

DIN CEN ISO/TS 19144-3:2025-02 (E)

Geographic information - Classification systems - Part 3: Land Use Meta Language (LUML) (ISO/TS 19144-3:2024); English version CEN ISO/TS 19144-3:2024

Contents

Page

Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms, definitions and abbreviated terms	1
3.1 Terms and definitions	1
3.2 Abbreviated terms	2
4 Conformance	3
4.1 Conformance requirements and testing	3
4.2 Conformance classes	3
4.3 Conformance class 1 — Description of a land characterization classification system	3
4.4 Conformance class 2 — Comparison of land characterization classification systems	3
5 Notation	3
6 Context	4
7 Conceptual basis	5
7.1 Domain of interest	5
7.2 Model based approach	5
7.3 Packages	6
7.4 Relation to ISO 19144-1	6
7.5 High level structure classes	7
7.5.1 LU_LandUseClassificationSystemMetaLanguage	7
7.5.2 LU_LandUseClassDescriptor	8
7.5.3 LU_LandUseClass	8
7.6 Connection with Land Cover	8
7.7 Land Cover Land Use functional link	9
7.7.1 Types of descriptions	9
7.7.2 Description Type 1 — Land Cover	9
7.7.3 Description Type 2 — Land Use	10
7.7.4 Description Type 3 — Combined Land Cover Land Use – Land Characterization	11
7.7.5 Descriptive Overview of the functional link	12
7.7.6 Land Characterization class description	13
7.7.7 LU_LandCoverLandUseRelationship	13
8 LUML design concepts	15
8.1 Overview of LUML design	15
8.2 Elements of the LUML metamodel	15
8.2.1 General description	15
8.2.2 Land Use Meta Language object structure	16
8.2.3 Land Use function and activities	17
8.2.4 LU_ChronologyType	18
8.3 Land Use structure	19
8.3.1 Overview of the Land Use structure	19
8.3.2 Description of the Land Use function classes	20
8.3.3 Code lists and support classes for LU_Production	28
8.3.4 LU_Provision function	32
8.3.5 Subtypes of LU_Provision	33

8.3.6	LU_ResidentialTypes.....	35
8.3.7	LU_Regulative.....	35
8.3.8	Subtypes of LU_Regulative.....	37
8.3.9	Code lists for LU_Regulative.....	38
8.3.10	Subtypes of LU_Insubstantive_Other.....	40
9	Land Use activities.....	41
9.1	Land Use activities arrangement structure.....	41
9.2	Land Use activities structure.....	42
9.3	Land Use activities description.....	43
9.3.1	LU_Activities attributes and support classes.....	43
9.3.2	LU_Activities subtypes.....	44
9.4	Land Use activities details.....	45
9.4.1	LU_PrimaryProductionActivities subtypes.....	45
9.4.2	LU_PrimaryProductionActivities subtypes and attributes.....	46
9.4.3	LU_RawEndProductionIndustryActivities subtypes and attributes.....	48
9.4.4	LU_RawEndProductionActivities subtypes.....	49
9.4.5	LU_HeavyProductionIndustryActivities subtypes and attributes.....	49
9.4.6	LU_HeavyProductionActivities subtypes.....	50
9.4.7	LU_EnergyProductionIndustryActivities subtypes and attributes.....	51
9.4.8	LU_EnergyExtraction subtypes.....	51
9.4.9	LU_ProvisionActivities subtypes and attributes.....	51
9.4.10	LU_ProvisionActivities subtypes.....	52
9.4.11	LU_ResidentialActivities subtypes and attributes.....	53
9.4.12	LU_ResidentialActivities subtypes.....	53
9.4.13	LU_RegulativeActivities subtypes and attributes.....	53
9.4.14	LU_RegulativeActivities subtypes.....	54
9.4.15	LU_BufferingShieldingActivities subtypes and attributes.....	54
9.4.16	LU_BufferingShieldingActivities subtypes.....	55
10	Extension of the LCML.....	55
10.1	Extension process.....	55
10.2	Registration of extensions.....	55
10.3	Backward compatibility through registration.....	56
	Annex A (normative) Abstract test suite.....	57
	Annex B (informative) Examples.....	59
	Annex C (informative) Backward compatibility.....	73
	Bibliography.....	75