Diversity of land uses—patch richness density (B.1.1.1a)

Definition:

Patch richness density (PRD),[102] representing the number of different land use classes per 100 hectares within the study area, is used as a measure of land use diversity. Values: **[1] PRD < 0,25**; **[2] 0,25 ≤ PRD < 0,75**; **[3] PRD ≥ 0,75**.

Input data:
- URC and corridor segment boundaries
- Urban Atlas data for the study area[103]

Implementation:

1. Urban Atlas data is reclassified as shown in Table.App.E.13.
2. To isolate land uses interacting with the river space, polygons within a buffer of 150m from the river are selected from the Urban Atlas data.
3. The number of different classes (**n**) is recorded for each corridor segment.
4. The PRD values assigned to the corridor segments are given by the ratio **PRD = n / A_{rs} * 100**, i.e. the number of different classes per 100 hectares.
5. Final values are normalised[104] and classified as follows: **[1] PRD < 0,25**; **[2] 0,25 ≤ PRD < 0,75**; **[3] PRD ≥ 0,75**.

Results for CS03:
- Number of different classes: **4**
- PRD = 4 / 123,77ha * 100 = **3,232 classes/100 ha**
- Normalised PRD = **0,413** > 0,25 **[class 2]**

CLASS	NAME	UA CODE	SEALING
C1	Continuous urban fabric areas	11100	80-100%
C2	Discontinuous dense urban fabric	11121	50-80%
C3	Discontinuous urban fabric	11220, 11230, 11240, 11300	< 50%
C4	Industrial/commercial areas	12100	
C5	Transport infrastructure	12210, 12220, 12230, 12300,12400	
C6	Mine/Dump sites, Construction/Land without use	13100, 13300, 13400	
C7	Green areas and sport facilities	14100, 14200	
C8	Agriculture, Forest, Water	20000, 30000, 50000	

TABLE APP.E.13 Reclassification of Urban Atlas data (based on Prastacos et al., 2017).

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102   PRD is a diversity measure of landscape composition.

103   Urban Atlas data is available for the Large Urban Zones of Europe (all urban areas above 100.000 inhabitants, according to the Urban Audit). Source: https://www.eea.europa.eu/data-and-maps/data/urban-atlas#tab-gis-data

104   In absence of a reference (maximum) value, PRD values of all corridor segments of the corridor are normalised, with the highest PRD value equal to 1.
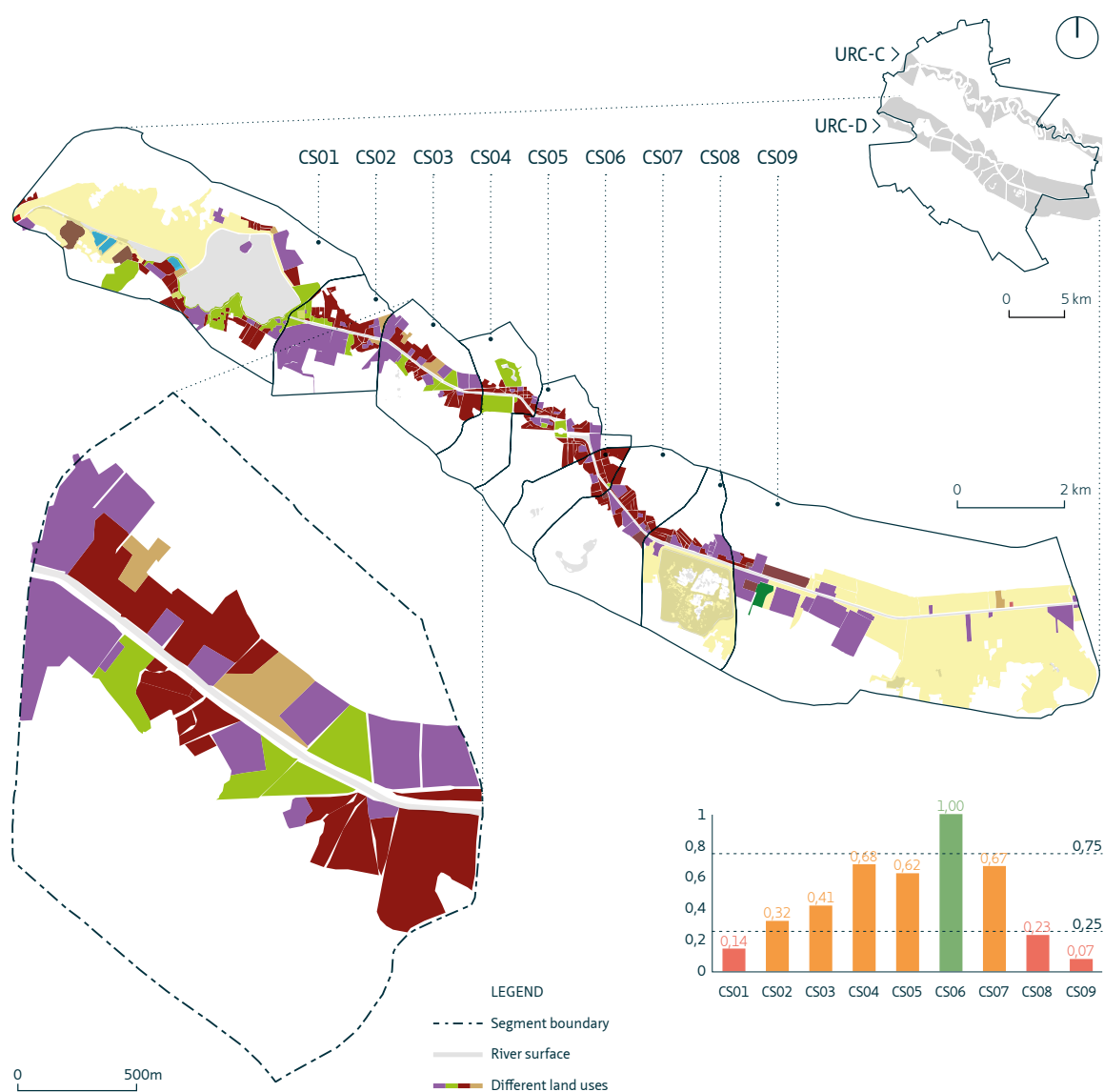
FIGURE APP.E.12 Diversity of land uses - patch richness density along URC Dâmbovița, with detail of CS03.

SEGMENT	VALUE	INDEX
CS01	0.138	1
CS02	0.316	2
CS03	0.413	2
CS04	0.678	2
CS05	0.620	2
CS06	1.000	3
CS07	0.667	2
CS08	0.225	1
CS09	0.071	1

TABLE APP.E.14 Results of indicator B.1.1.1a.