# **Updated District Level Database** (Apportioned)

Documentation of Files: 1966-67 to 2015-16 (1966 district boundaries)

**Data Documentation** 











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Documentation of Files: 1966-67 to 2015-16 (1966 district boundaries)









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## Introduction

The expanded and updated district-level database for 20 states includes data on key agriculture and socio-economic variables from 1966 to 2015. This documentation is for the updated apportioned database (i.e. data for 1966 district boundaries).

This database builds on the earlier ICRISAT district-level database of 13 states (Andhra Pradesh, Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, Bihar, West Bengal and Odisha) with an additional 3 states (Assam, Himachal Pradesh and Kerala), 3 newly formed states in 2000 (Chhattisgarh, Jharkhand and Uttarakhand) and Telangana formed in 2013. The earlier database was created with funding support from ICRISAT, World Bank, System Wide Livestock Program (SLP-CGIAR) in collaboration with National Institute of Agricultural Economics and Policy Research (NIAP), a think tank of the Indian Council of Agricultural Research (ICAR), New Delhi.

The current update of the database is being jointly carried out by ICRISAT and Tata Cornell Institute (TCI) and includes data for all districts in 20 states until 2015. It includes data on crop area and production, irrigated area, monthly rainfall, livestock and agricultural implements, operational holdings, population census and select socio-economic and agro-ecological variables. Additionally, the scope of the database has been expanded to include data on soft infrastructure related to education, health, nutrition and credit. Data on environmental variables like temperature, Actual Evapotranspiration (AET), Potential Evapotranspiration (PET), etc., was generated using pixel-level data from Terra Climate database. A webbased interactive tool (with a dashboard and spatial maps) is being created to add value to the database and allow quick access to and extraction of information.

The database is divided into 2 datasets, apportioned that includes only the 1966 base districts, and unapportioned that includes all the districts formed until 2015 in 20 states of India. The database in this documentation relates to the 1966 district boundaries i.e., 313 districts. Data on districts formed after 1966 were given back to their parent district and removed from the file. Thus, consistent and comparable time series data are available for all the districts from after 1966. The methodology for apportioning newly formed districts to their parent district and a list of districts formed after 1966 and their parent districts are given in appendices 1 and 2.

The data are stored in Excel spreadsheet. Compilation, matching data from different states and sources, computerization, proof reading, and subsequent validation of raw data were extremely time-consuming. Despite our efforts, several anomalies remain in the database and are highlighted in the section on 'Data clarification and anomalies'. Users are urged to read this documentation carefully prior to using the data, particularly the sections on data clarification and anomalies and missing data, and bring to our notice any glaring inconsistencies so that we can continuously improve the quality of data.

Several data sources were utilized to compile the database. Many times, staff working on this project had to visit offices of the state Directorates of Agriculture, state Bureaus of Economics and Statistics, Department of Animal husbandry, Department of Horticulture etc. to collect the latest data. Details on the sources in each state are given in the section on 'data sources'. The support and cooperation extended by these organizations is highly appreciated, and we take this opportunity to thank them in enabling the update. But for their cooperation, this database would not have been completed.

## 1. File Groups and Data Files Included in the Database

The database is divided into the following file groups and stored in Excel spreadsheet.

	File Groups and Data Files
I	Crops
1	Area, production and yield (APY)
2	Area under high yielding varieties (cereals)
II	Irrigation
1	Crop-wise
2	Source-wise
Ш	Biophysical
1	Land use
2	Monthly rainfall
3	Normal rainfall
4	Soil type <sup>1</sup>
5	Length of growing period (LGP) <sup>1</sup>
IV	Inputs
1	Fertilizer consumption
2	Seasonal fertilizer consumption
V	Prices
1	Farm harvest prices (FHP)
VI	Census
1	Population
2	Livestock
3	Crossbred and Indigenous cattle
4	Agricultural implements
5	Operational holdings

	File Groups and Data Files
VII	Livestock Products
1	Milk
2	Meat
3	Egg
VIII	Infrastructure
1	Markets and roads
2	Banks and post offices
3	Veterinary institutions (under progress)
4	Health (under progress)
IX	Domestic Product
1	Sector-wise GDP
<b>X</b> <sup>2</sup>	Environment (pixel generated)
1	Actual Evapotranspiration (AET)
2	Potential Evapotranspiration (PET)
3	Climate Water Deficit (Def)
4	Precipitation (Ppt)
5	Maximum Temperature (Tmax)
6	Minimum Temperature (Tmin)
<sup>1.</sup> Vari	ables in these data files are static, i.e., single point
data	, not time series.
2. Ann	cortioning has not been done for this group of files and

<sup>&</sup>lt;sup>2.</sup> Apportioning has not been done for this group of files and are only available from the unapportioned datasets.

Standalone additional files for bulk download only <sup>1</sup>			
Name of the file			
Fruits APY	By type		
Vegetables APY	By type		
Spices APY	By type		
Season-wise APY	All major crops		
GDP (current & constant)	Total and by sectors		
NDP (current & constant)	Total and by sectors		
Education	Number of institutions		
Warehouses and godowns	Number and capacity		
Cold storage	Number and capacity		
Groundwater table	Depth of water table		
Credit	Agriculture sector		
Nutrition	NHFS survey data		
Environment	From Pixel level data		

<sup>&</sup>lt;sup>1</sup> Apportioning has not been done for files in this group and are available for bulk download only for the unapportioned datasets.

## 2. Summary of District-level Database Documentation

The district-level database for India is divided into two categories: Apportioned database and Unapportioned database.

Apportioned database: Data for all variables for the districts formed after 1966 have been given back to their parent district and removed from the database. A total of 258 new districts were formed between 1966 and 2015. For example, Rangareddy district was formed in 1978-1979 from Hyderabad. The data for all variables for Rangareddy district were given back to its parent district Hyderabad and Rangareddy district, removed from the database. In case a new district is formed from more than 1 parent district the criterion used for determining the apportioning percentage was based on the geographical area of the parent district, transferred to the new district. The data for all variables in the database [except for rainfall, farm harvest prices (FHP) and wages] were apportioned using using proportion of geographical area transfert to the new district. Thus, the continuity of data over time was ensured to compare key trends at two points in time, enabling time series analysis. For more details, see Appendix 1 on adjustment of district boundaries. This database contains data for 313 districts spread across 20 states of India from 1966-67 to 2015-16.

#### States covered

The database covers the 20 states of Andhra Pradesh, Bihar, Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, West Bengal, Chhattisgarh, Jharkhand, Uttarakhand, Assam, Himachal Pradesh, Kerala and Telangana.

#### **Years**

1966-67 to 2015-2016.

Number of districts in 20 states<sup>1</sup> in the district-level database (1966 base) and in 2015.

		Apportioned (1966 base)	Unapportioned (2015)
State code	Name of state	Number of districts	Number of districts
1	Andhra Pradesh	20	13
2	Bihar	17	38
3	Gujarat	18	33
4	Haryana	7	22
5	Karnataka	19	30
6	Madhya Pradesh	43	51
7	Maharashtra	26	36
8	Odisha	13	30
€	Punjab	11	22
10	Rajasthan	26	33
11	Tamil Nadu	13	32
12	Uttar Pradesh	54	75
13	West Bengal	16	23
14	Chhattisgarh	6	27
15	Jharkhand	6	24
16	Uttarakhand	8	13
17	Assam	10	33
18	Himachal Pradesh	10	12
19	Kerala	10	14
20	Telangana	<u>-</u>	10
	Total	313	571

<sup>&</sup>lt;sup>1</sup> Chhattisgarh, Jharkhand and Uttarakhand states were formed in 2000 from Madhya Pradesh, Bihar and Uttar Pradesh states, respectively. Telangana was formed from the erstwhile Andhra Pradesh in 2013.

#### Missing data

Missing data are shown as '-1' in the data files in the following cases:

- Complete year missing for all variables in a file (i.e., variable group) for selected states/year not included in the dataset.
- Data missing for a few districts for some variables in a file.
- Data missing for a specific crop/variable in a file for selected states (for instance, the crop is not grown in that particular state).

### **Data format**

The data are stored in Excel spreadsheet. The database is divided into 26 data files.

#### **Common variables**

In the database, each file has the following four common identifier variables: State code, State name, District code and District name. All identifiers including those related to agro-ecological zone, SAT and non-SAT, etc., are shown in Appendix 4.

## Summary of data files

File description	Variable name
Time series data files	
Area and production	Rice, Wheat, Sorghum (kharif), Sorghum (rabi), Sorghum (total), Pearl millet, Maize, Finger millet, Barley, Cereals, Chickpea, Pigeonpea, Minor pulses, Total pulses, Groundnut, Sesamum, Rapeseed and Mustard, Safflower, Castor, Linseed, Sunflower, Soyabean, Total oilseeds, Sugarcane, Cotton, Fruits, Vegetables, Total fruits and vegetables, Potatoes, Onions, Fodder
Area under HYV cereal crops	Rice, Wheat, Sorghum, Pearl millet, Maize, Finger millet, Total HYV area
Crop-wise irrigated area	Rice, Wheat, Sorghum (kharif), Sorghum (rabi), Sorghum (total), Pearl millet, Maize, Finger millet, Barley, Chickpea, Pigeonpea, Minor pulses, Groundnut, Sesamum, Rapeseed and Mustard, Linseed, Sugarcane, Cotton, Total fruits and vegetables
Source-wise irrigated area	Net irrigated area by Canals, Tanks, Tube wells, Other wells, Total wells, Gross irrigated area, Net irrigated area
Fertilizer consumption	Nitrogen, Phosphate, Potash, Total (NPK)
Seasonal Fertilizer consumption	Nitrogen, Phosphate, Potash, Total (NPK) for kharif and rabi seasons
Land use	Geographical area, Forest area, Barren and uncultivable land, Land put to non -agricultural uses, Cultivable waste, Permanent pastures & other grazing land, Other fallow land, Current fallow land
Normal monthly rainfall	January-December normal rainfall, Annual normal rainfall
Actual monthly rainfall	Annual rainfall, January-December actual Rainfall
Length of Growing Period	Length of growing period (days)
Soil type	Type of soil
Farm harvest prices	Rice, Paddy, Wheat, Sorghum, Pearl millet, Maize, Finger millet, Barley, Chickpea, Pigeonpea, Sugarcane (gur), Groundnut, Sesamum, Rapeseed and Mustard, Linseed, Castor, Cotton (kapas)
Population Census	Total population, Male population, Female population, Total rural population, Male rural population, Female rural population, Total urban population, Male urban population, Female urban population, Total literates, Male literates, Female literates, Total rural literates, Male rural literates, Female rural literates, Total Urban literates, Male urban literates, Female urban literates, Total cultivators, Male cultivators, Female cultivators, Total rural cultivators, Total urban cultivators, Male urban cultivators, Female urban cultivators, Total agricultural labour, Male agricultural labour, Female agricultural labour, Total rural agricultural labour, Male rural agricultural labour, Female rural agricultural labour, Total urban agricultural labour, Male urban agricultural labour, Female urban agricultural labour
Livestock Census	Total male and female cattle (crossbred + indigenous), Adult male cattle (crossbred + indigenous), Adult female cattle (crossbred + indigenous), Young male cattle (crossbred + indigenous), Young male and female cattle (crossbred + indigenous), Young male and female cattle (crossbred + indigenous), Total male and female buffaloes, Adult male buffaloes, Adult female buffaloes, Young male buffaloes, Young female buffaloes, Young male and female buffaloes, Total sheep (adult + young stock), Total goats (adult + young stock), Total horses (adult + young stock), Total donkeys (adult + young stock), Total camels (adult + young stock), Total pigs (adult + young stock), Total livestock (excluding dogs), Total poultry
Agricultural Implements Census	Diesel pump sets, Electric pump sets, Power tiller, Tractor
Agricultural Census	Marginal number, Marginal area (below 1 ha); Small number, Small area (1 to 2 ha); Semi-medium number, Semi-medium area (2 to 4 ha); Medium number, Medium area (4 to 10 ha); Large number, Large area (above 10 ha); Total number, Total area
	Contd

#### Contd...

File description	Variable name
Markets and Roads	Principle markets, (Nos), Sub-markets (Nos), Total markets (Nos), Road length (Kms)
Field Labour Wages	District wage rate (₹), State wage rate (₹)
GDP	Primary Sector GDP (current and constant), Secondary sector GDP (current and constant), Tertiary sector GDP (current and constant), Total GDP (current and constant)
<b>Environment variables</b>	
Precipitation	January-December Condensation of atmospheric water vapour that falls under gravity
Minimum Temperature	January-December lowest temperature attained at a specific location during a specified period
Maximum Temperature	January-December highest temperature reported for a given location during a given period
Q	January-December runoff: When rain or snow falls onto the earth, it starts moving along the slopes. A portion of it seeps into the soil and replenishes the groundwater
Potential Evapotranspiration	January-December potential Evapotranspiration
Actual Evapotranspiration	January-December actual Evapotranspiration: It is the actual amount of water lost to evapotranspiration from the soil—plant continuum by an actively growing plant or crop
Climate Water Deficit	January-December Climate Water deficit

## 3. List and Description of Data Files

Crops Area & Production		
Filename: DT-AREA-PROD-A.XLS	No. of records	:15508
<b>Years</b> : 1966 to 2015	Date of last update	: May 2019

Units: Area in '000 hectares, Production in '000 tons, Yield in kg/ha

: Area in '000	hectares, Production in '000 tons, Yield in kg/ha
Abbreviation	Description of variables
STCODE	State code
STNAME	State name
DIST	District code
DISTNAME	District name
YEAR	Year (1966 relates to 1966-67 and so on)
RICE_TA	Rice area
RICE_TQ	Rice production
WHT_TA	Wheat area
WHT_TQ	Wheat production
SORG_KA	Kharif sorghum area
SORG_KQ	Kharif sorghum production
SORG_RA	Rabi sorghum area
SORG_RQ	Rabi sorghum production
SORG_TA	Total sorghum area
SORG_TQ	Total sorghum production
PMLT_TA	Pearl millet area
PMLT_TQ	Pearl millet production
	Abbreviation STCODE STNAME DIST DISTNAME YEAR RICE_TA RICE_TQ WHT_TA WHT_TQ SORG_KA SORG_KQ SORG_RA SORG_RQ SORG_TA SORG_TQ PMLT_TA

Contd...

## Contd...

Crops I	8 Area	ኔ Pro	duction
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S.No.	Abbreviation	Description of variables
18	MAIZ_TA	Maize area
19	MAIZ_TQ	Maize production
20	FMLT_TA	Finger millet area
21	FMLT_TQ	Finger millet production
22	BRLY_TA	Barley area
23	BRLY_TQ	Barley production
24	CERL_TA	Total cereals area
25	CERL_TQ	Total cereals production
26	CPEA_TA	Chickpea area
27	CPEA_TQ	Chickpea production
28	PPEA_TA	Pigeonpea area
29	PPEA_TQ	Pigeonpea production
30	MPUL_TA	Minor pulses area (includes all pulses other than chickpea and pigeonpea)
31	PULS_TA	Total pulses area
32	PULS_TQ	Total pulses production
33	GNUT_TA	Groundnut area
34	GNUT_TQ	Groundnut production
35	SESA_TA	Sesamum area
36	SESA_TQ	Sesamum production
37	RM_TA	Rapeseed and mustard area
38	RM_TQ	Rapeseed and mustard production
39	SAFF_TA	Safflower area
40	SAFF_TQ	Safflower production
41	CAST_TA	Castor area
42	CAST_TQ	Castor production
43	LINS_TA	Linseed area
44	LINS_TQ	Linseed production
45	SUNF_TA	Sunflower area
46	SUNF_TQ	Sunflower production
47	SOYA_TA	Soyabean area
48	SOYA_TQ	Soyabean production
49	OILS_TA	Total oilseeds area
50	OILS_TQ	Total oil seeds production
51	SCAN_TA	Sugarcane area
52	SGUR_TQ	Sugarcane (gur) production
53	COTN_TA	Cotton area
54	COTN_TQ	Cotton (lint) production
55	FRUT_TA	Fruits area
56	VEGT_TA	Vegetables area
57	TFV_TA	Total fruits and vegetables area
58	POTA_TA	Potatoes area
59	ONIO_TA	Onions area
60	FOD_TA	Fodder area

## **Crop-wise Irrigated Area**

Filename : DT-CIA-A.XLS No. of records : 13923 Years : 1966 to 2015 Date of last update : May 2019

Units: '000 hectares

S.No.	Abbreviation	Description of variables
1	STCODE	State code
2	STNAME	State name
3	DIST	District code
4	DISTNAME	District name
5	YEAR	Year (1966 relates to 1966-67 and so on)
6	RICE_TAI	Rice area irrigated
7	WHT_TAI	Wheat area irrigated
8	SORG_KAI	Kharif sorghum area irrigated
9	SORG_RAI	Rabi sorghum area irrigated
10	SORG_TAI	Total sorghum area irrigated
11	PMLT_TAI	Pearl millet area irrigated
12	MAIZ_TAI	Maize area irrigated
13	FMLT_TAI	Finger millet area irrigated
14	BRLY_TAI	Barley area irrigated
15	CPEA_TAI	Chickpea area irrigated
16	PPEA_TAI	Pigeonpea area irrigated
17	GNUT_TAI	Groundnut area irrigated
18	SESA_TAI	Sesamum area irrigated
19	RM_TAI	Rapeseed and mustard area irrigated
20	LINS_TAI	Linseed area irrigated
21	SCAN_TAI	Sugarcane area irrigated
22	COTN_TAI	Cotton area irrigated
23	TFV_TAI	Total fruits and vegetables area irrigated
24	MPUL_TAI	Minor pulses area irrigated (includes all pulses other than chickpea and pigeonpea)
25	PULS_TAI	Pulses area irrigated
26	FOD_TAI	Fodder area irrigated

## **HYV Area under Cereal Crops**<sup>1</sup>

Filename : DT-HYV-A.XLS No. of records : 10628
Years : 1966 to 2011 Date of last update : May 2019

Units: '000 hectares

S.No.	Abbreviation	Description of variables
1	STCODE	State code
2	STNAME	State name
3	DIST	District code
4	DISTNAME	District name
5	YEAR	Year (1966 relates to 1966-67 and so on)
6	RICE_TAH	Rice HYV area
7	WHT_TAH	Wheat HYV area
8	SORG_TAH	Sorghum HYV area
9	PMLT_TAH	Pearl millet HYV area
10	MAIZ_TAH	Maize HYV area
11	FMLT_TAH	Finger millet HYV area
12	TOTAL_HYV	Total HYV area

<sup>&</sup>lt;sup>1</sup> HYV area has not been reported for many states in recent years.

## **Land Use**

Filename: DT-LANDUSE-A.XLS No. of records : 15227
Years : 1966 to 2015 Date of last update: May 2019

Units : Area in '000 hectares

Units	: Area III 000 IIE	ectales
S.No.	Abbreviation	Description of variables
1	STCODE	State code
2	STNAME	State name
3	DIST	District code
4	DISTNAME	District name
5	YEAR	Year (1966 relates to 1966-67 and so on)
6	TOTGEOG	Geographical area/Reporting area for land utilization statistics (RLU)
7	FOREST	Forest area
8	BARREN	Barren and uncultivable land
9	NONAGRI	Land put to non-agricultural uses
10	CWASTE	Cultivable waste
11	PPASTUR	Permanent pastures & other grazing land
12	OTFALOW	Other fallow lands
13	CUFALOW	Current fallow lands
14	NCA	Net cropped area (or Net Sown Area)
15	GCA	Gross cropped area (or Total Cropped Area)

## **Source-wise Irrigated Area**

Filename: DT-SIA-A.XLS
No. of records: 14381
Years: 1966 to 2015
Date of last update: May 2019

**Units**: '000 hectares.

S.No.	Abbreviation	Description of variables
1	STCODE	State code
2	STNAME	State name
3	DIST	District code
4	DISTNAME	District name
5	YEAR	Year (1966 relates to 1966-67 and so on)
6	CANALS	Net irrigated area by canals
7	TANKS	Net irrigated area by tanks <sup>1</sup>
8	TUBEWELL	Net irrigated area by tube wells
9	OTHWELL	Net irrigated area by other wells <sup>2</sup>
10	TOTWELL	Net irrigated area by total wells
11	OTHSOUR	Net irrigated area by other sources
12	NIA	Net irrigated area
13	GIA	Gross irrigated area

<sup>&</sup>lt;sup>1</sup> Data for Maharashtra combines the area irrigated under canals, tanks and other sources under 'surface irrigation'. For our purposes, data for surface irrigation are listed under the variable 'Net irrigated area by tanks'.

## **Farm Harvest Prices (All Crops)**

Filename: DT-FHP-A.XLS No. of records: 14953
Years: 1966 to 2015 Date of last update: May 2019

Units	:₹/100 Kgs	
S.No.	Abbreviation	Description of variables
1	STCODE	State code
2	STNAME	State name
3	DIST	District code
4	DISTNAME	District name
5	YEAR	Year (1966 relates to 1966-67 and so on)
6	RICE_TP	Rice price
7	PADY_TP	Paddy price
8	WHT_TP	Wheat price
9	SORG_TP	Sorghum price
10	PMLT_TP	Pearl millet price
11	MAIZ_TP	Maize price
12	FMLT_TP	Finger millet price
13	BRLY_TP	Barley price
14	CPEA_TP	Chickpea price
15	PPEA_TP	Pigeonpea price
16	GNUT_TP	Groundnut price
17	SESA_TP	Sesamum price
18	RM_TP	Rapeseed and mustard price
19	CAST_TP	Castor price
20	LINS_TP	Linseed price
21	SGUR_TP	Sugarcane (gur) price

<sup>&</sup>lt;sup>2</sup> For Odisha, the variable 'Net irrigated area by other sources' is included under the variable 'Net irrigated area by other wells'.

## **Actual Annual & Monthly Rainfall**

**Filename**: DT-Monthly rainfall-A.XLS **No. of records**: 14527 **Years**: 1966 to 2015 **Date of last update**: May 2019

**Units**: Millimeters

S.No.	Abbreviation	Description of variables
1	STCODE	State code
2	STNAME	State name
3	DIST	District code
4	DISTNAME	District name
5	YEAR	Year
6	JAN	January actual rainfall
7	FEB	February actual rainfall
8	MARCH	March actual rainfall
9	APRIL	April actual rainfall
10	MAY	May actual rainfall
11	JUNE	June actual rainfall
12	JULY	July actual rainfall
13	AUG	August actual rainfall
14	SEPT	September actual rainfall
15	OCT	October actual rainfall
16	NOV	November actual rainfall
17	DEC	December actual rainfall
18	ANNUAL	Annual rainfall (January to December)

## **Fertilizer Consumption**

**Filename**: DT-FERTILIZER CONSUMPTION -A.XLS **No. of records**: 8054 **Years**: 1966 to 2015 **Date of last update**: May 2019

Units	: Tons (t)	
S.No.	Abbreviation	Description of variables
1	STCODE	State code
2	STNAME	State name
3	DIST	District code
4	DISTNAME	District name
5	YEAR	Year (1966 relates to 1966-1967 and so on)
6	N_TC	Nitrogen consumption
7	P_TC	Phosphate consumption
8	K_TC	Potash consumption
9	NPK_TC	Nitrogen, Phosphate and Potash consumption (total consumption)

## **Population Census Data**

Filename: DT-POPULATION-A.XLS No. of records : 1850

	ie : DI-POPULATIO		No. of records	: 1850	
Years Units	: 1961, 1971, 198 : '000 Nos	81, 1991,2001 and 2011	Date of last update	: May 2019	
S.No.	Abbreviation	Description of variables			
1	STCODE	State code			
2	STNAME	State name			
3	DIST	District code			
4	DISTNAME	District name			
5	YEAR	Year (census year)			
6	POP_T	Total population			
7	POP_M	Male population			
8	POP F	Female population			
9	POP_RU	Total rural population			
10	POP_RM	Male rural population			
11	POP_RF	Female rural population			
12	POP_UB	Total urban population			
13	POP_UM	Male urban population			
14	POP_UF	Female urban population			
15	_ LIT_T	Total literates			
16	_ LIT_M	Male literates			
17	_ LIT_F	Female literates			
18	_ LIT_RU	Total rural literates			
19	LIT_RM	Male rural literates			
20	LIT_RF	Female rural literates			
21	LIT_UB	Total urban literates			
22	LIT_UM	Male urban literates			
23	LIT_UF	Female urban literates			
24	CULT_T	Total cultivators			
25	CULT_M	Male cultivators			
26	CULT_F	Female cultivators			
27	CULT_RU	Total rural cultivators			
28	CULT_RM	Male rural cultivators			
29	CULT_RF	Female rural cultivators			
30	CULT_UB	Total urban cultivators			
31	CULT_UM	Male urban cultivators			
32	CULT_UF	Female urban cultivators			
33	AGRL_T	Total agricultural labour			
34	AGRL_M	Male agricultural labour			
35	AGRL_F	Female agricultural labour			
36	AGRL_RU	Total rural agricultural labou	r		
37	AGRL_RM	Male rural agricultural labou	r		
38	AGRL_RF	Female rural agricultural lab	our		
39	AGRL_UB	Total urban agricultural labo	ur		
40	AGRL_UM	Male urban agricultural labo	ur		

Female urban agricultural labour

41

AGRL\_UF

### **Livestock Census Data**

Filename: DT-LIVESTOCK-A.XLSNo. of records: 2990Years: Quinquennial censusDate of last update: May 2019

Units : '000 Nos

Offics	. 000 1103	
S.No.	Abbreviation	Description of variables
1	STCODE	State code
2	STNAME	State name
3	DIST	District code
4	DISTNAME	District name
5	YEAR	Year (1966, 1972, 1977, 1982, 1987, 1992, 1997, 2003, 2007, 2012)
6	CATL_T	Total male and female cattle (crossbred + indigenous)
7	CATL_AM	Adult male cattle (crossbred + indigenous)
8	CATL_AF	Adult female cattle (crossbred + indigenous)
9	CATL_YM	Young male cattle (crossbred + indigenous)
10	CATL_YF	Young female cattle (crossbred + indigenous)
11	CATL_YMF	Young male and female cattle (crossbred + indigenous)
12	BUFF_T	Total male and female buffaloes
13	BUFF_AM	Adult male buffaloes
14	BUFF_AF	Adult female buffaloes
15	BUFF_YM	Young male buffaloes
16	BUFF_YF	Young female buffaloes
17	BUFF_YMF	Young male and female buffaloes
18	SHEEP_T	Total sheep (adult + young stock)
19	GOAT_T	Total goats (adult + young stock)
20	HORSE_T	Total horses (adult + young stock)
21	DONKEY_T	Total donkeys (adult + young stock)
22	CAMEL_T	Total camels (adult + young stock)
23	PIG_T	Total pigs (adult + young stock)
24	LIVESTOCK_T	Total livestock (excluding dogs)
25	POULTRY_T	Total poultry

## **Agricultural Implements Census Data**

Filename: DT-AGRI-IMPLEMENTS-A.XLS

Years: Quinquennial census

No. of records: 2422

Date of last update: May 2019

Units: '000 Nos

S.No.	Abbreviation	Description of variables
1	STNAME	State name
2	STCODE	State code
3	DISTNAME	District name
4	DIST	District code
5	YEAR	Year (1972, 1977, 1982, 1987, 1992, 1997, 2003, 2007)
6	DIESEL_PS	Diesel pump sets
7	ELECTRIC_PS	Electric pump sets
8	POWER_T	Power tiller
9	TRACTOR	Tractor

### **Markets and Roads**

Filename: DT-MAKET-ROAD-A.XLSNo. of records: 13702Years: 1966 to 2015Date of last update: May 2019

Units : Markets in Nos and road length in Kilometers (Kms)

S.No.	Abbreviation	Description of variables
1	STCODE	State code
2	STNAME	State name
3	DIST	District code
4	DISTNAME	District name
5	YEAR	Year (1970 relates to 1970-71 and so on)
6	PPMRKT	Principal markets (nos)
7	PSMRKT	Sub-markets (nos)
8	PTMRKT	Total markets (nos)
9	LROAD	Road length (Kms)

## **Wage Rate**

Filename: DT-WAGE-RATE-A.XLSNo. of records: 14451Years: 1966 to 2015Date of last update: May 2019

**Units** : Rupees (₹/day)

S.No.	Abbreviation	Description of variables
1	STCODE	State code
2	STNAME	State name
3	DIST	District code
4	DISTNAME	District name
5	YEAR	Year (1966 relates to 1966-67 and so on)
6	MALE_WAGE	District male wage rate
7	FEM_WAGE	District female wage rate
8	MALE_SAW	State male average wage rate
9	FEM_SAW	State female average wage rate

## **Operational Holdings (Agricultural Census)**

Filename: DT-OPERATIONAL-HOLDINGS-A.XLS No. of records : 2378 Years : Census data Date of last update: May 2019

: Number in '000 and area in '000 hectares Units

S.No.	Abbreviation	Description of variables
1	STCODE	State code
2	STNAME	State name
3	DIST	District code
4	DISTNAME	District name
5	YEAR	Year (1970, 1975, 1980, 1985, 1990, 1995, 2000, 2005, 2010)
6	MARG_NO	Number - Holdings
7	MARG_AR	Area - Marginal (below 1 ha)
8	SMALL_NO	Number - Holdings
9	SMALL_AR	Area - Small (1 to 2 ha)
10	SEMIM_NO	Number - Semi-medium
11	SEMIM_AR	Area - Semi-medium (2 to 4 ha)
12	MEDIUM_NO	Number - Holdings
13	MEDIUM_AR	Area - Medium (4 to 10 ha)
14	LARGE_NO	Number - Holdings
15	LARGE_AR	Area - Large (above 10 ha)
16	TOTAL_NO	Number - Holdings
17	TOTAL_AR	Area – Total

## **Normal Annual & Monthly Rainfall**

**Filename**: DT-NORMAL-RAINFALL-A.XLS No. of records : 313

: One point in time Date of last update: May 2019 Years : Millimeters

Units

: iviiiimeters	
Abbreviation	Description of variables
STCODE	State code
STNAME	State name
DIST	District code
DISTNAME	District name
JAN	January normal rainfall
FEB	February normal rainfall
MARCH	March normal rainfall
APRIL	April normal rainfall
MAY	May normal rainfall
JUNE	June normal rainfall
JULY	July normal rainfall
AUG	August normal rainfall
SEPT	September normal rainfall
OCT	October normal rainfall
NOV	November normal rainfall
DEC	December normal rainfall
ANNUAL	Annual normal rainfall
	Abbreviation STCODE STNAME DIST DISTNAME JAN FEB MARCH APRIL MAY JUNE JULY AUG SEPT OCT NOV DEC

## **Length of Growing Period (LGP)**

Filename: DT-LGP-A.XLS
No. of records: 313
Years: One point in time
Date of last update: May 2019

**Units** : Days

S.No.	Abbreviation	Description of variables
1	STCODE	State code
2	STNAME	State name
3	DIST	District code
4	DISTNAME	District name
5	LGP	Length of growing period

## **Soil Type**

Filename: DT-SOIL-TYPE-A.XLSNo. of records: 313Years: One point in timeDate of last update: May 2019

Units :

S.No.	Abbreviation	Description of variables
1	STCODE	State code
2	STNAME	State name
3	DIST	District code
4	DISTNAME	District name
5	SOILTYPE	Type of soil

### **Gross Domestic Product**

**Filename**: DT-GDP PST PRICES -A.XLS **No. of records**: 2149 **Years**: 2007-2013 **Date of last update**: May 2019

Units : Million ₹

Units	: Million ₹	
S.No.	Abbreviation	Description of variables
1	STCODE	State code
2	STNAME	State name
3	DIST	District code
4	DISTNAME	District name
5	Primary Sector_Con	Primary sector GDP at constant prices
6	Secondary Sector_Con	Secondary sector GDP at constant prices
7	Tertiary Sector_Con	Tertiary sector GDP at constant prices
8	Tertiary Sector_Cur	Tertiary sector GDP at current prices
9	Primary Sector_Cur	Primary sector GDP at current prices
10	Secondary Sector_Cur	Secondary sector GDP at current prices
11	Tertiary Sector_Cur	Tertiary sector GDP at current prices
12	Total GDP_Con	Total GDP at constant prices
13	Total GDP_Cur	Total GDP at current prices

## 4. Data Clarification and Anomalies

#### **Area and production**

- 'Paddy' production figures refer to 'rice' production for all districts. For 'West Bengal' and 'Karnataka', production was reported for 'paddy' only in some years. These were converted into 'rice' by using 0.66 as the conversion factor.
- ♦ 'Cotton' production is reported in terms of 'lint'. In the data sources, production is reported in bales of 170 kg each. These were converted into '000 tons for all districts.
- ♦ The production figure for 'sugarcane' refers to 'raw sugar' (gur). Sugarcane production was converted into raw sugar by taking 10% of cane production.
- 'Minor pulses' include all pulses other than chickpea and pigeonpea, e.g., green gram, black gram, horse gram, lentil, cowpea, moth bean, etc.
- Area data for 'chickpea' and 'pigeonpea' are from Agricultural Situation in India up to 1990 and area data for "minor pulses" and 'total pulses' are from Indian Agricultural Statistics Volume II. Hence, owing to different sources, 'chickpea', 'pigeonpea' and 'minor pulses' areas do not add up to 'total pulses' area in some cases.
- Production data was <u>not</u> available for 'total fruits', 'vegetables', 'potato' and 'onion'.
- Production data for 'total cereals', 'pulses' and 'oilseeds' was <u>not</u> available for select years.
- ♦ Total cereals, pulses and oilseeds data is from state-level data sources since DACNET is not publishing production figures for these crop groups.
- For Jharkhand, paddy APY data is from state sources.
- For Odisha state, crop APY data is from the Directorate of Agriculture and Food Production.
- ♦ Area and Production data for 'total oilseeds' includes coconut.
- APY data is not available separately for coconut in the database.
- In some cases, 'crop production' may be reported while 'crop area' is listed as '0', i.e., less than 500 ha. This generally occurs for crops of minor importance in specific states/districts.
- ♦ For 'sorghum', crop area and production under summer crop are included in the rabi season.
- For season-wise paddy, area and production for early kharif are shown under kharif, late kharif under rabi while rabi paddy is shown under summer (in states where early and late sowing are practiced).

#### **Farm harvest prices**

- ♦ Both 'rice' and 'paddy' prices were included depending on the availability of data from the source. These prices are mainly for coarse paddy/rice.
- 'Cotton' prices are for 'kapas' i.e., raw cotton. In some states, cotton prices are reported for several cotton varieties. The price of the most dominant variety is reported. For Punjab and Haryana, we have used an average of American and Desi cotton.
- 'Sugarcane' prices were reported for 'raw sugar' (qur) prices.
- 'Season-wise' farm harvest prices are not available in this dataset.
- ♦ 'Cotton prices' for Maharashtra state were not available from 1973 onwards due to monopoly procurement by the government.
- For 'Odisha', farm harvest prices were not reported/released from 1988 onwards.
- ♦ Farm harvest prices were not reported for several districts where the crop is of minor importance or relatively less important. In such cases, the missing data are shown as '-1.'

#### **Crop-wise irrigation**

• For some crops, crop-wise irrigated area exceeds the actual area under the crop. This can occur when data comes from different sources. No adjustments were made to correct this inconsistency in our dataset.

- For 'Odisha', data on this variable were available from 1972 onwards.
- For 'West Bengal', data on this variable were not available.

#### **Source-wise irrigation**

- ♦ Data on the variable 'dug wells' was included in the variable 'other wells'.
- For 'Odisha', source-wise irrigated area values were only available 1970 onwards. Source-wise net irrigated area values were not available from 1977 to 1981 and from 1984 to 1987; instead source-wise gross irrigated areas are reported. The variable 'other sources' of irrigation is included under the variable 'other wells'.
- From 1975 onwards, data for Maharashtra combines area irrigated under canals, tanks and other sources under 'surface irrigation'. For our purposes, data for surface irrigation are listed under the variable 'tanks'.
- For 'West Bengal', data on source-wise irrigation was not available.
- Data on canals was available only for some years.
- ♦ Data was not available for Maharashtra from 2002 onwards.
- Source-wise irrigation data was available for Gujarat for select years since 2007.
- ♦ From 2000 onwards, for Karnataka, 'lift irrigation' data was included in the 'other sources' variable.

#### **Area under HYV cereals**

- For 'finger millet', area under HYVs was available only from 1990 onwards.
- 'HYV area' for a selected cereal crop exceeds actual area under that crop for some districts in some states. This may occur when data comes from different sources. In such cases, no adjustments have been made in the data.
- ♦ For 'West Bengal', area under HYVs was not available from 1988 onwards.
- ♦ Since 2010, many states have not reported area under HYVs as they have reached saturation point.

### **Gross and net irrigated area**

• For 'West Bengal', data on net and gross irrigated areas were not available from 1985 onwards.

#### Land use

- Area under 'miscellaneous tree crops and groves' was not included in the dataset.
- 'Geographical area' is reported instead of 'RLU' (Reporting area for land use statistics) for some states/ districts for some years. Reporting area stands for the area for which data on land use classification are available i.e., the sum of areas under different land use classifications generally equals the RLU.
- For 'Odisha', land use data values were available only from 1972 onwards.

#### Fodder area

• For 'Bihar, West Bengal, Assam, Himachal Pradesh and Kerala', data for fodder area is available from 1970 onwards.

#### Livestock

♦ Adult 'cattle' and 'buffaloes' are the sum of crossbred and indigenous breeds. For crossbred cattle, an 'adult' is over 2½ years old and for indigenous breeds, it is over 3 years. In many states, the time of collection of livestock census data does not match. Hence the years reported vary from state to state, particularly in later years.

#### **Agricultural implements**

♦ Data was collected for 'four variables' from the 1972 census onwards. In many states, the time of collection of data for the agricultural implements census did not match. Hence the years reported vary from state to state, particularly in later years.

Data collection for agricultural implements was removed from the livestock census since 2003.
 Hence, for later years, data on the availability of agricultural implements is sketchy and missing for many years.

#### **Roads and markets**

Data gaps were filled by interpolation, wherever required.

#### **Length of Growing Period (LGP)**

◆ The growing period is the period when the moisture in the soil is adequate to support plant growth. LGP was calculated following the FAO model (Higgins and Kassam 1981). The growing period, as per the model, starts when precipitation (P) exceeds 0.5 potential evapotranspiration (PE) and ends with the utilization of an assumed quantum of available stored soil moisture assumed as 100 mm except for Vertisols (250 mm) after P falls below PE. The period (in days) calculated for each observation site was plotted and isolines drawn at specified intervals. Observed rainfall data for over 200 locations was taken as a base for the whole of India. Data for missing districts was estimated from the nearest districts located in a similar agro-ecological region. PE data are estimated (by the modified Penman's method); these are published by IMD. In some cases, PE estimated by Hargreaves method has been included.

## 5. Available and Missing Data

Missing data are provided from 1966 to 2015. Data could be missing because: (a) Data was not published /not available or (b) crop activity was unimportant in the state or a few districts in the state; hence data was not recorded for area, production, crop-wise irrigation, and FHP for such crops.

Missing data can be grouped into 3 categories:

- Complete year missing for all variables in a file (i.e., variable group) for selected states. For example, several years' data for crop-wise irrigated area, source-wise irrigated area, and land use are missing for West Bengal.
- Data missing for a few districts for some variables in a file. Such cases are few and restricted to a few variables in a file.
- ♦ Data missing for a specific crop/variable in a file for selected states. (For example, potato and onion area data are not reported for some states in the sources available with us).

Missing data are shown as '-1' in the data files.

State-wise and year-wise missing data for core variable groups in a file are shown in the enclosed tables.

Available data and missing data for Andhra Pradesh from 1966 to 2015.			
Variables	Years data is available	Years data is missing	
Area and production (crops)	1966 to 2015	-	
Land use	1966 to 2015	-	
Crop-wise irrigated area	1966 to 2015	-	
Source-wise irrigated area	1966 to 2015	-	
HYV area	1966 to 1994, 1998, 2000, 2002 to 2007	1995 to 1997, 1999, 2001, 2008 to 2015	
Farm harvest prices - crops	1966 to 2015	-	
Fertilizer consumption	1966 to 2015	-	
Rainfall - Annual & monthly	1966 to 2015	-	
Markets (main and sub-markets)	1970 to 1994, 2010, 2014, 2015	1966 to 1969, 1995 to 2009, 2011 to 2013	
Roads (total road length)	1966 to 2015		
Livestock census	1966, 1972, 1977, 1983, 1987, 1992, 1999, 2003, 2007, 2012	-	
Agri. implements and machinery	1966, 1972, 1977, 1982, 1987, 1992, 1999, 2003, 2007	-	
Operational holdings	1970, 1976, 1980, 1986, 1990, 1995, 2000, 2005, 2010	-	
Population census	1971, 1981, 1991, 2001, 2011	-	
Agricultural wages (men & women)	1966 to 2015	-	

Available data and missing data for Bihar from 1966 to 2011.			
Variables	Years data is available	Years data is missing	
Area and production (crops)	1966 to 2015		
Land use	1966 to 2015	-	
Crop-wise irrigated area	1966 to 1996, 1998 to 2015	1997	
Source-wise irrigated area	1966 to 2015	-	
HYV area	1966 to 1990, 2000 to 2003, 2005 to 2008	1991 to 1999, 2004, 2009 to 2011	
Farm harvest prices - crops	1966 to 2015	-	
Fertilizer consumption	1966 to 1988, 1992 to 2015	1989 to 1991	
Rainfall - Annual & monthly	1966 to 2009, 2012 to 2015	2010, 2011	
Markets (main and sub-markets)	1970 to 2000,	1966 to 1969, 2001 to 2015	
Roads (total road length)	1970 to 1994, 2000, 2014, 2015	1966 to 1969, 1995 to 1999, 2001 to 2013	
Livestock census	1966, 1972, 1977, 1982, 2003, 2007, 2012	1987, 1993, 1997	
Agri. implements and machinery	1966, 1972, 1977, 1982, 1992, 2003	1987, 1997, 2007	
Operational holdings	1970, 1976, 1980, 1995, 2010	1966, 1985, 1990, 2000, 2005	
Population census	1971, 1981, 1991, 2001, 2011	-	
Agricultural wages (men & women)	1961 to 1971, 1973, 1974, 1978 to 2015	1972, 1975 to 1977	

Available data and missing data for Gujarat from 1966 to 2015.			
Variables	Years data is available	Years data is missing	
Area and production (crops)	1966 to 2015	-	
Land use	1966 to 2007, 2014	2008 to 2013, 2015	
Crop-wise irrigated area	1966 to 2007, 2008, 2009, 2014	2010 to 2013, 2015	
Source-wise irrigated area	1966 to 2007, 2008, 2009, 2014	2010 to 2013, 2015	
HYV area	1966 to 1994, 1999, 2000	1995 to 1998, 2001 to 2015	
Farm harvest prices - crops	1966 to 2015	-	
Fertilizer consumption	1966 to 2015	-	
Rainfall - Annual & monthly	1966 to 2009, 2011 to 2015	2010	
Markets (main and sub-markets)	1966 to 2011, 2014, 2015	1966 to 1970, 2012 to 2013	
Roads (total road length)	1966 to 2011	2012 to 2015	
Livestock census	1966, 1972, 1977, 1982, 1988, 1992, 1997, 2003, 2007, 2012	-	
Agri. implements and machinery	1966, 1972, 1977, 1982, 1987, 1992, 2003, 2007	1997	
Operational holdings	1970, 1976, 1980, 1986, 1990, 1995, 2000, 2005, 2010	1966	
Population census	1971, 1981, 1991, 2001, 2011	-	
Agricultural wages (men & women)	1966 to 2015		

Available data and missing data for Haryana from 1966 to 2015.			
Variables	Years data is available	Years data is missing	
Area and production (crops)	1966 to 2015	-	
Land use	1966 to 2015	-	
Crop-wise irrigated area	1966 to 2015	-	
Source-wise irrigated area	1966 to 2015	-	
HYV area	1966 to 2011	2012 to 2015	
Farm harvest prices - crops	1966 to 2004, 2006 to 2015	2005	
Fertilizer consumption	1966 to 2015	-	
Rainfall - Annual & monthly	1966 to 2015	-	
Markets (main and sub-markets)	1970 to 2015	1966 to 1969	
Roads (total road length)	1967 to 2011, 2014, 2015	2012 to 2013	
Livestock census	1966, 1972, 1977, 1982, 1988, 1992, 1997, 2003, 2007, 2012	-	
Agri. implements and machinery	1972, 1982, 1987, 1992, 1997, 2003, 2007	1966, 1977	
Operational holdings	1970, 1976, 1980, 1986, 1990, 1995, 2000, 2005, 2010	1966	
Population census	1971, 1981, 1991, 2001, 2011	-	
Agricultural wages (men & women)	1966 to 2015		

Available data and missing data for Karnataka from 1966 to 2015.			
Variables	Years data is available	Years data is missing	
Area and production (crops)	1966 to 2015	-	
Land use	1966 to 2015	-	
Crop-wise irrigated area	1966 to 2015	-	
Source-wise irrigated area	1966 to 2015	-	
HYV area	1966 to 2009	2010 to 2015	
Farm harvest prices - crops	1966 to 2015	-	
Fertilizer consumption	1966 to 2015	-	
Rainfall - Annual & monthly	1966 to 2015	-	
Markets (main and sub-markets)	1966 to 2011	2012 to 2015	
Roads (total road length)	1966, 1968 to 2015	1967	
Livestock census	1966, 1972, 1977, 1983, 1987, 1992, 1997, 2003, 2007, 2012	-	
Agri. implements and machinery	1972, 1982, 1987, 1992, 1997, 2003, 2007	1977	
Operational holdings	1970, 1976, 1980, 1985, 1990, 1995, 2000, 2005, 2010	1966	
Population census	1971, 1981, 1991, 2001, 2011	-	
Agricultural wages (men & women)	1966 to 2001, 2003 to 2015	2002	

Available data and missing data for Madhya Pradesh from 1966 to 2015.			
Variables	Years data is available	Years data is missing	
Area and production (crops)	1966 to 2015	-	
Land use	1966 to 2015	-	
Crop-wise irrigated area	1966 to 2015	-	
Source-wise irrigated area	1966 to 2015	-	
HYV area	1966 to 1994, 1998, 1999	1995 to 1997, 2000 to 2015	
Farm harvest prices - crops	1966 to 2015	-	
Fertilizer consumption	1966 to 2015	-	
Rainfall - Annual & monthly	1966 to 2015	2010, 2011	
Markets (main and sub-markets)	1970 to 2011, 2015	1966 to 1969, 2012 to 2014	
Roads (total road length)	1970 to 1995, 1998 to 2001	1966 to 1969, 1996, 1997, 2002 to 2015	
Livestock census	1966, 1972, 1977, 1982, 1987, 1992, 1997, 2003, 2007, 2012	-	
Agri. implements and machinery	1972, 1977, 1982, 1987, 1992, 1997, 2003, 2007	1966	
Operational holdings	1970, 1976, 1980, 1985, 1990, 1995, 2000, 2005, 2010	1966	
Population census	1971, 1981, 1991, 2001, 2011	-	
Agricultural wages (men & women)	1966 to 1996, 1998 to 2001, 2003 to 2015	1997, 2002	

Available data and missing data for Maharashtra from 1966 to 2015.		
Variables	Years data is available	Years data is missing
Area and production (crops)	1966 to 2015	-
Land use	1966 to 2015	-
Crop-wise irrigated area	1966 to 2008	2009 to 2015
Source-wise irrigated area	1966 to 2002	2003 to 2015
HYV area	1966 to 2015	2009 to 2011
Farm harvest prices - crops	1966 to 2015	-
Fertilizer consumption	1966 to 2015	-
Rainfall - Annual & monthly	1966 to 2015	-
Markets (main and sub-markets)	1966 to 2000, 2004 to 2007	2001 to 2003, 2008 to 2015
Roads (total road length)	1967 to 2014	1966, 2015
Livestock census	1966, 1972, 1978, 1982, 1987, 1992, 1997, 2003, 2007, 2012	-
Agri. implements and machinery	1966, 1972, 1978, 1982, 1987, 1992, 1997, 2003	2007
Operational holdings	1970, 1976, 1980, 1985, 1990, 1995, 2000, 2010	1966, 2005
Population census	1971, 1981, 1991, 2001, 2011	-
Agricultural wages (men & women)	1966 to 2008, 2015	2009

Available data and missing data for Odisha from 1966 to 2015.		
Variables	Years data is available	Years data is missing
Area and production (crops)	1966 to 2015	-
Land use	1972 to 2015	1966 to 1971
Crop-wise irrigated area	1972 to 1980, 1984 to 2015	1966 to 1971, 1981 to 1983
Source-wise irrigated area	1970 to 1972, 1974 to 2011	1966 to 1969, 1973
HYV area	1966 to 2011	2012-2015
Farm harvest prices - crops	1966 to 2015	-
Fertilizer consumption	1966 to 2015	-
Rainfall - Annual & monthly	1966 to 2015	-
Markets (main and sub-markets)	1970 to 1994, 2006, 2007	1966 to 1969, 1995 to 2005, 2008 to 2015
Roads (total road length)	1970 to 1994, 1996, 1997, 1999 to 2003, 2005 to 2011, 2013 to 2015	1966 to 1969, 1995, 1998, 2004, 2012
Livestock census	1966, 1972, 1977, 1982, 1987, 1992, 2000, 2003, 2007, 2012	-
Agri. implements and machinery	1966, 1972, 1977, 1982, 1987, 1992, 2003	1997, 2007
Operational holdings	1970, 1976, 1980, 1985, 1990, 1995, 2000, 2005, 2010	1966, 2011 to 2015
Population census	1971, 1981, 1991, 2001, 2011	-
Agricultural wages (men & women)	1966, 1967, 1969 to 1973, 1979 to 1981, 1983 to 2015	1968, 1974 to 1978, 1982, 2011, 2012 to 2015

Available data and missing data for Punjab from 1966 to 2015.		
Variables	Years data is available	Years data is missing
Area and production (crops)	1966 to 2015	-
Land use	1966 to 2015	-
Crop-wise irrigated area	1966 to 2015	-
Source-wise irrigated area	1966 to 2015	-
HYV area	1997 to 2011	1966
Farm harvest prices - crops	1966 to 2015	-
Fertilizer consumption	1966 to 2015	-
Rainfall - Annual & monthly	1966 to 2015	-
Markets (main and sub-markets)	1966 to 2011	2012 to 2015
Roads (total road length)	1966 to 2008, 2010, 2011	2009 2012 to 2015
Livestock census	1993, 1997, 2003, 2007, 2012	
Agri. implements and machinery	1972, 1977, 1992, 2003, 2007	1966, 1983, 1987, 1997
Operational holdings	1970, 1980, 1985, 1990, 1995, 2000, 2005, 2010	1966, 1975
Population census	1971, 1981, 1991, 2001, 2011	-
Agricultural wages (men & women)	1966 to 1998, 2000 to 2015	1999

Available data and missing data for Rajasthan from 1966 to 2015.		
Variables	Years data is available	Years data is missing
Area and production (crops)	1966 to 2015	-
Land use	1966 to 2015	-
Crop-wise irrigated area	1966 to 2015	-
Source-wise irrigated area	1966 to 2015	-
HYV area	1966 to 2011	2012 to 2015
Farm harvest prices - crops	1966 to 2015	-
Fertilizer consumption	1966 to 2015	-
Rainfall - Annual & monthly	1966 to 2015	-
Markets (main and sub-markets)	1970 to 1994, 2009 to 2011	1966 to 1969, 1995 to 2008, 2012 to 2015
Roads (total road length)	1966 to 2013	2014 to 2015
Livestock census	1966, 1972, 1977, 1983, 1988, 1992, 1997, 2003, 2007, 2012	-
Agri. implements and machinery	1966, 1972, 1977, 1982, 1987, 1992, 1997, 2003, 2007	-
Operational holdings	1970, 1976, 1980, 1985, 1990, 1995, 2000, 2005, 2010	1966
Population census	1971, 1981, 1991, 2001, 2011	-
Agricultural wages (men & women)	1966 to 2001, 2003 to 2015	2002

Available data and missing data for Tamil Nadu from 1966 to 2015.		
Variables	Years data is available	Years data is missing
Area and production (crops)	1966 to 2015	-
Land use	1966 to 2015	-
Crop-wise irrigated area	1966 to 2015	-
Source-wise irrigated area	1966 to 2015	-
HYV area	1966 to 2010	2011, 2012 to 2015
Farm harvest prices - crops	1966 to 2015	-
Fertilizer consumption	1966 to 2015	-
Rainfall - Annual & monthly	1966 to 2015	-
Markets (main and sub-markets)	1970 to 2010, 2013	1966 to 1969, 2011 to 2012, 2014 to 2015
Roads (total road length)	1970 to 2010, 2012 to 2014	1966 to 1969, 2011,2015
Livestock census	1966, 1972, 1977, 1982, 1987, 1992, 1997, 2003, 2007, 2012	-
Agri. implements and machinery	1966, 1972, 1977, 1982, 1987, 1992, 1997, 2003, 2007	-
Operational holdings	1970, 1976, 1979, 1985, 1990, 1995, 2000, 2005, 2010	1966
Population census	1971, 1981, 1991, 2001, 2011	-
Agricultural wages (men & women)	1966 to 2015	

Available data and missing data for Uttar Pradesh from 1966 to 2015.		
Variables	Years data is available	Years data is missing
Area and production (crops)	1966 to 2015	-
Land use	1966 to 2014	2015
Crop-wise irrigated area	1966 to 2014	2015
Source-wise irrigated area	1966 to 1970, 1972, 1974 to 2014	1971, 1973, 2015
HYV area	1966 to 1989	1990 to 2015
Farm harvest prices - crops	1966 to 2015	-
Fertilizer consumption	1966 to 2015	-
Rainfall - Annual & monthly	1966 to 1995, 1997 to 1999, 2002, 2004 to 2015	1996, 2000, 2001, 2003
Markets (main and sub-markets)	1970 to 1994, 1998, 2001 to 2014	1966 to 1969, 1995 to 1997, 1999, 2000, 2015
Roads (total road length)	1970 to 1995, 1999 to 2001, 2003 to 2015	1966 to 1969, 1996 to 1998
Livestock census	1966, 1972, 1978, 1982, 1988, 1993, 1997, 2003, 2007, 2012	-
Agri. implements and machinery	1972, 1982, 1987, 1993, 1997, 2003, 2007	1966, 1977
Operational holdings	1976, 1980, 1985, 1990, 1995, 2000, 2005, 2010	1966, 1970
Population census	1971, 1981, 1991, 2001, 2011	-
Agricultural wages (men & women)	1966 to 2001, 2003 to 2015	2002

Available data and missing data for West Bengal from 1966 to 2015.		
Variables	Years data is available	Years data is missing
Area and production (crops)	1966 to 2015	-
Land use	1966 to 1988, 1994 to 2015	1989 to 1993
Crop-wise irrigated area	1966 to 1969, 1983, 1985, 1988	1970 to 1982, 1984, 1986, 1987, 1989 to 2015
Source-wise irrigated area	1966 to 2013	2014 to 2015
HYV area	1966 to 1987	1988 to 2015
Farm harvest prices - crops	1966 to 2015	-
Fertilizer consumption	1966 to 2015	-
Rainfall - Annual, June, July + August	1966 to 2015	-
Markets (main and sub-markets)	1972, 1973, 1975 to 1995, 1999, 2001 to 2003, 2005 to 2010	1966 to 1971, 1974, 1996 to 1998, 2000, 2004, 2011 to 2015
Roads (total road length)	1970 to 2008, 2011 to 2015	1966 to 1969, 2009, 2010
Livestock census	1966, 1972, 1977, 1982, 1987, 1992, 1997, 2003, 2007, 2012	-
Agri. implements and machinery	1972, 1982, 1989, 1994, 1997, 2003	1966, 1977, 2007
Operational holdings	1970, 1976, 1990, 1995, 2001, 2005, 2010	1966, 1980, 1985
Population census	1971, 1981, 1991, 2001, 2011	-
Agricultural wages (men & women)	1966 to 1974, 1981 to 2009, 2015	1975 to 1979, 1980

Available data and missing data for Chhattisgarh from 2000 to 2015. (This state was formed in 2000.)		
Variables	Years data is available	Years data is missing
Area and production (crops)	2000 to 2015	2011
Land use	2000 to 2015	-
Crop-wise irrigated area	2000 to 2015	-
Source-wise irrigated area	2000 to 2015	-
HYV area	2005 to 2009	2000 to 2004, 2010 to 2015
Farm harvest prices - crops	2000 to 2015	-
Fertilizer consumption	2000 to 2015	-
Rainfall - Annual & monthly	2000, 2002, 2004, 2011 to 2015	2001, 2003
Markets (main and sub-markets)	-	Not available
Roads (total road length)	-	Not available
Livestock census	2003, 2007, 2012	-
Agri. implements and machinery	2003	2007
Operational holdings	2001, 2005, 2010	-
Population census	2001, 2011	-
Agricultural wages (men & women)	2005 to 2010	2000 to 2004

Available data and missing data for Jharkhand from 2000 to 2015. (This state was formed in 2000.)		
Variables	Years data is available	Years data is missing
Area and production (crops)	2000 to 2015	
Land use	2001 to 2011	2000
Crop-wise irrigated area	2001 to 2011	2000
Source-wise irrigated area	2001 to 2011	2000
NCA, GCA, NIA, GIA	2001 to 2011	2000
Fodder area	-	Not available
Fodder irrigated area	-	Not available
HYV area	-	Not available
Farm harvest prices - crops	2005 to 2015	2000 to 2004
Fertilizer consumption	2003 to 2015	2000 to 2002
Rainfall - Annual & monthly	2000 to 2015	-
Markets (main and sub-markets)	-	Not available
Roads (total road length)	-	Not available
Livestock census	2003, 2007, 2012	-
Agri. implements and machinery	2003	2007
Operational holdings	-	Not available
Population census	2001, 2011	-
Agricultural wages (men & women)	2006 to 2015	2000 to 2005

Available data and missing data for Uttarakhand from 2000 to 2015. (This state was formed in 2000.)		
Variables	Years data is available	Years data is missing
Area and production (crops)	2000, 2001, 2003 to 2015	2002
Land use	2000 to 2015	-
Crop-wise irrigated area	2000 to 2011	-
Source-wise irrigated area	2000 to 2011	-
NCA, GCA, NIA, GIA	2000 to 2011	-
Fodder area	2000 to 2011	-
Fodder irrigated area	2000 to 2011	-
HYV area	-	Not available
Farm harvest prices - crops	2010, 2015	2000 to 2009
Fertilizer consumption	2000 to 2015	-
Rainfall - Annual & monthly	2005 to 2015	2000 to 2004
Markets (main and sub-markets)	-	Not available
Roads (total road length)	2015	Not available
Livestock census	2003, 2007, 2012	2000 to 2014
Agri. implements and machinery	2003	2007
Operational holdings	2000, 2005, 2010	-
Population census	2001, 2011	-
Agricultural wages (men & women)	2006 to 2015	2000 to 2005

Available data and missing data for Assam from 1966 to 2015.		
Variables	Years data is available	Years data is missing
Area and production (crops)	1966 to 2015	
Land use	1966 to 1981, 1992 to 2015	1982 to 1991
Crop-wise irrigated area	2006 to 2015	1966 to 2005
Source-wise irrigated area	2002 to 2015	1966 to 2001
HYV area	1977, 1985, 1987, 1991 to 1998, 2000 to 2009	1966 to 1976, 1978 to 1984, 1986, 1988 to 1990, 1999, 2010, 2011 to 2015
Farm harvest prices - crops	1966 to 2015	-
Fertilizer consumption	1968 to 1971, 1973 to 2015	1966, 1967, 1972
Rainfall - Annual, June, July + August	1966 to 2001, 2003 to 2015	2002
Markets (main and sub-markets)	2009 to 2010, 2012 to 2015	1966 to 2008
Roads (total road length)	1972, 1976, 1979, 1982, 1985, 1987, 1989, 1990, 1991, 1993, 1995, 1996, 2004, 2005, 2010, 2013 to 2015	1966 to 1971, 1973 to 1975, 1977, 1978, 1980, 1981, 1983, 1984, 1986, 1988, 1992, 1994, 1997 to 2003, 2006 to 2009, 2011 to 2012
Livestock census	1966, 1972, 1977, 1982, 1987, 1992, 1997, 2003, 2007, 2012	-
Agri. implements and machinery	1966, 1972, 1977, 1982, 1992, 1996, 2003	1987, 2007
Operational holdings	1970, 1974, 2000, 2005, 2010	1980, 1985, 1990, 1995
Population census	1971, 1991, 2001, 2011	1981
Agricultural wages (men & women)	1968 to 1971, 1973, 1974, 1978 to 2015	1966, 1967, 1972, 1975 to 1977

Available data and missing data in Himachal Pradesh from 1966 to 2015.		
Variables	Years data is available	Years data is missing
Area and production (crops)	1996 to 2008, 2010, 2015	2009, 2011
Land use	1966 to 2011	2012 to 2015
Crop-wise irrigated area	1966 to 2011	2012 to 2015
Source-wise irrigated area	1966 to 2011	1994, 2012 to 2015
HYV area	1979, 1981, 1987 to 1989, 1993, 1996, 1997, 2002, 2003	1966 to 1978, 1980, 1990 to 1992, 1994, 1995, 1998 to 2001, 2004, 2005, 2007, 2012 top 2015
Farm harvest prices - crops	1993 to 1995, 1998 to 2015	1990 to 1992, 1996, 1997
Fertilizer consumption	1968, 1969, 1970, 1973 to 1976, 1978 to 1982, 1984 to 2011	1966, 1967, 1971, 1972, 1977, 1983
Rainfall - Annual & monthly	1966 to 2015	-
Markets (main and sub-markets)	1991 to 2001	1966 to 1990, 2002 to 2015
Roads (total road length)	1990 to 1998, 2000 to 2011	1966 to 1975, 1999, 2012 to 2015
Livestock census	1992, 1997, 2003, 2007, 2011	2012 to 2015
Agri. implements and machinery	1992, 2003	1997, 2007
Operational holdings	1990, 1995, 2000, 2005, 2010	1991 to 1994, 1996 to 1999, 2001 to 2004, 2006 to 2009, 2011 to 2015
Population census	1991, 2001, 2011	-
Agricultural wages (men & women)	1966 to 1971, 1973, 1974, 1979 to 2010	1972, 1975, 1978

Available data and missing data for Kerala from 1966 to 2015.		
Variables	Years data is available	Years data is missing
Area and production (crops)	1966 to 2015	-
Land use	1966 to 2015	-
Crop-wise irrigated area	1966 to 2014	2015
Source-wise irrigated area	1966 to 2014	2015
HYV area	1966 to 2011	2012 to 2015
Farm harvest prices - crops	1970, 1975, 1980 to 2011	1966 to 1969, 1971 to 1974, 1976 to 1979
Fertilizer consumption	1968 to 1971, 1973 to 2015	1966, 1967, 1972
Rainfall - Annual & Monthly	1966 to 2015	-
Markets (main and sub-markets)	2007	1990 to 2006, 2008 to 2015
Roads (total road length)	1991 to 2010	2011 to 2015
Livestock census	2003, 2007, 2012	-
Agri. implements and machinery	1992, 1996, 2000, 2003	2007
Operational holdings	1990, 1995, 2000, 2005, 2010	
Population census	1991, 2001, 2011	-
Agricultural wages (men & women)	1968 to 1981, 1983 to 2001, 2003 to 2010	1966, 1967, 1982, 2002

## 6. Data Sources

Data was downloaded from online sources wherever available and soft and published hard copies were collected from respective state departments. Soft copies and published hard copies that include season and crop reports, statistical abstract, statistical handbook, agricultural statistics, district handbooks, integrated sample survey reports (livestock and products), infrastructure statistics, farm harvest price for principal crops of India, agricultural wages in India, fertilizer statistics, etc. were used for the update of the database. District-level environmental data was generated from pixel-level data from Terra Climate database.

Data Sources for key variables groups		
Data	Source	
Area, Production and Yield (APY)	Directorate of Economics and Statistics (DES, Delhi); State DES; State Directorate of Agriculture (DOA)	
HYV area (cereals)	State DES; State (DOA)	
Crop-wise irrigation	DES, Delhi; State DES; State DOA	
Source-wise irrigation	DES, Delhi; State DES; State DOA	
Land use	DES, Delhi; State DES; State DOA	
Rainfall (monthly, normal)	State DES; Indian Meteorological Department	
Length of Growing Period (LGP)	ICRISAT	
Soil type	ICRISAT	
Fertilizer consumption	Fertilizer Association of India, Delhi	
Wages	DES, Delhi	
Farm harvest price	DES, Delhi	
Population	Census data Registrar General of India	
Livestock	State Dept of Animal Husbandry and Dairying	
Agricultural implements	State Dept of Animal Husbandry; State DES	
Operational holdings	Agricultural Census data	
Milk, meat, egg production	State Dept of Animal Husbandry and Dairying	
Markets and roads	State Directorate of Agriculture Marketing; Public Works Department (PWD); State DES	
Banks and post offices	State DES	
Veterinary institutions	State Dept of Animal Husbandry and Dairying	
Health	State DES	
Sector-wise GDP	State DES; CMIE database	

## **Appendices**

## Appendix 1. Methodology and rationale for adjusting district boundaries (1966 base)

The geographical area of a particular district is typically not constant over time, i.e., districts tend to gain and lose area over time for a variety of reasons, most of them political. During the period covered by the dataset, there were numerous adjustments in the boundaries of some of the districts. These changes have occurred, for example, upon the division of the former Punjab into Punjab, Haryana and Himachal Pradesh; in the division of certain districts into two or more smaller districts in many places; or in the transfer of parts of one district to another. As far as possible, the dataset preserves the <u>original</u> district boundaries: Where districts have been broken up, values for the resultant districts in later years have been summed to yield values appropriate to a "shadow" consolidated district. This is necessary for maintaining consistency in data over the years. In order to take into account these changes, we had to choose a particular (agricultural) reference year, i.e., stick to the size of the district in that particular year and adjust the data for all the other years accordingly.

Since 1966, 258 new districts have been formed, and the data for all the variables for these districts have been given back to their parent district and removed from the dataset. The criterion used for determining the apportioning percentage was based on the geographical area of the parent district transferred to the new district. All variables in the dataset [except rainfall, farm harvest prices (FHP) and wages]<sup>1</sup> were apportioned using this proportion.

Of the 258 new districts, about 224 were formed from a single parent district; hence the apportioning percentage was 100, with no room for error. For example, Rajnandgaon district was created fully from Durg district on 1 May 1973. Hence data for Rajnandgaon was added to that of Durg starting 1972/73. For the remaining districts, the new districts were formed from 2 parent districts and only in the case of 4 districts from 3 parent districts. Ideally in such cases, taluka-wise data would be more appropriate in recreating the parent district. However, in the absence of such data, the parent districts were created using earlier criteria i.e., geographical area of the parent district transferred to the new district. For example, Vizianagaram district was created from Srikakulam (50%) and Visakhapatnam (50%) districts on 18 May 1979. Hence all the data for Vizianagaram were added to Srikakulam and Visakhapatnam in a fifty-fifty proportion from 1979/80 onwards. The state of Punjab was reorganized on 1 November 1966 as per the Punjab Reorganization Act. A new state Haryana was created. Haryana initially consisted of 7 districts; we stick to these 7 districts by apportioning the data of the new districts formed after 1966 to their parent district. Similarly, the reorganized Punjab state had 11 districts to which we stick.

For a detailed list of new districts formed after 1966 and their parent districts, see Appendix 3.

In the case of rainfall, farm harvest prices and wages, the data of newly formed districts were not apportioned to the parent district. Instead, data of the truncated parent district were retained.

## Appendix 2. Districts (1966 base).

Appendix 2			
State name	District name	India code	District code
Andhra Pradesh	Srikakulam	3219	44
Andhra Pradesh	Visakhapatnam	3220	45
Andhra Pradesh	East Godavari	3205	46
Andhra Pradesh	West Godavari	3223	47
andhra Pradesh	Krishna	3210	48
andhra Pradesh	Guntur	3206	49
andhra Pradesh	Sri Potti Sriramulu Nellore	3215	50
ndhra Pradesh	Kurnool	3211	51
andhra Pradesh	Anantapur	3202	52
ndhra Pradesh	YSR	3204	53
andhra Pradesh	Chittoor	3203	54
elangana	Hyderabad	3207	55
elangana	Nizamabad	3216	56
elangana	Medak	3213	57
elangana	Mahbubnagar	3212	58
elangana	Nalgonda	3214	59
elangana	Warangal	3222	60
elangana	Khammam	3209	61
elangana	Karimnagar	3208	62
langana	Adilabad	3201	63
ssam	Cachar	3315	601
ssam	Darrang	3304	602
ssam	Dibrugarh	3303	603
ssam	Goalpara	3305	604
ssam	Kamrup	3306	605
ssam	Karbi Anglong	3308	606
ssam	Lakhimpur	3312	607
ssam	Dima Hasao/NC Hills	3311	608
ssam	Nagaon	3313	609
ssam	Sivasagar	3314	610
ihar	Champaran	3424	901
ihar	Muzaffarpur	3420	902
ihar	Darbhanga	3405	903
ihar	Saharsa	3430	904
ihar	Purnia	3427	905
ihar	Saran	3434	906
Bihar	Patna	3425	907
Bihar	Munger	3419	908

State name	District name	India code	District code	
Bihar	Bhagalpur	3403	909	
Bihar	Shahabad	3429	911	
Bihar	Gaya	3408	912	
Gujarat	Ahmedabad	3501	121	
Gujarat	Amreli	3502	122	
Gujarat	Banaskantha	3503	123	
Gujarat	Bharuch	3504	124	
Gujarat	Vadodara	3518	125	
Gujarat	Bhavnagar	3506	126	
Gujarat	Valsad	3519	127	
Gujarat	The Dangs	3517	128	
Gujarat	Jamnagar	3507	129	
Gujarat	Junagadh	3508	130	
Gujarat	Kheda	3510	131	
Gujarat	Kachchh	3509	132	
Gujarat	Mehsana	3511	133	
Gujarat	Panchmahal	3512	134	
Gujarat	Rajkot	3513	135	
Gujarat	Sabarkantha	3514	136	
Gujarat	Surat	3515	137	
Gujarat	Surendranagar	3516	138	
Haryana	Hisar	3605	177	
Haryana	Gurgaon	3604	180	
Haryana	Jind	3606	181	
Haryana	Mahendragarh	3609	182	
Haryana	Ambala	3601	183	
Haryana	Karnal	3607	184	
Haryana	Rohtak	3610	186	
Himachal Pradesh	Bilaspur	3701	626	
Himachal Pradesh	Chamba	3702	627	
Himachal Pradesh	Kangra	3704	629	
Himachal Pradesh	Kinnaur	3705	630	
Himachal Pradesh	Kullu	3706	631	
Himachal Pradesh	Lahul & Spiti	3707	632	
Himachal Pradesh	Solan	3711	633	
Himachal Pradesh	Mandi	3708	634	
Himachal Pradesh	Shimla	3709	635	
Himachal Pradesh	Sirmaur	3710	636	

Appendix 3. Districts formed after 1966 and their parent district.

Appendix 3	Districts forms of /s	ft 40CC)		Daniel district (4	000	
	Districts formed (a		Year of	Parent district (1		-
State	Name	Code	formation	Name	Code	Percentage
Andhra Pradesh	Prakasam	504	1974-75	Guntur	49	46
				Nellore	50	38
				Kurnool	51	16
	Vizianagaram	503	1979-80	Srikakulam	44	50
				Visakhapatnam	45	50
Telangana	Rangareddy	520	1978-79	Hyderabad	55	100
Assam	Barapet	615	1981	Kamrup	605	100
	Dhubri	616	1981	Goalpara	604	100
	Golaghat	617	1981	Sibsagar	610	100
	Jorhat	618	1981	Sibsagar	610	100
	Karimganj	619	1981	Cachar	601	100
	Kokrajhar	620	1981	Goalpara	604	100
	Nalbari	621	1981	Kamrup	605	100
	Sonitpur	622	1981	Darrang	602	100
	Bongaigaon	1047	1989	Goalpara	604	40
				Kokrajhar	620	60
	Dhemaji	1048	1989	Lakhimpur	607	100
	Hailakandi	1049	1989	Cachar	601	100
	Marigaon	1050	1989	Nagaon	609	100
	Tinsukia	1051	1989	Dibrugarh	603	100
	Udalguri	2017	2004	Darrang	602	100
	Baksa	2018	2007	Barapet	615	33
				Nalbari	621	33
				Kamrup	605	34
	Cirang	2019	2004	Bongaigaon	1047	100
	Kamrup Metroplitan	2028	2003	Kamrup	605	100
	Biswanath	2044	2015	Sonitpur	622	100
	Charaideo	2045	2015	Sivasagar	610	100
Assam	Hojai	2046	2015	Nagaon	609	100
Bihar	Nalanda	918	1973-74	Patna	907	100
	Nawada	919	1973-74	Gaya	912	100
	Aurangabad	920	1973-74	Gaya	912	100
	Bhojpur	921	1973-74	Sahabad	911	100
	Rohtas	922	1973-74	Sahabad	911	100
	Gopalganj	924	1973-74	Saran	906	100
	Champaran (East)	925	1973-74	Champaran	901	100

Contd...

	Districts formed (at	fter 1966)	Year of	Parent district (1	1966 base)	_
State	Name	Code	formation	Name	Code	Percentage
	Champaran (West)	926	1973-74	Champaran	901	100
	Vaisali	927	1973-74	Muzaffarpur	902	100
	Seetamarhi	928	1973-74	Muzaffarpur	902	100
	Madhubani	929	1973-74	Darbhanga	903	100
	Samastipur	930	1973-74	Darbhanga	903	100
	Begusarai	931	1973-74	Mungair	908	100
	Sivan	923	1974-75	Saran	906	100
	Katihar	932	1981-82	Purnea	905	100
	Madhepura	935	1982-83	Champaran	901	100
	Khagaria	936	1982-83	Mungair	908	100
	Jahanabad	934	1986-87	Gaya	912	100
	Aarreya	945	1991-92	Purnea	905	100
	Kishanganj	946	1991-92	Purnea	905	100
	Buxar	947	1992-93	Bhojpur	921	100
	Kaimur/Babhua	948	1992-93	Rohtas	922	100
	Banka	949	1992-93	Bhagalpur	909	100
	Jamui	950	1992-93	Mungair	908	100
	Supaul	951	1992-93	Saharsa	904	100
	Lakhisarai	956	1992-93	Mungair	908	100
	Shekapura	958	1997	Mungair	908	100
	Sheohar	960	1997	Sitamarhi	928	100
	Arwal	961	2001	Jehanabad	934	100
Iharkhand	Giridhi	933	1985-86	Hazaribagh	913	100
	Dumka	939	1982-83	San.Parganas/ Dumka	910	100
	Sahebganj	938	1983-84	San.Parganas/ Dumka	910	100
	Devghar/Deogarh	940	1983-84	San.Parganas/ Dumka	910	100
	Lohardagga	941	1983-84	Ranchi	916	100
	Gumla	942	1983-84	Ranchi	916	100
	Singhbhum (East)	943	1977-78	Singhbhum	917	100
	Singhbhum (West)	944	1977-78	Singhbhum	917	100
	Godda	937	1983-84	San.Parganas/ Dumka	910	100
	Chatra	952	1992-93	Hazaribagh	913	100
	Bokaro	953	1992-93	Giridhi	933	67
				Dhanbad	914	33
	Garhwa/Gadva	954	1992-93	Palamau	915	100
	Khodrama	955	1992-93	Hazaribagh	913	100

	Districts formed (	after 1966)	Year of	Parent district (19	66 base)	_
State	Name	Code	formation	Name	Code	Percentage
	Pakur	957	1997	Sahibganj	938	100
	Jamtara	962	2003	San.Parganas/ Dumka	910	100
	Latehar	963	2003	Palamau	915	100
	Sariakela- Kharsawan	964	2003	Sigbhbum (West)	944	100
	Simdega	965	2003	Gumla	942	100
	Khunbi	2023	2007	Ranchi	916	100
	Ramgarh	2024	2007	Hazaribagh	913	100
Gujarat	Gandhinagar	518	1970-71	Ahmedabad	121	59
				Mehsana	133	41
	Anand	1001	1997	Kaira	131	100
	Dohad	1002	1997	Panchmahal	134	100
	Narmada	1003	1997	Baruch	124	100
	Navsari	1004	1997	Valsad	127	100
	Porbandar	1006	1997	Junagadh	130	100
	Patan	1005	2000	Mehsana	133	100
	Тарі	2001	2007	Surat	137	100
	Aravalli	2050	2013	Sabarkanta	136	100
	Botad	2051	2013	Ahmedabad	121	35
				Bhavnagar	126	65
	Chhota Udaipur	2052	2013	Vadodara	125	100
	Devbhoomi Dwarla	2053	2013	Jamnagar	129	100
	Gir Somnath	2054	2013	Junagadh	130	100
	Mahisagar	2055	2013	Panchmahal	134	77
				Kheda	131	23
	Morbi	2056	2013	Rajkot	135	69.8
				Surendranagar	138	24.6
				Jamnagar	129	5.6
Haryana	Bhiwani	179	1972-73	Hissar	177	71
				Mahendragarh	182	29
	Kurukshetra	185	1972-73	Karnal	184	100
	Sonepat	187	1972-73	Rohtak	186	100
	Sirsa	178	1975-76	Hissar	177	100
	Faridabad	188	1979-80	Gurgaon	180	100
	Yamunanagar	523	1989-90	Ambala	183	100
	Kaithal	524	1989-90	Karnal	184	82
				Jind	181	18
	Panipat	525	1989-90	Karnal	184	100

Contd...

	Districts formed (at	fter 1966)	Year of	Parent district (19	66 base)	
State	Name	Code	formation	Name	Code	Percentage
	Rewari	526	1989-90	Mahendragarh	182	87
				Rohtak	186	13
	Fatehabad	1007	1997	Hissar	177	100
	Jajjar	1008	1997	Rohatak	186	100
	Panchkula	1009	1997	Ambala	183	100
	Mewat	2002	2005	Faridabad	188	100
	Palwal	2003	2008	Gurgaon	180	100
Himachal	Hamirpur	628	1972	Kangra	629	100
Pradesh						
	Una	637	1972	Kangra	629	100
Karnataka	Bangalore (Rural)	549	1986-87	Bangalore	64	100
	Bangalore (Urban)	550	1986-87	Bangalore	64	100
	Bagalkot	1010	1997	Bijapur	76	100
	Chamarajanagara	1011	1997	Mysore	67	100
	Davangere	1012	1997	Chittradugra	72	100
	Gadag	1013	1997	Dharwad	74	100
	Haveri	1014	1997	Dharwad	74	100
	Koppal	1015	1997	Raichur	78	100
	Udupi	1016	1997	Dakshin Kanara	80	100
	Ramanagara	2004	2007	Bangalore (Rural)	549	100
	Chikkballapura	2005	2007	Kolar	65	100
	Yadagir	2025	2009	Gulberga	79	100
Kerala	Idukki	654	1972	Ernakulam	653	20
				Kottayam	655	80
	Waynad	664	1981	Kozhikode	656	64.84
				Cannanore	652	35.16
	Pathanamthitta	663	1983	Quilon	659	100
	Kasargod	662	1985	Cannanore	652	100
Madhya Pradesh	Bhopal	502	1972-73	Sehore	37	100
	Dindori	1057	1998	Mandla	12	100
	Harda	1058	1998	Hoshangbad	43	100
	Barwani	1060	1998	Khargone	35	100
	Katni	1061	1998	Jabalpur	7	100
	Neemach	1062	1998	Mandsaur	31	100
	Sheopur	1063	1998	Morena	26	100
	Umaria	1064	1998	Shahdol	21	100
	Asoknagar	1081	2003	Shahdol	21	100
	Anuppur	1071	2003	Shahdol	21	100
	Burhanpur	1082	2003	Shahdol	21	100

	Districts formed (a	after 1966)	Year of	Parent district (	1966 base)	_
State	Name	Code	formation	Name	Code	Percentage
	Alirajpur	2006	2008	Jhabua	34	100
	Singrauli	2007	2008	Sidhi	19	100
	Agar Malwa	2058	2013	Shajapur	42	100
Chhattisgarh	Rajnandgaon	501	1972-73	Durg	1	100
	Dakshin Baster Dantewada	1055	1998	Bastar	2	100
	Dhamtari	1056	1998	Raipur	3	100
	Janjgir (Champa)	1059	1998	Bilaspur	4	100
	Koriya	1065	1998	Surguja	6	100
	Jashpur	1066	1998	Raigarh	5	100
	Korba	1067	1998	Bilaspur	4	100
	Kabeerdham (Kawardha)	1068	1998	Rajnandgoan	501	71
				Bilaspur	4	29
	Mahasamund	1069	1998	Raipur	3	100
	Uttar Bastar Kanker	1070	1998	Bastar	2	100
	Bijapur	2014	2007	Dantewada	1055	100
	Narayanpur	2015	2007	Bastar	2	100
	Balod	2034	2012	Durg	1	100
	Balodabazar	2035	2012	Raipur	3	100
	Balrampur	2036	2012	Surguja	6	100
	Bemetara	2037	2012	Durg	1	100
	Gariyaband	2038	2012	Raipur	3	100
	Kondagaon	2039	2012	Bastar	2	100
	Mungeli	2040	2012	Bilaspur	4	100
	Sukma	2041	2012	Dakshin Bastar Dantewada	1055	100
	Surajpur	2042	2012	Surguja	6	100
Maharashtra	Jalna	514	1981-82	Aurangabad	108	100
	Latur	515	1981-82	Osmanabad	112	100
	Gadchiroli	516	1981-82	Chandrapur	120	100
	Sindhudurg	517	1981-82	Ratnagiri	98	100
	Nandurbar	1074	1997	Dhule	100	100
	Washim	1075	1997	Akola	114	100
	Gondiya	1072	1998	Bhandra	119	100
	Hengelo	1073	1998	Parbhani	109	100
	Mumbai Sub.	1076	1990	Mumbai	95	100
	Mumbai City	2027	1979	Mumbai	95	100
	Palghar	2059	2014	Thane	96	100

Contd...

	Districts formed (a	after 1966)	Year of	Parent district (1	1966 base)	
State	Name	Code	formation	Name	Code	Percentage
Odisha	Bhadrak	714	1993-94	Balasore	701	100
	Jagatsingpur	716	1993-94	Cuttak	703	100
	Jajpur	717	1993-94	Cuttak	703	100
	Kendrapara	718	1993-94	Cuttak	703	100
	Angul	719	1993-94	Dhenkanal	704	100
	Gajapati	720	1993-94	Ganjam	705	100
	Naupada	721	1993-94	Kalahandi	706	100
	Malkanagiri	722	1993-94	Koraput	708	100
	Nobarangpur	723	1993-94	Koraput	708	100
	Rayagada	724	1993-94	Koraput	708	100
	Khordha	725	1993-94	Puri	711	100
	Nayagarh	726	1993-94	Puri	711	100
	Boudh	728	1993-94	Phulbani	710	100
	Bargarh	729	1993-94	Sambalpur	712	100
	Deogarh	730	1993-94	Sambalpur	712	100
	Jharsuguda	731	1993-94	Sambalpur	712	100
	Sonepur/ Subarnapur	732	1993-94	Bolangir	702	100
Punjab	Faridkot	173	1972-73	Firozpur	172	74
				Bhatinda	174	26
	Mansa	545	1992-93	Bhatinda	174	100
	Fatehgarh Sahib	546	1992-93	Patiala	176	77
				Ludhiana	171	15
				Sangrur	175	8
	Nawan Shehar	1017	1995	Jalandhar	168	61
	(SBS Nagar)			Hoshiarpur	169	39
	Muktsar	1018	1995	Faridkot	173	100
	Moga	1019	1995	Faridkot	173	100
	Tarantaran	2009	2006	Amritsar	166	100
	Barnala	2010	2006	Sangrur	175	100
	SAS Nagar	2011	2006	Roper Patiala	170 - 176	50 - 50
	Pathankot	2030	2011	Gurdaspur	165	100
	Fazilka	2043	2011	Firozpur	172	100
Rajasthan	Dholpur	519	1982-83	Bharatpur	143	100
	Baran	536	1991-92	Kota	157	100
	Dausa	537	1991-92	Jaipur	151	100
	Rajsamand	538	1991-92	Udaipur	164	100
	Hanumangarh	539	1993-94	Ganganagar	150	100
	Karauli	1020	1997	Sawai Madhopur	160	100

	Districts formed (a	fter 1966)	Year of	Parent district (1	.966 base)	
State	Name	Code	formation	Name	Code	- Percentage
	Pratapgarh	2012	2008	Banswara Chittorgarh Udaipur	141 147 164	33 33 34
Tamil Nadu	Dharmapuri	506	1970-71	Salem	86	100
	Pudukottai	508	1972-73	Coimbatore	87	100
	Periyar	507	1979-80	Tiruchirapally/ Trichy	88	68
				Tanjavur	89	32
	Kamarajar/ Virudhunagar	510	1984-85	Ramnathpuram	91	100
	Muthuramlingam /Pasumpon M Thevar/Sivaganga	512	1984-85	Ramnathpuram	91	100
	Anna/DQ Milleth/ Dindigal	509	1985-86	Madurai	90	100
	Chidambarnar/ Thoothukkudi	513	1986-87	Tirunalveli/ Kattabomman	92	100
	T Sambuvarayar/ Tiruvanmalai	521	1989-90	North Arcot/ Ambedkar	85	100
	Nagapatnam/ Nagai QE Milleth	542	1992-93	Tanjavur	89	100
	Villupuram	543	1993-94	South Arcot/ SA Vallalar/ Cuddalore	84	100
	Kancheepuram	1021	1996	Chengalpattu	83	100
	Karur	1022	1996	Tiruchirapally	88	100
	Namakkal	1023	1996	Salem	86	100
	Perambalur	1024	1996	Tiruchirapally	88	100
	Theni	1025	1996	Madurai	90	100
	Thiruvarur	1026	1996	Tanjavur	89	10
				Nagapattinam	542	90
	Tiruvallur	1027	1996	Chengalpattu	83	100
	Ariyalur	1077	2001	Perambalur	1024	100
	Krishnagiri	1080	2003	Dharmapuri	506	100
	Thiruppur	2020	2008	Coimbatore, Erode	87 507	50 50
Uttar Pradesh	Lalithpur	212	1974-75	Jhansi	211	100
	Ghaziabad	193	1976-77	Meerut	191	78
				Bulandershahr	192	22
	Kanpur (City)	547	1982-83	Kanpur	208	100
	Kanpur (Dehat)	548	1982-83	Kanpur	208	100
	Haridwar	527	1989-90	Saharanpur	189	100

Contd...

	Districts formed (a	fter 1966)	Year of	Parent district (1	1966 base)	
State	Name	Code	formation	Name	Code	Percentage
	Ferozabad	528	1989-90	Agra	196	34
				Mainpuri	197	66
	Sonbhadra	529	1989-90	Mirzapur	217	100
	Mau	530	1989-90	Azamgarh	224	100
	Maharajganj	531	1989-90	Ghorakpur	221	100
	Sidhartnagar	532	1989-90	Basti	223	100
	Ambedhkar Nagar	1028	1995	Faizabad	231	100
	Kushinagar	1029	1995	Deoria	222	100
	Mahoba	533	1995	Hamirpur	214	100
	Padrauna	535	1995	Deoria	222	100
	Auraiya	1031	1997	Etawah	207	100
	Baghpat	1033	1997	Meerut	191	100
	Balrampur	1034	1997	Gonda	232	100
	Chandauli	1036	1997	Varanasi	216	100
	Chitrakut	1037	1997	Banda	215	100
	Gautambuddha nagar	1038	1997	Ghaziabad	193	100
	Hatharas (Mahamayangar)	1039	1997	Aligarh	194	100
	JB Phule Nagar	1040	1997	Moradabad	201	100
	Kannauj	1041	1997	Farrukabad	206	100
	Kaushambi	1042	1997	Allahabad	210	100
	Sant Ravi Das Nagar	1044	1997	Varanasi	216	100
	Sant Kabir Nagar	1045	1997	Basti	223	100
	Shravasti	1046	1997	Baharaich	233	100
	Khansi Ram Nagar	2013	2008	Etah	198	100
	CSM Nagar/ Amethi	2026	2010	Sultanpur	234	56.6
				Rae Bareli	227	43.4
	Sambhal	2031	2012	Moradabad	201	62
				Budaun	200	38
	Shamili	2032	2011	Muzaffarnagar	190	100
	Hapur	2033	2011	Ghaziabad	193	100
Uttarakhand	Udhamsingh Nagar	1030	1995	Nainital	237	100
	Bageshwar	1032	1997	Almorah	238	100
	Champavat	1035	1997	Pithorgarh	239	100
	Rudraprayag	1043	1997	Chamoli	240	100

	Districts formed (at	fter 1966)	Year of	Parent district (	1966 base)	
State	Name	Code	formation	Name	Code	Percentage
West Bengal	24-Parganas (South)	801	1982-83	24-Parganas	800	100
	24-Parganas (North)	802	1982-83	24-Parganas	800	100
	Dinajpur (Uttar)	819	1995-96	West Dinajpur	822	100
	Dinajpur (Dakshin)	820	1995-96	West Dinajpur	822	100
	Midnapore (East)	823	1982-83	Midnapore	818	100
	Midnapore (West)	824	1982-83	Midnapore	818	100

Appendix 4. Identifiers (common to all files).

Appendix 4	x 4										
REGION	REG_NAME	AEZ <sup>1</sup>	AEZ_NATP <sup>2</sup>	AEZ_NATP_PS3 ST CODE ST NAME	ST COD	E ST NAME	INDIA ID	DIST <sup>4</sup>	DIST NAME	LAT	LONG
1	Coastal Andhra	1	2	2.1	1	Andhra Pradesh	3219	44	Srikakulam	18.6	84.3
1	Coastal Andhra	Т	2	2.1	Т	Andhra Pradesh	3220	45	Visakhapatnam	17.7	83.3
1	Coastal Andhra	1	2	2.1	⊣	Andhra Pradesh	3205	46	East Godavari	17.0	82.2
1	Coastal Andhra	Т	2	2.1	$\vdash$	Andhra Pradesh	3223	47	West Godavari	16.8	81.5
1	Coastal Andhra	3	2	2.1	$\vdash$	Andhra Pradesh	3210	48	Krishna	16.2	81.1
1	Coastal Andhra	3	2	2.1	Т	Andhra Pradesh	3206	49	Guntur	16.6	9.62
1	Coastal Andhra	3	2	2.1	⊣	Andhra Pradesh	3215	20	S.P.S. Nellore	14.5	80.0
2	Rayalaseema	3	2	5.3	1	Andhra Pradesh	3211	51	Kurnool	15.8	78.1
2	Rayalaseema	4	2	5.3	Т	Andhra Pradesh	3202	52	Ananthapur	14.6	77.0
2	Rayalaseema	3	2	5.3	Т	Andhra Pradesh	3204	53	Kadapa YSR	14.5	78.8
2	Rayalaseema	3	2	5.3	⊣	Andhra Pradesh	3203	54	Chittoor	13.5	78.5
2	Tirhut	1	4	4.1	2	Bihar	3424	901	Champaran	26.5	84.6
2	Tirhut	2	4	4.1	2	Bihar	3420	905	Muzaffarpur	26.1	85.4
4	Darbhanga	1	4	4.1	2	Bihar	3405	903	Darbhanga	26.0	85.9
2	Kosi	П	4	4.1	7	Bihar	3430	904	Saharsa	26.2	86.8
9	Purnea	1	4	4.1	2	Bihar	3427	902	Purnea	25.8	87.5
3	Saran	2	4	4.1	2	Bihar	3434	906	Saran	26.0	84.8

 $<sup>^{1}</sup>$  AEZ: Agro-Ecological Zone; Humid (LGP > 180 days); 2 = Semi-Arid Temperate (LGP = 75-179 days, Temp = < 18 $^{\circ}$ C); 3 = Semi-Arid Tropic (LGP = 75-179 days, Temp = > 18 $^{\circ}$ C) and 4 = Arid (LGP = 0-74 days).

<sup>&</sup>lt;sup>2</sup> AEZ\_NATP: Agro-Ecological Zone - National Agricultural Technology Programme; 1= Arid; 2 = Coastal; 3 = Hill & mountain; 4= Irrigated and 5 = Rainfed.

<sup>&</sup>lt;sup>3</sup> AEZ\_NATP\_PS; Agro-Ecological Zone NATP Production System; 1.1 = Pearl Millet; 1.2 = Pearl Millet-Oilseeds; 2.1 = Rice-Groundnut-Fruits; 2.2 = Coconut-Rice-Fruits; 3.1 = Horticulture; 3.2 = Rice-Maize-Fruits; 4.1 = Rice-Wheat; 4.2 = Cotton-Wheat; 4.3 = Sugarcane-Wheat; 5.1 = Rice; 5.2 = Coarse cereal; 5.3 = Oilseed and 5.4 = Cotton

<sup>&</sup>lt;sup>4</sup> DIST: District code;

	REG_NAME	AEZ¹ A	AEZ_NATP <sup>2</sup> A	AEZ_NATP_PS <sup>3</sup> S	ST COD	ST CODE ST NAME	INDIA ID	DIST <sup>4</sup>	DIST NAME	LAT	PNOT
1	Patna	8	4	4.1	2	Bihar	3425	907	Patna	25.6	85.0
∞	Mungair	c	4	4.1	2	Bihar	3419	806	Mungair	24.9	86.2
7	Bhagalpur	1	4	4.1	2	Bihar	3403	606	Bhagalpur	25.3	87.0
П	Patna	ю	4	4.1	2	Bihar	3429	911	Shahabad (now part of Bhojpur district)	25.5	84.5
6	Magadh	c	4	4.1	2	Bihar	3408	912	Gaya	24.8	85.0
1	Baroda	m	2	5.4	3	Gujarat	3501	121	Ahmedabad	23.1	72.6
2	Rajkot	8	2	5.3	3	Gujarat	3502	122	Amreli	21.5	71.1
1	Baroda	c	1	1.2	3	Gujarat	3503	123	Banaskantha	24.3	71.9
1	Baroda	c	2	5.4	3	Gujarat	3504	124	Bharuch	21.7	73.0
1	Baroda	c	2	5.4	3	Gujarat	3518	125	Vadodara/Baroda	22.3	73.3
2	Rajkot	8	2	5.3	3	Gujarat	3506	126	Bhavnagar	21.8	72.2
Т	Baroda	8	2	5.4	3	Gujarat	3519	127	Valsad	20.6	73.2
1	Baroda	8	2	5.4	3	Gujarat	3517	128	Dangs	20.8	73.6
2	Rajkot	c	1	1.2	3	Gujarat	3507	129	Jamnagar	22.5	70.1
2	Rajkot	8	2	5.3	3	Gujarat	3508	130	Junagadh	20.9	70.4
Т	Baroda	8	2	5.4	3	Gujarat	3510	131	Kheda	22.3	73.3
2	Rajkot	4	1	1.2	3	Gujarat	3509	132	Kutch	23.3	8.69
П	Baroda	8	2	5.4	3	Gujarat	3511	133	Mehsana	23.8	71.6
Т	Baroda	8	2	5.4	3	Gujarat	3512	134	Panchmahal	22.9	73.8
2	Rajkot	8	1	1.2	3	Gujarat	3513	135	Rajkot	22.3	70.8
1	Baroda	8	2	5.3	3	Gujarat	3514	136	Sabarkantha	23.5	73.2
1	Baroda	æ	2	5.4	3	Gujarat	3515	137	Surat	21.2	72.1
2	Rajkot	æ	2	5.4	8	Gujarat	3516	138	Surendranagar	22.8	71.6
3	Hissar	4	4	4.2	4	Haryana	3605	177	Hissar	29.5	75.7

REGION	REG_NAME	AEZ1	AEZ_NATP <sup>2</sup>	AEZ_NATP_PS <sup>3</sup> ST CODE ST NAME	ST COD	E ST NAME	INDIA ID	DIST <sup>4</sup>	DIST NAME	LAT	LONG
2	Gurgaon	2	4	4.2	4	Haryana	3604	180	Gurgaon	28.5	76.8
e	Hissar	7	4	4.1	4	Haryana	3606	181	Jind	29.5	76.4
2	Gurgaon	7	4	4.2	4	Haryana	3609	182	Mahendragarh/ Narnaul	28.4	76.2
1	Ambala	2	4	4.1	4	Haryana	3601	183	Ambala	30.4	7.97
4	Rohtak	2	4	4.1	4	Haryana	3607	184	Karnal	29.7	77.0
4	Rohtak	4	4	4.2	4	Haryana	3610	186	Rohtak	28.9	9.92
1	Bangalore	33	2	5.2	2	Karnataka	3901	64	Bangalore	13.0	77.6
1	Bangalore	3	2	5.2	2	Karnataka	3913	9	Kolar	13.1	78.1
1	Bangalore	3	2	5.2	2	Karnataka	3918	99	Tumkur	13.4	77.1
4	Mysore	33	2	5.2	2	Karnataka	3915	29	Mysore	12.1	76.3
4	Mysore	3	2	5.2	2	Karnataka	3914	89	Mandya	12.8	77.8
4	Mysore	Н	2	5.2	2	Karnataka	3911	69	Hassan	13.0	76.2
1	Bangalore	Т	2	5.2	2	Karnataka	3917	70	Shimoge	13.9	75.6
4	Mysore	1	2	5.2	2	Karnataka	3906	71	Chickmagalur	13.3	75.8
1	Bangalore	3	2	5.2	2	Karnataka	3907	72	Chitradurga	14.2	76.4
3	Gulbarga	4	2	5.2	2	Karnataka	3903	73	Bellary	15.2	76.9
2	Belgaum	3	2	5.2	2	Karnataka	3909	74	Dharwad	15.5	75.0
2	Belgaum	3	2	5.2	2	Karnataka	3902	75	Belgaum	15.9	74.5
2	Belgaum	3	2	5.2	2	Karnataka	3905	92	Bijapur/Vijayapura	16.8	75.7
3	Gulbarga	3	2	5.2	2	Karnataka	3904	77	Bidar	17.9	77.5
3	Gulbarga	3	2	5.2	2	Karnataka	3916	78	Raichur	16.2	77.4
3	Gulbarga	3	2	5.2	2	Karnataka	3910	79	Gulbarga/Kalaburagi	17.4	76.9
4	Mysore	П	2	2.2	2	Karnataka	3908	80	Dakshina Kannada	12.9	74.9
2	Belgaum	$\vdash$	2	2.2	2	Karnataka	3919	81	Uttara Kannada	14.8	75.5
4	Mysore	1	5	5.2	2	Karnataka	3912	82	Kodagu/Coorg	12.4	75.7
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REGION	REG_NAME	AEZ	AEZ_NATP2	AEZ_NATP_PS ST CODE ST NAME	ST COD	E ST NAME	INDIA ID	DIST <sup>4</sup>	DIST NAME	LAT	LONG
1	Jabalpur	3	5	5.1	9	Madhya Pradesh	1019	7	Jabalpur	23.0	80.0
1	Jabalpur	$\vdash$	2	5.1	9	Madhya Pradesh	1001	∞	Balaghat	22.1	9.08
1	Jabalpur	3	2	5.3	9	Madhya Pradesh	1008	6	Chhindwara	22.1	79.0
1	Jabalpur	П	2	5.3	9	Madhya Pradesh	1024	10	Narsinghpur	22.8	79.0
1	Jabalpur	П	2	5.3	9	Madhya Pradesh	1037	11	Seoni/Shivani	22.1	79.7
1	Jabalpur	$\vdash$	2	5.1	9	Madhya Pradesh	1021	12	Mandla	25.0	88.1
2	Sagar	3	5	5.3	9	Madhya Pradesh	1033	13	Sagar	23.9	78.8
2	Sagar	3	5	5.1	9	Madhya Pradesh	1009	14	Damoh	24.1	9.62
2	Sagar	2	5	5.3	9	Madhya Pradesh	1042	15	Tikamgarh	24.9	78.9
2	Sagar	2	5	5.3	9	Madhya Pradesh	1007	16	Chhatarpur	25.1	79.5
2	Sagar	2	5	5.1	9	Madhya Pradesh	1025	17	Panna	24.3	80.0
3	Rewa	2	2	5.1	9	Madhya Pradesh	1032	18	Rewa	24.5	81.3
3	Rewa	3	5	5.1	9	Madhya Pradesh	1041	19	Sidhi	24.3	82.0
3	Rewa	2	5	5.1	9	Madhya Pradesh	1035	20	Satna	24.6	80.1
33	Rewa	3	2	5.1	9	Madhya Pradesh	1038	21	Shahdol	23.5	81.1
9	Chambal	2	2	5.3	9	Madhya Pradesh	1016	22	Gwalior	26.2	78.3
9	Chambal	3	2	5.3	9	Madhya Pradesh	1040	23	Shivpuri	24.6	77.5
9	Chambal	3	2	5.3	9	Madhya Pradesh	1015	24	Guna	24.7	77.3
9	Chambal	2	2	5.3	9	Madhya Pradesh	1010	25	Datia	25.7	78.5
9	Chambal	2	2	5.3	9	Madhya Pradesh	1023	56	Morena	25.1	76.7
9	Chambal	2	2	5.3	9	Madhya Pradesh	1004	27	Bhind	21.9	7.77
4	Indore	3	2	5.3	9	Madhya Pradesh	1018	28	Indore	22.7	75.8
2	Ujjain	3	2	5.3	9	Madhya Pradesh	1031	29	Ratlam	23.0	75.0
2	Ujjain	3	2	5.3	9	Madhya Pradesh	1043	30	Ujjain	23.3	75.7
2	Ujjain	3	2	5.3	9	Madhya Pradesh	1022	31	Mandsaur	24.3	75.2
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REGION	REG_NAME	AEZ1	AEZ_NATP <sup>2</sup>	AEZ_NATP_PS3	ST CODI	ST CODE ST NAME	INDIA ID	DIST <sup>4</sup>	DIST NAME	LAT	LONG
5	Ujjain	æ	5	5.3	9	Madhya Pradesh	1011	32	Dewas	22.6	76.4
4	Indore	m	2	5.3	9	Madhya Pradesh	1012	33	Dhar	22.5	75.0
4	Indore	m	2	5.3	9	Madhya Pradesh	1020	34	Jhabua	22.6	74.4
4	Indore	m	2	5.3	9	Madhya Pradesh	1045	35	Khargone/West Nimar	21.9	75.4
4	Indore	m	2	5.3	9	Madhya Pradesh	1014	36	Khandwa/East Nimar	21.1	76.4
7	Bhopal	m	2	5.3	9	Madhya Pradesh	1036	37	Sehore	22.9	77.1
7	Bhopal	m	2	5.3	9	Madhya Pradesh	1028	38	Raisen	23.2	78.2
7	Bhopal	m	2	5.3	9	Madhya Pradesh	1044	39	Vidisha	23.9	77.9
7	Bhopal	m	2	5.3	9	Madhya Pradesh	1003	40	Betul	21.9	77.9
7	Bhopal	m	2	5.3	9	Madhya Pradesh	1029	41	Rajgarh	23.9	76.8
2	Ujjain	m	2	5.3	9	Madhya Pradesh	1039	42	Shajapur	23.4	76.4
7	Bhopal	က	2	5.3	9	Madhya Pradesh	1017	43	Hoshangabad	22.8	77.8
₽	Konkan	1	2	2.2	7	Maharashtra	1111	92	Bombay	18.9	72.8
П	Konkan	1	2	2.2	7	Maharashtra	1128	96	Thane	20.0	72.7
$\vdash$	Konkan	1	2	2.2	7	Maharashtra	1123	97	Raigad	18.4	73.1
₽	Konkan	1	2	2.2	7	Maharashtra	1119	86	Ratnagiri	17.0	73.0
2	Nasik	က	2	5.2	7	Maharashtra	1118	66	Nasik	20.6	74.5
2	Nasik	æ	2	5.2	7	Maharashtra	1109	100	Dhule	21.1	74.6
2	Nasik	æ	2	5.4	7	Maharashtra	1112	101	Jalgaon	21.1	75.6
3	Pune	c	2	5.2	7	Maharashtra	1101	102	Ahmednagar	19.1	74.9
3	Pune	æ	2	5.2	7	Maharashtra	1122	103	Pune	18.5	73.9
4	Kolhapur	æ	2	5.2	7	Maharashtra	1125	104	Satara	17.4	73.6
4	Kolhapur	ĸ	2	5.2	7	Maharashtra	1124	105	Sangli	16.9	74.8
3	Pune	æ	2	5.2	7	Maharashtra	1127	106	Solapur	17.1	75.9
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REGION	REG_NAME	AEZ <sup>1</sup>	AEZ_NATP <sup>2</sup>	AEZ_NATP_PS <sup>3</sup> §	ST COD	ST CODE ST NAME	INDIA ID	DIST <sup>4</sup>	DIST NAME	LAT	LONG
5	Aurangabad	က	5	5.2	7	Maharashtra	1104	108	Aurangabad	19.9	75.3
9	Latur	33	2	5.4	7	Maharashtra	1121	109	Parbhani	19.1	76.1
2	Aurangabad	3	2	5.2	7	Maharashtra	1105	110	Beed	19.0	75.8
9	Latur	33	2	5.4	7	Maharashtra	1117	111	Nanded	19.1	77.2
9	Latur	33	2	5.2	7	Maharashtra	1120	112	Osmanabad	18.0	76.1
7	Amravati	3	2	5.4	7	Maharashtra	1107	113	Buldhana	20.5	76.2
7	Amravati	3	2	5.4	7	Maharashtra	1102	114	Akola	20.7	77.0
7	Amravati	3	2	5.4	7	Maharashtra	1103	115	Amarawati	20.9	77.8
7	Amravati	3	2	5.4	7	Maharashtra	1130	116	Yeotmal	20.4	78.1
∞	Nagpur	3	2	5.4	7	Maharashtra	1129	117	Wardha	20.9	78.4
<b>∞</b>	Nagpur	3	2	5.4	7	Maharashtra	1116	118	Nagpur	21.2	79.1
∞	Nagpur	1	2	5.1	7	Maharashtra	1106	119	Bhandara	20.0	79.3
∞	Nagpur	1	2	5.4	7	Maharashtra	1108	120	Chandrapur	19.4	80.0
Н	Coastal plains	1	2	2.1	∞	Odisha	1502	701	Balasore	21.1	86.9
3	Central plateau	1	2	5.1	∞	Odisha	1501	702	Bolangir	20.3	83.2
1	Coastal plains	1	2	2.1	∞	Odisha	1503	703	Cuttack	20.8	85.9
3	Central plateau	1	2	5.1	∞	Odisha	1504	704	Dhenkanal	20.7	85.6
Т	Coastal plains	1	2	2.1	∞	Odisha	1505	705	Ganjam	19.3	84.9
2	Southwestern plateau	⊣	Ŋ	5.1	∞	Odisha	1506	902	Kalahandi	19.3	83.1
4	Northern plateau	1	2	5.1	∞	Odisha	1507	707	Keonjhar	21.6	85.6
2	Southwestern plateau	П	ις	5.1	∞	Odisha	1508	708	Koraput	18.8	82.7
4	Northern plateau	1	2	5.1	∞	Odisha	1509	402	Mayurbhanja	19.1	86.4
2	Southwestern plateau	П	ιν	5.1	∞	Odisha	1510	710	Phulbani (Kandhamal)	20.1	84.4

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REGION	REG_NAME	AEZ1	AEZ_NATP2	AEZ_NATP_PS3	ST COD	ST CODE ST NAME	INDIA ID	DIST <sup>4</sup>	DIST NAME	LAT	FONG
1	Coastal plains	1	2	2.1	∞	Odisha	1511	711	Puri	19.8	85.8
e	Central plateau	ĸ	5	5.1	∞	Odisha	1512	712	Sambalpur	21.5	84.0
4	Northern plateau	33	2	5.1	∞	Odisha	1513	713	Sundargarh	21.5	84.9
2	Mojha	2	4	4.1	6	Punjab	1604	165	Gurdaspur	32.3	75.7
2	Mojha	2	4	4.1	6	Punjab	1601	166	Amritsar	31.6	74.9
3	Dobra	2	4	4.1	6	Punjab	1608	167	Kapurthala	31.1	75.4
3	Dobra	2	4	4.1	6	Punjab	1607	168	Jalandhar	31.5	75.6
3	Dobra	2	4	4.1	6	Punjab	1606	169	Hoshiarpur	31.6	75.9
1	Malwa	2	4	4.1	6	Punjab	1611	170	Roopnagar/Ropar	30.3	76.5
1	Malwa	2	4	4.1	6	Punjab	1609	171	Ludhiana	30.9	75.9
2	Mojha	4	4	4.1	6	Punjab	1605	172	Ferozpur	30.9	74.6
1	Malwa	4	4	4.2	6	Punjab	1602	174	Bhatinda	31.6	75.3
1	Malwa	4	4	4.1	6	Punjab	1612	175	Sangrur	31.0	75.9
1	Malwa	2	4	4.1	6	Punjab	1610	176	Patiala	30.0	76.5
2	Ajmer	3	2	5.3	10	Rajasthan	1701	139	Ajmer	26.5	74.6
3	Jaipur	2	4	4.2	10	Rajasthan	1702	140	Alwar	26.4	9.92
2	Udaipur	3	2	5.3	10	Rajasthan	1703	141	Banswara	23.6	74.5
4	Jodhpur	4	1	1.1	10	Rajasthan	1704	142	Barmer	25.8	71.4
3	Jaipur	2	4	4.2	10	Rajasthan	1705	143	Bharatpur	26.7	77.9
2	Ajmer	8	2	5.3	10	Rajasthan	1706	144	Bhilwara	25.6	74.9
1	Bikaner	4	1	1.2	10	Rajasthan	1707	145	Bikaner	28.0	73.3
9	Kota	3	2	5.3	10	Rajasthan	1708	146	Bundi	25.6	75.7
2	Udaipur	8	5	5.3	10	Rajasthan	1709	147	Chittorgarh	24.8	75.5
1	Bikaner	4	1	1.2	10	Rajasthan	1710	148	Churu	28.4	74.4
5	Udaipur	3	5	5.3	10	Rajasthan	1712	149	Dungarpur	23.8	73.9
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REGION	REG_NAME	AEZ1	AEZ_NATP <sup>2</sup>	AEZ_NATP_PS <sup>3</sup>	ST COD	ST CODE ST NAME	INDIA ID	DIST <sup>4</sup>	DIST NAME	LAT	DNOT
1	Bikaner	4	4	4.2	10	Rajasthan	1713	150	Ganganagar	29.9	73.9
3	Jaipur	2	4	4.2	10	Rajasthan	1714	151	Jaipur	26.9	75.8
4	Jodhpur	4	Т	1.1	10	Rajasthan	1715	152	Jaisalmer	26.9	70.9
4	Jodhpur	4	Н	1.1	10	Rajasthan	1716	153	Jalore	25.1	72.2
9	Kota	3	2	5.3	10	Rajasthan	1717	154	Jhalawar	24.5	76.2
3	Jaipur	4	Н	1.1	10	Rajasthan	1718	155	Jhunjhunu	28.1	75.5
4	Jodhpur	4	7	1.1	10	Rajasthan	1719	156	Jodhpur	26.3	73.1
9	Kota	3	2	5.3	10	Rajasthan	1720	157	Kota	25.2	75.9
2	Ajmer	4	T	1.1	10	Rajasthan	1721	158	Nagaur	27.0	74.0
4	Jodhpur	33	T	1.1	10	Rajasthan	1722	159	Pali	25.7	73.6
9	Kota	2	2	5.3	10	Rajasthan	1723	160	Swami Madhopur	26.4	76.8
3	Jaipur	2	Т	1.1	10	Rajasthan	1724	161	Sikar	27.6	75.1
4	Jodhpur	3	7	1.1	10	Rajasthan	1726	162	Sirohi	24.7	72.7
2	Ajmer	3	2	5.3	10	Rajasthan	1725	163	Tonk	26.1	75.6
2	Udaipur	3	2	5.3	10	Rajasthan	1727	164	Udaipur	24.6	73.7
7	Tondai Nadu	Н	2	2.1	11	Tamil Nadu	1901	83	Chengalpattu MGR/ Kanchipuram	24.6	79.9
2	Tondai Nadu	1	2	2.1	11	Tamil Nadu	1915	84	South Arcot/ Cuddalore	9.3	78.3
2	Tondai Nadu	3	2	5.1	11	Tamil Nadu	1909	85	North Arcot/Vellore	12.9	79.2
3	Kongu Nadu	3	2	5.3	11	Tamil Nadu	1914	98	Salem	11.7	78.0
3	Kongu Nadu	3	2	5.1	11	Tamil Nadu	1902	87	Coimbatore	11.0	77.0
$\vdash$	Chola Nadu	3	2	5.1	11	Tamil Nadu	1917	88	Tiruchirapalli/Trichy	10.8	78.7
П	Chola Nadu	3	2	2.1	11	Tamil Nadu	1916	89	Thanjavur	10.8	79.9
4	Pandya Nadu	3	5	5.1	11	Tamil Nadu	1907	90	Madurai	9.6	78.1

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REGION	REG_NAME	AEZ	AEZ_NATP	AEZ_NATP_PS	T COD	ST CODE ST NAME	INDIA ID	DIST.	DIST NAME	LAT	LONG
4	Pandya Nadu	33	2	2.1	11	Tamil Nadu	1913	91	Ramananthapuram	9.5	78.5
4	Pandya Nadu	n	2	5.1	11	Tamil Nadu	1918	95	Thirunelveli	8.7	77.8
3	Kongu Nadu	Т	2	5.1	11	Tamil Nadu	1908	93	The Nilgiris	11.4	77.4
4	Pandya Nadu	33	2	2.2	11	Tamil Nadu	1905	94	Kanyakumari	8.3	77.3
2	Tondai Nadu	0	2	2.1	11	Tamil Nadu	1929	666	Chennai	13.1	80.2
1	Saharanpur	2	4	4.3	12	Uttar Pradesh	2150	189	Saharanpur	29.9	77.9
1	Saharanpur	2	4	4.3	12	Uttar Pradesh	2143	190	Muzaffarnagar	29.5	7.77
3	Meerut	2	4	4.3	12	Uttar Pradesh	2140	191	Meerut	29.0	7.77
3	Meerut	2	4	4.1	12	Uttar Pradesh	2114	192	Bulandshahar	28.3	77.9
2	Aligarh	2	4	4.1	12	Uttar Pradesh	2102	194	Aligarh	27.9	78.1
4	Agra	7	4	4.1	12	Uttar Pradesh	2139	195	Mathura	27.6	77.6
4	Agra	2	4	4.1	12	Uttar Pradesh	2101	196	Agra	27.2	78.0
4	Agra	2	4	4.1	12	Uttar Pradesh	2138	197	Mainpuri	27.3	79.1
2	Aligarh	2	4	4.1	12	Uttar Pradesh	2118	198	Etah	27.6	78.8
9	Bareilly	2	4	4.1	12	Uttar Pradesh	2110	199	Bareilly	28.4	79.4
9	Bareilly	2	4	4.1	12	Uttar Pradesh	2113	200	Budaun	28.1	79.0
2	Moradabad	2	4	4.3	12	Uttar Pradesh	2142	201	Moradabad	28.7	78.7
9	Bareilly	2	4	4.1	12	Uttar Pradesh	2151	202	Shahjahanpur	28.0	79.9
9	Bareilly	2	4	4.1	12	Uttar Pradesh	2145	203	Pilibhit	28.5	79.9
2	Moradabad	2	4	4.1	12	Uttar Pradesh	2149	204	Rampur	28.8	79.1
2	Moradabad	2	4	4.3	12	Uttar Pradesh	2112	205	Bijnor	28.7	78.7
∞	Kanpur	2	4	4.1	12	Uttar Pradesh	2121	506	Farrukhabad	27.2	79.5
∞	Kanpur	2	4	4.1	12	Uttar Pradesh	2119	207	Etawah	27.1	78.7
∞	Kanpur	2	4	4.1	12	Uttar Pradesh	2133	208	Kanpur	26.4	80.3
11	Allahabad	2	4	4.1	12	Uttar Pradesh	2122	209	Fatehpur	25.9	80.1
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REGION	REG_NAME	AEZ1	AEZ_NATP <sup>2</sup> A	AEZ_NATP_PS3	ST COD	ATP_PS3 ST CODE ST NAME	INDIA ID	DIST <sup>4</sup>	DIST NAME	LAT	LONG
11	Allahabad	2	4	4.1	12	Uttar Pradesh	2103	210	Allahabad	25.5	81.7
6	Jhansi	2	2	5.3	12	Uttar Pradesh	2132	211	Jhansi	25.5	78.6
6	Jhansi	2	2	5.3	12	Uttar Pradesh	2130	213	Jalaun	26.0	79.5
10	Chitrakut	2	2	5.3	12	Uttar Pradesh	2128	214	Hamirpur	25.5	79.9
10	Chitrakut	2	2	5.3	12	Uttar Pradesh	2108	215	Banda	25.5	80.4
17	Varanasi	2	4	4.1	12	Uttar Pradesh	2157	216	Varanasi	25.3	83.0
18	Vindhyachal	2	4	4.1	12	Uttar Pradesh	2141	217	Mirzpur	25.0	82.6
17	Varanasi	2	4	4.1	12	Uttar Pradesh	2131	218	Jaunpur	25.7	82.6
17	Varanasi	2	4	4.1	12	Uttar Pradesh	2125	219	Ghazipur	25.7	83.6
16	Azamgarh	2	4	4.1	12	Uttar Pradesh	2107	220	Ballia	25.9	84.0
15	Gorakhpur	П	4	4.1	12	Uttar Pradesh	2127	221	Gorakhpur	26.8	83.4
15	Gorakhpur	П	4	4.1	12	Uttar Pradesh	2117	222	Deoria	26.8	83.9
14	Basti	2	4	4.1	12	Uttar Pradesh	2111	223	Basti	26.8	82.8
16	Azamgarh	2	4	4.1	12	Uttar Pradesh	2105	224	Azamgarh	26.0	83.2
7	Lucknow	2	4	4.1	12	Uttar Pradesh	2137	225	Lucknow	26.9	80.9
7	Lucknow	2	4	4.1	12	Uttar Pradesh	2155	226	Unnao	26.6	80.5
7	Lucknow	2	4	4.1	12	Uttar Pradesh	2148	227	Rae-Bareily	26.2	81.2
7	Lucknow	2	4	4.1	12	Uttar Pradesh	2152	228	Sitapur	27.6	80.8
7	Lucknow	2	4	4.1	12	Uttar Pradesh	2129	229	Hardoi	27.4	80.1
7	Lucknow	П	4	4.1	12	Uttar Pradesh	2135	230	Kheri	27.9	80.8
12	Faizabad	2	4	4.1	12	Uttar Pradesh	2120	231	Faizabad	26.5	82.4
13	Devipatan	П	4	4.1	12	Uttar Pradesh	2126	232	Gonda	27.1	82.0
13	Devipatan	Т	4	4.1	12	Uttar Pradesh	2106	233	Bahraich	27.6	81.6
12	Faizabad	2	4	4.1	12	Uttar Pradesh	2153	234	Sultanpur	26.2	82.0
11	Allahabad	2	4	4.1	12	Uttar Pradesh	2147	235	Pratapgarh	25.8	81.8

REGION	REG_NAME	AEZ <sup>1</sup>	AEZ_NATP2		AEZ_NATP_PS3 ST (	CODE	ST CODE ST NAME	INDIA ID	DIST <sup>4</sup>	DIST NAME	LAT	LONG
12	Faizabad	2	4	4	4.1	12	Uttar Pradesh	2109	236	Barabanki	26.9	81.3
3	Presidency	Т	4	4	4.1	13	West Bengal	2215	800	24 Parganas	22.4	9.88
3	Presidency	Н	4	4	1.1	13	West Bengal	2213	803	Nadia	23.4	88.5
3	Presidency	⊣	4	4	4.1	13	West Bengal	2212	804	Murshidabad	24.1	88.3
2	Burdwan	Т	4	4	1.1	13	West Bengal	2202	802	Burdwan	23.2	87.9
2	Burdwan	Н	4	4	4.1	13	West Bengal	2203	908	Birbhum	23.7	87.7
2	Burdwan	⊣	2	5	5.1	13	West Bengal	2201	807	Bankura	24.4	87.2
2	Burdwan	⊣	4	4	4.1	13	West Bengal	2207	810	Hooghly	22.9	88.3
3	Presidency	⊣	4	4	4.1	13	West Bengal	2206	811	Howrah	22.6	88.0
T	Jalpaiguri	$\vdash$	က	ĸ	2.5	13	West Bengal	2208	812	Jalpaiguri	26.5	88.7
1	Jalpaiguri	1	က	κi	2.5	13	West Bengal	2205	813	Darjeeling	27.1	88.3
1	Jalpaiguri	$\vdash$	4	4	4.1	13	West Bengal	2210	814	Malda	25.0	88.1
1	Jalpaiguri	7	2	5	5.1	13	West Bengal	2209	816	Cooch Behar	26.0	89.5
2	Burdwan	$\vdash$	2	5	5.1	13	West Bengal	2214	817	Purulia	23.0	86.4
2	Burdwan	Т	2	5	5.1	13	West Bengal	2211	818	Midnapur	22.4	87.3
3	Presidency	Т	2	5	5.1	13	West Bengal	2220	821	Kolkata	24.0	88.0
1	Jalpaiguri	Т	2	5	5.1	13	West Bengal	2216	822	West Dinajpur	25.5	88.4
2	Durg	3	2	5	5.1	14	Chhattisgarh	1013	$\vdash$	Durg	21.2	81.3
1	Bastar	Т	2	5	5.1	14	Chhattisgarh	1002	2	Bastar	19.1	82.0
3	Raipur	3	2	5	5.1	14	Chhattisgarh	1027	33	Raipur	21.2	81.7
4	Bilaspur	3	2	5	5.1	14	Chhattisgarh	1006	4	Bilaspur	22.1	82.1
4	Bilaspur	3	2	5	5.1	14	Chhattisgarh	1026	2	Raigarh	21.9	83.4
2	Surguja	3	2	5	5.1	14	Chhattisgarh	1034	9	Surguja	23.1	83.2
4	Santhal Paragana	cc	2	5	5.1	15	Jharkhand	3442	910	Santhal Paragana/ Dumka	24.9	97.8

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REGION	REG_NAME	AEZ <sup>1</sup>	AEZ_NATP <sup>2</sup>	AEZ_NATP_PS <sup>3</sup> ST CODE ST NAME	ST COD	E ST NAME	INDIA ID	DIST <sup>4</sup>	DIST NAME	LAT	FONG
2	North Chotanagpur	Т	2	5.1	15	Jharkhand	3413	913	Hazaribagh	24.0	85.4
2	North Chotanagpur	1	2	5.1	15	Jharkhand	3407	914	Dhanbad	23.8	86.4
3	Palamau	3	2	5.1	15	Jharkhand	3423	915	Palamau	24.1	84.1
1	South Chotanagpur	1	2	5.1	15	Jharkhand	3428	916	Ranchi	23.4	85.0
2	Kolhan	1	2	5.1	15	Jharkhand	3436	917	Singhbhum	22.7	86.0
2	Kumaon divions	Т	c	3.3	16	Uttarakhand	2144	237	Nainital	29.5	79.7
2	Kumaon divions	1	c	3.3	16	Uttarakhand	2104	238	Almorah	29.8	79.5
2	Kumaon divions	⊣	3	3.3	16	Uttarakhand	2146	239	Pithorgarh	30.0	80.4
1	Garhwal	4	3	3.3	16	Uttarakhand	2115	240	Chamoli	30.5	79.7
1	Garhwal	4	33	3.3	16	Uttarakhand	2156	241	Uttar Kashi	30.9	78.5
1	Garhwal	⊣	3	3.3	16	Uttarakhand	2154	242	Tehri Garhwal	30.5	78.7
1	Garhwal	$\vdash$	3	3.3	16	Uttarakhand	2123	243	Garhwal	29.9	78.9
1	Garhwal	$\vdash$	3	3.3	16	Uttarakhand	2116	244	Dehradun	30.3	78.0
2	Uppar brahamaputra	7	m	3.2	17	Assam	3315	601	Cachar	24.5	92.5
$\leftarrow$	Lower brahamaputra	1	2	5.1	17	Assam	3304	602	Darrang	26.9	92.2
2	Uppar brahamaputra	7	Ŋ	5.1	17	Assam	3303	603	Dibrugarh	27.3	94.5
$\vdash$	Lower brahamaputra	7	Ŋ	5.1	17	Assam	3305	604	Goalpara	26.1	90.4
П	Lower brahamaputra	7	Ŋ	5.1	17	Assam	3306	909	Kamrup	26.1	91.4
2	Uppar brahamaputra	Н	က	3.2	17	Assam	3308	909	Karbi Anglong	25.5	93.3
2	Uppar brahamaputra	1	5	5.1	17	Assam	3312	209	Lakhimpur	27.1	94.1

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REGION	REG_NAME	$AEZ^1$	AEZ_NATP2	AEZ_NATP_PS <sup>3</sup>	ST CODI	ATP_PS <sup>3</sup> ST CODE ST NAME	INDIA ID	DIST <sup>4</sup>	DIST NAME	LAT	FONG
2	Uppar brahamaputra	1	8	3.2	17	Assam	3311	809	North Cachar Hil/ Dima hasao	25.1	93.0
$\vdash$	Lower brahamaputra	1	Ŋ	5.1	17	Assam	3313	609	Nagaon	26.2	92.4
7	Uppar brahamaputra	1	5	5.1	17	Assam	3314	610	Sibsagar	26.6	94.4
1	Low hills	П	က	3.3	18	Himachal Pradesh	3701	979	Bilashpur	31.2	76.4
7	Low hills	1	က	3.3	18	Himachal Pradesh	3702	627	Chamba	32.6	76.4
1	Low hills	1	က	3.3	18	Himachal Pradesh	3704	679	Kangra	31.9	76.5
4	Very high hills	1	ĸ	3.1	18	Himachal Pradesh	3705	630	Kinnaur	31.6	78.2
2	Mid hills	1	က	3.3	18	Himachal Pradesh	3706	631	Kullu	31.7	77.0
4	Very high hills	2	က	3.1	18	Himachal Pradesh	3707	632	Lahul & Spiti	32.4	77.5
2	Mid hills	1	ĸ	3.3	18	Himachal Pradesh	3711	633	Solan	30.6	76.8
3	High hills	1	က	3.3	18	Himachal Pradesh	3708	634	Mandi	31.6	76.8
3	High hills	1	က	3.3	18	Himachal Pradesh	3709	635	Shimla	30.9	9.77
3	High hills	1	က	3.3	18	Himachal Pradesh	3710	989	Sirmaur	30.6	77.3
3	Travancore (SK)	1	2	2.2	19	Kerala	4001	651	Alappuzha	9.3	76.2
1	Malabar (NK)	1	2	2.2	19	Kerala	4002	652	Kannur	11.5	75.3
2	Kochi (CK)	1	2	2.2	19	Kerala	4003	653	Eranakulam	10.0	76.2
3	Travancore (SK)	П	2	2.2	19	Kerala	4006	655	Kottayam	9.4	76.3
7	Malabar (NK)	1	2	2.2	19	Kerala	4007	929	Kozhikode	11.2	75.5
Н	Malabar (NK)	П	2	2.2	19	Kerala	4008	657	Malappuram	11.0	76.1
2	Kochi (CK)	П	2	2.2	19	Kerala	4009	829	Palakkad	10.5	76.4
3	Travancore (SK)	1	2	2.2	19	Kerala	4011	629	Kollam	8.5	76.4
2	Kochi (CK)	1	2	2.2	19	Kerala	4012	099	Thrissur	10.3	76.2
8	Travancore (SK)	1	2	2.2	19	Kerala	4013	661	Thiruvananthapuram	8.3	76.6

REGION	REGION REG_NAME	AEZ <sup>1</sup>	AEZ_NATP2 A	AEZ¹ AEZ_NATP² AEZ_NATP_PS³ ST CODE ST NAME	ST COD	E ST NAME	INDIA ID	DIST <sup>4</sup>	INDIA ID DIST <sup>4</sup> DIST NAME	LAT	LONG
3	Telangana	3	5	5.1	20	Telangana	3207	55	Hyderabad	17.5	78.5
3	Telangana	3	2	5.1	20	Telangana	3216	26	Nizamabad	18.1	78.1
3	Telangana	3	2	5.1	20	Telangana	3213	22	Medak	17.6	78.0
3	Telangana	3	2	5.1	20	Telangana	3212	28	Mahabubnagar	16.7	78.0
3	Telangana	3	2	5.1	20	Telangana	3214	29	Nalgonda	17.1	79.3
3	Telangana	3	2	5.1	20	Telangana	3222	09	Warangal	18.0	9.62
3	Telangana	П	2	5.1	20	Telangana	3209	61	Khammam	17.7	80.9
3	Telangana	3	2	5.1	20	Telangana	3208	62	Karimnagar	18.4	79.0
8	Telangana	c	2	5.1	20	Telangana	3201	63	Adilabad	19.4	79.3

<sup>1</sup> AEZ: Agro-Ecological Zone; Humid (LGP > 180 days); 2 = Semi-Arid Temperate (LGP = 75-179 days, Temp = < 18°C); 3 = Semi-Arid Tropic (LGP = 75-179 days, Temp = > 18°C) and 4 = Arid (LGP = 0.74 days).

<sup>2</sup> AEZ\_NATP: Agro-Ecological Zone - National Agricultural Technology Programme; 1= Arid; 2 = Coastal; 3 = Hill & mountain; 4= Irrigated and 5 = Rainfed.

<sup>3</sup> AEZ\_NATP\_PS; Agro-Ecological Zone NATP Production System; 1.1 = Pearl Millet; 1.2 = Pearl Millet-Oilseeds; 2.1 = Rice-Groundnut-Fruits; 2.2 = Coconut-Rice-Fruits; 3.1 = Horticulture; 3.2 = Rice-Maize-Fruits; 4.1 = Rice-Wheat; 4.2 = Cotton-Wheat; 4.3 = Sugarcane-Wheat; 5.1 = Rice; 5.2 = Coarse cereal; 5.3 = Oilseed and 5.4 = Cotton

<sup>4</sup> DIST : District code;