

Practical experience in the implementation of data and metadata standards in the ESS

24

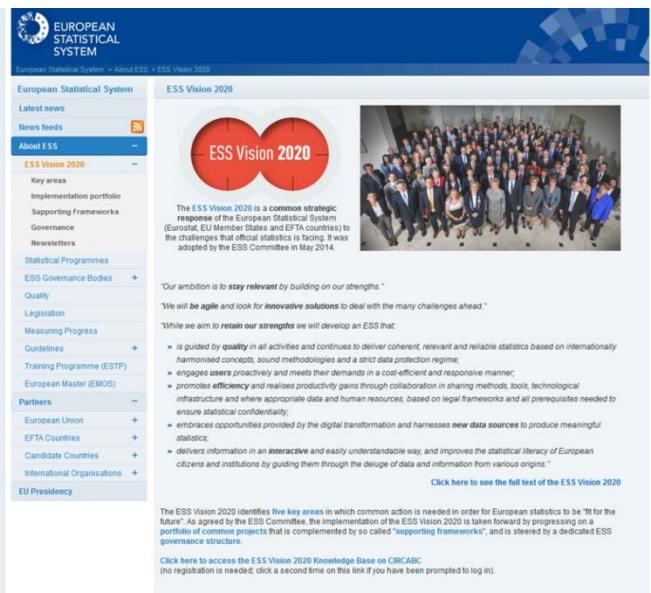
02.06.2016

Jan Planovsky
Bogdan-Sorin Zdrentu

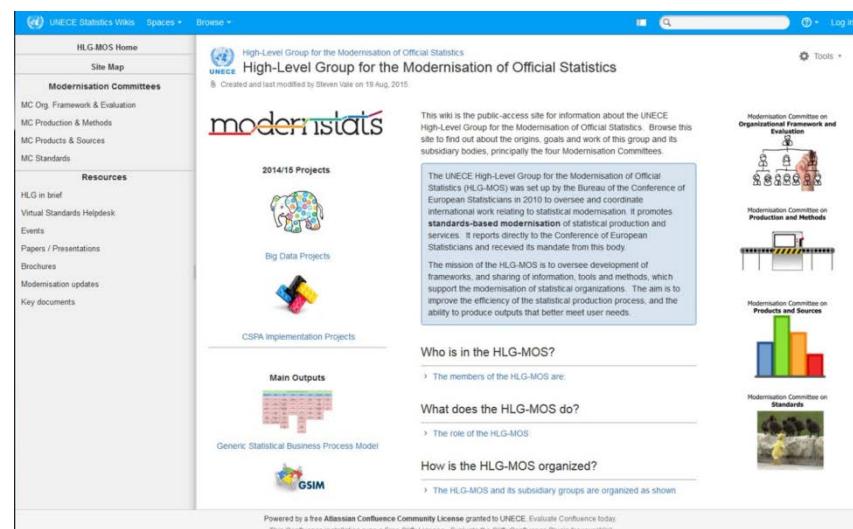
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Bogdan-Sorin.Zdrentu@ec.europa.eu

3 strategic dimensions of innovation and modernisation work of Eurostat

Dimension	Stakeholders	Initiative
(1) European Commission	ESTAT + DGs	IT rationalisation
(2) European Statistical System (ESS)	ESTAT + 28 MSs + 4 EFTA countries	ESS Vision 2020
(3) Global	ESTAT + UNECE	HLG-MOS ⁽¹⁾ Modernstat



The screenshot shows the European Statistical System website with a sidebar containing links like Latest news, News feeds, About ESS, ESS Vision 2020, Key areas, Statistical Programmes, Partners, and EU Presidency. The main content area displays the "ESS Vision 2020" logo and a large group photo of people. Below the photo is a text box stating: "The ESS Vision 2020 is a common strategic response of the European Statistical System (Eurostat, EU Member States and EFTA countries) to the challenges that official statistics is facing. It was adopted by the ESS Committee in May 2014." A quote from the vision document follows: "Our ambition is to stay relevant by building on our strengths." Another section discusses the need for agility and innovative solutions. At the bottom, there's a link to the full text of the ESS Vision 2020.



The screenshot shows the HLG-MOS website with a sidebar containing links like Site Map, Modernisation Committees, Resources, 2014/15 Projects, and Main Outputs. The main content area features the "modernstats" logo and sections for "High-Level Group for the Modernisation of Official Statistics" and "CSPA Implementation Projects". There are also sections for "Who is in the HLG-MOS?", "What does the HLG-MOS do?", and "How is the HLG-MOS organized?". On the right side, there are four boxes representing different modernization committees: "Modernisation Committee on Organizational Framework and Evaluation", "Modernisation Committee on Production and Methods", "Modernisation Committee on Products and Sources", and "Modernisation Committee on Standards".





Eurobase - navigation tree and metadata

The screenshot shows the Eurostat website interface. At the top right are links for "Sign In | Register" and a language dropdown set to "English". Below that is a search bar with placeholder text "Type a keyword, a code, a title..." and a magnifying glass icon. The main content area has a breadcrumb trail: "European Commission > Eurostat > Data > Database". A blue navigation bar at the top includes links for "News", "Data", "Publications", "About Eurostat", and "Help". On the left, a sidebar under "DATA" has sections for "DATABASE" (Information, Browse statistics by theme, Statistics A - Z, Bulk download, SDMX Web Services, Access to microdata, GISCO:Geographical Information and maps) and "Metadata" (Classifications, Legislation and methodology, Concepts and definitions, Glossaries and thesauri, National methodologies, Standard code lists, Euro-SDMX Metadata Structure (ESMS), Statistical Data and Metadata eXchange (SDMX), Data validation). The central "DATABASE" section displays a hierarchical navigation tree. A large yellow arrow points from the left towards this tree. The tree includes categories like "General and regional statistics", "Economy and finance", "National accounts (ESA 2010) (na10)", "National accounts (including GDP) (ESA95) (na)", "Annual national accounts (nama)", "GDP and main components (nama_gdp)", "Exports and imports by Member States of the EU/third countries (nama_exi)", "Final consumption aggregates (nama_fcs)", "Income, saving and net lending/ borrowing (nama_inc)", "National Accounts detailed breakdowns (by industry, by product, by consumption purpose) (nama_brk)", "Auxiliary indicators to National Accounts - annual data (nama_aux)", "Regional economic accounts - ESA95 (nama_reg)", "Quarterly national accounts (namq)", "Annual sector accounts (nasa)", "Quarterly sector accounts (nasq)", "Supply, use and Input-output tables (naio)", "Government statistics (gov)", "Government finance statistics (EDP and ESA2010) (gov_gfs10)", "Government statistics – historical ESA95 data (gov_h)", "Government contingent liabilities and potential obligations (gov_cl)", and "Exchange rates (ert)". A small note at the bottom right indicates "(Important - country specific footnotes)" with a "M" icon.

Metadata in data dissemination

Important legal notice
v3.0.3.4-20150504-5575b-PROD_EUROBASE

eurostat **Reference metadata** [rail_if_tracks]

Railway transport - Length of tracks
Last update: 02-03-2015
Table Customization [hide](#)

Labeling: Codes Labels Both Dimension specific

Cell Formatting: 1.234,56 1,234.56 1 234.56

Hide empty lines Hide flags/footnotes

Structural metadata

	TIME	GEO	UNIT							
+ TRA_INFR			KM - Kilometre							
TOTAL - Total										
+ GEO	+ TIME	2004 2005 2006 2007 2008 2009 2010 2011 2012 2013								
BE - Belgium	6,291	6,215	6,067	5,961	6,283	6,436	:	:	:	
BG - Bulgaria	6,238	6,025	5,990	5,967	5,923	5,888	5,831	5,661	5,658	
CZ - Czech Republic	15,925	16,156	15,844	15,810	15,716	15,677	15,666	15,656	15,636	
DK - Denmark	:	:	:	:	:	:	:	:	:	
DE - Germany (until 1990 former territory of the FRG)	:	70,557	70,557 (r)	70,557 (r)	70,557 (r)	70,557 (r)	37,679	41,876	41,427	41,328
EE - Estonia	1,587	1,798	2,733 (e)	2,200	2,141	2,166	2,167	2,164	2,164	2,146 (r)
IE - Ireland	:	1,912	:	1,834	1,889	:	2,384 (r)	2,384 (r)	2,421	2,421
EL - Greece	2,880	3,093	2,997	3,060	3,062	:	:	:	:	:
ES - Spain	:	:	:	:	:	:	18,967	19,166	19,285	:
FR - France	49,063	49,111	49,111.11	49,644	:	51,217	:	:	:	:
HR - Croatia	4,104	4,104	4,098	4,096	4,104	4,103	4,102	4,101	4,105	4,090
IT - Italy	22,277	22,999	23,193	23,385	23,835	24,179	24,216	24,240	24,277	:
LV - Latvia	2,583	2,583	2,583	2,583	2,565	2,206	2,202	2,202	2,161	2,161
LT - Lithuania	2,199,7	2,187,4	2,187,4	2,180,3	2,179,6 (r)	2,182,3	2,184,1	2,184	:	:
LU - Luxembourg	:	:	275	275	619	275	:	:	:	:
HU - Hungary	12,735	12,735	9,513	9,223	9,208	9,208	9,178	9,445,9	13,378,4	:
NL - Netherlands	:	:	:	:	:	:	:	:	:	:
AT - Austria										

Available flags:
 b break in time series c confidential d definition differs, see metadata
 e estimated f forecast i see metadata (phased out)
 n not significant p provisional r revised
 s Eurostat estimate (phased out) u low reliability z not applicable

Special value:
 : not available

Source of data: Eurostat



Dissemination of reference metadata

DATABASE

- Data Navigation Tree
- Database by themes
 - General and regional statistics
 - European and national indicators for short-term analysis (euroind) [M]
 - + Business and consumer surveys (source: DG ECFIN) (ei_bcs) [M]
 - + Balance of payments (ei_bp) [M] M
 - + Consumer prices (ei_cp) [M]
 - + International trade (ei_et) [M]
 - + Industry, trade and services (ei_is) [M] M
 - + Labour market (ei_lm)
 - + Monetary and financial indicators (ei_mf) [M]
 - + National accounts (ei_qna) [M]
 - + Housing price statistics (ei_hp)
 - + Regional statistics by NUTS classification (reg)
 - + Regional statistics by typology (reg_typ) [M] M
 - + Degree of urbanisation (degurb)
 - + Urban audit (urb) [M] M
 - + Other sub-national statistics (reg_nat)
 - + Land cover and land use, landscape (LUCAS) (lan) [M] (Important information)
 - + Non EU countries (noneu)
 - + Economy and finance
 - + Population and social conditions
 - + Industry, trade and services

eurostat

Balance of payments (ei_bp)
 Reference Metadata in Euro SDMX Metadata Structure (ESMS)
 Compiling agency: Eurostat, the statistical office of the European Union

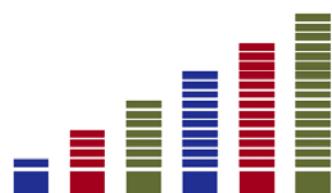
Eurostat metadata	
Reference metadata	
1. Contact	
2. Metadata update	
3. Statistical presentation	
4. Unit of measure	
5. Reference Period	
6. Institutional Mandate	
7. Confidentiality	
8. Release policy	
9. Frequency of dissemination	
10. Dissemination format	
11. Accessibility of documentation	
12. Quality management	
13. Relevance	
14. Accuracy	
15. Timeliness and punctuality	
16. Comparability	
17. Coherence	
18. Cost and Burden	
19. Data revision	
20. Statistical processing	
21. Comment	
Related Metadata	
Annexes (including footnotes)	

For any question on data and metadata, please contact: [EUROPEAN STATISTICAL DATA SUPPORT](#)

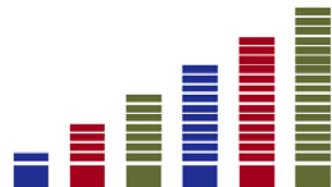
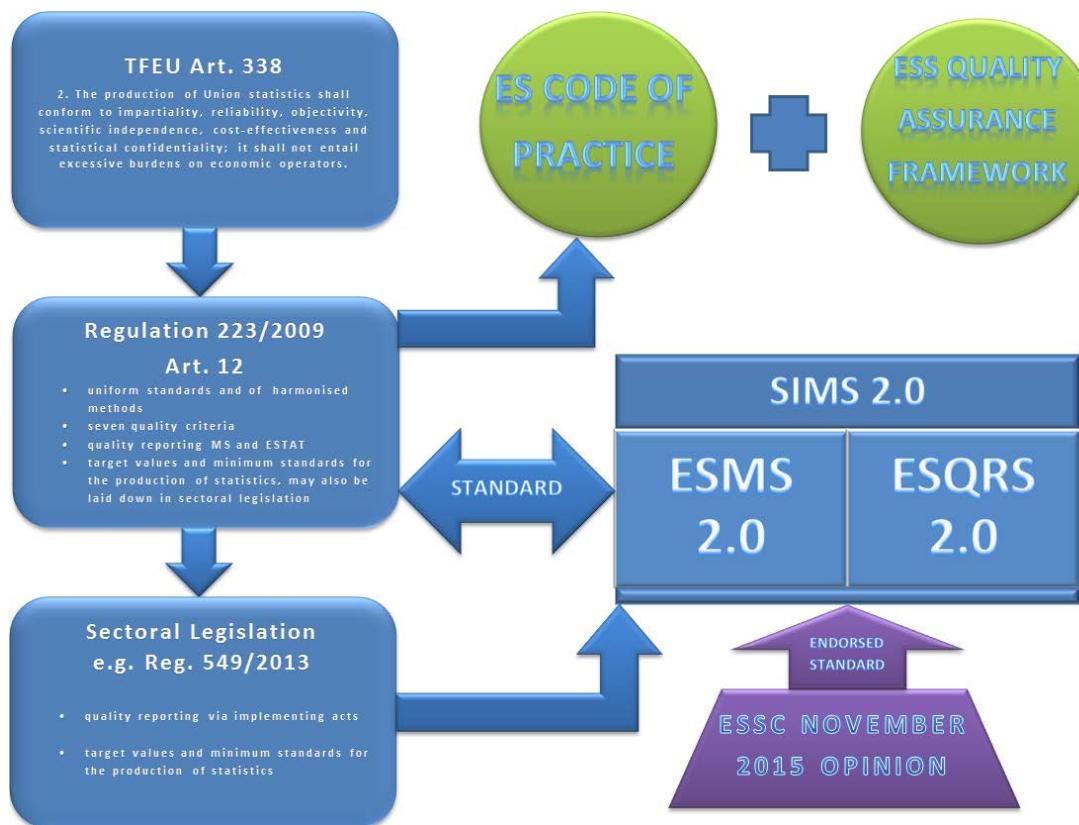
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[Top](#)

1. Contact	
1.1. Contact organisation	Eurostat, the statistical office of the European Union
1.2. Contact organisation unit	C2: National and regional accounts production. Balance of payments
1.3. Contact mail address	2920 Luxembourg LUXEMBOURG
2. Metadata update	
2.1. Metadata last certified	09/03/2010
2.2. Metadata last posted	09/03/2010
2.3. Metadata last update	27/01/2016
3. Statistical presentation	
3.1. Data description	
<p>The Balance of Payments (BOP) systematically summarizes all economic transactions between the residents and the non-residents of a country or of an economic area during a given period.</p> <p>The Balance of payments provides harmonized information on international transactions which are part of the current account (goods, services, primary and secondary income), as well as on transactions which fall in the capital and the financial account. International investment position presents value of financial assets owned outside the economy and indebtedness of the economy to the rest of the world.</p> <p>BOP is an important macro-economic indicator used to assess the position of an economy (of credit or debit for current and capital account, net acquisition of financial assets or net incurrence of liabilities for BOP financial account and international investment position) towards the external world. Out of BOP data, some indicators on international position of the EU and Member States are derived.</p> <p>Indicators on Main Balance of Payments and International Investment Position items are presented for given quarter for:</p> <ul style="list-style-type: none"> • balance, credit and debit flows of current and capital accounts and of main current account items: goods, services, primary and secondary income, • net flows, net acquisition of financial assets and net incurrence of liabilities for total financial account and foreign direct investment, • international investment position and net external debt at the end of reference quarter. 	



Legal framework of the implementation of data and metadata standards in the ESS

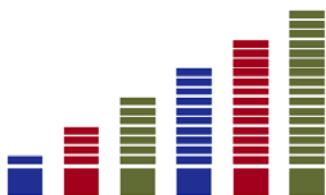


Integration of ESMS and ESQRS under the Single Integrated Metadata Structure (SIMS)

SIMS	
ESMS	ESQRS
S.1 Contact	
S.1.1 Contact organisation	
S.1.2 Contact organisation unit	
S.1.3 Contact name	
S.1.4 Contact person function	
S.1.5 Contact mail address	
S.1.6 Contact email address	
S.1.7 Contact phone number	
S.1.8 Contact fax number	
S.2 Metadata update	
S.2.1 Metadata last certified	
S.2.2 Metadata last posted	
S.2.3 Metadata last update	
S.3 Statistical presentation	
S.3.1 Data description	
S.3.2 Classification system	
S.3.3 Sector coverage	
S.3.4 Statistical concepts and definitions	
S.3.5 Statistical unit	
S.3.6 Statistical population	
S.3.7 Reference area	
S.3.8 Time coverage	
S.3.9 Base period	
S.4 Unit of measure	
S.5 Reference period	
S.6 Institutional mandate	
S.6.1 Legal acts and other agreements	
S.6.2 Data sharing	
S.7 Confidentiality	
S.7.1 Confidentiality - policy	
S.7.2 Confidentiality - data treatment	
S.8 Release policy	
S.8.1 Release calendar	
S.8.2 Release calendar access	
S.9.3 User access	

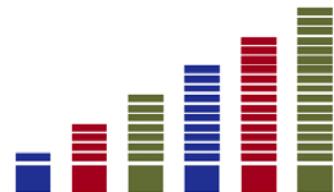
SIMS	
ESMS	ESQRS
S.9 Frequency of dissemination	
S.10 Accessibility and clarity	
S.10.1 News release	
S.10.2 Publications	
S.10.3 On-line database	
S.10.3.1 AC1. Data tables - consultations	
S.10.4 Micro-data access	
S.10.5 Other	
S.10.5.1 AC 2. Metadata - consultations	
S.10.6 Documentation on methodology	
S.10.6.1 AC 3. Metadata completeness - rate	
S.10.7 Quality documentation	
S.11 Quality management	
S.11.1 Quality assurance	
S.11.2 Quality assessment	
S.12 Relevance	
S.12.1 User needs	
S.12.2 User satisfaction	
S.12.3 Completeness and R1. Data completeness - rate for U	
S.12.3.1 R1. Data completeness - rate for P	
S.13 Accuracy and reliability	
S.13.1 Overall accuracy	
S.13.2 Sampling error and A1. Sampling errors - indicators for U	
S.13.2.1 A1. Sampling errors - indicators for P	
S.13.3 Non-sampling error and A4. Unit non-response - rate for U and A5. Item non-response - rate for U	
S.13.3.1 Coverage error	
S.13.3.1.1 A2. Over-coverage - rate	
S.13.3.1.2 A3. Common units - proportion	
S.13.3.2 Measurement error	
S.13.3.3 Non response error	
S.13.3.3.1 A4. Unit non-response - rate for P	
S.13.3.3.2 A5. Item non-response - rate for P	
S.13.3.4 Processing error	
S.13.3.5 Model assumption error	

SIMS	
ESMS	ESQRS
S.14 Timeliness and punctuality	
S.14.1 Timeliness and TP2. Time lag - final results for U	
S.14.1.1 TP1. Time lag - first results for P	
S.14.1.2 TP2. Time lag - final results for P	
S.14.2 Punctuality and TP3. Punctuality - delivery and publication for U	
S.14.2.1 TP3. Punctuality - delivery and publication for P	
S.15 Coherence and comparability	
S.15.1 Comparability - geographical	
S.15.1.1 CC1. Asymmetry for mirror flows statistics - coefficient	
S.15.2 Comparability - over time and CC2. Length of comparable time series for U	
S.15.2.1 CC2. Length of comparable time series for P	
S.15.3 Coherence- cross domain	
S.15.3.1 Coherence- sub annual and annual statistics	
S.15.3.2 Coherence- National Accounts	
S.15.4 Coherence - internal	
S.16 Cost and burden	
S.17 Data revision	
S.17.1 Data revision - policy	
S.17.2 Data revision - practice and A6. Data revision - average size for U	
S.17.2.1 A6. Data revision - average size for P	
S.18 Statistical processing	
S.18.1 Source data	
S.18.2 Frequency of data collection	
S.18.3 Data collection	
S.18.4 Data validation	
S.18.5 Data compilation	
S.18.5.1 A7. Imputation - rate	
S.18.6 Adjustment	
S.18.6.1 Seasonal adjustment	
S.19 Comment	

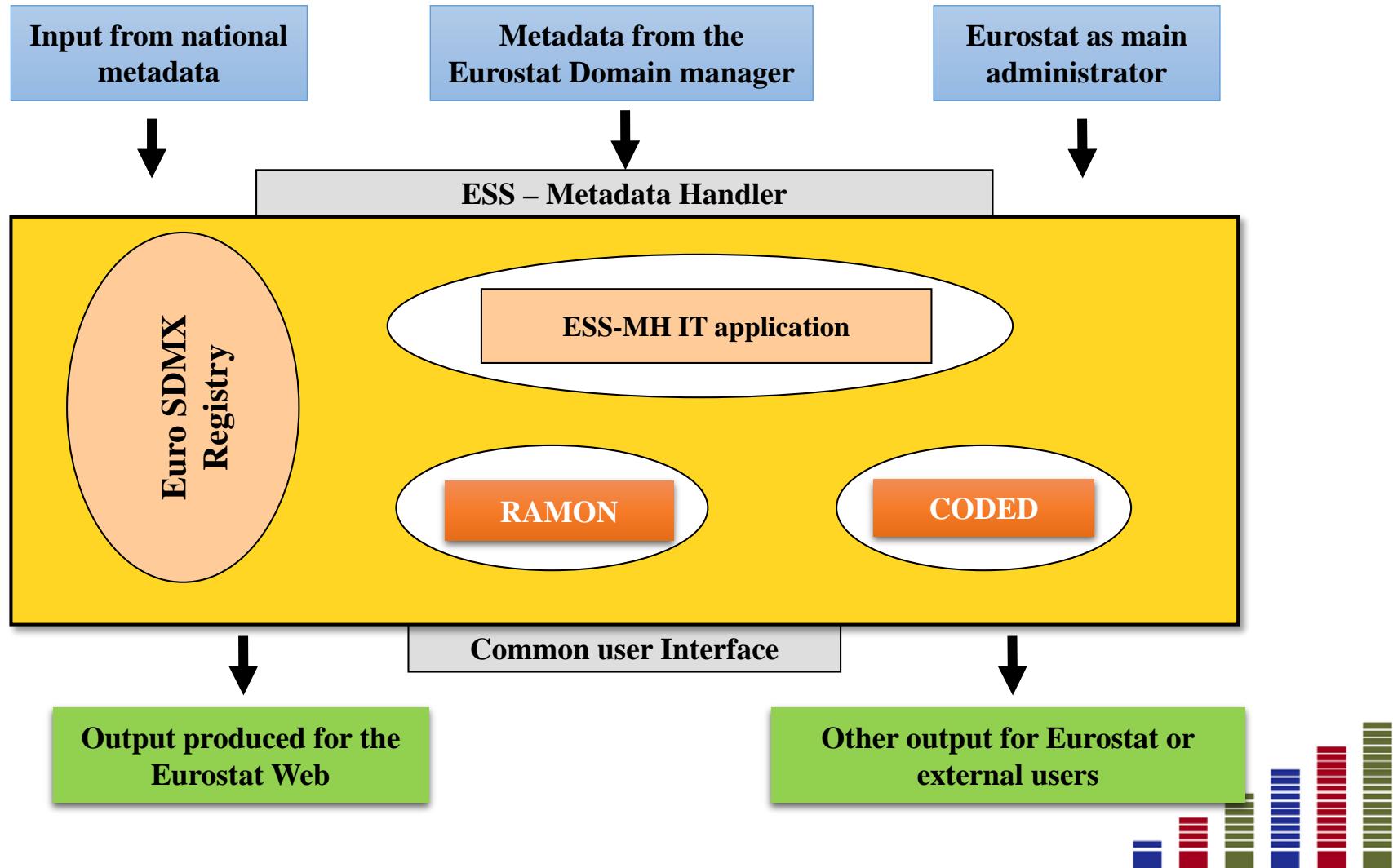


ESS Metadata Handler in figures (14.04.2016)

	Total April 2015	Total April 2016
ESMS	1947	2406
ESQRS	1327	1920
ESMS IPs	145	146
EPMS	102	102
Total	3521	4574



Practical experience in the implementation of data and metadata standards in the ESS





ESS METADATA HANDLER

European Commission > Eurostat > ESS-MH > Metadata Files

[Home](#) [Metadata files](#) [Reports](#) [Administration](#) [Help](#)

Metadata Files

Filter: (Dom: All - Mdf: All - Org: All) [?](#)

+ Add

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	File name	Domain	Flow	Year	Status	Updated	Owner	Actions
<input type="checkbox"/>	AEI_ESQRS_A_BG_2012_0000 i B	Agri-environmental Statistics	AEI_ESQRS_A	2012	Draft	29/04/2013 10:33	zdrenbo	Edit Send for validation Delete Download Compare Search
<input type="checkbox"/>	AEI_ESQRS_A_ES_2013_0000 i B	Agri-environmental Statistics	AEI_ESQRS_A	2013	Draft	25/04/2013 11:33	zdrenbo	Edit Send for validation Delete Download Compare Search
<input type="checkbox"/>	AEI_ESQRS_A_SI_2012_0000 i B	Agri-environmental Statistics	AEI_ESQRS_A	2013	Draft	30/09/2013 11:19	tinasijanec	Edit Send for validation Delete Download Compare Search
<input type="checkbox"/>	AEI_ESQRS_A_UK_2013_0000 i B	Agri-environmental Statistics	AEI_ESQRS_A	2013	Draft	29/04/2013 11:00	zdrenbo	Edit Send for validation Delete Download Compare Search
<input type="checkbox"/>	AES_ESQRS_A_AT_2010_0000 i B	Adult Education Survey	AES_ESQRS_A	2010	Validated	02/10/2013 16:01	zdrenbo	Edit Send for validation Delete Download Compare Search
<input type="checkbox"/>	AES_ESQRS_A_AT_2011_0000 i B	Adult Education Survey	AES_ESQRS_A	2011	Ready for validation	25/09/2013 16:08	burgthom	Edit Send for validation Delete Download Compare Search
<input type="checkbox"/>	AES_ESQRS_A_BE_2010_0000 i B	Adult Education Survey	AES_ESQRS_A	2010	Draft	25/09/2013 16:42	radovdu	Edit Send for validation Delete Download Compare Search
<input type="checkbox"/>	AES_ESQRS_A_CY_2009_0000 i B	Adult Education Survey	AES_ESQRS_A	2009	Draft	12/06/2012 12:07	parmebe	Edit Send for validation Delete Download Compare Search
<input type="checkbox"/>	AES_ESQRS_A_EE_2000_0000 i B	Adult Education Survey	AES_ESQRS_A	2000	Draft	30/09/2011 15:14	ingelilm	Edit Send for validation Delete Download Compare Search
<input type="checkbox"/>	AES_ESQRS_A_FI_2010_0000 i B	Adult Education Survey	AES_ESQRS_A	2010	Draft	03/04/2012 14:11	zdrenbo	Edit Send for validation Delete Download Compare Search
<input type="checkbox"/>	AES_ESQRS_A_SI_2013_0000 i B	Adult Education Survey	AES_ESQRS_A	2013	Draft	30/09/2013 11:17	tinasijanec	Edit Send for validation Delete Download Compare Search
<input type="checkbox"/>	CENSUS_ESMS_A_TR_2000_0000 i B	Census Statistics	CENSUS_ESMS_A	2000	Draft	25/05/2012 15:17	gurgegok	Edit Send for validation Delete Download Compare Search
<input type="checkbox"/>	COMEXT_ESMSXTC_A_AL_2000_0000 i B	External Trade	COMEXT_ESMSXTC_A	2000	Draft	11/10/2013 15:45	parmebe	Edit Send for validation Delete Download Compare Search
<input type="checkbox"/>	COMEXT_ESMSXTC_A_AM_2000_0000 i P	External Trade	COMEXT_ESMSXTC_A	2000	Published	03/12/2013 16:10	delhave	Edit Send for validation Delete Download Compare Search
<input type="checkbox"/>	COMEXT_ESMSXTC_A_AZ_2000_0000 i P	External Trade	COMEXT_ESMSXTC_A	2000	Published	03/12/2013 16:11	delhave	Edit Send for validation Delete Download Compare Search

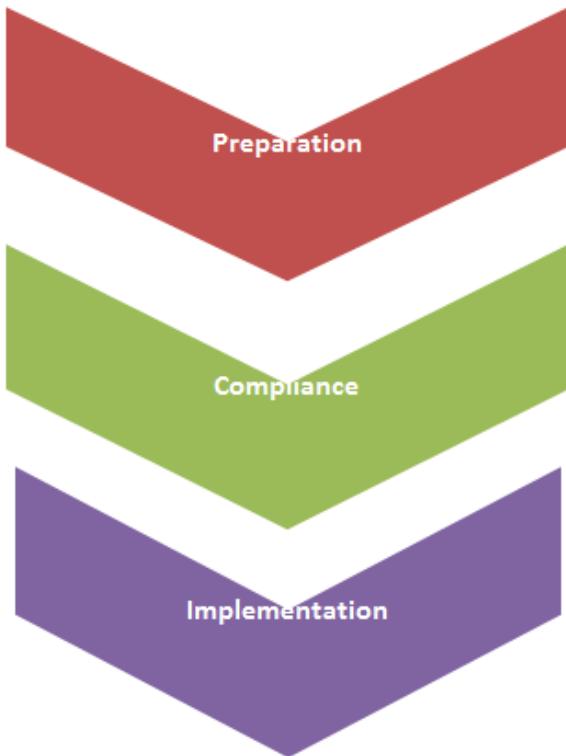
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Global actions

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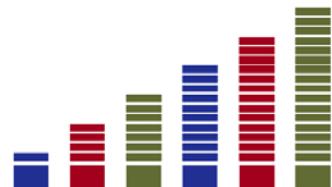
Implementation process



- GNI (Gross National Income)
- HBS (Consumption Expenditure of Private Households)
- **HICP inventory**

- MIP Statistics
- CVTS (Continuing vocational training survey)
- FOOD (From Farm to Fork)
- **PRC_OOH (Owner occupied Housing)**

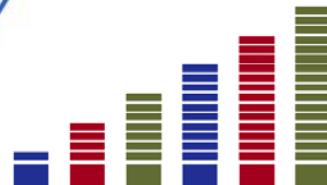
- PRAG (Agricultural Price statistics)
- ESAW (Accidents at Work)
- AES (Adult Education Survey)
- **MIGR ASYAPP (Migration – Asylum and Dublin statistics)**
- **MIGR RES (Migration – Residence Permits)**



Implementation process

Production

- HICP (Harmonised Indices of Consumer Prices)
- EU-SILC (Income and Living Conditions)
- STS (Short Term Statistics)
- AEI (Pesticides)
- JVC (Job Vacancy Statistics)
- COMEXT (3rd countries)
- COSAEA (Economic Accounts for Agriculture)
- R&D
- PERMCROP (Fruit Tree Plantation Survey), CROPROD (Annual Crop Stats)
- INFOSOC (Information Society)
- DEMOMIGR (Detailed Data on Demographic events)
- EARNINGS, SES 2010 (Structure Earnings Survey)
- CIS 2012 (Community Innovation Survey)
- SBS (Business demography)
- **EHIS (Education, Health and Social Protection)**
- **VITIS (vineyards)**
- **PEER REVIEW**
- LFS-Q, LFS-A (Labour Force Survey), LFS-AD hoc Module
- FATS (Foreign Affiliates Statistics)
- WASTE
- EDUCAT
- PRODCOM (Production of manufactured goods)
- URBANREG (Urban Audit Statistics)
- TOURISM
- HPS (Housing prices)
- DEMOBAL (Demographic Balance and crude Rates)
- CENSUS
- LCI (Labour Cost Index), LCS (Labour Cost Survey)
- FSS (Farm Structure Survey)
- SES (Structure of Earnings Survey)
- TUS (Time Use Survey)
- **HEALTH-CODES (Causes of Death)**
- **MIGR (Migration)**
- **BUSREG (Business Registers)**





Questions & answers?

Thank you for your attention!

