



## Eurostat Dissemination

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# Changes in SDMX file format in new applications

Migrating from the Bulk Download to the new dissemination API

User Documentation

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## Introduction

In the Bulk Download, the SDMX version 2.0 Compact is the only available SDMX format.

In the new dissemination API, the SDMX 2.1 Generic Time Series is the default SDMX format.

## SDMX 2.0 version in the Bulk Download

The existing SDMX data files and their related DSDs available in the Bulk Download are based on the SDMX 2.0 Compact version.

## SDMX Versions in the new Dissemination API

In the new API, the SDMX data files and their related DSDs are based on the SDMX 2.1 Generic Time Series version.

The SDMX 2.1 Generic format contains more functionalities than the 2.0 Compact version.

Through the Data Browser or the new API, users can download datasets in different formats:

- SDMX 2.1 Compact
- SDMX 2.1 Generic

Users could also download their related DSDs in SDMX 2.1 format.

## Comparison of the SDMX DSDs (Data Structure Definition) between the Bulk Download and the new dissemination API

### Bulk Download

In the Bulk Download, the DSDs can be downloaded at:

<http://ec.europa.eu/eurostat/estat-navtree-portlet-prod/BulkDownloadListing?dir=data&filter=SDMX&sort=-3&sort=2&start=a>

A DSD file is included in each zip archive listed in the pages.

### Renovated Dissemination Chain

In the new dissemination API, the DSD can be downloaded at:

[https://ec.europa.eu/eurostat/api/dissemination/sdmx/2.1/datastructure/ESTAT/DEMO\\_GIND?format=SDMX\\_2.1\\_GENERIC](https://ec.europa.eu/eurostat/api/dissemination/sdmx/2.1/datastructure/ESTAT/DEMO_GIND?format=SDMX_2.1_GENERIC) (Here, the “DEMO\_GIND” dataset is requested.)

However, the data structure file provided here contains mostly the concept schemes of the dataset, but not the related positions of all dimensions as in the Bulk Download.

In order to get a data structure file equivalent to the Bulk Download, including positions, extra parameters must be added in the URL:

[https://ec.europa.eu/eurostat/api/dissemination/sdmx/2.1/dataflow/ESTAT/DEMO\\_GIND?format=SDMX\\_2.1\\_GENERIC&references=descendants&detail=referencepartial](https://ec.europa.eu/eurostat/api/dissemination/sdmx/2.1/dataflow/ESTAT/DEMO_GIND?format=SDMX_2.1_GENERIC&references=descendants&detail=referencepartial)

### Comparison

The table below shows the main differences between both DSDs. In this example, the DSD of the “bs\_bs8bdf\_r2” dataset - *Turnover by residence of client and economic activity* - is analysed.

Difference type	DSD in SDMX 2.0 (Bulk Download)	DSD for the SDMX version 2.1 in the dissemination API
File name	Naming convention: <dataset_code>.dsd.xml Example: bs_bs8bdf_r2.dsd.xml	Naming convention: <i>ESTAT_&lt;dataset_code&gt;_&lt;DSD_version&gt;.xml</i> Example: ESTAT_BS_BS8BDF_R2_1.0.xml
Tag names	Tags are mostly names with: <ul style="list-style-type: none"><li>• one words: &lt;CodeLists&gt;</li><li>• or 2 words separated by a colon (:):&lt;structure:CodeList&gt;</li></ul>	Tags are always named the following way: one letter, then a colon character and a word: <s:Structure>, <s:CodeLists>, <s:CodeLists>.
Main hierarchical structure	Structure ---Header ---CodeLists ----structure:CodeList ---Concepts ----structure:ConceptScheme ---KeyFamilies ----structure:KeyFamily ----structure:Name ----structure:Components ----structure:Dimension	--m:Header --m:Structures ----s:Dataflows -----s:Dataflow ----s:CodeLists -----s:CodeLists ----s:Concepts -----s:ConceptScheme ----s:DataStructures -----s:DataStructure -----s:DataStructureComponents -----s:DimensionList -----s:Dimension
Institution	The institution is named "Eurostat".	The institution is named "ESTAT".
Header	<Header> <ID>bs_bs8bdf_r2_DSD</ID> <Test>false</Test> <Truncated>false</Truncated> <Name xml:lang="en">bs_bs8bdf_r2_DSD</Name> <Prepared>2020-04-03T13:07:14</Prepared> <Sender id="EUROSTAT"> <Name xml:lang="en">EUROSTAT</Name> </Sender> <Receiver id="XML"> <Name xml:lang="en">XML File</Name> </Receiver> </Header>	<m:Header> <m:ID>F9144FA2F4FB4F6287DEED1F47E90187</m:ID> <m:Test>false</m:Test> <m:Prepared>2020-06-09T11:19:30.701Z</m:Prepared> <m:Sender id="ESTAT"/> </m:Header>
Dataflow	Dataflow is not present.	<s:Dataflows> <s:Dataflow id="BS_BS8BDF_R2" urn="urn:sdmx:org.sdmx.infomodel.datastructure.Dataflow=ESTAT:BS_BS8BDF_R2(1.0)" agencyID="ESTAT" version="1.0" isFinal="false"> <c:Annotations> <c:Annotation> <c:AnnotationTitle>DATASET</c:AnnotationTitle> </c:Annotation> </c:Annotations> <c:AnnotationType>DISSEMINATION_OBJECT_TYPE</c:AnnotationType> </s:Dataflow> </s:Dataflows>

## Changes in SDMX file format in new applications

	<pre> &lt;c:AnnotationType&gt;OBS_COUNT&lt;/c:AnnotationType&gt; &lt;/c:Annotation&gt; &lt;c:Annotation&gt;  &lt;c:AnnotationTitle&gt;2008&lt;/c:AnnotationTitle&gt;  &lt;c:AnnotationType&gt;OBS_PERIOD_OVERALL_DEST&lt;/c:AnnotationType&gt; &lt;/c:Annotation&gt; ... &lt;/c:Annotations&gt; &lt;c:Name xml:lang="de"&gt;Umsatz nach Sitz des Kunden und wirtschaftlicher Tätigkeit (NACE Rev. 2)&lt;/c:Name&gt; &lt;c:Name xml:lang="fr"&gt;Chiffre d'affaires par résidence du client et activité économique (NACE Rév.2)&lt;/c:Name&gt; &lt;c:Name xml:lang="en"&gt;Turnover by residence of client and economic activity (NACE Rev. 2)&lt;/c:Name&gt; &lt;s:Structure&gt; &lt;Ref id="BS_BS8BDF_R2" version="1.0" agencyID="ESTAT" package="datastructure" class="DataStructure"/&gt; &lt;/s:Structure&gt; &lt;/s:Dataflow&gt; &lt;/s:Dataflows&gt; </pre>	
Code list names	All code list names are prefixed with "CL_".	No prefix.
Code lists	<pre> &lt;CodeLists&gt; &lt;structure:CodeList id="CL_INDIC_SB" agencyID="EUROSTAT" isFinal="true"&gt; &lt;structure:Name xml:lang="en"&gt;Economical indicator ...&lt;/structure:Name&gt; &lt;structure:Name xml:lang="de"&gt;Wirtschaftlicher Indikator...&lt;/structure:Name&gt; &lt;structure:Name xml:lang="fr"&gt;Indicateur économique...&lt;/structure:Name&gt; &lt;structure:Code value="V12110"&gt; &lt;structure:Description xml:lang="en"&gt;Turnover ...&lt;/structure:Description&gt; &lt;structure:Description xml:lang="de"&gt;Umsatz...&lt;/structure:Description&gt; &lt;structure:Description xml:lang="fr"&gt;Chiffre...&lt;/structure:Description&gt; &lt;/structure:Code&gt; &lt;/structure:CodeList&gt; </pre>	<pre> &lt;s:CodeLists&gt; &lt;s:CodeList agencyID="ESTAT" id="INDIC_SB" isFinal="true" urn="urn:sdmx:org.sdmx.infomodel.codelist.Codelist=ESTAT:INDIC_SB(1.1)" version="1.1"&gt; &lt;s:Name xml:lang="en"&gt;Economical indicator ... &lt;/s:Name&gt; &lt;s:Name xml:lang="de"&gt;Wirtschaftlicher Indikator...&lt;/s:Name&gt; &lt;s:Name xml:lang="fr"&gt;Indicateur économique...&lt;/s:Name&gt; &lt;s:Code value="V12110"&gt; &lt;s:Description xml:lang="en"&gt;Turnover...&lt;/s:Description&gt; &lt;s:Description xml:lang="de"&gt;Umsatz...&lt;/s:Description&gt; &lt;s:Description xml:lang="fr"&gt;Chiffre...&lt;/s:Description&gt; &lt;/s:Code&gt; &lt;/s:CodeList&gt; </pre>
Concepts	<pre> &lt;Concepts&gt; &lt;structure:ConceptScheme agencyID="EUROSTAT" id="CONCEPTS" isFinal="true"&gt; &lt;structure:Concept id="indic_sb"&gt; &lt;structure:Name xml:lang="en"&gt;Economical indicator for structural business statistics&lt;/structure:Name&gt; &lt;structure:Name xml:lang="de"&gt;Wirtschaftlicher Indikator für strukturelle Unternehmensstatistik&lt;/structure:Name&gt; </pre>	<pre> &lt;s:Concepts&gt; &lt;s:ConceptScheme agencyID="ESTAT" id="BS_BS8BDF_R2" isFinal="true" urn="urn:sdmx:org.sdmx.infomodel.conceptsscheme.ConceptScheme=ESTAT:BS_BS8BDF_R2(2.1)" version="2.1"&gt; &lt;s:Name xml:lang="en"&gt;List of concepts for dataset 'BS_BS8BDF_R2'&lt;/s:Name&gt; </pre>

## Changes in SDMX file format in new applications

	<pre>&lt;structure:Name xml:lang="fr"&gt;Indicateur économique des statistiques structurelles sur les entreprises&lt;/structure:Name&gt; &lt;/structure:Concept&gt;</pre>	<pre>&lt;s:Concept id="indic_sb" urn="urn:sdmx:org.sdmx.infomodel.conceptscheme.Concept=ESTAT:BS_BS8BDF_R2(2.1).indic_sb" coreRepresentation="INDIC_SB" coreRepresentationAgency="ESTAT"&gt; &lt;:Name xml:lang="en"&gt;Economical indicator for structural business statistics&lt;/s:Name&gt; &lt;:Name xml:lang="de"&gt;Wirtschaftlicher Indikator für strukturelle Unternehmensstatistik&lt;/s:Name&gt; &lt;:Name xml:lang="fr"&gt;Indicateur économique des statistiques structurelles sur les entreprises&lt;/s:Name&gt; &lt;/s:Concept&gt; &lt;/s:ConceptScheme&gt;</pre>
Key families / Data Structures	<pre>&lt;KeyFamilies&gt; &lt;structure:KeyFamily id="bs_bs8bdf_r2_DSD" agencyID="EUROSTAT" isFinal="true" isExternalReference="false"&gt; &lt;structure:Name xml:lang="en"&gt;bs_bs8bdf_r2_DSD&lt;/structure:Name&gt; &lt;structure:Components&gt; ... &lt;structure:Dimension conceptSchemeRef="CONCEPTS" conceptSchemeAgency="EUROSTAT" conceptRef="indic_sb" codelistAgency="ESTAT" codelist="CL_INDIC_SB" crossSectionalAttachDataSet="false" crossSectionalAttachGroup="false" crossSectionalAttachSection="true" crossSectionalAttachObservation="false"/&gt; ... &lt;structure:TimeDimension conceptSchemeRef="CONCEPTS" conceptSchemeAgency="EUROSTAT" conceptRef="TIME_PERIOD"&gt; &lt;structure:TextFormat textType="String"/&gt; &lt;/structure:TimeDimension&gt; &lt;structure:PrimaryMeasure conceptSchemeRef="CONCEPTS" conceptSchemeAgency="EUROSTAT" conceptRef="OBS_VALUE"&gt; &lt;structure:TextFormat textType="Double"/&gt; &lt;/structure:PrimaryMeasure&gt; &lt;structure:Attribute conceptRef="TIME_FORMAT" conceptSchemeRef="CONCEPTS" conceptSchemeAgency="EUROSTAT" codelistAgency="SDMX" codelist="CL_TIME_FORMAT" attachmentLevel="Series" assignmentStatus="Mandatory"/&gt; &lt;structure:Attribute conceptSchemeRef="CONCEPTS" conceptSchemeAgency="EUROSTAT" conceptRef="OBS_STATUS" codelistAgency="EUROSTAT" codelist="CL_OBS_STATUS" attachmentLevel="Observation" assignmentStatus="Conditional" crossSectionalAttachDataSet="false" crossSectionalAttachGroup="false" crossSectionalAttachSection="false" crossSectionalAttachObservation="true"&gt; &lt;structure:TextFormat textType="String"/&gt; &lt;/structure:Attribute&gt; &lt;/structure:Components&gt; &lt;/structure:KeyFamily&gt; &lt;/KeyFamilies&gt;</pre>	<pre>&lt;s:DataStructures&gt; &lt;s:DataStructure xmlns:s="http://www.sdmx.org/resources/sdmxml/schemas/v2_1/structure" xmlns:m="http://www.sdmx.org/resources/sdmxml/schemas/v2_1/message" xmlns:c="http://www.sdmx.org/resources/sdmxml/schemas/v2_1/common" agencyID="ESTAT" id="BS_BS8BDF_R2" isFinal="true" urn="urn:sdmx:org.sdmx.infomodel.datastructure.DataStructure=ESTAT:BS_BS8BDF_R2(1.0)" version="1.0"&gt; &lt;c:Annotations&gt; &lt;c:Annotation&gt; &lt;c:AnnotationURL&gt; &lt;c:AnnotationTitle&gt;OBS_FLAG&lt;/c:AnnotationTitle&gt; &lt;c:AnnotationType&gt;DISSEMINATION_FLAG_SETTINGS&lt;/c:AnnotationType&gt; &lt;c:AnnotationURL&gt; &lt;/c:Annotation&gt; &lt;c:Annotation&gt; &lt;c:AnnotationTitle&gt;time&lt;/c:AnnotationTitle&gt; &lt;c:AnnotationType&gt;DISSEMINATION_TIME_DIMENSION_CODE&lt;/c:AnnotationType&gt; &lt;c:AnnotationURL&gt; &lt;/c:Annotation&gt; &lt;c:Annotations&gt; &lt;c:Name xml:lang="en"&gt;BS_BS8BDF_R2 data structure&lt;/c:Name&gt; &lt;s:DataStructureComponents&gt; &lt;s:DimensionList id="DimensionDescriptor" urn="urn:sdmx:org.sdmx.infomodel.datastructure.DimensionDescriptor=ESTAT:BS_BS8BDF_R2(1.0).DimensionDescriptor"&gt; &lt;s:Dimension id="freq" position="1" urn="urn:sdmx:org.sdmx.infomodel.datastructure.Dimension=ESTAT:BS_BS8BDF_R2(1.0).freq"&gt; ... &lt;s:TimeDimension id="TIME_PERIOD" position="6" urn="urn:sdmx:org.sdmx.infomodel.datastructure.TimeDimension=ESTAT:BS_BS8BDF_R2(1.0).TIME_PERIOD"&gt; &lt;s:ConceptIdentity&gt; &lt;Ref agencyID="ESTAT" class="Concept" id="TIME_PERIOD" maintainableParentID="BS_BS8BDF_R2" maintainableParentVersion="1.0" package="conceptscheme"/&gt; &lt;/s:ConceptIdentity&gt; &lt;s:LocalRepresentation&gt; &lt;s:TextFormat textType="ObservationalTimePeriod"/&gt; &lt;/s:LocalRepresentation&gt; &lt;/s:TimeDimension&gt; &lt;/s:DimensionList&gt;</pre>

	<pre> &lt;s:AttributeList id="AttributeDescriptor" urn="urn:sdmx:org.sdmx.infomodel.datastructure.AttributeDescriptor=ESTAT:BS_BS8BDF_R2(1.0).AttributeDescriptor"&gt;     &lt;s:Attribute         assignmentStatus="Conditional" id="OBS_FLAG"         urn="urn:sdmx:org.sdmx.infomodel.datastructure.DataAttribute=ESTAT:BS_BS8BDF_R2(1.0).OBS_FLAG"&gt;             ...             &lt;s:AttributeRelationship&gt;                 &lt;s:PrimaryMeasure&gt;                     &lt;Ref id="OBS_VALUE"/&gt;                 &lt;/s:PrimaryMeasure&gt;             &lt;/s:AttributeRelationship&gt;         &lt;/s:Attribute&gt;     &lt;/s:AttributeList&gt;     &lt;s:MeasureList id="MeasureDescriptor" urn="urn:sdmx:org.sdmx.infomodel.datastructure.MeasureDescriptor=ESTAT:BS_BS8BDF_R2(1.0).MeasureDescriptor"&gt;         &lt;s:PrimaryMeasure             id="OBS_VALUE"             urn="urn:sdmx:org.sdmx.infomodel.datastructure.PrimaryMeasure=ESTAT:BS_BS8BDF_R2(1.0).OBS_VALUE"&gt;                 &lt;s:ConceptIdentity&gt;                     &lt;Ref                         agencyID="ESTAT" class="Concept" id="OBS_VALUE"                         maintainableParentID="BS_BS8BDF_R2"                         maintainableParentVersion="1.0" package="conceptscheme"/&gt;                 &lt;/s:ConceptIdentity&gt;                 &lt;s:LocalRepresentation&gt;                     &lt;s:TextFormat textType="Double"/&gt;                 &lt;/s:LocalRepresentation&gt;             &lt;/s:PrimaryMeasure&gt;         &lt;/s:MeasureList&gt;     &lt;/s:DataStructureComponents&gt; &lt;/s:DataStructure&gt; &lt;/s:DataStructures&gt; </pre>
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## Comparison of the SDMX 2.0 Compact data file between the Bulk Download and the new dissemination API

### Bulk Download

In the Bulk Download, the dataset can be downloaded at:

<http://ec.europa.eu/eurostat/estat-navtree-portlet-prod/BulkDownloadListing?dir=data&filter=SDMX&sort=3&sort=2&start=a>

A data file is included in each zip archive listed in the page.

### Renovated Dissemination Chain

In the new dissemination API, the dataset can be downloaded thanks to a SOAP request, using SoapUI as an example. SoapUI is an open-source web service application for service-oriented architectures (SOA) and representational state transfers (REST). It can be downloaded at <https://www.soapui.org/>

A direct data query using the API REST endpoint also allows to perform a download:

[https://ec.europa.eu/eurostat/api/dissemination/sdmx/2.1/data/DEMO\\_GIND/?format=sdmx\\_2.1\\_structured](https://ec.europa.eu/eurostat/api/dissemination/sdmx/2.1/data/DEMO_GIND/?format=sdmx_2.1_structured)

## Comparison

Dataset: bs\_bs8bdf\_r2

Difference type	Dataset for the SDMX version 2.0 compact in the Bulk Download	Dataset for the SDMX version 2.0 compact in the dissemination API
File name	Naming convention: <dataset_code>.sdmx.xml Example: bs_bs8bdf_r2.sdmx.xml	Naming convention: estat_<dataset_code>.xml Example: estat_bs_bs8Bdf_r2.xml
Tag names	Tags are mostly names with: <ul style="list-style-type: none"><li>• one words: &lt;Header&gt;</li></ul> or 2 words separated by a colon (:): <data:dataset>	Tags are always named the following way: one letter, then a colon character and a word: <u:DataSet>.
Declaration	<CompactData xmlns="http://www.SDMX.org/resources/SDMXML/schemas/v2_0/message" xmlns:common="http://www.SDMX.org/resources/SDMXML/schemas/v2_0/common" xmlns:compact="http://www.SDMX.org/resources/SDMXML/schemas/v2_0/compact" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:data="urn:sdmx:org.sdmx.infomodel.keyfamily.KeyFamily=EUROSTAT:bs_bs8bdf_r2_DSD:compact" xsi:schemaLocation="http://www.SDMX.org/resources/SDMXML/schemas/v2_0/message SDMXMessage.xsd urn:sdmx:org.sdmx.infomodel.keyfamily.KeyFamily=EUROSTAT:bs_bs8bdf_r2_DSD:compact EUROSTAT_bs_bs8bdf_r2_Compact.xsd http://www.SDMX.org/resources/SDMXML/schemas/v2_0/compact SDMXCompactData.xsd">	<m:StructureSpecificData xmlns:m="http://www.sdmx.org/resources/sdmxml/schemas/v2_1/message" xmlns:s="http://www.sdmx.org/resources/sdmxml/schemas/v2_1/data/structurespecific" xmlns:u="urn:sdmx:org.sdmx.infomodel.datastructure.DataStructure=ESTAT:BS_BS8BDF_R2(2.0):ObsLevelDim:TIME_PERIOD" xmlns:c="http://www.sdmx.org/resources/sdmxml/schemas/v2_1/common" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
Header	<Header> <ID>bs_bs8bdf_r2</ID> <Test>false</Test> <Name xml:lang="en">bs_bs8bdf_r2</Name> <Prepared>2020-04-03T13:07:14</Prepared> <Sender id="EUROSTAT"> <Name xml:lang="en">EUROSTAT</Name> </Sender> <Receiver id="XML"> <Name xml:lang="en">SDMX-ML File</Name> </Receiver> <DataSetID>bs_bs8bdf_r2</DataSetID> <Extracted>2020-04-03T13:07:14</Extracted> </Header>	<m:Header> <m:ID>7C523C3CBAFF4046BCCBAB1FC5E35C08</m:ID> <m:Test>false</m:Test> <m:Prepared>2021-06-25T08:34:17.271Z</m:Prepared> <m:Sender id="ESTAT"/> <m:Structure dimensionAtObservation="TIME_PERIOD" structureID="STR1"> <c:StructureUsage> <Ref id="T2020_20" agencyID="ESTAT" version="1.0"/> </c:StructureUsage> </m:Structure> <m:DataSetID>T2020_20</m:DataSetID> <m:Extracted>2021-06-24T15:45:01.25Z</m:Extracted> </m:Header>
Data	<data:DataSet> <data:Series FREQ="A" indic_sb="V12110" resid="NRES" nace_r2="J582" geo="AT" TIME_FORMAT="P1Y"> <data:Obs TIME_PERIOD="2008" OBS_STATUS="c" /> <data:Obs TIME_PERIOD="2009" OBS_STATUS="c" /> <data:Obs TIME_PERIOD="2010" OBS_STATUS="c" /> <data:Obs TIME_PERIOD="2011" OBS_VALUE="55.2" />	<u:DataSet s:structureRef="STR1" s:dataScope="DataStructure" xsi:type="u:DataSetType"> <Series geo="AT" unit="PC_GDP" indic_eu="T2020_20" freq="A" TARGET="3.76"> <Obs TIME_PERIOD="1995" OBS_VALUE="1.53" OBS_FLAG="e"/>

	<pre> &lt;data:Obs TIME_PERIOD="2012" OBS_VALUE="72.8" /&gt; &lt;data:Obs TIME_PERIOD="2013" OBS_VALUE="134.6" /&gt; &lt;data:Obs TIME_PERIOD="2014" OBS_VALUE="108.3" /&gt; &lt;data:Obs TIME_PERIOD="2015" OBS_VALUE="113.9" /&gt; &lt;data:Obs TIME_PERIOD="2016" OBS_VALUE="140.5" /&gt; &lt;data:Obs TIME_PERIOD="2017" OBS_VALUE="137.8" /&gt; &lt;/data:Series&gt; &lt;/data:DataSet&gt;</pre>	<pre> &lt;Obs TIME_PERIOD="1996" OBS_VALUE="1.58" OBS_FLAG="e"/&gt; &lt;Obs TIME_PERIOD="1997" OBS_VALUE="1.66" OBS_FLAG="e"/&gt; &lt;Obs TIME_PERIOD="1998" OBS_VALUE="1.73"/&gt; &lt;Obs TIME_PERIOD="1999" OBS_VALUE="1.85" OBS_FLAG="e"/&gt; &lt;Obs TIME_PERIOD="2000" OBS_VALUE="1.89" OBS_FLAG="e"/&gt; &lt;Obs TIME_PERIOD="2001" OBS_VALUE="1.99" OBS_FLAG="e"/&gt; &lt;Obs TIME_PERIOD="2002" OBS_VALUE="2.07"/&gt; &lt;Obs TIME_PERIOD="2003" OBS_VALUE="2.17" OBS_FLAG="e"/&gt; &lt;Obs TIME_PERIOD="2004" OBS_VALUE="2.17"/&gt; &lt;Obs TIME_PERIOD="2005" OBS_VALUE="2.37" OBS_FLAG="e"/&gt; &lt;Obs TIME_PERIOD="2006" OBS_VALUE="2.36"/&gt; &lt;Obs TIME_PERIOD="2007" OBS_VALUE="2.42"/&gt; &lt;Obs TIME_PERIOD="2008" OBS_VALUE="2.57" OBS_FLAG="e"/&gt; &lt;Obs TIME_PERIOD="2009" OBS_VALUE="2.6"/&gt; &lt;Obs TIME_PERIOD="2010" OBS_VALUE="2.73" OBS_FLAG="e"/&gt; &lt;Obs TIME_PERIOD="2011" OBS_VALUE="2.67"/&gt; &lt;Obs TIME_PERIOD="2012" OBS_VALUE="2.91" OBS_FLAG="e"/&gt; &lt;Obs TIME_PERIOD="2013" OBS_VALUE="2.95"/&gt; &lt;Obs TIME_PERIOD="2014" OBS_VALUE="3.08" OBS_FLAG="e"/&gt; &lt;Obs TIME_PERIOD="2015" OBS_VALUE="3.05"/&gt; &lt;Obs TIME_PERIOD="2016" OBS_VALUE="3.12" OBS_FLAG="e"/&gt; &lt;Obs TIME_PERIOD="2017" OBS_VALUE="3.06"/&gt; &lt;Obs TIME_PERIOD="2018" OBS_VALUE="3.14" OBS_FLAG="p"/&gt; &lt;Obs TIME_PERIOD="2019" OBS_VALUE="3.19" OBS_FLAG="p"/&gt; &lt;/Series&gt;</pre>
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## Tools used to check SDMX files

Data Structure Wizard (DSW) version 2.3.1 and SDMX Converter V5.4.4 are the tools used to validate the SDMX compliance of the SDMX files.

These tools can be downloaded at:

<http://ec.europa.eu/eurostat/web/sdmx-infospace/sdmx-it-tools>

## Use of the Data Structure Wizard to check the DSD files (structure)

This tool allows to import SDMX-ML v2.0 and v2.1 DSD files and to validate them.

This tool can be downloaded at:

<http://ec.europa.eu/eurostat/web/sdmx-infospace/sdmx-it-tools>

## Changes in SDMX file format in new applications

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### Case of DSD version 2.1

File	Name of the dataset	Data structure wizard: Import function	Environment	Version
DSD	IRT_EURYLD_A	OK	Training	2.1

File	Name of the dataset	Data structure wizard: SDMX-ML artefact Validation	Environment	Version
DSD	IRT_EURYLD_A	This file corresponds to the SDMX 2.1 standard	Training	2.1

### Case of DSD version 2.0

File	Name of the dataset	Data structure wizard: function Import	Environment	Version
DSD	ert_bil_eur_a	<i>The file that you want to import is not valid</i>	Training	2.0

File	Name of the dataset	Data structure wizard: SDMX-ML artefact Validation	Environment	Version
DSD	ert_bil_eur_a	<i>This file doesn't correspond either to the SDMX 2.0 or SDMX 2.1 standards.</i>	Training	2.0

### Use of the Converter V5.4.4 to convert in different formats

The SDMX Converter is an open source application.

This Converter is used to perform conversions in different SDMX formats.

The formats used at Eurostat:

- SDMX version 2.1 Generic
- SDMX version 2.1 Specific Structure
- SDMX version 2.0 Compact
- SDMX version 2.0 Generic

### Case of SDMX version 2.1 Generic

File	Name of the dataset	Converter	Environment	Version	Message
DSD and Dataset	IRT_EURYLD_A	OK	Training	2.1	Generic

The SDMX version 2.1 generic format is converted into SDMX v2.0 compact format and then this last one is converted into csv format.

Case of SDMX version 2.1 Specific Structure

File	Name of the dataset	Converter	Environnent	Version	Message
DSD and Dataset	IRT_EURYLD_A	OK	Training	2.1	Specific Structure

The SDMX version 2.1 Specific Structure format is converted into SDMX v2.0 compact format and then this last one is converted into csv format.

Case of SDMX version 2.0 Generic

File	Name of the dataset	Converter	Environnent	Version	Message
DSD and Dataset	IRT_EURYLD_A	OK	Training	2.0	Generic

Case of SDMX version 2.0 Compact

File	Name of the dataset	Converter	Environnent	Version	Message
DSD and Dataset	IRT_EURYLD_A	OK	Training	2.0	Compact