

Supplementary Material

Remote sensing-based prediction of temporal changes in land surface temperature and land use-land cover (LULC) in urban environments

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Table S1: Accuracy Assessment of LULC Classification for 1992

Landsat LULC Classes							
09/06/1992		Vegetation	Built Up	Bare Land	Water	Total Count	User Accuracy
Classified	Vegetation	267	0	4	15	286	93.3
LULC	Built Up	0	275	34	0	309	88.9
Classes	Bare Land	0	19	262	0	281	93.2
	Water	33	6	0	285	324	87.9
Total Count		300	300	300	300	1200	
Producer Accuracy		89	91.6	87.3	95		
Overall Kappa Statistics						0.87	

Table S2: Accuracy Assessment of LULC Classification for 1996

Landsat LULC Classes								
04/06/1996	Vegetation		Built Up	Bare Land	Water	Total Count	User Accuracy	Overall Accuracy
Classified	Vegetation	269	3	0	14	286	94.05	
LULC	Built Up	1	277	35	1	314	88.21	91.2
Classes	Bare Land	1	19	265	1	286	92.65	
	Water	29	1	0	284	314	90.4	
Total Count		300	300	300	300	1200		
Producer Accuracy		89.6	92.33	88.33	94.66			
Overall Kappa Statistics						0.89		

Table S3: Accuracy Assessment of LULC Classification for 2000

		Landsat LULC Classes						
30/05/2000		Vegetation	Built Up	Bare Land	Water	Total Count	User Accuracy	Overall Accuracy
Classified	Vegetation	268	0	2	19	289	92.73	90.7
LULC	Built Up	4	273	31	0	308	88.63	
Classes	Bare Land	0	27	267	0	294	90.81	
	Water	28	0	0	281	309	90.93	
Total Count		300	300	300	300		1200	
Producer Accuracy		89.33	91	89	93.6			
Overall Kappa Statistics						0.83		

Table S4: Accuracy Assessment of LULC Classification for 2008

		Landsat LULC Classes						
05/06/2008		Vegetation	Built Up	Bare Land	Water	Total Count	User Accuracy	Overall Accuracy
	Classified	Vegetation	278	0	3	16	297	93.6
	LULC	Built Up	1	277	24	0	302	91.72
	Classes	Bare Land	1	23	271	5	300	90.33
		Water	20	0	2	279	301	92.69
Total Count		300	300	300	300	1200		
Producer Accuracy		92.66	92.33	90.66	92.69			
Overall Kappa Statistics						0.89		

Table S5: Accuracy Assessment of LULC Classification for 2014

Landsat LULC Classes								
6/6/2014	Vegetation		Built Up	Bare Land	Water	Total Count	User Accuracy	Overall Accuracy
Classified	Vegetation	278	0	3	16	297	93.6	
LULC	Built Up	1	277	24	0	302	91.72	92.58
Classes	Bare Land	1	23	272	0	296	91.89	
	Water	20	0	1	284	305	93.11	
Total Count		300	300	300	300	1200		
Producer Accuracy		92.66	92.33	90.66	94.66			
Overall Kappa Statistics						0.9		

Table S6: Accuracy Assessment of LULC Classification for 2017

Landsat LULC Classes								
14/06/2017	Vegetation		Built Up	Bare Land	Water	Total Count	User Accuracy	Overall Accuracy
Classified	Vegetation	269	0	5	16	290	92.75	
LULC	Built Up	12	271	30	4	317	85.48	90.25
Classes	Bare Land	4	28	264	1	297	88.88	
	Water	15	1	1	279	296	94.2	
Total Count		300	300	300	300	1200		
Producer Accuracy		89.66	90.3	88	93			
Overall Kappa Statistics						0.88		

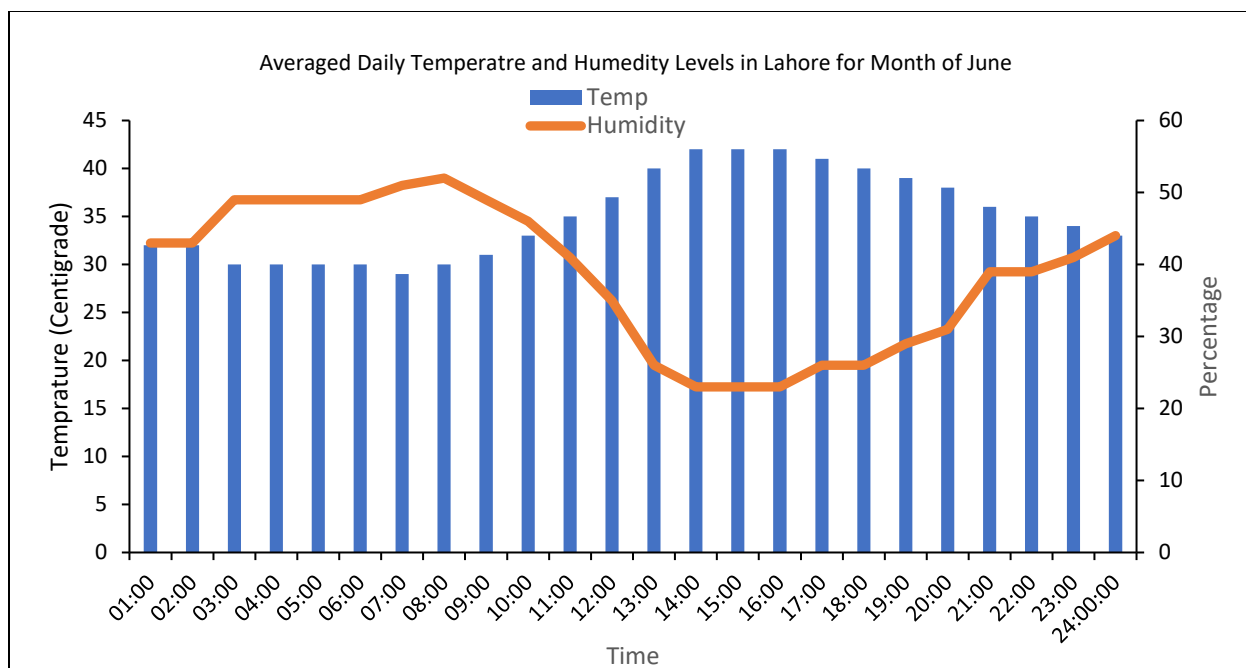


Figure S1: Averaged Daily Temperature and Humidity Levels in Lahore for Month of June

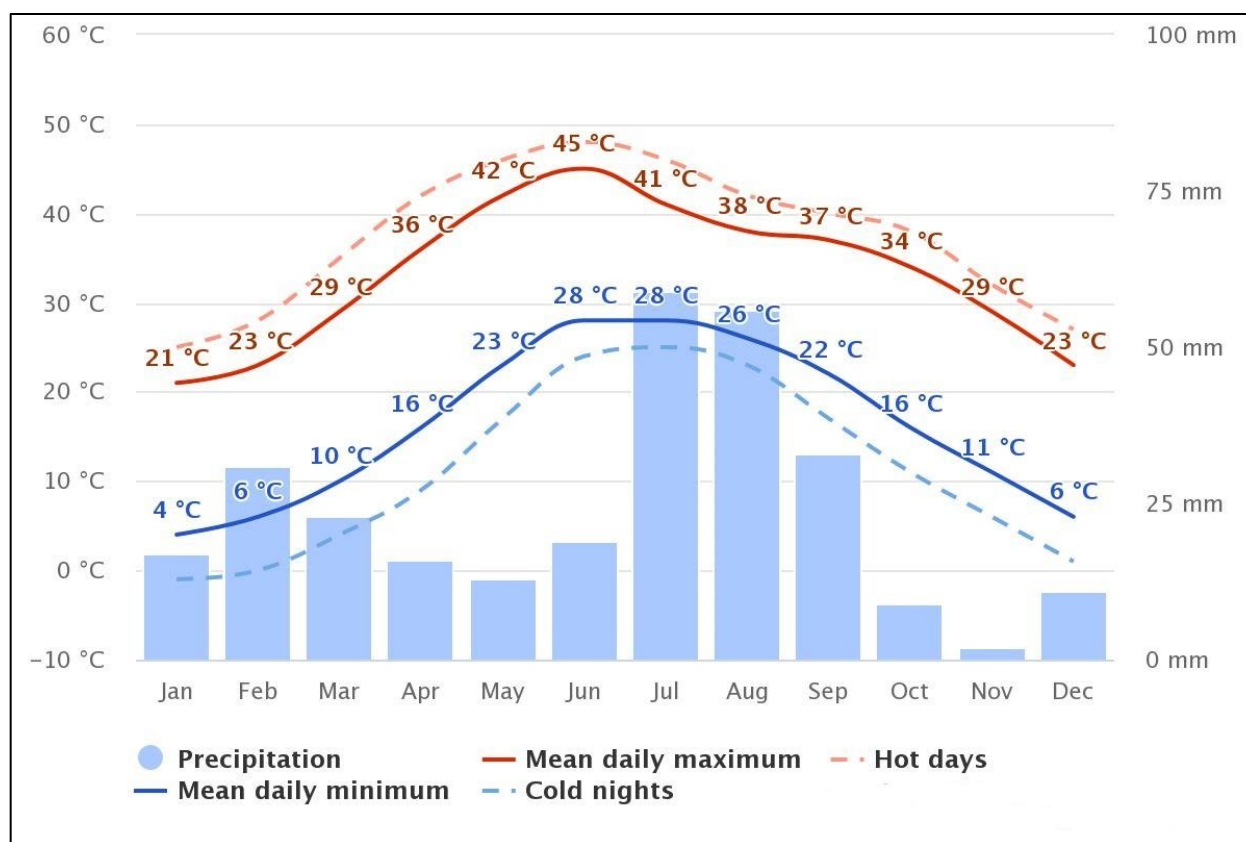


Figure S2: Monthly Climatic Conditions (Precipitation, Mean daily Temp (max and min) and day and night Temp fluctuations in Lahore