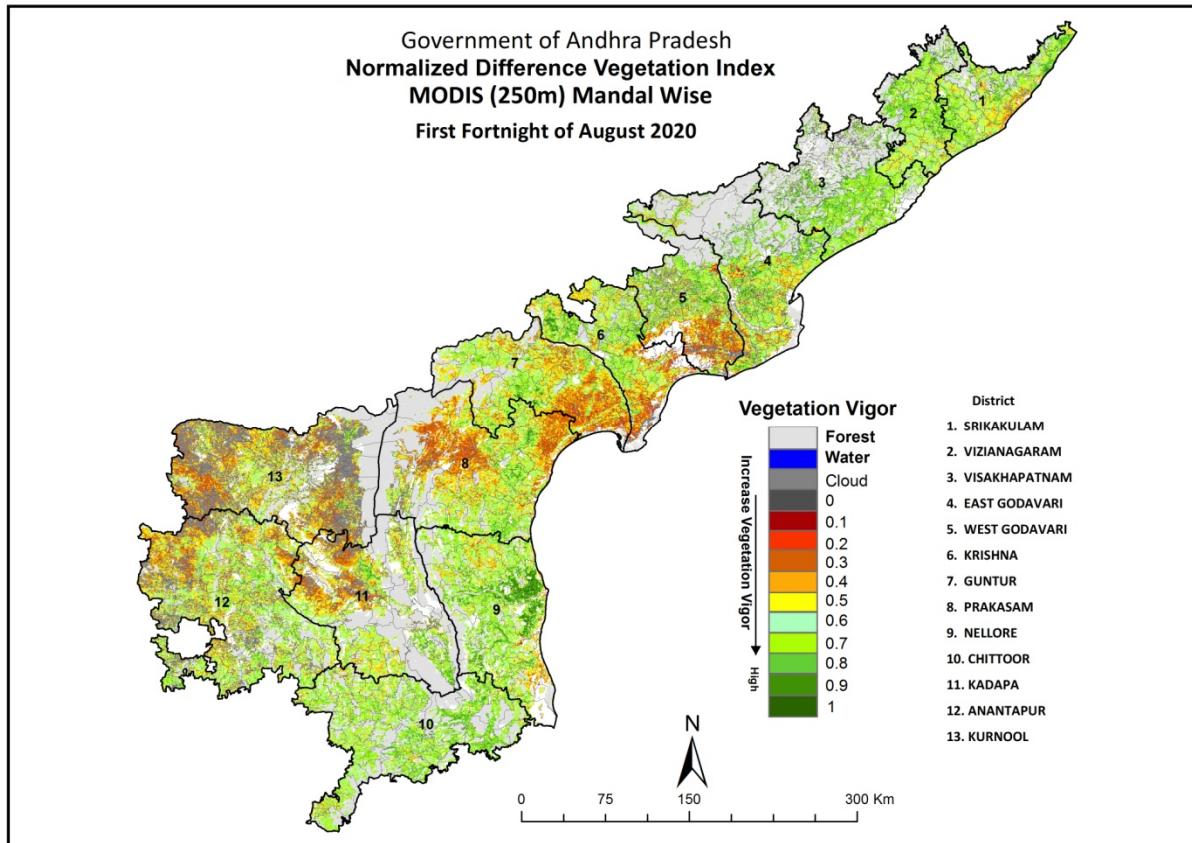




Report-Drought Monitoring

Remote sensing Indicators (NDVI, NDWI and VCI) for Drought Declaration in Andhra Pradesh State up to 1st Fortnight of August 2020 (Kharif Season)



Prepared by-

Andhra Pradesh Space Applications Centre (APSAC)

Agriculture & Soils Division

ITE&C Department, Government of Andhra Pradesh

Vijayawada-520010, web site : www.apsac.ap.gov.in

Prepared for-

Andhra Pradesh State Disaster Management Authority (APSDMA)

Revenue (DM) Department

Genious, JR Towers, Kunchanapalli,

Guntur, Govt. of Andhra Pradesh



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Background

Advancements in satellite remote sensing technology has enabled regular monitoring of crop conditions/vigour over large regions. Among the various spectral vegetation indices commonly derived from remote sensing data, Normalized Difference Vegetation Index (NDVI) is most widely used for operational assessment of drought owing to the ease in calculation and interpretation and also its ability to partially compensate for the effects of atmosphere, illumination geometry etc. NDVI is derived using the formula $(NIR - Red) / (NIR + Red)$, where NIR and Red are the reflectance in visible and near infrared channels. Water, clouds and snow have higher reflectance in the visible region and consequently NDVI assumes negative values for these features. Bare soil and rocks exhibit similar reflectance in both visible and near IR regions and the index values are near zero. The NDVI values for vegetation generally range from 0.2 to 0.6, the higher index values being associated with greater green leaf area and biomass. Shortwave Infrared (SWIR) band is sensitive to moisture available in soil as well as in crop canopy. In the beginning of the cropping season, soil background is dominant hence SWIR is sensitive to soil moisture in the top 1-2 cm. As the crop growth progresses, SWIR becomes sensitive to leaf moisture content. SWIR band provides only surface wetness information. Normalized Difference Wetness Index (NDWI), computed using SWIR data, can complement NDVI for drought assessment particularly in the beginning of the cropping season. NDWI is derived as follows: $NDWI = (NIR - SWIR) / (NIR + SWIR)$ where, NIR and SWIR are the reflected radiation in Near-Infrared and Shortwave Infrared channels. Higher values of NDWI signify more surface wetness. Satellite based crop condition anomalies which point towards agricultural drought can be generated by computing Vegetation Condition Index (VCI) of NDVI and VCI of NDWI. While combining VCI of NDVI and NDWI, the minimum of two values can be taken, i.e. if at least one is in Severe category, the category will be considered as Severe. If at least one is moderate then category will be taken as moderate (**As per the Drought manual:2016 and amendments**). Fortnightly (FN) NDVI, NDWI and VCI status is being generated and submitted to Andhra Pradesh State Disaster Management Authority for monitoring and Declaration of drought at mandal level in the state of Andhra Pradesh.

VCI Value (%)	Vegetation Condition	Description
60-100	Normal	Crop condition is Normal
40-60	Moderate	Crop condition is Moderate
0-40	Severe	Crop condition is Severe

2. Vegetation Index

The NDVI (Normalized Difference of Vegetation Index) for the 1st fortnight (FN) of August 2020 is shown in the figure 1.

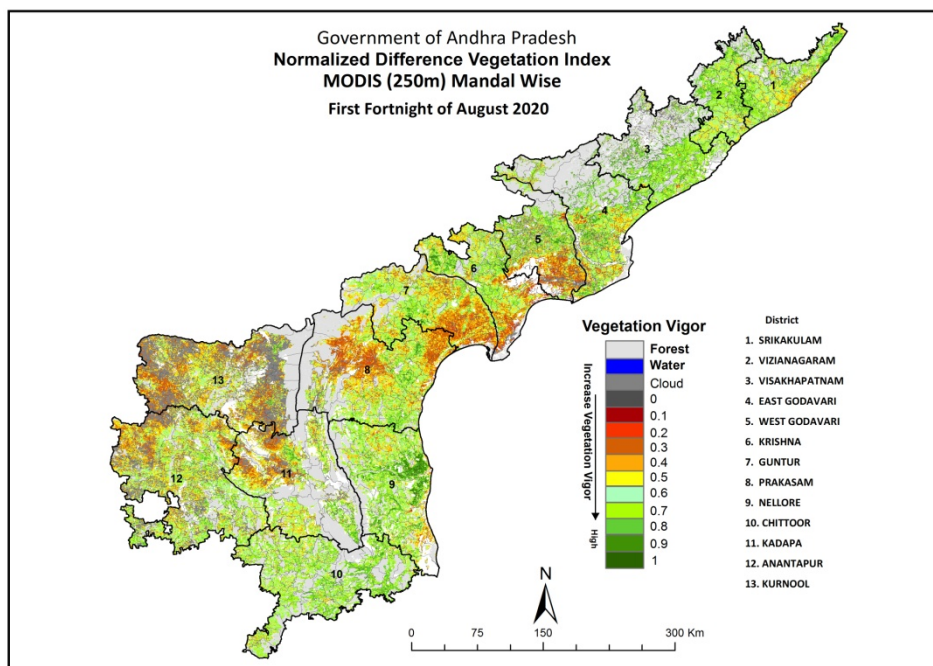


Figure:1 NDVI up to 1st FN August, 2020

3. Surface Wetness Indicators: Normalized Difference Water Index (NDWI)

The map indicates status of moisture availability in soil as well as in crop canopy for 1st FN of August 2020 (figure 2).

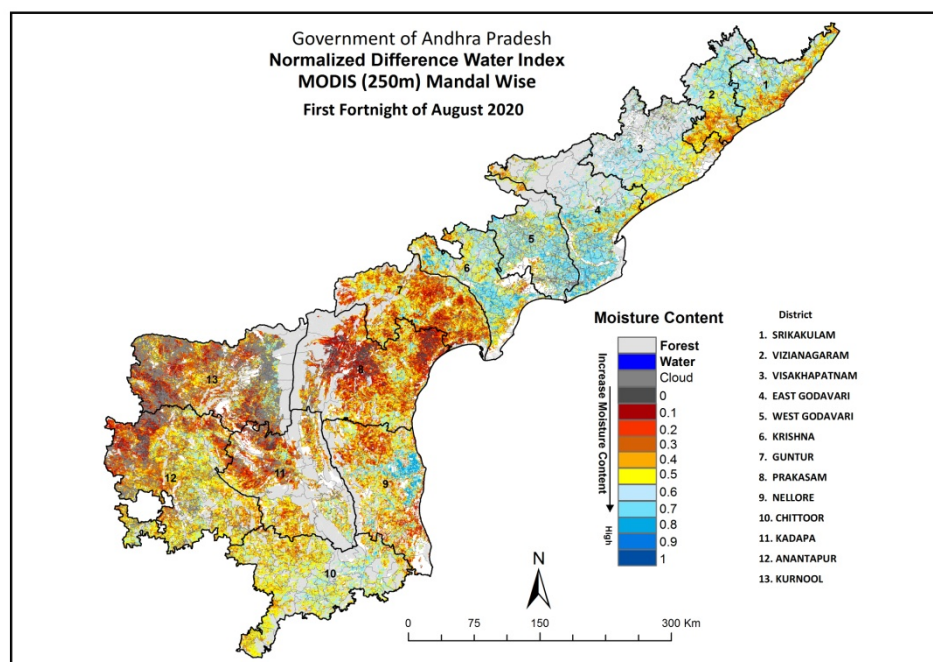


Figure:2 NDWI up to 1st FN August, 2020



4. Comparison of Vegetation Index

The NDVI for the 1st fortnight of August 2020 shown and also compared with 2015, 2016, 2017, 2018, 2019 and 2020 in figure 3.

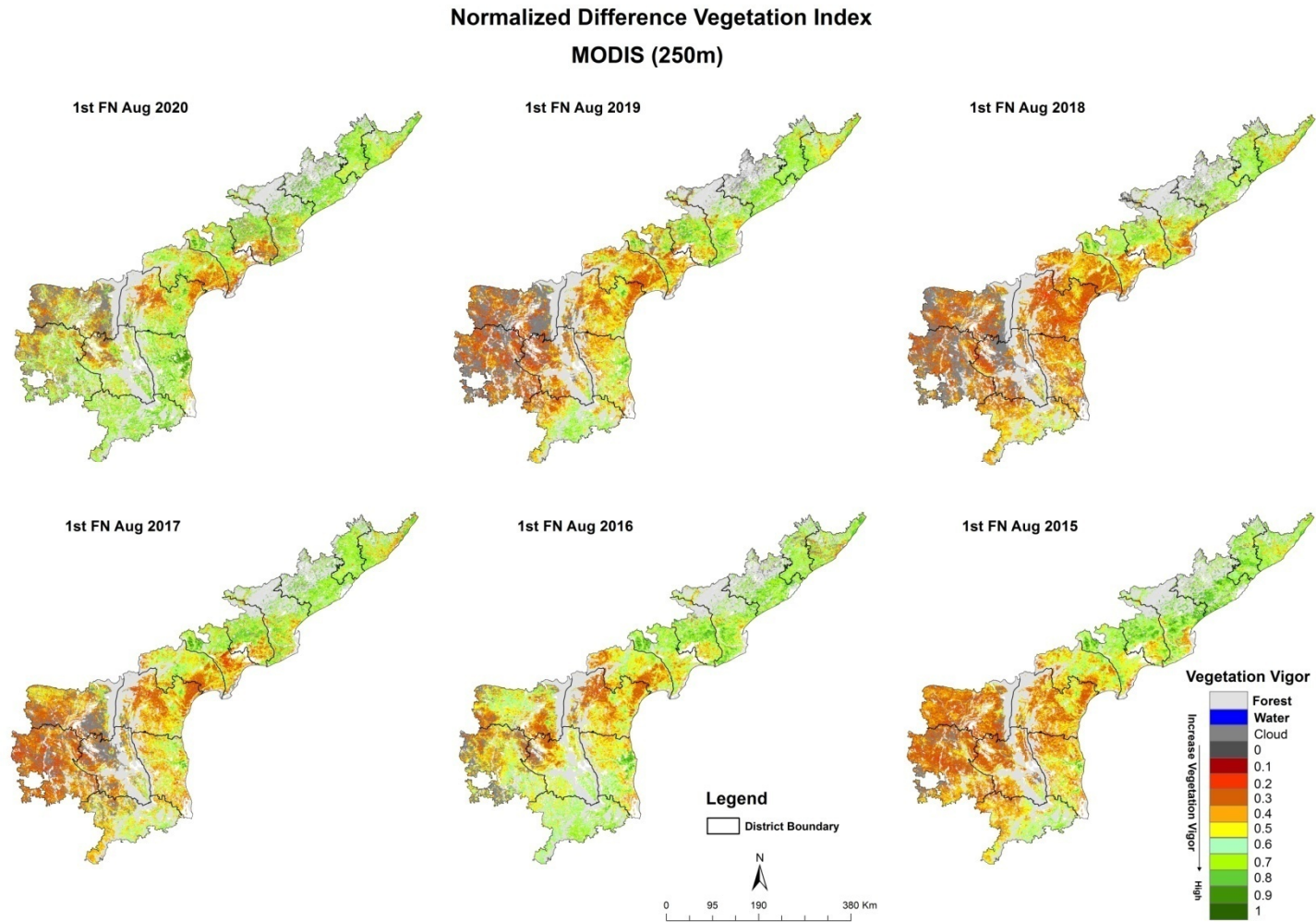


Figure 3: NDVI - MODIS (250m): 1st fortnight of August 2015, 2016, 2017, 2018, 2019 and 2020



5. Comparison of Surface Wetness Indicators

The map indicates comparison status of moisture availability in soil as well as in crop canopy. NDWI situation for the year 2015, 2016, 2017, 2018, 2019 and 2020 shown in figure 4.

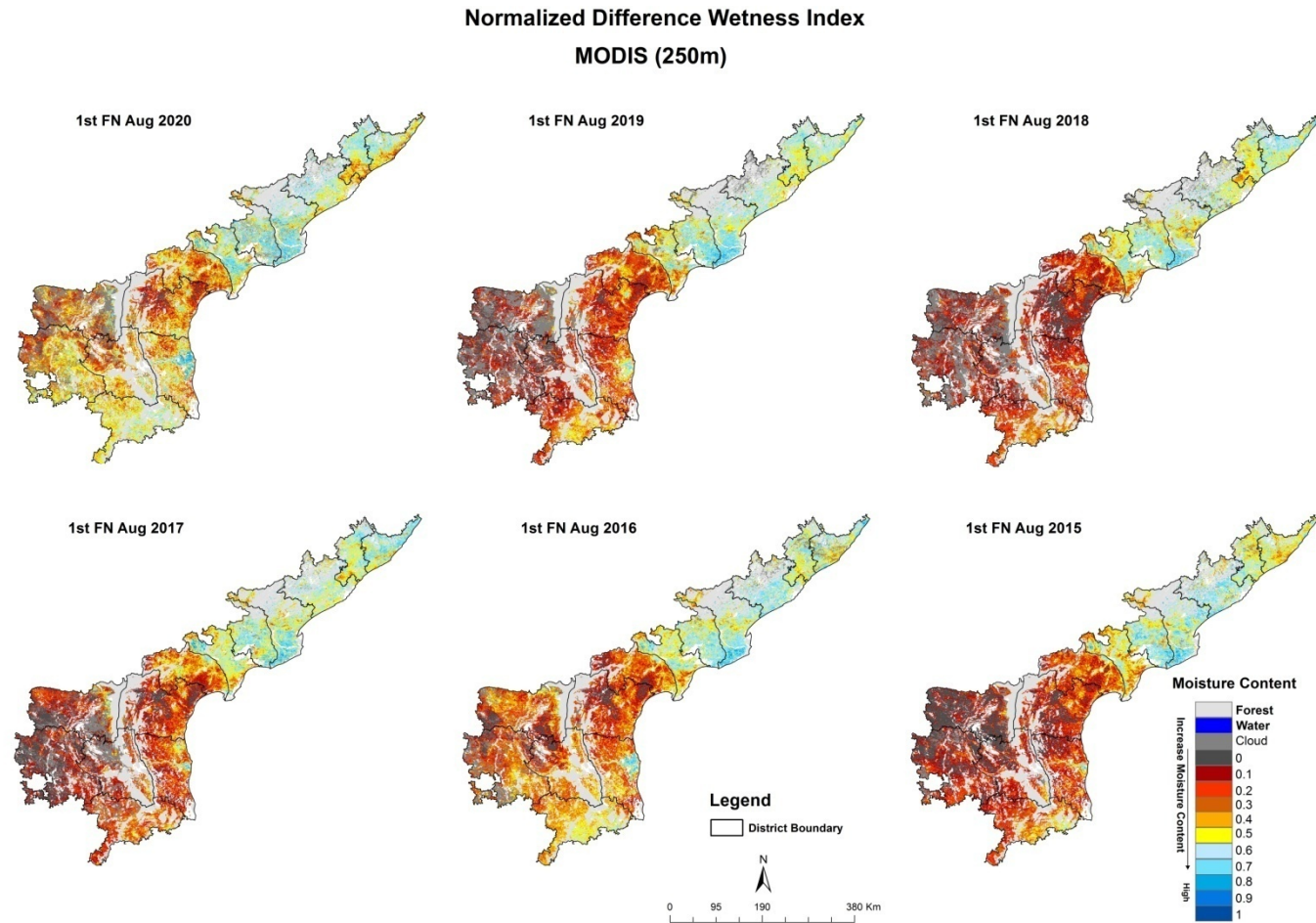


Figure 4: NDWI - MODIS (250m): 1st fortnight of August 2015, 2016, 2017, 2018, 2019 and 2020



6. Table:

District wise number of Mandals under Normal, Moderate and Severe up to 1st FN August 2020.

Sno.	District	Total No. of Mandals	NDVI			NDWI			Final		
			Normal	Moderate	Severe	Normal	Moderate	Severe	Normal	Moderate	Severe
1	ANANTAPURAM	63	61	1	1	62	1	0	61	1	1
2	CHITTOOR	66	65	1	0	66	0	0	65	1	0
3	EAST GODAVARI	64	43	10	11	41	11	12	37	13	14
4	GUNTUR	57	34	16	7	34	12	11	29	14	14
5	KRISHNA	50	27	4	19	30	12	8	23	7	20
6	KURNOOL(-1)	54	15	17	21	33	14	6	15	16	22
7	NELLORE	46	46	0	0	42	4	0	42	4	0
8	PRAKASAM	56	38	11	7	34	10	12	33	11	12
9	SRIKAKULAM	38	33	1	4	10	7	21	10	7	21
10	VISAKHAPATNAM(-1)	43	37	2	3	32	4	6	31	5	6
11	VIZIANAGARAM	34	23	3	8	18	3	13	17	3	14
12	WEST GODAVARI	48	12	11	25	14	16	18	12	11	25
13	YSR KADAPA	51	45	5	1	46	5	0	44	6	1
	Grand Total	670	479	82	107	462	99	107	419	99	150

Note: Two mandal excluded from assessment. (Visakhapatnam and Srisailam)

7. Table: Mandal wise status: Normal, Moderate and Severe up 1st FN August 2020.

DISTRICT	MANDAL	NDVI Status	NDWI Status	Final Status
SRIKAKULAM	VEERAGHATTAM	Normal	Normal	Normal
SRIKAKULAM	VANGARA	Normal	Normal	Normal
SRIKAKULAM	REGIDIAMADALAVALASA	Normal	Normal	Normal
SRIKAKULAM	RAJAM	Normal	Normal	Normal
SRIKAKULAM	GANGUVARISIGADAM	Normal	Severe	Severe
SRIKAKULAM	LAVERU	Normal	Moderate	Moderate
SRIKAKULAM	RANASTALAM	Severe	Severe	Severe
SRIKAKULAM	ETCHERLA	Severe	Severe	Severe
SRIKAKULAM	PONDURU	Normal	Severe	Severe
SRIKAKULAM	SANTHAKAVITI	Normal	Normal	Normal
SRIKAKULAM	BURJA	Normal	Moderate	Moderate
SRIKAKULAM	PALAKONDA	Normal	Normal	Normal
SRIKAKULAM	SEETHAMPETA	Normal	Normal	Normal
SRIKAKULAM	BHAMINI	Normal	Normal	Normal
SRIKAKULAM	KOTHURU	Normal	Moderate	Moderate
SRIKAKULAM	HIRAMANDALAM	Normal	Moderate	Moderate
SRIKAKULAM	SARUBUJILI	Normal	Moderate	Moderate
SRIKAKULAM	AMADALAVALASA	Normal	Severe	Severe
SRIKAKULAM	SRIKAKULAM	Normal	Severe	Severe



SRIKAKULAM	GARA	Normal	Severe	Severe
SRIKAKULAM	POLAKI	Moderate	Severe	Severe
SRIKAKULAM	NARASANNAPETA	Normal	Severe	Severe
SRIKAKULAM	JALUMURU	Normal	Normal	Normal
SRIKAKULAM	SARAVAKOTA	Normal	Normal	Normal
SRIKAKULAM	PATHAPATNAM	Normal	Moderate	Moderate
SRIKAKULAM	MELIAPUTTI	Normal	Severe	Severe
SRIKAKULAM	TEKKALI	Normal	Severe	Severe
SRIKAKULAM	KOTABOMMALI	Normal	Severe	Severe
SRIKAKULAM	SANTHABOMMALI	Severe	Severe	Severe
SRIKAKULAM	NANDIGAM	Normal	Severe	Severe
SRIKAKULAM	VAJRAPUKOTHURU	Severe	Severe	Severe
SRIKAKULAM	PALASA	Normal	Severe	Severe
SRIKAKULAM	MANDASA	Normal	Severe	Severe
SRIKAKULAM	SOMPETA	Normal	Severe	Severe
SRIKAKULAM	KANCHILI	Normal	Severe	Severe
SRIKAKULAM	KAVITI	Normal	Severe	Severe
SRIKAKULAM	ICHCHAPURAM	Normal	Severe	Severe
SRIKAKULAM	LAKSHMINARSUPETA	Normal	Moderate	Moderate
VIZIANAGARAM	KOMARADA	Normal	Normal	Normal
VIZIANAGARAM	GUMMALAKSHMIPURAM	Normal	Normal	Normal
VIZIANAGARAM	KURUPAM	Normal	Normal	Normal
VIZIANAGARAM	JIYYAMMAVALASA	Normal	Moderate	Moderate
VIZIANAGARAM	GARUGUBILLI	Normal	Normal	Normal
VIZIANAGARAM	PARVATHIPURAM	Normal	Normal	Normal
VIZIANAGARAM	MAKKUVA	Normal	Normal	Normal
VIZIANAGARAM	SEETHANAGARAM	Normal	Normal	Normal
VIZIANAGARAM	BALIJPETA	Normal	Normal	Normal
VIZIANAGARAM	BOBBILI	Normal	Normal	Normal
VIZIANAGARAM	SALUR	Normal	Normal	Normal
VIZIANAGARAM	PACHIPENTA	Normal	Normal	Normal
VIZIANAGARAM	RAMABHADRAPURAM	Normal	Normal	Normal
VIZIANAGARAM	BADANGI	Normal	Normal	Normal
VIZIANAGARAM	THERLAM	Normal	Normal	Normal
VIZIANAGARAM	MERAKAMUDIDAM	Normal	Normal	Normal
VIZIANAGARAM	DATTIRAJERU	Normal	Moderate	Moderate
VIZIANAGARAM	MENTADA	Normal	Normal	Normal
VIZIANAGARAM	GAJAPATHINAGARAM	Severe	Severe	Severe
VIZIANAGARAM	BONDAPALLE	Severe	Severe	Severe
VIZIANAGARAM	GURLA	Severe	Severe	Severe
VIZIANAGARAM	GARIVIDI	Normal	Normal	Normal
VIZIANAGARAM	CHEEPURUPALLE	Severe	Normal	Severe
VIZIANAGARAM	NELIMARLA	Severe	Severe	Severe
VIZIANAGARAM	PUSAPATIREGA	Severe	Severe	Severe
VIZIANAGARAM	BHOGAPURAM	Severe	Severe	Severe



VIZIANAGARAM	DENKADA	Moderate	Severe	Severe
VIZIANAGARAM	VIZIANAGARAM	Severe	Severe	Severe
VIZIANAGARAM	GANTYADA	Moderate	Severe	Severe
VIZIANAGARAM	SRUNGAVARAPUKOTA	Normal	Severe	Severe
VIZIANAGARAM	VEPADA	Normal	Severe	Severe
VIZIANAGARAM	LAKKAVARAPUKOTA	Normal	Severe	Severe
VIZIANAGARAM	JAMI	Moderate	Severe	Severe
VIZIANAGARAM	KOTHAVALASA	Normal	Moderate	Moderate
VISAKHAPATNAM	MUNCHINGIPUTTU	Normal	Normal	Normal
VISAKHAPATNAM	PEDABAYALU	Moderate	Moderate	Moderate
VISAKHAPATNAM	HUKUMPETA	Severe	Severe	Severe
VISAKHAPATNAM	DUMBRIGUDA	Severe	Severe	Severe
VISAKHAPATNAM	ARUKU VALLEY	Normal	Normal	Normal
VISAKHAPATNAM	ANANTHAGIRI	Normal	Normal	Normal
VISAKHAPATNAM	DEVARAPALLE	Normal	Normal	Normal
VISAKHAPATNAM	CHEEDIKADA	Normal	Normal	Normal
VISAKHAPATNAM	MADUGULA	Normal	Normal	Normal
VISAKHAPATNAM	PADERU	Normal	Normal	Normal
VISAKHAPATNAM	G MADUGULA	Moderate	Normal	Moderate
VISAKHAPATNAM	CHINTAPALLE	Normal	Normal	Normal
VISAKHAPATNAM	G K VEEDHI	Normal	Normal	Normal
VISAKHAPATNAM	KOYYURU	Normal	Normal	Normal
VISAKHAPATNAM	GOLUGONDA	Normal	Normal	Normal
VISAKHAPATNAM	NATHAVARAM	Normal	Normal	Normal
VISAKHAPATNAM	NARSIPATNAM	Normal	Moderate	Moderate
VISAKHAPATNAM	ROLUGUNTA	Normal	Normal	Normal
VISAKHAPATNAM	RAVIKAMATAM	Normal	Normal	Normal
VISAKHAPATNAM	BUTCHAYYAPETA	Normal	Normal	Normal
VISAKHAPATNAM	CHODAVARAM	Normal	Normal	Normal
VISAKHAPATNAM	K KOTAPADU	Normal	Normal	Normal
VISAKHAPATNAM	SABBAVARAM	Normal	Normal	Normal
VISAKHAPATNAM	PENDURTHI	Normal	Normal	Normal
VISAKHAPATNAM	ANANDAPURAM	Normal	Moderate	Moderate
VISAKHAPATNAM	PADMANABHAM	Normal	Severe	Severe
VISAKHAPATNAM	BHEEMUNIPATNAM	Severe	Severe	Severe
VISAKHAPATNAM	VISAKHAPATNAM(R)	Normal	Moderate	Moderate
VISAKHAPATNAM	VISAKHAPATNAM(U)	#DIV/0!	#DIV/0!	#DIV/0!
VISAKHAPATNAM	GAJUWAKA	Normal	Normal	Normal
VISAKHAPATNAM	PEDAGANTYADA	Normal	Normal	Normal
VISAKHAPATNAM	PARAVADA	Normal	Normal	Normal
VISAKHAPATNAM	ANAKAPALLI	Normal	Normal	Normal
VISAKHAPATNAM	MUNAGAPAKA	Normal	Normal	Normal
VISAKHAPATNAM	KASIMKOTA	Normal	Normal	Normal
VISAKHAPATNAM	MAKAVARAPALEM	Normal	Normal	Normal
VISAKHAPATNAM	KOTAURATLA	Normal	Normal	Normal



VISAKHAPATNAM	PAYAKARAOPETA	Normal	Severe	Severe
VISAKHAPATNAM	NAKKAPALLI	Normal	Severe	Severe
VISAKHAPATNAM	S RAYAVARAM	Normal	Normal	Normal
VISAKHAPATNAM	YELAMANCHILI	Normal	Normal	Normal
VISAKHAPATNAM	RAMBILLI	Normal	Normal	Normal
VISAKHAPATNAM	ATCHUTAPURAM	Normal	Normal	Normal
EAST GODAVARI	MAREDUMILLI	Normal	Normal	Normal
EAST GODAVARI	Y.RAMAVARAM	Normal	Normal	Normal
EAST GODAVARI	ADDATEEGALA	Normal	Normal	Normal
EAST GODAVARI	RAJAVOMMANGI	Normal	Normal	Normal
EAST GODAVARI	KOTANANDURU	Normal	Normal	Normal
EAST GODAVARI	TUNI	Normal	Moderate	Moderate
EAST GODAVARI	THONDANGI	Normal	Normal	Normal
EAST GODAVARI	GOLLAPROLU	Normal	Normal	Normal
EAST GODAVARI	SANKHAVARAM	Normal	Normal	Normal
EAST GODAVARI	PRATHIPADU	Normal	Normal	Normal
EAST GODAVARI	YELESWARAM	Normal	Normal	Normal
EAST GODAVARI	GANGAVARAM	Normal	Normal	Normal
EAST GODAVARI	RAMPACHODAVARAM	Normal	Normal	Normal
EAST GODAVARI	DEVIPATNAM	Normal	Normal	Normal
EAST GODAVARI	SEETHANAGARAM	Normal	Normal	Normal
EAST GODAVARI	KORUKONDA	Severe	Normal	Severe
EAST GODAVARI	GOKAVARAM	Normal	Normal	Normal
EAST GODAVARI	JAGGAMPETA	Normal	Normal	Normal
EAST GODAVARI	KIRLAMPUDI	Moderate	Moderate	Moderate
EAST GODAVARI	PEDDAPURAM	Normal	Normal	Normal
EAST GODAVARI	PITHAPURAM	Moderate	Normal	Moderate
EAST GODAVARI	KOTHAPALLE	Normal	Normal	Normal
EAST GODAVARI	KAKINADA (R)	Normal	Moderate	Moderate
EAST GODAVARI	KAKINADA (U)	Normal	Moderate	Moderate
EAST GODAVARI	SAMALKOTA	Normal	Normal	Normal
EAST GODAVARI	RANGAMPETA	Moderate	Normal	Moderate
EAST GODAVARI	GANDEPALLE	Normal	Normal	Normal
EAST GODAVARI	RAJANAGARAM	Moderate	Moderate	Moderate
EAST GODAVARI	RAJAHMUNDRY (U)	Normal	Normal	Normal
EAST GODAVARI	RAJAHMUNDRY (R)	Normal	Normal	Normal
EAST GODAVARI	KADIAM	Moderate	Moderate	Moderate
EAST GODAVARI	MANDAPETA	Moderate	Severe	Severe
EAST GODAVARI	ANAPARTHY	Moderate	Moderate	Moderate
EAST GODAVARI	BICCAVOLU	Moderate	Severe	Severe
EAST GODAVARI	PEDAPUDI	Normal	Normal	Normal
EAST GODAVARI	KARAPA	Normal	Normal	Normal
EAST GODAVARI	THALLAREVU	Normal	Severe	Severe
EAST GODAVARI	KAJULURU	Normal	Moderate	Moderate
EAST GODAVARI	RAMACHANDRAPURAM	Normal	Normal	Normal



EAST GODAVARI	RAYAVARAM	Normal	Normal	Normal
EAST GODAVARI	KAPILESWARAPURAM	Normal	Normal	Normal
EAST GODAVARI	ALAMURU	Severe	Severe	Severe
EAST GODAVARI	ATREYAPURAM	Severe	Severe	Severe
EAST GODAVARI	RAVULAPALEM	Severe	Severe	Severe
EAST GODAVARI	PAMARRU	Normal	Normal	Normal
EAST GODAVARI	KOTHAPETA	Severe	Severe	Severe
EAST GODAVARI	P.GANNAVARAM	Severe	Severe	Severe
EAST GODAVARI	AMBAJIPETA	Severe	Severe	Severe
EAST GODAVARI	AINAVILLI	Severe	Severe	Severe
EAST GODAVARI	MUMMIDIVARAM	Severe	Severe	Severe
EAST GODAVARI	I. POLAVARAM	Normal	Normal	Normal
EAST GODAVARI	KATRENIKONA	Normal	Moderate	Moderate
EAST GODAVARI	UPPALAGUPTAM	Moderate	Moderate	Moderate
EAST GODAVARI	AMALAPURAM	Severe	Severe	Severe
EAST GODAVARI	ALLAVARAM	Normal	Normal	Normal
EAST GODAVARI	MAMIDIKUDURU	Moderate	Normal	Moderate
EAST GODAVARI	RAZOLE	Normal	Normal	Normal
EAST GODAVARI	MALIKIPURAM	Normal	Normal	Normal
EAST GODAVARI	SAKHINETIPALLE	Severe	Moderate	Severe
EAST GODAVARI	ROWTHULAPUDI	Normal	Normal	Normal
EAST GODAVARI	NELLIPAKA	Normal	Normal	Normal
EAST GODAVARI	KUNAVARAM	Normal	Normal	Normal
EAST GODAVARI	CHINTUR	Normal	Normal	Normal
EAST GODAVARI	VARARAMACHANDRAPURAM	Normal	Normal	Normal
WEST GODAVARI	JEELUGU MILLI	Moderate	Moderate	Moderate
WEST GODAVARI	BUTTAYAGUDEM	Normal	Normal	Normal
WEST GODAVARI	POLAVARAM	Normal	Normal	Normal
WEST GODAVARI	TALLAPUDI	Normal	Normal	Normal
WEST GODAVARI	GOPALAPURAM	Normal	Normal	Normal
WEST GODAVARI	KOYYALAGUDEM	Normal	Normal	Normal
WEST GODAVARI	JANGAREDDIGUDEM	Moderate	Moderate	Moderate
WEST GODAVARI	T.NARASAPURAM	Severe	Severe	Severe
WEST GODAVARI	CHINTALAPUDI	Normal	Normal	Normal
WEST GODAVARI	LINGAPALEM	Normal	Normal	Normal
WEST GODAVARI	KAMAVARAPUKOTA	Moderate	Normal	Moderate
WEST GODAVARI	DWARAKA TIRUMALA	Severe	Moderate	Severe
WEST GODAVARI	NALLAJERLA	Moderate	Moderate	Moderate
WEST GODAVARI	DEVARAPALLE	Normal	Normal	Normal
WEST GODAVARI	CHAGALLU	Normal	Normal	Normal
WEST GODAVARI	KOVVUR	Normal	Normal	Normal
WEST GODAVARI	NIDADAVOLE	Severe	Severe	Severe
WEST GODAVARI	TADEPALLIGUDEM	Severe	Severe	Severe
WEST GODAVARI	UNGUTUR	Moderate	Moderate	Moderate
WEST GODAVARI	BHIMADOLE	Moderate	Moderate	Moderate



WEST GODAVARI	PEDAVEGI	Moderate	Moderate	Moderate
WEST GODAVARI	PEDAPADU	Moderate	Normal	Moderate
WEST GODAVARI	ELURU	Moderate	Moderate	Moderate
WEST GODAVARI	DENDULURU	Moderate	Moderate	Moderate
WEST GODAVARI	NIDAMARRU	Severe	Severe	Severe
WEST GODAVARI	GANAPAVARAM	Severe	Severe	Severe
WEST GODAVARI	PENTAPADU	Severe	Severe	Severe
WEST GODAVARI	TANUKU	Severe	Moderate	Severe
WEST GODAVARI	UNDRAJAVARAM	Moderate	Moderate	Moderate
WEST GODAVARI	PERAVALI	Severe	Moderate	Severe
WEST GODAVARI	IRAGAVARAM	Severe	Moderate	Severe
WEST GODAVARI	ATTILI	Severe	Moderate	Severe
WEST GODAVARI	UNDI	Severe	Severe	Severe
WEST GODAVARI	AKIVIDU	Severe	Severe	Severe
WEST GODAVARI	KALLA	Severe	Severe	Severe
WEST GODAVARI	BHIMAVARAM	Severe	Severe	Severe
WEST GODAVARI	PALACODERU	Severe	Severe	Severe
WEST GODAVARI	VEERAVASARAM	Severe	Severe	Severe
WEST GODAVARI	PENUMANTRA	Severe	Severe	Severe
WEST GODAVARI	PENUGONDA	Severe	Severe	Severe
WEST GODAVARI	ACHANTA	Severe	Severe	Severe
WEST GODAVARI	PODURU	Severe	Moderate	Severe
WEST GODAVARI	PALACOLE	Severe	Severe	Severe
WEST GODAVARI	YELAMANCHILI	Severe	Severe	Severe
WEST GODAVARI	NARASAPURAM	Severe	Moderate	Severe
WEST GODAVARI	MOGALTHUR	Severe	Severe	Severe
WEST GODAVARI	KUKUNOOR	Normal	Normal	Normal
WEST GODAVARI	VELAIRPADU	Normal	Normal	Normal
KRISHNA	JAGGAYYAPETA	Severe	Normal	Severe
KRISHNA	VATSAVAI	Moderate	Moderate	Moderate
KRISHNA	PENUGANCHIPROLU	Moderate	Normal	Moderate
KRISHNA	NANDIGAMA	Normal	Normal	Normal
KRISHNA	CHANDARLAPADU	Normal	Normal	Normal
KRISHNA	KANCHIKACHERLA	Normal	Normal	Normal
KRISHNA	VEERULLAPADU	Normal	Normal	Normal
KRISHNA	IBRAHIMPATNAM	Moderate	Moderate	Moderate
KRISHNA	G.KONDURU	Normal	Normal	Normal
KRISHNA	MYLAVARAM	Normal	Normal	Normal
KRISHNA	A.KONDURU	Severe	Normal	Severe
KRISHNA	GAMPALAGUDEM	Severe	Moderate	Severe
KRISHNA	TIRUVURU	Normal	Normal	Normal
KRISHNA	VISSANNAPET	Severe	Moderate	Severe
KRISHNA	REDDIGUDEM	Normal	Normal	Normal
KRISHNA	VIJAYAWADA (URBAN)	Normal	Moderate	Moderate
KRISHNA	VIJAYAWADA (R)	Normal	Normal	Normal



KRISHNA	PENAMALURU	Normal	Normal	Normal
KRISHNA	THOTLAVALLURU	Normal	Normal	Normal
KRISHNA	KANKIPADU	Normal	Normal	Normal
KRISHNA	GANNAVARAM	Normal	Moderate	Moderate
KRISHNA	AGIRIPALLE	Normal	Severe	Severe
KRISHNA	NUZVID	Normal	Moderate	Moderate
KRISHNA	CHATRAI	Severe	Severe	Severe
KRISHNA	MUSUNURU	Severe	Severe	Severe
KRISHNA	BAPULAPADU	Normal	Normal	Normal
KRISHNA	UNGUTURU	Normal	Normal	Normal
KRISHNA	VUYYURU	Normal	Normal	Normal
KRISHNA	PAMIDIMUKKALA	Normal	Normal	Normal
KRISHNA	MOVVA	Moderate	Normal	Moderate
KRISHNA	GHANTASALA	Severe	Normal	Severe
KRISHNA	CHALLAPALLE	Severe	Normal	Severe
KRISHNA	MOPIDEVI	Normal	Normal	Normal
KRISHNA	AVANIGADDA	Severe	Moderate	Severe
KRISHNA	NAGAYALANKA	Severe	Moderate	Severe
KRISHNA	KODURU	Severe	Moderate	Severe
KRISHNA	MACHILIPATNAM	Severe	Moderate	Severe
KRISHNA	GUDURU	Normal	Normal	Normal
KRISHNA	PAMARRU	Normal	Normal	Normal
KRISHNA	PEDAPARUPUDI	Normal	Normal	Normal
KRISHNA	NANDIVADA	Severe	Severe	Severe
KRISHNA	GUDIVADA	Normal	Normal	Normal
KRISHNA	GUDLAVALLERU	Normal	Normal	Normal
KRISHNA	PEDANA	Normal	Normal	Normal
KRISHNA	BANTUMILLI	Severe	Moderate	Severe
KRISHNA	MUDINEPALLE	Severe	Severe	Severe
KRISHNA	MANDAVALLI	Severe	Severe	Severe
KRISHNA	KAIKALUR	Severe	Severe	Severe
KRISHNA	KALIDINDI	Severe	Severe	Severe
KRISHNA	KRUTHIVENNU	Severe	Normal	Severe
GUNTUR	MACHERLA	Normal	Normal	Normal
GUNTUR	RENTACHINTALA	Normal	Normal	Normal
GUNTUR	GURAZALA	Normal	Normal	Normal
GUNTUR	DACHEPALLE	Moderate	Normal	Moderate
GUNTUR	MACHAVARAM	Moderate	Normal	Moderate
GUNTUR	BELLAMKONDA	Moderate	Normal	Moderate
GUNTUR	ATCHAMPET	Moderate	Normal	Moderate
GUNTUR	KROSURU	Normal	Normal	Normal
GUNTUR	AMARAVATHI	Severe	Severe	Severe
GUNTUR	THULLUR	Normal	Normal	Normal
GUNTUR	TADEPALLE	Moderate	Severe	Severe
GUNTUR	MANGALAGIRI	Normal	Normal	Normal



GUNTUR	TADIKONDA	Moderate	Moderate	Moderate
GUNTUR	PEDAKURAPADU	Moderate	Moderate	Moderate
GUNTUR	SATTENAPALLE	Moderate	Severe	Severe
GUNTUR	RAJUPALEM	Normal	Normal	Normal
GUNTUR	PIDUGURALLA	Normal	Normal	Normal
GUNTUR	KAREMPUDI	Normal	Normal	Normal
GUNTUR	DURGI	Normal	Normal	Normal
GUNTUR	VELDURTHI	Normal	Normal	Normal
GUNTUR	BOLLAPALLE	Normal	Normal	Normal
GUNTUR	NEKARIKALLU	Normal	Normal	Normal
GUNTUR	MUPPALLA	Normal	Normal	Normal
GUNTUR	PHIRANGIPURAM	Normal	Normal	Normal
GUNTUR	MEDIKONDURU	Normal	Moderate	Moderate
GUNTUR	GUNTUR	Normal	Normal	Normal
GUNTUR	PEDAKAKANI	Normal	Normal	Normal
GUNTUR	DUGGIRALA	Normal	Severe	Severe
GUNTUR	KOLLIPARA	Normal	Moderate	Moderate
GUNTUR	KOLLUR	Moderate	Moderate	Moderate
GUNTUR	VEMURU	Moderate	Severe	Severe
GUNTUR	TENALI	Normal	Moderate	Moderate
GUNTUR	TSUNDUR	Severe	Severe	Severe
GUNTUR	CHEBROLU	Normal	Normal	Normal
GUNTUR	VATTICHERUKURU	Moderate	Normal	Moderate
GUNTUR	PRATHIPADU	Normal	Normal	Normal
GUNTUR	EDLAPADU	Normal	Normal	Normal
GUNTUR	NADENDLA	Normal	Normal	Normal
GUNTUR	NARASARAOPET	Normal	Normal	Normal
GUNTUR	ROMPICHERLA	Normal	Normal	Normal
GUNTUR	IPUR	Normal	Normal	Normal
GUNTUR	SAVALYAPURAM	Normal	Normal	Normal
GUNTUR	VINUKONDA	Normal	Normal	Normal
GUNTUR	NUZENDLA	Normal	Normal	Normal
GUNTUR	CHILAKALURIPET	Normal	Normal	Normal
GUNTUR	PEDANANDIPADU	Normal	Normal	Normal
GUNTUR	KAKUMANU	Severe	Moderate	Severe
GUNTUR	PONNUR	Severe	Moderate	Severe
GUNTUR	AMRUTHALUR	Severe	Moderate	Severe
GUNTUR	CHERUKUPALLE	Normal	Moderate	Moderate
GUNTUR	BHATTIPROLU	Moderate	Moderate	Moderate
GUNTUR	REPALLE	Moderate	Severe	Severe
GUNTUR	NAGARAM	Moderate	Severe	Severe
GUNTUR	NIZAMPATNAM	Severe	Severe	Severe
GUNTUR	PITTALAVANIPALEM	Severe	Severe	Severe
GUNTUR	KARLAPALEM	Moderate	Severe	Severe
GUNTUR	BAPATLA	Moderate	Moderate	Moderate



PRAKASAM	YERRAGONDAPALEM	Moderate	Moderate	Moderate
PRAKASAM	PULLALACHERUVU	Normal	Normal	Normal
PRAKASAM	TRIPURANTHAKAM	Normal	Normal	Normal
PRAKASAM	KURICHEDU	Normal	Normal	Normal
PRAKASAM	DONAKONDA	Moderate	Moderate	Moderate
PRAKASAM	PEDA ARAVEEDU	Severe	Severe	Severe
PRAKASAM	DORNALA	Moderate	Normal	Moderate
PRAKASAM	ARDHAVEEDU	Moderate	Severe	Severe
PRAKASAM	MARKAPUR	Severe	Severe	Severe
PRAKASAM	TARLUPADU	Severe	Severe	Severe
PRAKASAM	KONAKANAMITLA	Severe	Severe	Severe
PRAKASAM	PODILI	Severe	Severe	Severe
PRAKASAM	DARSI	Moderate	Moderate	Moderate
PRAKASAM	MUNDLAMURU	Normal	Normal	Normal
PRAKASAM	THALLUR	Normal	Normal	Normal
PRAKASAM	ADDANKI	Normal	Normal	Normal
PRAKASAM	BALLIKURAVA	Normal	Normal	Normal
PRAKASAM	SANTHAMAGULURU	Normal	Normal	Normal
PRAKASAM	YEDDANAPUDI	Normal	Moderate	Moderate
PRAKASAM	MARTUR	Moderate	Severe	Severe
PRAKASAM	PARCHUR	Normal	Normal	Normal
PRAKASAM	KARAMCHEDU	Moderate	Severe	Severe
PRAKASAM	CHIRALA	Normal	Normal	Normal
PRAKASAM	VETAPALEM	Normal	Severe	Severe
PRAKASAM	INKOLLU	Normal	Moderate	Moderate
PRAKASAM	JANAKAVARAMPANGULURU	Normal	Normal	Normal
PRAKASAM	KORISAPADU	Normal	Moderate	Moderate
PRAKASAM	MADDIPADU	Normal	Normal	Normal
PRAKASAM	CHIMAKURTHI	Normal	Normal	Normal
PRAKASAM	MARRIPUDI	Normal	Normal	Normal
PRAKASAM	KANIGIRI	Normal	Normal	Normal
PRAKASAM	HANUMANTHUNIPADU	Normal	Normal	Normal
PRAKASAM	BESTAWARIPETA	Normal	Moderate	Moderate
PRAKASAM	CUMBUM	Severe	Severe	Severe
PRAKASAM	RACHERLA	Moderate	Moderate	Moderate
PRAKASAM	GIDDALUR	Moderate	Moderate	Moderate
PRAKASAM	KOMAROLU	Moderate	Moderate	Moderate
PRAKASAM	CHANDRASEKHARA PURAM	Normal	Normal	Normal
PRAKASAM	VELIGANDLA	Normal	Normal	Normal
PRAKASAM	PEDACHERLO PALLE	Normal	Normal	Normal
PRAKASAM	PONNALURU	Normal	Normal	Normal
PRAKASAM	KONDAPI	Normal	Normal	Normal
PRAKASAM	SANTHANUTHALA PADU	Normal	Normal	Normal
PRAKASAM	ONGOLE	Normal	Normal	Normal
PRAKASAM	NAGULUPPALAPADU	Moderate	Severe	Severe



PRAKASAM	CHINAGANJAM	Severe	Severe	Severe
PRAKASAM	KOTHA PATNAM	Normal	Normal	Normal
PRAKASAM	TANGUTUR	Normal	Normal	Normal
PRAKASAM	ZARUGUMILLI	Normal	Normal	Normal
PRAKASAM	KANDUKUR	Normal	Normal	Normal
PRAKASAM	VOLETIVARIPALEM	Normal	Normal	Normal
PRAKASAM	PAMUR	Normal	Normal	Normal
PRAKASAM	LINGASAMUDRAM	Normal	Normal	Normal
PRAKASAM	GUDLURU	Normal	Normal	Normal
PRAKASAM	ULAVAPADU	Normal	Normal	Normal
PRAKASAM	SINGARAYAKONDA	Normal	Normal	Normal
PS NELLORE	SEETHARAMAPURAM	Normal	Normal	Normal
PS NELLORE	VARIKUNTAPADU	Normal	Normal	Normal
PS NELLORE	KONDAPURAM	Normal	Normal	Normal
PS NELLORE	JALADANKI	Normal	Normal	Normal
PS NELLORE	KAVALI	Normal	Normal	Normal
PS NELLORE	BOGOLE	Normal	Normal	Normal
PS NELLORE	KALIGIRI	Normal	Normal	Normal
PS NELLORE	VINJAMUR	Normal	Normal	Normal
PS NELLORE	DUTTALUR	Normal	Normal	Normal
PS NELLORE	UDAYAGIRI	Normal	Normal	Normal
PS NELLORE	MARRIPADU	Normal	Normal	Normal
PS NELLORE	ATMAKUR	Normal	Normal	Normal
PS NELLORE	ANUMASAMUDRAMPETA	Normal	Normal	Normal
PS NELLORE	DAGADARTHI	Normal	Normal	Normal
PS NELLORE	ALLUR	Normal	Normal	Normal
PS NELLORE	VIDAVALUR	Normal	Normal	Normal
PS NELLORE	KODAVALUR	Normal	Normal	Normal
PS NELLORE	BUCHIREDDIPALEM	Normal	Normal	Normal
PS NELLORE	SANGAM	Normal	Normal	Normal
PS NELLORE	CHEJERLA	Normal	Normal	Normal
PS NELLORE	ANANTHASAGARAM	Normal	Normal	Normal
PS NELLORE	KALUVOYA	Normal	Normal	Normal
PS NELLORE	RAPUR	Normal	Normal	Normal
PS NELLORE	PODALAKUR	Normal	Normal	Normal
PS NELLORE	NELLORE	Normal	Normal	Normal
PS NELLORE	KOVUR	Normal	Normal	Normal
PS NELLORE	INDUKURPET	Normal	Normal	Normal
PS NELLORE	THOTAPALLIGUDUR	Normal	Normal	Normal
PS NELLORE	MUTHUKUR	Normal	Normal	Normal
PS NELLORE	VENKATACHALAM	Normal	Normal	Normal
PS NELLORE	MANUBOLU	Normal	Normal	Normal
PS NELLORE	GUDUR	Normal	Normal	Normal
PS NELLORE	SYDAPURAM	Normal	Normal	Normal
PS NELLORE	DAKKILI	Normal	Normal	Normal



PS NELLORE	VENKATAGIRI	Normal	Normal	Normal
PS NELLORE	BALAYAPALLE	Normal	Normal	Normal
PS NELLORE	OJILI	Normal	Normal	Normal
PS NELLORE	CHILLAKUR	Normal	Normal	Normal
PS NELLORE	KOTA	Normal	Moderate	Moderate
PS NELLORE	VAKADU	Normal	Moderate	Moderate
PS NELLORE	CHITTAMUR	Normal	Moderate	Moderate
PS NELLORE	NAIDUPET	Normal	Normal	Normal
PS NELLORE	PELLAKUR	Normal	Normal	Normal
PS NELLORE	DORAVARISATRAM	Normal	Normal	Normal
PS NELLORE	SULLURPETA	Normal	Normal	Normal
PS NELLORE	TADA	Normal	Moderate	Moderate
CHITTOOR	PEDDAMANDYAM	Normal	Normal	Normal
CHITTOOR	THAMBALLAPALLE	Normal	Normal	Normal
CHITTOOR	MULAKALACHERUVU	Normal	Normal	Normal
CHITTOOR	PEDDA THIPPASAMUDRAM	Normal	Normal	Normal
CHITTOOR	B.KOTHAKOTA	Normal	Normal	Normal
CHITTOOR	KURABALAKOTA	Normal	Normal	Normal
CHITTOOR	GURRAMKONDA	Normal	Normal	Normal
CHITTOOR	KALAKADA	Normal	Normal	Normal
CHITTOOR	KAMBHAMVARIPALLE	Normal	Normal	Normal
CHITTOOR	YERRAVARIPALEM	Normal	Normal	Normal
CHITTOOR	TIRUPATI (URBAN)	Normal	Normal	Normal
CHITTOOR	RENIGUNTA	Normal	Normal	Normal
CHITTOOR	YERPEDU	Normal	Normal	Normal
CHITTOOR	SRIKALAHASTI	Normal	Normal	Normal
CHITTOOR	THOTTAMBEDU	Normal	Normal	Normal
CHITTOOR	BUCHINAIDU KANDRIGA	Normal	Normal	Normal
CHITTOOR	VARADAIHPALEM	Normal	Normal	Normal
CHITTOOR	SATYAVEDU	Normal	Normal	Normal
CHITTOOR	NAGALAPURAM	Normal	Normal	Normal
CHITTOOR	PICHATUR	Normal	Normal	Normal
CHITTOOR	VIJAYAPURAM	Normal	Normal	Normal
CHITTOOR	NINDRA	Normal	Normal	Normal
CHITTOOR	K.V.B.PURAM	Normal	Normal	Normal
CHITTOOR	NARAYANAVANAM	Normal	Normal	Normal
CHITTOOR	VADAMALAPETA	Normal	Normal	Normal
CHITTOOR	TIRUPATI (R)	Normal	Normal	Normal
CHITTOOR	RAMACHANDRAPURAM	Normal	Normal	Normal
CHITTOOR	CHANDRAGIRI	Normal	Normal	Normal
CHITTOOR	CHINNAGOTTIGALLU	Normal	Normal	Normal
CHITTOOR	ROMPICHERLA	Normal	Normal	Normal
CHITTOOR	PILERU	Normal	Normal	Normal
CHITTOOR	KALIKIRI	Normal	Normal	Normal
CHITTOOR	VAYALPAD	Normal	Normal	Normal



CHITTOOR	NIMMANAPALLE	Normal	Normal	Normal
CHITTOOR	MADANAPALLE	Normal	Normal	Normal
CHITTOOR	RAMASAMUDRAM	Normal	Normal	Normal
CHITTOOR	PUNGANUR	Normal	Normal	Normal
CHITTOOR	CHOWDEPALLE	Normal	Normal	Normal
CHITTOOR	SOMALA	Normal	Normal	Normal
CHITTOOR	SODAM	Normal	Normal	Normal
CHITTOOR	PULICHERLA	Normal	Normal	Normal
CHITTOOR	PAKALA	Normal	Normal	Normal
CHITTOOR	VEDURUKUPPAM	Normal	Normal	Normal
CHITTOOR	PUTTUR	Normal	Normal	Normal
CHITTOOR	NAGARI	Normal	Normal	Normal
CHITTOOR	KARVETINAGAR	Normal	Normal	Normal
CHITTOOR	SRIRANGARAJAPURAM	Normal	Normal	Normal
CHITTOOR	PALASAMUDRAM	Normal	Normal	Normal
CHITTOOR	GANGADHARANELLORE	Normal	Normal	Normal
CHITTOOR	PENUMURU	Normal	Normal	Normal
CHITTOOR	PUTHALAPATTU	Normal	Normal	Normal
CHITTOOR	IRALA	Normal	Normal	Normal
CHITTOOR	THAVANAMPALLE	Normal	Normal	Normal
CHITTOOR	CHITTOOR	Moderate	Normal	Moderate
CHITTOOR	GUDIPALA	Normal	Normal	Normal
CHITTOOR	YADAMARRI	Normal	Normal	Normal
CHITTOOR	BANGARUPALEM	Normal	Normal	Normal
CHITTOOR	PALAMANER	Normal	Normal	Normal
CHITTOOR	GANGAVARAM	Normal	Normal	Normal
CHITTOOR	PEDDAPANJANI	Normal	Normal	Normal
CHITTOOR	BAIREDDIPALLE	Normal	Normal	Normal
CHITTOOR	VENKATAGIRIKOTA	Normal	Normal	Normal
CHITTOOR	RAMAKUPPAM	Normal	Normal	Normal
CHITTOOR	SANTHIPURAM	Normal	Normal	Normal
CHITTOOR	GUDUPALLE	Normal	Normal	Normal
CHITTOOR	KUPPAM	Normal	Normal	Normal
YSR KADAPA	KONDAPURAM	Normal	Normal	Normal
YSR KADAPA	MYLAVARAM	Normal	Normal	Normal
YSR KADAPA	PEDDAMUDIUM	Moderate	Normal	Moderate
YSR KADAPA	RAJUPALEM	Normal	Moderate	Moderate
YSR KADAPA	DUVVUR	Normal	Normal	Normal
YSR KADAPA	S.MYDUKUR	Normal	Normal	Normal
YSR KADAPA	BRAHMAMGARIMATTAM	Normal	Normal	Normal
YSR KADAPA	B.KODUR	Normal	Normal	Normal
YSR KADAPA	KALASAPADU	Moderate	Moderate	Moderate
YSR KADAPA	PORUMAMILLA	Normal	Normal	Normal
YSR KADAPA	BADVEL	Normal	Normal	Normal
YSR KADAPA	GOPAVARAM	Normal	Normal	Normal



YSR KADAPA	KHAJIPET	Normal	Normal	Normal
YSR KADAPA	CHAPAD	Normal	Normal	Normal
YSR KADAPA	PRODDATUR	Normal	Normal	Normal
YSR KADAPA	JAMMALAMADUGU	Normal	Normal	Normal
YSR KADAPA	MUDDANUR	Normal	Normal	Normal
YSR KADAPA	SIMHADRIPURAM	Normal	Normal	Normal
YSR KADAPA	LINGALA	Normal	Normal	Normal
YSR KADAPA	PULIVENDLA	Normal	Normal	Normal
YSR KADAPA	VEMULA	Normal	Normal	Normal
YSR KADAPA	THONDUR	Normal	Normal	Normal
YSR KADAPA	VEERAPUNAYUNIPALLE	Normal	Normal	Normal
YSR KADAPA	YERRAGUNTLA	Normal	Normal	Normal
YSR KADAPA	KAMALAPURAM	Severe	Moderate	Severe
YSR KADAPA	VALLUR	Moderate	Moderate	Moderate
YSR KADAPA	CHENNUR	Normal	Normal	Normal
YSR KADAPA	ATLUR	Normal	Normal	Normal
YSR KADAPA	VONTIMITTA	Normal	Normal	Normal
YSR KADAPA	SIDHOUT	Normal	Normal	Normal
YSR KADAPA	YSR KADAPA	Normal	Normal	Normal
YSR KADAPA	CHINTHAKOMMADINNE	Normal	Normal	Normal
YSR KADAPA	PENDLIMARRI	Normal	Normal	Normal
YSR KADAPA	VEMPALLE	Normal	Normal	Normal
YSR KADAPA	CHAKRAYAPET	Normal	Normal	Normal
YSR KADAPA	LAKKIREDDIPALLE	Normal	Normal	Normal
YSR KADAPA	RAMAPURAM	Normal	Normal	Normal
YSR KADAPA	VEERABALLE	Normal	Normal	Normal
YSR KADAPA	RAJAMPET	Normal	Normal	Normal
YSR KADAPA	NANDALUR	Moderate	Moderate	Moderate
YSR KADAPA	PENAGALUR	Moderate	Normal	Moderate
YSR KADAPA	CHITVEL	Normal	Normal	Normal
YSR KADAPA	KODUR	Normal	Normal	Normal
YSR KADAPA	OBULAVARIPALLE	Normal	Normal	Normal
YSR KADAPA	PULLAMPETA	Normal	Normal	Normal
YSR KADAPA	T SUNDUPALLE	Normal	Normal	Normal
YSR KADAPA	SAMBEPALLE	Normal	Normal	Normal
YSR KADAPA	CHINNAMANDEM	Normal	Normal	Normal
YSR KADAPA	RAYACHOTI	Normal	Normal	Normal
YSR KADAPA	GALIVEEDU	Normal	Normal	Normal
YSR KADAPA	SRI AVADHUTHA KASINAYANA	Normal	Normal	Normal
ANANTAPURAM	D.HIREHAL	Normal	Normal	Normal
ANANTAPURAM	BOMMANAHAL	Normal	Normal	Normal
ANANTAPURAM	VIDAPANAKAL	Normal	Normal	Normal
ANANTAPURAM	VAJRAKARUR	Normal	Normal	Normal
ANANTAPURAM	GUNTAKAL	Moderate	Normal	Moderate
ANANTAPURAM	GOOTY	Normal	Normal	Normal



ANANTAPURAM	PEDDAVADUGUR	Normal	Normal	Normal
ANANTAPURAM	YADIKI	Normal	Normal	Normal
ANANTAPURAM	TADPATRI	Normal	Normal	Normal
ANANTAPURAM	PEDDAPAPPUR	Normal	Normal	Normal
ANANTAPURAM	SINGANAMALA	Normal	Normal	Normal
ANANTAPURAM	PAMIDI	Normal	Normal	Normal
ANANTAPURAM	GARLADINNE	Normal	Normal	Normal
ANANTAPURAM	KUDAIR	Normal	Normal	Normal
ANANTAPURAM	URAVAKONDA	Normal	Normal	Normal
ANANTAPURAM	BELUGUPPA	Normal	Normal	Normal
ANANTAPURAM	KANEKAL	Normal	Normal	Normal
ANANTAPURAM	RAYADURG	Normal	Normal	Normal
ANANTAPURAM	GUMMAGATTA	Normal	Normal	Normal
ANANTAPURAM	BRAHMASAMUDRAM	Normal	Normal	Normal
ANANTAPURAM	SETTUR	Normal	Normal	Normal
ANANTAPURAM	KUNDURPI	Normal	Normal	Normal
ANANTAPURAM	KALYANDURG	Normal	Normal	Normal
ANANTAPURAM	ATMAKUR	Normal	Normal	Normal
ANANTAPURAM	ANANTAPURAM	Normal	Normal	Normal
ANANTAPURAM	BUKKARAYA SAMUDRAM	Normal	Normal	Normal
ANANTAPURAM	NARPALA	Normal	Normal	Normal
ANANTAPURAM	PUTLUR	Normal	Normal	Normal
ANANTAPURAM	YELLANUR	Normal	Normal	Normal
ANANTAPURAM	TADIMARRI	Normal	Normal	Normal
ANANTAPURAM	BATHALAPALLE	Normal	Normal	Normal
ANANTAPURAM	RAPTADU	Normal	Normal	Normal
ANANTAPURAM	KANAGANAPALLE	Normal	Normal	Normal
ANANTAPURAM	KAMBADUR	Normal	Normal	Normal
ANANTAPURAM	RAMAGIRI	Normal	Normal	Normal
ANANTAPURAM	CHENNEKOTHAPALLE	Normal	Normal	Normal
ANANTAPURAM	DHARMAVARAM	Normal	Normal	Normal
ANANTAPURAM	MUDIGUBBA	Normal	Normal	Normal
ANANTAPURAM	TALUPULA	Normal	Normal	Normal
ANANTAPURAM	NAMBULIPULIKUNTA	Normal	Normal	Normal
ANANTAPURAM	TANAKAL	Normal	Normal	Normal
ANANTAPURAM	NALLACHERUVU	Normal	Normal	Normal
ANANTAPURAM	GANDLAPENTA	Normal	Normal	Normal
ANANTAPURAM	KADIRI	Normal	Normal	Normal
ANANTAPURAM	AMADAGUR	Normal	Normal	Normal
ANANTAPURAM	OBULADEVARACHERUVU	Normal	Normal	Normal
ANANTAPURAM	NALLAMADA	Normal	Normal	Normal
ANANTAPURAM	GORANTLA	Normal	Normal	Normal
ANANTAPURAM	PUTTAPARTHI	Normal	Normal	Normal
ANANTAPURAM	BUKKAPATNAM	Normal	Normal	Normal
ANANTAPURAM	KOTHACHERUVU	Severe	Moderate	Severe



ANANTAPURAM	PENUKONDA	Normal	Normal	Normal
ANANTAPURAM	RODDAM	Normal	Normal	Normal
ANANTAPURAM	SOMANDEPALLE	Normal	Normal	Normal
ANANTAPURAM	CHILAMATHUR	Normal	Normal	Normal
ANANTAPURAM	LEPAKSHI	Normal	Normal	Normal
ANANTAPURAM	HINDUPUR	Normal	Normal	Normal
ANANTAPURAM	PARIGI	Normal	Normal	Normal
ANANTAPURAM	MADAKASIRA	Normal	Normal	Normal
ANANTAPURAM	GUDIBANDA	Normal	Normal	Normal
ANANTAPURAM	AMARAPURAM	Normal	Normal	Normal
ANANTAPURAM	AGALI	Normal	Normal	Normal
ANANTAPURAM	ROLLA	Normal	Normal	Normal
KURNOOL	KOWTHALAM	Severe	Normal	Severe
KURNOOL	KOSIGI	Moderate	Normal	Moderate
KURNOOL	MANTRALAYAM	Moderate	Normal	Moderate
KURNOOL	NANDAVARAM	Severe	Moderate	Severe
KURNOOL	C.BELAGAL	Moderate	Normal	Moderate
KURNOOL	GUDUR	Normal	Normal	Normal
KURNOOL	KURNOOL	Severe	Moderate	Severe
KURNOOL	NANDIKOTKUR	Moderate	Moderate	Moderate
KURNOOL	PAGIDYALA	Moderate	Moderate	Moderate
KURNOOL	KOTHAPALLE	Moderate	Severe	Severe
KURNOOL	ATMAKUR	Severe	Severe	Severe
KURNOOL	SRISAILAM	#DIV/0!	#DIV/0!	#DIV/0!
KURNOOL	VELGODE	Severe	Severe	Severe
KURNOOL	PAMULAPADU	Moderate	Normal	Moderate
KURNOOL	JUPADU BUNGALOW	Severe	Severe	Severe
KURNOOL	MIDTHUR	Moderate	Normal	Moderate
KURNOOL	ORVAKAL	Severe	Moderate	Severe
KURNOOL	KALLUR	Severe	Moderate	Severe
KURNOOL	KODUMUR	Moderate	Normal	Moderate
KURNOOL	GONEGANDLA	Severe	Moderate	Severe
KURNOOL	YEMMIGANUR	Severe	Moderate	Severe
KURNOOL	PEDDA KADUBUR	Normal	Normal	Normal
KURNOOL	ADONI	Severe	Normal	Severe
KURNOOL	HOLAGUNDA	Normal	Normal	Normal
KURNOOL	ALUR	Normal	Normal	Normal
KURNOOL	ASPARI	Severe	Moderate	Severe
KURNOOL	DEVANAKONDA	Moderate	Normal	Moderate
KURNOOL	KRISHNAGIRI	Normal	Normal	Normal
KURNOOL	VELDURTHI	Normal	Normal	Normal
KURNOOL	BETHAMCHERLA	Normal	Normal	Normal
KURNOOL	PANYAM	Severe	Moderate	Severe
KURNOOL	GADIVEMULA	Severe	Severe	Severe
KURNOOL	BANDI ATMAKUR	Severe	Moderate	Severe



KURNOOL	NANDYAL	Severe	Moderate	Severe
KURNOOL	MAHANANDI	Severe	Severe	Severe
KURNOOL	SIRVEL	Moderate	Normal	Moderate
KURNOOL	RUDRAVARAM	Severe	Moderate	Severe
KURNOOL	ALLAGADDA	Severe	Moderate	Severe
KURNOOL	CHAGALAMARRI	Normal	Normal	Normal
KURNOOL	UYYALAWADA	Moderate	Normal	Moderate
KURNOOL	DORNIPADU	Moderate	Normal	Moderate
KURNOOL	GOSPADU	Normal	Normal	Normal
KURNOOL	KOILKUNTLA	Normal	Normal	Normal
KURNOOL	BANAGANAPALLE	Moderate	Normal	Moderate
KURNOOL	SANJAMALA	Normal	Normal	Normal
KURNOOL	KOLIMIGUNDLA	Normal	Normal	Normal
KURNOOL	OWK	Normal	Normal	Normal
KURNOOL	PEAPALLY	Normal	Normal	Normal
KURNOOL	DHONE	Normal	Normal	Normal
KURNOOL	TUGGALI	Moderate	Normal	Moderate
KURNOOL	PATTIKONDA	Moderate	Normal	Moderate
KURNOOL	MADDIKERA (EAST)	Severe	Normal	Severe
KURNOOL	CHIPPAGIRI	Severe	Normal	Severe
KURNOOL	HALAHARVI	Moderate	Normal	Moderate

Abbreviations:

NDVI: Normalized Difference Vegetation Index

NDWI: Normalized Difference Water Index

VCI: Vegetation Condition Index

TR: Technical Report

ASD: Agriculture & Soils Division

NIR: Near Infra Red

SWIR: Shortwave Infra Red

APSAC: Andhra Pradesh Space Applications Centre

APSDPS: Andhra Pradesh State Development and Planning Society