

Supplementary Materials

Figure S1. Cumulative histogram for Lausanne.

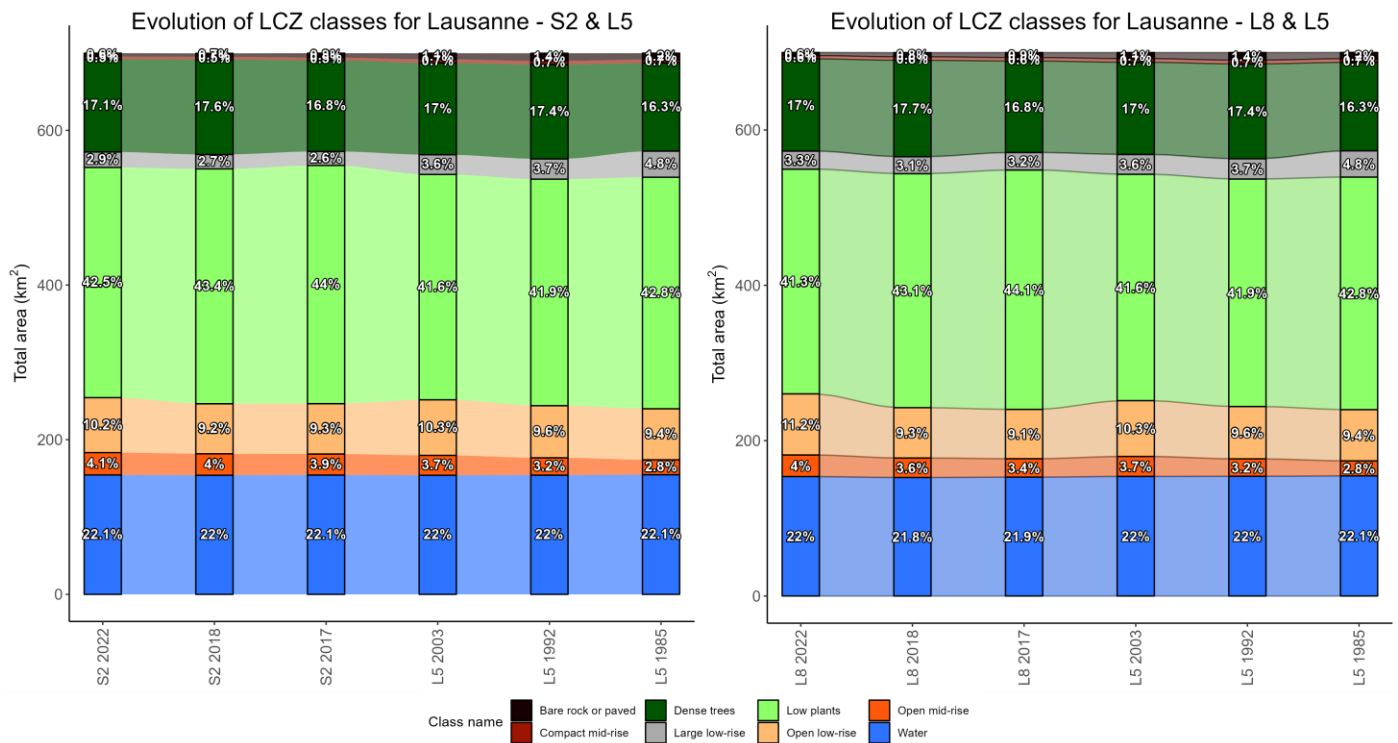


Figure S2. Cumulative histogram for Bern.

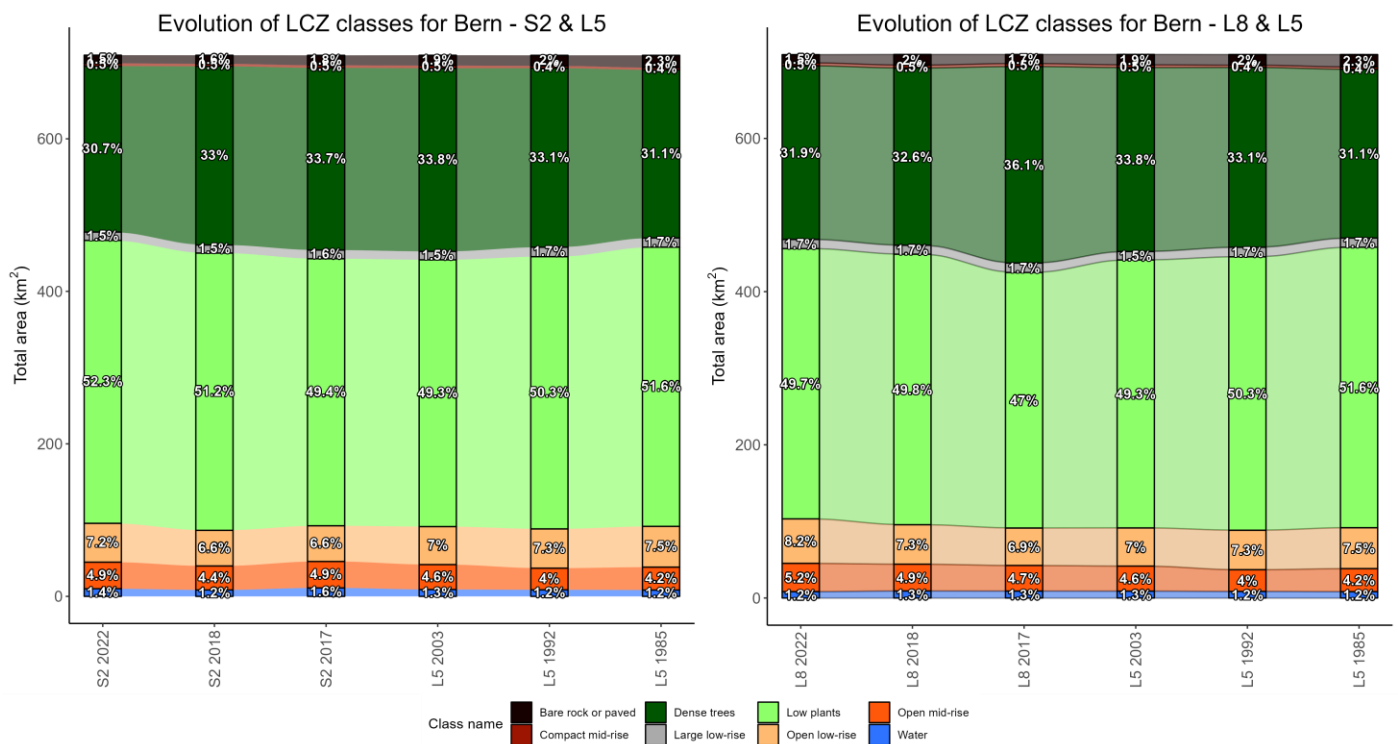


Figure S3. Cumulative histogram for Basel.

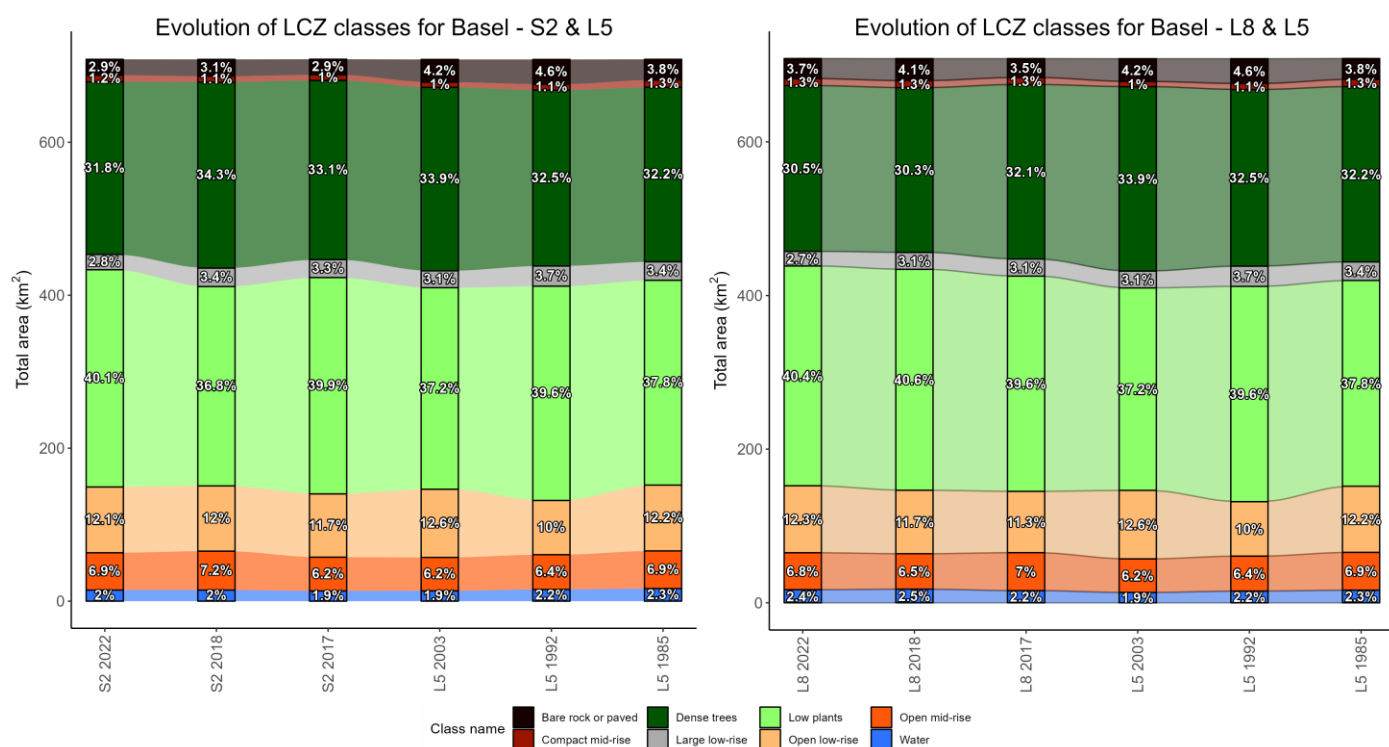


Figure S4. Cumulative histogram for Geneva.

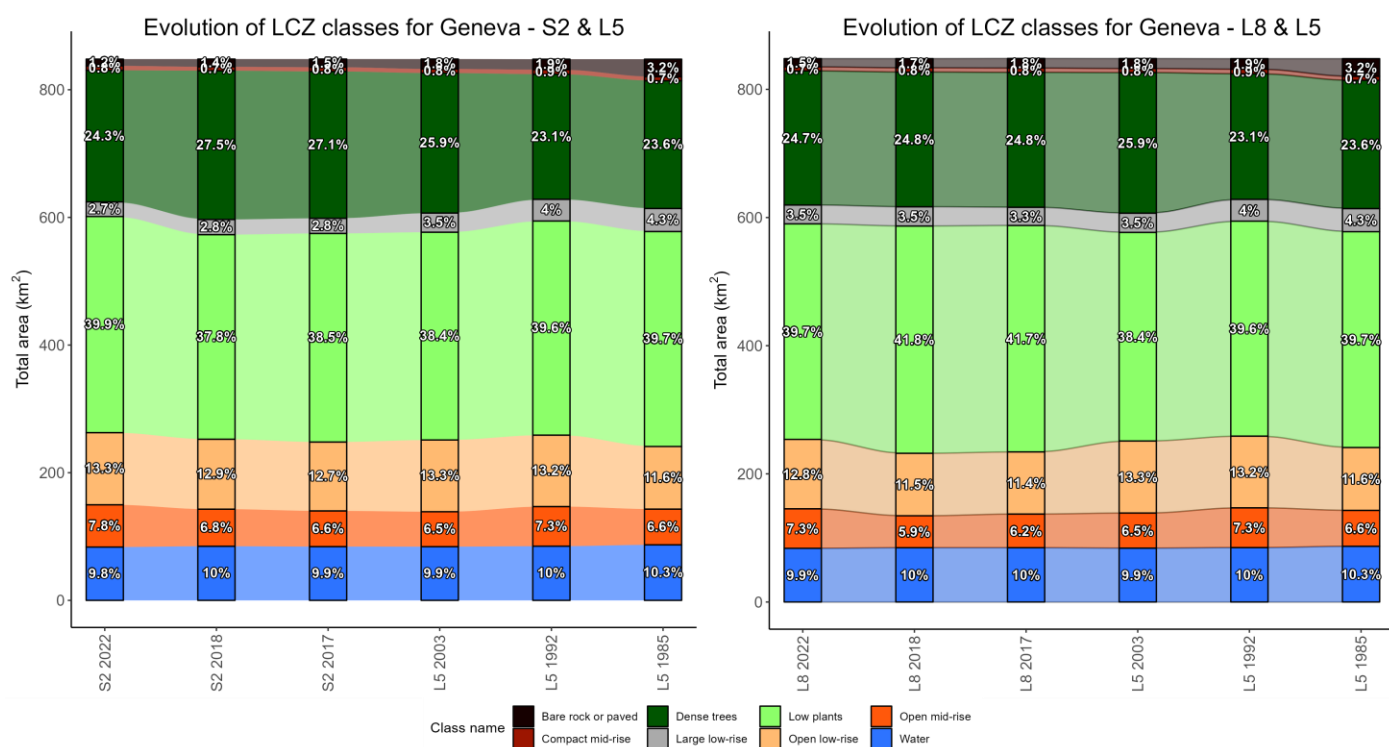


Table S1. Summary tables for UA and PA for each year, each satellite, and each city

Geneva																		
	Sentinel-2 : 2022		Landsat 8 : 2022		Sentinel-2 : 2018		Landsat 8 : 2018		Sentinel-2 : 2017		Landsat 8 : 2017		Landsat 5 : 2003		Landsat 5 : 1992		Landsat 5 : 1985	
Class name	PA [%]	UA [%]	PA [%]	UA [%]	PA [%]	UA [%]	PA [%]	UA [%]	PA [%]	UA [%]	PA [%]	UA [%]	PA [%]	UA [%]	PA [%]	UA [%]	PA [%]	UA [%]
Compact mid-rise	81.1	79.6	76.2	78.3	84.7	84.1	74.1	75.4	86.6	80.3	80.5	76.2	76.9	75.8	74.2	74.6	80.1	75.6
Open mid-rise	63.7	59.9	51.4	49.2	69.4	62.9	47.3	52.8	62.5	58.5	45.7	49.9	46.3	45.2	34.5	34.2	29.6	31.6
Open low-rise	72.9	73.0	68.6	71.3	71.7	79.9	68.0	68.3	74.4	71.1	65.9	57.8	63.7	67.5	55.0	59.0	49.1	58.0
Large low-rise	84.5	90.9	75.9	85.4	85.5	89.3	73.3	74.9	82.4	87.7	76.6	80.6	72.3	75.7	58.0	61.5	40.5	59.5
Dense trees	98.3	99.8	99.5	99.7	99.6	98.3	99.3	98.7	98.2	98.6	96.8	98.7	99.4	98.9	84.0	98.7	49.7	89.1
Low plants	95.0	93.0	93.9	92.9	94.5	93.3	89.4	89.8	91.6	92.5	86.0	88.7	89.3	88.0	90.3	72.0	81.6	48.4
Bare rock or paved	81.1	71.2	76.4	52.5	72.3	72.0	50.2	38.6	65.4	66.2	66.5	47.1	29.5	27.5	21.9	20.0	32.0	11.8
Water	99.8	100	99.8	100	99.9	100.0	99.8	99.9	99.7	100.0	99.7	99.5	99.8	100.0	99.7	99.6	99.8	99.6
Zürich																		
	Sentinel-2 : 2022		Landsat 8 : 2022		Sentinel-2 : 2018		Landsat 8 : 2018		Sentinel-2 : 2017		Landsat 8 : 2017		Landsat 5 : 2003		Landsat 5 : 1992		Landsat 5 : 1985	
Class name	PA [%]	UA [%]	PA [%]	UA [%]	PA [%]	UA [%]	PA [%]	UA [%]	PA [%]	UA [%]	PA [%]	UA [%]	PA [%]	UA [%]	PA [%]	UA [%]	PA [%]	UA [%]
Compact mid-rise	77.3	66.9	76.9	63.8	77.6	60.7	80.1	69.4	70.0	56.9	79.0	71.4	77.0	57.0	77.6	59.5	81.7	63.1
Open mid-rise	71.2	54.7	62.4	52.1	75.4	58.3	55.8	51.0	70.2	58.7	50.3	41.4	59.5	52.7	56.7	54.0	57.1	53.3
Open low-rise	58.7	68.7	59.6	71.6	61.9	77.8	56.7	66.4	59.0	66.7	40.9	66.2	61.9	74.3	58.3	66.8	48.8	67.7
Large low-rise	83.1	88.5	76.9	82.5	79.4	87.7	76.8	83.1	78.5	88.5	72.9	82.8	70.8	77.5	68.7	79.8	59.4	80.0
Dense trees	99.7	99.2	98.9	99.1	99.6	98.9	97.9	99.2	99.4	99.2	97.0	97.7	97.6	99.3	98.3	99.5	98.0	99.3
Low plants	93.8	96.3	95.6	96.1	95.1	96.2	94.9	91.8	94.4	93.8	94.7	90.7	97.2	94.2	96.9	93.9	95.9	89.3
Bare rock or paved	57.9	57.9	52.1	42.5	34.9	40.9	35.7	30.8	43.3	51.3	37.2	28.2	33.5	30.4	37.4	31.6	42.7	31.4
Water	98.3	99.3	97.3	98.2	96.6	98.0	97.9	97.6	96.0	99.0	97.2	89.6	96.5	93.6	96.1	93.4	96.9	95.3
Basel																		
	Sentinel-2 : 2022		Landsat 8 : 2022		Sentinel-2 : 2018		Landsat 8 : 2018		Sentinel-2 : 2017		Landsat 8 : 2017		Landsat 5 : 2003		Landsat 5 : 1992		Landsat 5 : 1985	
Class name	PA [%]	UA [%]	PA [%]	UA [%]	PA [%]	UA [%]	PA [%]	UA [%]	PA [%]	UA [%]	PA [%]	UA [%]	PA [%]	UA [%]	PA [%]	UA [%]	PA [%]	UA [%]
Compact mid-rise	61.4	58.7	60.3	59.0	65.8	69.4	64.8	58.6	66.1	82.4	60.4	56.0	61.3	60.9	65.4	46.8	77.3	51.5
Open mid-rise	50.9	59.7	49.3	66.0	51.0	58.4	47.9	56.8	44.7	57.4	53.9	56.4	44.1	51.3	43.7	51.6	43.5	54.1
Open low-rise	65.3	55.3	76.1	65.1	63.6	56.3	69.3	61.3	68.0	50.8	61.5	55.7	62.9	54.7	59.0	56.1	55.6	49.6
Large low-rise	73.3	71.2	68.2	66.8	76.7	72.6	64.9	67.1	78.6	68.6	66.8	67.1	54.9	50.5	44.0	51.5	42.4	50.6
Dense trees	98.4	99.1	97.8	99.0	98.8	97.6	95.7	97.9	96.0	96.9	98.4	96.2	96.9	98.2	89.4	95.9	91.3	93.1
Low plants	96.8	96.6	95.8	96.0	95.4	96.1	96.3	94.9	93.4	92.7	94.5	96.5	94.7	93.7	91.6	88.1	87.3	86.5
Bare rock or paved	58.7	63.7	56.4	49.6	50.2	55.0	52.8	56.2	41.3	56.8	48.1	55.0	36.5	42.4	36.1	43.9	28.3	35.8
Water	99.1	99.6	97.3	95.8	98.1	97.1	97.8	90.4	98.5	99.0	97.6	94.9	94.0	93.4	96.6	74.1	95.5	76.9
Bern																		
	Sentinel-2 : 2022		Landsat 8 : 2022		Sentinel-2 : 2018		Landsat 8 : 2018		Sentinel-2 : 2017		Landsat 8 : 2017		Landsat 5 : 2003		Landsat 5 : 1992		Landsat 5 : 1985	
Class name	PA [%]	UA [%]	PA [%]	UA [%]	PA [%]	UA [%]	PA [%]	UA [%]	PA [%]	UA [%]	PA [%]	UA [%]	PA [%]	UA [%]	PA [%]	UA [%]	PA [%]	UA [%]
Compact mid-rise	78.0	68.9	74.9	73.2	74.7	67.6	75.4	69.3	79.3	68.0	74.0	69.2	78.7	65.1	79.2	67.3	79.8	72.7
Open mid-rise	55.4	59.7	49.4	59.1	49.0	66.8	47.7	60.6	56.1	62.6	55.7	66.1	51.9	62.7	48.2	55.1	47.8	58.4
Open low-rise	68.4	61.3	74.3	63.5	73.7	58.3	68.1	58.3	74.0	65.8	66.1	60.9	68.8	64.0	45.5	49.4	50.6	48.1
Large low-rise	73.5	70.7	60.5	57.7	78.1	73.4	68.0	63.4	79.0	69.2	68.5	61.1	54.9	63.8	52.5	64.2	54.7	58.2
Dense trees	99.2	98.7	99.3	97.6	98.4	99.2	97.8	97.9	92.0	97.7	87.7	93.9	96.7	97.2	98.3	92.5	97.7	97.6
Low plants	92.0	95.5	89.7	94.1	94.5	93.4	89.7	91.7	92.9	85.7	84.4	76.0	91.9	87.7	76.4	84.1	88.7	85.7
Bare rock or paved	62.3	60.9	55.4	50.0	52.1	52.3	51.3	44.3	38.8	51.8	43.2	40.2	34.2	37.9	33.5	29.3	27.1	31.8
Water	99.3	98.9	97.3	98.8	97.2	98.7	97.9	96.7	99.0	93.3	98.7	96.2	97.1	97.7	97.4	95.9	98.5	97.3
Lausanne																		
	Sentinel-2 : 2022		Landsat 8 : 2022		Sentinel-2 : 2018		Landsat 8 : 2018		Sentinel-2 : 2017		Landsat 8 : 2017		Landsat 5 : 2003		Landsat 5 : 1992		Landsat 5 : 1985	
Class name	PA [%]	UA [%]	PA [%]	UA [%]	PA [%]	UA [%]	PA [%]	UA [%]	PA [%]	UA [%]	PA [%]	UA [%]	PA [%]	UA [%]	PA [%]	UA [%]	PA [%]	UA [%]
Compact mid-rise	29.3	54.2	36.6	52.8	31.8	61.5	40.3	56.2	36.7	67.6	38.6	54.8	36.3	64.9	47.1	64.1	49.4	65.5
Open mid-rise	63.2	64.4	55.3	64.0	57.9	76.1	47.3	56.0	52.5	74.5	45.3	60.2	49.2	59.1	41.0	58.2	32.0	59.0
Open low-rise	84.4	72.0	82.2	75.9	84.8	76.1	80.4	75.1	84.4	69.7	77.7	74.3	79.9	70.0	71.5	63.3	69.7	59.4
Large low-rise	91.3	75.2	83.1	72.4	91.4	75.5	82.4	72.0	89.0	74.8	82.6	70.8	66.5	68.8	59.3	63.2	51.2	52.7
Dense trees	99.6	99.9	99.5	96.1	99.4	93.7	99.5	95.4	99.3	99.9	99.2	94.0	96.5	96.4	97.2	96.2	97.6	96.4
Low plants	92.4	96.7	95.9	96.6	96.6	96.2	95.4	95.5	93.3	95.2	94.4	93.8	95.8	90.7	90.5	87.0	89.9	84.2
Bare rock or paved	47.2	65.4	45.6	53.3	41.9	58.6	29.0	36.9	39.5	40.1	36.2	39.9	18.5	32.8	16.3	15.4	12.0	23.6
Water	99.9	100.0	98.7	100.0	97.8	100.0	98.6	100.0	99.9	100.0	98.2	100.0	99.4	99.8	99.8	100.0	99.9	100.0