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ANNEX I

[^{F1}COMMON TYPES, DEFINITIONS AND REQUIREMENTS]**Textual Amendments**

- F1** Substituted by [Commission Regulation \(EU\) No 1253/2013 of 21 October 2013 amending Regulation \(EU\) No 1089/2010 implementing Directive 2007/2/EC as regards interoperability of spatial data sets and services.](#)

[^{F1}1. TYPES DEFINED IN EUROPEAN AND INTERNATIONAL STANDARDS

The following common types, used in attributes or association roles of spatial object types or data types, are defined as follows:

- (1) For the types Any, Angle, Area, Boolean, CharacterString, Date, DateTime, Decimal, Distance, Integer, Length, Measure, Number, Probability, Real, RecordType, Sign, UnitOfMeasure, Velocity and Volume, the definitions given in ISO/TS 19103:2005 shall apply.
- (2) For the types DirectPosition, GM_Boundary, GM_Curve, GM_MultiCurve, GM_MultiSurface, GM_Object, GM_Point, GM_Primitive, GM_Solid, GM_Surface and GM_Tin, the definitions given in EN ISO 19107:2005 shall apply.
- (3) For the types TM_Duration, TM_GeometricPrimitive, TM_Instant, TM_Object, TM_Period and TM_Position, the definitions given in EN ISO 19108:2005/AC:2008 shall apply.
- (4) For the type GF_PropertyType, the definitions given in EN ISO 19109:2006 shall apply.
- (5) For the types CI_Citation, CI_Date, CI_RoleCode, EX_Extent, EX_VerticalExtent, MD_Distributor, MD_Resolution and URL, the definitions given in EN ISO 19115:2005/AC:2008 shall apply.
- (6) For the type CV_SequenceRule, the definitions given in EN ISO 19123:2007 shall apply.
- (7) For the types AbstractFeature, Quantity and Sign, the definitions given in EN ISO 19136:2009 shall apply.
- (8) For the types LocalisedCharacterString, PT_FreeText and URI, the definitions given in CEN ISO/TS 19139:2009 shall apply.
- (9) For the type LC_LandCoverClassificationSystem, the definitions given in ISO 19144-2:2012 shall apply.
- (10) For the types GFI_Feature, Location, NamedValue, OM_Observation, OM_Process, SamplingCoverageObservation, SF_SamplingCurve, SF_SamplingPoint, SF_SamplingSolid, SF_SamplingSurface and SF_SpatialSamplingFeature, the definitions given in ISO 19156:2011 shall apply.
- (11) For the types Category, Quantity, QuantityRange and Time, the definitions given in Robin, Alexandre (ed.), *OGC®SWE Common Data Model Encoding Standard, version 2.0.0*, Open Geospatial Consortium, 2011 shall apply.

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- (12) For the types TimeValuePair and Timeseries, the definitions given in Taylor, Peter (ed.), *OGC® WaterML 2.0: Part 1 – Timeseries, v2.0.0*, Open Geospatial Consortium, 2012 shall apply.
- (13) For the types CGI_LinearOrientation and CGI_PlanarOrientation, the definitions given in CGI Interoperability Working Group, *Geoscience Markup Language (GeoSciML), version 3.0.0*, Commission for the Management and Application of Geoscience Information (CGI) of the International Union of Geological Sciences, 2011 shall apply.]

2. COMMON DATA TYPES

2.1. Identifier (Identifier)

External unique object identifier published by the responsible body, which may be used by external applications to reference the spatial object.

Attributes of the data type Identifier

Attribute	Definition	Type	Voidability
localId	A local identifier, assigned by the data provider. The local identifier is unique within the namespace, that is no other spatial object carries the same unique identifier.	CharacterString	
namespace	Namespace uniquely identifying the data source of the spatial object.	CharacterString	
versionId	The identifier of the particular version of the spatial object, with a maximum length of 25 characters. If the specification of a spatial object type with an external object identifier includes life-cycle information, the version identifier is used to distinguish between the different versions of a spatial object. Within the set of all versions of a spatial object, the	CharacterString	voidable

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version identifier is unique.		
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F² Constraints of the data type Identifier

[F³2.2. Related Party (RelatedParty)]

An organisation or a person with a role related to a resource.

Attributes of the data type RelatedParty

Attribute	Definition	Type	Voidability
individualName	Name of the related person.	PT_FreeText	voidable
organisationName	Name of the related organisation.	PT_FreeText	voidable
positionName	Position of the party in relation to a resource, such as head of department.	PT_FreeText	voidable
contact	Contact information for the related party.	Contact	voidable
role	Roles of the party in relation to a resource, such as owner.	PartyRoleValue	voidable

Constraints of the data type RelatedParty

At least the individual, organisation or position name shall be provided.

Textual Amendments

F3 Inserted by [Commission Regulation \(EU\) No 1253/2013 of 21 October 2013 amending Regulation \(EU\) No 1089/2010 implementing Directive 2007/2/EC as regards interoperability of spatial data sets and services.](#)

2.3. Contact (Contact)

Communication channels by which it is possible to gain access to someone or something.

Attributes of the data type Contact

Attribute	Definition	Type	Voidability
address	An address provided as free text.	AddressRepresentation	voidable
contactInstructions	Supplementary instructions on how or when to contact	PT_FreeText	voidable

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	an individual or organisation.		
electronicMailAddress	An address of the organisation's or individual's electronic mailbox.	CharacterString	voidable
hoursOfService	Periods of time when the organisation or individual can be contacted.	PT_FreeText	voidable
telephoneFacsimile	Number of a facsimile machine of the organisation or individual.	CharacterString	voidable
telephoneVoice	Telephone number of the organisation or individual.	CharacterString	voidable
website	Pages provided on the World Wide Web by the organisation or individual.	URL	voidable

2.4. Document Citation (DocumentCitation)

Citation for the purposes of unambiguously referencing a document.

Attributes of the data type DocumentCitation

Attribute	Definition	Type	Voidability
name	Name of the document.	CharacterString	
shortName	Short name or alternative title of the document.	CharacterString	voidable
date	Date of creation, publication or revision of the document.	CI_Date	voidable
link	Link to an online version of the document	URL	voidable
specificReference	Reference to a specific part of the document.	CharacterString	voidable

2.5. Legislation Citation (LegislationCitation)

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Citation for the purposes of unambiguously referencing a legal act or a specific part of a legal act.

This type is a sub-type of DocumentCitation.

Attributes of the data type LegislationCitation

Attribute	Definition	Type	Voidability
identificationNumber	Code used to identify the legislative instrument	CharacterString	
officialDocumentNumber	Official document number used to uniquely identify the legislative instrument.	CharacterString	
dateEnteredIntoForce	Date the legislative instrument entered into force.	TM_Position	
dateRepealed	Date the legislative instrument was repealed.	TM_Position	
level	The level at which the legislative instrument is adopted.	LegislationLevelValue	
journalCitation	Citation of the official journal in which the legislation is published.	OfficialJournalInformation	

Constraints of the data type LegislationCitation

If the link attribute is void, the journal citation shall be provided.

2.6. Official Journal Information (OfficialJournalInformation)

Full citation of the location of the legislative instrument within the official journal.

Attributes of the data type OfficialJournalInformation

Attribute	Definition	Type	Voidability
officialJournalIdentification	Reference to the location within the official journal within which the legislative instrument was published. This reference shall be comprised of three parts:	CharacterString	

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	<ul style="list-style-type: none"> — the title of the official journal — the volume and/or series number — Page number(s) 		
ISSN	The International Standard Serial Number (ISSN) is an eight-digit number that identifies the periodical publication in which the legislative instrument was published.	CharacterString	
ISBN	International Standard Book Number (ISBN) is a nine-digit number that uniquely identifies the book in which the legislative instrument was published.	CharacterString	
linkToJournal	Link to an online version of the official journal	URL	

2.7. Thematic Identifier (ThematicIdentifier)

Thematic identifier to uniquely identify the spatial object.

Attributes of the data type ThematicIdentifier

Attribute	Definition	Type	Voidability
identifier	Unique identifier used to identify the spatial object within the specified identification scheme.	CharacterString	
identifierScheme	Identifier defining the scheme used to assign the identifier.	CharacterString]

3. COMMON ENUMERATIONS

3.1. Vertical Position (VerticalPositionValue)

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The relative vertical position of a spatial object.

ALLOWED VALUES FOR THE ENUMERATION VERTICALPOSITIONVALUE

Value	Definition
onGroundSurface	The spatial object is on ground level.
suspendedOrElevated	The spatial object is suspended or elevated.
underground	The spatial object is underground.

4. COMMON CODE LISTS

[^{F1}4.1. Condition of Facility (ConditionOfFacilityValue)

The status of a facility with regards to its completion and use.

The allowed values for this code list comprise the values in the table below and narrower values defined by data providers.

Values for the code list ConditionOfFacilityValue

Value	Name	Definition
functional	functional	The facility is functional.
projected	projected	The facility is being designed. Construction has not yet started.
underConstruction	under construction	The facility is under construction and not yet functional. This applies only to the initial construction of the facility and not to maintenance work.
disused	disused	The facility is no longer used, but is not being or has not been decommissioned.
decommissioned	decommissioned	The facility is no longer used and is being or has been decommissioned.]

4.2. Country Code (CountryCode)

Country code as defined in the Interinstitutional style guide published by the Publications Office of the European Union.

[^{F2}.....]

[^{F4}The allowed values for this code list are the two-letter country codes listed in the Interinstitutional style guide published by the Publications Office of the European Union.]

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Textual Amendments

- F4** Inserted by [Commission Regulation \(EU\) No 102/2011 of 4 February 2011 amending Regulation \(EU\) No 1089/2010 implementing Directive 2007/2/EC of the European Parliament and of the Council as regards interoperability of spatial data sets and services.](#)

[F3]4.3. Legislation Level (LegislationLevelValue)

The level at which a legal act or convention has been adopted.

The allowed values for this code list comprise any values defined by data providers.

Data providers may use the values specified in the INSPIRE Technical Guidance document on the INSPIRE Generic Conceptual Model.

4.4. Party Role (PartyRoleValue)

Roles of parties related to or responsible for a resource.

The allowed values for this code list comprise the values of the following code lists or other code lists specified by data providers:

- Role Code (CI_RoleCode): Functions performed by a responsible party, as specified in EN ISO 19115:2005/AC:2008.
- Role of a Related Party (RelatedPartyRoleValue): Classification of related party roles, as specified in the table below.

Values for the code list RelatedPartyRoleValue

Value	Name	Definition
authority	authority	A party legally mandated to supervise a resource and/or parties related to a resource.
operator	operator	A party that runs a resource.
owner	owner	A party that owns a resource, i.e., to which a resource belongs in a legal sense.

4.5. Climate and Forecast Standard Names (CFStandardNamesValue)

Definitions of phenomena observed in meteorology and oceanography.

The allowed values for this code list comprise any values defined by data providers.

Data providers may use the values specified in the INSPIRE Technical Guidance document on the INSPIRE Generic Conceptual Model.

4.6. Gender (GenderValue)

Gender of a person or group of persons.

The allowed values for this code list comprise only the values specified in the table below.

Values for the code list GenderValue

Value	Name	Definition
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female	female	A person or group of persons of female gender.
male	male	A person or group of persons of male gender.
unknown	unknown	A person or group of persons of unknown gender.]

5. GENERIC NETWORK MODEL

5.1. Spatial Object Types

5.1.1. Cross Reference (*CrossReference*)

Represents a reference between two elements in the same network.

ASSOCIATION ROLES OF THE SPATIAL OBJECT TYPE CROSSREFERENCE

Association role	Definition	Type	Voidability
element	The cross referenced elements	NetworkElement	

5.1.2. Generalised Link (*GeneralisedLink*)

Abstract base type representing a linear network element that may be used as a target in linear referencing.

This type is a sub-type of NetworkElement.

This type is abstract.

5.1.3. Grade Separated Crossing (*GradeSeparatedCrossing*)

Indicator which of two or more intersecting elements is/are below and which is/are above, to be used if elevation coordinates are not present or cannot be trusted.

This type is a sub-type of NetworkElement.

ASSOCIATION ROLES OF THE SPATIAL OBJECT TYPE GRADESEPARATEDCROSSING

Association role	Definition	Type	Voidability
element	Sequence of crossing links. The order reflects their elevation; the first link is the lower link.	Link	

5.1.4. Link (*Link*)

Curvilinear network element that connects two positions and represents a homogeneous path in the network. The connected positions may be represented as nodes.

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This type is a sub-type of GeneralisedLink.

This type is abstract.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE LINK

Attribute	Definition	Type	Voidability
centrelineGeometry	The geometry that represents the centreline of the link.	GM_Curve	
fictitious	Indicator that the centreline geometry of the link is a straight line with no intermediate control points – unless the straight line represents the geography in the resolution of the data set appropriately.	Boolean	

ASSOCIATION ROLES OF THE SPATIAL OBJECT TYPE LINK

Association role	Definition	Type	Voidability
endNode	The optional end node for this link. The end node may be the same instance as the start node.	Node	
startNode	The optional start node for this link.	Node	

5.1.5. Link Sequence (*LinkSequence*)

A network element which represents a continuous path in the network without any branches. The element has a defined beginning and end and every position on the link sequence is identifiable with one single parameter such as length.

This type is a sub-type of GeneralisedLink.

This type is abstract.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE LINKSEQUENCE

Attribute	Definition	Type	Voidability
link	The ordered collection of directed links that constitute the link sequence.	DirectedLink	

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5.1.6. *Link Set (LinkSet)*

A collection of link sequences and/or individual links that has a specific function or significance in a network.

This type is a sub-type of NetworkElement.

This type is abstract.

ASSOCIATION ROLES OF THE SPATIAL OBJECT TYPE LINKSET

Association role	Definition	Type	Voidability
link	The set of links and link sequences that constitute the link set.	GeneralisedLink	

5.1.7. *Network (Network)*

A network is a collection of network elements.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE NETWORK

Attribute	Definition	Type	Voidability
geographicalName	Geographical name for this network.	GeographicalName	voidable

ASSOCIATION ROLES OF THE SPATIAL OBJECT TYPE NETWORK

Association role	Definition	Type	Voidability
elements	The collection of elements that constitutes the network.	NetworkElement	

5.1.8. *Network Area (NetworkArea)*

A 2-dimensional element in a network.

This type is a sub-type of NetworkElement.

This type is abstract.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE NETWORKAREA

Attribute	Definition	Type	Voidability
geometry	Represents the geometric properties of the area	GM_Surface	

5.1.9. *Network Connection (NetworkConnection)*

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Represents a logical connection between two or more network elements in different networks.

This type is a sub-type of NetworkElement.

Attributes of the spatial object type NetworkConnection

Attribute	Definition	Type	Voidability
type	Categorisation of the network connection.	ConnectionTypeValue	voidable

Association roles of the spatial object type NetworkConnection

Association role	Definition	Type	Voidability
element	Network elements in different networks	NetworkElement	

Constraints of the spatial object type NetworkConnection

All elements have to be in different networks

5.1.10. Network Element (NetworkElement)

Abstract base type representing an element in a network. Every element in a network provides some function that is of interest in the network.

This type is abstract.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE NETWORKELEMENT

Attribute	Definition	Type	Voidability
beginLifespanVersion	Date and time at which this version of the spatial object was inserted or changed in the spatial data set.	DateTime	voidable
endLifespanVersion	Date and time at which this version of the spatial object was superseded or retired in the spatial data set.	DateTime	voidable
inspireId	External object identifier of the spatial object.	Identifier	

ASSOCIATION ROLES OF THE SPATIAL OBJECT TYPE NETWORKELEMENT

Association role	Definition	Type	Voidability
inNetwork	The networks in which a network element is a member.	Network	voidable

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5.1.11. Network Property (NetworkProperty)

Abstract base type representing phenomena located at or along a network element. This base type provides general properties to associate the network-related phenomena (network properties) with the network elements.

This type is abstract.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE NETWORKPROPERTY

Attribute	Definition	Type	Voidability
beginLifespanVersion	Date and time at which this version of the spatial object was inserted or changed in the spatial data set.	DateTime	voidable
endLifespanVersion	Date and time at which this version of the spatial object was superseded or retired in the spatial data set.	DateTime	voidable
inspireId	External object identifier of the spatial object.	Identifier	
networkRef	Spatial reference of the network-related property.	NetworkReference	voidable

5.1.12. Node (Node)

Represents a significant position in the network that always occurs at the beginning or the end of a link.

This type is a sub-type of NetworkElement.

This type is abstract.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE NODE

Attribute	Definition	Type	Voidability
geometry	The location of the node.	GM_Point	

ASSOCIATION ROLES OF THE SPATIAL OBJECT TYPE NODE

Association role	Definition	Type	Voidability
spokeEnd	The links that enter the node.	Link	voidable

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spokeStart	The links that leave the node.	Link	voidable
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5.2. Data Types

5.2.1. Directed Link (*DirectedLink*)

A link either in its positive or negative direction.

ATTRIBUTES OF THE DATA TYPE DIRECTEDLINK

Attribute	Definition	Type Voidability	Voidability
direction	Indicates if the directed link agrees (positive) or disagrees (negative) with the positive direction of the link.	Sign	

ASSOCIATION ROLES OF THE DATA TYPE DIRECTEDLINK

Association role	Definition	Type Voidability	Voidability
link	The link	Link	

5.2.2. Link Reference (*LinkReference*)

A network reference to a linear network element.

This type is a sub-type of NetworkReference.

Attributes of the data type LinkReference

Attribute	Definition	Type	Voidability
applicableDirection	The directions of the generalised link to which the reference applies. In cases where a property does not apply to a direction along a link, but represents a phenomenon <i>along</i> a link, 'inDirection' refers to the right side in the direction of the link.	LinkDirectionValue	voidable

Constraints of the data type LinkReference

Linear reference targets must be linear network elements. That is, if linear referencing is used or direction is relevant, the target of the network reference shall be a link or a link sequence.

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5.2.3. Network Reference (*NetworkReference*)

A reference to a network element.

ASSOCIATION ROLES OF THE DATA TYPE NETWORKREFERENCE

Association role	Definition	Type	Voidability
element	The referenced network element.	NetworkElement	

5.2.4. Simple Linear Reference (*SimpleLinearReference*)

A network reference that is restricted to part of a linear network element. The part is the part of the network element between fromPosition and toPosition.

This type is a sub-type of LinkReference.

ATTRIBUTES OF THE DATA TYPE SIMPLELINEARREFERENCE

Attribute	Definition	Type	Voidability
fromPosition	The start position of the linear element, expressed as the distance from the start of the linear network element along its curve geometry.	Length	
offset	An offset from the centreline geometry of the generalised link, where applicable; a positive offset is to the right in the direction of the link, a negative offset is to the left.	Length	voidable
toPosition	The end position of the linear element, expressed as the distance from the start of the linear network element along its curve geometry.	Length	

5.2.5. Simple Point Reference (*SimplePointReference*)

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A network reference that is restricted to a point on a linear network element. The point is the location on the network element at the position atPosition along the network.

This type is a sub-type of LinkReference.

ATTRIBUTES OF THE DATA TYPE SIMPLEPOINTREFERENCE

Attribute	Definition	Type	Voidability
atPosition	Position of the point, expressed as the distance from the start of the linear network element along its curve geometry.	Length	
offset	An offset from the centreline geometry of the generalised link, where applicable; a positive offset is to the right in the direction of the link, a negative offset is to the left.	Length	voidable

5.3. Code Lists

5.3.1. Connection Type (ConnectionTypeValue)

Types of connections between different networks.

[^{F1}The allowed values for this code list comprise only the values in the table below.]

[^{F4}[^{F1}VALUES FOR THE CODE LIST] CONNECTIONTYPEVALUE

Value	Definition
crossBorderConnected	Connection between two network elements in different networks of the same type, but in adjacent areas. The referenced network elements represent the different, but spatially connected real-world phenomena.
crossBorderIdentical	Connection between two network elements in different networks of the same type, but in adjacent areas. The referenced network elements represent the same real-world phenomena.
intermodal	Connection between two network elements in different transport networks that use a different transport mode. The connection represents a possibility for the transported

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media (people, goods, etc) to change from one transport mode to another.]

5.3.2. Link Direction (*LinkDirectionValue*)

List of values for directions relative to a link

[^{F1}The allowed values for this code list comprise only the values in the table below.]

[^{F4}[^{F1}VALUES FOR THE CODE LIST] LINKDIRECTIONVALUE

Value	Definition
bothDirections	In both directions.
inDirection	In direction of the link.
inOppositeDirection	In the opposite direction of the link.]

[^{F3}6. COVERAGE MODEL

The INSPIRE coverage model consists of the following packages:

- Coverages (Base)
- Coverages (Domain And Range)

6.1. Coverages (Base)

6.1.1. Spatial object types

The package Coverages (Base) contains the spatial object type Coverage.

6.1.1.1. Coverage (Coverage)

Spatial object that acts as a function to return values from its range for any direct position within its spatial, temporal or spatiotemporal domain.

This type is abstract.

Attributes of the spatial object type Coverage

Attribute	Definition	Type	Voidability
metadata	Application specific metadata of the coverage.	Any	
rangeType	Description of the structure of the range values.	RecordType	

6.2. Coverages (Domain And Range)

6.2.1. Spatial object types

The package Coverages (Domain and Range) contains the following spatial object types:

- Coverage (Domain And Range Representation)

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- Rectified Grid Coverage
- Referenceable Grid Coverage

6.2.1.1. Coverage (Domain And Range Representation) (CoverageByDomainAndRange)

Coverage which provides the domain and range as separate properties.

This type is a sub-type of Coverage.

This type is abstract.

Attributes of the spatial object type CoverageByDomainAndRange

Attribute	Definition	Type	Voidability
coverageFunction	Description of how range values at locations in the coverage domain can be obtained.	CoverageFunction	
domainSet	Configuration of the domain of the coverage described in terms of coordinates.	Any	
rangeSet	Set of values associated by a function with the elements of the domain of the coverage.	Any	

Constraints of the spatial object type CoverageByDomainAndRange

The grid function shall only be valid for domains that are grids.

6.2.1.2. Rectified Grid Coverage (RectifiedGridCoverage)

Coverage whose domain consists of a rectified grid.

This type is a sub-type of CoverageByDomainAndRange.

Constraints of the spatial object type RectifiedGridCoverage

The domain shall be a rectified grid.

Grid points of a RectifiedGridCoverage shall coincide with the centres of cells of the geographical grids defined in Section 2.2 of Annex II at any resolution level.

6.2.1.3. Referenceable Grid Coverage (ReferenceableGridCoverage)

Coverage whose domain consists of a referenceable grid.

This type is a sub-type of CoverageByDomainAndRange.

Constraints of the spatial object type ReferenceableGridCoverage

The domain shall be a referenceable grid.

6.2.2. Data types

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6.2.2.1. Coverage Function (CoverageFunction)

Description of how range values at locations in the coverage domain can be obtained.

This type is a union type.

Attributes of the union type CoverageFunction

Attribute	Definition	Type	Voidability
ruleDefinition	A formal or informal description of the coverage function as text.	CharacterString	
ruleReference	A formal or informal description of the coverage function as reference.	URI	
gridFunction	Mapping rule for grid geometries.	GridFunction	

6.2.2.2. Grid Function (GridFunction)

An explicit mapping rule for grid geometries.

Attributes of the data type GridFunction

Attribute	Definition	Type	Voidability
sequenceRule	Description of how the grid points are ordered for association to the elements of the values in the range set of the coverage.	CV_SequenceRule	
startPoint	The grid point to be associated with the first record in the range set of the coverage.	Integer	

7. OBSERVATIONS MODEL

The INSPIRE observations model consists of the following packages:

- Observation References
- Processes
- Observable Properties
- Specialised Observations

7.1. Observation References

7.1.1. Spatial object types

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The package Observation References contains the spatial object type Observation Set.

7.1.1.1. Observation Set (ObservationSet)

Links a set of Observations.

Attributes of the spatial object type ObservationSet

Attribute	Definition	Type	Voidability
inspireId	External object identifier of the spatial object.	Identifier	
extent	Information about the spatial and temporal extent.	EX_Extent	

Association roles of the spatial object type ObservationSet

Association role	Definition	Type	Voidability
member	One member of the ObservationSet.	OM_Observation	

7.2. Processes

7.2.1. Spatial object types

The package Processes contains the spatial object type Process.

7.2.1.1. Process (Process)

Description of an observation process.

This type is a sub-type of OM_Process.

Attributes of the spatial object type Process

Attribute	Definition	Type	Voidability
inspireId	External object identifier of the spatial object.	Identifier	voidable
name	Name of the Process.	CharacterString	voidable
type	Type of process.	CharacterString	voidable
documentation	Further information (online/offline) associated with the process.	DocumentCitation	voidable
processParameter	Parameter controlling the application of the process and, as a consequence its output.	ProcessParameter	voidable

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responsibleParty	Individual or organisation related to the process.	RelatedParty	voidable
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7.2.2. Data types

7.2.2.1. Process Parameter (ProcessParameter)

Description of the given parameter

Attributes of the data type ProcessParameter

Attribute	Definition	Type	Voidability
name	Name of the process parameter.	ProcessParameterNameValue	
description	Description of the process parameter.	CharacterString	

7.2.3. Code lists

7.2.3.1. Process Parameter Name (ProcessParameterNameValue)

A code list of names of process parameters.

The allowed values for this code list comprise any values defined by data providers.

7.3. Observable Properties

7.3.1. Data types

7.3.1.1. Constraint (Constraint)

A constraint on some property e.g. wavelength = 200 nm.

Attributes of the data type Constraint

Attribute	Definition	Type	Voidability
constrainedProperty	The property being constrained. e.g. 'colour' if the constraint is 'colour = blue'.	PhenomenonTypeValue	
label	A human readable title for the constraint as a whole.	CharacterString	

7.3.1.2. Category Constraint (CategoryConstraint)

A constraint based on some qualifying category. e.g. colour = 'red'.

This type is a sub-type of Constraint.

Attributes of the data type CategoryConstraint

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Attribute	Definition	Type	Voidability
comparison	A comparison operator. In the case of a category constraint it should be 'equalTo' or 'notEqualTo'.	ComparisonOperatorValue	
value	The value of the property that is constrained e.g. 'blue' (if the constrained property is colour).	CharacterString	

7.3.1.3. Range Constraint (RangeConstraint)

A numerical range constraint on some property e.g. wavelength \geq 300 nm and wavelength \leq 600 nm.

This type is a sub-type of Constraint.

Attributes of the data type RangeConstraint

Attribute	Definition	Type	Voidability
value	The numerical value range of the property that is constrained.	RangeBounds	
uom	Units of measure used in the constraint.	UnitOfMeasure	

7.3.1.4. Range Bounds (RangeBounds)

The start and end bounding values of a numerical range (e.g. start \geq 50, end \leq 99).

Attributes of the data type RangeBounds

Attribute	Definition	Type	Voidability
startComparison	The comparator used for the lower range limit (e.g. greaterThanOrEqualTo).	ComparisonOperatorValue	
rangeStart	The lower limit of the range.	Real	
endComparison	The comparator used for the upper range limit (e.g. lessThan).	ComparisonOperatorValue	
rangeEnd	The upper limit of the range.	Real	

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7.3.1.5. Scalar Constraint (ScalarConstraint)

A numerical scalar constraint on some property e.g. length \geq 1 m.

This type is a sub-type of Constraint.

Attributes of the data type ScalarConstraint

Attribute	Definition	Type	Voidability
value	The numerical value of the property that is constrained.	Real	
comparison	The comparator to be used in the constraint e.g. greaterThan.	ComparisonOperatorValue	
uom	Units of measure used in the constraint.	UnitOfMeasure	

7.3.1.6. Other Constraint (OtherConstraint)

A constraint which is not modelled in a structured way but may be described using the freetext 'description' attribute.

This type is a sub-type of Constraint.

Attributes of the data type OtherConstraint

Attribute	Definition	Type	Voidability
description	A description of the constraint.	CharacterString	

7.3.1.7. Statistical Measure (StatisticalMeasure)

A description of some statistical measure e.g. 'daily maximum'.

Attributes of the data type StatisticalMeasure

Attribute	Definition	Type	Voidability
label	A human readable title for the statistical measure.	CharacterString	
statisticalFunction	A statistical function e.g. mean.	StatisticalFunctionTypeValue	
aggregationTimePeriod	A temporal range over which a statistic is calculated. e.g. a day, an hour.	TM_Duration	
aggregationLength	A one dimensional spatial range over which a statistic	Length	

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	is calculated, for example 1 metre.		
aggregationArea	A two dimensional spatial range over which a statistic is calculated, for example 1 square metre.	Area	
aggregationVolume	A three dimensional spatial range over which a statistic is calculated, for example 1 cubic metre.	Volume	
otherAggregation	Any other type of aggregation.	Any	

Association roles of the data type StatisticalMeasure

Association role	Definition	Type	Voidability
derivedFrom	One statistical measure may be derived from another, e.g. monthly maximum temperatures may be derived from daily mean temperatures.	StatisticalMeasure	

7.3.2. Enumerations

7.3.2.1. Comparison Operator (ComparisonOperatorValue)

An enumeration of comparison operators (e.g. greater than)

Values for the enumeration ComparisonOperatorValue

Value	Definition
equalTo	exactly equal to
notEqualTo	not exactly equal to
lessThan	less than
greaterThan	greater than
lessThanOrEqualTo	less than or exactly equal to
greaterThanOrEqualTo	greater than or exactly equal to

7.3.3. Code lists

7.3.3.1. Phenomenon Type (PhenomenonTypeValue)

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A code list of phenomena (e.g. temperature, wind speed).

The allowed values for this code list comprise the values of the following code lists or other code lists defined by data providers:

- Climate and Forecast Standard Names (CFStandardNamesValue): Definitions of phenomena observed in meteorology and oceanography, as specified in Section 4.5 of this Annex.
- Profile Element Parameter Name (ProfileElementParameterNameValue): Properties that can be observed to characterize the profile element, as specified in Section 3.3.8 of Annex IV.
- Soil Derived Object Parameter Name (SoilDerivedObjectParameterNameValue): Soil-related properties that can be derived from soil and other data, as specified in Section 3.3.9 of Annex IV.
- Soil Profile Parameter Name (SoilProfileParameterNameValue): Properties that can be observed to characterize the soil profile, as specified in Section 3.3.12 of Annex IV.
- Soil Site Parameter Name (SoilSiteParameterNameValue): Properties that can be observed to characterize the soil site, as specified in Section 3.3.13 of Annex IV.
- EU Air Quality Reference Component (EU_AirQualityReferenceComponentValue): Definitions of phenomena regarding air quality in the context of reporting under Union legislation, as specified in Section 13.2.1.1 of Annex IV.
- WMO GRIB Code and Flags Table 4.2 (GRIB_CodeTable4_2Value): Definitions of phenomena observed in meteorology, as specified in Section 13.2.1.2 of Annex IV.
- BODC P01 Parameter Usage (BODC_P01ParameterUsageValue): Definitions of phenomena observed in oceanography, as specified in Section 14.2.1.1 of Annex IV.

7.3.3.2. Statistical Function Type (StatisticalFunctionTypeValue)

A code list of statistical functions (e.g. maximum, minimum, mean).

The allowed values for this code list comprise any values defined by data providers.

7.4. Specialised Observations

7.4.1. Spatial object types

The package Specialised Observations contains the following spatial object types:

- Grid Observation
- Grid Series Observation
- Point Observation
- Point Observation Collection
- Multi Point Observation
- Point Time Series Observation
- Profile Observation
- Trajectory Observation

7.4.1.1. Grid Observation (GridObservation)

Observation representing a gridded field at a single time instant.

This type is a sub-type of SamplingCoverageObservation.

Constraints of the spatial object type GridObservation

featureOfInterest shall be a SF_SamplingSolid or SF_SamplingSurface.

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phenomenonTime shall be a TM_Instant.

result shall be a RectifiedGridCoverage or RefererencableGridCoverage.

7.4.1.2. Grid Series Observation (GridSeriesObservation)

Observation representing an evolving gridded field at a succession of time instants.

This type is a sub-type of SamplingCoverageObservation.

Constraints of the spatial object type GridSeriesObservation

featureOfInterest shall be a SF_SamplingSolid.

phenomenonTime shall be a TM_Period.

result shall be a RectifiedGridCoverage or a ReferenceableGridCoverage.

7.4.1.3. Point Observation (PointObservation)

Observation that represents a measurement of a property at a single point in time and space.

This type is a sub-type of SamplingCoverageObservation.

Constraints of the spatial object type PointObservation

featureOfInterest shall be a SF_SamplingPoint.

phenomenonTime shall be a TM_Instant.

7.4.1.4. Point Observation Collection (PointObservationCollection)

A collection of Point Observations.

This type is a sub-type of ObservationSet.

Constraints of the spatial object type PointObservationCollection

Each member shall be a PointObservation.

7.4.1.5. Multi Point Observation (MultiPointObservation)

Observation that represents a set of measurements all made at exactly the same time but at different locations.

This type is a sub-type of SamplingCoverageObservation.

Constraints of the spatial object type MultiPointObservation

featureOfInterest shall be a SF_SamplingCurve, SF_SamplingSurface or SF_SamplingSolid.

phenomenonTime shall be a TM_Instant

result shall be a MultiPointCoverage.

7.4.1.6. Point Time Series Observation (PointTimeSeriesObservation)

Observation that represents a time-series of point measurements of a property at a fixed location in space.

This type is a sub-type of SamplingCoverageObservation.

Constraints of the spatial object type PointTimeSeriesObservation

featureOfInterest shall be a SF_SamplingPoint.

phenomenonTime shall be a TM_Period.

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result shall be a Timeseries.

7.4.1.7. Profile Observation (ProfileObservation)

Observation representing the measurement of a property along a vertical profile in space at a single time instant.

This type is a sub-type of SamplingCoverageObservation.

Constraints of the spatial object type ProfileObservation

featureOfInterest shall be a SF_SamplingCurve.

phenomenonTime shall be a TM_Instant.

result shall be a ReferenceableGridCoverage or a RectifiedGridCoverage.

Spatial domain of the result shall contain one axis and that shall be vertical.

7.4.1.8. Trajectory Observation (TrajectoryObservation)

Observation representing the measurement of a property along a meandering curve in time and space.

This type is a sub-type of SamplingCoverageObservation.

Constraints of the spatial object type TrajectoryObservation

phenomenonTime shall be a TM_Period.

result shall be a Timeseries.

each point in the result shall be a TimeLocationValueTriple.

featureOfInterest shall be a SF_Sampling Curve.

7.4.2. Data types

7.4.2.1. Time Location Value Triple (TimeLocationValueTriple)

A triple set of Time, location, value (measurement). For example, at a point along a trajectory.

This type is a sub-type of TimeValuePair.

Attributes of the data type TimeLocationValueTriple

Attribute	Definition	Type	Voidability
location	Geographic location where value is valid.	GM_Position	

7.5. Requirements for Observations

Where the OM_Observation type or any sub-type thereof is used to make data available, the following requirements shall apply:

- (1) The Process type shall be used to indicate the procedure used in an OM_Observation.
- (2) Where reference is made to an EnvironmentalMonitoringFacility from an OM_Observation, a parameter attribute shall be provided, whose name attribute is 'relatedMonitoringFeature' and whose value attribute is of type AbstractMonitoringFeature.

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- (3) For all encodings that are used for all or part of an OM_Observation result, a public Application Programming Interface (API) shall be available to read the encoded file. This API shall be capable of exposing the information needed to realise INSPIRE spatial objects.
- (4) If the processParameter attribute is present in the procedure property of an OM_Observation object, its value (a name) shall be included in the parameter attribute of the OM_Observation object.

8. ACTIVITY COMPLEX MODEL

The INSPIRE activity complex model contains the package Activity Complex.

8.1. Activity Complex

8.1.1. Spatial object types

The package Activity Complex contains the spatial object type Activity Complex.

8.1.1.1. Activity Complex (ActivityComplex)

A single unit, both technically and economically, under the management control of a legal entity (operator), covering activities as those listed in the Eurostat NACE classification established by Regulation (EC) No 1893/2006 of the European Parliament and of the Council⁽¹⁾. Activity Complex must represent the whole area, at the same or different geographical location, managed by the same operator including all infrastructure, equipment and materials.

Attributes of the spatial object type ActivityComplex

Attribute	Definition	Type	Voidability
inspireId	External object identifier of the spatial object.	Identifier	
thematicId	Thematic identifier of the activity complex.	ThematicIdentifier	
geometry	The geometry used to define the extent or position of the activity complex.	GM_Object	
function	Activities performed by the activity complex. Function is described by the activity and potentially complemented with information about inputs and outputs as result of it.	Function	
name	Descriptive name of the activity complex.	CharacterString	voidable
validFrom	The time when the activity complex	DateTime	voidable

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	started to exist in the real world.		
validTo	The time when the activity complex no longer exists in the real world.	DateTime	voidable
beginLifespanVersion	Date and time at which this version of the spatial object was inserted or changed in the spatial data set.	DateTime	voidable
endLifespanVersion	Date and time at which this version of the spatial object was superseded or retired in the spatial data set.	DateTime	voidable

8.1.2. Data types

8.1.2.1. Function (Function)

The function of something expressed as an activity and optional input and/or output.

Attributes of the data type **Function**

Attribute	Definition	Type	Voidability
activity	Categorized description of individual or organized set of technically related processes that are carried out by a economical unit, private or public, profit or non profit character.	EconomicActivityValue	
input	Any classified or registered material that enters a technical and economical unit according to its function.	InputOutputValue	voidable
output	Any classified or registered material that leaves a technical and economical unit according to its function.	InputOutputValue	voidable

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description	A more detailed description of the function.	PT_FreeText	voidable
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8.1.2.2. Capacity (Capacity)

A quantification of an actual or potential ability to perform an activity, that typically does not change, does not change often, or does not change to a significant degree.

Attributes of the data type Capacity

Attribute	Definition	Type	Voidability
activity	Categorized description of individual or organized set of technically related processes that are carried out by a economical unit, private or public, profit or non profit character.	EconomicActivityValue	
input	Measurable information about any classified or registered material that enters a technical and economical unit according to its function.	InputOutputAmount	
output	Measurable information about any classified or registered material that leaves a technical and economical unit according to its function.	InputOutputAmount	
time	The duration of time to which the specified capacity refers, such as 1 year for an annual capacity.	TM_Duration	
description	A description of the capacity.	PT_FreeText	voidable

8.1.2.3. Amount Of Input Or Output (InputOutputAmount)

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Type and, where available, measurable amount of a classified or registered material that enters or leaves a technical and economical unit.

Attributes of the data type InputOutputAmount

Attribute	Definition	Type	Voidability
inputOutput	A classified or registered material that enters or leaves a technical and economical unit according to its function.	InputOutputValue	
amount	The amount (such as a volume or mass) of the classified or registered material that enters or leaves a technical and economical unit.	Measure	voidable

8.1.2.4. Permission (Permission)

Official Decision (formal consent) granting authorization to operate all or part of an Activity Complex, subject to certain conditions which guarantee that the installations or parts of installations on the same site operated by the same operator comply with the requirements fixed by a competent authority. A permit may cover one or more functions and fix parameters of capacity. The term could be extended to other kind of certificates or documents of special relevance depending of the scope (e.g. ISO, EMAS, National Quality Standards, etc).

Attributes of the data type Permission

Attribute	Definition	Type	Voidability
id	Identifying reference to the permission.	ThematicIdentifier	
relatedParty	Parties related to the permission granted to the activity complex open to many different roles, such as Competent Authorities or Company among others	RelatedParty	voidable
decisionDate	Temporal reference that complements the definition of the permission.	DateTime	voidable
dateFrom	A date starting from which the permission applies and is valid.	DateTime	voidable

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dateTo	A date up to which the permission applies and is valid.	DateTime	voidable
description	A description of the permission.	PT_FreeText	voidable
permittedFunction	Function/s to which the permission is granted.	Function	voidable
permittedCapacity	Maximum amounts of activity input and/or output according to the permission.	Capacity	voidable

8.1.2.5. Activity Complex Description (ActivityComplexDescription)

Additional information about an activity complex, including its description, address, contact details and related parties.

Attributes of the spatial object type ActivityComplexDescription

Association role	Definition	Type	Voidability
description	A complementary definition of the 'Activity Complex' and its characteristics.	PT_FreeText	voidable
address	An address for the activity complex, i.e., an address where the activities occur.	AddressRepresentation	voidable
contact	Contact information for the activity complex.	Contact	voidable
relatedParty	Information of Parties related to the Activity Complex. It is open to many different roles, such as owners, operators or Competent Authorities.	RelatedParty	voidable

8.1.3. Code lists

8.1.3.1. Economic Activity (EconomicActivityValue)

Classification of economic activities.

The allowed values for this code list comprise the values of the following code lists or other code lists specified by data providers:

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- EU Economic Activity Classification (EconomicActivityNACEValue): Economic activities according to Eurostat NACE Classification values, as specified in Regulation (EC) No 1893/2006 of the European Parliament and of the Council⁽²⁾.
- EU Waste Statistics Economic Activity Classification (EconomicActivityWasteStatisticsValue): Classification of economic activities according to Section 8 of Annex I of Regulation (EC) No 2150/2002⁽³⁾.
- EU Waste Recovery Disposal Classification (WasteRecoveryDisposalValue): Classification of waste recovery and disposal operations according to Annexes I and II of Directive 2008/98/EC of the European Parliament and of the Council⁽⁴⁾.

8.1.3.2. Input Or Output (InputOutputValue)

Classification of inputs or outputs.

The allowed values for this code list comprise the values of the following code lists or other code lists specified by data providers.

- EU Product Classification (ProductCPAValue): Classification of Products by Economical Activity according to Regulation (EC) No 451/2008 of the European Parliament and of the Council⁽⁵⁾.
- EU Waste Classification (WasteValue): Classification of Wastes according to Decision 2000/532/EC⁽⁶⁾.

8.2. Requirements for Activity Complexes

If a data provider uses a sub-type of ActivityComplex to make available information on the status, physical capacity, permissions and/or additional information, the relevant code lists and data types (ConditionOfFacilityValue, Capacity, Permission, ActivityComplexDescription) included in the package Activity Complex shall be used.]

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- (1) [^{F3}OJ L 393, 30.12.2006, p. 1.]
- (2) [^{F3}OJ L 393, 30.12.2006, p. 1.]
- (3) [^{F3}OJ L 332, 9.12.2002, p. 1.]
- (4) [^{F3}OJ L 312, 22.11.2008, p. 3.]
- (5) [^{F3}OJ L 145, 4.6.2008, p. 65.]
- (6) [^{F3}OJ L 226, 6.9.2000, p. 3.]

Textual Amendments

- F3** Inserted by Commission Regulation (EU) No 1253/2013 of 21 October 2013 amending Regulation (EU) No 1089/2010 implementing Directive 2007/2/EC as regards interoperability of spatial data sets and services.

Changes to legislation:

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Changes and effects yet to be applied to the whole legislation item and associated provisions

- Annex 1 para. 8.1.3.1 words inserted by [S.I. 2018/1338 reg. 13\(10\)\(c\)\(ii\)](#)
- Annex 1 para. 8.1.3.1 words inserted by [S.I. 2018/1338 reg. 13\(10\)\(c\)\(iii\)](#)
- Annex 1 para. 7.3.3.1 words omitted by [S.I. 2018/1338 reg. 13\(10\)\(a\)](#)
- Annex 1 para. 8.1.3.2 words omitted by [S.I. 2018/1338 reg. 13\(10\)\(d\)\(i\)](#)
- Annex 1 para. 8.1.3.2 words omitted by [S.I. 2018/1338 reg. 13\(10\)\(d\)\(ii\)](#)
- Annex 1 para. 8.1.1.1 words substituted by [S.I. 2018/1338 reg. 13\(10\)\(b\)](#)
- Annex 1 para. 8.1.3.1 words substituted by [S.I. 2018/1338 reg. 13\(10\)\(c\)\(i\)](#)
- Annex 2 para. 1.3.4(2) omitted by [S.I. 2018/1338 reg. 13\(11\)\(b\)](#)
- Annex 2 para. 2.2(2) omitted by [S.I. 2018/1338 reg. 13\(11\)\(c\)](#)
- Annex 2 para. 3.1.1 words omitted by [S.I. 2018/1338 reg. 13\(11\)\(d\)](#)
- Annex 2 para. 6.1.4 words omitted by [S.I. 2018/1338 reg. 13\(11\)\(k\)](#)
- Annex 2 para. 7.6.1.6 words omitted by [S.I. 2018/1338 reg. 13\(11\)\(l\)](#)
- Annex 2 para. 7.9.1 words omitted by [S.I. 2018/1338 reg. 13\(11\)\(n\)](#)
- Annex 2 para. 8.7.1 words omitted by [S.I. 2018/1338 reg. 13\(11\)\(o\)\(i\)](#)
- Annex 2 para. 9.4.1 words omitted by [S.I. 2018/1338 reg. 13\(11\)\(s\)\(ii\)](#)
- Annex 2 para. 9.4.5 words omitted by [S.I. 2018/1338 reg. 13\(11\)\(t\)](#)
- Annex 2 heading words substituted by [S.I. 2018/1338 reg. 13\(11\)\(a\)](#)
- Annex 2 para. 3.3.4 words substituted by [S.I. 2018/1338 reg. 13\(11\)\(e\)\(i\)](#)
- Annex 2 para. 3.3.4 words substituted by [S.I. 2018/1338 reg. 13\(11\)\(e\)\(ii\)](#)
- Annex 2 para. 4.2.1.2 words substituted by [S.I. 2018/1338 reg. 13\(11\)\(f\)](#)
- Annex 2 para. 4.4(1) words substituted by [S.I. 2018/1338 reg. 13\(11\)\(g\)](#)
- Annex 2 para. 5.2.4 words substituted by [S.I. 2018/1338 reg. 13\(11\)\(h\)](#)
- Annex 2 para. 5.3.2 words substituted by [S.I. 2018/1338 reg. 13\(11\)\(i\)](#)
- Annex 2 para. 6.1 words substituted by [S.I. 2018/1338 reg. 13\(11\)\(j\)](#)
- Annex 2 para. 7.7.1.15 words substituted by [S.I. 2018/1338 reg. 13\(11\)\(m\)](#)
- Annex 2 para. 8.7.1 words substituted by [S.I. 2018/1338 reg. 13\(11\)\(o\)\(ii\)](#)
- Annex 2 para. 8.7.2 words substituted by [S.I. 2018/1338 reg. 13\(11\)\(p\)](#)
- Annex 2 para. 8.7.4 words substituted by [S.I. 2018/1338 reg. 13\(11\)\(q\)](#)
- Annex 2 para. 9.1.1 words substituted by [S.I. 2018/1338 reg. 13\(11\)\(r\)](#)
- Annex 2 para. 9.4.1 words substituted by [S.I. 2018/1338 reg. 13\(11\)\(s\)\(i\)](#)
- Art. 2(2) words substituted by [S.I. 2018/1338 reg. 13\(3\)\(a\)](#)
- Art. 2(3) words substituted by [S.I. 2018/1338 reg. 13\(3\)\(b\)](#)
- Art. 2(20) words substituted by [S.I. 2018/1338 reg. 13\(3\)\(c\)](#)
- Art. 2(39)(40) inserted by [S.I. 2018/1338 reg. 13\(3\)\(d\)](#)
- Annex 3 heading words substituted by [S.I. 2018/1338 reg. 13\(12\)\(a\)](#)
- Annex 3 para. 1.7.5 point (3) words substituted by [S.I. 2018/1338 reg. 13\(12\)\(b\)](#)
- Annex 4 para. 1.5 point (2) omitted by [S.I. 2018/1338 reg. 13\(13\)\(b\)](#)
- Annex 4 para. 16.2.3 word inserted by [S.I. 2018/1338 reg. 13\(13\)\(p\)\(i\)](#)
- Annex 4 para. 18.4.8 word omitted by [S.I. 2018/1338 reg. 13\(13\)\(u\)\(ii\)](#)
- Annex 4 para. 4.7.1.1 word substituted by [S.I. 2018/1338 reg. 13\(13\)\(c\)\(i\)](#)
- Annex 4 para. 4.7.1.1 word substituted by [S.I. 2018/1338 reg. 13\(13\)\(c\)\(ii\)](#)
- Annex 4 para. 4.7.1.3.1 word substituted by [S.I. 2018/1338 reg. 13\(13\)\(e\)\(iii\)](#)
- Annex 4 para. 18.4.8 word substituted by [S.I. 2018/1338 reg. 13\(13\)\(u\)\(i\)](#)
- Annex 4 para. 5.1.5 words inserted by [S.I. 2018/1338 reg. 13\(13\)\(h\)](#)
- Annex 4 para. 10.3.2 words inserted by [S.I. 2018/1338 reg. 13\(13\)\(k\)](#)
- Annex 4 para. 11.3.1 words inserted by [S.I. 2018/1338 reg. 13\(13\)\(l\)\(iii\)\(bb\)](#)
- Annex 4 para. 11.3.1 words inserted by [S.I. 2018/1338 reg. 13\(13\)\(l\)\(vii\)\(aa\)](#)
- Annex 4 para. 17.4.2 words inserted by [S.I. 2018/1338 reg. 13\(13\)\(q\)\(i\)\(aa\)](#)
- Annex 4 para. 17.4.2 words inserted by [S.I. 2018/1338 reg. 13\(13\)\(q\)\(i\)\(bb\)](#)

- Annex 4 para. 17.4.2 words inserted by S.I. 2018/1338 reg. 13(13)(q)(ii)
- Annex 4 para. 17.4.3 words inserted by S.I. 2018/1338 reg. 13(13)(r)(ii)(bb)
- Annex 4 para. 18.4.2 words inserted by S.I. 2018/1338 reg. 13(13)(s)(ii)
- Annex 4 para. 4.7.1.2 words omitted by S.I. 2018/1338 reg. 13(13)(d)(i)
- Annex 4 para. 4.7.1.2 words omitted by S.I. 2018/1338 reg. 13(13)(d)(ii)
- Annex 4 para. 4.7.3.4 words omitted by S.I. 2018/1338 reg. 13(13)(f)
- Annex 4 para. 11.3.1 words omitted by S.I. 2018/1338 reg. 13(13)(l)(iv)
- Annex 4 para. 11.3.1 words omitted by S.I. 2018/1338 reg. 13(13)(l)(v)
- Annex 4 para. 11.3.1 words omitted by S.I. 2018/1338 reg. 13(13)(l)(vi)
- Annex 4 para. 11.3.1 words omitted by S.I. 2018/1338 reg. 13(13)(l)(vii)(bb)
- Annex 4 para. 11.4.1 point (3)(b) words omitted by S.I. 2018/1338 reg. 13(13)(m)
- Annex 4 para. 13.2.1.1 words omitted by S.I. 2018/1338 reg. 13(13)(n)
- Annex 4 para. 13.3 point (3) words omitted by S.I. 2018/1338 reg. 13(13)(o)
- Annex 4 para. 16.2.3 words omitted by S.I. 2018/1338 reg. 13(13)(p)(ii)
- Annex 4 para. 17.4.3 words omitted by S.I. 2018/1338 reg. 13(13)(r)(i)
- Annex 4 para. 18.4.7 words omitted by S.I. 2018/1338 reg. 13(13)(t)
- Annex 4 para. 19.1 words omitted by S.I. 2018/1338 reg. 13(13)(v)
- Annex 4 para. 11.3.1 words omitted by S.I. 2018/1338 reg. 13(13)(l)(ix)
- Annex 4 heading words substituted by S.I. 2018/1338 reg. 13(13)(a)
- Annex 4 para. 4.7.1.3.1 words substituted by S.I. 2018/1338 reg. 13(13)(e)(i)
- Annex 4 para. 4.7.1.3.1 words substituted by S.I. 2018/1338 reg. 13(13)(e)(ii)
- Annex 4 para. 4.8 point (4) words substituted by S.I. 2018/1338 reg. 13(13)(g)(i)
- Annex 4 para. 4.8 point (5) words substituted by S.I. 2018/1338 reg. 13(13)(g)(ii)
- Annex 4 para. 6.9.1.1 words substituted by S.I. 2018/1338 reg. 13(13)(i)
- Annex 4 para. 9.1 point (1) words substituted by S.I. 2018/1338 reg. 13(13)(j)(i)
- Annex 4 para. 9.1 point (2) words substituted by S.I. 2018/1338 reg. 13(13)(j)(ii)
- Annex 4 para. 11.3.1 words substituted by S.I. 2018/1338 reg. 13(13)(l)(i)
- Annex 4 para. 11.3.1 words substituted by S.I. 2018/1338 reg. 13(13)(l)(ii)
- Annex 4 para. 11.3.1 words substituted by S.I. 2018/1338 reg. 13(13)(l)(iii)(aa)
- Annex 4 para. 11.3.1 words substituted by S.I. 2018/1338 reg. 13(13)(l)(viii)
- Annex 4 para. 17.4.3 words substituted by S.I. 2018/1338 reg. 13(13)(r)(ii)(aa)
- Annex 4 para. 18.4.2 words substituted by S.I. 2018/1338 reg. 13(13)(s)(i)
- Annex 4 para. 18.4.8 words substituted by S.I. 2018/1338 reg. 13(13)(u)(iii)
- Annex 7 para. 2 words substituted by S.I. 2018/1338 reg. 13(14)