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EXPLANATORY NOTE

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Subject: **Proposed changes to Commission Regulation (EU) No 1089/2010 of 23 November 2010 implementing Directive 2007/2/EC of the European Parliament and of the Council as regards interoperability of spatial data sets and services.**

Overview of changes to Commission Regulation (EU) No 1089/2010

In summary the main changes to the Commission Regulation (EU) No 1089/2010 and their benefits are:

- **Code lists and enumerations**
A code list is a list of names or agreed numbers which are essential for identification and interoperability. E.g. the agreed ISO list of abbreviations of country names, the ISC country codes, is such a commonly used code list.
  - All code list and enumeration values are removed from the Regulation text.
  - Article 6 - Code Lists for Spatial Data Sets is modified to refer to the INSPIRE registry, to be operated by the Commission, with assistance by the INSPIRE expert group (MIG), as the place where code list values are managed.
  - Since enumerations are essentially equivalent to non-extensible code lists, it is proposed to remove the notion of enumeration from the text altogether, i.e. in the definitions in Article 2 and elsewhere in the Implementing Regulation (IR). There are currently 17 enumerations in the Regulation.
  - **Benefits:**
    - Several of the received change proposals address issues with the code lists and their values included in the IRs, e.g. proposing additional values, changes in definitions of specific values or code list extensions. Since domain terminology evolves in time, further such change proposals to INSPIRE code lists can be envisioned also for the future.
    - The proposed IR amendment will make the process for changes in code lists and their values more flexible and faster. Contrary to the time when the IRs were first adopted, the INSPIRE registry and its formalized governance structure and procedures, now provide an alternative for managing the code lists in a transparent, yet controlled way.
- **Voidability and multiplicity**
Many fields in the existing Implementing Regulation have been identified as "voidable" which means that they do not have to be filled in if the value does not exist. However, the way in which this was done was considered confusing and has led in some Member States to a rather time consuming solution or to different solutions from one country to another.

- Article 4(2) is reworded in order to clarify that MS do not have to provide property values if they do not exist (in the real world) and that a value "void" has to be provided if a value exists (in the real world), but is not contained in the data set (or cannot be derived from existing values at reasonable costs).
- **Benefits:**
  - This limited change would clarify further in the legal act the concept of voidability and what implications it has for data providers, while not having the same comprehensive consequences as the other scenarios considered.

- **Coordinate reference systems (CRSs)**
  CRS are defined parameters which are necessary to establish maps and geographic information systems. There are many available systems and if these are not harmonised, it will be difficult and time-consuming to combine mapping data from different sources.

  - In section 1 of Annex II (Coordinate Reference Systems), limited changes are made, in order to allow also other CRSs that are endorsed by the MIG and their management in a CRS register containing the CRS's identifiers and their geodetic codes and parameters needed to describe them and to allow conversion and transformation operations.
  - **Benefits**
    - This change would allow, after discussion and agreement by the MIG, additional CRSs in order to lower the burden for implementers, who would then no longer have to create and maintain (store) data in both their national and INSPIRE-required CRS.
    - While, on the other hand, there would be additional burden on users, who might need to do coordinate transformations when bringing together data from different sources, this could be alleviated by additionally requiring that transformations from any additional CRS to the currently required INSPIRE CRS (and vice versa) would need to be implemented in widely available tools or libraries such as GDAL.

- **Other specific changes and corrigenda**
  - A number of corrigenda and minor adaptations to technological and scientific evolution have been introduced as documented in detail in Table 2.

Table 1: Main changes to Commission Regulation (EU) No 1089/2010				
Issue	Change proposal	annex	section(s)	Changes made to IR
1	IR amendment removing all code list & enumeration values and adding an explicit reference to the INSPIRE registry	-	Art. 4 and 6, whole Regulation	Removed Art. 2(7) and Art. 4(3); modified Art. 6; examples for how code list and enumeration values will be removed from the text are given in chapters 3 and 4 of Annex I.
2	Change proposal on voidability and multiplicities	-	Art. 4	Added the sentence as numbered point 2. of the list; changed the following numbers of the numbered list accordingly
3	Change proposal on allowing national coordinate reference systems	II	1.3.4	Added the sentence and the words specified
4	Change proposal on adding Web Mercator as a possible CRS	II	1,3	It has been agreed to have no changes in the IR for this change proposal
5	Change proposal(s) on the data models of Population Distribution & Demography (PD)	-	-	It has been agreed to have no changes in the IR for this change proposal, but TG need to be updated. This change proposal includes all the change proposals from 2.3.1 to 2.3.7 in the sheet 'All change proposals'
6	Change proposals related to bug-fixes / corrigenda & minor changes to the conceptual models and to ensure coherence with thematic legislation	-	-	Specific amendments to the IR accepted here are explained in detail in the sheet 'All change proposals' in this file.

Table 2: Corrigenda			
Issue	annex	section(s)	Changes made to IR
1	II	4.2.4.1	The code list values were not added to the IR, since they have to be added to the Registry; however, the values are already available in the Registry (http://inspire.ec.europa.eu/codelist/AdministrativeHierarchyLevel)
2	II	4.3.1.3	Corrected "endLifepanVersion" into "endLifespanVersion" (only 1 occurrence)
3	II	5.2.1	Replaced "Type to be specified in the spatial data theme Buildings" by "Building of the Buildings Base package"
4	II	7.4.1.3	Replaced "Type to be specified in the spatial data theme Buildings" by "Building of the Buildings Base package"
5	II	7.8.1.13	Removed the sentence "This type is abstract."
6	II	9.2.1	Changed the type Percentage into Decimal for the attribute percentageUnderDesignation
7	II	9.4.2, 9.4.3	Text substituted and sentence "This type is a sub-type of DesignationValue." removed (5 occurences)
8	IV	1.3.1, 1.3.1.2, 1.3.1.3	Corrected the spelling of attribute "tesselation" to "tessellation" (6 occurrences)
9	IV	6.9.2.2	Replaced "Building" by "Building of the Buildings 2D package"
10	IV	2.3.1.3	Replaced "BuildingPart" by "BuildingPart of the Buildings Base package"
11	IV	2.3.3.6	Nothing changed in the IR in English, since changes are required in the IR in other languages (see notes)
12	IV	3.3.9	Replaced "chemicalParameters" with "chemicalParameter" (the reference code is already correct in the Registry)
13	IV	3.3.12	Replaced "chemicalParameters" with "chemicalParameter" (the reference code is already correct in the Registry)
14	IV	8.2.2	Replaced "InstallationType" with "InstallationTypeValue"
15	IV	8.2.3	Replaced "InstallationPartType" with "InstallationPartTypeValue"
16	IV	12.3.4	Replaced "HazardCategoryValue" with "NaturalHazardCategoryValue"
17	I	7.3.1.1, 7.3.1.2, 7.3.1.3	Added the data types AbstractObservableProperty, CompositeObservableProperty, ObservableProperty with their attributes and 3 association roles, according to the UML; changed the following numbered list 7.3.1.X accordingly.
18	IV	3.1.3, 3.1.5, 3.1.9, 3.1.10, 3.1.11, 3.1.12, 32.1, 3.2.5, 18.3.2	Replaced all occurrences of "RangeType" with "RangeType (as defined in section 3.2.6)" in section 3 of Annex IV (Soil); replaced all occurrences of "RangeType" with "RangeType (as defined in section 18.3.3)" in section 18 of Annex IV (Species Distribution).
19	IV	19.3.1.3	Replaced "VerticalReferenceRangeType" with "VerticalExtentRangeType"
20	IV	19.4.2.5	Replaced "HydrocarbonMeasure" with "FossilFuelMeasure"
21	IV	12.2.1, 12.2.2, 12.2.4	Replaced "identifier" with "Identifier" (3 occurrences)
22	I	1 (2)	Added "GM_Position" in the position specified

23	I	1 (7)	Removed "Quantity and Sign" and changed "types" into "type"
24	III	2,4	Replaced "onlineDescription" with "externalDescription" in the position specified
25	IV	15.1.2, 15.1.3	Removed the "extent" attribute from Sea and MarineCirculationZone Feature Types; for both Feature Types, added a constraint to say that the multiplicity of Extent for Sea and for MarineCirculationZone shall be 1.
26	II	7.6.1.7	Removed table of the attributes of the spatial object type "RailwayLink"
27	II	9.1.1	Replaced "inspireID" with "inspireId"
28	II	9.2.1	Removed the sentence "If a value is not provided for this attribute, it is assumed to be 100%"
29	IV	15.1.6	Removed the whole section 15.1.6 "Shore Segment (ShoreSegment)"; changed the following numbered list 15.1.X accordingly
30	IV	20.3.3.1	Updated the code list; changes not marked in the IR, but only in the file inspire_codelist_amendements.xlsx, sheet ''ClassificationMethodUsedValue''; the code list values should be added to the Registry by a change proposal
31	IV	20.3.3.3	Updated the code list; changes not marked in the IR, but only in the file inspire_codelist_amendements.xlsx, sheet ''EndusePotentialValue''; the code list values should be added to the Registry by a change proposal
32	IV	20.3.3.4	Updated the code list; changes not marked in the IR, but only in the file inspire_codelist_amendements.xlsx, sheet ''ExplorationActivityTypeValue''; the code list values should be added to the Registry by a change proposal
33	IV	20.3.3.5	Updated the code list; changes not marked in the IR, but only in the file inspire_codelist_amendements.xlsx, sheet ''ExplorationResultValue''; the code list values should be added to the Registry by a change proposal
34	IV	20.3.3.8	Updated the code list; changes not marked in the IR, but only in the file inspire_codelist_amendements.xlsx, sheet ''MineralDepositGroupValue''; the code list values should be added to the Registry by a change proposal
35	IV	20.3.3.10	Updated the code list; changes not marked in the IR, but only in the file inspire_codelist_amendements.xlsx, sheet ''MineralOccurrenceTypeValue''; the code list values should be added to the Registry by a change proposal
36	IV	20.3.3.11	Updated the code list; changes not marked in the IR, but only in the file inspire_codelist_amendements.xlsx, sheet ''MiningActivityTypeValue''; the code list values should be added to the Registry by a change proposal
37	IV	20.3.3.13	The code list is already up-to-date, without any value to be retired/superseded; see the file inspire_codelist_amendements.xlsx, sheet "ReserveCategoryValue"
38	IV	20.3.3.14	Updated the code list; changes not marked in the IR, but only in the file inspire_codelist_amendements.xlsx, sheet ''ResourceCategoryValue''
39	II	9.4.1	Replaced "This code list may be extended by the Member States." with "The allowed values for this code list comprise the values specified in the Sections 9.4.3-9.4.8 below and additional values at any level defined by data providers."
	IV	1.3.1	Replaced "The package Vector" with "The package Statistical Units Vector"