

State Action Plan on Climate Change



'Inclusive Growth for Improved Resilience'

Government of Chhattisgarh
March 2014

Supported by United Nations Development Programme



Cover Photo Credits: Dr. A A Boaz

Table of Contents

Table of Contents.....	iii
List of Tables	v
List of Figures	vi
Abbreviations/Acronyms	xi
Executive Summary	xiv
The CSAPCC.....	xv
Introduction.....	1
Background and Context	1
The National Context.....	1
The Chhattisgarh Context.....	2
Chhattisgarh -- 'Inclusive Growth for Improved Resilience'	2
CSAPCC Preparation Process	3
Part A: General and Climate Profile - Introduction	6
1 State Profile	7
1.1 Location and Physiography	7
1.2 Demographic and Human Development Profile	10
1.3 Economy.....	12
1.4 Infrastructure.....	14
1.5 Rural Development and Social Sectors	15
2 Climate Profile and Vulnerability	21
2.1 Climatic Conditions in Chhattisgarh.....	21
2.2 Future Climatic Projections and Vulnerability	24
2.3 The Need for State Specific Vulnerability Analyses	26
Part B: Climate Change Strategy.....	27
3 Overarching State Framework	28
3.1 State Vision and Commitment.....	28
3.2 Overall Approach, Principles, and Strategies at State Level	28
3.3 Overall Common Sectoral Implementation Framework.....	34
4 Agriculture and Allied Sectors	35
4.1 Overview, Characteristics and Status	35
4.2 Key Issues.....	38
4.3 Existing/On-going Initiatives and Priorities	39
4.4 Perceived Climate Impacts.....	42
4.5 Strategies	43
4.6 Institutional Linkages and Stakeholders	45
4.7 Linkages with the NAPCC.....	45
4.8 Sectoral Action Plan and Budgets under the CSAPCC.....	45
5 Forests and Biodiversity.....	47
5.1 Overview, Characteristics and Status	47
5.2 Key Issues.....	52
5.3 Existing/On-going Initiatives	53
5.4 Priorities.....	54
5.5 Perceived Climate Impacts.....	55
5.6 Strategies	55

5.7	Institutional Linkages and Stakeholders	59
5.8	Linkages with the NAPCC.....	59
5.9	Sectoral Action Plan and Budgets under the CSAPCC.....	59
6	Water Resources	61
6.1	Overview, Characteristics and Status	61
6.2	Key Issues.....	63
6.3	Existing/On-going Initiatives	64
6.4	Priorities.....	65
6.5	Perceived Climate Impacts.....	65
6.6	Strategies	66
6.7	Institutional Linkages and Stakeholders	68
6.8	Linkages with the NAPCC.....	68
6.9	Sectoral Action Plan and Budgets under the CSAPCC.....	68
7	Urban Development	70
7.1	Overview, Characteristics and Status	70
7.2	Key Issues.....	71
7.3	Existing/On-going Initiatives	72
7.4	Priorities.....	73
7.5	Perceived Climate Impacts.....	74
7.6	Strategies	74
7.7	Institutional Linkages and Stakeholders	77
7.8	Linkages with the NAPCC.....	77
7.9	Sectoral Action Plan and Budgets under the CSAPCC.....	77
8	Transport.....	78
8.1	Overview, Characteristics and Status	78
8.2	Key Issues.....	78
8.3	Existing/On-going Initiatives	78
8.4	Priorities.....	79
8.5	Perceived Climate Impacts.....	79
8.6	Strategies	80
8.7	Institutional Linkages and Stakeholders	80
8.8	Linkages with the NAPCC.....	81
8.9	Sectoral Action Plan and Budgets under the CSAPCC.....	81
9	Energy	83
9.1	Overview, Characteristics and Status	83
9.2	Key Issues.....	85
9.3	Existing/On-going Initiatives	85
9.4	Priorities.....	86
9.5	Perceived Climate Impacts.....	87
9.6	Strategies	89
9.7	Institutional Linkages and Stakeholders	91
9.8	Linkages with the NAPCC.....	91
9.9	Sectoral Action Plan and Budgets under the CSAPCC.....	91
10	Industries and Mining	93
10.1	Overview, Characteristics and Status	93
10.2	Key Issues	94
10.3	Existing/On-going Initiatives	95

10.4	Priorities	96
10.5	Perceived Climate Impacts.....	99
10.6	Strategies.....	99
10.7	Institutional Linkages and Stakeholders.....	100
10.8	Linkages with the NAPCC	100
10.9	Sectoral Action Plan and Budgets under the CSAPCC	100
11	Human Health	102
11.1	Overview, Characteristics and Status	102
11.2	Key Issues	103
11.3	Existing/On-going Initiatives	103
11.4	Priorities	106
11.5	Perceived Climate Impacts.....	107
11.6	Strategies.....	108
11.7	Institutional Linkages and Stakeholders.....	109
11.8	Linkages with the NAPCC	109
11.9	Sectoral Action Plan and Budgets under the CSAPCC	109
Part C:	Annexures, Climate Change Action Plan Budgets.....	110
	Annexure 1: Summary Proceedings of Regional Stakeholder Consultation Workshops	111
	Bilaspur, 21 January 2013.....	111
	Raipur, 22 January 2013.....	112
	Jagdalpur, 24 January 2013.....	113
	Annexure 2: Overarching State Level Actions	115
	Annexure 3: Agriculture and Allied Sectors	117
	Annexure 4: Forests and Biodiversity.....	120
	Annexure 5: Water Resources	123
	Annexure 6: Urban Development	125
	Annexure 7: Transport.....	128
	Annexure 8: Energy	131
	Annexure 9: Industries and Mining	134
	Annexure 10: Human Health	137
	Annexure 11 : Order of the State Government to establish the Steering Committee for the State Action Plan on Climate Change.....	137
	Annexure 12 : Order for nomination of Nodal Officer for Climate Change or the State of Chhattisgarh.....	138

List of Tables

Table 1: Timeline of CSAPCC formulation Process/Activities	3
Table 2: Agro-climatic zones and details	10
Table 3: Economic and human development indicators	10
Table 4: Roads sector PPPs in Chhattisgarh (as of November 2011)	15
Table 5: Annual rainfall and distribution during cropping season in Chhattisgarh	21
Table 6: Typology of Blocks Requiring Priority Drought Proofing	22
Table 7: Land use pattern, Chhattisgarh	35
Table 8: Soils of Chhattisgarh	35
Table 9: Crop Production (Kharif and Rabi) in '000 tonnes	36
Table 10: Available water resources for fisheries	37
Table 11: Ownership wise percentage of water area	38
Table 12: District-wise forest cover (in km ²)	48