

## TWINNING CONTRACT

# Support to the State and Entity Statistical Institutions, phase V Bosnia-Herzegovina



## MISSION REPORT


on

Promotion of Dissemination

**Component no 3.3**

**Activity no 3.3.10**

Mission carried out by  
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		 <b>STATISTICS DENMARK</b>

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## List of Abbreviations

BHAS	Agency for Statistics of Bosnia and Herzegovina
FIS	Institute for Statistics of Federation of Bosnia and Herzegovina
RSIS	Institute for Statistics of Republika Srpska
ToR	Terms of Reference
RTA	Resident Twinning Adviser

## 1. General comments

This mission report was prepared within the Twinning Project „Support to the State and Entity Statistical Institutions, phase V”. It was the fifth mission to be devoted to dissemination within Component 3.3 of the twinning project.

The consultant would like to express his thanks to all officials and individuals met for the kind support and valuable information which they received during the stay in Bosnia-Herzegovina, and which highly facilitated the work of the consultant.

The views and observations stated in this report are those of the consultants and do not necessarily correspond to the views of EU, BHAS, FIS, RSIS or Statistics Denmark.

The concrete objectives of the mission were:

- Follow up and expansion of the pilot installations made in December 2012
- Discussions / workshop on different ways / road maps for introducing a dissemination database
- Continued training in PX-Web (on the job training)
- Continued training in PX-Edit for production of PX-files
- Continued discussions on how population and housing census data can best be presented

Further activities in the twinning program related to PC-Axis / PX-Web are not relevant before a final decision to implement the system is taken. A third activity can be scheduled when a positive implementation decision is made and relevant metadata for the population and housing census is available. A third mission should only focus on “on the job training”.

Although the population and housing census has been postponed the relevant tabulation plan and metadata should be available well before the end of the twinning project.

It is recommended that the PX-tables are used to evaluate the user friendliness of tabulation plan for the census.

## 2. Assessment and results

### Change of participants

Not all the participants from the December activity were able to attend and other new staff members joined the activity. The changes to the participants and the fact that the software had not been intensively used since December required some repetition of the different techniques.

### New version of PX-Web

Since the activity in December a new version of PX-Web has been released by Statistics Sweden. The new version was installed on the participants laptops and it was discussed how the customizations / adaptations should be transferred from the old version to the new version. There are still some nagging issues with installing the software on the laptops. It should be investigated further if these problems are related to the software itself or to the security settings of the participants laptops. Again BiH staff was helpful and very skilled in solving these problems.

If PC-Axis is adapted in BiH the software will need to be installed on an external internet server. Also an internal server for testing and quality control of files would be most recommendable.

## Census data as the starting point

An initial tabulation plan / overview for the census, was used as the basis for the training in PX-Web / PX-Edit. At the moment about 16 paper tables are expected to disseminate the census data. The tables appear to be designed for paper publishing. They are quite complex in terms of table headings and the involved number of variables. From a web dissemination perspective some of the tables should be simplified so ordinary users can easily understand them. However the use of the tabulation plan as starting point was very useful as it provided a practical example of real work and showed both the it work and the more intellectual work of understanding the tables and the metadata behind.

## Lack of historical census data

Only the tabulation plans were available. Access to historical data from earlier censuses (1991) would greatly have facilitated the training. And perhaps more importantly presenting the historical 1991 data in the PX-Web pilot would help improve and finalize the tabulation plan for the census. As the staff from IT and Dissemination and I had to think very carefully about some of the tables, the ordinary citizen of BiH will be challenged.

## Tabulation plan should be reconsidered

The tabulation plan of census should be reconsidered in relation to PX-Web / electronic dissemination. As currently available a number of tables in the tabulation plan include historical data. This should be considered very carefully as data from different time periods should only be displayed in the same tables if the data definitions are actually comparable. Alternatively a very large number of cells will either have to be empty and / or most users will think data is in fact comparable.

## Settlements

The presentation of census data at the level of settlements was not tested in PX-Web as a list of settlements was not available. It would have been interesting and extremely valuable for the BiH staff to test data aggregated at the settlement level<sup>1</sup>. The experience from other censuses is that settlement / village data is extremely popular in the broader public. But more importantly they are also difficult to navigate in for users as settlements often have duplicate names in various municipalities / cantons. The number of settlements / enumeration areas is also counted in the 1000's making a split into a number of tables (most likely canton level) relevant.

## Coordinated metadata

Metadata or more simply put data about data is an important part of a dissemination database. There are discussions in BiH about adopting either Colectica or MetaPlus for the handling of metadata. At a less ambitious level variables and their values in dissemination (i.e. web database) must coherent and consistent. This means that variable names like Gender or Sex should be used consistently, and that geographical information should be presented with relevant codes so that the data can be displayed by geographical information software (GIS).

If we have had access to code list that are planned for the census it would have been possible to prepare tables to the level where only data was missing. The activities could have greatly benefited from the participation of staff responsible for the management of classifications in BiH and / or from those who prepare the census.

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<sup>1</sup> See for this page from the Slovenian Statistical office  
[http://pxweb.stat.si/pxweb/Dialog/varval.asp?ma=05C5002E&ti=&path=../Database/Demographics/05\\_population/10\\_Number\\_Population/25\\_05C50\\_Population\\_naselja/&lang=1](http://pxweb.stat.si/pxweb/Dialog/varval.asp?ma=05C5002E&ti=&path=../Database/Demographics/05_population/10_Number_Population/25_05C50_Population_naselja/&lang=1)

## Organization of work

As staff from methodology and subject matter departments / census organization was not present it was difficult to discuss the organization of how best to produce PX files for a dissemination database. However some recommendations can be given based on Danish experience and the local needs.

Tabulations / tables are best described and designed by the subject matter experts (the statisticians).

However the tables for internet dissemination must be well coordinated and easily understandable even to the uneducated user. This requires experience that is typically only found in the dissemination department. The design of aggregated tables, are therefore best done in a corporation between Dissemination and subject matter departments. Subject matter expertise should respect the special skills required for dissemination. When the internet tables are prepared and filled with relevant data they must be signed on and approved as correct by the subject matter department. So quality assurance is not the responsibility of IT and / or Dissemination.

As tables from various subject matter areas are likely to draw on / contain data based on the same classifications it is important that Methodology (or those responsible for the metadata) are involved also.

The production of tables in itself is best concentrated either in IT or Dissemination. As the number of tables will be small in the beginning it gives no meaning to decentralize the production. First of all it is difficult to build and maintain the necessary skills if these are not use regularly. Secondly a centralized production greatly helps the use of well coordinated metadata.

It is important that IT / Dissemination departments NEVER are left with the final responsibility for preparing statistics or tables.

## Time is running

Time is not exactly running out, but a go / no go decision is needed inside 3 months to have something ready at the time of census – and preferably before. If comparable historical data is in fact available it would be beneficial to publish this as soon as possible so that donors and users know in advance what they can expect of data when the census results are published. When the go decision is made, it is recommended that a third activity is undertaken by the twinning program. It should help refine the available data and prepare them for publishing. For this to be efficient the BiH side should prepare at least 15 tables from 3 different subject areas (historical census data, CPI, trade?). If only the *Agency for Statistics of Bosnia and Herzegovina* will launch a dissemination database in the first instance, the activity can be directed only to the Agency thereby having a higher impact. The dissemination and IT staff now has all the knowledge needed to start producing tables. They will of course encounter problems and challenges along the way, but more “training” without a “go decision” will not be beneficial.

## Don't wait for metadata

It is important that the implementation of a dissemination database does not await the implementation of a centrally managed metadata system. As discussed, in an ideal world all the metadata for internet dissemination will come from a central coordinated system. However compared to the amount of metadata involved in the census tabulation plan and in dissemination in general it would be a waste of valuable time to await an optimum solution.

### 3. Conclusions and recommendations

As stated in the mission report (3.3.9 Ellemose Jensen) from December 2012 it is indeed possible to implement a PX-Web based solution before the end of the twinning project if sufficient management support is given to the project, as qualified staff is clearly available at all levels of the BiH statistical system.

The use of the tabulation plan for the census in the training has given the staff the necessary knowledge to use PX-Web to disseminate the census results. To prepare for this IT, Dissemination, Methodology and the census organisation should meet as soon as possible and finalize the metadata.

In the report from December it was recommended that a follow up intervention: (this activity) *“should be dedicated to practical work with a small group of technicians who will be dedicated to the project (No more than 3 to 5 persons)”*. A third activity dedicated to this is only relevant if a positive decision is made and should then be dedicated only to the 3-5 persons assigned to work with the system.

From activity 3.3.10 the conclusions and recommendations below can be given. At the end some of the conclusions from 3.3.9 are repeated as they are still valid (shown in italics).

- Recognize that time is running
- A go / no go decision is need inside 3 months to have the system ready for the Census even if the census is postponed to late in 2013
- Methodology / census organization must prepare and supply relevant metadata
- Tables combining 1991 (historical data) and 2013 (data not available) census data should be prepare to test the validity and user friendliness of the census tabulation plan – will also allow for faster dissemination
- An additional activity should be scheduled after the go decision – given that 50% of the census tables are prepared
- Consider interfaces to the metadata projects
- *The management perspective on dissemination databases is independent of the chosen software platform and must be addressed independently*
- *The role of a dissemination base must be clearly stated and defined in the overall Strategy for Statistics and in the coming dissemination strategy*
- *The initial task should be delegated to a small number of staff that can set aside the necessary time*
- *Priority should be given to statistics with high user demand and high updating frequency (monthly) – Alternatively to long time series*
- *The subject structure should be coordinated with the quality and metadata descriptions being prepared*
- *A priority list of statistics to be published in the system must be compiled and approved by management*
- *The organisational set up should be decided as soon as possible*

## Annex 1. Terms of Reference

**Dissemination**  
**29<sup>th</sup> January 2013 to 1<sup>th</sup> February 2013**  
**Terms of Reference - Activity 3.3.10**  
**EU Twinning Project BA 08-IB-FI-03**  
**Institute for Statistics of Federation of BiH (FIS)**  
**Zelenih beretki 26, Sarajevo**

### Component 1 Business Statistics

- 1.1. Statistical Business Register
- 1.2. Structural Business Statistics
- 1.3. Construction Statistics
- 1.4. Retail Trade Statistics
- 1.5. Tourism Statistics

### Component 2 Extended Household Budget Survey

### Component 3 Institutional Capacity

- 3.1. Long term strategy
- 3.2. Metadata and classification system development

### **3.3. Promotion of dissemination**

#### **Benchmarks**

- A) Staff trained in electronic dissemination by 8<sup>th</sup> project quarter
- B) Comprehensive training of the staff
- C) Planning for the building of a comprehensive dissemination database

#### 3.3.10 PC-Axis staff training II

### **Background:**

It has been decided to implement a dissemination database in Bosnia-Herzegovina using the PX-Web software. The software is developed by Statistics Sweden. An initial license has been procured by the twinning project and will cover the first year of implementation. As stated in the report from mission 3.3.3 (Ellemose Jensen & Stefansson) especially foreign trade statistics will benefit from an output database. But also the results from the upcoming population and housing census can with benefit from a dissemination database. Also the adapted global assessment report mentions the benefits of a dissemination database. This activity will help develop a plan / roadmap for implementing PX-Web in Bosnia-Herzegovina.

A first training mission on PX-Web (3.3.9 – Ellemose Jensen) and associated software was conducted in December (11-14) 2012. The general conclusion after this mission was that additional training would be appreciated and highly relevant. This activity 3.3.10 PC-Axis staff training II was therefore added to the project.

The activities in December 2012 tested and explored various options for including housing and population census data in PX-Web. Although a formal decision on disseminating population census data in PX-Web is not yet made there is a consensus that it will be advantageous to press forward with the preparations for implementing PX-Web and associated software's in Bosnia-Herzegovina.

### **Activities to be undertaken in preparation for the mission**

In the report from activity 3.3.9 the following activities are recommended to be carried out by the BiH side before the next mission (3.3.10).

- Make a decision if a new activity is needed – PX-Web or not?
- Small dedicated group – Decide who that will work with it – February?
- Prepare (10) PX-files one week before activity
- Prepare files for population statistics
- Finish translation of user interface to local language(s)
- Discuss work share between statisticians, dissemination and IT

*Produced PX-files should be send by e-mail to the consultant no later than Thursday before the mission.*

### **The expected activities are:**

- Follow up and expansion of the pilot installations made in December 2012
- Discussions / workshop on different ways / road maps for introducing a dissemination database
- Continued training in PX-Web (on the job training)
- Continued training in PX-Edit for production of PX-files
- Continued discussions on how population and housing census data can best be presented
- Eventually discussions / briefings with other relevant stakeholders like the Central Bank
- Discussions for potential adjustments to the twinning work plan to better support the implementation of PX-Web.
- Preparation for the next mission
  - Preparation of the list of activities to be done before the next mission
  - Preparation of the list of topics for the next missions

<b>Expected output</b>
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The purpose of the activity is to continue the work on implementing PX-Web in Bosnia-Herzegovina. The mission will allow the relevant stakeholders to develop an implementation plan for introducing PX-Web.

It will also allow the relevant IT / dissemination staff to make the necessary technical and practical preparations.

Recommendations on possible information structure of a dissemination database will be provided.



**Time schedule**

All times are tentative and subject to change

<b>Time</b>	<b>Activity</b>	<b>Purpose</b>	<b>Required participants</b>
Tuesday 9:00-10:30	Updating PX-Web to 2012 version – as released at end of December 2012	Discussions / demonstration of how to upgrade present installation	IT developers – (Agency?)
Tuesday 10.30-10.45	Coffee break		
Tuesday 10.45-12.00	Updating PX-Web to 2012 version – as released at end of December 2012		
Tuesday 12.00-13.15	Lunch Break		
Tuesday 13:15-14:30	Follow up on prepared files	Quality insurance of work done – discussions of problems encountered	
Tuesday 14.30-14.45	Coffee break		
Tuesday 14.45-16.00	Follow up on prepared files		
Wednesday 09:00-10.30	Translation of PX-Web user interface	User interface of PX-Web must be translated to Bosnian / Serbian. A partial translation was started in December and should now be completed to a level where it can be systematically tested by users.	Staff assigned by BC for the project – IT / Dissemination
Wednesday 10.30-10.45	Coffee break		
Wednesday 10.45-12.00	Translation of PX-Web user interface continued		
Wednesday 12.00-13.15	Lunch Break		
Wednesday 13:15-14.30	Production of files for population census	Discussions on which files / content that will be required to disseminate population and housing census – Croatia and other Balkan countries as starting point	Staff assigned by BC for the project – IT / Dissemination
Wednesday 14.30-14.45	Coffee break		
Wednesday 14:45-16.0	Production of files for population census continued		
Thursday 09:00-10:30	Production of files for population census – continued	Training in PX-Web / PX-Edit through the production of files – Use of aggregation files	Staff assigned by BC for the project – IT / Dissemination

		to display various age and geographical distributions	
Thursday 10.30-10.45	Coffee break		
Thursday 10.45-12.00	Production of files for population census – continued		
Thursday 12.00-13.15	Lunch Break		
Thursday 13.15 -14.30	Production of files for data with a high updating frequency – preferably (Foreign Trade )	Running PX-Edit in Batch mode – adjusting PX-Edit to local requirements	Staff assigned by BC for the project – IT / Dissemination
Thursday 14.30 – 14.45	Coffee break		
Thursday 14.45 – 16.00	Continued		
Friday 09.00- 12.00	Final report – Signing final report		Staff assigned by BC for the project – IT / Dissemination

## Annex 2. Persons met

### Agency for statistics of BiH

Adnan Gušić  
Sabrina Omerbašić  
Nino Svjetlanović  
Senad Mujkić

### Institute for Statistics of Federation of BiH (FIS)

Zehra Kaba  
Amer Korić  
Kološ Mahir  
Zijo Eskić  
Vildan Madeško  
Amel Sikirić  
Šemso Surković

### RTA Team

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