

**TWINNING CONTRACT**  
**Institutional Capacity Building for the Central Agency for Public  
Mobilisation and Statistics (CAPMAS) and Developing the Legal  
Framework for Statistics in Egypt**  
**EG/07/AA/F106**



## **MISSION REPORT**


**on**

**4.10**

*Workshop on website upgrade with a dynamic output database*

Mission carried out by  
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Statistics Denmark  
*Egypt Cairo, 21-25 March 2010*

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		 <b>STATISTICS DENMARK</b>
Central Agency for Public Mobilisation and Statistics		Statistics Denmark

EG/07/AA/F106 Institutional capacity building for CAPMAS

**PHARE 2005**

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## Table of contents

1. General comments.....	5
2. Assessment and results .....	5
Follow up on work done to develop new website	5
Output database	6
Architecture	7
Training needs	7
3. Conclusions and recommendations .....	7
Website	7
Output databases	8
Training needs	8
Annex 1. Terms of Reference .....	9
Annex 2. Programme for the mission .....	12
Annex 3. Persons met .....	16

## List of Abbreviations

IA	Information Architecture
CSS	Cascading Style Sheet
FAQ	Frequently Asked Questions
RSS	Real Simple Syndications
SDDS	Special Data Dissemination Standard

## Executive Summary

The mission was designed to help Capmas discuss and evaluate various possibilities for improving the new version of its website [www.capmas.gov.eg](http://www.capmas.gov.eg). The new version is expected to be launched to the public around 1 of July. An English language version will follow shortly after. As experts we gave a series of recommendations regarding the development of the new website. Some of the recommendations are technical and others are more aimed at the policy and management aspects of running a NSI website.

Our best advice focuses on the need to test user behaviour and reactions to the design. End user's never quit understands or follow the thinking behind the navigation structure of a website. It is therefore important to test user behaviour in order to develop the web site. Also information from web server log files and / or dedicated monitoring tools should be used to understand which pages of [www.capmas.gov.eg](http://www.capmas.gov.eg) that are most used by users. This will also indicate the geographical composition of users and the relation between the Arabic and English language versions of the website.

It is recommended that [www.capmas.gov.eg](http://www.capmas.gov.eg) in the long term is supplemented with the inclusion of an aggregated output database. A number of different technical solutions are available to Capmas.

As experts we presented the use of the PC-Axis / PX-Web family of tools as an example on how an aggregated output database work and can be integrated in to the production set up at Capmas. In the short to medium term it is recommended that Capmas uses PX-Web to conduct a pilot study into the possibilities of output databases. The PX software family can be downloaded from [www.pc-axis.scb.se](http://www.pc-axis.scb.se). If Capmas would like to use the software in a production setup a small annual licence fee (less than 500 Euro) must be paid to Statistics Sweden.

## 1. General comments

This mission report was prepared within the CAMAS Egypt. It was the sixth mission to be devoted to Increased statistical awareness/Web Dissemination within Component 3/4 of the project. The mission was a follow up to mission Activity 3.7 + 4.8 Workshop on web dissemination (combined with IT component) Assessment of the current dissemination tools (website, publishing and Internet)

The objectives of the mission were:

- Give recommendations for upgrade in architecture
- Give recommendations regarding output databases, download formats
- Identify training needs for IT staff in the area of web dissemination

The mission and this report follow logically from the work undertaken in the combined missions covering activity 3.7 and 4.8.

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 Egypt, and which highly 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 Statistics Denmark.

## 2. Assessment and results

### Follow up on work done to develop new website

CAPMAS has done a very impressive amount of work in developing a revised design for [www.capmas.org.eg](http://www.capmas.org.eg). As experts we provided comments and further suggestions for refining the new design and its' Information Architecture (IA). Some of the comments provided to Capmas are technical others are related to editorial and organizational issues. A brief summary of the recommendations can be found in chapter 3 *Conclusion and Recommendations*.

The possibilities for establishing a release calendar was discussed again. CAPMAS believes correctly that this is more than a technical, practical issue. However, as a start CAPMAS can preannounce the release dates of the SDDS data to the IMF (International Monetary Fond) on their own web site. The existence of a release calendar is highlighted in the UN recommendations for statistical best practice as well as by Eurostat in the European Code of Practice. Pre announcement of releases is convenient for the end users and it is a way to create trust in statistics as being independent of political influence.

Usability tests and user satisfaction surveys. Half a year after the new web site is published, a usability study should be carried out. The experts recommend a simple set-up with 3-5 testers (could be staff from a statistical department). A draft description of five to ten typical tasks to be solved by the testers should be ready for the next mission.

Analyses of web behaviour either through studying log files or through the introduction of a web analyses tool is recommended.

Another initiative which could be taken by the CAMAS is setting up a RSS-feed site, where the end users can select to be alerted when certain new releases take place. This was also a recommendation from mission 3.4

The revised site is expected to be launched around 1. July 2010. In January the ambition was to have the revised site launched in about 6 months. Having set 1 of July as the target CAPMAS is clearly working in the right direction. And the targeted launch day now seems more realistic.

Like in January 2010 we as experts were asked to comment on the design and its functionality. A number of the areas for change had actually been worked on and others are awaiting attention and resources. The new design seems to efficiently address most of the weak points in the present site

The site is expected to be fully bi-lingual supporting English and Arabic. This will require a strong management focus on updating so that the two sites are always equal.

## **Output database**

Capmas has a strong interest in implementing a system for aggregated output databases in to its website. Various international solutions and best practices were discussed during the mission. Different NSIs use different systems for aggregation. The systems are often different in their choice of software platform and in the “look and feel” of their user interface. But all systems work on the basis of pre aggregated data. The end user then selects a small set of data from these pre defined aggregations. Users can freely select data from the pre aggregated cubes but data can never be selected across cubes.

The available systems offer roughly the same functionality. Compared to the system Capmas is planning to use for smaller tables on the new website some of the differences are number of output formats, quality of graphical presentations, the use of bookmarks and the possibility for storing data retrievals for later use.

A very important difference between a statistical output database and standard report generating tools is often found in the facilities for storage and management of cell notes and signatures. In the statistical context the figure “zero” often means anything but zero. In an aggregated output database different data symbols can be stored directly. To state it more bluntly the difference between a general commercial report generating tool connected to a data warehouse and a dissemination output database can be found in the dissemination databases ability to store and present meta data related to each data cell. The key functionalities of an aggregated output database were demonstrated using various software from the PX-family.

Statistics Sweden has told us that Capmas can use the PC-AXIS family of tools for a licence fee of 450 Euro a year and that Capmas is free to conduct a pilot study.

Designing and planning cubes for internet dissemination is different to the design of tables for printed publications. It's therefore important that the cubes are created in a close dialog between subject matter statisticians and dissemination people. Alternatively the IT staff preparing the cubes needs a rather well developed understanding of statistics.

Unless Capmas will implement an aggregated data model for its macro data warehouse like the common Scandinavian data model used by Denmark, Norway and Sweden a certain amount of

own development of software will be needed in order to implement an aggregated output database.

The experts would like to stress that the choice of output database platform is not a question of choosing one relational database system over another fx Microsoft SQL versus Oracle versus Sybase instead it is more a question of choosing a suitable relational model design for the purpose of presenting statistics.

## **Architecture**

The relationship and roles between the work carried out by Data collection, the Data Warehouse and the Information Bank sections should be considered standardized in regards to tools and the used number of software platforms. Management could focus on creating a higher degree of cooperation and involvement of both the statistical departments in production process. Inputs from end users should also be taken into consideration when designing tables.

## **Training needs**

It's our understanding from other missions that Capmas have an efficient and well established training program covering a multitude of statistical subjects. Understanding the conceptual differences between tables designed for printed publications and multi dimensional aggregated tables designed for dissemination of statistics is a discipline in it self and training in this area should therefore be given to Capmas staff involved in the production of statistics. It is especially important that the staff of the Information bank has this type knowledge.

Another training aspect that could be given attention is the training of end users. A number of NSI's offer their end users training in how best to locate and choose statistics for their needs.

## **3. Conclusions and recommendations**

The experts would like to give the following recommendations to CAPMAS in relation to developing the Capmas website and output databases:

### **Website**

Work on developing the new website design to be launched around July 1 2010 should continue along the present lines. To improve the user experience and functionality we have the following recommendations:

- Implement RSS feeds on the new website
- Develop at strategy and plan for testing the user experience
- Collect systematic feedback from users on the new design, when it has been working for 2 to 3 month's
- Implement a system for monitoring of website usages / web metrics

- Implement ALT tags on all links being displayed on the website – this will improve user experience and help improve search engine ratings
- On the “Ask us” page a link to the frequently asked questions should be added
- On the “Ask us” page a list of pre filled headings should be included – This will help to sort the request for data
- Consider using <DIV> class tag for the layout of the new website instead of tables -
- Local technical guidelines for web pages must be known and followed
- Clearly state and mark subscription statistics

## **Output databases**

Most NSI’s are operating output databases. There are a number of different technical solutions available to Capmas through the international statistical community. Solutions like TGM (Tables Graphs and Maps from Eurostat) and PC-AXIS (Statistics Sweden) are all based on pre aggregated cubes. The end user then extracts his or her data as a subset from the pre aggregated cube. All programs in the PC-AXIS family can be downloaded in full versions from [www.pc-axis.scb.se](http://www.pc-axis.scb.se)

The consequences of the Arabic language for web interfaces are not totally clear to the experts.

We recommend that Capmas:

- Download and install all relevant material
- Conduct a pilot installation of PC-AXIS / PX-WEB to gain experience
- Participates in the annual PC-Axis reference group meeting (To be held in Maputo 6 to 8 October)
- Investigate the experience form Kuwait on using PC-AXIS with Arabic characters

## **Training needs**

Data disseminated through the internet in the form of pre aggregated cubes has a fundamentally different structure than tables designed for presentation on paper / print.

Train staff in the use and management of an aggregated output database like PC-AXIS / TGM

Train staff in the design of multi dimensional cubes

Train subject matter statisticians in the differences between cubes and paper tables

## **Annex 1. Terms of Reference**

### Terms of Reference

*for a short-term mission to the Central Agency for Mobilisation and Statistics  
on*

#### *Activity 4.10*

*Workshop on the website upgrade with a dynamic output database*

## **Background**

CAPMAS and Statistics Denmark with partners have established a fruitful cooperation in the framework of Twinning. This twinning project is EG/07/AA/F106.

This activity is the ninth activity within component 4, Improved IT-Function. The objectives for this component are to give recommendations for an integrated IT function for central and regional offices with MS operating system and MS office. Guidelines for building up Intranet with security rules for storage and dissemination are introduced at central office and regional offices. Also recommendations for upgrade of statistical databases, including metadata and rules for statistical production and publishing are further elaborated. Dynamic and user friendly website with output database is implemented.

This activity will contribute to this objective and especially to the benchmark set out in the contract: *By the 15<sup>th</sup> month, Identification of tools for developing and updating the website with an output database.*

## **Purpose of the mission**

The mission is a workshop to give recommendation for upgrade in architecture, output database, download format and web applications. Identifying training needs for IT personnel in the area of the web disseminations.

The mission will follow up on the

## **Expected Results**

Recommendations on a solution for a dynamic web based output database and on monitoring the usage of CAPMAS web solutions.

## **Activities**

A tentative schedule for the mission is

*Sunday 21 February 2010*

Introduction and overall discussion on the activity with the RTA

Meeting with component leader and the relevant staff  
Determining the agenda for the mission  
Presentation of the progress done on the website  
**Installing Google – Analytics code on CAPMAS server.** Providing the experts a copy of CAPMAS internet log files for 3 random days.

*Monday 22 February 2010*

Presentation of a Dynamic web based output database: PX web  
Discussions and preparations for a User test on the regional statistics solution

*Tuesday 23 February 2010*

Setting up PX web for CAPMAS

*Wednesday 24 February 2010*

Production of Web statistics based on CAPMAS logs or Google analytics  
Conduct a User test on the regional statistics solution

*Thursday 25 February 2010*

Final discussions and clarifications with CAPMAS on findings and recommendations  
Presentation of preliminary results

## **Tasks to be done by CAPMAS to facilitate the mission**

The beneficiary will arrange meetings with the relevant staff in CAPMAS.

The work on Tuesday 23 February can be very technical and might require access to IT equipment with internet access.

To help the experts demonstrate PX-Web – CAPMAS should provide the experts with a selection of data sets in EXCEL or CSV format. Data should be in English.

// At the last mission there was some hesitation to the use of Google Analytics for various reasons related to IT security. A proposal would be to try the tracking code for 2 or 3 days and then to evaluate the results. As Google Analytics needs 24 hours to generate usable statistics a pilot should start Sunday or Monday. We can then present preliminary findings on Thursday 25.

If Google Analytics can not be tried CAPMAS should provide log files from the CAPMAS Internet Server. The log files are normally located in C:\Windows\System32\LogFiles\W3SVC1\\*\*\*

The Internet Information Server creates a new file every day.

It will greatly assist the experts if log files can be send to [jej@dst.dk](mailto:jej@dst.dk) / [jesperellemose@gmail.com](mailto:jesperellemose@gmail.com) as soon as possible.

To make a user test of the Regional Statistics Solution it is suggested that CAPMAS make an agreement with 5 to 8 staff members (from outside IT and Dissemination) that are familiar with computers and internet.

## **Consultant and counterpart**

The mission will be carried out jointly by:

Mrs Annegrete Wulff, Statistics Denmark  
And  
Mr. Jesper Ellemose, Statistics Denmark

The beneficiary's counterpart will be Ms. Zeinab Gharib

## **Timing**

The mission will be carried out during 21- 25 March 2010 in Cairo.

## **Report**

A final report from the mission should be made available not later than two weeks after the termination of the mission.

## Annex 2. Programme for the mission

**Workshop on the website upgrade  
with a dynamic output database  
21-25/ 3 /2010**

Sunday 21 March	What <sup>5</sup>	Who
9:30 – 10:15	<ul style="list-style-type: none"> <li>• About twinning project</li> <li>• Objectives of the workshop</li> <li>• Today's Program</li> </ul>	Zeinab gharib
10:15 – 11:15	<ul style="list-style-type: none"> <li>• <b><u>CAPMAS website</u></b> <ul style="list-style-type: none"> <li>○ Presentation of the progress done on the website</li> </ul> </li> </ul>	Amal mokhtar
11:15 – 12:15	<ul style="list-style-type: none"> <li>• <b><u>Presentation about the suggested Roles of :</u></b> <ul style="list-style-type: none"> <li>• Data producers</li> <li>• Data Ware house</li> <li>• Information Bank</li> </ul> </li> <li>In designing Online database outputs through Website.</li> <li>• Example(data sets of Industrial Statistics)</li> </ul>	Zeinab gharib, Faida Hosney
12:15 – 12:45	<ul style="list-style-type: none"> <li>• Break</li> </ul>	
12:45 – 13:45	<ul style="list-style-type: none"> <li>▪ Expert's view about the progress done on the website</li> </ul>	Experts
13:45 – 14:45	<ul style="list-style-type: none"> <li>• <b>Installing Google – Analytics code on CAPMAS server.</b> Providing the experts a copy of CAPMAS internet log files for 3 random days.</li> </ul>	Experts

Monday 22 March	What <sup>5</sup>	Who
9:30 – 10:15	<ul style="list-style-type: none"> <li>• Introduction &amp; Today's Program</li> </ul>	Zeinab gharib
10:15 – 11:15	<ul style="list-style-type: none"> <li>• <b><u>Presentation :</u></b> the Roles and the relation between Data producers , Data Ware house , Stat Bank In designing Online database outputs, examples on European statistical</li> </ul>	Experts

11:15 – 12:15	<ul style="list-style-type: none"> <li>• <b><u>Presentation of a Dynamic web based output database: PX web</u></b></li> <li>• providing the experts with a selection of data sets (Industrial Statistics) in EXCEL format.</li> </ul>	Experts
12:15 – 12:45	<ul style="list-style-type: none"> <li>• Break</li> </ul>	
12:45 – 13:45	<ul style="list-style-type: none"> <li>▪ Visit Delopers ( Fogitsu Lab )</li> </ul>	Zeinab gharib, Wafaa
13:45 – 14:45	<ul style="list-style-type: none"> <li>▪ Visit to D.W.H Lab</li> </ul>	Zeinab gharib,

**Workshop on the website upgrade  
with a dynamic output database  
21-25/ 3 /2010**

Tuesday 23 March	What	Who
09:30 – 10:15	<ul style="list-style-type: none"> <li>• Introduction &amp; Today's Program</li> </ul>	Zeinab_gharib
10:15 – 11:15	<ul style="list-style-type: none"> <li>• Setting up PX web for CAPMAS</li> </ul>	Experts
11:15 – 12:15	<ul style="list-style-type: none"> <li>• solution for a dynamic web based output database</li> </ul>	Experts
12:15 – 12:45	<ul style="list-style-type: none"> <li>• Break</li> </ul>	
12:45 – 13:45	<ul style="list-style-type: none"> <li>• Presentation of a Dynamic web based output database: PX web</li> </ul>	Experts
13:45 – 14:45	<ul style="list-style-type: none"> <li>▪ Visit to information Bank</li> </ul>	Zeinab gharib, Faida Hosney

Wednesday 24 March	What	Who
09:30 – 10:15	<ul style="list-style-type: none"> <li>• Introduction &amp; Today's Program</li> </ul>	Zeinab_gharib

10:15 – 11:15	<b>Presentation about the latest • software used in designing database outputs.</b>	Experts
11:15 – 12:15	<b>• A draft for designing database outputs based on the current website and examples on electronic sites for European statistical organizations.</b>	Experts
12:15 – 12:45	<b>• Break</b>	
12:45 – 13:45	<b>• Online database access through Website</b>	Experts
13:45 – 14:45	<b>• Production of Web statistics based on CAPMAS logs or Google analytics • Conduct a User test on the regional statistics solution</b>	Experts,

***Workshop on the website upgrade  
with a dynamic output database  
21-25/ 3 /2010***

<b>Thursday 25 March</b>	<b>What</b>	<b>Who</b>
09:30 – 10:15	<b>Introduction &amp; Today's Program</b>	Zeinab_gharib
10:15 – 11:15	<b>• framework for action plan to achieve workshop objectives</b>	Experts
11:150 – 12:15	<b>• Final discussions and clarifications with CAPMAS on findings and recommendations</b>	Participants &Experts
12:15 – 12:45	<b>• Break</b>	

<b>12:45 – 14:45</b>	<b>• Presentation of preliminary results</b>	<b>Participants &amp; Experts</b>
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## Annex 3. Persons met

	Name	Title
1	Ms. Zeinab Gharib	Head of Central Dept. for Computer.
2	Ms. Abbla Saleh	General Manager of projects developments Dept.
3	Ms. Wafaa Mohamed	General Director of software of Industrial & Construction Data Dept.
4	Ms. Fayda Hosney	General manager of Data Bank Dept.
5	Mr. Ali El Kashef	General Dept. for Computer Engineering
6	Ms. Salwa El Shazli	General Dept. of Information Bank
7	Ms. Suher Metwaly	Population statistics Sector
8	Ms. Amal Kamal	General Dept. of Information Bank
9	Ms. Naglaa Zein	General Dept of Projects Development
10	Ms. Randa Salah	Gen. Dept. of computer engineering
11	Mr. Ahmed Watany	Data Ware House
12	Mr. Mohsen Mohamed	Technical Affairs Dept.
13	Ms. Zeinab Hosney	General Dept. of Information Bank
14	Ms. Samira Zaki	General Dept. of Information Bank
15	Ms. Iman Zaki	Technical Affairs, Gen. dept of project development
16	Ms. Ola Abd El Azim	Technical support and development
17	Ms. Nagah Abdel Hafz	Data Ware House
18	Mr. Nader Abdel Azez	Data Ware House
19	Ms. Enas Samir	Software of Demography statistics
20	Ms. Rasha Fekry	Industry software
21	Ms. Nahla Abd Elbaset	Services software
22	Mr. Mostafa Yousef	Economic Statistical sector
23	Mr. Mohamed Nabil	Population statistics Sector
24	Ms. Heba Tawfic	Presidency of CAPMAS