



INDICATOR 5: 'Real Abandoned' and Temporarily Used Built-Up Areas, 2015

a) File Name: Sh_LA_Class_Settl.shp

➤ Coordinate Reference Systems: WGS 84 / UTM zone 34N (EPSG:32634)

b) File Name: Sh_LA_Class_Mun.shp

➤ Coordinate Reference Systems: WGS 84 / UTM zone 34N (EPSG:32634)

Attribute	Alias	Pseudonim
MatBrO	Municipality identification number	Matični broj opštine
MatBrNas	Settlement identification number	Matični broj naselja
ImeNasCir	Name of the settlement in Cyrillic	Ime naselja (ćirilica)
ImeNasLat	Name of the settlement in Latin	Ime naselja (latinica)
ImeOpsCir	Name of the municipality in Cyrillic	Ime opštine (ćirilica)
ImeOpsLat	Name of the municipality in Latin	Ime opštine (latinica)
P_0	Share of built-up areas with irradiance 0 $\text{nW cm}^{-2} \text{sr}^{-1}$ (%) in total built-up area of settlement	Učešće izgrađenih površina sa radijansom 0 $\text{nW cm}^{-2} \text{sr}^{-1}$ (%) u ukupnoj izgrađenoj površini naselja
P_1	Share of built-up areas with irradiance from > 0 to $\leq 1 \text{ nW cm}^{-2} \text{sr}^{-1}$ (%) in total built-up area of settlement	Učešće izgrađenih površina sa radijansom od > 0 do $\leq 1 \text{ nW cm}^{-2} \text{sr}^{-1}$ (%) u ukupnoj izgrađenoj površini naselja
P_2	Share of built-up areas with irradiance from > 1 to $\leq 2 \text{ nW cm}^{-2} \text{sr}^{-1}$ (%) in total built-up area of settlement	Učešće izgrađenih površina sa radijansom od > 1 do $\leq 2 \text{ nW cm}^{-2} \text{sr}^{-1}$ (%) u ukupnoj izgrađenoj površini naselja
P_3	Share of built-up areas with irradiance from > 2 to $\leq 4 \text{ nW cm}^{-2} \text{sr}^{-1}$ (%) in total built-up area of settlement	Učešće izgrađenih površina sa radijansom od > 2 do $\leq 4 \text{ nW cm}^{-2} \text{sr}^{-1}$ (%) u ukupnoj izgrađenoj površini naselja
P_4	Share of built-up areas with irradiance from > 4 to $\leq 6 \text{ nW cm}^{-2} \text{sr}^{-1}$ (%) in total built-up area of settlement	Učešće izgrađenih površina sa radijansom od > 4 do $\leq 6 \text{ nW cm}^{-2} \text{sr}^{-1}$ (%) u ukupnoj izgrađenoj površini naselja
P_5	Share of built-up areas with irradiance from > 6 to $\leq 8 \text{ nW cm}^{-2} \text{sr}^{-1}$ (%) in total built-up area of settlement	Učešće izgrađenih površina sa radijansom od > 6 do $\leq 8 \text{ nW cm}^{-2} \text{sr}^{-1}$ (%) u ukupnoj izgrađenoj površini naselja



Attribute	Alias	Pseudonim
P_6	Share of built-up areas with irradiance from > 8 to $\leq 10 \text{ nW cm}^{-2} \text{ sr}^{-1}$ (%) in total built-up area of settlement	Učešće izgrađenih površina sa radijansom od > 0 do $\leq 1 \text{ nW cm}^{-2} \text{ sr}^{-1}$ (%) u ukupnoj izgrađenoj površini naselja
P_7	Share of built-up areas with irradiance from > 10 to $\leq 15 \text{ nW cm}^{-2} \text{ sr}^{-1}$ (%) in total built-up area of settlement	Učešće izgrađenih površina sa radijansom od > 0 do $\leq 1 \text{ nW cm}^{-2} \text{ sr}^{-1}$ (%) u ukupnoj izgrađenoj površini naselja
P_8	Share of built-up areas with irradiance from > 15 to $\leq 30 \text{ nW cm}^{-2} \text{ sr}^{-1}$ (%) in total built-up area of settlement	Učešće izgrađenih površina sa radijansom od > 0 do $\leq 1 \text{ nW cm}^{-2} \text{ sr}^{-1}$ (%) u ukupnoj izgrađenoj površini naselja
P_9	Share of built-up areas with irradiance from > 30 to $\leq 50 \text{ nW cm}^{-2} \text{ sr}^{-1}$ (%) in total built-up area of settlement	Učešće izgrađenih površina sa radijansom od > 0 do $\leq 1 \text{ nW cm}^{-2} \text{ sr}^{-1}$ (%) u ukupnoj izgrađenoj površini naselja
P_10	Share of built-up areas with irradiance from > 50 to $\leq 100 \text{ nW cm}^{-2} \text{ sr}^{-1}$ (%) in total built-up area of settlement	Učešće izgrađenih površina sa radijansom od > 0 do $\leq 1 \text{ nW cm}^{-2} \text{ sr}^{-1}$ (%) u ukupnoj izgrađenoj površini naselja
P_11	Share of built-up areas with irradiance from > 100 to $\leq 200 \text{ nW cm}^{-2} \text{ sr}^{-1}$ (%) in total built-up area of settlement	Učešće izgrađenih površina sa radijansom od > 0 do $\leq 1 \text{ nW cm}^{-2} \text{ sr}^{-1}$ (%) u ukupnoj izgrađenoj površini naselja
P_12	Share of built-up areas with irradiance $> 200 \text{ nW cm}^{-2} \text{ sr}^{-1}$ (%) in total built-up area of settlement	Učešće izgrađenih površina sa radijansom $> 200 \text{ nW cm}^{-2} \text{ sr}^{-1}$ (%) u ukupnoj izgrađenoj površini naselja

c) File Name: Ngt_Lt_Built-Up.tif

- Coordinate Reference Systems: WGS 84 / UTM zone 34N (EPSG:32634)
- Resolution: 19.1093 m × 19.1093 m
- Max: 213.7830657959
- Min: 0
- No Data: $-3.40282\text{e}+38$
- Unit: $\text{nW cm}^{-2} \text{ sr}^{-1}$

Description of Indicator: Real Abandoned' and Temporarily Used Built-up Areas serve to indicate the poorly used and potentially abandoned built-up areas. The data about built-up areas was overlapped with satellite images of nighttime lights to determine their radiance ($\text{nW cm}^{-2} \text{ sr}^{-1}$). In the second step, built-up areas were classified according to the radiance intensity in 12 classes: 0, 0–1, 1–2, 2–4, 4–6, 6–8, 8–10, 10–15, 15–30, 30–50, 50–100, 100–200, $> 200 \text{ nW cm}^{-2} \text{ sr}^{-1}$. The shares of radiance classes in the total built-up area of settlements/municipalities were calculated. The nighttime lights dataset for 2015 was used in calculations. The data are filtered to exclude impact by stray light, lightning, lunar illumination, cloud-cover, fires and other ephemeral light, and with the background (non-lights) set to zero. Additionally, the dataset was checked on outliers that have been removed from the analysis.



Source data for Indicator calculation

Type of data	Source
Built-up area	GHS_BUILT_S1NODSM_GLOBE_R2018A [European Commission, Joint Research Center, 2019]
Nighttime Lights	Version 1 VIIRS DNB [Earth Observation Group (EOG); Colorado Mining School, 2015]
Administrative units*	GeoSrbija [Open data of the National Data Infrastructure, Republic Geodetic Authority, n.d.]

* GeoSrbija (Open Data of the National Data Infrastructure, Republic Geodetic Authority, n.d.) from which the administrative settlements boundaries were taken have no data for the province Kosovo and Metohija. Accordingly, these administrative units were not included in the analysis.