



## TWINNING CONTRACT

JO 21 ENI ST 01 22

# Strengthening the capacity of Jordan's Department of Statistics in terms of compilation, analysis and reporting of statistical data in line with International and European best practices

## MISSION REPORT

on

### Component 2

**To review and develop the source data and methodology for producing and dissemination Small Area Statistics.**

### Activity: 2.4.1:

PxWeb

Mission carried out by  
*Mr. Hans Baumgartner*  
*Mr. Veli-Matti Jantunen*

**Amman, Jordan**

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## Strengthening the capacity of Jordan's Department of Statistics

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**List of Abbreviations**

- API – Application Programming Interface
- BC – Beneficiary Country
- DoS – Department of Statistics
- MS – Member State
- PL – Project Leader
- RTA – Resident Twinning Advisor
- STE – Short-term Expert

## Executive Summary

This activity was designed to assist DoS in practical issues concerning PxWeb dissemination, mainly based on Statistics Finland's experiences with file based PxWeb service.

There were several issues covered in the mission.

- introducing new or updated tools for table creation process (PxWin, PxEdit and PxJob)
- going through the most crucial px keywords, and giving recommendations of their usage ('metadata model')
- demonstrating how some concepts have been implemented in Statistics Finland (e.g. API and saved queries)
- introducing the concept of structural tables, with which is possible to include both data and metadata in Excel tables and furthermore to PxWeb via PxEdit
- showing how PxEdit can be used for special operations, such as table joining, metadata importing and database reports
- showing how to fine-tune PxEdit behaviour with the main settings file
- showing how to create aggregation files with PxWin and how they are used in PxWeb
- color tweaking in PxWeb navigation flow
- going through DoS related questions and problems

It was not possible to cover all the topics excessively due to the quite short time available. The participants were active and motivated, the consultants were asked lots of questions, and thus we feel that DoS experts are ready to continue the work themselves. If possible, there would be need for another mission for deepening the participants' knowledge for example going through PxJob possibilities.

Some problems were left unsolved, the most irritating one being the wrong character coding which overrides Arabic texts when saving px files.

The consultants promised to be available and give support via e-mail if needed.

It is worth noticing that there were some new features added to PxEdit (e.g. support for Indian numbers) and some fixes to the source code during the mission.

## 1. General comments

This mission report was prepared within the Twinning Project “*Strengthening the capacity of Jordan's Department of Statistics in terms of compilation, analysis and reporting of statistical data in line with International and European best practices*”.

The overall purpose of the activity is:

- The possibility of updating to the newest version PxWeb explored
- Use of PxWeb Application Programming Interface (API) demonstrated

The consultants would like to express their thanks to all officials and individuals met for the kind support and valuable information which they received during the stay in Jordan and which facilitated the work of the consultants.

The views and observations stated in this report are those of the consultants and do not necessarily correspond to the views of EU, DoS or Statistics Finland.

## 2. Assessment and results

DoS is ready to implement the latest version of PxWeb, that was confirmed when discussing with the local specialists. The consultants advised to update to the latest version of PxWeb (2023v1), but to be aware that the next versions of PxWeb will **only** have a new PxWebAPI V2 API. So, if DoS updates to the current latest version (2023v1) work is needed at the next update to change from PxWebAPI V1 to PxWebAPI V2.

PxWin was presented to the participants. It can be used to check how the tables will look and behave without having to test them in PxWeb (PxWin uses the same components). What is more, PxWin offers the interface to all open PxWeb databases all over the world, thus showing how API can be exploited with open databases. Because PxWin is free to use, the end users may also utilise it in their environments when processing px tables.

DoS is using the old version of PxEdit (3.1), and the consultants strongly recommend updating to the latest version (4.1). The latest version should work in the modern Windows environments, it contains many new features, it should be able to handle really huge tables, it contains lot of bug fixes, and the accompanying PxJob application supports many new options, including database reporting.

During the mission some updates were made to PxEdit concerning Arabic (and other right-to-left writing systems). For example, the Arabic comma is now recognised as the list delimiter.

The participants should now have a good understanding how the structural table concept works. For example, it is possible to have a multilingual table with all the relevant metadata in one Excel sheet.

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The following picture shows such table in Excel sheet:

	A	B	C	D	E	F	G	H	I	J	K	L
1	Nordic population	en,ar-JO										
2	Sex					M			W			
3	Sex					Men			Women			
4	Sex					الرجال			نحيف			
5	Year					2016	2017	2018	2016	2017	2018	
6	Country	Country	Country	Age group	Age group							
7	DK	Denmark	الدنمارك	0-49 years	سنة 0-49	1796142	1797549	1796712	1734580	1734489	1734196	
8				50- years	سنة 50	1041745	1062629	1079761	1134784	1154102	1170521	
9	FI	Finland	الفلندينية	0-49 years	سنة 0-49	1662827	1661692	1657123	1587107	1581760	1574903	
10				50- years	سنة 50	1038663	1050635	1062008	...	1529408	1219096	
11	IS	Iceland	أيسلندا	0-49 years	سنة 0-49	115158	117546	122579	110587	111463	113784	
12				50- years	سنة 50	52112	53487	55021	54672	55853	57066	
13	NO	Norway	النرويج	0-49 years	سنة 0-49	1750142	1755291	1755803	1655932	1660434	1662487	
14				50- years	سنة 50	874969	893839	912568	932942	948753	964761	
15	SE	Sweden	السويدية	0-49 years	سنة 0-49	3137016	3188062	3227842	2983468	3019710	3051633	
16				50- years	سنة 50	1793950	1825285	1854820	1936583	1962096	1985947	
17												
18												
19	languagecode	en	ar-JO	en	en	ar-JO	en	en	ar-JO	ar-JO		
20	variablename			Age group	Year	الفئة العمرية	Country	Country	ولاية	ولاية		
21	valuetext						Denmark	Finland	الدنمارك	الفلندينية		
22	STUB	Country,Age group	البلد، الفئة العمرية									
23	HEADING	Sex,Year	الجنس، السنة									
24	MATRIX	CITI01										
25	SUBJECT-CODE	VRM										
26	SUBJECT-AREA	Population	سكان									
27	COPYRIGHT	YES										
28	DESCRIPTION	Nordic population d	عدد سكان دول الشمال									
29	CONTENTS	Nordic population	عدد سكان دول الشمال									
30	UNITS	Number of persons	الأشخاص									
31	CONTACT	nordicstatistics@statisticon.org										
32	SOURCE	National statistical i	المكاتب الإحصائية في									
33	NOTE	Population as of 1 Ja	عدد السكان في 1 يناير									
34	TIMEVAL				A							
35	NOTE			Halfway grouped	انقسم إلى قسمين							
36	VALUENOTE						excluding G	excluding G	لا يشمل	لا يشمل		
37												
38	LANGUAGE	ar-JO										

The crucial PX keywords were handled step by step, and the consultants covered different ways how DoS might use the keywords in their tables. The consultants' expertise is based on Statistics Finland's experiences during last 25 years, and thus they could tell how **not** to do things in first place.

As usual, keywords for table titles and decimal settings had to be covered quite extensively.

The most important recommendation is that as much as possible should be standardised as early as possible. At least SUBJECT-AREA, SUBJECT-CODE and UNITS should be examined and given local standards.

The tables should also always have CONTVARIABLE and TIMEVAL settings.

### 3. Conclusions and recommendations

PxEdit should be updated to the latest version, and there should be a person who checks every now and then if there are updates available in either <https://pxweb2.stat.fi/pxedit/pxedit.zip> (the whole package) or: <https://pxweb2.stat.fi/pxedit/pxedit-update.zip> (updated files only). PxJob documentation gives ideas what is possible to achieve in table production automation.

PxWin should be explored and taken into production as well.

Table production should include keywords CONTVARIABLE and TIMEVAL in every table. At least SUBJECT-AREA, SUBJECT-CODE and UNITS keyword alternatives should be standardised. When that is done, the corresponding lists could be included in the PxEdit main settings file.

There is a problem when PxWeb saves Arabic characters. Seemingly the application tries to convert Unicode characters to an ISO format, but the used ISO-8859-15 (Western) doesn't support Arabic characters. PxWeb should produce real Unicode files (UTF-8) or at least use the proper Arabic ISO-8859-6 character conversion format.

## Annex 1. Terms of Reference

### Terms of Reference

#### EU Twinning Project JO 21 ENI ST 01 22

##### Component 2:

To review and develop the source data and methodology for producing and dissemination Small Area Statistics.

##### Activity 2.4.1:

Exploring the possibilities for updating PxWeb

*Dates: 02 -05 September 2024*

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**List of abbreviations**

BC	Beneficiary Country
DoS	Department of Statistics
ESS	European Statistical System
MS	Member State
RTA	Resident Twinning Advisor
STE	Short Term Expert
ToR	Term of References

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## 1. Objective and Mandatory Results for the component

*To review and develop the source data and methodology for producing and dissemination Small Area Statistics.*

Recently the [Jordan Economic Modernization Vision 2030](#) was launched and “[Smart Jordan](#)” was identified as one of the eight Growth Drivers to implement the Economic Modernization Vision. The ‘Smart Jordan Driver’ includes seven sectors where data is one of them. This indicates the national interest to ensure constant and reliable data sources, and robust statistical systems that contribute to timely and informed policy making including an updated dissemination platform. It is expected that one of the measures that will be taken is to transform Jordan's Department of Statistics (DoS) into an interactive National Statistical Center (NSC).

Component 2 is sub-divided in three sub-components each with a Mandatory Results (MR) with indicators of achievements associated with the sub-component. This specific Mission is particularly addressing MR 2.4 Tools for dissemination of small area statistics on the DoS website assessed and demonstrated.

**Table 1:** Mandatory results and indicators for achievement for each sub-components within Component 2: Methodology for producing Small Area Statistics (SAS).

<b>MR from the Twinning Fiche</b>	<b>Indicator</b>
<b>MR 2.1:</b> Pilot project to assess inclusion of administrative and other external data sources in the development of SAS and action plan developed.	<p><b>Indicators 2.1.A:</b> Administrative and other data sources investigated and their potential assessed</p> <p><b>Indicators 2.1.B:</b> Action Plan for inclusion of administrative data prepared</p>
<b>MR 2.2:</b> Develop methodology for producing SAS on expenditure and provide recommendations on how this methodology can be applied to other areas within the DoS.	<p><b>Indicators 2.2.A:</b> Methodology proposed including the potential use of modelling techniques, building on work in 2.1 above</p> <p><b>Indicators 2.2.B:</b> Analysis completed on how new methodology can be expanded to other statistical areas</p>
<b>MR 2.4:</b> Tools for dissemination of small area statistics on the DoS website assessed and demonstrated	<p><b>Indicators 2.4.A:</b> The possibility of updating to the newest version PxWeb explored</p> <p><b>Indicators 2.4.B:</b> Use of PxWeb Application Programming Interface (API) demonstrated</p> <p><b>Indicators 2.4.C:</b> The possibility of updating functionalities of management system WordPress explored</p>

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## 2. Purpose of the activity

The overall purpose of the activity is:

- The possibility of updating to the newest version PxWeb explored;
- Use of PxWeb Application Programming Interface (API) demonstrated;

An outcome of a former Twinning project in Jordan running from 2023 – 2015 a StatBank based on PxWeb was established based on close cooperation with statistics Denmark. A link to the current StatBank can be found following this link: <https://jorinfo.dos.gov.jo/Databank/pxweb/en/>

However, a functional review of the DoS webpage has revealed an urgent need for updating tools to support the dissemination.

More specifically DoS has identified the following needs:

### Introduction to the Nordic Data Model

DoS need to be introduced all the tables and columns in the Nordic model and see some examples of how to fill these tables, as well as getting an understanding of the benefits of each column in the tables and where it can appear on the screen.

### Common management for Saved Queries

An introduction to the common management for Saved Queries

- The general benefit of it?
- How does it work?
- How can DoS benefit from it?

### Quality Information in the Nordic Data Model

- The benefit of Nordic Data Model.
- How it works?
- How can DoS benefit from it by developing the work.
- Example: how to add notes on cell level?

### PX-EDIT

Training in how to use PxEdit and how DoS can use all the features available in the Nordic data model in PX\_EDIT like: grouping, drop down list, Cell notes, etc.

In particular there are some matters DoS we'd like to inquire about in order to understand their usage and how it will be reflected on table display:

1. There are "subject-code" and "subject area" fields.
2. Displaying the date of the last modification made to the data in the new version of 2023.
3. How can we control displaying decimal points for specific fields within the table without affecting other fields?
4. When on the metadata screen, how do we control variables and values, and is "cell note" used solely for writing notes?
5. If new data is added to the original table, can we modify or add to the existing data in the table using the "add" command?

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### PxAPI

How can DoS use the PxAPI and illustrative examples of how DoS can benefit from it.

### Mapping

How the data can be displayed on maps. In order get a better understanding for this DoS would like an integrated example and work together on it to understand the idea.

### Design

- How to change the color of icon from blue to another color in below image



- How to change the paragraph format as it appears in the English interface
  - Arabic Interface

[المواليد والوفيات / جدول 1: المواليد حسب الجنس والمحافظة 2000-2022 / نصائح عند الاختيار](#)

#### نصيحة حول كيفية وضع علامة أو اختيار متغير في مربع القائمة

- يجب وضع إشارة واحدة على الأقل في كل مربع قائمة لإظهار نتيجة لكل متغير. عندما ترغب في رؤية متغير واحد أو أكثر، ضع علامة على هذه العناصر فقط. للتراجع عن التظليل او عملية الاختيار ، اضغط على زر Ctrl وانقر على زر الماوس على النص. - لتحديد كافة المتغيرات في مربع القائمة: - ضع علامة على المتغير الأول في المربع. ثم اضغط على زر Shift ومن ثم اسحب للأسفل في وقت واحد. - للتراجع / إلغاء عملية اختيار المتغير في قائمة المتغيرات: - اضغط على زر Ctrl وانقر فوق زر الماوس الأيسر على المتغير المحدد في وقت واحد. - لتحديد أو اختيار أكثر من متغير في القائمة: - ضع علامة على الأسطر على المتغير من خلال الضغط على زر الماوس الأيسر وقم بإزالتها فوق المتغيرات المطلوبة. أو ضع علامة على المتغير الأول من قائمتك ثم اضغط على الزر Shift في نفس الوقت الذي تضغط فيه على السهمين لأعلى أو لأسفل على لوحة المفاتيح. - خطوط مارك، وليس على التوالي، عن طريق الضغط على زر Ctrl في نفس الوقت الذي تنقر على زر الماوس الأيسر على خطوط المطلوبة. للبحث عن قيمة محددة في مربع القائمة: - ضع علامة على المتغير الأول في مربع القائمة. ثم اكتب الحرف الأول في المتغير المطلوب. إذا فشلت في الحصول على البحث الصحيح، حاول الكتابة مرة أخرى حتى تجد القيمة الصحيحة. أو استخدم السهمين لأعلى أو لأسفل أو زر الماوس لمزيد من البحث.

- English Interface

[/ - Births and Deaths / Table 1: Registered Live Births \(2000-2022\) / Marking tips](#)

#### Tip on how to mark in a list box

At least one indication in every list box has to be made to show a result for each variable. When you wish to see one or a few variables, mark these only. N.B. To undo a mark, press the button CTRL and click the mouse button on the text.

To select all lines in a list box:

- Mark the first line in the list box. Then press the buttons SHIFT and END simultaneously.

To select/undo a marked line in a list box:

- Press the button CTRL and click the left mouse button on the selected line simultaneously.

To select more than one line in a list box:

- Mark lines in a row by pressing the left mouse button and slip it over the requested lines. Or, mark the first

line on your list and then press the button SHIFT at the same time as you press the up or down arrows on the keyboard.

- Mark lines, not in a row, by pressing the button CTRL at the same time as you click the left mouse button on the requested lines.

To search for a specific value in the list box:

- Mark the first line in the list box. Then type the first letter in the line requested. If you fail in getting the right line, try the typing again until you find the right value. Or use the up or down arrows or the mouse button to look further.

## 3. Expected output of the activity

- Activity report;
- The possibility of updating to the newest version PxWeb explored;
- Use of PxWeb Application Programming Interface (API) demonstrated;

## 4. Participants

### ***MS Short Term Experts (STE's)***

- **Mr. Hans Baumgartner**, Planning Officer, Statistics Finland. Mr. Hans Baumgartner has more than 20 years of experiences from Statistics Finland and since 2013 been PxWeb product owner and PxWeb administrator. E-mail: [hans.baumgartner@stat.fi](mailto:hans.baumgartner@stat.fi)
- **Mr. Veli-Matti Jantunen**, Planning Officer for the Database Unit in Statistics Finland. Mr. Veli-Matti Jantunen has more than 20 year of experiences in Statistics Finland and have extensive knowledge and experiences in PcAxis/PxWeb file-based dissemination system; the PxWeb based dissemination process and years of experience in teaching and providing courses in PxEdit. E-mail: [veli-matti.jantunen@stat.fi](mailto:veli-matti.jantunen@stat.fi)

### ***DoS experts***

*The final selected of DoS experts will be made by Ms. Ahlam Al-Rosan, Director of Electronic Transformation and Information Technology. However, the following experts has already been selected:*

- **Mr. Hussam Abu Shukor**, Head of Electronic Dissemination, IT
- **Ms. Manal Khuffash**, Web Dissemination section, IT
- **Mr. Abdullah AlSous**, Web Dissemination section, IT

### ***Twinning team***

- **Dr. Charlotte Nielsen**, RTA
- **Ms. Thekra Altorah (RTA Assistant)**, RTA Assistant
- **Ms. Zaina Amireh**, Language Assistant

### ***Higher management***

The following will be invited for the welcoming session the final session where main findings and recommendation will be presented.

- **His Excellency Dr. Haidar Fraihat** - General Director Department of Statistics (DoS)
- **Dr. Ali Al-Shibli**, Operational Assistant to the Director General
- **Dr. Tayseer Muqdad**, Technical Assistant to the Director General
- **Dr. Fozan Alhurout**, Administrative and Financial Affairs Assistant to the Director General

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## **5. Resources**

Translation and interpretation will be provided throughout the activity. Translation will be provided as sequential translation. Therefore, please keep frequent pauses when presenting and talking allowing our project translator to provide as accurate a translation as possible.

All material will be provided in both English and Arabic before, under and after the Mission. However, this means that any background material and presentation should be mailed to RTA ([cln@ds.dk](mailto:cln@ds.dk)) no later than a week before the mission takes place

The venue will be the Meeting room at DoS.

## **6. Overall agenda**

The working form for the Mission will be peer-to-peer and will take place each day from 09:30 – 15:00 with a one hour lunch break

A more detailed program will be provided before the mission

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## **Annex 2: Programme for the mission**

### **Monday 2.9. - Introduction**

- Introduction to PxWeb usage within DoS
- Introduction to PxWeb implementation in Statistics Finland
  - PxWeb site
  - API usage
  - Saved queries
  - PxWin
- Introduction to base use and installation of PxEdit
  - Settings files
  - Interface
  - Table joining
  - Reporting

### **Tuesday 3.9. – PxEdit & PxJob**

- Demonstration of structural tables
  - General tables: cubic format, value order, language code
  - Extensions: variable codes, Excel comments
  - Keyword blocks for metadata importing
  - Multilingual tables
- Short demonstration of PxJob
  - Joining two tables
  - Converting Excel table to px format
- DoS related subjects
  - Recognised problems & questions
  - PxJob test with new version with Arabic texts

### **Wednesday 4.9 - Metadata**

- Most important PX file keywords
  - Usage in Statistics Finland (i.e Statistics Finland's "Metadata Model")
  - Recommendations & discussion
- Aggregation files for file-based PxWeb
  - creating and editing with PxWin
- PxEdit
  - Classification files (\*.pxc)
  - Indian numbers & minus symbol
- DoS: problems & testing
  - e.g. changing dot code symbols

### **Thursday 5.9 – Wrap up**

- Practical part: DoS related subjects
  - Recognised problems & challenges
  - Questions
  - Discussion & hands-on testing
- Recaps

### **Annex 3. Persons met**

#### ***DoS experts***

- **Mr. Hussam Abu Shukor**, Head of Electronic Dissemination, IT
- **Ms. Manal Khuffash**, Web Dissemination section, IT
- **Mr. Abdullah AlSous**, Web Dissemination section, IT
- **Abrar Qudah**, Web Dissemination section, IT
- **Ms. Tamara Wadi**, Web Dissemination section, IT
- **Ms. Lama Bnymelhem**, Web Dissemination section, IT
- **Ms. Wafa Hasoune**, Web Dissemination section, IT

#### ***Twinning team***

- **Dr. Charlotte Nielsen**, RTA
- **Ms. Zaina Amireh**, Language Assistant