

Integrated Watershed Management Programme

Preliminary Project Report (PPR)

Thiruvananthapuram

**Department of Land Resources,
Ministry of Rural Development,
Government of India**

I. Institutional Structures.

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I. Institutional Structures

I. A. State Level Nodal Agencies (SLNAs):

Table-PPR 1: Details of SLNA

1	2	3	4	5	6
No	State	Type of SLNA [#]	Date of Notification	Date of MoU with DoLR	Total no. of members of SLNA
1	Kerala	Mission	14-Jun-10		Twenty Five

Table-PPR 1: Details of SLNA (Contd..)

7		8					
Chairperson and Co Chairperson		CEO					
Name	Designation [#]	Name	Designation	Date of Appointment	Nature of appointment ^{\$}	Tenure	Contact Ph. No./ Fax/ E-mail
L C Goyal	Agriculture Production commissioner		Additional Director of Agriculture (SC Unit)	14-Jun-10			
S M Vijayanand	Principal Secretary, LSGD						

Table-PPR 2: Details of functionaries in the SLNAs*

1	2	3	4	5	6	7	8		9	
No	Total no. of persons working in the SLNA for IWMP	Names & Designation	Qualification	Experience	Work allocation	Monthly remuneration (Rs.)	Total budget of SLNA (Rs.)		Funding expected from DoLR (Rs.)	
							R	NR	R	NR
1										

Table-PPR 3: Details of State Level Data Cell (SLDC) functionalities*

1	2	3	4	5	6	7	8		9	
No	Total no. of persons working in the SLDC for IWMP	Names & Designation	Qualification	Experience	Work allocation	Monthly remuneration (Rs.)	Total budget of SLDC (Rs.)		Funding expected from DoLR (Rs.)	
							R	NR	R	NR
1	N i n e	Technical expert, (Agriculture/ Agriculture Engineering)	PG/Ph.D in the related Field	10 years		50000				
2		Technical expert, (IT/Livelihood,micro enterprises /livelihood)	B Tech. Computer Science / MCA	10 years		50000				
3		Administrative Officer	PG in Administration / Management	10 years		40000				
4		Finance cum Accounts Officer	PG in FM / Accounts / CA	10 years		35000				
5		Accounts assistants - 2 numbers	Graduation in Accounts / Commerce / Economics	5 years		25000				
6		GIS expert	B Tech / M Sc / M Tech in related field	5 years		40000				
7		Data entry operator	Graduate+Certificate in DTP	5 years		15000				
8		Programmer	Diploma/Certificate in related fields	5 years		25000				

I. B. District Level Watershed Units:

Table-PPR 4: Details of functionaries in the DRDA Watershed Cell

1	2	3	4	5	6
No	Name of the District	Name of the executing Agency	Status of Chairman	Date of signing of MoU with SLNA	Total no. of persons working for Watershed programme
1	Thiruvananthapuram	Respective District Panchayaths	President, respective District panchayats		Three each in all Districts, 52 persons in the State
2	Kollam				
3	Pathanamthitta				
4	Alapuzha				
5	Kottayam				
6	Idukki				
7	Eranakulam				
8	Thrissur				
9	Palakkad				
10	Malappuram				
11	Kozhikkode				
12	Wayanadu				
13	Kannur				
14	Kasargode				

Table-PPR 4: Details of functionaries in the DRDA Watershed Cell - cont.

No	Names & Designation	Qualification	Experience	Work allocation	Monthly remuneration (Rs.)	12		13	
						Total budget of Watershed Cell (Rs.)		Funding expected from DoLR (Rs.)	
						R	NR	R	NR
1	Technical expert	Graduation in the related field	5 years		25000				
2	Accountant	Graduation in the related field	3 years		10000				
3	Data entry operator	Diploma / certificate in the related field	3 years		7500				
	52 persons				595000				

II. SELECTION OF WATERSHED PROJECTS

*Table-PPR 5 : Status of District-wise area covered under the watershed programme *
(MIS Table-M(SP)2)*

1	2	3		4						5	
				Micro-watersheds covered so far							
				Dept. of Land Resources		Other Ministries/ Depts.		Total watersheds covered			
				Pre-IWMP projects (DPAP +DDP +IWDP)		Any other watershed project					
No.	Area (ha.)	No.	Area	No.	Area (ha.)	No.	Area h	No.	Area (ha.)		
1	Thiruvananthapuram	182	218929	2	0	49	67025	51	67025	74	77552
	State	4529	3874535	29	19345	955	1018761	983	1038991	2067	1459817

Table-PPR 6: Prioritized list of projects proposed for sanction during the financial year 2010-11

1	2	3	4	5	6	7	8													
No	District	Name of the project	No. of micro-watersheds proposed to be covered	Proposed project area (ha)	Type of project	Proposed cost (Rs. in lakh)	Weightage under the criteria#													
					(Hilly/ Desert/ Others)		1	2	3	4	5	6	7	8	9	10	11	12	13	Total
1	Thiruvananthapuram	IWMP1	6	7492	Hilly	1123.80	35	20	0	60	0	0	90	45	5	0	60	0	60	375
		1	6	7492		1123.80														

Criteria and weightage for selection of watershed

No	Criteria	score	Ranges & scores			
i	Poverty index (% of poor to population)	10	Above 80 % (10)	80 to 50 % (7.5)	50 to 20 % (5)	Below 20 % (2.5)
ii	% of SC/ ST population	10	More than 40 % (10)	20 to 40 % (5)	Less than 20 % (3)	
iii	Actual wages	5	Actual wages are significantly lower than minimum wages (5)	Actual wages are equal to or higher than minimum wages (0)		
iv	% of small and marginal farmers	10	More than 80 % (10)	50 to 80 % (5)	Less than 50 % (3)	
v	Ground water status	5	Over exploited (5)	Critical (3)	Sub critical (2)	Safe (0)
vi	Moisture index/	15	-66.7 & below (15)	-33.3 to -66.6 (10)	0 to -33.2 (0)	
	DPAP/ DDP Block		DDP Block	DPAP Block	Non DPAP/ DDP Block	Above 70 % (Reject)
vii	Area under rain-fed agriculture	15	More than 90 % (15)	80 to 90 % (10)	70 to 80% (5)	Fully covered (0)
viii	Drinking water	10	No source (10)	Problematic village (7.5)	Partially covered (5)	
ix	Degraded land	15	High – above 20 % (15)	Medium – 10 to 20 % (10)	Low-less than 10% of TGA(5)	
x	Productivity potential of the land	15	Lands with low production & where productivity can be significantly enhanced with reasonable efforts (15)	Lands with moderate production & where productivity can be enhanced with reasonable efforts (10)	Lands with high production & where productivity can be marginally enhanced with reasonable efforts(5)	
xi	Contiguity to another watershed that has already been developed/ treated	10	Contiguous to previously treated watershed & contiguity within the micro watersheds in the project (10)	Contiguity within the micro watersheds in the project but non contiguous to previously treated watershed (5)	Neither contiguous to previously treated watershed nor contiguity within the micro watersheds in the project (0)	
xii	Cluster approach in the plains (more than one contiguous micro-watersheds in the project)	15	Above 6 micro-watersheds in cluster (15)	4 to 6 micro watersheds in cluster (10)	2 to 4 micro watersheds in cluster (5)	
	Cluster approach in the hills (more than one contiguous micro-watersheds in the project)		Above 5 micro-watersheds in cluster (15)	3 to 5 micro watersheds in cluster (10)	2 to 3 micro watersheds in cluster (5)	

III) PROJECT WISE PROFILE OF THE SELECTED WATERSHED PROJECT

Table –PPR 7: Project at a Glance

1	Name of the State	Kerala		
2	Name & type [#] (Hilly/ Desert/ Others) of the project	IWMP1	0	Hilly
3	Name of the District	Thiruvananthapuram		
4	Names of the Blocks	Vamanapuram		
		Nedumangad		
		Chirayinkeezhu		
5	Names of Gram Panchayats	Pangode		
		Kallara		
		Nellanad		
		Mudakkal		
		Anad		
		Pullampara		
		Nanniyode		
		Manikkal		
		Vembayam		
		Panavoor		
6	Names & Census Code of Villages covered	Elampa Mudakkal		129300
		Nellanad		130100
		Vamanapuram		130200
		Kallara		130300
		Pangode		130400
		Palode		130700
		Panavoor		130900
		Pullampara		131000
		Koliakode		131100
		Manikkal		131200
		Thekkada		131300

7	Names & Codes of the micro-watersheds	Maruthumoodu	4V10a
		Bharathannur	4V11a
		Paluvally	4V11b
		Vayyakkavu	4V25a
		Vengamala	4V26a
		Plavode	4V29b
8	Four major reasons for selection of watershed	Dilapidated traditional irrigation systems	
		Low productivity of land	
		Strong presence of SC/ST, BPL families and marginal farmers	
		Poor adaptation to climate change	
9	Area of the Project (ha.)	7492	
10	Area proposed to be treated (ha.)	7492	
11	Project Cost (Rs. in Lakhs)	1123.80	
12	Name and Address of proposed PIA	Vamanapuram	Block Panchayat

Table-PPR 8: Details of previously identified DPAP/ DDP areas proposed under IWMP (ha) during the financial year*

There are no DPAP/DDP blocks identified in Kerala

Table-PPR 9: Land Use pattern of the project*

(Area in ha)									
1	2	3	4	5	6	7	8	9	
No	Name of watersheds	Names of villages	Geographical Area of the watershed	Forest Area	Land under agricultural use	Rain fed area	Permanent pastures	Wasteland	
								Cultivable	Non-cultivable
1	Maruthumoodu	Pullampara, Kallara,	1696	1	1607	1696	0	1	88
2	Bharathannur	Kallara, Pangode, Palode	132	5	122	132	0	0	5
3	Paluvally	Kallara, Pangode, Vamanapuram	727	29	644	727	0	0	54
4	Vayyakkavu	Pullampara, Vamanapuram	416	1	346	416	0	52	18
5	Vengamala	Manikkal, Pullampara, Panavoor,	1902	0	1798	1902	0	57	47
6	Plavode	Manikkal, Pullampara, Ilampa	2619	0	2517	2619	0	9	93
Total			7492	35	7492	35	7492	35	7492

Source of data:

Kerala state land use board and Panchayat resource map

IV. AGRO-CLIMATIC CONDITION

Details about soil types, land uses etc. are given as additional tables

Table – PPR 10: Details of Agro-climatic condition*

1	2	3	5	7	8
No	Name of the watershed	Name of the Agro-climatic zone covers project area	Names of the villages	Topography#	Average rainfall in mm
1	Maruthumoodu	Southern zone	Pullampara, Kallara, Vamanapuram	undulating and	2052 mm
2	Bharathannur	Southern zone	Kallara, Pangode, Palode	undulating and	
3	Paluvally	Southern zone	Kallara, Pangode, Vamanapuram	undulating and	
4	Vayyakkavu	Southern zone	Pullampara, Vamanapuram	undulating and	
5	Vengamala	Southern zone	Manikkal, Pullampara, Panavoor, Thekkada	undulating and	
6	Plavode	Southern zone	Manikkal, Pullampara, Ilampa Mudakkal, Koliakkode, Nellanad	undulating and	

Table – PPR 10 a: Details of soil types and major crops

1	2	6					9				
No	Name of the watershed	Major soil types					Major crops				
		Brown hydromorphic soil	Lateritic soil	Riverine alluvium	0	Total	Coconut	Paddy	Mixed	Rubber	Total
1	Maruthumoodu	0	593	1104	0	1696	802	35	605	165	1607
2	Bharathannur	0	0	132	0	132	116	0	6	0	122
3	Paluvally	0	727	0	0	727	474	0	167	2	644
4	Vayyakkavu	0	178	238	0	416	228	0	118	0	346
5	Vengamala	0	1719	183	0	1902	903	0	622	273	1798
6	Plavode	703	1707	208	0	2619	715	188	964	650	2517

Table-PPR 11: Details of flood and drought in the project area*

1	2	3	4		5
No	Particulars	Villages	Periodicity		Not affected
			Annual	Any other - once in 4 years	
1	Flood	No. of villages	0	2	9
		Name(s) of villages	0	Vamanapuram, Pullampara	
2	Drought	No. of villages	3	11	0
		Name(s) of villages	Panagode Kallara Vembayam	All	
Total			3	13	0

Table-PPR 12 : 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 (Tons/ ha/ year)
Water erosion				
a	Severe	2652	NA	NA
b	Moderate	4840	NA	NA
c	Slight	0	NA	NA
Sub-Total		7492	NA	NA
Wind erosion		0	NA	NA
Total		7492	NA	NA

V. DEMOGRAPHY AND LAND DISTRIBUTION

Details about population is given as table

Key features of population in Table

No	Watershed Name	Area (In Ha)	Total Families	Population			BPL Families	Land holding/Family (In Ha)
				Total	SC	ST		
		7492	17245	72776	10544	1758	7526	
1	Maruthumoodu	1696	3072	12885	1828	276	1198	0.55
2	Bharathannur	132	259	1072	148	57	95	0.51
3	Paluvally	727	1720	6954	907	844	573	0.42
4	Vayyakkavu	416	895	3827	641	10	479	0.46
5	Vengamala	1902	4016	17049	2512	75	2053	0.47
6	Plavode	2619	7283	30989	4508	496	3128	0.36

VI. LIVELIHOODS

The existing scenario and the opportunities are described in the tables. One more word about capacity building activities. There is tremendous scope of these activities can be organized in the field level in a participatory manner. Of extreme importance is adaptation to climate change. How an effective strategy can be developed is the very question of survival. Then comes the hands on exposure to modern agriculture practices, technologies and machines. Trainings should be imparted in such a manner that new social institutions can be created at grass root level to sustain these initiatives.

Table-PPR 13 Summary of livelihoods

1	2	3	4	5	6
No	Names of the watersheds	Existing livelihood activities	Possible livelihood interventions under the project	Current status of migration (No. of people)	Main reasons for migration
1	Maruthumoodu	Employment in construction sector, wage labour in semi skilled and unskilled activities, trading etc. are the major livelihood of the poor people now. Middle and upper class are employed in service sector, government and large private	Animal husbandry with strong forward and backward linkages and supporting infrastructure and initiatives at the homestead is the main possibility. High yield cows which can be milked in tandem, scientifically constructed cowshed	129	Lack of job opportunities in the agriculture sector due to low productivity and poor income from land. This is inducing the farmer to fallow the land and search for better alternatives. As more
2	Bharathannur			11	
3	Paluvally			70	
4	Vayyakkavu			38	
5	Vengamala			170	
6	Plavode			310	
	6			36	

VII. EXPECTED PROJECT OUTCOMES

VII. (i). Expected employment related outcomes:

Table-PPR 14: Employment generation

1	2	3										4				
		Wage employment										Self employment				
		No. of man-days in '00 s					No. of beneficiaries					No. of beneficiaries				
No.	Names of the watersheds	SC	ST	Others	Women	Total	SC	ST	Others	Women	Total	SC	ST	Others	Women	Total
1	Maruthumoodu	183	28	2493	1611	4314	183	28	2493	1611	4314	110	17	623	1289	2038
2	Bharathannur	15	6	206	134	361	15	6	206	134	361	9	3	52	107	171
3	Paluvally	91	84	1321	869	2365	91	84	1321	869	2365	54	51	330	695	1131
4	Vayyakkavu	64	1	739	478	1283	64	1	739	478	1283	38	1	185	383	607
5	Vengamala	251	8	3306	2131	5696	251	8	3306	2131	5696	151	5	827	1705	2687
6	Plavode	451	50	5998	3874	10372	451	50	5998	3874	10372	270	30	1499	3099	4899
	6	1054	176	14063	9097	24390	1054	176	14063	9097	24390	633	105	3516	7278	11532

Table-PPR 15: Details of migration from Project area

1	2	3	4	5	6
No	Names of the watersheds	No. of persons migrating	No. of days per year of migration	Major reason(s) for migrating	Expected reduction in no. of persons migrating
1	Maruthumoodu	129	12885	Lack of job opportunities in the agriculture and allied sectors. Low productivity and poor income from land.	103
2	Bharathannur	11	632		10
3	Paluvally	70	8553		42
4	Vayyakkavu	38	918		29
5	Vengamala	170	17049		145
6	Plavode	310	18284		248
	6	36	2916		576

VII. (ii). Water related outcomes:

Table-PPR 16: Details of average ground water table depth in the project areas

(in meters)

1	2	3	4	5	6
No	Names of the watersheds	Sources	Pre-Project level	Expected post-project level	Remarks
1	Maruthumoodu	Open wells	8	6	This increase will substantially improve the drinking water availability, reduce the drudgery for fetching water and increase the irrigated areas. But substantial steps to improve water and irrigation efficiency through the application of modern and traditional technologies is essential. There must be simultaneous initiatives to reduce the contamination of surface water and
		Bore wells	90	72	
		Others - Ponds	6	5	
2	Bharathannur	Open wells	9	6	
		Bore wells	105	84	
		Others - Ponds	7	6	
3	Paluvally	Open wells	7	5	
		Bore wells	95	76	
		Others - Ponds	5	5	
4	Vayyakkavu	Open wells	6	4	
		Bore wells	85	68	
		Others - Ponds	4	4	
5	Vengamala	Open wells	7	5	
		Bore wells	100	80	
		Others - Ponds	5	5	
6	Plavode	Open wells	8	6	
		Bore wells	115	92	
		Others - Ponds	6	5	

Source of data:

Panchayat development report and resource map report

Table-PPR 17: Status of Drinking water*

1	2	3		4		5
No	Names of the watersheds	Availability of drinking water (no. of months in a year)		Quality of drinking water		Comments
		Pre project	Expected post project	Pre project	Expected post project	
1	Maruthumoodu	9	10	Turbulence, hardness, high iron and salinity are the major issues observed.	Reduced concentration of dissolved salts, less incidence of turbulence, a check regarding the saline intrusion, better bacteriological quality etc. are the major expected post project benefits	The issues listed are culled from varies studies conducted in the area by other agencies. There is also a variation in quality issues during different
2	Bharathannur	8	10			
3	Paluvally	11	12			
4	Vayyakkavu	10	11			
5	Vengamala	7	9			
6	Plavode	11	12			
	6	10	10			

VII. (iii). Crop related outcomes:

Table-PPR 18- Major crops grown and their productivity in the project area

1	2	3		4	
No	Name of the Crop	Current status		Expected post project status	
		Area (ha)	Productivity (kg/ ha)	Area (ha)	Productivity (kg/ ha)
	Kharif				
	Paddy	223	2477	245	2849
	Rabi				
	Paddy	223	2535	312	4183
	Zaid				
	Paddy	0	2390	0	2689

VIII. MANDATORY CERTIFICATION

“It is certified that the State Government of Kerala will abide by the following mandatory conditions laid down by DoLR”

1	The area of the proposed projects are not covered under assured irrigation
2	The area of the proposed project is not covered or overlapping with any other watershed projects sanctioned by the central govt./ state govt./ autonomous bodies & others
3	The State must sign all the mandatory MoUs before implementing the project
4	The timeframes and milestones of the projects will be followed
5	The Budget requested for must follow the criteria laid down in the Common Guidelines, 2008
6	The State must release matching State Share within 15 days from release of each installment of central funds
7	Purchase of vehicles and other equipments are not permitted and nor is construction of buildings allowed. Only purchase of computers and related software is permitted
8	Savings, if any, in each component of the project cost can be utilized only for activities in the Watershed works
9	The DWDU will have one Member exclusively responsible for monitoring
10	All works will be evaluated after each phase of completion. Fund release will depend on favourable reports received from evaluators
11	Evaluators must include only institutions and agencies and not individuals
12	The State and DRDA cell will furnish monitoring reports and periodical reports as desired by DoLR
13	Composition of the WDT must be clearly spelt out and the team Members must be fully in place at the time of signing of the MoU of contract between the PIA and DRDA Cell
14	That DRDA shall release the funds to the PIAs and the watershed committees within 15 days of receipt of the funds
15	The Watershed Committee must be a registered society under the Societies Registration Act, 1860
16	At least one of the WDT Members must be a woman
17	The Gram Sabhas of the proposed project areas have passed resolutions for people’s contribution towards WDF
18	Resource-use agreements on the principles of equity and sustainability must be worked out among the User Groups prior to the concerned work being undertaken
19	The DPR must give detailed justification for the proposed project duration
20	No works on private lands will be repaired/ maintained from the WDF

21	The PIA will start project work within three months of the receipt of first installment by DWDU/agency or else it can come under the purview of foreclosure
22	The State will not undertake unnecessary foreclosure of the projects. In the event of foreclosure, the State will refund the amount and furnish all necessary documents as desired by DoLR. The State shall also take administrative and legal action against any defalcation, misappropriation, mis-utilization, deliberate negligence and laxity which has caused foreclosure of the project.

Date:

Signature of officer authorized by State Govt.*

NAME OF OFFICER (IN CAPITAL LETTERS)

DESIGNATION

IX. STATUS OF ON-GOING PROJECTS (DPAP/ DDP/ IWDP)

Table- PPR 19: Details of pending UCs: Statewise* Rs in Lakhs

1	2	3	4	5	6	7	8		9		10	11	
No	District	Project	Instalment no.	Financial year of release of fund	Amount released	Amount utilized	Submission of UC		Date of submission of UC		Reasons for not submitting/ delayed submission of UC	Pending UCs	
							Due date	Amount	Date	Amount		Period	Amount
1	Thiruvananthapuram												

Table- PPR 20: Details of Unspent balance as on _____: District wise*

1	2	3	4	5		6
No	District	Name of the Project	Total cost (Rs. in lakh)	Total funds released		Unspent balance
				(Rs. in lakh)		
				DoLR	State	(Rs. in lakhs)
1	Thiruvananthapuram					
	14		0	0	0	0

X. ABSTRACT OF PROJECTS PROPOSED FOR SANCTION DURING 2010-11

1	Number of districts to be covered under the present proposal	Thirteen	
2	No. of Watersheds projects proposed to be taken up under IWMP	Hilly/Desert	Others
3	Total area to be covered under proposed projects (000' ha)		
	(a) Hilly & Desert areas [#]	7.49	
	(b) Others		0.00
	Total	<u>7.49</u>	<u>0.00</u>
4	Total cost of the proposed Watershed projects (Rs. in lakhs)		
	(a) Hilly & Desert areas [#]	1123.80	
	(c) Others		0.00
	Total	<u>1123.80</u>	<u>0.00</u>
5	First installment required from central funds for the proposed watershed projects	<u>202.28</u>	<u>0.00</u>

Project Abstract

1	Title of Project	Integrated Watershed Management Programme in Thiruvananthapuram	
2	No. of watersheds proposed	<u>6</u>	
3	Area proposed	<u>7492</u>	<u>hectares</u>
4	Project Cost	<u>1123.80</u>	<u>in lakhs</u>
5	a Amount to be met form IWMP	<u>1011.42</u>	<u>in lakhs</u>
	b From other sources	<u>112.38</u>	<u>in lakhs</u>
6	Designation , address, e-mail and phone number of the officer in ZP/DRDA responsible for this project	Project Director, Poverty Alleviation Unit Thiruvananthapuram District Panchayat	
		Phone	
		E-mail	

Certificate

Certified that the watershed proposed to be treated in this project does not overlap with any other scheme and there is no duplication of Central/external assistance.

**President
District Panchayat
Thiruvananthapuram**

**Project Director
Poverty Alleviation Unit
District Panchayat
Thiruvananthapuram**