



# QUALITY REPORT FOR STATISTICAL SURVEY

## PRODUCTION, SALES AND STOCKS OF FOREST ASSORTMENTS IN BOSNIA AND HERZEGOVINA 2014



Bosnia and Herzegovina



Agency for Statistics of  
Bosnia and Herzegovina

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## 1 Introduction to statistical process and its results – Survey methodology

### 1.1 Purpose and periodicals of survey

Statistics of production, sales and stocks of forest assortments has a purpose to determine natural indicators of production and transactions of wood products. Those indicators illustrate dynamics in economical movements of forestry sector in Bosnia and Herzegovina. The survey results are intended for national needs of monitoring economical movements in forestry and determination of participation of forestry sector in Bosnia and Herzegovina GDP. Survey collected data are used in reporting to UN international bodies which in the frame of their activities monitor statistics of forestry and wood processing sector (*UNECE/FAO Forestry and timber section, Eurostat etc.*).

### 1.2 Legal framework and responsibility of statistical institutions

- Law on statistics of Bosnia and Herzegovina and Entity laws on statistics;
- Multiannual statistical programmes and annual working plans of Bosnia and Herzegovina and entities;
- Methodology of Production, sales and stocks of forest assortments survey;
- International recommendations and handbooks (UNECE/FAO/Eurostat/ITTO Joint Forest Sector Questionnaire-JFSQ).

Statistical survey is part of annual working programme of statistical institutions in Bosnia and Herzegovina. The survey is primarily established on the level of entity statistical offices while coordination, compilation of results on state level and international reporting are obligations of Agency for Statistics of Bosnia and Herzegovina. Methodological bases for the statistical survey are product of mutual work of the members of all three statistical institutions in Bosnia and Herzegovina.

### 1.3 Unit of observation

Units of observation are forest public enterprises in Bosnia and Herzegovina or their lower organizational units.

### 1.4 Data collection

The data on quantity of produced and traded forest assortments and on current stocks on monthly level are collected by questionnaire ŠUM-22.

### 1.5 Coverage

The survey has full coverage of units of observation. Quarterly and annual reports on production, sales and stocks of forest assortments in Bosnia and Herzegovina covers all forestry public enterprises or their subordinated organizational units which manage forests on the territory of Bosnia and Herzegovina.

## 1.6 Definitions

*Nomenclature of forest assortments* applied in the survey is based on standards of forest assortments that is used by forest public enterprises in Bosnia and Herzegovina.

Classification covers division on coniferous and non-coniferous (broadleaf) wood and then to larger categories of forest assortments inside the above division. Used nomenclature is harmonized with the needs of national statistical surveys and international reporting from the domain of products of forest exploitation. Definitions used in the survey are given as follows:

**Coniferous** tree species from systematic class of naked-seed plants (Gymnospermae) mostly from Pinaceae tree family. Belong here are commercial domestic or foreign tree species from genera Pinus (pine), Picea (spruce), Abies (fir), Larix (larch), Pseudotsuga (Douglas fir) etc.

**Non-coniferous (broadleaf)** commercial domestic and foreign tree species from systematic class of covered-seed plants (Angiospermae) and genera Quercus (oak), Fagus (beech), noble broadleaf hardwood - genera Fraxinus (ash), Acer (maple), Ulmus (elm), Prunus avium (wild cherry tree) and other hardwood and softwood broadleaves - genera Populus (poplar), Alnus (alder), Carpinus (hornbeam), Tilia (lime) etc.

**Logs** forestry wood products with proper physical and mechanical properties, intended for further mechanical processing (sawing, slicing or peeling).

**Mining wood** include forestry wood products with proper physical and mechanical properties which natural shape, dimensions and properties are used for construction and maintenance of mining pits. It could also be used for roof constructions.

**Other long wood** include technical wood which natural shape, dimensions and properties are used for manufacture of utility poles, scaffold poles, foundation poles, masts etc.

**Cordwood** include wood of bad technical characteristics, round or split, used in chemical processing for production of chemical and mechanical pulp, wooden wool, tannin etc.

**Fuelwood** is wood intended for heating or production of charcoal.

**Other wood, roughly worked** is small technical wood like hop and vine poles, other poles, pickets, sticks, handles, wooden rims, brushwood etc.

## 1.7 Data processing

Data on production, sales and stocks of forest assortments are collected by entity statistical institutions on monthly level. Data are delivered to Agency for Statistics of Bosnia and Herzegovina on quarterly level according to dynamics, established by previously agreed annual „Agency for Statistics of Bosnia and Herzegovina Working Plan“ and by annual working plans of entity statistical institutions. Data and eventual significant differences control are carried out by entity statistical offices in contact with statistical units. BHAS also, following dynamics of changes, perform data control in cooperation with entity statistical offices in case of significant differences in values compared to referent periods on quarterly and annual levels. BHAS carries out monthly production and sales data compilation and calculation of indices. Stocks of

forest assortments are calculated only on annual level in a form of average stocks of particular assortments and their groups during the year.

## 1.8 Publishing results

BHAS publishes results of production and sales of forest assortments by quarterly and annual dynamics. Data about average stocks of forest assortments BHAS publishes only on annual level. Quarterly press releases are published 45 days after the current quarter expired as final results and annual survey in March of current year for previous year.

## 1.9 Key variables

- quantity of produced forest assortments,
- quantity of sold forest assortments,
- average annual stocks of forest assortments.

## 1.10 Key statistics

- quarterly index for production of forest assortments, which shows changes in production related to corresponding quarter in year n-1,
- quarterly index for sales of forest assortments, which shows changes in sales of forest assortments related to corresponding quarter in year n-1,
- annual index for production of forest assortments, which shows changes in production in relation with year n-1,
- annual index for sales of forest assortments, which shows changes in sales in relation with year n-1,
- annual index for average stocks of forest assortments, which shows changes in average stocks during the year in relation with year n-1.

## 1.11 Questionnaire

Questionnaire used for data collection is ŠUM-22.

## 1.12 Contact information

- Boro Kovačević – Senior Advisor for Forestry Statistics in Department for Agriculture, Forestry and Fishery Statistics in Agency for Statistics of Bosnia and Herzegovina ([boro.kovacevic@bhas.ba](mailto:boro.kovacevic@bhas.ba))

## 2 Relevance

### 2.1 For all statistical processes

Statistics of production, sales and stocks of forest assortments is based on standards for classification of forest assortments in Bosnia and Herzegovina. Survey classification meets national needs for monitoring of production dynamics and trade of forestry timber products. Classification also meets requirements of international reporting according to categories of roundwood and it is in accordance with foreign trade statistics and custom nomenclature.

## 2.2 Quality and Performance Indicators – Available ESS statistics rate (R1)

There are no specific ESS regulations for production, sale and stocks of forest assortments statistical survey. Survey results are, besides national needs, used for reporting to international bodies which monitor and work with statistical data on production and international trade with wood and wood products (UNECE/FAO Forestry and Timber Section i Eurostat). Number and structure of statistical indicators is designed for national needs but the survey also, according to types of roundwood forest assortments fulfills international statistical indicators requirements.

## 3 Accuracy

### 3.1.1 Sampling error – Quality and Performance Indicators – Coefficient of Variation (A1)

Statistics of production, sales and stocks of forest assortments in Bosnia and Herzegovina is based on full coverage of all enterprizes that manage state forests in Bosnia and Herzegovina therefore there is no possibility of sampling error.

### 3.1.2 Explanations

See 3.1.1

### 3.1.3 Sampling error reduction measures

See 3.1.1

## 3.2 Non – sampling errors

### 3.2.1 Coverage errors

#### 3.2.1.1 Quality and Performance – Over - coverage rate (A2)

Production, sales and stocks of forest assortments survey has no over coverage. Reporting statistical units are forestry public enterprizes or their lower organizational units which manage state forests on the whole territory of Bosnia and Herzegovina.

#### 3.2.1.2 Under – coverage errors

There were no cases of under coverage in the survey.

#### 3.2.1.3 Coverage error reduction measures

Monitoring and updating eventual changes in structure of the management system in public forests in Bosnia and Herzegovina.

### 3.2.2 Measurement errors

#### 3.2.2.1 Measurement error tracking controls

Visual control and monitoring of time series.

### *3.2.2.2 Reasons for occurrence of measurement errors*

Measurement errors are possible in data collection and reporting units data input phases. Questionnaires and methodology explanations are delivered to reporting statistical units and they are contacted regularly to minimize errors. Errors are also possible due to wrong classification of forest assortments during work on filling data into questionnaire.

### *3.2.2.3 Procedure in case of measurement errors*

After detecting error during the phase of data collection and data input the reporting statistical units are contacted for check and correction of errors.

### *3.2.2.4 Quality and Performance Indicators - Data editing rate (A3)*

There is no accurate evidency of data correction measures. Occurrence of data correction is slight. Future measures for quality and effectiveness ought to have evidency procedure of number of reports and variables that had to be corrected during data processing.

### *3.2.2.5 Measurement error number reduction measures*

The most important tool for reduction of error occurrence during the questionnaire fillings are precise filling guides and contacts with reporting units to eliminate eventual misunderstandings.

## *3.2.3 Non – response errors*

### *3.2.3.1 Quality and Performance Indicators – Unit Non – response Rate (A4)*

In the period of observation it hasn't been recorded non-response of any of reporting units.

### *3.2.3.2 Quality and Performance Indicators – Item Response Rate (A5)*

Process of non-response evidency per variable has not been implemented.

### *3.2.3.3 Measures undertaken in case of non-response*

In most cases reporting unit is contacted should complete questionnaire or some data are missing.

### *3.2.3.4 Non – response rate reduction measures*

- *Contacting reporting units, repeatedly as required;*
- *Additional methodological explanations of variables;*
- *Postponing deadlines for data delivery.*

### *3.2.3.5 Quality and Performance Indicators – Imputation Rate (A6)*

The survey does not have data imputation. Should missing variables appear errors are corrected in contact with reporting units.

### *3.2.3.6 Quality and Performance Indicators - Number of errors according to type (A7)*

Eventual errors are corrected prior the data entry and calculation of indexes so the later data corrections are not registered.

### *3.2.3.7 Quality and Performance Indicators - Average size of revision (A8)*

The revision of survey results is not carried out.

## **4 Timeliness and Punctuality**

### **4.1 Timeliness of release**

#### *4.1.1 Quality and Performance Indicators –Timeliness of First Results (T1)*

Timeliness of the survey first results is set as the difference between first release date and the end of reference period. In the case of this survey it's 45 days from the day of the end of reference quarter. For annual survey the period is 75 days from the end of reference year.

#### *4.1.2 Quality and Performance Indicators -Timeliness of Final results (T2)*

The first results are also the final results – so there are no later corrections.

### **4.2 Punctuality of release**

#### *4.2.1 Quality and Performance Indicators – Punctuality of Release (T3)*

There were no deviations between advised date in annual publication calendar and actual date of release.

### **4.3 Reasons for major delays and measures for improvement of timeliness and punctuality of release**

There were no reasons for major delays recorded in survey results release.

## **5 Accessibility and Clarity**

### **5.1 Accessibility**

#### *5.1.1 Dissemination channels*

For dissemination of the result of implemented survey : Production, sales and stocks of forest assortments in Bosnia and Herzegovina following dissemination channels are used:

No.	Dissemination channels	Used
1	Web page – Internet release	YES
2	Written users' requests according to their specifications	YES
3	Data released by phone	NO
4	Digital media (CD, floppy disc, etc..)	NO
5	Data presented on press conference	YES
6	Thematic bulletin	NO
7	Special printed publications	NO
8	Data bases, available to outside users	NO
9	Statistical protected microdata	NO

### 5.1.2 Quality and Performance Indicators–Dissemination Channels and Means Use Rate(AC1)

Used dissemination channels rate is 33% (3/9X100).

### 5.1.3 Dissemination means

For dissemination of the results of the implemented survey: Production, sales and stocks of forest assortments following means are used:

No.	Dissemination channels	Used
1	Web page – Internet release	YES
2	Web page of other institutions	YES
3	Web page of international organizations	NO
4	Thematic web pages (e.g. population census)	NO
5	Written requests	YES
6	Phone intermediation	YES
7	Digital media (CD, floppy disc, etc..)	NO
8	Data presented on press conference	YES
9	Yearbook	YES
10	BH in numbers	YES
11	First release	YES
12	Thematic bulletin	NO
13	Special publications	NO
14	Eurostat publication	NO
15	Publications of other international organizations (OECD, IMF)	NO
16	Data bases for internal use	YES
17	Data bases, available to outside users	YES

### 5.1.4 Quality and Performance Indicators – Dissemination Means Use Rate (AC2)

Used dissemination channels rate is 59% (10/17X100).

### 5.1.5 Pokazatelj kvaliteta i učinka – Broj pristupa on-line bazi podataka (AC3)

This should be developed with IT personnel.

## 5.2 Clarity

### 5.2.1 Paper publications and online release

- Quarterly first release »Production, sales and stocks of forest assortments in Bosnia and Herzegovina« (Q1/Q2/Q3/Q4 2014);
- Annual first release »Production, sales and stocks of forest assortments in Bosnia and Herzegovina« (2014)
- Bulliten » BH in numbers 2014 « in part which refers to forestry.

#### 5.2.1.1 Disseminated outputs

» Production, sales and stocks of forest assortments in Bosnia and Herzegovina » survey results are published in absolute values (quantities) expressed in cubic meters (m<sup>3</sup>). Indexes are also published as relative indicators in relation to same quarter of the previous year or in relation to previous year. The results are disseminated in tables and accompanying comments and graphs.

#### 5.2.1.2 Level (detailness) of dissemination

The data are published for the level of Bosnia and Herzegovina.

#### 5.2.1.3 Metadata

Referent Metadata - ESMS: Contact (organization, organizational unit, mail address); Metadata update - dates; Statistical presentation (data description, system of classification, sector coverage, statistical concepts and definitions, statistical unit, statistical population, reference area, time coverage, base period); Unit of measurement; Reference period; Institutional mandate (legal acts and other agreements, making data available);

Confidentiality (confidentiality - politics, confidentiality – data processing); Publication politics (publication calendar, publication access calendar, users access); Dissemination frequency; Dissemination layout (first releases - news, publication, on-line data base, access to Micro-data, other); Availability of documentation (methodological documentation, quality documentation); Quality management (quality assurance, quality assessment); Relevance (user needs, users' content, completeness); Accuracy and reliability (overall accuracy, sample error, non-sample error - a) coverage error - b) measurement error - c) processing error - d) non-response error); Timeliness and publication accuracy (timeliness, publication accuracy); Comparability (comparability - geographic, comparability - temporal); Coherency (coherency – interdomain, coherency with e.g population statistics, coherency with e.g estimation of employment in national accounts, coherency with koherentnost sa procjenom zaposlenosti koje potiču iz posl. istraživanja, koherentnost – interna); Costs and load; Data revision (data revision – politics, data revision – practice); Statistical data processing (data sources, data collection frequency, data collection, data correctness check, data compilation, adjustment).

#### 5.2.1.4 *Measures for improvement of disseminated outputs clarity*

The data are shown in PDF format, excel tables and graphically on new BHAS web page so that users are able to analyse and use data.

#### 5.2.2 *Quality and Performance Indicators - Rate of Completeness of Metadata (AC4)*

Total number of metadata elements from recommended Reference ESMS that was used is 55. Number of available metadata elements in »Production, sales and stocks of forest assortments in Bosnia and Herzegovina« survey is 35. That means that completion rate of metadata for Production, sales and stocks of forest assortments is 64 % (35/55x100).

## 6 **Comparability and Coherence**

### 6.1 *Comparability over time*

#### 6.1.1 *Quality and Performance Indicators – Length of Comparable Time Series (CC1)*

The data on production, sales and stocks of forest assortments in Bosnia and Herzegovina have been collected since 2000. The survey results were also published for the first time in 2000 and they have been regularly published since.

Quarterly and annual data have been published since 2000. There is a data time series for Bosnia and Herzegovina in length of 15 years. Indicator value is  $15 \times 4 = 60$ .

#### 6.1.2 *Breaks in time series*

There was no brakes in time series for the survey of production, sales and stocks of forest assortments in Bosnia and Herzegovina from the start of unified method of data collection.

#### 6.1.3 *Other factors affecting comparability over time*

There was no any significant factor having influenced temporal comparability.

## 6.2 **Geographic comparability**

### 6.2.1 *Comparability with other members of the European Statistical System*

Quantitative data are, in larger methodological categories (roundwood, industrial roundwood, fuelwood, split to coniferous (softwood) and non-coniferous (broadleaved hardwood) and split to lower categories) comparable to data of other members of European Statistical System and to members of UNECE.

## 6.3 **Seasonal adjustment**

Data seasonal adjustment of the survey of production, sales and stocks of forest assortments in Bosnia and Herzegovina is not carried out.

## 6.4 **Coherence between provisional and final results**

### 6.4.1 *Provisional dissemination policy*

Pri iskazivanju rezultata Proizvodnje, prodaje i zaliha šumskih sortimenata u BiH ne koristimo politiku diseminacije privremenih podataka ovog istraživanja.

#### *6.4.2 Quality Indicators—Coherence Between First and Final Results (CC2)*

First results are also final results so that this indicator is not calculated.

#### *6.4.3 Reasons for major differences between first and final data*

There are no differences between first and final data, as the first results are also final in the same time.

### **6.5 Coherence with the benchmark survey results**

#### *6.5.1 Brief description of the benchmark survey*

Benchmark survey is not carried out.

#### *6.5.2 Quality and Performance Indicator – Coherence with Reference Data (CC3)*

There is no any referent survey to compare data.

#### *6.5.3 Reasons for major deviations*

There is no any benchmark survey carried out.

### **7 Compromises among quality output components**

None of the trade-offs (concessions between quality outputs) has not been analysed in the survey.

### **8 User needs assesment and perception of users**

Users of data on production, sales and stocks of forest assortments in Bosnia and Herzegovina are or can be institutions on level of Bosnia and Herzegovina, other institutions that analyse economic movements and forestry sector in Bosnia and Herzegovina and also users like scientific-educational institutions e.t.c. Regular quarterly and annual surveys are accompanied with table and graphs with quantitative and index indicators of movements in production, sales and stocks of forest assortments in Bosnia and Herzegovina in relation to same quarter or year in the year n-1. First release is accompanied with short comment in all three official languages and both scripts in Bosnia and Herzegovina and translation of comment to English language. The first release also has methodological explanations of all indicators.

#### **8.1 Classification and comprehension of users**

Users of data on production, sales and stocks of forest assortments in Bosnia and Herzegovina are or can be institutions on level of Bosnia and Herzegovina, other institutions that analyse economic movements and forestry sector in Bosnia and Herzegovina and also users like scientific-educational institutions e.t.c. data users are also international organizations like FAO, UNECE and Eurostat.

## **8.2. Measurement of perceptions and content of users.**

The data on production, sales and stocks of forest assortments in Bosnia and Herzegovina fulfil users needs on national level. There has not been received or recorded any objection neither on data quality nor on the data structure. The data also make part of report (JFSQ) on production and external trade of forestry, wood processing industry and pulp and paper industry that Agency for Statistics of Bosnia and Herzegovina sends to UNECE. The data of the particular survey fulfil needs of JFSQ questionnaire and considered from the level of complete questionnaire there is a opinion and evaluation of significant improvement of the data quality in last five years.

### *8.2.1 Quality and Performance Indicators - Index of user content (US1)*

There is no any user content survey carried out so far.

### *8.2.2 Quality and Performance Indicators - Time from latest users content survey (US2)*

There is no any user content survey carried out.

## **9 Cost and Respondent/Reporting Unit Burden**

### **9.1 Survey costs of the Statistical Office**

#### *9.1.1 Quality and Performance Indicators - Annual operating costs, average per main cost components (PCR1)*

Costs of Agency for Statistics of Bosnia and Herzegovina related to statistics of production, sales and stocks of forest assortments are not available.

### **9.2 Respondent/Reporting Unit Burden and Costs**

#### *9.2.1 Quality and Performance Indicators – Annual burden of respondent in hours and/or financial indicators (PCR2)*

Costs and burden of reporting units are small. Reporting tables are used for collection of data on entity level and they are sent by e-mail officially.

### **9.3 Measures to reduce costs and burden**

Because of insignificant burden and non existance of reporting unit costs, there are no any cost reduction measures.

## **10 Confidentiality, Transparency and Security**

### **10.1 Confidentiality**

Confidentiality of statistical data is required by law. Personnel carry out statistical surveys have, on the legal basis, obligation to protect confidentiality. Thus in the article 27. of the Law on Statistics of BH is cited that »During collection, processing, delivery and distribution of statistic data in Bosnia and Herzegovina, authorized personnel, including entity level officials, take all organizational, regulatory, administrative and technical measures which are needed to protect data from an unauthorized access, publication or use«. In article 28. of the same Law it is said

that «Personnel that during work on their duties, have access to confidential data must hold to regulation of the Law even after ceasing performing their duties».

Also the document »Regulation on protection of statistical data in Agency for Statistics of Bosnia and Herzegovina« contains procedures for protection of confidentiality during collection, processing and dissemination – including protocols for safety of individual data which it has access to, rules for definition of confidential cells in output tables and procedures for finding and prevention of later revealing and access to microdata for research purposes to outside users.

## 10.2 Transparency

The data of statistic survey Production, sales and stocks of forest assortments in Bosnia and Herzegovina are transparent and accessible to data users. Should any of errors appear in publications they are to be amended and corrections are to be clearly noted in the publication.

## 10.3 Security

Mentioned in the article 10.1.

## 11 Conclusion

Statistical survey of production, sales and stocks of forest assortments in Bosnia and Herzegovina is important both from the point of collection and monitoring of the data on production and flows of forest assortments as significant part of total production in BH forestry and also from the standpoint of collection of the part of economic data for the development of economic accounts in forestry and national accounts. Statističko istraživanje proizvodnje, prodaje i zaliha šumskih sortimenata u BiH je značajno i sa stanovišta dobivanja i praćenja podataka o proizvodnji i tokovima šumskih sortimenata kao značajnog dijela ukupne proizvodnje u šumarstvu BiH a takođe i sa stanovišta prikupljanja dijela ekonomskih podataka za razvoj ekonomskih računa u šumarstvu i nacionalnih računa. Dalji razvoj istraživanja ovisi o promjenama legislative u šumarstvu Bosne i Hercegovine i prilagođavanja nasljeđene kategorizacije »šuma i šumskog zemljišta« međunarodnoj nomenklaturi i zahtjevima. To se prvenstveno odnosi na mogućnost odvojenog tretmana šumskog zemljišta koje po definiciji nije šuma (other wooded land) i drvne mase koja se sječom dobiva sa takvog zemljišta.