



**FUNDAMENTAL PRINCIPLES AND GUIDELINES**  
**on statistical confidentiality and data protection to be**  
**implemented by relevant statistical institutions and other**  
**producers of statistics in Bosnia and Herzegovina**

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The BiH Agency for Statistics in accordance with its competencies and responsibilities (in line with Article 8, Item c: Article 9, Item 2: Article 18, Item 4, Article 19, Items 3 and 6 and Articles 23 through 29 of the BiH Law on Statistics, Official Gazette of BiH, 26/04) defines the fundamental principles and provides guidelines on statistical confidentiality and data protection to be implemented by relevant statistical institutions and other producers of statistics in Bosnia and Herzegovina.

*Definitions used in this document:*

1. *Competent statistical institutions (hereinafter referred as: statistical institutions)* are institutions at the level of BiH and entity levels responsible for organization, production and dissemination of statistical data.
2. *Other authorized producers of statistics (hereinafter referred as: other producers of statistics)* are authorized bodies and organizations in charge of statistical activities which organize and conduct statistical surveys within the scope of their activities.
3. *Statistical unit* is a reporting, observation or measurement unit for which data are ultimately collected or derived in some other way: this unit is also a subject of statistical surveys and is a carrier of statistical features (statistical units could be physical persons, legal persons or any other kind of business entities).
4. *Confidential data* are individual data provided by competent authorities during data collection and/or data used for production of statistical data from which some statistical reporting units could be directly or indirectly identified.
5. *Users* are all persons/including physical persons, legal persons, institutions and authorities and/or all other types of business entities/ which use statistical data.
6. *Individual data* is data which describes characteristics, circumstances or size of statistical unit and is a part of the overall data on statistical observation unit.
7. *Micro data* and/or deindividualized data is an individual data changed in such a way that no statistical unit, such a data refers to, can be identified.
8. *Identifier* is such a part of individual data that uniformly identifies the link between data and reporting unit in such a way that data describes a specifically defined entity/unit.
9. *Primary data* are data provided to the BiH statistical institutions and other producers of statistics directly by reporting units;
10. *Secondary data* are data provided to the BiH statistical institutions and other producers of statistics by holders of official and other administrative databases;
11. *Protected data* are all individual data collected through implementation of programs of statistical surveys, aggregated statistical data prior to the time of publication and aggregated statistical data from which it is possible to access individual data;



12. *Data protection premises* are all premises in the statistical institutions where the carriers of protected data are stored or rooms with equipment through which it is possible to access data;
13. *Direct identification* means the identification of statistical unit on the basis of its name and address, or on the basis of publicly accessible ID number;
14. *Indirect identification means identification of a statistical unit by any other means than by way of direct identification.*

### **Legal framework and other regulations and good practices on data confidentiality and protection**

- The BiH Law on Statistics, Article 8, Item c; Article 9, Item 2; Article 18, Item 4; Article 19, Items 3 and 6; and Article 23 through 29 (Official Gazette of BiH 26/04 and 42/04);.
- The RS law on Statistics, Articles 6, 7 and 26 (Official Gazette of RS 85/03);
- The FBiH Law on Statistics, Articles 16 and 41 (Official Gazette of FBiH 63/03 and 9/09);
- Law on Individual Data Protection (Official Gazette of BiH 49/06);
- Regulation of the European Parliament on European Statistics, 2009, No. 223/09;
- UNECE, CES, EUROSTAT: Principles and guidelines to apply good practice on confidentiality and access to micro data /UNECE Principle 6 »Confidentiality« and EU Code of Practice - Principle 5 »Statistical confidentiality«.

### **GENERAL PRINCIPLES AND GUIDELINES**

Statistical confidentiality and data protection have a very high priority and is a fundamental principle respected by the statistical institutions and other producers of statistics in BiH in order to guarantee and keep confidence of the public and statistical reporting units.

Statistical institutions and other producers of statistics in BiH when transmitting protected micro data will respect legal, ethnic and professional criteria and measures.

Statistical institutions and other producers of statistics in BiH collect individual characteristics from the statistical units (physical and legal persons) for statistical purposes.

The statistically protected micro data can be provided for statistical-analytical and scientific research purposes.

When collecting, processing, disseminating and storing data, the statistical institutions and other producers of statistics are legally responsible to protect confidential data from unauthorized access, publication and use.

The statistically protected micro data cannot be obtained for non-statistical purposes. These include the administrative purposes where dissemination of micro data would have a direct administrative consequence for a citizen or business entity, that is reporting statistical units.

Existing organization, technical and methodological solutions for data protection must be continuously adjusted and further improved in order to ensure optimal



data protection. In particular, this refers to data linkage and technical progress during data collection, processing, dissemination and storing.

In order to provide optimal data protection all the necessary financial and other resources should be available. Data protection in terms of technical, methodological and organizational solutions will be applied in such a way to guarantee the lowest possible expenditures related to optimal data protection.

Staff of the statistical units has a responsibility to respect legal and other regulations referring to statistical confidentiality and data protection. A special attention has to be paid to this.

Given the relations with public, data protection by statistical institutions should be presented in such a way to increase confidence of general public, that is users and data providers. Practice and need to protect data must be apprehensible and available both to data providers and users.

Reporting statistical units should be properly informed of the purpose of statistical survey. Any additional changes related to the purpose of the survey are not allowed. In particular, data collected for the statistical purpose must not be used for administrative purpose.

## **1 GUIDELINES ON DISSEMINATION OF CONFIDENTIAL STATISTICAL DATA**

For the purpose of implementation of statistical surveys defined by the BiH Program of Statistical Surveys and by the Entity program of statistical surveys data are collected from the all existing sources, primary or secondary. During the very data collection process the statistical reporting units are informed that the confidentiality of collected data is assured as well as on the fact that such data will not be exchanged with other data users in a form or way enabling identification of statistical reporting unit to which such data refer.

Secondary data to be provided according to Article 8, Item e) of the BiH Law on Statistics from administrative databases are to be taken over in accordance with special procedures to be agreed with data providers.

### **1.1 GUIDELINES ON INDIVIDUAL DATA EXCHANGE AND TRANSMISSION**

#### ***1.1.1 Exchange of individual data within the statistical system***

Transmission of data within the BiH statistical system is not subject to the restrictions related to data confidentiality. In exchanging data within the BiH statistical system individual data with identification may be exchanged in order to produce statistical data at the level of BiH and to implement programs of statistical surveys and to increase quality of statistical data. The exchange of data shall take place according to previously agreed procedure.

Good practice: for the implementation of annual plans and multi-annual programs of statistical surveys, it is possible to exchange micro data between statistical institutions and other producers of statistics according to previously agreed procedure.



### ***1.1.2 Release of individual data to reporting statistical units***

In some cases reporting statistical units may request their own data (data they have already provided to statistical institutions and other producers), to be provided by statistical institutions and other producers of statistics.

Good practice: if statistical institutions and other producers of statistics have such data, they should transmit them (within their technical and financial capacities) to reporting unit. Statistical institutions and other producers of statistics, following the agreed procedure, should provide only data collected from the reporting units on the printed questionnaire. For the Population Census, statistical institutions transmit prints or scanned census questionnaires.

### ***1.1.3 Release of individual data to commercial and interest associations and their members***

To rationalize data collection and decrease the burden of reporting statistical units, some commercial and interest associations do not collect data needed for various analyses by themselves but ask competent statistical institutions to transmit these data to them.

Good practice: competent statistical institutions transmit individual data on members of an association after obtaining written consent from the members respecting the agreed procedure.

### ***1.1.4 Partly release of individual data for the purpose of interviews***

For the purpose of interviews /for example, when conducting surveys the competent statistical institutions may provide registered scientific research organizations and registered researchers-individuals only the following personal data: name and surname of the individual, his/her residence, year of birth, sex and profession.

### ***1.1.5 Exchange of data with international statistical institutions***

Given the fulfillment of international obligations in the field of statistics the BiH Agency for Statistics communicates (transmits) to and exchanges data with Eurostat and other EU institutions.

Data transmission and exchange procedures are to be defined by a separate instruction manual, first of all in order to define the area of data exchange with Eurostat and other EU institutions.

The exchange of data is carried out through organizational unit (Sector for Dissemination) responsible for data transmission and exchange.

## **1.2 PROVISION OF LIST OF ADDRESSES – LIST OF STATISTICAL UNITS**

Statistical institutions create list of addresses for statistical surveys on the basis of administrative databases respecting and undertaking various measures and procedures and complete these data with data taken from the various statistical databases. Therefore, these lists of addresses are considered data collections and their provision is accordingly treated as provision of individual data.

Good practice: Statistical institutions provide list of addresses used for statistical surveys to other producers of statistics only for the implementation of program



of statistical surveys. If the user does not fulfill all the necessary requirements for the provision of such lists, the user is suggested to use other appropriate administrative source (if any).

### **1.3 PROVISION OF STATISTICALLY PROTECTED MICRO DATA<sup>1, 1a)</sup>,**

#### ***1.3.1 Provision of statistically protected micro data to scientific research institutions and registered researchers***

A registered research organization or registered individual researcher may use micro data and individual data for research purposes.

Data for research purposes may only be used by a registered research organization or registered individual researcher that has concluded an appropriate contract and confidentiality statement.

The contract must define the status of the user, the intended use of data, the manner or protection of data and the manner and time of data publication.

Such contracts are kept in the Department for Legal Affairs.

The work of researchers or authorized persons from international organizations in the statistical institution using micro data is only possible on the basis of contract defining data access and use.

Good practice: micro data for scientific research and analytical purposes are transmitted only to scientific research institutions and registered researchers that can prove their registration (extract from the register of research institution and register of researchers for individual researchers). Data are provided in line with prescribed procedure.

#### ***1.3.2 Release of micro data to institutions in government bodies***

By providing micro data to government bodies (i.e. users that have a great and specific needs for micro data) statistical institutions and other producers of statistics will facilitate their work regarding policy and decision making.

Good practice: micro data are transmitted to the government bodies if the purpose of micro data use is research or analysis. Their request is rejected if the purpose of using micro data is the granting of administrative advantages or disadvantages to particular business entities or natural persons. The procedure to obtain such data is the same as for the case of scientific research institutions.

#### ***1.3.3 Provision of statistically protected micro data to data archives***

By conveying statistically protected micro data to data archives, statistical institutions and other producers of statistics enable analytical and research work to be carried out.

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<sup>1</sup> For full implementation of the guidelines provided under Section 1.3 the BiH Law on Statistics and the RS Law on Statistics are to be changed. All the necessary changes in these laws should define dissemination of protected micro data in line with international recommendations.

<sup>1a</sup> Given the Foreign Trade Statistics the principle of „passive confidentiality“ is applied; in fact, some protection measures are undertaken as requested by importers or exporters if data disclosure might interfere with their interests



Good practice: statistically protected micro data forwarded to data archives have the highest micro data protection level.

## **2 METHODOLOGICAL GUIDELINES FOR CONFIDENTIAL DATA PROTECTION**

Protection measures used depend on the content of the publication, that is, whether statistical aggregates are published as tabled or users are provided with individual data /micro data/.

### **2.1 STATISTICAL PROTECTION OF AGGREGATED AND INDIVIDUAL DATA**

#### ***2.1.1 Statistically protected aggregated data (tables)***

The statistical protection of tables provides protection of business and personal data. This means that not all the tables presented by statistical institutions need to be automatically protected but only those whose disclosure could induce invasion into the business secrecy of a business entity or the privacy of information of an individual.

Good practice: all published tables are statistically protected if their disclosure might interfere with the information on privacy of individuals, or interests of business entities. If the person responsible for the statistical survey determines that tables need not be statistically protected, he/she submits a proposal for approval by the sector for general methodology and standards.

#### ***2.1.2 Dissemination of tabular data in cases where the entry reporting unit in the table could be identified***

Since the BiH economy is relatively small it happens in some cases that only one unit or smaller number of units is entered in the tables or that such a unit is strongly prevailing.

Data in separate cells of the published tables may contain identification of statistical unit. In such a case, only those cells which comprise at least three aggregated statistical units /X-Rule/ may be published. Data in this cell are not published and the cell should include a mark »T« instead of a number. This is so-called „primary cover-up of data“.

However, in order to enable disclosure of such data by applying additional return calculation, i.e. through creation of differences or other mathematical operations with regard to other published data, additional protection of aggregates including more than X reporting units should be provided. This procedure is known as „secondary cover-up of data“.

In addition to the above case of identification, there is also in use a rule known as „rule of domination and concentration“. This rule means that if a share of one statistical unit in an aggregate exceeds 85% of the total such data will not be published.

Use of such protection methods in some cases would imply high loss of information thus preventing quality economic analyses for some parts of the BiH economy. Given the above mentioned reasons and following the provisions of the BiH Law on Statistics, Article 26, paragraph 2, some data may be disseminated even if they do not meet the aggregate requirements (in cases where this is determined necessary by the Agency for ensuring significant basic information



and provided that the Statistical program foresees the dissemination of such information).

Good practice: the principles of statistical confidentiality do not prevent data dissemination in cases when data publishing is agreed with statistical unit which disseminated data.

### **2.1.3 Statistically protected individual data**

To reduce to minimum a risk of disclosure of individual data, two types of activities are to be undertaken: data compression/reduction/ and data cover-up.

Anonymity of individual data is provided in the following way:

- *Recoding*, modalities in the key variables are provided with new codes;
- *Micro aggregation*, numerical values of variables are grouped;
- *„Covering-up“*, numerical variables are covered-up by selected random value;
- *„Rank swapping“*, numerical value of variable is replaced with randomly selected value of another variable within specified limits-range;
- *Sub-sampling*, publishing of a randomly selected data subsample.

However, any of the above methods/procedures should not significantly jeopardize data quality.

Available software packages should be used when applying in practice the relevant rules on confidentiality and protection of aggregated and anonymous individual data.

## **3 ORGANIZATION AND TECHNICAL MEASURES FOR DATA PROTECTION**

### **3.1 Measures at the level of competent statistical institutions<sup>2</sup>**

The Agency for Statistics of BiH as authorized institution is to create and appoint the Committee for Statistical Confidentiality and Data Protection. The Committee is to coordinate and harmonize measures and recommendations on data protection in the statistical institutions and other producers of statistics in Bosnia and Herzegovina.

The Committee as an advisory body is to be composed of the representatives of all the three statistical institutions in BiH, representative of the Central Bank of BiH, representative delegated from the authorized producers of statistics and representative of the BiH Agency for Individual Data Protection.

The representatives of the Committee for Statistical Confidentiality and Data Protection will regularly meet to discuss the problems related to data protection, to improve and apply unique measures for data protection and to discuss and agree on further development of technical and methodological measures for data protection.

Authorized representative of the Committee is also a person responsible for maintaining the central register of contracts on data protection.

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<sup>2</sup> For the full implementation of the Section 3.1 the BiH Law on Statistics and the RS Law on Statistics are to be changed, i.e. on the basis of such changes to define the provision of protected micro data in line with international recommendations. Tasks related to statistical confidentiality and data protection in each statistical institution will be delegated to persons appointed by the directors of statistical institutions before the establishment of the Committee (this is an interim solution).



### **3.2 Access to secure rooms, data and documents**

#### *a) Restricted – access to secure rooms not allowed to unauthorized persons*

Access to secure rooms in the statistical institutions is restricted in line with the following safety rules:

- Access to all premises outside official working hours is forbidden. If adequate restriction measures cannot be organized the access to these premises is restricted by undertaking other suitable measures (coded key, password, etc./).
- Access is allowed only to authorized persons. Access to all other persons is allowed only in presence of authorized person.
- Computer centers represent special safety areas. Access to these premises is allowed only to persons with special and valid authorization.

#### *b) Restriction – access not allowed to data and documents*

Access to premises where daily activities are carried out is to be defined in the framework of the House Rules and general protection measures in the statistical institutions.

In general, this mainly concerns the premises protected by the employees of the institutions. They should respect the general safety measures given the premises, data and other documents (locking the vacant premises, use of password on PCs and adequate storing of working materials).

### **3.3 Measures in the organization units (staff)**

Persons authorized in the respective statistical units are responsible for data protection.

Authorized persons in the relevant statistical institutions and other producers of statistics are responsible for ensuring implementation of the provisions of the rules in the field of data protection in their organizational units. They should ensure implementation of the measures and procedures for data protection, control implementation of such measures and procedures and inform the newly employed staff about such rules and measures.

The staff of statistical institutions should be fully aware of the importance of data protection, principles, measures and procedures to be taken on a daily basis in order to ensure full data protection.

The staff of statistical institutions is to sign the Statement on Data Protection.

### **3.4 Data archiving and destroying**

*Lists of addresses and lists of names can be kept as long as they are used for processing, implementation and coordination of surveys.*

*Materials used for statistical surveys (questionnaires, lists of addresses, identification number etc.) should be destroyed after the completed processing and/or use.*

Data collected through statistical surveys /provided by the statistical reporting units/ must be stored and archived without identifiers.



Production of archive copies is to be implemented fully in line with standard procedures defined for storing and/or archiving and on annual basis, if not otherwise defined for some special cases.

Two copies are to be produced, one to be kept in the safe premise in the relevant statistical institution /where a copy has been produced/ and the second one in other safe premise in the same statistical institution.

After expiration of the defined archiving period data are to be deleted or destroyed /depending on a type of media they are saved/archived/ in order to prevent restoration of all or part of deleted data.

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