ISO19115 Metadata – BGS Business Rules

Note:

We are documenting here the developing business rules for 3 of the types of dataset ("areas") with which we are dealing. These are BGS-geoIDS (corporate BGS datasets), DGSM (Digital Geoscience Spatial Model – a programme of work within the BGS), and OML (Ocean Margin Link – a collaborative project with other organisations).

Modification History:

KAH 21 July 2004 Changed Business Rule 18 (JLL: allow inheritance of properties from a single 'largerWorkCitation')

KAH 22 July 2004 Removed 26, modified 27 (LA: BGS-geoIDS entries can have more than one scale and more than one resolution)

KAH 26 July 2004 Modified 12, added 12.1 (JLL: Minimum/Maximum Valid Scale should be completed for DGSM models but not data subsets)

KAH 26 July 2004 Modified 14, added 14.1 (JLL: Purpose should be completed for DGSM models but not data subsets)

KAH 26 July 2004 Added 57 (JLL: Should it be mandatory to record 'Logical consistency' and 'Level of spatial detail' in Supplementary Information?)

KAH 26 July 2004 Added 49.1 (JLL: Should there not also be one, and only one, Data Density check for DGSM models?)

KAH 26 July 2004 Modified 18 (JLL & LA: Explanations needed; LA applies to BGS-geoIDS as well)

KAH 26 July 2004 Modified 20 (JLL: I think Spatial Representation Type should be recorded for DGSM models (it will be inherited for DGSM data subsets))

KAH 26 July 2004 Modified 19 and 20 (KAH: I got it wrong earlier)

KAH 28 July 2004 Modified 18 (JLL: allow inheritance of properties from a single 'largerWorkCitation' for DGSM models as well as datasets)

REH 04 August 2004 Modified all records to indicate where the rule is enforced by the application or by the metadata completion report

KIGL 24 August 2004 Modified to include the OML (Ocean Margin Link Project) to the rules where appropriate

KIGL 25 August 2004 Modified 36.1 (KIGL got it wrong first time round)

KAH 3 September 2004 Added 5.2 (LA: we don't want 'various' in BGS-geoIDS entries)

KAH 13 September 2004 Added 58 (JLL/KAH: Scientific Concept must be included in abstract for DGSM models)

	Area	Rationale	Technical	How?
1	DGSM BGS-geoIDS OML	Each dataset must have one (and only one) set of information about the metadata recorded with it	ISO_DATAIDENT has a 1:1 relationship with ISO_METADATA (where CITATION.COLLTITLE in ('DGSM', 'BGS-geoIDS', 'OML'))	completion report

	Area	Rationale	Technical	How?
2	DGSM BGS-geoIDS OML	Each dataset must have one (and only one) title and collection associated with it. A title can exist without any other metadata information – for example, this is used for recording a title for AMF Thesaurus	ISO_DATAIDENT has a 1:0..1 relationship to ISO_CITATION generally. ISO_DATAIDENT has a 1:1 relationship to ISO_CITATION where COLLTITLE in ('DGSM', 'BGS-geoIDS', 'OML')	completion report
3	DGSM BGS-geoIDS OML	The title of a dataset should be in plain English and in Title Case.		Metadata Steward
4	DGSM BGS-geoIDS OML	The title should not include any special characters such as ampersands (&), double quotes ("), single quotes ('), less than and greater than signs (<>) and percents (%)	Check: ISO_CITATION.RESTITLE not like '%&%', etc. (where CITATION.COLLTITLE in ('DGSM', 'BGS-geoIDS', 'OML'))	DBA system
5	DGSM	Presentation form must be modelDigital or tableDigital	Check: ISO_CITATION.PRESFORM not in ('modelDigital', 'tableDigital') where ISO_CITATION.COLLTITLE = 'DGSM'	completion report
5.1	OML	Presentation form must be entered	Check: ISO_PRESSFORMCD is null where ISO_CITATION.COLLTITLE = 'OML'	application
5.2	BGS-geoIDS	Presentation form must not be 'various'	Check: ISO_CITATION.PRESSFORM <> 'various' where ISO_CITATION.COLLTITLE = 'BGS-geoIDS'	
6	DGSM BGS-geoIDS OML	Each dataset must have at least one reference date	ISO_CITATION is in a 1:1..* relationship to ISO_DATEREF where COLLTITLE in ('DGSM', 'BGS-geoIDS', 'OML') (where CITATION.COLLTITLE in ('DGSM', 'BGS-geoIDS', 'OML'))	completion report
7	DGSM	Frequency of Update should not be completed	Check: ISO_DATAIDENT.MAINTFREQ is not null where ISO_CITATION.COLLTITLE = 'DGSM'	application
8	BGS-geoIDS OML	Frequency of Update must be completed	Check: ISO_DATAIDENT.MAINTFREQ is null where ISO_CITATION.COLLTITLE in ('BGS-geoIDS', 'OML')	application
9	DGSM	Vertical Datum and Vertical Units of Measure must be completed	Check: ISO_DATAIDENT.VERTDATUM is null or ISO_DATAIDENT.VERTUOM is null where ISO_CITATION.COLLTITLE = 'DGSM'	application

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10	BGS-geoIDS OML	Vertical Datum and Vertical Units of Measure should not be completed	Check: ISO_DATAIDENT.VERTDATUM is not null or ISO_DATAIDENT.VERTUOM is not null where ISO_CITATION.COLLTITLE in ('BGS-geoIDS', 'OML')	application
11	DGSM OML	Dataset Progress Status must be completed	Check: ISO_DATAIDENT.IDSTATUS is null where ISO_CITATION.COLLTITLE in ('DGSM', 'OML')	application
12	DGSM	Minimum Valid Scale and Maximum Valid Scale must be completed for models	Check: ISO_DATAIDENT.ADD_VALID_SCALE_MIN is null or ISO_DATAIDENT.ADD_VALID_SCALE_MAX is null where ISO_CITATION.COLLTITLE = 'DGSM' and ISO_CITATION.PRESFORM = 'modelDigital'	application
12.1	DGSM	Minimum Valid Scale and Maximum Valid Scale should not be completed for datasets	Check: ISO_DATAIDENT.ADD_VALID_SCALE_MIN is not null or ISO_DATAIDENT.ADD_VALID_SCALE_MAX is not null where ISO_CITATION.COLLTITLE = 'DGSM' and ISO_CITATION.PRESFORM =n 'tableDigital'	application
13	BGS-geoIDS OML	Minimum Valid Scale and Maximum Valid Scale should not be completed	Check: ISO_DATAIDENT.ADD_VALID_SCALE_MIN is not null or ISO_DATAIDENT.ADD_VALID_SCALE_MAX is not null where ISO_CITATION.COLLTITLE in ('BGS-geoIDS', 'OML')	application
14	DGSM	Purpose must be completed for models	Check: ISO_DATAIDENT.IDPURP is null where ISO_CITATION.COLLTITLE = 'DGSM' and ISO_CITATION.PRESFORM = 'modelDigital'	application
14.1	DGSM	Purpose must not be completed for datasets	Check: ISO_DATAIDENT.IDPURP is not null where ISO_CITATION.COLLTITLE = 'DGSM' and ISO_CITATION.PRESFORM = 'tableDigital'	application
15	BGS-geoIDS OML	Purpose should not be completed	Check: ISO_DATAIDENT.IDPURP is not null where ISO_CITATION.COLLTITLE in ('BGS-geoIDS', 'OML')	application

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16	DGSM BGS-geoIDS	The dataset topic category is always and only 'geoscientificInformation'	ISO_DATAIDENT is in a 1:1 relationship to ISO_TPCAT All values in ISO_TPCAT.TPCAT are 'geoscientificInformation' (where CITATION.COLLTITLE in ('DGSM', 'BGS-geoIDS'))	application
16.1	OML	The dataset topic category (We don't know yet)		
17	DGSM BGS-geoIDS OML	Linkage/URL address must be in standard format and linkage work		Metadata Steward
18	DGSM BGS-geoIDS OML	There must be no more than one dataset association where the association type is 'largerWorkCitation' The purpose of this rule is to allow inheritance of metadata from a large dataset to a subset of it.	ISO_CITATION is in a 1:0..1 relationship with NCR_AGGREGATEINFO where NCR_AGGREGATEINFO.ASSOCTYPE = 'largerWorkCitation'	completion report
19	BGS-geoIDS DGSM	Spatial Representation Type must be completed and only one value is allowed for BGS-geoIDS and DGSM Models	ISO_DATAIDENT is in a 1:1 relationship with ISO_SPATREPTYPE where (ISO_CITATION.COLLTITLE = 'BGS-geoIDS') or (ISO_CITATION.COLLTITLE = 'DGSM ' and ISO_CITATION.PRESFORM = 'modelDigital')	completion report
20	DGSM	Spatial Representation Type should not be completed for datasets	There should be no entry in ISO_SPATREPTYPE where ISO_CITATION.COLLTITLE = 'DGSM' and ISO_CITATION.PRESFORM = 'tableDigital'	completion report
20.1	OML	Spatial Representation Type should not be completed	There should be no entry in ISO_SPATREPTYPE where ISO_CITATION.COLLTITLE = 'OML'	application
21	BGS-geoIDS OML	At least one Spatial Reference System must be given	ISO_DATAIDENT is in a 1:1..* relationship with ISO_REFSYSINFO where ISO_CITATION.COLLTITLE in ('BGS-geoIDS', 'OML')	completion report
22	DGSM	No reference system should be given for DGSM datasets	There should be no entry in ISO_REFSYSINFO where ISO_CITATION.COLLTITLE = 'DGSM' and ISO_CITATION.PRESFORM = 'tableDigital'	completion report

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23	DGSM	One, and only one, reference system should be given for DGSM models	ISO_DATAIDENT is in a 1:1 relationship with ISO_REFSYSINFO where ISO_CITATION.COLLTITLE = DGSM' and ISO_CITATION.PRESFORM = 'modelDigital'	completion report
24	DGSM	One, and only one, scale should be given for DGSM datasets	ISO_DATAIDENT is in a 1:1 relationship with ISO_REPFRACT where ISO_CITATION.COLLTITLE = 'DGSM' and ISO_CITATION.PRESFORM = 'tableDigital'	completion report
25	DGSM	Either the Scale or Distance between Data points must be given for DGSM Models	Whilst ISO_DATAIDENT is in a 1:0..1 relationship with ISO_RESOL and ISO_DATAIDENT is in a 1:0..1 relationship with ISO_REPFRACT where ISO_CITATION.COLLTITLE = DGSM' and ISO_CITATION.PRESFORM = 'modelDigital', at least one of these relationships must be 1:1	completion report
27	DGSM	No more than one resolution should be given	ISO_DATAIDENT is in a 1:0..1 relationship with ISO_RESOL (where CITATION.COLLTITLE = 'DGSM')	completion report
28	DGSM BGS-geoIDS OML	Additional Information on access and use constraints is only populated if we have a use constraint or access constraint with a value of 'other restrictions'	Check: ISO_DATAIDENT.OTHERCONSTS is not null where not exists (NCR_ACCESS_CONSTRAINT.ACCESSCONSTS = 'otherRestrictions' or NCR_USE_CONSTRAINT.USECONSTS = 'otherRestrictions') (where CITATION.COLLTITLE in ('DGSM', 'BGS-geoIDS', 'OML')))	completion report
29	BGS-geoIDS	At least one storage format must be given	ISO_DATAIDENT is in a 1:1..* relationship with ADD_STORAGE_FORMAT where ISO_CITATION.COLLTITLE = 'BGS-geoIDS'	completion report
30	DGSM	At least one storage format must be given for models	ISO_DATAIDENT is in a 1:1..* relationship with ADD_STORAGE_FORMAT where ISO_CITATION.COLLTITLE = 'DGSM' and ISO_CITATION.PRESFORM = 'modelDigital'	completion report

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31	DGSM	No storage format should be given for datasets	There should be no entry in ADD_STORAGE_FORMAT where ISO_CITATION.COLLTITLE = 'DGSM' and ISO_CITATION.PRESFORM = 'tableDigital'	completion report
31.1	OML	No storage format should be given	There should be no entry in ADD_STORAGE_FORMAT where ISO_CITATION.COLLTITLE = 'OML'	application
32	DGSM	At least one distribution format must be given for models	ISO_DATAIDENT is in a 1:1..* relationship with ISO_FORMAT where ISO_CITATION.COLLTITLE = 'DGSM' and ISO_CITATION.PRESFORM = 'modelDigital'	completion report
33	DGSM	No distribution format should be given for datasets	There should be no entry in ISO_FORMAT where ISO_CITATION.COLLTITLE = 'DGSM' and ISO_CITATION.PRESFORM = 'tableDigital'	completion report
33.1	OML	No distribution format should be given	There should be no entry in ISO_FORMAT where ISO_CITATION.COLLTITLE = 'OML'	application
34	BGS-geoIDS OML	Vertical Scope should not be completed	There should be no entry in ADD_VERTICAL_SCOPE where ISO_CITATION.COLLTITLE in ('BGS-geoIDS', 'OML')	application
35	DGSM	Vertical Scope should not be completed for datasets	There should be no entry in ADD_VERTICAL_SCOPE where ISO_CITATION.COLLTITLE = 'DGSM' and ISO_CITATION.PRESFORM = 'tableDigital'	application
36	DGSM BGS-geoIDS OML	There must be at least one point of contact for a dataset	There must be at least one entry in ISO_IDPOC for each entry in ISO_DATAIDENT where ISO_IDPOC.ROLE = 'pointOfContact' (where CITATION.COLLTITLE in ('DGSM', 'BGS-geoIDS', 'OML'))	completion report
36.1	DGSM	There must be only one entry per role for each dataset	Check: Count(*)>1 for each ISO_IDPOC.ROLE where ISO_CITATION.COLLTITLE ='DGSM'	completion report

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37	DGSM BGS-geoIDS OML	Telephone numbers must start with '+'	Check: ISO.TELEPHONE_1.VOICENUM not like '+%' (where CITATION.COLLTITLE in ('DGSM', 'BGS-geoIDS', 'OML'))	
38	DGSM BGS-geoIDS OML	FAX numbers must start with '+'	Check: ISO.TELEPHONE_2.FAXNUM not like '+%' (where CITATION.COLLTITLE in ('DGSM', 'BGS-geoIDS', 'OML'))	
39	BGS-geoIDS OML	Lineage steps should not be used	There should be no entry in NCR_PRCESSSTEP where ISO_CITATION.COLLTITLE in ('BGS-geoIDS', 'OML')	application
40	DGSM	There must be at least one data inclusion lineage step for datasets	Check: ADD_PRCESSSTEP_TYPE, count(*)<1 where NCR_PRCESSSTEP.ADD_PRCESSSTEP_TYPE = 'dataInclusion' and ISO_CITATION.COLLTITLE = 'DGSM' and ISO_CITATION.PRESFORM = 'tableDigital'	completion report
41	DGSM	There must be at least one data exclusion lineage step for datasets	Check: ADD_PRCESSSTEP_TYPE, count(*)<1 where NCR_PRCESSSTEP.ADD_PRCESSSTEP_TYPE = 'dataExclusion' and ISO_CITATION.COLLTITLE = 'DGSM' and ISO_CITATION.PRESFORM = 'tableDigital'	completion report
42	DGSM	There must be at least one processInterpret lineage step for models	Check: count(*)<1 where NCR_PRCESSSTEP.ADD_PRCESSSTEP_TYPE = 'processInterpret' and ISO_CITATION.COLLTITLE = 'DGSM' and ISO_CITATION.PRESFORM = 'modelDigital'	completion report
43	DGSM	There must be at least one processInterpol lineage step for models	Check: count(*)<1 where NCR_PRCESSSTEP.ADD_PRCESSSTEP_TYPE = 'processInterpol' and ISO_CITATION.COLLTITLE = 'DGSM' and ISO_CITATION.PRESFORM = 'modelDigital'	completion report
44	DGSM	There must be at least one dataItemInterpret lineage step for models	Check: count(*)<1 where NCR_PRCESSSTEP.ADD_PRCESSSTEP_TYPE = 'dataItemInterpret' and ISO_CITATION.COLLTITLE = 'DGSM' and ISO_CITATION.PRESFORM = 'modelDigital'	completion report

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45	DGSM	There must be at least one dataItemAssump lineage step for models	Check: count(*)<1 where NCR_PRCESSSTEP.ADD_PRCESSS TEP_TYPE = 'dataItemAssump' and ISO_CITATION.COLLTITLE = 'DGSM' and ISO_CITATION.PRESFORM = 'modelDigital'	completi on report
46	BGS-geoIDS OML	Quality Assessments should not be used	There should be no entry in ISO_DQELEMENT where ISO_CITATION.COLLTITLE in ('BGS-geoIDS', 'OML')	applicati on
47	DGSM	There must be one and only one spurious data check quality assessment for datasets	Check: count(*)<>1 where ISO_DQELEMENT.MEASNAME = 'spuriousDataCheck' and ISO_CITATION.COLLTITLE = 'DGSM' and ISO_CITATION.PRESFORM = 'tableDigital'	completi on report
48	DGSM	There must be one and only one Interpolation/Modelling Check quality assessment for models	Check: count(*)<>1 where ISO_DQELEMENT.MEASNAME = 'interpolModelCheck' and ISO_CITATION.COLLTITLE = 'DGSM' and ISO_CITATION.PRESFORM = 'modelDigital'	completi on report
49	DGSM	There must be one and only one Fitness for Purpose Check quality assessment for models	Check: count(*)<>1 where ISO_DQELEMENT.MEASNAME = 'fitnessForPurpose' and ISO_CITATION.COLLTITLE = 'DGSM' and ISO_CITATION.PRESFORM = 'modelDigital'	completi on report
49.1	DGSM	There must be one and only one Data Density Check quality assessment for models	Check: count(*)<>1 where ISO_DQELEMENT.MEASNAME = 'dataDensity' and ISO_CITATION.COLLTITLE = 'DGSM' and ISO_CITATION.PRESFORM = 'modelDigital'	completi on report
50	BGS-geoIDS OML	Graphics file should not be used	There should be no entry in NCR_BROWGRAPH where ISO_CITATION.COLLTITLE in ('BGS-geoIDS', 'OML')	applicati on
51	DGSM	Graphics file should not be used for datasets	There should be no entry in NCR_BROWGRAPH where ISO_CITATION.COLLTITLE = 'DGSM' and ISO_CITATION.PRESFORM = 'tableDigital'	applicati on

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52	BGS-geoIDS DGSM OML	There must be at least one point of contact for the metadata about a dataset.	There must be at least one entry in ISO_MDCONTACT for each entry in ISO_DATAIDENT where ISO_MDCONTACT.ROLE = 'pointOfContact' (where CITATION.COLLTITLE in ('DGSM', 'BGS-geoIDS', 'OML'))	completion report
53	BGS-geoIDS	There should be no roles other than point of contact for the metadata about a dataset.	Check: count(*)>0 where ISO_CITATION.COLLTITLE = 'BGS-geoIDS' and ISO_MDCONTACT.ROLE <> 'pointOfContact'	application
54	DGSM	There must be one and only one Geographic Location of the dataset by 4 coordinates	ISO_DATAIDENT is in a 1:1..* relationship with ISO_GEOBNDBOX where ISO_CITATION.COLLTITLE = 'DGSM'	completion report
54.1	OML	There must be at least one Geographic Location of the dataset by 4 coordinates	There must be at least one entry in GEOBNDBOX for each entry in ISO_DATAIDENT where CITATION.COLLTITLE = 'OML'	completion report
55	DGSM OML	Time period of the Geographic Location of the dataset by 4 coordinates should not be used	There should be no entry in ISO_EXTEMP_GEOBNDBOX where ISO_CITATION.COLLTITLE in 'DGSM'	application
56	DGSM OML	Time period of the Geographic Extent should not be used	There should be no entry in ISO_EXTEMP_GEODESC where ISO_CITATION.COLLTITLE in ('DGSM' , 'OML')	application
57	DGSM	Logical Consistency and Level of Spatial detail must be included in Supplementary Information		Metadata Steward
58	DGSM (Models)	Scientific Concept must be included in abstract		Metadata Steward