Sinuosity (A.2.2.3)

Definition:

Sinuosity is a measure of channel form complexity which may be used, within lateral connectivity, as an indicator of (not the presence of, but the spatial conditions for) biodiversity. Sinuosity is "the existence or absence of a meandering pattern in the landscape." (Silva et al., 2004, pp.34-6) Sinuosity can be determined by dividing channel length (L_r) with down-valley length (L_v). Values: **[1] almost straight** between 1,00-1,05; **[2] sinuous** between 1,05-1,50, and **[3] meandering** above 1,50.

Input data:
— Corridor segment boundary
— River centreline (OSM: waterway=river)[100]

Implementation:

1 The river centreline is clipped to the corridor segment boundary.
2 The down-valley length is determined by river centreline.
3 The sinuosity is determined with the formula L_r / L_v.

Results for CS03:
— L_r = **2,19km**
— L_v = **2,15km**
— Sinuosity: **1.02 (almost straight)**

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100   In some cases the definition waterway=stream may need to be added to the selection. The river line must be dissolved before used as an input.
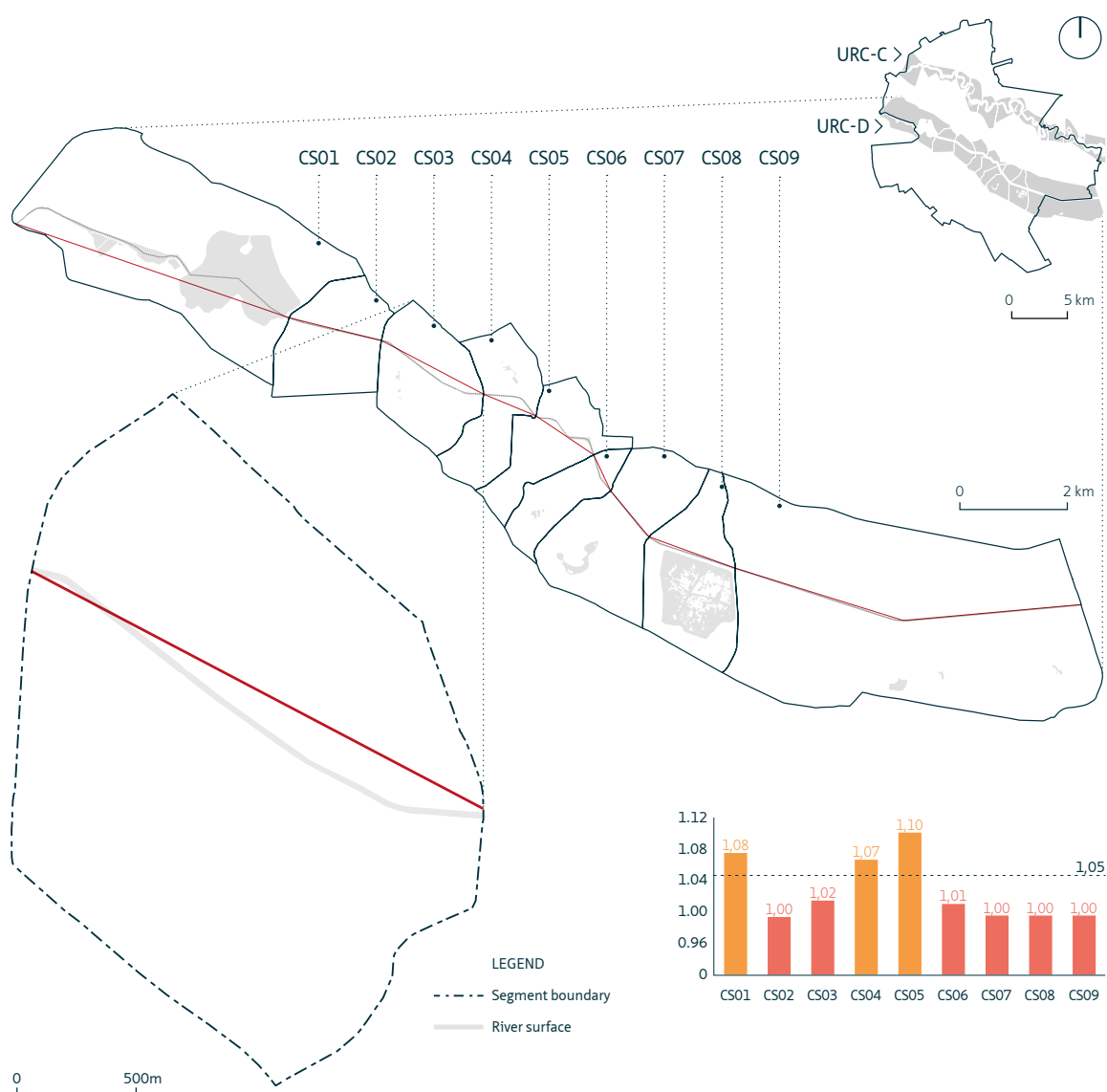
FIGURE APP.E.10 Sinuosity along URC Dâmbovița, with detail of CS03.

SEGMENT	VALUE	INDEX
CS01	1.08	2
CS02	1.00	1
CS03	1.02	1
CS04	1.07	2
CS05	1.10	2
CS06	1.01	1
CS07	1.00	1
CS08	1.00	1
CS09	1.00	1

TABLE APP.E.11 Results of indicator A.2.2.3.