

Supporting Information

Flood Monitoring in Khammam: Leveraging Multi-Temporal Synthetic Aperture Radar and Geospatial Techniques to Assess Land Use Impacts

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SI Table 1: Khammam September Rainfall

Sr.no	Khammam Mandal	August 31st - Rainfall (mm)	September Month Rainfall (mm)	Highest one day Rainfall (mm)	Date of Highest Rainfall
1	Bonakal	82.3	339.3	200.3	01-Sep-24
2	Chinthakani	48.9	380.6	262.2	01-Sep-24
3	Enkuru	35.6	246.9	102.8	01-Sep-24
4	Kalluru	47.1	384.4	197.8	01-Sep-24
5	Kamepalle	48.6	337.8	145.5	01-Sep-24
6	KhammamRural	34.5	358.2	181	01-Sep-24
7	KhammamUrban	52.9	346.1	153.4	01-Sep-24
8	Konijerla	53.7	362.3	200	01-Sep-24
9	<i>Kusumanchi</i>	<i>41.2</i>	<i>511.6</i>	<i>315.6</i>	<i>01-Sep-24</i>
10	Madhira	87.4	405.4	239.8	01-Sep-24
11	Mudigonda	44.3	373.7	210.1	01-Sep-24
12	Nelakondapalle	59.9	403.5	168.9	01-Sep-24
13	Penuballi	50.2	333.1	109.8	01-Sep-24
14	Raghunadhapalem	54.1	344	150.5	01-Sep-24
15	Sathupalle	55.3	295.3	120	01-Sep-24
16	Singareni	48	409.6	168.7	01-Sep-24
17	Thallada	66.4	418.8	218.2	01-Sep-24
18	<i>Thirumalayapalem</i>	<i>49.6</i>	<i>477.1</i>	<i>330.2</i>	<i>01-Sep-24</i>
19	Vemsoor	68	398.7	90.6	08-Sep-24
20	Wyra	61.7	405.1	247.6	01-Sep-24
21	Yerrupalem	192.4	523.6	253.1	01-Sep-24

SI Table 2: Mandal-wise Flooded Area

S. No	Khammam Mandals	Bare ground	Built up	Crop	Flooded Vegetation	Rangeland	Trees	Water	Total	%
1	Bonakal	0.00	2.35	1249.04	0.00	0.02	0.57	46.55	1298.53	5.06
2	Chintakani	0.13	5.91	1263.73	0.00	2.01	1.46	67.29	1340.53	5.22
3	Enkoor	0.00	0.28	153.12	0.00	0.00	0.01	0.00	153.41	0.60
4	Kalluru	0.00	2.03	776.37	0.00	0.05	0.86	6.08	785.39	3.06
5	Kamepally	0.00	0.02	274.04	0.00	0.85	0.00	1.55	276.45	1.08
6	Khammam Rural	0.00	27.43	1419.34	0.00	9.57	6.00	86.54	1548.88	6.03
7	Khammam Urban	0.00	26.87	345.94	0.19	21.35	10.43	34.76	439.54	1.71
8	Konijerla	0.00	1.73	1092.42	0.01	9.90	4.05	15.75	1123.85	4.38
9	Kusumanchi	0.00	30.68	2334.88	0.31	1.00	1.64	67.35	2435.87	9.48
10	Madhira	2.84	10.71	2871.53	0.57	15.89	17.45	67.01	2986.00	11.63
11	Mudigonda	0.47	8.00	2181.95	0.00	4.00	3.32	58.18	2255.93	8.78
12	Nelakondapally	0.00	8.71	1670.98	0.00	0.00	0.45	38.10	1718.24	6.69
13	Penuballi	0.00	1.32	424.87	0.00	0.09	0.95	3.91	431.14	1.68
14	Raghunadhapalem	0.00	2.79	459.28	0.00	1.52	0.35	13.24	477.19	1.86
15	Sathupally	0.00	1.93	267.67	2.02	11.39	0.28	0.46	283.75	1.10
16	Singareni	0.00	0.41	143.22	0.00	0.94	0.02	0.50	145.09	0.56
17	Thallada	0.00	4.37	1609.45	0.10	21.83	1.99	4.64	1642.38	6.39
18	Tirumalayapalem	0.00	10.03	2617.90	0.51	36.01	5.98	72.99	2743.41	10.68
19	Vemsoor	0.00	0.30	393.09	0.00	0.01	3.23	2.27	398.91	1.55
20	Wyra	0.00	5.05	1614.90	0.00	0.00	0.07	12.26	1632.29	6.36
21	Yerrupalem	0.00	3.12	1546.33	0.00	1.95	4.85	11.26	1567.51	6.10