

European Forest Accounts:

Data validation rules and checks

(version March 2023 including the conclusions from the 2023 meeting of the Working group Forestry statistics and accounts)

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Structure of the document

The aim of this document is to provide a compilation of rules and checks for the validation of data reported in the European Forestry Accounts (EFA) questionnaire by countries to Eurostat.

The document is structured in 6 annexes: The checks and rules are presented in this document in three separate annexes according to the type of check and/or the status of their development:

- **Annex 1a: examines the content of cells in the questionnaire (data cells, cells intended for flags, reference years and country code) without considering the relationship with the content with other cells.**
- Annex 1b: includes internal consistency checks within and between EFA tables – these apply in instances where a relationship between variables is defined exactly (i.e. a formula without a threshold applies¹).
- Annex 2: includes methodologically advanced plausibility checks. These examine the consistency of EFA data with JFSQ and FAO – Forest Resources Assessment data (i.e., with datasets with clear relations with EFA definitions and reporting convention, which are expected to hold across the EU), and the consistency of EFA data over time.
- Annex 3: includes plausibility checks under development (plausibility checks for concepts and reporting convention ‘under development’) which help Eurostat identify cross-country differences in reporting convention and instances where links with related datasets cannot be defined in the same manner for the whole EU. The checks point to potential cross-country comparability issues for EFA data, and to conceptual issues that need to be examined and elaborated on in the future.
- **Annex 4: summarizes the reporting of issues, identified by Eurostat during the validation, back to countries and informs about actions required from countries. The Annex is structured by the four validation tools currently used for EFA validation. These are:**
 - **Built-in macro function in the EFA questionnaire to be used by countries before submitting EFA data to Eurostat (i.e. pre-validation).**
 - **STRUctural VALidation of the questionnaire. Datasets failing these STRUVAL checks are automatically rejected by Eurostat’s IT system. Country receive an error report (via EDAMIS) listing issues that need to be corrected before the content of the dataset can be examined.**
 - **CONTent VALidation of the questionnaire. Datasets failing these CONVAL checks are automatically rejected by Eurostat’s IT system. Country receive an error report (via EDAMIS) listing issues that need to be corrected so that the dataset can be loaded to Eurostat’s internal database for further validation and subsequent publication.**
 - **SQL-based validation performed in Eurostat’s internal database after data upload. The output of this step is the validation (and revision) report, send to countries via the EDAMIS channel set up in 2022 – ‘EFA_ACCVR_N’.**
- Annex 5: summarizes the publication of country EFA data in Eurostat’s public database (‘Eurobase’). The tables in Eurobase are structured differently from EFA questionnaire tables and Annex 5 aims to show how the two are mapped.

For validation rules listed in annexes 1a – 3, the following attributes are presented:

- Rule number – this is a single identifier of the validation rule consisting of three parts:
 - First digit: Number of the validation level (from 1 to 4)²
 - Second part: Name of the EFA data table the check is applied to.
 - Last digit: Number of the validation rule (incremental for the given combination of validation level and EFA table)
- Coded format

¹ In practice, we use a threshold of 1 to address potential differences resulting from rounding.

² https://ec.europa.eu/eurostat/cros/content/validation-levels_en

- Description
- Threshold, if applicable
- Validation outcome, which has three levels (i.e. three possible outcomes):
 - **PASS** – data meet the condition of the validation check, i.e. no issues detected and no action needed from the reporting country.
 - **WARNING** – thresholds have been exceeded; i.e. the reporting country has to confirm the data and briefly explain for what reasons (e.g. country-specific circumstances) data do not confirm with pre-agreed rules and thresholds. Data may be accepted based on the explanation.
 - **ERROR** – data do not conform with well-established accounting / mathematical rules; i.e. the reporting country has to correct and resubmit the data.

Annex 1a – EFA Validation rules – validation of the questionnaire cell content

Worksheet ‘GETTING STARTED’

0.GETTING STARTED.1 – contact details

Rule number	0.GETTING STARTED.1
Coded format	
Description	The cells designated to include compilers’ ‘Name’, ‘Institution’ and ‘e-mail’ must not be blank.
Threshold	NA
Notification	WARNING

All tables

0.ALLTABLES.1 – country³

Rule number	0.ALLTABLES.1
Coded format	
Description	The content of cells designated for the code of the reporting country must be equal to one of the 2-letter country codes defined by the Publications Office of the EU.
Threshold	NA
Notification	ERROR

0.ALLTABLES.2 – year⁴

Rule number	0.ALLTABLES.2
Coded format	
Description	The content of cells designated for the reference year must be filled in with a valid reference year.
Threshold	NA
Notification	ERROR

0.ALLTABLES.3 – year⁵

³ In reality, countries only fill in the country code on worksheet ‘GETTING STARTED’ (and it is copied to all tables). However, the validation check examines the correctness of the country code in all table (all worksheets), therefore the check is listed here as applicable to ‘All tables’.

⁴ As above.

Rule number	0.ALLTABLES.3
Coded format	
Description	The reference year entered in the cells designated for the reference year must be equal to the reference year entered in the EDAMIS submission system, i.e. the one appearing in the EDAMIS file name 'EFA_ACC_A_xx_XXXX_0000_V000x'.
Threshold	NA
Notification	ERROR

0.ALLTABLES.4 – flags

Rule number	0.ALLTABLES.4
Coded format	
Description	The content of cells designated for flags and footnotes must not differ from predefined entries (i.e. 'b', 'e', 'p' for cells for standard footnotes and 'a number' for cells for country-specific footnotes).
Threshold	NA
Notification	ERROR

0.ALLTABLES.5 – number

Rule number	0.ALLTABLES.5
Coded format	
Description	The content of cells designated for data must be a number.
Threshold	NA
Notification	ERROR

⁵ As footnote above.

0.ALLTABLES.6 – negative

Rule number	0.ALLTABLES.6
Coded format	
Description	<p>The content of the cell after rounding to 0 decimal places must not be a negative number; this applies to the following reporting items:</p> <p>Table A1a:</p> <ul style="list-style-type: none"> for all variables <u>except for</u> RCLAS and BAL <p>Table A1b:</p> <ul style="list-style-type: none"> for all variables except for RCLAS, REVAL and BAL <p>Table A2a:</p> <ul style="list-style-type: none"> for all variables except for RCLAS and BAL <p>Table A2b:</p> <ul style="list-style-type: none"> for all variables except for RCLAS, REVAL and BAL <p>Table B1:</p> <ul style="list-style-type: none"> for 'Total output (at basic prices) [P.1]' and all its sub-items for 'Total intermediate consumption [P.2]' and all its sub-items except for 'Financial services (FISIM) [P.119]' for 'Gross value added [B.1g]' for 'Consumption of fixed capital [P.51c]' for 'Other subsidies on production [D.39]' for 'Compensation of employees [D.1]' for 'Gross fixed capital formation (excluding deductible VAT) [P.51g]' and all its sub-items for 'Total labour input [L]' and all its sub-items <p>Table B2:</p> <ul style="list-style-type: none"> for all variables <p>Table B3a:</p> <ul style="list-style-type: none"> for all variables except for 'Trade and transport margins' and 'Taxes less subsidies on products' <p>Table B3b:</p> <ul style="list-style-type: none"> for all variables except for 'Capital formation' <p>Table C1a:</p> <ul style="list-style-type: none"> for all variables <p>Table C1b:</p> <ul style="list-style-type: none"> for all variables except for 'Final consumption and capital formation'
Threshold	NA
Notification	ERROR

Table B1

1.B1.20 – employment unit	
Rule number	1.B1.20
Coded format	
Description	<p>The value for employment reported in Table B1, using the established unit '1000 FTE', must be:</p> <ul style="list-style-type: none"> • >1 for countries BE, BG, CZ, DK, DE, EE, IE, EL, ES, FR, HR, IT, LV, LT, HU, NL, AT, PL, PT, RO, SI, SK, FI, SE, NO, CH; • >0.01 for countries CY and LU.
Threshold	1 for BE, BG, CZ, DK, DE, EE, IE, EL, ES, FR, HR, IT, LV, LT, HU, NL, AT, PL, PT, RO, SI, SK, FI, SE, NO, CH and 0.01 for CY and LU.
Notification	WARNING

Annex 1b – EFA Validation rules – internal consistency checks

Table ‘A1a - Area of wooded land, in 1000 ha’

1.A1a.1	
Rule number	1.A1a.1
Coded format	FOR = FAWS + FNAWS
Description	The data on area of wooded land (in 1000 ha) reported for type of wooded land 'Forest' have to be equal to the sum of the data on area of wooded land reported for types of wooded land 'Forest available for wood supply' and 'Forest not available for wood supply' for each stock/flow of wooded land area.
Threshold	1
Notification	ERROR

1.A1a.2	
Rule number	1.A1a.2
Coded format	OWL_AWS <= OWL
Description	The data on area of wooded land (in 1000 ha) reported for type of wooded land 'Other wooded land available for wood supply' have to be less than or equal to the data on area of wooded land reported for type of wooded land 'Other wooded land' for each stock/flow of wooded land area.
Threshold	1
Notification	ERROR

1.A1a.3	
Rule number	1.A1a.3
Coded format	STK_CL = STK_OP + INCR - DECR + RCLAS + BAL
Description	The data on stock of wooded land area (in 1000 ha) reported for stock 'Closing area of wooded land' have to be equal to the sum of data on wooded land area reported for stock/flows 'Opening area of wooded land', 'Afforestation and other increase', 'Statistical re-classification' and 'Balancing item' minus 'Deforestation and other decrease' for each type of wooded land.
Threshold	1
Notification	ERROR

1.A1a.4	
Rule number	1.A1a.4
Coded format	$STK_OP(year\ n) = STK_CL(year\ n-1)$
Description	The data on the area of wooded land (in 1000 ha) reported for stock 'Opening area of wooded land' for year n has to be equal to the data on stock of wooded land area (in 1000 ha) reported for stock 'Closing area of wooded land' for year $n-1$ for each type of wooded land.
Threshold	1
Notification	ERROR

Table A1b - Area of wooded land, in million national currency

1.A1b.1	
Rule number	1.A1b.1
Coded format	FOR = FAWS + FNAWS
Description	The data on area of wooded land (in million national currency) reported for type of wooded land 'Forest' have to be equal to the sum of the data on area of wooded land reported for types of wooded land 'Forest available for wood supply' and 'Forest not available for wood supply' for each stock/flow of wooded land area.
Threshold	1
Notification	ERROR

1.A1b.2	
Rule number	1.A1b.2
Coded format	OWL_AWS <= OWL
Description	The data on area of wooded land (in million national currency) reported for type of wooded land 'Other wooded land available for wood supply' have to be less than or equal to the data on area of wooded land reported for type of wooded land 'Other wooded land' for each stock/flow of wooded land area.
Threshold	1
Notification	ERROR

1.A1b.3	
Rule number	1.A1b.3
Coded format	STK_CL = STK_OP + INCR - DECR + REVAL + RCLAS + BAL
Description	The data on stock of wooded land area (in million national currency) reported for stock 'Closing area of wooded land' have to be equal to the sum of data on the wooded land area reported for stock/flows 'Opening area of wooded land', 'Afforestation and other increase', 'Revaluation', 'Statistical re-classification' and 'Balancing item' minus 'Deforestation and other decrease' for each type of wooded land.
Threshold	1
Notification	ERROR

1.A1b.4	
Rule number	1.A1b.4
Coded format	$STK_OP(year\ n) = STK_CL(year\ n-1)$
Description	The data on the area of wooded land (in million national currency) reported for stock 'Opening area of wooded land' for year n has to be equal to the data on stock of wooded land area (in million national currency) reported for stock 'Closing area of wooded land' for year $n-1$ for each type of wooded land.
Threshold	1
Notification	ERROR

Table A2a - Timber on wooded land, in 1000 m³ over bark

1.A2a.1	
Rule number	1.A2a.1
Coded format	FOR = FAWS + FNAWS
Description	The data on timber on wooded land (in 1000 m ³ over bark) reported for type of wooded land 'Forest' have to be equal to the sum of the data on timber on wooded land reported for types of wooded land 'Forest available for wood supply' and 'Forest not available for wood supply' for each stock/flow of timber on wooded land.
Threshold	1
Notification	ERROR

1.A2a.2	
Rule number	1.A2a.2
Coded format	OWL_AWS <= OWL
Description	The data on timber on wooded land (in 1000 m ³ over bark) reported for type of wooded land 'Other wooded land available for wood supply' have to be less than or equal to the data on timber on wooded land reported for type of wooded land 'Other wooded land' for each stock/flow of timber on wooded land.
Threshold	1
Notification	ERROR

1.A2a.3	
Rule number	1.A2a.3
Coded format	STK_CL = STK_OP + NAI - RMOV - LOSS + RCLAS + BAL
Description	The data on timber on wooded land (in 1000 m ³ over bark) reported for stock 'Closing stocks of timber on wooded land' have to be equal to the sum of the data on timber on wooded land reported for stock/flows 'Opening stocks of timber on wooded land', 'Net increment', 'Statistical re-classification' and 'Balancing item' minus 'Removals' and 'Irrecoverable losses' for each type of wooded land.
Threshold	1
Notification	ERROR

1.A2a.4

Rule number	1.A2a.4
Coded format	STK_OP(year n) = STK_CL(year $n-1$)
Description	The data on timber on wooded land (in 1000 m ³ over bark) reported for stock 'Opening stocks of timber on wooded land' for year n has to be equal to the data on timber on wooded land (in 1000 m ³ over bark) reported for stock 'Closing stocks of timber on wooded land' for year $n-1$ for each type of wooded land.
Threshold	1
Notification	ERROR

Table A2b - Timber on wooded land, in million national currency

1.A2b.1	
Rule number	1.A2b.1
Coded format	FOR = FAWS + FNAWS
Description	The data on timber on wooded land (in million national currency) reported for type of wooded land 'Forest' have to be equal to the sum of the data on timber on wooded land reported for types of wooded land 'Forest available for wood supply' and 'Forest not available for wood supply' for each stock/flow of timber on wooded land.
Threshold	1
Notification	ERROR

1.A2b.2	
Rule number	1.A2b.2
Coded format	OWL_AWS <= OWL
Description	The data on timber on wooded land (in million national currency) reported for type of wooded land 'Other wooded land available for wood supply' have to be less than or equal to the data on timber on wooded land reported for type of wooded land 'Other wooded land' for each stock/flow of timber on wooded land.
Threshold	1
Notification	ERROR

1.A2a.3	
Rule number	1.A2b.3
Coded format	STK_CL = STK_OP + NAI - RMOV - LOSS + REVAL + RCLAS + BAL
Description	The data on stock of timber on wooded land (in million national currency) reported for stock 'Closing stocks of timber on wooded land' have to be equal to the sum of the data on timber on wooded land reported for stock/flows 'Opening stocks of timber on wooded land', 'Net increment', 'Revaluation', 'Statistical re-classification' and 'Balancing item' minus 'Removals' and 'Irretrievable losses' for each type of wooded land.
Threshold	1
Notification	ERROR

1.A2b.4	
Rule number	1.A2b.4
Coded format	STK_OP(year n) = STK_CL(year $n-1$)
Description	The data on timber on wooded land (in million national currency) reported for stock 'Opening stocks of timber on wooded land' for year n has to be equal to the data on timber on wooded land (in million national currency) reported for stock 'Closing stocks of timber on wooded land' for year $n-1$ for each type of wooded land.
Threshold	1
Notification	ERROR

Table B1 Economic aggregates of the forestry and logging industry (excluding other industries)

1.B1.1	
Rule number	1.B1.1
Coded format	$P1 = P1_GD + P1_SERV + P1_SEC + P1_O$
Description	The data reported for economic aggregate 'Total output (at basic prices) [P.1]' have to be equal to the sum of the data reported for economic aggregates 'Output of 'Goods characteristic of the forestry and logging activity'', 'Output of 'Services characteristic of the forestry and logging activity'', 'Output of 'Other products from connected secondary activities in the local KAU'' and 'Output of 'Other products''.
Threshold	1
Notification	ERROR

1.B1.2	
Rule number	1.B1.2
Coded format	$P12 \leq P1$
Description	The data reported for economic aggregate 'Output for own final use [P.12]' have to be less than or equal to the data reported for economic aggregate 'Total output (at basic prices) [P.1]'.
Threshold	1
Notification	ERROR

1.B1.3	
Rule number	1.B1.3
Coded format	$P1_GD = P1_TR_PL + P1_RW + P1_NW$
Description	The data reported for economic aggregate 'Output of 'Goods characteristic of the forestry and logging activity' have to be equal to the sum of the data reported for economic aggregates 'Output of 'Trees, tree plants and forest tree seeds'', 'Output of 'Wood in the rough (02.20.1)'' and 'Output of 'Non-wood products (02.30)''.
Threshold	1
Notification	ERROR

1.B1.4

Rule number	1.B1.4
Coded format	$P1_TR_PL = P1_PL + P1_TR$
Description	The data reported for economic aggregate 'Output of 'Trees, tree plants and forest tree seeds' have to be equal to the sum of the data reported for economic aggregates 'Output of 'Live forest tree plants (02.10.11) and tree seeds (02.10.12)' and 'Output of 'Forest trees (02.10.30)'".
Threshold	1
Notification	ERROR

1.B1.5

Rule number	1.B1.5
Coded format	$P1_RW = P1_RWF + P1_RWIN$
Description	The data reported for economic aggregate 'Output of 'Wood in the rough (02.20.1)' have to be equal to the sum of the data reported for economic aggregates 'Output of 'Logs" and 'Output of 'Fuel wood (02.20.14 and 02.20.15)'".
Threshold	1
Notification	ERROR

1.B1.6

Rule number	1.B1.6
Coded format	$P2 = P2_GD + P2_SERV + P2_O$
Description	The data reported for economic aggregate 'Total intermediate consumption [P.2]' have to be equal to the sum of the data reported for economic aggregates 'Goods input', 'Services input' and 'Other goods and services used as inputs'.
Threshold	1
Notification	ERROR

1.B1.7

Rule number	1.B1.7
Coded format	$P2_GD = P2_TR_PL + P2_NRG + P2_FERT + P2_PPP$
Description	The data reported for economic aggregate 'Goods input' have to be equal to the sum of the data reported for economic aggregates 'Trees, tree plants and forest tree seeds' as inputs', 'Energy, lubricants' as inputs', 'Fertilisers and soil improvers' as inputs' and 'Plant protection products and pesticides' as inputs'.
Threshold	1
Notification	ERROR

1.B1.8

Rule number	1.B1.8
Coded format	$P2_SERV = P2_FL + P2_MREQ + P2_MBL + P2_FISIM$
Description	The data reported for economic aggregate 'Services input' have to be equal to the sum of the data reported for economic aggregates 'Services characteristic of the forestry and logging activity' as inputs', 'Regular maintenance and repair of equipment' as inputs', 'Maintenance of buildings' as inputs' and 'Financial services (FISIM) [P.119]' as inputs'.
Threshold	1
Notification	ERROR

1.B1.9

Rule number	1.B1.9
Coded format	$B1G = P1 - P2$
Description	The data reported for economic aggregate 'Gross value added [B.1g]' have to be equal to the data reported for economic aggregate 'Total output (at basic prices) [P.1]' minus the data reported for economic aggregate 'Total intermediate consumption [P.2]'.
Threshold	1
Notification	ERROR

1.B1.10

Rule number	1.B1.10
Coded format	$B1N = B1G - P51C$
Description	The data reported for economic aggregate 'Net value added [B.1n]' have to be equal to the data reported for economic aggregate 'Gross value added [B.1g]' minus the data reported for economic aggregate 'Consumption of fixed capital [P.51c]'.
Threshold	1
Notification	ERROR

1.B1.11

Rule number	1.B1.11
Coded format	$FI = B1N - D29 + D39$
Description	The data reported for economic aggregate 'Factor income' have to be equal to the data reported for economic aggregate 'Net value added (at basic prices) [B.1n]' minus the data reported for economic aggregate 'Other taxes on production [D.29]' plus the data reported for economic aggregate 'Other subsidies on production [D.39]'.
Threshold	1
Notification	ERROR

1.B1.12

Rule number	1.B1.12
Coded format	$B2A3N = FI - D1$
Description	The data reported for economic aggregate 'Net operating surplus [B.2n]' and 'Mixed income [B.3n]' have to be equal to the data reported for economic aggregate 'Factor income' minus the data reported for economic aggregate 'Compensation of employees [D.1]'.
Threshold	1
Notification	ERROR

1.B1.13

Rule number	1.B1.13
Coded format	$B4N = B2A3N + D4$
Description	The data reported for economic aggregate 'Net entrepreneurial income [B.4n]' have to be equal to the sum of the data reported for economic aggregates 'Net operating surplus [B.2n] and Mixed income [B.3n]' and 'Net property income [D.4]'.
Threshold	1
Notification	ERROR

1.B1.14

Rule number	1.B1.14
Coded format	$P51G = P51G_PRP + P51G_EQ + P51G_BL + P51G_O$
Description	The data reported for economic aggregate 'Gross fixed capital formation (excluding deductible VAT) [P.51g]' have to be equal to the sum of the data reported for economic aggregates gross fixed capital formation in 'Plant resources yielding repeat products', 'Machinery and equipment', 'Buildings, structures and land improvements' and 'Other GFCF'.
Threshold	1
Notification	ERROR

1.B1.15

Rule number	1.B1.15
Coded format	$P51N = P51G - P51C$
Description	The data reported for economic aggregate 'Net fixed capital formation (excluding deductible VAT) [P.51n]' have to be equal to the data reported for economic aggregate 'Gross fixed capital formation (excluding deductible VAT) [P.51g]' minus the data reported for economic aggregate 'Consumption of fixed capital [P.51c]'.
Threshold	1
Notification	ERROR

1.B1.16

Rule number	1.B1.16
Coded format	$P52 = P52_PRO + P52_O$
Description	The data reported for economic aggregate 'Changes in inventories [P.52]' have to be equal to the sum of the data reported for economic aggregates 'Work-in-progress on cultivated biological assets (AN.1221)' and 'Other changes in inventories'.
Threshold	1
Notification	ERROR

1.B1.17

Rule number	1.B1.17
Coded format	$P52_PRO < P1_TR^6$
Description	The value reported for economic aggregate 'Work-in-progress on cultivated biological assets (AN.1221)' should be less than the value reported for economic aggregate 'Output of 'Forest trees (02.10.30)''.
Threshold	1
Notification	WARNING

1.B1.18

Rule number	1.B1.18
Coded format	$SELF \leq EMP$
Description	The data reported for 'Self-employed labour input' have to be less than or equal to the data reported for 'Total labour input [L]'.
Threshold	1
Notification	ERROR

⁶ This reflects the most likely outcome for all EU Member States for the vast majority of years considering the equation in rule '2.B1(xA2b).1'. and the fact that P1_TR is the sum of the value of NAI in FAWS (dominant part) and the value of removals in FNAWS (minor share).

1.B1.19

Rule number	1.B1.19
Coded format	D1 <= FI
Description	The data reported for economic aggregate 'Compensation of employees [D.1]' should be less than or equal to the data reported for economic aggregate 'Factor income'.
Threshold	1
Notification	WARNING

2.B1(xA2b).2

Rule number	2.B1(xA2b).2
Coded format	P1_TR(B1) >= NAI(FAWS)(A2b)
Description	The data reported for economic aggregate 'Output of 'Forest trees (02.10.30)' in Table B1 should be higher than or equal to the data reported for flow of timber on wooded land (in million national currency) 'Net increment' for type of wooded land 'Forest available for wood supply' in Table A2b.
Threshold	1
Notification	WARNING

Table B2 - Output of the forest and logging industry by type

1.B2.1	
Rule number	1.B2.1
Coded format	$P11 = P1 - P12 - P13$
Description	The data reported for economic aggregate 'Market output' have to be equal to the data reported for economic aggregate 'Total output' minus the data reported for economic aggregate 'Output for own final use' minus the data reported for economic aggregate 'Non-market output'.
Threshold	1
Notification	ERROR

1.B2.2	
Rule number	1.B2.2
Coded format	$P1_S14 \leq P1$
Description	The data reported for economic aggregate 'Output of Households' have to be less than or equal to the data reported for economic aggregate 'Total output'.
Threshold	1
Notification	ERROR

2.B2(xB1).1	
Rule number	2.B2(xB1).1
Coded format	$P12(B2) = P12(B1)$
Description	The data reported for economic aggregate 'Output for own final use' in Table B2 have to be equal to the data reported for economic aggregate 'Output for own final use [P.12]' in Table B1.
Threshold	1
Notification	ERROR

2.B2(xB1).2	
Rule number	2.B2(xB1).2
Coded format	$P1(B2) = P1(B1)$
Description	The data reported for economic aggregate 'Total output' in Table B2 have to be equal to the data reported for economic aggregate 'Total output (at basic prices) [P.1]' in Table B1.
Threshold	1
Notification	ERROR

Table B3a - Supply of wood in the rough by all industries, in million national currency

1.B3a.1	
Rule number	1.B3a.1
Coded format	$TOTAL(SUP) = A02(SUP) + TOT_X_A02(SUP)$
Description	The data reported for economic aggregate 'Supply of products by industries' have to be equal to the sum of the data reported for economic aggregates 'Supply of products by 'Forestry and logging industry (Division 02)'' and 'Supply of products by 'Other industries (if any)''.
Threshold	1
Notification	ERROR

1.B3a.2	
Rule number	1.B3a.2
Coded format	$TS_BP = TOTAL(SUP) + P7$
Description	The data reported for economic aggregate 'Total supply (at basic prices)' have to be equal to the sum of the data reported for economic aggregates 'Supply of products by industries' and 'Imports (CIF)'.
Threshold	1
Notification	ERROR

1.B3a.3	
Rule number	1.B3a.3
Coded format	$TS_PP = TS_BP + OTTM + D21X31$
Description	The data reported for economic aggregate 'Total supply (at purchasers' prices)' have to be equal to the sum of the data reported for economic aggregates 'Total supply (at basic prices)', 'Trade and transport margins' and 'Taxes less subsidies on products'.
Threshold	0
Notification	ERROR

2.B3(xB1).1

Rule number	2.B3(xB1).1
Coded format	$P1_RW(B1) = A02(SUP)(B3a) - A02(USE)(B3b)$
Description	The data reported for economic aggregate 'Output of 'Wood in the rough (02.20.1)' in Table B1 has to be equal to the data reported for economic aggregate 'Supply of products by 'Forestry and logging industry (Division 02)" in Table B3a minus the data reported for economic aggregate 'Use of products by 'Forestry and logging industry (Division 02)" in Table B3b.
Threshold	1
Notification	ERROR

Table B3b - Use of wood in the rough by all industries, in million national currency

1.B3b.1	
Rule number	1.B3b.1
Coded format	TOTAL(USE) = A02(USE) + TOT_X_A02(USE)
Description	The data reported for economic aggregate 'Use of products by industries' have to be equal to the sum of the data reported for economic aggregates 'Use of products by 'Forestry and logging industry (Division 02)' and 'Use of products by 'Other industries (if any)'".
Threshold	1
Notification	ERROR

1.B3b.2	
Rule number	1.B3b.2
Coded format	TU_PP = TOTAL(USE) + P3 + P5 + P6
Description	The data reported for economic aggregate 'Total use (at purchasers' prices)' have to be equal to the sum of the data reported for economic aggregates 'Use of products by industries', 'Final Consumption', 'Capital formation' and 'Exports (FOB)'. The data reported for economic aggregate 'Total use (at purchasers' prices)' have to be equal to the sum of the data reported for economic aggregates 'Use of products by industries', 'Final Consumption', 'Capital formation' and 'Exports (FOB)'.
Threshold	1
Notification	ERROR

2.B3b(xB3a).1	
Rule number	2.B3b(xB3a).1
Coded format	TU_PP(B3b) = TS_PP(B3a)
Description	The data reported for economic aggregate 'Total use (at purchasers' prices)' in Table B3b have to be equal to the data reported for economic aggregate 'Total supply (at purchasers' prices)' in Table B3a.
Threshold	1
Notification	ERROR

Table C1a - Supply of wood in the rough by all industries, in 1000 m³ over bark

1.C1a.1	
Rule number	1.C1a.1
Coded format	$RW = RW_IN + RW_FW$
Description	The data reported for type of product 'Wood in the rough (02.20.1)' have to be equal to the sum of the data reported for types of product 'Logs' and 'Fuel wood' for each component of the supply of products.
Threshold	1
Notification	ERROR

1.C1a.2	
Rule number	1.C1a.2
Coded format	$RW_IN = RW_IN_C + RW_IN_NC + RW_IN_TNC$
Description	The data reported for type of product 'Logs' have to be equal to the sum of the data reported for types of product 'Coniferous wood (02.20.11)', 'Non-coniferous wood, except tropical wood (02.20.12)' and 'Tropical wood (02.20.13)' for each component of the supply of products.
Threshold	1
Notification	ERROR

1.C1a.3	
Rule number	1.C1a.3
Coded format	$RW_FW = RW_FW_C + RW_FW_NC$
Description	The data reported for type of product 'Fuel wood' have to be equal to the sum of the data reported for types of product 'Fuel wood of coniferous wood (02.20.14)' and 'Fuel wood of non-coniferous wood (02.20.15)' for each component of the supply of products.
Threshold	1
Notification	ERROR

1.C1a.4

Rule number	1.C1a.4
Coded format	TOTAL(SUP) = A02(SUP) + TOT_X_A02(SUP)
Description	The data reported for 'Supply of products by industries' have to be equal to the sum of the data reported for 'Supply of products by 'Forestry and logging industry (Division 02)'' and 'Supply of products by 'Other industries (if any)'' for each type of product.
Threshold	1
Notification	ERROR

1.C1a.5

Rule number	1.C1a.5
Coded format	TS = TOTAL(SUP) + P7
Description	The data reported for 'Total supply' have to be equal to the sum of the data reported for 'Supply of products by industries' and 'Imports' for each type of product.
Threshold	1
Notification	ERROR

2.C1a(xA2a).1

Rule number	2.C1a(xA2a).1
Coded format	RW(A02)(C1a) = RMOV(FAWS + FNAWS + OWL)(A2a)
Description	The data reported for 'Supply of products by 'Forestry and logging industry (Division 02)'' for type of product 'Wood in the rough (02.20.1)' in Table C1a have to be equal to the sum of the data reported for flow of timber on wooded land (in 1000 m ³ over bark) 'Removals' for types of wooded land 'Forest available for wood supply', 'Forest not available for wood supply' and 'Other wooded land' in Table A2a.
Threshold	1
Notification	ERROR

Table C1b - Use of wood in the rough by all industries, in 1000 m³ over bark

1.C1b.1	
Rule number	1.C1b.1
Coded format	$RW = RW_IN + RW_FW$
Description	The data reported for type of product 'Wood in the rough (02.20.1)' have to be equal to the sum of the data reported for types of product 'Logs' and 'Fuel wood' for each component of the use of products.
Threshold	1
Notification	ERROR

1.C1b.2	
Rule number	1.C1b.2
Coded format	$RW_IN = RW_IN_C + RW_IN_NC + RW_IN_TNC$
Description	The data reported for type of product 'Logs' have to be equal to the sum of the data reported for types of product 'Coniferous wood (02.20.11)', 'Non-coniferous wood, except tropical wood (02.20.12)' and 'Tropical wood (02.20.13)' for each component of the use of products.
Threshold	1
Notification	ERROR

1.C1b.3	
Rule number	1.C1b.3
Coded format	$RW_FW = RW_FW_C + RW_FW_NC$
Description	The data reported for type of product 'Fuel wood' have to be equal to the sum of the data reported for types of product 'Fuel wood of coniferous wood (02.20.14)' and 'Fuel wood of non-coniferous wood (02.20.15)' for each component of the use of products.
Threshold	1
Notification	ERROR

1.C1b.4

Rule number	1.C1b.4
Coded format	TOTAL(USE) = A02(USE) + TOT_X_A02(USE)
Description	The data reported for 'Use of products by industries' have to be equal to the sum of the data reported for 'Use of products by 'Forestry and logging industry (Division 02)'' and 'Use of products by 'Other industries (if any)'' for each type of product.
Threshold	1
Notification	ERROR

1.C1b.5

Rule number	1.C1b.5
Coded format	TU = TOTAL(USE) + P3_P5 + P6
Description	The data reported for 'Total use' have to be equal to the sum of the data reported for 'Use of products by industries', 'Final consumption and capital formation' and 'Exports' for each type of product.
Threshold	1
Notification	ERROR

2.C1b(xC1a).5

Rule number	2.C1b(xC1a).1
Coded format	TU(C1b) = TS(C1a)
Description	The data reported for 'Total use' in Table C1b have to be equal to the data reported for 'Total supply' in Table C1a for each type of product.
Threshold	1
Notification	ERROR

Annex 2 – EFA Validation rules – methodologically advanced plausibility checks

All tables

2.ALLTABLES.1 – consistency across time

Rule number	2.ALLTABLES.1
Description	Time series checks for two consecutive years ($n, n-1$) for all cells of each data table, except for the balancing item in Tables A, in percentages.
Threshold	<p>Table A1a: 20% for all variables except for:</p> <ul style="list-style-type: none"> • 5% for STK_OP and STK_CL for FOREST and FAWS ; • 10% for STK_OP and STK_CL for FNAWS • 10% for increase for FOREST and FAWS • 500% for RCLAS <p>Table A1b: 20% for all variables except for:</p> <ul style="list-style-type: none"> • 500% for RCLAS and REVAL <p>Table A2a: 20% for all variables except for:</p> <ul style="list-style-type: none"> • 5% for STK_OP and STK_CL for FOREST and FAWS ; • 10% for STK_OP and STK_CL for FNAWS • 10% for NAI for FOREST and FAWS • 500% for RCLAS and LOSS <p>Table A2b: 20% for all variables except for:</p> <ul style="list-style-type: none"> • 500% for LOSS, RCLAS and REVAL <p>Tables B2: 20% for all variables except for:</p> <ul style="list-style-type: none"> • 500% for P12 <p>Tables B3 and C: 20% for all variables.</p>
<i>(the table continues with checks for EFA Table B1 on the next page)</i>	

Thresholds for Table B1	1	Total output (at basic prices) [P.1]	20%
	1.0	Of which output for own final use [P.12]	500%
	1.1	Goods characteristic of the forestry and logging activity	20%
	1.1.1	Trees, tree plants and forest tree seeds	20%
	1.1.1.1	Live forest tree plants (02.10.11) and tree seeds (02.10.12)	500%
	1.1.1.2	Forest trees (02.10.30)	20%
	1.1.2	Wood in the rough (02.20.1)	20%
	1.1.2.1	Logs	20%
	1.1.2.2	Fuel wood (02.20.14 and 02.20.15)	20%
	1.1.4	Non-wood products (02.30)	500%
	1.2	Services characteristic of the forestry and logging activity	20%
	1.3	Other products from connected secondary activities in the local KAU	30%
	1.4	Other products	500%
	2	Total intermediate consumption [P.2]	20%
	2.1	Goods input	20%
	2.1.1	Trees, tree plants and forest tree seeds	20%
	2.1.2	Energy, lubricants	30%
	2.1.3	Fertilisers and soil improvers	500%
	2.1.4	Plant protection products and pesticides	500%
	2.2	Services input	20%
	2.2.1	Services characteristic of the forestry and logging activity	20%
	2.2.2	Regular maintenance and repair of equipment	500%
	2.2.3	Maintenance of buildings	500%
	2.2.4	Financial services (FISIM) [P.119]	500%
2.3	Other goods and services used as inputs	500%	
3	Gross value added [B.1g]	20%	
3.1	Consumption of fixed capital [P.51c]	20%	
3.2	Net value added [B.1n]	None	
3.2.1	Other taxes on production [D.29]	30%	
3.2.2	Other subsidies on production [D.39]	30%	
4	Factor income	20%	
4.1	Compensation of employees [D.1]	20%	
5	Net operating surplus [B.2n] and Mixed income [B.3n]	None	
5.1	Net property income [D.4]	500%	
5.2	Net entrepreneurial income [B.4n]	None	
6	Gross fixed capital formation (excluding deductible VAT)	20%	

	6.1	Planting of trees to provide regular income	500%
	6.2	Equipment and buildings	500%
	6.3	Other GFCF	None
	7	Net fixed capital formation (excluding deductible VAT)	None
	8	Changes in inventories [P.52]	None
	8.1	Work-in-progress on cultivated biological assets	20%
	8.2	Other changes in inventories	None
	9	Capital transfers (net) [D.9]	30%
	10	Total labour input [L] (in 1000 AWU)	20%
	10.1	Of which self-employed (in 1000 AWU)	20%
Notification	WARNING - if the difference > or equal to the established threshold		

Table A1a - Area of wooded land, in 1000 ha

4.A1a(x'for_area').1 – Consistency with FAO – FRA data– forest area	
Rule number	4.A1a(x'for_area').1
Coded format	STK_OP(A1a) = (+/- 5%) Area of wooded land (Eurobase 'for_area')
Description	The data on stock of wooded land area (in 1000 ha) reported for stock 'Opening area of wooded land' for types of wooded land 'Forest', 'Forest available for wood supply' and 'Other wooded land' have to be close to the data reported on area of wooded land in Eurobase table ' for_area ' (FAO – FRA data) for the same types of wooded land.
Threshold	5%
Notification	WARNING - if the difference > 5%

Table A2a - Timber on wooded land, in 1000 m³ over bark

4.A2a(x'for_vol').1 – Consistency with FAO – FRA data – timber volume	
Rule number	4.A2a(x'for_vol').1
Coded format	STK_OP(A2a) = (-10%+20%) Growing stock of timber (Eurobase 'for_vol')
Description	The data on timber on wooded land (in 1000 m ³ over bark) reported for stock 'Opening stocks of timber on wooded land' for types of wooded land 'Forest', 'Forest available for wood supply' and 'Other wooded land' have to be close to the data reported on volume of timber in Eurobase table ' for_vol ' (FAO – FRA data) for the growing stock of the same types of wooded land.
Threshold	Between -10% and +20%
Notification	WARNING - if the difference is outside the indicated range

4.A2a(x'for_remov').3 – Consistency with JFSQ data – removals

Rule number	4.A2a(x'for_remov').3
Coded format	$RMOV(OR+OWL+OLWTC_AWS; FAWS+OWL+OLWTC_AWS)(A2a) = (+/- 20\%) RW(OVBK \text{ or } (UNBK + 10\%))(Eurobase \text{ 'for_remov'})$
Description	The data on timber on wooded land (in 1000 m ³ over bark) reported for 'Removals' for types of wooded land 'Forest' plus 'Other wood land' plus 'Other land with tree cover' and 'Forest available for wood supply' plus 'Other wood land' plus 'Other land with tree cover' have to be close to the data on roundwood removals in Eurobase table 'for_remov' (JFSQ data).
Threshold	20% for OVBK or (UNBK + 10%)
Notification	WARNING - if the difference is > indicated thresholds

Table C1a - Supply of wood in the rough by all industries, in 1000 m³ over bark

4.C1a(x'for_remov').1 – Consistency with JFSQ data – removals

Rule number	4.C1a(x'for_remov').1
Coded format	$RW(A02; TOTAL)(C1a) = (+/- 20\%) RW(OVBK \text{ or } (UNBK + 10\%))(Eurobase \text{ 'for_remov'})$
Description	The data on physical supply of wood in the rough reported for economic aggregates 'Supply of products by 'Forestry and logging industry (Division 02)'' and 'Supply of products by industries' for type of product 'Wood in the rough (02.20.1)' have to be close to the data reported on roundwood removals in Eurobase table 'for_remov' (JFSQ data).
Threshold	20% for OVBK or (UNBK + 10%)
Notification	WARNING - if the difference is > indicated thresholds

Annex 3 – EFA Validation rules – plausibility checks under development

Table B1 Economic aggregates of the forestry and logging industry (excluding other industries)

1.B1.21 – Share of ‘other P1’ in total P1	
Rule number	1.B1.21
Coded format	$P1_O(B1) < 20\% P1(B1)$
Description	The data reported for economic aggregate ‘Other products’ should not exceed 20% of item ‘Total output (at basic prices) [P.1]’.
Threshold	0
Notification	WARNING - if the share $\geq 20\%$

1.B1.22 – Share of ‘other P2’ in total P2	
Rule number	1.B1.22
Coded format	$P2_O(B1) < 20\% P2(B1)$
Description	The data reported for economic aggregate ‘Other goods and services used as inputs’ should not exceed 20% of item ‘Total intermediate consumption [P.2]’.
Threshold	0
Notification	WARNING - if the share $\geq 20\%$

1.B1.23 – Share of ‘other GFCF’ in total GFCF	
Rule number	1.B1.23
Coded format	$P51G_O(B1) < 20\% P51G(B1)$
Description	The data reported for economic aggregate ‘Other GFCF’ should not exceed 20% of item ‘Gross fixed capital formation (excluding deductible VAT) [P.51g]’.
Threshold	0
Notification	WARNING - if the share $\geq 20\%$

2.B1(A2b).1

Rule number	2.B1(xA2b).1
Coded format	$P52_PRO(B1) = (NAI(FAWS + OWL_AWS) - RMOV(FAWS + OWL_AWS))(A2b)$
Description	The data reported for economic aggregate 'Work-in-progress on cultivated biological assets [AN.1221]' in Table B1 should be equal to the data reported for flows of timber on wooded land (in million national currency) 'Net increment of 'Forest available for wood supply" plus 'Net increment of 'Other wooded land available for wood supply" minus 'Removals of 'Forest available for wood supply" minus 'Removals of 'Other wooded land available for wood supply" in Table A2b.
Threshold	1
Notification	WARNING

4.B1(x'nama_10_a64').1 – Consistency with national accounts

Rule number	4.B1(x'nama_10_a64').1
Coded format	$P1(B1) = (+/- 20\%) P1(A02)(nama_10_a64)$
Description	The data reported for economic aggregate 'Total output (at basic prices) [P.1]' have to be close to the data reported for 'Output' in national accounts published in Eurobase table ' nama_10_a64 '.
Threshold	20%
Notification	WARNING - if the difference > 20%

4.B1(x'nama_10_a64').2 – Consistency with national accounts

Rule number	4.B1(x'nama_10_a64').2
Coded format	$P2(B1) = (+/- 20\%) P2(A02)(Eurobase\ nama_10_a64)$
Description	The data reported for economic aggregate 'Total intermediate consumption [P.2]' have to be close to the data reported for 'Intermediate consumption' in Eurobase table ' nama_10_a64 '.
Threshold	20%
Notification	WARNING - if the difference > 20%

4.B1(x'nama_10_a64').3 – Consistency with national accounts

Rule number	4.B1(x'nama_10_a64').3
Coded format	$B1G(B1) = (+/- 20\%) B1G(A02)(Eurobase\ nama_10_a64)$
Description	The data reported for economic aggregate 'Gross value added [B.1g]' have to be close to the data reported for 'Value added, gross' in Eurobase table ' nama_10_a64 '.
Threshold	20%
Notification	WARNING - if the difference > 20%

4.B1(x'nama_10_a64').4 – Consistency with national accounts

Rule number	4.B1(x'nama_10_a64').4
Coded format	$P51C(B1) = (+/- 20\%) P51C(A02)(Eurobase\ nama_10_a64)$
Description	The data reported for economic aggregate 'Consumption of fixed capital [P.51c]' have to be close to the data reported for 'Consumption of fixed capital' in Eurobase table ' nama_10_a64 '.
Threshold	20%
Notification	WARNING - if the difference > 20%

4.B1(x'nama_10_a64').5 – Consistency with national accounts

Rule number	4.B1(x'nama_10_a64').5
Coded format	$B1N(B1) = (+/- 20\%) (B1G - P51C)(A02)(Eurobase\ nama_10_a64)$
Description	The data reported for economic aggregate 'Net value added [B.1n]' have to be close to the data reported for 'Value added, gross' minus the data reported for 'Consumption of fixed capital' in Eurobase table ' nama_10_a64 '.
Threshold	20%
Notification	WARNING - if the difference > 20%

4.B1(x'nama_10_a64').6 – Consistency with national accounts

Rule number	4.B1(x'nama_10_a64').6
Coded format	$D29(B1) - D39(B1) = (+/- 20\%) D29X39(A02)(Eurobase\ nama_10_a64)$
Description	The data reported for economic aggregate 'Other taxes on production [D.29]' minus the data reported for 'Other subsidies on production [D.39]' have to be close to the data reported for 'Other taxes less other subsidies on production' in Eurobase table ' nama_10_a64 '.
Threshold	20%
Notification	WARNING - if the difference > 20%

4.B1(x'nama_10_a64').7 – Consistency with national accounts

Rule number	4.B1(x'nama_10_a64').7
Coded format	$D1(B1) = (+/- 20\%) D1(A02)$ (Eurobase nama_10_a64)
Description	The data reported for economic aggregate 'Compensation of employees [D.1]' have to be close to the data reported for 'Compensation of employees' in Eurobase table ' nama_10_a64 '.
Threshold	20%
Notification	WARNING - if the difference > 20%

4.B1(x'nama_10_a64').8 – Consistency with national accounts

Rule number	4.B1(x'nama_10_a64').8
Coded format	$B2A3N(B1) = (+/- 20\%) B2A3N(A02)$ (Eurobase nama_10_a64)
Description	The data reported for economic aggregate 'Net operating surplus [B.2n] and Mixed income [B.3n]' have to be close to the data reported for 'Operating surplus and mixed income, net' in Eurobase table ' nama_10_a64 '.
Threshold	20%
Notification	WARNING - if the difference > 20%

4.B1(x'nama_10_a64_e').9 – Consistency with national accounts

Rule number	4.B1(x'nama_10_a64_e').9
Coded format	$EMP(B1) = (+/- 20\%) EMP_DC(A02)$ (Eurobase nama_10_a64_e)
Description	The data reported for economic aggregate 'Total labour input [L] (in 1000 AWU)' have to be close to the data reported for 'Total employment domestic concept' in Eurobase table ' nama_10_a64_e '.
Threshold	20%
Notification	WARNING - if the difference > 20%

4.B1(x'nama_10_a64_e').10 – Consistency with national accounts

Rule number	4.B1(x'nama_10_a64_e').10
Coded format	$SELF(B1) = (+/- 20\%) SELF_DC(A02)$ (Eurobase nama_10_a64_e)
Description	The data reported for economic aggregate 'Self-employed (in 1000 AWU)' have to be close to the data reported for 'Self-employed domestic concept' in Eurobase table ' nama_10_a64_e '.
Threshold	20%
Notification	WARNING - if the difference > 20%

Annex 4 – Validation tools for EFA and error reporting to countries

Validation tool: Built-in macro functions in the EFA questionnaire – pre-validation by countries via button ‘Validate questionnaire’

Summary	This step is to be performed by countries (or a similar, alternative way of pre-validation is to be conducted if macro functions cannot be executed) before the questionnaire is submitted to Eurostat.
Rules details	<p>The following rules from Annex 1a of this document:</p> <p>Rule 0.GETTING STARTED.1 (contact details): The cells designated to include compilers’ ‘Name’, ‘Institution’ and ‘e-mail’ must not be blank.</p> <p>Rule 0.ALLTABLES.1 (country): The content of cells designated for the code of the reporting country must be equal to one of the 2-letter country codes used by the EU.</p> <p>Rule 0.ALLTABLES.2 (year): The content of cells designated for the reference year must be filled in with a valid reference year.</p> <p>Rule 0.ALLTABLES.4 (flags): The content of cells designated for flags and footnotes must not differ from predefined entries (i.e. ‘b’, ‘e’, ‘p’ for cells for standard footnotes and ‘a number’ for cells for country-specific footnotes).</p> <p>Rule 0.ALLTABLES.6 (negative): The content of the cell after rounding to 0 decimal places must not be a negative number; this applies to reporting items listed in the description of this rule in Annex 1a.</p> <p>All rules from Annex 1b of this document, except for Rules comparing the closing and opening stocks of two consecutive years (all EFA tables A)</p> <p>Rules comparing data in two different EFA worksheets</p> <p>Rules containing a subtraction</p>
Reporting of issues	Outcomes of pre-validation are shown in the questionnaire in two ways: cells associated with an issue are (i) shown as red and (ii) listed in the ‘ErrorLog’ worksheet.
Required action by countries	Identified issues must be corrected before submitting the dataset via EDAMIS.

Consequence of corrections not implemented	<p>In case of a country code or reference year missing (in the cells designated for this purpose), the dataset will be rejected (i.e. it does not reach Eurostat's database and no further examination can be performed).</p> <p>In case of issues that are also covered by the CONtEnt VALidation tool (see below), the dataset will be rejected (i.e. it does not reach Eurostat's database and no further examination can be performed).</p> <p>In case of issues that are also covered by the SQL-based validation tool, these will be reported to the country in the html-validation report (see below for further steps).</p>
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Validation tool: STRUctural VALidation tool

Summary	<p>This step takes place automatically upon the submission of data by countries via EDAMIS to Eurostat. Errors of this kind should not occur unless countries have manipulated the questionnaire structure, deleted codes or formulas copying country code or the reference year from the 'GETTING STARTED' cover sheet to the data-reporting sheets⁷, or copy-pasted items beyond reporting cells.</p>
Rule details	<ul style="list-style-type: none"> • Correctness of the data structure (using predefined codes for data dimensions) <p>The following rules from Annex 1a of this document:</p> <p>Rule 0.ALLTABLES.1 (country): The content of cells designated for the code of the reporting country must be equal to one of the 2-letter country codes used by the EU.</p> <p>Rule 0.ALLTABLES.2 (year): The content of cells designated for the reference year must be filled in with a valid reference year.</p> <p>Rule 0.ALLTABLES.4 (flags): The content of cells designated for flags and footnotes must not differ from predefined entries (i.e. 'b', 'e', 'p' for cells for standard footnotes and 'a number' for cells for country-specific footnotes).</p> <p>Rule 0.ALLTABLES.5 (number): The content of cells designated for data must be a number.</p>
Reporting of issues	<p>Outcomes of this validation step are summarized in the automated message sent to the compiler via EDAMIS containing text either 'STRUVAL validation successful' or 'STRUVAL validation failed'. Error details are available in the STRUVAL report accessible from the STRUVAL summary report.</p>

⁷ The questionnaire is locked to reduce the risk of these issues occurring.

Required action by countries	Countries must not manipulate the structure of the questionnaire. This means adding or removing rows or columns in the reporting table, deleting hidden codes (which serve for structural validation and upload to Eurostat's internal database), or deleting formulas that copy the country code and reference year from the 'GETTING STARTED' cover sheet to the data-reporting sheets.
Consequence of corrections not implemented	Dataset is rejected (i.e. it does not reach Eurostat's database and no further examination can be performed).

Validation tool: CONtent VALidation tool⁸

Summary	This step takes place automatically upon the submission of data by countries via EDAMIS to Eurostat. It is implemented for a subset of rules listed in Annex 1a of this document.
Rule details	<p>Rule 0.ALLTABLES.3 (year): The reference year entered in the cells designated for the reference year must be equal to the reference year entered in the EDAMIS submission system, i.e. the one appearing in the EDAMIS file name 'EFA_ACC_A_xx_XXXX_0000_V000x'.</p> <p>Rule 0.ALLTABLES.6 (negative): The content of the cell after rounding to 0 decimal places must not be a negative number; this applies to reporting items listed in the description of this rule in Annex 1a.</p>
Reporting of issues	Outcomes of this validation step are summarized in the automated message sent to the compiler via EDAMIS containing text either 'CONVAL validation successful' or 'CONVAL validation failed'. Error details are available in the CONVAL report accessible from the EDAMIS summary report.
Required action by countries	Identified errors must be corrected.
Consequence of corrections not implemented	Dataset is rejected (i.e. it does not reach Eurostat's database and no further examination can be performed).

⁸ Currently, for EFA, this step is limited to a small number of simple checks performed automatically before the data reach the database so that countries can correct these upfront and so that the number of exchanges between country compilers and Eurostat validators is reduced. The vision for the future is that the checks currently performed in Eurostat's internal database using SQL will be performed by the CONVAL tool, as it is done for advanced domains of statistics. (i.e. the step of SQL-based validation in Eurostat's internal database will be discontinued/converted to the above.)

Validation tool: Database validation (in Eurostat's internal database)

Summary	This step takes place after the data had been loaded to Eurostat's internal database (i.e. after a successful validation by the STUctural VALidation and CONtent VALidaton tools). The SQL-based validation comprises (i) internal consistency check of EFA within and between EFA tables; (ii) methodologically advanced plausibility checks examining plausibility of the time-series and consistency with other datasets from related domains (JFSQ and FAO – FRA); and (iii) plausibility checks under development, in particular comparison with National accounts data, listed in Annexes 1b, 2 and 3 of this document, respectively.
Rules details	All rules included in Annexes 1b, 2 and 3 of this document ⁹ .
Reporting of issues	Outcomes of this validation step are summarized in the html-based validation report sent to countries via EDAMIS channel 'EFA_ACCVR_N'.
Required action by countries	Data points associated with WARNINGS need to be explained and justified. Data points associated with ERRORS need to be corrected. They can be accepted temporarily if the country and Eurostat agree on corrective measures to be implemented in future data collections.
Consequence of corrections not implemented	Data points reported by the html-based validation report as ERRORS may be excluded from publication by Eurostat.

⁹ Note for the WG: this is the 'original' set of validation rules agreed on at the 2019 meeting of the WG.

Annex 5 – Data publication

EFA data are published in Eurobase¹⁰ in the following tables accessible via hyperlinks included in the table codes below. .

Eurobase table <u>'for area efa'</u>	
Based on questionnaire table	Tables A1a and A1b
Dimension used in Eurobase table	GEO, INDIC_FO, STK_FLOW, TIME, UNIT
Variables for dimension 'INDIC_FO'	FOR, FAWS, FNAWS, OWL, OWL_AWS, OLWTC_AWS
Variables for dimension 'STK_FLOW'	STK_OP, STK_CL, INCR, DECR, REVAL, RCLAS, BAL
Variables for dimension 'UNIT'	MIO_EUR, MIO_NAC, THS_HA

Eurobase table <u>'for vol efa'</u>	
Based on questionnaire table	Tables A2a and A2b
Dimension used in Eurobase table	GEO, INDIC_FO, STK_FLOW, TIME, UNIT
Variables for dimension 'INDIC_FO'	FOR, FAWS, FNAWS, OWL, OWL_AWS, OLWTC_AWS
Variables for dimension 'STK_FLOW'	STK_OP, STK_CL, NAI, RMOV, LOSS, REVAL, RCLAS, BAL
Variables for dimension 'UNIT'	MIO_EUR, MIO_NAC, THS_M3

Eurobase table <u>'for eco cp'</u>	
Based on questionnaire table	Table B1
Dimension used in Eurobase table	FOR_ACC, GEO, TIME, UNIT
Variables for dimension 'FOR_ACC'	P1, P2, B1G, P51C, B1N, D29, D39, FI, D1, B2A3N, D4, B4N, P51G, P51G_PRP, P51G_EQ, P51_BL, P51G_O, P51N, P52, P52_PRO, P52_O, D9
Variables for dimension 'UNIT'	MIO_EUR, MIO_NAC

¹⁰ Eurobase is Eurostat's public database for data dissemination: <https://ec.europa.eu/eurostat/data/database>

Eurobase table 'for sup_cp'

Based on questionnaire table	Table B1
Dimension used in Eurobase table	FOR_ACC, GEO, TIME, UNIT
Variables for dimension 'FOR_ACC'	P1, P12, P1_GD, P1_TR_PL, P1_PL, P1_TR, P1_RW, P1_RFWF, P1_RWIN, P1_NW, P1_SERV, P1_SEC, P1_O, P2, P2_GD, P2_TR_PL, P2_NRG, P2_FERT, P2_PPP, P2_SERV, P2_FL, P2_MREQ, P2_MBL, P2_FISIM, P2_O
Variables for dimension 'UNIT'	MIO_EUR, MIO_NAC

Eurobase table 'for awu'

Based on questionnaire table	Table B1
Dimension used in Eurobase table	GEO, TIME, UNIT, WSTATUS
Variables for dimension 'WSTATUS'	EMP, SELF
Variables for dimension 'UNIT'	THS_AWU

Eurobase table 'for eoutput'

Based on questionnaire table	Table B2
Dimension used in Eurobase table	FOR_ACC, GEO, TIME, UNIT
Variables for dimension 'FOR_ACC'	P1, P11, P12, P13, P1_S14
Variables for dimension 'UNIT'	MIO_EUR, MIO_NAC

Eurobase table 'for emsuw'

Based on questionnaire table	Tables B3a and B3b
Dimension used in Eurobase table	GEO, INDUSE, STK_FLOW, TIME, UNIT
Variables for dimension 'INDUSE'	A02, TOT_X_A02, TOTAL, P7, TS_BP, D21X31, OTTM, TS_PP, P3, P5, P6, TU_PP
Variables for dimension 'STK_FLOW'	SUP, USE

Variables for dimension 'UNIT'	MIO_EUR, MIO_NAC
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Eurobase table 'for epsuw'

Based on questionnaire table	Tables C1a and C1b
Dimension used in Eurobase table	GEO, INDUSE, PROD_WD, STK_FLOW, TIME, UNIT
Variables for dimension 'INDUSE'	A02, TOT_X_A02, TOTAL, P7, TS, P3_P5, P6, TU
Variables for dimension 'PROD_WD'	RW, RW_FW, RW_FW_C, RW_FW_NC, RW_IN, RW_IN_C, RW_IN_NC, RW_IN_TNC
Variables for dimension 'STK_FLOW'	SUP, USE
Variables for dimension 'UNIT'	THS_M3