



STATISTICS
DENMARK



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Mission Report

from a short-term mission on PX-WEB

3 December - 13 December 2007

TA for the Scandinavian Support Program to Strengthen the Institutional
Capacity of the National Statistics, Mozambique

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List of abbreviations

DBA	Database Administrator
CO	Scanstat Coordination Office in Statistics Denmark
Danida	Danish International Development Assistance
DKK	Danish Kroner
DSt	Statistics Denmark
EUR	European Euro
INE	Instituto Nacional de Estatística, Mozambique
INE-P	Instituto Nacional de Estatística, Portugal
IIS	Internet Information Server (A Microsoft product)
LTA	Long Term Advisors
STA	Short Term Advisors
MZM	Mozambique Meticaís
NSI	National Statistical Institutes
NOK	Norwegian Kroner
PX	Family of Software produced by Statistics Sweden
Scanstat	Consortium between Statistics Denmark, Statistics Norway and Statistics Sweden
SCB	Statistics Sweden
SDMX	Statistical Data and Meta data exchange
SEK	Swedish Kronor
SSB	Statistics Norway
SQL	Structured Query Language
USD	US Dollars
XML	Extendable Mark up Language
ZAR	South African Rand

1 EXECUTIVE SUMMARY

Scope of the mission In principal terms the mission was highly technical in terms of the use of a dissemination database and its related functions. As this is a specialised function inside not only INE but all NSI's the mission was targeted at supporting the Webmaster / Database Manager Mr. Anselmo Nhane and not INE staff in general. The TOR for the mission is included as appendix 4. The mission also included general talks with Mrs...Need a Name on the specific issues of the 2008 – 2012 work plan.

Background Since late 2003 INE has worked on delivering statistics in a user friendly way on the internet. A series of consulting mission in the Scanstat program has supported and help develop this capacity. The software in use is the PC-AXIS platform developed by a number of NIS's and international organisations in cooperation. This cooperation is headed by Statistics Sweden. In 2007 INE for the first time participated in the yearly PC-AXIS user forum meeting where the software's future development path is decided.

Focus on marketing and updating As most of the technical infra structure and training is now in place, INE needs to direct its attention to the more organizational aspects of Internet dissemination. Especially attention should be put to developing stringent procedures for updating of the database. Also an effort should be made to promote and market the content and capabilities of the database to external users, but perhaps more importantly also to subject matter experts, inside INE. Dissemination on internet helps statisticians reach a broader audience.

Recommendations It is recommended that INE develops a plan for continues updating of the content of the Database. Especially it is important to disseminate the results of the 2007 Census in the database as soon as they are ready. A CD-ROM version should also be considered. Figures from the 1997 Census should be included for comparison purposes. Most of this work can be prepared in advance. As INE also uses the ESDM software supplied by Unicef, INE should consider sourcing its ESDM data from the PX-WEB database using stored Excel Internet Query's.

At an end The consultant would like to thank Mr. Nhane for his inspiration and hard dedicated work to keep www.ine.gov.mz and especially the PX-Web database a viable project.

Mr. Lars Carlsson, the Scanstat team leader, was as always an excellent host providing both inspiration for work and insight into life and society in Mozambique. As the internet database has evolved from a feasibility study in 2003 to a production system and the Scandinavian programme is coming to and end, I would like to thank INE and Scanstat for having trusted me with this component of the Scandinavian assistance. All opinions in this report present's my best professional views and knowledge but are not necessarily shared by Statistics Denmark.

2 INTRODUCTION

- Background* Internet dissemination is increasingly important for National Statistical Institutions. INE has worked to develop its presence on the Internet in the form of www.ine.gov.mz, also known as the INE portal. The site is regularly updated with figures and reports from INE as they become available.
- Since the late part of 2003 INE has worked its way towards having a statistical output database on the Internet. A report describing challenges and possible solutions was prepared in a short term mission by Ellemose and Wulff back in December 2003. In this report¹ it was recommended that INE should consider using the PX-software for its dissemination purposes.
- Pilot Database in 2004* As INE later decided to adopt this recommendation, a pilot database was established in 2004 with technical assistance from the Scanstat consortium. Most of the content in the database was at that time sourced from the INE Yearbook. Since then the database has been updated more or less regularly.
- As the staff trained by Scanstat during the pilot phase has moved on to other jobs additional training was provided by Scanstat in 2006. But in 2006 the main focus was on developing a long term strategy for storage of micro and macro data at INE, as a dissemination output database is a logical and necessary extension of any data storage or data warehouse.
- Upgrading to the latest version* As the PX-Web software has come a long way since the implementation of the pilot database in 2004 it was a natural step to implement the latest version of the PX-web software before the end of the Scanstat program.
- Updating of the content* As most if the statistical production in Mozambique is build around censuses the need for regular updating the database is relatively modest, as most data is annual in frequency. However the price indexes are updated in the database as soon as they are available. And judging from the log files produced by the PX-Web database these macro economic indicators are also the most used data. This an interesting trend as population data is usually the most search for on the websites of most European NSI's.
- Updated of the software / maintenance* As the Scandinavian support program is coming to and end it was considered important to have the latest version of the PX-Web software installed.
- Shared hardware* Since 2004 the INE database has shared it's serve with the INE portal. In order to share the same hardware as the Zope/Plone based INE portal the PX-Web solution was original placed on port: 82. Instead of on port:80 which is the norm. Giving the database the address:
<http://www.ine.gov.mz:82/pxweb2005ine/Database/INE/databasetree.asp>
- Non availability* Unfortunately users are increasingly denied access to this port as a security measure. This means that user's especially outside Mozambique has experienced the PX-Web database as not available. As this situation is of cause not acceptable a new dedicated server has been procured. This will

¹ [MZ-2003-24: Report from a short-term Mission on The Creation of an Output Database by Jesper Ellemose Jensen and Annegrete Wulff](#)

significantly improve the availability of the PX-Web database and thereby also its use. The arrival of the new server was timed with the mission so the consultant helped install the software and prepare it for use on the Internet.

Devinfo INE disseminates data on cd-rom's using the Devinfo software sponsored by UNICEF. The Mozambique version of Devinfo is called ESDM. Devinfo can be a power full tool but is very much tailor made to the needs of Unicef and the statistical indicators they are interested in. As an example of the tailor made nature of Devinfo, it should be mentioned that FAO and the UN statistical commission in Europe (UNECE) uses PX-Web / PC-Axis.

2.1 New functionality

The latest version of PX-Web offers major new functionalities will be helpful to INE users. Below you will find a short description of the new functionalities included in PX-WEB 2007.

2.1.1 Stored questions

Users who registers as users of INE database can store the query behind there selections. Then re entering the database they can then go directly to the data of interest and see if the data has been updated since there last visit.

A registered user having logged on to the Database



Bases de Dados de Estatísticas de Moçambique

Hello jesper
 A sua tabela gravada foi actualizada
[clima_med_temp_max](#), Média das temperaturas máximas diárias registada nas capitais

- [Base de Dados do INE](#)
- [Base de Dados do Censo 2007](#)
- [Anuario](#)

Database
 The INE database is free to use.
 It is possible to register as a user of the INE database
 If you register as a user you can save files and see whats changed the next time you come to visit the INE Database

User possibilities for storing retrieved data

2.1.2 Excel –web query

User can save their query so it can be directly accessed from EXCEL and then integrated in their calculations.

Tete	100 724
Manica	61 661
Sofala	68 018
Inhambane	68 615
Gaza	75 709
P. Maputo	26 058
C. Maputo	300

Para o uso posterior poderá salvar a sua selecção
podrá também fazer, mais modificações/ Calculos antes de salvar

Codigo da Tabela:

Descrição:

Escolha de apresentação :

Tabela na tela

Download no formato de ficheiro:

Envia e-mail quando a tabela é actualizada

Crie consulta web para importar dado no excel. [i](#)

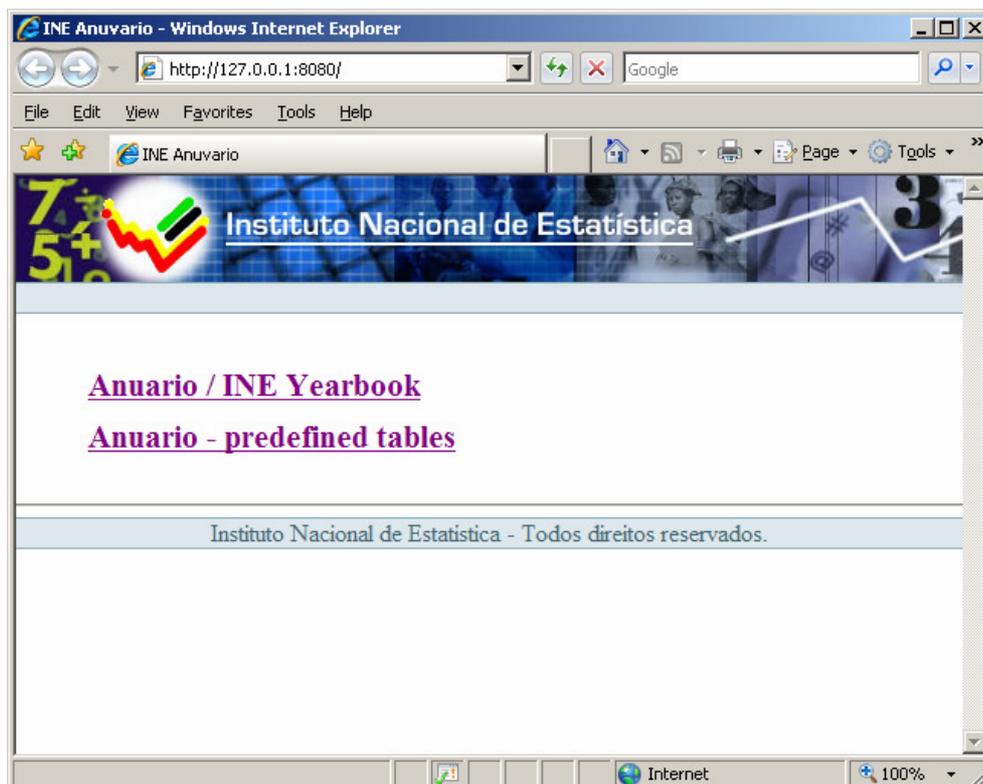
2.1.3 Notification by email

Users can also decide to receive notification by email when the database is updated. In this way users do not have to follow publication schedules but can instead rely on notifications send out by INE. To use this facility will how ever take some work on INE's behalf in order to develop a marketing plan / strategy for such a service.

2.1.4 CD-Rom version

Starting with version 2006 of PX-Web it is possible to prepare a stand alone version of the database. The database can then be distributed on a CD-ROM for distribution to people without access to the internet. INE has decided to prepare a CD-ROM version of the Yearbook's (Anuario) tables in the px format. Therefore the consultant together with Mr. Anselmo Nhane prepared a cd-rom version which can be distributed when the conversion of data from the Yearbook into PX-Files has been completed.

Opening screen from the
Cd-rom.



3 RECOMMENDATIONS

The consultant would like to make the following recommendations based on the work undertaken during the mission:

More Staff should be involved in the project

The updating of the INE portal www.ine.mz.gov is mainly done by Mr. Anselmo Nhane who is also responsible for the updating of the PX-Web database. There is a plan for more staff to be involved in the project. And this is highly recommendable as no system can be dependent on the skills of just a single employee. All jobs / tasks must have a critical mass of knowledge so that INE is not dependent on individual staff members.

The Census

As the data collection of the 2007 Census has now been completed and the codification and processing is under way, it is not too early to start planning for the dissemination of the results. The Internet and PX-Web should play an important part in this project. Also it should be considered to make a CD-ROM using PX-Web CD-ROM for distribution. Figures from the 1997 Census should be included in the database for comparison purposes.

Data from the yearbook

Most of the data is still sourced from the yearbook. This is not a problem in itself. But as the content of the Yearbook is nearly constant over time it is important to build tables with long time series. If the Yearbook is reproduced "as is" the users are not getting optimum value from the database. So focus should be on producing long series.

Decentralizing the updating process

INE can consider decentralizing the updating process for the tables with the highest production frequency. If the subject area departments produce /

updates the tables themselves, instead of sending the raw data to the IT department for updating a higher quality of data can be realized. As errors are more easily identified by statisticians than by IT people.

Using templates It was discussed how the subject area staff could be given EXCEL files sourced from the database to update. Instead of the statisticians sending excel files prepared for printed publication purposes.

Reversing the production process INE should consider reversing the production process so the tables are produced before the printed publication. Software like PX-Publ can then be used to produce the tables in the Yearbook in a more efficient manner.

ESDEM It is recommended that INE adapts a production process were ESDEM is produced by data taken from the PX-Web database. As ESDEM's data capture interface is as series of EXCEL files, these can easily be produced as links to the PX-Web database using EXCEL's internet query files which is fully supported by PX-Web.

Dedicated server As a dedicated IIS (Internet Information Server – Windows 2003 R2) server for the PX-Web database has now been procured and made available on the Internet, it is strongly recommended that the new server is used for this purpose and this purpose only.

4 APPENDIX 1 List of persons met

INE

Mr. Anselmo Leonardo O. Nhane

Scanstat Consortium, LTA:

Mr Lars Carlsson, Team Leader

5 APPENDIX 2 List of Literature

The official documentation of the PC-AXIS / PX-Web software can be found on www.pc-axis.scb.se The software can also be downloaded from this page.

PX-Make and documentation is available from www.dst.dk/pxmake

All mission reports from the Scandinavian programme are available online at: www.dst.dk/mozambique

For this mission I would like to refer to the following reports:

Mission Report from a short-term mission: [MZ:2007:3; Data Modelling and SQL by Jesper Ellemose Jensen](#)

Mission Report from a short-term mission: [MZ:2006:08, PX-Axis and the Macro Data Warehouse by Jesper Ellemose Jensen \(English version\)](#)

Mission Report from a short-term mission: [MZ-2004-17: Report from a short-term Mission on Internet Database Pilot Project by Jesper Ellemose Skou Jensen](#)

Mission Report from a short-term mission: [MZ-2003-24: Report from a short-term Mission on The Creation of an Output Database by Jesper Ellemose Jensen and Annegrete Wulff](#)

6 Appendix 3 Activities during the mission

The following activities were conducted during the mission:

- Monday 3 December* Meetings with Team Leader and main counterpart discuss the TOR of the mission.
- Tuesday 4 December* Work on localisation of PX-Web2007 together with main counterpart.
- Wednesday 5 December* Installation of new Windows 2003 Server R2 with the PX-Web 2007 software and MS-SQL database
- Thursday 6 December* Work on localisation of PX-Web2007 together with main counterpart.
- Friday 7 December* Work on localisation of PX-Web2007 together with main counterpart.
- Monday 10 December* Participation in the preparation of a CD-ROM with tables presenting results from the 2007 Yearbook.
Meeting with XXX from DDA.
Meeting with consultant from to discuss the potential use of PX-Web in project on .
- Tuesday 11 December* Participation in the Steering Committee meeting of the Scandinavian program. Participation in this meeting was not related to the mission as such but to the consultants other role in the Scanstat consortium.
Preparing new server for the Internet. TCP/IP configuration and firewall with Salamou.
- Wednesday 12 December* Continued preparation of new server for PX-Web. Discussions and preparation of additional PX files for the database. Providing on the job training.
Installation of Trend-Micro anti virus software.
- Thursday 13 December* Meeting with main counterpart and discussion about future use of PX-Web database in INE.

7 APPENDIX 4 Terms of Reference

TERMS OF REFERENCE

for a short-term mission on

PX-WEB

3 December – 13 December 2007

within the Scandinavian Assistance to Strengthen the Institutional Capacity of INE/Mozambique

Consultants: Jesper Ellemose Jensen

Counterparts: Tomas Bernardo, Anastácia Judas Honwana, Anselmo Nhane

DRAFT

Background

This mission is a follow up to the missions undertaken by the consultant in June 2004 (Internet Database pilot) and in June 2006 (PC-Axis and the Macro Data Warehouse). Those missions gave the basis for INE database. Today internet databases are a natural and necessary component in NSI's dissemination work. It is therefore important that INE follows the general developments in this field and keep their database solution up to date. Since the first version of PX-Web was installed back in 2004 the PX-Web product has improved and developed in a number of areas. A new version of the software is usually release every year. As the upgrades varies in size and complexity it is not recommendable to implement all upgrades of the software, unless the purpose is to remove serious errors. However since the last upgrade a series of new functionalities has been included in the software and these will help INE's daily users to extract data from the database. New functions will enable users to register them self as users of the database and allow INE to notify it's users by email the new data is available.

Objective

The objective of this mission is to follow up on the earlier missions related to the internet database. The main task of the mission is to provide an upgrade to the lasted version of the PX-Web software.

Expected results

- A new version of PX-Web (2007)

- Improved user satisfaction through stored queries and email notifications from the database
- Increased in the database staff's confidence and knowledge

Activities

- A meeting with the counterparts to clarify the objectives and expectations of the mission
- Adapt PX-Web 2007 versions “look and feel” to the design of www.ine.gov.mz
- Prepare new IIS server for PX-Web
- Implement the stored query functionality
- Implement the e-mail notification functionality
- Implement the user registration functionality
- Connect PX-Web to a version of MS-SQL 2005 database to support user registration and stored query functionality
- Install PX-Web version 2007 in INE’s production environment
- Prepare a prototype version of PX-Web for use on cd-rom
- A meeting towards the end of the mission with Counterparts to present and discuss the results and recommendations

Tasks to be done by INE to facilitate the mission

- Elaborate ToR for the mission
- Prepare and supply the consultants with necessary documents and information, such as mission reports, strategies, plans etc.
- Supply good working conditions for the consultant

Consultant and Counterpart

Consultant: Jesper Ellemose Jensen from Statistics Denmark
 Main counterparts: Anselmo Nhane

Timing of the mission

Two weeks: 3 December - 13 December 2007

Report

The consultant will prepare a draft report to be discussed with INE before leaving Maputo. The consultant will submit a final draft to INE for final comments within one week of the experts have returned to work. Statistics Denmark as Lead Party will print the final version within 3+ weeks of the end of the mission. The structure of the report should be according to Danida format.

The Counterpart has to ensure that the final printed report has at least a summary in Portuguese if the main report is in English – or vice versa.

These Terms of Reference were prepared by

Day / /

Approved by/in the name of the President of INE

Day / /

Prepared by: