- Conduct basic **physical and bacteriological water quality tests** after rehabilitation.
- Ensure water quality is acceptable for domestic use.
- Any required corrective actions (e.g. re-flushing or additional disinfection) shall be undertaken.

8. Disinfection of Boreholes

- Shock chlorination of each rehabilitated borehole after installation.
- Flushing after disinfection to ensure safe chlorine residual levels before community use.
- Disinfection shall follow approved WASH and public health protocols.

9. Testing and Commissioning

- Test pumping of each rehabilitated hand pump for a sufficient duration to confirm:

- Smooth mechanical operation
- Adequate yield
- Absence of abnormal noise or excessive pumping force
- Final adjustments to ensure full functionality before handover.

10. Community Training and Handover

- Brief training of community caretakers or Water User Committee members on basic operation and routine maintenance.
- Formal handover of rehabilitated hand pumps to community representatives.
- Documentation of handover, including signatures and photographs.

General Provisions

- All works shall be completed for **12 hand pumps**, as indicated in the BOQ.
- Only defective components shall be replaced; functional parts shall be retained where appropriate.
- Contractors must use qualified pump mechanics with experience in Indian Mark III hand pumps.
- All sites shall be left clean and safe after completion of works.