

# **Integrated Watershed Management Programme**

## **Preliminary Project Report (PPR)**

**Alapuzha**

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

**I. Institutional Structures.**

I. A. State Level Nodal Agencies

I. B. District Level Watershed Units

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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 <sup>#</sup>	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 <sup>#</sup>	Name	Designation	Date of Appointment	Nature of appointment <sup>\$</sup>	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.)	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
2	Accountant	Graduation in the related field	3 years		10000				
3	Data entry operator	Diploma / certificate in the related field	3 years		7500				
	<b>52 persons</b>				<b>595000</b>				

## 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	Alapuzha	91	140638	4	0	12	27957	16	27957	73	107373
	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 (Hilly/ Desert/ Others)	Proposed cost (Rs. in lakh)	Weightage under the criteria#													
							1	2	3	4	5	6	7	8	9	10	11	12	13	Total
1	Alappuzha	IWMP1	5	5889	Plains	706.68	33	15	0	50	0	0	75	38	55	0	20	50	0	335
		1	5	5889		706.68														

### # 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 <sup>#</sup> (Hilly/ Desert/ Others) of the project	IWMP1	0	Plains
3	Name of the District	Alapuzha		
4	Names of the Blocks	Champakulam		
		Ambalapuzha		
5	Names of Gram Panchayats	Kainakary		
		Nedumudi		
		Champakulam		
		Punnapra		
		Aryadu		
6	Names & Census Code of Villages covered	Kainakary south		00106100
		Kainakary north		00106800
		Nedumudi		00106900
		Champakulam		00106800
7	Names & Codes of the micro-watersheds	Kuttamangalam		10P1a
		Kainakary		10P2a
		Marthanda		11M2a
		Chittarimangalam		11M3a
		R.Block		11M4a
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.)	5889		
10	Area proposed to be treated (ha.)	5889		
11	Project Cost (Rs. in Lakhs)	706.68		
12	Name and Address of proposed PIA	Champakulam 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 No	2 Name of watersheds	3 Names of villages	4 Geographical Area of the watershed	5 Forest Area	6 Land under agricultural use	7 Rain fed area	8 Permanent pastures	9	
								Wasteland	
								Cultivable	Non-cultivable
1	Kuttamangalam	Nedumudi, Champakulam,	2809	0	2012	2809	0	0	796
2	Kainakary	Kainakary north, Kainakary south	1456	0	1344	1456	0	0	112
3	Marthanda	Kainakary north	306	0	258	306	0	0	48
4	Chittarimangalam	Kainakary north	601	0	558	601	0	0	43
5	R.Block	Kainakary north	717	0	620	717	0	0	98
<b>Total</b>			<b>5889</b>	<b>0</b>	<b>5889</b>	<b>0</b>	<b>5889</b>	<b>0</b>	<b>5889</b>

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	Kuttamangalam	Coastal sandy	Nedumudi, Champakulam, Kainakary north, Kainakary south	Flat	2808 mm
2	Kainakary	Kuttanad	Kainakary north, Kainakary south	Flat	
3	Marthanda	Kuttanad	Kainakary north	Flat	
4	Chittarimangalam	Kuttanad	Kainakary north	Flat	
5	R.Block	Kuttanad	Kainakary north	Flat	

**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	Acid saline	Total	Coconut	Paddy	Mixed	Rubber	Total
1	Kuttamangalam	0	0	1494	1315	2809	214	1799	0	0	2012
2	Kainakary	0	0	369	1087	1456	254	1091	0	0	1344
3	Marthanda	0	0	0	306	306	0	258	0	0	258
4	Chittarimangalam	0	0	0	601	601	0	558	0	0	558
5	R.Block	0	0	0	717	717	0	620	0	0	620

**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	4	0
		Name(s) of villages	0	Kainakary south, Kainakary north, Nedumudi, Champakulam	
2	Drought	No. of villages	0	4	0
		Name(s) of villages	0	Kainakary south, Kainakary north, Nedumudi, Champakulam	
Total			0	4	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	0	NA	NA
b	Moderate	0	NA	NA
c	Slight	5889	NA	NA
Sub-Total		5889	NA	NA
Wind erosion		0	NA	NA
Total		5889	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		
		<b>5889</b>	<b>6521</b>	<b>29358</b>	<b>1969</b>	<b>12</b>	<b>3277</b>	
1	Kuttamangalam	2809	3736	16697	1067	10	1914	0.75
2	Kainakary	1456	1247	5687	421	0	583	1.17
3	Marthanda	306	296	1342	92	0	161	1.03
4	Chittarimangalam	601	635	2861	181	2	334	0.95
5	R.Block	717	607	2770	208	0	284	1.18

## 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	Kuttamangalam	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,	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,	167	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
2	Kainakary			57	
3	Marthanda			13	
4	Chittarimangalam			29	
5	R.Block			28	
	5			15	

## 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	Kuttamangalam	107	1	3296	2087	5491	107	1	3296	2087	5491	64	1	824	1670	2558
2	Kainakary	42	0	1121	711	1874	42	0	1121	711	1874	25	0	280	569	874
3	Marthanda	9	0	265	168	442	9	0	265	168	442	6	0	66	134	206
4	Chittarimangalam	18	0	565	358	941	18	0	565	358	941	11	0	141	286	438
5	R.Block	21	0	546	346	913	21	0	546	346	913	12	0	136	277	426
	5	197	1	5792	3670	9660	197	1	5792	3670	9660	118	1	1448	2936	4503

**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	Kuttamangalam	167	16697	Lack of job opportunities in the agriculture and allied sectors. Low productivity and poor	134
2	Kainakary	57	3355		51
3	Marthanda	13	1651		8
4	Chittarimangalam	29	687		21
5	R.Block	28	2770		24
	<b>5</b>	<b>15</b>	<b>1258</b>		<b>238</b>

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	Kuttamangalam	Open wells	2	2	This increase will substantially improve the drinking water availability, and quality.
		Others - Ponds	2	2	
2	Kainakary	Open wells	2	2	
		Others - Ponds	2	2	
3	Marthanda	Open wells	2	2	
		Others - Ponds	2	2	
4	Chittarimangalam	Open wells	2	2	
		Others - Ponds	2	2	
5	R.Block	Open wells	2	2	
		Others - Ponds	2	2	

**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	Kuttamangalam	9	10	Turbulence, hardness, high iron and salinity are the major issues	Reduced concentration of dissolved salts, less incidence of turbulence, a check regarding the saline intrusion, better bacteriological quality etc. are the major expected	The issues listed are culled from varies studies conducted in the area by other agencies. There is also a variation in quality
2	Kainakary	8	10			
3	Marthanda	11	12			
4	Chittarimangalam	10	11			
5	R.Block	7	9			
	<b>5</b>	<b>10</b>	<b>10</b>			



**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)
	Rabi				
	Paddy	4325	2125	6055	3506

**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
4	Alapuzha												

**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)
4	Alapuzha					
	<b>14</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

## 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	<b>Hilly/Desert</b>	<b>Others</b>
3	Total area to be covered under proposed projects (000' ha)		
	(a) Hilly & Desert areas <sup>#</sup>	0.00	
	(b) Others		5.89
	Total	<u>0.00</u>	<u>5.89</u>
4	Total cost of the proposed Watershed projects (Rs. in lakhs)		
	(a) Hilly & Desert areas <sup>#</sup>	0.00	
	(c) Others		706.68
	Total	<u>0.00</u>	<u>706.68</u>
5	First installment required from central funds for the proposed watershed projects	<u>0.00</u>	<u>127.20</u>

### Project Abstract

1	Title of Project	Integrated Watershed Management Programme in Alapuzha	
2	No. of watersheds proposed	<u>5</u>	
3	Area proposed	<u>5889</u>	<u>hectares</u>
4	Project Cost	<u>706.68</u>	<u>in lakhs</u>
5	a	<u>636.012</u>	<u>in lakhs</u>
	b	<u>70.67</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 Alapuzha 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  
Alapuzha**

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