Hindustan Construction Co Ltd
Community based Water Intervention

Regeneration of Diversion Based Irrigation System

on

Mhalungi River

Sinnar block, Nashik district

NGO – Yuva Mitra
Diversion Based Irrigation System

The System:

- The system was developed in 1870 in British rule.
- Mhalungi River originates from Sahyadri ranges near Sinnar.
- There are 6 check dams built on this river by British government in 1870.
- Each check dam has a canal, which is further divided into sub-canals to take water to farms.
- The gravitational flow ensures that water reaches till the tail end.
Diversion Based Irrigation System

Current Status:

- The irrigation system was well functional till up to 1995 and local farmers managed the water distribution system.
- Later, it got deteriorated and canal system collapsed into pieces
  - due to silting of canals,
  - damage of check dam and canal gates,
  - encroachment by nearby farmers,
  - damage due to demarcation of land etc.
- Groundwater tables declined due to
  - lack of ground water recharging and
  - heavy extraction through electrical pumps
Diversion Based Irrigation System : at village Ashapur

• Ashapur village is situated in hills of sahyadri, twenty km from Sinnar city. The villagers are primarily engaged in agriculture activity.

• **Salient features of irrigation system at village Ashapur** –
  - Name of existing Dam : Agaratil Pat (No.93 B)
    - Dam length = 390 mt
    - Canal Length : 3138 m (to be repaired)
    - Length of field canals : 6760 m (to be repaired)
    - Canal Outlets = 28 No.
    - No. of wells = 62

• **Demographic Information of Ashapur**
  - Village population = 1627
  - No of Farmers: 340
The current state of gates, canals and the wells.
Scope of Work

Main canal - Creating appropriate cross-section of canal (length 3.138 Km) by
  • Removing debris, brushes cutting etc
  • Soil cutting and Earthen Embankment along the canal

Repairing and Desilting of check Dam - 390mt

Repairing of Field Channels - 6760 m

Construction and repairs of road bridge – 2 nos.

Construction and repairs of Outlet Gates – 28 nos.

Construction of protection wall - 90 m
## Cost implications

### Regeneration of Diversion Based Irrigation System at village Ashapur

### Part One: Proposal Preparation

<table>
<thead>
<tr>
<th>Sr No.</th>
<th>Description</th>
<th>NGO - Yuva Mitra Contribution (Rs)</th>
<th>Budget Expectation from HCC</th>
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<td>Needs assessment &amp; PRA including community mobilization</td>
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### Part Two: Execution of the Regeneration of DBI work at village Ashapur

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<th>Yuva Mitra Contribution (Rs)</th>
<th>Budget Expectation from HCC (Rs)</th>
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Diversion Based Irrigation System at village Ashapur

Benefits of water intervention at village Ashapur –

• 340 farmers get ensured benefit of water resource for at least 2 crops
• 62 wells to get recharged
• Benefits to irrigation:
  ✓ Increase in Ground water table
  ✓ area of land to come under irrigation (Direct benefit of this intervention) : 102.4 hect.
  ✓ Additional area of land to come under irrigation by use of lift irrigation : 140+ ha (this includes the beneficiaries from adjacent village too)

Operational strategies –

• People’s participation at every stage of planning, implementation and monitoring.
• Beneficiary contribution in cash and through voluntary labour.
• Collaboration with local self governance ensuring institutional sustainability of the project.
Water conservation potential of the intervention

Based on the data given by the Irrigation Engineer supporting the NGO.

• Discharge opening Size = 1’6” x 2’ 0”

• Maximum discharge = 9 cusecs (with velocity = 3 ft / sec)

• Water available for conservation
  – During monsoon (July 15 to Sept 15) = 60 days Full discharge in canal = 46.67 Mcft
  – Post monsoon (Sept 15 to Nov 15) = 60 days = 50% of total discharge in canal = 23.34 Mcft
  – Post monsoon (Nov, 15 to Dec. 15) = 30 days = 23% of total discharge = 5.19 Mcft
  – Total Discharge = 75.2 Mcft

• Total water conservation = 48.89 Mcft = 1385 ML (considering 35% losses in discharge).

• 48.89 Mcft water would irrigate 207.69 Hect. land
About NGO – Yuva Mitra

“Yuva Mitra” is based in Sinnar taluka of Nashik district. It is administered by Its President Mr. Sunil Pote who received Zee Ananya Award.

The core work areas include

• Natural resource management,
• conservation of biodiversity,
• good governance at Gram Panchayat level,
• women’s participation in local decision making and village development,
• Quality primary education,
• dairy development for livelihood enhancement and
• develop sustainable agriculture in response to felt needs in the area
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