

**Documentation openLCA format converter V2
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Data Conversion from ILCD to EcoSpold01

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1 Introduction

This documentation describes the conversion from the ILCD format to the EcoSpold02 format, as implemented in the openLCA format converter V2 [1-2], by “mapping” (i.e. assigning) fields from one format to the other.

The following versions of the formats are considered:

ILCD 1.1

EcoSpold V1

The mapping is facing several challenges, which cannot always be overcome. Both formats use different approaches, for example regarding process / activity scale, linking between different data sets, uncertainty, compartments etc. and have their own characteristics. For example EcoSpold01 does not support the use of parameters and flow properties or multilingualism. Another example is the different length of fields. While ILCD uses field lengths of maximal 500 or 1000 characters or with unlimited length, EcoSpold applies field lengths of maximal 20, 40, 80, 255, or 32000 characters. In addition, there are different types of IDs in ES1 (IDs with 2, 3, or 10 characters), while ILCD uses always IDs with a length of 36 characters. The consequence is that many fields have to be shortened in the conversion from ILCD to EcoSpold01 and that IDs cannot be transferred.

However, the practical consequences will keep within limits, because many fields are not in use and many problems can be got around.

The converter uses the following main approaches, also in combination:

- **field transformation:** Entering content into the target format based on content of one or several corresponding fields in the source format, modifying the original content.
- **n:1 mapping/field concatenation:** different occurrence of elements, only one can be transferred or the fields are lumped together into the target field
- **reasonable default entries:** mandatory fields that cannot be mapped are filled with reasonable default entries where possible.

All the assignments / mappings, and the implemented workarounds, are described in the following. This text focuses on converting ILCD 1.1 to EcoSpold01. Other documents [5-7] deal with further conversion “directions” and formats.

Starting from the fields in ILCD 1.1, suitable EcoSpold01 fields are listed, and the mapping is commented and motivated. However, not every ILCD dataset is considered. The flow property dataset and the unit group dataset are not cited, because the majority of the fields cannot be mapped. For that reason the conversion is considered from the EcoSpold perspective for these two datasets to reduce complexity.

Note that in order to generate a valid EcoSpold data set, several fields with specific contents are mandatory in EcoSpold. To not overlook these requirements when dealing with the direction “from ILCD to EcoSpold01”, as this text does primarily, a special section for each element in EcoSpold considers the mandatory other fields, including where and if these are available.

The explanations will be given in tables. In the first column of the “explanation tables”, the ILCD fields are listed, in the second column the corresponding fields in EcoSpold01. The comment field explains any conversion challenges and illustrates them based on a numbered colour system (3 = no mapping possible, 2 = mapping is problematic, 1 = mapping works without problems).

The structure of the data format will be illustrated by help of images created from the ILCD schema. The images show the definition of the respective data types in the XML schema with existing elements and attributes. Figure 1 gives an example, together with an explanation of the elements shown in any of these figures.

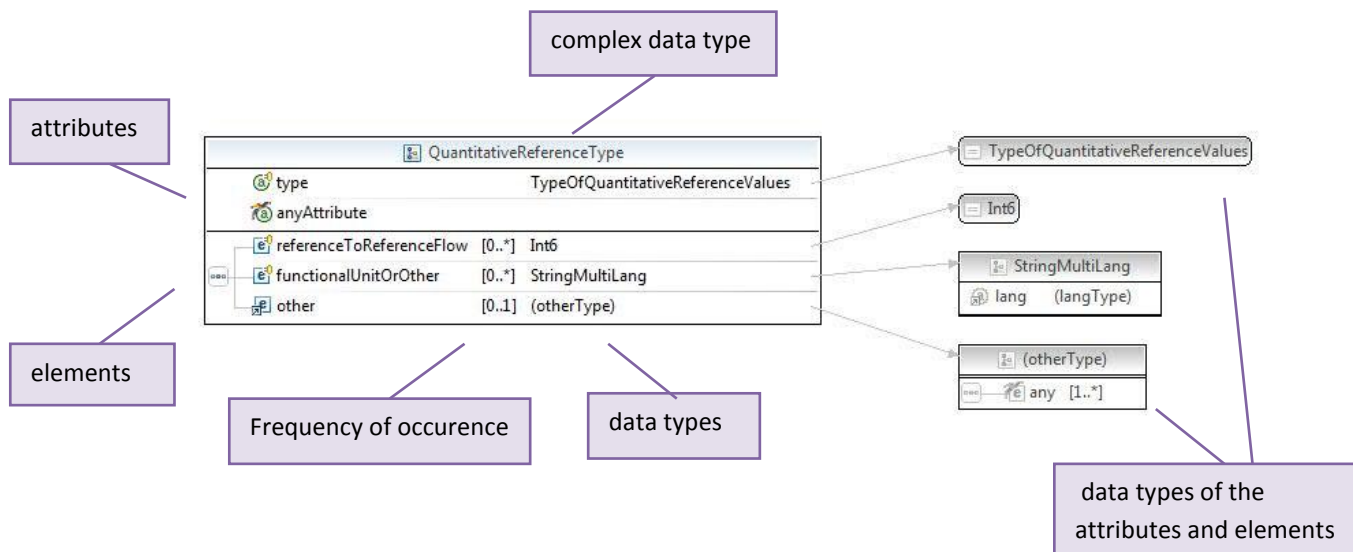


Figure 1: definition of the DataSetInformation type in ILCD, example of an image of an XML schema type with explanations

2 Mapping description

2.1 Process dataset

The XML schema type of the process dataset contains three attributes and five complex elements, which are defined by the following schema types (see also figure 2):

- **ProcessInformationType:** describes the process
- **ModellingAndValidationType:** covers information about the LCI modeling and data treatment aspects etc.
- **AdministrativeInformationType:** contains information about the dataset management and administration
- **ExchangesType:** contains the Input/Output list of exchanges with the quantitative inventory data
- **LCIAResultsType:** comprises list with pre-calculated LCIA results of the Input/Output list of the dataset

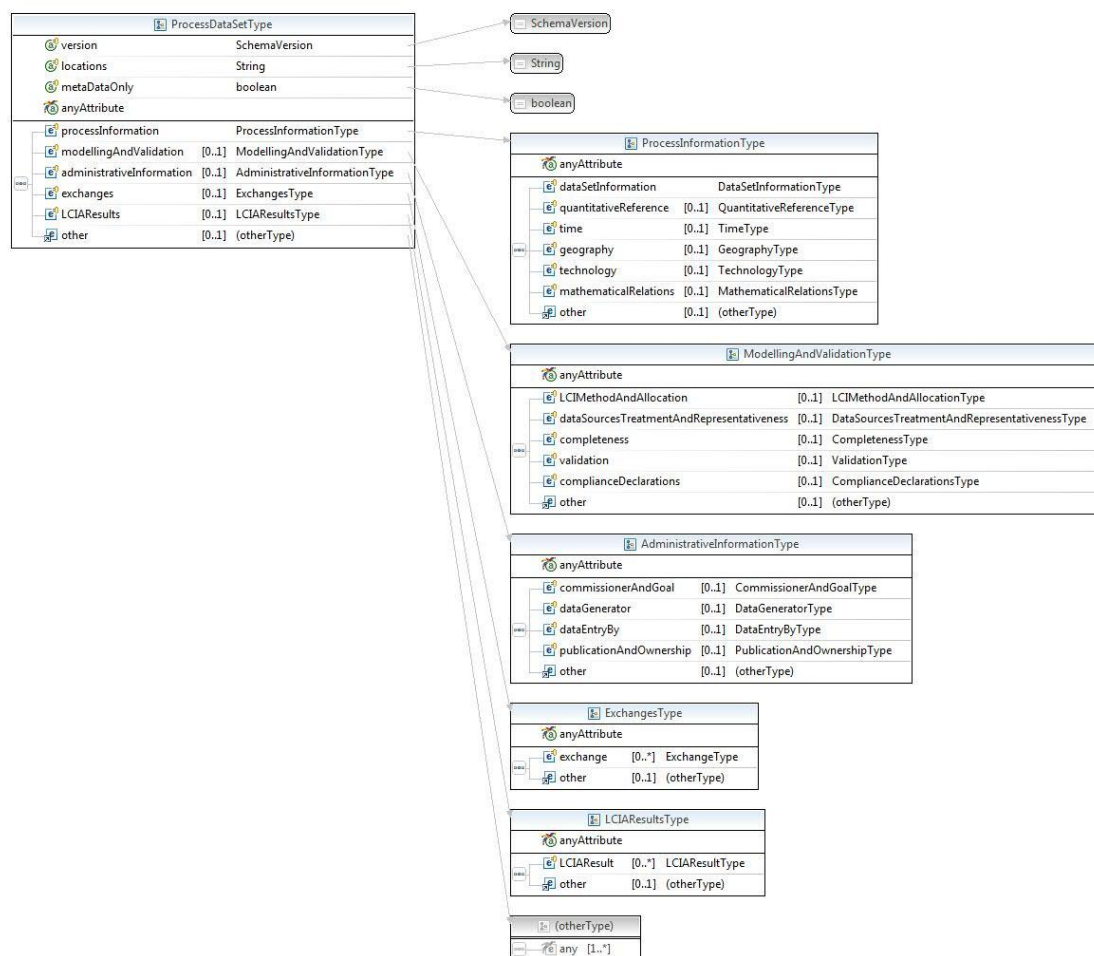


Figure 2: definition of the ILCD ProcessDataSet type

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
@locations		no corresponding field not relevant for conversion, lists of locations of both formats have to be aligned	no	3
@metaDataOnly		no corresponding field If this field is true, no dataset can be compiled!	no	3

No mandatory fields in EcoSpold01 in the corresponding section.

2.1.1 Type: processInformation

The XML schema definition of the process information type comprises also several complex elements. The elements are defined by the following schema types (see also figure 3):

- **DataSetInformationType**: contains general data set information
- **QuantitativeReferenceType**: comprises the quantitative reference used for the dataset
- **TimeType**: provides information about the time representativeness of the dataset
- **GeographyType**: provides information about the geographical representativeness of the dataset
- **TechnologyType**: provides information about the technological representativeness of the dataset
- **MathematicalRelationType**: contains information about used parameters

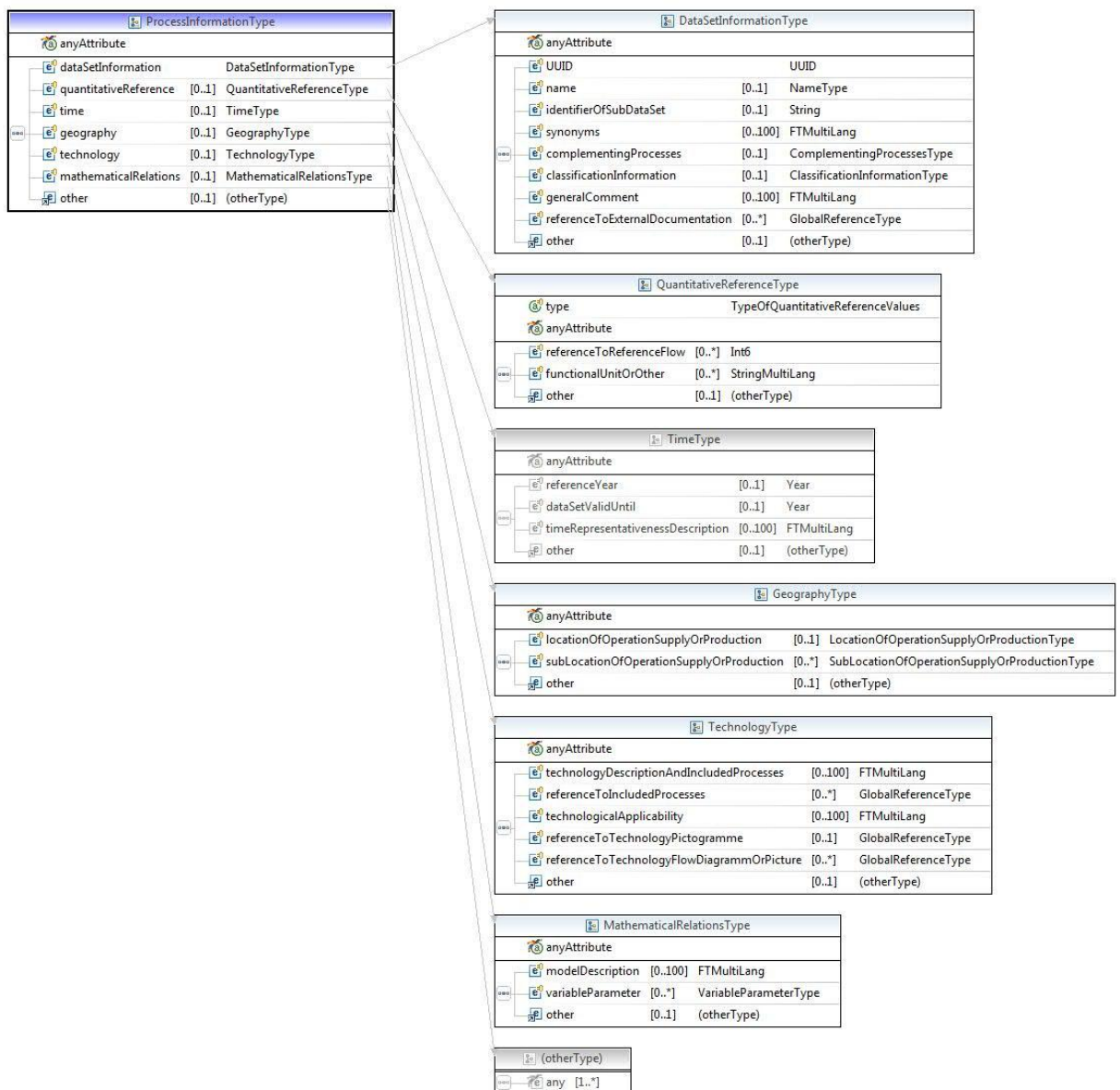


Figure 3: definition of the ILCD ProcessInformation type

2.1.1.1 Type: processInformation/dataSetInformation

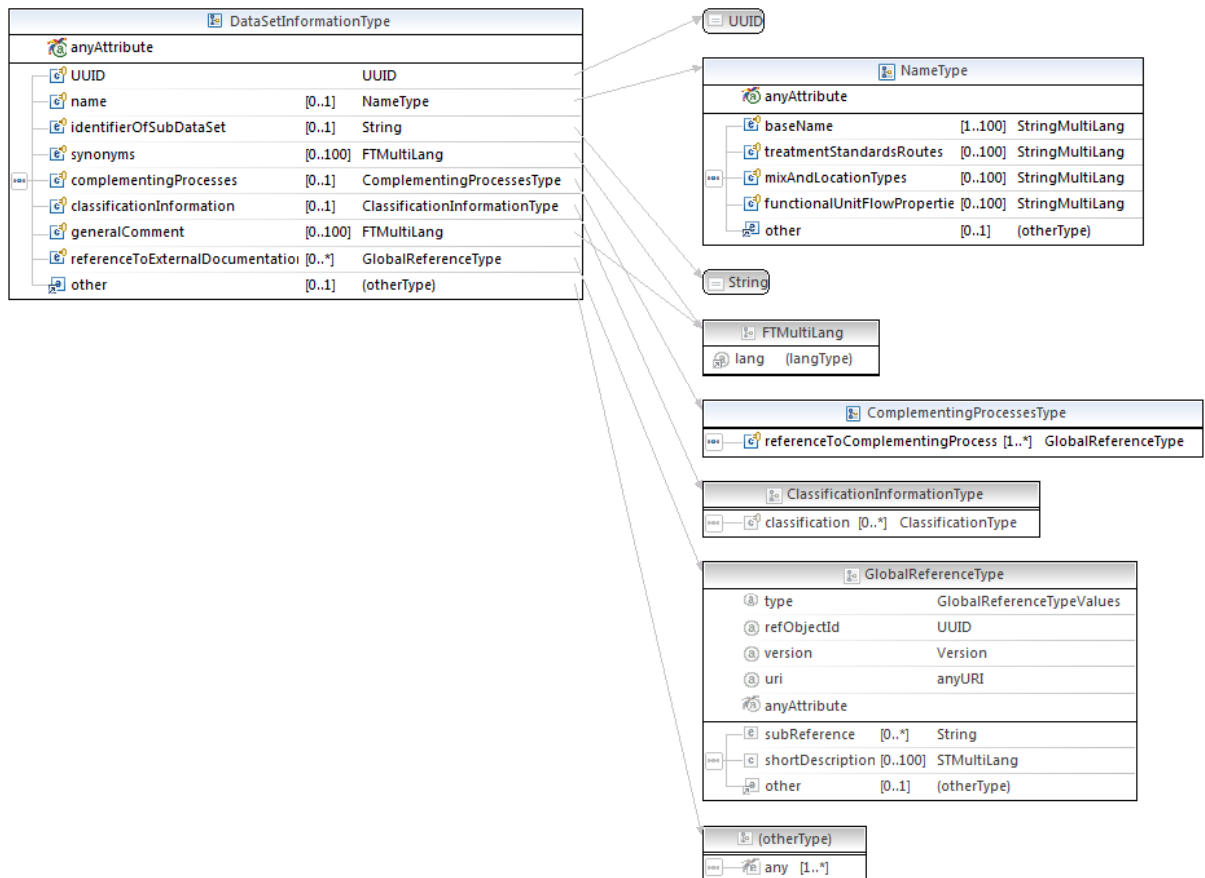


Figure 4: definition of the ILCD DataSetInformation type

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
UUID		no corresponding field	no	3
Name				
baseName		no corresponding field	no	3
treatmentStandardsRoutes		no corresponding field	no	3
mixAndLocationTypes		no corresponding field	no	3
functionalUnitFlowProperties		no corresponding field	no	3
identifierOfSubDataSet		no corresponding field	no	3
synonyms		no corresponding field	no	3
ReferenceToComplementingProcess		no corresponding field	no	3
classificationInformation/classification				
@name		no corresponding field	no	3
@classes		no corresponding field	no	3
classificationInformation/class				

class[@level]		no corresponding field	no	3
@classId		no corresponding field	no	3
generalComment		no corresponding field	no	3
referenceToExternalDocumentation	modellingAndValidation/source/@number	field transformation A new source has to be compiled.	no	2

Mandatory fields in EcoSpold01

Element	Field	Is mapped?	Is mandatory in ILCD?	Default value
Dataset information	@type	yes	no (r)	default value default value for required field '@type': "1" (= Unit process)
	@impactAssessmentResult	no		default value default value for required field '@impactAssessmentResult': false
	@timestamp	yes	no (r)	default value default value for required field '@timestamp': "00-00-0000 00:00"
	@version	yes	yes	
	@internalVersion	no		default value default value for required field '@internalVersion': "1.0"
	@energyValues	no		default value default value for required field '@energyValues': "0" (= undefined)
	@languageCode	yes	yes	
	@localLanguagecode	yes	yes	
Reference function	@datasetRelatesToProduct	no		default value default value for required field '@datasetRelatesToProduct': true
	@name	yes	no (r)	default value default value for required field '@name': "no name"
	@localName	yes	no (r)	default value The corresponding ILCD fields provide a Multilanguage option, but if there is no local name specified the default value is: "no local name"
	@infrastructureProcesses	no		default value default value for required field '@infrastructureProcess': no
	@amount	yes	no (r)	default value default value for required field '@amount': "1"
	@unit	yes	no (r)	default value default value for required field '@unit': "kg"
	@category	yes	no (r)	default value default value for required field

				'@category': "unspecified"
	@subCategory	yes	no (r)	default value default value for required field '@subCategory': "unspecified"
	@localCategory	no		default value default value for required field '@localCategory' is the entry of @category
	@localSubCategory	no		default value default value for required field '@localSubCategory' is the entry of @subCategory
	@infrastructureIncluded	no		default value default value for required field '@infrastructureIncluded': false

2.1.1.2 Type: processInformation/quantitativeReference

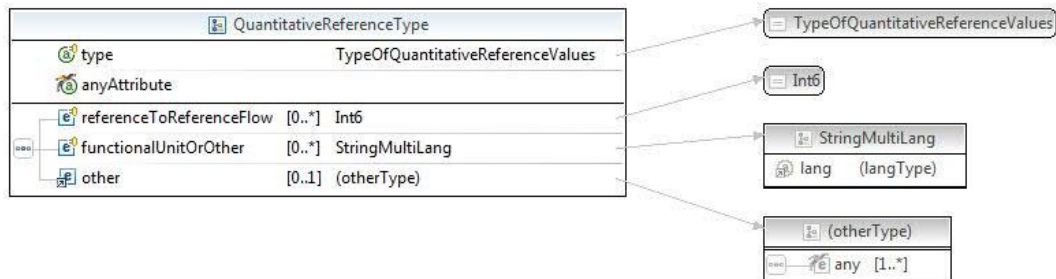


Figure 5: definition of the ILCD QuantitativeReference type

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
@type		no corresponding field But, if this field has the entry "Reference flow(s)", it identifies the reference flow.	no	2
referenceToReferenceFlow		no corresponding field With the aid of this reference the reference flow can be found and the reference function can be compiled. If this field is blank, no valid ES1 dataset can be generated.	no	2
FunctionalUnitOrOther		no corresponding field If this field occurs the reference flow cannot be found, no dataset can be generated!	no	3

No corresponding section in EcoSpold01.

2.1.1.3 Type: processInformation/time

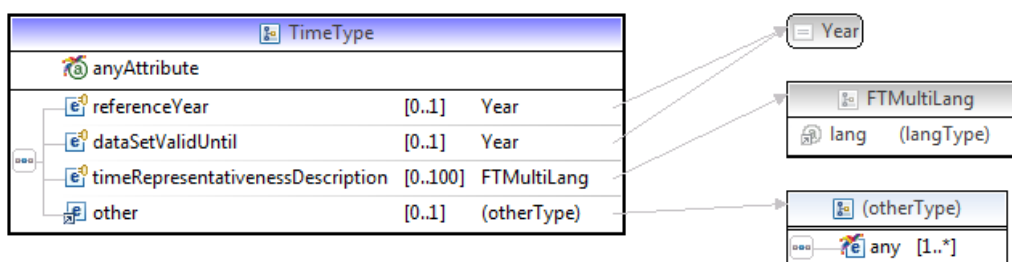


Figure 6: definition of the ILCD Time type

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
referenceYear	processInformation/time Period/@startYear	different field meaning different field meaning, but similar field description: ILCD: <i>Start year of the time period for which the data set is valid (until year of "Data set valid until:"). For data sets that combine data from different years, the most representative year is given regarding the overall environmental impact. In that case, the reference year is derived by expert judgement.</i> EcoSpold: <i>Start date of the time period for which the dataset is valid</i>	no	2
dataSetValidUntil	processInformation/time Period/@endYear	o.k.	no	1
timeRepresentativenessDescription		no corresponding field	no	3

Mandatory fields in EcoSpold01

Element	Field	Is mapped?	Is mandatory in ILCD?	Default value
Time period	@startDate	yes	no (r)	default value default value for required field '@startDate': "0001-01-01"
	@endDate	yes	no (r)	default value default value for required field '@endDate': "0001-12-31"
	@dataValidForEntirePeriod	no		default value default value for required field '@isDataValidForEntirePeriod': true

2.1.1.4 Type: processInformation/geography

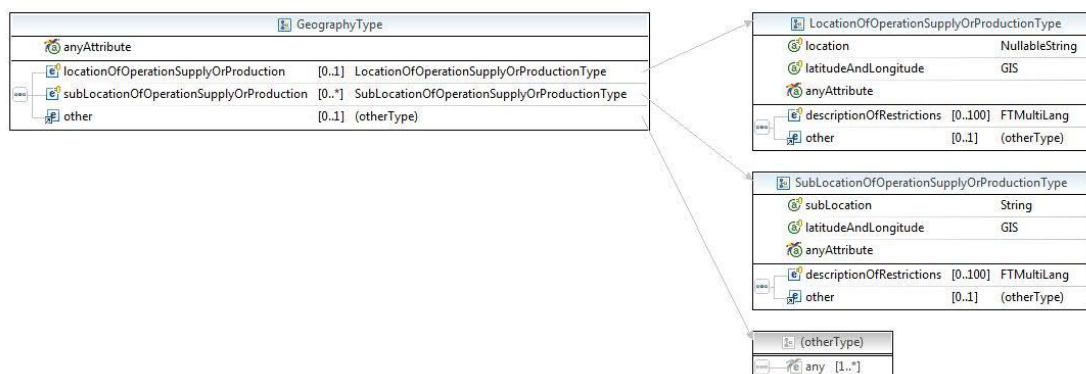


Figure 7: definition of the ILCD Geography type

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
location				
@location	processInformation/geo graphy/@location	different data types The EcoSpold field is intended for the entry of 7 letter codes or 2 letter codes, the ILCD field is also used for site names etc.	no	2
@latitudeAndLongitude		no corresponding field	no	3
descriptionOfRestrictions	processinformation/geo graphy/@text	o.k.	no	1
sublocation		no corresponding field	no	3
@subLocation		no corresponding field	no	3
@latitudeAndLongitude		no corresponding field	no	3
descriptionOfRestrictions		no corresponding field	no	3

Mandatory fields in EcoSpold01

Element	Field	Is mapped?	Is mandatory in ILCD?	Default value
Geography	@location	yes	no (o)	default value default value for required field '@location': "GLO"

2.1.1.5 Type: processInformation/technology

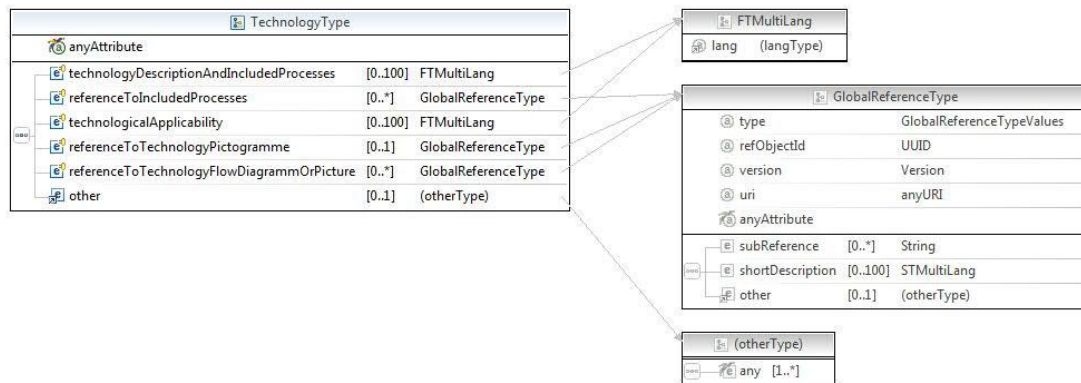


Figure 8: definition of the ILCD Technology type

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
technologyDescriptionAndIncludedProcesses	processInformation/referenceFunction/@includedProcesses	o.k.	no	1
referenceToIncludedProcesses		no corresponding field	no	3
technologicalApplicability	processInformation/technology/@text	o.k.	no	1
referenceToTechnologyPictogramme		no corresponding field	no	3
referenceToTechnologyFlowDiagrammOrPicture		no corresponding field	no	3

Mandatory fields in EcoSpold01

Element	Field	Is mapped?	Is mandatory in ILCD?	Default value
Technology	@text	yes	no (o)	default value default value for required field '@text': "No description of technology available."

2.1.1.6 Type: processInformation/mathematicalRelations

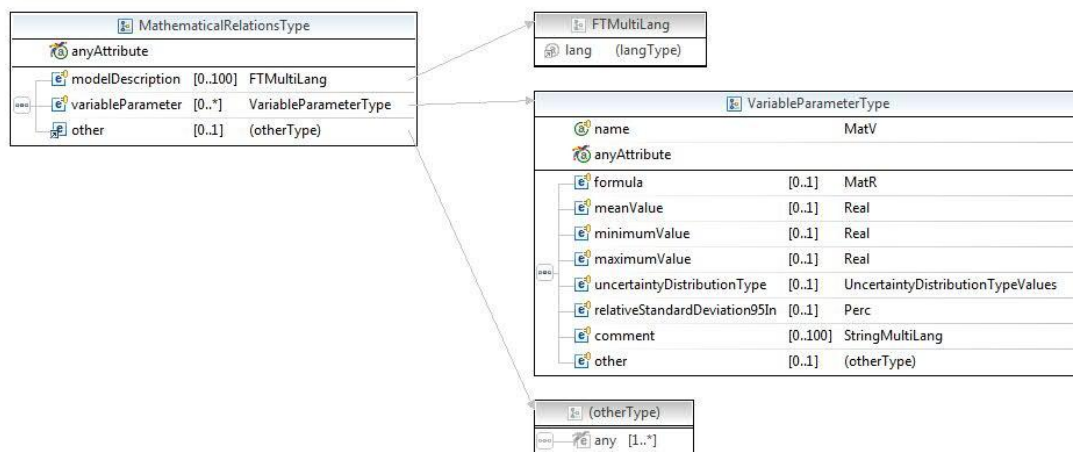


Figure 9: definition of the ILCD MathematicalRelation type

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
modelDescription		no corresponding field	no	3
variableParameter				
@name		no corresponding field	no	3
formula		no corresponding field	no	3
meanValue		no corresponding field	no	3
minimumValue		no corresponding field	no	3
maximumValue		no corresponding field	no	3
uncertaintyDistributionType		no corresponding field	no	3
relativeStandardDeviation95In		no corresponding field	no	3

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
comment		no corresponding field	no	3

No corresponding section in EcoSpold01.

2.1.2 Modelling and Validation

The XML schema type of the modelling and validation section contains five complex elements, which are defined by the following schema types (see also figure 10):

- **LCIMethodAndAllocationType**: contains information about LCI methodological modelling aspects including allocation
- **DataSourcesTreatmentAndRepresentativenessType**: provides information about data selection, completeness, and treatment principles and procedures, data sources and market coverage information
- **CompletenessType**: contains information about the data completeness aspects for the dataset
- **ValidationType**: provides information about the validation of the dataset
- **ComplianceDeclarationsType**: comprises statements on compliance of several dataset aspects with compliance requirements as defined by the referenced compliance system

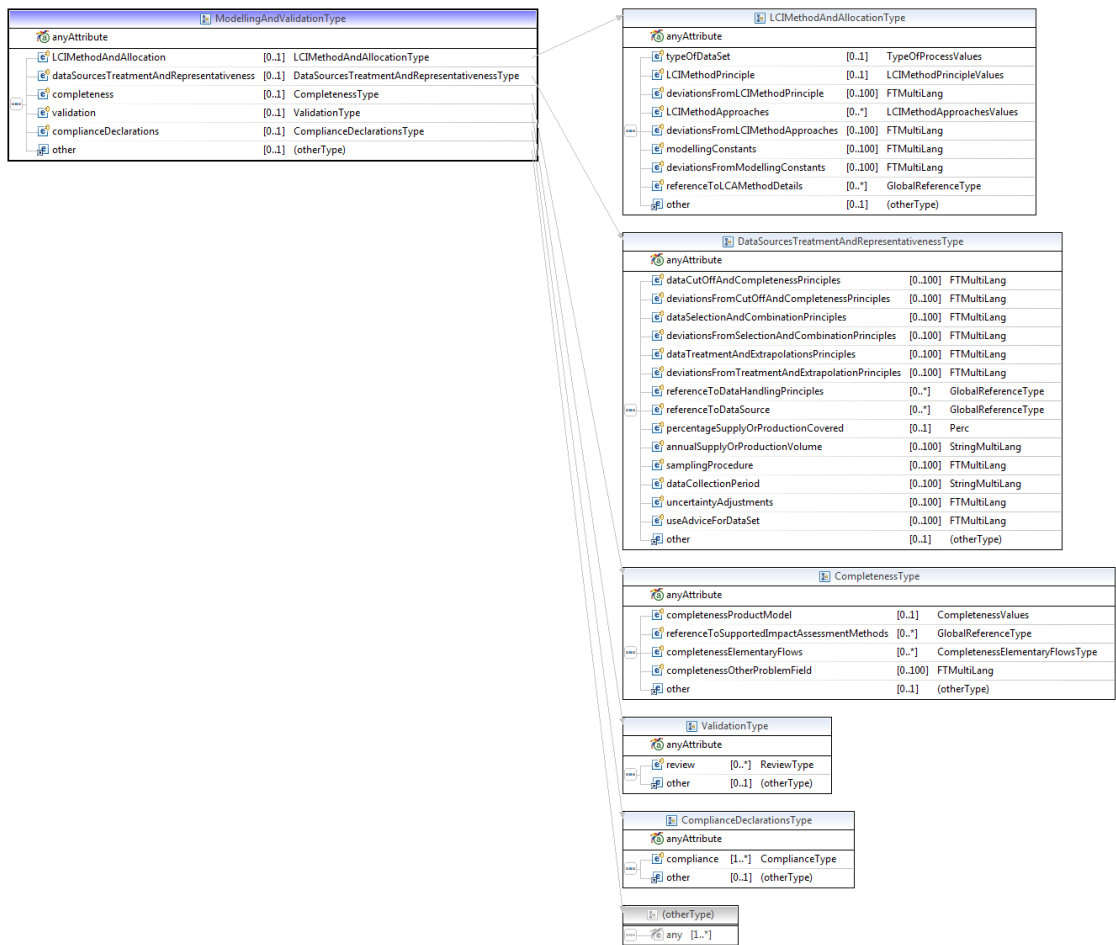


Figure 10: definition of the ILCD ModellingAndValidation type

2.1.2.1 Type: ModellingAndValidation/LCIMethodAndAllocation

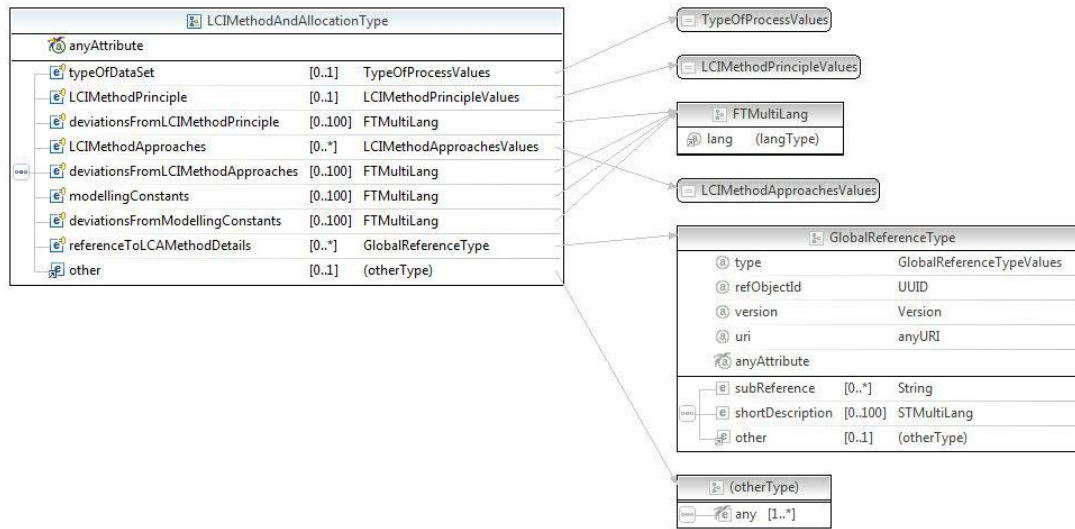


Figure 11: definition of the ILCD LCIMethodAndAllocation type

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
TypeOfDataSet	processInformation/data SetInformation/@type	field transformation different enumerations if system terminated than "2" (= System terminated), if not "1" (= Unit process)	yes	2
LCIMethodPrinciple		no corresponding field	no	3
deviationsFromLCIMethod Principle		no corresponding field	no	3
LCIMethodApproaches	allocation/@allocationMethod	enumeration mapping Only applicable for multioutput processes! different enumerations: <ul style="list-style-type: none"> Allocation - market value => "1" (= economic) Allocation - gross calorific value => "0" (= physical) Allocation - net calorific value => "0" (= physical) Allocation - exergetic content => "2" (= other) Allocation - element content => "0" (= physical) Allocation - mass => "0" (= physical) Allocation - volume => "0" (= physical) Allocation - ability to bear => "2" (= other) 	yes	2

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
		<ul style="list-style-type: none"> • Allocation - marginal causality => "2" (= other) • Allocation - physical causality => "0" (= physical) • Allocation - 100% to main function => "2" (= other) • Allocation - other explicit assignment => "2" (= other) • Allocation - equal distribution => "2" (= other) • Substitution – BAT => "2" (= other) • Substitution - average, market price correction => "2" (= other) • Substitution - average, technical properties correction => "2" (= other) • Allocation - recycled content => "2" (= other) • Substitution - recycling potential => "2" (= other) • Substitution - average, no correction => "2" (= other) • Substitution – specific => "2" (= other) • Consequential effects – other => "2" (= other) • Not applicable => "-1" (= undefined) • Other => "2" (= other) 		
deviationsFromLCIMethod Approaches		no corresponding field	no	3
modellingConstants		no corresponding field	no	3
deviationFromModellingConstants		no corresponding field	no	3
referenceTpLCAMethodDetails		no corresponding field	no	3

No mandatory fields in EcoSpold01 in the corresponding section.

2.1.2.2 Type: ModellingAndValidation/ dataSourcesTreatmentAndRepresentativeness

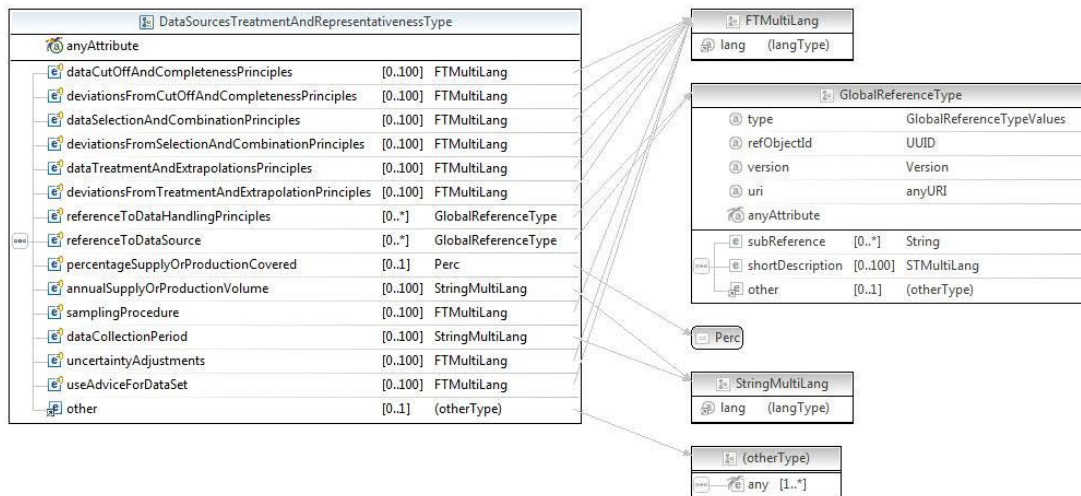


Figure 12: definition of the ILCD DataSourcesTreatmentAndREpresentativeness type

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
<code>dataCutOffAndCompletenessPrinciples</code>		no corresponding field	no	3
<code>deviationsFromCutOffAndCompletenessPrinciples</code>		no corresponding field	no	3
<code>dataSelectionAndCombinationPrinciples</code>	<code>modellingAndValidation/representativeness/@samplingProcedure</code>	field concatenation n:1 mapping	no	2
<code>deviationsFromSelectionAndCombinationPrinciples</code>		no corresponding field	no	3
<code>dataTreatmentAndExtrapolationsPrinciples</code>	<code>modellingAndValidation/representativeness/@extrapolations</code>	field concatenation n:1 mapping	no	2
<code>deviationsFromTreatmentAndExtrapolationPrinciples</code>	<code>modellingAndValidation/representativeness/@extrapolations</code>	field concatenation n:1 mapping	no	2
<code>referenceToDataHandlingPrinciples</code>		no corresponding field	no	3
<code>referenceToDataSource</code>	<code>modellingAndValidation/source/number</code>	field transformation Source elements are compiled	no	2
<code>percentageSupplyOrProductionCovered</code>	<code>modellingAndValidation/representativeness/@percent</code>	o.k.	no	1
<code>annualSupplyOrProductionVolume</code>	<code>modellingAndValidation/representativeness/@procuctionVolume</code>	o.k.	no	1
<code>samplingProcedure</code>	<code>modellingAndValidation/representativeness/</code>	field concatenation: n:1 mapping	no	2

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
	@samplingProcedure			
dataCollectionPeriod		no corresponding field	no	3
uncertaintyAdjustments	modellingAndValidation/ representativeness/@ uncertaintyAdjustments	o.k.	no	1
useAdviceForDataSet		no corresponding field	no	3

No mandatory fields in EcoSpold01 in the corresponding section.

2.1.2.3 Type: ModellingAndValidation/completeness

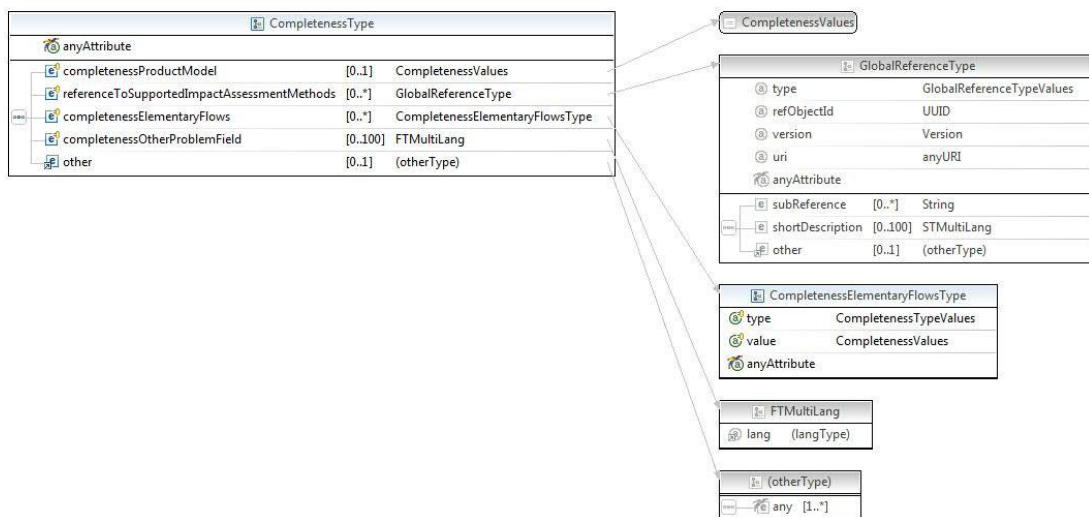


Figure 13: definition of the ILCD Completeness type

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
completenessProductModel		no corresponding field	no	3
referenceToSupportedImpactAssessmentMethods		no corresponding field	no	3
completenessElementaryFlows		no corresponding field	no	3
@type		no corresponding field	no	3
@value		no corresponding field	no	3
completenessOtherProblemField		no corresponding field	no	3

No mandatory fields in EcoSpold01 in the corresponding section.

2.1.2.4 Type: ModellingAndValidation/validation

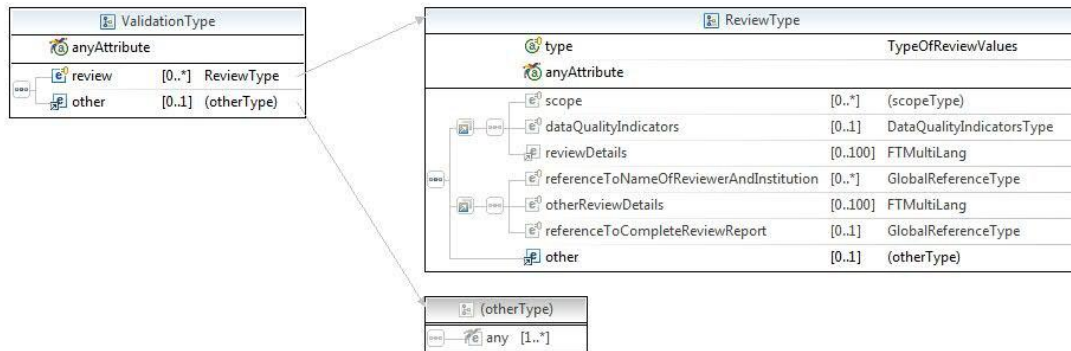


Figure 14: definition of the ILCD Validation type

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
review		no corresponding field	no	3
@type		no corresponding field	no	3
scope		no corresponding field	no	3
@name		no corresponding field	no	3
method		no corresponding field	no	3
@name		no corresponding field	no	3
dataQualityIndicators		no corresponding field	no	3
dataQualityIndicator		no corresponding field	no	3
@name		no corresponding field	no	3
@value		no corresponding field	no	3
reviewDetails	modellingAndValidation/validation/@proofReadingDetails	o.k.	no	1
referenceToNameOfReviewerAndInstitution	modellingAndValidation/validation/@proofReadingValidator	different occurrence Only the first entry can be transferred. If the reviewer does not exist in EcoSpold, a new Person has to be compiled.	no	2
otherReviewDetails	modellingAndValidation/validation/@otherDetails	o.k.	no	1

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
referenceToCompleteReviewReport	modellingAndValidation/source/@number	o.k. A new source is compiled, but the context gets lost.	no	1

Mandatory fields in EcoSpold01:

Element	Field	Is mapped?	Is mandatory in ILCD?	Default value
validation	@proofReadingDetails	yes	no (r)	default entry default entry for required field '@proofReadingDetails': "no review details available"
	@proofReadingValidator	yes	no (r)	default contact

2.1.2.5 Type: ModellingAndValidation/complianceDeclarations

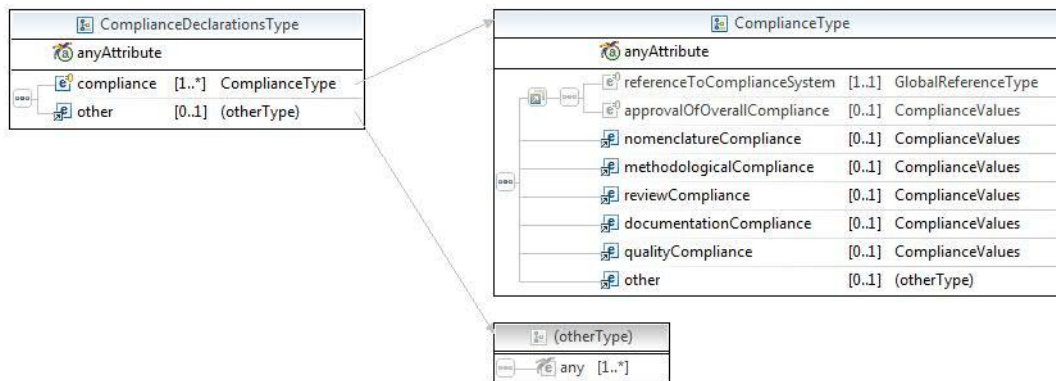


Figure 15: definition of the ILCD ComplianceDeclarations type

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
compliance		no corresponding field	no	3
referenceToComplianceSystem		no corresponding field	no	3
approvalOfOverallCompliance		no corresponding field	no	3
nomenclatureCompliance		no corresponding field	no	3
methodologicalCompliance		no corresponding field	no	3

reviewCompliance		no corresponding field	no	3
documentationCompliance		no corresponding field	no	3
qualityCompliance		no corresponding field	no	3

No corresponding section in EcoSpold01.

2.1.3 Administrative Information

The XML schema of the AdministrativeInformationType comprises four complex elements. It concerns the following data types (see also figure 16):

- **CommissionerAndGoalType**: provides basic information about goal and scope of the dataset
- **DataGeneratorType**: contains information about the person that compiled and modeled the dataset
- **DataEntryByType**: provides information about the staff or entity that documented the generated dataset, entering the information into the database
- **PublicationAndOwnershipType**: contains information related to publication and version management of the dataset including copyright and access restrictions

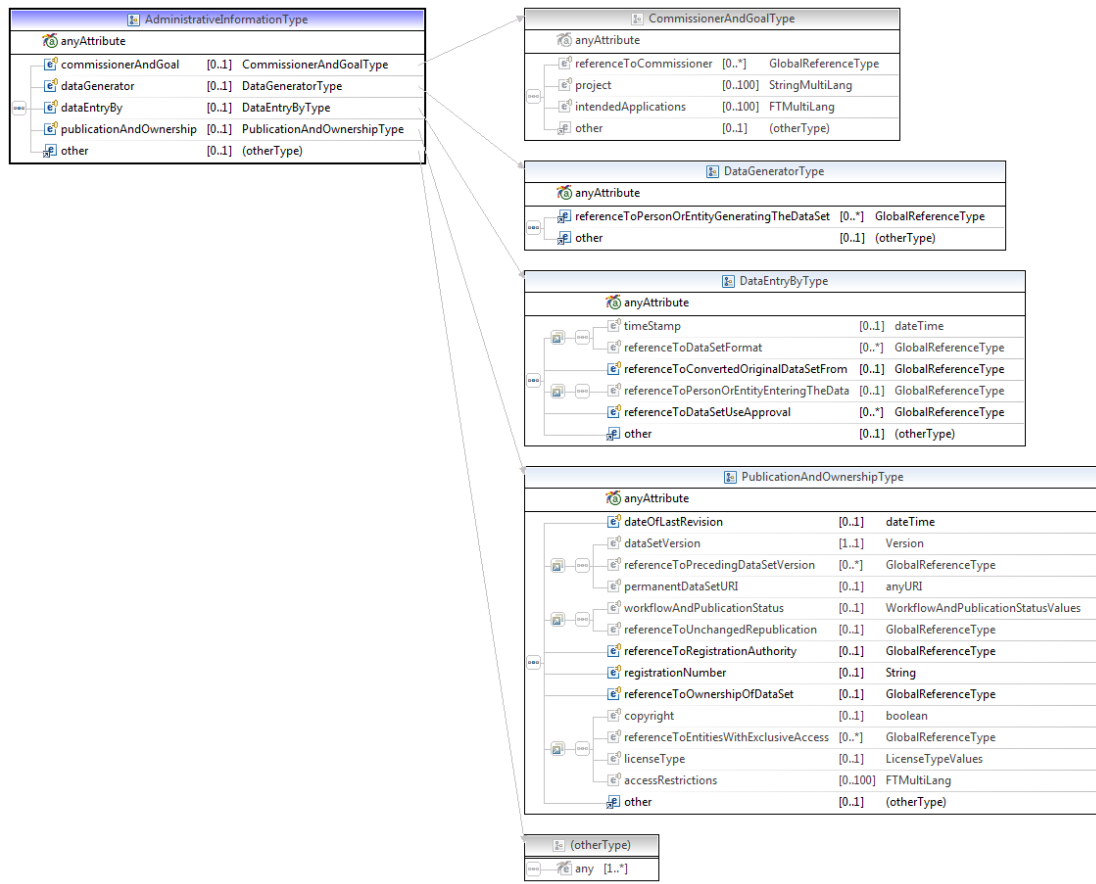


Figure 16: definition of the ILCD DataSourcesTreatmentAndREpresentativeness type

2.1.3.1 Type: administrativeInformation/commissionerAndGoal

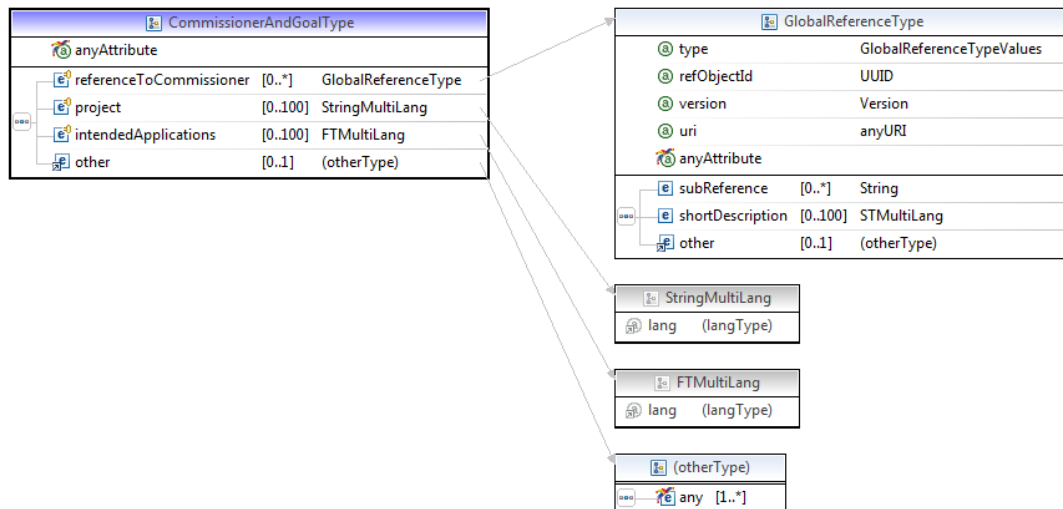


Figure 17: definition of the ILCD ComissionerAndGoal type

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
referenceToCommissioner		no corresponding field	no	3
project		no corresponding field	no	3
intendedApplications		no corresponding field	no	3

No corresponding section in EcoSpold01.

2.1.3.2 Type: administrativeInformation/dataGenerator

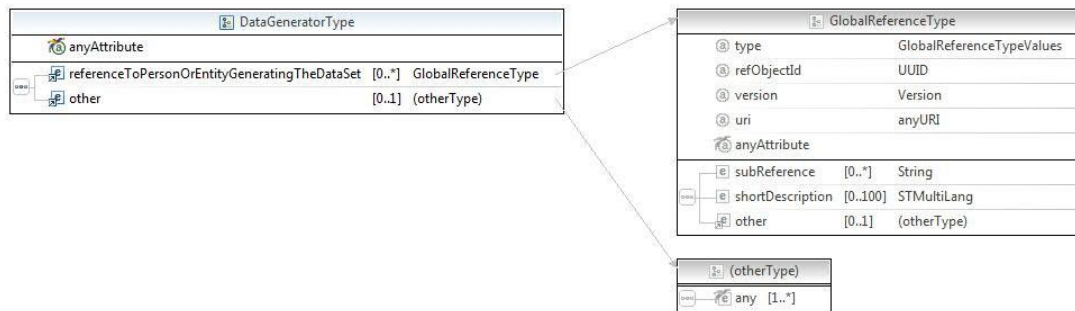


Figure 18: definition of the ILCD DataGenerator type

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
referenceToPersonOrEntityGeneratingTheDataSet	administrativeInformation/dataGeneratorAndPublication/@person	field transformation different field length (ILCD: 36 characters, ES1: 2 characters) => a new person has to be compiled with a new ID	no	2

Mandatory fields in EcoSpold01

Element	Field	Is mapped?	Is mandatory in ILCD?	Default value
Administrative information/ Data generator and publication	@person	yes	no (r)	default contact
	@dataPublishedIn	yes	no (r)	default value default value for required field '@dataPublishedIn': "0" (=Data as such not published)
	@copyright	yes	no (r)	default value default value for required field '@isCopyrightProtected': true

2.1.3.3 Type: administrativeInformation/dataEntryBy

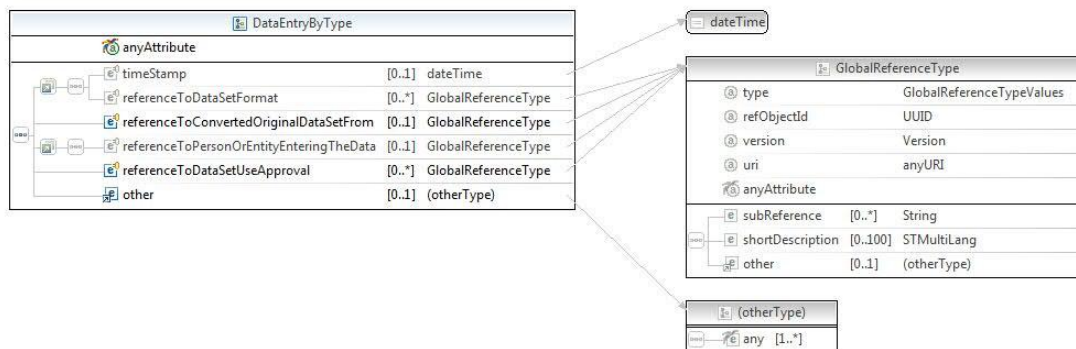


Figure 19: definition of the ILCD DataEntryBy type

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
timeStamp	processInformation/dataSetInformation/@timestamp	o.k.	no	1
referenceToDataSetFormat		no corresponding field	no	3
referenceToConvertedOriginalDataSetFrom		no corresponding field	no	3
referenceToPersonOrEntityEnteringTheData	administrativeInformation/dataEntryBy/@person	field transformation different field lengths (ILCD: ID with 36 characters, ES1: ID with 2 characters) => a new person has to be compiled with a new ID data for this person have to be generated.	no	2

Mandatory fields in EcoSpold01

Element	Field	Is mapped?	Is mandatory in ILCD?	Default value
Administrative information/Data entry by	@person	yes	no (o)	default contact
	@qualityNetwork	no		default entry default value for required field '@qualityNetwork': "0"

2.1.3.4 Type: administrativeInformation/publicationAndOwnership

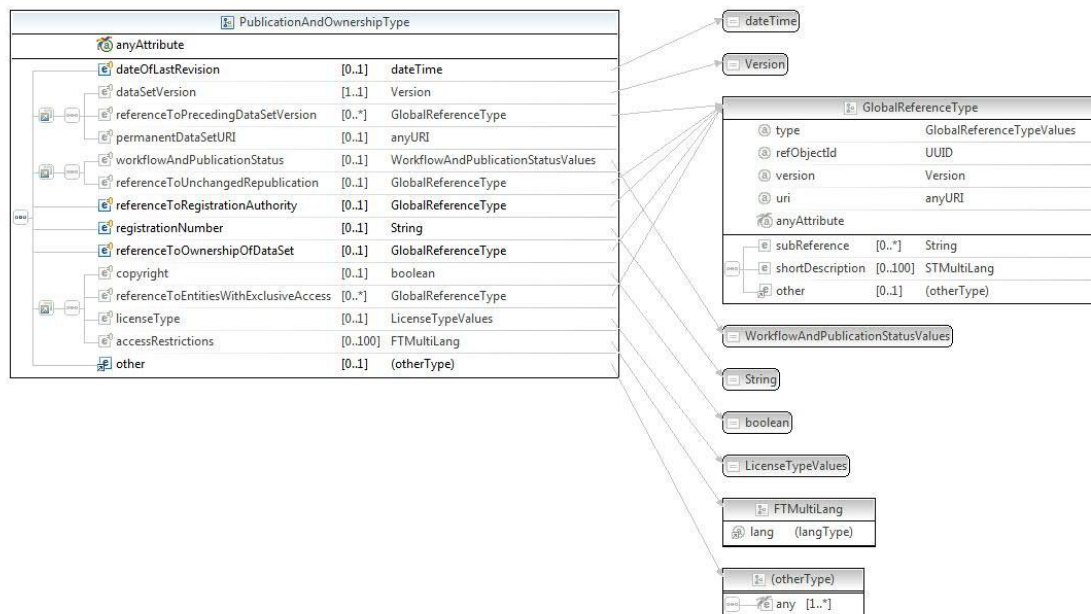


Figure 20: definition of the ILCD PublicationAndOwnership type

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
dateOfLastRevision		no corresponding field	no	3
dataSetVersion	processInformation/dataSetInformation/@version	field transformation different data formats: ILCD: Version (example: 01.00.000) ES1: Number (Decimal) (example: 1.0) transformation: 01.00.000 => 1.0	no	2
referenceToPrecedingDataSetVersion		no corresponding field	no	3
permanentDataSetURI		no corresponding field	no	3

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
workflowAndPublicationStatus	administrativeInformation/dataGeneratorAndPublication/@dataPublishedIn	Enumeration mapping different enumerations: <ul style="list-style-type: none"> • “Working draft” => “0” (= Data is not published) • “Final draft for external review” => “0” (= Data is not published) • “Data set finalised; unpublished” => “0” (= Data is not published) • “Under revision” => “0” (= Data is not published) • “Withdrawn” => “0” (= Data is not published) • “Data set finalised; subsystem published” => “1” (= Data of some unit processes or subsystems are published) • “Data set finalised; entirely published” => “2” (= Data has been published entirely) 	yes	2
referenceToUnchangedRepublishment	administrativeInformation/dataGeneratorAndPublication/@referenceToPublishedSource	field transformation and different field meaning In ILCD this field is a reference to an unchanged publication of the data set, in ES1 it is the reference to a documentation of the data set. Different field lengths (ILCD: ID with 36 characters, ES1: ID with 3 characters) => a new source has to be compiled with a new ID	no	2
referenceToRegistrationAuthority		no corresponding field	no	3
registrationNumber		no corresponding field	no	3
referenceToOwnershipOfDataSet		no corresponding field	no	3
copyright	administrativeInformation/dataGeneratorAndPublication/@copyright	o.k.	no	1
referenceToEntitiesWithExclusiveAccess		no corresponding field	no	3
licenseType	administrativeInformation/dataGeneratorAndPublication/@accessRestrictedTo	enumeration mapping different enumerations: <ul style="list-style-type: none"> • “free of charge for all users and uses” => “0” • default entry for all other items: “3” 	yes	2
accessRestrictions	administrativeInformation/dataGeneratorAndPublication/@accessRestrictedTo	field transformation not possible different data types: ILCD: FTMultiLang ES1: Number	no	3

Mandatory fields in EcoSpold01

Element	Field	Is mapped?	Is mandatory in ILCD?	Default value
Person	@number	no		a new ID is generated
	@name	yes	no (r)	default value default value for required field '@name': "no name"
	@address	yes	no (r)	default value default value for required field '@address': "no address"
	@telephone	yes	no (o)	default value default value for required field '@telephone': "no telephone number specified"
	@companyCode	no		All companies have to be listed onto the list of valid company codes and so a company code is also generated.
	@countryCode	no		default value default value for required field '@countryCode': "DE" (= Germany)

If a source is defined, following field is also mandatory:

Element	Field	Is mapped?	Is mandatory in ILCD?	Default value
Source	@number	no		a new ID is generated
	@sourceType	yes	no (o)	default entry default entry for required field '@sourceType': "0" (= undefined)
	@firstAuthor	no		default entry default entry for required field '@firstAuthor': first 40 characters of the field '@sourceCitation'
	@year	no		default entry default entry for required field '@year': "9999"
	@title	yes	no (r)	default entry default entry for required field '@title': "no source citation available"
	@placeOfPublications	no		default entry default entry for required field '@placeOfPublications': "see '@title'"

2.1.4 Exchanges

The XML schema type of the exchanges contains only one complex element that is defined by the **ExchangeType**. This complex element can occur any numbers of times and contains information about an exchange of the process.

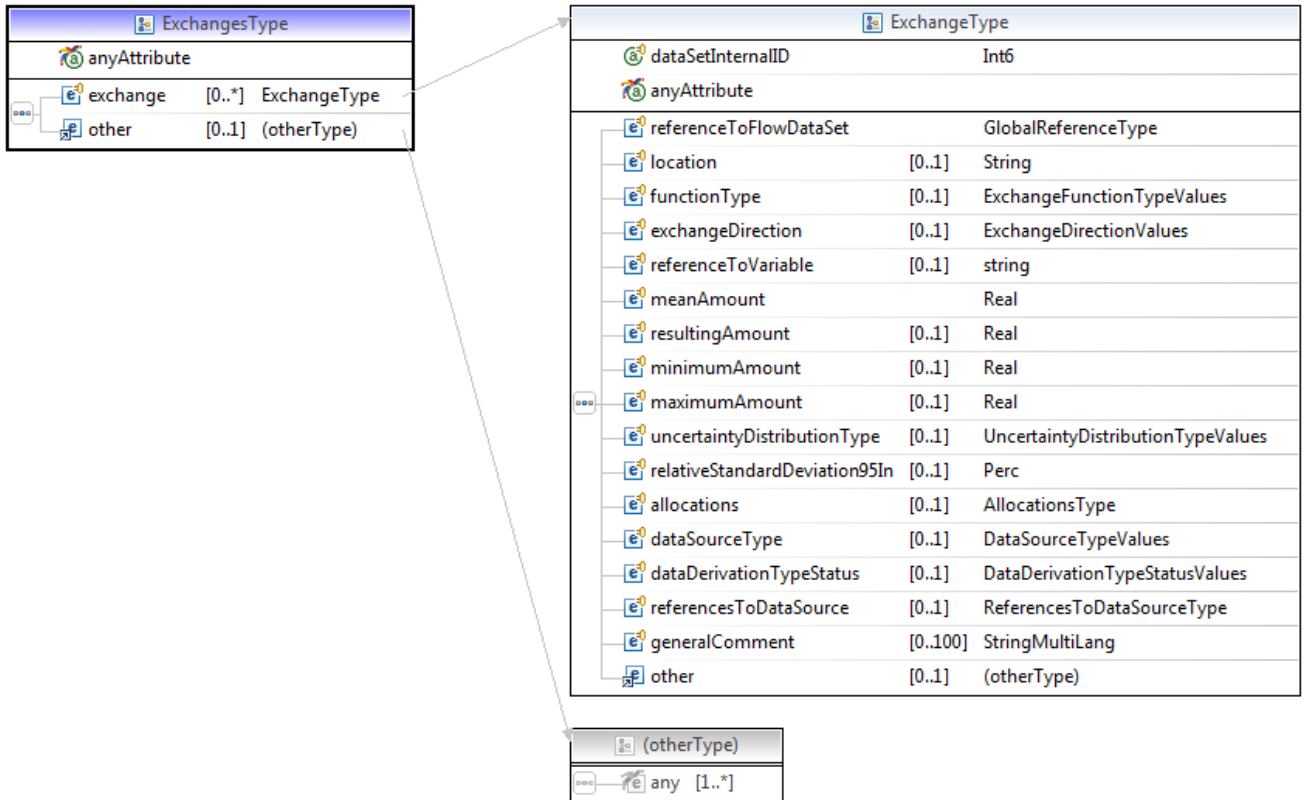


Figure 21: definition of the ILCD Exchanges type

2.1.4.1 Type: exchanges/exchange

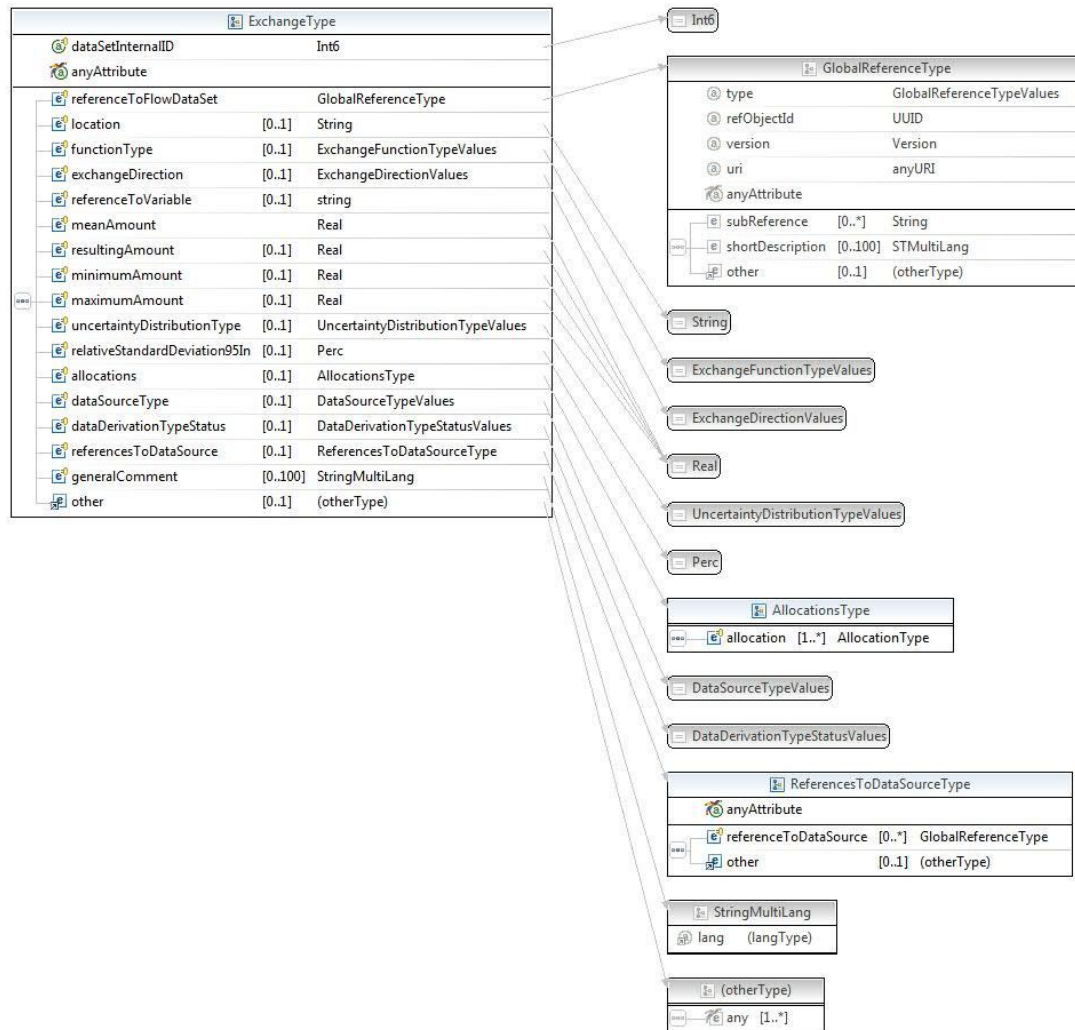


Figure 22: definition of the ILCD Exchange type

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
@dataSetInternalID	flowData/exchange/number	o.k. The internal ID is transferred +1 (The ILCD IDs start with "0" and the ES1 IDs start with "1")	no	1
referenceToFlowDataSet		no corresponding field	no	3
location	flowData/exchange/location	o.k.	no	1
functionType		no corresponding field	no	3

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
exchangeDirection	flowData/exchange/inputGroup or flowData/exchange/outputGroup	enumeration mapping The flow type in combination with the direction of the flow allows a mapping to the enumeration in ES1: <ul style="list-style-type: none"> ILCD elementary exchange: "Input" => exchange/inputGroup: "4" (= from nature) ILCD elementary exchange: "Output" => exchange/outputGroup: "4" (= to nature) ILCD product flow: "Input" => exchanges/inputGroup: "5" (= from technosphere (unspecified)) ILCD product flow: "Output" => exchanges/outputGroup: "0" (= reference product), if reference flow; "3" (= waste to treatment), if waste flow; otherwise default value "2" (= allocated by-product) 	yes	2
referenceToVariable		no corresponding field	no	3
meanAmount	flowData/exchange/@meanValue	The fields meanAmount and resultingAmount are similar, if there is no parameter used. Because parameters cannot be transferred to ES1 both fields are the same.	no	2
resultingAmount	flowData/exchange/@meanValue	The fields meanAmount and resultingAmount are similar, if there is no parameter used. Because parameters cannot be transferred to ES1 both fields are the same.	no	2
minimumAmount	flowData/exchange/@minValue	o.k.	no	1
maximumAmount	flowData/exchange/@maxValue	o.k.	no	1
uncertaintyDistributionType	flowData/exchange/@uncertaintyType	enumeration mapping <ul style="list-style-type: none"> "undefined" => "0" (= undefined) "log-normal" => "1" (= lognormal) "normal" => "2" (= normal) "triangular" => "3" (= triang) "uniform" => "4" (= uniform) 	yes	1
relativeStandardDeviation95In	flowData/exchange/@standardDeviation95	o.k.	no	1
allocations				
allocation				
@internalReferenceToCoProduct	flowData/allocation/@referenceToCoProduct	field transformation different data types: ES1: TIndexNumber ILCD: Int6	no	2
@allocatedFraction	flowData/allocation/@fraction	o.k.	no	1

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
dataSourceType		no corresponding field	no	3
dataDerivationTypeStatus		no corresponding field	no	3
referenceToDataSource	flowData/exchange/@referenceToSource	field transformation A new source with a new ID has to be compiled.	no	2
generalComment	flowData/exchange/generalComment	o.k.	no	1

Mandatory fields in EcoSpold01

Element	Field	Is mapped?	Is mandatory in ILCD?	Default value
Exchange	@name	yes	no (r)	default value default value for required field '@name': "no name"
	@number	no		A new ID is generated.
	@category (only mandatory for elementary flows)	yes	no (r)	inclusion of the ILCD compartments of elementary flows
	@subCategory (only mandatory for elementary flows)	yes	no (r)	inclusion of the ILCD compartments of elementary flows
	@localCategory	yes	no (r)	default value default value for required field '@localCategory': "no local category specified"
	@localSubCategory	yes	no (r)	default value default value for required field '@localSubCategory': "no local sub category specified"
	@location (only mandatory for product flows)	yes	no (o)	default value default value for required field '@location': "GLO"
	@unit	yes	no (r)	default value default value for required field '@unit': "kg"
	@meanValue	yes	no (r)	default value default value for required field '@meanValue': "1"
	@uncertaintyType	yes	no (o)	default value default value for required field '@uncertaintyType': "0" (= undefined)
	@infrastructureProcesses (only mandatory if input group of the flow is 5)	no		default value default value for required field '@infrastructureProcess': false
	inputGroup	partly	no (r)	default value default value for required field 'inputGroup': "5" (= from technosphere (unspecified))

Element	Field	Is mapped?	Is mandatory in ILCD?	Default value
	outputGroup	partly	no (r)	default value default value for required field 'outputGroup': "2" (= allocated by product) (see above for further explanations)
Allocation	@referenceToCoProduct	yes	no (o)	
	@allocationMethod	yes	no (r)	default value default value for required field '@allocationMethod': "-1" (= undefined)
	@fraction	yes	no (o)	
	@referenceToInputOutput	no		Because it is known to which flow the allocation relates, the right ID can be entered here.

2.1.5 LCIA results

The XML schema of the LCIA results type contains one complex element that is defined by the **LCIAResultType**. This complex element can occur any numbers of times and describes a LCIA result.

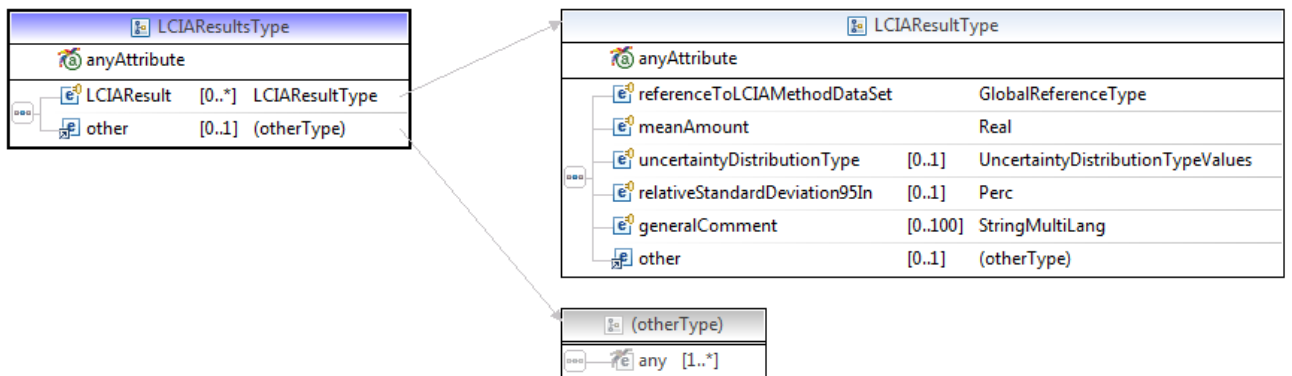


Figure 23: definition of the ILCD LCIAResults type

2.1.5.1 Type: LCIAResults/LCIAResult

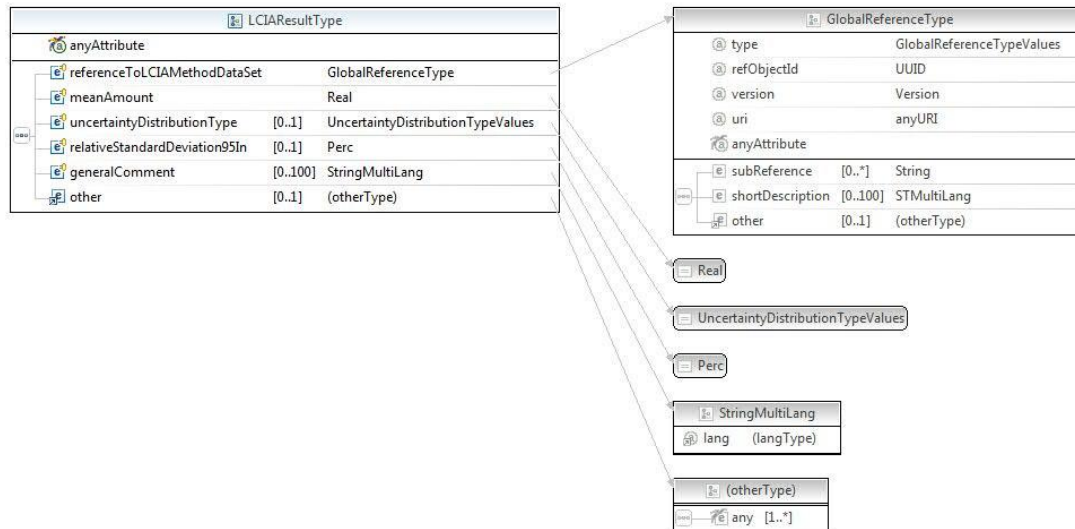


Figure 24: definition of the ILCD LCIAResult type

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
referenceToLCIAMethodDataSet		no corresponding field	no	3
meanAmount		no corresponding field	no	3
uncertaintyDistributionType		no corresponding field	no	3
relativeStandardDeviation95In		no corresponding field	no	3
generalComment		no corresponding field	no	3

No mandatory fields in EcoSpold01 in the corresponding section.

2.2 Flow dataset

The XML schema of the flow dataset comprises two attributes and four complex elements. The complex elements are defined by the following data types (see also figure 25):

- **FlowInformationType**: contains information about the flow
- **ModellingAndValidationType**: contains information about the modelling and validation of the flow dataset

- **AdministrativeInformationType**: comprises administrative information regarding the flow dataset
- **FlowPropertiesType**: contains a list of flow properties

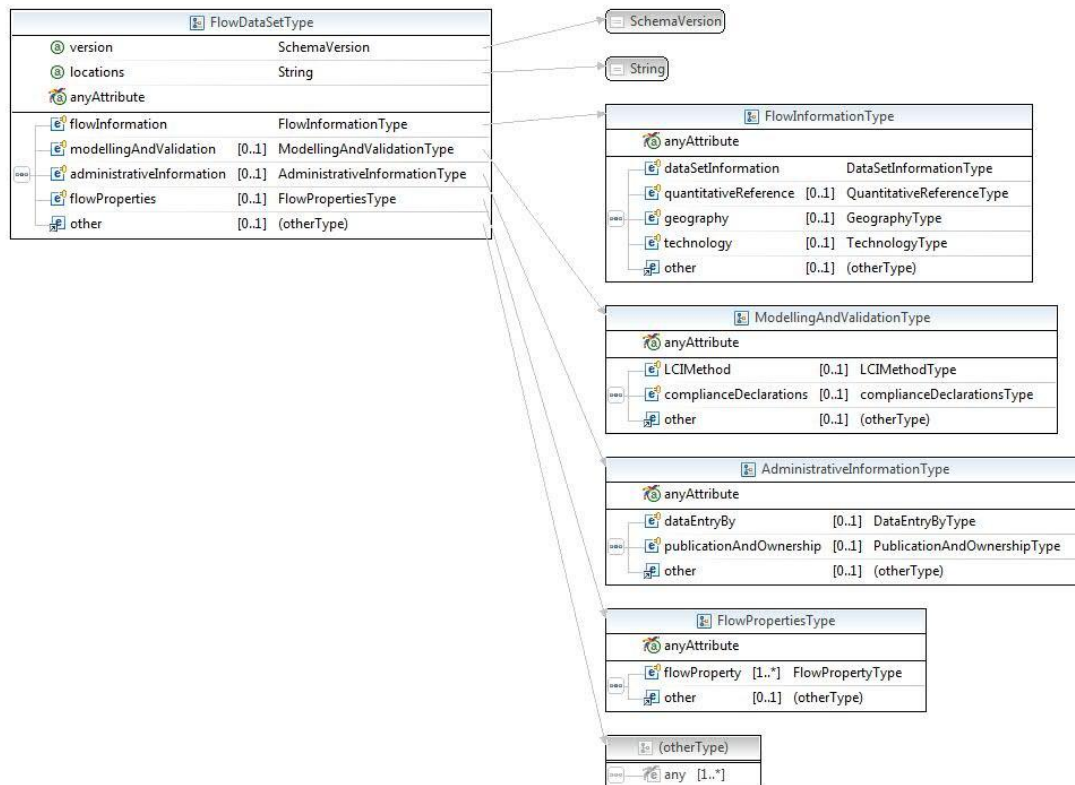


Figure 25: definition of the ILCD flowDataSet type

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
@version		no corresponding field	no	3
@locations		no corresponding field	no	3

No mandatory fields in EcoSpold01 in the corresponding section.

2.2.1 Flow information

The XML schema of the flow information type contains four complex elements with the following data types (see also figure 26):

- **DataSetInformationType**: contains general dataset information of the flow dataset
- **QuantitativeReferenceType**: names the type of quantitative references used for the flow dataset

- **GeographyType**: provides information about the geographical representativeness of the flow data set
- **TechnologyType**: provides information about the technological representativeness of the flow data set

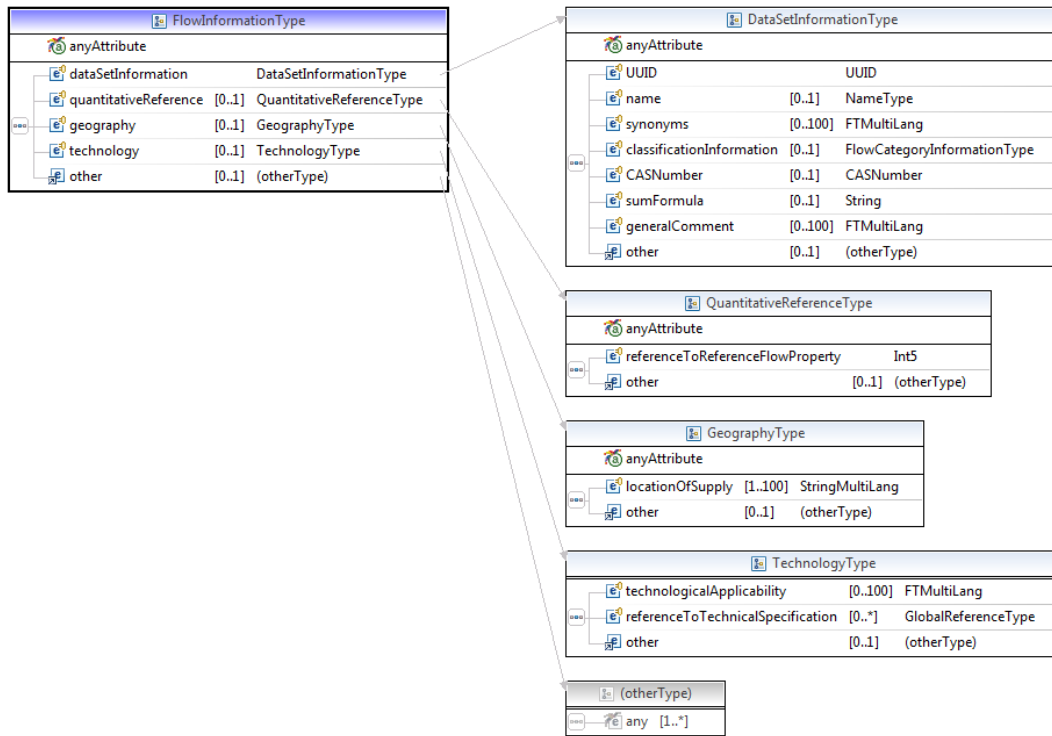


Figure 26: definition of ILCD FlowInformation type

2.2.1.1 Type: flowInformation/dataSetInformation

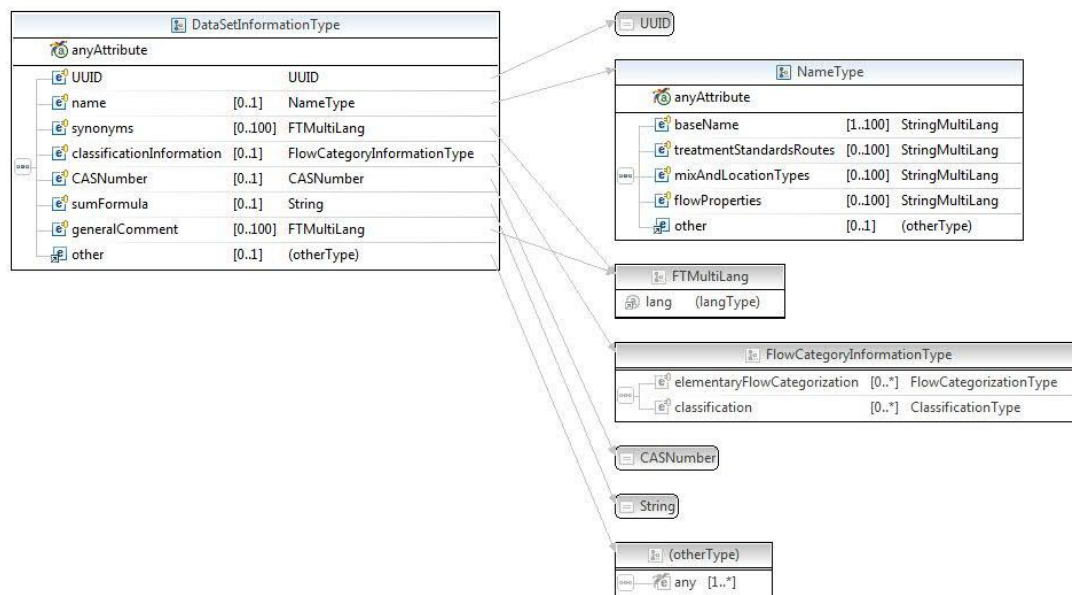


Figure 27: definition of ILCD DataSetInformation type

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
UUID	flowData/exchange/ @number	field transformation different field length: a new ID has to be generated	no	2
name				
baseName	flowData/exchange/ name or processInformation/ref erencefunction/@nam e for the reference flow	field concatenation The EcoSpold name is the concatenation of three ILCD name fields: <baseName>, <treatmentStandardsRoutes>, <mixAndLocationTypes>	no	2
treatmentStandardsRoutes	flowData/exchange/ name or processInformation/ref erencefunction/@nam e for the reference flow	field concatenation The EcoSpold name is the concatenation of three ILCD name fields: <baseName>, <treatmentStandardsRoutes>, <mixAndLocationTypes>	no	2
mixAndLocationTypes	flowData/exchange/ name or processInformation/ref erencefunction/@nam e for the reference flow	field concatenation The EcoSpold name is the concatenation of three ILCD name fields: <baseName>, <treatmentStandardsRoutes>, <mixAndLocationTypes>	no	2
flowProperties	flowData/exchange/ name or processInformation/ref erencefunction/@nam	field concatenation The EcoSpold name is the concatenation of three ILCD name fields: <baseName>, <treatmentStandardsRoutes>, <mixAndLocationTypes>	no	2

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
	e for the reference flow	<treatmentStandardsRoutes>, <mixAndLocationTypes>		
synonyms	processInformation/referencefunction/@synonym	<p>field transformation The mapping is only valid for the reference flow!</p> <p>ILCD: <i>Synonyms</i> / alternative names / brands of the good, service, or process. Separated by semicolon.</p> <p>ES2: List of synonyms for the name. Contrary to normal multi language strings, synonyms may contain more than one element with the same xml:lang attribute value.</p> <p>⇒ Splitted synonym list</p>	no	2
classificationInformation				
elementaryFlowCategorization				
@name	flowData/exchanges/generalComment	<p>default entry: If it is a flow with the Input- or Outputgroup 4, the default entry is: "ILCD compartments"</p>	no	2
@categories		no corresponding field	no	3
category				
@level		<p>field transformation mapping of different classification systems with different compartments:</p> <ul style="list-style-type: none"> Emissions/Emissions to air/Emissions to air, unspecified => air/unspecified Emissions/Emissions to air/Emissions to air, unspecified (long-term) => new compartment Emissions/Emissions to air/Emissions to lower stratosphere and upper troposphere => air/lower stratosphere + upper troposphere Emissions/Emissions to air/Emissions to non-urban air or from high stacks => air/low population density Emissions/Emissions to air/Emissions to urban air close to ground => air/high population density Emissions/Emissions to soil/Emissions to agricultural soil => soil/agricultural Emissions/Emissions to soil/Emissions to non-agricultural soil => new subcompartment must be generated Emissions/Emissions to soil/Emissions to soil, unspecified => soil/unspecified Emissions/Emissions to water/Emissions to fresh water => new subcompartment must be generated 		2

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
		<ul style="list-style-type: none"> • Emissions/Emissions to water/Emissions to sea water => water/ocean • Emissions/Emissions to water/Emissions to water, unspecified => water/unspecified • Emissions/Emissions to water/Emissions to water, unspecified (long-term) => new subcompartment must be generated • Resources/Resources from air/Renewable element resources from air => resource/in air • Resources/Resources from air/Renewable energy resources from air => resource/in air • Resources/Resources from air/Renewable material resources from air => resource/in air • Resources/Resources from biosphere => resource/biotic • Resources/Resources from biosphere/Renewable energy resources from biosphere => resource/biotic • Resources/Resources from ground/Non-renewable element resources from ground => resource/in ground • Resources/Resources from ground/Non-renewable energy resources from ground => resource/in ground • Resources/Resources from ground/Non-renewable material resources from ground => resource/in ground • Resources/Resources from ground/Renewable energy resources from ground => resource/in ground • Resources/Resources from ground/Renewable material resources from ground => resource/in ground • Resources/Resources from water/Non-renewable element resources from water => resource/in water • Resources/Resources from water/Non-renewable material resources from water => resource/in water • Resources/Resources from 		

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
		water/Renewable energy resources from water => resource/in water <ul style="list-style-type: none"> Resources/Resources from water/Renewable material resources from water => resource/in water 		
@catId		no corresponding field	no	3
classificationInformation/classification				
@name		no corresponding field	no	3
@classes		no corresponding field	no	3
class				
class[@level]	flowData/exchange/ @category, flowData/exchange/ @subCategory or processInformation/ref erenceFunction/@cate gory, processInformation/ref erenceFunction/@sub Category for reference flow	field transformation assignment according to the different levels Because the ILCD field does not support multilingualism, the local category and the local sub category cannot be mapped.	no	2
@classId		no corresponding field	no	3
CASNumber	flowData/exchange/ @CASNumber or processInformation/ref erenceFunction/@CAS Number for reference flow	o.k.	no	1
sumFormula	flowData/exchange/ @formula or processInformation/ref erenceFunction/@for mula for reference flow	o.k.	no	1
generalComment	flowData/exchange/ @generalComment or processInformation/ref erenceFunction/@gen eralComment for reference flow	o.k.	no	1

No mandatory fields in EcoSpold01 in the corresponding section.

2.2.1.2 Type: flowInformation/quantitativeReference

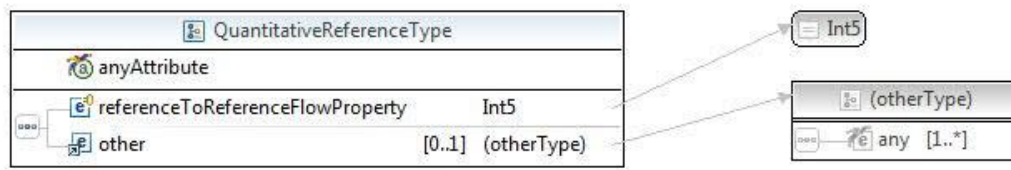


Figure 28: definition of ILCD QuantitativeReference type

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
referenceToReferenceFlowProperty		no corresponding field	no	3

No mandatory fields in EcoSpold01 in the corresponding section.

2.2.1.3 Type: flowInformation/geography

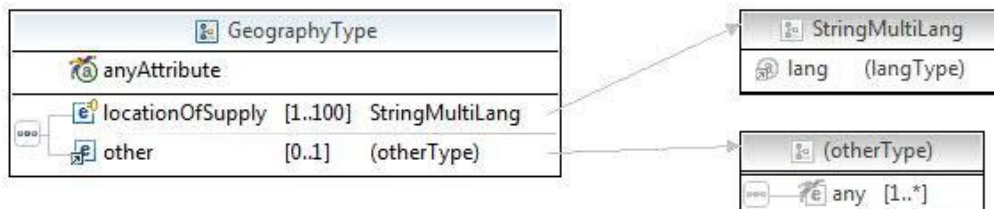


Figure 29: definition of ILCD Geography type

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
locationOfSupply		no corresponding field	no	3

No mandatory fields in EcoSpold01 in the corresponding section.

2.2.1.4 Type: flowInformation/technology

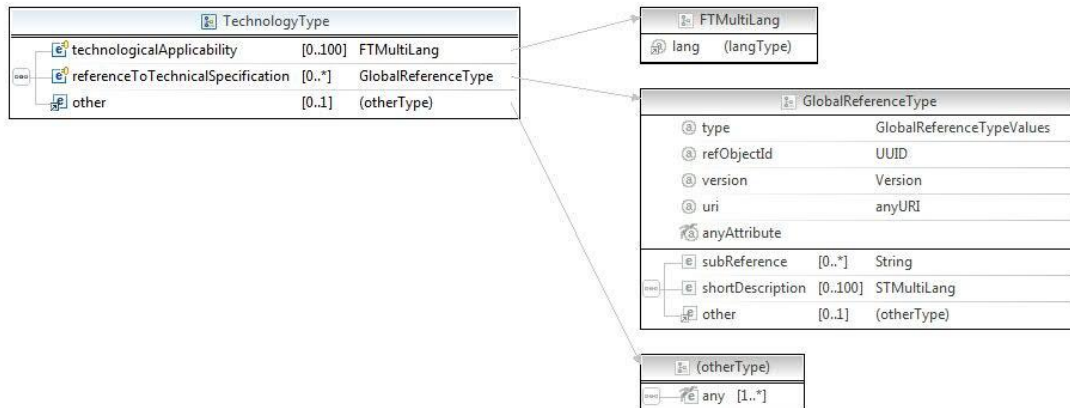


Figure 30: definition of ILCD Technology type

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
technologicalApplicability		no corresponding field	no	3
referenceToTechnicalSpecification		no corresponding field	no	3

No mandatory fields in EcoSpold01 in the corresponding section.

2.2.2 Modelling and validation

The ModellingAndValidationType comprises two complex elements. These complex elements are defined by the following XML schema types (see also figure 31):

- **LCIMethodType**: contains LCI methodological modelling aspects
- **ComplianceDeclarationsType**: provides statements on compliance of several data set aspects with compliance requirements as defined by the referenced compliance system

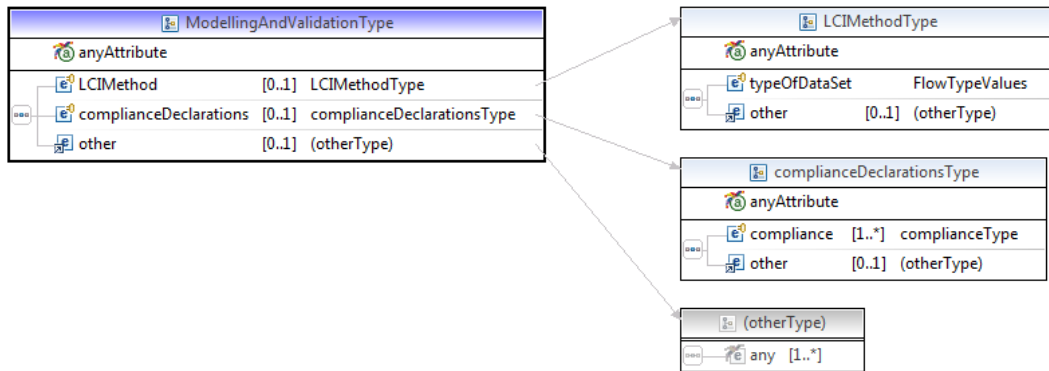


Figure 31: definition of ILCD ModellingAndValidation type

2.2.2.1 Type: ModellingAndValidation/LCIMethod

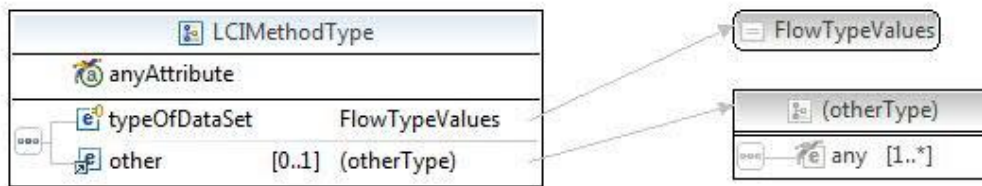


Figure 32: definition of ILCD LCIMethod type

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
typeOfDataSet	flowData/exchange/ inputGroup or flowData/exchange/ outputGroup	<p>field transformation</p> <p>This field in combination with the classification level and the exchange direction gives information about the exchange properties:</p> <ul style="list-style-type: none"> “Elementary flow” and exchange direction “Output” => flowData/exchange/outputGroup = “4” (= to nature) “Elementary flow” and exchange direction “Input” => flowData/exchange/inputGroup = “4” (= from nature) “Product flow”, exchange direction “Input”, and category “Electricity” or “Heat” => flowData 	yes	2

		<p>/exchange/inputGroup = "2" (= electricity/heat)</p> <ul style="list-style-type: none"> • "Product flow", exchange direction "Input" and all other categories => flowData/exchange/inputGroup = "5" (= from technosphere (unspecified)) • "Product flow", exchange direction "Output" => flowData/exchange/outputGroup = "2" (=by-product), if flow is not reference • "Product flow", exchange direction "Output" => flowData/exchange/outputGroup = "0" (= reference product), if flow is reference • "Waste flow", exchange direction "Output" => flowData/exchange/outputGroup = "3" (= waste to treatment) 		
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No mandatory fields in EcoSpold01 in the corresponding section.

2.2.2.2 Type: ModellingAndValidation/complianceDeclarations

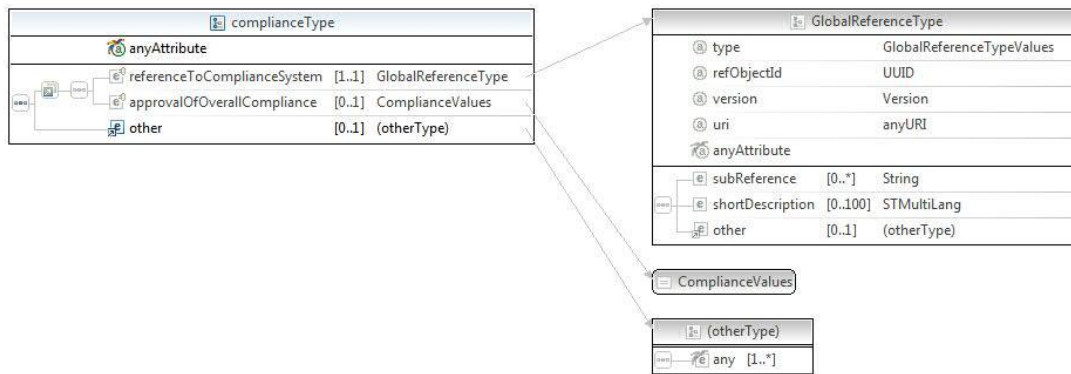


Figure 33: definition of ILCD ComplianceDeclarations type

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
compliance		no corresponding field	no	3
referenceToComplianceSystem		no corresponding field	no	3
approvalOfOverallCompliance		no corresponding field	no	3

No mandatory fields in EcoSpold01 in the corresponding section.

2.2.3 Administrative information

The XML schema of the AdministrativeInformationType has two complex elements, that are defined by the following types (see also figure 34):

- **DataEntryByType:** contains information about the staff or entity that documented the generated flow dataset, entering the information into the database
- **PublicationAndOwnershipType:** covers information related to publication and version management of the dataset including copyright and access restrictions

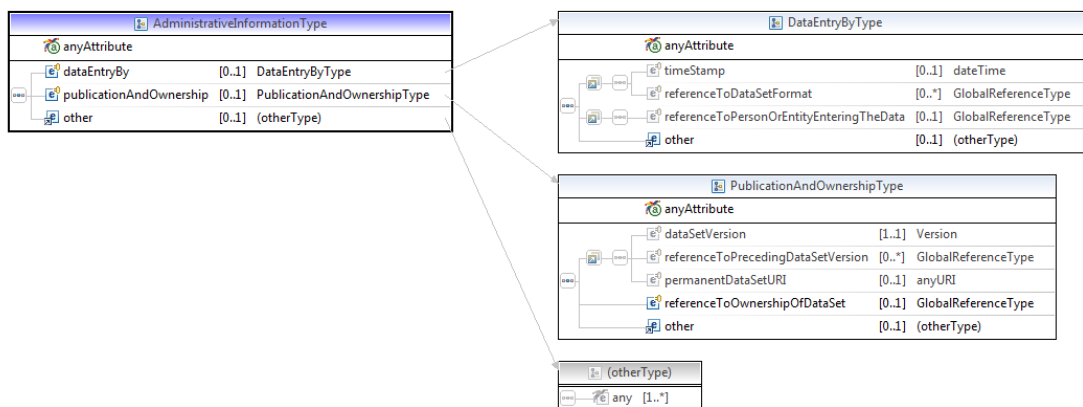


Figure 34: definition of ILCD AdministrativeInformation type

2.2.3.1 Type: administrativeInformation/dataEntryBy

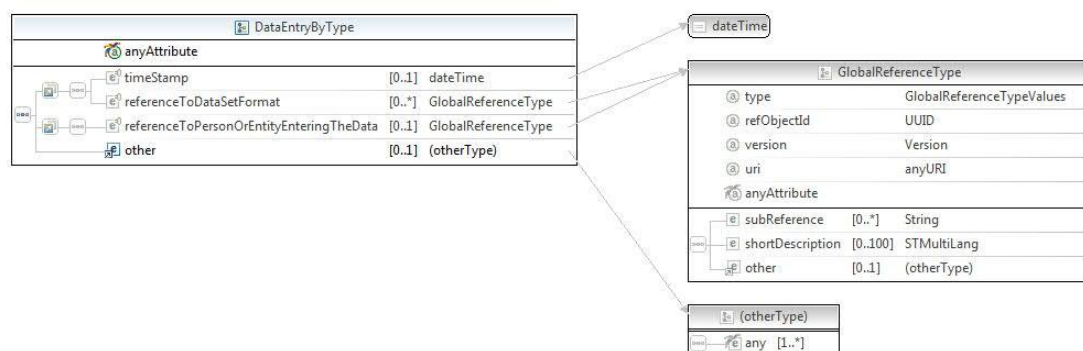


Figure 35: definition of ILCD DataEntryBy type

ILCD field	EcoSpold field	Comment	Nomen-	Assess-
------------	----------------	---------	--------	---------

			clature mapping?	ment
timeStamp		no corresponding field	no	3
referenceToDataSetFormat		no corresponding field	no	3
referenceToPersonOrEntityEnteringTheData		no corresponding field	no	3

No mandatory fields in EcoSpold01 in the corresponding section.

2.2.3.2 Type: administrativeInformation/publicationAndOwnership

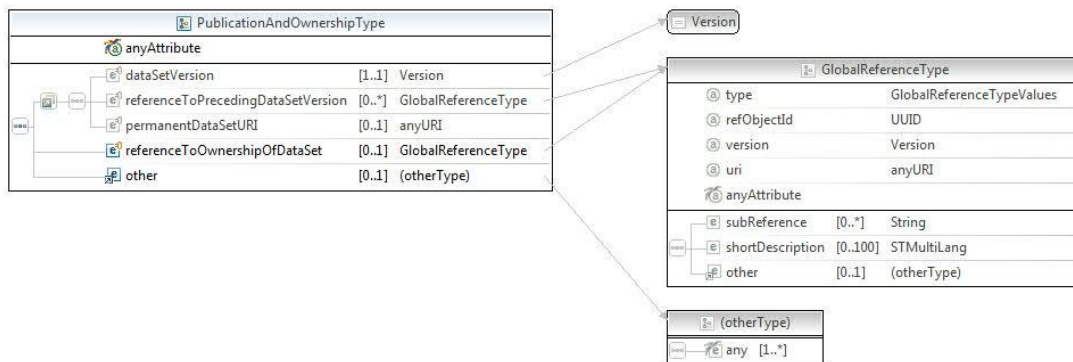


Figure 36: definition of PublicationAndOwnership type

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
dataSetVersion		no corresponding field	no	3
referenceToPrecedingDataSetVersion		no corresponding field	no	3
permanentDataSetURI		no corresponding field	no	3
referenceToOwnershipOfDataSet		no corresponding field	no	3

No mandatory fields in EcoSpold01 in the corresponding section.

2.2.4 Flow properties

The XML schema of the flow properties type contains one complex element that is defined by the **FlowPropertyType**. This complex element can occur any numbers of times and describes the used flow properties.

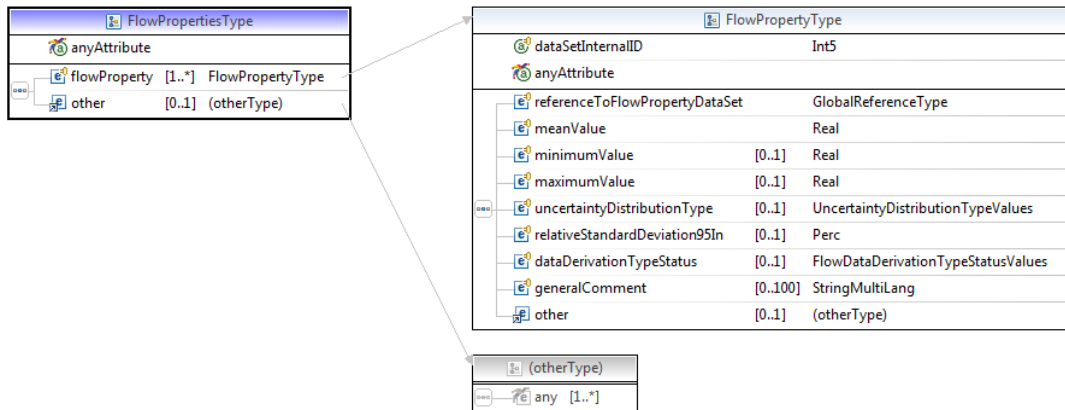


Figure 37: definition of ILCD FlowProperties type

2.2.4.1 Type: flowProperties/flowProperty

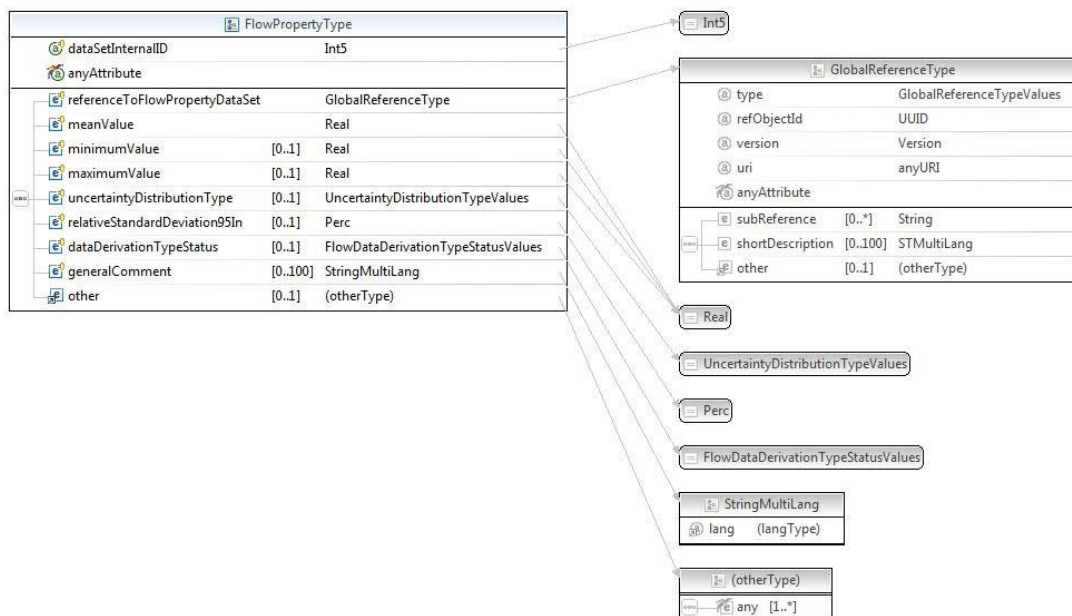


Figure 38: definition of ILCD FlowProperty type

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
@dataSetInternalID		no corresponding field	no	3

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
referenceToFlowProperty DataSet		no corresponding field	no	3
meanValue		no corresponding field	no	3
minimumValue		no corresponding field	no	3
maximumValue		no corresponding field	no	3
uncertaintyDistributionType		no corresponding field	no	3
relativeStandardDeviation 95In		no corresponding field	no	3
dataDerivationTypeStatus		no corresponding field	no	3
generalComment		no corresponding field	no	3

No mandatory fields in EcoSpold01 in the corresponding section.

2.3 Contact data set

The XML schema type of the contact dataset comprises one attribute and two complex elements. The complex elements are defined by the following data types (see figure 39);

- **ContactInformationType**: contains information about the dataset
- **AdministrativeInformationType**: contains information about the administrative informations about the contact dataset

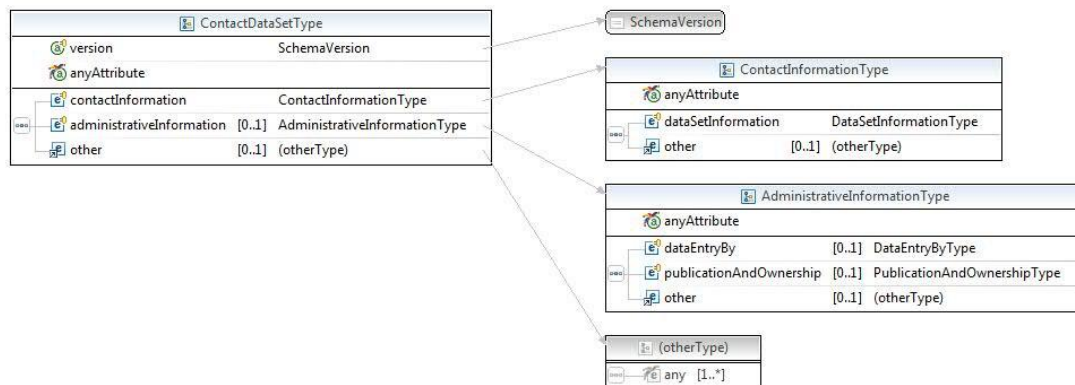


Figure 39: definition of ILCD ContactDataSet type

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
@version		no corresponding field ILCD schema version; no relevance for conversion	no	3

No mandatory fields in EcoSpold01 in the corresponding section.

2.3.1 Contact information

The XML schema type **ContactInformationType** contains one complex element that is defined by the **DataSetInformationType**. This data type contains information about the contact as name and address.

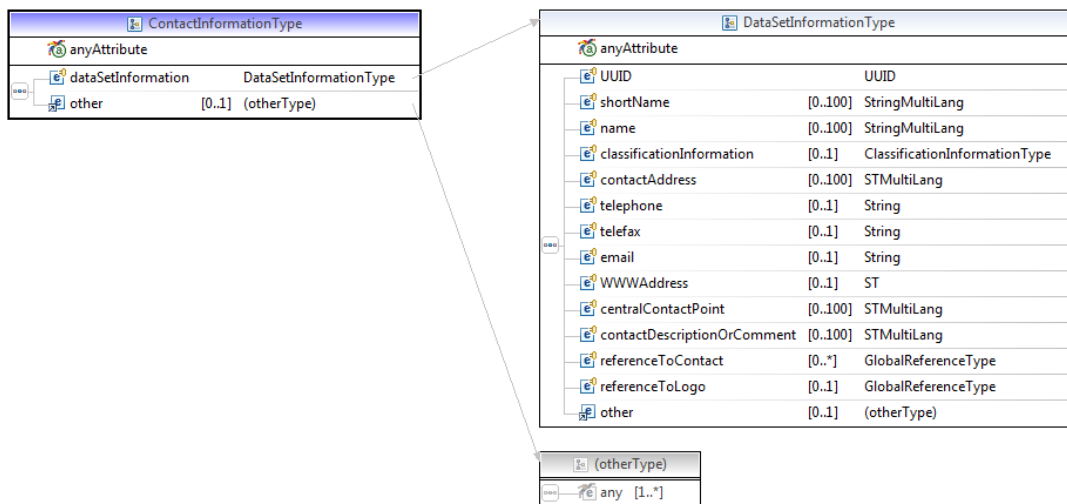


Figure 40: definition of ILCD ContactInformation type

2.3.1.1 Type: contactInformation/dataSetInformation

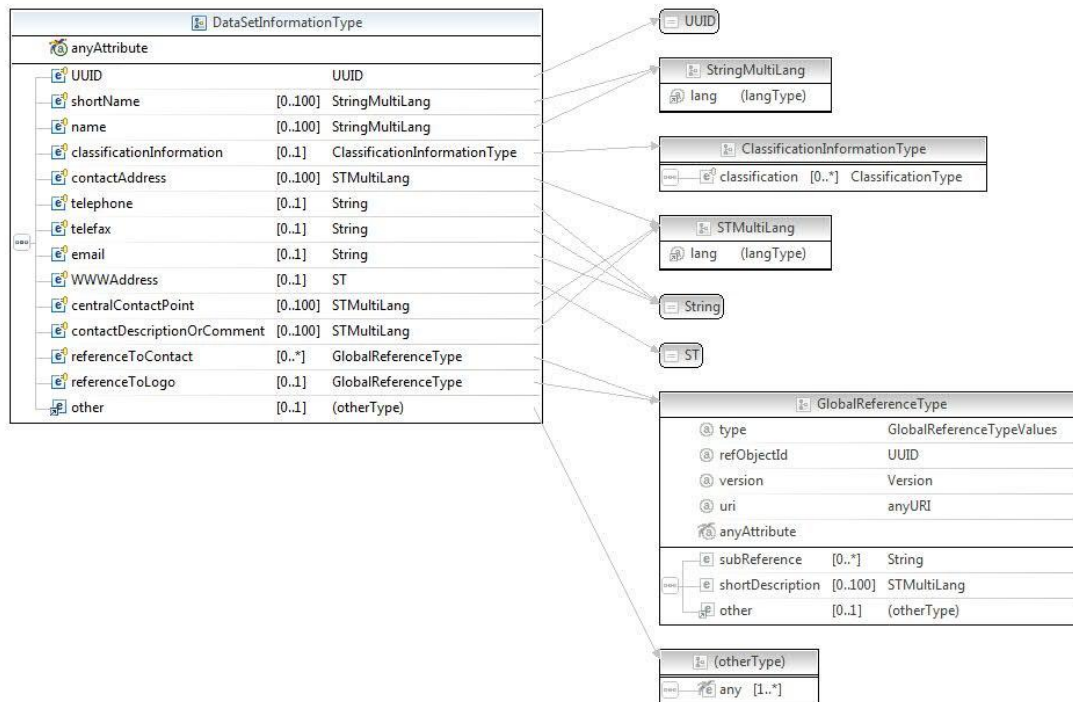


Figure 41: definition of ILCD DataSetInformation type

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
UUID	administrativeInformation/person/@number	field transformation different field length (ILCD: ID with 36 characters, ES1: ID with 10 characters => a new ID has to be generated)	no	2
shortName		no corresponding field	no	3
name	administrativeInformation/person/@name	o.k.	no	1
classificationInformation		no corresponding field	no	3
classification		no corresponding field	no	3
@name		no corresponding field	no	3
@classes		no corresponding field	no	3
class		no corresponding field	no	3
@level		no corresponding field	no	3
@classId		no corresponding field	no	3
contactAddress	administrativeInformation/person/@address	o.k.	no	1

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
telephone	administrativeInformation/person/@telephone	o.k.	no	1
telefax	administrativeInformation/person/@telefax	o.k.	no	1
email	administrativeInformation/person/@email	o.k.	no	1
WWWAddress		no corresponding field	no	3
centralContactPoint	administrativeInformation/person/@address	no corresponding field But this field can be used as alternative if the field 'contactAddress' is blank.	no	2
contactDescriptionOrComment		no corresponding field	no	3
referenceToContact		no corresponding field	no	3
referenceToLogo		no corresponding field	no	3

No mandatory fields in EcoSpold01 in the corresponding section.

2.3.2 AdministrativeInformation

The AdministrativeInformationType of the contact dataset comprises two complex elements which are defined by the following data types (see also figure 42):

- **DataEntryBy:** contains information about the staff or entity that documented the generated dataset, entering the information into the database
- **PublicationAndOwnership:** provides information related to publication and version management of the dataset including copyright and access restrictions

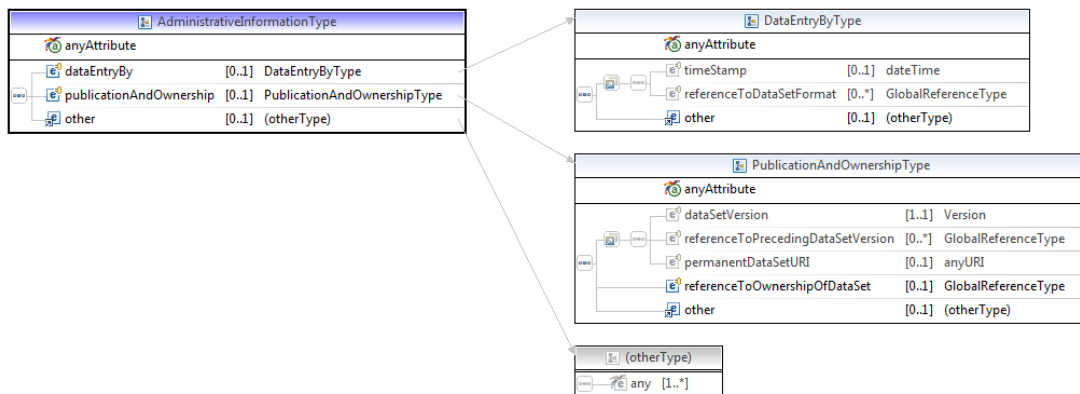


Figure 42: definition of ILCD AdministrativeInformation type

2.3.2.1 Type: administrativeInformation/dataEntryBy

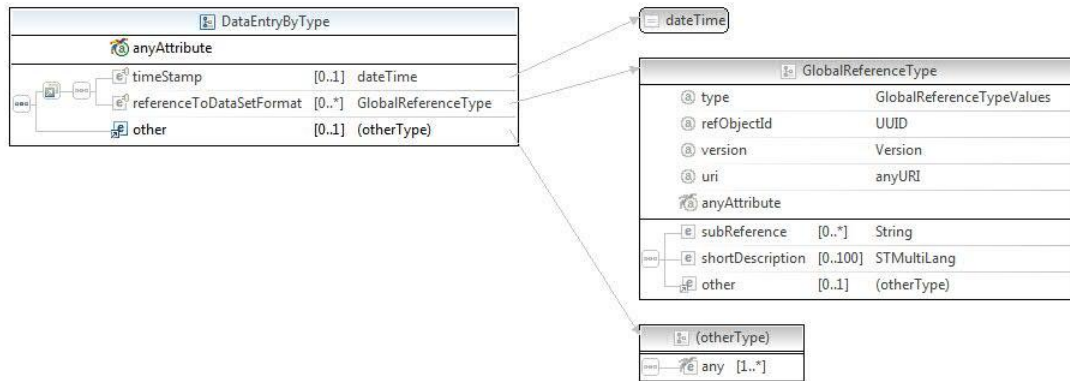


Figure 43: definition of ILCD DataEntryBy

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
timeStamp		no corresponding field	no	3
referenceToDataSetFormat		no corresponding field	no	3

2.3.2.2 Type: administrativeInformation/publicationAndOwnership

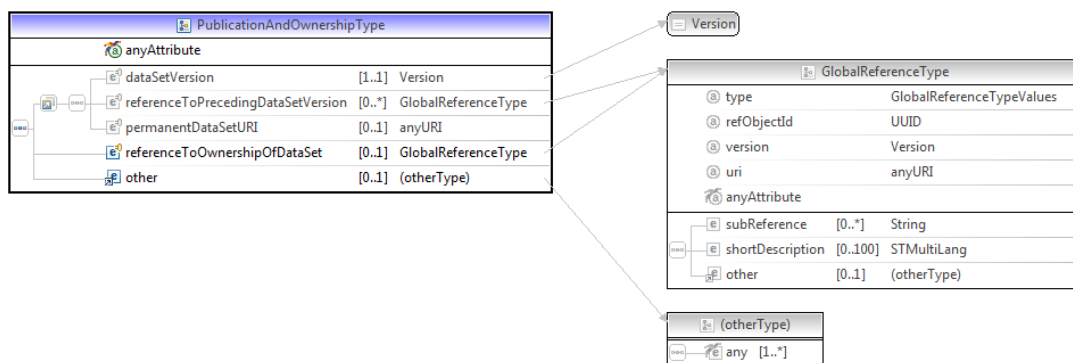


Figure 44: definition of ILCD PublicationAndOwnership type

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
dataSetVersion		no corresponding field	no	3

referenceToPrecedingDataSetVersion		no corresponding field	no	3
permanentDataSetURI		no corresponding field	no	3
referenceToOwnershipOfDataSet		no corresponding field	no	3

No mandatory fields in EcoSpold01 in the corresponding section.

2.4 Source data set

The XML schema type of the source data set contains one attribute and two complex elements. The elements are described by the following data types (see figure 45):

- **SourceInformationType**: contains information about the source dataset
- **AdministrativeInformationType**: provides information about the dataset management and administration

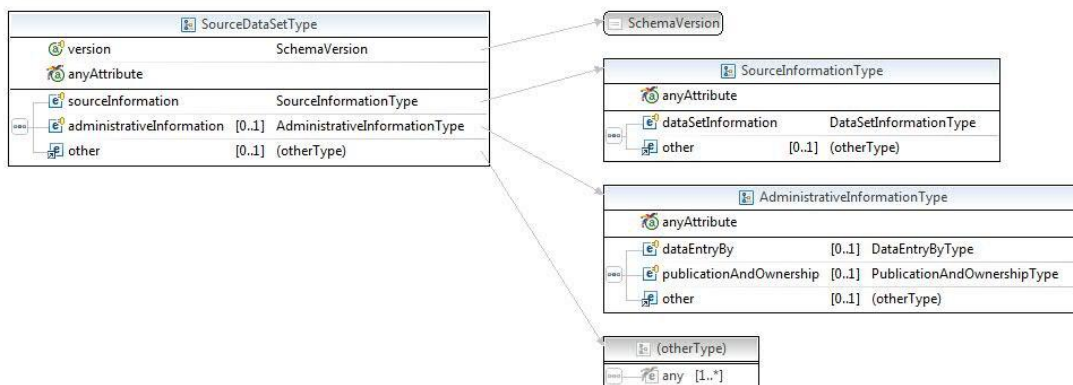


Figure 45: definition of ILCD SourceDataSet type

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
@version		no corresponding field	no	3

No corresponding section in EcoSpold01.

2.4.1 Source information

The SourceInformationType contains one complex element with the data type

DataSetInformationType. This element provides information about the source as name, citation and type.

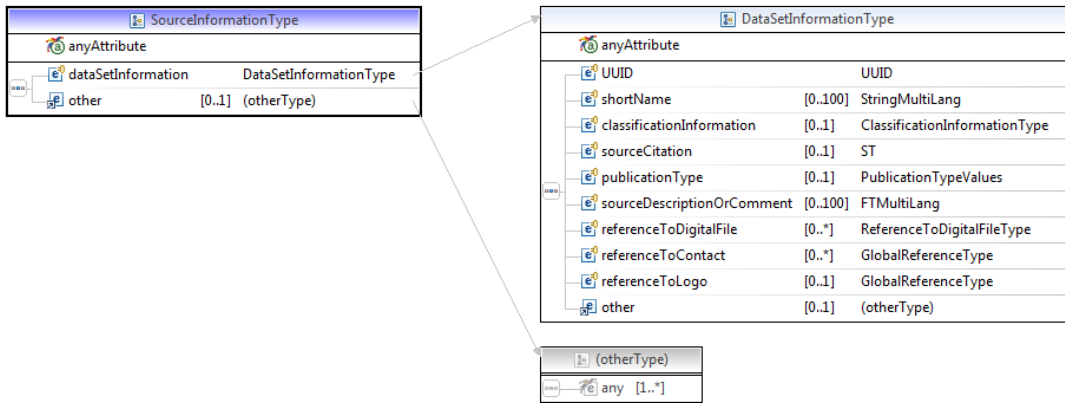


Figure 46: definition of ILCD SourceInformation type

2.4.1.1 Type: sourceInformation/dataSetInformation

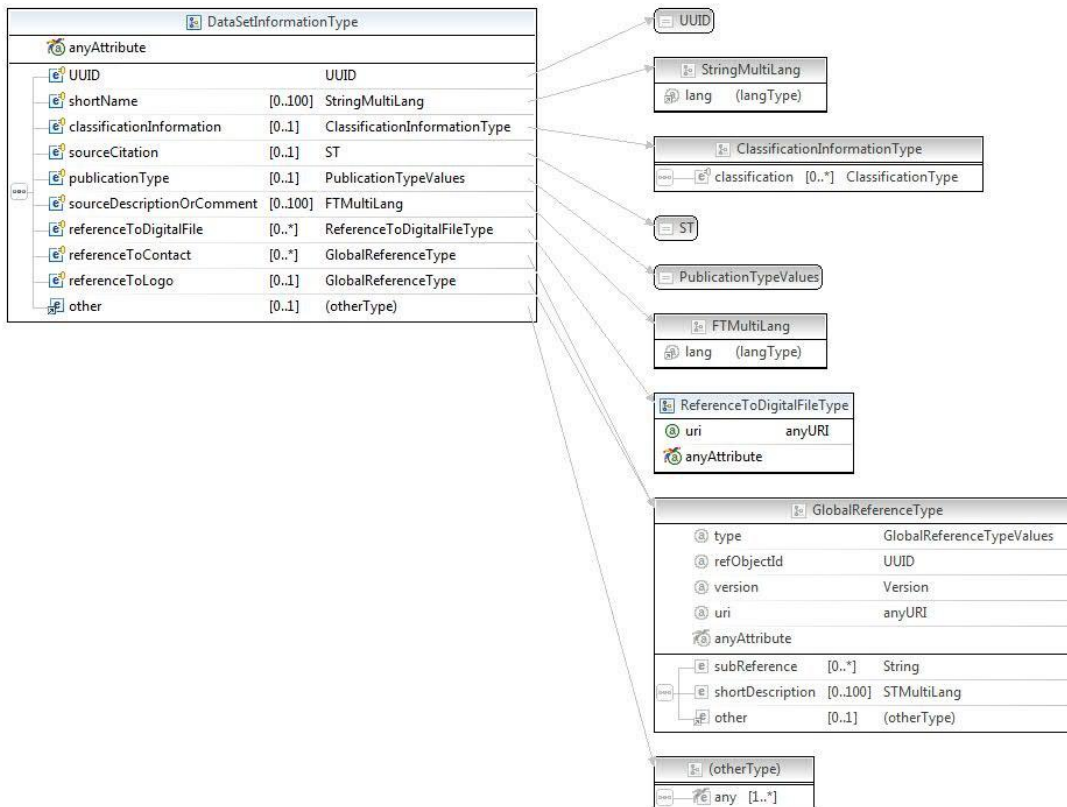


Figure 47: definition of ILCD DataSetInformation type

Field	EcoSpold	Comment	Nomenclature mapping?	Assessment
UUID	modellingAndValidation/source/@number	field transformation different field length (ILCD: ID with 36 characters, ES1: ID with 3 characters) => a new ID has to be generated	no	2
shortName		no corresponding field	no	3
classificationInformation		no corresponding field	no	3
classification		no corresponding field	no	3
@name		no corresponding field	no	3
@classes		no corresponding field	no	3
class		no corresponding field	no	3
@level		no corresponding field	no	3
@classId		no corresponding field	no	3
sourceCitation	modellingAndValidation/source/@firstAuthor, modellingAndValidation/source/@additionalAuthors, modellingAndValidation/source/@year, modellingAndValidation/source/@title, modellingAndValidation/source/@pageNumbers, modellingAndValidation/source/@nameOfEditors , modellingAndValidation/source/@titleOfAnthology, modellingAndValidation/source/@publisher, modellingAndValidation/source/@journal, modellingAndValidation/source/@volumeNo, modellingAndValidation/source/@issueNo, modellingAndValidation/source/@placeOfPublications	1:n mapping The ILCD field cannot be splitted up to the corresponding ES1 fields, so that the source citation has to be entered in one ES1 field (@title).	no	2
publicationType	activityDescription/modellingAndValidation/source/@sourceType	enumeration mapping different enumerations: <ul style="list-style-type: none"> • "Undefined" => "0" (= undefined) • "Article in periodical" => "1" (= article) 	yes	2

Field	EcoSpold	Comment	Nomenclature mapping?	Assessment
		<ul style="list-style-type: none"> • “Chapter in anthology” => “2” (= chapters in anthology) • “Monograph” => “3” (= separate publication) • “Direct measurement” => “4” (= measurement on site) • “Oral communication” => “5” (= oral communication) • “Personal written communication” => “6” (= personal written communication) • “Questionnaire” => “7” (= questionnaires) • “Software or database” => “0” (= undefined) • “Other unpublished and grey literature” => “0” (= undefined) 		
sourceDescriptionOrComment	modellingAndValidation/source/text	o.k.	no	1
referenceToDigitalFile		no corresponding field	no	3
@uri		no corresponding field	no	3
referenceToContact		no corresponding field	no	3
referenceToLogo		no corresponding field	no	3

No corresponding section in EcoSpold01.

2.4.2 Administrative information

The XML schema type of the administrative information comprises two complex elements. These elements are defined by the following data types (see also figure 48):

- **DataEntryByType:** contains information about the staff or entity that documented the generated dataset, entering the information into the database
- **PublicationAndOwnershipType:** contains information related to publication and version management of the dataset including copyright and access restrictions

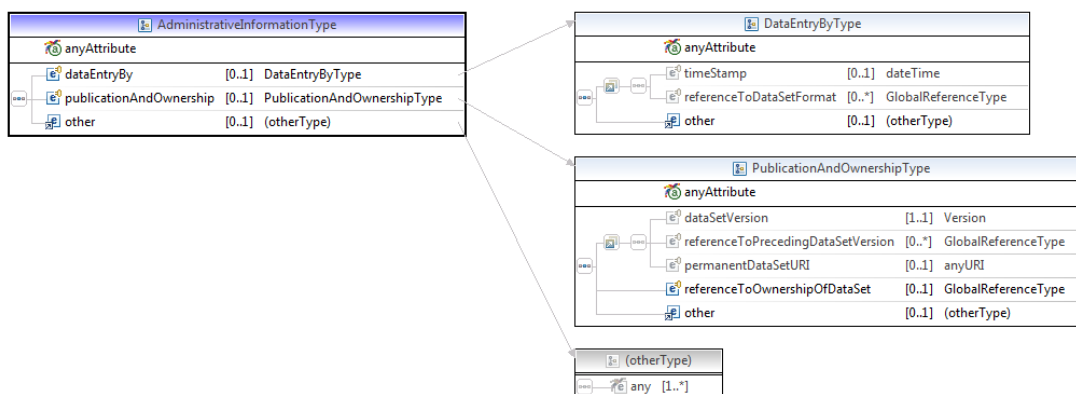


Figure 48: definition of ILCD AdministrativeInformation type

2.4.2.1 Type: administrativeInformation/dataEntryBy

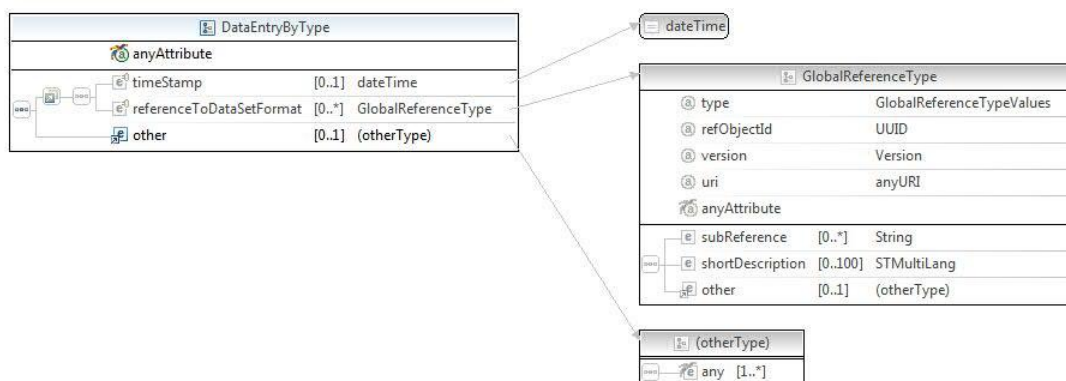


Figure 49: definition of ILCD DataEntryBy type

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
timeStamp		no corresponding field	no	3
referenceToDataSetFormat		no corresponding field	no	3

No corresponding section in EcoSpold01.

2.4.2.2 Type: administrativeInformation/publicationAndOwnership

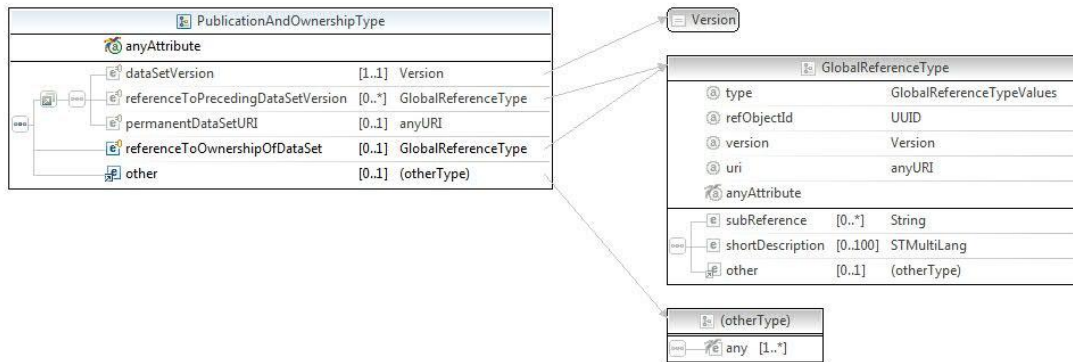


Figure 50: definition of ILCD PublicationAndOwnership type

ILCD field	EcoSpold field	Comment	Nomenclature mapping?	Assessment
dataSetVersion		no corresponding field	no	3
referenceToPrecedingDataSetVersion		no corresponding field	no	3
permanentDataSetURI		no corresponding field	no	3
referenceToOwnershipOfDataSet		no corresponding field	no	3

No corresponding section in EcoSpold01.

3 References

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[5] Data Conversion from EcoSpold02 to ILCD, January 2010, GreenDeltaTC GmbH Berlin

[6] Data Conversion from EcoSpold01 to ILCD, February 2010, GreenDeltaTC GmbH Berlin

[7] Data Conversion from ILCD to EcoSpold02, January 2010, GreenDeltaTC GmbH Berlin