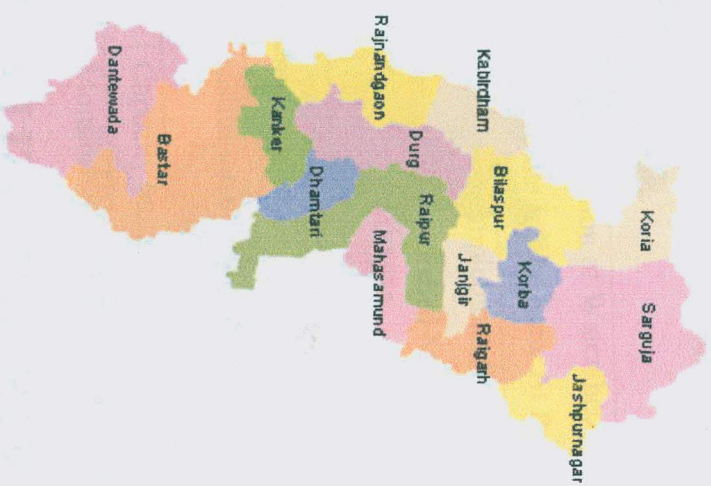


Integrated Watershed Management Programme

STATE PERSPECTIVE AND STRATEGIC PLAN (SPSP)

FOR

CHHATTISGARH STATE



STATE LEVEL NODAL AGENCY (S.L.N.A.)

PANCHAYAT & RURAL DEVELOPMENT

GOVERNMENT OF CHHATTISGARH

VIKAS BHAWAN, CIVIL LINE, RAIPUR

Integrated Watershed Management Programme

STATE PERSPECTIVE AND STRATEGIC PLAN (SPSP)

FOR

CHHATTISGARH STATE



STATE LEVEL NODAL AGENCY (S.L.N.A.)

PANCHAYAT & RURAL DEVELOPMENT

GOVERNMENT OF CHHATTISGARH

VIKAS BHAWAN, CIVIL LINE, RAIPUR

Index

Chapter No.	Content	Page (from --- to)
Chapter -1	Introduction : An overview of State	1-11
Chapter-2	Agro-climatic zones	12-43
Chapter-3	Demographic and Land distribution	44-50
Chapter-4	Land Use Pattern	51-64
Chapter-5	Trends in Agriculture and food Productivity	65-67
Chapter-6	Implementation of Watershed Programme In The State At Present	68-84
Chapter-7	Strategy for implementation of Integrated Watershed Management Programme (IWMP)	85-95
Chapter-8	Livelihood concerns	96-98
Chapter-9	Institutional arrangements	99-102
Chapter-10	Capacity building	103-105
Chapter-11	Monitoring and Evaluation (M & E)	106-107

Details of Table

Table No.	Content	Page No.
Table 01	Details of Forest Cover in Chhattisgarh	4
Table 02	Types of Wastelands Areas in Chhattisgarh	6
Table 03	State-wise drainage area of Godavari basin	7
Table 04	Major Basins/Sub-basins in Chhattisgarh	7
Table -05	Crop wise Area Scenario of Chhattisgarh: Progress in Agriculture Sector Year 2001-02 to 2006-07	19
Table -06	Crop wise Productivity : Progress in Agriculture Sector Year 2001-02 to 2006-07	20
Table-07	Economic indicators of Chhattisgarh	46
Table- 08	Land use pattern in agro climatic zones of Chhattisgarh	52
Table- 09	Sanctioned post at present	70
Table- 10	Stake holders and capacity building requirements	103

Details of SPSP

SPSP No.	Content	Page No.
SPSP-1	District Profile	11
SPSP-2	Details of Agro-climatic zones in the district	15
SPSP-3	Details of average rainfall and altitude recorded at the District headquarters	21
SPSP-4	Details of drought and flood affected districts, blocks and villages in the State during last 10 years	23
SPSP-5	Details of District-wise land holding pattern in the State	47
SPSP-6	Share of Agriculture Sector to State Income/National Income at Current Prices and Total Work Force in the State and India	50
SPSP-7	Sectoral Composition of Net State Domestic Product (NSDP) in State	50
SPSP-8	Land Use status in the State (average of preceding 5 years)	54
SPSP-9	Irrigation Status	55
SPSP-10	Source-wise Area Irrigated	56
SPSP-11	Details of Common Property Resources in the State	57
SPSP-12	Crops production and productivity as per Agricultural Statistics, 2008	66
SPSP-13	comparative average yield of major crops of the State and India during Triennia	67
SPSP-14	Status of District-wise area covered under the watershed programme	71
SPSP-15	Details regarding the watershed projects sanctioned by DoLR in the State	72
SPSP-16	Details of the Watershed projects implemented in the state with the financial assistance other than DoLR	73
SPSP-17	Details of pending UCs	74
SPSP-18	Details of Unspent balance	79
SPSP-19	Plan-wise phasing of physical (area in ha) & financial (Rs. in Crore) targets of IWMP for next 18 years	86
SPSP-20	Year-wise phasing of physical (area in '000 ha) & financial (Rs. In lakh) targets of IWMP for remaining period of XI Plan	87
SPSP-21	Details of district wise and category-wise area proposed to be taken up under IWMP during next 3 years i.e. upto 11 th Five Year Plan	88
SPSP-22	Details of Convergence of IWMP with other Schemes	94
SPSP-23	Summary of Public-Private Partnership in the IWMP projects	95
SPSP-24	Details of livelihoods created for landless people	97
SPSP-25	Details of other livelihoods created for farmers	98
SPSP-26	Details of SLNA	99
SPSP-27	Details of SLNA (MIS Table-M(S)1) (Contd..)	99
SPSP-28	Details of functionaries in the SLNAs*	100
SPSP-29	Details of State Level Data Cell (SLDC) functionaries	101
SPSP-30	Details of functionaries in the DWDU/ DRDA Watershed Cell	102
SPSP-31	List of Training Institutes [@] identified for Capacity Building at State level	104
SPSP-32	Details of IEC activities*	105
SPSP-33	List of Institutes [@] identified for M & E at State level	107

Details of Map

Map No.	Content	Page No.
Map-1	Physical Political map of Chhattisgarh	2
Map-2	Chhattisgarh Physical	4
Map-3	Chhattisgarh-Sectoral Contribution to GDP	10
Map-4	Agro-Climatic Zones of Chhattisgarh	13
Map-5	Divers Soils of Chhattisgarh	16
Map-6	Rainfall	22
Map-7	Chhattisgarh sex Ratio	45

CHAPTER: 1

INTRODUCTION

Chhattisgarh is geographically situated between 17°46'N and 24°5' North Latitude and 80°15'E and 84°20' East Longitude. The total geographical area is around 136 lakh ha, of which, cultivable land area is 58.81 lakh ha and forestland area is 60.76 lakh ha with more than 2.07 crore population. Scheduled castes (SC)/ Scheduled Tribes (ST) constitute almost 44.7% of the total State's population. The highest concentration of ST population is in Bastar and Dantewada. These are also one of the poorest regions in the State in terms of human resource development. The SC population is highest in Jajgir Champa district of Chhattisgarh (22.48%). The Scheduled caste population is concentrated in the relatively more developed blocks conducive to stable and productive agriculture.

About 80 percent of the population in the state is engaged in agriculture and 43 percent of the entire arable land is under cultivation. Paddy is the principal crop in the state. Other major crops are coarse grains, wheat, maize, groundnut, pulses and oilseeds. The region is also suitable for growing mango, banana, guava & other fruits and a variety of vegetables. About 44 percent of state's area is under forests with one of the bio-diversity richest areas in the country. It has abundant minor forest produce like Tendu leaves, Sal seed, etc. Medicinal plants, bamboo, lac and honey are other potential money earners for the state. Chhattisgarh has embarked on a concerted plan to increase double-cropped areas, diversify the cropping pattern and improve incomes from agro-based small-scale enterprises. In order to unlock the true potential of agriculture sector in the state, government is paying special attention towards better management of land and water resources. To reduce the farmer's dependence on rainfall, government is working towards increasing the irrigation potential of the state. It is estimated that approximately 43-lakh hectares

Mahasamund) are a fact of greater consideration for integrated development of rural areas of Chhattisgarh. Productivity in agriculture is extremely low and variable, and all the production system development indicators are best in the plains and valleys.

Forest: Chhattisgarh state is quite prosperous in the sense of its forest cover and forest produces. Basically forest cover in the state can be sub-divided in terms of dense forest, degraded forest, fringe forest etc. Districts falling in each category of forest i.e. dense forest, open forest and scrub are described in the forest map of Chhattisgarh (Fig. 1). Various details of forest cover area are given in Table 1. The forest areas are rich in biodiversity but the soils are heavily eroded. There is need to pay immediate attention to conserve the eroded soils in hilly area and conservation of water in valley areas.

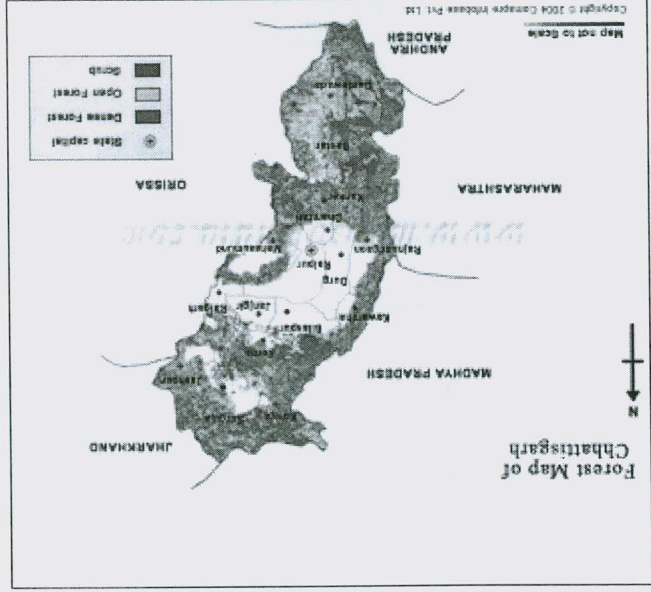
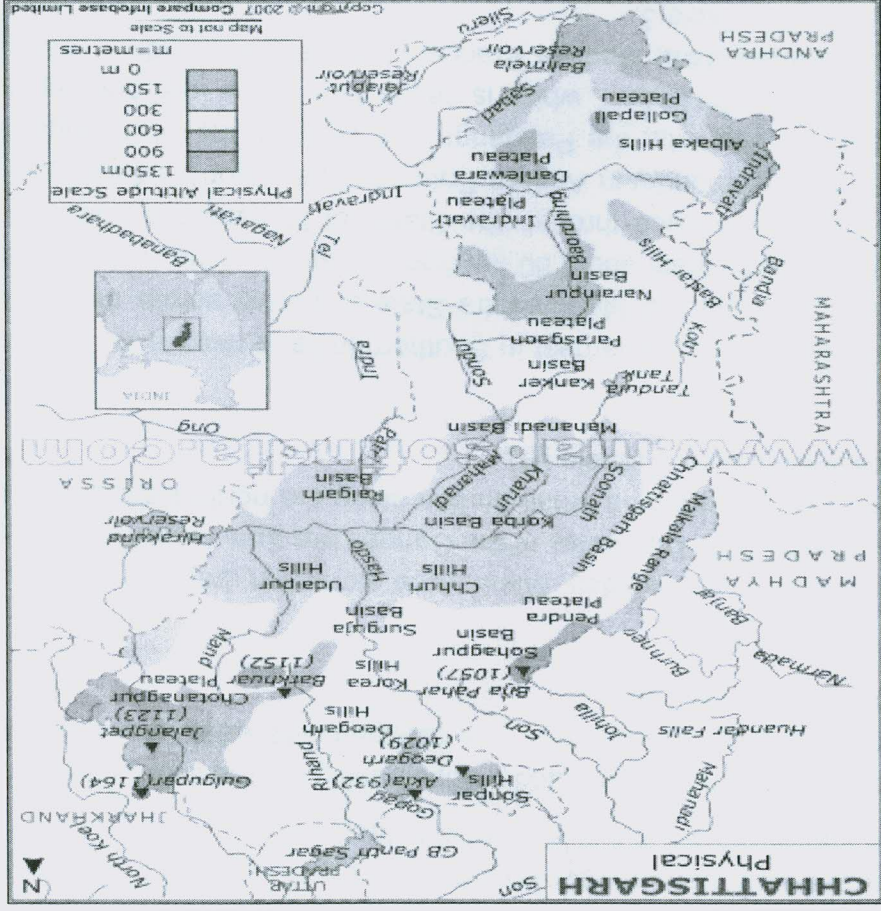


Table 01: Details of Forest Cover in Chhattisgarh

Forest Cover	Area
Dense Forest	37,880 Km ²
Open Forest	18,568 Km ²
Total	56,448 Km ²
Share of State's Geographic Area	41.8%
Share of Country's Forest Cover	8.4%

Integrated Watershed Development programme: Development and conservation of natural resources should be done in integrated manner to achieve desired goal. Long term planning is prerequisite for achieving sustainable development in rural areas. Watershed management is a community-based programme for the welfare of community. It is for the earmarked area with a defined time frame and focuses on a wide range of issues and activities for integrated development of the area. The main focus is laid on water, food and fodder security and employment generation. The Watershed approach has conventionally aimed at treating degraded lands with the help of low cost and locally accessed technologies such as in-situ soil and moisture conservation measures, a-forestation etc. and through participatory approach that seeks to secure close involvement of the user-communities.

The broad objective was the promotion of the overall economic development and improvement of the socio-economic conditions of the resource poor sections of people inhabiting in the programme areas. Many projects designed within this approach at different points of time, taken up by the Government of India. The Drought Prone Areas Programme (DPAP) and the Desert Development Programme (DDP) were brought into the watershed mode in 1987. The Integrated Watershed Development Programme (IWDP) launched in 1989 by National Watershed Development Board also aimed at the development of wastelands on watershed basis.



The above programmes were brought under the Guidelines for Watershed Development with effect from 1.4.1995. Other major programmes now being implemented through this approach are the 'National Watershed Development Project in Rainfed Areas' (NWDPPRA) and the 'Watershed Development in Shifting Cultivation Areas' (WDSICA) of the Ministry of Agriculture (MoA). The entire watershed development programmes are integrated owing to their similar aim and brought under a single umbrella of "State Level Nodal Agency (SLNA)" in the Chhattisgarh state. Perspective plan for next 18 years is formulated for integrated Watershed development of entire Chhattisgarh state. Various essential parameters were analyzed and criteria for selection of watersheds were followed in the preparation of perspective plan and described in subsequent chapters.

Status of Wastelands: An extent of 758400 hectare of wasteland has been identified and mapped using remote sensing technique in all the districts of Chhattisgarh. These constitute 5.61% of the total geographical area. The category wise wasteland area of the districts in the state as well as the district wise wasteland available is given in Table 2.

Drainage

Main Rivers flowing in the state are Mahanadi and its tributaries like Seonath, Hasdeo, Mand, Arpa etc, which drain the central part of the state. River Indravati, a tributary of Godavari drains the southern part. Tributaries of the Ganges like Son, Gopal, Rihand etc. drain the northern part and river Sankh, a tributary of the river Bramhani drains a small portion along the northeastern part of the state. Based on the drainage the state can be divided into five basins/subbasins (Table 04).

RIVER BASIN

Godavari: The River Godavari is the second largest river in the country and the largest in Southern India. It rises in the Sahyadri hills at an altitude of about 1067 m near Triambakeswar in the Nasik district of Maharashtra State and flows across the Deccan plateau from the Western Ghats to Eastern Ghats. Rising in the Western Ghats about 80 km from the shore of the Arabian sea, it flows for a total length of about 1465 km in a general South-Eastern direction through the States of Maharashtra and Andhra Pradesh before joining the Bay of Bengal at about 97 km south of Rajahmundry in Andhra Pradesh. The major tributaries joining the Godavari are the Pravara, the Purna, the Manjra, the Maner, the Pranrita, the Penganga, the Wardha, the Wainganga, the Indravati and the Sabari. The Godavari basin extends over an area of 312813 km², which is nearly 10% of the total geographical area of the country. The basin comprises areas in the States of Maharashtra, Madhya Pradesh, Chhattisgarh, Andhra Pradesh, Karnataka and Orissa. The State-wise distribution of the areas is given in Table 3.

Command area : The Godavari (Inchampanli) - The Godavari basins covered 29% of the state and across the Bastar & Dantewada district of Chhattisgarh.

Table 02: Types of Wastelands Areas in Chhattisgarh

Type of Wastelands		Area in Sq. Km.
1.	Gullied and/or ravenous land (Shallow)	49.11
2.	Gullied and/or ravenous land (Medium)	1.68
3.	Gullied and/or ravenous land (Deep)	0.00
4.	Land with scrub	2812.41
5.	Land without scrub	1192.48
6.	Waterlogged and Marshy land (Permanent)	0.00
7.	Waterlogged and Marshy land (Seasonal)	0.00
8.	Land affected by salinity/alkalinity (Strong)	0.00
9.	Land affected by salinity/alkalinity (Moderate)	0.00
10.	Land affected by salinity/alkalinity (Slight)	0.00
11.	Shifting cultivation area (Abandoned Jhum)	69.39
12.	Shifting cultivation area (Current Jhum)	56.38
13.	Under utilised/degraded notified forest land	2820.18
14.	Under utilised/degraded notified forest land (Agri.)	129.36
15.	Degraded pastures/grazing land	0.00
16.	Degraded land under plantation crop	4.59
17.	Sands-(Flood Plain)	3.79
18.	Sands- (Levees)	0.00
19.	Sands-(Coastal Sand)	0.00
20.	Sands- (Semi Stab.-Stab>40m)	0.00
21.	Sands- (Semi Stab.-Stab Moder. High 15-40m)	0.00
22.	Sands-(Semi Stab. to Stab. low<15m)	0.00
23.	Sands-(Closely Spaced Inter-Dune Area)	0.00
24.	Mining Wastelands	32.50
25.	Industrial Wastelands	4.91
26.	Barren Rocky/Stone Waste/Sheet Rock Area	394.98
27.	Steep Sloping Area	12.39
28.	Snow covered and/or Glacial Area	0.00
Total		75,84.15

Source: Wasteland Maps 2003 Land Use Division, RS & GIS, National Remote Sensing Agency, Department of Space Govt. of India, Hyderabad

Table 3: State-wise drainage area of Godavari basin

Name of the State	Drainage area (km ²)	Percentage of the total basin drainage area
Maharashtra	152199	48.6
Madhya Pradesh	26168	8.4
Chhattisgarh	39087	12.5
Andhra Pradesh	73201	23.4
Karnataka	4406	1.4
Orissa	17752	5.7
Total	312813	100.0

Table 04: Major Basins/Sub-basins in Chhattisgarh

Basin/Sub basin	Area Covered (as percentage of the entire area of the state)	District
1. Mahanadi	55%	Raipur, Mahasamund, Raigarh
2. Godavari	29%	Baster, Dantewada
3. Lower Ganges	13%	
4. Narmada	2%	
5. Sankh Sub-basin (Brahmani Basin)	1%	

Micro Watershed

It is necessary to co-ordinate all the programmes dealing with development of Land and Water resources on a holistic and Micro-Watershed approach. A Micro watershed of about 500 hectares is taken as a unit for development for a period of 5 years. Such Micro watersheds are a part of a milli watershed covering a cluster of villages. The scale of investment in each micro watershed is Rs. 60.00-70.00 lakhs in 5 years. The holistic and integrated approach includes activities like Soil and Moisture Conservation, Water harvesting Structures, Social Forestry, Silvi-pasture, Horticulture etc., Participatory approach through Community

Organizations is adopted as a tool for as a group. The Self-Help Groups are emerging as stake holders in the villages and the active development activities are virtually placed in the hands of village people consisting of Self Help Groups and User Groups, who actually plan, implement and subsequently manage the implementation that, it is possible to achieve socio-economic development. "The role of the Government is that of a facilitator but not a regulator". In most of the cases, the Self Help Groups and User also must have entry through thrift or any other important input.

Chhattisgarh State Level Nodal Agency: An Innovative approach

Chhattisgarh state level Nodal Agency was notified on 10.08.2009. The Watershed Cell in the office of Development Commissioner is being upgrade to work under the direction of the SLNA. It will also provide technical input in the project formulation and their execution. The entire watershed program will be run under direct supervision of the SLNA.

1.4 Overview of the State

The state of Chhattisgarh has an area of 1, 35,191 sq. km. and a population of 20.83 million. There are 18 districts, 146 blocks, and 20308 villages. The State has population density of 154 per sq. km. (as against the national average of 312). The decadal growth rate of the state is NA (against 21.54% for the country) and the population of the state is growing at a slower rate than the national rate.

1.5 Economic Development

Between 1994 and 2003, the state's NSDP increased from US\$ 2.7 to 3.3 billion at a compounded annual growth rate of 2 per cent. This is a new state with an opportunity to adopt a modern model for economic development. It has large mineral resources to facilitate development of cement, steel, aluminum and electricity generation. There is single window clearance framework with statutory backing. Per capita income of the state is around 14000 Rs. (US\$264) Per annum. During 2002-03, Chhattisgarh's per capita income stood at US\$ 264. Between 1993-94 and 2001-02, the share of agriculture sector in the state declined from 40 per cent to 36 per cent and the industrial sector from 30 per cent to 28 per cent. Cement, Mining, Iron & Steel, Aluminum industries are operation in the state.

Role of Watershed Management

To assess the economic development of the village community which is directly or indirectly dependent on the watershed through (A) Optimum utilization of the watershed's natural resources like land, water, vegetation, etc. that will mitigate the adverse effects of drought and prevent further ecological degradation and (B) Employment generation and development of the human and other economic resources of the village in order to promote savings and other income-generation activities. To assess impact of DPAP and IWDP on restoration of ecological balance in the village through (A) Sustained community action for the operation and maintenance of assets created and further development of the potential of the natural resources in the watershed and (B) Simple, easy and affordable technological solution and institutional knowledge and available materials.

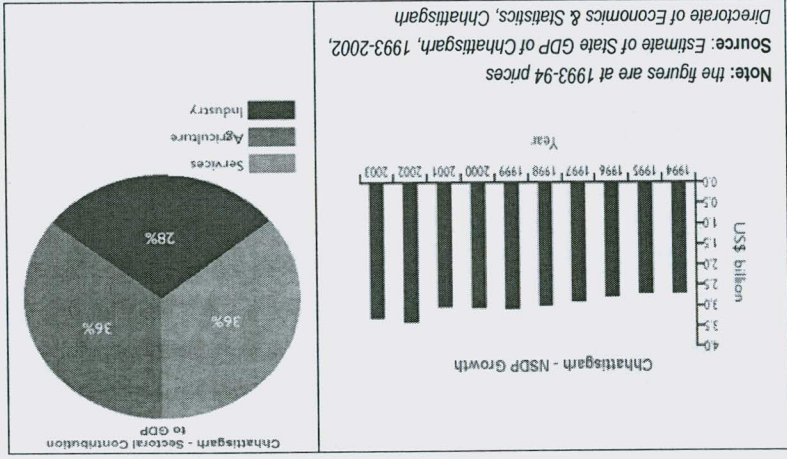


Table SPSP 1: District Profile

Name of District	No. of Blocks	Total no. of villages	No. of Gram Panchayats (000 Nos.)	Geographical area ('000 ha)	Population in thousand (2001 Census)									% of BPL to population
					Male			Female			Total			
					SC	ST	Others	SC	ST	Others	SC	ST	Others	
Bastar	14	1461	655	1702.0	38.4	857.9	403.2	38.9	875.0	399.8	77.4	1733.0	803.0	58
Bilaspur	10	1579	864	857.0	187.8	198.0	628.1	181.3	199.1	604.1	369.1	397.1	766.2	43
Dantewada	11	1220	409	1561.0	6.5	189.1	40.5	8.1	179.6	54.5	14.7	368.7	95.0	36
Dhamtari	4	629	339	408.0	24.4	91.7	236.3	25.0	93.8	235.3	49.4	185.5	471.7	36
Durg	12	1776	998	870.0	154.4	147.8	1114.4	151.6	150.3	1087.2	305.9	298.1	2201.6	35
Janjgir-Champa	9	889	582	447.0	148.1	75.5	659.4	148.1	77.6	658.0	296.2	153.1	1317.4	39
Jashpur	8	764	417	646.0	18.6	239.7	113.5	17.8	230.3	123.4	36.4	470.0	236.8	45
Kanker	7	1068	389	643.0	13.5	180.8	130.3	14.1	184.2	128.0	27.7	365.0	258.2	49
Kawardha	4	956	371	444.0	108.2	180.1	529.6	107.7	183.0	529.1	215.9	363.1	1058.7	55
Korba	5	710	354	714.5	26.7	184.2	304.3	26.3	184.9	285.5	53.0	369.1	589.8	47
Koriya	5	650	250	598.0	24.6	132.0	144.7	23.6	128.1	133.4	48.2	260.0	278.1	50
Mahasamund	5	1111	492	496.0	44.8	110.1	271.1	46.0	114.4	273.7	90.8	224.6	544.8	54
Raigarh	9	1433	710	653.0	89.4	90.3	446.7	222.5	225.2	191.4	311.9	315.6	638.1	55
Raipur	15	2124	1204	1345.0	244.3	181.4	1190.2	243.4	183.9	973.8	487.7	365.3	2163.9	47
Rajnandgaon	9	1605	696	802.0	62.8	166.6	404.9	64.6	175.1	49.2	127.4	341.7	454.1	40
Surjua	19	1769	1090	1603.0	45.9	541.9	410.2	46.9	534.7	390.7	92.8	1076.7	800.9	56
Total	146	19744	9820	13789.5	1238.6	3567.1	7027.2	1365.9	3719.2	6117.1	2604.5	7286.3	12678.3	

CHAPTER: 2

Agro-climatic zones

Chhattisgarh state has been divided into three Agro-climatic zones viz Chhattisgarh Plains, Bastar Plateau and Northern Hills zone covering 51.0%, 28.0% and 21.0% of the geographical area, respectively. The location of the state is such that it is close to the Bay of Bengal, which is instrumental in bringing monsoon in the Northern part of the country. The cropping intensity of the state is about 135 percent, which shows an increasing trend since creation of the state and due to increases in irrigation facilities

Climate

Chhattisgarh being near to the Tropic of Cancer possesses intense heating during the summer period; the sun remains overheads most of time during summer. The overall average temperature is 25.4°C and Chhattisgarh Plains witnesses the hottest atmosphere with average temperature touching 27.2°C due to the lower altitude and less forest cover, while, Northern Hills Zone usually observe the mild temperature averaging 23.8°C due to its extreme north position and higher altitude. The daytime temperature of the state is 32.2°C and it is highest in the month of May with a value of 40.2°C, whereas, it is lowest in the month of January (20.0°C). Thus, the nights of Northern Hills are relatively cooler, while that of Chhattisgarh Plains are warmer. On an average the 3.60 Octa cloud covers are observed over the Chhattisgarh state with 1.98 and 5.22 Octa cloud cover in *rabi* and *kharif* season, respectively. The sun shines about 4.5 hours every day during *kharif* season and about 7.5 hours every day during *rabi* season with mean of 6 hours per day. The nearness of the state to Bay of Bengal causes good amount of rainfall during June to September, which accounts for more than 90 percent rainfall in the state. The average rainfall of the state ranged from 1200-1400 mm, which is mostly concentrated in the *kharif* season. The annual rainfalls of Chhattisgarh Plains, Bastar Plateau and Northern Hills zone are 1200, 1400 and 1600 mm, respectively. The state also receives the winter rains from occasional western disturbances and localized thunderstorms. The monsoon usually enters around 10th June from southern part of the Bastar and reaches the other part of Chhattisgarh by 25th June and starts withdrawing from 15th September from Surguja and completely withdrawn by usually 25th

September. The relative humidity remains very high (80-90 %) during rainy season and decreases significantly (40 %) in the remaining period.

Agro-climatic and agro-ecological characteristics

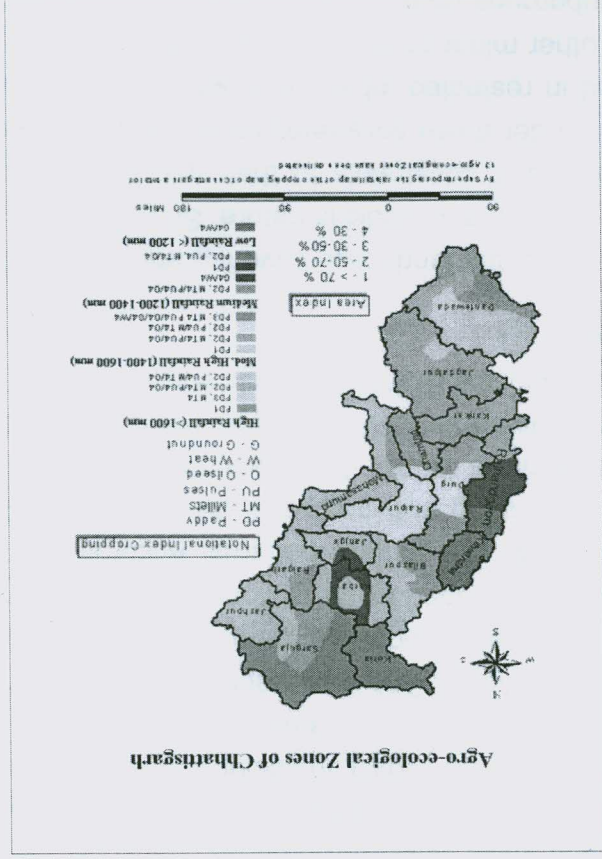
The characterization was based on screening of distinct agro-climatic parameters apart with agro-ecological parameters and preparation of data base for the said zones of Chhattisgarh. The annual average data of 30 stations falling in Chhattisgarh and surrounding states of Madhya Pradesh, Maharashtra, Orissa, Uttar Pradesh, Jharkhand and Andhra Pradesh have been collected from Indian Meteorological Department. The spatial surface of the rainfall data was generated in ARC-View 3.1 GIS software using the IDW (Inverse Distance Weightage) algorithm.

Annual temperature varied from $<23^{\circ}\text{C}$ to $>26^{\circ}\text{C}$, rainfall between <1300 mm to >1600 mm, relative humidity $<56\%$ to 62% , cloud cover <3 octa to >4 octa, rainy days <65 to >80 days, wind speed <3 kmph to >6 kmph, potential evapotranspiration from <1500 mm to 1650 mm, and radiation intensity from <18 mj/m^2 to >19.5 mj/m^2 for minimum to maximum respectively. Length of growing period was standardized on the basis of these said factors that range from <105 to 120 day suitable for crop growth. Soil depth ranged from <10 cm to >100 cm and soil type variation includes vertisol, ultisol, inceptisol and alfisol area of Chhattisgarh. Chhattisgarh classified is classified into 63 Agro-ecological classes.

Soils

Variations in most soil properties and characteristics in the region are closely related to their position on the landscape. Soil properties gradually improved towards the slope indicating that drainage conditions, differential transport of eroded material and

Agro-ecological Zones of Chhattisgarh



translocation and deposition of mobile soil constituents played a key role in genesis of these soils. Moving down the slope, there is an increase in soil depth, water holding capacity, cation exchange capacity and preponderance of calcium and magnesium ions on exchange sites. Along the slope, there is gradual change in soil colour from red to darker gray brown, in colour from sandy loam to clayey, in texture from non-sticky to very-sticky inconsistency and in mineralogical make up towards decrease in *illite* and concurrent increase in *montmorillonite*, and calcium carbonate from almost none to abundant. The topographical variations, have marked influence in regulating hydrological conditions and thereby on *pedogenic* processes responsible for morphological features as well as, physical and chemical properties of soils. Soils of Chhattisgarh are mainly developed by the actions and interactions of relief, parent material and climate. Biotic features, mainly the natural vegetation follows the climatic patterns. According to soil taxonomy' (7th approximation) soils of Chhattisgarh fall under 5 orders and 9 dominating sub groups. Entisols covers 19.5% cultivated area of the state, Inceptisols 14.8%, Alfisols 39%, Mollisols 0.3 % and Vertisols 26.4%. Dominating 9 sub groups are namely, Typic Ustorthent (Covering an area of 1.6% of the total cultivated area), lithic Ustorthent (17.9%), Typic Haplustept (9.5%), Vertic Haplustept (5.3%), Typic Rhodustalf (6.1 %), Typic Haplustalf 32.9%, lithic Haplustoll (0.3%), Chromic Haplustert (19.3%), Typic Haplustert (7.1%). The different forms of soils of the state are described as below.

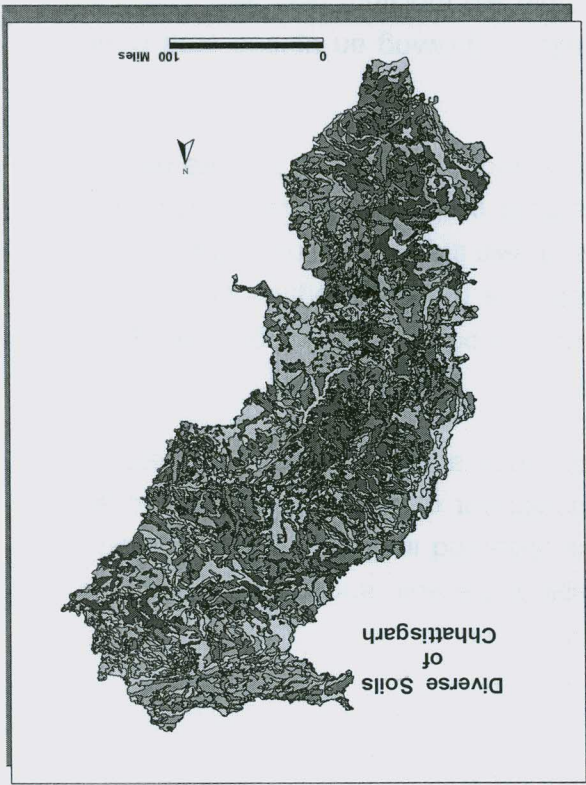
Entisols: These soils are locally called *Bhata* or *Tikra* soils found in upper most layer of the landscape covering about 20% of the cultivable area. They are eroded, coarse textured gravelly soils, free to excessively drained and acidic in nature. Shallow depth, low water holding capacity, poor physical environments and low soil fertility are the major constraints to their use for productive cropping. They are soft when wet but becomes very hard on drying. A major area under these soils remains fallow or constitutes the wasteland and not suitable for most of the crops. They are, however, cropped in restricted tribal areas without inputs during kharif season with smaller millets, sesame, niger, horsegram, ricebean, sorghum, other minor crops and even with extra early rice varieties in some parts. Typic ustorthent and lithic ustorthent are the dominating subgroups under this order. Typic ustorthent was sandy clay loam to clay in texture with clay content ranging from 31.3 to 42.8 per cent. Lithic ustorthent was sandy clay in texture with clay content ranging from 36.4 to 45.9 percent. High profile water storage capacity was observed in Typic ustorthent and medium profile water storage capacity was observed in lithic ustorthent.

Table SPSP 2: Details of Agro-climatic zones in the district

S.No	Name of the Agro-climatic zone	Area in Ha.	Names of the districts	Major soil types		Average rainfall in mm (preceding 5 years average)	Major crops	
				Type	Area (ha)		Name	Area (ha)
1	2	3	4	5	6	7		
1	Semi - arid	1702000	Bastar	Red & yellow	709223	1481	Paddy	263701
2	Semi - arid	857000	Bilaspur	Red & yellow	357112	1351	Paddy	325134
3	Semi - arid	1561000	Dantewada	Red & yellow	650469	1404	Paddy	190505
4	Semi - arid	408000	Dhamtari	Red & yellow	170014	1346	Paddy	175006
5	Semi - arid	870000	Durg	Red & yellow	362529	1142	Paddy	465325
6	Semi - arid	447000	Janjgir-Champa	Red & yellow	186265	1386	Paddy	254239
7	Semi - arid	646000	Jashpur	Red & yellow	269188	1487	Paddy	181389
8	Semi - arid	643000	Kanker	Red & yellow	267938	1271	Paddy	171869
9	Semi - arid	444000	Kawardha	Red & yellow	185015	1117	Paddy	93715
10	Semi - arid	714544	Korba	Red & yellow	297750	1392	Paddy	109818
11	Semi - arid	598000	Koriya	Red & yellow	249187	1317	Paddy	69115
12	Semi - arid	496000	Mahasamund	Red & yellow	206683	1339	Paddy	241743
13	Semi - arid	653000	Raigarh	Red & yellow	272105	1466	Paddy	241665
14	Semi - arid	1345000	Raipur	Red & yellow	560462	1337	Paddy	539878
15	Semi - arid	802000	Rainandgaon	Red & yellow	334193	1112	Paddy	268022
16	Semi - arid	1603000	Surguja	Red & yellow	667970	1317	Paddy	311757
	Total	13789544			5746103	1329.06		3902881

Affisols: Affisols are locally called *Dorsa* or *Mall* soils. The soils occur on midland situation, are deep and hence, have good water holding capacity, roughly twice as that of *Inceptisols*. Most of the *Affisol* fields are banded, leveled and relatively less affected due to drought. They constitute the major land situation, which has traditionally been used for growing oilseed, and pulse crops as relay cropping (*Utera*) on residual soil moisture especially after irrigated rice and effective rainfall. Extremely low yields of post-rice crops in these soils are mostly due to poor soil physical conditions after rice, lack of appropriate till in establishing adequate plant population. The major challenge therefore, lies in exploiting the potential of these soils by ensuring adequate plant population and promoting early plant vigour with limited, economic fertilizer use for deeper root penetration to utilize the soil moisture reserves.

Haplustept and high profile water storage capacity was observed in Typic Haplustept. Indicating movement of clay from surface to sub surface layers. Very high profile water storage capacity was observed in Vertic to clay in texture with clay content ranging from 33.2 to 50.4 per cent. Clay content in the soils generally increased with depth



Inceptisols: *Inceptisols* are locally called *Matasi* or *Marhan* soils and are considered to be immature soils with poor soil profile features having lighter texture and shallow to moderate depth. These soils are being used exclusively for growing early rice after bunding, puddling and leveling and also for pulses and maize without bunding. They are soft and non-sticky when wet, easily workable under wet cultivation for puddling and *biasi* operations and therefore, can easily be managed to improve surface water retention for rice cultivation. The soils are marginally suited for upland crops due to lack of aggregation and structural stability, tendency to surface sealing and hardsetting on drying high susceptibility to erosion and limited water holding or retaining capacity. The rainfed rice and maize in these soils faces risk of drought with erratic distribution of rainfall but performs very well with irrigation. These soils are usually left fallow after rice under rainfed condition, but presently being used successfully for growing *rabi* crops under irrigated and proper management of soil moisture. Under this order the dominating sub-groups are Typic Haplustept and Vertic Haplustept. Vertic Haplustept have clayey texture with clay content varying from 48.0 to 55.0 per cent. Typic Haplustept is sandy clay loam

Typic Rhodustalf and Typic Haplustalf are the dominant subgroups under this order. Texture of the soil ranged from sandy clay loam to clay, with clay content varying from 24.0 to 57.5 per cent. Higher clay content was observed in Typic Haplustalf than in Typic Rhodustalf. Clay content in the soils generally increased with depth & indicating movement of clay from surface to sub surface layers. Very high-to-high profile water storage capacity was observed in Typic Haplustalf and low profile water storage capacity was observed in Typic Rhodustalf.

Vertisols: These soils are locally known as *Kanhar* or *Gabhar* soils. They are deep, have a good water holding capacity and therefore possess considerable crop production potential. They have very narrow workable soil moisture regime and become massive when dry and sticky when wet making tillage operation extremely difficult with animal drawn implements normally available with farmers. Thus, these soils remain mostly under-utilized due to difficulties in management problems. However, the tillage operation becomes easy with minimum power within the narrow favourable soil moisture range and on flooding. They are used for growing rice under low-lying situations receiving considerable run-off from upland fields.

Management prerequisite is, therefore, to exploit the production potential of these soils by growing an upland crop or rice during rainy season and ensuring establishment a follow-up, short duration winter crop on ample soil moisture reserves. There are two sub groups under the order, Vertisols, i.e. chromic Haplustert and Typic Haplustert. Both subgroups were clay in texture with clay content ranging from 45.0 to 50.70 per cent. Very high profile water storage capacity was observed in Typic Haplustert and high profile water storage capacity was observed in Chaomic Haplustert.

Mollisols: They are dark in colour and have high moisture regimes on greater annual average moisture content. These soils are generally high in organic matter, low to medium in available phosphorus and medium to high in available potassium. They are formed under a dense vegetative cover in forests as a result of subsurface decomposition of organic residues on base-rich parent material. They have a thick, dark coloured and well structured surface diagnostic horizon and found only in Bastar plateau of Chhattisgarh plain. The soils occur on wide ranging landforms covering about 17% of total geographical area of Bastar plateau. In this order the dominating sub group is lithic Haplustoll. Texture was sandy clay loam to clay with clay content ranging from 27.8 to 41.8 per cent. Profile water storage capacity in this group was very high; it was measured at 24.35 cm m⁻¹.

Major crops

The total cultivated area of the state is about 5715.84 thousand ha i.e. 41.14 per cent of the total geographic area having 4590.26 thousand ha i.e. 80.310 total area under Kharif crops and 1125.59 thousand ha under rabi crops. The zone-wise cropping pattern of the state reveals that Kharif crops are being grown in about 74.72, 96.19 and 88.68 per cent in Chhattisgarh plains, Bastar plateau and Northern hills, respectively. However, rabi cropping was done in 25.27, 3.8 and 11.32 per cent of the total cropped area in CG plains, Bastar plateau and northern hills, respectively. Similarly, the double cropping was grown in only 16.54 % area with highest 20.85 percent in CG plains followed by 11.04% in Northern hills and the lowest 3.25 % in Bastar plateau zone.

The crop scenario analysis of the state reveals that the rice is the main crop constituted 65 % of the total cropped area and of which nearly 23 percent of the total irrigated area is under rice and rest with wheat, vegetables, sugarcane and few other crops. The government is also in efforts to increase the state irrigation upto 50% from existing 27-32 percent. It is near to target in Chhattisgarh plains but lacking in other zones. Though, presently the coverage of high yielding varieties is upto the satisfactory level, but due to poor management practices like use of fertilizers, pesticides etc. leads sizable yield gaps between potential and actual yield at farmers field. Thus there is challenging scope for agriculture and its allied sectors prosperity in the state.

Diversified crops and cropping systems are the typical characteristic of Chhattisgarh. Though, the rice is the major crop of the region, however, the other crops like *kharif* potato in northern hills, coconut, coffee and various tuber crops in Bastar plateau, rabi potato, vegetables, sugarcane, sunflower, maize (kharif & rabi) and mustard in whole state are being grown profitably. The cropping system of the state is Rice based. Pulses rank next to rice followed by minor millets, oilseeds and maize. Chhattisgarh state contributes about 4.47 per cent of the total rice production, while for maize it is only 1.35 per cent of the country. In rabi season, major area is under pulses followed by oilseeds and wheat. *Lathyrus*, gram, wheat and linseed are the main rabi crops. *Lathyrus* is grown (about 5.8 lac ha) as a relay as well as sown crop in Chhattisgarh plains. The productivity of rice ranges between 1.0 to 1.1 t/ha in rainfed, 1.6 to 1.9 t/ha in irrigated area. However, the productivity of summer rice is higher as compared to *kharif* rice. The productivity of minor millets, oilseeds, pulses, maize and other rabi crops is, also low. Thus, there is an urgent need to improve the productivity of these crops in the state with proper management practices.

Table 04 : Crop wise Area Scenario of Chhattisgarh : Progress in Agriculture Sector Year 2001-02 to 2006-07

Particulars	Kharif Area ('000 ha.)						% Over Base year
	2000-01 Base Year	2001-02	2002-03	2003-04	2004-05	2005-06 End Year	
Paddy	3718	3708	3696	3702	3703	3692	- 4
Maize	93	94	94	99	98	100	+ 78
Total Cereals	4093	4150	4108	4133	4122	4110	- 6
Arhar	49	50	56	52	52	51	+ 233
Total Pulses	244	238	243	238	236	231	+ 77
Soybean	13	15	15	21	32	47	+ 685
Total Oilseed	146	147	147	157	164	177	+ 112
Grand Total	4622	4587	4562	4590	4581	4774	+ 3
Rabi Area ('000 ha.)							
Wheat	78	98	94	106	99	97	+ 91
Maize	0	0	0	0	0	0	+ 109
Total Cereals	160	104	99	112	190	171	+ 96
Gram	140	170	176	205	234	243	+ 79
Lethyrus	251	417	330	461	449	458	+ 97
Total Pulses	439	632	551	721	740	450	+ 42
Linseed	74	82	68	75	72	71	+ 196
Mustard	48	50	48	55	55	57	+ 137
Total Oilseeds	124	136	118	138	152	150	+ 137

Source: Year 2000-01 to 2005-06 By Land Record and 2006-07 By Director of Agriculture, C.G.

Table 05 : Crop wise Productivity : Progress in Agriculture Sector Year 2001-02 to 2006-07

Crops	National	Base Year 2000-01	Kharif Productivity (kg/ha)							% Over Base year	
			2001-02	2002-03	2003-04	2004-05	2005-06	2006-07			
Paddy	2077	629	1330	781	1553	1238	1469	1425	227		
Maize	2039	1355	745	1840	2111	2418	1930	1241	92		
Total Cereals	-	613	1241	752	1453	1175	1372	1384	226		
Arhar	672	429	400	3143	3827	1692	1333	417	97		
Total Pulses	-	307	328	1136	1328	928	818	360	117		
Soybean	1210	538	533	4867	3476	2875	1660	1020	189		
Total Oilseed	-	384	476	1136	1153	1335	1073	652	170		
Grand Total	-	571	1155	774	1417	1153	1261	1198	210		
				Rabi Productivity (kg/ha)							
Wheat	2713	1013	1061	1032	1708	1636	1567	1060	105		
Maize	-	0	0	0	0	0	0	0	0		
Total Cereals	-	719	1048	1293	2777	1716	1901	1778	247		
Gram	813	514	735	932	1210	692	930	833	162		
Lethyrus	-	434	554	470	644	399	502	524	121		
Total Pulses	-	444	581	633	838	518	1116	588	132		
Linseed	-	270	268	426	600	444	465	257	95		
Mustard	1151	313	380	1104	1055	1000	877	401	128		
Total Oilseeds	-	323	309	822	1014	763	733	361	112		

Source: Year 2000-01 to 2005-06 By Land Record and 2006-07 By Director of Agriculture, C.G.

Rainfall

The State has a sub-tropical humid climate and experiences rainfall used by SW Monsoon during June to September. Normal annual rainfall (Indian Meteorological Department, 2001) in the districts varies from 1112 mm in Rajnandgaon to 1487 mm (Table SPS-2) in Jashpur. Normal non-monsoon rainfall in the district varies from a minimum of 117mm in Bilaspur to a maximum of 210 mm in Bastar district. On an average, normal non-monsoon rainfall accounts for 11.4% of the normal rainfall. The average rainfall in the Chhattisgarh plains is 1021.35mm. Baster plateau is 1066.5mm, and northern hills are 1328.73mm in year 2008.

Table SPS 3: Details of average rainfall and altitude recorded at the District headquarters

(A brief description of droughts and floods in the State in the last **ten** years)

S.No.	Name of the District	Average rainfall in mm (preceding 5 years average)
1	Bastar	1481
2	Bilaspur	1351
3	Dantewada	1404
4	Dhamtari	1346
5	Durg	1142
6	Janjgir-Champa	1386
7	Jashpur	1487
8	Kanker	1271
9	Kawardha	1117
10	Korba	1392
11	Koriya	1317
12	Mahasamund	1339
13	Raigarh	1466
14	Raipur	1337
15	Rajnandgaon	1112
16	Surguja	1317
	Total	1329.06

Source of data: Department of Agriculture, Raipur Chhattisgarh

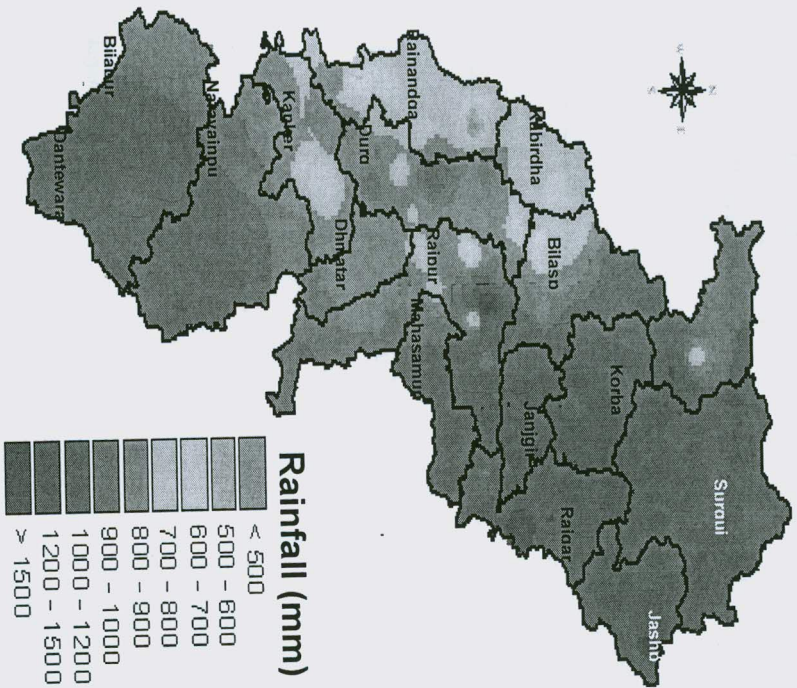


Table SPSP 4: Details of drought and flood affected districts, blocks and villages in the State during last 10 years * (MIS Table-M(SP)6) for the year 2000-01

Sl. No	Name of the District	Particulars	Names of the Block	Villages		Periodicity		Not affected
				No. of villages	Name (s) of villages	Annual (Avg. of Last 10 Year)	Any other (pl. specify)	
1	Bastar	Flood	-	5	No. of villages	6	-	-
		Drought	-	5	Name (s) of villages	-	-	-
2	Bilaspur	Flood	-	5	No. of villages	-	-	-
		Drought	Bilaspur, Bilha, Masturi, Kota, Mungeli, Takatpur, Pendraroad	5	Name (s) of villages	1770	-	-
3	Dantewada	Flood	-	5	No. of villages	-	-	-
		Drought	-	5	Name (s) of villages	-	-	-
4	Dhamtari	Flood	-	5	No. of villages	48	-	-
		Drought	Kurud, Nagari, Dhamtari	5	Name (s) of villages	364	-	-
5	Durg	Flood	-	5	No. of villages	-	-	-
		Drought	Sajam Bemetara, Navagarh, Daundi-lohara, Balod, Berla, Gurur, Patan, Dhandha, Durg, Gundadehi	5	Name (s) of villages	1702	-	-
6	Janjgir-Champa	Flood	-	5	No. of villages	45	-	-
		Drought	Janjgir, Champa, Sakti, Jaijapur, Dabhara, Malkharauda	5	Name (s) of villages	733	-	-
7	Jashpur	Flood	-	5	No. of villages	-	-	-
		Drought	Jashpur, Kunkuri, Bagicha, Patthalgaon	5	Name (s) of villages	755	-	-

8	Kanker	Flood	-	Kanker, Natharpur	No. of villages	15	-	-
		Drought	-		Name (s) of villages	No. of villages	217	-
9	Kabirdham	Flood	-	Kabirdham, Pandariya.	Name(s) of villages	-	-	-
		Drought	-		Name (s) of villages	949	-	-
		Flood	-		Name(s) of villages	-	-	-
		Flood	-		Name (s) of villages	-	-	-
10	Korba	Drought	Katghora	Name (s) of villages	121	-	-	
		Flood	-	Name(s) of villages	-	-	-	
		Flood	-	Name(s) of villages	-	-	-	
11	Koriya	Flood	-	Name (s) of villages	-	-	-	
		Drought	-	Name(s) of villages	35	-	-	
		Flood	-	Name (s) of villages	-	-	-	
12	Mahasamund	Flood	-	Mahasamund, Saraipali, Basana	No. of villages	1082	-	-
		Drought	-		Name(s) of villages	55	-	-
		Flood	-		No. of villages	1438	-	-
		Drought	-		Name(s) of villages	56	-	-
13	Raigarh	Flood	-	Raigarh, Sarangarh, Kharsia, Charghoda, Lailunga, Dharmjaigarh	No. of villages	1438	-	-
		Drought	-		Name(s) of villages	56	-	-
		Flood	-		No. of villages	2000	-	-
14	Raipur	Drought	-	Raipur, Tilda, Abhanpur, Aramag, Simga, Bhatapara, Balaudabazar, Palari, Kasdol, Bilagarh, Ganvabandi, Rajim, Devgarh	Name(s) of villages	-	-	-

15	Rajnandgaon	Flood	-	No. of villages	-		
		Drought	Rajnandgaon, Chukhadan, Khairagarh, Dongarhgarh, Mohala, Dongarhgaon	No. of villages Name(s) of villages	1353 -		-
16	Surjuja	Flood	-	No. of villages	-		
		Drought	-	Name (s) of villages No. of villages Name(s) of villages	- - -		-

Table SPS 4: Details of drought and flood affected districts, blocks and villages in the State during last 10 years * (MIS Table-M(SP)6)

Sl. No	Name of the District	Particulars	Names of the Block	Villages	Periodicity		Not affected
					Annual (Avg. of Last 10 Year)	Any other (pl. specify)	
1	2	3	4	5	6	7	
1	Bastar	Flood	-	-	-	-	-
		Drought	-	-	-	-	-
2	Bilaspur	Flood	-	-	-	-	-
		Drought	Bilaspur, Bilha, Masturi, Kota, Mungeli, Takapur, Pendrao	1770	-	-	-
3	Dantewada	Flood	-	-	-	-	-
		Drought	-	-	-	-	-
4	Dhamtari	Flood	-	-	-	-	-
		Drought	Kurud, Nagari, Dhamtari	364	-	-	-
5	Durg	Flood	-	-	-	-	-
		Drought	Sajam Bemetara, Navagarh, Daundi-Johara, Balod, Bera, Gurur, Patan, Dhamdha, Durg, Gundadehi	1702	-	-	-
6	Janjgir Champa	Flood	-	-	-	-	-
		Drought	Janjgir, Champa, Sakti, Jajapur, Dabhara, Malkharada	733	-	-	-

7	Jashpur	Flood	-	No. of villages	-	-	-
		Drought	Jashpur, Kunkuri, Bagicha, Pathhagaon	Name (s) of villages	755	-	-
8	Kanker	Flood	-	No. of villages	-	-	-
		Drought	Kanker, Nartharpur	Name (s) of villages	217	-	-
9	Kabirdham	Flood	-	No. of villages	-	-	-
		Drought	Kabirdham, Pandariya,	Name(s) of villages	949	-	-
10	Korba	Flood	-	No. of villages	-	-	-
		Drought	Katghora	Name (s) of villages	121	-	-
11	Koriya	Flood	-	No. of villages	-	-	-
		Drought	-	Name(s) of villages	-	-	-
12	Mahasamund	Flood	-	No. of villages	35	-	-
		Drought	Mahasamund, Saraipali, Basana	Name (s) of villages	1082	-	-
13	Raigarh	Flood	-	No. of villages	-	-	-
		Drought	Raigarh, Sarangarh, Kharsia, Gharghoda, Lalunga, Dharmjagarh	Name (s) of villages	1438	-	-
14	Raipur	Flood	-	No. of villages	-	-	-
		Drought	Raipur, Tilda, Abhanpur, Aranaq, Simga, Bhatapara, Balaudabazar, Palari, Kasdoi, Bilagarh, Gariyaband, Rajim, Devgarh	Name (s) of villages	2000	-	-

15	Rajnandgaon	Flood	-	No. of villages	-	-
		Drought	Rajnandgaon, Chukhadan, Khairagath, Dongarhgarh, Mohala, Dongarhgaon	Name (s) of villages	1353	-
16	Surguja	Flood	-	No. of villages	-	-
		Drought	-	Name (s) of villages	-	-
				No. of villages	-	-
				Name (s) of villages	-	-
				No. of villages	-	-
				Name(s) of villages	-	-

Table SPSP 4: Details of drought and flood affected districts, blocks and villages in the State during last 10 years * (MIS Table-M(SP)6) for the year 2002-03

Sl. No	Name of the District	Particulars	Names of the Block	Villages	Periodicity		Not affected
					Annual (Avg. of Last 10 Year)	Any other (pl. specify)	
1	2	3	4	5	6		7
1	Bastar	Flood	-	No. of villages 21	-	-	-
		Drought	Kondagaon, Keskal, Narayanpur, Jagdalpur	No. of villages 1260	-	-	-
2	Bilaspur	Flood	-	Name(s) of villages No. of villages	-	-	-
			-	Name (s) of villages No. of villages	-	-	-
		Drought	Bilaspur, Bilha, Masturi, Marwahi, Lorami, Kota, Mungeli, Takatpur, Pendraarod	No. of villages 1598	-	-	-
			-	Name (s) of villages No. of villages	-	-	-
3	Dantewada	Flood	-	Name (s) of villages No. of villages	-	-	-
			-	Name(s) of villages No. of villages	-	-	-
		Drought	Bhopalpatnam, Korta, Bijapur, Dantewada	No. of villages 1354	-	-	-
			-	Name(s) of villages No. of villages	-	-	-
4	Dhamtari	Flood	-	Name (s) of villages No. of villages	-	-	-
			-	Name (s) of villages No. of villages	-	-	-
		Drought	Kurud, Nagari, Dhamtari	No. of villages 650	-	-	-
			-	Name(s) of villages No. of villages	-	-	-
5	Durg	Flood	-	Name(s) of villages No. of villages	-	-	-
			-	Name (s) of villages No. of villages	-	-	-
		Drought	Saijam Bemelatara, Navagarh, Daundi-lohara, Balod, Berta, Gurur, Patan, Dhamdha, Durg, Gundadehi	No. of villages 1842	-	-	-
			-	Name(s) of villages No. of villages	-	-	-
6	Janjgir Champa	Flood	-	No. of villages 198	-	-	-
		Drought	Janjgir, Champa, Sakti, Jajajapur, Malkharauda	No. of villages 637	-	-	-

7	Jashpur	Flood	-	No. of villages	-	-	-
		Drought	Jashpur, Kurkuri, Bagicha, Patthalgaon	Name (s) of villages	755	-	-
8	Kanker	Flood	-	No. of villages	27	-	-
		Drought	Kanker, Charama, Nairapur, Bhanupratappur, Antagarh, Pakhanjur	Name (s) of villages	995	-	-
		Flood	-	No. of villages	-	-	-
		Drought	Kabhidham, Pandariya	Name (s) of villages	1012	-	-
10	Korba	Flood	-	No. of villages	45	-	-
		Drought	Korba Katghora, Kartala, Pali	Name (s) of villages	792	-	-
		Flood	-	No. of villages	57	-	-
11	Koriya	Drought	Bikunthipur, Sonhat, Manendragarh, Bharatpur	Name (s) of villages	683	Almost every two years, there are drought in the area	-
		Flood	-	No. of villages	667	-	-
12	Mahasamund	Flood	-	No. of villages	667	-	-
		Drought	Mahasamund, Saraiipali, Basana	Name (s) of villages	1141	-	-
		Flood	-	No. of villages	70	-	-
13	Raigarh	Drought	Raigarh, Sarangarh, Kharsia, Gharghoda, Lailunga, Dharmjalagarh	Name (s) of villages	1487	-	-
		Flood	-	No. of villages	546	-	-
		Flood	-	No. of villages	2218	-	-
14	Raipur	Drought	Raipur, Tilda, Abhanpur, Aranaq, Simga, Bhatapara, Balaudabazar, Palari, Kasdol, Bilagarh, Garyaband, Rajin, Devgarh	Name (s) of villages	-	-	-
		Flood	-	No. of villages	-	-	-

15	Rajnandgaon	Flood	-	No. of villages	86	-
		Drought	Rajnandgaon, Chuikhadan, Khairagarh, Dongarhgarh, Mohala, Dongarhgaon	No. of villages Name(s) of villages	1583 All selected villages	-
16	Surguja	Flood	-	No. of villages	-	-
		Drought	Pratappur, Ambikapur, Surajpur, Pal (Ramanujgarh), Vadrathagar, Rajpur, Lundra, Sami, Sitapur	No. of villages Name(s) of villages	- 1774	-

Table SPS 4: Details of drought and flood affected districts, blocks and villages in the State during last 10 years * (MIS Table-M(SP)6)
for the year 2003-04

Sl. No	Name of the District	Particulars	Names of the Block	Villages	Periodicity		Not affected
					Annual (Avg. of Last 10 Year)	Any other (pl. specify)	
1	Bastar	Flood	-	No. of villages	-	-	-
2	Bilaspur	Flood	-	Name (s) of villages	-	-	-
		Drought	Kondagaon, Keskai, Narayanpur, Jagdalpur	No. of villages	1260	-	-
				Name(s) of villages	-	-	-
		Flood	Bilaspur, Bilha, Masturi, Marwahi, Loram, Kota, Mungeli, Takatpur, Pendrao	No. of villages	1598	-	-
				Name(s) of villages	-	-	-
		Flood	-	No. of villages	-	-	-
		Drought	Bhopalpatnam, Konta, Bijapur, Dantewada	Name(s) of villages	1354	-	-
				No. of villages	-	-	-
		Flood	-	Name (s) of villages	-	-	-
		Drought	Kurud, Nagari, Dhamtari	No. of villages	650	-	-
				Name(s) of villages	-	-	-
		Flood	-	No. of villages	-	-	-
		Drought	Sajam Bemetara, Navagarh, Daundi-Iohara, Balod, Berla, Gurur, Patan, Dhamdha, Durg, Gundadehi	Name(s) of villages	1842	-	-
				No. of villages	-	-	-
		Flood	-	Name (s) of villages	-	-	-
		Drought	Janjgir, Champa, Sakti, Jajairpur, Malkharanda	No. of villages	637	-	-
				Name(s) of villages	-	-	-
		Flood	-	No. of villages	-	-	-
		Drought	Jashpur, Kunkuri, Bagicha, Patthalgaon	Name(s) of villages	755	-	-
				No. of villages	-	-	-
7	Jashpur	Flood	-	Name (s) of villages	-	-	-
				No. of villages	-	-	-

8	Kanker	Flood	-	No. of villages	-		
		Drought	Kanker, Charama, Nanharpur, Bhanupratappur, Antagarh, Pakhanjur	No. (s) of villages	995		
9	Kabirdham	Flood	-	No. of villages	-		
		Drought	Kabirdham, Pandariya	Name(s) of villages	-		
				No. of villages	1012		
				Name (s) of villages	-		
10	Korba	Flood	-	Name(s) of villages	-		
		Drought	Korba Katghora, Kartala, Pali	No. of villages	792		
				Name(s) of villages	-		
				No. of villages	-		
11	Koriya	Flood	-	Name (s) of villages	683		
		Drought	Bikunthpur, Sonhat, Manendragarh, Bharatpur	No. of villages	-		
12	Mahasamund	Flood	-	Name(s) of villages	-		
		Drought	Mahasamund, Saraipali, Basana	No. of villages	1141		
				Name (s) of villages	-		
13	Raigarh	Flood	-	No. of villages	-		
		Drought	Raigarh, Sarangarh, Kharsia, Gharghoda, Lailunga, Dhamjaigarh	Name(s) of villages	1487		
				No. of villages	-		
				Name (s) of villages	-		
14	Raipur	Flood	-	Name (s) of villages	2218		
		Drought	Raipur, Tilda, Abhanpur, Aranaq, Simga, Bhatapara, Balaudabazar, Palari, Kasdol, Bilagarh, Gariyaband, Rajim, Devgarh	No. of villages	-		
				Name(s) of villages	-		

15	Raipur	Flood	-	No. of villages	-	-
		Drought	Raipur, Chukhadan, Khairagarh, Dongargarh, Mohala, Dongargarh	No. of villages	1583	-
16	Surguja	Flood	-	Name(s) of villages	-	-
		Drought	Pratapgarh, Ambikapur, Surajpur, Pal (Ramanujgarh), Vadratnagar, Raipur, Lundra, Samri, Sitapur	No. of villages	-	-
				No. of villages	1774	-

Table SPSP 4: Details of drought and flood affected districts, blocks and villages in the State during last 10 years * (MIS Table-M(SP)6) for the year 2004-05

Sl. No	Name of the District	Particulars	Names of the Block	Villages		Periodicity		Not affected
				No. of villages	Name (s) of villages	Annual (Avg. of Last 10 Year)	Any other (pl. specify)	
1	Bastar	Flood	-	No. of villages	27	-	-	7
		Drought	Kondagaon, Keskal, Narayanpur	No. of villages	383	-	-	
2	Bilaspur	Flood	-	No. of villages	-	-	-	-
		Drought	Bilaspur, Bilha, Masturi, Marwahi, Loramii, Kota, Mungeli, Takatpur, Pendraraod	Name (s) of villages	-	-	-	
3	Dantewada	Flood	-	No. of villages	33	-	-	-
		Drought	Bhopalpatnam, Konta	Name (s) of villages	-	-	-	
4	Dhamtari	Flood	-	No. of villages	480	-	-	-
		Drought	Kurud, Nagari	Name (s) of villages	-	-	-	
5	Durg	Flood	-	No. of villages	597	-	-	-
		Drought	Sajam Bemetara, Navagarh, Daundi-Iohara, Patan, Dhamdha, Durg	Name (s) of villages	596	-	-	
6	Janjgir Champa	Flood	-	No. of villages	-	-	-	-
		Drought	Janjgir, Navagarh, Pamgarh, Champa, Sakti, Jaljainpur, Dabhara, Maikharanda	Name (s) of villages	99	-	-	
7	Jashpur	Flood	-	No. of villages	-	-	-	-
		Drought	Jashpur, Kunkuri, Bagicha, Pathalgaon	Name (s) of villages	440	-	-	

8	Kanker	Flood	-	No. of villages	-	-	-
		Drought	Kanker, Charama, Narharpur, Bhanupratappur, Antagarh, Pakhanjur	No. of villages	290	-	-
9	Kabirham	Flood	-	Name(s) of villages	-	-	-
		Drought	Kabhidham, Pandariya	No. of villages	-	-	-
				Name (s) of villages	292	-	-
				No. of villages	-	-	-
10	Korba	Flood	-	Name (s) of villages	-	-	-
		Drought	Katghora, Kartala	No. of villages	415	-	-
				Name(s) of villages	-	-	-
				No. of villages	-	-	-
11	Koriya	Flood	-	Name (s) of villages	-	-	-
		Drought	Bikunthipur, Sonhat, Manendragarh, Bharatpur	No. of villages	237	-	-
12	Mahasamund	Flood	-	Name (s) of villages	-	-	-
		Drought	Mahasamund	No. of villages	73	-	-
13	Raigarh	Flood	-	Name(s) of villages	-	-	-
		Drought	Raigarh, Sarangarh, Kharisia, Gharghoda, Lailunga, Dharnajagarh	No. of villages	863	-	-
				Name (s) of villages	-	-	-
				No. of villages	467	-	-
14	Raipur	Flood	-	Name (s) of villages	-	-	-
		Drought	Raipur, Tilda, Abhanpur, Aranaq, Simga, Bhatapara, Balaudabazar, Palari, Kasdol, Bilagarh, Garlyaband, Rajim, Devgarh	No. of villages	574	-	-

15	Rainandgaon	Flood	-	No. of villages	766	-	-
				Name (s) of villages			
16	Surguja	Drought	Rainandgaon, Chukhadan, Khairagarh, Dongarhgarh, Amba-Chauki, Mohala, Manpur, Dongarhgaon	No. of villages	517	-	-
		Flood	-	No. of villages	-	-	-
		Drought	Pratappur, Ambhikapur, Surajpur, Pal (Ramanujganj), Vadrathnagar, Rajpur, Lundra, Samri, Sitapur	No. of villages	-	-	-
				Name (s) of villages			
				No. of villages	1040	-	-
				Name(s) of villages			

Table SPS 4: Details of drought and flood affected districts, blocks and villages in the State during last 10 years * (MIS Table-M(SP)6) for the year 2005-06

Sl. No	Name of the District	Particulars	Names of the Block	Villages		Periodicity		Not affected
				No. of villages	Name (s) of villages	Annual (Avg. of Last 10 Year)	Any other (pl. specify)	
1	Bastar	3	Jagdulpur, Kondagaon, Keskal, Narayanpur	5	6	378	-	7
		Flood		No. of villages	Name (s) of villages	-	-	-
		Drought		No. of villages	Name(s) of villages	383	-	-
2	Bilaspur	Flood	-	Name (s) of villages	-	-	-	-
		Drought	Bilaspur, Bilha, Masturi, Marwahi, Lorami, Kota, Mungeli, Takatpur, Pendraroad	No. of villages	1020	-	-	-
		Flood	-	Name(s) of villages	266	-	-	
		Drought	-	No. of villages	-	-	-	
3	Dantewada	Flood	-	Name (s) of villages	480	-	-	
		Drought	Bhopalpatnam, Korta	No. of villages	-	-	-	
		Flood	-	Name(s) of villages	223	-	-	
4	Dhamtari	Flood	-	No. of villages	202	-	-	
		Drought	Kurud, Nagari	Name(s) of villages	768	-	-	
		Flood	-	No. of villages	-	-	-	
5	Durg	Drought	Saja, Bemetara, Navagath, Daundi-lohara, Patan, Dhamdha, Durg, Balod, Gundardehi	No. of villages	99	-	-	
		Flood	-	Name (s) of villages	-	-	-	
		Drought	-	No. of villages	-	-	-	
6	Janjgir Champa	Flood	-	Name(s) of villages	-	-	-	
		Drought	Janjgir, Navagath, Pamgarh, Champa, Sakti, Jaijapur, Dabhara, Maikharanda	No. of villages	440	-	-	
7	Jashpur	Flood	-	Name (s) of villages	-	-	-	
		Drought	Jashpur, Kunkuri, Bagicha, Patthalgaon	No. of villages	-	-	-	

8	Kanker	Flood	-	No. of villages	65	-	-
		Drought	Kanker, Charama, Natharpur, Bhanupratappur, Antagarh, Pakhanjur	Name (s) of villages		-	-
9	Kabirdham	Flood	-	No. of villages	290	-	-
		Drought	Kabhdham, Pandariya	Name(s) of villages		-	-
				No. of villages	292	-	-
				Name (s) of villages		-	-
10	Korba	Flood	-	No. of villages	-	-	-
		Drought	Korba, Pali, Katghora, Kartala	Name (s) of villages	415	-	-
				No. of villages		-	-
				Name(s) of villages		-	-
11	Koriya	Flood	-	No. of villages	-	-	-
		Drought	Bikunthpur, Sonhat, Manendragarh, Bharatpur	Name (s) of villages	237	Almost every two years, there are drought in the area	-
12	Mahasamund	Flood	-	No. of villages	255	-	-
		Drought		Name (s) of villages		-	-
				No. of villages		-	-
13	Raigarh	Flood	-	Name(s) of villages	62	-	-
		Drought	Raigarh, Sarangarh, Kharsia, Gharghoda, Lalilunga, Dharmjagarh	No. of villages	863	-	-
				Name (s) of villages		-	-
14	Raipur	Flood	-	No. of villages	557	-	-
		Drought	Raipur, Tilda, Abhanpur, Arang, Simga, Bhatapara, Balaudabazar, Palari, Kasdol, Biliagarh, Gariyaband, Rajim, Devgarh	Name (s) of villages	574	-	-
				No. of villages		-	-

Table SPSP 4: Details of drought and flood affected districts, blocks and villages in the State during last 10 years * (MIS Table-M(SP)6) for the year 2006-07

Sl. No	Name of the District	Particulars	Names of the Block	Villages	Periodicity		Not affected
					Annual (Avg of Last 10 Year)	Any other (pl. specify)	
1	2	3	4	5	6	7	
1	Bastar	Flood	-	No. of villages Name (s) of villages	-	-	-
		Drought	Kondagaon, Keskal, Narayanpur, Jagdalpur	No. of villages Name(s) of villages	383	-	-
2	Bilaspur	Flood	-	No. of villages Name (s) of villages	-	-	-
		Drought	-	No. of villages Name(s) of villages	-	-	-
3	Dantewada	Flood	-	No. of villages Name (s) of villages	-	-	-
		Drought	Bhopalpatham, Konta	No. of villages Name(s) of villages	480	-	-
4	Dhamtari	Flood	-	No. of villages Name (s) of villages	-	-	-
		Drought	-	No. of villages Name(s) of villages	-	-	-
5	Durg	Flood	-	No. of villages Name(s) of villages	-	-	-
		Drought	-	No. of villages Name(s) of villages	-	-	-
6	Janjgir Champa	Flood	-	No. of villages Name (s) of villages	-	-	-
		Drought	-	No. of villages Name(s) of villages	-	-	-
7	Jashpur	Flood	-	No. of villages Name (s) of villages	-	-	-
		Drought	Jashpur, Kunkuri, Bagicha, Patthalgaon	No. of villages Name (s) of villages	440	-	-

8	Kanker	Flood	-	No. of villages	-		
		Drought	-	Name (s) of villages	-		
9	Kabirham	Flood	-	No. of villages	-		
			-	Name(s) of villages	-		
		Drought	-	No. of villages	-		
			-	Name (s) of villages	-		
			-	No. of villages	292		
			-	Name(s) of villages	-		
10	Korba	Flood	-	No. of villages	-		
			-	Name (s) of villages	-		
		Drought	-	No. of villages	-		
			-	Name(s) of villages	-		
11	Koriya	Flood	-	No. of villages	-		
			-	Name (s) of villages	237		
		Drought	Bikunthpur, Sonhat, Bharatpur	No. of villages	-		
				Name(s) of villages	-		
12	Mahasamund	Flood	-	No. of villages	-		
			-	Name (s) of villages	-		
		Drought	Mahasamund, Basana, saraiipali	No. of villages	124		
				Name(s) of villages	-		
13	Raigarh	Flood	-	No. of villages	-		
			-	Name (s) of villages	-		
		Drought	-	No. of villages	-		
			-	Name(s) of villages	-		
14	Raipur	Flood	-	No. of villages	-		
			-	Name (s) of villages	96		
		Drought	Devbhog	No. of villages	-		
				Name(s) of villages	-		

15	Rajnandgaon	Flood	-	No. of villages	-	-	-
		Drought	-	Name (s) of villages			
16	Surguja	Flood	-	No. of villages	-	-	-
		Drought	Bikunthpur, Sonhat, Bharatpur	Name (s) of villages			
				No. of villages	240		
				Name(s) of villages			

CHAPTER: 3

Demography and Land distribution – An overview

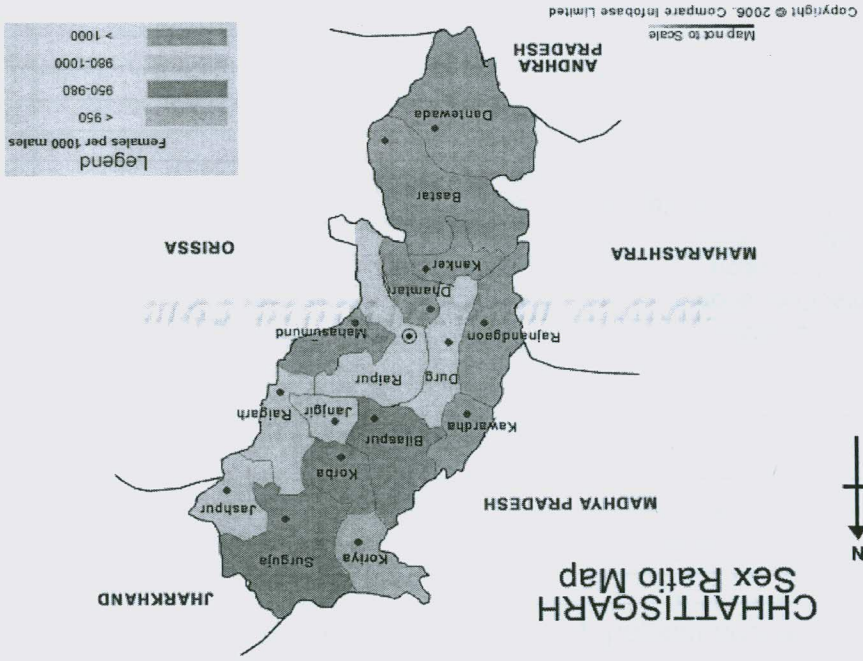
Basic Socio-Demographic Features

Chhattisgarh accounts for two per cent of India's population, of which 20 per cent live in urban areas and the remaining 80 per cent in rural areas. The population is primarily concentrated in the central plains region. Of the total population of 20.83 million, 43.4 per cent represent scheduled castes and scheduled tribes, who live mostly in the thickly forest areas in the north and south.

The literacy rate in Chhattisgarh has improved steadily from 42.91 per cent in 1991 to 64.7% in 2001, registering a growth of 21.79 per cent. With 77.4 per cent male and 51.9 percent female literacy rates, the gender gap in literacy is 25.5% as against the country's average of 21.6%. Among all districts in the state, Rajnandgaon has the highest literacy rate of 77.2 per cent. As per the 2005 UNDP report on Human Development Index (HDI), Chhattisgarh has an HDI of 0.447 in Korba district, which ranks first in the HDI rankings (0.625), also has the highest income index of 0.980.

The State has a low density of population, 151 persons per square kilometre. The sex ratio for the State is 989 females per 1,000 males. In rural Chhattisgarh, however, there are more women than men, and the ratio is 1,004 women per 1,000 men, while in urban Chhattisgarh the ratio is 932 women per 1,000 men. Rajnandgaon (1,023 women per 1,000 men) and Dantewada (1,016 women per 1,000 men) district have the highest sex ratios in the State. Almost a third of the population belongs to Scheduled Tribes and about 11.61 percent of the population is listed as Scheduled Castes. Other communities including a large number of people belonging to the Backward Classes constitute the rest of the population. The bulk of its people are concentrated in the central plains region, while the northern and the southern regions have a considerably lower density of population.

CHHATTISGARH Sex Ratio Map



Achieving 100% literacy - During the last decade, the State has made big strides in this area with total literacy increasing from 42.91% in 1991 to 65.18% in 2001. The level of male literacy in Chhattisgarh today is better than the national average. Given the significance of education for overall social and economic development, the State would achieve 100% literacy by 2010 with a renewed focus on higher and technical education. Primary education would be made compulsory for all children till the age of 14 years.

Reducing the population growth rate - During the last decade, Chhattisgarh has witnessed a lower decadal growth rate (1.86% per annum) than that of India as a whole. It plans to further reduce this growth rate to 1.48% per annum for the period 2001-2010.

Table 07-Socio - economic indicators of Chhattisgarh (Socio Economic Report, Chhattisgarh 2006-07)

ITEMS	DETAILS
• Districts	18
• Villages	20,308 (2001)
• Population characteristics 2001	
• Population	20,833,803 (2001)
• Population growth rate	18.06%
• Population density	154 Per Sq. Kms
• Sex ratio	989 Females per `000 males
• Percentage of Rural Population to total Population	79.92%
• Percentage of Urban Population to total Population	20.08%
• Percentage of Male Population to total Population	50.48%
• Percentage of Female Population to total Population	49.52%
• Percentage of Scheduled Castes Population to total Population (1991)	12.20%
• Percentage of Scheduled Tribe Population to total Population (1991)	32.40%
Total Literacy Rate 2001	
Total	65.12%
Males	77.86%
Females	52.28%
Rural Literacy Rate	
Total	60.93%
Males	74.58%
Females	47.41%
Urban Literacy Rate	
Total	81.08%
Males	89.87%
Females	71.63%
STATE INCOME 2000-01	
Per capita income at current prices	11663 Rupees
SCHOOL EDUCATION 2000-01	
• Percentage of Pre- Primary/Primary schools to total institutions	78.24%
• Percentage of Middle schools to total institutions	15.76%
• Percentage of High schools/Higher Secondary to total institutions	6.00%

Table-SFSP 5: Details of District-wise land holding pattern in the State (MIS Table-M(SP)9)

Names of Districts	Type of Farmer	No. of households	No. of BPL households	Land holding (ha)	
				Irrigated	Rainfed Total
Bastar	i) Large	67415	49740	6144.78	167849.52
	ii) Small	35681	28715	1636.76	44709.26
	iii) Marginal	54526	41361	958.75	25230.21
	iv) landless	147000	22424	0.00	0.00
	Sub-total	304622	142240	8740.28	230007.45
Bilaspur	i) Large	55447	23620	5091.9	11881.1
	ii) Small	68067	28997	18752.7	43756.3
	iii) Marginal	216994	92252	65880.3	153720.7
	iv) Landless	68376	29128	0	0
	Sub-total	408444	173997	89724.9	209358.1
Dantewada	i) Large	5297	0	6576	15344
	ii) Small	27831	17255	4619.7	10779.3
	iii) Marginal	10703	10703	4437.3	10353.7
	iv) Landless	3651	3651	0	0
	Sub-total	47482	31609	15633	36477
Dhamtari	i) Large			1396.5	3258.5
	ii) Small			8109	18921
	iii) Marginal			21896.7	51092.3
	iv) Landless			0	0
	Sub-total			31402.2	73271.8
Durg	i) Large	3979	-	2410	1569
	ii) Small	87479	14320	30311	42848
	iii) Marginal	79738	20311	32793	26634
	iv) Landless	214183	91180	-	123003
	Sub-total	350586	125811	65514	285072

Block	i) Large	ii) Small	iii) Marginal	iv) Landless	Sub-total
Janjgir-champa	5275	42800	183989	70376	26318
					0
					0
					187596
Jashpur	302440	1053	2444	1128	73828.5
					0
					6533.7
					172266.5
Kanker	26318	70376	183989	187596	3045
					7105
					14504.7
					33844.3
Kawardha	30623	64066	61767	26590	2095
					3565.5
					8319.5
					55452.6
Korba	183046	21234	81462	60467	75927
					0
					0
					24074.4
Koriya	114572	114572	114572	114572	32939.1
					2188.2
					5105.8
					76857.9
Sub-total	48592	134286	48592	16692.9	38950.1
					0
					0
					55643

Mahasamund	i) Large	14952	2990	4636.2	10817.8	15454
	ii) Small	54033	36055	12366.6	28855.4	41222
	iii) Marginal	105150	105150	24860.4	58007.6	82868
	iv) Landless	29950	29950	0	0	139544
	Sub-total	204085	102035	41863.2	97680.8	102454.8
	i) Large	62714		6942.43	95512.33	155579.5
	ii) Small	94083		10542.23	145037.25	121427.9
	iii) Marginal	73493.00		8228.10	113199.82	
	iv) Landless	182222	37965	-	353749.40	26474
	Sub-total	412512		25712.78	18531.8	97167
Raipur	Sub-total	86552	-	29150.1	68016.9	271112
	i) Large	90981	-	81333.6	189778.4	
	ii) Small	203638	142859	0	0	394753
	iii) Marginal	86108	86108	118425.9	276327.1	37175
	iv) Landless	467279	228967	8922	28253	74890
	Sub-total	2516	-	17973	56917	48871
Rajnandgaon	i) Large	533304	-	11729	37142	
	ii) Small	103227	-	-	-	-
	iii) Marginal	30286	-	38625	122311	160936
	iv) Landless	189333	90499	9343.5	21801.5	31145
	Sub-total	29738	6839	21895.5	51089.5	72985
	i) Large	18246	4196	47697.3	111293.7	158991
Surguja	ii) Small	39748	9142			
	iii) Marginal	26319	6053			
	iv) Landless	114051	26230	78936.3	184184.7	263121
	Sub-total					

Table SPS 6: Share of Agriculture Sector to State Income/National Income at Current Prices and Total Work Force in the State and India

Year	Percentage share of Agriculture in NSDP@ figure	
	All India	State
1980-81		
1990-91		
2000-01	37.30%	34%

@NSDP: Net State Domestic Product; Note: - Information will be submitted in annual action plan.

Table SPS 7: Sectoral Composition of Net State Domestic Product (NSDP) in State

Sector	Years		
	1970-71	1980-81	1990-91
Agriculture and allied Sectors			
Industrial Sector			
Service Sector			

Source: Estimate of State GDP of Chhattisgarh, 1993-2002, Directorate of Economics & Statistics, Chhattisgarh
 Note:- Chhattisgarh State constituted in year 2000. So data furnished for the year 2000-01

CHAPTER: 4

Land Use Pattern

The total geographic area of Chhattisgarh is 13.79 million hectares, out of which the forest occupies 4.47 million ha (32.44%). Forest area in Bastar Plateau is highest (42.7%), followed by Northern Hills (36.4%) and Chhattisgarh Plains (26.6%). However, the net sown area is inversely proportional to the forest area. Barren land is also high (3.5 lac ha) and it is highest in Chhattisgarh Plains (1.4 lac ha) followed by Northern Hills (1.24 lac ha) and Bastar Plateau (0.85 lac ha). The region is predominant agriculture and above 80% of the population depends on agriculture for its livelihood. There is 5881 thousand hectare arable land in the state is reported that there is an average of 5409 thousand metric tones of agriculture production every year.

Forests

The forests of the region are rich in bio-diversity, density and in wildlife population and above all, over 200 non-timber forest products, with tremendous potential for value addition. About 12% of India's forests are in Chhattisgarh, and 44% (60,76,000 hectares) of the State's land is under forests. There are three national parks namely the Sanjay Gandhi Udayan, Indrawat Tiger Project and Kanger Valley. There are sanctuaries at Badakhol, Barnawapara, Sitanade Achanakmar, Semarsat, Tamar Pingle, Bhairamagarh, Pamed, Udanti and Gomarda. Forests have been contributing a lot to the revenue of the state. About 36% of the forest area is Sal forest, which provide livelihood to a large number of people of the State. Teak forest is mainly restricted to western and southern part of the state of the forest produce; timber contributes about 40% of the forest revenue. Because of richness in minor forest produce, including medicinal plants about ten thousand industries base upon it. These small-scale industries include sawmills, furniture units, bidi, silk and khattha industries.

Tab 08: Land use pattern in agro climatic zones of Chhattisgarh (ha)

Particulars	Chhattisgarh plains	Bastar plateau	Northern hills	Total
Geographical area	7680404	3262481	2846951	13789836
Forest	2045526	1392806	1036399	4474731
Land under non agricultural uses	490829	79744	127145	697718
Barren & unculturable	137924	84692	124403	347019
Fallow land	158232	171673	7165	337070
Culturable wasteland	100.76	155.89	6.6	263.3
Net Sown area	3291076	637965	834862	4763903
Double cropped area	865265	13580	103098	981943
Cropping intensity	126.3	102.1	112.35	120.6
Irrigated area	1183624 (36%)	12085 (1.9%)	52581 (6.3%)	1248290 (26.2%)
Area under rice	2820669 (85.7%)	469811 (73.6%)	563872 (67.5%)	3854352 (80.9%)
Rice production (000 t)	3933	569	589	5091
Rice Productivity q/ha	15.1	12.8	10.8	14.3

Source: Agricultural statistics Commissioner Land Records, Chhattisgarh, 2006

Wastelands

Satellite imageries of 1998-99 show that in all the district of Chhattisgarh, the size of wastelands is substantial. But this satellite data includes the uncultivable wastelands also that are not wastelands in real sense. Cultivable wastelands are biggest in size in Bastar and Durg districts-4 and 3% respectively of their corresponding geographical area. Bilaspur and Raipur districts that have 2 % each of cultivable wastelands follow. Size of land not available for cultivation and other cultivable and is quite a large in the entire district. The wastelands mainly occur on the hilly slopes and near industries or mines. In some places, waterlogged lands also remain wastelands. Industries and mines of the areas make thousands of acres of cultivable lands unproductive or less fertile. Lands lying uncultivated may become unusable forever.

Agriculture

The region is predominantly agricultural and about 80 percent of the population depends on agriculture for its livelihood. Steps have been taken to introduce modern methods of farming and to increase the farm output to the maximum extent. Rice and wheat, soybean, rapeseed and mustard are among the principal crops of the region. But it is in the matter of pulses that Chhattisgarh leads the others.

Agriculture of Chhattisgarh is subsistence agriculture. There is 5,881 thousand hectares arable and in the State. It was reported that there is an average of 5,409 thousand metric tonnes of agriculture production every year. Food grains are grown in 88.37% of net sown lands. Among food grains rice is main crop. Raipur district has 24.06% under rice crop. In addition, wheat, maize, jowar, bajra, kodo etc. are other main crops grown. Wheat contributes 3.19% of all food grain crops. Durg, Bilaspur, Raipur, Rajnandgaon and Sarguja only grow wheat crop. Maize covers 2.33% area of the area under all food grain crops. Maize occupies 46.3% and 28.04% area in Sarguja and Bastar, respectively. Jowar comprises 0.37% area of food-grain production. Jowar is being produced mostly in Sarguja and Bastar district. Pulses like gram, tuar, urad, kulthi and moong are cultivated enormously. About 83.39% area of cultivated in Rajnandgaon district that is 36.92% area of entire Chhattisgarh under tuar cultivation.

Irrigation

The level of irrigation in Chhattisgarh is fairly low. The net irrigated area by net sown area is only 27%. Further, there are variations between districts. Looking at the data available for the undivided seven districts of Chhattisgarh, the net irrigated area by net sown area fluctuates from 56% for Raipur in recent years to 7% for Raigarh, 5% for Surguja and 3% for Bastar. The main source of irrigation is canals, which provide for three fourths of all irrigation. Eight percent of the irrigation is done by tube wells, 6% by tanks and 4-5% by wells. Details of Land use pattern/status in the state given in the table SPS-8

Table-SPP 8: Land Use status in the State (average of preceding 5 years)* (Area in 000 ha)

Districts	Geographical Area	Forest Area	Land under Non-Agril. use	Total rainfed area		Perm- anent pastures	Land under miscellaneous tree crops and groves	Current fallow	Other fallow	Net sown area	Net sown area more than once	Gross cropped area	
				Cultivated	Cultivable waste								
1	2	3	4	5		6	7	8	9	10	11	12	13
Bastar	1702000	859000	78000	256500	85500	47000	0	29000	14000	361000	109000	8000	307000
Bilaspur	857000	218000	52000	168000	56000	64000	0	6000	5000	479000	116000	143000	481000
Dantewada	1561000	535000	85000	179250	59750	36000	0	53000	38000	247000	3710	5000	262000
Dhamtari	408000	212000	30000	28500	9500	16000	140	1000	1000	212000	87000	96000	221000
Durg	870000	75000	100000	242250	80750	63000	0	10000	8000	811000	268000	229000	819000
Janjgirchampa	447000	79000	38000	66000	22000	38000	14	4000	3000	324000	42700	173000	303000
Jashpur	646000	173000	78000	180750	60250	41000	0	7000	0	265000	15500	8000	264000
Kanker	643000	186000	50000	140250	46750	46000	4	11000	7000	227000	17200	23000	229000
Kawardha	444000	164000	27000	107250	35750	28000	22	25000	0	242000	56800	42000	243000
Korba	715000	283000	60000	93750	31250	21000	29	5000	3000	143000	11000	7000	143000
Koriya	598000	353000	35000	75000	25000	32000	0	0	0	120000	12300	7000	116000
Mahasamund	496000	110000	43000	142500	47500	30000	56	2000	1000	297000	32500	78000	301000
Raigarh	653000	150000	64000	162750	54250	63000	0	5000	2000	310000	33200	60000	309000
Raipur	1345000	406000	102000	190500	63500	95000	127	15000	11000	684000	141100	292000	686000
Rajnandgaon	802000	161000	68000	215250	71750	53000	131	12000	4000	453000	97700	71000	455000
Surguja	1603000	569000	87000	331500	110500	184000	0	0	0	557000	74700	40000	554000
Total	13790000	4533000	997000	2580000	860000	857000	523	185000	97000	5732000	1118410	1282000	5693000

Source of data: Office of the commissioner land record Raipur Chhattisgarh

Table-SPSP 9: Irrigation Status (Area in 000 ha)

Districts	Gross cultivated area	Net cultivated area	Gross irrigated area	Net irrigated area	Net irrigated (%)
1	2	3	4	5	6
Bastar	361	350	8	8	2.00
Bilaspur	479	367	154	143	39.00
Dantewada	247	244	5	5	7.00
Dhantari	212	134	133	96	72.00
Durg	811	552	291	229	41.00
Janjirchampa	324	261	215	173	67.00
Jashpur	265	249	9	8	3.00
Kanker	227	210	23	23	11.00
Kawardha	242	185	56	42	23.00
Korba	143	132	7	7	6.00
Koriya	120	107	8	7	7.00
Mahasamund	297	268	81	78	29.00
Raigarh	310	277	63	60	22.00
Raipur	684	546	310	292	54.00
Rainandgaon	453	358	81	71	20.00
Surguja	557	482	42	40	8.00
Total	5732	4722	1486	1282	25.68

Source of data: Department of Agriculture, Chhattisgarh

Table-SPSP 10: Source-wise Area Irrigated (Area in 000 ha)

Districts	Canal (Area)	1		2		3		4		5		6	
		No	Area	No	Area	No	Area	No	Area	No	Area	No	Area
Bastar	0.20	132	1.40	3652	0.75	967	2.50	-	-	-	-	-	-
Bilaspur	118.00	6178	4.90	7393	6.14	8667	25.20	-	-	-	-	-	-
Dantewada	0.50	458	3.40	326	0.94	74	0.16	-	-	-	-	-	-
Dhamtari	117.00	24	0.40	2702	0.59	14439	24.20	-	-	-	-	-	-
Durg	144.00	346	4.90	4152	2.88	29820	136.20	-	-	-	-	-	-
Janjgirchampa	169.00	7640	4.10	7216	3.54	2797	15.10	-	-	-	-	-	-
Jashpur	5.00	260	0.20	12451	2.70	7	0.01	-	-	-	-	-	-
Kanker	8.00	649	3.50	4429	0.76	3407	5.10	-	-	-	-	-	-
Kawardha	19.00	46	2.70	2018	0.70	6279	35.40	-	-	-	-	-	-
Korba	4.40	2052	0.60	1190	0.88	309	0.26	-	-	-	-	-	-
Koriya	5.00	813	0.10	6055	0.95	375	0.24	-	-	-	-	-	-
Mahasamund	49.00	3836	11.50	13221	1.19	8127	24.10	-	-	-	-	-	-
Raigarh	20.60	2629	4.70	3818	0.92	8196	31.44	-	-	-	-	-	-
Raipur	251.70	8280	7.60	26626	4.10	14166	40.65	-	-	-	-	-	-
Rajnandgaon	54.80	571	5.70	9196	3.43	5047	18.63	-	-	-	-	-	-
Surguja	8.10	2684	2.10	49307	7.17	2174	1.15	-	-	-	-	-	-
Total	974.30	36598	57.80	153752	37.64	104851	360.34	-	-	-	-	-	-

4.4 Common Property Resources (CPR)

Table-SPSP 11: Details of Common Property Resources in the State *(MIS Table-M (SP)10)

S. No.	Names of Districts	CPR Particulars	Total Area (ha)				Area available for treatment (ha)				
			Pvt. persons	Govt.	PRI	Any other (Pl. Specify)	Pvt. persons	Govt.	PRI	Any other	
1	2	3	4				5				
1	Bastar	<ul style="list-style-type: none"> • Wasteland/ degraded land • Pastures • Orchards • Village Woodlot • Forest • Village Ponds/ Tanks • Community Buildings • Weekly Markets • Permanent markets • Temples/ Places of worship • Others 	12478.62	14261.28	2971.10	0.00	4991.45	7843.70	1693.53	0.00	
			18132.67	20030.38	4005.95	0.00	7253.07	11016.00	2283.09	0.00	
			962.32	10525.38	541.30	0.00	0.00	0.00	0.00	0.00	
			0	97	0	0	0	0	0	0	
			71367.00	502819.23	74612.77	0.00	7136.70	40225.45	5222.89	0.00	
			205	1444	214	0	0	0	0	0	
			0	984	286	0	0	0	0	0	
			0	0	123	0	0	0	0	0	
			0	0	8	0	0	0	0	0	
			0	0	0	2348	0	0	0	0	
			0	0	0	0	0	0	0	0	
2	Bilaspur	<ul style="list-style-type: none"> • Wasteland/ degraded land • Pastures • Orchards • Village Woodlot • Forest • Village Ponds/ Tanks • Community Buildings • Weekly Markets • Permanent markets • Temples/ Places of worship • Others 	-	80755	-	-	-	80755	62327	-	-
			925	-	-	-	925	-	-	-	
			-	16151	-	-	-	3230	-	-	
			-	114072	-	-	-	7037	-	-	
			-	10723	-	-	-	-	-	-	
			-	1597	-	-	-	-	-	-	
			-	-	-	-	-	-	-	-	
			-	-	-	-	-	-	-	-	
			-	-	-	-	-	-	-	-	
			-	-	-	-	-	80755	-	-	

3	Dantewada	• Wasteland/ degraded land	78906	33990	8497	0	51289	22093	5523	-		
		• Pastures	-	25353	-	-	-	25353	-	-	-	
		• Orchards	-	0	-	-	-	-	-	-	-	
		• Village Woodlot	-	125787	-	-	-	125787	-	-	-	
		• Forest	-	255623	-	-	-	-	-	-	-	
		• Village Ponds/ Tanks	48	650	-	-	-	-	-	-	-	
		• Community Buildings	-	9	-	-	-	-	-	-	-	
		• Weekly Markets	-	21	-	-	-	-	-	-	-	
		• Permanent markets	-	11	-	-	-	-	-	-	-	
		• Temples/ Places of worship	-	250	-	-	-	-	-	-	-	
		• Others	-	-	-	-	-	-	-	-	-	
		4	Dhamtari	• Wasteland/ degraded land	1950.13	2067.27	-	-	1356.18	1457.4	968.47	-
				• Pastures	-	1319.56	-	-	-	-	-	-
• Orchards	5			55.2	-	4	-	-	-	-		
• Village Woodlot	5.78			20.03	-	-	-	-	-	-		
• Forest	-			-	-	12770.7	-	-	-	-		
• Village Ponds/ Tanks	22			165.2	147.09	-	-	-	-	-		
• Community Buildings	-			11.4	24.8	-	-	-	-	-		
• Weekly Markets	-			11.8	22.35	-	-	-	-	-		
• Permanent markets	17			-	-	-	-	-	-	-		
• Temples/ Places of worship	10			25.1	7.1	-	-	-	-	-		
• Others	-			13534.32	-	-	-	10188.34	-	-		

5	Durg	• Wasteland/ degraded land	31368	-	-	-	31368	-	-	-	-	-	-
		• Pastures	12600	-	-	-	12600	-	-	-	-	-	-
		• Orchards	-	-	-	-	-	-	-	-	-	-	-
		• Village Woodlot	-	10	-	-	-	10	-	-	-	-	-
		• Forest	-	1100	-	-	-	1100	-	-	-	-	-
		• Village Ponds/ Tanks	440	1900	-	-	440	1900	-	-	-	-	-
		• Community Buildings	360	234	-	-	360	234	-	-	-	-	-
		• Weekly Markets	72	124	-	-	72	124	-	-	-	-	-
		• Permanent markets	12	58	-	-	12	58	-	-	-	-	-
		• Temples/ Places of worship	170	20	-	-	170	20	-	-	-	-	-
		• Others	380	327	-	-	380	327	-	-	-	-	-
		• Wasteland/ degraded land	4882	23822	-	-	4882	23822	-	-	-	-	19156
		• Pastures	-	37500	-	-	-	37500	-	-	-	-	-
		• Orchards	-	-	-	-	-	-	-	-	-	-	-
		• Village Woodlot	-	-	-	-	-	-	-	-	-	-	-
• Forest	-	79439	-	-	-	79439	-	-	-	-	-		
• Village Ponds/ Tanks	749	6601	327	-	749	6601	327	-	-	-	-		
• Community Buildings	26	-	615	-	26	-	615	-	-	-	-		
• Weekly Markets	-	135	-	-	-	135	-	-	-	-	-		
• Permanent markets	-	-	-	-	-	-	-	-	-	-	-		
• Temples/ Places of worship	-	-	-	-	-	-	-	-	-	-	-		
• Others	-	-	-	-	-	-	-	-	-	-	-		
6	Janjgir- champa	• Wasteland/ degraded land	4882	23822	-	19156	4882	23822	-	-	-	-	19156
		• Pastures	-	37500	-	-	-	37500	-	-	-	-	-
		• Orchards	-	-	-	-	-	-	-	-	-	-	-
		• Village Woodlot	-	-	-	-	-	-	-	-	-	-	-
		• Forest	-	79439	-	-	-	79439	-	-	-	-	-
		• Village Ponds/ Tanks	749	6601	327	-	749	6601	327	-	-	-	-
		• Community Buildings	26	-	615	-	26	-	615	-	-	-	-
		• Weekly Markets	-	135	-	-	-	135	-	-	-	-	-
		• Permanent markets	-	-	-	-	-	-	-	-	-	-	-
		• Temples/ Places of worship	-	-	-	-	-	-	-	-	-	-	-
		• Others	-	-	-	-	-	-	-	-	-	-	-

7	Jashpur	• Wasteland/ degraded land	480	412	112	203	623	203	5	-
		• Pastures	45	112	28	13	440	560	8	2
		• Orchards	290	430	89	48	210	60	42	18
		• Village Woodlot	120	1540	190	-	220	920	840	23
		• Forest	380	2548	80	102	194	840	620	108
		• Village Ponds/ Tanks	92	02	52	-	22	8	52	-
		• Community Buildings	-	-	2	-	-	-	-	-
		• Weekly Markets	-	-	84	-	-	-	-	-
		• Permanent markets	-	-	4	-	-	-	-	-
		• Temples/ Places of worship	-	-	1	-	-	-	-	-
		• Others	-	-	-	-	-	-	-	-
		• Wasteland/ degraded land	1781	1005.85	100	-	6454.62	1951.62	-	-
		• Pastures	175	325.16	-	-	175	325.16	-	-
		• Orchards	10	-	-	-	10	-	-	-
		• Village Woodlot	6.70	319.46	-	-	-	-	-	-
• Forest	-	52793	-	-	-	52793	-	-		
• Village Ponds/ Tanks	95.42	425.14	-	-	95.42	425.14	-	-		
• Community Buildings	-	10.01	-	-	-	-	-	-		
• Weekly Markets	-	15.58	-	-	-	-	-	-		
• Permanent markets	-	7.58	-	-	-	-	-	-		
• Temples/ Places of worship	5	2.27	-	-	-	-	-	-		
• Others	-	-	-	-	-	-	-	-		
8	Kanker									

9	Kawardha	Wasteland/ degraded land	17227	-	26104.00	-	-	-	582.72	-	-	-	-
		• Pastures	-	-	70.00	-	-	-	-	-	-	-	-
		• Orchards	-	-	2900.00	-	-	-	-	-	-	-	-
		• Village Woodlot	-	-	25619.00	-	-	-	-	-	-	-	-
		• Forest	-	-	1055.00	-	-	-	-	-	-	-	-
		• Village Ponds/ Tanks	-	-	-	-	-	-	-	-	-	-	-
		• Community Buildings	-	-	-	-	-	-	-	-	-	-	-
		• Weekly Markets	-	-	-	-	-	-	-	-	-	-	-
		• Permanent markets	-	-	-	-	-	-	-	-	-	-	-
		• Temples/ Places of worship	-	-	-	-	-	-	-	-	-	-	-
		• Others	-	-	-	-	-	-	-	35000	-	-	-
		• Wasteland/ degraded land	-	-	74074 agriculture revenue forest	-	-	-	-	10000	-	-	-
		• Pastures	800	-	21122 forest	-	-	-	-	-	-	-	-
		• Orchards	700	-	1300	-	-	-	-	-	-	-	-
		• Village Woodlot	250	800	2000	-	-	-	-	-	117916	-	-
		• Forest	-	-	471668 forest	-	-	-	-	-	600	-	-
		• Village Ponds/ Tanks	10	-	1630 Panchayat RES	-	-	-	-	-	-	-	-
		• Community Buildings	10	-	50 Municipal, state govt.	-	-	-	-	-	-	-	-
		• Weekly Markets	-	-	175	-	-	-	-	-	-	-	-
		• Permanent markets	25	-	25	-	-	-	-	-	-	-	-
		• Temples/ Places of worship	20	-	200 Tourist revenue	-	-	-	-	-	-	-	-
		• Others	-	-	-	-	-	-	-	-	-	-	-
10	Korba												

11	Koriya	• Wasteland/ degraded land	131914	112982	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		• Pastures	-	31880	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		• Orchards	1861	61465	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		• Village Woodlot	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		• Forest	-	47692	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		• Village Ponds/ Tanks	-	813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		• Community Buildings	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		• Weekly Markets	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		• Permanent markets	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		• Temples/ Places of worship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		• Others	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	Mahasamu nd	• Wasteland/ degraded land	23902.00	19989.00	-	-	-	-	-	165	177344	-	-	-	-	-	-	-	
		• Pastures	0	2452.00	-	-	-	-	-	-	2452	-	-	-	-	-	-	-	
		• Orchards	229.00	-	-	-	-	-	-	229	-	-	-	-	-	-	-	-	
		• Village Woodlot	-	710.00	-	-	-	-	-	-	-	137899.00	-	-	-	-	-	-	
		• Forest	-	137899.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		• Village Ponds/ Tanks	343	2979	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		• Community Buildings	79	1410	-	-	-	-	-	117	-	-	-	-	-	-	-	-	
		• Weekly Markets	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	
		• Permanent markets	-	-	-	-	-	-	-	1719	-	-	-	-	-	-	-	-	
		• Temples/ Places of worship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		• Others	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

13	Raigarh	• Wasteland/ degraded land	57654.23	57067.79	-	-	57654.23	57067.79	-	-	
		• Pastures	57654	-	-	-	-	-	-	-	
		• Orchards	115308	28533.33	-	-	115308	28533.33	-	-	
		• Village Woodlot	2882	2853	-	-	2882	2853	-	-	
		• Forest	1566	52228	-	-	1566	52228	-	-	
		• Village Ponds/ Tanks	-	-	-	-	1444 no.	-	-	-	
		• Community Buildings	-	-	-	-	-	-	-	-	
		• Weekly Markets	-	-	-	-	660 no.	-	-	-	
		• Permanent markets	-	-	-	-	132 no.	-	-	-	
		• Temples/ Places of worship	-	-	-	-	1500	-	-	-	
		• Others	-	-	-	-	-	-	-	-	
		14	Raipur	• Wasteland/ degraded land	-	-	-	-	-	-	-
				• Pastures							
				• Orchards							
		• Village Woodlot									
		• Forest									
		• Village Ponds/ Tanks									
		• Community Buildings									
		• Weekly Markets									
		• Permanent markets									
		• Temples/ Places of worship									
		• Others									

15	Rainnandgao n	• Wasteland/ degraded land	-	113526	-	-	-	-	113526	-	-
		• Pastures	-	52982	-	-	-	-	52982	-	-
		• Orchards	-	-	-	-	-	-	-	-	-
		• Village Woodlot	-	259430	-	-	-	-	-	-	-
		• Forest	-	259430	-	-	-	-	-	-	-
		• Village Ponds/ Tanks	144	1028	-	-	-	-	66502	-	Protected Forest
		• Community Buildings	-	32.1	-	-	-	-	-	-	-
		• Weekly Markets	-	1050	-	-	-	-	-	-	-
		• Permanent markets	-	50	-	-	-	-	-	-	-
		• Temples/ Places of worship	8	-	-	-	-	-	-	-	-
		• Others	-	-	-	-	-	-	-	-	-
		• Wasteland/ degraded land	48412	52820	-	-	-	38729	42256	-	-
		16	Surguja	• Pastures	-	-	-	-	-	-	-
• Orchards	-			-	-	-	-	-	-	-	
• Village Woodlot	-			-	-	-	-	-	-	-	
• Forest	-			1037872	-	-	-	-	155680	-	-
• Village Ponds/ Tanks	-			-	-	-	-	-	-	-	
• Community Buildings	-			-	-	-	-	-	-	-	
• Weekly Markets	-			-	-	-	-	-	-	-	
• Permanent markets	-			-	-	-	-	-	-	-	
• Temples/ Places of worship	-			-	-	-	-	-	-	-	
• Others	-			-	-	-	-	-	-	-	

CHAPTER: 5

Trends in Agriculture and food Productivity

The total cultivated area of the state is about 5715.84 thousand ha i.e. 41.14 per cent of the total geographic area having 4590.26 thousand ha i.e. 80.310 total area under Kharif crops and 1125.59 thousand ha under rabi crops. The zonewise cropping pattern of the slat reveals that Kharif crops are being grown in about 74.72, 96.19 and 88.68 per cent in Chhattisgarh plains, bastar plateau and Northern hills, respectively. However, rabi cropping was done in 25.27, 3.8 and 11.32 per cent of the total cropped area in CG plains, Bastar plateau and northern hills, respectively. Similarly, the double cropping was grown in only 16.54 % area with highest 20.85 percent in CG plains followed by 11.04% in Northern hills and the lowest 3.25 % in Bastar plateau zone.

The crop scenario analysis of the state reveals that the rice is the main crop constituted 65 % of the total cropped area and of which nearly 23 percent of the total irrigated area is under rice and rest with wheat, vegetables, sugarcane and few other crops. The government is also in efforts to increase the state irrigation upto 50% from existing 27-32 percent. It is near to target in Chhattisgarh plains but lacking in other zones. Though, presently the coverage of high yielding varieties is upto the satisfactory level, but due to poor management practices like use of fertilizers, pesticides etc. leads sizable yield gaps between potential and actual yield at farmers field. Thus there is challenging scope for agriculture and its allied sectors prosperity in the state.

Diversified crops and cropping systems are the typical characteristic of Chhattisgarh. Though, the rice is the major crop of the region, however, the other crops like *kharif* potato in northern hills, coconut, coffee and various tuber crops in Bastar plateau, rabi potato, vegetables, sugarcane, sunflower, maize (*kharif & rabi*) and mustard in whole state are being grown profitably. The cropping system of the state is Rice based. Pulses ranks next to rice followed by minor millets, oilseeds and maize. Chhattisgarh state contributes about 4.47 per cent of the total rice production, while for maize it is only 1.35 per cent of the country. In *rabi* season, major area is under pulses followed by oilseeds and wheat. *Lathyrus*, gram, wheat and linseed are the main *rabi* crops. *Lathyrus* is grown (about 5.8 lac ha) as a relay as well as sown crop in Chhattisgarh plains. The productivity of rice ranges between

1.0 to 1.1 t/ha in rainfed, 1.6 to 1.9 t/ha in irrigated area. However, the productivity of summer rice is higher as compared to *khari* rice. The productivity of minor millets, pulses, maize and other *rabi* crops is, also low. Thus, there is an urgent need to improve the productivity of these crops in the state with proper management practices.

Table-SFSP 12: Crops production and productivity as per Agricultural Statistics, 2008 (MIS Table-M(PO)C1, C2 & C3 pre-project status)

Sl. No.	Names of the Districts	Name of crops	1			2			3			4			5			6		
			Area	Average Yield (T per ha)	Total Production (MT)	Area	Average Yield per ha (qt)	Total production (qt)	Area	Average Yield per ha (qt)	Total production (qt)	Area	Average Yield per ha (qt)	Total production (qt)	Area	Average Yield per ha (qt)	Total production (qt)	Area	Average Yield per ha (qt)	Total production (qt)
1	Bastar	Paddy & Wheat	10530	230223	2.79	1.43	29378.7	329218.9	860	1008	2.12	1.35	1823.2	1360.8	850	0	4	3400	0	
2	Bilaspur		143374	153866	1.96	1.04	281013	160020.6	7191	21909	1.25	0.89	8988.75	19499	14450	0	4	57800	0	
3	Dantewada		14190	184450	2.53	1.35	35900.7	249007.5	50	70	1.50	0.80	75	56	0	0	4	0	0	
4	Dhantari		119180	10000	2.19	1.23	261004.2	12300	654	876	1.30	1.07	850.2	937.32	34330	0	4	137320	0	
5	Durg		244650	177460	1.90	1.21	464835	214726.6	12583	8437	1.14	0.67	14344.6	5652.8	17540	0	4	70160	0	
6	Jangirchampa		185479	64191	2.40	1.37	445149.6	87941.67	2489	2191	1.36	0.96	3385.04	2103.4	41220	0	4	164880	0	
7	Jashpur		4349	172371	1.62	1.20	7045.38	206845.2	1059	2501	1.48	1.02	1567.32	2551	260	0	4	1040	0	
8	Kanker		18829	150651	2.77	1.32	52156.33	198859.3	547	1233	2.09	1.26	1143.23	1553.6	2930	0	4	11720	0	
9	Kawardha		32065	47985	1.45	0.95	46494.25	46065.6	3147	3803	0.96	0.65	3021.12	2472	0	0	4	0	0	
10	Korba		6093	89407	1.93	1.06	11759.49	94771.42	279	1461	1.00	0.72	279	1051.9	1370	0	4	5480	0	
11	Koriya		3073	60327	1.43	0.77	4394.39	46451.79	3369	11131	1.09	0.74	3672.21	8236.9	500	0	4	2000	0	
12	Mahasamund		64760	160510	2.06	1.12	133405.6	179771.2	1462	1168	1.23	1.00	1798.26	1168	20920	0	4	83680	0	
13	Raigarh		44819	196161	1.62	1.22	72606.78	239316.4	1806	4994	1.53	1.26	2763.18	6292.4	10000	0	4	40000	0	
14	Raipur		296291	197689	1.83	1.08	542212.5	213504.1	7006	7674	1.17	0.96	8197.02	7367	20270	0	4	81080	0	
15	Rajnandgaon		74284	150936	1.00	1.12	74284	169048.3	3797	11353	1.15	0.78	4366.55	8855.3	2090	0	4	8360	0	
16	Surguja		4685	285365	2.17	1.21	10166.45	345291.7	18129	20021	1.33	0.90	24111.6	18019	3500	0	4	14000	0	
Total for the State			1266651	2331592			2471806	2793140	64428	99830			80386.3	87176	170230			680920		

Source of data : Department of Agriculture, Chhattisgarh

Table-SPSP 13: A. comparative average yield of major crops of the State and India during Triennia 1972-73 to 1974-75 and 1992-93 to 1994-95

Major Crop/crop group	Period I: 1972-73 to 1974-75		Period II: 1992-93 to 1994-95		Post 1994-95#
	State	India	State	India	
1					
	2		3		
			4		

Note:- Information will be submitted in Annual Action Plan.

CHAPTER: 6

Implementation of Watershed Programme in The State At Present

State Level Nodal agency: An Innovative approach

Chhattisgarh state level watershed development authority has been established as a part of "Development Commissioner", Panchayat and Rural Development Department, Govt. of Chhattisgarh in the year 2004 for regular monitoring, evaluation training to the district level watershed project implementation agency. Now, it's renamed as **State Level Nodal agency (SLNA)** for watershed development. The SLNA will monitor all the watershed programmes running in the state by Panchayat and Rural development, Department of Agriculture and NABARD. It also provides technical input in the project formulation and their execution.

Structure of the SLNA: The Principal Secretary, Panchayat & Rural Development Department, Government of Chhattisgarh is the member secretary of SLNA. In addition to that there is one CEO and Joint Director. There are three monitoring officers for monitoring watershed activities of their respective components, in the projects. Training part in the projects is monitored and facilitated by the training expert appointed in the SLNA.

Current status and future plans: Apart from regular monitoring of the projects, SLNA having following assignments:

1. **Technical support:** Watershed project implementing agency at the district/field level faces problem of unavailability of a lot of technical details of various watershed activities, which makes it quite difficult to achieve desired results. SLNA is facilitated with all technical details, which is being disseminated to field level officers.

2. **Criteria formulation:** Selection of watershed was done on the basis of some selected criteria. It was by the Government of India to revise/modify those criteria. SLNA come up with some excellent criterion for selection of watersheds in the state. On the basis of those criterions, all the blocks have been categorized for priority of treatment.
3. **Training programme:** Specific training programme are of great importance so that SLNA is engaged in organizing such training programme. Training at national institute like Central Soil and Water Conservation Research and Training Institute, Deheradun and NIRD, Hyderabad is also being arranged for making the officers acquainted with technical know how.

Future plans

GIS Cell Cum Data Cell Setup: SLNA is in the midway of establishing a GIS cell to facilitate GIS produced database, maps it will also the upgraded and latest information to the projects running in the state. Priority fixation, watershed delineation, long term action plan and monitoring through remotely sensed data would be the main assignments to be performed in the cell.

(A). **Administrative Structure For Implementing Watershed programme in the State: Presently Watershed Cell has following sanctioned post table-09 that will be continued in SLNA.** For additional posts under SLNA, sanction will be finalized from Finance Department, after final administrative guideline is received from GOI.

(B) **Area Covered Under Watershed Programme in the state:** The Watershed development programme launched by the Ministry of Rural Development has brought out a silent revolution in rural areas. In the Chhattisgarh Watershed programme run by the IWDP & DPAP schemes. The respective District Rural Development Agency (DRDA) with the help to Project officer and coordinate both schemes. Under the Watershed programme as on 2009, total 431 Micro Watershed covered in the state with an area 850827 ha. Details of watershed programme in Chhattisgarh is given in the Table SPS-14.

Table 09- Sanctioned post at present

S.NO	Post	Salary	Sanctioned Post	Remark
1.	Joint Director	12000-16500	1	Deputation
2.	Training Expert	10000-15200	1	Contractual/Deputation
3.	Monitoring Officer	10000-15200	3	Contractual/Deputation
4.	Steno	4500-7000	1	Contractual/Deputation
5.	Assistant Grade-II	4000-6000	1	Contractual/Deputation
6.	Data Entry Operator	3050-4590	2	Contractual/Deputation
7.	Peon	2550-3200	2	Contractual/Deputation
8.	Gaurd	2550-3200	1	Contractual/Deputation
9.	Driver	2610-3540	2	Contractual/Deputation
	Total Post		14	

Table-SPP 14: Status of District-wise area covered under the watershed programme (ha) * (MIS Table-M(SP)2)

S. No.	Names of Districts	Total micro-watersheds in the District*		Dept. of Land Resources		Pre-IWMP projects (DPAP +DDP +IWDP)		Any other watershed project		Total watersheds covered		Net watersheds to be covered
		No.	Area (ha)	No.	Area (ha.)	No.	Area (ha.)	No.	Area (ha.)	No.	Area (ha.)	
1	Bastar	226	112631	187	91000	15	10031.2	202	101031.2	24	11599.8	11599.8
2	Dantewada	508	355832	109	86800	11	8459.764	120	95259.76	388	260572.2	260572.2
3	Bilaspur	3022	1511661	143	61900	16	12521	159	74421	2863	1437240	1437240
4	Janjgir-Champa	736	368100	116	55102	13	9194.35	129	64296.35	607	303803.7	303803.7
5	Korba	227	130225	168	84000	11	11207.46	179	95207.46	48	35017.54	35017.54
6	Durg	170	84872	16	84868.8	9	6375.16	25	91243.96	145	-6371.96	-6371.96
7	Rajnandgaon	442	176519	34	107491.79	9	5225.67	43	112717.5	399	63801.54	63801.54
8	Kawardha	561	280873	198	55636.16	7	5791.25	205	61427.41	356	219445.6	219445.6
9	Mahasamund	1143	383054	105	42841.08	9	5789.98	114	48631.06	1029	334422.9	334422.9
10	Raipur	1810	937289	296	59686	24	19436.71	320	79122.71	1490	858166.3	858166.3
11	Raigarh	1530	472094.6	120	22549	14	9310	134	31859	1396	440235.6	440235.6
12	Dhamtari	650	195639	41	21398	4	3004.99	45	24402.99	605	171236	171236
13	Koriya	630	315000	45	19132	12	8638.34	57	27770.34	573	287229.7	287229.7
14	Kanker	1078	649000	21	15000	12	8998.52	33	23998.52	1045	625001.5	625001.5
15	Jashpur	807	645700	120	15600	9	7736.752	129	23336.75	678	622363.2	622363.2
16	Surguja	1597	1010901	36	22819.42	27	20787	63	43606.42	1534	967294.6	967294.6
Total		15137	7629391	1755	845824.3	202	152808.1	1957	998332.4	13180	6631059	6631059

*: Details of total number of micro watershed in Chhattisgarh state data not available in on DoLR web site so data was collected from the districts

Table-SPSP 15: Details regarding the watershed projects sanctioned by DOLR in the State

S. No.	Item	Pre-IWMP scheme details		
		Total	DPAP	DDP
1	Area sanctioned in ha. (As per column 4 of DOLR area in ha. Table SSP 14)		461490.95	-
2	Names of the districts covered	16	8	-
3	No. of Blocks covered	99	29	-
4	No. of watershed projects sanctioned by DOLR	126	56 Batch	-
5	No. of projects completed out of those taken at Row (4)	-	-	-
6	No. of projects foreclosed of Row (4)	-	-	-
7	No. of on-going projects of Row (4)	126	56	-
8	Area already treated by completed projects of Row (5)	-	-	-
9	Area for treatment by on-going projects of Row (5)	-	461490.95	-
10	Total area treated and under treatment (8)+ (9)	-	461490.95	-
11	Area yet to be treated and proposed to be treated by DOLR (column 1-column 10)	-	461490.95	-
				384333.30

Table-SPSP 16: Details of the Watershed projects implemented in the state with the financial assistance other than DoLR

S.No	Item	Total	Watershed schemes of other Ministries						
			Ministry of Agriculture, GoI	Ministry of E & F, GoI	Planning Commission	NABARD	State Govt.	EAP	Others
1	Area sanctioned in ha (as per column 4 of Table 14)	152808.14	1,33,100.59	-	-	19707.55	-	-	-
2	No. of the districts covered	28	16	-	-	12	-	-	-
3	No. of Blocks covered	297	284	-	-	13	-	-	-
4	No. of watershed projects sanctioned other than DoLR	202	184	-	-	18	-	-	-
5	No. of projects completed out of those taken at Row (4)	-	-	-	-	-	-	-	-
6	No. of projects foreclosed of Row (4)	-	-	-	-	-	-	-	-
7	No. of on-going projects of Row (4)	202	184	-	-	18	-	-	-
8	Area already treated by completed projects of Row (5)	-	-	-	-	-	-	-	-
9	Area for treatment by on-going projects of Row (5)	29329.39	20329.39	-	-	9000	-	-	-
10	Total area treated and under treatment (8)+(9)	29329.39	20239.39	-	-	9000	-	-	-
11	Area yet to be treated and proposed to be treated by other than DoLR resources (column 1-column 10)	123568.75	112861.20	-	-	10707.55	-	-	-

6.1 Details of pending utilization certificates and unspent balance available with district under DPAP & IWDP

Table SPSP 17 : Details of pending UCs (MIS Table-M/(FM)5)

S. No.	District	Project	Instal-ment no.	Financial year of release of fund	Amount released (Rs. in lakh)	Amount utilized		Due date	Submission of UC		Date of submission of UC	Amount (Rs. In lakhs)	Reasons for not submitting/ delayed submission of UC	Pending UCs	
						(Rs. in lakhs)	(Rs. in lakhs)		Amount (Rs. In lakhs)	Date				Amount (Rs. In lakhs)	Period
1	2	3	4	5	6	7	8	9	10	11					
1	BASTAR	6th Batch	7 th	2008-09	76.963	7.37	31.03.09	7.37	28.08.09	7.37	-	2009-10	69.593		
		7th Batch	6 th	2007-08	70.324	21.574	31.03.09	21.574	28.08.09	21.574	-	2009-10	48.75		
		8th Batch	5 th	2008-09	108.483	27.13	31.03.09	27.13	28.08.09	27.13	-	2009-10	81.153		
		9th Batch	5 th	2008-09	209.238	62.42	31.03.09	62.42	28.08.09	62.42	-	2009-10	146.817		
		10th Batch	2 nd	2008-09	215.43	24.88	31.03.09	24.88	28.08.09	24.88	-	2009-10	190.55		
		11th Batch	2 nd	2005-06	189.029	41.81	31.03.09	41.81	28.08.09	41.81	-	2009-10	147.219		
		12th Batch	2 nd	2008-09	225.706	60.099	31.03.09	60.099	28.08.09	60.099	-	2009-10	165.607		
		IWDP	2 nd	2008-09	100.172	44.692	31.03.09	44.692	28.08.09	44.692	-	2009-10	55.48		
		Total				1195.35	289.975		289.975		289.975			905.169	
		2	BILASPUR	6th Batch	4 th	2005-06	94.205	91.564	31.03.09	91.564	10.08.09	91.564	-	2009-10	2.641
				7th Batch	3 rd	2003-04	40.319	40.27	31.03.09	40.27	10.08.09	40.27	-	2009-10	0.049
				8th Batch	4 th	2006-07	35.72	35.11	31.03.09	35.11	10.08.09	35.11	-	2009-10	0.61
9th Batch	3 rd			2005-06	71.253	71.048	31.03.09	71.048	10.08.09	71.048	-	2009-10	0.205		
11th Batch	2 nd			2005-06	45	44.261	31.03.09	44.261	08.04.09	44.261	-	2009-10	0.739		
Total						286.497	282.253		282.253		282.253			4.244	
3	DANTEWADA	6th Batch	6 th	2008-09	111.36	19	31.03.09	19	05.09.09	19	-	2009-10	92.36		
		7th Batch	2 nd	2003-04	103.43	101.93	31.03.09	101.93	05.09.09	101.93	-	2009-10	1.5		
		8th Batch	5 th	2008-09	107.98	21.57	31.03.09	21.57	05.09.09	21.57	-	2009-10	86.41		
		9th Batch	2 nd	2007-08	200.28	195.69	31.03.09	195.69	05.09.09	195.69	-	2009-10	4.59		

DANTEWADA	10th Batch	2 nd	2007-08	213.13	211.76	31.03.09	211.76	05.09.09	211.76	-	2009-10	1.37	
	11th Batch	2 nd	2008-09	240.28	16	31.03.09	16	05.09.09	16	-	2009-10	224.28	
	12th Batch	2 nd	2008-09	240.7	23.25	31.03.09	23.25	05.09.09	23.25	-	2009-10	217.45	
Total				1217.16	589.2		589.2		589.2			627.96	
4 DHAMTARI	IWDP-I	4 th	2008-09	270.28	234.26	31.03.09	234.26	31.03.09	234.26	-	2009-10	36.02	
	IWDP-II	3 rd	2008-09	227.24	176.51	31.03.09	176.51	31.03.09	176.51	-	2009-10	50.73	
	IWDP-III	2 nd	2007-08	137.34	109.88	31.03.09	109.88	16.03.09	109.88	-	2009-10	27.46	
	IWDP-IV	2 nd	2008-09	173.52	118.92	31.03.09	118.92	31.03.09	118.92	-	2009-10	54.58	
	Total				808.38	639.57		639.57				168.79	
		6th Batch		2007-08	0.53	0.02	31.03.09	0.02	04.09.09	0.02	-	2009-10	0.51
		7th Batch		2007-08	36.34	35.97	31.03.09	35.97	04.09.09	35.97	-	2009-10	0.37
5 DURG	9th Batch		2008-09	108.72	99.55	31.03.09	99.55	04.09.09	99.55	-	2009-10	9.17	
	10th Batch		2007-08	73.03	69.22	31.03.09	69.22	04.09.09	69.22	-	2009-10	3.81	
	11th Batch		2007-08	90.38	86.52	31.03.09	86.52	04.09.09	86.52	-	2009-10	3.86	
	12th Batch		2007-08	3.72	-	31.03.09	-	04.09.09	-	-	2009-10	3.72	
	IWDP7		2007-08	94.22	78.89	31.03.09	78.89	04.09.09	78.89	-	2009-10	15.33	
	IWDP8		2006-07	10.52	5.34	31.03.09	5.34	04.09.09	5.34	-	2009-10	5.18	
	IWDP9		2007-08	65.03	64.02	31.03.09	64.02	04.09.09	64.02	-	2009-10	1.01	
	IWDP10		2007-08	80.8	77.25	31.03.09	77.25	04.09.09	77.25	-	2009-10	0.95	
	Total			563.29	516.78		516.78		516.78			43.91	
6 JANJIR- CHAMPA	6th Batch	5 th	2008-09	40.752	8.856	31.03.09	8.856	06.08.09	8.856	-		31.896	
	7th Batch	6 th	2008-09	22.16	13.829	31.03.09	13.829	06.08.09	13.829	-	2009-10	8.331	
	8th Batch	4 th	2006-07	0.69	0.56	31.03.09	0.56	06.08.09	0.56	-	2009-10	0.13	
	9th Batch	4 th	2008-09	26.994	11.382	31.03.09	11.382	06.08.09	11.382	-	2009-10	15.612	
	10th Batch	3 rd	2008-09	39.004	7.941	31.03.09	7.941	06.08.09	7.941	-	2009-10	31.063	
	11th Batch	2 nd	2008-09	45.781	5.623	31.03.09	5.623	06.08.09	5.623	-	2009-10	40.158	
	12th Batch	2 nd	2008-09	61.817	12.408	31.03.09	12.408	06.08.09	12.408	-	2009-10	49.409	
	IWDP1	6 th	2008-09	145.797	77.004	31.03.09	77.004	06.08.09	77.004	-	2009-10	68.753	
	IWDP2	4 th	2008-09	48.043	14.09	31.03.09	14.09	06.08.09	14.09	-	2009-10	33.953	

JANJIR-CHAMPA	IWDP3	3 rd	2008-09	146.932	41.849	31.03.09	41.849	06.08.09	41.849	-	2009-10	105.083	
	IWDP4	3 rd	2008-09	151.209	92.638	31.03.09	92.638	06.08.09	92.638	-	2009-10	58.571	
	IWDP5	2 nd	2006-07	102.781	52.969	31.03.09	52.969	06.08.09	52.969	-	2009-10	49.812	
	IWDP6	2 nd	2006-07	55.653	31.201	31.03.09	31.201	06.08.09	31.201	-	2009-10	24.452	
	IWDP7	2 nd	2006-07	105.546	78.415	31.03.09	78.415	06.08.09	78.415	-	2009-10	27.131	
	Total				993.159	448.765		448.765		448.765			544.354
	JASHPUR	IWDP	2 ND	2007-08	280.55	280.55	31.03.09	280.55	19.12.08	280.55	-	-	-
Total				280.55	280.55	31.03.09	280.55	19.12.08	280.55			0	
KANKER	IWDP-I	1 st	2008-09	81.3	2.02	31.03.09	2.02	05.09.09	2.02	-	2009-10	79.28	
	IWDP-II	1 st	2008-09	59.91	24.38	31.03.09	24.38	05.09.09	24.38	-	2009-10	35.53	
	IWDP-III	1 st	2008-09	88.96	82.12	31.03.09	82.12	05.09.09	82.12	-	2009-10	6.84	
Total				230.17	108.52		108.52		108.52			121.65	
KAWARDHA	6th Batch	7 th	2008-09	180.221	166.241	31.03.09	166.241	19.08.09	166.241	-	2009-10	13.98	
	7th Batch	4 th	2008-09	144.807	138.052	31.03.09	138.052	21.07.09	138.052	-	2009-10	6.76	
	8th Batch	5 th	2008-09	271.317	254.556	31.03.09	254.556	01.07.09	254.556	-	2009-10	16.76	
	9th Batch	4 th	2005-06	92.019	85.507	31.03.09	85.507	19.08.09	85.507	-	2009-10	6.51	
	10th Batch	2 nd	2008-09	163.821	85.328	31.03.09	85.328	21.07.09	85.328	-	2009-10	78.49	
	11th Batch	2 nd	2008-09	203.958	97.434	31.03.09	97.434	21.07.09	97.434	-	2009-10	106.52	
	IWDP1	5 th	2008-09	263.801	189.674	31.03.09	189.674	21.11.09	189.674	-	2009-10	74.13	
	IWDP2	2 nd	2007-08	137.555	104.989	31.03.09	104.989	01.07.09	104.989	-	2009-10	32.57	
	IWDP3	2 nd	2008-09	130.969	67.468	31.03.09	67.468	19.08.09	67.468	-	2009-10	63.5	
	IWDP4	2 nd	2008-09	137.192	75.228	31.03.09	75.228	19.08.09	75.228	-	2009-10	61.96	
	Total				1725.66	1264.48		1264.48		1264.48			461.18
KORBA	6th Batch	5 th	2005-06	0.057	-	31.03.09	-	07.08.09	-	-	2009-10	0.057	
	7th Batch	5 th	2005-06	0.091	0.07	31.03.09	0.07	07.08.09	0.07	-	2009-10	0.021	
	8th Batch	4 th	2008-09	89.85	89.8	31.03.09	89.8	24.08.09	89.8	-	2009-10	0.049	
	9th Batch	1 st	2003-04	0	0	31.03.09	0	07.08.09	0	-	2009-10	0	
	10th Batch	2 nd	2008-09	179.73	179.67	31.03.09	179.67	04.09.09	179.67	-	2009-10	0.056	

KORBA	11th Batch	2nd	2008-09	197.61	197.566	31.03.09	197.566	04.09.09	197.566	-	2009-10	0.077
	12th Batch	2nd	2008-09	197.47	197.28	31.03.09	197.28	04.09.09	197.28	-	2009-10	0.194
Total				664.808	664.386		664.386		664.386			0.454
11 KORIYA	IWDP-I	5th	2008-09	25.878	9.88	31.03.09	9.88	03.02.09	9.88	-	2009-10	15.99
	IWDP-II	4th	2008-09	31	2.7	31.03.09	2.7	03.02.09	2.7	-	2009-10	28.3
	IWDP-III	4th	2008-09	39.81	27.31	31.03.09	27.31	01.12.08	27.31	-	2009-10	12.5
	IWDP-IV	2nd	2008-09	89.09	86.45	31.03.09	86.45	03.02.09	86.45	-	2009-10	2.64
				185.778	126.34		126.34		126.34			59.43
12 MAHASA- MUND	IWDP1	4th	2006-07	109.68	107.06	31.03.09	107.06	10.08.09	107.06	-	2009-10	2.62
	IWDP2	4th	2008-09	42.27	18.39	31.03.09	18.39	10.08.09	18.39	-	2009-10	23.88
	IWDP3	2nd	2006-07	89.76	87.24	31.03.09	87.24	10.08.09	87.24	-	2009-10	2.52
	IWDP4	4th	2008-09	44.22	0	31.03.09	0	10.08.09	0	-	2009-10	44.22
	IWDP5	2nd	2008-09	89.74	43.97	31.03.09	43.97	10.08.09	43.97	-	2009-10	45.77
	IWDP6	2nd	2008-09	97.25	47.65	31.03.09	47.65	10.08.09	47.65	-	2009-10	49.6
	IWDP7	2nd	2008-09	89.54	89.04	31.03.09	89.04	10.08.09	89.04	-	2009-10	0.5
				562.46	393.35		393.35		393.35			124.89
13 RAIGARH	IWDP-II	5th	2007-08	117.74	115.32	31.03.09	115.32	04.09.09	115.32	-	2009-10	2.42
	IWDP-III	4th	2008-09	43.31	37.408	31.03.09	37.408	04.09.09	37.408	-	2009-10	6.502
	IWDP-IV	3rd	2008-09	80.31	70.658	31.03.09	70.658	04.09.09	70.658	-	2009-10	9.784
	IWDP-V	2nd	2007-08	90.486	81.428	31.03.09	81.428	04.09.09	81.428	-	2009-10	9.058
					331.846	304.814		304.814		304.814		
14 RAIPUR	IWDP2	6th	2007-08	79.778	64.667	31.03.09	64.667	30.04.09	64.667	-	2009-10	15.111
	IWDP3	6th	2008-09	70.568	0	31.03.09	0	30.04.09	0	-	2009-10	70.568
	IWDP4	6th	2008-09	69.41	61.712	31.03.09	61.712	30.04.09	61.712	-	2009-10	7.698
	IWDP5	6th	2008-09	42.962	37.024	31.03.09	37.024	30.04.09	37.024	-	2009-10	5.938
	IWDP6	3rd	2008-09	91.323	0	31.03.09	0	30.04.09	0	-	2009-10	91.323
	IWDP7	1st	2005-06	45	44.903	31.03.09	44.903	30.09.06	44.903	-	2009-10	0.097
	IWDP8	2nd	2007-08	85.153	34.965	31.03.09	34.965	30.04.09	34.965	-	2009-10	50.188
	IWDP9	3rd	2008-09	89.543	80.709	31.03.09	80.709	30.04.09	80.709	-	2009-10	8.834

RAIPUR	IWDP10	2 nd	2006-07	86.536	70.965	31.03.09	70.965	30.04.09	70.965	-	2009-10	15.571	
	IWDP11	3 rd	2008-09	89.478	81.991	31.03.09	81.991	30.04.09	81.991	-	2009-10	7.487	
				749.751	476.936		476.936		476.936			272.815	
15 RAJNAND GAON	6th Batch	6 th	2008-09	1.28	0	31.03.09	0	05.09.09	0	-	2009-10	1.28	
	7th Batch	5 th	2008-09	0.24	0	31.03.09	0	05.09.09	0	-	2009-10	0.24	
	8th Batch	6 th	2008-09	56.91	54.66	31.03.09	54.66	05.09.09	54.66	-	2009-10	2.25	
	9th Batch	4 th	2008-09	39.71	7.89	31.03.09	7.89	05.09.09	7.89	-	2009-10	31.8	
	10th Batch	3 rd	2008-09	19.97	13.69	31.03.09	13.69	05.09.09	13.69	-	2009-10	6.29	
	11th Batch	3 rd	2008-09	112.35	97.35	31.03.09	97.35	05.09.09	97.35	-	2009-10	14.97	
	12th Batch	3 rd	2008-09	124.56	96.99	31.03.09	96.99	05.09.09	96.99	-	2009-10	27.56	
	IWDP1	-	2008-09	0.126	0	31.03.09	0	05.09.09	0	-	2009-10	0.126	
	IWDP2	-	2008-09	109.9	104.5	31.03.09	104.5	05.09.09	104.5	-	2009-10	5.4	
	IWDP3	3 rd	2008-09	120.58	91.5	31.03.09	91.5	05.09.09	91.5	-	2009-10	29.08	
	IWDP4	3 rd	2008-09	94.68	81	31.03.09	81	05.09.09	81	-	2009-10	13.67	
					680.306	547.58		547.58		547.58			132.666
	16 SURGUJA	IWDP-I	2 nd	2008-09	121.33	109.42	31.03.09	109.42	30.03.09	109.42	-	2009-10	14.33
IWDP-II		2 nd	2008-09	128.07	117.84	31.03.09	117.84	30.03.09	117.84	-	2009-10	7.45	
IWDP-III		2 nd	2008-09	67.23	62.26	31.03.09	62.26	30.03.09	62.26	-	2009-10	13.13	
IWDP-IV		2 nd	2008-09	79.52	38.23	31.03.09	38.23	30.03.09	38.23	-	2009-10	43.77	
IWDP-V		2 nd	2008-09	130.06	127.81	31.03.09	127.81	30.03.09	127.81	-	2009-10	12.24	
	Grant Total			526.21	455.56		455.56		455.56	0		90.92	
				11001.4	7389.06		7389.06		7389.06	0		3586.2	

Note : % of total utilized fund - 67.16

Table-SPSP 18: Details of Unspent balance (MIS Table-M(FM)8)

S. No.	District	Project	Instal-ment no.	Financial year of release of fund	Amount released (Rs. in lakh)	Amount utilized (Rs.in lakhs)	Unutilised funds (Rs. In lakhs)		
1	Bastar	6 th Batch	7 th	2008-09	76.963	7.37	69.593		
		7 th Batch	6 th	2007-08	70.324	21.574	48.75		
		8 th Batch	5 th	2008-09	108.483	27.13	81.153		
		9 th Batch	5 th	2008-09	209.238	62.42	146.817		
		10 th Batch	2 nd	2008-09	215.43	24.88	190.55		
		11 th Batch	2 nd	2005-06	189.029	41.81	147.219		
		12 th Batch	2 nd	2008-09	225.706	60.099	165.607		
		IWDP	2 nd	2008-09	100.172	44.692	55.48		
		TOTAL				1195.35	289.975	905.169	
		2	Dantawada	6 th Batch	6 th	2008-09	111.36	19	92.36
				7 th Batch	2 nd	2003-04	103.43	101.93	1.5
				8 th Batch	5 th	2008-09	107.98	21.57	86.41
9 th Batch	2 nd			2007-08	200.28	195.69	4.59		
10 th Batch	2 nd			2007-08	213.13	211.76	1.37		
11 th Batch	2 nd			2008-09	240.28	16	224.28		
		12 th Batch	2 nd	2008-09	240.7	23.25	217.45		
3	Bilaspur						627.96		
		6 th Batch	4 th	2005-06	94.205	91.564	2.641		

		7 th Batch	3 rd	2003-04	40.319	40.27	0.049
		8 th Batch	4 th	2006-07	35.72	35.11	0.61
		9 th Batch	3 rd	2005-06	71.253	71.048	0.205
		11 th Batch	2 nd	2005-06	45	44.261	0.739
				TOTAL	286.497	282.253	4.244
		6 th Batch	5 th	2008-09	40.752	8.856	31.896
		7 th Batch	6 th	2008-09	22.16	13.829	8.331
		8 th Batch	4 th	2006-07	0.69	0.56	0.13
		9 th Batch	4 th	2008-09	26.994	11.382	15.612
		10 th Batch	3 rd	2008-09	39.004	7.941	31.063
		11 th Batch	2 nd	2008-09	45.781	5.623	40.158
		12 th Batch	2 nd	2008-09	61.817	12.408	49.409
		IWDP1	6 th	2008-09	145.797	77.004	68.753
		IWDP2	4 th	2008-09	48.043	14.09	33.953
		IWDP3	3 rd	2008-09	146.932	41.849	105.083
		IWDP4	3 rd	2008-09	151.209	92.638	58.571
		IWDP5	2 nd	2006-07	102.781	52.969	49.812
		IWDP6	2 nd	2006-07	55.653	31.201	24.452
		IWDP7	2 nd	2006-07	105.546	78.415	27.131
				TOTAL	993.159	448.765	544.354
		6 th Batch	5 th	2005-06	0.057	-	0.057
		7 th Batch	5 th	2005-06	0.091	0.07	0.021
		8 th Batch	4 th	2008-09	89.85	89.8	0.049
4	Jajgir- Champa						
5	Korba						

	9 th Batch	1 st	2003-04	0	0	0	
	10 th Batch	2 nd	2008-09	179.73	179.67	0.056	
	11 th Batch	2 nd	2008-09	197.615	197.566	0.077	
	12 th Batch	2 nd	2008-09	197.474	197.28	0.194	
			TOTAL	664.817	664.386	0.454	
6	6 th Batch		2007-08	0.53	0.02	0.51	
	7 th Batch		2007-08	36.34	35.97	0.37	
	9 th Batch		2008-09	108.72	99.55	9.17	
	10 th Batch		2007-08	73.03	69.22	3.81	
	11 th Batch		2007-08	90.38	86.52	3.86	
	12 th Batch		2007-08	3.72	-	3.72	
	IWDDP7		2007-08	94.22	78.89	15.33	
	IWDDP8		2006-07	10.52	5.34	5.18	
	IWDDP9		2007-08	65.03	64.02	1.01	
	IWDDP10		2007-08	80.8	77.25	0.95	
				TOTAL	563.29	516.78	43.91
	7	6 th Batch	6 th	2008-09	1.28	0	1.28
7 th Batch		5 th	2008-09	0.24	0	0.24	
8 th Batch		6 th	2008-09	56.91	54.66	2.25	
9 th Batch		4 th	2008-09	39.71	7.89	31.8	
10 th Batch		3 rd	2008-09	19.97	13.69	6.29	
11 th Batch		3 rd	2008-09	112.35	97.35	14.97	
12 th Batch		3 rd	2008-09	124.56	96.99	27.56	
IWDDP1		-	2008-09	0.126	0	0.126	

10	Raipur	IWDP2	6 th	2007-08	79.778	64.667	15.111
		IWDP3	6 th	2008-09	70.568	0	70.568
		IWDP4	6 th	2008-09	69.41	61.712	7.698
		IWDP5	6 th	2008-09	42.962	37.024	5.938
		IWDP6	3 rd	2008-09	91.323	0	91.323
		IWDP7	1 st	2005-06	45	44.903	0.097
		IWDP8	2 nd	2007-08	85.153	34.965	50.188
		IWDP9	3 rd	2008-09	89.543	80.709	8.834
		IWDP10	2 nd	2006-07	86.536	70.965	15.571
		IWDP11	3 rd	2008-09	89.478	81.991	7.487
				TOTAL		749.751	476.936
11	Raigarh	IWDP-II	5 th	2007-08	117.74	115.32	2.42
		IWDP-III	4 th	2008-09	43.31	37.408	6.502
		IWDP-IV	3 th	2008-09	80.31	70.658	9.784
		IWDP-V	2 th	2007-08	90.486	81.428	9.058
				TOTAL		331.846	304.814
12	Dhamtari	IWDP-I	4 th	2008-09	270.28	234.26	36.02
		IWDP-II	3 rd	2008-09	227.24	176.51	50.73
		IWDP-III	2 nd	2007-08	137.34	109.88	27.46
		IWDP-IV	2 nd	2008-09	173.52	118.92	54.58
		TOTAL		808.38	639.57	168.79	

13	Koria	IWDP-I	5 th	2008-09	25.87	9.88	15.99
		IWDP-II	4 th	2008-09	31	2.7	28.3
		IWDP-III	4 th	2008-09	39.81	27.31	12.5
		IWDP-IV	2 nd	2008-09	89.09	86.45	2.64
		TOTAL			185.77	126.34	59.43
14	Kanker	IWDP-I	1 st	2008-09	81.3	2.02	79.28
		IWDP-II	1 st	2008-09	59.91	24.38	35.53
		IWDP-III	1 st	2008-09	88.96	82.12	6.84
		TOTAL			230.17	108.52	121.65
15	Jashpur	IWDP	2 nd	2007-08	936	925.15	0
		TOTAL			936	925.15	0
16	Surguja	IWDP-I	2 nd	2008-09	121.33	109.42	14.33
		IWDP-II	2 nd	2008-09	128.07	117.84	7.45
		IWDP-III	2 nd	2008-09	67.23	62.26	13.13
		IWDP-IV	2 nd	2008-09	79.52	38.23	43.77
		IWDP-V	2 nd	2008-09	130.06	127.81	12.24
		TOTAL			526.21	455.56	90.92
		G. TOTAL			10439.8	7444.5	3586.2

CHAPTER: 7

Strategy for implementation of Integrated Watershed Management Programme (IWMP)

In Chhattisgarh state IWDP and DPAP programme are being implemented successfully, covering an area of 845824.3 ha on Hariyali Guide Line 2003 and old Guide Line 2001 to achieve its objects. Out of total area of 845824.3 ha total 349718.99 area treated under Watershed Programme till March, 2009 and 496105.31 ha area will be treated or being treated presently according to operational Guide Lines.

Under the IWMP programme, an area of 6.00 lac ha have been selected on merit basis, which has scored highest points according to operational common Guide Line for treatment during the remaining period of XI five year plan. This is the area where SC/ST population to more than 40%, area having acute drinking water problem, the crop fails in want of watering due to scanty and uneven rainfall resulting distress forming. The actual wages are much less than government minimum wage.

According to SPSP format of DoLR, the area available for treatment has been prioritized and accordingly 10 lac ha area for each five-year plan is proposed for treatment for next XII, XIII and XIV five-year plan. Thus total area of 36 lac ha will be treated during next 18 years to mitigate drought condition and provide self-employment to rural villagers. The list of project selected for remaining period of XI Five Year Plan for treatment of 6.00 lac ha is enclosed for ready reference, which covers 35 projects with an area of 201216.67 ha.

Table-SPSP 19: Plan-wise phasing of physical (area in ha) & financial (Rs. in Crore) targets of IWMP for next 18 years*

District	Remaining period of XI Plan (2009-10 to 2011-12)		XII Plan (2012-13 to 2016-17)		XIII Plan (2017-18 to 2021-22)		XIV Plan (2022-23 to 2026-27)		Total for 18 years	
	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
Bastar	37500	45.00	62500	75.00	62500	75.00	62500	75.00	225000	270.00
Bilaspur	37500	45.00	62500	75.00	62500	75.00	62500	75.00	225000	270.00
Dantewada	37500	45.00	62500	75.00	62500	75.00	62500	75.00	225000	270.00
Dhamtari	37500	45.00	62500	75.00	62500	75.00	62500	75.00	225000	270.00
Durg	37500	45.00	62500	75.00	62500	75.00	62500	75.00	225000	270.00
Jangirchampa	37500	45.00	62500	75.00	62500	75.00	62500	75.00	225000	270.00
Jashpur	37500	45.00	62500	75.00	62500	75.00	62500	75.00	225000	270.00
Kanker	37500	45.00	62500	75.00	62500	75.00	62500	75.00	225000	270.00
Kawardha	37500	45.00	62500	75.00	62500	75.00	62500	75.00	225000	270.00
Korba	37500	45.00	62500	75.00	62500	75.00	62500	75.00	225000	270.00
Koriya	37500	45.00	62500	75.00	62500	75.00	62500	75.00	225000	270.00
Mahasamund	37500	45.00	62500	75.00	62500	75.00	62500	75.00	225000	270.00
Raigarh	37500	45.00	62500	75.00	62500	75.00	62500	75.00	225000	270.00
Raipur	37500	45.00	62500	75.00	62500	75.00	62500	75.00	225000	270.00
Rajnandgaon	37500	45.00	62500	75.00	62500	75.00	62500	75.00	225000	270.00
Surguja	37500	45.00	62500	75.00	62500	75.00	62500	75.00	225000	270.00
Total	600000	720.00	10,00000	1200.00	10,00000	1200.00	10,00000	1200.00	3600000	4320.00

Table-SPSP 20: Year-wise phasing of physical (area in '000 ha) & financial (Rs. In lakh) targets of IWMP for remaining period of XI Plan *

S. No	District	Remaining period of XI Plan																			
		2009-10			2010-11			2011-12			Total										
		Phy.		Fin.	Phy.		Fin.	Phy.		Fin.	Phy.		Area	Fin.							
No. of projects		Area	No. of projects	Area		No. of projects	Area		No. of projects	Area		No. of projects	Area	Fin.							
H&D	O	H&D		O	H&D		O	H&D		O	H&D				O						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1	Bastar	2	0	11530	-	1384	1	0	7733	-	928	2	0	9000	-	1080	5	0	28263	0	3352
2	Bilaspur	3	0	19130	-	2296	3	1	12389	4844	2068	3	0	14000	-	1680	9	19	45579	4844	6044
3	Dantewada	2	0	6600	-	792	3	0	11475	-	1377	2	0	9000	-	1080	6	0	32750	-	3249
4	Dhantlari	2	0	12750	-	1530	2	0	11000	-	1320	2	0	9000	-	1080	4	8	20000	41380	7366
5	Durg	2	0	10000	-	1200	0	2	-	10000	1200	2	6	10000	31380	4966	7	-	46267	-	5552
6	Janjgir-Champa	2	0	18348	-	2202	3	0	18919	-	2270	2	0	9000	-	1080	6	0	29503	-	3540
7	Jashpur	2	0	14403	-	1728	2	0	7800	-	936	2	0	7300	-	876	5	0	18292	-	2195
8	Kanker	2	0	5502	-	660	2	0	8790	-	1055	1	-	4000	-	480	2	3	17238	19000	4349
9	Kabirdham	2	0	17238	-	2069	0	1	-	10000	1200	0	2	0	9000	1080	5	1	21700	1800	2820
10	Korba	1	1	5000	1800	816	3	0	12300	-	1476	1	0	4400	-	528	5	0	24150	-	2898
11	Koriya	2	0	8150	-	978	1	0	7000	-	840	2	0	9000	-	1080	5	9	-	51862	6223
12	Mahasamund	0	2	10457	-	1255	0	3	15535	-	1864	0	4	25869	0	3104	-	-	32450	-	3894
13	Raigarh	3	0	23450	-	2814	0	0	0	0	0	2	2	9000	0	1080	-	8	-	38321	4599
14	Raipur	0	2	10000	-	1200	0	4	19321	-	2319	0	2	9000	0	1080	-	8	-	42347	5082
15	Rainandgaon	0	3	14011	-	1681	0	3	19336	0	2320	0	2	9000	0	1080	-	-	60809	-	7297
16	Surguja	2	0	12847	-	1542	4	0	24954	0	2994	5	0	23008	0	2761	11	-	-	-	-
	Total	27	8	199417	1800	24146	24	14	176552	24844	23240	24	16	151576	40380	23035	72	56	346341	199554	72388

H&D - Hilly & Difficult area:

O - Others

Table-SPP 21: Details of district wise and category-wise area proposed to be taken up under IWMP during next 3 years i.e. upto 11th Five Year Plan (Area in 000 ha)

S. No.	District	Year	Total area available for treatment	Total area proposed to take up under IWMP in the next 3 years	Terrain of the proposed area				Land use type of proposed area	
					Hilly	Desert	Others	cultivated rainfed area	Uncultivated Wasteland	
1	2	3	4	5	6	7				
1	BASTAR	2009-10	11530	11530	-	-	0.00	0.00	300.87	0.00
		2010-11	7733	7733	-	-	4531.61	300.87	300.87	300.87
		2011-12	9000	9000	-	-	4531.61	300.87	300.87	300.87
		Sub-total	28263	28263	-	-	9063.23	601.74	601.74	601.74
2	BILASPUR	2009-10	19130	19130	-	-				
		2010-11	17233	17233						
		2011-12	14000	14000						
		Sub-total	50423	50423						
3	DANTEWADA	2009-10	6600	6600	0	0	2376.4	2823.6	2756.75	2823.6
		2010-11	11475	11475	0	0	2443.25	2756.75	2756.75	2756.75
		2011-12	9000	9000	0	0	2342.54	3257.46	3257.46	3257.46
		Sub-total	27075	27075			7162.19	8837.81	8837.81	8837.81
4	DHAMTARI	2009-10	12750	12750						
		2010-11	11000	11000						
		2011-12	9000	9000						
		Sub-total	32750	32750						
5	DURG	2009-10	10000	10000						
		2010-11	10000	10000						
		2011-12	41380	41380						
		Sub-total	61380	61380						

6	JANUGIRCHAMPA	2009-10	18348.21	18348.21	-	Small hill & undulated	3865.596	696.388
		2010-11	18918.68	18918.68	-		7731.192	1392.776
		2011-12	9000	9000	-		7731.192	1392.776
		Sub-total	46266.85	46266.85	-		19327.98	3481.94
7	JASHPUR	2009-10	14403.10	14403.10	-	Small hill & undulated		
		2010-11	7800	7800				
		2011-12	7300	7300				
		Sub-total	29503.10	29503.10	-		2506	-
8	KANKER	2009-10	5501.62	5501.62	-	Small hill & undulated	2506	-
		2010-11	8790.41	8790.41	-		2506	-
		2011-12	4000	4000	-		7518	-
		Sub-total	18292.03	18292.03	-			
9	KABIRDHAM	2009-10	17238	17238		Small hill & undulated		
		2010-11	10000	10000				
		2011-12	9000	9000				
		Sub-total	36238	36238			1432.80	614.05
10	KORBA	2009-10	6800	6800		Small hill & undulated	3086.02	1322.58
		2010-11	12300	12300			6502.68	2786.86
		2011-12	4400	4400			11021.50	4723.50
		Sub-total	23500	23500				
11	KORIYA	2009-10	8150	8150		Small hill & undulated		
		2010-11	7000	7000				
		2011-12	9000	9000				
		Sub-total	24150	24150				
12	MAHASAMUND	2009-10	10457.43	10457.43		Small hill & undulated		
		2010-11	15535.43	15535.43				
		2011-12	25868.78	25868.78				
		Sub-total	51861.64	51861.64				

13	RAGARH	2009-10	23450	23450	-	Small hill & undulated	8427	15073
		2010-11	-	-	-		7196	7804
14	RAIPUR	2011-12	9000	9000	-	Small hill & undulated	7215	10785
		Sub-total	32450	32450	-		22828	33662
		2009-10	10000	10000				
		2010-11	19321	19321				
		2011-12	9000	9000				
15	RAJNANDGAON	Sub-total	38321	38321		Small hill & undulated	35225	11740
		2009-10	14011	14011				
		2010-11	19336	19336				
		2011-12	9000	9000				
		Sub-total	42347	42347				
16	SURGUJA	2009-10	12847.31	12847.31		Small hill & undulated		
		2010-11	24953.70	24953.70				
		2011-12	23007.67	23007.67				
		Sub-total	60808.68	60808.68				

Table-SSP 21 (Conti.) : Details of district wise and category-wise area proposed to be taken up under IWMP during next 3 years i.e. upto 11th Five Year Plan.

S. No.	District	Year	Ownership pattern of the proposed area							Total area	No. of beneficiaries covered	8	9					
			Private	Comm-nity	Forest	Others (pl. specify)	MF	SF	LF					Landless	Total	DAP	IWDP	
			Identified DPAP/IWDP blocks covered															
			No. of Area blocks															
1	BASTAR	2009-10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		2010-11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		2011-12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Sub-total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	BILASPUR	2009-10	191	2167	147	742/154	3398	-	-	-	-	-	-	-	-	-	-	
		2010-11	478	5418	369	1856/384	8495	-	-	-	-	-	-	-	-	-	-	
		2011-12	287	3250	221	1119/230	5097	-	-	-	-	-	-	-	-	-	-	
		Sub-total	956	10835	737	3711/768	16990	-	-	-	-	-	-	-	-	-	-	-
3	DANTEWADA	2009-10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		2010-11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		2011-12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Sub-total	6864.00	7862.40	873.60	-	15600.00	1524	2164	295	103	4086	2	6000	3	9600	-	
4	DHAMTARI	2009-10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		2010-11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		2011-12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Sub-total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5	DURG	2009-10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		2010-11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		2011-12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Sub-total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
6	JANJIRCHAMPA	2009-10	1811.00	277.20	690.93	2810.90	5590.04	2441	568	70	933	4012	-	-	-	-	-	
		2010-11	3622.01	554.41	1381.87	5621.78	11180.06	4882	1136	140	1867	8025	-	-	-	-	-	
		2011-12	3622.01	554.41	1381.87	5621.78	11180.06	4882	1136	140	1867	8025	-	-	-	-	-	
		Sub-total	9055.01	1386.00	3454.67	14054.46	27950.16	12206	2839	351	4666	20062	-	-	-	-	-	

Table-SPSP 22: Details of Convergence of IWMP with other Schemes* (MIS Table-M(P)3)

S. No.	Name of the District	Names of Departments with Schemes converging with IWMP	Funds to be made available to IWMP due to convergence (Rs.)	Was this fund included in Rs.12,000/15,000 per ha.		Name of activity/task/structure to be undertaken with converged funds	Level at which decision for convergence was taken\$
				Yes	No		
1	2	3	4	5		6	7
1	BASTAR	Rural Development, Forest Department, Women & Child welfare Department	Will be finalised after projects are approved.	-	No	Will be given with Annual work plans	District Level
1	BILASPUR						
2	DANTEWADA						
3	DHAMTARI						
4	DURG						
5	JANJIRCHAMPA						
6	JASHPUR						
7	KANKER						
8	KAWARDHA						
9	KORBA						
10	KORIYA						
11	MAHASAMUND						
12	RAIGARH						
13	RAIPUR						
14	RAINANDGAON						
15	SURGUJA						

c). **Public-Private Partnership:** In Chattisgarh state PPP activities in watershed programme not incorporated and related data will be submitted in annual action plan.

Table-SPSP 23: Summary of Public-Private Partnership in the IWMP projects* (MIS Table-M(P)4)

S. No.	District	Name of Private Sector Partner Agency	Type of agreement signed (MoU /contract others)	Financial contribution	Partnership Interventions	Expected Outcomes
1	2	3	4	5	6	7
1	Bastar	Nil	Nil	Nil	Nil	Nil
2	Bilaspur	Nil	Nil	Nil	Nil	Nil
3	Dantewada	Nil	Nil	Nil	Nil	Nil
4	Dhamtari	Nil	Nil	Nil	Nil	Nil
5	Durg	Nil	Nil	Nil	Nil	Nil
6	Janjgirchampa	Nil	Nil	Nil	Nil	Nil
7	Jashpur	Nil	Nil	Nil	Nil	Nil
8	Kanker	Nil	Nil	Nil	Nil	Nil
9	Kawardha	Nil	Nil	Nil	Nil	Nil
10	Korba	Nil	Nil	Nil	Nil	Nil
11	Koriya	Nil	Nil	Nil	Nil	Nil
12	Mahasamund	Nil	Nil	Nil	Nil	Nil
13	Raigarh	Nil	Nil	Nil	Nil	Nil
14	Raipur	Nil	Nil	Nil	Nil	Nil
15	Rajnandgaon	Nil	Nil	Nil	Nil	Nil
16	Surguja	Nil	Nil	Nil	Nil	Nil

7.1 Planning process- Details of Scientific criteria /Inputs used in planning

The Chhattisgarh state is having village level data of remote sensing and GIS Maps in 32 layers. So we can use these data in making of Annual Action Plan and implementing it on the field. Apart from these data we had used various scientific inputs like hydro geological survey, contour survey, Baseline survey etc.

CHAPTER: 8

Livelihood concerns

In Chhattisgarh State livelihoods approaches are a way of thinking about the objectives, scope and priorities for development. They place people and their priorities at the center of development. They focus poverty reduction, interventions empowering the poor to build on their own opportunities. Scenario of Chhattisgarh in livelihood enhancement has large canvas to cover. Major part of rural livelihood have nothing much to do. They usually got engaged with traditional of their own.

Chhattisgarh state has abundant natural resources and raw material available. Livelihood can be engaged in honeybee keeping, pisciculture, poultry forming, goater, and so many other activities. The main reason for not developing the livelihood is only the lack of information and linkage to market. About 70% of youth force can be empowered to build their own opportunities.

Table-SPSP 24:(A) Details of livelihoods created for landless people*(MIS Table-M(PO)D2:(i))

S. No.	District	Name of activity	No. of beneficiaries					Pre-project income (Rs.)	Expected change in project income from intervention	Funds required for the activity (Rs.)	Sources of funding (Rs.)						
			SC	ST	Others	Women	Total				Project	Beneficiary	Financial Institution	NGO	Others		
1	2	3	4					5	6	7	8						
1	BASTAR	NTFP, Livestock, Agriculture	220	4995	2134	5475	7350	8000	14000	735.00	367.50	73.50	294.00				
2	BILASPUR	Dairy															
3	DANTEWADA																
4	DHAMTARI	Agriculture															
5	DURG	Agriculture	19309	9481	72920	61924	131750	1200/ pnl/ family	3000/ pnl/ family	957.53	957.53						
6	JANJIR-CHAMPA	Agriculture, Livestock, Horticulture	39411	20409	10556	37299	70376	Rs. 50 - 60/ day for feamale & male respectively	Rs. 75.00 / day for feamale & male respectively	751.19 lakh	Project Fund						
7	JASHPUR	NTFP															
8	KANKER	NTFP, agriculture	78	1235	331	286	1644	Upto 12000	Upto 20000	40.6	90.2	1.21	0.90				
9	KAWARDHA	Agriculture															
10	KORBA	Capacity building for landless people by social and fin. Upliftment by forming SHGs.	82	672	86	336	840	25000/ annum	30000/ annum	18.00 Lakh	18.00 Lakh						
11	KORIYA	NTFP															
12	MAHASAMUND	Agriculture															
13	RAIGARH	Livestock	992	7703	5758	5327	19780	2.96	3.397	263.00	236.71	26.29					
14	RAIPUR	Agriculture															
15	RAJNANDGAON	Agriculture NTFP, livestock	95213	326051	630313	534492	1586069	30026/ year	33028/ Capital/ year	342.88cr.	80% Central funds, 20%state fund						
16	SURGUJA	NTFP															

Table-SpSP 25: (B) Details of other livelihoods created for farmers*(MIS Table-M(PO)D2:(ii))

S. No.	District	Name of activity	No. of beneficiaries						Pre-project income (Rs.)	Expected change in income from project intervention	Funds required for the activity (Rs.)	Sources of funding (Rs.)			
			SF	MF	LF	Other	Total	Project Fund				Beneficiary	Financial Institution	NGO	Others
1	BASTAR	Dairy, Fishery, Crop demonstration, Equipment	7870	11544	14708	0	34122	4693.54	2346.77	469.35	1877.42	0.00	0.00		
2	BILASPUR														
3	DANTEWADA	Livestock	391	9119	597	0	10107								
4	DHAMTARI														
5	DURG	Agriculture	14388	19265	8126	4164	45969	3000/ Pm/ family	3000/ Pm/ family	3682.66	3682.66				
6	JANJIR-CHAMPA	Agriculture, Livestock, Horticulture	12206	2839	351	4666	20062	Rs. 50 - 60/ day for feamale & male respectively	Rs. 75.00 / day for feamale & male respectively	29296.62	Project Fund				
7	JASHPUR														
8	KANKER	Agriculture, NTFP	3050	3298	1965	800	9113	12000	20000	450.1	180.04	135	4.5		
	KAWARDHA														
10	KORBA	Capacity building for farmers by social and fin. Upliftment by forming UGs	2800	2700	140	1360	7003	33000/ Annum	40000/ Annum	210.00 Lakh	210.00 Lakh	-	-		
11	KORIYA														
12	MAHASA-MUND														
13	RAIGARH	Horti./Fishery	9408	7349	6271	-	23028	43.50	89	678	630.02	69.88	-		
14	RAIPUR														
15	RAJNANDGAON														
16	SURGUA														

Table-SPSP 28: Details of functionaries in the SLNAs* (MIS Table-M(S)2)

1 S. No.	2 Total no. of persons working in the SLNA for IWMP	3 Monthly emoluments of all the persons working in the SLNA for IWMP	4 Details of the persons engaged in the SLNA funded by DoLR									
			Names & Designation	Monthly remuneration	Date of Appointment	Nature of appointment \$	Tenure (No. of years)	Contact Ph. No./ Fax/ E-mail	Subject of Expertise	Qualification	Experience	Role
1	04		1. Mr. A.K. Choubey	-	-	Deputation	Till Project	94252-30589	-	-	15	-
2		16000	2. Mr. K. Pani grahi, Monitoring Officer	-	27/10/05	Contractual	Till Project	94242-03408	watershed management	M.Sc. In Hydrogeology, PG Diploma in Water Resource Mgt.	07 Year	-
3		16000	3. Mr. Vivek Singh Thakur,	-	24/12/2007	Contractual	Till Project	942555-5109	Soil & Water Engg.	M.Tech. Agricultural Engineering	05 Year	-
4		16000	4. Miss Meera Dewangan Monitoring Officer	-	18/05/09	Deputation from CAPART	Till Project	93022-98503	Sociologist	M.Phil. (Sociology)	02 Year	-

* From column no. 2, total no. of persons working in the SLNA for IWMP; from column no. 3, total monthly emoluments for all the persons working in the SLNA for IWMP; from column no. 4, total no. of persons to be funded by DoLR; total monthly remuneration of the persons funded by DoLR may be indicated for the entire State at the end of the table.
 * Chart indicating organizational structure of the SLNA with all the officers & staff may be enclosed

Table-SPP 29 : Details of State Level Data Cell (SLDC) functionaries*# (MIS Table-M(S)3)

S. No.	Total no. of persons working in the SLDC for IWMP	Monthly emoluments of all the persons working in the SLDC for IWMP	Names & Designation	Monthly remuneration	Date of Appointment	Nature of appointment \$	Tenure (No. of years)	Contact Ph. No./ Fax/ E-mail	Qualification	Experience	Role
1	2	3	Details of the persons engaged in the SLDC to be funded by DOLR								
4	Post & officer will be finalized with approval of Finance Department after receipt of final Guide line on administrative structure of DOLR.										

* From column no. 2, total no. of persons working in the SLDC for IWMP; from column no. 3, total monthly emoluments for all the persons working in the SLDC for IWMP; from column no. 4, total no. of persons to be funded by DOLR, total monthly remuneration of the persons funded by DOLR may be indicated for the entire State at the end of the table.

\$ Deputation/ Contract

#Chart indicating organizational structure of the SLDC with all the officers & staff may be enclosed

Briefly describe State level Monitoring/Evaluation Cell

9.2. District Level Watershed Units

A) **Briefly describe organizational structure of DRDA/ZP cell for watershed programme:** People will be finalize with approval of finance department after receipt of final guidelines on administrative structure of DOLR.

Table-SPP 30: Details of functionaries in the DWDU/DRDA Watershed Cell*(MIS Table-M(S)4)

S. No.	Name of the executing Agency#	Status of Chairman@	Date of signing of MoU with SLNA	Total no. of persons working for IWP	Monthly emoluments of all persons working for IWP	Name and Designation	Monthly Remuneration	Date of Appointment	Nature of appointments (No. of years)	Contact Ph. No./Fax/ e-mail	Qualifi- Experience	Role
1				6	7	Details of the two personnel engaged in the Watershed Cell funded by DOLR						
2						Post & officer will be finalized with approval of Finance Department after receipt of final Guide line on administrative structure of DOLR. Presently above mention in table-28, people are working full time in Watershed.						
3		Chief Executive Officer, Zilla Panchayat	Collector of the district									
4												
5												
6												
7												
8												

a) * From column no.2, no. of districts; from column no. 3, no. of executive agencies; from column no. 6, no. of persons working in the executive agencies; from column no. 7, total monthly emoluments for all the persons working in the watershed cell, from column no. 8 total no.of persons to be funded by DOLR, total monthly remuneration of the persons for the entire State may be indicated at the end of the table.

- b) #DRDA/Zilla Parishad (ZP)/ State Department/ Any other (Please specify)
- c) @Collector/CEO ZP/ CDO/ DDO/ PD/ Any other (please specify)

B) Eligible districts (more than 25,000 ha area under watershed projects in the district) for strengthening DRDA cell may be given.

9.3 PIA Briefly describe the potential PIAs for IWP in the State (Line Dept., Autonomous organization, Govt. Institute, Research Bodies, Zilla Parishad, Intermediate Panchayat, Voluntary Organisations, any other (please specify) and process of selection of PIAs in the State

9.4 WDT Briefly describe process of selection of members for WDTs in the State

9.5 Institutional arrangements at village level and people's participation Briefly describe the strategy for setting up Institutional arrangements (SHGs, UGs and WCs) at village level and people's participation

CHAPTER: 10

Capacity building

Table 10-Capacity building

a) Stake holders and capacity building requirements

S.No	Project Stakeholder	Critical capacity gaps-
1	Target community	<ol style="list-style-type: none"> 1- Risk bearing capacity. 2- No technical know how about advanced technology regarding, improved cultivation. 3- Irratic rainfall pattern. 4- More than 55% of net rainfed area is having low moisture retention capacity. 5- No proper knowledge regarding water management. 6- Tendency to grow paddy in all type of soil and field whether it is suitable for paddy or not. 7- Low seed replacement ratio. 8- Lack of water harvesting technology. 9- Low plant population in the field hence productivity in very low. 10- Lack of irrigation facility. 11- Due to light soil and irratic monsoon double crop rainfed area in very less. <p>Lack of knowledge about the improved cultivation practices of crops including water management, crops and varieties, fertilizer application, insect pest control, diversified cropping, remunerative and low water requiring crops. Also in alternative farming systems with available resources and market assess. Low risk bearing capacity and unable to cop-up with drought</p>
2	GPs	Proper coordination amongst farming community and panchayat executives
3	Watershed Committees	Lack of awareness about proper implementation of the works, managing finance
4	SHGs	Lack of coordination, market infrastructure, inputs for desired investments
5	UGs	Lack of coordination and knowledge about the natural resource use
6	WDTs	Proper functioning and new ideas for implementation is desired
7	PLAs	Update about watershed activities and their linking with rural community
8	DRDA/ZP cell	Need to constitute separate cell to look after watershed works
9	SLNA	Strengthening of the cell and equipped with recent database

b) Strategies for capacity building: Regular training with coordination with Department of Agriculture and line department as well as Agriculture University. Training facilities will be availed from other institutes like manage, ICRISAT, NIRD, SIRDI, CSWCNRP, KVAFS of the state and national level.

c) Indicate capacity building programme to be taken up:

1- Intense field crop demonstration by K.V.K. and agriculture department.

2- Proper and time to time training regarding IPM balance use of fertilizer, weeding introduction and training low

input technology such as vermicompost, Nadep compost, bio fertilizers green manuring etc.

3- Efficacy of water harvesting structures and multiple use of water bodies.

4- Introduction of livelihood like backyard poultry farming goatry, piggy, pisciculture etc., also ancillary

activities like mechanics for agricultural implement repair, machinery repair etc.

5- Training regarding, repairing, vermicompost and Nadep pits, preparation of green manures, apiculture, fruit

preservation/processing, mushroom cultivation, cocoon rearing, lac cultivation etc as per local requirement.

d) Indicate institutional arrangements made for capacity building at State level, District level, Block level and

Village level: Details are given in Table SPS 31.

e) Training manuals developed for training programme and field training proposed: It is in process

Table-SPSP 31: List of Training Institutes[@] identified for Capacity Building at State level (MIS Table-M(CB)1)

1	2	3	4	5	6	7
S. No.	Name of the Training Institute	Full Address with contact no., website & e-mail	Name & Designation of the Head of Institute	Type of Institute #	Area(s) of specialization ^{\$}	Accreditation details
1	Chhattisgarh State Institute of Rural Development (CGSIRD)	Nimora, Jagadapur Road, N.H. 43, Raipur Chhattisgarh www.cg.nic.in	Mr. R.K. Singh Director, SIRD	State Government Department	Capacity Building, Agriculture, Horticulture, Soil & Water Conservation- All	State Level
2	IGKV Raipur & Raigarh	NH-6, Raipur Boirdadar, Raigarh www.new.icar.org.in	Mr. R.K. Shaw, DRS, IGKV Raipur	University	Agriculture, Horticulture Soil & Water Conservation	State Level
3	Sachiv Training Center Raigarh	DRDA, Raigarh www.raigarhzilla.panchayat.net	Principal	Govt.	Capacity Building, Watershed Management	District Level
4	IGKV Korba	Sutarra, Katghora www.new.icar.org.in	Coordinator	Govt.	Agriculture Horticulture Soil & Water Conservation	District Level
5	KVK Anjora	Dist- Durg	Dr. S.K. Shrivastav, Director	Govt.	Horticulture Agriculture Soil and Water Conservation	District Level
6	KVK, Janjgir-Champa	Near Old Zila Panchayat, Janjgir-Champa	Dr. R.K. Sharma Sr. Scientist	Govt.	Soil and Water Conservation Agriculture, Water Management	District Level
6	Natural and Human Resource Development Society	Gaytri Nagar, Raipur	Shri N.L. Sharma	Autonomous Body	Soil and Water Conservation Watershed Management	State Level
7	Bharat Gayan Vigyan Samitei, Raipur	Shailendra Nagar, Raipur	Mr. Lalbabu	Autonomous Body	Agriculture Horticulture Soil & Water Conservation	District Level

Central govt. Dept./ State govt. Dept./ Autonomous Body/ Research Institutes/ Universities/ Others (pl. specify)

\$ Capacity Building/ Agriculture/ Horticulture/ Animal Husbandry/ Pisciculture/ Remote Sensing/ Water conservation/ Ground water/ Forestry/ livelihoods/ entrepreneurship development/ others (pl. specify)

@ The training institutes must fulfill the conditions mentioned in the operations guidelines.

f) Information, Education & Communication (IEC) Activities:

Table: SPS 32: Details of IEC activities* (MIS Table-M(CB)3)

1	2	3	4	5	6
S. No.	District	Activity	Executing agency	Estimated expenditure for XI Plan period (Rs. in lakh)	Expected Outcome (may quantify, wherever possible)
1	BASTAR	Training, Awareness Campaign, Kala-Jatha, Rally, Wall Writhing, Nukkad Natak, Telly Film etc.	Zilla Panchayat	225.00	-
2	BILASPUR			225.00	-
3	DANTEWADA			225.00	-
4	DHAMTARI			225.00	-
5	DURG			225.00	-
6	JANJGIR-CHAMPA			225.00	-
7	JASHPUR			225.00	-
8	KANKER			225.00	-
	KAWARDHA			225.00	-
10	KORBA			225.00	-
11	KORIYA			225.00	-
12	MAHASAMUND			225.00	-
13	RAIGARH			225.00	-
14	RAIPUR			225.00	-
15	RAJNANDGAON			225.00	-
16	SURGUJA			225.00	-

* From Column no. 2, total no. of Districts implementing the programme, from column no.3 no. of activities, from Column no. 4, total no. of agencies, from column no. 5 total estimated expenditure may be given at the end of the table for the entire State.

CHAPTER: 11

Monitoring and Evaluation (M & E)

Briefly describe plan to comply following:

a) **Performance monitoring of projects:** Monitoring will be performed with the help of mid-term and final evaluators. Village level social audit will also be performed. A team of experts of different agencies/ institutes will be formed to monitor the progress.

b) **Institutional performance monitoring:** Timely utilization of fund and target achievements within stipulated time period will be indicators for monitoring.

c) **Internal learning:** Day to day performance of the project will be monitored by the reports and their performance at field level and news flash in media.

d) **Evaluation:** A reputed institute will do mid-term and final evaluation after providing indicators.

e) **Indicate institutional arrangements made for M & E at State level, District level, Block level and Village level:** At all level, Chhattisgarh State Institute of Rural Development will do the monitoring and evaluation of the projects.

Table-SPSP 33: List of Institutes @ identified for M & E at State level

1	2	3	4	5	6	7
S. No.	Name of the Training Institute	Full Address with contact no., website & e-mail	Name & Designation of the Head of Institute	Type of Institute #	Area(s) of specialization \$	Accreditation details
1	Chhattisgarh State Institute of Rural Development	Nimora, Jagadaiपुर Road, N.H. 43, Raipur Chhattisgarh	Shri R.K. Singh, Director, SIRD Chhattisgarh	Government Institute	All Sector	Administrative Block-1 Lecture hall-3 Conference Hall-1 & Library-1 Ladies Hostel (Sanctioned)
2	NABARD	Pithalia Complex, Fafadih Raipur	Mr. Ratnu	Central Govt.	Water management	-

Central govt. Dept./ State govt. Dept./ Autonomous Body/ Research Institutes/ Universities/ Others (pl. specify)

\$ Capacity Building/ Agriculture/ Horticulture/ Animal Husbandry/ Pisciculture/ Remote Sensing/ Water conservation/ Ground water/ Forestry/ Livelihoods/ entrepreneurship development/ others (pl. specify)

@ The M&E institutes must fulfill the conditions mentioned in the operations guidelines.