

DETAILED PROJECT REPORT

INTEGRATED WATERSHED MANAGEMENT PROGRAMME

NAME OF PROJECT: Churu (IWMP) III/2009-10

AREA OF PROJECT : 5000 hac

COST OF PROJECT : 750 Lakhs

BLOCK :- RAJGARH

DISTRICT :- CHURU

DEPARTMENT OF SOIL & WATER CONSERVATION, JAIPUR (RAJASTHAN)

DETAILED PROJECT REPORT

INTEGRATED WATERSHED MANAGEMENT PROGRAMME

| | |
|---|---|
| NAME OF PROJECT (AS PER GOI) : | CHURU III |
| LOCAL NAME OF PROJECT : | Bhuwadi |
| No. of Macro W/S / No. of Gram Panchayat : | 03 |
| Atlas Code of Macro W/S / Name of Gram Panchayat : | Mundi Tal, Bhuwadi , Seuwa. |
| No. of Micro W/S / No. of Village : | 08 |
| Atlas Code of Micro W/S / Name of Village : | Bhuwadi, mudi bari, amarpura, Chimanpura, mudi bas, pabasi, manpura, bas radsana |
| AREA OF PROJECT : | 5000 ha |
| COST OF PROJECT : | 750 Lakhs |
| BLOCK :- | RAJGARH |
| DISTRICT : | CHURU |

DEPARTMENT OF SOIL & WATER CONSERVATION, JAIPUR (RAJASTHAN)

CHAPTER - I

Location & General features of watershed/cluster/project

CHURU III project falls in Churu District of Rajasthan. The geographical area of this project is 5000 ha and it comprises of 03 Gram pnnchayat covering 08 villages. The area lies between latitude of 28 to 30'N and longitude of 75 to 23' East.

Churu III project is located in rajgarh, Block, Churu District of Rajasthan state. The project is a cluster of bhuwadi, mundi bari, amarpura, chimanpura, mundi bas, pabasi, Manpura, bas radsana villages with **00593300, 00593700, 00593600, 00593400, 00593800, 00588700, 00593200, 00593500** being there respective code.

The total Village area of the project (Cluster/watershed) is about 5000 Ha, out of which 5000 Ha has been undertaken to be treated under Integrated Watershed Management Programme (IWMP) starting year 2009-10.

The nearest town is Rajgarh which is about 15 Km from the project area and is well connected by *pucca/kachha* road. *Gravel*, *BT*, and *SC* communities are the primary inhabitants of the village. The livelihood of these people is primarily based on rainfed agriculture, animal husbandry, wage labour, goat and sheep rearing. It is a very poor and desolate village of India.

Average annual rainfall of the area is 340 mm and most of its parts get washed away in the form of wind erosion which also carries valuable top soil. Most of the residents of the project area are dependent on agriculture and animal produce. Area being rainfed and excess rains and early recession of rains causes the failure of crops. The economic condition of the people is poor.

Present status of land use of the project

Details of land use pattern of the project area is given below :-

Land use pattern of the project

| S.No | Land Use Details | Area (ha) |
|------|-------------------------|------------|
| 1 | Total Geographical area | 5000 |
| 2 | Forest | - |

| | | |
|----|--|---------|
| 3 | Non agriculture use | 12.52 |
| 4 | Barren & unculturable land | 310.11 |
| 5 | Area unfit for cultivation (3+4) | 330.13 |
| 6 | Cultivable wasteland | - |
| 7 | Pasture and other grazing lands | 133 |
| 8 | Other uncultivated land excluding fallow lands (6+7+8) | 133 |
| 9 | Fallow (Other fallow +Current fellow lands) | 1675.66 |
| 10 | Net Area sown | 3350 |
| 11 | Total cropped Area | 4790 |
| 12 | Area sown more than once | 760 |
| 13 | Net area Irrigated | - |
| 15 | Rainfed cultivable land (6+10+11-12) | 4790 |

Present status of rain water storage of the project

Details of Rain Water Storage of the project area is given below :-

Details of Rain Water Storage

| S. No. | Source | No. of source | Capacity (in litre) | Qty (in litre) | Availability of water (in month) |
|--------|-----------------------------|---------------|---------------------|----------------|----------------------------------|
| 1 | Kachha Johar/Talaab | 04 | 4800000 | 3200000 | 1-4 months |
| 2 | Kachha Johar/Talaab | 02 | 2500000 | 1000000 | ---do--- |
| 3 | Kachha Johar/Talaab | 03 | 3400000 | 1200000 | ---do--- |
| 5 | Pacca Johar/Talaab | 03 | 500000 | 1500000 | 04 months |
| 9 | Individual Farm Pond/Taanka | 40 | 20000 | 800000 | 06 months |
| 10 | Individual Farm Pond/Taanka | 10 | 10000 | 100000 | 03 months |
| 11 | Individual Farm Pond/Taanka | 01 | 50000 | 50000 | 08 months |

| | | | | | |
|----|--|----|-------|---------|-----------|
| 13 | Community Farm Pond/Taanka | 04 | 75000 | 300000 | 05 months |
| 14 | Community Farm Pond/Taanka | 05 | 50000 | 250000 | 04 months |
| 15 | Roof Top Rain Water Harvesting Structure | 20 | 20000 | 400000 | 06 months |
| | Total | 92 | | 8800000 | |

Soil Erosion

Being general soil texture light and course sandy, highly permeable and without any streams contributing runoff, no water erosion is reported but large amount of wind erosion takes place in total project area of 5000 Hactare. The data regarding about wind erosion are not available.

Details of soil erosion in the project area

| 1 | 2 | 3 | 4 | 5 |
|---------------|-----------------|--------------------|--|---|
| Cause | Type of erosion | Area affected (ha) | Run off (mm/ year) | Average soil loss (Tonnes/ ha/ year) |
| Water erosion | | | | |
| a | Sheet | nil | There is no runoff producing storm in the district | - |
| b | Rill | nil | | |
| c | Gully | nil | | |
| Sub-Total | | | | |
| Wind erosion | | 5000 ha | N.A | Data regarding about wind erosion are not available |
| Total | | 5000 ha. | | |

Socio Economic Status

...Bhuwadi watershed project has a total of 970. households with a population of 9008 (as per base-line survey) out of which 4658 are male and 4250 female .The sex ratio is 920. female to 1000 male. There are - 177 BPL families. The average family size is 04 members. The literacy rate is very low i.e- 30.99 . per cent. Male literacy rate is ...-47.49. per cent (of total male population) and female literacy rate is as low - 43.33 per cent (of total female population). The major castes in the village are ...GN, OBC ..and SC . Majority of population is involved in agriculture and animal husbandry.

Details of Socio Economic indicators are below:-

1.1 Socio –Economic Indicators

| A Population | | | | |
|---|---|----------------------------------|------|-------|
| | a | Population of project area | 9008 | By % |
| | | Male | 4658 | |
| | | Female | 4250 | |
| | b | Childern | 900 | |
| | c | Total Household | 1756 | |
| | d | BPL Families | 177 | |
| | | By Caste | | |
| | | General | 758 | |
| | | S.C. | 208 | |
| | | S.T. | 04 | |
| | | Density (per sq.kms) | | |
| | | Decadal growth rate (1991-2001) | | |
| B Human Development Index parameters | | | | |
| | | Litercy rate all % | 3040 | 30.99 |
| | | Male | 4658 | 47.49 |
| | | Female | 4250 | 43.33 |
| | | Litercy rate(rural) (M) | 1585 | 37.02 |
| | | Litercy rate(rural) (F) | 1455 | 34.24 |
| | | Sex ratio | | |
| | | Human Development index(2007) | | |
| C Distribution of households | | | | |
| | a | By Land Holding | 4000 | |
| | b | Marginal Farmers (0- 1ha) | | |
| | c | Samll Farmers (1- 2ha) | 274 | |
| | d | Medium Farmers (2 to 4 ha) | 300 | |
| | e | Big Farmers (more than 4 ha) | 186 | |

| | | | | | |
|---|--|---|--|---------|--|
| | f | Average holding size - ha | | 6.95 ha | |
| D | Major occupation | | | | |
| | a | Agriculture | | | |
| | b | Landless labourers/ Agriculture labour | | | |
| | c | Household industrial labour | | | |
| | d | Others labour | | | |
| | e | Total working labour | | | |
| E | Source of Income | | | | |
| | 1 | Crop production & dairy enterprise | | | |
| | 2 | Off-farm income / Other services | | | |
| | 3 | Agriculture Labour | | | |
| F | Income wise Category of /households/Families(No) | | | | |

Human resources indicator are

| | | |
|--|------------------------|-------|
| Population | persons | 9008 |
| Density of population | persons per sq. km | |
| Male | number | 4658 |
| Female | number | 4346 |
| Literacy | per cent | 30.99 |
| Sex Ratio female per 1000 male | | |
| Working Population | per cent of population | |
| Growth rate | per cent | |
| Percentage distribution of work force | | |
| Cultivators | per cent | |
| Agricultural laborers | per cent | |

| | | |
|-----------------------------------|----------|--|
| Household industry manufacturing | per cent | |
| Processing, servicing and repairs | per cent | |
| Other workers | per cent | |

Problems and Scope of improvement goods/objectives

Problems

- Lack of conservation of rain water, indigenous plants and natural resources.
- Lack of irrigation facilities and lack of water harvesting structures.
- Low fertility and problem of nutrient losses due to wind erosion in summer season.
- Lack of Pasture land.
- Low Rainfall.
- Ground water at 30 to 48m depth & having 1800 to 3500 TDS.
- Migration
- Low availability of fodder.
- Low Vegetation.
- Low of agriculture production.
- Poor socio-economic condition of the farmers.

Objectives

- Awareness building regarding conservation of rain water, indigenous plants, natural resources and to adopt bio compost etc.
- Regeneration of ecology by increasing vegetation i.e. conserving the medicinal plants, agro forestry and horticulture plants.
- Bridging ecological cycle by concentrating on eco-friendly land use methods, forestation, animal husbandry, land revitalization and efficient use of harvested water

- Increase the availability of biomass for consumption and market purpose (food, fodder, firewood, fiber and fertilizer)
- Ensure year round availability of employment opportunities and economic avenues particularly for women and landless
- Revitalization of traditional practices like organic manuring, soil fertility management through crop rotations by utilizing new crops and technologies i.e. vermi culture etc.
- To promote the villagers for conservation of plants
- Establishment of ECO CLUBS in the village for sharing the knowledge regarding biodiversity.

Institutional Arrangements

State Level Nodal Agency (SLNA)

The State Level Nodal Agency (SLNA) is a nodal agency at level for Monitoring, evaluation, providing technical support to District Watershed Development Units (DWDU) and to oversee the smooth implementation of watershed projects in the state. The Additional Chief Secretary (Development) is the chairperson of the SLNA. The SLNA has dedicated and experienced staff, a technical expert and a multidisciplinary team. The objectives of the SLNA are supervising, planning, implementing, documenting and promoting watershed development projects and related developmental activities in the state as per guidelines.

State level Nodal Agencies (SLNAs)

Details of SLNA

| 1 S. No. | 2 State | 3 Type of SLNA | 4 Date of Notification | 5 Date of MoU with DoLR | 6 Total no. of members of SLNA | 7 | | 8 | | | | | |
|-------------|------------|-----------------------|---------------------------|----------------------------|-----------------------------------|------------------|--|---------------------|---|---------------------|--|-----------------------|---|
| | | | | | | Chairperson | | CEO | | | | | |
| | | | | | | Name | Designation | Name | Designation | Date of Appointment | Nature of appointment | Tenure (No. of years) | Contact Ph. No./ Fax/ E-mail |
| 1 | Rajasthan | Government Department | 3/2/2009 | | 27 | Mr. B.B. Mohanty | Additional Chief Secretary (Development) | Mrs. Pramila Surana | Director Watershed Development and Soil Conservation & CEO SLNA | 12/31/2010 | Director Watershed Development and Soil Conservation & CEO SLNA from IAS cadre | | 0141-2227189/ 2227858 dir_wdsc@dataone.in |

Details of functionaries in the SLNAs

List of Officers/Officials working in SLNA/
Directorate

| S.No. | Names & Designation | Designation | Qualification | Experience | Work allocation | Monthly remuneration (Rs.) | Total budget of SLNA(lacs.) |
|--|-------------------------|---------------------|---------------------------|------------|----------------------------|----------------------------|-----------------------------|
| | | | | | | | R |
| 1 | Sh.C.S.Mehta | Additional Director | B.E.Agri | 38 years | Adll. Dir.(HQ) | 53900 | |
| 2 | Sh. D K Yadav | Jt.Director | B.E.Agri | 37 years | MIES | 51075 | |
| 3 | Sh.Anil Mogra | Dy.Director | B.E.Agri | 32 Years | Training | 40297 | |
| 4 | Sh.Rajesh Bhandari* | Dy.Director | B.E.Agri | 32 years | IWMP | 37190 | |
| 5 | Sh.M.L.Barupal | Dy.Director | B.E.Agri | 18 Years | NWDP | 39169 | |
| 6 | Sh.J D Meena | Dy.Director | B.E.Agri | 38Years | Quality Control | 44500 | |
| 7 | Sh B L Verma | Dy.Director | B.E.Agri | 18 Yrs | D.D.(Adm) | 39169 | |
| 8 | Sh Arun Surana | Dy.Director | B.E.Agri/MBA | 24 Yrs | Livelihood Expert | 42000 | |
| 9 | Sh N S Rathore | Dy.Director | MSc Agri | 20 Yrs | Agriculture Expert | 40000 | |
| 10 | Sh. A.S.Gehlot | AEN | B.E.Agri | 11 Years | Training | 37230 | |
| 11 | Smt.Susheela Yadav | AEN | M.E.(IWM) | 12 Years | Project Formulation & IWMP | 33371 | |
| 12 | Sh.Vimal Gupta | CAO | M.A, M.Phill, | 24 years | Accounts | 45047 | |
| 13 | Mrs Sangeeta Rathore | AO | B.Com | 10 years | Accounts | 42839 | |
| 14 | Sh. R.S. Meena | AAO | B.Com | 28 years | Accounts | 34901 | |
| 15 | Sh.Gyarsi Lal | AAO | M.A | 31 years | Accounts | 31535 | |
| 16 | Sh. Prabhakar Saraswat* | JEN | B.E.Agri | 13 Years | Data cell | 17129 | |
| 17 | Sh. R.K.Vijay | JEN | B.E.Agri/MBA | 13 Years | Training | 20410 | |
| 18 | Sh. Nitin Srivastava | JEN | B.E.Agri/MBA | 13 Years | IWMP | 20410 | |
| 19 | Sh. Pawan | JEN | M CA /B.E.Agri | 14 Years | RD | 20410 | |
| 20 | Sh.Tarun Bhatnagar | JEN | M Tech /B.E.Agri | 13Yrs | IWMP | 20410 | |
| 21 | Sh.Vijay Agnihotri* | Investigator | M.Sc.Statistics, PGDCA | 30 Years | Data supporting | 34603 | |
| 22 | Sh. Ashok Kumar Tailor | Legal Asstt. | M.Com LLM | 8 Years | Legal work | 22064 | |
| 23 | Sh Rajesh Kumar | ACP | MA | 18 Yrs | Data cell | 35600 | |
| 24 | Sh Pukhraj Bumb | Programmer | MA | 22 Yrs | Data cell | 25400 | |
| 25 | Sh. Anil Jain | Asstt.Prog. | B.Com | 15 Years | Computer supporting | 22504 | |
| 26 | Sh. Gajadhar Sharma | Jr.Acctt. | B.Com | 13 Years | Accounts | 25500 | |
| 27 | Sh.C.M.Regar | Jr.Acctt. | M.Com | 14 Years | Admn. Supporting | 24422 | |
| Supporting staff (6 P.A.,6 Steno,10 UDC,20 LDC,1 Driver,23 Class IV) | | | | | | | |

| Persons to be hired on contract / deputation | | | | | | |
|--|--|--|---|------------------|--|-------|
| 28 | | | Technical Expert(Animal Husbandry / Capacity Bldg.) | Veternery Doctor | | 50000 |
| 29 | | | GIS Expert | | | 40000 |
| 30 | | | Data Entry Operator(3 posts) | | | 45000 |
| 36 | | | Jr. Accountant (3 posts) | | | 84000 |

Funding expected from DoLR (Rs)*

| <i>Strengthening of State Data Cell</i> | | R | NR |
|--|--|---------|---------|
| For the salaries, TA, O.E. and other expenses for the hired persons | | 90 lacs | |
| For strengthening of SLNA in terms of consultancy, workshops, R&D, strengthening, MEL, Softwares & Hardwares | | | 40 lacs |

* Also included in strengthening of SLAN mentioned in PPR 2

Details of State Levl Data Cell (SLDC) functionaries

List of Officers/Officials working in Commissionrate

| S.No. | Total no. of persons working in the SLNA for IWMP | Names & Designation | Designation | Qalification | Experience | Work allocation | Monthly remuneration (Rs.) |
|-------|---|------------------------|--------------|--------------------------|------------|---------------------------------------|----------------------------|
| 1 | Given in PPR1 | Sh.D K Yadav | Jt. Director | B.E. Agri | 37 years | Data Cell, Monirtering and supervison | 51075 |
| 2 | | Sh. Prabhakar Saraswat | JEN | B.E. Agri | 13 Years | Data cell | 17129 |
| 5 | | Sh. Vijay Agnihotri | Investigator | M.Sc. Statistics, PGDCA, | 30 Years | Data supporting | 34603 |
| 6 | | Sh. Raju Gorana | P.A | Hr. Secondary | 16 Years | Dictation work | 22843 |
| 10 | | Sh. Bheema Ram Meena | CLASS IV | Literate | 36 Years | Peon | 14187 |

Funding expected from DoLR (Rs)*

| <i>Strengthening of State Data Cell</i> | | R | NR |
|--|--|--------------------------------|----|
| For the salaries, TA, O.E. and other expenses for the hired persons and AMC charges for equipments already precured. | | Proposal to be sent seperately | |

For strengthening of SLNA in terms of consultancy, workshops, R&D, strengthening, MEL, Softwares & Hardwares

Proposal to be sent seperately

All expenses already considered in PPR-2

District Watershed Development Unit (DWDU)

The District Watershed Development Unit (DWDU) is a district level nodal agency to oversee the smooth implementation of watershed projects in the district. The Project Officer (Land Resource) is the chairman of the DWDU. The DWDU has dedicated and experienced staff comprising one Project Manager, a technical expert and a multidisciplinary team. The objectives of the DWDU are supervising, planning, implementing, documenting and promoting watershed development projects and related developmental activities in the district as per guidelines.

DWDU

| S. No. | Name of Project | Details of DWDU | |
|--------|-----------------|-----------------------------|--|
| 1 | Bhuwadi | (i) Type of organization | District Level Nodal Agency |
| | | (ii) Name of organization | DWDW, Churu |
| | | (iii) Designation & Address | Project Manager, DWDU, Churu |
| | | (iv) Telephone | |
| | | (v) Fax | |
| | | (vi) E-mail | dwdu.churu@gmail.com |

Staff at DWDU level

| S. No. | Name | Age | Sex | Designation | Qualification | Experience | Govt. Servant/ on Contract | Mobile No. | E-mail |
|--------|---------------------|-----|-----|-----------------|---------------|------------|----------------------------|------------|--|
| 1 | Rajesh Kumar | 42 | M | Project Manager | B. E. (Agri.) | 18 | Govt. Servant | 9783451780 | Dhimaanrajesh@gmail.com |
| 2 | Hari Singh Sekhawat | 60 | M | Accountant | Graduate | 33 | on contract | 9314580470 | |
| 3 | Gheesa Ram | 30 | M | L. D. C. | 12th | 12 | Govt. | 9001727238 | |

| | | | | | | | | | |
|---|------------|----|---|---------------------|-------|----|---------------|--|--|
| | Kumawat | | | | | | Servant | | |
| 4 | Amit Kumar | 24 | M | Data Entry Operator | B. A. | 1 | on contract | | |
| 5 | Tara Singh | 45 | M | Fourth Class | 8th | 21 | Govt. Servant | | |

Project Implementing Agency (PIA)

Assistant Engineer, Panchayat Samiti, Ratangarh/Rajgarh has been nominated to act as Project Implementing Agency (PIA) for Project Churu III The Project Implementing Agency (PIA) provides necessary technical guidance to the Watershed Committee for the preparation of development plans for the watershed through Participatory Rural Appraisal (PRA) exercise. The PIA undertake community organization and training for the village communities, supervise watershed development activities, inspect and authenticate project accounts, encourage adoption of low cost technologies and build upon indigenous technical knowledge, monitor and review the overall project implementation and set up institutional arrangements for post-project operation and maintenance and further development of the assets created during the project period. The PIA, after careful scrutiny, shall submit the Action Plan for Watershed Development Project for approval of the DWDU and other arrangements. The PIA shall submit the periodical progress report to DWDU. The PIA shall also arrange physical, financial and social audit of the work undertaken. It will facilitate the mobilization of additional financial resources from other government programmes, such as NREGA, SGRY, Artificial Ground Water Recharging etc. implemented by DRDA, Agriculture, Horticulture, Animal Husbandry, Sericulture and Fisheries Departments during the District Watershed Committee meeting.

| Staff at PIA level | | | | | | | | | |
|--------------------|-----------------|-----|-----|-------------|---------------|------------|----------------------------|------------|--------|
| S. No. | Name | Age | Sex | Designation | Qualification | Experience | Govt. Servant/ on Contract | Mobile No. | E-mail |
| 01 | Shubhkaransingh | 55 | m | A.En | B.E. agg. | 30 | Govt. servant | 9414542964 | |

Watershed Development Team (WDT)

. The WDT is an integral part of the PIA and will be set up by the PIA. Each WDT should have at least four members, broadly with knowledge and experience in agriculture, soil science, water management, social mobilisation and institutional building. At least one of the WDT members should be a woman. The

WDT members should preferably have a professional degree. However, the qualification can be relaxed by the DWDU with the approval of SLNA in deserving cases keeping in view the practical field experience of the candidate. The WDT should be located as close as possible to the watershed project. At the same time, it must be ensured that the WDT should function in close collaboration with the team of experts at the district and state level. DWDU will facilitate the training of the WDT members.

WDT

| S. No. | Name of Project | Discipline | Name | Age | Sex | Qualification | Experience | Mobile No. | E-mail |
|--------|-----------------|------------------------|----------------------|-----|-----|---------------|------------|------------|--|
| 1 | BHUVADI | Engineer | Rakesh kumar indalia | 28 | m | B.E. civil | 01 Yrs | 9413316455 | Rakesh_indalia22@yahoo.co.in |
| 2 | | Agriculture Specialist | Om prakash singh | 26 | m | B.Sc., agg, | 02 Yrs | 966746175 | |
| 3 | | Animal Husbandry | Satish beniwal | 26 | m | diploma | 04 yrs | 9414816693 | |
| 4 | | Social worker | Manju poonia | 23 | F | M.A., | 04 Yrs | 9610501575 | |

Watershed Committee (WC)

It is a committee that is constituted by Gram Sabha to implement the watershed project with technical support of WDT in the Gram Panchayat. This committee is registered under society Registration Act 1860. The Gram Sabha of the Gram Panchayat selects the chairman of the watershed committee with the secretary who will be a paid functionary. A watershed Committee was formed accordingly in 03 Gram Panchayat. Capacity building training to the watershed committee is given by WDT. The watershed committee has a pivotal role to play during and after the project implementation period.

WC

| S. No. | Name of WC | Registration No. & date | Name of Member | Designation | Gender | Age | Category | Qualification | Mobile No. | Bank A/C No. | Name of Bank |
|--------|------------|-------------------------|----------------|-------------|--------|-----|----------|---------------|------------|--------------|--------------|
| 1 | 1. bhuwadi | ...324/02/02/11..... | maniram | president | m | | dhanak | literate | | | |
| 2 | | | Jai singh | secretary | m | | OBC | literate | | | |
| 3 | | | sundar | member | m | | GEN | literate | - | | |
| 4 | | | rameshwar | member | m | | SC | literate | | | |
| 5 | | | motiram | member | m | | ST | literate | | | |
| 6 | | | balbir | member | m | | obc | literate | | | |
| 7 | | | Hari singh | member | m | | obc | literate | | | |

| | | | | | | | | | | |
|----|---------------|--------------|-----------------|-----------|---|----|-----|------------------|------------|--|
| 8 | | | girdhari | member | m | | SC | literate | | |
| 9 | | | Chagan singh | member | m | | GEN | literate | | |
| 10 | | | Subh ram | member | m | | GEN | literate | | |
| 11 | | | shakuntala | member | f | | obc | literate | | |
| 12 | | | savitri | member | f | | obc | literate | | |
| 13 | | | sunita | member | f | | obc | literate | | |
| 1 | 2. Mundi bari | 285/08/12/10 | Krishan kumar | president | m | 33 | OBC | literate | 9783033708 | |
| 2 | | | Subhash chandra | secretary | m | 40 | obc | b.a., B.Ed. | | |
| 3 | | | saroj | member | f | 23 | sc | 10 th | | |
| 4 | | | vidha | member | f | 23 | obc | 8 th | | |
| 5 | | | prema | member | f | 36 | obc | literate | | |
| 6 | | | sumer | member | m | 44 | sc | literate | | |
| 7 | | | tarachand | member | m | 40 | sc | literate | | |
| 8 | | | amilal | member | m | 66 | sc | literate | | |
| 9 | | | balwan | member | m | 30 | obc | literate | | |
| 10 | | | balbir | member | m | 36 | obc | literate | | |
| 11 | | | ramswarup | member | m | 62 | obc | literate | | |
| 12 | | | banwari | member | m | 43 | sc | literate | | |
| 13 | | | rajendra | member | m | 43 | obc | literate | | |
| 14 | | | satish | member | m | 28 | obc | diploma | | |
| 1 | 3. Manpura | 274/26/11/10 | Sunil kumar | president | m | 26 | obc | B.sc. | 9587836829 | |
| 2 | | | ramnivas | secretary | m | 27 | sc | 12 th | 9462341474 | |
| 3 | | | sheesram | member | m | 40 | sc | literate | | |
| 4 | | | Kiran devi | menmer | f | 26 | gen | literate | | |
| 5 | | | babita | member | f | 43 | gen | literate | | |
| 6 | | | Surendra singh | member | m | 33 | gen | literate | | |
| 7 | | | gopiram | member | m | 38 | obc | literate | | |

| | | | | | | | | | | |
|----|--|--|------------|--------|---|----|-----|----------|--|--|
| 8 | | | harisingh | member | m | 58 | gen | literate | | |
| 9 | | | narayanram | member | m | 58 | obc | literate | | |
| 10 | | | Sant kumar | member | m | 40 | gen | literate | | |
| 11 | | | Ram kumar | member | m | 35 | obc | literate | | |
| 12 | | | Guddi | member | F | 37 | Obc | literate | | |
| 13 | | | Roshni | member | F | 40 | Obc | literate | | |
| 14 | | | Lichma | member | F | 27 | Sc | literate | | |
| 15 | | | Jeevni | member | F | 55 | Obc | literate | | |
| 16 | | | Sulochna | member | F | 27 | Obc | literate | | |
| 17 | | | Rukmani | member | F | 30 | Obc | literate | | |
| 18 | | | Sulochna | member | F | 34 | Obc | literate | | |
| 19 | | | Sumitra | member | F | 32 | Obc | literate | | |

Secretary

It is a person that is selected by Gram Sabha on the basis of merit and experience for the following tasks-

- a. Convening meetings of the Gram Sabha, Gram Panchyat, Watershed Committee for facilitating the decision making processes in the context of Watershed Development Project.
- b. Taking follow up action on all decisions.
- c. Maintaining all the records of project activities and proceedings of the meetings of Gram Panchayat, Watershed Committee (WC) and other institutions for Watershed Development Project.
- d. Ensuring payments and other financial transactions.
- e. Signing the cheques jointly with the WDT nominee on behalf of the Watershed Committee.

Secretary

| S. No. | Name of Project | Name | Age | Sex | Qualification | Experience | Mobile No. | E-mail |
|--------|-----------------|----------------|-----|-----|---------------|------------|------------|--------|
| 1 | Bhuwadi | Jai singh | 32 | m | B.A. | - | 9783665874 | - |
| 2 | manpura | ramniwas | 26 | m | graduate | - | 9462341474 | |
| 3 | Mundi bari | Subhas chandra | 35 | m | B.A. , B. Ed. | | 9783033708 | |

CHAPTER – II

I. Basic Features : Socio Economic and Infrastructure

a) Land use and land classification map, land capability map & Present land use

The land capability class of the project area falls under the category of II, III and IV. The details of Land Capability classification as furnished by Remote sensing application centre Jodhpur given below :-

Land capability classification of the project area

| S. No. | LCC | Area in Ha. | Area in Sq. Kms. |
|--------|--------------|-----------------|------------------|
| 1 | II | Sandy 3000 | 30 |
| 2 | III | Sandy loam 1500 | 15 |
| 3 | IV | Loamy 500 | 5 |
| | TOTAL | 5000 | 50 |

The project consists of 5000 ha area of which 67.8..% is under cultivation. Agriculture is purely depending on the monsoon rainfall and single cropped. The net sown area is 63.35 % with cropping density of 67.8 % in the year 2011 . Only 2.7. % irrigated area in the project. 107. ha pasture land which is degraded land/ grazing stable/ and deniable sand dunes of height 6 to 30 meters. The area under the assured means of irrigation in the project is negligible. At some places of the project the irrigation is facilitated through wells. Details of present land use and waste lands of the project area is given below :

| Gram Panchayat | Village | W/S | Geographical Area | Forest Area | Community Land | Pastures | Uncultivated Waste Land | Agriculture Land | | | | Net sown area | Net Area sown more than once |
|----------------|------------|-----|-------------------|-------------|----------------|----------|-------------------------|------------------|------------------|--------------------|----------------------|---------------|------------------------------|
| | | | | | | | | Temporary fallow | Parmanent fallow | Cultivared Rainfed | Cultivated irrigated | | |
| Mundi tal | Mundi bari | | 817.59 | - | | 23.94 | 87.26 | 201.32 | 35.32 | 671.04 | | 469.75 | 120 |
| | Bas mundi | | 429.55 | | | 15.59 | 24.58 | 110.97 | 19.47 | 369.91 | | 258.94 | 50 |
| Bhuwadi | amarpura | | 889.28 | | | | 57.38 | 237.09 | 41.60 | 790.31 | | 553.21 | 140 |
| | Chimanpura | | 954.41 | - | | 29.13 | 40.66 | 252.12 | 44.23 | 840.40 | | 588.28 | 150 |

| | | | | | | | | | | | | | |
|-------|----------------|--|--------|--|-------|-------|--------|--------|-------|--------|--|--------|-----|
| | Bas radsana | | 543.89 | | | | 18.55 | 149.72 | 26.27 | 499.07 | | 349.35 | 80 |
| | Bhuwadi | | 114.92 | | 17.02 | 29.88 | 55.31 | 288.62 | 50.64 | 962.07 | | 673.45 | 50 |
| Seuwa | Manpura | | 577 | | | 66.24 | 102.90 | 505.5 | 88.68 | 1685 | | 1179.5 | 250 |
| | Pabasi | | 677.46 | | | 14.54 | 36.48 | 178.54 | 31.32 | 595.12 | | 416.58 | 130 |

b) Agriculture and Horticulture Status and fuel availability

Most of the area depends upon rain. Cropping intensity is less than 80% of the cropped area. In most of the area single crop is grown. The farmers left the fields fallow for few years to regain the fertility of the soil, and then they bring the field under cultivation. Main Crops raised in the Project area are:

1. Kharif : Bajra, Guar, Moth & Moong
2. Rabbi : Wheat , Mustard, and Grams.

Horticulture:

There are no orchards in the Project area. Only few jungli Bers are found in the project area.

Vegetation:

Important trees found in the project area are Khejra (*Prosopis spicigera*), Kikar (*Acacia nilotica*), Neem (*Azadirachta indica*), Hingota (*Balanites roxburghii*), Ker (*Capparis Aphylla*), Shisham (*Dalbergia Sisoo*), Jal-Pilu (*Salvadora oleoides*), Jal Khera (*Salvadora persica*) & Rohira (*Tecomela undulata*).

Important shrubs of the area which deserve mention are Bhui (*Areghna tomentosa*), Kut Kartalia (*Argemone mexicana*), Phog (*Calligonum polygonoides*), Aak (*Calotropis procera*), Senia (*Crotalaria burhia*), Thor (*Euphorbia royleana*), Kheenp (*Laptadenia spartium*), Morali (*Lycium europoeum*) & Ber (*Zizyphus mauritiana*).

Several types of grasses are found in this project area viz. Bhurat (*Cenchrus catharticus*), Sewan (*Lasiurus catharticus*), Bura (*Cymbopogon Jwarincosa*), Lampra (*Aristida mutica*), Kucha (*Saccharum griffithii*) & Murat (*Panicum turgidum*).

Cropping Pattern of the Project Area

| S.No. | Name of Crop | Kharif | | | Rabi | | | Total | | |
|-------|--------------|--------|----------------|----------------|------|----------|-------|-------|----------------|----------------|
| | | Irr | Rain fed | Total | Irr | Rain fed | Total | Irr | Rain fed | Total |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 1 | Bajra | - | 1422.27 | 1422.27 | | | | | 1422.27 | 1422.27 |
| 2 | Moth, | - | 673.36 | 673.36 | | | | | 673.36 | 673.36 |
| 3 | Moong | - | 448.91 | 448.91 | | | | | 448.91 | 448.91 |
| 4 | Guar | - | 854.52 | 854.52 | | | | | 854.52 | 854.52 |
| 5 | Groundnut | | 1090 | 1090 | | | | | 1090 | 1090 |
| 15 | Gram | - | 3200 | 3200 | | | | | 3200 | 3200 |
| | Total | | 7689.06 | 7689.06 | | | | | 7689.06 | 7689.06 |

Irr = irrigated area

Cropping Status

| S. No. | Season | Crop Shown | Rain fed | | | Irrigated | | | Total | |
|--------|--------|--------------|-----------|------------------|----------------------|-----------|------------------|----------------------|-----------|------------------|
| | | | Area (ha) | Production (Ton) | Productivity (Kg/ha) | Area (ha) | Production (Ton) | Productivity (Kg/ha) | Area (ha) | Production (Ton) |
| 1 | Kharif | Bajra | 1422.27 | 369.79 | 260 | - | - | - | 1422.27 | 369.79 |
| | | Moth, | 673.36 | 148.14 | 220 | | | | 673.36 | 148.14 |
| | | Moong | 448.91 | 80.80 | 180 | | | | 448.91 | 80.80 |
| | | Guar | 854.52 | 179.45 | 210 | | | | 854.52 | 179.45 |
| | | Groundnut | 1090 | 305.20 | 280 | | | | 1090 | 305.20 |
| | | Vegetable | 4489.06 | 1083.38 | | | | | 4489.06 | 1083.38 |
| | | Gram | 3200 | 800 | 250 | | | | 3200 | 800 |
| | | Total | 7689.10 | 1883.40 | - | 210 | 288.5 | | 7689.10 | 1883.40 |

| Existing area under horticulture (ha) | | | Existing area under fuel-wood (ha) | | | Existing area under fodder (ha) | | |
|---------------------------------------|-------------------|---------------------------------|------------------------------------|-------------------|------------------------------|---------------------------------|-------------------|---------------------------|
| Source/Name of report | Year of reference | Area already under Horticulture | Source/Name of report | Year of reference | Area already under fuel-wood | Source/Name of report | Year of reference | Area already under fodder |
| | | | Nil | | | | | |

| Abstract of cropped Area (ha) | |
|-------------------------------|---------|
| Area under Single crop | 3399.06 |
| Area under Double crop | 1090 |
| Area under Multiple crop | - |

c) Livestock Status – Animals/milk production/average yield and fodder availability

Almost all households of the Project area keep livestock of one species or other and earn income out of them. The animal husbandry is the most income generating activities in farm household next to crop production. The animals useful in agriculture are camel & buffalo, which are used for ploughing and transportation work. Cows and buffaloes are main milk providing animals. Milk of goat is being used for domestic purpose. Sheep and Goat are fostering for wool and meat. Coak and hen are being fostering for meat and eggs.

Backyard poultry is also an important source of supplemental income for small and marginal farmers. It is expected that farmers can fetch more than Rs.5000 additional income per year per family by maintaining ten hen flocks.

As per basic survey of the project area live stock density per sq. km is 02 and average livestock available with respect to human population is 02 Only.

Fodder requirement of Rainfed area, is mainly met out from canal command area of near by the district. As per basic survey of the project area, the pasture land in the project area is 133 ha where as waste land is 310 ha. Fellow land of permanent nature is 1676 ha. These lands are opened and scrubbed. The grass / fodder trees are very little and are not fetching the demand of fodder. The grass and fodder are procured during crop season or purchased from the market.

The data regarding to animals, milk production, average yield and fodder availability are given below –

The details of livestock in the project area based on base line survey

| Livestock | Project | | | Annual Production | | | | Yeild per day | | | | Live Stock density per sq. Kms | Ratio with respect to Human population | Availability of fodder (quintals) | Deficiency of fodder (quintals) |
|------------------------|-------------|----------------|-------------|-------------------|---------------|---------------|-------------------|---------------|-----------|-----------|-----------|--------------------------------|--|-----------------------------------|---------------------------------|
| | Indigenou s | Crosse d breed | Total | Milk (tonns) | Meat (tonns) | Wool (tonns) | Egg (million no.) | Milk (litre) | Meat (Kg) | Wool (Kg) | Egg (No.) | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| Cows | 435 | 288 | 1064 | 578 | - | - | - | 1584 lit | - | - | - | | | | |
| Buffaloes | 470 | 465 | 1387 | 1570 | | - | - | 4303 lit | - | - | - | | | | |
| Bullocks | - | - | 40 | - | - | - | - | - | - | - | - | - | - | - | - |
| Camel | | - | 237 | - | - | | - | - | - | | - | | | | |
| Goat | | - | 3872 | | 14 t | 06t | - | | 40 | - | - | | | | |
| Sheep | | - | 2932 | - | 5t | | - | - | 13 | 16 kg | - | | | | |
| Total Livestock | 905 | 753 | 9532 | 2148 | 19 | 6 | | 5887 | 53 | 16 | - | - | - | | |

e) Demography

As per basic survey, project area has a population of 9008 Males constitute 4658 i.e. 51.8 % and female 4250 i.e. 43.33% of the population. The project area has an average literacy rate of 28.5 %, higher/lower than the national average of 59.5%. Male and female literacy rate are 37.02 % & 34.24 % respectively. In the project area, 19.25 .% of the population is under 6 years of age. The growth rate against population is 20%.

Total number of household in the project area are 970. Sex ratio of the project area is 912. Migration from project area is 12%. SC, ST, BPL & Landless population in the project area are respectively 17%SC, 0.3% ST & 37% OBC.

DEMOGRAPHY OF THE PROJECT AREA

| Name of Project | No. of Household | Growth in Population during the last three census | Per capita availability of Land (Ha.) | Sex Ratio | Total Population | | | Population in the age group 0-6 | | | Lit. Population | Literacy Level (%) | Migration | Total Worker | No. of SC, ST, BPL & Landless Population | | | |
|-----------------|------------------|---|---------------------------------------|-----------|------------------|------|--------|---------------------------------|------|--------|-----------------|--------------------|-----------|--------------|--|----|-----|----------|
| | | | | | Person | Male | Female | Person | Male | Female | | | | | SC | ST | BPL | Landless |
| Churu III | 1756 | 20% | 0.85 | 912 | 8908 | 4660 | 4248 | 1075 | 630 | 445 | 3180 | 36 | 310 | 5306 | 3060 | 77 | 576 | 349 |

f) Other infrastructure facilities available

Facilities available in the project area are given below :-

Details of infrastructure in the project areas

| Parameters | | Status | | | |
|------------|---|----------------|-----------|-----------|-----------|
| (i) | No. of villages connected to the main road by an all-weather road | All 8 villages | | | |
| (ii) | No. of villages provided with electricity | All 8 villages | | | |
| (iii) | No. of households without access to drinking water | | | | |
| (iv) | No. of educational institutions: Primary (P)/Secondary (S)/Higher Secondary (HS)/Vocational institution (VI) | (P) 8 | (S) 01 | (HS) 0 | (VI) 0 |
| (v) | No. of villages with access to Primary Health Centre | 02 | | | |
| (vi) | No. of villages with access to Veterinary Dispensary | NO | | | |
| (vii) | No. of villages with access to Post Office | 02 | | | |
| (viii) | No. of villages with access to Bank | NO | | | |
| (ix) | No. of villages with access to Market/Mandis | Rajgarh | | | |
| (x) | No. of villages with access to Agro -industries | NO | | | |
| (xi) | Total quantity of surplus milk | churu | | | |
| (xii) | No. of milk collection centres (e.g. Union (U)/Society (S)/Private agency (PA)/Others (O) | (U) - | (S) - | (PA) - | (O) - |
| (xiii) | No. of villages with access to Aanganwadi Centre | | | | |
| (xiv) | Any other facilities with no. of villages (please specify) | | | | |
| (xv) | Nearest KVK | HISAR | | | |
| (xvi) | Co-operative Society | | | | |
| (xvii) | NGOs | | | | |
| (xviii) | Credit institutions | | | | |
| | (i) Bank | | | | |
| | (ii) Co-operative Society | | | | |
| (xix) | Agro Service Centre's | | | | |

i) Land Holding details

Land holding of Large farmer, Small farmer & Marginal farmer in the project area is 50.10, 28.24 & 3.40% respectively. Per capita of land holding of Large farmer, Small farmer & Marginal farmer in the project area is 10.26, 2.62 & 0.40 respectively. Land holding of General, SC, ST, OBC & BPL farmers in the project area is 17.21(147), 20.03(208), 0.46(04), 62.28(611) & 15.20(177) % respectively. Per capita of land holding of General, SC, ST, OBC & BPL farmers in the project area is 7.9, 6.50, 7.81, 6.88 & 5.79 respectively.

Land holding details of the project area is given below :-

| Type of Farmer | Land holding (ha) irrigation source wise | | | Land holding (ha) Social group wise | | | | |
|-----------------------------|--|---------|-------|-------------------------------------|----|----|-----|-----|
| | Irrigated (source) | Rainfed | Total | General | SC | ST | OBC | BPL |
| (i) Large Farmer | | 300 | 300 | 50 | 70 | 04 | 300 | 75 |
| (ii) Small Farmer | | 274 | 274 | 37 | 72 | 00 | 165 | 46 |
| (iii) Marginal Farmer | | 33 | 33 | 07 | 01 | 00 | 25 | 26 |
| (iv) No. of Landless person | 77 | | | | | | | |
| (v) No. of BPL households | 137 | | | | | | | |

j) Other Development Schemes in the project area

There are many other schemes running in the Project area. Other development scheme/programme running in the project area are given below :-

| S. No. | Name of the Programme/Scheme | Sponsoring Agency | Objectives of the Programme/Scheme | Villages covered | Number of beneficiaries benefitted |
|--------|---|------------------------------|------------------------------------|------------------|------------------------------------|
| 1 | Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) | Rural Development Department | Employment | 8 | 923 |
| 2 | Indira Awas Yojna (IAY) | Rural Development Department | Housing | 8 | 75 |
| 3 | C M Rural BPL Housing Scheme | Rural Development Department | Housing | 8 | 0 |
| 3 | Swarnjayanti Gram Swarozgar Yojana (SGSY) | Rural Development Department | Loan | 8 | 125 |
| 4 | Total Sanitation campaign (TSC) | Rural Development Department | Sanitation | 8 | 24 |
| 5 | Member of Legislative Assembly Local Area Development (MLA LAD) | Rural Development Department | Development | 8 | 16 |

| | | | | | |
|----|--|------------------------------|-------------|---|-----|
| 6 | Member of Parliament Local Area Development (MP LAD) | Rural Development Department | Development | 8 | 12 |
| 7 | Thirteenth Finance Commission (TFC) | Panchayati Raj Department | Development | 8 | 135 |
| 8 | State Finance Commission (SFC) | Panchayati Raj Department | Development | 8 | 124 |
| 9 | Swa Vivek | Rural Development Department | Development | 8 | 62 |
| 10 | Gramin Jan Sah-Bhagidari Yagna | Rural Development Department | Development | 8 | 65 |
| 11 | Nirband Yagna | Panchayati Raj Department | Development | 8 | 26 |

II. Technical Features

a) Revenue maps

Revenue maps, constructed by SRSAC Jodhpur is based on 1 : 4000. Revenue records like khsra maps , khasra list has been collected, printed & enclosed in the DPR at the last. Base line map, Cartosat map, Land use map & Land cover map of the project area has been marked by SRSAC Jodhpur & enclosed in the DPR.

b) Topo maps/watershed maps with drainage line/ survey maps (as prescribed and utility)

Topo map traced on plastic sheets and scanned by SRSAC Jodhpur showing all topography of the project area is enclosed below :-
As mentioned above being general soil texture light and coarse sandy, highly permeable and without any streams contributing runoff, no water erosion is reported but large amount of wind erosion takes place in total project area of 5000 Hactare. The data regarding about wind erosion are not available. Therefore no drainage line map is available in the project area.

c) Hydro-Geological maps / Ground Water status and prospect maps

Ground water of the project area lies in between 25 to 30 m depth & having 2000 to 3400 TDS.

| S. No. | Well | No. | Depth | Dry | Area irrigated (Ha) | Water availability (days) |
|--------|-----------------|-----|-------|-----|---------------------|---------------------------|
| 1 | Dug well | 12 | 25-30 | 4 | 0 | 180 |
| 2 | Deep tube wells | 5 | 25-30 | 2 | 0 | 150 |
| | Total | 17 | | 6 | 0 | |

As reported out of 5000 ha area, the potential of ground water in the area 5000 ha is reported as critical. More emphasis on such activities which help in recharging the ground water is needed. Details of critical and safe area is given below :-

Ground water prospects

| Category | Area in hectares | % to district | % to state |
|--------------|------------------|---------------|------------|
| Critical | 5000 | 0.36 | |
| Safe | 0 | | |
| TOTAL | 5000 | 0.36 | |

d) Slope details

The information provided by Remote Sensing Centre Jodhpur the slope of the area is varying from 0 to 35%.

The details as furnished by Remote Sensing Centre Jodhpur is given below :-

Slope distribution

General slope of area of the Project

| S. No. | Slope Category | Area in Ha. | Area in Sq. Km. |
|--------|----------------|-------------|-----------------|
| 1 | 0-1% | 2076 | 20.76 |
| 2 | 1-3% | 126 | 1.26 |
| 3 | 3-5% | 165 | 1.65 |
| 4 | 5-10% | 250 | 2.50 |
| 5 | 10-15% | 215 | 2.15 |
| 6 | 15-35% | 2168 | 21.68 |
| 7 | 35-50% | 0 | 0 |
| | TOTAL | 5000 | 50.00 |

e) (i) Available surface runoff based on average rainfall

The soil of the project area is very light, sandy course and highly permeable, neither run off is generated and nor harvested. But only runoff take place from 20% of the average rainfall in johar area, 100% from Daamar Road, 70% from Daamar Road Berms, 100% from roof top of the building/house, 100% from C. C. Road, 80 % from Brick Road (Khurra/Kharanja), 100% from the pacca catchment area of the water harvesting structure already exist. Total surface runoff available in the project area are given below :-

| S. No. | Particulars | Area (sqm) | Average Rainfall (m) | Available Runoff (litre) |
|--------|-------------------|------------|----------------------|--------------------------|
| 1 | Johar | 20000000 | 0.34 | 1360000 |
| 2 | Daamar Road | 35000 | 0.34 | 11900 |
| 3 | Daamar Road Berms | 20000 | 0.34 | 5440 |

| | | | | |
|---|--------------------------------|------------|------|------------|
| 4 | Roof top of the building/house | 40000 | 0.34 | 13600 |
| 5 | C. C. Road | 5000 | 0.34 | 1700 |
| 6 | Brick Road (Khurra/Kharanja) | 25000 | 0.34 | 7600 |
| 7 | Artificial Catchment | 323,53,000 | 0.34 | 110,00,020 |
| | Total | 374,78,000 | | 124,00,260 |

(ii) Surface runoff tapped in existing structures

Surface runoff tapped in existing structure lies in the project area area given below :-

| S. No. | Source | No. of source | Capacity (in litre) | Qty (in litre) | Availability of water (in month) |
|--------|--|---------------|---------------------|----------------|----------------------------------|
| 1 | Kachha Johar/Talaab | 04 | 4800000 | 3200000 | 1-4 months |
| 2 | Kachha Johar/Talaab | 02 | 2500000 | 1000000 | ---do--- |
| 3 | Kachha Johar/Talaab | 03 | 3400000 | 1200000 | ----do---- |
| 5 | Pacca Johar/Talaab | 03 | 500000 | 1500000 | 04 months |
| 9 | Individual Farm Pond/Taanka | 40 | 20000 | 800000 | 06 months |
| 10 | Individual Farm Pond/Taanka | 10 | 10000 | 100000 | 03 months |
| 11 | Individual Farm Pond/Taanka | 01 | 50000 | 50000 | 08 months |
| 13 | Community Farm Pond/Taanka | 04 | 75000 | 300000 | 05 months |
| 14 | Community Farm Pond/Taanka | 05 | 50000 | 250000 | 04 months |
| 15 | Roof Top Rain Water Harvesting Structure | 20 | 20000 | 400000 | 06 months |
| | Total | 92 | | 8800000 | |

(iii) Balance Available Runoff

Total available runoff of the project area is 124,00,260 litre & runoff tapped in the existing structure is 88,00,000 litre. So balance available runoff to be tapped is 36,00,260 Litre.

(iv) Total Demand of water for human & animals in the project area

| S. No. | Particulars | No. | Demand of Water (litre) | |
|--------|---|------|-------------------------|--------------|
| | | | Per person per day | Per year |
| 1 | Persons (for drinking purpose) | 9008 | 5.5 | 180,83,560 |
| 2 | Persons (for bathing, washing etc. purpose) | 9008 | 60 | 19,72,75,200 |
| 3 | Cows | 1064 | 42560 | 15534400 |
| 4 | Buffaloes | 1387 | 55480 | 20250200 |
| 5 | Bullocks | 40 | 16 00 | 584000 |
| 6 | Camel | 237 | 20145 | 7352925 |
| 7 | Goat | 3872 | 38720 | 14132800 |
| 8 | Sheep | 2932 | 29320 | 10701800 |
| | TOTAL DEMAND | | | 28,39,14,885 |

(v) Net Demand of Water in the Project Area

1. Total Demand of Water in the Project Area :- 28,39,14,885 (litre)
2. Total Water Available in the Existing Structure in the Project Area :- 88,00,000 (litre)
3. Total Supply of water by Deptt., NGO & any other agency in the Project Area :- 10,65,54,236 (litre)
4. Net Demand of Water in the Project Area :- 16,85,60,649 (litre)
5. Is Net Demand of Water in the Project Area is Greater than the Balance Available Runoff Yes

f) Soil Map and Soil details

As mentioned Project area is a part of great Thar Desert. It is covered with thick mantling sand i.e. 1. to 35 meters high longitudinal dunes trending north east to south west and general slope varies from south to north.

The general texture of the soil is course sandy to sandy loam, red soils in depressions, calcareous that has rapid infiltration rate of water, low human content due to rapid oxidation high salinity. The organic carbon values are almost negligible.

As per **Remote Sensing application centre**, Sodic or Alkali Soils is 5000 ha.

The overall fertility (qualities of N, P, and K) are very less through out the area of the Project. As per **Remote Sensing application centre**, the status of fertility is as under-

Nitrogen Very Low/Medium

Phosphorous Very Low/Medium

Potassium Very Low/Medium

In order to improve the health of the soil , sound agronomic measures such as addition of organic measures, green manuring and crop rotation with stress on legumes and other measures which enhance the humus content of the soil are recommended.

Soil depth

| The details of the Area according to depth of soil | | |
|---|--------------------|------------------------|
| Depth (Cms) | Area in Ha. | Area in Sq. Km. |
| 0.00 to 7.50 | | |
| 7.50 to 45.00 | | |
| > 45.00 | 5000 ha | |
| TOTAL | 5000 ha | |

Soil Profile

| Major Soil Classes | Area in Hectares |
|--------------------|------------------|
| II | 125 |
| III | 1689 |
| IV | 2821 |
| VI | 365 |
| Total | 5000 |

Soil Fertility Status

| Soil Fertility Status | Kg/ha |
|-----------------------|--------------|
| N | 0.47kg/hac |
| P | 28.536kg/hac |
| K | 287kg/hac |
| Micro nutrients | PPM |

g) Climatic and Hydrological details

The Area of Project is situated at 28.° 30.' N 75.° 23.'E. The climate of the Project area is dry desert with large variation in temperature. The maximum and minimum temperature of the Project area generally varies from 45.°C to 22° C. Relatively humidity is below 30% during south east monsoon period and rises to 60% during the rainy session i.e. in the month of July to September of the year. This Project area comes into extreme temperatures in winters and summers with lowest rain. The recorded minimum and maximum temperatures are 48°C and 0 .°C respectively. Normal rainfall is only 340 mm / year which is sufficient for growing the crops.

The Climatic & Hydrological details of the project area are given below :-

Climatic and Hydrological information

Name of Agroclimatic zone :- 2A

Average Annual Rainfall (mm)

| S. No. | Year | Average Annual Rainfall (mm) |
|--------|------|------------------------------|
| 1 | 2002 | 210 |
| 2 | 2003 | 366 |
| 3 | 2004 | 427 |
| 4 | 2005 | 437 |
| 5 | 2006 | 341 |
| 6 | 2007 | 532 |
| 7 | 2008 | 648 |
| 8 | 2009 | 315 |
| 9 | 2010 | 510 |
| 10 | 2011 | |

Avg. Monthly Rainfall (Last Ten Years)

| S. No. | Month | Rainfall (mm) |
|--------|-----------|---------------|
| 1 | June | 65.88 |
| 2 | July | 98.66 |
| 3 | August | 96.55 |
| 4 | September | 48.33 |

Maximum Rainfall Intensity (mm)

| S. No. | Duration | Rainfall intensity (mm) |
|--------|--------------------|-------------------------|
| 1 | 15 minute duration | 35 |
| 2 | 30 minute duration | 65 |
| 3 | 60 minute duration | 68 |

Tempreture (Degree C)

| S. No. | Season | Max. | Min. |
|--------|---------------|------|------|
| 1 | Summer Season | 48 | 28 |
| 2 | Winter Season | 12 | 0 |
| 3 | Rainy Season | 27 | 22 |

**Potential Evaporation Transpiration (PET)
(mm/day)**

| S. No. | Season | PET |
|--------|--------|------|
| 1 | Summer | 3-18 |
| 2 | Winter | 2-7 |
| 3 | Rainy | 4-12 |

i) Erosion details

Being general soil texture light and course sandy, highly permeable and without any streams contributing runoff, no water erosion is reported but large amount of wind erosion takes place in total project area of 5000 Hactare. The data regarding about wind erosion are not available.

Details of soil erosion in the project area

| 1 | 2 | 3 | 4 | 5 |
|---------------|-----------------|--------------------|--|---|
| Cause | Type of erosion | Area affected (ha) | Run off (mm/ year) | Average soil loss (Tonnes/ ha/ year) |
| Water erosion | | | | |
| a | Sheet | | There is no runoff producing storm in the district | |
| b | Rill | | | |
| c | Gully | | | |
| Sub-Total | | | | |
| Wind erosion | | 5000 | | Data regarding about wind erosion are not available |
| Total | | 5000 | | |

III. Problems, Demand and Scope for comprehensive area development

a) NRM

Problems

- Being general soil texture light and coarse sandy, highly permeable and without any streams contributing runoff, no water erosion take place in the project area. All rainfall water percolate in soil & increases the water table.
- Severe Wind erosion take place in the summer season which washed away a upper productive soil of the project area.
- Low community land as comparative to total area & deforestation of community land.
- Less vegetative cover
- Ground water depth ranges from 25 to 30 m which is highly deep
- Ground water having a TDS ranging 200 to 3400 which is not suitable for drinking purpose.
- Average annual rainfall is 340 mm which is sufficient/insufficient for fulfill the need of the area.
- Potential Evaporation Transpiration (PET) is 2-20 mm/day which transpire most of the water in the air.
- Max. & Min. temperature of the project area is 49.5 degree & 0 degree which is a adverse condition of the project area.

- Land slope having 0 to 35 % which effect on production.

Demand

- 16,85,60,649 litre runoff wants to store for requirement of the project area.
- There should be a barrier to stop wind erosion & protection of productive soil in the project area.
- There should be afforestation in the community land.
- There should be a rich vegetative cover in the project area.
- Ground water depth should be decrease.
- TDS of water should be suitable for drinking purpose.
- There should be a sufficient structure for capturing & storing rain.
- There should be a minimum Potential Evaporation Transpiration (PET) rate.
- There should be a heavy & rich plantation in the project area for favourable climatic condition.
- There should be a work for stabilisation of sand dunes.
- There should be a work for improvement of land.

Scope for development

- No. of artificial catchment & tank can be take up in the project area for capturing runoff & storage of rain.
- No. of vegetative barrier & shelter belt plantation can be take up in the project area against wind erosion & to protect the productive soil of the area.
- All the community land can be take up for afforestation.
- Maximum area can be take up for requirement of vegetation.
- Recharge well can be take up for decresing ground water depth.
- Maximum rain fall water capturing structure can be take up for improving TDS.
- No. of structure can be take up for capturing & storing rain water.
- Adding zipsum in the soil can be take up for decresing PET rate.

- Maximum plantation can be take up for improving climatic condition.
- Sand Dune Stabilization work can be take up for stabilization of sand dunes.
- Latest scientific methods can be take up for improvement of land.

b) Agriculture and Horticulture Productivity gap analysis

Problems

- Low productive soil of the project area.
- Soil fertility is low
- Agriculture is purely depending on the monsoon rainfall and single cropped.
- Assured irrigation is negligible.
- Low use of fertilizer per unit cropped area.
- Traditional farming methods.
- Lack of adequate farm machinery.
- Lack of finances for farmers.
- Lack of good quality seeds and fertilizers.
- Lack of other facilities such as storage and marketing.

Demand

- There should be some mechanism for improvemet of productive soil.
- There should some mechanism for increase the soil fertility.
- There should be rainfall capturing structure to ensure for double cropping system.
- There should heavy water storage structure for life saving irrigation.

- There should some training for farmers for use of fertilizer.
- There should some training on modern farming methods.
- There should some demonstration on modern farm machinery.
- There should some loan facility for fulfill the demand of finances.
- There should be some demonstration on good quality seeds & fertilizer.
- There should be some training on storage of seeds & marketing.

Scope for development

- Suitable number of water harvesting structure can be take up for ensuring double cropping .
- Suitable number of water storage structure can be take up for life saving irrigation.
- Suitable number of training can be take up about benefits of fertilizer.
- Suitable number of training can be take up to aware about modern farming methods.
- Suitable number of demonstration can be take up about benefits of modern farm machinery.
- Demand of finance can be fulfill by loan of bank or society.
- Suitable number of crop demonstration can be take up about good seed & fertiliser.
- Suitable number of trainings can be take up on storage of seed & fertilizer.

c) Live-stock gap of fodder availability

Problems

- Cows and buffaloes are of local breeds.
- Lack of fodder and pasture availability.
- Migration of goats and sheeps.
- Milk production is low.
- No local treatment is available.

- No pure water is available for drinking for live-stock.
- Lack of green fodder.
- Lack of time period of repeat breeding.
- Lack of balanced & nutrient feed in the project area.
- Lack of suitable habitation of live stock.
- Lack of milk marketing in the project area.
- Lack of poultry farming.
- Unawareness of animal health.
- Traditional methods of treatment.
- Cost of feed is greater than production.
- Street animals.
- Unauthorised veterinary practicer by unknown person in the project area.
- Lack of awareness.
- Lack of vaccination.
- Unawareness of animal insurance.

Demand

- There should be a cows and buffaloes of hybrid nature.
- There should be a sufficient fodder & rich vegetative cover in Pasture land.
- There should some way to stop live-stock migration.
- There should some way of increasing milk production.
- There should be a availability of local treatment.
- There should be a pure water for live-stock.

- There should some way of increasing availability of green fodder.
- There should some way of increasing availability of balanced & nutrient feed.
- There should be a training programme on suitable habitation of live-stock.
- There should some way for developing milk marketing.
- There should some training on poultry farming.
- There should some training to aware about animal health.
- There should be a modern method of treatment.
- There should be a sufficient fodder that cost of feed should be less than the production.
- Street animals should be in definate area.
- There should be authorised vetenaty practicener in the project area.
- There should be some training on awareness.
- There should be some camp of vaccination.
- There should be some training on awareness of animal insurance.

Scope for development

- Distribution of improved bull and bull calves for natural services can be take up in the project area.
- A good vegetation programme can be take up in the pasture land.
- A good fodder vegetation programme on field boundry of famers & on common land can be take up to stop live-stock migration in the project area.
- Breed improvement programme can be take up for increase in milk production.
- Vetenary specialist as a WDT can be take up for local treatment.
- No. of rain harvesting structure can be take up for pure water for live-stock.
- Sufficient no. of plantation of fodder plant can be take up for availability of green fodder.

- No. of training can be take up on balanced & nutrient feed, suitable habitation of live-stock, milk marketing, poultry farming, aware about animal health, modern method of treatment, vaccination & animal insurance.
- Castration programme can be take up for street animal.

d) Livelihood & Micro-enterprises

Problems

- The villagers earn their livelihood from animal husbandry and agriculture and during lean seasons they migrate for daily wage in other parts of the state.
- Lack of small enterprises in the project area.
- Lack of Agro based industry in the project area.
- Lack of strengthening of Self Help Group.

Scope for development

- Development of small entrepreneurship such as stitching, embroidery, shops, fragrance sticks, candle preparation, handicrafts.
- Developing Agro based industry such as wool, Papad and Bardi weaving units with equipment and machines for livelihood enhancement.
- Poultry and piggery
- Vermi composting and animal waste as manure
- Fodder bank creation
- Establishment of processing center.
- Self Help Group Formation and there strengthening.

CHAPTER – III

Proposed Development Plan

1- Mobilization , Education, trainings and envisioning for

- Watershed Development Team
- Stakeholders at field level i.e. committee member
- Watershed secretary, SHG and User groups and progressive farmers.
- Vocational trainings for SHG and User Groups
- Capacity building for farmers and other progressive farmers on new interventions in the fields of soil water conservation measures to optimize natural water resources, rain fed agriculture, use of animal waste as manure, invention of water collection ways and use of micro irrigation technique
- Exposure tours
- Trainings on agriculture, horticulture and agro-based micro enterprises and silvi-pastoral approach
- Trainings on the development of livestock especially on improved market access for produce
- Training of the equity distribution of usufruct rights
- Livelihood activities for asset less people

2- Entry Point Activity (EPA)

To establish credibility of the Watershed Development Team and create rapport with the watershed community. Following works have been identified for the Entry Point Activity component, with the consent of the Gram Sabha.

| S. No. | Name of Gram Panchayat | Name of Village | Amount Alloted for EPA (Rs. In Lakhs) | Name of the Activity | Estimated Cost (Rs. In Lakhs) |
|--------|------------------------|-----------------|---------------------------------------|-------------------------------|-------------------------------|
| 01 | BHUWADI | BAS RADSANA | 30.00 | CONST. OF KUND, NATHANA JOHAD | 1.00 |

| | | | | | |
|----|-----------|------------|-------|--------------------------------|-------|
| 02 | BHUWADI | CHIMANPURA | | CONST . OF KUND , RATHORI | 1.00 |
| 03 | BHUWADI | CHIMANPURA | | CONST. OF KUND, SORANA JOHAD. | 1.00 |
| 04 | BHUWADI | AMARPURA | | PAKKA JOHAD CONST... | 8.00 |
| 05 | MUNDI TAL | MUNDI TAL | | PAKKA JOHAD CONST, RDANA JOHAD | 8.00 |
| 06 | SEUWA | MANPURA | | PAKKA TALAB , MANDRALI JOHAD | 9.00 |
| 07 | SEUWA | PABASI | | CONST. OF KUND, GODARAM JOHAD | 1.00 |
| 08 | SEUWA | PABASI | | CONST. OF KUND, NE PAKKA TAL | 1.00 |
| | | Total | 30.00 | | 30.00 |

3- Watershed Development Works on Arable lands

- New Farm pond (Tanka) of at least 1 lakh litter capacity and plantation
- Repair of private well and farm ponds
- Field bunding for vegetative barrier against wind.
- Road top water harvesting structure.

4- Watershed Development Works on Non arable lands

- Community farm ponds locally Johar a harvesting structure of more than 20 to 30 liters lakh literscapacity based its catchment
- Jal Grahan Koop (recharge well)
- Repair of existing community farm ponds and pucca Johar locally called Tall- A harvesting structures
- Continuous trenching works with sowing of local perennial grass and shrubs and trees

-Shunken ponds/Khet Talai

5- Production System

- Crop Demonstration (high yielding varieties of cereals pulses, oilseed, and vegetable, medicinal, spices, production of good agriculture seed and fodder etc.)
- Horticulture plantation especially at the periphery of farm ponds
- Agro-forestry
- Plantation of in non arable area
- Bio fuel plantation
- Over seeding of grass and legumes

6- Live stock development activities

Live stock development activities will be undertaken in the project area with the help of Animal Husbandry department and selected NGO i.e. BAIF etc and Krishi Vigyan Centers established in the various districts

- a - Breed improvement i.e. rearing and distribution of improved bull and bull calves for natural services
- b- Genetic improvement of defined ingenuous livestock breeds through selective breeding, upgrading and replacement of nondescript stock through cross breeding.
- c- Expansion and strengthening of infrastructures to propagate the elite germ-plasm by using modern reproductive technologies through convergence of the programme implemented by line department.
- d- Distribution of improved bucks and rams for improvement of the small ruminants in the district
- e- Animal health camps, animal health care activities viz vaccination, deworming
- f- Promotion of the farmers for producing the good quality fodder seeds and fodder
- g- Castration of scrub bulls and their subsequent replacement by elite bulls in a phased manner.

h- Conservation of important indigenous breeds and promotion of breeders association / cooperative groups.

7- Livelihood Support

- Development of small entrepreneurship such as stitching, embroidery, shops, fragrance sticks, candle preparation, handicrafts.
- Developing Agro based industry such as wool, Papad and Bardi weaving units with equipment and machines for livelihood enhancement.
- Poultry and piggery
- Vermi composting and animal waste as manure
- Fodder bank creation
- Establishment of processing center.
- Rearing of goats etc.
- Self Help Group Formation and there strengthening.

Consolidation / Exit Strategy

Consolidation and completion of various works, Building the capacity of the community based organizations to carry out the new agenda items during post project period, Sustainable management of (developed) natural resources, up-scaling of successful experience regarding farm production systems/off-farm livelihoods, etc.

Introduction

Consolidation and withdrawal phase is the most important and crucial phase in the participatory development projects. This phase facilitate the users to maintain the project activities in a sustainable manner during the post project period and initiate the new activities by users themselves. In this phase the resources augmented and economic plans developed in Phase II as per common guidelines are made the foundation to create new nature-based, sustainable livelihoods and raise productivity levels. The classification of activities in

the three phases must not be understood in a rigid manner. Many of the Phase III activities may even start in many watersheds during Phase I and/or II itself. Phasing of activities needs to have an internal logic and integrity that must flow through the entire action plan. This will depend on a host of factors such as the prevailing initial conditions, needs and possibilities in each village, response of the community etc. Such flexibility must be built into the action plan and is to be seen as a distinguishing feature of common guidelines
2008.

Activities to be undertaken during withdrawal phase

- Consolidation and completion of various works.
- Building the capacity of the community based organizations to carry out the new agenda items during post project period.
- Sustainable management of (developed) natural resources and Up-scaling of successful experiences regarding farm production systems /off-farm livelihoods

Completion various works

All the works initiated should be completed during first half of this phase.

Documentation of successful experiences /project interventions

- Successful stories of the farmers has to be documented either in the form of brochure or video clipping in local language.

Building the capacity of the community based organizations

- To carry out the new agenda items during post project period.
- To manage the developed natural resources.
- Improving the sustainability of various interventions under the project.
- Formal allocation of users right over Common Property Resources (CPRs).
- Collection of user charges for CPRs.
- Repair, maintenance and protection of CPRs.
- Sustainable utilization of developed natural resource.
- Intensification of farm production systems/off-farm livelihoods.

- Promotion of agro-processing and marketing enterprises.
- Maintenance of association including financial and records management.
- Farmers may also be encouraged to develop non pesticidal management, low cost organic inputs, seed farms and links with wider markets to fetch competitive price.
- Project management related aspects.
- Creating awareness about the various government schemes and facilitate them to approach appropriate organization.

Institutional linking with user groups / watershed associations

The PIA should make arrangements to link the watershed association and other user groups with appropriate external institutions for their self sustainability.

- Research, Developmental and Training organizations.
- Marketing agencies for procuring their on farm and off farm products.
- Financial institutions for providing loan in future.
- Any other organizations whom the farmers needed support based on the activities implemented during the project period.

Up scaling of successful interventions

Up scaling of successful experiences / interventions has to be attempted by availing revolving fund under the project as well as credit and technical support from external institutions.

Community enterprises

Community enterprises like a small agri or agro-processing units could be established by availing credit facilities from the financial institutions by watershed associations and the benefit can be used for post project management in addition to watershed development fund.

Formation of Federation

Federations could be formed at the level of a cluster of villages in order to support economic activities at scale. These would further strengthen and activate the linkages established with external resource agencies for knowledge, credit, input procurement, sale of local produce, carrying on processing activities to the point of exports.

Terminal evaluation

Terminal evaluation of project should be attempted by involving user groups for selected interventions on their impact based on pre and post project status. For example, the impact on water resources development could be gauged from additional area brought up under irrigation due to project interventions. Impact of production systems could be gauged from increase in yield. Impact of livestock and fisheries development could be gauged from additional income due to project interventions.

Consolidated project report preparation

Detailed completion report of the project which includes all intervention and activities implemented in the project has to be prepared in detail. The outline of the report will be as follows:

- Introduction and history of the watershed including special problems if any.
- Location, geographical and soils details etc. of the watershed.
- Details and maps of watershed.
- Budget allocation and utilization head wise.
- Details of the interventions, activities etc. implemented in watershed.
- Status of each intervention.
- Impact of interventions.
- Constraints.
- Any other matters PIA would like to highlight.
- Recommendations drawn based on lessons learnt for future use.

CHAPTER – IV

Technical Designs and Estimates

1. Technical Design of Kund/Farm Pond/Taanka of 30,000 litre Capacity

Volume of Kund should be 30.00 Cumec for 300,000 litre capacity

$$\text{Volume} = \pi/4 * (\text{Dia.})^2 * \text{depth}$$

Assuming Diameter of Kund = 3.00 m

$$\text{Then Depth should be} = 30 / \pi/4(3.00)^2$$

Therefore Depth = 4.24 m \approx 4.30 m

Catchment area of Kund should be for 30,000 litre

$$\text{Volume of Water} = \text{Catchment area} * \text{Average Rainfall}$$

Average rainfall of the project area is 340 mm

$$\text{Therefore Catchment area} = 30/0.34 * 0.80$$

Catchment area = 110.29 Sqm

$$(\text{Dia of Catchment area})^2 = 110.29 / \pi/4$$

$$(\text{Dia of Catchment area})^2 = 140.43$$

Dia of Catchment area = 11.85 m \approx 12.00 m

DETAILED ESTIMATE (Kund constrution)

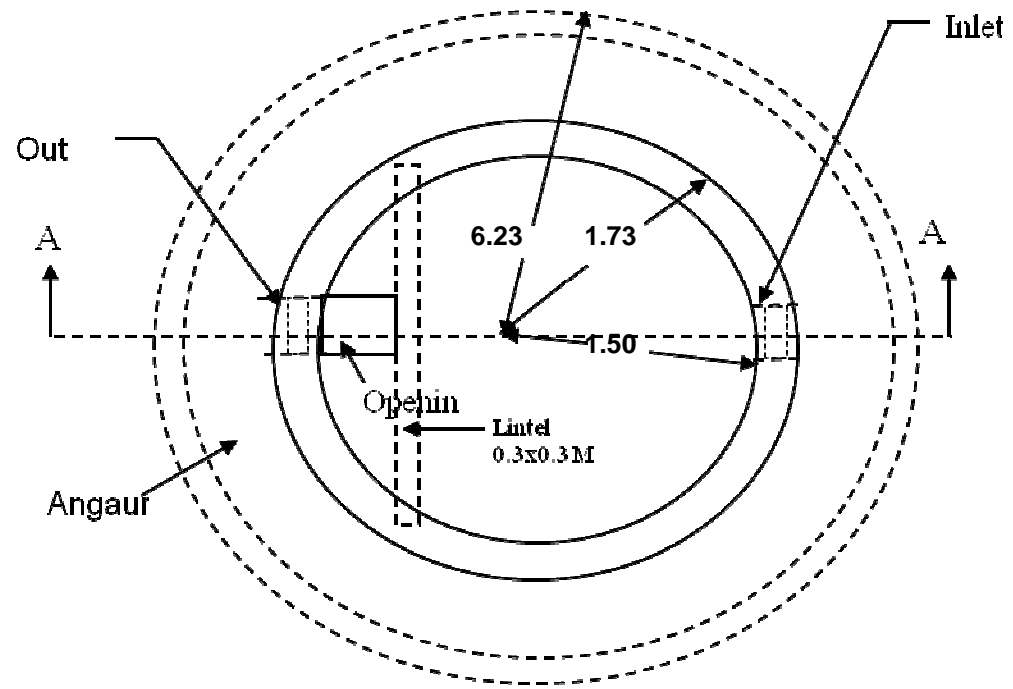
कार्य का नाम :-

Construction of Individual Kund (30,000 litre Capacity)

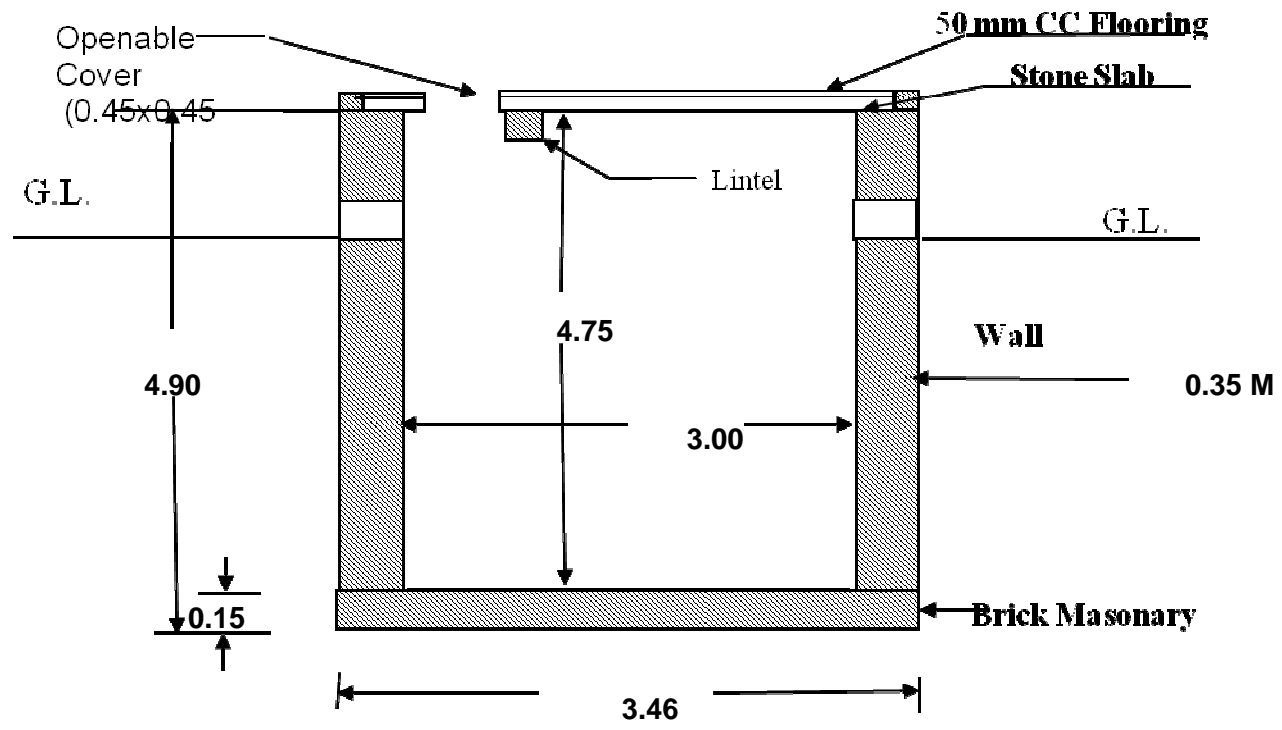
| क्र. सं. | विवरण | मात्रा | Rate Labour | Rate Total | Labour | Total |
|----------|--------------------------------------|------------------------------|--------------|------------|---------|----------|
| 1 | कुण्ड की खुदाई का कार्य | | | | | |
| a | खुदाई 0 मी. से 1.5 मी. तक $\pi/4$ | (3.46) ² * 1.50 | = 14.104 Cum | 71 /Cum | 71 /Cum | Rs. 1001 |
| b | खुदाई 1.5 मी. से 3.0 मी. तक | | | | | Rs. 1001 |

| | | | | | | | |
|----------------------------------|--|--------------------------------|---------------|--------------|-------------|------------------|-------------------|
| C | $\pi/4$ | $(3.46)^2 * 1.50$ | = 14.104 Cum | 82 /Cum | 82 /Cum | Rs. 1157 | Rs. 1157 |
| | खुदाई 3.0 मी. से 4.5 मी. तक | | | | | | |
| 2. | $\pi/4$ | $(3.46)^2 * 1.50$ | = 14.104 Cum | 93 /Cum | 93 /Cum | Rs. 1312 | Rs. 1312 |
| | ईंट की चिनाई का कार्य 1:6 | | | | | | |
| | $\pi/4$ | $(3.46)^2 * 0.15$ | = 1.410 Cum | | | | |
| | $\pi/4$ | $(3.46^2 * 3.00^2) * 4.75$ | = 11.086 Cum | | | | |
| | $\pi/4$ | $(12.46^2 * 12.00^2) * 0.68$ | = 6.009 Cum | | | | |
| | $\pi/4$ | $(12.46^2 * 12.00^2) * 0.07$ | = 0.619 Cum | | | | |
| | | | 19.124 Cum | 366.00 /Cum | 2354.0 /Cum | Rs. 6999 | Rs. 45018 |
| 3 | लिटल लगाने का कार्य | $2 * 3.00 * 0.30$ | = 1.800 Sqm | 162 /Sqm | 548 /Sqm | Rs. 292 | Rs. 986 |
| 4 | कुण्ड पर पट्टी लगाने का पूर्ण कार्य | | | | | | |
| | $\pi/4$ | $(3.00)^2 * .45 * .45$ | = 6.866 Sqm | 370.00 /Sqm | 1191 /Sqm | Rs. 2540 | Rs. 8178 |
| 5 | पायतन पर ईंट कंकरीट बिछाने का कार्य mud mortar | | | | | | |
| | $\pi/4$ | $(12.00^2 * 3.46^2) * 0.10$ | = 10.369 Cum | 236.00 /Cum | 445 /Cum | Rs. 2447 | Rs. 4614 |
| 6 | प्लास्टर का कार्य 1:6 अनुपात में 20mm | | | | | | |
| | $\pi/4$ | $(3.00)^2$ | = 7.069 Sqm | | | | |
| | π | $* 3.00 * 4.75$ | = 44.745 Sqm | | | | |
| | π | $* 3.46 * 0.50$ | = 5.432 Sqm | | | | |
| | | | 57.246 Sqm | 43 /Sqm | 93 /Sqm | Rs. 2462 | Rs. 5324 |
| 7 | प्लास्टर का कार्य 1:6 अनुपात में 12mm | | | | | | |
| | $\pi/4$ | $(12.00^2 * 3.46^2)$ | = 103.695 Sqm | | | | |
| | π | $* 12.00 * 0.07$ | = 2.638 Sqm | | | | |
| | π | $* 12.23 * 0.23$ | = 8.833 Sqm | | | | |
| | π | $* 12.46 * 0.60$ | = 23.475 Sqm | | | | |
| | | | 138.640 Sqm | 43 /Sqm | 74 /Sqm | Rs. 5962 | Rs. 10259 |
| 8 | Construction of Barbed wire fencing | | | | ≈ | Rs. 19000 | |
| 9 | किवाड़ व जाली लगाने का कार्य | | | | ≈ | Rs. 500 | |
| योग | | | | | | Rs. 24171 | Rs. 97349 |
| Add 3% for contingencies charges | | | | | | | Rs. 2920 |
| Grand Total | | | | | | Rs. 24171 | Rs. 100270 |
| लागत श्रम मद में | | | | 0.242 | लाख | | |
| लागत सामग्री मद में | | | | 0.761 | लाख | | |
| कुल योग | | | | 1.003 | लाख | | |

ड्राईंग कुण्ड निर्माण



PLAN



SECTION ON 'A-A'

2. Technical Design of Kund/Farm Pond/Taanka of 50,000 litre Capacity

Volume of Kund should be 50.00 Cumec for 50,000 litre capacity

$$\text{Volume} = \pi/4 * (\text{Dia.})^2 * \text{depth}$$

Assuming Diameter of Kund = 3.80 m

$$\text{Then Depth should be} = 50 / \pi/4(3.80)^2$$

Therefore Depth = 4.40 m \approx 4.40 m

Catchment area of Kund should be for 50,000 litre

$$\text{Volume of Water} = \text{Catchment area} * \text{Average Rainfall}$$

Average rainfall of the project area is 340 mm

$$\text{Therefore Catchment area} = 50/0.34 * 0.80$$

Catchment area = 183.82 Sqm

$$(\text{Dia of Catchment area})^2 = 183.82/ \pi/4$$

$$(\text{Dia of Catchment area})^2 = 234.05$$

Dia of Catchment area = 15.29m \approx 16.00 m

DETAILED ESTIMATE (Kund constrution)

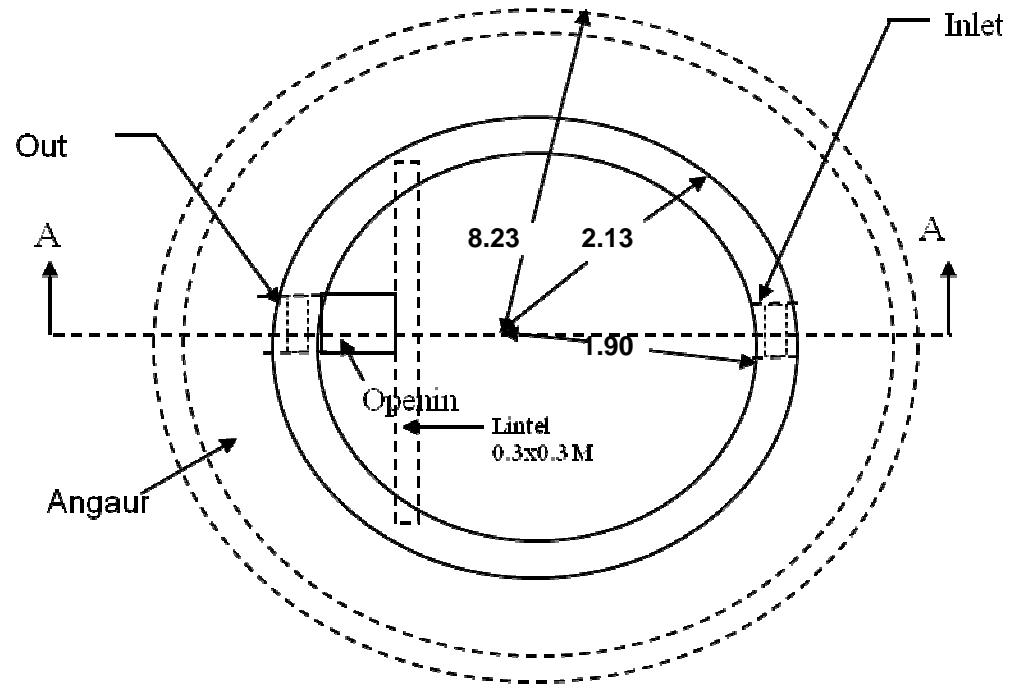
कार्य का नाम :-

Construction of Individual Kund (50,000 litre Capacity)

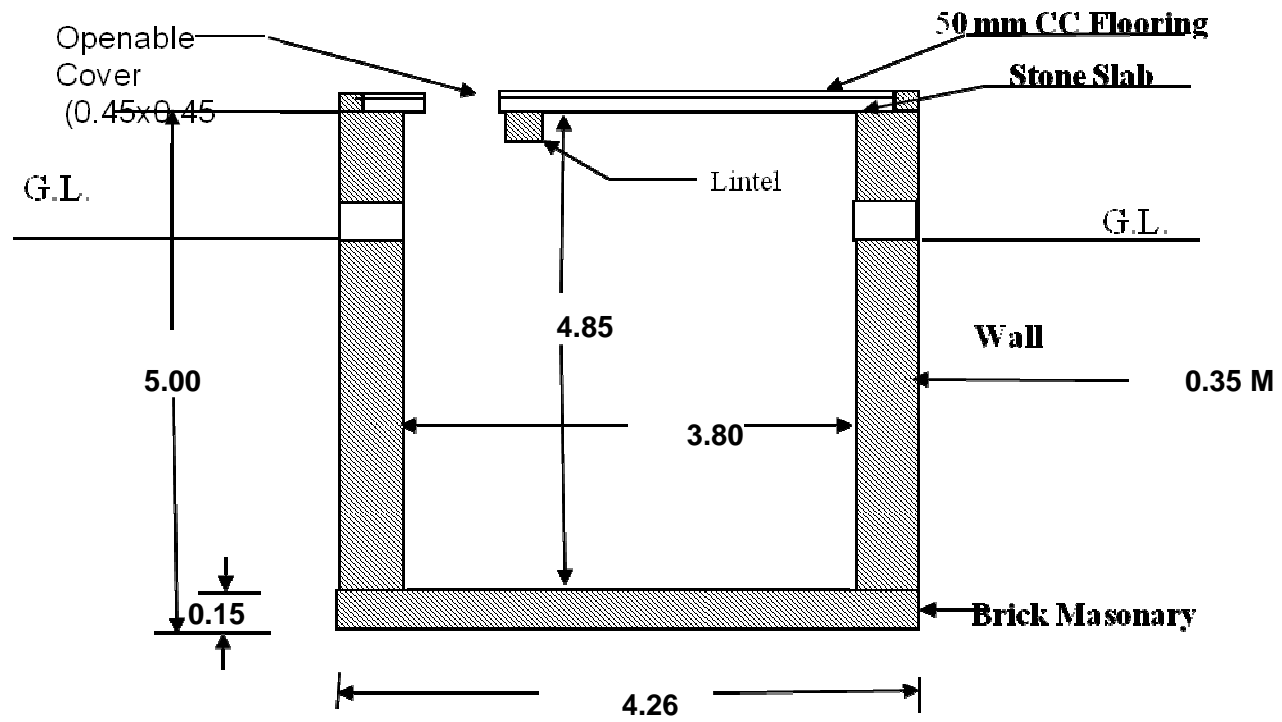
| क्र. सं. | विवरण | मात्रा | Rate Labour | Rate Total | Labour | Total |
|----------|--|------------------------------|--------------|------------|---------|----------|
| 1 | कुण्ड की खुदाई का कार्य | | | | | |
| a | खुदाई 0 मी. से 1.5 मी. तक $\pi/4$ | (4.26) ² * 1.50 | = 21.380 Cum | 71 /Cum | 71 /Cum | Rs. 1518 |
| b | खुदाई 1.5 मी. से 3.0 मी. तक $\pi/4$ | (4.26) ² * 1.50 | = 21.380 Cum | 82 /Cum | 82 /Cum | Rs. 1753 |
| c | खुदाई 3.0 मी. से 4.5 मी. तक | | | | | |

| | | | | | | | |
|----|---|---|--------------------|-------------|-------------|------------------|-------------------|
| 2. | $\pi/4$ | (4.26) ² * 1.50 | = 21.380 Cum | 93 /Cum | 93 /Cum | Rs. 1988 | Rs. 1988 |
| | ईंट की चिनाई का कार्य 1:6 | | | | | | |
| | $\pi/4$ | (4.26) ² * 0.15 | = 2.138 Cum | | | | |
| | $\pi/4$ | (4.26) ² * 3.80) * 4.85 | = 14.123 Cum | | | | |
| | $\pi/4$ | (16.46) ² * 16.00) * 0.83 | = 9.734 Cum | | | | |
| | $\pi/4$ | (16.46) ² * 16.00) * 0.07 | = 0.821 Cum | | | | |
| | | | <u>26.815</u> Cum | 366.00 /Cum | 2354.0 /Cum | Rs. 9814 | Rs. 63123 |
| 3 | लिटल लगाने का कार्य | | | | | | |
| | 4 | * 3.35 * 0.30 | = 4.020 Sqm | 162 /Sqm | 548 /Sqm | Rs. 651 | Rs. 2203 |
| 4 | कुण्ड पर पट्टी लगाने का पूर्ण कार्य | | | | | | |
| | $\pi/4$ | (3.80) ² * .45*.45 | = 11.139 Sqm | 370.00 /Sqm | 1191 /Sqm | Rs. 4121 | Rs. 13266 |
| 5 | पायतन पर ईंट कंक्रीट बिछाने का कार्य mud mortar | | | | | | |
| | $\pi/4$ | (16.00) ² * 4.26) ² * 0.10 | = 18.681 Cum | 236.00 /Cum | 445 /Cum | Rs. 4409 | Rs. 8313 |
| 6 | प्लास्टर का कार्य 1:6 अनुपात में 20mm | | | | | | |
| | $\pi/4$ | (3.80) ² | = 11.341 Sqm | | | | |
| | π | * 3.80 * 4.85 | = 57.870 Sqm | | | | |
| | π | * 4.26 * 0.50 | = 6.688 Sqm | | | | |
| | | | <u>75.900</u> Sqm | 43 /Sqm | 93 /Sqm | Rs. 3264 | Rs. 7059 |
| 7 | प्लास्टर का कार्य 1:6 अनुपात में 12mm | | | | | | |
| | $\pi/4$ | (16.00) ² * 4.26) ² | = 186.809 Sqm | | | | |
| | π | * 16.00 * 0.07 | = 3.517 Sqm | | | | |
| | π | * 16.23 * 0.23 | = 11.721 Sqm | | | | |
| | π | * 16.46 * 0.75 | = 38.763 Sqm | | | | |
| | | | <u>240.810</u> Sqm | 43 /Sqm | 74 /Sqm | Rs. 10355 | Rs. 17820 |
| 8 | किवाड़ व जाली लगाने का कार्य | | | | | | |
| | योग | | | | | Rs. 37874 | Rs. 117544 |
| | Add 3% for contingencies charges | | | | | Rs. 3526 | |
| | Grand Total | | | | | Rs. 37874 | Rs. 121070 |
| | लागत श्रम मद में | | | 0.379 | लाख | | |
| | लागत सामग्री मद में | | | 0.832 | लाख | | |
| | कुल योग | | | 1.211 | लाख | | |

ड्राईंग कुण्ड निर्माण



PLAN



SECTION ON 'A-A'

3. Technical Design of Kund/Farm Pond/Taanka of 75,000 litre Capacity

Volume of Kund should be 75.00 Cumec for 75,000 litre capacity

$$\text{Volume} = \pi/4 * (\text{Dia.})^2 * \text{depth}$$

Assuming Diameter of Kund = 4.50 m

$$\text{Then Depth should be} = 75 / \pi/4(4.50)^2$$

$$\text{Therefore Depth} = 4.71 \text{ m} \approx 4.75 \text{ m}$$

Catchment area of Kund should be for 75,000 litre

$$\text{Volume of Water} = \text{Catchment area} * \text{Average Rainfall}$$

Average rainfall of the project area is 340 mm

$$\text{Therefore Catchment area} = 75/0.34 * 0.80$$

$$\text{Catchment area} = 275.74 \text{ Sqm}$$

$$(\text{Dia of Catchment area})^2 = 275.74 / \pi/4$$

$$(\text{Dia of Catchment area})^2 = 351.08$$

$$\text{Dia of Catchment area} = 18.73 \text{ m} \approx 19.00 \text{ m}$$

DETAILED ESTIMATE (Kund construction)

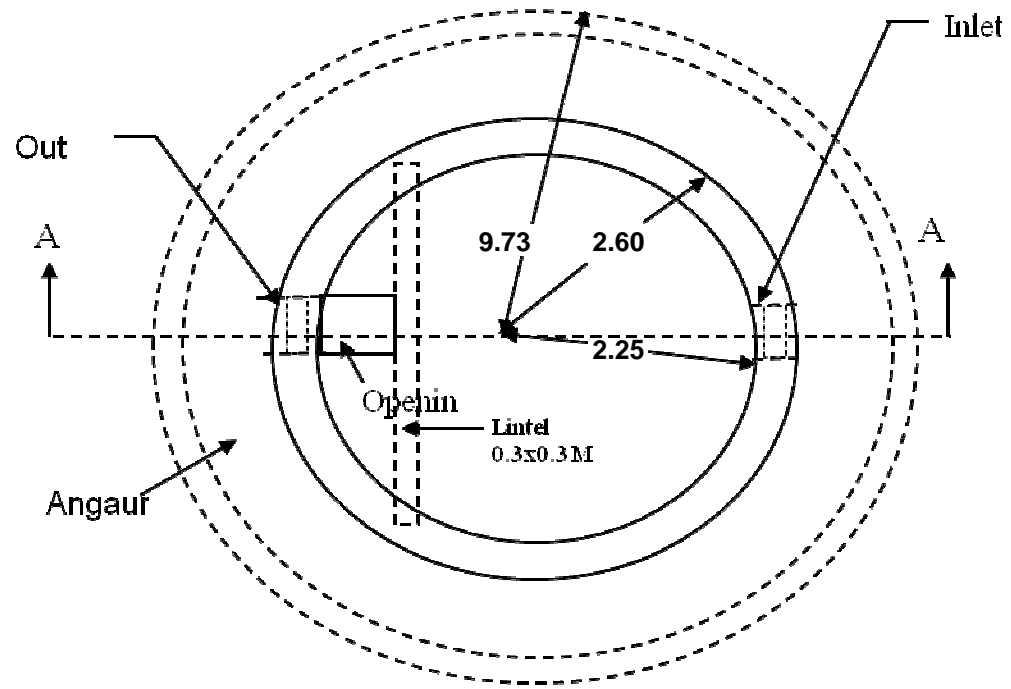
कार्य का नाम :-

Construction of Individual Kund (75,000 litre Capacity)

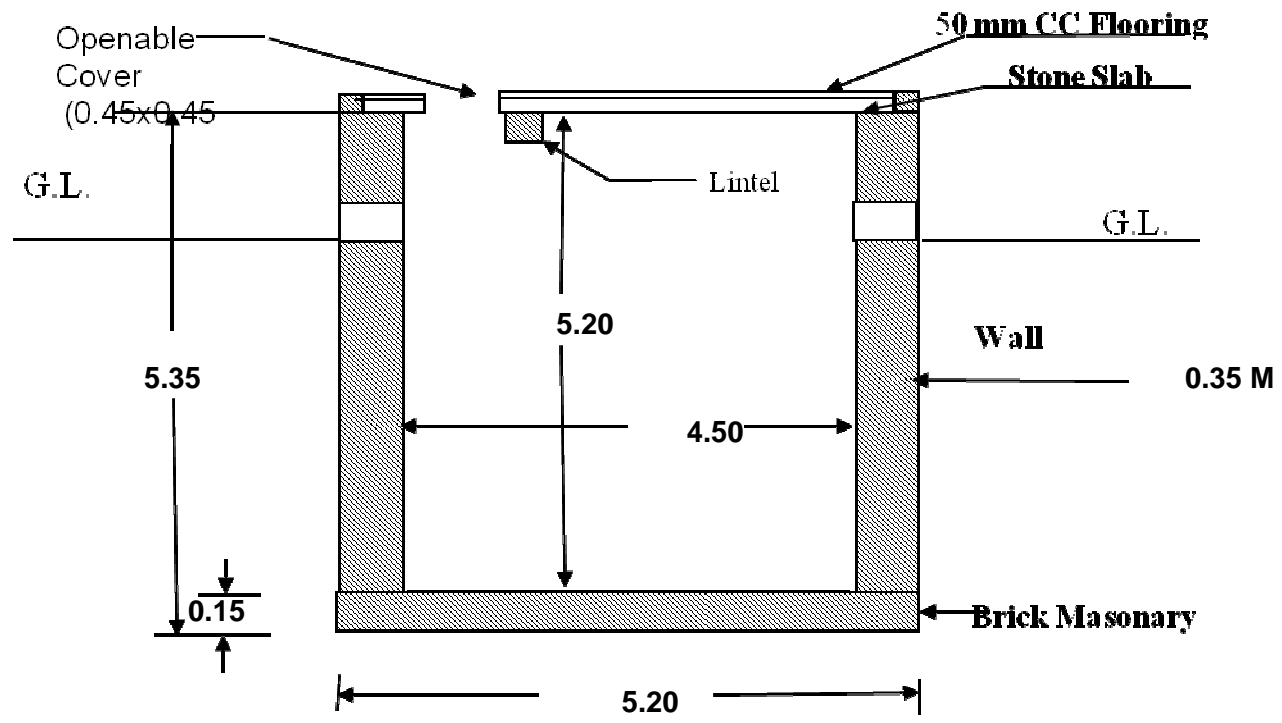
| क्र. सं. | विवरण | मात्रा | Rate Labour | Rate Total | Labour | Total |
|----------|---|--------------|-------------|------------|----------|----------|
| 1 | कुण्ड की खुदाई का कार्य | | | | | |
| a | खुदाई 0 मी. से 1.5 मी. तक $\pi/4$ (5.20) ² * 1.50 | = 31.856 Cum | 71 /Cum | 71 /Cum | Rs. 2262 | Rs. 2262 |
| b | खुदाई 1.5 मी. से 3.0 मी. तक $\pi/4$ (5.20) ² * 1.50 | = 31.856 Cum | 82 /Cum | 82 /Cum | Rs. 2612 | Rs. 2612 |
| c | खुदाई 3.0 मी. से 4.5 मी. तक $\pi/4$ (5.2) ² * 1.50 | = 31.856 Cum | 93 /Cum | 93 /Cum | Rs. 2963 | Rs. 2963 |
| d | खुदाई 4.5 मी. से 6.00 मी. तक $\pi/4$ (5.2) ² * 0.25 | 5.309 Cum | 104 /Cum | 104 /Cum | Rs. 552 | Rs. 552 |

| | | | | | | | | | |
|----------------------------------|--|---|--------------------|--------------|-------------|------------------|-------------------|--|--|
| 2. | ईट की चिनाई का कार्य 1:6 | | | | | | | | |
| | $\pi/4$ | (5.20) ² * 0.15 | = 3.186 Cum | | | | | | |
| | $\pi/4$ | (5.20) ² * 4.50) * 5.20 | = 27.731 Cum | | | | | | |
| | $\pi/4$ | (19.46) ² * 19.00) * 0.83 | = 11.533 Cum | | | | | | |
| | $\pi/4$ | (19.46) ² * 19.00) * 0.07 | = 0.973 Cum | | | | | | |
| | | | <u>43.422 Cum</u> | 366.00 /Cum | 2354.0 /Cum | Rs. 15892 | Rs. 102215 | | |
| 3 | लिटल लगाने का कार्य (R.C.C. Lintel) | | | | | | Rs. 10000 | | |
| 4 | कुण्ड पर पट्टी लगाने का पूर्ण कार्य | | | | | | | | |
| | $\pi/4$ | (4.50) ² * .45*.45 | = 15.702 Sqm | 370.00 /Sqm | 1191 /Sqm | Rs. 5810 | Rs. 18701 | | |
| 5 | पायतन पर ईट कंक्रीट बिछाने का कार्य mud mortar | | | | | | | | |
| | $\pi/4$ | (19.00) ² * 5.20) * 0.10 | = 26.229 Cum | 236.00 /Cum | 445 /Cum | Rs. 6190 | Rs. 11672 | | |
| 6 | प्लास्टर का कार्य 1:6 अनुपात में 20mm | | | | | | | | |
| | $\pi/4$ | (4.50) ² | = 15.904 Sqm | | | | | | |
| | π | * 4.50 * 5.20 | = 73.476 Sqm | | | | | | |
| | π | * 5.20 * 0.50 | = 8.164 Sqm | | | | | | |
| | | | <u>97.544 Sqm</u> | 43 /Sqm | 93 /Sqm | Rs. 4194 | Rs. 9072 | | |
| 7 | प्लास्टर का कार्य 1:6 अनुपात में 12mm | | | | | | | | |
| | $\pi/4$ | (19.00) ² * 5.20) | = 262.292 Sqm | | | | | | |
| | π | * 19.00 * 0.07 | = 4.176 Sqm | | | | | | |
| | π | * 19.23 * 0.23 | = 13.888 Sqm | | | | | | |
| | π | * 19.46 * 0.75 | = 45.828 Sqm | | | | | | |
| | | | <u>326.184 Sqm</u> | 43 /Sqm | 74 /Sqm | Rs. 14026 | Rs. 24138 | | |
| 8 | किवाड़ व जाली लगाने का कार्य | | | | | ≈ | 500 | | |
| योग | | | | | | Rs. 54501 | Rs. 184686 | | |
| Add 3% for contingencies charges | | | | | | | Rs. 5541 | | |
| Grand Total | | | | | | Rs. 54501 | Rs. 190226 | | |
| लागत श्रम मद में | | | | 0.545 | लाख | | | | |
| लागत सामग्री मद में | | | | 1.357 | लाख | | | | |
| कुल योग | | | | 1.902 | लाख | | | | |

ड्राईंग कुण्ड निर्माण



PLAN



SECTION ON 'A-A'

4. Technical Design of Kund/Farm Pond/Taanka of 1,00,000 litre Capacity

Volume of Kund should be 100.00 Cumec for 1,00,000 litre capacity

$$\text{Volume} = \pi/4 * (\text{Dia.})^2 * \text{depth}$$

Assuming Diameter of Kund = 4.50 m

$$\text{Than Depth should be} = 100 / \pi/4(4.50)^2$$

Therefore Depth = 6.29 m \approx 6.30 m

Catchment area of Kund should be for 1,00,000 litre

$$\text{Volume of Water} = \text{Catchment area} * \text{Average Rainfall}$$

Average rainfall of the project area is 340 mm

$$\text{Therefore Catchment area} = 100/0.34 * 0.80$$

Catchment area = 367.65 Sqm

$$(\text{Dia of Catchment area})^2 = 367.65 / \pi/4$$

$$(\text{Dia of Catchment area})^2 = 468.10$$

Dia of Catchment area = 21.63 m \approx 22.00 m

DETAILED ESTIMATE (Kund constrution)

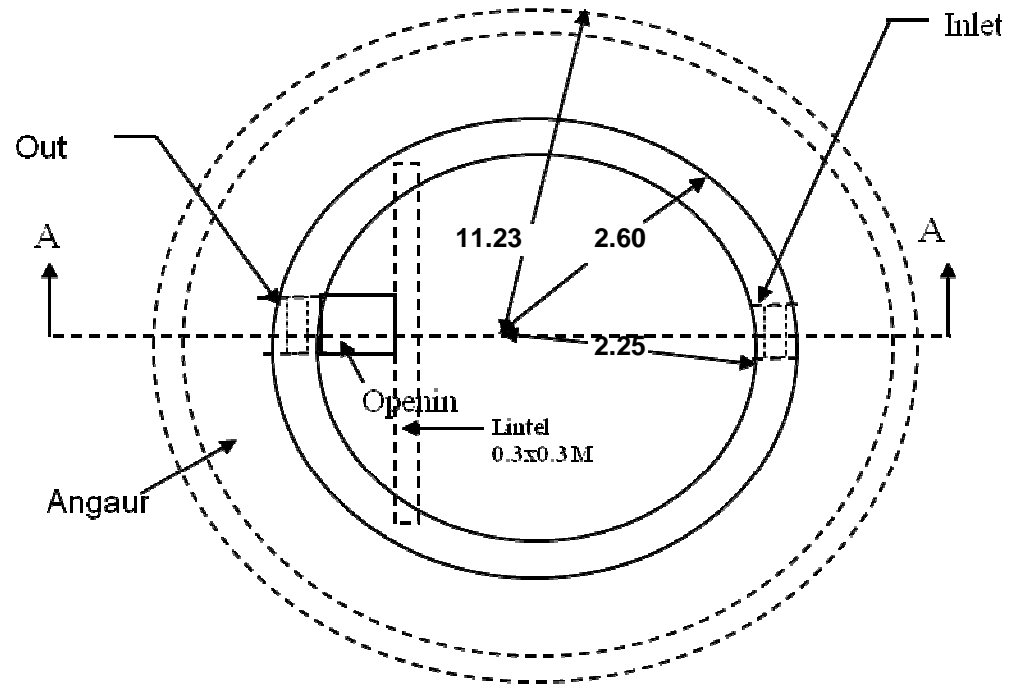
कार्य का नाम :-

Construction of Individual Kund (1,00,000 litre Capacity)

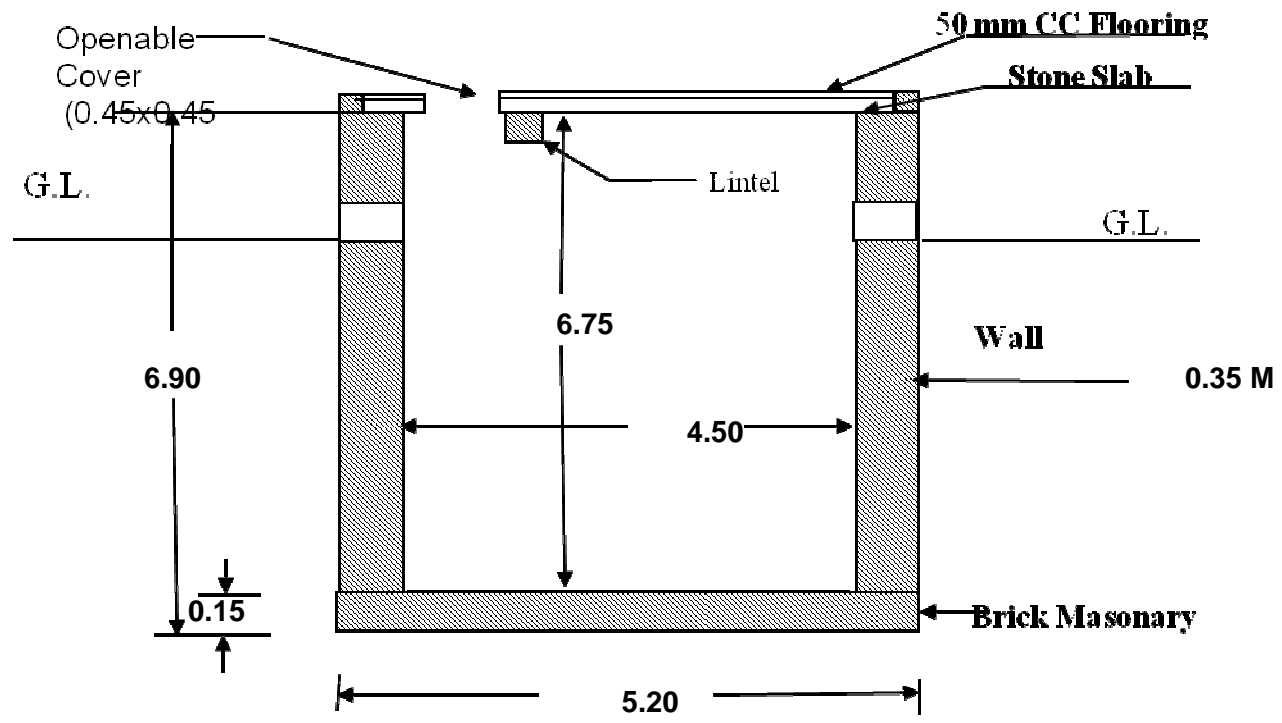
| क्र. सं. | विवरण | मात्रा | Rate Labour | Rate Total | Labour | Total |
|----------|--|------------------------------|--------------|------------|---------|-------------------|
| 1 | कुण्ड की खुदाई का कार्य | | | | | |
| a | खुदाई 0 मी. से 1.5 मी. तक $\pi/4$ | (5.20) ² * 1.50 | = 31.856 Cum | 71 /Cum | 71 /Cum | Rs. 2262 Rs. 2262 |
| b | खुदाई 1.5 मी. से 3.0 मी. तक $\pi/4$ | (5.20) ² * 1.50 | = 31.856 Cum | 82 /Cum | 82 /Cum | Rs. 2612 Rs. 2612 |
| c | खुदाई 3.0 मी. से 4.5 मी. तक | | | | | |

| | | | | | | | |
|----------------------------------|--|--------------------------------|---------------|--------------|-------------|------------------|-------------------|
| d | $\pi/4$ | $(5.2)^2 * 1.50$ | = 31.856 Cum | 93 /Cum | 93 /Cum | Rs. 2963 | Rs. 2963 |
| | खुदाई 4.5 मी. से 6.00 मी. तक | | | | | | |
| | $\pi/4$ | $(5.2)^2 * 1.50$ | 31.856 Cum | 104 /Cum | 104 /Cum | Rs. 3313 | Rs. 3313 |
| 2. | ईंट की चिनाई का कार्य 1:6 | | | | | | |
| | $\pi/4$ | $(5.20)^2 * 0.15$ | = 3.186 Cum | | | | |
| | $\pi/4$ | $(5.20)^2 * 4.50) * 6.75$ | = 35.997 Cum | | | | |
| | $\pi/4$ | $(22.46)^2 * 22.00) * 0.93$ | = 14.938 Cum | | | | |
| | $\pi/4$ | $(22.46)^2 * 22.00) * 0.07$ | = 1.124 Cum | | | | |
| | | | 55.245 Cum | 366.00 /Cum | 2354.0 /Cum | Rs. 20220 | Rs. 130047 |
| 3 | लिटल लगाने का कार्य (R.C.C. Lintel) | | | | | | Rs. 10000 |
| 4 | कुण्ड पर पट्टी लगाने का पूर्ण कार्य | | | | | | |
| | $\pi/4$ | $(4.50)^2 * .45 * .45$ | = 15.702 Sqm | 370.00 /Sqm | 1191 /Sqm | Rs. 5810 | Rs. 18701 |
| 5 | पायतन पर ईंट कंकरीट बिछाने का कार्य mud mortar | | | | | | |
| | $\pi/4$ | $(22.00)^2 * 5.20) * 0.10$ | 35.890 Cum | 236.00 /Cum | 445 /Cum | Rs. 8470 | Rs. 15971 |
| 6 | प्लास्टर का कार्य 1:6 अनुपात में 20mm | | | | | | |
| | $\pi/4$ | $(4.50)^2$ | = 15.904 Sqm | | | | |
| | π | $* 4.50 * 6.75$ | = 95.378 Sqm | | | | |
| | π | $* 5.20 * 0.50$ | = 8.164 Sqm | | | | |
| | | | 119.446 Sqm | 43 /Sqm | 93 /Sqm | Rs. 5136 | Rs. 11108 |
| 7 | प्लास्टर का कार्य 1:6 अनुपात में 12mm | | | | | | |
| | $\pi/4$ | $(22.00)^2 * 5.20)$ | = 358.895 Sqm | | | | |
| | π | $* 22.00 * 0.07$ | = 4.836 Sqm | | | | |
| | π | $* 22.23 * 0.23$ | = 16.055 Sqm | | | | |
| | π | $* 22.46 * 0.85$ | = 59.946 Sqm | | | | |
| | | | 439.731 Sqm | 43 /Sqm | 74 /Sqm | Rs. 18908 | Rs. 32540 |
| 8 | किवाड़ व जाली लगाने का कार्य | | | | ≈ | | 500 |
| योग | | | | | | Rs. 69693 | Rs. 230016 |
| Add 3% for contingencies charges | | | | | | | Rs. 6900 |
| Grand Total | | | | | | Rs. 69693 | Rs. 236917 |
| लागत श्रम मद में | | | | 0.697 | लाख | | |
| लागत सामग्री मद में | | | | 1.672 | लाख | | |
| कुल योग | | | | 2.369 | लाख | | |

ड्राईंग कुण्ड निर्माण



PLAN



SECTION ON 'A-A'

DETAILED ESTIMATE

कार्य का नाम :-

Construction of Pacca Johar (Pacca Talaab)

Capacity - 15.92 Lakhs litre

| क्र.सं. | विशेष विवरण | | | | | मात्रा | इकाई | दर | | राशि | |
|---------|--|---------|---------------|-------|-------|---------|-------|--------|---------|----------|-----------|
| | | सं. | ल. | चौ. | ऊं/ग. | | | श्रम | कुल | श्रम | कुल |
| 1 | नींव,खाई तथा नाला आदि के लिए 1.5 मीटर गहराई तक मिट्टी की खुदाई करना, तल को कूटना, पानी डालना, बगल को संवारना, खुदी मिट्टी को बाहर निकालना, नींव भरने के बाद खाली स्थानों को पुनः मिट्टी से भरना तथा बची हुई मिट्टी को 50 मीटर की दूरी तक निस्तारण करना । | | | | | | | | | | |
| | Ist | $\pi/4$ | 30.94 | 30.94 | 1.5 | 1127.20 | | | | | |
| | Ghat | 0.5 | 10 | 3.7 | 1.5 | 27.75 | | | | | |
| | Stair | 1 | 3 | 2.44 | 1.5 | 10.98 | | | | | |
| | योग | | | | | 1165.93 | घ.मी. | 82.00 | 82.00 | 95606.38 | 95606.38 |
| 2 |do..... | | 1.5m to 3.00m | | | | | | | | |
| | Ist | $\pi/4$ | 30.94 | 30.94 | 0.1 | 75.15 | | | | | |
| | Ist | $\pi/4$ | 20.7 | 20.7 | 1.00 | 336.36 | | | | | |
| | IIIst | $\pi/4$ | 10.7 | 10.7 | 0.40 | 35.95 | | | | | |
| | योग | | | | | 447.46 | घ.मी. | 93.00 | 93.00 | 41613.90 | 41613.90 |
| 3 |do..... | | 3.0m to 4.50m | | | | | | | | |
| | IIIst | $\pi/4$ | 10.7 | 10.7 | 0.60 | 53.92 | | | | | |
| | योग | | | | | 53.92 | घ.मी. | 104.00 | 104.00 | 5608.18 | 5608.18 |
| 4 | सीमेंट कांक्रीट 1सीमेंट, 3बजरी तथा 6गिट्टी पत्थर की 20 मि.मी. नामीय माप की नींव में डालना । | | | | | | | | | | |
| | Bottom | $\pi/4$ | 30.94 | 30.94 | 0.10 | 75.15 | | | | | |
| | Ghat | 1 | 10.00 | 3.70 | 0.10 | 3.70 | | | | | |
| | Stair | 2 | 3.00 | 2.44 | 0.10 | 1.46 | | | | | |
| | योग | | | | | 80.31 | घ.मी. | 322.60 | 2368.00 | 25908.25 | 190175.89 |

| | | | | | | | | | | | |
|---|--|---------|-------|-------|------|---------|-------|------------------------------|-----------|-----------|-----------|
| 5 | प्रथम श्रेणी ईटो की सीमेंट बजरी 1:6 के अनुपात मसाले में चिनाई मय बगल की झिरी बन्द करने तथा तराई समेत पूर्ण कार्य | | | | | | | | | | |
| | Ist | π | 30.47 | 0.47 | 1.50 | 67.49 | | | | | |
| | Iind | π | 20.35 | 0.35 | 1.00 | 22.38 | | | | | |
| | IIIrd | π | 10.35 | 0.35 | 1.00 | 11.38 | | | | | |
| | Ghat | 1 | 10.00 | 0.35 | 1.50 | 5.25 | | | | | |
| | Stair | 2 | 3.00 | 0.47 | 1.50 | 4.23 | | | | | |
| | " | 1 | 1.50 | 0.30 | 0.15 | 0.07 | | | | | |
| | Pt. | 2 | 10.00 | 0.35 | 0.75 | 5.25 | | | | | |
| | Pt. | π | 30.35 | 0.35 | 0.75 | 25.03 | | | | | |
| | | | | | योग | 141.07 | घ.मी. | 366.00 | 2354.00 | 51631.08 | 332075.33 |
| 6 | सीमेंट प्लास्टर दिवार पर 1:6 अनुपात में सीमेंट बजरी मिलाकर जोड़ो को कुरेदना तथा तराई करना । 20 मि.मी. मोटा | | | | | | | | | | |
| | Bottom | $\pi/4$ | 30.00 | 30.00 | | 706.50 | | | | | |
| | Ist | π | 30.00 | 1.50 | | 141.37 | | | | | |
| | IInd | π | 20.00 | 1.00 | | 62.83 | | | | | |
| | IIIrd | π | 10.00 | 1.00 | | 31.42 | | | | | |
| | Pt. | π | 30.35 | 1.85 | | 176.39 | | | | | |
| | Ghat | 1 | 10.00 | 3.00 | | 30.00 | | | | | |
| | " | 1 | 10.00 | 1.50 | | 15.00 | | | | | |
| | Pt. | 2 | 10.00 | 1.85 | | 37.00 | | | | | |
| | Stair | 2 | 3.00 | 1.50 | | 9.00 | | | | | |
| | " | 2 | 1.50 | 1.50 | | 4.50 | | | | | |
| | | | | | योग | 1214.01 | व.मी. | 43.00 | 93.00 | 52202.56 | 112903.21 |
| 7 | फोटोग्राफी व नाम लिखवाने का कार्य | | | | | | | | | | 500.00 |
| | | | | | | | | योग | 272570.35 | 778482.88 | |
| | | | | | | | | Add 3% Contingencies charges | | 23354.49 | |
| | | | | | | | | Grand Total | | 801837.37 | |
| | लागत श्रम मद में | | | | | | | | 2.73 | लाख | |
| | लागत सामग्री मद में | | | | | | | | 5.29 | लाख | |
| | कुल योग | | | | | | | | 8.02 | लाख | |

DETAILED ESTIMATE

कार्य का नाम :-

Construction of Pacca Johar (Pacca Talaab)

Capacity - 34.57 Lakhs litre

| क्र. सं. | विशेष विवरण | | | | | मात्रा | इकाई | दर | | राशि | |
|----------|--|---------|-------|-------|------|---------|-------|--------|---------|-----------|-----------|
| | सं. | ल. | चौ. | ऊं/ग. | श्रम | | | कुल | श्रम | कुल | |
| 1 | नींव,खाई तथा नाला आदि के लिए 1.5 मीटर गहराई तक मिट्टी की खुदाई करना, तल को कूटना, पानी डालना, बगल को संवारना, खुदी मिट्टी को बाहर निकालना, नींव भरने के बाद खाली स्थानों को पुनः मिट्टी से भरना तथा बची हुई मिट्टी को 50 मीटर की दूरी तक निस्तारण करना । | | | | | | | | | | |
| | Ist | $\pi/4$ | 45.94 | 45.94 | 1.5 | 2485.09 | | | | | |
| | Ghat | 0.5 | 10 | 3.7 | 1.5 | 27.75 | | | | | |
| | Stair | 1 | 3 | 2.44 | 1.5 | 10.98 | | | | | |
| | योग | | | | | 2523.82 | घ.मी. | 82.00 | 82.00 | 206953.60 | 206953.60 |
| 2 |do..... 1.5m to 3.00m | | | | | | | | | | |
| | Ist | $\pi/4$ | 45.94 | 45.94 | 0.1 | 165.67 | | | | | |
| | Ist | $\pi/4$ | 30.7 | 30.7 | 1.00 | 739.85 | | | | | |
| | IIIst | $\pi/4$ | 15.7 | 15.7 | 0.40 | 77.40 | | | | | |
| | योग | | | | | 982.93 | घ.मी. | 93.00 | 93.00 | 91412.07 | 91412.07 |
| 3 |do..... 3.0m to 4.50m | | | | | | | | | | |
| | IIIst | $\pi/4$ | 15.7 | 15.7 | 0.60 | 116.10 | | | | | |
| | योग | | | | | 116.10 | घ.मी. | 104.00 | 104.00 | 12074.07 | 12074.07 |
| 4 | सीमेंट कांक्रीट 1सीमेंट, 3बजरी तथा 6गिट्टी पत्थर की 20 मि.मी. नामीय माप की नींव में डालना। | | | | | | | | | | |
| | Bottom | $\pi/4$ | 45.94 | 45.94 | 0.10 | 165.67 | | | | | |
| | Ghat | 1 | 10.00 | 3.70 | 0.10 | 3.70 | | | | | |
| | Stair | 2 | 3.00 | 2.44 | 0.10 | 1.46 | | | | | |
| | योग | | | | | 170.84 | घ.मी. | 322.60 | 2368.00 | 55112.00 | 404541.93 |

| | | | | | | | | | | | |
|---|--|---------|-------|-------|------|---------|-------|------------------------------|-----------|------------|-----------|
| 5 | प्रथम श्रेणी ईटो की सीमेंट बजरी 1:6 के अनुपात मसाले में चिनाई मय बगल की झिरी बन्द करने तथा तराई समेत पूर्ण कार्य | | | | | | | | | | |
| | Ist | π | 45.47 | 0.47 | 1.50 | 100.71 | | | | | |
| | Iind | π | 30.35 | 0.35 | 1.00 | 33.37 | | | | | |
| | IIIrd | π | 15.35 | 0.35 | 1.00 | 16.88 | | | | | |
| | Ghat | 1 | 10.00 | 0.35 | 1.50 | 5.25 | | | | | |
| | Stair | 2 | 3.00 | 0.47 | 1.50 | 4.23 | | | | | |
| | " | 1 | 1.50 | 0.30 | 0.15 | 0.07 | | | | | |
| | Pt. | 2 | 10.00 | 0.35 | 0.75 | 5.25 | | | | | |
| | Pt. | π | 45.35 | 0.35 | 0.75 | 37.40 | | | | | |
| | | | | | योग | 203.15 | घ.मी. | 366.00 | 2354.00 | 74354.51 | 478225.47 |
| 6 | सीमेंट प्लास्टर दिवार पर 1:6 अनुपात में सीमेंट बजरी मिलाकर जोड़ो को कुरेदना तथा तराई करना । 20 मि.मी. मोटा | | | | | | | | | | |
| | Bottom | $\pi/4$ | 45.00 | 45.00 | | 1589.63 | | | | | |
| | Ist | π | 45.00 | 1.50 | | 212.06 | | | | | |
| | IInd | π | 30.00 | 1.00 | | 94.25 | | | | | |
| | IIIrd | π | 15.00 | 1.00 | | 47.12 | | | | | |
| | Pt. | π | 45.35 | 1.85 | | 263.57 | | | | | |
| | Ghat | 1 | 10.00 | 3.00 | | 30.00 | | | | | |
| | " | 1 | 10.00 | 1.50 | | 15.00 | | | | | |
| | Pt. | 2 | 10.00 | 1.85 | | 37.00 | | | | | |
| | Stair | 2 | 3.00 | 1.50 | | 9.00 | | | | | |
| | " | 2 | 1.50 | 1.50 | | 4.50 | | | | | |
| | | | | | योग | 2302.13 | व.मी. | 43.00 | 93.00 | 98991.48 | 214097.85 |
| 7 | फोटोग्राफी व नाम लिखवाने का कार्य | | | | | | | | | | 500.00 |
| | | | | | | | | योग | 538897.73 | 1407804.98 | |
| | | | | | | | | Add 3% Contingencies charges | | 42234.15 | |
| | | | | | | | | Grand Total | | 1450039.13 | |
| | लागत श्रम मद में | | | | | | | | 5.39 | लाख | |
| | लागत सामग्री मद में | | | | | | | | 9.11 | लाख | |
| | कुल योग | | | | | | | | 14.50 | लाख | |

DETAILED ESTIMATE

कार्य का नाम :-

Construction of Pacca Johar (Pacca Talaab)

Capacity - 60.48 Lakhs litre

| क्र. सं. | विशेष विवरण | | | | | मात्रा | इकाई | दर | | राशि | |
|----------|--|---------|-------|-------|------|---------|-------|--------|---------|-----------|-----------|
| | सं. | ल. | चौ. | ऊं/ग. | श्रम | | | कुल | श्रम | कुल | |
| 1 | नींव,खाई तथा नाला आदि के लिए 1.5 मीटर गहराई तक मिट्टी की खुदाई करना, तल को कूटना, पानी डालना, बगल को संवारना, खुदी मिट्टी को बाहर निकालना, नींव भरने के बाद खाली स्थानों को पुनः मिट्टी से भरना तथा बची हुई मिट्टी को 50 मीटर की दूरी तक निस्तारण करना । | | | | | | | | | | |
| | Ist | $\pi/4$ | 60.94 | 60.94 | 1.5 | 4372.86 | | | | | |
| | Ghat | 0.5 | 10 | 3.7 | 1.5 | 27.75 | | | | | |
| | Stair | 1 | 3 | 2.44 | 1.5 | 10.98 | | | | | |
| | योग | | | | | 4411.59 | घ.मी. | 82.00 | 82.00 | 361750.58 | 361750.58 |
| 2 |do..... 1.5m to 3.00m | | | | | | | | | | |
| | Ist | $\pi/4$ | 60.94 | 60.94 | 0.1 | 291.52 | | | | | |
| | Ist | $\pi/4$ | 40.7 | 40.7 | 1.00 | 1300.34 | | | | | |
| | IIIst | $\pi/4$ | 20.7 | 20.7 | 0.40 | 134.55 | | | | | |
| | योग | | | | | 1726.41 | घ.मी. | 93.00 | 93.00 | 160556.56 | 160556.56 |
| 3 |do..... 3.0m to 4.50m | | | | | | | | | | |
| | IIIst | $\pi/4$ | 20.7 | 20.7 | 0.60 | 201.82 | | | | | |
| | योग | | | | | 201.82 | घ.मी. | 104.00 | 104.00 | 20989.15 | 20989.15 |
| 4 | सीमेंट कांक्रीट 1सीमेंट, 3बजरी तथा 6गिट्टी पत्थर की 20 मि.मी. नामीय माप की नींव में डालना। | | | | | | | | | | |
| | Bottom | $\pi/4$ | 60.94 | 60.94 | 0.10 | 291.52 | | | | | |
| | Ghat | 1 | 10.00 | 3.70 | 0.10 | 3.70 | | | | | |
| | Stair | 2 | 3.00 | 2.44 | 0.10 | 1.46 | | | | | |
| | योग | | | | | 296.69 | घ.मी. | 322.60 | 2368.00 | 95711.60 | 702557.57 |

| | | | | | | | | | | | |
|---|--|---------|-------|-------|------|---------|-------|------------------------------|--------------|------------|-----------|
| 5 | प्रथम श्रेणी ईटो की सीमेंट बजरी 1:6 के अनुपात मसाले में चिनाई मय बगल की झिरी बन्द करने तथा तराई समेत पूर्ण कार्य | | | | | | | | | | |
| | Ist | π | 60.47 | 0.47 | 1.50 | 133.93 | | | | | |
| | IInd | π | 40.35 | 0.35 | 1.00 | 44.37 | | | | | |
| | IIIRD | π | 20.35 | 0.35 | 1.00 | 22.38 | | | | | |
| | Ghat | 1 | 10.00 | 0.35 | 1.50 | 5.25 | | | | | |
| | Stair | 2 | 3.00 | 0.47 | 1.50 | 4.23 | | | | | |
| | " | 1 | 1.50 | 0.30 | 0.15 | 0.07 | | | | | |
| | Pt. | 2 | 10.00 | 0.35 | 0.75 | 5.25 | | | | | |
| | Pt. | π | 60.35 | 0.35 | 0.75 | 49.77 | | | | | |
| | | | | | योग | 265.24 | घ.मी. | 366.00 | 2354.00 | 97077.94 | 624375.61 |
| 6 | सीमेंट प्लास्टर दिवार पर 1:6 अनुपात में सीमेंट बजरी मिलाकर जोड़ो को कुरेदना तथा तराई करना । 20 मि.मी. मोटा | | | | | | | | | | |
| | Bottom | $\pi/4$ | 60.00 | 60.00 | | 2826.00 | | | | | |
| | Ist | π | 60.00 | 1.50 | | 282.74 | | | | | |
| | IInd | π | 40.00 | 1.00 | | 125.66 | | | | | |
| | IIIRD | π | 20.00 | 1.00 | | 62.83 | | | | | |
| | Pt. | π | 60.35 | 1.85 | | 350.75 | | | | | |
| | Ghat | 1 | 10.00 | 3.00 | | 30.00 | | | | | |
| | " | 1 | 10.00 | 1.50 | | 15.00 | | | | | |
| | Pt. | 2 | 10.00 | 1.85 | | 37.00 | | | | | |
| | Stair | 2 | 3.00 | 1.50 | | 9.00 | | | | | |
| | " | 2 | 1.50 | 1.50 | | 4.50 | | | | | |
| | | | | | योग | 3743.49 | व.मी. | 43.00 | 93.00 | 160970.15 | 348144.74 |
| 7 | फोटोग्राफी व नाम लिखवाने का कार्य | | | | | | | | | | 500.00 |
| | | | | | | | | योग | 897055.99 | 2218874.21 | |
| | | | | | | | | Add 3% Contingencies charges | | 66566.23 | |
| | | | | | | | | Grand Total | | 2285440.44 | |
| | लागत श्रम मद में | | | | | | | | 8.97 | लाख | |
| | लागत सामग्री मद में | | | | | | | | 13.88 | लाख | |
| | कुल योग | | | | | | | | 22.85 | लाख | |

Technical Design of Water Harvesting Structure with diversion drain of 200 m length

Considering Length of Road =200 m

Width of Road with berms = 5 m

Average Rainfall = 340 mm

Therefore Runoff = 200 * 5.00 * 0.34 *0.8 = 272.00 Cum = 2.72 Lakhs litre

therefore there should be a WHS at both side of the Road with minimum 1.36 Lakhs litre Capacity

DETAILED ESTIMATE

कार्य का नाम :-

Construction of Water Harvesting Structure

Capacity - 2.01 Lakhs litre

| क्र. सं. | विशेष विवरण | | | | | मात्रा | इकाई | दर | | राशि | |
|----------|--|---------|------|-------|--------|--------|--------|--------|----------|----------|--|
| | सं. | ल. | चौ. | ऊं/ग. | श्रम | | | कुल | श्रम | कुल | |
| 1 | नींव,खाई तथा नाला आदि के लिए 1.5 मीटर गहराई तक मिट्टी की खुदाई करना, तल को कूटना, पानी डालना, बगल को संवारना, खुदी मिट्टी को बाहर निकालना, नींव भरने के बाद खाली स्थानों को पुनः मिट्टी से भरना तथा बची हुई मिट्टी को 50 मीटर की दूरी तक निस्तारण करना । | | | | | | | | | | |
| | Nala | 1 | 225 | 1 | 0.75 | 168.75 | | | | | |
| | Ist | $\pi/4$ | 9.94 | 9.94 | 1.5 | 116.34 | | | | | |
| | Ghat | 0.5 | 10 | 3.7 | 1.5 | 27.75 | | | | | |
| | Stair | 1 | 3 | 2.44 | 1.5 | 10.98 | | | | | |
| | | | | योग | 323.82 | घ.मी. | 82.00 | 82.00 | 26553.34 | 26553.34 | |
| 2 |do..... 1.5m to 3.00m | | | | | | | | | | |
| | Ist | $\pi/4$ | 9.94 | 9.94 | 0.1 | 7.76 | | | | | |
| | Ist | $\pi/4$ | 6.7 | 6.7 | 1.00 | 35.24 | | | | | |
| | IIIst | $\pi/4$ | 3.7 | 3.7 | 0.40 | 4.30 | | | | | |
| | | | | योग | 47.29 | घ.मी. | 93.00 | 93.00 | 4398.29 | 4398.29 | |
| 3 |do..... 3.0m to 4.50m | | | | | | | | | | |
| | IIIst | $\pi/4$ | 3.7 | 3.7 | 0.60 | 6.45 | | | | | |
| | | | | योग | 6.45 | घ.मी. | 104.00 | 104.00 | 670.59 | 670.59 | |
| 4 | सीमेंट कांक्रीट 1सीमेंट, 3बजरी तथा 6गिट्टी पत्थर की 20 मि. मी. नामीय माप की नींव में डालना। | | | | | | | | | | |

| | | | | | | | | | | | |
|---|--|---------|--------|------|------|--------|-------|--------|---------|----------|-----------|
| | Bottom | $\pi/4$ | 9.94 | 9.94 | 0.10 | 7.76 | | | | | |
| | Ghat | 1 | 10.00 | 3.70 | 0.10 | 3.70 | | | | | |
| | Stair | 2 | 3.00 | 2.44 | 0.10 | 1.46 | | | | | |
| | | | | | योग | 12.92 | घ.मी. | 322.60 | 2368.00 | 4168.02 | 30594.76 |
| 5 | प्रथम श्रेणी ईटो की सीमेंट बजरी 1:6 के अनुपात मसाले में चिनाई मय बगल की झिरी बन्द करने तथा तराई समेत पूर्ण कार्य । | | | | | | | | | | |
| | Nala | 1 | 225.00 | 0.91 | 0.07 | 14.33 | | | | | |
| | Nala | 2 | 225.00 | 0.23 | 0.60 | 62.10 | | | | | |
| | Ist | π | 9.47 | 0.47 | 1.50 | 20.97 | | | | | |
| | Iind | π | 6.35 | 0.35 | 1.00 | 6.98 | | | | | |
| | IIIrd | π | 3.35 | 0.35 | 1.00 | 3.68 | | | | | |
| | Ghat | 1 | 10.00 | 0.35 | 1.50 | 5.25 | | | | | |
| | Stair | 2 | 3.00 | 0.47 | 1.50 | 4.23 | | | | | |
| | " | 1 | 1.50 | 0.30 | 0.15 | 0.07 | | | | | |
| | Pt. | 2 | 10.00 | 0.35 | 0.75 | 5.25 | | | | | |
| | Pt. | π | 9.35 | 0.35 | 0.75 | 7.71 | | | | | |
| | | | | | योग | 130.58 | घ.मी. | 366.00 | 2354.00 | 47792.58 | 307387.24 |
| 6 | सीमेंट प्लास्टर दिवार पर 1:6 अनुपात में सीमेंट बजरी मिलाकर जोड़ो को कुरेदना तथा तराई करना । 20 मि.मी. मोटा | | | | | | | | | | |
| | Nala | 1 | 225.00 | 0.45 | | 101.25 | | | | | |
| | Nala | 2 | 225.00 | 0.60 | | 270.00 | | | | | |
| | Bottom | $\pi/4$ | 9.00 | 9.00 | | 63.59 | | | | | |
| | Ist | π | 9.00 | 1.50 | | 42.41 | | | | | |
| | IInd | π | 6.00 | 1.00 | | 18.85 | | | | | |
| | IIIrd | π | 3.00 | 1.00 | | 9.42 | | | | | |
| | Pt. | π | 9.35 | 1.85 | | 54.34 | | | | | |
| | Ghat | 1 | 10.00 | 3.00 | | 30.00 | | | | | |
| | " | 1 | 10.00 | 1.50 | | 15.00 | | | | | |
| | Pt. | 2 | 10.00 | 1.85 | | 37.00 | | | | | |
| | Stair | 2 | 3.00 | 1.50 | | 9.00 | | | | | |
| | " | 2 | 1.50 | 1.50 | | 4.50 | | | | | |
| | | | | | योग | 655.36 | व.मी. | 43.00 | 93.00 | 28180.60 | 60948.74 |

| | | | | | | |
|---|-----------------------------------|--|------------------------------|-----|-------------|------------------|
| 7 | फोटोग्राफी व नाम लिखवाने का कार्य | | | | | 500.00 |
| | | | | योग | 111763.42 | 431052.96 |
| | | | Add 3% Contingencies charges | | | 12931.59 |
| | | | Grand Total | | | 443984.55 |
| | For 2 Stucture | | | | | |
| | लागत श्रम मद में | | | | 2.24 | लाख |
| | लागत सामग्री मद में | | | | 6.64 | लाख |
| | कुल योग | | | | 8.88 | लाख |

Technical Design of Water Harvesting Structure with diversion drain of 400 m

Considering Length of Road =400 m

Width of Road with berms = 5 m

Average Rainfall = 340 mm

Therefore Runoff = 400 * 5.00 * 0.34 * 0.80 = 544.00 Cum = 5.44 Lakhs litre

therefore there should be a WHS at both side of the Road with minimum 2.72 Lakhs litre Capacity

DETAILED ESTIMATE

कार्य का नाम :- **Construction of Water Harvesting Structure**

Capacity - 3.13 Lakhs litre

| क्र. सं. | विशेष विवरण | | | | मात्रा | इकाई | दर | | राशि | |
|----------|--|---------|-------|-------|--------|--------|--------|--------|----------|----------|
| | सं. | ल. | चौ. | ऊं/ग. | | | श्रम | कुल | श्रम | कुल |
| 1 | नींव,खाई तथा नाला आदि के लिए 1.5 मीटर गहराई तक मिट्टी की खुदाई करना, तल को कूटना, पानी डालना, बगल को संवारना, खुदी मिट्टी को बाहर निकालना, नींव भरने के बाद खाली स्थानों को पुनः मिट्टी से भरना तथा बची हुई मिट्टी को 50 मीटर की दूरी तक निस्तारण करना । | | | | | | | | | |
| | Nala | 1 | 425 | 1 | 0.75 | 318.75 | | | | |
| | Ist | $\pi/4$ | 12.94 | 12.94 | 1.5 | 197.16 | | | | |
| | Ghat | 0.5 | 10 | 3.7 | 1.5 | 27.75 | | | | |
| | Stair | 1 | 3 | 2.44 | 1.5 | 10.98 | | | | |
| | | | | योग | 554.64 | घ.मी. | 82.00 | 82.00 | 45480.88 | 45480.88 |
| 2 |do..... 1.5m to 3.00m | | | | | | | | | |
| | Ist | $\pi/4$ | 12.94 | 12.94 | 0.1 | 13.14 | | | | |
| | Ist | $\pi/4$ | 8.7 | 8.7 | 1.00 | 59.42 | | | | |
| | IIIst | $\pi/4$ | 4.7 | 4.7 | 0.40 | 6.94 | | | | |
| | | | | योग | 79.50 | घ.मी. | 93.00 | 93.00 | 7393.24 | 7393.24 |
| 3 |do..... 3.0m to 4.50m | | | | | | | | | |
| | IIIst | $\pi/4$ | 4.7 | 4.7 | 0.60 | 10.40 | | | | |
| | | | | योग | 10.40 | घ.मी. | 104.00 | 104.00 | 1082.06 | 1082.06 |
| 4 | सीमेंट कांक्रीट 1सीमेंट, 3बजरी तथा 6गिट्टी पत्थर की 20 मि.मी. नामीय माप की नींव में डालना । | | | | | | | | | |

| | | | | | | | | | | | |
|---|--|---------|--------|-------|------|---------|-------|--------|---------|----------|-----------|
| | Bottom | $\pi/4$ | 12.94 | 12.94 | 0.10 | 13.14 | | | | | |
| | Ghat | 1 | 10.00 | 3.70 | 0.10 | 3.70 | | | | | |
| | Stair | 2 | 3.00 | 2.44 | 0.10 | 1.46 | | | | | |
| | | | | | योग | 18.31 | घ.मी. | 322.60 | 2368.00 | 5906.26 | 43354.11 |
| 5 | प्रथम श्रेणी ईटो की सीमेंट बजरी 1:6 के अनुपात मसाले में चिनाई मय बगल की झिरी बन्द करने तथा तराई समेत पूर्ण कार्य । | | | | | | | | | | |
| | Nala | 1 | 425.00 | 0.91 | 0.07 | 27.07 | | | | | |
| | Nala | 2 | 425.00 | 0.23 | 0.60 | 117.30 | | | | | |
| | Ist | π | 12.47 | 0.47 | 1.50 | 27.62 | | | | | |
| | Iind | π | 8.35 | 0.35 | 1.00 | 9.18 | | | | | |
| | IIIrd | π | 4.35 | 0.35 | 1.00 | 4.78 | | | | | |
| | Ghat | 1 | 10.00 | 0.35 | 1.50 | 5.25 | | | | | |
| | Stair | 2 | 3.00 | 0.47 | 1.50 | 4.23 | | | | | |
| | " | 1 | 1.50 | 0.30 | 0.15 | 0.07 | | | | | |
| | Pt. | 2 | 10.00 | 0.35 | 0.75 | 5.25 | | | | | |
| | Pt. | π | 12.35 | 0.35 | 0.75 | 10.18 | | | | | |
| | | | | | योग | 210.94 | घ.मी. | 366.00 | 2354.00 | 77203.30 | 496548.03 |
| 6 | सीमेंट प्लास्टर दिवार पर 1:6 अनुपात में सीमेंट बजरी मिलाकर जोड़ो को कुरेदना तथा तराई करना । 20 मि.मी. मोटा | | | | | | | | | | |
| | Nala | 1 | 425.00 | 0.45 | | 191.25 | | | | | |
| | Nala | 2 | 425.00 | 0.60 | | 510.00 | | | | | |
| | Bottom | $\pi/4$ | 12.00 | 12.00 | | 113.04 | | | | | |
| | Ist | π | 12.00 | 1.50 | | 56.55 | | | | | |
| | IInd | π | 8.00 | 1.00 | | 25.13 | | | | | |
| | IIIrd | π | 4.00 | 1.00 | | 12.57 | | | | | |
| | Pt. | π | 12.35 | 1.85 | | 71.78 | | | | | |
| | Ghat | 1 | 10.00 | 3.00 | | 30.00 | | | | | |
| | " | 1 | 10.00 | 1.50 | | 15.00 | | | | | |
| | Pt. | 2 | 10.00 | 1.85 | | 37.00 | | | | | |
| | Stair | 2 | 3.00 | 1.50 | | 9.00 | | | | | |
| | " | 2 | 1.50 | 1.50 | | 4.50 | | | | | |
| | | | | | योग | 1075.82 | व.मी. | 43.00 | 93.00 | 46260.08 | 100050.86 |

| | | | | | | |
|---|-----------------------------------|--|--|------------------------------|--------------|------------------|
| 7 | फोटोग्राफी व नाम लिखवाने का कार्य | | | | | 500.00 |
| | | | | योग | 183325.82 | 694409.18 |
| | | | | Add 3% Contingencies charges | | 20832.28 |
| | | | | Grand Total | | 715241.45 |
| | For 2 Stucture | | | | | |
| | लागत श्रम मद में | | | | 3.67 | लाख |
| | लागत सामग्री मद में | | | | 10.64 | लाख |
| | कुल योग | | | | 14.30 | लाख |

Technical Design of Water Harvesting Structure with diversion drain of 600 m

Considering Length of Road =600 m

Width of Road with berms = 5 m

Average Rainfall = 340 mm

Therefore Runoff = 600 * 5.00 * 0.34 * 0.80 =816.00 Cum = 8.16 Lakhs litre

therefore there should be a WHS at both side of the Road with minimum 4.08 Lakhs litre Capacity

DETAILED ESTIMATE

कार्य का नाम :- **Construction of Water Harvesting Structure**

Capacity - 4.53 Lakhs litre

| क्र. सं. | विशेष विवरण | | | | मात्रा | इकाई | दर | | राशि | |
|----------|--|---------|-------|-------|--------|--------|--------|--------|----------|----------|
| | सं. | ल. | चौ. | ऊं/ग. | | | श्रम | कुल | श्रम | कुल |
| 1 | नींव,खाई तथा नाला आदि के लिए 1.5 मीटर गहराई तक मिट्टी की खुदाई करना, तल को कूटना, पानी डालना, बगल को संवारना, खुदी मिट्टी को बाहर निकालना, नींव भरने के बाद खाली स्थानों को पुनः मिट्टी से भरना तथा बची हुई मिट्टी को 50 मीटर की दूरी तक निस्तारण करना । | | | | | | | | | |
| | Nala | 1 | 625 | 1 | 0.75 | 468.75 | | | | |
| | Ist | $\pi/4$ | 15.94 | 15.94 | 1.5 | 299.18 | | | | |
| | Ghat | 0.5 | 10 | 3.7 | 1.5 | 27.75 | | | | |
| | Stair | 1 | 3 | 2.44 | 1.5 | 10.98 | | | | |
| | | | | योग | 806.66 | घ.मी. | 82.00 | 82.00 | 66146.40 | 66146.40 |
| 2 |do..... 1.5m to 3.00m | | | | | | | | | |
| | Ist | $\pi/4$ | 15.94 | 15.94 | 0.1 | 19.95 | | | | |
| | Ist | $\pi/4$ | 10.7 | 10.7 | 1.00 | 89.87 | | | | |
| | IIIst | $\pi/4$ | 5.7 | 5.7 | 0.40 | 10.20 | | | | |
| | | | | योग | 120.02 | घ.मी. | 93.00 | 93.00 | 11162.05 | 11162.05 |
| 3 |do..... 3.0m to 4.50m | | | | | | | | | |
| | IIIst | $\pi/4$ | 5.7 | 5.7 | 0.60 | 15.30 | | | | |
| | | | | योग | 15.30 | घ.मी. | 104.00 | 104.00 | 1591.49 | 1591.49 |
| 4 | सीमेंट कांक्रीट 1सीमेंट, 3बजरी तथा 6गिट्टी पत्थर की 20 मि.मी. नामीय माप की नींव में डालना । | | | | | | | | | |

| | | | | | | | | | | | | |
|---|--|---------|--------|-------|------|---------|-------|--------|---------|-----------|-----------|--|
| | Bottom | $\pi/4$ | 15.94 | 15.94 | 0.10 | 19.95 | | | | | | |
| | Ghat | 1 | 10.00 | 3.70 | 0.10 | 3.70 | | | | | | |
| | Stair | 2 | 3.00 | 2.44 | 0.10 | 1.46 | | | | | | |
| | | | | | योग | 25.11 | घ.मी. | 322.60 | 2368.00 | 8100.34 | 59459.44 | |
| 5 | प्रथम श्रेणी ईटो की सीमेंट बजरी 1:6 के अनुपात मसाले में चिनाई मय बगल की झिरी बन्द करने तथा तराई समेत पूर्ण कार्य । | | | | | | | | | | | |
| | Nala | 1 | 625.00 | 0.91 | 0.07 | 39.81 | | | | | | |
| | Nala | 2 | 625.00 | 0.23 | 0.60 | 172.50 | | | | | | |
| | Ist | π | 15.47 | 0.47 | 1.50 | 34.26 | | | | | | |
| | Iind | π | 10.35 | 0.35 | 1.00 | 11.38 | | | | | | |
| | IIIrd | π | 5.35 | 0.35 | 1.00 | 5.88 | | | | | | |
| | Ghat | 1 | 10.00 | 0.35 | 1.50 | 5.25 | | | | | | |
| | Stair | 2 | 3.00 | 0.47 | 1.50 | 4.23 | | | | | | |
| | " | 1 | 1.50 | 0.30 | 0.15 | 0.07 | | | | | | |
| | Pt. | 2 | 10.00 | 0.35 | 0.75 | 5.25 | | | | | | |
| | Pt. | π | 15.35 | 0.35 | 0.75 | 12.66 | | | | | | |
| | | | | | योग | 291.30 | घ.मी. | 366.00 | 2354.00 | 106614.03 | 685708.82 | |
| 6 | सीमेंट प्लास्टर दिवार पर 1:6 अनुपात में सीमेंट बजरी मिलाकर जोड़ो को कुरेदना तथा तराई करना । 20 मि.मी. मोटा | | | | | | | | | | | |
| | Nala | 1 | 625.00 | 0.45 | | 281.25 | | | | | | |
| | Nala | 2 | 625.00 | 0.60 | | 750.00 | | | | | | |
| | Bottom | $\pi/4$ | 15.00 | 15.00 | | 176.63 | | | | | | |
| | Ist | π | 15.00 | 1.50 | | 70.69 | | | | | | |
| | IInd | π | 10.00 | 1.00 | | 31.42 | | | | | | |
| | IIIrd | π | 5.00 | 1.00 | | 15.71 | | | | | | |
| | Pt. | π | 15.35 | 1.85 | | 89.21 | | | | | | |
| | Ghat | 1 | 10.00 | 3.00 | | 30.00 | | | | | | |
| | " | 1 | 10.00 | 1.50 | | 15.00 | | | | | | |
| | Pt. | 2 | 10.00 | 1.85 | | 37.00 | | | | | | |
| | Stair | 2 | 3.00 | 1.50 | | 9.00 | | | | | | |
| | " | 2 | 1.50 | 1.50 | | 4.50 | | | | | | |
| | | | | | योग | 1510.40 | व.मी. | 43.00 | 93.00 | 64947.14 | 140467.07 | |

| | | | | | | |
|---|-----------------------------------|--|--|------------------------------|--------------|------------------|
| 7 | फोटोग्राफी व नाम लिखवाने का कार्य | | | | | 500.00 |
| | | | | योग | 258561.46 | 965035.28 |
| | | | | Add 3% Contingencies charges | | 28951.06 |
| | | | | Grand Total | | 993986.34 |
| | For 2 Stucture | | | | | |
| | लागत श्रम मद में | | | | 5.17 | लाख |
| | लागत सामग्री मद में | | | | 14.71 | लाख |
| | कुल योग | | | | 19.88 | लाख |

CHAPTER – V

Activity Wise Total Abstract of Cost

Chapter V Proposed Development Plan for Bhuwadi Project

| S. No. | Activities | Unit | Total | | |
|--|---|------------|-----------|----------|-----------------|
| | | | Unit Cost | Phy. | Fin. |
| 1 | Admn. | – | – | – | 75.0000 |
| 2 | Monitoring | – | – | – | 7.5000 |
| 3 | Evaluation | – | – | – | 7.5000 |
| (A) Preparatory phase | | | | | |
| 1 | EPA | No. | – | 3 | 30.0000 |
| 2 | I & CB | – | – | – | 37.5000 |
| 3 | DPR | – | – | – | 7.5000 |
| Total (A) | | – | – | – | 75.0000 |
| (B) Natural resource management | | | | | |
| Conservation measures for arable land | | | | | |
| 1 | Tanka/Farm Pond (30000 litre Capacity) | No. | 1.000 | 257 | 256.7000 |
| 2 | Water Harvesting Structure with diversion drain (2.01 Lakhs litre Capacity) | No. | 4.440 | 4 | 17.7600 |
| 3 | Water Harvesting Structure with diversion drain (3.13 Lakhs litre Capacity) | No. | 7.150 | 4 | 28.6000 |
| 4 | Water Harvesting Structure with diversion drain(4.53 Lakhs litre Capacity) | No. | 9.940 | 4 | 39.7600 |
| Conservation measures for non arable land | | | | | |
| 1 | Tanka (50000 litre Capacity) | No. | 1.210 | 3 | 3.6300 |
| 2 | Tanka (75000 litre Capacity) | No. | 1.900 | 3 | 5.7000 |
| 3 | Tanka (100000 litre Capacity) | No. | 2.370 | 3 | 7.1100 |
| 4 | Pacca Johar (Water Harvesting Structure) (15.92 lakhs litre Capacity) | No. | 8.020 | 2 | 16.0400 |
| 5 | Pacca Johar (Water Harvesting Structure) (34.57 lakhs litre Capacity) | No. | 14.500 | 2 | 29.0000 |
| 6 | Pacca Johar (Water Harvesting Structure) (60.48 lakhs litre Capacity) | No. | 22.850 | 2 | 45.7000 |
| Total (B) | | | | | 450.0000 |
| (C) Production Measure | | | | | |
| Production measures for arable land | | | | | |
| 1 | Horticulture plantation | No. | | | 112.5000 |
| 2 | Agro-Forestry plantation | No. | | | |
| 3 | Crop Demonstration | No. | | | |
| 4 | Medicinal Plantation | Ha. | | | |
| 5 | Vegetable Plantation | Ha. | | | |
| Production measures for non arable land | | | | | |
| 1 | Afforestation & Pasture Development | | | | |
| (D) Live Stock development Activities | | | | | |

| | | | | | |
|---|--|-----|---|---|-----------------|
| 1 | Distribution of improved Bull & Bull calves for natural service | No. | | | |
| 2 | Distribution of improved Bucks & Rams | No. | | | |
| 3 | Animal Health Camps | No. | | | |
| 4 | Animal Health Care Activities (Vaccination & Deworming) | No. | | | |
| 5 | Castration | No. | | | |
| | (E) Livelihood activities, Production System and Micro Enterprise | | | | |
| | Activities | | | | |
| 1 | Backyard Poultry | No. | – | – | |
| 2 | Composting | No. | – | – | |
| 3 | Nursery Raising | No. | – | – | |
| 4 | Fodder Bank | No. | – | – | |
| 5 | Vermi composting | No. | – | – | |
| 6 | Handicraft-wool | No. | – | – | |
| 7 | Milk Collection Centre | No. | – | – | |
| 8 | Micro Enterprises | No. | – | – | |
| | Total (C D & E) | | | | 112.5000 |
| | (F) Consolidation Phase | | – | – | 22.5000 |
| | Total (F) | | | | 22.5000 |
| | Grand Total | | | | 750.0000 |

CHAPTER – VI

Annual Action Plan

Annual Action Plan of I Year

| S. No. | Activities | Unit | <i>EXPENDITURE (Rs. In Lakhs)</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------|------------------------------|------|-----------------------------------|-------------|------|-------------|------|-------------|------|-------------|----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--|--|
| | | | April | | May | | June | | July | | Aug | | Sep | | Oct | | Nov | | Dec | | Jan | | Feb | | March | | Total | | | |
| | | | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | | |
| 1 | Admn. | – | | | | | | | | | | 0.94 | | 0.94 | | 0.94 | | 0.94 | | 0.94 | | 0.94 | | 0.94 | | 0.94 | 0 | 7.50 | | |
| 2 | Monitoring | – | | | | | | | | | | 0.09 | | 0.09 | | 0.09 | | 0.09 | | 0.09 | | 0.09 | | 0.09 | | 0.09 | 0 | 0.75 | | |
| 3 | Evaluation | – | | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0.00 | | |
| | (A) Preparatory phase | | | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0.00 | | |
| 1 | EPA | No. | | | | | | | | | 1 | 3.75 | | 3.75 | 1 | 3.75 | | 3.75 | 1 | 3.75 | | 3.75 | | 3.75 | | 3.75 | 3 | 30.00 | | |
| 2 | I & CB | – | | | | | | | | | | 1.41 | | 1.41 | | 1.41 | | 1.41 | | 1.41 | | 1.41 | | 1.41 | | 1.41 | 0 | 11.25 | | |
| 3 | DPR | – | | | | | | | | | | 0.70 | | 0.70 | | 0.70 | | 0.70 | | 0.7 | | 0.7 | | 0.7 | | 0.7 | 0 | 5.63 | | |
| | Total (A) | – | | | | | | | | | 1 | 5.86 | 0.00 | 5.86 | 1.00 | 5.86 | 0.00 | 5.86 | 1.00 | 5.86 | 0.00 | 5.86 | 0.00 | 5.86 | 0.00 | 5.86 | 3.00 | 46.88 | | |
| | Grand Total | | | 0.00 | | 0.00 | | 0.00 | | 0.00 | | 6.89 | | 6.89 | | 6.89 | | 6.89 | 1.00 | 6.89 | 0.00 | 6.89 | 0.00 | 6.89 | 0.00 | 6.89 | 3.00 | 55.13 | | |

Annual Action Plan of II Year

| S. No. | Activities | Unit | <i>EXPENDITURE (Rs. In Lakhs)</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------|------------------------------|------|-----------------------------------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|-------------|-------------|----------|--------------|--|--|
| | | | April | | May | | June | | July | | Aug | | Sep | | Oct | | Nov | | Dec | | Jan | | Feb | | March | | Total | | | |
| | | | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | | |
| 1 | Admn. | – | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | 0 | 15.00 | | |
| 2 | Monitoring | – | | 0.13 | | 0.13 | | 0.13 | | 0.13 | | 0.13 | | 0.13 | | 0.13 | | 0.13 | | 0.13 | | 0.13 | | 0.13 | | 0.13 | 0 | 1.50 | | |
| 3 | Evaluation | – | | | | | | | | | | | | | | | | | | | | | | | | | 0 | 2.25 | | |
| | (A) Preparatory phase | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | EPA | No. | | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0.00 | | |
| 2 | I & CB | – | | 0.94 | | 0.94 | | 0.94 | | 0.94 | | 0.94 | | 0.94 | | 0.94 | | 0.94 | | 0.94 | | 0.94 | | 0.94 | | 0.94 | 0 | 11.25 | | |
| 3 | DPR | – | | 0.16 | | 0.16 | | 0.16 | | 0.16 | | 0.16 | | 0.16 | | 0.16 | | 0.16 | | 0.16 | | 0.16 | | 0.16 | | 0.16 | 0 | 1.88 | | |
| | Total (A) | – | | 1.09 | | 1.09 | | 1.09 | | 1.09 | | 1.09 | | 1.09 | | 1.09 | | 1.09 | | 1.09 | | 1.09 | | 1.09 | | 1.09 | | 13.13 | | |
| | Grand Total | | | 2.47 | | 2.47 | | 2.47 | | 2.47 | | 2.47 | | 2.47 | | 2.47 | | 2.47 | | 2.47 | | 2.47 | | 2.47 | 0.00 | 4.72 | | 31.88 | | |

Annual Action Plan of III Year

| S. No | Activities | Unit | EXPENDITURE (Rs. In Lakhs) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------|---|------|----------------------------|-------------|-----|-------------|------|-------------|------|-------------|-----|-------------|-----|-------------|-----|-------------|-----|-------------|-----|-------------|-----|-------------|-----|-------------|-------|-------------|-------|-------------|-----|-------------|------|--------|---|-------|
| | | | April | | May | | June | | July | | Aug | | Sep | | Oct | | Nov | | Dec | | Jan | | Feb | | March | | Total | | | | | | | |
| | | | Phy | Fin. | Phy | Fin. | Phy | Fin. | Phy | Fin. | Phy | Fin. | Phy | Fin. | Phy | Fin. | Phy | Fin. | Phy | Fin. | Phy | Fin. | Phy | Fin. | Phy | Fin. | Phy | Fin. | Phy | Fin. | | | | |
| 1 | Admn. | – | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | 0 | 15.00 |
| 2 | Monitoring | – | | 0.13 | | 0.13 | | 0.13 | | 0.13 | | 0.13 | | 0.13 | | 0.13 | | 0.13 | | 0.13 | | 0.13 | | 0.13 | | 0.13 | | 0.13 | | 0.13 | 0 | 1.50 | | |
| | (A) Preparatory phase | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | I & CB | – | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | 0 | 3.75 | | |
| | Total (A) | – | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | 0 | 3.75 | | |
| | (B) Natural resource management | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Conservation measures for arable land | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Tanka/Farm Pond (30000 litre Capacity) | No. | 20 | 20.00 | 20 | 20.00 | 20 | 20.00 | | | | | | | | | | | | | 20 | 20.00 | 20 | 20.00 | | | | | | | 100 | 100.00 | | |
| 2 | Road Top Water Harvesting Structure (2.01 Lakhs litre Capacity) | No. | 1 | 4.44 | 1 | 4.44 | | | | | | | | | | | | | | | 1 | 4.44 | 1 | 4.44 | | | | | | | 4 | 17.76 | | |
| | Conservation measures for non arable land | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Tanka (50000 litre Capacity) | No. | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.21 | | | 1 | 1.21 | | |
| 2 | Tanka (75000 litre Capacity) | No. | | | 1 | 1.9 | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.90 | | | |
| 3 | Tanka (100000 litre Capacity) | No. | | | | | | | | | | | | | | | | | | | 1 | 2.37 | | | | | | | | 1 | 2.37 | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|-----|-----------|-----------|-----------|------|------|------|------|------|------|------|------|------|-----------|-----------|-----------|------|--|--|--|--|--|---|--------|
| | Total (B) | | | | | | | | | | | | | | | | | | | | | | | | |
| | (C) Livelihood activities, Production System and Micro Enterprise | | | | | | | | | | | | | | | | | | | | | | | | |
| | Activities | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Backyard Poultry | No. | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Composting | No. | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Nursery Raising | No. | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Fodder Bank | No. | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Vermi composting | No. | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Handicraft- wool | No. | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | Milk Collection Centre | No. | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | Micro Enterprises | No. | | | | | | | | | | | | | | | | | | | | | | | |
| | Total | | 50.4 2 | 29.4 7 | 23.1 3 | 3.13 | 3.13 | 3.13 | 3.13 | 3.13 | 3.13 | 3.13 | 3.13 | 3.13 | 3.13 | 37.9 6 | 28.7 8 | 3.13 | | | | | | | 191.61 |
| | (D) Consolidatio n Phase | | | | | | | | | | | | | | | | | | | | | | | 0 | 0.00 |
| | Total (D) | | | | | | | | | | | | | | | | | | | | | | | 0 | 0.00 |
| | Grand Total | | 52.1 0 | 31.1 5 | 24.8 1 | 4.81 | 4.81 | 4.81 | 4.81 | 4.81 | 4.81 | 4.81 | 4.81 | 4.81 | 39.6 4 | 30.4 6 | 0.0 0 | 4.81 | | | | | | | 211.86 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|-----|--|--------------|--------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--|--|--|----------|-------------|----------|-------------|---------------|--|
| 2 | Distribution of improved Bucks & Rams | No. | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Animal Health Camps | No. | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Animal Health Care Activities (Vaccination & Deworming) | No. | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Castration | No. | | | | | | | | | | | | | | | | | | | | | | | | |
| Total (B) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (C) Livelihood activities, Production System and Micro Enterprise | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Activities | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Backyard Poultry | No. | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Composting | No. | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Nursery Raising | No. | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Fodder Bank | No. | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Vermi composting | No. | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Handicraft-wool | No. | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | Milk Collection Centre | No. | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | Micro Enterprises | No. | | | | | | | | | | | | | | | | | | | | | | | | |
| Total | | | | 38.30 | 32.18 | 23.13 | 3.13 | 3.13 | 3.13 | 3.13 | 3.13 | 3.13 | 3.13 | 3.13 | 31.49 | 32.65 | 17.63 | | | | 0 | 0.00 | | | | |
| (D) Consolidation Phase | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0.00 | |
| Total (D) | | | | | | | | | | | | | | | | | | | | | | | 0 | 0.00 | | |
| Grand Total | | | | 39.98 | 33.86 | 24.81 | 4.81 | 4.81 | 4.81 | 4.81 | 4.81 | 4.81 | 4.81 | 33.17 | 34.33 | 0.00 | 21.94 | | | | 0 | 0.00 | | | 216.98 | |

Annual Action Plan of V Year

| S. No. | Activities | Unit | <i>EXPENDITURE (Rs. In Lakhs)</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------|---|------|-----------------------------------|-------------|-----|-------------|------|-------------|------|-------------|-----|-------------|-----|-------------|-----|-------------|-----|-------------|-----|-------------|-----|-------------|-----|-------------|-------|-------------|-------|-------------|--|-------------|----|----------|-------------|
| | | | April | | May | | June | | July | | Aug | | Sep | | Oct | | Nov | | Dec | | Jan | | Feb | | March | | Total | | | | | | |
| | | | Phy | Fin. | Phy | Fin. | Phy | Fin. | Phy | Fin. | Phy | Fin. | Phy | Fin. | Phy | Fin. | Phy | Fin. | Phy | Fin. | Phy | Fin. | Phy | Fin. | Phy | Fin. | Phy | Fin. | | | | | |
| 1 | Admn. | - | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 0 | 15.00 |
| 2 | Monitoring | - | | 0.13 | | 0.13 | | 0.13 | | 0.13 | | 0.13 | | 0.13 | | 0.13 | | 0.13 | | 0.13 | | 0.13 | | 0.13 | | 0.13 | | 0.13 | | 0.13 | | 0 | 1.50 |
| | (A) Preparatory phase | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | I & CB | - | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0 | 3.75 |
| | Total (A) | - | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0 | 3.75 |
| | (B) Natural resource management | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Conservation measures for arable land | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Tanka/Farm Pond (30000 litre Capacity) | No. | 20 | 20.00 | 20 | 20.00 | | | | | | | | | | | | | | | 17 | 16.70 | | | | | | | | | 57 | 56.70 | |
| 2 | Water Harvesting Structure with diversion drain (4.53 Lakhs litre Capacity) | No. | 1 | 9.94 | 1 | 9.94 | | | | | | | | | | | | | | | 1 | 9.94 | 1 | 9.94 | | | | | | | 4 | 39.76 | |
| | Conservation measures for non arable land | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Tanka (50000 litre Capacity) | No. | 1 | 1.21 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.21 | |

| | Enterprise | | | | | | | | | | | | | | | | | | | | | | | |
|---|------------------------|-----|-------|-------|------|------|------|------|------|------|------|------|------|------|------|-------|--|-------|------|------|--|--|--|--------|
| | Activities | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Backyard Poultry | No. | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Composting | No. | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Nursery Raising | No. | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Fodder Bank | No. | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Vermi composting | No. | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Handicraft-wool | No. | | | | | | | | | | | | | | | | | | | | | | |
| 7 | Milk Collection Centre | No. | | | | | | | | | | | | | | | | | | | | | | |
| 8 | Micro Enterprises | No. | | | | | | | | | | | | | | | | | | | | | | |
| | Total | | 34.28 | 34.97 | 5.50 | 3.13 | 3.13 | 3.13 | 3.13 | 3.13 | 3.13 | 3.13 | 3.13 | 3.13 | 3.13 | 52.62 | | 27.57 | | 3.13 | | | | 176.79 |
| | Grand Total | | 35.96 | 36.65 | 7.18 | 4.81 | 4.81 | 4.81 | 4.81 | 4.81 | 4.81 | 4.81 | 4.81 | 4.81 | 4.81 | 54.30 | | 29.25 | 0.00 | 4.81 | | | | 197.04 |

Annual Action Plan of VI Year

| S. No. | Activities | Unit | <i>EXPENDITURE (Rs. In Lakhs)</i> | | | | | | | | | | | | | | | | | | | | | | | |
|--------|------------------------------------|------|-----------------------------------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|------|
| | | | April | | May | | June | | July | | Aug | | Sep | | Oct | | Nov | | Dec | | Jan | | Feb | | Mar | |
| | | | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. |
| 1 | Admn. | – | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | |
| 2 | Monitoring | – | | 0.03 | | 0.03 | | 0.03 | | 0.03 | | 0.03 | | 0.03 | | 0.03 | | 0.03 | | 0.03 | | 0.03 | | 0.03 | | |
| 3 | Evaluation | – | | | | | | | | | | | | | | | | | | | | | | | | |
| | (A) Preparatory phase | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | I & CB | – | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | |
| | Total (A) | – | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | |
| | (D) Consolidation Phase | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total (D) | | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | 1.25 | | |
| | Grand Total | | | 1.91 | | 1.91 | | 1.91 | | 1.91 | | 1.91 | | 1.91 | | 1.91 | | 1.91 | | 1.91 | | 1.91 | | 1.91 | | |

Annual Action Plan of VII Year

| S. No. | Activities | Unit | <i>EXPENDITURE (Rs. In Lakhs)</i> | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------|------------|------|-----------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|------|----------|------------|
| | | | April | | May | | June | | July | | Aug | | Sep | | Oct | | Nov | | Dec | | Jan | | Feb | | March | | Total | |
| | | | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. |
| 1 | Admn. | – | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | | 0.31 | 0 | 3.7 |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--------------------------------|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---|-------------|
| 2 | Monitoring | - | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0 | 0.3 |
| | (D) Consolidation Phase | | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | | 7.5 |
| | Total (D) | | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | | 7.5 |
| | Grand Total | | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | | 11.6 |

CHAPTER – VII

Project Outcomes

The watershed development works are implemented based on Agro-climatologically characteristics. However it will differ watershed to watershed but the following criteria and performance standards are spell out to evaluate the success of participatory watershed management.

- The level of understanding among farmers will increase towards the environmental degradation.
- The moisture retention will increase in the fields resulted in enhancement of agriculture production by 15 %
- Watershed farmers will get drinking water through out the year through rain water storage tanks
- Due to harvest of rain water in the storage pucca tankas the cultivation of horticulture plants and the plants which has medicinal value will be protected thereby survival of plants be increased by 40%
- The ground water column will increase to the extent of 1.2-1.5 m.
- Straightening and empowering of local community so as to manage the assets created after completion of the project
- Due to moisture retention in the fields the cultivable area will increase by 10 % and irrigated area by 15 %
- On the completion of project, about 2 % number of wells will increase.
- Farmers of the watershed will come forward for the replacement of seed rate by 15 % in every year
- The fodder production will increase by 10 to 15 %

- The employment opportunities at the village will increase resulted in reduction of migration significantly by 30 % and will generate 22000 to 25000 man days based on last years experiences in the clusters executed so far in every cluster in each year.
- Number of sustainable SHG and UG will be 2 to 4 per cluster
- The project will improve the breed of the livestock and animal health. With the result, more production of the milk, meet and access its marketing with ease. Rearing of animals i.e. rearing of goat and sheep will also improve their livelihood and ultimately human development.
- The village community themselves will be able to prepare farmers led program and to implement the various developmental activities in their villages per their need including the fund management and in assessing the problem more accurately in a participatory and sustainable manner.
- The project will provide the guideline for policy makers and implementing agencies especially in the fields of animal husbandry activities in the district areas and other similar conditions.
- The livestock owner will be able to increase the average yield of milk per day from 2.3 liter/day to 3 to 4 liters per day. The lactation period will be optimized in order to increase the milk production.
- By introduction of crossed breeding the production of meat and wool will increase by 40 to 50% i.e. meat from 2.36 to 3.5 tones and wool by 728 tones to 1300 tones.
- Per capita income of the watershed farmer will increase from Rs. 11113 to Rs. 15000 on completion of the project i.e. 30 to 40 %

CHAPTER – VIII

Year Wise Break Up

| S. No. | Activities | Unit | Unit Cost | I Year | | II Year | | III Year | | IV Year | | V Year | | VI Year | | VII Year | | Total | |
|--------|---|------|-----------|--------|-------|---------|-------|----------|--------|---------|--------|--------|-------|---------|------|----------|------|-------|--------|
| | | | | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. | Phy. | Fin. |
| 1 | Admn. | – | | – | 7.50 | – | 15.00 | – | 15.00 | – | 15.00 | – | 15.00 | – | 3.75 | – | 3.75 | – | 75.00 |
| 2 | Monitoring | – | | – | 0.75 | – | 1.50 | – | 1.50 | – | 1.50 | – | 1.50 | – | 0.38 | – | 0.38 | – | 7.50 |
| 3 | Evaluation | – | | – | 0.00 | – | 2.25 | – | 0.00 | – | 2.63 | – | 0.00 | – | 2.63 | – | 0.00 | – | 7.50 |
| | (A) Preparatory phase | | | | | | | | | | | | | | | | | | |
| 1 | EPA | No. | | 3 | 30.00 | – | 0.00 | – | 0.00 | – | 0.00 | – | 0.00 | – | 0.00 | – | 0.00 | 3 | 30.00 |
| 2 | I & CB | – | | – | 11.25 | – | 11.25 | – | 3.75 | – | 3.75 | – | 3.75 | – | 3.75 | – | 0.00 | – | 37.50 |
| 3 | DPR | – | | – | 5.63 | – | 1.88 | – | 0.00 | – | 0.00 | – | 0.00 | – | 0.00 | – | 0.00 | – | 7.50 |
| | Total (A) | – | | – | 46.88 | – | 13.13 | – | 3.75 | – | 3.75 | – | 3.75 | – | 3.75 | – | 0.00 | – | 75.00 |
| | (B) Natural resource management | | | | | | | | | | | | | | | | | | |
| | Conservation measures for arable land | | | | | | | | | | | | | | | | | | |
| 1 | Tanka/Farm Pond (30000 litre Capacity) | No. | 1.00 | – | – | – | – | 100 | 100.00 | 100 | 100.00 | 57 | 56.70 | – | – | – | – | 257 | 256.70 |
| 2 | Road Top Water Harvesting Structure (2.01 Lakhs litre Capacity) | No. | 4.44 | – | – | – | – | 4 | 17.76 | 0 | 0.00 | 0 | 0.00 | – | – | – | – | 4 | 17.76 |

| | | | | | | | | | | | | | | | | | | |
|---|--|-----|--|--------------|--|--------------|--|---------------|--|---------------|--|---------------|--|--------------|-------------|--------------|---------------|---------------|
| 2 | Distribution of improved Bucks & Rams | No. | | | | | | | | | | | | | | | | |
| 3 | Animal Health Camps | No. | | | | | | | | | | | | | | | | |
| 4 | Animal Health Care Activities (Vaccination & Deworming) | No. | | | | | | | | | | | | | | | | |
| 5 | Castration | No. | | | | | | | | | | | | | | | | |
| | Total (D) | | | | | | | | | | | | | | | | | |
| | (E) Livelihood activities, Production System and Micro Enterprise | | | | | | | | | | | | | | | | | |
| | Activities | | | | | | | | | | | | | | | | | |
| 1 | Backyard Poultry | No. | | | | | | | | | | | | | | | | |
| 2 | Composting | No. | | | | | | | | | | | | | | | | |
| 3 | Nursery Raising | No. | | | | | | | | | | | | | | | | |
| 4 | Fodder Bank | No. | | | | | | | | | | | | | | | | |
| 5 | Vermi composting | No. | | | | | | | | | | | | | | | | |
| 6 | Handicraft-wool | No. | | | | | | | | | | | | | | | | |
| 7 | Milk Collection Centre | No. | | | | | | | | | | | | | | | | |
| 8 | Micro Enterprises | No. | | | | | | | | | | | | | | | | |
| | Total (C, D & E) | | | 0.00 | | 0.00 | | 37.50 | | 37.50 | | 37.50 | | | 0.00 | | 112.50 | |
| | (F) Consolidation Phase | | | | | | | | | | | | | 15.00 | | 7.50 | | 22.50 |
| | Total (F) | | | | | | | | | | | | | 15.00 | | 7.50 | | 22.50 |
| | Grand Total | | | 55.13 | | 31.88 | | 211.86 | | 216.98 | | 197.04 | | 25.50 | | 11.63 | | 750.00 |