

Report on the Sector Review of the Labour Force Survey in Armenia

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List of abbreviations

AGA	Adapted Global Assessment
COMM	European Commission
ENP	European Neighbourhood Policy (Countries)
ESCoP	European Statistics Code of Practice, 2013
ESS	European Statistical System
EU	European Union
EUROSTAT	Statistical Office of the European Union (DG of the European Commission)
ICSE	International Classification by Status in Employment
ILO	International Labour Organisation
IMF	International Monetary Fund
ISCO	International Standard Classification of Occupations
ISCED	International Standard Classification of Education
ISIC	International Standard Industrial Classification
LFS	Labour Force Survey
LPR	Light Peer Review(s)
NACE	Statistical Classification of Economic Activities in the European Community
NSS	National Statistical Service of Armenia
SAQ	Self-Assessment Questionnaire
SNA	System of National Accounts, 2008
SCS	State Council on Statistics
UNSD	United Nations Statistics Division

Preface

1. EUROSTAT supports both enlargement countries (Albania, Bosnia and Herzegovina, the former Yugoslavia Republic of Macedonia and Kosovo) and European Neighbourhood Policy countries (ENP-East: Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine; ENP-South: Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Palestine, Syria and Tunisia) in aligning their statistical production with EU and international standards and assessing their statistical systems.
2. A number of specific tools were put in place in order to assess and support the efforts of the partner countries in this regard: light peer reviews, adapted global assessment and sector reviews. (See Idem pp. 5-6 for details). Sector reviews are conceived to support the partner countries in their efforts to align core sectors of statistics (e.g. labour force surveys) with EU principles (e.g. European Statistics Code of Practice) and international standards (e.g., ILO recommendations). (Idem, p. 6). The objectives of sector reviews are (i) to assess the administrative and technical capacity of the statistical systems to produce high-quality statistics in the reviewed sector, (ii) to assess the statistical production in the particular sector vis-à-vis the *acquis* and (iii) to propose a list of actions to improve and strengthen the statistical system (Idem, p. 6). An important benefit for the statistical institute is that this sector review indicates directions for the development of the statistics under review. This report also serves a practical purpose as it may be used as a source document to update the metadata.
3. Sector review reports (as well as reports of light peer reviews and adapted global assessments) are published on the EUROSTAT website (<http://ec.europa.eu/eurostat/web/european-neighbourhood-policy/publications/reports>). Sector reviews so far conducted in various fields - incl. Labour Force Surveys (e.g. Egypt, Jordan and Tunisia: see References) – have showed the importance of such a tool to assess and improve the statistical environment, the processes and the production of the national statistical systems concerned. This sector review aimed at assessing the Labour Force Survey of the National Statistical Service (NSS) in Armenia, under the EUROSTAT project “*Provision of global assessments, sector assessments and light peer reviews for enlargement and ENP countries*” (ESTAT/A/2014/016). This review was organised at the initiative of the National Statistical Service of Armenia. The lead contractor is DEVSTAT in consortium with the Lithuanian Department of Statistics (contract no 14467.2014.002-2014.742).
4. This sector review was conducted by two international reviewers – Ms. Zaiga Priede and Dr. Aloïs Van Bastelaer – with a vast experience in the management of the labour force survey on the one hand, and on the other hand in statistical assessment, communication and report writing at the international level.
5. This sector review strictly refers to the EUROSTAT provisions (ESTAT/A/2014/016) and makes use of all relevant guidelines and standard tools, notably the European Statistics Code of Practice (ESCoP).
6. In August 2017 the sector review started with the preparation of the self-assessment questionnaire and the agenda for the meeting with the statisticians of the NSS of Armenia (Annex 1).
7. Early August, the NSS already sent some background documents: the English version of the questionnaire of the labour force survey and the interviewer instructions, the generic statistical business process model (GSBPM) with a description of the labour force survey process and a link to sources on the legal status of the labour force survey, on metadata and reports of survey results.
8. The purpose of the self-assessment questionnaire was to collect some preliminary information on the labour force survey in Armenia – including its institutional and organisational frame, the administrative

and methodological issues, the fieldwork and some relevant budget data. This questionnaire was designed by the two reviewers in line with the contents determined by the EUROSTAT tender provisions (ESTAT/A/2014/016) for sector reviews, and the related European Statistics Code of Practice (ESCoP). In line with the above references and especially the ESCoP principles, the questionnaire covered all topics of the labour force survey, namely: institutional environment, statistical processes and statistical outputs. The questionnaire also included a cover page explaining the scopes of the review, the way to fill in the same questionnaire and the availability of the reviewers to provide any additional support in case of need. The questionnaire consisted of 160 mainly closed ended questions to streamline the answering of the questionnaire, divided into seven sections (chapters from A to G), covering all sector review topics, namely: A. survey plan; B. fieldwork; C. questionnaire; D. data validation and codification; E. estimation; F. outputs; G. work organisation (incl. budget). All questions were formulated in compliance with the EU regulations and guidelines, in order to specifically assess the status of the labour force survey in Armenia vis-à-vis the *acquis*.

9. End of October, the NSS, Ms. Anahit Safyan returned the answers on the self-assessment questionnaire well before the mission in Yerevan. The field mission took place on 21-24 November 2017 at the central office of the NSS (Yerevan) (see agenda, Annex 1).
10. Both international experts met the head of the division of labour statistics, the manager of the labour force survey unit and the statistical officers belonging to both division and unit involved in the data collection and data processing of the labour force survey in order to assess institutional, organisational, methodological, communication and planning issues relating to the labour force survey in Armenia (see list of participants, Annex 2). The meetings in Yerevan provided the two reviewers with more specific information concerning the topics covered in the self-assessment questionnaire.
11. On 24 November, preliminary findings and recommendations were presented by the two reviewers and discussed with the head of the division of labour statistics and the staff members of this division. On 30 November, the summary report “Labour Force Survey: summary of main characteristics, recommendations and actions” was sent by DevStat to the NSS. On 19 December 2017 comments were received from the head of the division of labour statistics, they are taken into account in this report.
12. The cooperation with the NSS was excellent since its start, it allowed a sound, proper and useful assessment of the labour force survey in Armenia.

Executive summary

13. The labour force survey is a recognised coherent source on labour participation, employment and unemployment producing quarterly and timely results. Much progress has been made since the 2009 UNECE global assessment of the system of official statistics (jointly with Eurostat). In 2014, the labour force survey started in its current design as a stand-alone survey. Sample households are interviewed only once. Before then, since April 2007 the integrated living conditions survey was the vehicle for the labour force survey. Since 2007 it was a continuous survey with an annual 1% sample rate while before then, the survey was conducted in specific quarters or months, for example, in March and October in 2001, 2003 and 2006, in August in 2004 and the last quarter in 2005. Furthermore, the age range of the target population between 15 and 75 has remained the same since 2008 but it varied before, e.g. between 15 and 70 years in 2004 until 2006 and in 2007, from 16 years old without an upper age limit. On several occasions, modules on specific topics were added, e.g., in 2008 and 2009 on informal employment, in 2012 and 2014 on the school to work transition and in 2015 on child labour.
14. Although the survey is continuous, the reference weeks are not uniformly distributed over the quarter or year because the reference week depends on the moment of the interview – the reference week is the week preceding the day of the interview. The number of observations in a reference week may therefore vary and typical events occurring these weeks in relationship with employment or unemployment, e.g., recruitment or job losses – may be more frequent or they may be missing [Several recommendations concern the sample design and the definition of the reference week].
15. The labour force survey has several objectives and addresses several topics. The first objective according to the National Statistical Service is to provide an overall, coherent and up-to-date description of the labour market. Almost 50 questions concern the characteristics of employed persons and more than 20 questions concern the characteristics of unemployed persons or persons outside the labour force. Compared with the EU labour force survey, four specific questions have been added to distinguish employment in the informal sector. The second objective of the labour force survey is to yield statistics for international comparison indicating the preoccupation of the National Statistical Service with the application and compliance with international standards. A third use of the labour force survey is for macro-economic monitoring on the basis of short-term indicators. First quarterly results are released on the website of the National Statistical Service as bare estimates without any comments or explanation on key trends (time series in the sub-domain of statistical indicators). Headline short-term, quarterly indicators are the absolute levels of working-age population, labour force, employment and unemployment, inactive population (population out of labour force) and the labour force participation, employment and unemployment rates in relationship with the previous quarter and with the same quarter of the previous year. The monthly indicator is registered unemployment although it is published with a delay of several weeks. The fourth objective of the labour force survey is to provide specific information on the regional (*marzes*) and local labour market. The annual publication on the labour market by *Marzes* consists in total of 23 tables, 16 tables with data from labour force survey. These tables have two dimensions maximum, one dimension is the regional breakdown; the breakdown by gender is therefore not applied in all the tables as this is the practice of publication in, for example, the statistical yearbook. The fifth use of the labour force survey is to provide data for the formulation of employment policy, e.g., in relationship with working hours and working conditions.

16. Other, less important uses of the labour force survey concern the welfare policy-making particularly in relationship with education and training, to provide information on labour participation by household composition and to yield demographic data on household composition between censuses. Finally, employment data from the labour force survey by formal/informal sector and informal employment are used as estimates on labour input in national accounts.
17. The data are collected by sixteen interviewers, they are professionally trained and their performance is controlled by six supervisors. The average weekly workload of the interviewers is ten face-to-face interviews. Computer-assisted interviewing should be used to collect the data instead of the current paper- and pencil questionnaires; this will substantially increase efficiency. The current lag between the last interviews and the release of the first results can be reduced, the total lag is due to eight weeks before the data entry in the main office with a MS Access application, three weeks for data editing and coding of the industrial activity, the occupation and the field of education until a clean dataset is available and another two weeks for statistical processing and consistency checks of the main variables over time. The NSS intends to use laptops or tablets instead of the paper-and-pencil questionnaire from next year or the following year [Several recommendations concern the change to computer-assisted interviewing and the coding of the industrial activity, the occupation and the field of education].
18. The fieldwork of the survey meets high performance standards with a final 91% response rate. Participation in the survey is voluntary. Non-response is mainly due to refusal and for the remainder due to addresses which could not be found or non-accessible dwellings. The small ultimate non-response rate is the result of the substitution of almost one third of not-at-home households or non-accessible dwellings by households from a reserve sample list. The data should be reweighted to reduce non-response bias that may be significant in cities; this will require the compilation of reliable population benchmarks by sex and age on a regional level (*marzes*) [Several recommendations concern the approach of sample households to reduce non-response and the reweighting of the estimates].
19. In general, the survey complies with many international standards, concepts and classifications although some adaptations of operational definitions and additional variables / questions are needed ⁽¹⁾. In particular, some operationalisations to measure employment and unemployment have to be corrected taking into account ILO definitions, ICLS resolutions and European definitions. The classification of the industrial activity, viz., NACE rev.2 is the most recent version but the classifications of occupation, educational level and field of education are the previous editions of these classifications, i.e., ISCO-88 and ISCED 1997 instead of ISCO-08 and ISCED 2011. Additional questions are missing to describe employment from the perspective of a commodity on the market, an economic production factor and a social function [Several recommendations concern the revision of the questionnaire].
20. A time series of labour participation, employment and unemployment from 2008 onwards in absolute values and as a rate is disseminated on the NSS website. Quarterly data are disseminated thirteen weeks after the end of the reference quarter according to a release calendar. Furthermore, the results of the labour force survey are disseminated in several annual hard-copy publications, as multidimensional tables on the website and as anonymised micro-data. Metadata are published on the IMF website, but they may refer to a previous design of the labour force survey (several recommendations concern the data dissemination and the metadata).

¹ NSS is revising the questionnaire

21. Implementation of the recommendations on short or medium term will improve and strengthen the quality of the survey and they will further the use of the survey results.

1. Assessment of results

1.1 Institutional environment

1.1.1 Principle 2: mandate for data collection

22. The statistical institution in the Republic of Armenia has a long history. In 1922 the Statistical Department of the Soviet Socialist Republic of Armenia started its activity. At the end of 1991 or early 1992 when the Commonwealth of Independent States was established, the State Statistical Committee of the SSR of Armenia was renamed the State Department of Statistics, State Register and Analysis. May 2000, the current institution, the National Statistical Service of the Republic of Armenia was established on the basis of the Law on State Statistics of the Republic of Armenia ⁽²⁾.
23. This law determines the mandate of the National Statistical Service. The activity of the National Statistical Service and its territorial and functional units concerns the process and production of state statistics according to three-year and annual work programs. Its mission consists of the organisation of a statistical information system for the effective functioning of government, the economy, international institutions and the society at large. More specific tasks involve the maintenance of registers, classifications, the development and application of a statistical methodology appropriate to international standards and the systematic development of documentation (art. 3 and 4).
24. The head of the National Statistical Service, the **President** is appointed for six years; currently is Mr. Mnatsakanyan. The President is very committed to international comparability, he is currently a vice-chair of the Bureau of the Conference of European Statisticians ⁽³⁾.
25. The governing body of the National Statistical Service is the **State Council on Statistics**, consisting of seven members. This Council implements the policy in the domain of state statistics, it confirms the three-year and annual work programs – after the adoption of the state budget - and it monitors the implementation of these work programs (art. 10). The statistical council member for demography, sociology and public activity is the manager (mainly for the statistical activities) of the labour statistics division and the labour force survey division. The statistical work program includes statistical information for the observation of the economic, demographic, social and environmental situation taking into account available resources, response burden and cost-effectiveness. The three-year program indicates directions of statistical activity while the annual work program defines actions (art. 11). Statistical observations imply the collection of data on occurrences and processes in the economy and society on the basis of primary reporting, documents or direct enquiry (art. 12).
26. For the work foreseen by the statistical work program, data can be collected through statistical reports or survey questionnaires (art. 14). The National Statistical Service has the authority to decide on the appropriate methods and forms to collect these data.
27. The more specific legal basis of the labour force survey is determined in the **three-year statistical programmes**. The 2016-2018 statistical work program determines two major goals in relationship with

² http://www.parliament.am/law_docs/260400HO48eng.pdf

³ <http://www.unece.org/stats/cesbureau.html>

the labour force survey: the continuous improvement of the labour force sample survey, data collection and methods and the harmonisation of the survey characteristics with the concepts, definitions, classifications and indicators proposed by ILO, Eurostat and UN (Section 1, chapter 4 of the work programme).

1.1.2 Principle 3: Adequacy of resources

28. The Labour force survey is designed and implemented by the National Statistical Service given its institutional organisation and human resources.
29. The organisation of the **National Statistical Service** consists of sixteen subject-matter oriented divisions, the information technologies department, the international statistical cooperation division, the quality management division, the dissemination and public relations division and furthermore the common supporting staff services, the internal audit department and the office of the president and eleven regional agencies. The subject-matter oriented divisions are grouped into four major domains: demography, sociology and public activity, nature protection, financial and banking statistics and entrepreneurial activity statistics; each domain is managed by a member of the statistical council.
30. The National Statistical Service employs 332 civil servants, half of them working in the central office, the other half in the eleven regional agencies; about 40% of the staff in the central office performs administrative or support functions ⁽⁴⁾.
31. Two divisions are involved in the labour force survey. The **Labour Statistics Division** is responsible for the design, statistical processing, dissemination and analysis of the labour force survey. The work of the division is not limited to the labour force survey; besides the labour force survey the division also processes business surveys, the labour cost survey and the structure of earnings survey (a twinning project with Statistics Denmark) and job vacancy statistics on the basis of administrative reports and an annual questionnaire. The staff consists of the head of the division and six statisticians with a university background. Very specific mathematical knowledge of sample design techniques and statistical estimation is missing although all staff members have a university background. The head of the division is highly competent and skilled, particularly with regard to the conceptual framework of the labour force survey and she has a thorough knowledge of the national labour market ⁽⁵⁾.
32. The **Labour Force Survey Unit** is responsible for the survey operations: the sample, the fieldwork, data entry, editing and data coding. The unit consist of the Manager of unit and fourteen staff members, all with a university background. There are two staff members for data-entry (with MS Access software) and two staff members for the coding of occupation, economic activity and countries. All the data-entry of the completed paper-and-pencil questionnaires is done in the central office. Besides six supervisors who are controlling the performance of the sixteen interviewers, there are three coordinators. The supervisors usually cover two regions. Finally, there is one IT expert.
33. The NSS total current operational budget amounts to about 1140 million Armenian dram (about 2 million euro). Last year, the total cost of the labour force survey represented 3% of the total budget of the National Statistical Service, a slight increase compared with two years ago. The total budget of the

⁴ AGA of the National System of Official Statistics of RA, § 48 and § 63

⁵ https://www.armenianow.com/society/68180/armenia_employment_rate_statistics_lusine_kalantaryan and <https://armenpress.am/eng/news/888478/number-of-employed-people-rather-than-jobs-cut-in-armenia-national-statistical-service.html>

labour force survey is considered as commensurate with the needs of its processing. The operational costs of the fieldwork amounted to 60% of the total cost of the labour force survey. This proportion has slightly increased over the past three years due to rising travel costs.

34. The number of interviewers for the labour force survey is sixteen; the average workload of face-to-face interviews is ten interviews per week.

1.1.3 Principle 5: Statistical confidentiality

35. The general obligation of statistical confidentiality is already inserted in the law on state statistics: the National Statistical Service must preserve the anonymity of the collected data and it must not disseminate the initial statistical data (art. 16).
36. The National Statistical Service guarantees the protection of information containing statistically confidential data. Individual statistically confidential data are only kept as digital databases without time limit; the hard copies on the basis of these data could be destroyed after data entry, data control and editing. Access to statistically confidential data is restricted to those persons who are implementing state statistical work and it is not allowed to disclose statistically confidential information ⁽⁶⁾.
37. The State Council on Statistics could decide to provide statistically confidential micro-data if the expected results of scientific work and research do not refer to individual units that are subject to discovery. It has to be sure that the individual provider will not be injured because this is an important guarantee for trustworthy and reliable statistics. Anonymous databases from samples available on the website of the National Statistical Service for the scientific and research society.

1.1.4 Principle 6: Impartiality and objectivity

38. The National statistics Service is a public body and is independent from the government, it has a function of public interest (art. 6).
39. Furthermore, the law on state statistics of RA specifies the fundamental quality requirements of state statistics: objectivity and validity of statistics, accuracy, comparability over time and across countries, actuality, dissemination, accessibility and the public ownership of statistical information (art. 5).
40. The state statistical work program is developed explicitly addressing the demand of the users of statistics (art. 11).
41. The National Statistical Service applies a quality policy. A quality report on the labour force survey is available referring to 2011. It describes the history of the labour force survey, it specifies the users, furthermore it describes the source, the target population, the legal basis, the contents and concepts and the quality dimensions of the accuracy in general terms, the comparability over time indicating time series breaks, the possible revision of the estimates, the timeliness of the first publication, the accessibility and publications. Coherence and international comparability are only superficially treated. Systematic quality monitoring seems neglected because this quality report refers to a situation several years ago (☞ § 95 on metadata).
42. Transparency consists in presenting the statistical sources and related methods and aims to inform respondents about the utilisation and the interpretation of the disseminated statistics. Transparency also

⁶ Resolution of the State Council of Statistics of RA, June 25, 2001, §13-15

consists in informing respondents and public about the legal and institutional frame characterizing the statistical activities as well as their statistical purposes.

1.2 Statistical processes

1.2.1 Principle 7: Sound methodology

43. Statisticians of the labour statistics division frequently participate in international meetings, seminars or workshops on the labour force survey organised by, e.g., ILO, UN or Eurostat, therefore they have a good knowledge of international standards, guidelines, statistical processes and good practices.
44. The head of the labour statistics division participated in the 19th International Conference of Labour Statisticians (October 2013) and in meetings organised by Eurostat, for example, the meeting on labour force statistics under platform 2 of the Eastern Partnership (Tbilisi, October 2015) and by the Interstate Statistical Committee of the CIS, she was discussant of the OECD meeting (jointly with Eurostat) on the interrelations between public policies, migration and development in Armenia; she also contributed to, for example, the UNECE workshop on gender statistics (Vilnius, May 2016); furthermore, she recently attended the 2nd technical workshop on European statistics for the EECCA countries (Vilnius, July 2017) and a seminar on measuring decent work in the context of SDG's organised by the ILO International Training Centre (Turin, November 2017).
45. Furthermore, staff members of the labour statistics division participated actively and made presentations in international meetings, seminars or workshops on the labour force survey, for example, a workshop on gender statistics (Bishkek, 2004) and the UN ESCAP inter-regional workshop on gender statistics (Bangkok, June 2016).

1.2.2 Principle 8: Appropriate statistical procedures

Population coverage

46. The target population of the labour force survey comprises all persons between 15 and 75 excluding collective or institutional households (table 1). These collective or institutional households (e.g., student hostels or dormitories, boarding houses, residential care homes and hospitals) can be identified on the basis of the census and are then excluded from the sample list of households. The number of collective households, i.e., 526 is limited. The survey estimates are grossed up to the total population including collective households. A comparison of the labour force characteristics of the total population including persons living in the institutional households on the basis of the census with the total estimates excluding the institutional households is useful to explain the effect of the non-coverage of the institutional household from the survey (*☞ recommendation a*).
47. Household members who are temporarily absent for less than three months are added to the list of (present) household members and proxy data are collected. Conscripts regardless of the duration of their absence from the household are also included in the survey (questions B10=6, D19=6, etc.), their data are collected by proxy interviews.
48. The age range of the target population has changed several times. From 2001 until 2003, the age range covered persons between 16 and 70, from 2004 until 2006, the lower age limit changed to 15 years, in

2007, the lower age limit was again 16 years without an upper age limit and from 2008 onwards the age range covered persons between 15 and 75.

49. The target population of the labour force survey is the usually resident population. The usual residence is defined as including all persons normally living at least one year in Armenia or living shorter here than one year but intending to live here for at least a year ⁽⁷⁾. However, these persons living shorter than one year in Armenia without intention to stay longer are included in the survey (*☞ recommendation b*)

Survey frequency and survey period

50. In 1996, a first labour force survey was carried out within the framework of UN Development Programme. From 2001 when labour force survey data started to be collected at twice yearly intervals and also later, from 2007 when it became an annual survey, the integrated living conditions household survey was the vehicle for the labour force survey. Since 2014, the labour force survey is a separate survey.
51. In the early years of the labour force survey, the observation period of the survey varied, in 2001 and 2003 the survey was organised in March and October, in 2004 it was organised in August, one year later, it was organised in November and December.
52. Since April 2007 the labour force survey is carried out continuously, but the distribution of the reference weeks is not uniform over the weeks in a quarter (see table 1). This distribution depends on the week of the interview because the reference week is defined as the week preceding the day of the interview. Consequently, some reference weeks and some sample areas may be overrepresented when more interviews are conducted in a particular week; typical events occurring in these weeks and areas, e.g., new jobs or job losses may be captured more or less frequently dependent on the number of successful interviews. The total quarterly estimate is therefore not a true, unbiased estimate of the average employment or unemployment for the survey period. A true period estimate assumes that the reference weeks are distributed uniformly over that period. The reference week should therefore be determined in the sampling process when the sample is allocated to a particular reference week (*☞ recommendations c and j*). The interview may thus take place some weeks later, e.g., due to absence of the household or other local conditions in the week immediately after the reference week.

Sample design

53. The source for the sample frame is the October 2011 population and housing census. The census is divided in more than 11.5 thousand enumeration areas stratified by ten urban areas, ten rural areas and separately, the city of Yerevan ⁽⁸⁾. In urban areas, the enumeration district is a street block, in rural areas the enumeration area is a (segment of a large) village or a group of small villages. Villages in urban areas normally have at least 5000 inhabitants and they are further distinguished by the proportion of non-agricultural activities. Slightly more than half of the enumeration areas belong to urban areas. The average size of an urban enumeration area is 79 households and in rural areas 56 households. The

⁷ UN recommendations on international migration statistics, 1998, § 36; SNA 2008, § 19.11 and EU Parliament and Council regulation n0 763/2008, §2(d)

⁸ A more detailed stratification was applied for the household intergrated living conditions survey where the 12 districts of Yerevan were distinguished as separate strata with an obviously positive reduction of the cluster effect; however, since 2012 the stratification was reduced and the districts of Yerevan were not separate strata anymore

number of enumeration areas in the sample of the *marzes* monthly varied between 4 and 7 depending on the *marzes* and Yerevan has 10 enumeration areas.

54. The annual sample size comprised 7788 households, a 1% sample of the total population. A two-stage sample is selected. In the first stage, are selected 708 enumeration areas of the strata with probability proportional to their size.
55. In the second stage households are sampled. The total annual sample is then distributed over the quarters, but weekly or monthly representativeness is not guaranteed (☞ *recommendations d*). Furthermore, the quarterly sample size is small ⁽⁹⁾ with implications on the (detail of the) output (☞ § 91).
56. The sample list of households (derived from the population census) is not updated before the actual data collection; the sample list can therefore include demolished dwellings but on the other hand, new constructions will be missing (☞ *recommendations e*).
57. Households are interviewed only once, there is no repeated survey of the same households in, for example, two consecutive quarters or in the same quarters one year apart. A repeated survey has several advantages: more precise net change estimates, a larger sample size at relatively less survey costs when telephone interviewing is applied in the later survey waves, a reduction of the interview duration (**Non-excessive response burden, Principle 9 of the Code of Practice**) when dependent interviewing is applied, for example, to verify the household composition or in some questions on job characteristics as the occupation or economic activity, similarly, savings are attained in the coding of these variables when the answers can be copied forward to the current wave and finally, a repeated survey allows to estimates gross flows between labour statuses. A relatively minor disadvantage is the increase of the non-response – attrition between waves (☞ *recommendation f*).

Table 1. Assessment of the correspondence between the Labour Force Survey and the specifications in Council Regulation no 577/98 of March 9, 1998, no 1372/2007 of October 23, 2007 and no 545/2014 of May 15, 2014 concerning the survey and sample design

Survey characteristics	Currently implemented	Recommended and considered by the NSS for implementation on the short-term	Recommended and considered by the NSS for implementation on the medium-term dependent on conditions (✓) or objections (Ø)
Population coverage: 15 years and over	✓ but upper age limit of 75		
Supplementary coverage of collective and institutional households			✓ (526 according to census)
Continuous survey	✓		
Uniform distribution of the reference weeks		✓	
Quarterly results	✓		
Repeated observations / interviews			✓

⁹ In the Member States, the minimum quarterly sample size is 2300 households

Table 1. Assessment of the correspondence between the Labour Force Survey and the specifications in Council Regulation no 577/98 of March 9, 1998, no 1372/2007 of October 23, 2007 and no 545/2014 of May 15, 2014 concerning the survey and sample design			
Administrative data (except for labour status)		✓ (in particular the economic activity)	
Assessment of the correspondence between the Labour Force Survey and the recommendations of the task force on the quality of the labour force survey, June 2009			
Balanced samples over geographical areas and reference weeks		✓	
Regular review of the efficiency of the sample design	✓		
Full application of concept of the resident population (EP and Council Regulation no. 763/2008)		✓	
Quarterly rotation pattern, harmonisation of rotation patterns		✓	

58. Sixteen interviewers are collecting the data for the labour force survey; their average weekly workload is ten interviews. They are collecting data for the labour force survey only. They are recruited externally and trained by the main statistical office; their training takes two days. They are trained how to establish the contact with the sample households and how to conduct the interview. Furthermore, the questionnaire, in particular the household box and key concepts of employment, working hours and job characteristics are explained (table 2). A refresher training is organised after changes in the questionnaire or after the introduction of new concepts or classifications.
59. The interviewer is the intermediate between the statistician and the respondent: the statistician can rely only on the interviewer who conveys the question content to the respondent exactly as it is defined by the statistician. Only in this case the statistician maintains control over the interview. In statistical terms: deviations by interviewers from standardised interviewing generally increases interviewer variance, hence increases measurement error. The standardised interviewing technique reduces interviewer variance. Its procedures are the following: (1) to read a question as written in the questionnaire, (2) to probe inadequate answers in a non-directive way and (3) to record the answers without discretion. Instances of deviations from standardised interviewing are adding or omitting words from the question, incorrectly or incompletely reading the question and response categories and using non-neutral or leading clarifications. These standardised interviewing techniques are part of the training (table 2).
60. Interviewers are initially accompanied by a supervisor. There are six supervisors verifying whether the questionnaires are completely and correctly filled. Furthermore, the performance of the interviewers is monitored by comparing response rates within similar enumeration areas and follow-up surveys of a sample of respondents are conducted. When the data collection is computer assisted, many recording errors of the responses are avoided and the follow-up of the data collection can be centralised.
61. The final total non-response rate is almost 9%. A non-response rate of more than 5% is due to refusal and more than 3% is due to addresses which could not be found, non-accessible dwellings with security barriers and blocked doors. Participation in the survey is voluntary. This non-response rate is relatively small compared with the non-response rate of 29% of the labour force survey in the Member States where participation is also voluntary. The small final non-response rate is the result of the replacement

of almost one third of not-at-home households or non-accessible dwellings by households from a reserve sample list ⁽¹⁰⁾. Household are re-contacted three times before they are considered as not at home. The high substitution rate of one third may introduce a bias and non-response is likely to be reduced by delivery of an advance letter and eventually mailing or leaving a paper-and-pencil questionnaire to be completed and returned by the household (☞ *recommendations g and h*).

62. The proxy response rate is 38.8%.

Table 2. Assessment of the correspondence between the Labour Force Survey and the recommendations of the task force on the quality of the labour force survey, June 2009 concerning the fieldwork			
Recommendations of the task force	Currently implemented	Recommended and considered by the NSS for implementation on the short-term	Recommended and considered by the NSS for implementation on the medium-term dependent on conditions (✓) or objections (Ø)
Compulsory participation, wherever legally feasible			Ø
Inform and reassure sample households/persons before interview		✓	
Dependent interviewing of select (stable) variables			✓ (dependent on the introduction of a rotation pattern)
Scheduling the contact attempts at different times of the day	✓		
Permanent professional interviewers with minimum turnover	✓		
Training on communication skills and survey content	✓		
Regular debriefing of interviewer experiences	✓		
Standardised interviewing	✓		
Monitoring interviewer performance	✓		
Maximum delay between interview and reference week	✓ (reference week is week before day of interview)		
Emphasize the confidentiality of the data collection		✓	
Mixed survey modes (CAPI/CATI/Web-based)			✓ (dependent on the introduction of a rotation pattern)
CAPI instead of paper-and-pencil questionnaires		✓	
Tailored approach of non-nationals (translation)			Ø (language barrier < 1% of households in Yerevan)

¹⁰ Identification of response households from the reserve sample list is useful for later analysis

Table 2. Assessment of the correspondence between the Labour Force Survey and the recommendations of the task force on the quality of the labour force survey, June 2009 concerning the fieldwork			
Wave specific modules/ questionnaire organisation			✓ (dependent on the introduction of a rotation pattern)
Test of changes of the survey design before applying these in the field	✓		

Questionnaire and variables

63. The questionnaire includes more than two thirds of the variables in the EU labour force survey (table 3). Several important variables are missing, these variables are interesting to describe labour as a commodity on the labour market and to distinguish labour market segments, to describe labour as an economic production factor or from a social perspective. The reasons for a temporary job, its total duration (instead of the current question on the elapsed duration) and the contract with a temporary work agency, the region of the place work and the status in employment in the last job are interesting variables to describe heterogeneous labour market segments. The number of overtime hours, the case where the number of hours actually worked is greater than the number of hours usually worked, is useful to describe labour in relationship with the typical work situation. The search for another job as an additional question for persons who like to work more hours because it identifies actual pressure on the labour market of persons in time-related underemployment. The distinction full-time / part-time in the type of job a person would like to work is useful to describe the volume of unmet labour supply. Working at home, atypical working hours and supervisory responsibilities are meaningful to describe labour from a social perspective. The year when the highest level of education was completed specifies the educational path and the number of years of residence in Armenia is relevant to describe mobility across borders. When these variables are added, they will contribute significantly to the relevance of the survey (*☞ recommendation i*).
64. Some questions of the EU labour force survey are not included because they aroused irritation of the respondent (for example, the question on the registration at a public employment office) or because they are specifically relevant for EU policy (need of care facilities in addition to the measurement of the reasons for part-time work of why a person is not looking for work).
65. Three questions are asked about the income without distinction by status in employment, income may be the take home pay or the business profit: the net monthly amount (if any), an alternative, funnel question with a range of eight income brackets and the reference period for those wages or mixed income. These income questions are not only asked for the main job but also for the second job ⁽¹¹⁾.

Table 3. Assessment of the correspondence between the Labour Force Survey and the specifications in Council Regulations no 577/98 of March 9, 1998, no 1372/2007 of October 23, 2007 and no 377/2008 of April 25, 2008 concerning the variable list			
Survey characteristics	Currently implemented	Recommended and considered by the NSS for implementation on the short-term	Recommended and considered by the NSS for implementation on the medium-term

¹¹ Average hourly earnings of employees is an additional decent work indicator in relationship with adequate earnings and productive work

Table 3. Assessment of the correspondence between the Labour Force Survey and the specifications in Council Regulations no 577/98 of March 9, 1998, no 1372/2007 of October 23, 2007 and no 377/2008 of April 25, 2008 concerning the variable list

			dependent on conditions (✓) or objections (Ø)
<u>Questionnaire:</u> Demographic background variables	✓ except number of years of residence in Armenia		
Measurement of labour status	✓ except breakdown full-/part-time in type of employment sought or found (question 67) – <i>but this variable may be deleted in the revised LFS</i>		
Measurement of employment characteristics of main job	✓ except region of place of work, working at home, reasons and total duration of temporary job, involvement of public employment office in finding a job, contract with temporary work agency, supervisory responsibilities, shift work, atypical working hours		
Economic activity according to ISIC rev. 4, occupation according to ISCO-08	✓ (NACE rev. 2)	✓ superseded classification ISCO-88	
Measurement of take-home pay	✓		
Measurement of characteristics of second job (ICSE, ISIC and hours)	✓		
Measurement of hours usually and actually worked	✓ except number of overtime hours		
Measurement of time-related underemployment	✓ except search for another job and reason why not seeking another job		
Measurement of search for employment	except need for care facilities (only in relationship with the EU Joint Assessment Framework), registration at public employment office and situation before job search – <i>but this variable may be deleted in the revised LFS</i>		
Measurement of educational attainment	✓ except year when (highest level of) education completed		

Table 3. Assessment of the correspondence between the Labour Force Survey and the specifications in Council Regulations no 577/98 of March 9, 1998, no 1372/2007 of October 23, 2007 and no 377/2008 of April 25, 2008 concerning the variable list			
	and field of this completed education		
Level of educational attainment according to ISCED 2011		✓ superseded classification ISCED97	
Measurement of participation in education and training	✓ except level of current education or training and number of hours spent on these learning activities		
Measurement of previous work experience of person not in employment	✓ except status in employment in last job		
Measurement of main activity status	✓		
Technical items, i.e., proxy and private/collective household	✓		
Completeness (variables in comparison with EU LFS)		68%	
System of ad-hoc modules	✓ (informal employment, school-to-work transition and child labour)		

66. Specific modules were added to the labour force survey. These modules concern informal employment (2008) with support of the TACIS program, informal sector with assistance of the Asian Development Bank (ADB) (2009), the transition from school to work designed by ILO and in partnership with the MasterCard Foundation (2012 and 2014), child labour, age 5 to 17 (2015) in cooperation with ILO and funded by the US Department of Labour and the labour force and child labour survey (2004).
67. Four supplementary questions are included in the questionnaire to distinguish informal employment and employment in the informal sector: a question on the legal registration of the business, the type of ownership, the legal status of the business and the market use of the produced goods and services.
68. The questions on the labour status meet the question design principles according to Commission Regulation 1897/2000 except for the specification of reference periods, the insertion of an ungrounded filter question and a too wide definition and identification of employment (table 4). This indicates the high degree of **cross-national comparability** (*Principle 14 of the Code of Practice*).
69. The reference week to determine employment is implicitly specified as “last week”, the week before the day of the interview. Similarly, the reference week for the job search and the availability to start working is specified as last month resp. in two weeks. These descriptions are not clear and these reference periods should take into account the reference week defined when the sample is selected (*☞ recommendation j*).
70. The duration of absence from work of six months instead of three months is very long as evidence of a continued job attachment. Seasonal workers during the off-season cannot be considered as employed

when the economic activity of the business is discontinued (☞ *recommendation k*). Persons working for own-use production or services are not considered as employed unlike persons producing goods or services for sale ⁽¹²⁾ – these two situations are asked in two subsequent questions (☞ *recommendation l*). Unemployment depends on three conditions: not having a job, job search (or the case that someone has already found a job to start later) and the availability to start working. In the questionnaire of the labour force survey, a filter question is inserted whether a person looking for a job would like to work, dependent on the answer the question on the availability to start working is asked ⁽¹³⁾; this filter question should be moved (☞ *recommendation m*). The expected start of the new job within two weeks (instead of three months) when someone has already found a job is too short (☞ *recommendation i6*) ⁽¹⁴⁾.

Table 4. Assessment of the correspondence between the labour status questions in the Labour Force Survey and the Commission Regulation no 1897/2000 of September 7, 2000			
Question design principles	Currently implemented	Recommended and considered by the NSS for implementation on the short-term	Recommended and considered by the NSS for implementation on the medium-term dependent on conditions (✓) or objections (Ø)
Questions on labour status are in general the first questions in the individual questionnaire	✓		
Questions on employment consist at least of <u>2 separate</u> questions	✓ (questions C1a, C1d & C2)	Additional questions to identify production of goods and services for sale and for own use	
Questions on employment and job search contain at least one cue for the identification of <u>minor jobs</u>	✓ except the question F57 on job search		
Questions on employment contain at least one cue for the identification of <u>unpaid family workers</u>	✓ (question C1d)		
Questions on employment clearly indicate work <u>for pay or profit</u>	✓ (question C1b)		
Reference period of employment is <u>last week ‘from Monday to Sunday’</u> , period of job search is past <u>four weeks including the reference week</u> , period of availability is <u>two weeks following the reference week</u>		✓ reference periods refer to last week instead of the reference week according to the sample selection	

¹² Resolution concerning statistics of work, employment and labour underutilisation, 19th ICLS, § 10

¹³ Current routing for job searchers is: questions F57 on job search, F62 on job search duration, F63 whether person would have liked to start working, only if F63= “yes”, then F65 is asked on availability to start working

¹⁴ NSS is revising the questionnaire taking into account current international concepts and definitions to be used in the field next year

Table 4. Assessment of the correspondence between the labour status questions in the Labour Force Survey and the Commission Regulation no 1897/2000 of September 7, 2000			
All persons identified as having no job are asked the question on job search		✓ (but ungrounded filter question F63 for availability)	
Question on job search refers to <u>any effort</u> to find a job	✓		
The question on job search methods contains <u>active and passive search methods</u>	✓ (question F58 only contains active search methods – this satisfies the new EU requirements)		
At least <u>three search methods</u> are enumerated	✓		
<u>Contact with the public employment office</u> is finding out about job vacancies or suggesting job opportunities	✓		
Persons who have <u>already found a job to start within next 3 months</u> and currently not employed and not searching are identified		✓ (question F60: 2 weeks instead of 3 months)	

Data editing and coding

71. Eight weeks may pass after the interview until the data entry. As data are collected by a paper-and-pencil questionnaire, incomplete questionnaires and routing errors may occur. Questionnaires are therefore verified and edited by the supervisor and imputation of missing values is applied. A donor method with data of respondents with similar characteristics is used for the imputation; imputation may occur in 0.02% or 0.03% of the employed and active population and in 0.1% of unemployment. When the data collection is computer assisted, data are immediately available for processing, routing errors are avoided and the follow-up of the data collection can be centralised.
72. The industrial activity of the establishment (*questions D6, E26 and F55*), the description of the main tasks, duties and position in the job (*questions D5, E25 and F54*) and the field of education (*questions D7 and F56*) are open questions. Both questions D7 and F56 ask the qualification acquired by formal education; this information is used as an auxiliary description for the coding of occupation besides the description of the main tasks, duties and position in the first questions D5 and F54. Because the information on the qualification acquired by formal education refers to a past situation, it may not be relevant for the current job. In other words, the current occupation cannot be coded on the basis of information on someone's early educational path. Nevertheless, it is useful to determine the field of education (*☞ recommendation n*).
73. All three variables are coded by two coders in the central office. The industrial activity is coded according to the 2006 NACE rev. 2 on a 4-digit level of classes. Sometimes when the name of the

establishment is reported, this name can be matched with the business register⁽¹⁵⁾ to determine the code for the industrial activity. Matching of the responses on the name (and address) with the business register could be more frequent when an explicit question is asked (*☞ recommendation o*). The business register, sampling and classifications division is the custodian of the Armenian edition of the standard industrial classification.

74. Occupation is coded according to ISCO-88 on the 4-digit level of unit groups. The introduction of the ISCO-08 depends on the initiative of the National Institute of Labour and Social Research (a NPI) of the Ministry of Labour and Social Issues who is the custodian of the Armenian edition of the standard classification of occupations (*☞ recommendation p*).
75. The level of educational attainment is coded according to the 6 levels of ISCED 1997 on the basis of a closed question with nine categories. ISCED 2011 is a revision of ISCED 1997 with changes mainly on level 4 and in tertiary education. A mapping of the national Armenian educational system on the levels of ISCED 2011 is available⁽¹⁶⁾. The introduction of ISCED 2011 can be coordinated with the Ministry of Education and Science (*☞ recommendation q*). The ISCED 2011 classification by field of education is recently revised, independently from the revision of the level of education. This ISCED-F 2013 consists of eleven broad groups and twenty-nine narrow fields; this classification can be used for the coding of the qualification acquired by formal education (*☞ recommendation q*).
76. Three weeks pass after the data entry until a clean dataset is available including the codes for the industrial activity and occupation.

1.2.3 Principle 10: Cost effectiveness

77. All interviews are conducted face-to-face with a paper-and-pencil questionnaire. The average duration of an interview is half an hour. The NSS intends to use laptops or tablets for the data collection by next year or the following year (*☞ recommendation r*).

1.3 Statistical output

1.3.1 Principle 11: Relevance

78. The main and regular users of labour force survey data are the Ministry of Finance, the Ministry of Labour and Social Affairs, the Ministry of Economic Development and Investments, Ministry of Territorial Administration and Development, the Central Bank, the press, researchers from universities and other research institutes, trade union and employers' associations and international organisations.
79. The content of the labour force survey is determined after consultation and in agreement with the Ministry of Labour and Social Affairs and the Central Bank as well as with the Scientific and Methodological Council of the NSS (an advisory body of stakeholders).

¹⁵ Law on State Statistics of RA, article 13.

¹⁶ <http://uis.unesco.org/en/isced-mappings>

1.3.2 Principle 12: Accuracy and reliability

80. In the labour force survey in Armenia, a Horvitz-Thompson estimator is applied taking into account effective sampling probabilities (Table 5). A weighting procedure usually consists of four steps. Besides the first step of the adjustment of unequal sampling probabilities there is an adjustment for non-response, a post-stratification of calibration on the population benchmarks and finally, estimating household weights by using average values of the auxiliary variables for the calibration ⁽¹⁷⁾. Without this last adjustment, estimates of married men and women will differ as a statistical consequence of the use of sex as an individual auxiliary variable for calibration yielding different weights by sex. The adjustment for non-response can be useful when auxiliary variables, for example, type of dwelling, are available for the sample which are not available for the calibration on the population benchmarks.¹⁸
81. A re-weighting of the sample depends on the availability of recent and reliable population benchmarks by, e.g., region (*marzes*), sex and age (*☞ recommendation s*). These population benchmarks are an extrapolation of the regional population pyramid by sex and age categories from the population census – or they are directly derived from the population register. The extrapolation takes into account total natality and mortality and net interregional migration. Useful administrative sources to produce recent and reliable population benchmarks are the central register of the state population register and the border management information system with information on national border crossings ⁽¹⁹⁾. In the 2016-2018 statistical work program, the improvement of the statistical processing of data on the natural movement of the population by region is specified, including the transmission of electronic data on the registration of civil status acts by births and deaths.

Table 5. Assessment of the correspondence between the Labour Force Survey and the specifications in Council Regulation No 577/98 of March 9 concerning statistical estimation			
Survey characteristics	Currently implemented	Recommended and considered by the NSS for implementation on the short-term	Recommended and considered by the NSS for implementation on the medium-term dependent on conditions (✓) or objections (Ø)
Relative standard error of the annual average of unemployed persons representing 5% of working age population at a regional level ≤ 8%	✓		
Relative standard error of the net quarterly change [will be substituted by a requirement on the rotation pattern]			✓ (dependent on the introduction of a rotation pattern)
Imputation rate (of missing data)	✓		
Post-stratification by sex, age (5-year classes) and region		✓	
Assessment of the correspondence between the ‘National Survey on Population and Employment’ and the recommendations of the task force on the quality of the labour force survey, June 2009			

¹⁷ Because the Horvitz-Thompson estimator is used and this estimator respects the household unit, the weights of the individual members in a household are equal

¹⁸ These last three steps are not applied in the LFS in Armenia.

¹⁹ Herm A. and Oblak Flander A. Report on sector review on migration statistics in RA. 2015, § 22

Table 5. Assessment of the correspondence between the Labour Force Survey and the specifications in Council Regulation No 577/98 of March 9 concerning statistical estimation			
Separate treatment of collective and private household, for example, when weighting			✓
Single weight for all household members	✓ [because of HT estimator]		
Optimal weighting schemes to reduce non-response bias			✓
Regular collection of information on non-respondents	✓ (non-response ≤ 9%)		

82. Due to the statistical processing, two weeks pass between the availability of a clean dataset and the production of a first set of results. For plausibility control, main aggregates for the last reference period are then compared with previous data on total population, active population, employment and unemployment.
83. Standard errors are estimated for the levels of employment and unemployment and for the employment and unemployment ratios. The precision of the quarterly estimates meets the EU requirements on the standard error of quarterly averages on a national and regional level with one exception (table 6). The proposed precision requirements are specified in terms of the minimum standard error of the unemployment and employment ratios as a continuous function of the actual estimates and the size of the working age population at a national and a regional NUTS 2 level ⁽²⁰⁾. They will replace the current precision requirements in terms of the coefficient of variation.

²⁰ Report of the task force on EU labour force survey precision requirements, to be inserted in the proposal for a framework regulation on integrated European social statistics http://europa.eu/rapid/press-release_IP-16-2867_en.htm

Table 6. Maximum thresholds of standard error of quarterly employment (E) and unemployment (U) ratio by <i>Marzes</i>												
		N [15-75]	N (POP)	N HH	n (sample)	n (sample)	\hat{y}	\hat{y}/N [15-75]	threshold	sdev (\hat{y})	sdev (\hat{y})	sdev (p) (*)
<i>Marzes</i>		x 10 ⁶	x 1000	x 1000	persons	hh	x 1000			x 1000	units	
Armenia	E	2,0114	3019	803	7699	1947	1000,7	0,50	0,0062	2,804	2804	0,00093
	U						224,1	0,11	0,0039	1,597	1597	0,00053
Yerevan	E	0,6476	1060	271	2541	683	258	0,40	0,0136	2,036	2036	0,00192
	U						117,3	0,18	0,0107	1,352	1352	0,00128
Aragatsotn	E	0,0798	133	35	435	102	42,9	0,54	0,0071	0,462	462	0,00348
	U						1,8	0,02	0,0021	0,095	95	0,00072
Ararat	E	0,1855	260	68	615	140	109,9	0,59	0,0107	0,82	820	0,00315
	U						10,9	0,06	0,0051	0,229	229	0,00088
Armavir	E	0,2096	266	65	630	141	127	0,61	0,0113	1,156	1156	0,00435
	U						19	0,09	0,0067	0,418	418	0,00157
Gegharkunik	E	0,1297	235	55	627	132	69,1	0,53	0,0091	0,992	992	0,00423
	U						0,7	0,01	0,0013	0,053	53	0,00023
Lori	E	0,1838	236	82	582	165	105,8	0,58	0,0107	0,84	840	0,00357
	U						16,6	0,09	0,0062	0,34	340	0,00145
Kotayk	E	0,1973	254	71	610	149	83,9	0,43	0,0111	0,706	706	0,00278
	U						24,7	0,13	0,0074	0,401	401	0,00158
Shirak	E	0,1809	252	67	596	154	84,9	0,47	0,0107	0,905	905	0,00360
	U						18,2	0,10	0,0065	0,445	445	0,00177
Syunik	E	0,0788	142	38	396	107	49,5	0,63	0,0069	0,55	550	0,00388
	U						4,1	0,05	0,0032	0,166	166	0,00117
Vayots Dzor	E	0,0312	52	14	275	67	22,8	0,73	0,0040	0,224	224	0,004292
	U						1,8	0,06	0,0021	0,065	65	0,001246
Tavush	E	0,0872	129	36	404	105	46,7	0,54	0,0075	0,656	656	0,00511
	U						9,1	0,10	0,0046	0,262	262	0,00204
(*) =sdev (\hat{y})/ $\sqrt{N(N-n)}$				census 2011								

84. The precision requirements for the labour force survey for the whole country and for the *marzes* are presented in the column “threshold”. The standard errors for the employment and unemployment ratios are presented in the last column. All these standard errors are smaller than the threshold except for the standard error of the employment ration in the Vayots Dzor *marz*. However, *marzes* are treated here as regions on a NUTS-2 level. However, the average size of the *marzes* is smaller than the minimum of 800 thousand inhabitants of the average sizes of NUTS-2 level regions in the Member States. Therefore, the comparison of the standard error on the level of *marzes* is too strict; it may be concluded that the precision of the estimates in the labour force survey in Armenia meets the European standard.

1.3.3 Principle 13: Timeliness and punctuality

85. Headline short-term, quarterly indicators are the absolute levels of employment and unemployment and the employment-to-population ratio and unemployment rate on the basis of the labour force survey⁽²¹⁾. Preliminary quarterly results are published 90-92 days after the reference quarter, before the end of the next quarter according to an advance release calendar⁽²²⁾ (table 7). The total time lag of thirteen weeks between the last interviews and the release of the first results is due to eight weeks between the interview and the data entry, three weeks for data editing and coding and two weeks for the statistical processing and cross-checking of the data. The monthly indicator is the number of registered unemployed persons, but it is released several weeks after the reference month.

Table 7. Assessment of the correspondence between the Labour Force Survey and the specifications in Council Regulation no 577/98 of March 9, 1998 concerning the timeliness			
Survey characteristics	Currently implemented	Recommended and considered by the NSS for implementation on the short-term	Recommended and considered by the NSS for implementation on the medium-term dependent on conditions (✓) or objections (Ø)
First data release within 12 weeks	✓		
Assessment of the correspondence between the Labour Force Survey and the recommendations of the task force on the quality of the labour force survey, June 2009			
More timely LFS results in relationship with their relevance for short-term analysis		✓ (dependent on introduction of computer-assisted interviewing)	
Advance release calendar	✓		
[Exchange of data control and validation programs between Eurostat and Member States]	does not apply		

²¹ These are ILO main decent work indicators

²² <http://docs.armstat.am/nsdp/arc/>

1.3.4 Principle 14: Data coherence and comparability

86. A time series with the annual results from 2008 onwards is disseminated for the working age population, the labour force, employment and unemployment (Table 8). The start of the time series is 2008 because the age range of the target population remained the same since 2008 and the ILO definitions of the labour force indicators are applied since then. A time series with quarterly results from 2008 onwards for the main aggregates is disseminated in the digital publication “Labour market in RA”; comments are included in its introduction about time series breaks when in 2014 the labour force survey became a stand-alone survey and because since 2015 the recent population census is used as the sampling frame.
87. Data are revised backwards when errors are identified in the logical construction of derived variables and when definitions, particularly inclusion or exclusion conditions are changed and when these conditions were already recorded in the data.
88. In national accounts, labour input is a necessary variable in the supply and use tables and for the calculation of labour productivity (SNA 2008, par. 2.157 and 19.4). Tables on employment in the main and second job in terms of employed persons and hours actually worked from the labour force survey by formal and informal employment and by the A*21 breakdown of industrial activity are transmitted yearly to national accounts. The informal sector is a subset of household unincorporated enterprises, they operate at a low level of organisation, they are not registered and they have few (for example, in agriculture) or no employees. Informal employment can occur in the informal as well as formal sector and consists of employment with labour relations which are typically temporary, casual or based on kinship or personal relations instead of contractual arrangements that bring associated (social security) benefits (e.g., paid domestic workers employed by households, day labourers, street vendors or contributing, unpaid family workers). A comparison of the employment estimates from the labour force survey with data in national accounts on the basis of business surveys in the format of a reconciliation table will underpin the evaluation of the accuracy of the labour force survey results (☞ *recommendation t*).
89. The labour participation and employment rates concern persons between 15 and 75, the same age range as the target population of the labour force survey, in contrast to the EU operationalisation of these indicators with the age range between 15 and 64 ⁽²³⁾ (☞ *recommendation u*).

Table 8. Assessment of the correspondence between the Labour Force Survey the recommendations of the task force on the quality of the labour force survey, June 2009 concerning comparability and coherence			
Survey characteristics	Currently implemented	Recommended and considered by the NSS for implementation on the short-term	Recommended and considered by the NSS for implementation on the medium-term dependent on conditions (✓) or objections (Ø)
[Cross-national comparability: review of the principles for the formulation of the questions on the labour	does not apply		

²³ European Neighbourhood Policy ENP-East – Labour market statistics, statistics explained 2016

Table 8. Assessment of the correspondence between the Labour Force Survey the recommendations of the task force on the quality of the labour force survey, June 2009 concerning comparability and coherence			
status, viz., Commission Reg. 1897/2000]			
<u>Comparability over time:</u> data validation, comparison of current main aggregates with previous data	✓		
Identification, description of design changes and time series breaks		✓ (update of metadata)	
To limit number of time series breaks; length of time series	✓ quarterly series of main aggregates since 2008		
<u>Coherence:</u> explanation of differences between employment estimates from LFS and National Accounts	✓ [LFS is direct input in NA]		
Reconciliation table between employment estimates from LFS and National Accounts			✓
Communication between statisticians from LFS and National Accounts			✓
Further research on (employment in) non- observed economy in relationship with exhaustiveness of NA	✓		

1.3.5 Principle 15: Accessibility and clarity

90. The NSS website is easily accessible. Besides the website in Armenian, many domains and documents are available in Russian or English. All documents, including data, are clear and comprehensible to a wide public, including non-practitioners.
91. The results of the survey are published on various carriers: tables and digital publications on the website of the National Statistical Service, hardcopy publications and a database with anonymised micro-data. The sub-domain of statistical indicators – with more than 100 indicators – includes the most recent quarterly data for the current year and a time series of annual data since 2008 on the working age population, labour participation, employment and unemployment ⁽²⁴⁾ (table 10). The quarterly data in absolute levels are also compared with the same quarter of previous year. The indicators are published as bare estimates without any comments or explanation on key trends (*☞ recommendation v*). Besides the online dissemination of these indicators, new quarterly data from the labour force survey on the

²⁴ <http://armstat.am/en/?nid=12&id=08015>

labour force, employment, unemployment and persons outside the labour force by sex and urban/rural area are also included in the chapter on “Employment” of the monthly bulletin “Socio-economic situation of RA”. Longer time series with quarterly data from 2008 onwards besides detailed annual data are included in the annual digital publication “Labour market in RA”, published at the end of the year. It consists of thirteen chapters – eight of them with data from the labour force survey; quarterly data on the main indicators are unidimensional due to a relatively small quarterly sample size. This publication includes supplementary indicators of labour market performance, i.e., time-related underemployment, non-available job seekers and persons available to work but who are not seeking work.

92. The annual publication “Marzes of the Republic of Armenia and Yerevan city in figures” is published end of October; it includes ten tables with regional data from the labour force survey on the labour force, employment and unemployment by sex, urban/rural area and agricultural/non-agricultural sector. Finally, the annual hardcopy publication “Statistical yearbook of Armenia” includes almost thirty tables on the labour force, employment and unemployment, many tables are two-dimensional with a breakdown by sex; another hardcopy publication “Women and men in Armenia” includes more than thirty tables and graphs on the labour force, employment, unemployment and persons outside the labour force.
93. Tables with annual results on the working age population and the economically (in-)active population are disseminated with breakdowns by year and by demographic background variables and (type of) region; data on employment are disseminated by the same breakdowns and by job characteristics, data on unemployment are also disseminated by those breakdowns and by previous work experience, furthermore, data are disseminated on informal employment, long-term unemployment and the youth not in education, employment or training (table 9) (*☞ recommendation w*).

Table 9 – List of tables of the Labour Force Survey published on the NSS website – annual data
Table 2.3.1: <i>Economically active population by sex, age, educational level, marital status, urban/rural, region, 2008-2016 – thousands</i>
Table 2.3.12: <i>Economic activity rate by sex, age, educational level, marital status, urban/rural, region, 2008-2016 – %</i>
Table 2.3.2: <i>Unemployment rate by sex, age, educational level, marital status, urban/rural, region, 2008-2016 – %</i>
Table 2.3.10: <i>Unemployment by sex, age, educational level, marital status, urban/rural, region, previous work experience, reasons for job termination, long-term unemployment 2008-2016 – thousands</i>
Table 2.3.3: <i>Employment by sex, age, educational level, marital status, urban/rural, region, status in employment, industrial activity, occupation, permanent/temporary job, full-time/part-time, 2008-2016 – thousands</i>
Table 2.3.4: <i>Employment rate by sex, age, educational level, marital status, urban/rural, region; informal employment rate by sex, urban/rural, agriculture/industry or services 2008-2016 – %</i>
Table 2.3.5: <i>Weekly hours actually worked by sex 2008-2016 – n of hours</i>
Table 2.3.11: <i>Economically inactive population by sex, age, educational level, marital status, urban/rural, region, main activity status; youth, 15-29 years not in education, employment or training by sex, 2008-2016 - thousands</i>
Table 2.3.13: <i>Structure of working age population by sex, age, educational level, marital status, urban/rural, region, 2008-2016 – thousands</i>
Source: NSS, http://armstatbank.am/pxweb/en/ArmStatBank/?rxid=002cc9e9-1bc8-4ae6-aaa3-40c0e377450a (last access: December 2017)

94. Data on employment and unemployment by sex and age as well as on employment by status in employment and by sector of economic activity and unemployment by educational level are transmitted yearly to Eurostat. Data on 2016 were recently transmitted to Eurostat; early 2018, an update of the labour market statistics of the European Neighbourhood Policy (ENP) – East countries is planned by Eurostat.
95. Metadata (concepts, definitions and synthetic methodological issues) are disseminated on the website of dissemination standards bulletin board of the IMF by four dimensions: data coverage, periodicity and timeliness, accessibility, integrity and quality of the data ⁽²⁵⁾. Ready and equal access to data requires the dissemination of a release calendar and the simultaneous release to all interested users. The integrity of the data requires a description of the conditions under which the official statistics are produced or disseminated and the policy and procedure of data revision according to the fundamental transparency principle. The data quality requires a documentation of the applied methods and reconciliations with related data that make possible cross-checks and the evaluation of the data validity. The metadata on the methodology are referring to an old design of the labour force survey, they need updating and they need to be more complete, specific and technical. The following metadata are missing or incomplete: the coverage of the time series and time-series breaks, the revision practice, the confidentiality rules and data treatments, the sample design and estimation methods and the actual quality characteristics (*☞ recommendation y*).
96. Anonymised micro-datasets of the labour force survey in 2015 and 2016 are available on the website of the National Statistical Service in SPSS and Excel format. The data are treated before they are cleared as public-use micro-data, sparse categories of the variables are collapsed, and a high level of aggregation is applied to classifications. More safeguards against the risk of statistical disclosure are imposing themselves, e.g., aggregation of numerical variables ⁽²⁶⁾ and the collapse and recoding of sparse categories of demographic variables, job characteristics and job search characteristics (*☞ recommendation z*).
97. The NSS is preparing the new hardcopy publication of the “Catalogue of statistical publications” for 2017 to provide the public with detailed information on the list, periodicity and brief content of statistical publications.

Table 10. Assessment of the correspondence between the Labour Force Survey and the recommendations of the task force on the quality of the labour force survey, June 2009 concerning relevance and accessibility			
Survey characteristics	Currently implemented	Recommended and considered by the NSS for implementation on the short-term	Recommended and considered by the NSS for implementation on the medium-term dependent on conditions (✓) or objections (Ø)
Production and dissemination of time series of headline short-term employment and unemployment indicators	✓		
Supplementary indicators of employment and unemployment, i.e., time-related underemployment, job	✓		

²⁵ <http://dsbb.imf.org/Pages/SDDS/DQAFBase.aspx?ctycode=ARM&catcode=EMP00>

²⁶ Precise values of, for example, month and year of birth are specified in the files

Table 10. Assessment of the correspondence between the Labour Force Survey and the recommendations of the task force on the quality of the labour force survey, June 2009 concerning relevance and accessibility			
seekers not available and persons available to work but not seeking			
Information on new user demands	✓		
Published results (number of tables compared with EU dissemination)	✓ 60% (except by household characteristics, limited breakdowns)		
Published results: transmission of data to international organisations on request	✓		
Metadata, ratio of available on applicable metadata		✓ [73%]	

2. Recommendations

The recommendations in comparison with the *acquis communautaire* of the labour force survey are the following:

2.1 Principle 8: Appropriate statistical procedures

Sample design, reference period and coverage

- a. Institutional or collective households are not surveyed; however, the data are reweighted to the total population. On the basis of the last census, labour estimates for the total population including institutional or collective households should be compared with the grossed-up estimates for the non-institutional population to assess the effect of the exclusion of the institutional households.
- b. Persons who stayed less than one year in Armenia and who do not intend to stay longer than one year are not belonging to the target population and should be excluded from the survey (SNA 2008, §19.11; EP and Council Regulation no 763/2008, §2(d))
- c. The reference week should be determined when the sample is selected [It is not strictly related with the interview date]. This is a condition for unbiased estimates. In a continuous survey the reference weeks are homogeneously distributed within a time interval. The sum of all the responses in a continuous survey is (mathematically) a true estimate of, for example, total employment or labour input per quarter. When the reference week depends on the interview date, specific labour market events, e.g., hires or dismissals may be oversampled when they occur in specific weeks when more interviews are conducted –  recommendation k.
- d. The monthly and weekly samples should be balanced over geographical areas, viz. by region (*marzes*) and urban/rural settlement to avoid the interaction effects of seasons and areas.
- e. The sample dwellings in the enumeration areas should be thoroughly listed and updated before the actual data collection. Without this update, recent dwellings may be missing and the labour market characteristics of the households may be different from the initial sample of households. Coordination of the sample with samples of other household surveys should be attempted.
- f. The design of the “Labour force survey” should be a rotation design where the households are repeatedly interviewed instead of a single interview. This design is more efficient because the net quarterly change estimates are more precise ⁽²⁷⁾. Furthermore, the response burden may be somewhat reduced when some questions on job characteristics and household composition can be simply asked with reference to the answers in the previous wave (dependent interviewing); the coding of the economic activity and the occupation can also be copied forward. Households in later waves can be interviewed by telephone, thereby reducing costs of fieldwork (no travel costs). A (relatively minor) disadvantage is a rise of the total non-response – attrition from wave to wave.

Fieldwork

- g. An advance letter should be sent to the sampled households explaining the purpose of the survey, emphasizing the confidentiality, describing the use of the results and announcing the visit of the interviewer. The consent of the interviewers with this advance letter should be sought.

²⁷ The standard error of differences is reduced by the correlation between two occasions

- h. In the case of non-accessible dwellings / households a test should be carried out whether a paper questionnaire by mail to be returned by the respondent may increase the response rate (without replacement by households from a reserve sample list).

Questionnaire and concepts

- i. The following additional variables should be captured by the questionnaire:
- 1) the contract with a temporary work agency, the reasons for a temporary job and its total duration (instead of currently the elapsed duration, question D20) and also the region of the place of work because they identify different labour market segments, the status in employment in the last job of persons without a current job (to be inserted after question 56) should also be captured because it similarly identifies different labour market segments;
 - 2) the number of overtime hours per week in relationship to the employment contract or typical work situation to describe labour as an economic production factor ⁽²⁸⁾, the situation that the number of hours actually worked is higher than the number of hours usually worked is not explicitly provided as a response category (question E40);
 - 3) supervisory responsibilities, working at home and atypical working hours because these characteristics are relevant to describe labour from a social perspective ⁽²⁹⁾;
 - 4) the search for another job because it is a complementary indicator of time-related underemployment;
 - 5) the distinction full-time / part-time job in the type of employment person would like to work (question 67) because this would allow to calculate the volume of (unmet) labour supply;
 - 6) a period of three months should be applied in the case when a person will start working in a job already found instead of two weeks (question F60); furthermore, it should be considered to ask a separate question ⁽³⁰⁾ whether a job has been found because this situation is defined as unemployment (this situation of a job already found is at risk from being skipped as a main reason in a question with multiple response categories);
 - 7) the year when the highest level of education or training was completed (following question B15), the field of the completed education or training ⁽³¹⁾ recommendation r, and
 - 8) the number of years of residence in Armenia as an additional background variable because it is a relevant variable to describe mobility across borders ⁽³¹⁾.

A test survey of these additional variables should be carried out to determine the appropriate formulation of these questions before they are included in the regular survey questionnaire.

- j. The reference week for employment (question C1) should be specified as “the week from Monday [date] to Sunday” instead of the seven days prior to the interview; the reference week is determined at the time of the sample selection and remains the same week independently from the interview date. Similarly, the

²⁸ See presentation on the “Conceptual and operational framework of the labour force survey” by A. Van Bastelaer and Z. Priede on November 24, 2017

²⁹ Some questions on the second job could be deleted; just four fewer questions are asked on the second job than on the main job

³⁰ or incorporated in question F57

³¹ Armenia: 0.7% foreigners

reference period for job search and availability to work (questions F57 and F65) should refer to the four weeks prior to resp. three weeks following and including the reference week.

- k. In question C4, the condition of the duration of the absence from work (in relationship with the reasons for absence 6-13) should be reduced to three months instead of six month; in the case of suspension of work or lay-off, a duration of more than three months is very long as an indication of continued attachment to work, furthermore, seasonal workers during the off-season when the economic activity of the business is discontinued are not considered as employed irrespective of the duration of the interruption.
- l. Current question C1.f) refers to (and identifies persons in) own-use production work while questions C1.e) and C1.g) refer to work for use by others in exchange for income. Persons working for own final use should be excluded from employment ⁽³²⁾. Anyway, they should be identified and tabulated as a separate category.
- m. The routing of job searchers should be verified: the question on the availability to work (question F65) is skipped by job searchers who last week did not like to start working (question F63); because this filter question may have an effect on the estimation of unemployment, it should be moved.

Data processing: classifications and coding

- n. The field of education seems to be asked in questions D7 and F56, they should be coded according to the ISCED fields 2013. A closed version of this question with a list of fields could be used instead of the open question. Responses to those questions must not be used as an auxiliary variable to code occupation because they may deviate from the current tasks and duties (questions D5 and F54).
- o. The basis of the business register is the state register of legal units ⁽³³⁾ (question D10 and E28 are relevant filters); the business register should therefore be used more for the coordinated coding of the industrial activity of the establishment where persons are working, this would require an explicit question on the name and/or address of the establishment where persons are / were working.
- p. Occupation (questions D5, E25 and F54) should be coded according to the new classification of ISCO-08 in order to improve international comparability; its likely introduction in 2018 depends on the initiative of the National Institute of Labour and Social Research ⁽³⁴⁾.
- q. Educational attainment (question B15) should be coded according to the eight levels of ISCED 2011 in order to improve the cross-national comparability. The ISCED 2011 mapping may provide guidance ⁽³⁵⁾. The field of education (questions D7, F56) should be coded according to the eleven broad groups or twenty-nine narrow fields of the ISCED-Fields 2013; these codes should also be consistent across the levels of educational attainment ⁽³⁶⁾.

³² Work in progress

³³ Law on state statistics, April 26, 2000

³⁴ Custodian of the Classification of Occupations

³⁵ UNESCO UIS website of ISCED mapping by country

³⁶ Coordination with the Ministry of Education seems obvious

2.2 Principle 10: Cost effectiveness

- r. Computer-assisted interviewing with laptops or tablets ⁽³⁷⁾ should be used to collect the data instead of paper-and-pencil questionnaire. The investment costs are offset by the efficiency gain, the error-prone steps of the manual data entry are skipped, routing errors are avoided and the control and supervision of the interviewers can be centrally organised.

2.3 Principle 12: Accuracy and reliability

- s. The sample data should be reweighted to the estimated population totals at least by sex and age besides the current grossing-up⁽³⁸⁾ by region only to improve accuracy and to reduce non-response bias if sufficiently reliable and recent breakdowns by sex and age are available at the level of *marzes*.

Corollary: the population totals at the level of *marzes* should be updated yearly taking into account net regional migration besides the data from the civil acts on births and deaths – requiring the involvement of the Demography Division.

2.4 Principle 14: Coherence and comparability

- t. Whereas employment data from the labour force survey are used as input for employment in national accounts; the results of the comparison of employment from the labour force survey and business surveys on the basis of a reconciliation table should be discussed by both divisions. This will corroborate the use of the labour force data.
- u. The indicators of the labour participation rate and the employment-to-population ratio should be defined with reference to persons between 15 and 64 for international comparison instead of the age range of 15 to 75.

2.5 Principle 15: Accessibility and clarity

- v. Whereas data interpretation and reporting belong to the core business ⁽³⁹⁾, output should be increased, for example, with analysis and description of the key dynamics on the labour market to supplement the current publications limited to the dissemination of only data.
- w. Tables should be disseminated on labour participation and employment by household composition because the household dimension is a key characteristic of the labour force survey.
- x. More specific metadata are needed ⁽⁴⁰⁾, in particular, on the sample design and the estimation [§ 3.1.1 and § 3.3.1] in order to better assess the design effect and the reweighting of the data. More complete metadata are needed on time series breaks and the revision practice instead of the current general description [§ 4.2.2 and § 1.2.4], on the survey burden and on the applied classifications [ISCO in § 2.3.1]. These metadata are necessary because users are not in a position to detect errors by observing the data alone. Other metadata need to be updated, for example, on the Integrated Living Conditions Survey as a vehicle for the labour force survey until 2013.

³⁷ Dependent on tests and practical experience

³⁸ A stratified Horvitz-Thompson estimator seems to be applied without reweighting

³⁹ Transformation of data into information

⁴⁰ They are currently published on the IMF website, data and statistics, “Dissemination Standards Bulletin Board”, last update in January 2017

- y. More safeguards against the risk of statistical disclosure should be applied in the public-access micro-data database.

List of actions to implement the recommendations

The actions to implement the above short-term and medium-term recommendations are described in the following synopsis. Short-term recommendations involve changes concerning the questionnaire and the data dissemination which can be made parallel with the change to computer assisted interviewing instead of a paper-and-pencil questionnaire:

Recommendations	Actions
Short-term:	
Computer-assisted data collection	<ul style="list-style-type: none"> • to specify a proposal on the basis of a cost-benefits analysis for use of tablets for data collection • to define the overall architecture of the redesigned labour force survey • to define a project plan and process for the development of computer-assisted data collection • to obtain the agreement for an investment in the new hardware
Fixed reference week defined when the sample was selected	<ul style="list-style-type: none"> • to adapt the questionnaire and to brief the interviewers • to compare the results with the current data on the basis of a small-scale parallel survey
Efficient sample design	<ul style="list-style-type: none"> • to verify the balanced coverage of the monthly and weekly samples over the geographical areas and to adapt it • to update the sample in the selected enumeration areas with new dwellings
Usual residence concept	to exclude temporary residents (for less than one year) on the basis of an explicit filter question
Measurement of employment and unemployment	<ul style="list-style-type: none"> • to revise questions C1 and C4 and • to move the question F63 • to quantify the effects on unemployment
Questionnaire	<ul style="list-style-type: none"> • to add new questions • to reconsider whether some questions can be deleted • to test the new questionnaire before using it in the regular survey
Maximum response	<ul style="list-style-type: none"> • advance letter • paper questionnaire by mail (multi-mode approach)
Classifications ISCO-08 and ISCED-2011	to introduce these new classifications and to inform users of the time-series breaks
Business register for the coding of industrial activity	<ul style="list-style-type: none"> • to ask the name and location of the establishment • to match the responses on the name and location of the establishment with the records of the business register to retrieve a code for the industrial activity
Weighted estimates by region, sex and age	<ul style="list-style-type: none"> • to calculate annual population data by region, sex and age

Recommendations	Actions
	<ul style="list-style-type: none"> • to apply these benchmarks on the labour force survey estimates • to revise the time series of the labour force survey estimates
Labour participation and employment-to-population ratio	to adapt the age range of the indicators and to inform the users
Anonymous database	to apply more safeguards against the risk of statistical disclosure
Medium-term:	
Computer-assisted data collection	<ul style="list-style-type: none"> • to develop the software applications • to train the interviewers, their supervisors and the data editors in the new technology • to test the new environment for the computer-assisted data collection
Rotation design with repeated interviewing of households	to replace quarter by quarter part of the sample by households who were already interviewed within the applied stratification
Employment from the labour force survey and national accounts	to continue to compare employment estimates from the labour force survey with data from business surveys
Tables by household type	to produce and to disseminate tables by household type
Analysis and description of key dynamics on the labour market	to analyse and to prepare quarterly reports on key dynamics on the labour market
Metadata	to update and to add metadata
Coverage of institutional households	to compare labour force estimates including and excluding the institutional population on the basis of the population census

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Annexes

Annex 1

Agenda

National Statistical Service of Armenia

Sector review – Labour Force Survey Statistics

21 – 24 November, 2017

International review team

Experts:

Mrs. Zaiga Priede and
Aloïs Van Bastelaer, PhD

Day 1, Tuesday November 21, 2017		
09:30 – 10:00	Opening and welcome, introduction to the review, the review team and the participants from the National Statistical Service	NSS: International Statistical Cooperation Division, Labour Statistics Division; Mrs. Zaiga Priede & Aloïs Van Bastelaer
10:00 – 10:45	<p>Introductory meeting with the representatives of the National Statistical Service (hereafter: NSS). Discussions on the general institutional framework related to the labour force survey statistics (LFS)</p> <p>General discussion on the institutional framework related to the labour force (survey) statistics: general rules; NSS internal organisation, roles and functions; human resources; relations with other national stakeholders and data sources (actors in the national statistical system); multiannual statistical programs; dissemination / publication issues and policies; formal relations with external stakeholders (e.g., ILO, EU).</p> <p>Provision of related official documents / material</p>	NSS: Labour Statistics Division Mrs. Zaiga Priede & Aloïs Van Bastelaer
10:45 – 11:00	<i>Coffee break</i>	
11:00 – 12:00	<p>LFS Conception</p> <p>Presentation by the responsible division and discussion of methodological aspects relating to the design of national household surveys, for example the integrated living conditions survey and the labour force survey in particular with reference to the information in the assessment questionnaire.</p> <p>This includes: survey design, frequency, coverage, sampling frame and sample design</p>	NSS: Labour Statistics Division
12:15 – 12:45	Preliminary conclusions and recommendations	Mrs. Zaiga Priede & Aloïs Van Bastelaer
12:45 – 14:00	<i>Lunch break</i>	
14:00 – 15:00	LFS Implementation	

Day 1, Tuesday November 21, 2017		
	<p>Presentation and discussion of methodological aspects relating to the implementation of the labour force survey with reference to the information in the assessment questionnaire.</p> <p>This includes: field work, data collection methods, non-response, substitution and proxy rates</p>	NSS: Labour Statistics Division
15:00 – 15:15	Preliminary conclusions and recommendations	Mrs. Zaiga Priede & Aloïs Van Bastelaer
15:15 – 15:30	<i>Coffee break</i>	
15:30 – 16:30	<p>Relations between NSS surveys and other national sources and institutions</p> <p>Presentation and discussion of the survey questionnaire, its content and testing and on the interaction (based on rules and practice) between NSS surveys and other data sources and institutions in the national statistical system related to the labour force survey with reference to the information in the assessment questionnaire. Focus will be on the (potential) use of administrative data, data from other ad-hoc surveys and censuses</p>	NSS: Labour Statistics Division and eventually other relevant divisions, for example, Household Surveys Division
16:30 – 16:45	Preliminary conclusions and recommendations	Mrs. Zaiga Priede & Aloïs Van Bastelaer

Day 2, Wednesday, November 22, 2017		
09:15 – 10:15	<p>Data processing: entry, editing and coding</p> <p>Presentation and discussion of data processing (entry, editing and coding): consistency and routing checks, imputation rate, imputations methods, related calculations, coding procedures, software applications used for data entry, editing and coding with reference to the information in the assessment questionnaire.</p>	NSS: Labour Statistics Division and other relevant divisions, for example, Business Register, Sampling and Classifications Division

Day 2, Wednesday, November 22, 2017		
10:15 – 10:30	Preliminary conclusions and recommendations	Mrs. Zaiga Priede & Aloïs Van Bastelaer
<i>10:30 – 10:45 Coffee break</i>		
10:45 – 11:45	Compliance with European and international standards	NSS: Labour Statistics Division and other relevant divisions, for example, Quality Management Division
	Presentation and discussion on compliance with European and international standards: classifications used (ISCO, NACE, ISECD etc.), definition of variables, norms/standards (coverage, reference period, frequency), main issues arising from alignment to international classifications/definitions/standards with reference to the information in the assessment questionnaire.	
11:45 – 12:00	Preliminary conclusions and recommendations	Mrs. Zaiga Priede & Aloïs Van Bastelaer
<i>12:00 – 13:15 Lunch break</i>		
13:15 – 14:15	Data estimation and quality	NSS: Labour Statistics Division and other relevant divisions, for example, Information Technologies Development Division
	Presentation and discussion of the data estimation (non-response rates, weighting procedures, software packages used, level estimates for main variables, standard errors and non-sampling errors) and quality (timeliness and accuracy) with reference to the information in the assessment questionnaire.	
14:15 – 14:30	Preliminary conclusions and recommendations	Mrs. Zaiga Priede & Aloïs Van Bastelaer
<i>14:30 – 14:45 Coffee break</i>		
14:45 – 15:45	Data dissemination	NSS: Labour Statistics Division and other relevant divisions, for example, Statistical Information and Public Relations Division, National Accounts Division
	Presentation and discussion of the dissemination policy and practice: micro-datasets, bulletins, publications, calendar release, type of tables produced, data accessibility, data revision, available metadata, data transmission to external institutions / agencies and data quality (accessibility and coherence) with	

Day 2, Wednesday, November 22, 2017		
	reference to the information in the assessment questionnaire.	
15:45 – 16:00	Preliminary conclusions and recommendations	Mrs. Zaiga Priede & Aloïs Van Bastelaer
16:00 – 17:45	Review work	Mrs. Zaiga Priede & Aloïs Van Bastelaer
	Review team will meet separately for preparing conclusions and recommendations of the first two days	

Day 3, Thursday, November 23, 2017		
09:15 – 10:15	Management of users' requests	NSS: Labour Statistics Division
	Presentation and exchange of views on the procedures adopted to manage users' requests: main users, tools for satisfying specific users' needs, time needed, tools for measuring users' satisfaction with data; major constraints and quality (relevance) with reference to the information in the assessment questionnaire	
10:15 – 10:30	Preliminary conclusions and recommendations	Mrs. Zaiga Priede & Aloïs Van Bastelaer
10:30 – 10:45	<i>Coffee break</i>	
10:45 – 11:45	Organisational structure of LFS	NSS: Labour Statistics Division
	Presentation and exchange of views on the organisation of LFS division. Focus will be on number and type of staff (management / research / administrative), type of employment (permanent/temporary), recruitment channels, international training and qualifications, participation to international initiatives and training and updating programs, interaction with academy and research institutions with reference to the information in the assessment questionnaire.	
11:45 – 12:00	Preliminary conclusions and recommendations	Mrs. Zaiga Priede & Aloïs Van Bastelaer
12:00 – 13:15	<i>Lunch break</i>	

Day 3, Thursday, November 23, 2017		
13:15 – 14.15	Relations with international organisations	NSS: Labour Statistics Division
	Presentation and exchange of views on interactions with international organisations such as ILO, UNECE and EUROSTAT. Focus will be given to projects, twinning, partnerships and programs relating to LFS; participation and contributions to international meetings; main issues arising from such events and suggestions for changes in LFS with reference to the information in the assessment questionnaire.	
14:15 – 14:30	Preliminary conclusions and recommendations	Mrs. Zaiga Priede & Aloïs Van Bastelaer
<i>14:30 – 14:45</i>	<i>Coffee break</i>	
14:45 – 17:00	Review work	Mrs. Zaiga Priede & Aloïs Van Bastelaer
	Review team will meet separately for preparing overall conclusions and recommendations	

Day 4, Friday, November 24, 2017		
09:30 – 10:00	Debriefing and following steps	Aloïs Van Bastelaer
	Introduction of the conceptual framework of the labour force	
10:00 – 10:30	Presentation of main conclusions and recommendations on the labour force survey design and process and consequent actions	Mrs. Zaiga Priede & Aloïs Van Bastelaer
<i>10:30 – 10:45</i>	<i>Coffee break</i>	
<i>10:45 – 11:45</i>	Views of the management on the recommendations	NSS: Labour Statistics Division
<i>11:45 – 12:00</i>	Closing of the meeting Thanks and Greetings	NSS Mrs. Zaiga Priede & Aloïs Van Bastelaer
	Administrative rounding off: afterwards, the review Team will meet separately for collecting the list of participants (by day and topic), discussing and defining the next assessment steps, including the contents of the forthcoming summary report of findings. All collected material (institutional documents, reports, metadata, additional notes, etc.) will be ordered for following further in-depth analysis	

Annex 2

Participants at the meetings for the assessment of the « Labour Force Survey »

Participants of the NSS	Tuesday, November 21		Wednesday, November 22		Thursday, November 23		Friday, November 24	
	mor- ning	after- noon	mor- ning	after- noon	mor- ning	after- noon	mor- ning	after- noon
Mrs. Lusine Kalantaryan, head of labour statistics division	✓	✓	✓	✓	✓	✓	✓	✓
Mrs. Goharik Meliksetyan, manager of labour force survey unit	✓	✓		✓			✓	
Mrs. Susan Hunanyan, senior specialist	✓	✓	✓	✓	✓		✓	✓
Mrs. Anna Soghomonyan, senior specialist	✓	✓	✓	✓	✓		✓	✓
Mrs. Jemma Avoyan, leading specialist methodology	✓	✓	✓	✓	✓		✓	✓
Mr. Paruyr Movsisyan, 1 st category specialist	✓	✓	✓	✓	✓		✓	✓
Mrs. Siranush Zeynalyan, 1 st category specialist	✓	✓	✓	✓	✓		✓	✓
Mrs. Karine Sargsyan, 1 st category specialist	✓	✓	✓	✓	✓		✓	✓
Mrs. Varduhi Sedrakyan, programmer		✓		✓			✓	✓
Anahit Safyan, SCS member international statistical cooperation								✓