

# تطبيقات المناخ الذكى

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الهيئة العامة للتخطيط العمرانى

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مقدمة

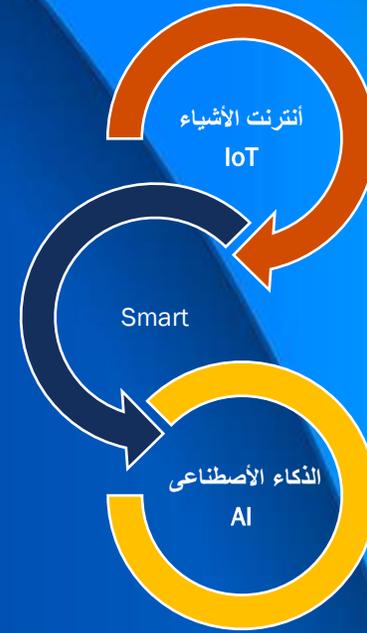
مقياس استخدام التطبيقات

أدوات المناخ الذكي

البيانات مفتوحة المصادر وكيفية التكامل بين البيانات

تطبيق LCZ Generator

المحتوى



## مقدمة

يعتمد بشكل رئيسي على أجهزة الاستشعار، الحواسيب، تطبيقات الهواتف الذكية، النماذج المناخية، المواقع الإلكترونية لتقديم خدمة نشر البيانات المناخية بكل سلاسة مع ربط وتحليل وتقديم خدمات مناخية فائقة السرعة عن الطرق التقليدية في الرصد المناخي ودمج وعرض البيانات ومعالجة حجم أكبر من البيانات وبالتالي تقديم خدمات ونتائج لمشكلات كتغير المناخ ونسبة الكربون وارتفاع الانبعاثات

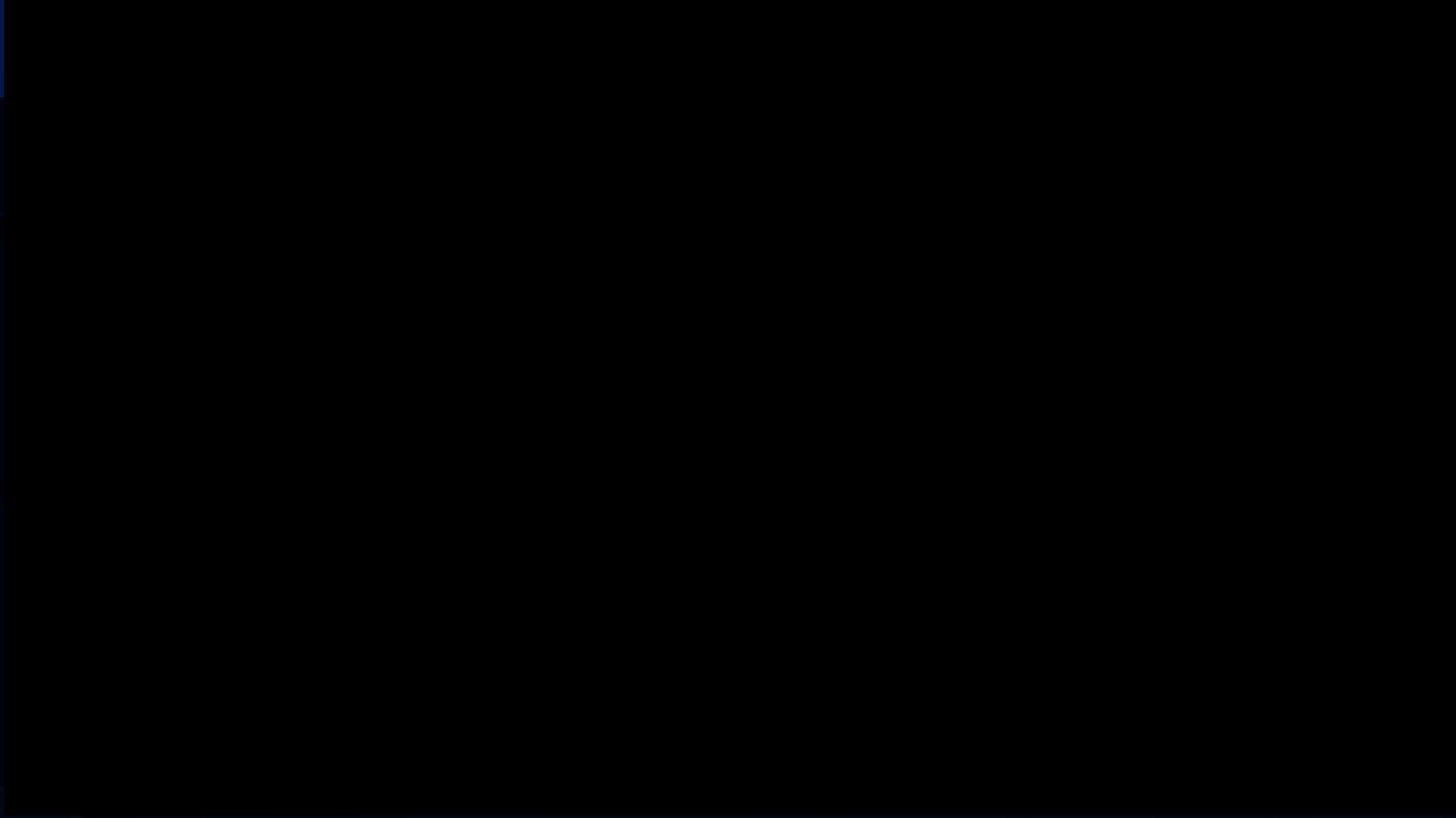
2022-9-20

تطبيقات المناخ الذكي

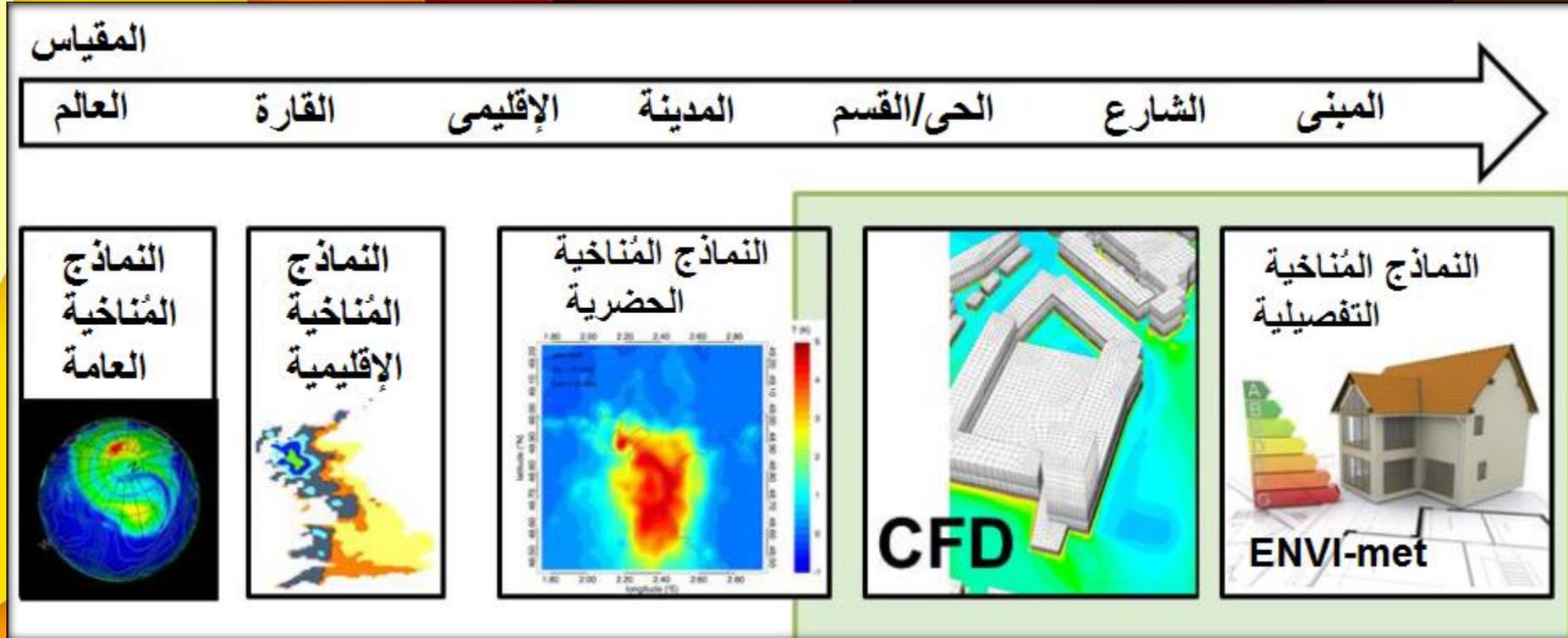
# محطة ارساد ذكية



# لماذا تختلف توقعات جودة الهواء على هاتفي عن محطات مراقبة جودة الهواء المباشرة



# مقياس استخدام التطبيقات



# أدوات المناخ الذكي



البرامج

الذكاء الاصطناعي  
RS

التطبيقات

GIS



المواقع الإلكترونية

# البيانات مفتوحة المصادر

كيفية التكامل بين البيانات



**Climate Consultant**



**Climate One**



**epw map**

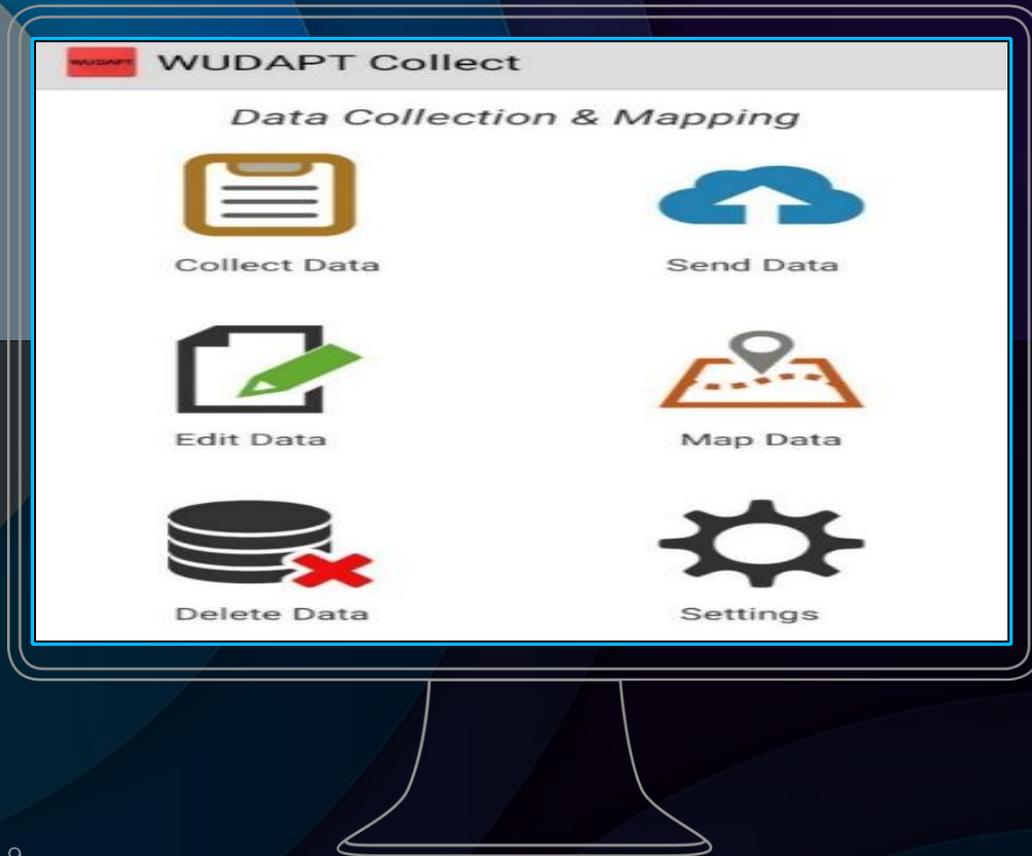


**Climate Data Store**

**WorldClim**

# تطبيق LCZ Generator

(LCZ) Local Climate Zone



**WUDAPT**

World Urban Database and  
Access Portal Tools



## Built types

### Compact highrise



Dense mix of tall buildings to tens of stories. Few or no trees. Land cover mostly paved. Concrete, steel, stone, and glass construction materials.

### Compact midrise



Dense mix of midrise buildings (3–9 stories). Few or no trees. Land cover mostly paved. Stone, brick, tile, and concrete construction materials.

### Compact lowrise



Dense mix of lowrise buildings (1–3 stories). Few or no trees. Land cover mostly paved. Stone, brick, tile, and concrete construction materials.

### Open highrise



Open arrangement of tall buildings to tens of stories. Abundance of pervious land cover (low plants, trees). Concrete, steel, stone, and glass construction materials.

### Open midrise



Open arrangement of midrise buildings (3–9 stories). Abundance of pervious land cover (low plants, scattered trees). Concrete, steel, stone, and glass construction materials.

### Open lowrise



Open arrangement of lowrise buildings (1–3 stories). Abundance of pervious land cover (low plants, scattered trees). Wood, brick, stone, tile, and concrete construction materials.

### Lightweight lowrise



Dense mix of single-story buildings. Few or no trees. Land cover mostly hard-packed. Lightweight construction materials (e.g., wood, thatch, corrugated metal).

### Large lowrise



Open arrangement of large lowrise buildings (1–3 stories). Few or no trees. Land cover mostly paved. Steel, concrete, metal, and stone construction materials.

### Sparsely built



Sparse arrangement of small or medium-sized buildings in a natural setting. Abundance of pervious land cover (low plants, scattered trees).

### Heavy industry



Lowrise and midrise industrial structures (towers, tanks, stacks). Few or no trees. Land cover mostly paved or hard-packed. Metal, steel, and concrete construction materials.

## Land cover types

### Dense trees



Heavily wooded landscape of deciduous and/or evergreen trees. Land cover mostly pervious (low plants). Zone function is natural forest, tree cultivation or urban park.

### Scattered trees



Lightly wooded landscape of deciduous and/or evergreen trees. Land cover mostly pervious (low plants). Zone function is natural forest, tree cultivation, or urban park.

### Bush, scrub



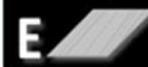
Open arrangement of bushes, shrubs, and short, woody trees. Land cover mostly pervious (bare soil or sand). Zone function is natural scrubland or agriculture.

### Low plants



Featureless landscape of grass or herbaceous plants/crops. Few or no trees. Zone function is natural grassland, agriculture, or urban park.

### Bare rock or paved



Featureless landscape of rock or paved cover. Few or no trees or plants. Zone function is natural desert (rock) or urban transportation.

### Bare soil or sand



Featureless landscape of soil or sand cover. Few or no trees or plants. Zone function is natural desert or agriculture.

### Water



Large, open water bodies such as seas and lakes, or small bodies such as rivers, reservoirs, and lagoons.

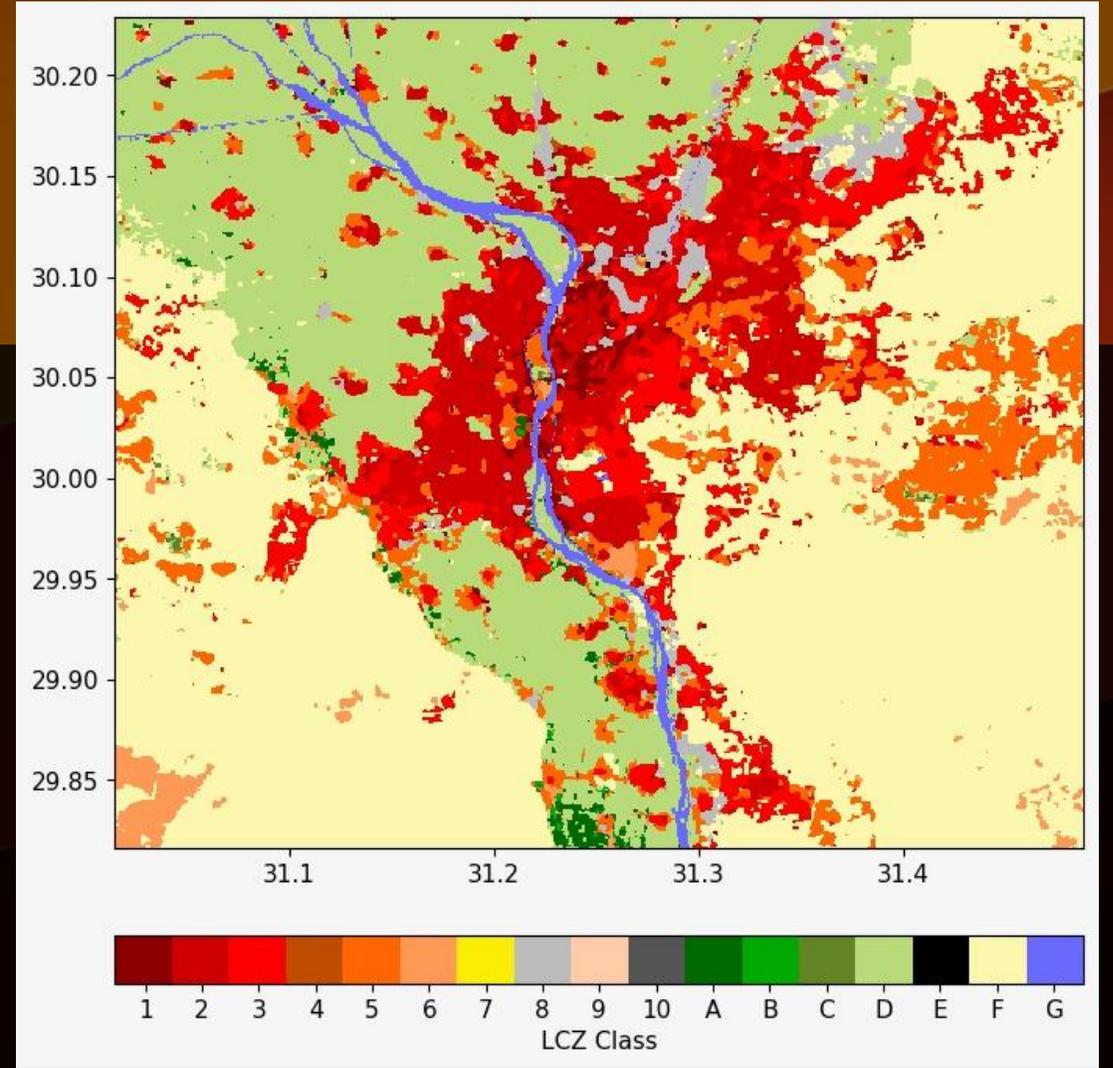
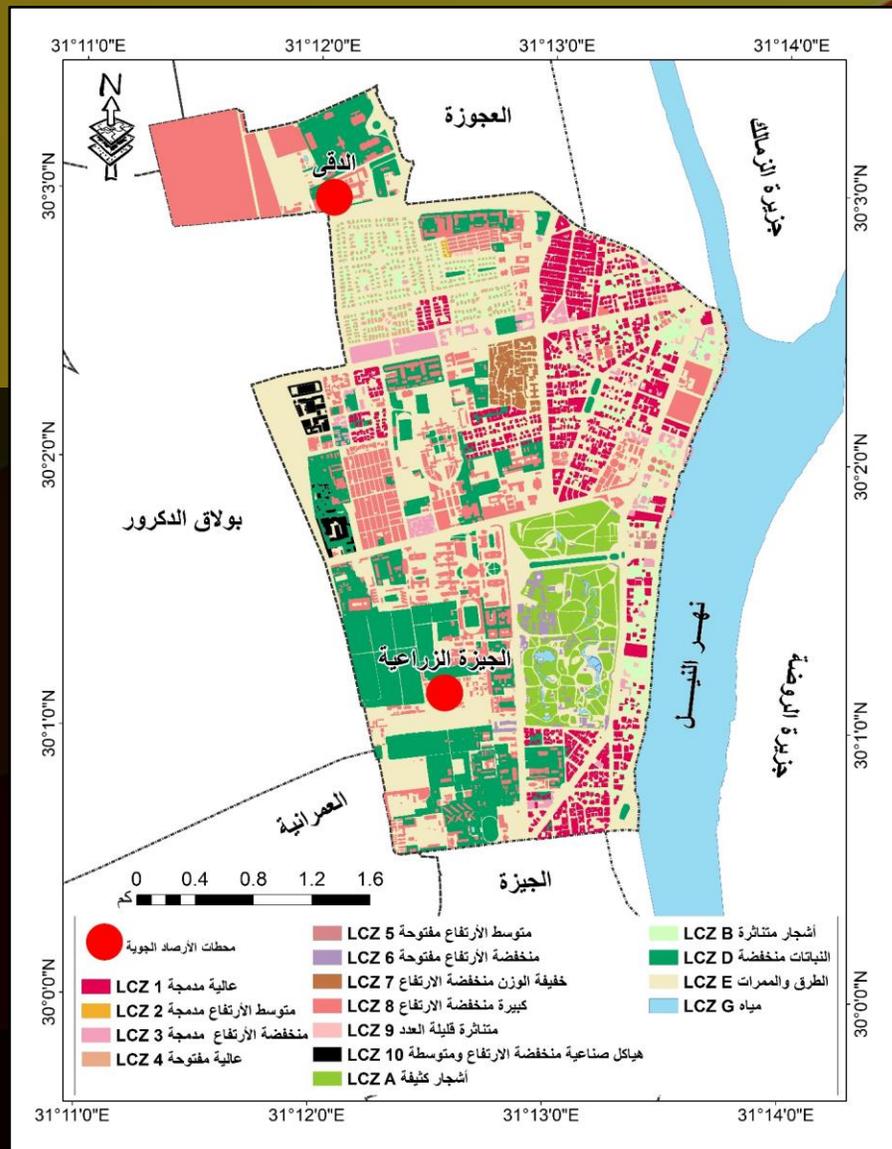
## VARIABLE LAND COVER PROPERTIES

Variable or ephemeral land cover properties that change significantly with synoptic weather patterns, agricultural practices, and/or seasonal cycles.

- b. bare trees** Leafless deciduous trees (e.g., winter). Increased sky view factor. Reduced albedo.
- s. snow cover** Snow cover >10 cm in depth. Low admittance. High albedo.
- d. dry ground** Parched soil. Low admittance. Large Bowen ratio. Increased albedo.
- w. wet ground** Waterlogged soil. High admittance. Small Bowen ratio. Reduced albedo.



[https://lcz-generator.rub.de/ta\\_submission](https://lcz-generator.rub.de/ta_submission)



# Thank you!

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