OFFICE OF THE ASSTT. ENGINEER (PIA) IWMP P.S LUNI,JODHPUR

DETAILED PROJECT REPORT OF IWMP, JODHPUR-28 (SATLANA)

2010-11

(UNDER INTEGRATED WATERSHED MANAGEMENT PROGRAMME)

BLOCK: LUNI DISTRICT : JODHPUR

AGRO CLIMATIC ZONE- II A

TOTAL GEOGRAPHICAL AREA – 5000 Ha.

TOTAL EFFECTIVE AREA-5000 Ha.

TOTAL COST- 750.00 Lac.

UNIT COST- 15,000/Ha.

SUBMITTED BY

PROJECT MANAGER

DISTRICT WATERSHED DEVELOPMENT UNIT

JODHPUR (RAJASTHAN)

PHOTOGRAPH OF P.R.A PROGRAMME
IWMP PROJECT : JODHPUR 28

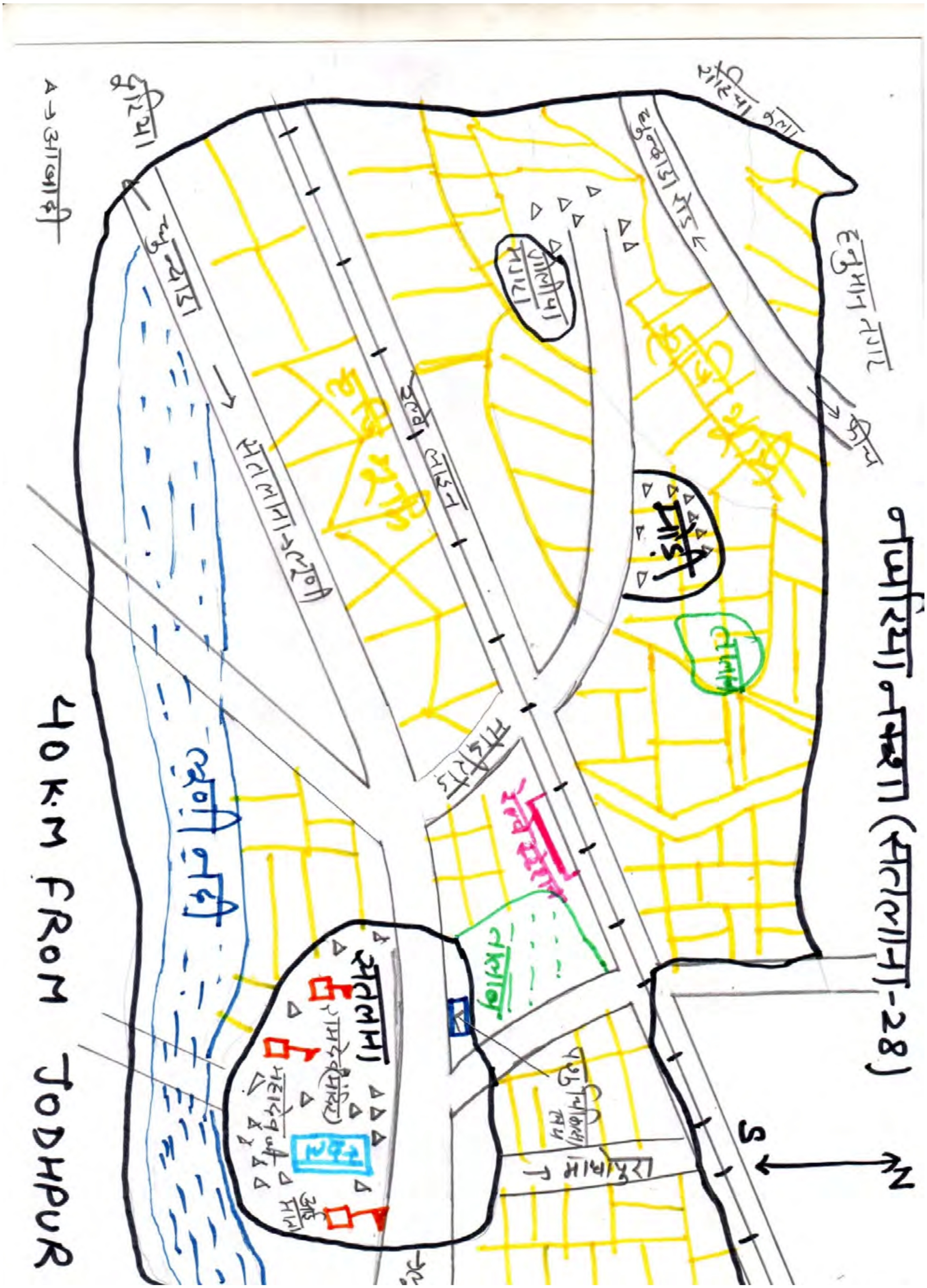
PHOTOGRAPH OF P.R.A PROGRAMME
IWMP PROJECT : JODHPUR 28

PHOTOGRAPH OF PUBLIC TANKA UNDER E.P.A ACTIVITY
IWMP PROJECT : JODHPUR 28

PHOTOGRAPH OF PUBLIC TANKA UNDER E.P.A ACTIVITY
IWMP PROJECT : JODHPUR 28

PHOTOGRPH OF SOLAR LIGHTS
UNDER E.P.A ACTIVITY

IWMP PROJECT : 28



40 K.M FROM JODHPUR
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N
सतलाना
लूणी नदी
तालाब

CHAPTER – I

INTRODUCTION

Location.:-

Jodhpur-(IWMP) 28/2010-11 Project is located in Luni Block, of Jodhpur district. The project area is between the 26° 11' N to 26° 21' N latitudes & 72° 89' E to 72° 97' E longitudes. It is at a distance of 35 km from its Block head quarters and 40 Kms from the district head quarters. There are 602 no. of habitations in the Project area and other details are given below.

General features of watershed

S.No.	Name of Project(as per GOI)	Jodhpur (IWMP) 28/2010-11
(a)	Name of Catchment	Jodhpur IWMP 28/10-11
(b)	Name of watershed area (local name)	SATLANA
©	Project Area	5000 Ha.
(d)	Net treatable Area	5000 Ha.
e)	Cost of Project	750.0 Lac.
f)	Cost/hectare	15000
g)	Year of Sanction	2010-11
h)	Watershed Code	JODHPUR-28
i)	No. of Gram Panchayats in project area	1
j)	No. of villages in project area	3
k)	Type of Project	Desert
l)	Elevation (metres)	-
m)	Major streams	Luni and Jojhri Stream
n)	Slope range (%)	0--3%

Macro/micro	Name of Gram Panchayat	Name of Villages Covered
Cluster	SATLANA	SATLANA
	SATLANA	GOLIYA MAGRA
	SATLANA	MODI

The watershed falls in Agroclimatic Zone-II A (093) .The soil texture is sandy loam. The average rainfall is 289.6 mm.The temperatures in the area are in the range between 35--47 centigrade during summer and 08—25 centigrade during winter. The major crops in the area are Bajra 75% land is under cultivation 8% land fallow,6% land is wasteland.There is no irrigation facility in the project area.

48 No. of households are BPL (7.97% households) 15 are landless households (2.49% households) and 560 household are small and marginal farmers(93.02 % household) .Average land holding in the area is 1.08 ha. 100% area is single cropped area and no dubble croped area in the project. The average annual rainfall (10 years) in the area is 292.36 mm. The Major streams in the Watershed are Luni and Jojhri stream. The major festivals in the village are Holi, Deewali, krishana janamaastmi, Navratra, Gangor, Raksha-bandhan. At present this village is having 3917 population with Communities like Rajput, Dewasi, Kumhar, Suthar, Mali,Rajpurohit, Megwal and Bhil, Vishnoi.

Climatic and Hydrological information

1	**Average Annual Rainfall(mm)**	
	Year	Average Annual Rainfall(mm)
1	2001	362.00 mm
2	2002	61.00 mm
3	2003	397.60 mm
4	2004	174.00 mm
5	2005	496.00 mm
6	2006	263.00 mm
7	2007	198.00 mm
8	2008	297.00 mm
9	2009	208.60 mm
10	2010	467.34 mm

2	**Average Monthly rainfall (last ten years)**			
	Month	Rainfall(mm)		
i)	June	31.17		
ii)	July	94.56		
iii)	August	110.35		
iv)	September	38.25		
3	**Maximum rainfall intensity (mm)**			
	Duration	rainfall intensity(mm)		
	i) 15 minute duration	--		
	ii) 30 minute duration	--		
	iii) 60 minute duration	--		
4	**Temperature (Degree C)**			
	Season		Max	Min
	i) Summer Season		45	25
	ii) Winter Season		25	13
	iii) Rainy Season		35	30

5	**Potential Evaporation Transpiration (PET) (mm/day)**			
	Season		PET	
	i) Summer		1.17	
	ii) Winter		0.53	
	iii) Rainy		0.31	
6	Runoff			
	i) Peak Rate (cum/hr)		-	
	ii) Total run off volume of rainy season (ha.m.)		-	
	iii) Time of return of maximum flood	5 years	10 years	In-Year
	iv)Periodicity of Drought in village area	1	3	-

Other Development Schemes in the project area

S.No	Scheme	Name of the department	Key interventions under the Scheme	Targeted Beneficiaries	Provisions under the Scheme
1	MG NREGA	RURAL DEVELOPMENT & PANCHAYAT RAJ DEPARTMENT	-	-	-
2	TFC		-	-	-
3	SFC		-	-	-
4	BRGF		-	-	-
5	TSC		-	-	-
6	SGS		-	-	-
7	IAY		-	-	-

Details of infrastructure in the project areas

Parameters		Status			
(i)	No. of villages connected to the main road by an all-weather road	03			
(ii)	No. of villages provided with electricity	03			
(iii)	No. of households without access to drinking water	174			
(iv)	No. of educational institutions : Primary(P)/ Secondary(S)/ Higher Secondary(HS)/ vocational institution(VI)	(P) 3	(S) 2	(HS) -	(VI) -
(v)	No. of villages with access to Primary Health Centre	1			
(vi)	No. of villages with access to Veterinary Dispensary	1			
(vii)	No. of villages with access to Post Office	2			
(viii)	No. of villages with access to Banks	2			
(ix)	No. of villages with access to Markets/ mandis	0			
(x)	No. of villages with access to Agro-industries	NIL			
(xi)	Total quantity of surplus milk	2350 Ltr.			
(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 Anganwadi Centre	3			
(xiv)	Any other facilities with no. of villages (please specify)	-			
(xv)	KVK	KVK CAZRI JODHPUR			
(xvi)	cooperative society	1			
(xvii)	NGOs	1			
(xviii)	Credit institutions				
	(i) Bank	-			
	(ii) Cooperative Society	-			
(xix)	Agro Service Centre's	-			

Institutional arrangements (SLNA,DWDU,PIA,WDT,WC, Secretary)

DWDU Details

1	2	3
S.No	**Particulars**	**Details of DWDU**
1.	PM ,DWDU	Sh. GAJENDRA CHAWLA Executive Engineer
2.	Address with contact no., website	PM,WCDC, District JODHPUR
3.	Telephone	9414545909
4.	Fax	-
5.	E-mail	dwdu.jodhpur@gmail.com

PIA particulars

1	2	3
S.No	**Particulars**	**Details of PIA**
6.	Name of PIA	Sh. Sudheer Narayan Mathur
7.	Designation	Assist. Engineer
8.	Address with contact no., website	AEN. (IWMP) P.S.Luni
9.	Telephone	9530306840
10.	Fax	-
11.	E-mail	Iwmp.luni@gmail.com

WDT Particulars:

1	2	3	4	5	6	7	8
S. No	Name of WDT member	M/F	Age	Qualification	Experience in watershed (Yrs)	Description of professional training	Role/ Function
1	BHARAT GAUR	M	24	DIPLOMA (Civil Engineering)	1.5	Yes	Water management Expert
2	RAJENDRA DUDI	M	30	Veterinary Diploma	-	Yes	Veterinary Expert
3	RAJESH BORAWAT	M	27	B.Sc. in Agriculture	-	Yes	Agriculture Specialist
4	SEEMA VISHNOI	F	26	B.A. in Sociology	-	Yes	Social Science Specialist

Details of Watershed Committees (WC) SATLANA

S.N.	Name of WCs	Date of Gram Sabha for WC	Designation	Name	M/F	SC/ST/ OBC/ Gen	LL/SF/MF
1	SATLANA	02/02/2011	President	MAHENDRA SIRVI JI S/O JOGARAM VISHNOI	M	OBC	MF
2			Secretary	TARACHAND CHANDAK S/O SHAKTI DAN CHARAN	M	GEN	MF
3			Member	SHRAVAN KUMAR PATEL S/O VENA RAM PATEL	M	OBC	SHG
4			Member	RAMLAL S/O LALARAM SIRVI	M	OBC	MF
5			Member	KANSINGH S/O BAKHTAVAR SINGH	M	GEN	SF
6			Member	OMKAR S/O KISHOR SINGH	M	GEN	UG
7			Member	HARI SINGH S/O SHIV SINGH	M	GEN	UG
8			Member	DARIYA W/O PRTAP SIRVI	F	OBC	LL
9			Member	BHOMARAM S/O NENARAM PATEL	M	OBC	UG
10			Member	BHALARAM S/O BIJARAM PATEL	M	OBC	MF
11			Member	BHARATSINGH S/O JORSINGH	M	GEN	MF
12			Member	PUKHRAJ S/O RAMDAYAL SONI	M	OBC	LL
13			Member	KHAMA DEVI W/O BIJARAM SARGARA	F	SC	UG
14			Member	PREM S/O BHAGARAM BHIL	F	ST	UG
15			Member	TULSARAM S/O THANARAM PATEL	M	OBC	MF
16			Member	AMRARAM S/O LADURAM MEGHWAL	M	SC	SHG
17			Member	NARAYANRAM S/O CHUNARAM SARGARA	M	SC	UG
18			Member	SUKHI DEVI W/O SHELRAM	F	OBC	UG
19			Member	SUKKHI DEVI W/O SUKHARAM	F	OBC	UG
20			Member	CHANDANI W/O MANGILAL PARJAPAT	F	OBC	UG

Details of Watershed Committees (WC) SATLANA

S.N.	Name of WCs	Date of Gram Sabha for WC	Designation	Name	M/F	SC/ST/OBC/ Gen	LL/SF/MF
21			Member	SUMITRA W/O OMPRKASH SUTHAR	F	OBC	MF
22			Member	SATYANARAYAN S/O CHUNILAL RAV	M	OBC	MF
23			Member	BALU SINGH S/O KESAR SINGH RAJPUROHIT	M	GEN	SF
24			Member	OMARAM S/O CHELARAM SIRVI	M	OBC	MF
25			Member	SUNDAR W/O PUKHARAJ	F	OBC	SHG
26			Member	RUKHSAN W/O LAL KHAN	F	OBC	UG
27			Member	SHENKI W/O MANGILAL SIRVI	M	OBC	UG
28			Member	DHANARAM S/O BHANARAM JAT	M	OBC	UG
29			Member	KANHARAM S/O MANGILAL PATEL	M	0BC	UG
30			Member	KHIMARAM S/O BHANARAM MALI	M	OBD	SF
31			Member	YASHPAL S/O BHAMAR SINGH	M	GEN	MF
32			DEPT. Member	RACHNA PUROHIT	F	GEN	JEN

Problems and scope of improvement in the project area

The socio economic conditions of the area can be improved through increased production which can be achieved through expansion in cultivated area and productivity enhancement. **482** ha land is arable wasteland and 107 ha is fallow can be brought under cultivation.

The productivity gap of major crops in the area as compared with district and with areas in the same agro climatic zones indicate potential to increase the productivity. The demonstration of improved package of practices, improved varieties, increased irrigation facilities and soil conservation measures under the project can bridge this gap. Due to small land holdings in the area focus of the project would be on diversification in agriculture (horticulture, vegetables, green houses, Agro forestry, fodder crops)and diversification in Livelihoods(Agriculture, Animal husbandry, self employment)

38626.49 Tones fodder scarcity can be met out through Pasture development .Improved animal Husbandry practices can increase the productivity of livestock. 407 no. of persons migrate due to Employment this migration can be checked through creation of employment opportunities in the project area through increase in production and diversification in agriculture and Livelihoods as mentioned above.

CHAPTER – II

Socio economic Features, Problems and Scope

Table 2.1 Population & Household Details:

Total Population				
Male	**Female**	**Total**	**SC**	**ST**
2052	1865	3917	664	14

Household Details						
BPL household	**L. Less**	**Small Farmer**	**M. Farmer**	**Total household**	**SC household**	**ST household**
48	15	325	235	602	162	3

Table 2.2 Development indicators

S. No.	Development Indicators	State	Project Area
1	Per capita income (Rs.)	16260	15205
2	Poverty ratio	0.22	26.56%
3	Literacy (%)	0.604	40.78%
4	Sex Ratio	926	870
5	infant mortality rate		5.90%
6	maternal mortality ratio		0.04%

The table indicates poor socio economic conditions.

Table 2.3 Land Use

Land Use	Total area in Ha.				
	Private	Panchayat	Government	Community	Total
Agriculture Land	4518	-	-	-	4518
Temporary fallow	-	-	-	-	-
Permanent Fallow	-	-	-	-	-
Cultivated Rainfed	4518	-	-	-	4518
Cultivated irrigated	-	-	-	-	-
Net Sown Area	4518	-	-	-	4518
Net Area sown more than once	-	-	-	-	-
Forest Land	-	-			
Waste Land	-	-	370	-	370
Pastures	-		-	-	-
Others	-	-	70	42	112
Total	-	-	-	-	5000

The project area has 270 ha of cultivable wasteland (total 5000 ha) can be brought under cultivation if some irrigation source can be provided through Construction of WHS like Khadin, Tanka, Farm ponds etc. and also through demonstration of rainfed varieties of crops.

Construction of WHS can also increase in area under irrigation which is only 0%.

0 ha. (0% of the project area) is under wastelands and can be brought under vegetative cover, with reasonable effort .Activities like Earthen check dams, Vegetative filter strip, V-ditches, staggered trenches ,WHS (Johad) Afforestation of wastelands and Pasture development will be taken up on these lands

Pasture development the land use table shows that there is 50 hectare pasture land.This emphasizes the need for taking up pasture land development works through sowing of promising species of grasses and plantation

Table 2.4 .a Agriculture and Horticulture status and fuel availability.

Cropping Status												
S. No	Season	Crop sown	Rain fed				Irrigated				Total	
			Varieties	Area (ha)	Production (Ton)	Productivity (kg/ha)	Varieties	Area (ha)	Production (Ton)	Productivity (kg/ha)	Area (ha)	Production (Ton)
1	Kharif	Bajra	HHB 67	3250	1193	600	-	-	-	-	3250	1193
		Moong	K851	521	261	500	-	-	-	-	521	261
2	Rabi	Mustered	-	-	-	-	Pusha Bold	80	514	1500	80	514
		Wheat	-	-	-	-	Raj 3077	-	-	2500	-	-
3	Jaid	-	-	-	-	-		-	-	-	-	-

Table 2.4.b Abstract of cropped Area(ha)	
Area under Single crop	4518
Area under Double crop	-
Area under Multiple crop	-

****Write for each crop:** The farmers are using WCC 75 ,Raj. 171, varieties of Bajra, whereas varieties like HHB 67 , RCB2 can increase the production.

Crop Rotation**will vary from project to project

Bajra	-	Fallow
Moong	-	Fallow
Cluster Bean	-	Fallow
Fallow	-	Tarameera
Til	-	Fallow
Caster	-	Caster
Moth	-	Fallow

The table 2.3 shows that there no double cropped area. Also the crop rotation shows that fallow lands are there. This indicates that there is scope for change in crop rotation in fields where there are fallow lands through Soil and Water conservation measures, crop demonstration and diversification in agriculture.

Soil and Water conservation measures besides putting fallow lands under cultivation can change the area under single cropping to double and multiple cropping.

Table 2.4.c Productivity Gap Analysis (**The table can also be given in bar chart form)**

Name of the crop	Productivity kg/ha				
	India	Highest Average in Rajasthan	Highest Average of Agro climatic zone	District	Project Area
Bajra	886	679	750	750	800
Guar	-	277	400	400	500
Moong	-	312	450	450	500
Caster	-	997	800	800	850

Analysis of the above table indicate that besides national gap there is wide gap in productivity within state and even within same agro climatic zones.

The reasons for this variation are

- The farmers are using varieties WCC-75,Raj.171 of Bajra. whereas the recommended varieties like HHB 67, RCB -2 provide 18 qnt. yield
- Lack of Availability of good quality seeds of desired crop and variety in adequate quantities and time to the farmers.
- Availability of water for cultivation

The productivity gap and reasons of it indicate potential to increase the productivity through crop demonstration .Crop demonstrations would be carried out on improved crops/ varieties, improved agronomic practices. INM, IPM, Mixed cropping, distribution of fodder seed mini kit. Demonstration of improved methods and economics of fodder crops cultivation and also distribution foundation seeds of Forage Crops for further multiplication, introduction of fodder crops in the existing crop rotations.

Table 2.5 Existing area under horticulture/Vegetables/Floriculture (ha)

Activity	Area(Hact.)	Species	Varieties	Recommended varieties	Production
Horticulture					
Vegetables					
Floriculture					
Medicinal Plants					

Table 2.6 Land holding Pattern in project area

Type of Farmer	Total House holds	Land holding (ha) irrigation source wise			Land holding (ha)Social group wise				
		Irrigated (source)	Rain fed	Total	Gen	SC	ST	OBC	BPL
(i)Large farmer	27	-	975	975	850	125	-	-	-
(ii) Small farmer	325	-	2355	2355	700	540	45	1070	-
(iii) Marginal farmer	235	-	1183	1183	545	230	-	463	-
(iv) Landless person	15	-	-	-	-	-	-	-	-
(V)No. of BPL households	48	-	-	-	-	-	-	-	-
Total	602	-	4518	4518	2045	895	45	1533	

93.02% land holdings belong to small and marginal farmers who own 70.76% of total cultivated area. Horticulture/vegetables could be more economical to Small and marginal farmers with irrigation source. For large farmers with no irrigation facility Horticulture/vegetables will be promoted in a part of land with farm pond/Tanka construction.

The following activities will be more beneficial for small land holdings and for diversification and income for large farmers

Horticulture plantation and Medicinal plantation: As discussed earlier . Horticulture/vegetables could be more economical to Small and marginal farmers with farm pond as source. Also the project area has good potential for Sonamukhi, Isabgol, Mehandi etc.

Agro forestry plantation: To increase the income of farmers and also for shelter belt plantation as wind velocity is high in the project area.

Setting of Vermi Compost Units - Keeping in view the side effect of residues of chemicals and fertilizers on human health the emphasis would be on cultivation of organic produce through motivating farmers and providing assistance for production of organic input, vermi compost.

Production and distribution of quality seed – There is need to ensure that good quality seed is available for cultivators for which adequate seed production would be initiated in watershed areas with the assistance of private sector and agriculture department technologies

Sprinklers and pipelines for efficient water management practices emphasis on demonstration of sprinklers with adequate financial support and convergence/private partnership.

Establishment of nurseries: Most of the planting material is procured from other parts of the State/ country. The procurement of planting material from distant places causes damage to the planting material and often results in untimely supply. Hence nursery development activity in area.

Innovative hi-tech/ export oriented activities: innovative hi-tech/ export oriented projects like mushroom cultivation, floriculture, etc which are in negligible existence at present, can be implemented by individual farmers / private companies.

Drip irrigation Drip irrigation will be promoted in all horticulture plantations, vegetables, green houses and in nurseries for rational use of irrigation higher yields and quality produce.

Table 2.7 Livestock Status - animals/milk production / average yield.

S.No.	Description of animals	Population in No.	Yield(milk/mutton/ Wool)	Equ. cow units	Dry matter requirement per year (7Kg per animal.)	Total requirement in M.T.
1	Cows					
	Indigenous	2520	4 ltr. per day	2520	6438600	6438.60
	Hybrid	53	6 ltr. per day	53	135415	135.415
2	Buffaloes	3132	7 ltr. per day	3132	8002260	8002.26
3	Goat	1570	2 ltr. per day	1570	4011350	4011.35
4	Sheep	7802	½ kg per no.	7802	19934110	19934.11
5	Camel	41	-	41	104755	104.755
6	Poultry	26	-	26	0	0
7	Piggery	0	-	0	**0**	0
	Total	15144	-	15144		38626.49

In spite of the large number of livestock, production is less hence increase in productivity across all species, is a major challenge. To reduce production of unproductive cattle and improve the productivity by improving the breeds by breeding management following activities will be taken up

- Castration
- Artificial insemination
- Distribution of superior Breeding bulls for use in Cattle and Buffalo
- Breeding distribution crossbred rams

Besides breed improvement other animal husbandry practices like better health, hygiene and feeding practices can increase productivity of livestock. Hence Activities like Animal health camps ,Urea-Molasses treatment demonstration ,demonstration of improved methods of conservation and utilization of Forage crops are proposed.

Table 2.8 Existing area under fodder (ha)

S.No	Item	Unit	Area/Quantity
1	Existing Cultivable area under Fodder	Ha	340/10500
2	Production of Green fodder	Tonns/year	60/1800
3	Production of Dry fodder	Tonns/ Year	450/2250
4	Area under Pastures	Ha	50/110
5	Production of fodder	Tonnes	655/6985

		/year	
6	Existing area under Fuel wood	Ha	-
7	Supplementary feed	Kgs/ day	1 kg/965
8	Silage Pits	No	-
9	Availability of fodder	Tonnes	11235

i.Requirement of fodder= 38626.49tonns
ii. Availability of fodder = 11235tonns.
Deficiency of fodder = 38626.49-11235= 27391.49 tonns.

The table above shows there is fodder deficiency in the project area. (Requirement is 17825.33 tonns and availability is 6985 tonns)

To minimize the large and expanding gap between feed and fodder resource availability and demand there is need for

- Increase in area under fodder crops
- Increase in productivity of fodder crops
- Development of pastures
- And reduction in large number of livestock production through replacement by few but productive animals

Table 2.9 Agriculture implements

1	2	3
S. No	**Implements**	**Nos.**
1	Tractor	35
2	Sprayers-manual/ power	10
3	Cultivators/Harrows	10
4	Seed drill	10
5	Any Other	00

Farm mechanization and seed banks: As discussed earlier 93.02% land holdings belong to small and marginal farmers who own only 70% total cultivated area so owning of big farm implements by individual farmers is not economical so SHG would be promoted to buy farm implements and rent to farmer

Table 2.10 NREGA Status - No. of Card Holder, activities taken so far, employment status.

Sr. no.	Name of village	Total No .of job cards	Employment Status	Activity taken up so far
1	SATLANA	390	31250	Nadi,Tanka,Greval road,Bunding
2	GOLIYA MAGRA	135	9200	
3	MODI	145	890	

Table 2.11 Migration Details

Name of village	No. of persons migrating	No. of days per year of migration	Major reason(s) for migrating	Distance of destination of migration from the village (km)	Occupation during migration	Income from such occupation (Rs. in lakh)
SATLANA	420	100-150	Employment & Business	50-1000	Employment & Business	120.00
GOLIYA MAGRA	200	100-150				55.00
MODI	210	100-150				44.65
TOTAL	830					

The migration can be check by creation of employment opportunities, enhancing farm level economy, increases the income of the people engaged in animal husbandry by dairy, poultry and marketing and value addition. (As discussed earlier) and diversification in livelihoods .

The existing livelihoods Village are given below

Table 2.12 (a) Major activities (On Farm)		
Name of activity	No of House holds	Average annual income from the
cultivators	625	1.5 Lac
Dairying	30	2.5 Lac
Poultry	-	-
Piggery	-	-
Landless Agri. Labourers	25	0.50 Lac

Table 2.12(b) Major activities (Off Farm)		
Name of activity	Households/individuals	Average annual income from the
Artisans	-	-
Carpenter	20	2.00 Lac
Blacksmith	5	1.00 Lac
Leather Craft	-	-
Porter	10	1.00 Lac
Mason	100	0.75 Lac
Others specify (Cycle Repair ,STD,Craft etc)	07	0.55 Lac

The efforts for increase in income through off farm activities will be made under livelihood component through assistance to SHG or individuals

Table 2.13(a) Status of Existing SHG

S.No	Name of SHG	Members	Activity involved	Monthly income	Fund avai.	Assistance available	Source of assistance	Training received
1	Maa Nagneshyan group	10	Saving	500	-	-	-	Handicraft
2	Baba Ramdev group	10	Saving	500	-	-	-	Masala,Achaar
3	Tejaji group	10	Saving	200	-	-	-	Paapad
4	Laxmi group	10	Saving	200	-	-	-	Tailoring

The table indicates existence of number of groups in the area also these need to be strengthened through trainings and financial assistance.

II. **Technical Features**

Table 2.14 Ground Water

S.No	Source	No.	Functional depth(meter)	Dry	Area irrigated	Water availability (days)
i)	Dug wells	14	160		80 hac	65 - 70 days
ii)	Shallow tube wells	5	155		20 hac	110 -150
iii)	Pumping sets	00	00		0 hac	-
iv)	Deep Tube Wells	2	160		20	175-180 days
	Total	21	-	-	125	-

Table 2.15 Availability of drinking water

S.No	Name of the village	Drinking water requirement Ltrs/day	Present availability of drinking water Ltrs/day	No. of drinking water sources available	No. functional	No. requires repairs	No. defunct
1	SATLANA	512000	387000	2	2	-	-
2	MODI	76500	63400	1	1	-	-
3	GOLIYA MAGRA	82900	73200	0	0	-	-

Table 2.16 Water Use efficiency

Name of major crop	Area (Hectare)			
	through water saving devices(Drip/Sprinklers)	through water conserving agronomic practices#	Any other (pl. specify)	Total

- The tables above indicate need for judicious use of available Water.
- Encouraging optimum use of water through installation of sprinklers on every operational wells

Table 2.17 Slope details.

Slope of Watershed		
S.No.	Slope percentage	Area in hectares
1	0 to 3%	5000
2	3 to 8%	-
3	8 to 25%	-
4	> 25%	-

As most of the area has slope less than 3% construction of contour bunds can solve the problem of water erosion in agriculture fields and protect washing of top soil and manures/fertilisers.

Water Budgeting:

To propose the total number of water harvesting structure, it is necessary to do water budgeting of area i.e. how much total run- off is available, out of which how much is being already stored in existing structures and how much balance is available for storage. As per guideline, maximum 15% of balance available run – off is to be stored and 85% of balance available run – off is to be allowed to flow in the drainage line.

In the proposed are, the various water harvesting structure have been constructed . The surface runoff has been stored in the structures. In the area about 208 structures have been constructed. After onset of monsoon i.e. in the end of the September month. All the main structures constructed in the area were visited. While visiting the area it was observed that about 208 structures were having water up to 20 % of their capacity.

For water budgeting the area is calculated and divided in following groups:

Average catchments: Cultivated land, forest land with vegetation
For estimation/ water budgeting the proposed water shed area has been divided as follows:
Good Catchment: -
Average Catchment: 5000 Hac.
Bad Catchment: -
Average annual Rainfall for the block is 289.6 mm
By interpolation method the proportion of estimated runoff of 289.6 mm rainfall have been
calculated form Strange's Table as follows: calculated form Strange's Table as follows:

Table No. 2.18 Total available water

Micro no	Area ha.	Type of catchment	Utilisable rain water/ ha (Cu.m.)	Utilisable rain water from micro w/s (Cu.m.)
	5000	Average	292.36	1461800
			Total	1416800

Table No. 2.18(a) Water tapped in existing structure

S.No.	Name	No.	Storage Capacity
i)	Major Irrigation Project	0	
ii)	Medium Irrigation Project	0	0
iii)	Form Ponds/Tanks	142	4235
iv)	Nadi / Talab	6	45056
	Total		49291

Table No. 2.18 (b) Balance available water

Total available water	Net tapped water	Balance	Available for Harvesting 96.52%
1416800	49291	1367509	1367509

The water budgeting indicates potential for water harvesting in the area. contour bunding, Dug out pond, Nallah bunding and WHS in arable land (Tanka) etc. activities could be done.

Table No. 2.18 (c) Structure proposed for water harvesting

Activity	No.	Storage capacity per No. (Cu.m.)	Total water to be harvested (Cu.m.)
Tanka	120	25	3000
Dug out pond	30	500	15000
		Total	18000

Total Run off trapped by existing & proposed structures = 49291+18000 = 67291 cum.

Which is only 4.07% of total runoff.

Table 2.19 Soil details

	Soil Profile	
S.No.	Major Soil Classes	Area in hectares
1	II class	1350
2	III class	3000
3	Iv class	650
	Soil Depth :	
B	Depth (Cms.)	Area in hectares
1	0.00 to 7.50	125
2	7.50 to 45.00	4225
3	> 45.00	650

C	Soil fertility Status	Kg/ha	Recommended
	N	50-70	80-90
	P	20-30	40-50
	K	10-15	20-30
	Micronutrients	10-500 ppm	100-500

The analysis of table shows need to improve and maintain soil fertility. Soil health card to every farmer every crop season will be provided, which will include the recommendation for Application micro nutrient and fertilizers.

Table 2.20 Erosion details

Erosion status in project Area				
Cause	Type of erosion	Area affected (ha)	Run off(mm/ year)	Average soil loss (Tonnes/ ha/ year)
Water erosion				
a	Sheet	4050	300	15-20
b	Rill	450	300	
c	Gully	0	300	
Sub-Total		4500	NA	
Wind erosion		500		
Total for project		5000		

The need is:

- To check land degradation
- To reduce excessive biotic pressure by containing the number and increase of livestock
- To check cultivation on sloping lands without adequate precautions of soil and water conservation measures
- To discourage cultivation along susceptible nallah beds
- To check Faulty agriculture techniques
- To check Uncontrolled grazing and developed cattle tracks
- To check Deforestation of steep slopes
- To check erosive velocity of runoff, store Runoff, to arrest silt carried by runoff and to recharge Ground Water structures life Earthen check dams, gully plugs, Bank Stabilisation, Loose stone check Dams, Gabions, Earthen embankment (Nadi), SCT would be taken up.

CHAPTER – III

Proposed Development Plan: The Activities are indicative addition /deletion in activities will be as per local conditions

A) Preparatory phase activities Capacity Building Trainings and EPA

The IEC activities like Kalajathas, Group meetings, door to door campaign, slogans and wall writings etc. were carried out in all the habitations of Jodhpur (IWMP) 29 Watershed. A series of meetings were conducted with GP members, community and discussed about the implementation of IWMP programme. User groups were also formed.

Grama Sabhas were conducted for approval of EPA (Village), for selecting the watershed committee and approval of DPR.

S.no	Name of the Gram Panchayat	Date on which Grama Sabha approved EPA
1	SATLANA	02/02/2011

S. No.	Names of Gram Panchayat	Amount earmarked for EPA	Entry Point Activities planned	Estimated cost	Exp. incurred	Bal.	Expected outcome	Actual outcome
1	SATLANA	30.00 Lac	Solar lights, RTWH,PIOS, PASHU KHELI,TANKA	30.00 Lac	22.00 Lac	8.00 Lac	Street light for villagers & Drinking water availability	Street light for villagers & Drinking water availability

The PRA exercise was carried out in all the villages on the dates shown below:

S.no	Name of the village/Habitation	Date on which PRA conducted
1	SATLANA	15.12.11 to 29.12.11 and 15.05.12 to 17.05.12

Transact walk were carried out involving the community for Social mapping, Resource mapping. Detailed discussions and deliberations with all the primary stakeholders were carried out.

Socio-economic survey was carried out during **March 2011 and OCTOBER 2011** (dates) period covering all the households and primary data on demography, Land holdings, Employment status, Community activities etc. was collected as mentioned in chapter 2.

SRSC,Jodhpur was assigned the work of preparing various thematic layers **using** Cartosat-1 and LISS-3 imageries for **Creation**, development and management of geo-spatial database depicting present conditions of land (terrain), water and vegetation with respect to watershed under different ownerships at village level

Various thematic layers provided by SRSC Jodhpur are :

- Delineation of Macro/Micro watershed boundaries.
- Digitised Khasara maps of the villages falling in project area.
- Network of Drainage lines, existing water bodies, falling in the project area.
- Base maps (transport network, village/boundaries, and settlements).
- Land Use / Land cover map.

Based on GIS thematic layers, Field visits , PRA and analysis of benchmark data (as discussed in chapter 2) final Treatment plan on revenue map for implementation has been framed. Thus each intervention identified has been marked on revenue map (map enclosed in DPR as annexure XXI).The GIS based intervention map, PRA based intervention map are annexed as XXII.

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CHAPTER – VI EXPECTED OUT COMES

1	2		3	4	5
S. No.	**Item**		**Unit of measurement**	**Pre-project Status**	**Expected Post-project Status**
1	Status of water table (Depth to Ground water level)		Meters	110	108
2	Ground water structures repaired/ rejuvenated		No.	4	4
3	Quality of drinking water		Description	salty	Potable
4	Availability of drinking water		Description	4 month	6 month
5	Change in irrigated Area		Ha	0	100
6	Change in cropping/ land use pattern		Description	-	-
7	Area under agricultural crop		Ha	-	
	I	Area under single crop	Ha	4513	4650
	Ii	Area under double crop	Ha	0	25
	Iii	Area under multiple crop	Ha	0	0
8	Change in cultivated Area		Ha	4513	4650
9.yield of major crops of area	Yield of Bajra		q/ha	8	12
	Yield of Wheat		q/ha	0	0
	Yield of Green Gram		q/ha		
	Yield of Mustard		q/ha	0	0
10. Production of major crops of area	Production of Bajra		ton	5840	9250
	Production of Wheat		ton	0	0
	Yield of Green Gram		ton	5412	7450
	Production of Mustard		ton	0	0
11	Area under vegetation		Ha	0	0
12	Area under horticulture		Ha	-	2
13	Area under fuel		Ha	0	10
14	Area under Fodder		Ha	90	130
15	Fodder production		Ton	6985	10800
16	Milk production		Litres/day	1630	3000
17	SHGs Active		No.	06	30
18	No. of livelihoods		No.	0	400
19	Income		Rs.in la	0.16	0.20
20	Migration		No.	830	0
21	SHG Federations formed		No.	-	4

Critical Assumption

- No severe droughts/ unexpected floods/ natural disasters
- Adequate funds are allocated for the same and released on time.
- There is no significant pest/ disease attack, and if so, then it will have been contained before irreversible damage is done.
- Adverse market conditions do not persist long.
- Sound macro-economic and growth conditions continue and the benefits are widely distributed particularly in the rural areas.
- Facilitating agencies and resource providers have the required competent staff so that timely and appropriate technical advice and services are provided to farmers whenever required.
- The Capacity Building Plan is implemented, monitored and modified to address evolving needs and feedback from participants.
- The execution of the Women's Empowerment Pedagogy is regularly monitored by the District and State level Implementing Agencies

Means of Verification of **indicators**

- Baseline surveys like household income ,expenditure, health and nutrition etc at the beginning, mid-term and end of the project period
- Annual participatory assessment by communities during project period.
- Regular project monitoring reports prepared by project monitoring teams/ agencies.
- Membership and other Records, Minutes of Meetings maintained by the SHGs, WCs/ Individual beneficiaries/project-related village and local bodies/PRIs.
- External review missions
- Data maintained by Government department (Revenue, Agriculture, Groundwater, Irrigation, Animal Husbandry

CHAPTER VII TECHNICAL DESIGNS AND ESTIMATES

Technical designs and estimates for proposed activities.

For Estimates GKN of the districts should be used. For Production System activities, rates of Agriculture/Horticulture/Animal Husbandry should be used.

CHAPTER - VIII Enclosures -

a. Location –District, block, village, watershed location map
b. Map of JODHPUR 29 IWMP Project (Watershed Boundary demarcation in cadastral & Topo Sheet)
c. PRA Map (along with photos & paper drawing)
d. Treatment map (Indicate proposed works)
e. Cadastral Map on watershed boundary
f. Information on Soils, Soil fertility, Land capability, Soil chemical problems like salinity, alkalinity
g. Land Use Land Cover map
h. Information on existing water harvesting structures & well inventory along with GPS co-ordinates.
i. High resolution, latest Remote Sensing Satellite data

Documents of Agreements:

Proceedings of gram sabha for EPA approval

Proceedings of gram sabha Resolution for committee constitution

Proceedings of gram sabha for DPR approval

DPR approval by district

Watershed Committee Registration certificate

MoU – PIA – DWMA, PIA – WC(in case of NGO as PIA)

CHAPTER V

ANNUAL ACTION PLAN THROUGH PROJECT FUND :- SATLANA

STATE RAJASTHAN	**IWMP--2010-11**	**UNIT COST**	15000	Hac.		
DISTRICT: JODHPUR	SATLANA	**Geographical Area**				
AGROCLIMATIC ZONE:IIB	II B	**Effective Area**	5000	Hac.	5482	
NAME OF BLOCK:	LUNI	**Total Arable land**	4518			
NAME OF WATERSHED	JODHPUR- 28	**1. Unirrigated**	5000	Hac.		
CATEGORY OF WATERSHED	DESERT AREA	**Total Nonarable land**				
IRRIGATION PERCENTAGE		**1. Pasture**	0	Hac.		
		2. Govt. / waste /OTHER LAND	482	Hac.		
		TOTAL COST	750	Lac.		

S. N.	ACTIVITY	Unit	Quantity	Unit Cost	Total cost	FIRST YEAR		SECOND YEAR		THIRD YEAR		FOURTH YEAR		FIFTH YEAR	
						PHY	FIN	PHY	FIN	PHY	FIN	PHY	FIN	PHY	FIN
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
AI.	**ADMINISTRATIVE COST**		**10%**	**75.000**	75.000		15.000		15.000		15.000		15.000		15.000
II	**MONITORING**		**1%**	**7.500**	7.500		1.500		1.500		1.500		1.500		1.500
III	**EVALUATION**		**1%**	**7.500**	7.500		1.500		1.500		1.500		1.500		1.500
	TOTAL		**12%**	**90.000**	**90.000**		**18.000**		**18.000**		**18.000**		**18.000**		**18.000**
BI	**PREPARATORY PHASE ENTRY POINT ACTIVITY**		**4%**	**30.000**	30.000		30.000								
II	**INTITUTION & CAPACITY BUILDING**		**5%**	**37.500**	37.500		22.500		6.750		4.500		1.875		1.875
III	**PREPARATION OF DETAILED PROJECT REPORT**		**1%**	**7.500**	7.500		7.500								
	TOTAL		**10%**	**75.000**	**75.000**		**60.000**		**6.750**		**4.500**		**1.875**		**1.875**
C	**WATERSHED DEVELOPMENT WORKS (NRM)**		**56%**		**420.00**	**6%**	**45.000**	**15%**	**112.5**	**15%**	**112.5**	**12%**	**90**	**08%**	**60**
1	**ARABLE CONSERVATION WORK**														
(i)	Vegitative counter bund	Hac	1560	14020	218.712	200	25.200	300	42.060	400	56.080	400	56.080	260	39.292
(ii)	Tanka	No.	190	70000	133.000	20	14.000	25	17.500	40	28.000	60	42.000	45	31.500
(iii)	Waste weir	No.	51	15800	8.058	5	0.790	5	0.790	20	3.160	10	1.580	11	1.738
(iv)	Gulley Control Structure Nallah Bunding	No.	10	11100	1.110	2	0.222	2	0.222	2	0.222	2	0.222	2	0.222
(v)	Other	No.	4	500000	20.000		0.000	2	10.000			2	10.000		
	TOTAL				**380.880**		**40.212**		**70.572**		**87.462**		**109.882**		**72.752**

S. N.	ACTIVITY	Unit	Quantity	Unit Cost	Total cost	FIRST YEAR		SECOND YEAR		THIRD YEAR		FOURTH YEAR		FIFTH YEAR	
						PHY	FIN	PHY	FIN	PHY	FIN	PHY	FIN	PHY	FIN
2	**NON ARABLE CONSERVATION WORK**														
(i)	V Ditch for PD	Ha.	110	19800	21.780	10	1.980	10	1.347	30	5.940	30	5.940	30	6.573
(ii)	Staggered Contour Trenches for PD	Ha.	21	12610	2.648	0	0.000	0	0.000	10	1.261	0	0.000	11	1.387
(iii)	Dug out Pond	No.	10	50000	5.000	0	0.000	3	1.500	3	1.500	2	1.000	2	1.000
(iv)	WHS (Tanka)	No.	10	82000	8.200	0	0.000	3	2.460	3	2.460	2	1.640	2	1.640
(v)	Nallah Bunding with ww	No.	0	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000
3	**DRAINAGE LINE TREATMENT**										0.000		0.000	0	0.000
(i)	LSCD 'A'	No.	6	24900	1.494	0	0.000	1	0.249	1	0.249	2	0.498	2	0.498
(ii)	LSCD 'B'	No.	0	23000	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000
(iii)	LSCD 'C'	No.	0	21100	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000
(iv)	LSCD 'D'	No.	0	19200	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000
(v)	LSCD 'E'	No.	0	17300	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000
(vi)	Masonry Check Dam	No.	0	698500	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000
TOTAL					**39.122**		**1.980**		**5.556**		**11.410**		**9.078**		**11.098**
TOTAL NRM					**420.000**		**42.190**		**76.128**		**98.872**		**118.960**		**83.850**
VIII	**Production Measures**		**10%**	**75.000**											
	For Arable Land														
1	Arable bund Dhaman sowing	**Hac**	1000	380	3.800	40	0.152	30	0.114	150	0.570	150	0.570	630	2.394
2	Agro Forestry	No.	1500	104	1.560	100	0.104	100	0.104	300	0.312	200	0.208	800	0.832
3	Horticulture Plantation (with fencing & Tanka)	No.	1000	295	2.950	20	0.059	50	0.148	150	0.443	150	0.443	630	1.859
4	Horticulture Plantation without fencing (Orchard)	No.	800	295	2.360	40	0.118	40	0.118	150	0.443	150	0.443	420	1.239
5	Vermi Compost	No.	10	36000	3.600	0	0.000	1	0.360	2	0.720	1	0.360	6	2.160
6	Crop Demonstration	No.	800	500	4.000	50	0.250	50	0.250	100	0.500	150	0.750	450	2.250
7	Homested Kitchen Gerden	No.	200	500	1.000	10	0.050	10	0.050	20	0.100	40	0.200	120	0.600
8	Medicinal Plants	No.	800	200	1.600	0	0.000	0	0.000	200	0.400	200	0.400	400	0.800
	For Non-arable Land													0	0.000
1	V Ditch for PD		110	2200	2.420	10	0.220	10	0.220	15	0.330	20	0.440	55	1.210
2	Staggered Contour Trenches for PD	Hac	21	900.00	0.189	1	0.009	1	0.009	3	0.027	3	0.027	13	0.117
3	Plantation (DCB & Barbed wire fencing)	Hac	90	36380.000	32.742	5	1.819	5	1.819	10	3.638	23	8.367	47	17.099
4	Fencing of PD (by DCB)	mt	300	2542.000	7.626	20	0.508	40	1.017	50	1.271	50	1.271	140	3.559
	LIVESTOCK MANAGEMENT													0	
	Animal Health Camp		25	24000	6.000	2	0.480	2	0.480	6	1.440	6	1.440	9	2.160
	Vaccination		15450	5.00	0.773	2000	0.100	2000	0.005	3000	0.005	3000	0.150	5450	0.513
	Purchase of Bull / Pada		3	25000	0.750					2	0.500			1	0.250
	A I		726	500.00	3.630	100	0.500	100	0.500	200	1.000	200	1.000	126	0.630
	Total Production System				**75.000**		4.369		5.193		11.698		16.068		37.670

S. N.	ACTIVITY	Unit	Quantity	Unit Cost	Total cost	FIRST YEAR		SECOND YEAR		THIRD YEAR		FOURTH YEAR		FIFTH YEAR	
						PHY	FIN	PHY	FIN	PHY	FIN	PHY	FIN	PHY	FIN
1	LIVELIHOOD ACTIVITIES		9%	67.500											
	1. REVOLVING FUND TO SHG,S			51.000	51.000		0.000		0.000		20.000		20.000		11.000
	2. FOR FEDERATION OF SHG'S			10.000	10.000		0.000		0.000		3.000		3.000		4.000
	3. FOR INDIVIDUAL ENERPRENEURS			6.500	6.500		0.000		0.000		3.000		3.000		0.500
TOTAL					67.500		0.000		0.000		26.000		26.000		15.500
IX	CONSOLIDATION PHASE		3%	22.500	22.500								13.500		9.000
	GRAND TOTAL		100%		750.000		124.559		106.071		159.070		194.403		165.896

CHAPTER V

ANNUAL ACTION PLAN THROUGH CONVERGENCE GAM PANCHAYA :-SATLANA

STATE RAJASTHAN	**IWMP--2010-11**	**UNIT COST**	15000	Hac.
DISTRICT: JODHPUR	SATLANA	**Geographical Area**		
AGROCLIMATIC ZONE:IIB	II B	**Effective Area**	5000	Hac.
NAME OF BLOCK:	LUNI	**Total Arable land**	4518	
NAME OF WATERSHED	JODHPUR- 28	**1. Unirrigated**	5000	Hac.
CATEGORY OF WATERSHED	DESERT AREA	**Total Nonarable land**		
IRRIGATION PERCENTAGE		**1. Pasture**	0	Hac.
		2. Govt. / waste /OTHER LAND	482	Hac.
		TOTAL COST	750	Lac.

S. N.	ACTIVITY	Unit	Quantity	Unit Cost	Total cost	FIRST YEAR		SECOND YEAR		THIRD YEAR		FOURTH YEAR		FIFTH YEAR	
						PHY	FIN	PHY	FIN	PHY	FIN	PHY	FIN	PHY	FIN
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
AI.	**ADMINISTRATIVE COST**														
II	**MONITORING**														
III	**EVALUATION**														
	TOTAL														
BI	**PREPARATORY PHASE ENTRY POINT ACTIVITY**														
II	**INTITUTION & CAPACITY BUILDING**														
III	**PREPARATION OF DETAILED PROJECT REPORT**														
	TOTAL														
C	**WATERSHED DEVELOPMENT WORKS (NRM)**														
1	**ARABLE CONSERVATION WORK**														
(i)	Vegitative counter bund	Hac	300	14020	42.060	0	0.000	0	0.000	100	14.020	80	11.216	120	16.824
(ii)	Tanka	No.	100	70000	70.000	0	0.000	0	0.000	40	28.000	30	21.000	30	21.000
(iii)	Waste weir	No.													
(iv)	Gulley Control Structure Nallah Bunding	No.													
(v)	Other	No.	2	500000	10.000		0.000	1	5.000			1	5.000		
	TOTAL				**122.060**		**0.000**		**5.000**		**42.020**		**37.216**		**37.824**

2	**NON ARABLE CONSERVATION WORK**														
(i)	V Ditch for PD	Ha.													0.000
(ii)	Staggered Contour Trenches for PD	Ha.													0.000
(iii)	Dug out Pond	No.													0.000
(iv)	WHS (Tanka)	No.													0.000
(v)	Nallah Bunding with ww	No.	0	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000
3	**DRAINAGE LINE TREATMENT**										0.000		0.000		0.000
(i)	LSCD 'A'	No.													0.000
(ii)	LSCD 'B'	No.													0.000
(iii)	LSCD 'C'	No.													0.000
(iv)	LSCD 'D'	No.													0.000
(v)	LSCD 'E'	No.													0.000
(vi)	Masonry Check Dam	No.	0	698500	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000
TOTAL					**0.000**		**0.000**		**0.000**		**0.000**		**0.000**		**0.000**
TOTAL NRM					**122.060**		**0.000**		**5.000**		**42.020**		**37.216**		**37.824**
VIII	**Production Measures**														
	For Arable Land														
1	Arable bund Dhaman sowing	**Hac**												0	0.000
2	Agro Forestry	No.												0	0.000
3	Horticulture Plantation (with fencing & Tanka)	No.												0	0.000
4	Horticulture Plantation without fencing (Orchard)	No.												0	0.000
5	Vermi Compost	No.												0	0.000
6	Crop Demonstration	No.	1000	500	5.000	50	0.250	50	0.250	300	1.500	300	1.500	300	1.500
7	Homested Kitchen Gerden	No.												0	0.000
8	Medicinal Plants	No.												0	0.000
	For Non-arable Land														0.000
1	V Ditch for PD													0	0.000
2	Staggered Contour Trenches for PD	Hac												0	0.000
3	Plantation (DCB & Barbed wire fencing)	Hac												0	0.000
4	Fencing of PD (by DCB)	mt												0	0.000
	LIVESTOCK MANAGEMENT														
	Animal Health Camp		10	24000	2.400	2	0.480	2	0.480	2	0.480	2	0.480	2	0.480
	Vaccination		10000	5.00	0.500	1500	0.075	1500	0.005	2000	0.005	2500	0.125	2500	0.290
	Purchase of Bull / Pada														0.000
	A I													0	0.000
	Total Production System				**7.900**		0.805		0.735		1.985		2.105		2.270

1	**LIVELIHOOD ACTIVITIES**														
	1. REVOLVING FUND TO SHG,S														**10.000**
	2. FOR FEDERATION OF SHG'S														**2.000**
	3. FOR INDIVIDUAL ENERPRENEURS														**0.000**
	TOTAL				**0.000**		**0.000**		**0.000**		**0.000**		**0.000**		12.000
IX	**CONSOLIDATION PHASE**												**0.000**		**0.000**
	GRAND TOTAL		**100%**		**129.960**		**0.805**		**5.735**		**44.005**		**39.321**		**52.094**

CHAPTER IV

ACTIVITY WISE TOTAL ABSTRACT OF COST GRAM PANCHAYAT :- JANADESAR

STATE RAJASTHAN	**IWMP-2010-11**	**UNIT COST**	15000	Hac.
DISTRICT	JODHPUR	**Geographical Area**		
AGROCLIMATIC ZONE:IIB	II B	**Effective Area**	5000	Hac.
NAME OF THE BLOCK:	LUNI	**Total Arable land**	4518	
NAME OF WATERSHED	JODHPUR- 28	**1. Unirrigated**	5000	Hac.
CATEGORY OF WATERSHED	DESERT AREA	**Total Nonarable land**		
IRRIGATION PERCENTAGE		**1. Pasture**	0	Hac.
		2. Govt. / waste /OTHER LAND	482	Hac.
		TOTAL COST	750	Lac.

S. N.	ACTIVITY	Unit	Quantity	Unit Cost	Cost from Project Fund	Convergence Fund	Total Cost	Beneficiary contribution
1	2	3	4	5	6	8		9
AI.	ADMINISTRATIVE COST		10%	75.000	75.000		75.000	
II	MONITORING		1%	7.500	7.500		7.500	
III	EVALUATION		1%	7.500	7.500		7.500	
	TOTAL		12%	90.000	90.000		90.000	
BI	PREPARATORY PHASE ENTRY POINT ACTIVITY		4%	30.000	30.000		30.000	
II	Instituion & CAPACITY BUILDING		5%	37.500	37.500		37.500	
III	Preparation of DETAILED PROJECT REPORT		1%	7.500	7.500		7.500	
	TOTAL		10%	75.000	75.000		75.000	

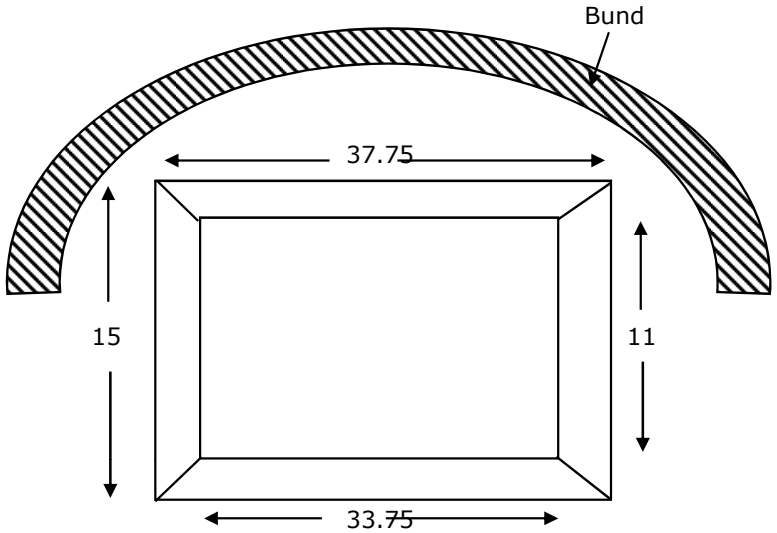
S. N.	ACTIVITY	Unit	Quantity	Unit Cost	Cost from Project Fund	Convergence Fund	Total Cost	Beneficiary contribution
VII	**watershed Development works(NRM)**		**56%**	**420.000**				
1	**ARABLE CONSERVATION WORK**							
(i)	Vegitative counter bund	Hac	1860	14020	218.712	42.060	260.772	15.310
(ii)	WHS (Tanka)	No.	290	70000	133.000	70.000	203.000	9.310
(iii)	Waste weir	No.	51	15800	8.058	0.000	8.058	0.564
(iv)	Gulley Control Structure Nallah Bunding	No.	10	11100	1.110	0.000	1.110	0.078
(v)	Others	No.	6	500000	20.000	10.000	30.000	1.400
	TOTAL				**380.880**	**122.060**	502.940	**26.662**
2	**NON ARABLE CONSERVATION WORK**							
(i)	V Ditch for PD	Ha.	110	19800	21.780	0.000	21.780	0.000
(ii)	Staggered Contour Trenches for PD	Ha.	21	12610	2.648	0.000	2.648	0.000
(iii)	Dug out Pond	No.	10	50000	5.000	0.000	5.000	0.000
(iv)	WHS (Tanka)	No.	10	82000	8.200	0.000	8.200	0.000
(v)	Nallah Bunding with ww	No.	0	0	0.000	0.000	0.000	0.000
3	**DRAINAGE LINE TREATMENT**		0	0	0.000	0.000	0.000	0.000
(i)	LSCD 'A'	No.	6	24900	1.494	0.000	1.494	0.000
(ii)	LSCD 'B'	No.	0	23000	0.000	0.000	0.000	0.000
(iii)	LSCD 'C'	No.	0	21100	0.000	0.000	0.000	0.000
(iv)	LSCD 'D'	No.	0	19200	0.000	0.000	0.000	0.000
(v)	LSCD 'E'	No.	0	17300	0.000	0.000	0.000	0.000
(vi)	Masonry Check Dam	No.	0	698500	0.000	0.000	0.000	0.000
	TOTAL				**39.122**	**0.000**	39.122	**0.000**
	TOTAL NRM				**420.002**	**122.060**	**542.062**	**26.662**

S. N.	ACTIVITY	Unit	Quantity	Unit Cost	Cost from Project Fund	Convergence Fund	Total Cost	Beneficiary contribution
VIII	**PRODUCTION MEASURES**		**10%**	**75.000**				
	For Arable Land							
1	Arable bund	**Hac**	1000	380	3.800	0.000	3.800	0.570
2	Agro Forestry	No.	1500	104	1.560	0.000	1.560	0.234
3	Horticulture Plantation with fencing & Tanka	No.	1000	295	2.950	0.000	2.950	0.443
4	Horticulture Plantation without fencing (Orchard)	No.	800	295	2.360	0.000	2.360	0.354
5	Vermi Compost	No.	10	36000	3.600	0.000	3.600	0.540
6	Crop Demonstration	No.	1800	500	4.000	5.000	9.000	0.600
7	Homested Kitchen Gerden	No.	200	500	1.000	0.000	1.000	0.150
8	Medicinal Plants	No.	800	200	1.600	0.000	1.600	0.240
	For Non-arable Land		0				0.000	
1	V Ditch for PD		110	2200	2.420	0.000	2.420	0.000
2	Staggered Contour Trenches for PD	**Hac**	21	900	0.189	0.000	0.189	0.000
3	Fencing of PD (by SW)		90	36380	32.742	0.000	32.742	0.000
4	Fencing of PD (by DCB)	mt	300	2542	7.626	0.000	7.626	0.000
	LIVESTOCK MANAGEMENT		0	0	0.000	0.000	0.000	
	Animal Health Camp		35	24000	6.000	2.400	8.400	1.600
	Vaccination		25450	5	0.773	0.500	1.273	0.040
	Purchase of Bull / Pada		3	25000	0.750	0.000	0.750	0.240
	A I		726	500	3.630	0.000	3.630	0.040
	Total Production Measures				**75.000**	**7.900**	**82.900**	**5.051**
1	LIVELIHOOD ACTIVITIES		**9%**	**67.500**				
	1. REVOLVING FUND TO SHG,S			**51.000**	**51.000**		51.000	
	2. FOR FEDERATION OF SHG'S			**10.000**	**10.000**		10.000	
	3. FOR INDIVIDUAL ENERPRENEURS			**6.500**	**6.500**		6.500	
TOTAL				**67.500**	**67.500**		67.500	
IX	**CONSOLIDATION PHASE**		**3%**	**22.500**	**22.500**		**22.500**	
	GRAND TOTAL		**100%**		**750.00**	**129.96**	**879.96**	**31.71**

Estimate of Dug out Pond

Outer Length	37.75	mtr
Inner Length	33.75	mtr
Outer Width	15	mtr
Inner Width	11	mtr
Depth	1	mtr

Upper Area 566.25
Lower Area 371.25



S. no.	Name of work	Item no.	No	Upper Area	Lower Area	Depth	Qty	Unit	Rate	Amount
1	Layout for Pond		2	97.5	1	1	195.00	Cu.m.	1.00	195.00
2	Excavation of earth in dry or moist and disposal of excavated material within initial lead of 50 m and lift 1.5 m									
2.1	In hard soil	2(c)	1	566.25	371.25	1	468.75	Cu.m.	100.00	46875.00
3	Stone Pitching 15-23 cm thick including supply of stones	124	1	52	1	0.2	10.40	Cu.m.	737.00	7664.80
										54734.80
								Add 3% contingency		1642.0
								Total		56376.8
								Say		**50000.0**

VEGETATIVE EARTHEN BUND IN ARABLE LAND

Abstract of Cost

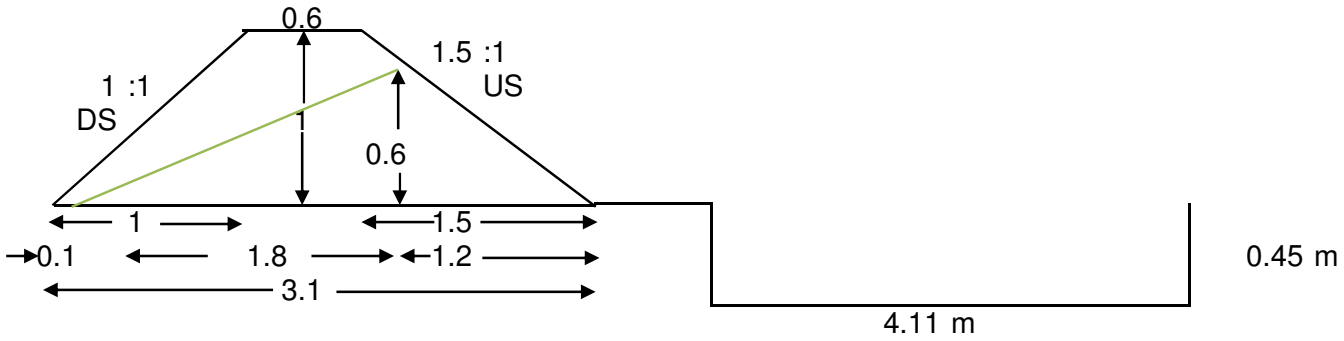
Total Area	900 ha
No. of Waste Weir	50

Name of work	Conservation Measure	Production Measure	Total Cost	
Earthen Bund	12618000	342000	12960000	
Waste Weir	790000	0	790000.00	
	13408000	342000	**13750000.00**	
Say			137.50	Lakh

Conservation Measure			13408000.00
Production Measure			342000.00

CROSS-SECTION OF VEGETATIVE BUND IN ARABLE LAND

Top width Based on seepage line check
Slope of seepage line 3:1



$$CS = \frac{(Tw+Bw)}{2} * Ht$$

CS = 1.85 Sq.m.

Average Cross section	1.85 Sq.m.
Length	1.00 m.
Quantity	1.85 Cu.m.

DESIGN OF VEGETATIVE BUND IN ARABLE LAND

V.I = 0.305 (XS+Y)

0.305(0.8 x 2+1.0)

V.I = 0.549

V.I	Vertical interval	
X=	Rain Fall Factor	0.8
Y=	Factor due to soil infiltration & Crop cover	1
S=	Percent slope	1

$$He = \frac{(Re \times VI)^{1/2}}{(50)^{1/2}}$$

He= 0.6199 Say 0.60 m

He	Depth of impounding	
Re	24Hour rainfall excess in Cms. for 10 year recurrence interval	35
V.I	Vertical interval	0.549

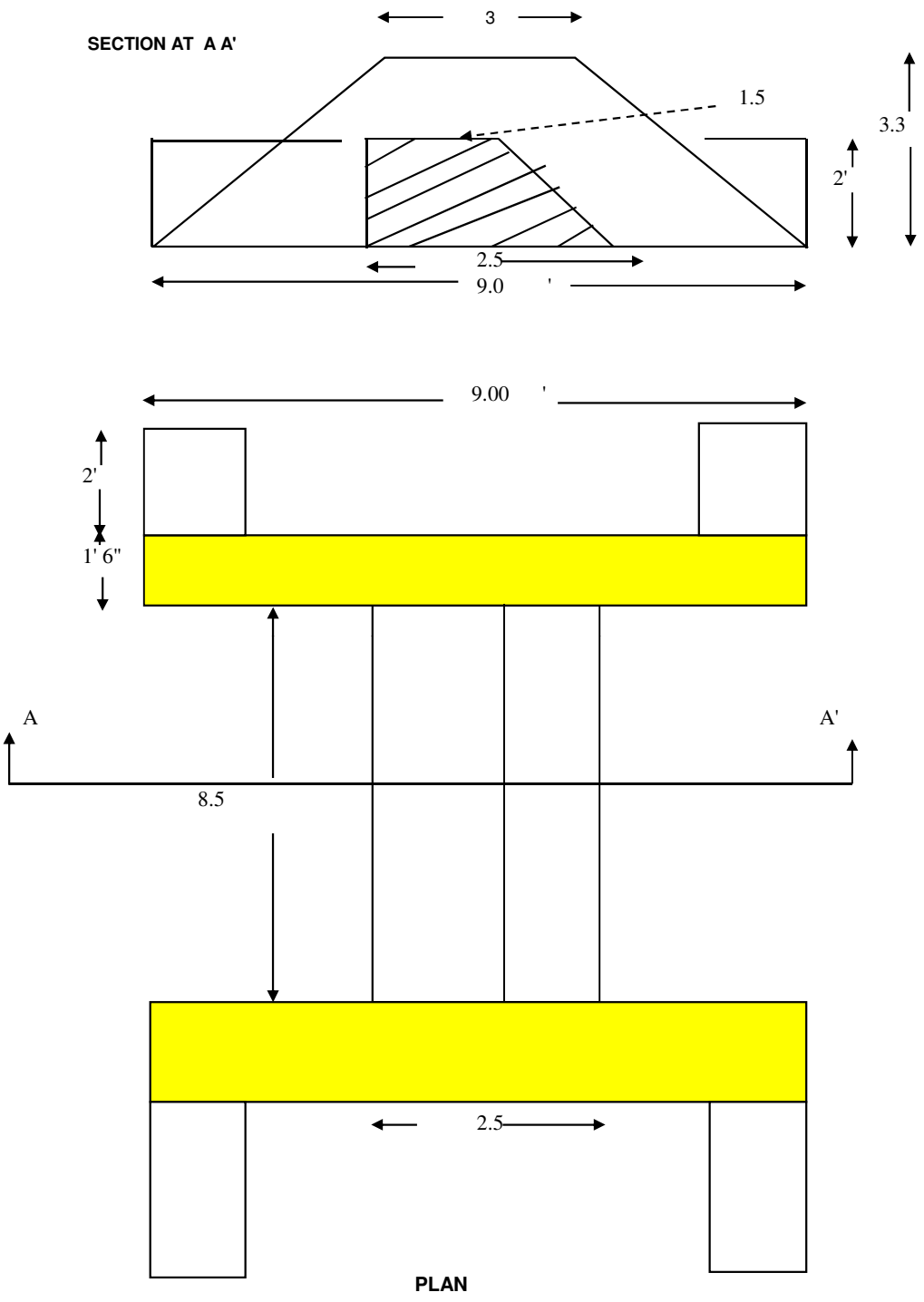
Total Height of Bund	=	0.6	+ 0.4	1.00	m
Top width of Bund	=			0.6	m
Bottom width of Bund	=			3.1	m

$$\text{Cross section of bund} = \frac{(\text{Top width of Bund} + \text{Bottom width of Bund})}{2} \times \text{Height}$$

$$\text{X Section} = \frac{(0.60+3.1)}{2} \times 1.00$$

X Section= 1.85 Sq.m.

Drawing of Waste Weir



Construction of Waste Weir

Construction of Waste Weir

DETAILS OF WORK AND ABSTRACT OF COST

S. No.	Item	No.	Detail			Quantity		Unit	Rate		Amount	
			L	B	D/H	Feet	Metre		Lab	Total	Lab	Total
1	Excavation in hard soil ordinary muram or earth mixed with bajri and kankar or boulder dry or moist & disposal of excavated material within initial lead of 30 m and lift of 1.5 m including dressing etc. complete.	2	9.5	2	2	76						
		2	2	2	2	16						
		1	8	2.5	2	40						
						0						
						0						
						132	3.7356	cum.	100.00	100.00	373.56	373.56
2	Cement concrete well mixed in cement mortar (1 : 4 : 8) laid in position complete including curing.Aggregate size upto 50 mm, HB	2	9.5	2	0.5	19						
		2	2	2	0.5	4						
		1	8	2.5	0.5	10						
						0						
						0						
						33	0.9339	cum.	363.10	1876.00	339.099	1752
3	Random rubble stone masonary in cement sand mortar (1 : 6)For foundation	2	9.5	1.75	1.5	49.875						
		2	2	1.75	1.5	10.5						
		1	8	2.5	1.5	30						
						0						
						90.375	2.55761	cum.	560.80	2013.00	1434.31	5148.47
4	Random rubble stone masonary in cement sand mortar (1 : 6) For superstructure	2	6	1.5	3.25	58.5						
		4	2	1.5	2	24						
		1	8.5	2	1	17						
	9 3											
						99.5	2.81585	cum.	747.30	2202.00	2104.28	6200.5
5	Dry Stone kharanja (15 to 30 cm) Item 140	1	8.5	3	0.3	7.65						
						0						
						7.65	0.71069	cum.	238.50	737.00	169.498	523.775

6	Cement plaster including smooth finishing in cement mortar (1:6) 25 mm thick.	2	13	1.5	1	39						
		4	2	1.5	1	12						
		1	8.5	1.5	1	12.75						
		1	8.5	1	1	8.5						
						72.25	6.71203	sqm.	92.90	153.00	623.547	1026.94
7	Ruled pointing in cement mortar (1:3)	2	6	3.25	1	39						
		4	2	2	1	16	1.4864	sqm.				
		1	8.5	1.25	1	10.625						
						65.625	6.09656	sqm.	55.10	66.00	335.921	402.373
											5380.22	15427.6

	Quantity	Rate	Amount
Skilled labour	5.96	325	1937
Unskilled labour	14.64	135	1976
Water			1467
			5380

Cement 2

Cement 2

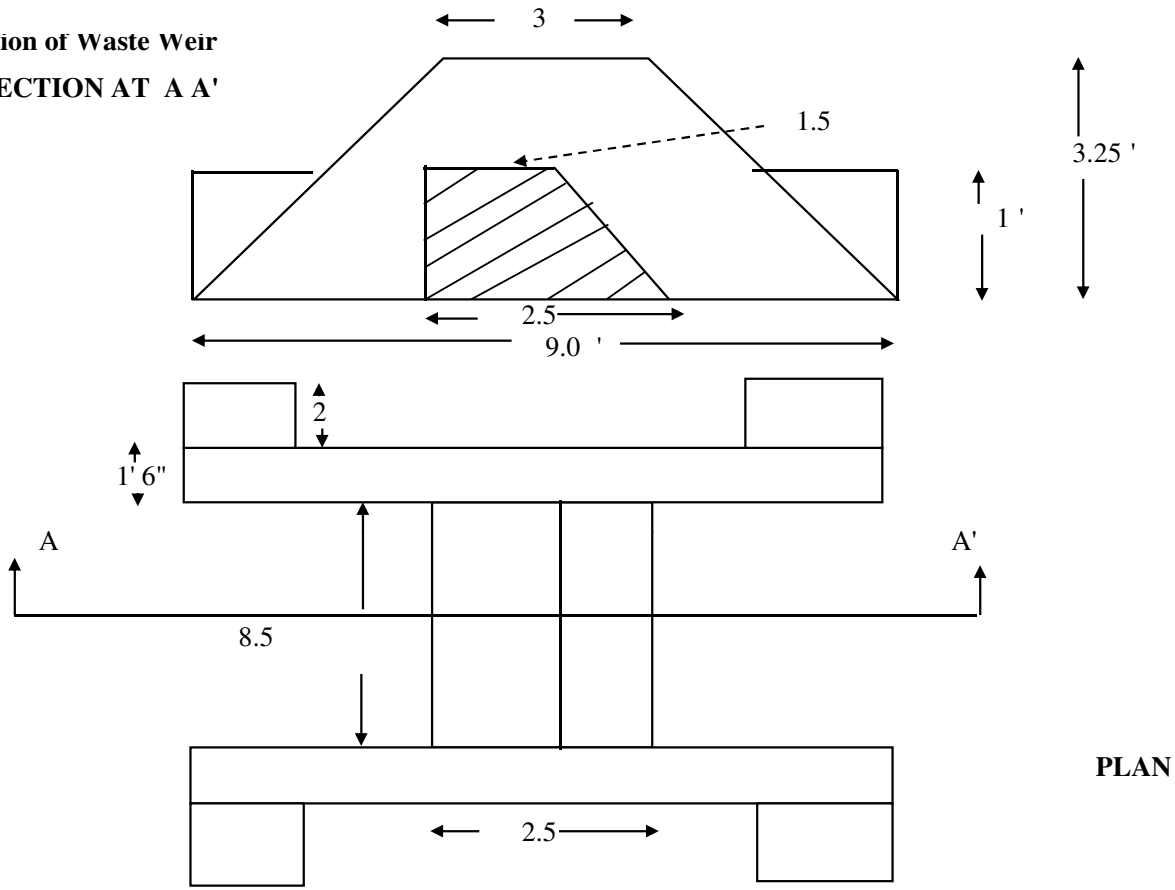
Amount		
Labour	A	5380.22
Material	B	10047.4
Total	C	15427.6
Add contingency		390
Total (C+D)		15817.6
	Say	**15800**

S. No	Material	Unit	Quantity	Rate	Amount
1	Sand	Cu.m.	2.272080	380	863.39
2	Stone Agg of 40 mm nominal size	Cu.m.	0.8	350	294.179
3	Stone	Cu.m.	5.4	575	3089.74
4	Cement	Kg	635.58	220	2796.56
					7248.55
	Other				2798.85
			Total		10047.4

12.712 Bag

Construction of Waste Weir

CROSS SECTION AT A A'



PLAN

ESTIMATE OF VEGETATIVE BUND IN ARABLE LAND

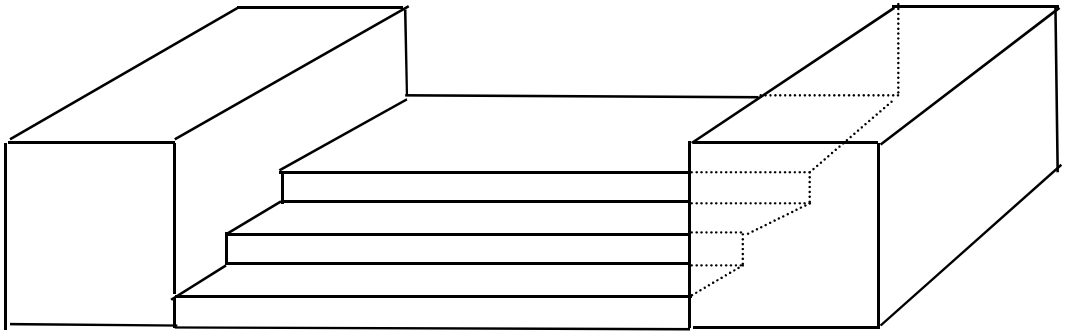
Estimate of One ha.

Length per ha. = 80 mtr

S. no	Name of work	Item no.	No	Length	Width (TW+BW) /2	Hight	Qty	Unit	Rate	Amount
1	Earth work Excavation for making of bund, laying in layers of 15 cm, breaking of clods, sorting of grass pebbles, disposal of excavated material up to 1.5 mt Hight and lead up to 50 m including dressing and compaction	119(B)	1	80	1.85	1	148.00	Cum	92.00	13616.00
2	Sowing of seeds on the constructed bund in three rows	114	3	80			240	meter	0.60	144.00
3	Supply of Stylo/Dhaman seed @ 4 gm / m in three rows	CAZRI Rate	3	80			0.96	Kg	200.00	192.00
										13952.0
									Add 3% contingency	418.56
									Total	14370.6
									Say	**14400.0**

Conservation Measure	14020
Production Measure	380

DESIGN OF LOOSE STONE CHECK DAM (LSCD)

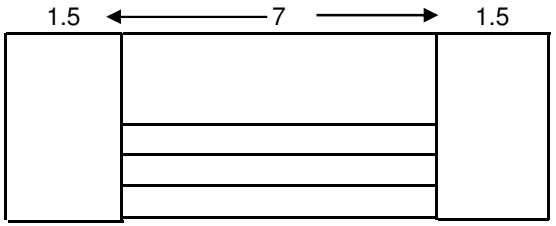


Length of Head wall	No of Lscd	Per Unit Cost	Total Cost
7	95	24900	2365500
6	140	23000	3220000
5	150	21100	3165000
4	150	19200	2880000
3	150	17300	2595000
	685		14225500

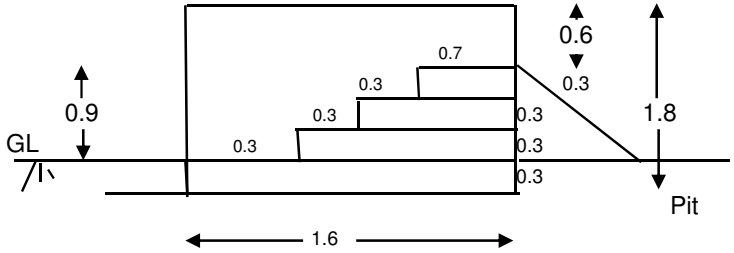
ESTIMATE OF LOOSE STONE CHECK DAM (LSCD)

Head Wall Length = 7 m

Plan



Elevation

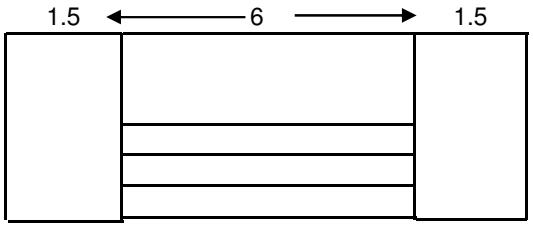


S. no.	Name of work	Item no.	No	Length	Width	Height	Qty	rate	amount
1	Earth work Excavation in hard soil up to 1.5 mt Height and deposited excavated material lead op to 150	2B	1	7.0	1.6	0.3	3.4	100.0	336.0
		2B	2	1.5	1.6	0.3	1.4	100.0	144.0
2	Dry stone masonry		1	7.0	1.6	0.3	3.4		
			1	7.0	1.3	0.3	2.7		
			1	7.0	1.0	0.3	2.1		
		21B	1	7.0	0.7	0.3	1.5		
			1	1.5	1.6	1.8	4.3		
			1	1.5	1.6	1.8	4.3		
							18.3	1293.0	23661.9
									24141.9
				Add 3% Contingency					**724.3**
						Total			**24866.2**
						Say			**24900.0**

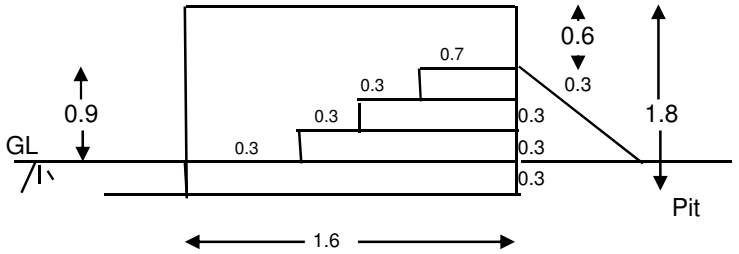
ESTIMATE OF LOOSE STONE CHECK DAM (LSCD)

Head Wall Length 6 m

Plan



Elevation

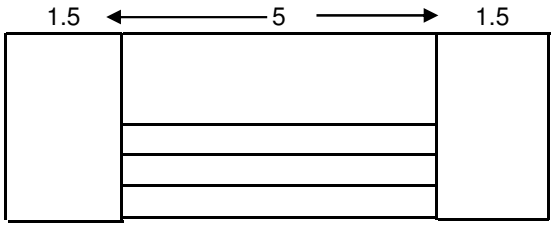


S. no.	Name of work	Item no.	No	Length	Width	Height	Qty	rate	amount
1	Earth work Excavation in hard soil up to 1.5 mt Height and deposited excavated material lead op to 150	2B	1	6.0	1.6	0.3	2.9	100.0	288.0
		2B	2	1.5	1.6	0.3	1.4	100.0	144.0
2	Dry stone masonry	21B	1	6.0	1.6	0.3	2.9		
			1	6.0	1.3	0.3	2.3		
			1	6.0	1.0	0.3	1.8		
			1	6.0	0.7	0.3	1.3		
			1	1.5	1.6	1.8	4.3		
			1	1.5	1.6	1.8	4.3		
							16.9	1293.0	21877.6
									22309.6
					Add 3% Contingency				669.3
						Total			**22978.8**
						Say			**23000.0**

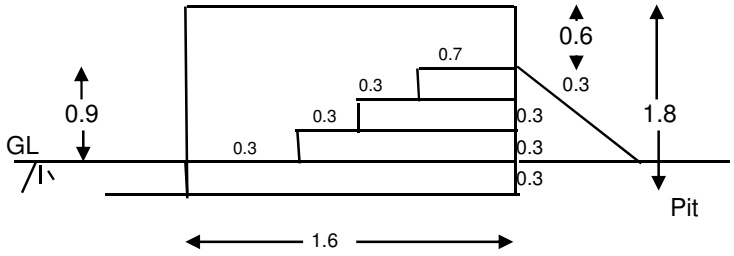
ESTIMATE OF LOOSE STONE CHECK DAM (LSCD)

Head Wall Length = 5 m

Plan



Elevation

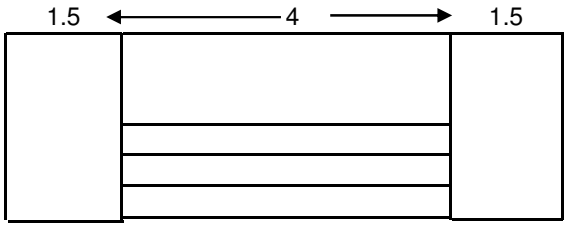


S. no.	Name of work	Item no.	No	Length	Width	Height	Qty	rate	amount
1	Earth work Excavation in hard soil up to 1.5 mt Height and deposited excavated material lead op to 150	2B	1	5.0	1.6	0.3	2.4	100.0	240.0
		2B	2	1.5	1.6	0.3	1.4	100.0	144.0
2	Dry stone masonry	21B	1	5.0	1.6	0.3	2.4		
			1	5.0	1.3	0.3	2.0		
			1	5.0	1.0	0.3	1.5		
			1	5.0	0.7	0.3	1.1		
			1	1.5	1.6	1.8	4.3		
			1	1.5	1.6	1.8	4.3		
							15.5	1293.0	20093.2
									20477.2
						Add 3% Contingency			614.3
						Total			**21091.5**
						Say			**21100.0**

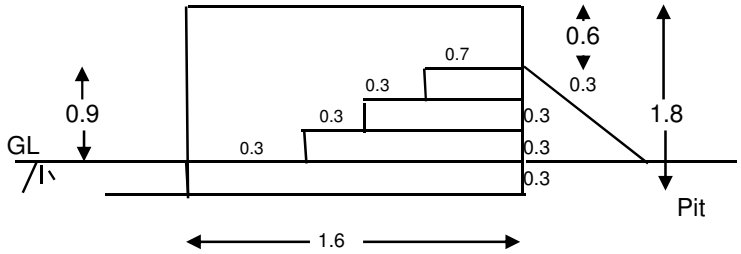
ESTIMATE OF LOOSE STONE CHECK DAM (LSCD)

Head Wall Length = 4 m

Plan



Elevation

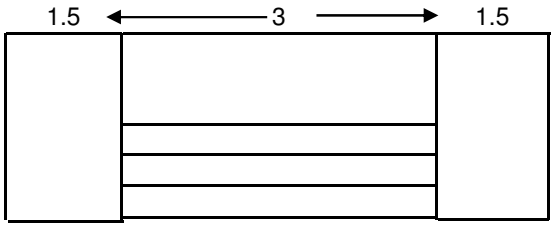


S. no.	Name of work	Item no.	No	Length	Width	Height	Qty	rate	amount
1	Earth work Excavation in hard soil up to 1.5 mt Height and deposited excavated material lead op to 150	2B	1	4.0	1.6	0.3	1.9	100.0	192.0
		2B	2	1.5	1.6	0.3	1.4	100.0	144.0
2	Dry stone masonry	21B	1	4.0	1.6	0.3	1.9		
			1	4.0	1.3	0.3	1.6		
			1	4.0	1.0	0.3	1.2		
			1	4.0	0.7	0.3	0.8		
			1	1.5	1.6	1.8	4.3		
			1	1.5	1.6	1.8	4.3		
							14.2	1293.0	18308.9
									18644.9
					Add 3% Contingency				559.3
								Total	**19204.2**
								Say	**19200.0**

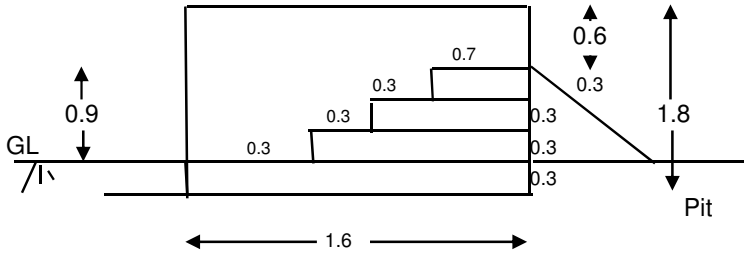
ESTIMATE OF LOOSE STONE CHECK DAM (LSCD)

Head Wall Length = 3 m

Plan



Elevation



S. no.	Name of work	Item no.	No	Length	Width	Height	Qty	rate	amount
1	Earth work Excavation in hard soil up to 1.5 mt Height and deposited excavated material lead op to 150	2c	1	3.0	1.6	0.3	1.4	100.0	144.0
		2c	2	1.5	1.6	0.3	1.4	100.0	144.0
2	Dry stone masonry	21c	1	3.0	1.6	0.3	1.4		
			1	3.0	1.3	0.3	1.2		
			1	3.0	1.0	0.3	0.9		
			1	3.0	0.7	0.3	0.6		
			1	1.5	1.6	1.8	4.3		
			1	1.5	1.6	1.8	4.3		
							12.8	1293.0	16524.5
									16812.5
					Add 3% Contingency				504.4
								Total	**17316.9**
								Say	**17300.0**

MODEL ESTIMATE OF NALLAH BUNDING

S. no.	Name of work	Item no.	No	X Sec	Length	Depth	Qty	Unit	Rate	Amount
1	Excavation of earth in dry or moist and disposal of excavated material within initial lead of 50 m and lift 1.5 m									
1.1	In Disintegrated rock	2(l)	1	4.84	13	1	62.89	Cu.m.	146.00	9181.58
2	Stone Pitching 15-23 cm thick including supply of stones	124	1	0.8	13	0.21	2.18	Cu.m.	737.00	1609.61
										10791.18
								Add 3% contingency		323.7
								Total		11114.9
								Say		**11100.0**

Silvi Pasture Development

Abstract of Cost

V-Ditches

DCB Fencing

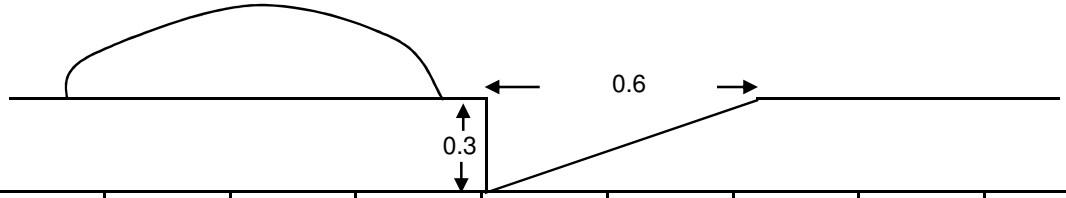
Area = 10 ha.

Name of work	Conservation Measure	Production Measure	Total Cost
V. Ditch	170500	22000	192500.00
Plantation	0	525500	525500.00
Fencing DCB	0	294000	294000.00
Total	170500	841500	**1012000.00**
Say			10.12 Lakh

Estimate for V.Ditch in Pasture

Area	Length	Width	Interval	No of row	Length
Ha	mtr	mtr	mtr		mtr
10	1000	100	6	167	16667

Dhaman require on V-ditch =0.002 kg/m 33 Kg
Spacing 5 mtr
Dhaman require between v-ditches =10 kg/ha 100 Kg



S. no.	Name of work	Item no.	No	Length	Width	Height	Qty	Unit	Rate	Amount
1	Jungal clearance	100	1	250	50	1	12500	Sqm	0.6	7500
2	Excavation in hard soil or earth mixed with bajri and kankar or boulder dry or moist & disposal of excavated material within initial lead of 30 m and lift of 1.5 m including dressing etc. complete.	2(c)	0.5	16667	0.60	0.3	1500.00	Cum	100.00	150000.0
			Kg							
3	Making of balls of grass seed(1:1:2:2) 1 grass seed :1 FYM : 2 sand : 2 clay	3/1/9 forest	133				133.00	Per 6 kg material	17.00	376.8
4	Sowing of balls of grass seed by dibbling method at 30 cm spacing	3/2/9 forest	133				133	Per 6 kg material	109.00	2416.2
5	Cost of seed			CAZARI Jodhpur			133	Kg	200.00	26600
										186893.0
								Add 3% contingency		5606.8
								Total		192499.8
								Say		**192500.0**

Conservation Measure	170500.0
Production Measure	22000.0

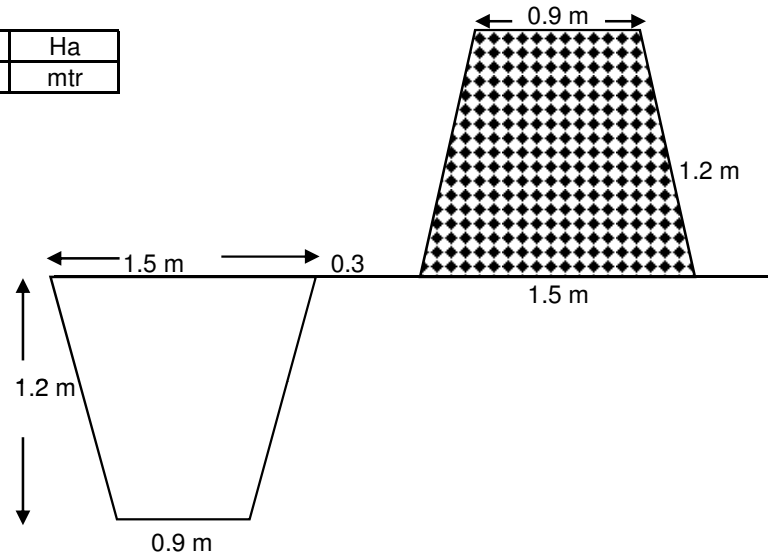
Model estimate of Plantation Work in Pasture land

Plant to pant Spacing	4 m	**No of plant**	**4166.67**
Row to row Spacing	6 m	**Gap filling 20%**	**833.3333**
Available Area	**10** Ha	**Total no of Plants**	**5000**

S.No	Description	Item no	Total		Length	Width	Height	Qty	Unit	Rate	Amount	(Amount for 10 ha.)
			Year	No./Year								
1	Digging of pit(kankar boulder soil)	112		1	0.45	0.45	0.45	1	No	14.60	14.60	73000
2	Cost of Plant	As per forest						1	No.	5.00	5.00	25000
3	Planting of plant	113(A)						1	No.	3.20	3.20	16000
4	Making thavla	117A)	2	1				1	No.	1.90	3.80	19000
5	Weeding & Hoeing	116	3	1				3	No.	1.30	3.90	19500
6	Insecticide treatment	Market rate	3		0.03 ml			0	Ltr	300.00	2.70	13500
7	Watering of plants	115	3	5				15	no	1.90	28.50	142500
8	Transportation of water 5 Km	124	3	5				225	/1000Ltr	42.20	9.50	47475
9	Watch & ward	Minimum wages	3	12				36	Month	3528.00	25	127008
10	Transportation of plants from nursery to planting site	LS	1	1				1		1.00	1.00	5000
11	Pruning of plants	forest bsr	1	1				1.00	/ plants	0.89	0.89	4450
12	Protection of plants from frost / loo using grass or other locally available material by making jhonpa of 0.6 m	forest bsr	1	1				1.00	/ plants	3.56	3.56	17800
	TOTAL											**510233**
											Contingency 3%	15307
											Grand total	**525540**
											Say	**525500.0**

Estimate of Ditch Cum Bund Fencing

Area	10	Ha
Length	1580	mtr



S. no.	Name of work	Item no.	No	Length	Width	Hight	Qty	Unit	Rate	Amount
1	Layout for DCB		2	1580	1	1	3160.00	Cu.m.	1.00	3160.00
2	Excavation of earth in dry or moist and disposal of excavated material within initial lead of 50 m and lift 1.5 m									
2.1	In hard soil 50%	2(2)	1	790	1.2	1.2	1137.60	Cu.m.	100.00	113760.00
2.2	In Disintegrated rock 50%	2(3)	1	790	1.2	1.2	1137.60	Cu.m.	146.00	166089.60
3	Sowing of seed on ridge	130	1	790	1	1	790.00	Rm	0.60	474.00
	Cost of seeds	LS					5.00	Kg	200.00	1000.00
										284483.60
								Add 3% contingency		8534.5
								Total		294018.1
								Say		**294000.0**

Silvi Pasture Development

Abstract of Cost

Staggered Contour Trenches

DCB Fencing

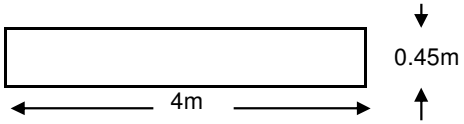
Area = 10 ha.

Name of work	Conservation Measure	Production Measure	Total Cost
Staggered Contour Trenches	117100	9000	126100.00
Agro Forestry	0	363800	363800.00
Fencing DCB	0	291500	291500.00
Total	117100	664300	**781400.00**
Say			7.81 Lakh

Model Estimate

Staggered Contour Trenches

Particulars	Value	Unit
Length	4	m
Width	0.45	m
Depth	0.45	m
No. of trenches per ha	125	no.



Area = **10.00 ha**

S.no	Activity	Item	No	Length	Width	Hight	Qty	Unit	Rate	Amount
1	Layout for Trenches		1	5000			5000	meter	1	5000
2	Earth work Excavation in hard soil up to 1.5 mt Hight and deposited excavated meterial lead op to 50 m									
2.1	In hard soil 50%	2(2)	1	2500	0.45	0.45	506.25	cum.	92	46575
2.2	In Disintegrated rock 50%	2(3)	1	2500	0.45	0.45	506.25	cum.	130	65812.5
3	Sowing of seeds on the constructed ridge in two rows		2	5000			10000	meter	0.6	6000
4	Supply of Stylo/Dhaman seed @ 4 gm / m in two lines		2	5000			20	Kg	200	4000
										122387.5
								Add 3% contengecy		3671.625
										126059.13
								Say		**126100.0**

Conservation Measure	117100
Production Measure	9000

Model estimate of Plantation Work in Pasture land

Available Area = **10 Ha** **No of plant** **2500**

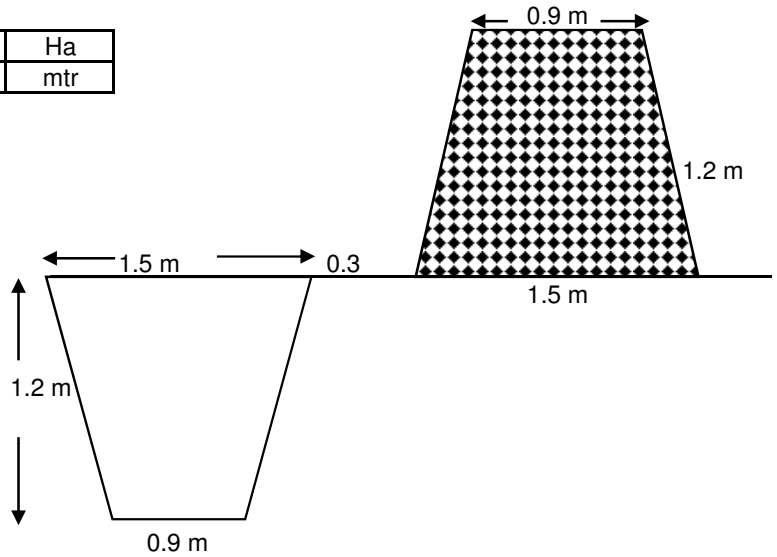
No.of Staggered Contour Trenches = **1250** **Gap filling 20%** **500**

Total no of Plants **3000**

S.No	Description	Item no	Total		Length	Width	Height	Qty	Unit	Rate	Amount
			Year	No./Year							
1	Digging of pit(kankar boulder soil)	112 ('C)		1	0.45	0.45	0.45	1	No	14.6	14.60
2	Cost of Plant	As per forest						1	No.	5	5.00
3	Planting of plant	113(A)						1	No.	4	4.00
4	Making thavla	117(A)	2	1				2	No.	2.6	5.20
5	Weeding & Hoeing	116	3	1				3	No.	1.3	3.90
6	Insecticide treatment	Market rate	3		0.03 ml			0.009	Ltr	300	2.70
7	Watering of plants	115	3	5				15	no	1.9	28.50
8	Transportation of water 5 Km	108	3	5				225	/1000Ltr	42.2	9.50
9	Watch & ward	Minimum wages	3	12				36	Month	3240	39
10	Transportation of plants from nursery to planting site	LS	1	1				1		1	1.00
11	Pruning of plants	forest bsr	1	1				1.00	/ plants	0.89	0.89
12	Protection of plants from frost / loo using		1	1				1.00	/ plants	3.56	3.56
	Adding for Barbed wire fencing	L.S.									
	TOTAL										
									Contingency 3%		
									Grand total		
										Say	

Estimate of Ditch Cum Bund Fencing

Area	10	Ha
Length	1580	mtr



S. no.	Name of work	Item no.	No	Length	Width	Hight	Qty	Unit	Rate	Amount
1	Layout for DCB		2	1580	1	1	3160.00	Cu.m.	0.70	2212.00
2	Excavation of earth in dry or moist and disposal of excavated material within initial lead of 50 m and lift 1.5 m									
2.1	In hard soil 50%	2(2)	1	790	1.2	1.2	1137.60	Cu.m.	100.00	113760.00
2.2	In Disintegrated rock 50%	2(3)	1	790	1.2	1.2	1137.60	Cu.m.	146.00	166089.60
3	Sowing of seed on ridge	114	1	790	1	1	790.00	Rm	0.60	474.00
	Cost of seeds	LS					5.00	Kg	50.00	250.00
										282785.60
								Add 3% contingency		8483.6
								Total		291519.2
								Say		**291500.0**

Silvi Pasture Development

Abstract of Cost

Staggered Contour Trenches

Stone Wall Fencing

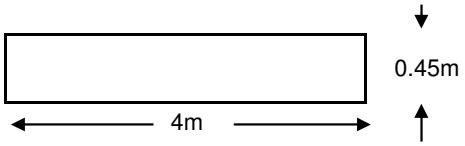
Area = 10 ha.

Name of work	Conservation Measure	Production Measure	Total Cost
Staggered Contour Trenches	115800.072	9000	124800.00
Plantation	0	369700	369700.00
Stone wall Fencing	0	477100	477100.00
Total	115800.072	855799.928	**971600.00**
Say			9.72 Lakh

Model Estimate

Staggered Contour Trenches

Particulars	Value	Unit
Length	4	m
Width	0.45	m
Depth	0.45	m
No. of trenches per ha	125	no.
Dhaman require between SCT =7 kg/ha	60	Kg
Dhaman require on SCT =0.002 kg/m	10	Kg



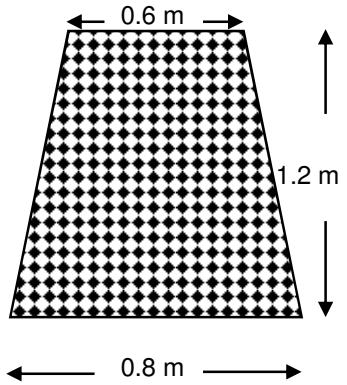
Area = **10.00 ha**

S.no	Activity	Item	No	Length	Width	Hight	Qty	Unit	Rate	Amount
1	Layout for Trenches		1	5000			5000	meter	0.7	3500
2	Earth work Excavation in hard soil up to 1.5 mt Hight and deposited excavated meterial lead op to 50 m									
2.1	In hard soil 50%	2(2)	1	2500	0.45	0.45	506.25	cum.	92	46575
2.2	In Disintegrated rock 50%	2(3)	1	2500	0.45	0.45	506.25	cum.	130	65812.5
			Kg							
3	Making of balls of grass seed(1:1:2:2) 1 grass seed :1 FYM : 2 sand : 2 clay	3/1/9 forest	70				70	Per 6 kg material	17	1190
4	Sowing of balls of grass seed by dibbling method at 30 cm spacing	3/2/9 forest	70				70	Per 6 kg material	109	7630
										121207.5
								Add 3% contengecy		3636.225
										124844
								Say		**124800**

Conservation Measure	115800
Production Measure	9000

Estimate of Stone Wall Fencing

Area	10	Ha
Length	1580	mtr



S. no.	Name of work	Item no.	No	Length	Width	Hight	Qty	Unit	Rate	Amount
1	Stone wall fencing Random rubble loose stone fencing	127	1	1580	0.7	1.2	1327.2	Cu.m.	349	463192.8
										463192.8
								Add 3% contingency		13895.8
								Total		477088.6
								Say		**477100**

Model estimate of Plantation Work in Pasture land

Available Area = **10 Ha** **No of plant** **2500**

No.of Staggered Contour Trenches = **1250** **Gap filling 20%** **500**

Total no of Plants **3000**

S.No	Description	Item no	Total		Length	Width	Height	Qty	Unit	Rate	Amount	(Amount for 10 ha.)
			Year	No./Year								
1	Digging of pit(kankar boulder soil)	112 ('C)		1	0.45	0.45	0.45	1	No	13.4	13.40	40200
2	Cost of Plant	As per forest						1	No.	5	5.00	15000
3	Planting of plant	113(A)						1	No.	4	4.00	12000
4	Making thavla	117(A)	2	1				2	No.	2.6	5.20	15600
5	Weeding & Hoeing	132	3	1				3	No.	1.9	5.70	17100
6	Insecticide treatment	Market rate	3		0.03 ml			0.009	Ltr	300	2.70	8100
7	Watering of plants	131	3	5				15	no	1.9	28.50	85500
8	Transportation of water 5 Km	124	3	5				225	/1000Ltr	32.75	7.37	22106.25
9	Watch & ward	Minimum wages	3	12				36	Month	3528	42	127008
10	Transportation of plants from nursery to planting site	LS	1	1				1		1	1.00	3000

11	Pruning of plants	forest bsr	1	1				1.00	/ plants	0.89	0.89	2670
12	Protection of plants from frost / loo using grass or other locally available material by making jhonpa of 0.6 m dia. Of plant height and covering the plant.		1	1				1.00	/ plants	3.56	3.56	10680
	TOTAL											**358964**
										Contingency 3%		10769
										Grand total		**369733**
											Say	**369700**

Silvi Pasture Development Work

Abstract of Cost

V-Ditches Area = 10 ha.

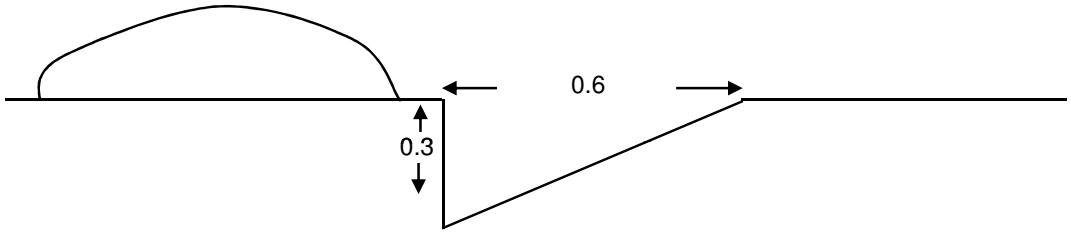
Stone wall Fencing

Name of work	Conservation Measure	Production Measure	Total Cost
V. Ditch	198000	2200	200200.00
Agro Forestry	0	521800	521800.00
Fencing of Stone wall	0	485300	485300.00
Total	198000	1009300	**1207300.00**
Say			12.07 Lakh

Estimate of V.Ditch in Pasture Development

Area	Length	Width	Interval	No of row	Length
Ha	mtr	mtr	mtr		mtr
10	1000	100	6	167	16667

Dhaman require on V-ditch =0.002 kg/m	33	Kg
Spacing	5	mtr
Dhaman require between v-ditches =10 kg/ha	100	Kg



S. no.	Name of work	Item no.	No	Length	Width	Hight	Qty	Unit	Rate	Amount
1	Jungal clearance	107	1	500	50	1	25000	Sqm	0.6	15000
2	Excavation in hard soil or earth mixed with bajri and kankar or boulder dry or moist & disposal of excavated material within initial lead of 30 m and lift of 1.5 m including dressing etc. complete.	2(B)	0.5	16667	0.60	0.3	1500.00	Cum	100	150000.0
			Kg							
3	Making of balls of grass seed(1:1:2:2) 1 grass seed :1 FYM : 2 sand : 2 clay	3/1/9 forest	133				133.00	Per 6 kg material	17	376.8

4	Sowing of balls of grass seed by dibbling method at 30 cm spacing	3/2/9 forest	133				133	Per 6 kg material	109	2416.2
5	Cost of seed		CAZARI Jodhpur				133	Kg	200	26600

	194393.0
Add 3% contingency	5831.8
Total	200224.8
Say	**200200.0**

Conservation Measure	198000
Production Measure	2200

Model estimate of Plantation Work in Pasture land

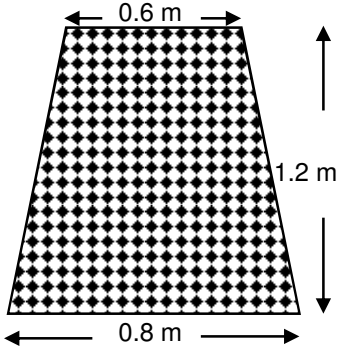
Plant to pant Spacing	4 m	**No of plant**	**4166.67**
Row to row Spacing	6 m	**Gap filling 20%**	**833.33**
Available Area	**10** Ha	**Total no of Plants**	**5000**

S.No	Description	Item no	Total		Length	Width	Height	Qty	Unit	Rate	Amount	(Amount for 10 ha.)
			Year	No./Year								
1	Digging of pit(kankar boulder soil)	112 ('C)		1	0.45	0.45	0.45	1	No	14.6	14.60	73000.00
2	Cost of Plant	As per forest						1	No.	5	5.00	25000.00
3	Planting of plant	113(A)						1	No.	3.2	3.20	16000.00
4	Making thavla	117(B)	2	1				1	No.	2.6	5.20	26000.00
5	Weeding & Hoeing	132	3	1				3	No.	1.3	3.90	19500.00
6	Insecticide treatment	Market rate	3		0.03 ml			0	Ltr	300	2.70	13500.00
7	Watering of plants	131	3	5				15	no	1.9	28.50	142500.00
8	Transportation of water 5 Km	124	3	5				225	/1000Ltr	32.75	7.37	36843.75
9	Watch & ward	Minimum wages	3	12				36	Month	3528	25	127008.00

10	Transportation of plants from nursery to planting site	LS	1	1				1		1	1.00	5000.00
11	Pruning of plants	forest bsr	1	1				1.00	/ plants	0.89	0.89	4450.00
12	Protection of plants from frost / loo using grass or other locally available material by making jhonpa of 0.6 m dia. Of plant height and covering the plant.		1	1				1.00	/ plants	3.56	3.56	17800.00
	TOTAL											506601.75
									Contingency 3%			15198.05
									Grand total			521799.80
											Say	**521800**
										UNIT COST		**104.36**

Estimate of Stone Wall Fencing

Area	10	Ha
Length	1580	mtr



S. no.	Name of work	Item no.	No	Length	Width	Hight	Qty	Unit	Rate	Amount
1	Stone wall fencing Random rubble loose stone fencing	111	1	1580	0.7	1.2	1327.2	Cu.m.	355	471156

	471156.0
Add 3% contingency	14134.7
Total	485290.7
Say	**485300**

Abstract of cost of Tanka with Plantation work

For General & OBC Category

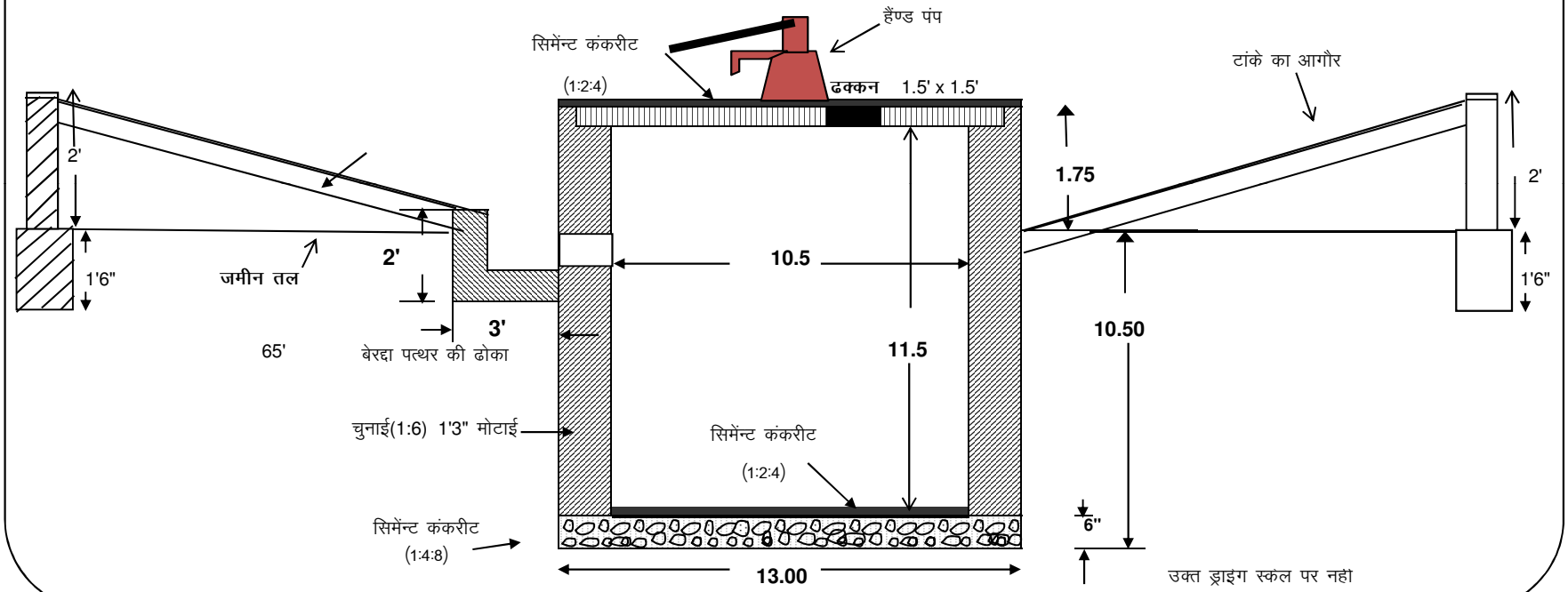
Sr. no	Name of work	Estimated cost	Project 90%	Contribution 10%	Total	Measures
1	Cost of tanka	82000	73800	8200	82000	Conservation measure for water harvesting
			60%	**40%**		
2	Cost of Horticulture plantation	5900	3540	2360	5900	Production
3	Barbed Wire Fencing	19500	11700	7800	19500	Production
	Total 2+3	25400	15240	10160	25400	
	Total Cost of tanka unit	**107400**	**89040**	**18360**	**107400**	
	No. of Farmers					
	1	***107400***	***89040***	***18360***	***107400***	

For SC/ST/ BPL

Sr. no	Name of work	Estimated cost	Project 95%	Contribution 5%	Total	Measures
1	Cost of tanka	82000.00	77900	4100	82000	Conservation measure for water harvesting
			80%	**20%**		
2	Cost of Horticulture plantation	5900	4720	1180	5900	Production
3	Barbed Wire Fencing	19500	15600	3900	19500	Production
	Total 2+3	25400	20320	5080	25400	
	Total Cost of tanka unit	**107400.00**	**98220.00**	**9180.00**	**107400.00**	
	No. of Farmers					
	1	***107400***	***98220***	***9180***	***107400***	
				Total Cost	***214800***	

1	**Conservation Measure**	**164000**
2	**Production Measure**	**50800**
a	**From project**	**35560**
b	**From Contribution**	**15240**
3	**Total Contribution**	**27540.00**

टॉके की ड्राईग


हैण्ड पंप
सिमेंन्ट कंकरीट
(1:2:4)
ढक्कन 1.5' x 1.5'
टांके का आगौर
2'
1.75
2'
1'6"
जमीन तल
2'
10.5
1'6"
65'
3'
बेरद्दा पत्थर की ढोका
11.5
10.50
चुनाई(1:6) 1'3" मोटाई
सिमेंन्ट कंकरीट
(1:2:4)
सिमेंन्ट कंकरीट
(1:4:8)
6"
13.00
उक्त ड्राइंग स्कल पर नहो

Model estimate Barbed wire fencing

Area 0.17 Ha

Length 164.9 mtr. Spacing 4 m
Say 165 mtr.
No of post As per length= Length/spacing 41.00
Additional post require after every 10 Posts 4
45.00

Length of Post 7.5 Feet 2.286 m
Width of post 1 Feet 0.3 m
Quantity of one post 0.6858 Sq.m

S.No	Description	Item no.	No	Length of single wire	Total length	Kg/mtr	Quantity	Unit	Rate	Amount
1	Supply of barbed wire fencing 14 gauge		5	165	825	0.08	66	Kg	46.00	3036
2	Supply of Jodhpur stone slab for post		45				30.86	Sq.m	450.00	13887.45
3	Rehandling of posts to pit	LS	45				45.00	No	15.00	675.00
4	fixing of post in 45 cm. deep pit	2B	45	0.45	0.3	0.45	2.73	Cum	100.00	273.38
5	Cost of binding wire						6	Kg	45.00	270.00
6	Stretching of barbed wire and fixing it with the post with thin wire	5.5/forest					825	mtr	0.92	759
7	interlacing the barbed wire with locally available bushy material at a spacing of 15 cms	5.6/forest			45		45	mtr	5.48	246.6
										18900.83

Add 3% contingency 567.02
19467.85
Say **19500.0**

Design of Water Harvesting Structure (tanka)

Collection of Water = Area * rainfall* 80%	Capacity as per Structural design
Catchment Area = $\pi/4 * D^2$ D= 11.70	Cum= $\pi/4 * D_t^2$ * Hight
= 107.46 Sqm	D_t= Inner diameter of tanka
Rainfall = 0.3 Mtr	D_t= 3.2 3.2004
	Hight = 3.20
Collection of water = 25.79 Cum	
	25.7261 Cum
Capacity Cum*1000	Capacity Cum*1000
= 25790	= 25726.1

Hence rainfall on catchment area can fillup the tanka by water

Production	
Total capacity of tanka	25726.1 Ltr
Use of water for drinking purpose 40%	10290.4 Ltr
Available water for plantation 60%	15435.7 Ltr
One watering require	15 Ltr
No. of watering per Year	20 No
Total Ltr require per plant per year	300 Ltr

No of plant can survive = Available water for Plantation/ water require per plant per year

= 51.45

say 50 plant

Model estimate of Horticulture Plantation in Arable land

Area- **0.17** **Ha**

No. of Plants - **20**

S. No	Description	Item No.	Total		Length	Width	Height	Qty	Unit	Rate	Amount	Amount for 20 Plants
			Year	No./Year								
1	Earth work Excavation in hard soil dry or moist and disposal of excavated meterial within initial lift of 1.5 mt height and lead of 50 metre.Digging of pit	2(B)		1	0.6	0.6	0.6	1.00	No.	100.00	100.00	2000.00
2	Apply of manure											
	(A) Compost Khad							5.00	kg.	0.40	2.00	40.00
	(B) S.S.P. (16%)							1.00	kg.	4.00	4.00	80.00
	(C) Endosulphan (4%)				100 gm			0.10	kg.	30.00	3.00	60.00
3	Plant cost	LS		1				1.00	No	20.00	20.00	400.00
4	Planting of plant	113(B)						1.00	No.	3.20	3.20	64.00
5	Watering of plants (15 litre)	115	3	21				63.00	No.	1.90	119.70	2394.00
6	Making of Thawla atleast 50 cm radius	117(B)	2	1				2.00	No.	1.90	3.80	76.00
7	Weeding & hoeing of plants 45 cm radius and 15 cm deep	132	3	1				3.00	No.	1.30	3.90	78.00

S. No	Description	Item No.	Total		Length	Width	Height	Qty	Unit	Rate	Amount	Amount for 20 Plants
			Year	No./Year								
8	Spray											
	(A) Endosulphan (35 ec)		3	0.01	Ltr			0.03	Ltr.	262.00	7.86	157.20
	(B) Sulpher		3	0.02	Kg			0.06		200.00	12.00	240.00
9	Transportation of Plant from Jodhpur 70 km including loading and unloading	LS						1.00	no	2.00	3.00	60.00
10	Protection of plants from frost / loo using grass or other locally available material by making jhonpa of 0.6 m dia. Of plant height and covering the plant.	Forest bsr	1	1				1.00	no	5	5.00	100.00
	TOTAL										**279.46**	**5749.20**
										Add 3% contingency		**172.476**
										Total		**5921.68**
										say		**5900.0**
										UNIT COST		**295**

DETAILS OF WORK AND ABSTRACT OF COST OF TANKA

क.सं.	कार्य का विवरण	सं.	विशेष विवरण			मात्रा		ईकाई	दर		राशि	
			ल.	चौ.	ऊं/ग.	फीट	कुल मी.		श्रम	कुल	श्रम	कुल
1	नींव, खाई तथा नाला आदि के लिए 1.5 मी. गहराई तक मिट्टी की खुदाई करना, तल को कुटना, पानी डालना बगल को संवारना, खुदी मिट्टी को बाहर निकालना नीवं भरने के बाद खाली स्थानों को पुनः मिट्टी से भरना तथा बची हुई मिट्टी को 50 मीटर की दूरी तक निस्तारण करना					0						
						0						
						0						
						0						
						0						
						0						
						0						
	(अ) साधारण/मुलायम मिट्टी में	1	132.707	1	3	398.122	11.27	cum.	82.00	82.00	924.14	924.14
	(ब) सख्त, चिकनी, कंकर मिट्टी में	1	132.707	1	3.5	464.475	13.15	cum.	100.00	100.00	1315	1315.00
	(स) विघटित चट्टान	1	132.707	1	2	265.415	7.51	cum.	146.00	146.00	1096.46	1096.46
	(द) साधारण चट्टान	1	132.707	1	2	265.415	7.51	cum.	194.00	194.00	1456.94	1456.94
	साधारण/मुलायम मिट्टी में	1	113.076	1.5	1.5	254.421	7.2	cum.	82.00	82.00	590.4	590.4
	1.5 मीटर अतिरिक्त उठान (Lift)											
	First lift	1	132.707	0.0929	1.5		18.4928	cum.	11.80	11.80	218.21451	218.2145
	Second lift	1	132.707	0.0929	0.2		2.4657	cum.	23.60	23.60	58.190537	58.19054
2	सीमेन्ट कांक्रीट नींव या फर्श में 40 मि. मी. नामीय माप की पत्थर गिट्टी/ईट गिट्टी, सीमेन्ट – रेत मसाला में 1 सीमेन्ट : 5 रेत : 10 गिट्टी अनुपात में मिलाकर डालना तथा कुटाई करना, तराई समेत।	1	132.707	1	0.5	66.3536						
						0						
						0						
						0						
						66.3536	1.87	cum.	363.10	1689.00	678.997	3158.43
4	नींव तथा कुर्सी मे पत्थर की वे रद्धा–ढ़ोका सीमेंट–बजरी 1 : 6 मसाले मे, मय बगल की झिरी बन्द करना तथा तराई आदि।	1	36.9068	1.25	12	553.601						

						0						
						553.601	15.67	cum.	560.80	2013.00	8787.736	31543.71
6	पत्थर के सिरदल (लिटंल) की आपूर्ति कर, चिनाई मे उपयोग की गई मसाले मे उसे लगाना।											
	पाट	2	9	1	1	18						
	योग					18	1.67	sqm.	1437.80	4415.00	2401.126	7373.05
7	अप्रुव्ड खान की पटटी की छत छत के दोनो के तरफ सिमेण्ट 1:4 से भरना	1	132.707	1	1	132.707						
						0						
	कटोतियां	-1	1.5	1.5	1	-2.25						
						130.457	12.11	sqm.	334.70	856.00	4053.217	10366.16
8	सीमेण्ट कंकरीट 1:2:4 की छत का कार्य 20 मिमी गिटटी	1	132.707	1	1	132.707						
		-1	1.5	1.5	1	-2.25						
						130.457	12.11	sqm.	139.10	335.00	1684.501	4056.85
9	सीमेण्ट कंकरीट 1:2:4 की फर्श का कार्य 20 मिमी गिटटी	1	86.5463	1	1	86.5463						
		1	113.076	1.25	1	141.345						
						227.891	21.17	sqm.	108.80	236.00	2303.296	4996.12
10	सीमेंट प्लास्टर दीवार पर 1:6 अनुपात मे सीमेंट–बजरी मिलाकर कर जोडों को कुरेदने तथा तराई सहित 25 मि.मी. में।	1	32.9805	1	11.75	387.521						
						387.521	36	sqm.	92.50	153.00	3330	5508.00
11	पत्थर की चुनाई पर सीमेण्ट मसाला 1:3 से टीपो का कार्य	1	40.833	1	2.5	102.083						
		1	116.965	1	2	233.93						
		1	109.115	1	2	218.23						
						554.243	51.48	sqm.	55.10	66.00	2836.548	3397.68
12	22 गेज की सादा एम. एस. चद्दर के 1 मी. ग 2 मी. दो पल्ले वाले दरवाजे, जिसमें लोहे की 40x40x3 मि.मी. के कोनिया लोहे की चौरवट तथा पल्लो में 25x25x3 मि.मी. के कोनिया लोहे((Angle Iron) के किनारे दिए गए नक्शे के अनुसार मय अर्गल चिटकनी तथा पकड़ पट्टियों क	1	1.5	1.5	1	2.25						

						2.25	0.2	sqm.	0.00	LS	100	500.00
13	अन्य आवश्यकता अनुसार कार्य					0						
	Silt Trap, Jali, Hand Pump etc					0						
						0					200	5000
											32034.77	81559.35
												81559.00

	Quantity	Rate	Amount
Skilled labour	32.51	400	13003
Unskilled labour	67.60	135	9126
Water			9906
			32035

राशि		
श्रम	A	32034.77
सामग्री	B	49524.58
कुल	C	81559.35
Add for contingency		220
कुल योग (C+D)		81779.35

82000

क्र.सं.	कुल सामग्री आवश्यकता	ईकाई	मात्रा	दर	राशि	
1	रेत/बजरी	घ.मी.	9.14	390	3565.75	
2	गिट्टी पत्थर की 40 मि.मी. नामीय माप की	घ.मी.	1.68	507	853.281	
3	गिट्टी पत्थर की 20 मि.मी. नामीय माप की	घ.मी.	1.56	700	1090.71	
4	पत्थर	घ.मी.	17.24	650	11204.1	
5	सीमेन्ट	कि.ग्रा.	2359.3	285	13448.2	47.1865
6	पत्थर के सिरदल 15 से.मी. मोटाई तक	व.मी.	1.67	825	1377.75	
7	पत्थर की पट्टियां	व.मी.	13.32	450	5994.45	
8	फेक्ट्री में बने दरवाजे	व.मी.	0.200	2000.00	400	
9	xkjk&feêh	घ.मी.	0.000	150.00	0	
					37934.2	
	अन्य Silt Trap, Jali, Hand Pump etc				11590.4	
			कुल योग		49524.6	

MODEL ESTIMATE FOR A VERMI-COMPOST UNIT

S. No.	Particulars	Quantity	Unit	Rate (Rs)	Amount (Rs)
1	Wooden Ballies (3 m long)	20	No.	70	1400
2	Wooden Ballies (4 m long)	25	No.	80	2000
3	Shade mats for covering the roof	125	Sq. m.	40	5000
4	Binding wire for tying wooden ballies and mats	20	Kg	45	900
5	Labour charges for erection of shades	15	No.	135	2025
6	Shovels, spades, crowbars, iron baskets	LS			2000
7	Weighing scale (100 Kg capacity)	1	No.	2500	2500
8	Cow dung	10	Ton	1100	11000
9	Worms @ 3 kg per ton	30	Kg	100	3000
10	Formation of vermi-bed with agro-waste, cow-	20	bed	300	6000
11	Miscellaneous				175
	Total Cost				36000

No. of Units	25
Cost for 25 Units	900000

Category	No. of Units	Contribution	Cost from project	Cost from project (per unit)
Gen, OBC	20	288000	432000	
SC ST	5	36000	144000	
Total	25	324000	576000	23040

Returns from Vermi-compost units

Benefits

1	Sale of vermi-compost	250	Ton	4000	1000000
2	Sale of worms @ 5 kg per ton	1250	Kg	50	62500
	Total				1062500
	Net benefit	1062500	-	900000	162500

GEOREFERENCED KHASRA MAP

WATERSHED - SATLANA (IWMP)

PANCHAYAT SAMITI - LUNI

DISTRICT- JODHPUR

N

W E

S

1:10,000

Madhopur

Satlana

Goli Ka Magra

Mori

Khera

LUNI RIVER

Legend

- Rail
- ROAD
- KHASRA BOUNDARY
- SETTLEMENT
- RIVER/ WATERBODY
- WATERSHED OUTER
- Goli Ka Magra
- Mori
- Satlana

STATE REMOTE SENSING APPLICATION CENTRE
Department of Science & Technology
JODHPUR

LAND USE LAND COVER MAP

WATERSHED - SATLANA (IWMP)

PANCHAYAT SAMITI - LUNI

DISTRICT- JODHPUR

N

W E

S

1:10,000

Madhopur

Satlana

Goli Ka Magra

Mori

Khera

LUNI RIVER

Legend

- Rail
- ROAD
- KHASRA BOUNDARY
- VILLAGE
- WATERSHED OUTER
- Agriculture
- Land With Srcub
- Land Without Scrub
- Rail
- River
- Settlement
- Stony Waste/ Barren Rocky
- Waterbody

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Department of Science & Technology
JODHPUR