

TWINNING CONTRACT

**AM/14/ENP/ST/15**

# **Strengthening of the National Statistical System of Armenia – Phase II**



## **MISSION REPORT**

**on**

### **Demographic Statistics**

#### **Activity 2.2: Cooperation with data suppliers**

Mission carried out by

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**List of Abbreviations**

- EU            European Union
- NSSRA      National Statistical Service of the Republic of Armenia
- RA            Republic of Armenia

## 1. General comments

This mission report was prepared within the Twinning Project “Strengthening of the National Statistical System of Armenia – Phase II”. This was the second activity in component 2 and the actions planned for this activity were carried out as scheduled.

The purposes of the mission were:

- Presentation on various ways of cooperating with data suppliers
- Discussion on strategy for how to cooperate with data suppliers
- Discussion on ways of introducing a centralized database system using a unique personal code
- To involve relevant stakeholders in the discussions

The consultants would like to express their sincere thanks to all officials and individuals met for the kind support and valuable information which they received during the stay in Armenia and which highly facilitated their work. The views and observations stated in this report are those of the consultants and do not necessarily correspond to the views of EU, NSSRA, Statistics Denmark, Istat or Statistics Lithuania.

## 2. Assessment and results

### Vital Statistics

This mission focused on cooperation with data suppliers, which in the case of Vital Statistics are the Ministry of Justice (owner of the Civil Acts Register - CAR) and the Ministry of Health (responsible for death certificates).

Main possible issues regarding data coming from the CAR are the coverage, as not all the vital events that occur are registered, and accuracy, as some information may be missing.

An evaluation of the size and territorial distribution of the undercoverage of birth and death registrations was elaborated using data from the 2011 population census, with particular reference to the question D2.:

*During the last 12 months were reported in the household:*

#### Live birth/s

- 2.1. Yes, registered in Civilian Registry Office (number)
- 2.2. Yes, not registered in Civilian Registry Office (number)
- 2.3. No

#### Case/s of death

- 2.4. Yes, registered in Civilian Registry Office (number, sex, age)
- 2.5. Yes, not registered in Civilian Registry Office (number, sex, age)
- 2.6. No

Summary results are shown in table 1: a certain level of undercoverage was reported by interviewed households, more notable for deaths (2.9%) than for births (1.2%). In some regions, such as Armavir and Gegharkunik, the undercoverage rate is significantly higher than the average, suggesting the need of particular attention.

Further analysis of the census results could be carried out, to identify communities/specific areas in the country and household typologies where the issue is more sizeable, as well as possible trends on a monthly basis.

**Table 1. Undercoverage rates – 2011 Population Census (%)**

	Births	Deaths
The Republic of Armenia	1.21	2.88
Yerevan city	0.88	2.28
Aragatsotn	1.23	3.05
Ararat	1.36	3.04
Armavir	1.01	4.17
Gegharkunik	2.27	4.11
Lori	1.27	3.45
Kotayk	0.97	2.53
Shirak	1.40	2.55
Syunik	1.49	2.90
Vayots Dzor	1.02	2.28
Tavush	1.35	3.07

These results can be a useful contribution to the forthcoming Interagency Working Group on Civil Registrations and Vital Statistics, where NSSRA should play a positive role not only presenting quantitative and detailed evidence of issues but also suggesting specific initiatives. Among them, actions to arise awareness among civil register officials about the relevance of their work also in terms of accuracy and completeness of national statistics, through specific training or communication initiatives. A larger involvement of community leaders, closer to people than the local civil registration offices, could also prove to be a fruitful measure to be taken.

Unfortunately, the meeting with the Ministry of Health to discuss the new system to code causes of death could not be held. The new system is going to introduce a major change: until now, one specialized doctor in NSSRA has been coding all causes of death for 1 year and older death acts; in the next future the coding will be decentralized, as each medical doctor in the country is going not only to write in the death certificate the relevant causes of death, but also to input the code. At present a pilot of these procedures is underway.

While this change is freeing up resources for the NSSRA and taking the coding closer to the source (the doctor issuing the certificate) with possible gains in accuracy, there is a need to strictly monitor it. In fact, decentralization could also cause a higher level of heterogeneity in the choice of coding, introducing biases in the analysis of trends and incidence of the main causes of death in the country.

The meeting with VXSoft, the company in charge of the E-Armenia project, gave an overall appreciation of the considerable improvements realized in the field of e-government. It allowed also to get a deeper insight into the specifics of the platform in use for the on-line registration of births and deaths. A document reporting its main features was requested, including built-in consistency rules and the list of compulsory and optional variables. It should be the basis to implement checks and editing procedures for the treatment of electronic data received by NSSRA. Present and foreseen practice for processing data on vital events should be part of a comprehensive note prepared by NSSRA documenting the whole process.

The last point addressed during the mission was the use of the unique identification number (Social Security Number - SSN) to improve the register system and statistics based on administrative data. It was made clear that the SSN is present in every record on vital events, even

though it is not transmitted to NSSRA. An agreement with the Ministry of Justice is needed to have it included in the records sent to NSSRA, so that individual information on population can be used for statistical purposes. Another variable of possible interest is the country of birth, either of parents or of the dead person, that is not recorded in the present registration process but is largely used for international classifications of vital events (see the EU regulation 1260/2013 on European demographic statistics).

### **Migration statistics**

The second mission focused on the deepest analysis of administrative data sources and on the ability to cooperate with data suppliers.

The main source of information on migration in NSSRA is the Integrated Living Conditions Survey. This is an annual sample survey which enables to collect information about demographical and social characteristics of the migrants 15 years and older, together with main information on living conditions of households and household's members. The design weights have been used in Integrated Living Conditions Survey for estimation the main indicators of the survey. Quality indicators have been estimated only for the poverty indicators. The possibility to estimate the quality of main indicators (coefficient of variation of emigrants and immigrants) in future has been discussed.

Raking methodology, calibration or post stratification weighting methods (using additional demographic information) should improve the quality of the results of all indicators which estimated from the Integrated Living Conditions Survey.

State Migration Service of RA obtains the data on the personal level about all applications of the asylum seekers, about persons who granted the citizenship of the Republic of Armenia and persons who lost it. State Migration Service of RA semi-annually and annually presents aggregated statistical reports about asylum seekers to NSSRA, according to EU Regulations (# 862/2007, 11 July 2007).

During the meeting with the State Migration Service of RA, present situation, further cooperation related methodological issues, interchanging of data, data analysis, quality of the data have been discussed. The necessity of signing the inter-institutional agreement has been approved. Also further cooperation with National Security Service of RA is necessary for improvement of the quality of migration statistics in RA of both institutions (NSSRA, State Migration Service of RA).

Visa and Passport department of the Police of RA is responsible for the State Population Register. Population Register obtains data of citizens of the Republic of Armenia; stateless persons; foreigners; citizens of the Republic of Armenia, who are not living in Armenia; new borns; persons who died; refugees. All persons who are registered in the Population Register receive the SSN.

According to the RA Law „On State Population Register” the main criteria for defining international/internal migrants are the change of place of permanent residence within a country and duration of the stay or absence in case of intention to take up permanent residence in a new place for a period more than 6 months. Flows of the declared international or internal migration are very low. According to the RA Government Decree on Defining the order of providing data to the National Statistical Service of the RA from the Information System of State Population Register the information about population movement have been provided to NSSRA. There are mistakes in provided data: missing values, wrong coding, possible double counting, as there is no identification data available. Data editing, imputation procedures, person SSN numbers are needed for receiving the better quality of results.

During the meeting with the Visa and Passport department of the Police of RA, present situation (receiving of the data; mistakes; quality of the data) has been discussed. The Visa and Passport department of the Police of RA agreed to provide the additional data (population stock; population movements by personal level and other required personal data). The RA Government Decree in use could be updated including the provision of the additional required data. The delegate of the Visa and Passport department of the Police of RA informed that the Address Register should be integrated in their system with all present and historical territorial changes. This will help to improve the quality of the data. Ministry of Foreign Affairs of RA is responsible for the electronic information system which helps to make the changes of the place of residence online for those citizens of RA who declare about it to the Embassies and Consulates of RA in foreign countries.

Personal data (with SSN) from State Population Resident (Population stock, population movements) could be useful for improving the quality of demographic and migration statistics, also for other purposes: construction of sampling frames, Population Census.

### 3. Conclusions and recommendations

#### Vital Statistics

Based on Census results, it is possible to improve the analysis on undercoverage of birth and death registrations. Hence, more elaboration should be carried out, taking into account territorial variables (community and rural/urban disaggregation), time and a classification of households by socio-economic profile. These elaborations can help in identifying more problematic areas / types of household for more focused initiatives.

A comprehensive documentation about data processing (checking and editing procedures) in NSSRA is also required, in order to highlight strong points and possible weakness to be improved. In this respect, strengthening IT skills of the staff working on vital statistics could be essential to support a substantial improvement in data processing. Also capacities in demographic analysis should be reinforced, especially if a development of dissemination is planned for the next future in the direction of providing the users not only with tables but also with comments on main results and more detailed data analyses.

NSSRA has already a fruitful collaboration with data providers, based on specific agreements and memorandum of understanding, and it could be further improved in the Interagency Working Group on Civil Registration and Vital Statistics. Main activities to be developed in cooperation with data providers are:

- initiatives to improve the coverage of vital events registrations, targeting more problematic areas in the country, taking into account also the profile of households where a missing registration is more likely to happen;
- clear identification of the network of reference persons for NSSRA in relevant ministries, in order to ease collaboration and increase its effectiveness;
- raising awareness about the relevance of statistics among civil register officials;
- specific agreements on the transmission of the SSN in every vital event record and possibly the inclusion of new variables (e.g. country of birth);
- joint actions to evaluate the quality of information about causes of death, especially considering the change in the coding procedure.

Next mission on vital statistics is going to be in the week 8-12 February 2016, aiming at:

- Review of data collection and discussion on how to handle electronic data

- Meeting with data suppliers (data quality, possible new variables)
- Review of methodology

In view of the next mission, NSSRA is expected to prepare a comprehensive document on data processing, including also information about the on-line acquisition system (to be provided by VXSoft).

It is also expected to further elaborate census data on undercoverage of birth and death registrations taking into account territorial level, household typology and month.

In addition to that, a first analysis on possible issues about the statistics on causes of death should be undertaken. Main issues that should be considered are:

- low variability in causes indicated by some medical doctors, possibly issuing certificates with too high recurrence of one or more cause because of inadequate command of the classification;
- significant differences in causes of death as coded with the present and the new coding method (centralized at NNSRA vs performed by local medical doctors) .

### Migration statistics

On the basis of the main findings during the second mission, the following conclusions can be made:

1. It is possible to improve the quality of results from Integrated Living Conditions Survey by using the reweighting procedure; and in the survey to ask the questions about their movements to all household members (including persons younger than 15 years old).
2. It is very important to have very detailed methodology of the survey, data editing, and imputation description for migration and population statistics. The possibility to use the mirror migration data for estimation the tendency of quarterly international migration data should be analysed.
3. According to the RA Government Decree on Defining the order of providing data to the National Statistical Service of the RA from the Information System of State Population Register the information about population movement have been provided to NSSRA. There are mistakes in provided data: missing values, wrong coding, possible double counting. Some partial imputation for the data about personal movements from the State Population Register should be done in NSSRA.

List of recommendations related to the activities mentioned should be analysed and implemented (if possible before the deadline):

Action	Deadline	Responsible person
To analyze the possibility in the Integrated Living Conditions Survey to ask questions about movements (except purposes of movement) for all household members (including persons younger than 15 years old)	Before approving of the new questionnaire	Karine Kuyumjyan
To use the reweighting pro-	End of the 2016	Armine Arushanyan and Ka-



cedure in Integrated Living Conditions Survey for receiving the better quality of the results. Estimate the quality of main migration indicators.		rine Kuyumjyan
To use the partial imputation for the data (variable – place of next residence) about personal movements from the State Population Register	End of the 2016	Karine Kuyumjyan and Narine Grigoryan

4. Data from State Population Register could be useful for improving the quality of demographic and migration statistics, also for other purposes: construction of sampling frames, for Population Census and other purposes. A strategy for better use the Population Register is needed.
5. In NSSRA, it is very important to identify the level of skills (of Statistical Data Analysis, Imputation, Data Editing, Survey Sampling Theory, IT skills and other) of the staff. The internal experts could provide the internal training courses for other colleagues.

Some recommendations related to the May 2016 mission for Population, census and demographic division of NSSRA have been provided:

- Detailed methodology documentation, specification for defining the internal migrants, emigrants, immigrants, population number by different breakdowns should be presented by the end of April 2016 to the Lithuanian experts;
- Organize the meeting with National Security Service of RA, Ministry of Foreign Affairs for further cooperation.

## Annex 1. Terms of Reference

### Terms of Reference

#### EU Twinning Project AM/14/ENP/ST/15

23-26 November 2015

#### Component 2: Demographic Statistics

#### Activity 2.2: Cooperation with data suppliers

#### 0. Mandatory results and benchmarks for the component

Mandatory results:

- Vital statistics improved concerning data collection mechanisms (transition from paper sources to electronic), coverage, timeliness and quality (July 2017)
- Migration statistics improved concerning data collection, coverage, timeliness and quality (July 2017)

Benchmarks:

- Methodology on vital statistics updated (October 2016)
- Methodology on migration statistics updated (April 2017)
- Improved vital statistics and migration statistics implemented and published (July 2017)
- Staff of NSSRA trained on issues related to vital statistics and migration statistics (July 2017)

#### 1. Purpose of the activity

- Presentation on various ways of cooperating with data suppliers
- Discussion on strategy for how to cooperate with data suppliers
- Discussion on ways of introducing a centralized database system using a unique personal code
- To involve relevant stakeholders in the discussions

#### 2. Expected output of the activity

- Possible ways of cooperating with data suppliers defined
- Proposal for a strategy of cooperation with data suppliers incl. technical and legal implementation made
- A lining up of work programme for the next activity (2.3 is scheduled to February 2016 and will focus on vital statistics alone)

### 3. Participants

#### NSSRA

##### Component leaders

- Mr. Gagik Gevorgyan, Member of State Council on Statistics of RA
- Ms. Karine Kuyumjyan, Head, Population Census and Demography Division

##### Other staff

- Ms. Anna Tokhatyan, Chief specialist, Population Census and Demography Division
- Ms. Narine Grigoryan, Leading specialist, Population Census and Demography Division
- Ms. Anna Grigoryan, 1<sup>st</sup> category specialist, Population Census and Demography Division
- Ms. Susanna Azatyan, 2<sup>nd</sup> category specialist, Population Census and Demography Division

#### MS experts

Ms. Maria Pia Sorvillo, Expert, Istat

Ms. Inga Masiulaitytė-Šukevič, Expert, Statistics Lithuania

#### Other stakeholders taking part in the activity

##### Representatives from:

- Department of Civil Registrations, RA Ministry of Justice
- RA Ministry of Health
- RA Ministry of Territorial Administration and Emergency Situations
- RA National Security Service
- Passport and Visa Department, RA Police

will also be invited.

## Annex 2: Programme for the mission

Time	Place	Event	Purpose / detail
Monday, noon	Hotel / NSSRA	Meeting with RTA	To discuss the programme of the week
Monday, afternoon	NSSRA	Meeting with BC Component Leader and BC Experts	Assessment of situation and presentation by BC of the work conducted since last mission. Presentation by BC of the expected outcome of current mission.
Tuesday, morning	NSSRA	Meeting with BC Component Leader and BC Experts	Discussion on various ways of cooperating with data suppliers ( <i>vital statistics</i> ) Estimation of quality indicators for households Discussion on ways of introducing a centralized database system using a unique personal code
Tuesday, afternoon	NSSRA	Meeting with BC Component Leader, BC Experts Meeting with stakeholders	Discussion on strategy for how to cooperate with data suppliers regarding <i>vital statistics</i> . Development of a Memoranda of Understanding Meeting with stakeholders on <i>vital statistics</i> : Ministry of Justice
Wednesday, morning	NSSRA	Meeting with BC Component Leader, BC Experts	Discussion on strategy for how to cooperate with data suppliers regarding <i>migration statistics</i> Development of a Memoranda of Understanding
	State Migration Service	Meeting with stakeholders	Meeting with stakeholders on <i>migration statistics</i> : State Migration Service
Wednesday, afternoon	VXSoft Ltd.	Meeting with stakeholders	Meeting with stakeholders on e-governance
	NSSRA	Meeting with BC Component Leader and BC Experts	Final discussions on strategy for cooperation with stakeholders and data suppliers Lining up of work to be done until the next activity
Thursday, morning	Police of RA	Meeting with stakeholders	Meeting with stakeholders: Police of RA
	NSSRA	Meeting with BC Component Leader	Presentation of MS Experts' findings and agreement on the reached conclusions
Thursday, morning	NSSRA	Ad-hoc meetings	Final clarifications with BC Experts, preparation of report and presentation for BC Project Leader
Thursday, afternoon	NSSRA	Debriefing with BC Project Leader	Conclusions, recommendations and work programme for the next activity of BC Experts

### **Note:**

In order to use the time in the most efficient way it is recommended to split stakeholder meetings between *vital statistics* and *migration statistics*.

That means that separate stakeholder meetings will be held.

## **Annex 3. Persons met**

### **NSSRA:**

- Stepan Mnatsakanyan, President of the NSSRA
- Anahit Safyan, Member of the State Council on Statistics of RA
- Gagik Gevorgyan, Member of the State Council on Statistics of RA
- Karine Kuyumjan, Head of Population Census and Demography Division
- Anna Tokhatyan, Population Census and Demography Division
- Narine Grigoryan, Population Census and Demography Division
- Anna Grigoryan, Population Census and Demography Division
- Susanna Azatyan, Population Census and Demography Division
- Anush Khamoyan, International Statistical Cooperation Division
- Armine Martikyan, Statistical Information Dissemination and Public Relations Division
- Armine Arushanyan, Head of Information Technologies Development Division of IT Department

### **External stakeholders:**

- Irina Davtyan, Deputy Head of the State Migration Service, State Migration Service, the Ministry of Territorial Administration and Emergency Situations
- Vahan Bakhshetsyan, Consultant in Migration Policy division, State Migration Service, the Ministry of Territorial Administration and Emergency Situations
- Petros Aghababyan, Head of Asylum Issues Division, State Migration Service, the Ministry of Territorial Administration and Emergency Situations
- Mnatsakan Bichakhchyan, Head of the Visa and Passport Department, Police of RA, Visa and Passport Department
- Argam Sanasaryan, Head of the State Population Register Support and Service Department, Police of RA, Visa and Passport Department
- Vahagn Mkhitarian, Deputy Team Leader, Transactional e-Governance Development in Armenia
- Ani Mkhitarian, RA Ministry of Justice
- Karen Hakobyan, State Economic University of Armenia, Chair of Statistics

### **RTA Team:**

- Peter Bohnstedt Anan Hansen, Resident Twinning Adviser
- MargaritBejanyan, RTA Assistant
- AnushPoghosyan, RTA Language Assistant