Report on sector review of the Labour Force Survey in Bosnia and Herzegovina

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in cooperation with
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the Republika Srpska Institute for Statistics (RSIS)

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List of abbreviations

BHAS	Agency for Statistics of Bosnia and Herzegovina
BiH	Bosnia and Herzegovina
BLAISE	Software used for data entry and cleaning of data
CV	Coefficient of variation, relative sample error
DB	Brčko District
EC	European Commission
ESS	European Statistical System
EUROSTAT	Statistical Office of European Union
FBIH	Federation of Bosnia and Herzegovina
FIS	Federation of Bosnia and Herzegovina Institute for Statistics
FSU	Final Sampling Unit
LFS	Labour Force Survey and all statistics produced from it
PSU	Primary Sampling Unit
RS	Republika Srpska
RSIS	Republika Srpska Institute of Statistics
SIDA	Sweden International Development Agency
SR	Sector Review
TOR	Terms of Reference
UNDP	United Nations Development Programme
WG	Working Group

Preface

1. The Sector Review (SR) of the Labour Force Survey (LFS) in Bosnia and Herzegovina (BiH) was undertaken in the framework of the Eurostat funded project *'Assessment of the statistical systems and selected statistical areas of the enlargement and ENP countries'*. ICON-INSTITUT in consortium with DevStat, under the contract (no. 14472.2013.002-2013.694) with Eurostat, was responsible for the organisation of all activities and tasks related to the SR. The SR process was initiated by Eurostat on the basis of a request made by the Agency for Statistics of Bosnia and Herzegovina (BHAS).

2. The review was conducted by two experts: Ms Tatjana Novak (director of general methodology and standards in the Statistical Office of the Republic of Slovenia), who acted as leading expert, and the supporting expert Ms Ljubinka Popovska Tosheva (independent consultant – statistician from the former Yugoslav Republic of Macedonia).

3. The beneficiaries were the three statistical institutes of BiH: the Agency for Statistics of Bosnia and Herzegovina (BHAS), the Federation of Bosnia and Herzegovina Institute for Statistics (FIS) and the Republika Srpska Institute for Statistics (RSIS). In the remaining of the report these institutions will be referred to as the *'statistical institutes of BiH'*.

4. The review findings were based on the analysis of the documentation available on the website of BHAS, on documents provided by the statistical institutes of BiH and information gathered and discussed during an in-country mission, which was held in Sarajevo on July 14-17, 2014.

5. During the in-country mission, discussions followed the structure of the questionnaire which was sent to BHAS in advance. The questionnaire was tailored to the needs of the statistical institutes of BiH and covered the following aspects: institutional environment, statistical processes, statistical outputs and orientation on future actions. Additional written documents were provided by BHAS and the statistical institutes of the entities of BiH after the in-country mission.

6. The overall collaboration between review experts and experts of BHAS, FIS and RSIS has been constructive throughout all phases of the SR. Our common goal is that the SR will be of benefit and will significantly contribute to the further development of the LFS in BiH.

Executive summary

7. The SR was tailored to the statistical institutes of Bosnia and Herzegovina (BiH)[1] and aims at aligning labour market statistics with the European and international standards. Emphasis was given to the Labour Force Survey. The main goals of the SR are:

 - to assess the administrative and technical capacity of the National Statistical System (NSS) of Bosnia and Herzegovina (BiH) to produce LFS;

 - to assess the statistical production of the LFS;

 - to assess the level of compliance with the *acquis* in the area of the LFS;

 - to review the medium and long-term planning within the LFS; and

 - to propose a list of recommendations to be undertaken in order to improve the data delivery and functioning of the LFS.

8. The self-assessment questionnaire (SAQ) has been drawn to assess the compliance of the LFS carried out by the statistical institutes of BiH according to the principles of the European Statistics Code of Practice and the Council Regulation (EC) No 577/98 including amending and implementing regulations on the organisation of a labour force sample survey in the Community. The SAQ for the LFS is based on the *'ESS Quality Assurance Framework 2012'*, and the majority of the questions, have been selected from Eurostat's documents *'Joint Standard Quality Report for Labour Force Survey and Regional Labour Market Statistics'* and *'National Action Plan for the implementations of the recommendations of the task force on quality of LFS'*.

9. The statistical institutes of BiH regularly produce and publish monthly statistics on the earnings of persons in employment and an annual LFS. Other labour statistics, under the *acquis*, are produced occasionally under different feasibility studies.

10. BHAS in its strategic documents, such as *'Statistical programme of Bosnia and Herzegovina 2013-2016 (multiannual statistical programme 2013-2016)'* and *'Strategy for development of statistics of Bosnia and Herzegovina 2020 (Strategy 2020)'*, already plans improvements in labour market statistics. Additional recommendations for improvements were detected within this Sector Review.

11. In the current cross-sectional designed annual LFS slight improvements can be made. Major challenges for statistics of BiH are:

 i) improving the sample frame;

 ii) introducing a continuous survey; and

 iii) using computer assisted mode for data collection.

12. Further improvements could be made in the three labour related EU-STS indicators (wages, persons employed and hours worked) – to develop methodology and prepare estimates; and in the regular production of other EU labour market statistics (Labour Cost Index, Labour Cost Survey, Job Vacancy Statistics).

13. Experts producing labour market statistics are committed to the production of reliable and quality statistics aligned with EU and International Standards. BiH statistical system is quite complex: it consists of one state institution (BHAS) and two entities statistical institutes (FIS, RSIS). High quality may be achieved with the adaption of a unique methodology among the three statistical institutes of BiH. Aiming towards this direction, the following recommendations are made:

 - Hold frequent meetings between the three statistical institutes, at expert level, aiming at the exchange of information, discussions and follow-up of joint activities;

 - Support the work of the joint working group on the LFS with members of BHAS, FIS and RSIS, responsible for regular production and development projects in labour market statistics;

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[1] Term *'statistical authority of BiH'* in this document refers to the production of statistics at the state level by the Agency for Statistics of Bosnia and Herzegovina (BHAS). The statistical institutes of the entities are partial producers of statistics of BiH because of their obligation to provide BHAS with necessary data for the implementation of the statistical programme of BiH.

- Hold joint preparation and discussion between all three institutes on the necessary methodology, technical guidelines and required IT solution;
- Allocate the additional resources for coordination and joint activities (especially in BHAS).

14. In order to achieve the improvements planned by the statistical authority of BiH international donations and expert support is required. Thus, BHAS and the entities institutes are encouraged to actively search for different possibilities for international support. Improved coordination between different donors and international organisations providing assistance should be ensured, so that all activities are in line with the set priorities stated in the Strategy 2020 and in the multiannual statistical programme 2013-2016.

15. Pilot activities should be carried out and carefully analysed before regular production processes are carried out for the benefit of the system as a whole.

16. The SR experts estimate that the statistical institutes of BiH will not be able to start the regular implementation of the continuous LFS surveys before 2017. The SR experts propose BHAS and the entities institutes to prepare a feasible action plan which will include all necessary phases for testing and developing infrastructure.

1   Legal and institutional basis

1.1 General overview

17. The statistics of BiH is based on the regional decentralisation, reflecting the administrative and political organisation of the country and to a large extent on its functional centralisation. The three statistical institutes, called *'competent authorities'* in the Law on Statistics of Bosnia and Herzegovina (2004), in charge of organisation, production and dissemination of statistical data are:

- the Agency for Statistics of Bosnia and Herzegovina (BHAS) at the state level;
- the Institute for Statistics of Federation of Bosnia and Herzegovina (FIS); and
- the Institute for Statistics of Republika Srpska (RSIS) at the entity level of the two entities.

18. Relations between the entity statistical institutes, FIS and RSIS, and BHAS are regulated by the Law on Statistics of Bosnia and Herzegovina, and the entity level laws (the Law on Statistics in the Federation of BiH and the Law on Statistics of Republika Srpska) as well as the *'Agreement on Implementation of Harmonised Methodologies and Standards in Producing Statistical Data of BiH (2005)'*.

19. In the Multiannual Statistical Programme of BiH for the period 2013-2016, the chapter on mid-term priorities of Labour Market Statistics (1.02) underlines the redesign of the LFS to a continuous survey with main goal to reach full compliance with the EU-LFS regulation on annual and quarterly basis. As a main requirement the establishment of a new sample frame for household sample surveys is noted, after the data processing of the Census of Population, Households and Dwellings in Bosnia and Herzegovina 2013 is finalised.

20. In December 2013 *'Strategy for Development of Statistics of Bosnia and Herzegovina 2020'* was adopted providing a framework for the implementation of the long-term programme goals which would contribute to the development of the statistical system in Bosnia and Herzegovina, and lead to an efficient and modern system capable of defining its priorities in line with requirements of its users. In the chapter *'Improvement and developments of Statistical Domain – Demographic and social statistics'* (as strategic priority 6.1) action: *'Switching from annual to continuous Labour Force Surveys'* is planned.

1.2 Mandate for data collection

21. The mandate of BHAS as a competent body to collect, process, disseminate and endorse statistics of BiH is described in the Law on Statistics of BiH (Art. 8). The Law also refers to production of statistics by entity institutes. Entity institutes are obliged to transmit all data that are deemed necessary for the production of statistics of BiH (including confidential data).

22. The entities have their entities specific laws on statistics defining the mandates of the entities statistical institutes for the collection, production, processing and dissemination of the entity level statistics.

23. BHAS and the entities statistical institutes (FIS, RSIS) are entitled, in accordance to their relevant laws on statistics, to have access to administrative data for statistical purposes. The technical document *'Guidelines for taking over data from administrative sources'* (http://www.bhas.ba/statistickistandardi/Uputstvo_o_podacima_iz_administrativnih_izvora_ba.pdf), prepared by BHAS, outlines definitions and procedures for taking over the data from administrative sources.

24. In practice, the use of administrative data could be increased. In the Departments of Labour Market Statistics of the statistical institutes of BiH, administrative data is not used in LFS. The administrative data from the employment offices and the tax authority are used for internal analyses. The administrative data on number of unemployed persons are regularly downloaded from the web sites of the employment offices and are published in monthly statistical bulletins.

25. The data from employment agencies is used for comparing the number of registered unemployed persons with the LFS unemployment; and the data from tax authority – for comparing the number of employees in certain activities (according to NACE).

26. The multi-annual statistical programme for the period 2013-2016 and the annual statistical plans were drafted by BHAS in cooperation with the entities institutes. The BHAS determines statistical standards for the implementation of the programme that are applied by all statistical institutes contributing to the production of statistics of BiH, at the state level as well as at the level of entities.

1.3 Adequacy of resources

27. The LFS is at present funded by own resources of the statistical institutes of BiH.

28. The Department of Labour Market Statistics of BHAS is responsible for the LFS and consists of 4 employees instead of 5 foreseen by the Act of the institution. During the in-country mission three of the staff members were absent due to maternity leave. Additionally, the position of the head of the unit is currently vacant. The consequence of this situation is a delay in publishing the first results of the LFS 2014.

29. The Department of Labour Market Statistics of FIS consists of 5 employees instead of 7 planned, and RSIS of 5 employees instead of 6 planned – by their internal Acts.

30. The total annual budget for conducting the BiH LFS in 2013 was 324,000 KM and is slightly decreasing from year to year. The budget for LFS 2013 was 2% lower than the LFS 2012 budget (which amounted to 330,000 KM); and17% lower than the LFS 2011 budget (which amounted to 392,000 KM), due to decisions made by the BiH and the entities governments.

1.4 Impartiality and objectivity

31. The Law on Statistics of BiH (Art. 8.2c) defines that statisticians are fully responsible for decisions regarding the sources and methods used for the compilation of different statistics as well as decisions concerning the dissemination of these.

32. The choice of sources and methods used in the LFS is based on objectives determined by statistical considerations and the professional selection of appropriate international standards and norms. The relevant methodological information (main concepts and definitions) is published as part of metadata together with the data (*see paragraph 2.4.2*).

33. There were no major mistakes made in the LFS publication so far. In the case of mistakes these will be corrected according to the *'Guidelines for correcting mistakes in published releases'* published on the BHAS website: http://www.bhas.ba/statistickistandardi/Uputstvo_ispravljanje_gresaka_en.pdf.

34. Until now there was no major revision in the BiH LFS. In 2012 the new version of NACE Rev.2 classification was introduced and few small revisions were made introducing the modalities for a few variables.

1.5 Assessment

35. The legal framework for data collection is currently considered sufficient. In the strategic documents, such as the multi-annual programme 2013-2016 and annual plans as well as the Strategy 2020, the actions to be taken for the future development of the LFS are given. These are: (i) the establishment of a new sample frame for household sample surveys after finalising the data processing of the Census of Population, Households and Dwellings in Bosnia and Herzegovina 2013; and (ii) switching from annual to continuous LFS and producing quarterly and annual labour force statistics.

36. It seems that currently staff resources for conducting the LFS are not adequate. Thus, the statistical institutes of BiH are advised to ensure an adequate number of staff. Financial resources are currently considered adequate for the conduction of the annual survey. However, the transition from annual to continuous survey requires the re-assessment of necessary financial resources and staff with specific knowledge.

37. Currently, there were no major revisions in the LFS. The statistical institutes of BiH are recommended to prepare an appropriate communication strategy when the new sampling frame is established and the continuous survey is introduced.

2   Main findings

2.1 General overview

38. The statistical institutes of BiH regularly produce and publish monthly statistics on the earnings of persons in employment (according to the national requirements) and an annual LFS (following EU LFS standards). Through different feasibility studies the statistical institutes of BiH have already (i) obtained experience in conducting a Labour Cost Survey (for the years 2009 and 2012) and some of the LFS ad-hoc modules; (ii) studied methodology on the Labour Cost Index and Job Vacancy Statistics. Up to now BHAS has not published the results of these studies. The results from the Labour Cost Survey for the years 2009 and 2012 have been published by the entities institutes. BHAS also compiled some EU STS indicators. Until now BHAS does not analyse the possibilities to compile labour input indicators related to the EU STS (persons employed, wages, hours worked).

39. Experts in labour market statistics are committed to the production of reliable and high quality statistics aligned with EU and International Standards. The LFS in BiH has been carried out since 2006 as a regular annual survey. The statistical institutes of BiH have collected the labour cost data for 2009 and 2012. Average monthly earnings are produced to fulfil national needs.

40. BHAS in its strategic documents, such as multi-annual statistical programme 2013-2016 and the Strategy 2020, has already planned improvements in labour market statistics. Additional recommendations for improvements were detected within this sector review.

2.2 Methodological information

41. The LFS in BiH is based on the recommendations and definitions of the International Labour Organisation (ILO) and the requirements of Eurostat, at both state and entity levels. The LFS appears to be largely compliant with European standards, based on the support of international donors and experts.

42. In the BiH LFS all required variables according to the EU regulations are covered. Although small differences in national concepts exist, the transformation into European concepts could be performed. For persons absent from the household for more than one year, information about the reasons for the absence has been collected. Based on the reasons of absence the LFS target population according to the LFS methodology (together with other questions) could be derived. The following minor inconsistency in the BiH LFS is related to the *'methods used during previous four week to find work'* from which the variable unemployment is derived. According to EU regulations a person is defined as unemployed if he/she is trying to find work by at least three methods. In BiH LFS a person is defined as unemployed if he/she is trying to find work by one method. The BiH statisticians plan to revise the questionnaire with the implementation of three methods in the coming years.

43. Non-response, which is less than 15%, seems to be at an acceptable level.

44. The major issue with the methodology used in the BiH LFS is the sampling frame. Due to massive demographic changes in population in recent years the results from the Population Census 1991 could not be used directly, and the results from the last Population Census 2013 are not yet available. In order to conduct household surveys, the Master sample was created in 2003 and updated in 2006 and in 2009 (*see paragraph 2.2.1.3*).

2.2.1 Sound methodology

45. The LFS methodology has been developed with the assistance of different international organisations under the supervision of international experts.

46. The LFS had been conducted with the expert assistance in the pilot phase of 2005 and in the period of 2006-2007 through the join support of the UNDP and the WB. In the most recent SIDA project the compliance of variables in BIH LFS with EU-LFS was investigated. The BiH statisticians have eliminated the identified inconsistencies.

47. The BiH LFS questionnaire complies with twelve principles of Annex 2 of Commission Regulation (EC) No 1897/2000[2], and the sequence of questions addressing the ILO variables on unemployment is in line with the requirement of the same regulation EC 1897/2000 in order to ensure that the rate of unemployment is estimated in a harmonised manner.

48. Classifications used are in line with international and EU standards (*see paragraph 2.4.1*).

2.2.1.1 Appropriate infrastructure

49. In the statistical institutes of BiH the organisational infrastructure is appropriate for the implementation of the following statistical processes: sampling, data collection, codification, data entry, data editing and imputation.

50. Sampling: A specific unit in each statistical institute of BiH is responsible for the sampling which includes defining and creating the sample frame, defining the sample design, selecting the sample, defining rules and implementing the editing and the imputation, assessing the results, calculating weights, performing non-response analyses and estimating sampling errors. The BHAS is responsible for the coordination of all tasks.

51. Data collection is realised through 17 regional units. 10 regional units work under the responsibility of the FIS, 6 units under the responsibility of the RSIS and 1 unit in the Brčko District, under the responsibility of the BHAS.

52. Data entry, editing and imputation are conducted centrally in BHAS, RSIS and FIS. Subject matter statisticians, IT experts and sample experts from BHAS, FIS and RSIS sectors responsible for statistical methods, planning, quality and coordination, through the mutual communication and meetings decide on the methodology (define which methods are/or should be used).

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[2] Regulation 1897/2000 of 7 September 2000 implementing Council Regulation (EC) No 577/98. *This regulation implements the operational definition of unemployment and contains the 12 principles for constructing the questionnaire.*

Codification is performed by the controllers and monitored by subject matter statisticians from BHAS, FIS and RSIS.

2.2.1.2 Procedures for recruitment of staff and vocational training

53. Staff of the statistics institutes of BiH are recruited openly and based on appropriate qualifications.

54. The vocational training for the staff, involved in the LFS, is conducted each year. The staff members have the opportunity to attend courses, seminars and workshops provided by different international organisations. Participation in these courses, conferences, workshops is financed by EU and other donors through different programmes. The participants of all statistical institutes of BiH propose that the knowledge and information obtained in different international meetings should be spread among subject matter statisticians from BHAS, FIS and RSIS.

55. The experience obtained from concrete implementation on the LFS in BiH shows that work within the working group is the most efficient. It is important that the leader of the group is committed and ensures the coordination of the work and tasks among all working group members.

56. There are no regular contacts, e.g. through conferences, workshops, task forces, with the scientific community to discuss methodological, IT and innovation developments. Contacts with the scientific community were done in part through the activities of preparing the multi-annual statistical program and annual plans, trying to announce and explain methodological, IT and innovation developments in the statistical system of BiH.

2.2.1.3 Sampling frame

57. *Creation:* Due to the massive demographic changes in population the data from the Population Census 1991 in BiH was not used as a sampling frame for the LFS (or any other household based survey). In order to conduct household surveys, during 2003 for selected enumeration areas all households were enumerated. Results of this activity are used as a frame, named the Master sample, for the LFS and for all other household based surveys.

58. In the process of forming the Master sample, complete enumeration of all households residing in the territory of selected enumeration areas has been performed on the basis of the representatively distributed sample on the whole territory of BiH and its entities.

59. Since 2003 the Master sample has been updated twice, in 2006 and 2009. During the 2009 updates, data were collected for 1,499 enumeration areas (with 80,069 households). Certain number of households was also included in the enumeration during the years 2003 and 2006, but the majority were changed (due to the random selection of the enumeration areas).

60. As new surveys have been conducted on BiH territory in recent years, the existing Master sample has been frequently used and some households have been selected more often. Consequently, this means an overburdening of households in certain areas with surveys and higher probability of non-response.

61. *Problems:* As the information on the size of enumeration areas are not available, a certain number of empty enumeration areas were selected. Also, during the analysis of the collected data of the Master sample, it has been noted that within certain enumeration areas or parts of the enumeration areas some households refused to respond. As a consequence, a final database has been formed with 1,417 enumeration areas from which 67,947 households accepted to give response after being directly contacted.

62. Currently, the LFS sample has been selected from the last available Master sample. As it has not been updated since 2009 problems with over-coverage and under-coverage existed. BiH methodologists are aware that the sample frame should be improved. This could be done after the results from the Census of Populations, Households and Dwellings in Bosnia and Herzegovina 2013 are available (after April 2015).

63. *Eligibility criteria:* UNECE-Eurostat's recommended definition for usual residence and full coverage of all persons living in the *'conventional'* households has already been implemented in the LFS. Demographic data have been collected for all household members who live in the selected housing units, and the data on economic activity are collected for the household members aged 15 years and more. In order to identify a household member from whom the data on economic activity will be collected, the following criteria are used: (i) household member's presence over the last 12 months; (ii) presence during the reference week and (iii) the reason for absence. Members of the household aged 15 years and more temporary absent for a period exceeding 12 months and persons living abroad were excluded from the survey, if the reasons of their absence were:

   1. Employment of foreign employer outside BiH;
   2. Illness / hospitalisation;
   3. Other reasons.

64. If the reasons for absence were:

   1. Education;
   2. Employment in BiH; and
   3. Employment of domestic employer outside BiH,

   these persons were included in the survey, regardless of the duration of absence.

65. The sample size for the LFS is approximately 10,500 households, of which 57% reside in the Federation of BiH, 33% in the Republika Srpska and 10% in the District of Brčko.

66. The LFS is conducted as an annual survey; the reference period is defined in accordance with Eurostat regulations for annual surveys. Most of the data refer to the economic activity performed by the persons during a specific calendar week, from Monday to Sunday which is the survey reference week. Some data refer to other periods (four weeks or one year). The reference week for the LFS is one week in April. In 2014, it was from 7 to 13 April and preceded the period of the field work, i.e. survey interviews. The survey interviews were conducted in a period between 14 and 27 April, 2014.

67. The sample design of the LFS is a stratified two stage cluster sample. The first stage of sampling is the selection of enumeration areas from the Master sample by the simple random sample method within the strata. The strata are constructed by the cross-classification of BiH geographic regions (the entities and the District of Brčko) and two types of settlements to which the enumeration area belongs to (urban and non-urban). The second stage is the selection of households (as clusters of individuals) within selected enumeration areas with respect to the prepared sample allocation.

68. Standard errors for LFS results are calculated for every statistical indicator that is published (*see paragraph 2.2.5.1*).

2.2.2 Appropriate statistical procedures

69. Administrative data: According to the Law on Statistics of BiH, the statistical laws of the entities, and the Statistical Programme of BiH, the statistical institutes of BiH are given the right to collect primary statistical data and to access administrative records. A *'Guideline for the use of administrative data'* is published on the BHAS website: http://www.bhas.ba/statistickistandardi/Uputstvo_o_podacima_iz_administrativnih_izvora_ba.pdf. For the production of the LFS the statistical institutes of BiH do not use administrative data yet. Administrative data are used only for the comparison and analysis of results for employment (collected by tax authority) and unemployment (collected by employment offices).

70. Appropriate infrastructure for classifications: The working groups from all three statistical institutes of BiH dealing with the variables related to activity and occupation has been created (*see paragraph 2.4.1*). The working groups are responsible for training the controllers and the interviewers, coding and providing explanations in the methodological guidelines.

2.2.2.1 Preparatory phase of data collection

71. The survey questionnaire is assessed and validated by experts through different international projects conducted by international organisations. A pilot survey is conducted before starting a new survey, or making major changes in the questionnaire. In BiH, the pilot LFS was carried out in 2005. After the regular survey was carried out the BiH statisticians analysed the experiences made by interviewers and controllers and improved the data collection process for regular implementation in the next year.

72. Training of interviewers: Interviewers are provided with the methodological guidelines prepared to support them during the data collection process. Prior to the fieldwork the interviewers attend training covering the content of the questionnaire with explanations on ILO concepts. Moreover, interviewers are trained on the general behaviour, such as approaching the household, introducing themselves, presenting the purpose and maintaining the confidentiality of the survey. Furthermore, examples are presented and interviewers are individually trained to conduct the interview and to complete the questionnaire.

73. Communication with respondents: The notification letters to respondents are distributed by the interviewers. Due to the specific situation concerning sampling in BiH, there is no possibility to send letters by post in advance. Notification letters have been reviewed regularly during the annual preparation of the survey. Prior to the conduction of the survey, the media, mayor of municipalities and police offices are informed. The LFS is also announced on press conferences held by the statistical institutes of BiH.

2.2.2.2 Field work

74. Proxy: The data are collected directly from all household members in the selected household via interviews. The survey responses are given by each household member separately, for himself or herself, and for children below 15 years of age by the parent or guardian of the child. Proxy interview is allowed during the data collection process and is indicated as a special question in the questionnaire. During the training of the interviewers the importance of collecting data directly, not proxy, is stressed. The interviewers try to ensure the presence of all members of the household during the interview period. If they cannot interview a certain member of the household the head of the household or the most knowledgeable household member, may respond on his or her behalf. The average of proxy responses is lower than 5% (data from SAQ).

75. During the data collection process interviewers read questions and possible answers, as well as methodological explanations. The interviewers are trained on how to clearly read questions to respondents, without leading to a specific response. Respondents have the possibility to call controllers or subject matter statisticians on mobile phones to ask for additional explanations. The BiH statisticians currently are not monitoring the number and types of questions asked by the respondents.

76. Work of interviewers is regularly monitored by controllers. They have regular meetings during the data collection period. Controllers are in control of all questionnaires collected by interviewers. Non-respondent units are checked by interviewers, controllers and regional offices. The interviewers have the instruction to visit the particular household at least three times. If a particular interviewer has a high non-response rate the reasons are analysed. The decision about the next engagement of interviewers or controllers is made according to these results. The total number of interviews conducted per day and per interviewer as well as the average duration of interview per day is calculated. Codification of economic activity and occupation is performed by controllers and checked by staff in regional offices.

2.2.2.3 Statistical processing

77. The two stage stratified cluster sample is used. Enumeration areas are the primary sampling unit (PSU), households randomly selected within enumeration areas from the Master sample are the final sampling unit (FSU). Stratification is done according to the entities * urbanity. The overall yearly sampling rate (including non-response) is 1.1% in the Federation of BiH and Republika

Srpska. For the District of Brčko the overall yearly sampling rate is higher (4.4%) due to the small size and great influence of the entities.

78. <u>Non-response:</u> There are three types of non-responses in the LFS: a unit non-response, a partial non-response (by a household member) and an item non-response.

79. In the cases of the unit non-response (either the household is not found at the address or refused to participate in the survey for any reason) correction is performed by appropriate weighting. In the case of item non-response, imputation is performed (see paragraph on imputation). In case of partial non-response (refusal by a household member to participate in the survey) correction (imputation or weighting) is not performed.

80. <u>Data entry and editing:</u> Prior to entering the data, paper questionnaires are visually screened. In case the irregularities are detected which cannot be rectified by using other data, the controller contacts the selected household by telephone in order to find out the true information which he/she then uses to rectify the data in the questionnaire. In case a telephone number of the household is not available, a contact is established with the interviewer who conducted the survey in that household. He/she is asked to visit the household again and rectify the erroneous data. No data are rectified automatically.

81. Before entering the data from the questionnaire into database the check of completeness of coverage is performed, whether the household is included in the survey sample or not. It is not possible to enter one and the same questionnaire twice. The response and non-response data have to provide a complete sample of households for this survey.

82. During the procedure of entering the data into the electronic database (Blaise), the data are controlled for the second time and logical as well as computational controls are included. If necessary, a contact is established with the household by telephone also at this stage in order to rectify the data. There is only a small number of implemented controls which are only a warning but do allow the entry of data which are not in accordance with the pre-defined control (the so-called soft controls).

83. The editing rate for key variables is equal to 0. Regarding other variables, there are no accurate records of corrections made during the editing stage.

84. Instructions for interviewers are important as they enable the interviewers to treat all questions in a proper way, which result in a reduced number of erroneous responses. Every interviewer receives the entire methodological material with all explanatory notes. A controller remains available for each interviewer during the entire duration of his/her field work in order to assist him/her in the case of any difficulties regarding the survey questionnaire. Nevertheless, communication between interviewers and controllers does not end after the completion of the field work but continues throughout the editing phase.

85. In the current procedure it is not possible to review which variables have been corrected, and this means that quality indicators like the editing rate cannot be calculated directly, only estimated.

86. <u>Imputation:</u> In the case of an item non-response, the imputation is performed depending on the type of question. There is no special IT solution developed for the imputation. In the current manual procedure the imputation is performed only on the variables which are important and published, such as the job search length, average number of work hours, etc. In the case of continuous variables, the breakdown is made into the observed groups (e.g. for a certain age group, certain qualifications, certain professions, etc.) and median values are imputed. In the case of categorical variables, either historical data (if any, e.g. from the survey conducted last year), a logical conclusion (such cases are rare) or a hot-deck method is used. Sometimes a subsequent telephone contact is made once the data processing stage has been reached. The share of imputed data is very small, approximately 0.1%. In the current procedure it is not possible to review which variables are imputed, which in turn means quality indicators like the imputation rate cannot be calculated directly, only estimated.

87. The statistical institutes of BiH could improve the procedure either by preserving the un-corrected data in the database or by introducing flagging of corrected and/or imputed values in the database

to be able to calculate some quality indicators such as the editing or the imputation rate directly from the processes.

88. <u>Weighting</u>: Weights are calculated at the household level and applied to all individuals in the household. Initial weights are calculated as reciprocal value of the product of three factors (1) the probability of selection of primary sampling units (enumerations areas); (ii) the probability of selection of the secondary sampling units (households); (iii) the rate of the Master sample non-response. The final weights are corrected with the non-response on the level of strata.

89. Methods used for the survey sampling, sample selections and estimation are reported in the methodological explanations in regular annual publications (*see paragraph 2.4.2*) and in the quality report for the LFS 2011.

2.2.3   Non-excessive burden on respondents

90. In recent years the main aim of statistics of BiH has been to produce the harmonised LFS at least on an annual basis, with no significant procedures in place to reduce the response burden. The BiH LFS questionnaire follows the EU LFS regulations and recommendations, and contains all requested variables. In the BiH LFS no additional variables for national purposes are included.

91. All variables are obtained directly by interviewing households. The statistical institutes of BiH have the possibility to use administrative sources. The legal access to administrative sources is guaranteed by the Law on Statistics of BiH (*see paragraph 1.2*), and the manual for using administrative sources *'Guidance for taking the administrative data'* is published on the BHAS website. For the production of the LFS the statistical institutes of BiH do not use administrative data yet. In the departments responsible for labour statistics in the statistical institutes of BiH administrative data from the employment offices and the tax authority are used for internal analyses; for comparing and analysing the number of employees in certain activities (according to NACE) and the number of unemployed persons. The administrative data on number of unemployed persons are regularly downloaded from the Employment offices websites and are published in monthly bulletins.

92. BHAS and the entities institutes publish only those LFS tables which they consider to be the most interesting and useful to users. This implies that only part of the collected data is published. The access to the LFS micro data for research purposes is allowed. Currently the LFS micro data are not sent to Eurostat, except for aggregated LFS data in pre-defined tables, are available upon request.

93. The response burden is measured annually. The average time spent in the household during the PAPI interview is 29 minutes; the interview takes 12 minutes/person. Each year approximately 10,500 households are included in the survey which means 27,000 persons are interviewed.

2.2.4   Cost effectiveness

94. The use of resources (mostly external) for the production of the LFS is monitored by the statistical institutes of BiH. These results are presented in an annual report.

95. On average the number of staff in central and regional offices (in full-time equivalent FTE; includes only staff directly employed, excluding interviewers) conducting the LFS is 6.7 FTE: 2.5 FTE in BHAS, 2 FTE in FIS and 2.2 FTE in the RSIS. Over 85% of staff involved in conducting the LFS are statisticians.

96. Each year the statistical institutes of BiH engage approximately 180 interviewers and controllers in the LFS production. The average number of interviews per interviewer is 191. The cost of interview is 16 KM per interviewed household.

97. The annual budget (including administrative expenses) on LFS in 2013 was 324,000 KM and is decreasing compared to previous years (*see paragraph 1.3*).

2.2.5 Accuracy and reliability

98. In order to assure a high level of quality, source data, intermediate results and outputs are regularly assessed and validated prior to publishing. Quality reports are prepared according to the Methodological Guidelines for Preparation Quality Report for Statistical Surveys. The LFS 2011 quality report was prepared and published on the BHAS website http://www.bhas.ba/statistickistandardi/QRMetodology_ENG.pdf.

2.2.5.1 Sampling errors

99. The coefficient of variation (CV) and the confidence interval for annual estimates is computed and presented for the following statistics and/or variables: total population, working age population, labour force, employed persons, unemployed persons, inactive persons, persons below 15 years of age, persons aged 15-64, activity rate, employment rate and unemployment rate. (*See Table 1 in Appendix of the LFS publications, published on the BHAS website http://www.bhas.ba/tematskibilteni/BHAS_Ars_BH_press.pdf*).

100. Sample errors for all other published tabulated data are calculated for every cell in the published tables. Values of sample errors are presented in the form of certain limits of relative errors-coefficient of variation (CV) for every cell in the published tables, according this definition:

- The data presented in the table cell without any brackets are certain and the coefficient of variation (CV) is less than 0.10 or expressed in percentages CV< 10%;
- The data presented in the table cell within one bracket are less certain and the coefficient of variation (CV) is less than 0.20 but equal to or higher than 0.10 or expressed in percentages 10%≤CV<20%;
- The data presented in the table cell within two brackets are uncertain and the coefficient of variation (CV) is less than 0.30 but equal to or higher than 0.20 or expressed in percentages 20%≤CV<30%;
- The table cells tagged with " . " show the extremely uncertain data with coefficient of variance (CV) equal to or higher than 0.30 or expressed in percentages CV≥30%.

Table 1: Coefficient of variation of main LFS estimates by years on the level* of BIH, FBIH, RS and DB (in %)

	BiH	FBiH	RS	DB
Employed persons				
2006	3.0	3.8	4.9	13.5
2007	2.5	3.2	4.1	11.8
2008	2.6	3.3	4.2	10.4
2009	2.6	3.4	4.0	10.1
2010	2.8	3.6	4.4	9.7
2011	2.9	3.7	4.8	11.2
2012	2.9	3.7	4.7	9.3
2013	2.9	3.8	4.7	8.7
Unemployed persons				
2006	3.9	5.1	6.3	14.4
2007	3.5	4.5	5.7	10.1
2008	3.8	4.9	5.9	11.3
2009	3.5	4.6	5.6	12.8
2010	3.8	4.9	6.5	13.9
2011	3.8	5.0	6.3	15.6
2012	3.8	4.7	6.6	17.5
2013	3.8	4.8	6.7	13.8
Rate of unemployed				
2006	2.5	3.1	4.3	9.3

	BiH	FBiH	RS	DB
2007	2.4	2.8	4.4	7.4
2008	2.9	3.6	5.0	6.7
2009	2.8	3.6	4.5	7.8
2010	2.6	3.4	4.5	8.7
2011	2.6	3.2	4.5	9.4
2012	2.5	3.1	4.6	11.3
2013	2.6	3.3	4.3	9.0
Part-time employed persons				
2012	cv<10%	cv<10%	10%≤cv<20%	20%≤cv<30%
2013	cv<10%	10%≤cv<20%	10%≤cv<20%	20%≤cv<30%
Average number of hours actually worked per week				
2012	cv<10%	cv<10%	cv<10%	cv<10%
2013	cv<10%	cv<10%	cv<10%	cv<10%

*) FBIH – Federation of BiH; RS – Republika Srpska; DB – Brčko District

2.2.5.2 Quantitative information and brief comments on the main problems affecting frame quality

101. <u>Under-coverage</u>: The data from the Population Census 1991 cannot be used directly for a sample frame. The Master sample is created and used for the sample frame. It is updated every 3 years from enumeration areas which are chosen randomly. Results from the Master sample are not updated by data on births and deaths. It means that households which have immigrated during the last update are not included in the Master sample. It is not possible for these households to be included in the sample even though they should be a part of target population. Another existing problem is the case in which the registered and actual place of resident differs. However, this is not a problem if the person resides at both addresses. According to the survey data, 3% of the selected persons registered residences are vacant apartments (including unidentified and non-existing).

102. <u>Over-coverage</u>: Following cases:

   - Selected households moved out from the housing unit permanently or for more than one year and the housing unit is vacant during the survey;
   - Housing unit is used only for business purposes;
   - Housing unit has been demolished;

represent over-coverage errors and can be calculated from the data of additional BiH LFS questionnaire for non-response-LFS2.

2.2.5.3 Measurement errors

103. Measurement errors occur when the response provided differs from the real value. Such errors may be imputed to the respondent, the interviewer, the questionnaire or the data collection method. The statistical institutes of BiH are not assessing the bias due to the measurement errors. The questionnaire was tested in 2005 but the report is not produced. The statistical institutes of BiH use only PAPI mode for the data collection.

2.2.5.4 Processing errors

104. The statistical institutes of BiH are not assessing the bias and variance due to processing errors for the main variables. The impact on the overall accuracy could not be predicted.

105. The completion of the questionnaires were controlled and coded by controllers and also by the staff in BHAS and the statistical institutes. The data entry program contains logical controls. The data are checked and errors and exceptions are manually corrected (*see paragraph 2.2.8*).

2.2.5.5 Non-response errors

106. The non-response rate in the BiH LFS is constantly slightly increasing from 11% in 2009 to 14% in 2014. The main reasons for this are: due to empty dwellings/flats 20%, absent households 37% and refusals 30%.

Table 2: Non-response and refusal rate in the LFS for the period 2006-2013

	Non-response rate (%)	Refusal rate (%)
2006	8.0	3.5
2007	10.7	3.7
2008	11.9	4.2
2009	11.3	3.4
2010	11.1	3.3
2011	12.5	3.9
2012	13.5	4.4
2013	14.4	3.9

2.2.5.6 Revisions

107. Until now there is no major revision in the BiH LFS. In 2012 the new version of the NACE classification is introduced and few small revisions were made introducing the modalities for a few variables. In order to introduce the revised version of the NACE classification the activity is double coded. In the results there are no big differences in the three main groups of industries (agriculture, industry, services). In a footnote it is noted that NACE Rev.2 (and not NACE Rev.1.1) is used.

108. There are no major mistakes made in the LFS publication so far. In case of mistakes they will be corrected according to the Guidelines for correcting mistakes in releases published on the BHAS website http://www.bhas.ba/statistickistandardi/Uputstvo_ispravljanje_gresaka_en.pdf.

2.2.6 Assessment

109. The reference period is one week in April. BHAS and the statistical institutes have plans to introduce a continuous survey and produce quarterly results in the coming years in order to improve the coverage of weeks in the year and to take into account seasonality.

110. In the statistical institutes of BiH the organisational infrastructure is appropriate for the implementation of the statistical processes such as sampling, data collection, codification, data entry, data editing and imputation.

111. The BiH statisticians have the opportunity to attend different courses, workshops, seminars and conferences. BHAS, FIS and RSIS should improve the procedures for spreading the knowledge and information obtained in different international events.

112. The BiH methodologists are aware that the sample frame should be improved. This could be done once the final results from the Census of Population, Households and Dwellings in Bosnia and Herzegovina 2013 are available.

113. Data are collected by face-to-face interviews. The interviewers are well trained and monitored. In order to improve the quality of statistics, BHAS and the entities institutes have already planned the use of more advanced models/methods for data collection such as CATI or/and CAPI.

114. The respondents are provided with all relevant information prior and during the data collection process, supported in completing the questionnaires and have the possibility to receive any additional information, either from the interviewers, controllers or subject matter statisticians. The type and the number of questions provided to the respondents are not systematically monitored. The statistical institutes of BiH should improve the procedures and establish a record of the questions.

115. The software Blaise is used for data entry including quality checks. Inconsistencies and errors are corrected. The item non-response is monitored, and some of the variables are imputed. There is no special IT solution developed for imputation. With the current manual procedure it is not possible to review which variable was corrected or imputed, which means quality indicators such as the imputation rate cannot be calculated directly, only estimated. The item non-response is currently approximately 0.4%. The statistical institutes of BiH could improve the procedure either by preserving the un-corrected data in the database or by introducing flagging of corrected or imputed values in the database to be able to calculate some of the quality indicators such as editing or imputation rate directly from the processes.

116. The unit non-response is measured. Currently the unit non-response is approximately 15%. Weights are used to adjust the results due to non-response error.

117. Sampling errors for key indicators (employment rate, unemployment rate, activity rate at the state and entity levels) are quite acceptable, except perhaps, for the District of Brčko which is a small territory (although the sample is enlarged). A higher reliability of other indicators, or key ones, at more detailed level is possible only if the sample size is increased. On the other hand, it will not be necessary to increase the sample size when the data from Population Census will be used as a sampling frame. It will enable a different sample design and a targeted selection of population.

2.3 Dissemination documents and practices

118. BHAS, FIS and RSIS regularly publish the LFS results according to the release calendar. All publications are also translated into English and available on the BHAS website http://www.bhas.ba/?option=com_content&view=article&id=113=ba.

119. An issue, raised by some users, is the relationship between unemployment figures based on the LFS and other *'official'* unemployment figures provided by the employment offices. This is a general issue in many countries. Thus, there might be a need for a further user-oriented explanation of these differences and the use of data from the LFS, even if there is a chapter on coherence of the LFS and administrative data in the LFS publications.

120. The dissemination of micro-data is also an issue for some users. Even if data are not directly identifiable as identifiers are removed, it seems necessary to implement a more distinct policy regarding the dissemination of micro-data as it is of utmost importance to assure confidentiality at individual level.

2.3.1 Relevance

121. BHAS prepares a release calendar yearly and publishes it on its website http://www.bhas.ba/statistickistandardi/KALENDAR_PUBLIKOVANJA_ba.pdf. According to the release calendar the first LFS release is usually published in July and more detailed results in the PDF publication at the end of October. Any deviations between the planned dates and the release calendar are explained to the users.

122. The results are published in PDF publications and are not available in databases. Users can receive additional data upon request.

123. As only annual survey is conducted the data are not seasonally adjusted. The LFS data are available since 2006; the length of the LFS time series is 9 years.

124. In PDF publications the set of BiH indicators are not fully consistent with the Eurostat LFS main indicators, available on: http://epp.eurostat.ec.europa.eu/portal/page/portal/employment_unemployment_lfs/data/main_tables. The main reason is the design of the current LFS survey as a cross-sectional annual survey,

not as the continuous survey. The questionnaire is in compliance with the Commission Regulations (EC) 377/2008[3] implying that all Eurostat main indicators could be produced.

125. According to the BiH statisticians the LFS results are of high relevance to politicians, social partners, media, researchers and students; and of low relevance to enterprises.

2.3.2 Timeliness and punctuality

126. The first release of the LFS results is usually announced for July, approximately 105 days after the reference period. The final results are published by the end of October.

Table 3: Reference period and dissemination dates for the LFS for the period 2009-2014

Year	Reference week	Field work	First results	Final results	Time lag of the first results (in days)	Time lag of the final results (in days)
2009	11-17 May 2009	18-31 May 2009	20 August 2009	October 2009	94	167
2010	12-18 April 2010	18 April-1 May 2010	15 July 2010	November 2010	97	202
2011	4- 10 April 2011	11-25 April 2011	26 July 2014	November 2011	107	234
2012	9-15 April 2012	16-30 April 2012	25 July 2012	November 2012	100	227
2013	8-14 April 2013	15-28 April 2013	25 July 2014	31 October 2013	101	200
2014	7-13 April 2014	14-30 April 2014	31 July 2014*)	31 October 2014 *)	119	> 180

*) The first results for the LFS 2014 were announced in release calendar for July 31, 2014 and are published on September 11, 2014

127. In recent years, as can be seen from the table above, the first LFS results were available according to the dissemination plan. However the time lag is longer than twelve weeks after the end of the reference period recommended by EU regulations. The statistical institutes of BiH should analyse the processes and improve the timelines; to align the release calendar with EU regulations.

2.3.3 Coherence and comparability

128. *Comparability over time:* BiH LFS results are available since 2006; the length of time series is 9 years and there were no major revisions or significant breaks in between. In the year 2012 missing questions from Reg. 377/08 about the duration of absence from work and variable *'need care'* were added; and NACE Rev. 2 and ISCO-08 were introduced. The master sample has been updated in 2009.

129. *Geographical comparability:* The comparison between the BiH LFS and the outputs of the LFS conducted in the ESS would be possible if the Member States conducted the LFS as an annual survey. As this is not the case, the comparison between BiH and other EU MS results is not possible.

130. *Comparability between first and final results:* According to the policy regarding the dissemination of provisional/first results, aiming at satisfying user needs, these are published as accurate as possible. It means the provisional and final results of the LFS (like activity rate, employment and unemployment rates) are usually the same.

131. Coherence between demographic statistics and LFS estimates: In the following table the comparison between the LFS data and the results from mid-year estimates are presented. In all years the LFS data are lower than the mid-year estimates and represent from 80% to 88% of the mid-year estimates on the level of Bosnia and Herzegovina. The situation is similar for the entity

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[3] Regulation 0377/2008 of 25 April 2008 implementing Council Regulation (EC) No 577/98.*The regulation implements the codification to be used for data transmission from 2009 onwards including the compulsory survey characteristic 'income', the use of a sub-sample for the collection of data on structural variables and the definition of the reference quarters.*

level: from 84% to 92% on the level of Federation of BiH; and from 71% to 81% on the level of the Republika Srpska.

Table 4: The comparison between the mid-year estimates and the LFS data by years, BIH, FBIH and RS

Year	BiH			FBIH			RS		
	De facto population mid-year estimate	LFS estimate of total population	Ratio: LFS /de facto mid-year estimates	De facto population mid-year estimate	LFS estimate of total population	Ratio: LFS /de facto mid-year estimates	De facto population mid-year estimate	LFS estimate of total population	Ratio: LFS /de facto mid-year estimates
2006	3843	3372	0,88	2325	2141	0,92	1444	1168	0,81
2007	3843	3315	0,86	2328	2101	0,90	1440	1155	0,80
2008	3842	3211	0,84	2327	2043	0,88	1437	1109	0,77
2009	3843	3129	0,81	2327	1974	0,85	1435	1096	0,76
2010	3843	3130	0,81	2327	1999	0,86	1433	1064	0,74
2011	3840	3057	0,80	2338	1943	0,83	1430	1052	0,74
2012	3836	3038	0.79	2338	1955	0,84	1429	1021	0,71
2013	3832	3050	0.80	2337	1958	0,84	1425	1033	0.72

132. BHAS and the entities institutes are not able to provide a detailed analysis on the reasons of these differences.

133. After the final Population Census 2013 data were made available, it was recommended to analyse the structure of the census and the LFS data for the years 2013 and 2014 by gender and age groups. It will be very important to investigate also the differences between the Population Census 2013 and LFS 2015 data on one side and between the LFS 2014 and LFS 2015 on the other side. Based on the results of the analysis, the statistical institutes of BiH will obtain the information needed in order to decide whether revision of the LFS methodology is required.

134. Coherence between benchmark survey results: In the LFS publications, the BiH statisticians regularly explain the differences between survey and administrative data in the variables employment and unemployment.

135. **Employment:** The data on the number of persons employed from the LFS may be compared to the data on the number of persons employed obtained from the regular monthly survey on employment and wages in legal entities (Rad-1), and to the data on owners and employees in crafts and trades and freelance workers. The survey Rad-1 covers all legal entities with all forms of ownership structures, public authorities at all levels, institutes and other organisations.

136. The data on owners and employees in crafts and trades and freelance workers are taken from the tax administration. The data on employed persons include the employees (including the employees in defence and police) and owners of craft and free professional practise.

137. The survey of employment in legal entities covers the persons employed on the basis of an employment contract regardless of the type of employment or on the number of working hours. The survey of the employees who work for private employers – self-employed owners – covers the owners and employees registered in tax administration.

138. The number of employees from the LFS 2011 is 18% higher than the number of employees obtained by related monthly survey.

139. **Unemployment:** The number of unemployed persons from the LF 2011 is 70% smaller than the number of registered unemployed persons obtained by the employment offices data.

140. Coherence with national accounts and business statistics: There are conceptual differences between LFS estimates, and National Accounts (NA) and Structural Business Statistics (SBS)

estimates. The LFS estimates are based on the data of individuals regardless of whether they are in formal or informal employment in the LFS reference week while NA and SBS data are based on annual statements of the business entities. Data are compared and analysed in methodological context and numerically. NA estimates for non-observed economy are based on LFS estimates. LFS is not conducted continuously and thus cause the high level of incoherence.

2.3.4 Accessibility and clarity

141. The LFS results are disseminated through the traditional information and communication means, modern information and communication web technology. All results are published on the BHAS website http://www.bhas.ba/?option=com_content&view=article&id=113=e.

142. The survey results are presented in the form of absolute figures, expressed in thousands and percentages. In addition to a tabular presentation given in the First Release, the data are presented also in the form of graphs.

143. Custom-designed analyses are performed based on the specific user request. The results of custom-designed analyses are published only on user's request.

144. The access to micro-data for research purposes is allowed and is subject to specific protocols. Data are given exclusively through the protocol; the statement on the purpose of the use of micro-data is requested. The users of micro-data have to sign the Memorandum of Understanding.

145. The metadata are documented and published; currently there is no standardised metadata system (*see paragraph 2.4.2*).

146. The assistance to users is available by telephone and e-mail through the dissemination of data unit and the Labour market unit.

147. The information on the national LFS is available to users on the BHAS website http://www.bhas.ba/index.php?option=com_publikacija&view=publikacija_pregled&ids=1&id=2&n=Tr%C5%BEi%C5%A1te%20rada.

2.3.5 Assessment

148. Results are published in PDF format. Publications could be improved by adding international comparison, graphical presentations and additional indicators e.g. (i) two EU2020 headline indicators, namely *Early leavers from education and training* and *Tertiary educational attainment*; (ii) three EUROSTAT supplement indicators for unemployment as: *Underemployment part- time workers*, *Persons available to work but not seeking* and *Persons seeking work but not immediately available*; (iii) more age and gender breakdowns as 15-18, 20-24, 18-24, 55-64 and etc., to follow the state and entities strategies and actions plans for employment on specific groups.

149. Currently LFS micro data are not being sent to Eurostat, with the exception of aggregated LFS data in pre-defined tables, upon request. BHAS should analyse the current situation and establish the processes in a way to be able to create the LFS micro datasets according to the Commission Regulation (EC) 377/2008 – Annex III if/when requested by Eurostat.

150. All publications are published on the website of BHAS and are also translated and available in English. Dissemination should be improved by using dissemination database or by publishing results in an editable format, e.g. excel. This would allow users to perform calculations on their own. Sampling errors are calculated for the main indicators.

151. Results are published annually according to the release calendar approximately 105 days after the reference period. BHAS should check the possibility to improve the timeliness and be able to publish the results in 12 weeks following the reference period in accordance with EU regulation.

152. Consistency among different statistical domains (such as business statistics, national accounts and population statistics) has not been measured. The BiH statisticians responsible for production of national accounts and business statistics should use LFS data as an input to their statistics.

2.4 Statistical infrastructure

2.4.1 Classifications

153. Through the regular activities of the preparation of multi-annual and annual plans the statistical institutes of BiH are announcing and explaining application of standards, classifications and good practices.

154. Classifications used are in line with international and EU standards. The following classifications are used:

- Classification of Activities which is comparable to the UN Classification of Activities (ISIC – Rev. 3) and EU Classification of Activities (NACE Rev. 1.1), in 2011 switch to NACE Rev. 2;

- Classification of Occupations which is comparable to the EU Classification of Occupations (ISCO-88), from 2011 ISCO-08;

- Classification of Levels of Education which is comparable to the International Classification of Education (ISCED 1997);

- Classification of Professional Status of Employees which is comparable to the International Classification of Status in Employment (ISCE).

155. The statistical institutes of BiH have planned to use the revised ISCED 2011 in the coming year. The economic activity for the current main job are coded at the NACE Rev. 2 – 3-digit level and published only for three groups of economic activity (agriculture, industry and services). The BiH statisticians would like to further analyse the number of persons in employment by economic activity of the main job from the LFS and perform comparison analysis with monthly statistics on earnings at a more detailed level of the NACE classification. Occupations are coded at the ICSO-08 4-digit level. BHAS and entities institutes of BiH do not publish any LFS results by occupation since it is assumed that such data are of no interest to users.

156. The units responsible for registers in the statistical institutes of BiH are also responsible for classifications.

157. For each classification used in the LFS an appropriate working group is established. These working groups consist of statisticians from all three statistical institutes of BiH. The working group responsible for the classification of activity consists of staff responsible for the statistical business register. The working group responsible for the classification of occupation consists of staff from social statistics. Both working groups are responsible for training persons on coding and explanations in the methodological guidelines.

2.4.2 Metadata

158. The metadata are documented and published; currently there is no standardised metadata system. In 2012 the methodological manual for quality report preparation *'Quality Report for Statistical Survey – methodological guidelines for preparation'* was prepared and published on http://www.bhas.ba/statistickistandardi/QRMetodology_ENG.pdf.

159. The users are informed on the methodology of statistical processes, the quality of statistical outputs with respect to the national quality criteria and on the international quality standards. The LFS PDF publications available on the BHAS website http://www.bhas.ba/index.php?option=com_publikacija&view=publikacija_pregled&ids=1&id=2&n=Labour%20market include the following metadata information: definitions, explanation notes and the questionnaire. For the year 2011 the quality report is prepared and is available on http://www.bhas.ba/tematskibilteni/QR_LFS_2011_ENG.pdf.

160. In all publications metadata is included, translated and is available in English.

2.4.3 Assessment

161. Classifications used are in line with international and EU standards. NACE Rev. 2 is used for economic activities, ISCO-08 for occupation and ISCED-97 for education. The statistical institutes of BiH have planned to use the revised ISCED in the coming years.

162. The metadata information is included in the publication and follows BiH national standards: definitions, methodological explanations and the questionnaire. For the 2011 survey the quality report is prepared. The next one is planned for 2014. BHAS and the statistical institutes could improve the availability of metadata related to the quality of the LFS by producing shortened versions of the quality report which will include most of the indicators and information which change frequently.

3 International organisations and activities related to the LFS

163. The LFS methodology has been developed under the assistance of different international organisations through international experts' supervision.

164. The LFS was conducted with experts' assistance in the pilot phase in 2005 and with the joint support of UNDP and WB in period 2006-2007. Some meetings and trainings in Eurostat were organised through multi-beneficiary IPA projects.

165. SIDA projects supported a lot of trainings on general statistical methodology and sampling methods. In the most recent SIDA project the compliance of variables in the BIH LFS with EU-LFS was investigated.

4 Further developments

166. In the annual LFS improvements can be made in sampling, data processing, dissemination and evaluation. Major challenges for statistics of BiH are:

- Improving the sample frame;
- Introducing a continuous survey;
- Using computer assisted mode for data collection.

167. Monthly statistics on gross earnings and paid off net earnings of persons in employment which are currently produced mostly to fulfil national needs could be a good basis for producing a Labour Cost Index, Job Vacancy Statistics and labour related STS indicators. The BiH statisticians are encouraged to analyse these monthly data, prepare methodology and calculate estimates to fulfil the requirements for producing LCI, JVS and/or labour related STS indicators (e.g. employment).

5 Conclusions and recommendations

168. The main conclusions of the SR of the LFS in statistics of BiH are:

- The LFS 2014 was the 9th annual cross-sectional survey;
- The LFS is one of the first close collaboration projects of BHAS and the entities institutes with visible successful international standardised results for all users;
- The LFS shows a high compliance with the ILO recommendations and with the European requirements in definitions of concepts, in the contents and list of variables as well as in the classifications used;
- BHAS produced the first quality report for LFS 2011 (in December 2012) in order to identify and elaborate different quality components relevant to the LFS statistical outputs;
- The main problem in order to introduce a continuous survey and produce quarterly and annual data in compliance with EU standards is the lack of a new sample frame. This could be established after finalising the data processing of the Census of Population, Households and Dwellings in Bosnia and Herzegovina 2013 in April 2015;
- The statistical institutes of BiH are strongly committed to activities on redesigning the LFS as a continuous survey and plans were announced in documents such as the *'Multi-annual statistical program 2013-2016'* and the *'Strategy for development of Statistics of Bosnia and Herzegovina 2020'* (2013);

- The main methods of dissemination of data are paper publications and PDF publications published on the BHAS website. A modest number of 24 standardised tables at national level and level of entities and the District of Brčko are published.

169. The main recommendations of the SR for the LFS in statistics of BiH are:

- To recalculate the number of unemployed persons and unemployment rate while taking in consideration at least three active methods for searching job; for the period 2006-2014. If significant differences exist, revision of the series 2006-2014 and explanations to users are required;
- To continue the intensive preparations aiming at establishing a continuous LFS;
- To improve the existing procedure in order to be able to calculate some of the quality indicators (e.g. imputation rate) directly from the processes (e.g. by preserving the un-corrected data in the database or by introducing flagging of corrected and imputed values);
- To establish and ensure the work of a joint working group on LFS (consisting of experts of all three statistical institutes of BiH) through regular meetings and contacts using new ICT technologies, such as Skype/video conferences, and to hold at least one meeting per year with the attendance of experts;
- To urgently design an action plan for developing a continuous LFS with detailed description of milestones and activities;
- The crucial activities of the action plan will be related to the sampling issues (weekly sample with rotating pattern, quarterly estimates) and computer assisted data-collection methods;
- Carefully analyse and compare the results from the LFS 2013, LFS 2014 and LFS 2015 with results from the Census of Population, Households and Dwellings in Bosnia and Herzegovina 2013 in April 2015 after finalising results. If there are significant differences in the age structure and gender the revision of weights and LFS results is recommended;
- To ensure further support from international experts;
- To carry out a few pilot surveys using new data collection methods (CAPI, CATI, mixed-mode);
- To extend the volume of data for dissemination, beginning with two EU 2020 indicators from the LFS in the period 2010-2014 and others indicators which are important to labour policy makers and social inclusion policy.
- To establish the processes in a way to be able to create the BiH LFS micro datasets according the Commission Regulation (EC) 377/2008 – Annex III.

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Annexes

Annex 1: Agenda of mission in BiH

Annex 2: List of participants on the mission

Annex 3: A self-assessment questionnaire

Annex 1: Agenda of mission in BiH

AGENDA

Agency of Statistics of Bosnia and Herzegovina

Sector review – Labour force statistics

July 14–17, 2014

Assessment team:

Leading expert: Ms Tatjana Novak

Supporting expert: Ms Ljubinka Popovska-Tosheva

Day 1, 14 July 2014		
10:00 – 11:30	Welcome and introductory meeting with LFS WG	Review team
	How the statistical system in BiH is organised (distribution of responsibilities, relations between institutions) relating to LFS and other Labour statistics	LFS WG (statistical institutes of BiH: BHAS, FIS and RSIS)
11:45 – 12:00	*Coffee break*	
12:00 – 13:00	In-depth review of legislation (institutional environment)	Review team
	Presentation by the LFS WG on the legal and institutional framework of the LFS	LFS WG
	Including: (i) institutional setting for the production of LFS and multiannual and annual programming, BiH Strategy 2020; (ii) adequacy of sources; and (iii) impartiality and objectivity	
	Presentation of LFS WG on interaction between statistical institutes of BiH and national institutions for the use of administrative datasets in conjunction with other official statistics drawn from different surveys and censuses	
13:00 – 14:00	Lunch break	
14:00 – 15:00	In-depth review of Statistical processes	Review team
	Presentation by LFS WG on (i) sources of information including surveys, administrative data, censuses; (ii) data collection: questionnaire, mode of data collection, survey and sampling methodology; field work, work with the interviewers; (iii) classifications used	LFS WG
15:00 – 15:15	*Coffee break*	
15:15 – 17:00	*Presentation by LFS unit on compliance with European and international standards*	Review team
	Classifications used, definition of variables, reference period, frequency	LFS WG

Day 2, 15 July 2014		
8:30 – 9:00	Discussions on the information provided so far	Review team, LFS WH
9:00 – 10:45	In-depth review of Statistical processes (cont)	Review team
	Presentation by the LFS WG on sound methodology, appropriate statistical procedures	LFS WG
	Presentation by LFS WG on statistical processes: editing and imputation, weighting, sampling errors estimations	
10:45 – 11:00	*Coffee break*	
11:00 – 12:00	Review on data quality	Review team
	Presentation by the LFS unit on the data quality including timeliness, completeness and consistency as well as methodological issues	LFS WG
12:00 – 13:00	Lunch break	
13:00 -15:00	*Discussion on the data storage and statistical processing (editing, imputations methods, weighting and calibration, sampling error estimations)*	Review team LFS WG
	Discussion on coherence between LFS and NA	IT unit
	Discussion on timeliness, accessibility and clarity	NA unit
		Dissemination unit
15:00 – 15:15	*Coffee break*	

| 15:15 – 16:30 | Review on data quality (cont) | Review team |
| | *Presentation by the LFS unit on the data quality including publication and dissemination, accessibility of the released data, comparability and coherence and Statistical confidentiality* | LFS WG |

Day 3, 16 July 2014		
8:30 – 9:00	Discussions on the information provided so far	Review team LFS WG
9:15 – 10:30	Review on data quality (cont)	Review team LFS WG
	Presentation by the LFS unit on the data quality including accuracy, accessibility of the released data, comparability and coherence and Statistical confidentiality	
10:45 – 11:00	*Coffee break*	
11:00 – 12:00	Review on interactions between international organisations	Review team LFS WG
	Presentation by the LFS unit on interactions between BHAS and international organisations such as Eurostat, OECD, UNECE and any others relevant to LFS	
12:00 – 13:00	Lunch break	
13:00 – 14:45	Discussions on developments of LFS *Are there any other developments towards the collection of quality and reliable data and towards the reduction of the costs and response burden* Discussions on recommendations for improving and progressing statistics: sampling, non-response, field work, communications with users	Review team LFS WG
14:45 – 15:00	*Coffee break*	
15:00 - 16:00	Review on compliance with European and international standards Discussions on recommendations for improving and progressing statistics Quarterly continuous survey; Ad hoc modules; Core variables; Monthly unemployment rate; Modularisation – possibility of integrations LFS with other surveys	Review team LFS WG

Day 4, 17 July 2014		
8:30 – 11:30	Presentation of draft recommendation to LFS WG	Review team LFS WG
11:30 – 12:00	*Coffee break*	
12:00 – 12:30	Meeting with international unit	Review team International unit
13:00 – 15:00	Meeting with director BHAS – discussion on main findings and draft recommendation; discussion on possibilities on producing labour related EU-STS indicators	Review team Director BHAS Business statistics
15:00 – 17:00	Summary report preparation (draft)	Review team

Annex 2: List of participants on the SR mission in BIH, Sarajevo, 14 -17 July 2014

	Name of participant	Institution	Position	E-mail
1	Svjetlana Kezunovic	Agency for Statistics of Bosnia and Herzegovina	Senior officer for labour force survey	svjetlana.kezunovic@bhas.ba
2	Samka Avdić	Federal Institute for Statistics of Federation BiH	Head of Labour market department	samka.avdic@fzs.ba
3	Hidajeta Čolović	Federal Institute for Statistics of Federation BiH	Assistant director for Social statistics	hidajeta.colovic@fzs.ba
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5	Vladimir Koprivica	Republika Srpska Institute of Statistics	Senior officer for labour market statistics	vladimir.koprivica@rzs.rs.ba
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7	Nermina Ademović Ibrišević	Federal Institute for Statistics of Federation BiH	Head of National accounts department	nermina.ibrisevic@fzs.ba
8	Nermina Sarajkić	Federal Institute for Statistics of Federation BiH	Head of IT	nermina.sarajkic@fzs.ba
9	Edina Kozić	Agency for Statistics of Bosnia and Herzegovina	Head of National accounts department	edina.kozic@bhas.ba
10	Selveta Hot	Agency for Statistics of Bosnia and Herzegovina	Adviser, Department for International cooperation and European Integration	selveta.hot@bhas.ba; international.cooperation@bhas.ba
11	Ivona Bulić	Agency for Statistics of Bosnia and Herzegovina	Head of Department - Dissemination sector	ivona.bulic@bhas.ba
12	Zdenko Milinovic	Agency for Statistics of Bosnia and Herzegovina	Director of BHAS	zdenko.milinovic@bhas.ba
13	Alen Bajramovic	Agency for Statistics of Bosnia and Herzegovina	Head of Services and tourism department	alen.bajrakovic@bhas.ba
14	Fahir Kanlic	Agency for Statistics of Bosnia and Herzegovina	Head of Industrial statistics department	fahir.kanlic@bhas.ba
15	Tima Karacic	Agency for Statistics of Bosnia and Herzegovina	Head of Structural business statistics department	tima.karacic@bhas.ba

Annex 3: Self-assessment questionnaire (SAQ)

Sector Review – Labour Force Survey Bosnia and Herzegovina (BiH)

Self-assessment questionnaire

This questionnaire has been drawn to assess the compliance of the Labour Force Survey (LFS) carried on by statistical institutions in BiH[1] with the principles of the European Statistics Code of Practice for the national and community statistical authorities and with the Regulations on the organization of a labour force sample survey in the European Community.

The self-assessment questionnaire for LFS is based on the "ESS Quality Assurance Framework 2012", and most of questions have been selected from the Eurostat's document "Joint Standard Quality Report for Labour Force Survey and Regional Labour Market Statistics" and "National Action Plan for the implementations of the recommendations of the task force on quality of LFS". It is divided in four parts; part 1 to 3 are part of the assessment as such, while part 4 is suggested for orientation of future action aimed at improving the general quality of the survey and its outputs.

PART 1 - INSTITUTIONAL ENVIRONMENT
In this part Labour Force sector/division at statistical institutions in BiH are assessed against institutional and organisational factors that have a significant influence on the effectiveness and creditability of a statistical authority developing, producing and disseminating LFS Statistics. The relevant issues are mandate for data collection, adequacy of resources, quality commitment, impartiality and objectivity.

PART 2 - STATISTICAL PROCESSES
In this part Labour Force statistical processes carried out by statistical institutions in BiH are assessed against the European and other international standards, guidelines and good practices to organise, collect, process and disseminate LFS statistics. The relevant aspects are sound methodology, appropriate statistical procedures, non-excessive burden on respondents and cost effectiveness.

PART 3 - STATISTICAL OUTPUTS
In this part Labour Force statistical outputs produced by statistical institutions in BiH are assessed against the ESS Quality Framework criteria, relevance, accuracy, reliability, timeliness, punctuality, coherency, comparability across regions, and accessibility by users and clarity. It aims at verifying consistency with EU standards and comparability of national outputs with those from European Countries.

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[1] The statistical system in BiH reflects the complex institutional structure of the state. It consists of three statistical institutions in BIH, one at state level: Agency for Statistics of Bosnia-Herzegovina (BHAS) and two at entity level: Federal Institute of Statistics (FIS) and Republika Srpska Institute of Statistics (RSIS).

PART 4 - RECOMMENDATIONS OF THE TASK FORCE ON THE QUALITY OF THE LABOUR FORCE SURVEY

This part could be used (if statistical institutions in BiH decide so) to assess against the recommendations contained in the Final Report of the "Task Force on the quality of the Labour Force Survey" which was set up by the LAMAS Working Group at Eurostat in March 2007.
http://epp.eurostat.ec.europa.eu/portal/page/portal/product_details/publication?p_product_code=KS-RA-09-020

The goal of the Task Force was to review the quality of the LFS along the dimensions of the quality framework for statistical output of the European Statistical System (ESS), detect weaknesses and recommend improvements. The focus of the review was on the estimates of employment and unemployment, as these are the most relevant and largely used indicators produced by the LFS.

Statistical institutions in BiH could use this questionnaire for orientation, in order to indicate some directions for further work, or to take future actions aimed at improving the general data quality of LFS.

Part 1 – Institutional environment

Principle 2 – Mandate for data collection

1.1 Is the mandate to collect information for the production and dissemination of official Labour Force statistics specified in law? *Please specify.*

1.2 Are statistical institutions in BiH allowed to use administrative sources for Labour Force statistics by legislation or by other forms of agreement? *Please specify.*

1.3 Do statistical institutions in BiH use administrative data sources for the production of Labour Force statistics? *If yes, please specify which source for which indicator/variable.*

1.4 Does the legal act allow statistical institutions in BiH to penalise units that do not respond to LFS? Is there a system of sanctions in place? If yes, how often do you practice it?

1.5 What actions you would take to strengthen your mandate for LFS data collection?

Principle 3 – Adequacy of resources

1.6 To what extent are your LFS resources adequate, both in magnitude and quality, to meet current statistical needs as regards to the production of Labour Force statistics?
Please indicate on a scale from 1 = "completely adequate" to 5 = "completely inadequate".

Magnitude of staff resources: ....

Quality of staff resources: ....

Magnitude of financial resources: ....

Magnitude of computing resources: ....

Quality of computing resources: ....

1.7 If you think about **future challenges** that statistical institutions in BiH will have to face in order to improve the quality of the Labour Force statistics, how much do you think that your current resources are able to meet these new requirements? *Please indicate on a scale from 1 = completely adequate to 5 = completely inadequate.*

Magnitude of staff resources: ....

Quality of staff resources: ....

Magnitude of financial resources: ....

Magnitude of computing resources: ....

Quality of computing resources: ....

1.8 Please provide the data for the last three years:

    a) Total number of full time staff (excluding interviewers), working on **Labour Force Survey** data collection, compilation and dissemination; of which total number of full time IT staff;

    b) Total annual budget (including administrative expenses) on **Labour Force Survey;** of which IT expenditures;

    c) Total annual budget (including administrative expenses) on **Labour Force Survey** per 100,000 population and in percentage of GDP.

1.9 How would you assess the scope and detail of your Labour Force statistics as compared to user needs (too low/adequate/excessive). *Please provide any available user feedback on Labour Force survey.*

1.10 Do you have an external or internal training programmes aimed at improving the expertise of staff working on Labour Force statistics? *Please explain your training activities.*

Principle 6 – Impartiality and Objectivity

1.11 Are choices of sources and methods used in the compilation of Labour Force statistics only informed by statistical considerations? *If they are published, please provide a copy.*

1.12 Are errors discovered in published LFS statistics corrected at the earliest opportunity?

1.13 Do you have a published revisions policy for LFS statistics? *If so, please provide a copy.*

1.14 Do you provide notice in advance on major revisions and changes in methodologies in LFS?

Part 2 – Statistical Processes

In this part of the questionnaire, the Labour Force Survey statistical processes are assessed against international standards, guidelines and good practices adopted within the ESS. It aims at verifying consistency with EU standards when it comes to the ability of the Statistical Office to apply adequate statistical methodology and statistical procedures, whilst maximising cost effectiveness and burden reduction.

Principle 7 – Sound methodology

This section assesses whether the overall methodological framework used for the BiH Labour Force Survey statistics follows European and other international standards, guidelines, good practices, concepts, definitions and classifications. Moreover it assess the existence of adequate expertise, continuous vocational training of the staff and good co-operation with the scientific community to improve methodology and tools.

2.1 Do your LFS data comply with the EU definition of unemployment as described in Annex 1 of Commission Regulation (EC) No 1897/2000? *If not, please explain divergences.*

2.2 Is the order of the sequence of questions addressing the ILO variables on unemployment is in line with requirements highlighted by implementing regulation EC 1897/2000?

2.3 Does the LFS questionnaire complies with the twelve principles in Annex 2 of Commission Regulation (EC) No 1897/2000 recommended 2000 in order to ensure that the rate of unemployment is estimated in a harmonised manner? *If not, please explain divergence.*

2.4 Is the national classification of industry consistent with the European classification systems NACE Rev 2? *If not, please say what industrial classification is used and if it would be possible to convert the collected data into the NACE Rev 2.*

2.5 Is the national classification of occupation consistent with International Standard Classification of Occupations (ISCO-08)? *If not, please say what classification is used and if it would be possible to convert the collected data into the ISCO-08.*

2.6 Is the national classification of educational level consistent with ISCED classification? *If not, please say what classification is used and if it would be possible to convert the collected data into the ISCED.*

2.7 Would you be able to accurately re-code your national variables into the EU list of variables laid down in Commission Regulation (EC) No 377/2008 of 25 April 2008? *If not, please indicate which variables cannot be re-coded and explain the divergence.*

2.8 Is there in place a methodological/technical infrastructure (e.g. units, nets, committees) which defines, monitors the implementation and validates the results of the following processes:

- statistical methods for sampling

- statistical methods for data collection,

- statistical methods for data editing and imputation

- statistical methods for weighting/calibration

- statistical methods for codification

2.09 Are the Staff of the statistical authority recruited openly and with appropriate qualifications from relevant disciplines?

2.10 Is there an adequate structure that ensures continuous vocational training of the staff involved in LFS?

2.11 Do your Staff attend courses, seminars and workshops at a national or international level on the application of standards, classifications, good practices, etc.?

2.12 Do you make public any methodological documentation containing all pertinent information on metadata, namely concepts, methods, classifications of the Labour Force Survey process?

2.13 Is there a regular contact, e.g. through conferences, workshops, task forces, with the scientific community to discuss methodological, IT and innovation developments.

2.14 How often do you cooperate with the scientific community in order to improve the methodology by which you compile your labour market (mainly LFS) statistics?

2.15 How often do you introduce new measures to improve the quality of the data that is produced from the LFS?

2.16 Please describe the sampling frame used for the purpose of LFS (e.g. household register, etc). Describe also the sources used to update this database; indicate how often and how this database is updated in order to ensure high quality of samples.

2.17 Is there any quality problem in your frame, especially in coverage? Is yes, do you have any plan to improve it?

2.18 Eligibility criteria:

	Already implemented	No, but will soon be implemented. Kindly indicate the year when this measure will be implemented.	Not yet planned
Use the UNECE-Eurostat recommended definition for usual residence			
Full coverage of all persons living in 'conventional' households			
Full coverage of all persons living in 'conventional' households			
Optional coverage of institutional households using a separate data collection mechanism			

2.19 Are there some inclusion/exclusion criteria for members of the household? Are these criteria in line with EU-LFS regulation's requirements? *If no, then explain the divergence.*

2.20 Participation is voluntary/compulsory for all household members? *If participation is obligatory by law, then provide the reference and a copy of the Legal Act.*

2.21 Sampling issues:

	Already implemented	*No, but will soon be implemented. Kindly indicate the year when this measure will be implemented.*	*Not yet planned*
LFS is carried out on a continuous basis			
In case of continuous survey, then the reference weeks are spread evenly throughout the year			
The reference week is defined in accordance to Eurostat regulations			
Full geographical coverage			
The sampling frame used for the scope of this survey is updated regularly in order to minimise over/under-coverage problems			
Do you ensure consistency between LFS sub-samples and annual sample as required by Implementing Regulation 430/2005?			
Is there overlap between consecutive surveys (panel)			

2.22 Data collection issues:

	Already implemented	*No, but will be implemented. Kindly indicate the year when this measure will be implemented.*	*Not yet planned*
LFS data is collected through personal interviews, although follow-up calls can be collected by telephone surveys			
A number of built-in validations are implemented into data collection software tool in order to minimise errors during data collection			
Do you use administrative data in order to collect at least part of the required information?			

2.23 Do you compute standard errors for LFS estimates? *Please provide an overview of the methodology used for the compilation of sampling errors.*

Principle 8 – Appropriate Statistical Procedures

This section assesses whether appropriate statistical procedures, from data collection to data validation, are implemented in Labour Force Survey

2.24 Do you integrate LFS with administrative data? *If yes, please specify which administrative sources are used and specify which LFS variables are collected from these registers. Please explain the method used for linking this administrative data with the data collected from surveys.*

2.25 Where administrative data are used, are they a good approximation to what is required for statistical purposes? *Please, explain if differences between administrative and statistical processes exist in terms of definitions, concepts, coverage, etc.*

2.26 Is there in statistical institutions in BiH appropriate organizational structures which provides guidelines, recommends appropriate methodologies and periodically examines the methods used in the statistical processes?

2.27 Is there in statistical institutions in BiH an appropriate group of experts which are in charge to code ISCO and NACE? Is the coding made directly by the interviewers?

2.28 Is your survey questionnaire assessed and validated by experts in the statistical domain and in questionnaire design?

2.29 Is your survey questionnaire tested prior to data collection with pilot in real situation, in-depth interviews, focus groups, interviewer support, etc.? *Describe the testing procedures*

2.30 Do you use electronic questionnaires with an optimized mix of PAPI, CAPI, CATI, CAWI techniques to exploit their advantages (e.g. to reduce cost, burden, non-response and non-sampling errors; to improve quality, accuracy and timeliness)? Describe the methodology used for data collection at statistical institutions in BiH.

2.31 Do you use dependent interviewing, asking the respondent to confirm some questions given in a previous wave?

2.32 Questions relating to employment status are put to all persons aged ….....

2.33 Are proxy interviews allowed during the data collection? *What measures are taken (during field work and data analysis) in order to minimise proxy interviews and reduce biases associated with proxy surveys?*

2.34 Are respondents provided with all necessary documents prior and during the data collection (i.e. letters, questionnaires, leaflets)? *Are these documents reviewed regularly?*

2.35 Are data collection techniques monitored on a regular basis? *Describe the monitoring processes used by statistical institutions in BiH.*

2.36 Are interviewers provided with an LFS manual/handbook to aid them during data collection?

2.37 Are there regular training courses to be attended by interviewers? Provide a brief overview of the material taught during these courses.

2.38 Are respondents given support with filling in the questionnaires (help on-line, free toll number, support from interviewers or statisticians)?

2.39 Do you have procedures in place to answer to respondents' requests and complaints?

2.40 Are follow-up procedures in place and implemented in the case of non-response and unreachable units?

2.41 Are automatic coding methods periodically reviewed and revised if necessary?

2.42 Are quality indicators related to data collection and coding regularly produced and analysed?

2.43 Describe the procedures used by statistical institutions in BiH in order to validate information collected by interviewers prior to data entry

2.44 Are the methods used for survey sampling, sample selections and estimation recommended by an appropriate organizational structure? Are they developed according to standard methods? Are they periodically renewed?

2.45 Please give details about the following aspects of the survey design?

      a) Sampling design

      b) Base used for the sample (sampling frame)

      c) Last update of the sampling frame

      d) Primary sampling unit (PSU)

      e) Final sampling unit (FSU)

      f) First (and intermediate) stage sampling method

      g) Final stage sampling method

      h) Overall theoretical yearly sampling rate (i.e. including non-response)

      i) Size of the theoretical yearly sample (i.e. including non-response)

      j) Stratification

      k) Rotation scheme

2.46 Do you calculate household and individual weights to produce estimates pertaining to the total population?

2.47 Gender is used in weighting (Y/N)

2.48 Nationality is used in weighting (Y/N)

2.49 Which age-groups are used in the weighting (e.g., 0-14, 15-19, ..., 70-74, 75+)?

2.50 Which regional breakdown is used in the weighting?

2.51 Do you use monthly constraints in the weighting?

2.52 Please give details about the following aspects of the weighting process?

a) method of calculating the base weights

b) method of calculating the final weights (e.g. post-stratification, weighing, calibration, etc.)

c) adjustments for total non-response of individuals and/or households

d) adjustments for wave non-response or panel attrition

e) adjustment for rotation groups

f) other weighting dimensions

2.53 Are the methods used for survey sampling, sample selections and estimation reported to public?

2.54 Do the methods used for estimation, including the correction of non-response, data calibration and seasonal adjustment follow transparent methodological rules?

2.55 Are appropriate editing and imputation methods used and regularly reviewed, revised or updated as required?

2.56 Is there in statistical institutions in BiH an appropriate organizational structure which provides guidelines, recommends appropriate methodologies and periodically examines editing and imputation methods?

2.57 Is the analysis of the effect of editing and imputation regularly undertaken as part of assessing quality of the data collection?

2.58 Describe the methodology used for the carrying out the following tasks for the purpose of LFS:

a) Cross-sectional and longitudinal checks on data

b) Imputation of missing information

c) Linking of dataset with administrative information

2.59 Describe the main statistical procedures used by statistical institutions in BiH in order to minimise non-sampling errors:

a) non-response bias;

b) under-reporting;

c) under-coverage problems;

d) item non-response;

e) attrition;

2.60 Do statistical institutions in BiH carry out regular revisions on past data? If yes, explain why revisions on past data are generally required.

2.61 Do revisions follow standard guidelines and principles, well-established procedures, and are transparent to users?

2.62 Are revisions accompanied by all necessary explanations and made available simultaneously to all users?

2.63 Does LFS make use of subsamples to survey structural variables (wave approach)?

2.64 Does LFS make use of a subsample for yearly variables? (Y/N)

2.65 If yes, are the 30 totals for ILO labour status (employment, unemployment and inactivity) by sex (males and females) and age groups (15-24, 25-34, 35-44, 45-54, 55+) between the annual average of quarterly estimates and the yearly estimates from the subsample all consistent? *(Ref.: Commission Reg. 430/2005, Annex I)*

2.66 If not, please list deviations

2.67 List of yearly variables for which the wave approach is used (Ref.: Commission Reg. 377/2008, Annex II)

Principle 9 – Non-excessive burden on respondents

This section assess if the reporting burden is proportionate to the needs of the users and is not excessive for respondents, and targets for its reduction over time are set by statistical authorities.

2.68 What procedures are already in place at statistical institutions in BiH in order to ensure that data collected from surveys are indeed required by users? How much of the data collected from the LFS is indeed published or used for policy making purposes?

2.69 What measures have statistical institutions in BiH taken during the past years in order to minimise response burden on respondents as much as possible?

2.70 Is the response burden measured periodically? *(The reporting burden is calculated for the time needed: to answer the questionnaire, to retrieve the required information, etc)*

2.71 Questions used to collect information which will not be published are limited and justified?

2.72 Is the reporting burden spread as widely as possible over survey populations? How is this done in statistical institutions in BiH?

2.73 Duration of the interview (Note: This table should only show the burden on the respondents. Not time spent in the field to contact the household or fill out administrative forms.)

	Minutes		
	Total	*First wave*	*Later waves*
Average time spent in the household during PAPI or CAPI interview			
Average time spent with the household of the telephone during a CATI interview			
Core questionnaire (per person)			
Ad hoc questionnaire (per person)			

2.74 Average number of units

	Number		
	Total	*First wave*	*Later waves*
Households visited over the year			
Persons interviewed over the year			
Persons interviewed for the ad hoc module over the year			

2.75 To minimize data collection there is explicit consideration of alternative data sources, including existing survey and administrative data?

2.76 Administrative sources are used whenever possible to avoid duplicating requests for information?

2.77 Legal access to the administrative sources is granted and the administrative authorities have the obligation to provide the administrative data if requested?

2.78 Guidance on the availability and quality of administrative sources is available to survey managers. Describe the procedure how this information is made available to the survey managers.

Principle 10 – Cost Effectiveness

This session assess whether statistical authorities uses the potential of information and communications technology is being optimised, and implement standardized solutions that increase effectiveness and efficiency of the resources.

2.79 Do statistical institutions in BiH have an internal or external mechanism in order to monitor the use of resources for the production of LFS?

2.80 What measures have been taken in recent years in order to improve efficiency of data collection and data analysis?

2.81 Do statistical institutions in BiH use automated tools in order to reduce manual interventions with consequent improvement in timeliness and cost-reduction?

2.82 Are administrative data used where possible?

2.83 Do policies, procedures and tools exist to promote automatic techniques for data capture, data coding and validation.

2.84 Number of staff involved in central and regional offices (in Full-time equivalent; consider only staff directly employed by the NSI, excluding interviewers)

	Full-time equivalents
Total	
- of which statisticians	
- of which other professional and managerial staff	

2.85 Interviewers

	PAPI	*CAPI*	*CATI*
Interviewers			
Number of interviews per interviewer (weekly average)			
Cost of each interview			

2.86 What is the total cost of the survey in the last year? Is it increasing or decreasing?

Part 3 – Statistical Outputs

In this part Labour Force statistical outputs are assessed against the ESS Quality Framework criteria, relevance, accuracy, reliability, timeliness, punctuality, coherency, comparability across regions, accessibility by users and clarity. It aims at verifying consistency with EU standards and comparability of national outputs with those from European Countries.

Principle 11 – Relevance

This section assesses whether labour force statistics meet and serve the existing needs of governments, research institutions, business concerns and the public generally; if labour force statistics consider emerging needs and priorities; whether user satisfaction is monitored on a regular basis and is systematically followed up.

3.1 Is a Labour Force Survey release calendar for quarterly and annual data made available well in advance to users on the website?

3.2 Are quarterly and annual indicators available on your national online database?

3.3 Is the set of your indicators consistent with the Eurostat LFS main indicators available on: http://epp.eurostat.ec.europa.eu/portal/page/portal/employment_unemployment_lfs/data/main_tables? *(If not, please specify what indicators are not currently available. Please set out any plans to start producing data for the missing indicator)*

3.4 Are not seasonally adjusted quarterly time series available?

3.5 Are seasonally adjusted quarterly time series available?

3.6 Please specify relevance of the main LFS outputs

	For policy makers (a)	For social actors (b)	For the media (c)	For researchers and students (d)	For enterprises (e)
Total Employment (levels)					
Total Employment rate					
Part-time employment					
Temporary employment					
Employment by socio-demographic breakdown (age, sex, education)					
Employment by governorate breakdown					
Employment by governorate and urban/rural breakdown					
Employment by economic activity (NACE) breakdown					
Hours actually worked					
Total Unemployment (levels)					
Total Unemployment rate					
Long-term unemployment					
Youth unemployment					

	For policy makers (a)	For social actors (b)	For the media (c)	For researchers and students (d)	For enterprises (e)
Unemployment by socio-demographic breakdown (age, sex, education)					
Unemployment by governorate breakdown					
Unemployment by governorate and urban/rural breakdown					

(a) i.e. if the statistic is used as policy target or if it is used in official studies influencing policy making
(b) i.e. if the statistic is used by employers' associations, trade unions, lobbies, at national or regional level, for their decision making
(c) i.e. if the statistic is mentioned in national or regional media, specialised or for general public
(d) i.e. if the statistic is used by academics for scientific research (e.g. appears in scientific publications) or by students
(e) i.e. if the statistic is used by enterprises for own market research activities or for consultancy services in the information sector

3.7 What is the periodicity of your results?

	monthly	quarterly	annual
Periodicity of the LFS statistics at national level			
Periodicity of the LFS statistics at governorates level			
Periodicity of the LFS statistics at governorates*urban/rural level			

Principle 12 – Accuracy and Reliability

This section assesses whether labour force statistics accurately and reliably portray reality, if results and outputs are regularly assessed and validated, if sampling errors and non-sampling errors are measured and systematically documented according to the European standards; if revisions are regularly analysed in order to improve statistical processes.

3.8 Are source data, intermediate results and outputs regularly assessed and validated? *If yes, please explain what is done.*

3.9 Is the coefficient of variation (CV) for quarterly and annual estimates computed? *If yes, please explain if design effect is taken into account, and provide references about the method and the software used.*

3.10 Please complete the following table of Coefficient of variation (CV) for estimates at national level if the information about CV is available

Quarter	CV of national aggregates (in %)				
	Number of employed	Number of part-time employed	Number of unemployed	Rate of unemployment	Average number of hours actually worked per week
1					
2					
3					
4					
Annual					

3.11 Please complete the following table of Coefficient of variation (CV) for estimates at governorate level. *Only if the corresponding estimate is made available to users and if the information about CVs is available.*

Governorate	CV of regional annual aggregates (in %)				
	Number of employed	Number of part-time employed	Number of unemployed	Rate of unemployment	Average number of hours actually worked per week
Please Add rows					

3.12 Give quantitative information and brief comments on the main problems affecting frame quality. Mention specifically which regions / population groups are not or badly represented in the sample.

	Rates	Description of over-coverage, under-coverage and classification errors and their impact on estimates
Under-coverage		
Over-coverage		
Classification errors of the statistical units*		
Reference on frame errors		

*Misclassification refers to statistical units having an erroneous classification where both the wrong and the correct one are within the target population.

3.13 Do you measure or assess the measurement errors due to the respondents? *If yes, please mention the methods you have used or intend to use to reduce such errors.*

3.14 Do you measure or assess the measurement errors due to the interviewers? *If yes, please mention the methods you have used or intend to use to reduce such errors.*

3.15 Do you measure or assess the measurement errors due to questionnaire? *If yes, please mention the methods you have used or intend to use to reduce such errors.*

3.16 Do you measure or assess the measurement errors due to survey mode? *If yes, please mention the methods you have used or intend to use to reduce such errors.*

3.17 Please provide comments on methods you have used or intend to use to reduce other possible measurement errors.

3.18 When do you carried on the last pilot survey in order to test the questionnaire?

3.19 Is there a report from cognitive laboratory available? *If yes, give details.*

3.20 Is there any methodological notes on the measurement errors?

3.21 Is information available about processing errors and the error rates? *Please, complete the table below.*

Is information available?	Yes / No / Not Available	Error rate in %	Comments
About data capture errors which occur when information on a questionnaire is converted to a computer format			
About data codification errors			
About errors which occur during the editing phase			
About other processing errors ((for example due to the use of computers, electronic questionnaires, wrong files e)			

3.21 Is information available on non-response rates by survey mode and by categories? *If yes, please complete the tables below and provide comments if these rates are increasing over the last 5 years or have high variability across quarters.*

Survey mode	Non-response rates by survey mode and by categories (%)								
	TOTAL	by Survey Mode					By Non-Response Categories		
		PAPI	POSTAL	CAPI	CATI	CAWI	Refusals	Non-contacts	Other reasons
Annual average 2013									
Annual average 2012									
Annual average 2011									
Annual average 2010									
Annual average 2009									

Survey mode	Non-response rates by survey mode and by categories (%)								
	TOTAL	by Survey Mode					By Non-Response Categories		
		PAPI	POSTAL	CAPI	CATI	CAWI	Refusals	Non-contacts	Other reasons
2013 Quarte1									
2013 Quarte2									
2013 Quarte3									
2013 Quarte4									

3.22 Is information available on non-response rates by survey wave? *Please, complete the table below and provide comments if these rates have high variability across waves and years.*

	Non-response rates by survey waves (%)							
	1	2	3	4	5	6	7	8
Annual average 2013								
Annual average 2012								
Annual average 2011								
Annual average 2010								
Annual average 2009								

3.23 Is information available on non-response rates by regions? *Please, complete the table below and provide comments if these rates have high variability across regions.*

Regions (Governorates)	Non response rate (%)
Please Add rows	

3.24 Are the non-response rates provided in the above tables weighted*? If weighted, please state the definition of the weights.*

3.25 Is the non-response calculated at household level or person level?

3.26 Is there an assessment of the underestimation and overestimation bias of main characteristics due to non- response? *If yes, please complete the table below.*

	Underestimation assessment		Overestimation assessment	
	Quantitative	Descriptive	Quantitative	Descriptive
Total employment				
Part-time employment				
Unemployment				
Numbers of hours actually worked				
Other characteristic				
Other characteristic				
Other characteristic				

3.27 Is there any method you use or intend to use in the future to adjust for unit non-response (e.g. post-stratification by ad hoc auxiliary information for non-response)? *If yes, please provide information about the method and provide details about the auxiliary variables used.*

3.28 Is substitution of non-responding units allowed? *If yes, please provide details about the criteria and substitution rate by wave.*

3.29 Do you use any other method (e.g. results of non-response surveys, copying information from previous quarters, etc.) to adjust for unit non-response? *If yes, please provide details.*

3.30 Do you use statistical methods for imputation of item non-response? *If yes, please provide references to methodological notes, explain if these information are made available to users and how; answer next question.*

3.31 Please provide the imputation rate and describe the method used for imputation of statistical item non-response in the following table. *The imputation rate expresses the percentage of records in which at least one variable has been imputed or when the original values, missing or not, have been modified)*

Question/Variable/Characteristic	Imputation rate (%)	Describe method used, mentioning which auxiliary information or stratification is used
Full questionnaire		
Add most relevant Question/Variable/Characteristic		

3.32 Are revisions regularly analysed to improve statistical processes? *If yes, please explain what is done.*

3.33 Is the quality of the LFS, in all its dimensions, systematically documented and made available to users? *If yes, please explain what is done.*

Principle 13 – Timeliness and Punctuality

This section assesses whether labour force statistics are released to public in a timely and punctual manner, in a specific day, at a standard daily time; if the periodicity of statistics takes into account user requirements as much as possible; if divergence from the dissemination time schedule is publicised in advance.

3.34 Please complete the table below with the reference period and dissemination dates

Quarterly and Annual result for the year 2013	Main dates in the national production process					Reasons for late delivery if this has occurred
	Date of data collection beginning	Date of end of data collection	Date of end of quality check and weighting for statistics published in press release	Date of national publication of press release	Date of national dissemination of microdata and metadata	
1						
2						
3						
4						
Annual average						

3.35 If data are not currently available in twelve weeks after the end of the reference period, are there any plans to accelerate production to meet this deadline? *Please explain ways for improving timeliness.*

3.36 Is the dissemination of LFS estimates scheduled in only one day or in more days (e.g. preliminary results of acceptable aggregate accuracy are released earlier than the final results, or when considered useful)?

3.37 In case of delay in the survey process, is the divergence from the dissemination time schedule publicised in advance, explained and a new release date set.

Principle 14 – Coherence and Comparability

This section assesses whether labour force statistics are internally coherent and consistent between quarterly and annual (i.e. arithmetic and accounting identities observed), are comparable over a reasonable period of time and between regions. Whether statistics from different surveys and sources are comparable and are compiled on the basis of common standards, definitions and classifications. Whether comparability of national data is possible with other countries of the European Statistical System.

3.38 Please specify the year from which LFS data are available.

3.39 Please enumerate and describe in the table below all the changes at the concept level that would affect comparability across years? *Add rows if needed.*

Changes in	Description of the impact of the changes on the statistics.	Estimation of effect for aggregates (%)	Estimation of adjustment F/P for aggregate	Are statistics revised backwards (Y/N)	If statistics are revised, give brief comment on the method of revision
Concepts and definition					
Coverage (i.e. target population)					
Legislation					
Classifications					
Geographical boundaries					
Other concept					

3.40 Please describe in the table below all the changes at the measurement level (for example changes in data collection, weighting scheme, new design, use of auxiliary information) that would affect comparability across years. *Add rows if needed.*

Changes to	Description of the impact of the changes on the statistics.	Estimation of effect for aggregates (%)	Estimation of adjustment F/P for aggregate	Are statistics revised backwards (Y/N)	If statistics are revised, give brief comment on the method of revision
Sampling frame					
Sample design					
Rotation pattern					
Questionnaire					
Instruction to interviewers					
Survey mode					
Weighting scheme					
Use of auxiliary information					
Others					
Others					
Others					

3.41 Please specify if annual data are consistent with quarterly data, and at which level of aggregation.

3.42 Are household estimates produced and disseminated? If yes, are these consistent with individual estimates by household type? *(For example, the number of employed persons which are single is equal to the number of one-person-households in which the person is employed)*

3.43 Is there any divergence of national concepts from European concepts. *Please list all concepts where any divergences can be found; add rows as necessary.*

Is there a divergence between the national and European concepts for the following characteristics?	(Y/N)	Give a description of difference and provide an assessment of the impact of the divergence on the statistics
Definition of resident population (*)		
Identification of the main job (*)		
Employment		
Unemployment		
Others		

3.44 Are national data comparable with European data? Please explain any other divergence with European Statistical System requirements *(if not explained in other parts of the questionnaire).*

3.45 Is the coherence of LFS data with population statistics assured? *If not, complete the table below*

	Give an assessment of the effects of the differences
Overall effect	
Men 25 years and over	
Men 25 years and over	
Women under 25 years	
Women 25 years and over	
Regional distribution	

3.46 Are the LFS data coherent with National Accounts data? *Give details in the table below*

	Description of difference in concept	*Description of difference in measurement*	*Give an assessment of the effects of the differences*	*Give references to description of differences*
Total employment				
Total employment by NACE				
Number of hours worked				

3.47 Are the LFS data coherent with Business Statistics data? *Give details in the table below*

	Description of difference in concept	*Description of difference in measurement*	*Give an assessment of the effects of the differences*	*Give references to description of differences*
Total employment				
Total employment by NACE				
Number of hours worked				

3.48 Are the LFS unemployment data coherent with registered unemployment? *Give details about differences in concept, purpose, measurement; provide references if exist.*

3.49 Is possible to have an assessment of the effect of differences of LFS unemployment and registered unemployment? *Please, complete the table below.*

	Give an assessment of the effects of the differences
Overall effect	
Men under 25 years	
Men 25 years and over	
Women under 25 years	
Women 25 years and over	
Regional distribution	

Principle 15 – Accessibility and clarity

This section assesses whether labour force statistics are presented in a clear and understandable form, released in a suitable and convenient manner, available and accessible on an impartial basis with supporting metadata and guidance.

3.50 Are LFS data dissemination using traditional information and communication means?

3.51 Are LFS data dissemination using modern information and communication web technology?

3.52 Are statistic and the corresponding metadata presented, and archived, in a form that facilitates proper interpretation and meaningful comparisons?

3.53 Are custom-designed analyses provided when feasible and the public informed?

3.54 Is the access to microdata allowed for research purposes and subject to specific rules or protocols? *Provide details about conditions of access to data, means, support, marketing conditions, anonimisation, possible restrictions, existing service-level agreement, etc.*

3.55 Are metadata documented and published according to a standardised metadata system? *Please provide details, references and web link.*

3.56 Are users kept informed about the methodology of statistical processes (including the use of administrative data)? *Please provide details, references and web link.*

3.57 Are users kept informed about the quality of statistical outputs with respect to the national quality criteria and to the international quality standards? *Please provide details, references and web link.*

3.58 Is assistance easily available to users by telephone and e-mail?

3.59 Does specific web page containing information on the national LFS exist? Is it translated in English?

Part 4 – Recommendations of the

Task Force on the Quality of the Labour Force Survey

In this part BiH Labour Force Survey is assessed against the recommendations contained in the Final Report
http://epp.eurostat.ec.europa.eu/portal/page/portal/product_details/publication?p_product_code=KS-RA-09-020 of the "Task Force on the quality of the Labour Force Survey" which was set up by the LAMAS Working Group at Eurostat in March 2007.

The goal of the Task Force was to review the quality of the LFS along the dimensions of the quality framework for statistical output of the European Statistical System (ESS), detect weaknesses and recommend improvements. The focus of the review was on the estimates of employment and unemployment, as these are the most relevant and largely used indicators produced by the LFS. Following this review, the Task Force formulated forty-three recommendations on sampling design and sampling errors, weighting schemes, non-response; some of these recommendations are excluded from this questionnaire because are recommendations to Eurostat only.

The questionnaire below has already been used by each National Statistical Institute in the European Statistical System as a self-assessment against these recommendations. Statistical institutions in BiH could use the results to draw a national action plan for the coming years, in order to try to fulfil these recommendations.

N.	RECOMMEDATIONS	ALREADY FULLFILLED Yes/No	DESCRIPTION OF THE PRESENT SITUATION	DESCRIPTION OF ALREADY PLANNED IMPROVEMENTS THAT WOULD MEET THE RECOMMENDATIONS (IF ANY)
Sampling design and sampling errors			
R2	Achieve consistency between target population, sampling frame and population estimates			
R3	Balance samples over geographical areas and reference weeks, in order to both improve the national quarterly and yearly estimates, and to enable the production of good European monthly estimates			
R4	Regularly review the efficiency of the sample design and adapt it when necessary			
R5	Fully apply the concept of resident population as defined by art. 2(d) of EP and Council Regulation (EC) No 763/2008			
R6	Use sample designs with intra-annual rotation patterns to allow calculation of quarter-to-quarter labour market flows estimates			
R7	Examine options for further harmonization of rotational patterns to enhance comparable longitudinal analysis at European level			
	Weighting schemes			
R8	Treat collective households separately from private households, for instance when applying weights. This is needed to ensure cross-country comparability and produce meaningful EU estimates, as not all Member States cover collective households			
R9	Apply weighting schemes which ensure the coherence between household and individual estimates			

N.	RECOMMEDATIONS	ALREADY FULLFILLED Yes/No	DESCRIPTION OF THE PRESENT SITUATION	DESCRIPTION OF ALREADY PLANNED IMPROVEMENTS THAT WOULD MEET THE RECOMMENDATIONS (IF ANY)
R10	Optimise weighting schemes to correct for non-response bias, taking into account specific characteristics of non-respondents			
Non-response				
R11	Regularly collect information on the characteristics of non-respondents (e.g. by retrieving structural data from the sampling frame or from low-level geographical databases that can be linked to it, or by conducting non-response surveys) to assess and adjust for non-response bias and to improve fieldwork strategies. Specific non-response surveys should be used primarily for improving fieldwork strategies, and care must be taken when using them to adjust the results of the LFS			
R12	Make participation in the LFS compulsory, wherever legally feasible, in order to reduce non-response			
R13	Make use of tools to inform or reassure respondents, such as presentation letters, free-toll numbers and visible identification cards for interviewers			
R14	Arrange for special tools to increase participation of non-nationals, such as translated questionnaires and presentation letters, and free-toll numbers for non-nationals where information is provided in other languages			
R15	Consider implementing the wave approach, as it helps to reduce response burden			
R16	Make use of dependent interviewing to reduce response burden and thus increase participation, but only for variables that tend to be stable from quarter to quarter. Dependent interviewing must not adversely impact on the measurement of the ILO labour status. In particular, the question on having worked for at least one hour during the reference week should be asked by default			
Interviewers and fieldwork organization				
R18	Provide specific training to interviewers to avoid refusals by respondents and to limit non-contacts. In particular, contact attempts should be carried out at different times of the day and interviewing time should also cover periods after working hours (evenings and weekends), to reduce cases of non-response. Collecting preferred contact time during the first interview may facilitate contacts at further waves			
R19	Make use of permanent professional interviewers. Minimise turnover of interviewers to ensure continuity. Interviewer remuneration should be adequate with respect to the interviewers' crucial role for the quality of the survey			

N.	RECOMMEDATIONS	ALREADY FULLFILLED Yes/No	DESCRIPTION OF THE PRESENT SITUATION	DESCRIPTION OF ALREADY PLANNED IMPROVEMENTS THAT WOULD MEET THE RECOMMENDATIONS (IF ANY)
R20	Provide interviewers with appropriate training on how to conduct the interview, covering both communication skills and survey content. Training should be provided on a continuous basis			
R21	Organise periodical focus groups and debriefing for interviewers to review and tackle critical issues			
R22	Instruct the interviewers in general not to adapt questions to the respondent but just to read them out as they are written in the questionnaire, as personal interpretations may lead to biased results			
R23	Continuously monitor and systematically assess the quality of the fieldwork. In the case of telephone interviewing, centralized fieldwork supervision should be used in a telephone facility. In the case of face-to-face interviewing, examples of suitable monitoring methods are regular quality surveys but also other methods like the systematic analysis of interview protocols and behaviour coding of audio recorded interviews			
R24	Keep interviewing periods as close as possible to the reference period, to avoid recall problems and to support timely production of results. Exceptions may be made in particular periods such as holiday seasons, when shorter interviewing periods would result in a low response rate			
R25	Stress, both in the presentation letter and from the interviewers side, that the information collected from individual respondents is treated as confidential and will be used for statistical purposes only			
Survey modes and questionnaire				
R26	Consider the use of mixed modes, in the light of possible gains in response rates, burden and costs versus the mode effects. The impact of self-administered electronic data collection, including web-based modes, on the measurement of ILO labour status should be carefully investigated			
R27	Carefully test any changes to modes, questionnaires and other explanatory survey material and assess their impact before introduction			
R28	Always carry out the LFS by computer-assisted questionnaires, given that the traditional paper interviewing mode is no longer suitable to cope with the complexity of the survey			
Information for users				
R29	Accompany published estimates by information about their accuracy, covering in principle both sampling and non-sampling errors			

N.	RECOMMEDATIONS	ALREADY FULLFILLED Yes/No	DESCRIPTION OF THE PRESENT SITUATION	DESCRIPTION OF ALREADY PLANNED IMPROVEMENTS THAT WOULD MEET THE RECOMMENDATIONS (IF ANY)
R30	Make available specific documents to explain the differences between LFS and National Accounts employment estimates and provide guidance to users on which source fits which purpose. The aforementioned documents should be easily accessible to domestic and international users			
Coherence				
R31	Produce, at least annually, reconciliation tables between National Accounts and LFS estimates of employed persons to enable targeted improvement measures for the LFS and National Accounts and for communication to users. A suitable template should be developed			
R32	Foster close communication between LFS experts and National Accounts labour market experts, to enhance cooperation and increase the mutual understanding of the methods used in each domain and their respective strengths and weaknesses			
R33	Conduct further research in the areas of marginal employment, employment in black economy activities, employment in private households, illegal immigrants, the influence of non-response and proxy interviews, as these were identified as areas with potential accuracy problems in the LFS that could result in inconsistency with National Accounts estimates			
Comparability of employment and unemployment statistics				
R35	Adequately plan and monitor, at national level, all changes initiated either by Eurostat or by countries in order to assess the statistical effect on time series			
R37	Produce and disseminate consistent time series at least for the headline employment and unemployment indicators			
Timeliness and Punctuality				
R40	Improve significantly the timeliness of the EU-LFS in order to further enhance its relevance for short-term economic analysis			
R42	Comply with the twelve-week deadline in the Regulation as the one for final, not first data transmission			