SADC SECRETARIAT   **EUROPEAN DEVELOPMENT FUND**

**Promotion of Regional Integration in the SADC Livestock Sector
(PRINT Livestock Project)**

9 ACP SAD 002

Report of a Mission to Seychelles

**LIMS adoption mission (Training on application & Standards Operating
Procedures) and Situation analysis of the Livestock sector
PRINT Report N°: PB-BB-LIMS-SEY-07-2009
Dr. Pascal BONNET, Chief Technical Adviser, PRINT
Dr Berhanu Bedane Information Technical Adviser, PRINT**

SADC Secretariat
FANR Directorate,
Millenium Office Park
Kgale View
P/Bag 0095
Gaborone Botswana   Dates: 19th – 25th July 2009

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Summary

Country   : Seychelles

Mission team : Dr Pascal Bonnet CTA PRINT, Dr B. Bedane Information specialist PRINT

Dates   : 19th – 25th July 2009

Venue   : Care House Victoria, Seychelles (Mahé Island)

Introduction: mission rationale and objective

The Livestock Sector Unit (LSU) in the Food, Agriculture and Natural Resources (FANR) Directorate of the SADC Secretariat is entrusted to promote regional integration and sustainable livestock development. The PRINT Livestock Project in FANR became operational in July 2005. The project's specific objective is to establish a livestock information management system (LIMS) in Animal Production and Health, Marketing and Trade. The generation of up-to-date and reliable information will assist the coordinating role of FANR as well as the development of harmonized policies and strategies in the SADC livestock sector.

The mission team comprised two SADC staff, namely, Dr. Pascal Bonnet (Animal Health & Livestock Economist, CTA Chief Technical Adviser PRINT – CIRAD), Dr B. Bedane Information Specialist PRINT.

Summary of SADC PRINT mission:

The mission was the launching of the SADC LIMS system in the Seychelles and comprised three components:
- a 3 days Training of trainers on the LIMS application and the principles of the LIMS system. It also served as a preliminary stage for establishing the rules of and drafting the first elements of Standards Operating Procedures of LIMS in Seychelles.
- Seminar on AIMS: It included discussions with the potential contributors to and potential users of the LIMS system.
- Situation analysis of the sector: visits of the major stakeholders in the sector

Detailed ToR's and timetable of the mission are provided in full in the annexures.

Funding of mission:
PRINT CIRAD budget (operational budget: April to October 2009, cf Addendum CIRAD contract).

Disclaimer

1. OBJECTIVES OF THE MISSION

The overall objective of the mission in SEYCHELLES was to launch the LIMS system. This mission was also a follow up of the comprehensive situation analysis and information needs assessments in this new SADC member state as its had started by PRINT in all SADC member states in 2007.

The **LIMS system** is made of 1/ the **LIMS software** developed in MS Access© (to capture data or import specially formatted MS Excel data sheets), 2/ LIMS **reporting templates** (a set of eleven (11) LIMS core quantitative data reporting modules) which national staff are sensitized and trained on, 3/ **procedures** for information **exchange** (**SoP,** Standards Operating Procedures) and for using **LIMS application** applied through 3/ a **network of stakeholders** working in collaboration (forming the **national LIMS network*** and from which some nominated members are also members of the four LTC **regional sub committees**), 4/ a set of technical **reference documents** and **training material** (i.e. LIMS manuals, Training handouts etc..), 5/ a **LIMS portal** (web site) embedded into the overarching AIMS portal and shared by several FANR information sub systems, using **common WEB20 ICT** derived technologies (WIKI, Dgroups, webmapping..) or using **tools specifically developed** for the sub system (e.g. for LIMS the Geoclip web-mapping).

*The **national LIMS network** means the various institutions being sources of livestock data / information in the respective member states, all sharing the effort to collect and compile data into the **collaborative LIMS** firstly at **national level** (some countries also soon operating at regional/provincial level like Zambia and Mozambique since they are decentralized states), then transferring the information to the SADC secretariat at **regional level** using the procedures agreed upon.

Therefore a selection of national professionals involved in national livestock statistics was trained on the harmonized templates, the software and on the procedures. Secondly one purpose of the mission was to assess, thanks to a participatory approach, how the the national sources of data will collaborate in the areas of Animal Health, Animal Production and Livestock Trade and Marketing in order to start the drafting of the SoP's and share the responsibilities for running the LIMS system in SEYCHELLES.

2. INSTITUTION VISITED AND PERSONS

The full listing of trainees and persons met at the seminar or during the situation analysis is provided in the tables attached in the following chapters.

3. ACTIVITIES

3-1. Stakeholder meeting

The objective of such stakeholder workshop is to present the entire AIMS initiative in order for participants to "locate" the LIMS system as a component (or sub system) under the AIMS system. It is therefore a follow up of former meetings dedicated to regional agriculture information systems, but this time focussing on the Livestock sector.
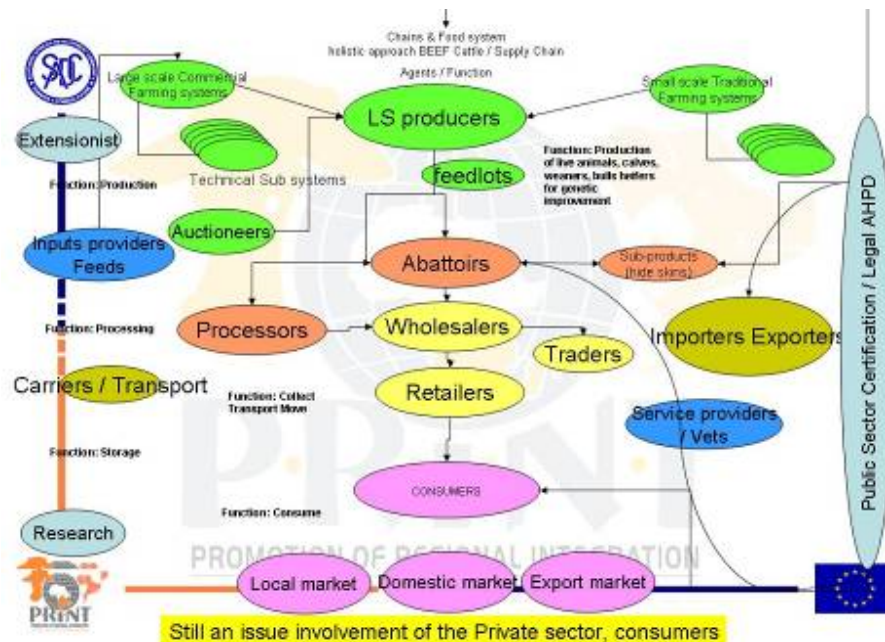
The sector represented as a series of **commodity chains** maps: all stakehlders from the system should participate to the national livestock community (forum)

Background:
Two AIMS workshops were held in 2007 and 2008 in collaboration with SADC sister projects have been opportunities to sensitize the Member States (MS) on the expected achievement of AIMS:

- formation of **AIMS networks**,
- compilation of numerical data and key information at national and regional level by sub sector and given stakes – topics (data contributors perspective),
- improvement of systems **interconnectivity** so that information is available from browsing in databases and in a portal (users perspective).

Seychelles which became a MS in August 2008 was not participating to such events and therefore the mission briefed the authorities during the seminar on past achievements.

The attendants to the LIMS AIMS seminar proudly wearing the LIMS community shirt, with the two SADC experts Dr Bonnet and Dr Bedane. The full listing of participants is in the following table.

SURNAME	FIRST NAMES	TITLE	Gender	DATE OF BIRTH	DESIGNATION	MINISTRY/ORGANISATION	FULL ADDRESS	PHYSICAL ADDRESS	Landline FAX	MOBILE	E-MAIL
Moumou	Sandra Linda		F	1973		Ministry of Envirnment Natural Resources and Transport / SAA Seychelle Agriculture Agency / Livestock section / Veterinary division	PO Box 166	Union Vale, Mahe, Seychelles	Landline : +248 285963/50, FAX: +248 225245	Cell: +248 723614	sandrou@seychelles.sc / sandrou@seychelles.se
Ernesta	Sandro Michel Rudolph		M	1986	stat assistant	Ministry of Envirnment Natural Resources and Transport / SAA / Agric Stats		Union Vale, Victoria, Mahe, Seychelles	Landline : +248 611462	Cell: +248 762264	stats@email.sc / sandroernesta@yahoo.com
Payet	Marie Michelle Edith		F	1978	research officer	Ministry of Envirnment Natural Resources and Transport / SAA / Livestock section		Union Vale, Victoria, Mahe, Seychelles	Landline : +248 285955		mmpayet@yahoo.com

Laurette	Simon Herve		M	1965		Ministry of Envirnment Natural Resources and Transport / SAA Animal Health / Livestock section / Veterinary division		Union Vale, Victoria, Mahe, Seychelles	Landline : +248 285950	Cell: +248 723609	Laurette1965@hotmail.com
Tyron	Scholastique		M	1982	Senior Trade Officer	Min. of Finance / Trade Division		Liberty House, Victoria, Mahe	Landline : +248 382000	Cell: +248 723448	tyron@finance.gov.sc
Molta	Lewi Akwara		M	1957	senior Livestock officer	Ministry of Envirnment Natural Resources and Transport / SAA Livestock		Union Vale, Victoria, Mahe, Seychelles	Landline : +248 285950	Cell: +248 723439	l.motta@yahoo.com

Melanie	Jimmy Gelaze	Dr.	M	1964	PVO Principal veterinary Officer	Ministry of Envirnoment Natural Resources and Transport / SAA Seychelle Agriculture Agency / Livestock section / Veterinary division	PO Box 166	Union Vale, Victoria, Mahe, Seychelles	Landline : +248 285950 , FAX: +248 285970	Cell: +248 722869	jmelanie@intelvision.net
Marie	Maryanne Fulgentia		F	1964	instructor	Ministry of Education, SAHTC, Seychelles agricultural and Horticultural Training Centre		Anse la Mouche Mahe Seychelles	Landline : +248 371290	Cell: +248 742679	no email
Sham Laye	Nicholas		M	1957	Principal Public Envirnomental Health Officer	Ministry of Health and Social Services MofHSS	PO Box 52 Victoria Mahe	Blue Roof MofHSS Mont Fleuri	Landline : +248 388191	Cell: +248 522776	peho1@moh.gov.sc / neshamlaye@yahoo.com

Malulu	Jose Joel	Dr.	M	1957	VPH Veterinary Public Health Officer	Ministry of Envirnoment Natural Resources and Transport / SAA Seychelle Agriculture Agency / Livestock section / Veterinary division / VPH		Union Vale, Victoria, Mahe, Seychelles	Landline : +248 285957	Cell: +248 722805	dr_joelma@intelvision.net
Gopal	Therese		F	1964	GOIS manager	National Statistics Bureau / NSB GIS	PO Box 206 Victoria Mahe	Caravelle House	Landline : +248 611666, FAX: +248 225339	Cell: +248 515355	therese@nsb.gov.sc
Moustache	Antoine Marie		M	1957	CEO of the Seychelles agricultural agency		PO Box 166	Independence House, Mahe, Seychelles	Landline : +248 378252 / FAX: +248 378428	Cell: +248 722009	antmoust@seychelles.net
Joubert	Lynetta		F	1964	Director Agricultural Land Management, SAA	GIS unit SAA , Land Cover classification & cadastre	PO Box 166	Union Vale, Victoria, Mahe, Seychelles	Landline : +248 611483 / FAX: +248 610223	Cell: +248 722299	landsdirector@email.sc
Moustache	Mermedah		F	1961	Policy analyst	Department of Natural Resources	PO Box 166	Grande Anse Mahe,	Landline : +248 378252	Cell: +248 723461	pgr@intelvision.net

									Seychelles		
Dogley	Will George		M	1963	Manager	Ministry of Envirnoment Natural Resources and Transport / SAA	PO Box 166	Union Vale, Victoria, Mahe, Seychelles	Landline : +248 611479	Cell: +248 722607	seypro@seychelles.net
Port Louis	Gilbert Francis		M	1966	Principal Officer	Ministry of Environment Natural Resources and Transport / SAA		Grand Anse, Victoria, Mahe, Seychelles	Landline : +248 378491	Cell: +248 774227	extserv@seychelles.net
Ismael	Christopher		M	1984	Field Officer	Ministry of Envirnoment Natural Resources and Transport / SAA Seychelle Agriculture Agency / Livestock section	PO Box 166	Union Vale, Victoria, Mahe, Seychelles	Landline : +248 511307		cismael@live.com
Talma	Walter Christopher		M	1963	Special Advisor	Ministry of Environment Natural Resources and Transport	PO Box 166	Independence House, Mahe, Seychelles	Landline : +248676400 Fax: 225245		wtalma@hotmail.com

Montes de Oca	Jose Raoul		M	1963	Advisor	Ministry of Envirnoment Natural Resources and Transport / SAA Seychelle Agriculture Agency / Livestock section		Revolution Avenue Victoria	Landline : +248 749851			joseraulmontesdeoca@yail.com

The entire presentation made by PRINT as an introduction to a full stakeholder meeting was provided as an annexe of the CD left to the authorities. The following slides summarize the contents presented.
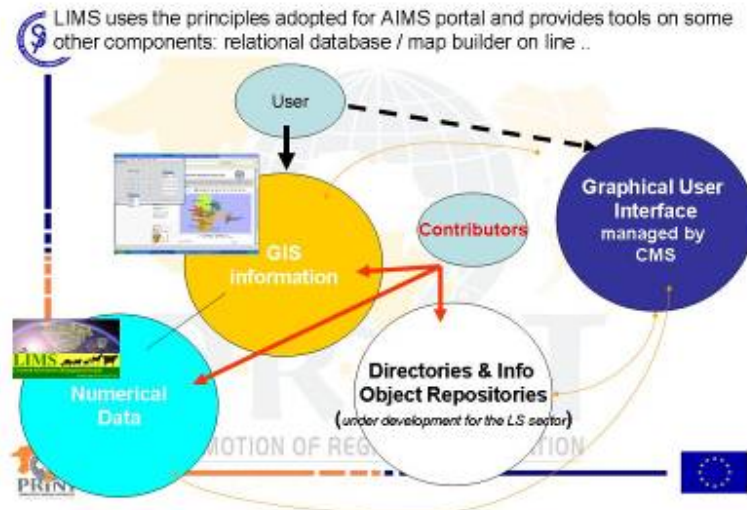
The expected components of AIMS and the place of LIMS elements were presented (i.e. the Excel Templates, database in MS Access = an application to facilitate data compilation and exchange, and LIMS web 2.0-based portal and mapping tools to display indicators computed from the database).
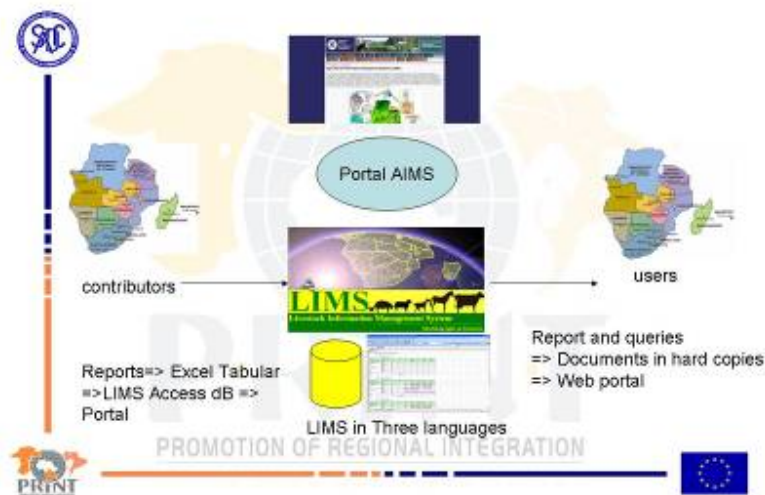
LIMS is a system not only a database: it has **contributors** (from the LIMS national network) and **users** (any one using the portal as a member of the LIMS community sometimes requiring an active registration to access the contents). They use a full package and toolkit made of Excel Templates, database in a MS Access and **procedures** for data compilation and exchange.
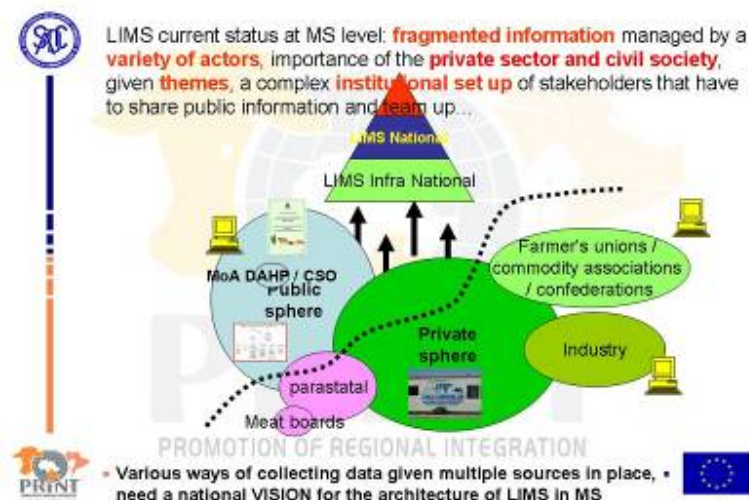
Contributors to LIMS are expected to originate from **multiple institutions** and therefore represent various **sources. They** will have to work in collaboration thanks to the formation of a LIMS national network. Therefore, LIMS provides for capturing data from various stakeholders and institutions, given their expertise and interest in the system, at various scales. It can therefore be decentralized and it is a therefore a modular system. There are two ways of entering data into the system firstly by **typing data** directly into the database, or by **importing** already available data formatted into a specific Excel-like datasheet (specification described into the manual).

Nevertheless a **central coordination and management unit** is required (coordinated by the network) as there will be a national LIMS database centralized in the country.

Networking of institutions

PRINT has already worked out the networking aspect of the information system (IS) by supporting the **horizontal integration** of actors, thanks to the support given to the 4 **SADC sub committees of the LTC**, composing four task forces aiming at managing part of the LIMS and therefore being its **custodian at regional level**. Horizontal integration therefore means the need for the integration of a network of stakeholders in specific areas of interest in the LS sector
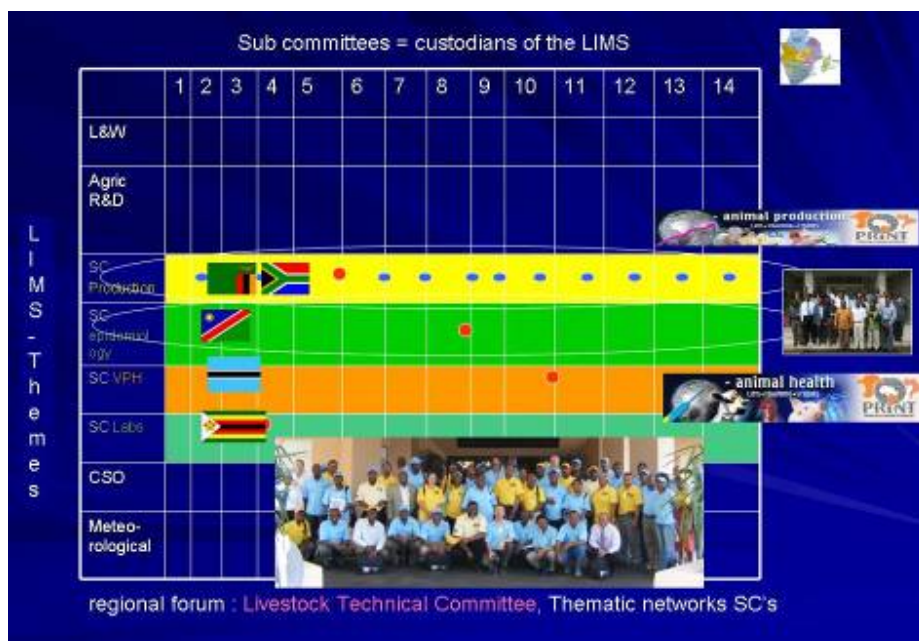
Four subcommittees of LTC horizontally integrated

The AIMS initiative and the LIMS launching missions are also opportunities to complement the process initiated in 2007 of boosting the **vertical integration** of national networks hence "at the periphery" of the core Livestock sector represented by the four representatives to the sub committees of SADC, this topic being central on this occasion. The Vertical integration therefore means an aggregation and integration of new players (e.g. specialist of meteorology, of early warning systems), i.e. new professionals to the core group, i.e. to the network of pure Livestock specialists. This is of primary importance as the management of risks and vulnerability required the collaboration of various specialists.
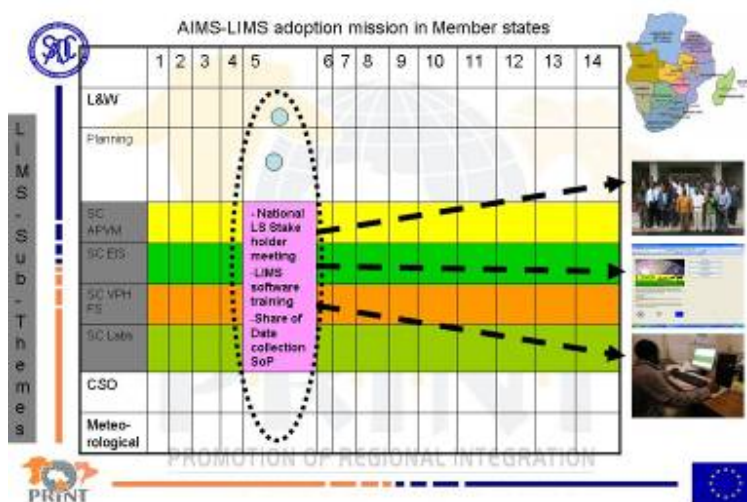
Enhancing vertical integration in the agricultural sector
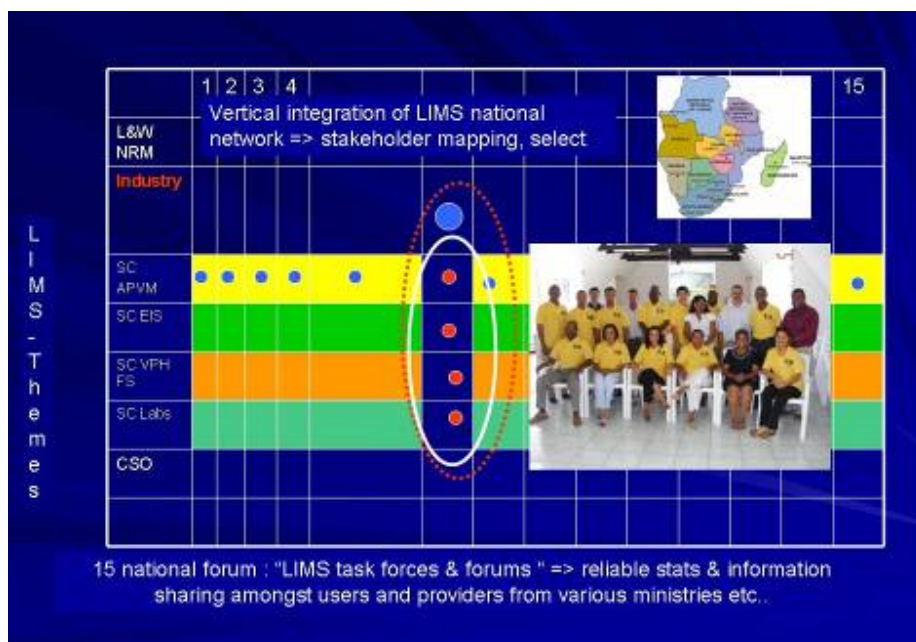
An application in the Seychelles

During the stakeholders meeting, the following concerns were raised:

- The Fisheries sector is an important component in the economy of the Seychelles. LIMS should have included modules on fisheries[1].

- Data collection from registered farmers is relatively easy. However, as there are several farmers, which are not registered, this may pose formidable challenge for getting data from them (informal sector). It is expected that the efforts given to control effluents will help for regularizing their status and for bringing new information to public statistics.

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[1] Fisheries was unfortunately not part of the PRINT mandate neither was it to include aquaculture though an important potential for the Seychelles (formely prawns were reared in some Seychelles islands)

Press release on the LIMS seminar

3-2. Training on LIMS

The training was carried out by the two following PRINT staff:

Trainers	Tel. No.	Fax No.	Cell No	E-mail	Postal address	gender
SADC Chief Technical Adviser FANR PRINT Dr. Pascal Bonnet	+267 3951863 ext 5124 Direct Line: 3959838	PRINT: +267 3959834 FANR: +267 3924099	+267 72734789	Pbonnet@sadc.int Pascal.bonnet@cirad.fr	SADC FANR PRINT P/Bag 0095 Gaborone Botswana	Male

SADC Information Specialist FANR PRINT Dr. Berhanu Bedane	+267 3951863	PRINT: +267 3959834 FANR: +267 3924099		bbedane@sadc.int	SADC FANR PRINT P/Bag 0095 Gaborone Botswana	Male

The event was announced on the LIMS web portal

Agenda of the LIMS training

SADC, PRINT Livestock Project in collaboration with the Seychelles Agriculture Agency (SAA)
**AGENDA FOR LIMS TRAINING OF TRAINERS
20 to 22 July 2009, Victoria, Seychelles**

DAY 1 – Monday 20 July 2009

8:15 – 8:30   **Arrival and registration**

8:30 – 8:45   **Welcome by the Representative of the Seychelles Agriculture**
Agency

8:45 – 9:00   **Objectives of the LIMS training mission – By SADC**
Representative

9:00 – 9:45   **Installation**
    1. First time installation of the LIMS Application
    2. Key files and folders
    3. Uninstalling LIMS
    4. Re-installing LIMS

9:45 – 10:30   **Basic concept of LIMS operation**
    1. Opening, navigation and closing the application
    2. Menu and sub-menu structure

10:30 – 10:45   **TEA BREAK**

10:45 – 11:30   **Basic concept of LIMS operation (Continued)**
    3. Standard tool bar and other GUI

11:30 – 12:00   **Administration: Access Control**
    1. Creating users
    2. Assigning roles and granting rights
    3. Validating Partitions of the country (GIS) relevant for
       statistics

12:00 – 13:00   **LUNCH**

13:00 – 14:00   **Data entry, modification and saving**
    Livestock numbers and composition (Module 1 – Template and
database)

14:00 - 14:30   **Data entry, modification and saving (continued)**
  1. Livestock numbers and composition (Module 1 - Template and
  database)

14:30 – 14:45   **TEA BREAK**

14:45 – 15:15   2. Livestock Production (Module 3 - Template and database)

15:15 – 16:00   3. Livestock Marketing (Module 4) and Livestock Trade (Module
5) –

  Template and database)

DAY 2 – Tuesday 21 July 2009

8:00 – 9:00   **Revision of day 1 - Discussion**

9:00 – 10:30   **Data entry, modification and saving (continued)**
    4. Livestock Infrastructure (Module 6 - Template and database)

10:30 – 11:00   **TEA BREAK**

11:00 – 11:30   **Data entry, modification and saving (continued)**
    5. Meat Inspection (Module 7 - Template and database)

11:30 – 13:00   **Data entry, modification and saving (continued)**
    6. Laws, regulations and acts (Module 9 - Template and
       database)

12:00 – 13:00   LUNCH

13:00 – 14:00   **Data entry, modification and saving (continued)**
    7. Disease Report (Module 10 - Template and database), and
       control measures (Module 11 Vaccination)

14:00 – 14:30   **Building queries, generating reports and exporting**
query results   1. Livestock numbers and composition (Module 1)
    2. Livestock Production (Module 3)

14:30 – 14:45   **TEA BREAK**

14:45 – 15:15   **Building queries, generating reports and exporting**
query results (Cont.)   2. Livestock Production (Module 3)

15:15 – 16:00   3. Livestock Trade (Module 5)

17:00   **END OF SECOND DAY**

DAY 3 – Wednesday 22 July 2009

8:00 – 9:00   **Revision of day 2 - Discussion**

9:00 – 10:30   **Building queries, generating reports and exporting query**
results
     (continued)
        4. Meat Inspection (Module 7)
        5. Disease Report (Module 10)

10:30 – 10:45   **TEA BREAK**

10:45 – 11:15   **Exporting query results and further analysis**
     Disease distribution mapping exercise

11:15 – 12:00   **Administration**
     1. Data Management: sending and receiving files (electronic
     reports)
     2. Data Management: backup and restore
     3. Interoperability (importing and exporting data)

12:00 - 13:00   **LUNCH**

13:00 - 14:30   **Information dissemination from LIMS, the use of LIMS/AIMS**
Portal
        1. Networking through DGroups (Discussion groups) ,
          participating to regional thematic debates;
        2. Visualizing data : The LIMS web GIS, an example of LIMS &
          AIMS integration
        3. LIMS software Forum and WIKI pages (LIMS Manuals)
        4. Using resources posted (document posted, institutional
          repository) and contributing to the collaborative LIMS/AIMS
          Portal (News, events)

14:30 – 14:45   **TEA BREAK**

14:45 - 16:00   **General Discussion**
        1. The way forward for the implementation of LIMS in
          Seychelles

2. The use and contribution to LIMS/AIMS Portal
3. Any other business related to the training

16;00   END OF THE TRAINING

The Training group and Dr Bonnet SADC PRINT
From left to right: Sandra (SAA), Sandro (SAA Agric Stats), Marie Michelle (SAA), Simon (SAA AH), Tyron (Min. of Finance Trade), Molta (SAA), Jimmy (SAA AH), Marianne (SAHTC), Nicholas (nikko, MoH), Joel (SAA), Therese (NSB GIS)

The training group and Dr Bedane SADC PRINT

The training aims at sensitizing the **future trainers** to the rationale of the LIMS system. Obviously it serves also to train them on the **LIMS application functionalities** and the **templates contents**, so that they become familiar with the entire concepts and system. Besides, it is also expected that from the training, participants will be in a position to design and produce *specific training material* derived from the *generic training material* provided by PRINT, i.e. training manuals for trainers and for data clerks, with specific examples and illustrations selected from the country context. Generic Manuals are provided as hard copies and can be downloaded from the LIMS portal, they are also posted as Wiki documents (cf. relevant chapter).

The composition of the group for the Training of Trainers was well balanced, drawing participants from the Livestock development and extension, Veterinary Services, Agricultural statistics, Ministries of Finance & Trade and Health & Environment , as well as the National Statistics Bureau.

The weak point of the training was the heterogeneous & generally poor computing skills of some of the participants. That has interfered with quick understanding of the operation of the LIMS MS Access application.

The list of attendance was as following:

SURNAME	FIRST NAMES	TITLE	Gender	DATE OF BIRTH	DESIGNATION	MINISTRY/ORGANISATION	FULL ADDRESS	PHYSICAL ADDRESS	Landline FAX	MOBILE	E-MAIL
Moumou	Sandra Linda		F	1973		Ministry of Envirnoment Natural Resources and Transport / SAA Seychelle Agriculture Agency / Livestock section / Veterinary division	PO Box 166	Union Vale, I2Mahe, Seychelles	Landline : +248 285963/50, FAX: +248 225245	Cell: +248 723614	sandrou@seychelles.sc / sandrou@seychelles.se
Ernesta	Sandro Michel Rudolph		M	1986	stat assistant	Ministry of Envirnoment Natural Resources and Transport / SAA / Agric Stats		Union Vale, Victoria, Mahe, Seychelles	Landline : +248 611462	Cell: +248 762264	stats@email.sc / sandroernesta@yahoo.com
Payet	Marie Michelle Edith		F	1978	research officer	Ministry of Envirnoment Natural Resources and Transport / SAA / Livestock section		Union Vale, Victoria, Mahe, Seychelles	Landline : +248 285955		mmpayet@yahoo.com

Laurette	Simon Herve		M	1965		Ministry of Envirnment Natural Resources and Transport / SAA Animal Health / Livestock section / Veterinary division		Union Vale, Victoria, Mahe, Seychelles	Landline : +248 285950	Cell: +248 723609	Laurette1965@hotmail.com
Tyron	Scholastique		M	1982	Senior Trade Officer	Min. of Finance / Trade Division		Liberty House, Victoria, Mahe	Landline : +248 382000	Cell: +248 723448	tyron@finance.gov.sc
Molta	Lewi Akwara		M	1957	senior Livestock officer	Ministry of Envirnment Natural Resources and Transport / SAA Livestock		Union Vale, Victoria, Mahe, Seychelles	Landline : +248 285950	Cell: +248 723439	l.motta@yahoo.com
Melanie	Jimmy Gelaze	Dr.	M	1964	PVO Principal veterinary Officer	Ministry of Envirnment Natural Resources and Transport / SAA Seychelle Agriculture Agency / Livestock section / Veterinary division	PO Box 166	Union Vale, Victoria, Mahe, Seychelles	Landline : +248 285950, FAX: +248 285970	Cell: +248 722869	jmelanie@intelvision.net

Marie	Maryann e Fulgentia		F	1964	instructor	Ministry of Education, SAHTC, Seychelles agricultural and Horticultural Training Centre		Anse la Mouche Mahe Seychell es	Landlin e : +248 371290	Cell: +248 742679	no email
Sham Laye	Nicholas		M	1957	Principal Public Envirnoment al Health Officer	Ministry of Health and Social Services MofHSS	PO Box 52 Victoria Mahe	Blue Roof MofHSS Mont Fleuri	Landlin e : +248 388191	Cell: +248 522776	peho1@moh.gov.sc / neshamlaye@yahoo. com
Malulu	Jose Joel	Dr.	M	1957	VPH Veterinary Public Health Officer	Ministry of Envirnoment Natural Resources and Transport / SAA Seychelle Agriculture Agency / Livestock section / Veterinary division / VPH		Union Vale, Victoria, Mahe, Seychell es	Landlin e : +248 285957	Cell: +248 722805	dr_joelma@intelvisi on.net
Gopal	Therese		F	1964	GOIS manager	National Statistics Bureau / NSB GIS	PO Box 206 Victoria Mahe	Caravelle House	Landlin e : +248 611666, FAX: +248 225339	Cell: +248 515355	therese@nsb.gov.sc

The details and list of the LIMS trainees will be added on the relevant LIMS web page like for this one in Namibia.

The training room accommodated for 11 trainers plus Dr Bonnet and Dr Bedane. Eleven "eee ASUS" mini laptops computers from PRINT project were available, all running XP OS and Access 2003, thus reducing the loss of time due to adjusting LIMS on other systems like Access 2007 and Vista (though LIMS can adapt to other systems and OS and install procedures for such systems are provided in the training package and CD's).

External QWERTY keyboard were available to switch from AZERTY genuine keyboards of the minilaptops, to English setting keyboards. In such a training with the LIMS software , all PC's must be set up with regional parameters preferably as **English UK** to properly run LIMS software (i.e. numeric decimal is a dot and thousands space separation is allowed). This will also be a prerequisite when running LIMS in all MS (therefore to be put as a warning message in the training material and FAQ)[2].

General Principle for the training
The training is based on the principle: "*if you master one template, you master them all",* as most screens and templates share a similar tabular presentation and screens have the same rationale to enter data into the LIMS application.

Validation of Geographical Partitions

The Seychelles has re-joined SADC in August 2008. Due to this, the situation analysis and the LIMS information needs assessment mission was not undertaken in the country before the LIMS adoption mission. That led to the assumption that the country made of several islands, because of its size, is composed of one administrative unit without any internal divisions. During the LIMS

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[2] Refer to Annexe and training handouts for more explanation

adoption mission, however, it was learned that in fact the country has about five regions and **26 districts**. The details are presented in the table below.

The concept of partitions of a country is generally well understood (= Administrative divisions and Cadastral Boundaries on one hand and any Technical divisions used for the purpose of managing technical issues like Livestock or Human Health on the other hand). Nevertheless, the alternative use of **technical partitions** versus **administrative partition** must be discussed in depth during a LIMS adoption mission, as these are key features into LIMS to insure interconnectivity with other information chains and provide room for populating the LIMS with external data originating from other data sources within or outside the Ministry of Agriculture (e.g. zoonosis records from MoH will use health zones).

This aspect of the LIMS allows capturing data from various sources by respecting the **observation units** they originally use. It therefore allows to interact and interconnect with other systems by assuring that one can import/export some information / data in compliance with the relevant observation units required (i.e. with logical and geographical compliance and GIS interconnectivity).

The LIMS screen (reference parameters section) which allows to pre populate and therefore define the administrative and technical **partitions** of a country (this must be also reflected into the LIMS database at SADC level as SADC regional level will consolidate national data using the same shared partitions).

For SADC purpose (regional database), it needs to be populated with at least the **ADMIN2 level** of a country (generally named a "district", and it refers to the ISO standard for its coding), so that all data are aggregated at such a level and sent to SADC accordingly.

Nevertheless for a national utilisation of LIMS one can think to implement a rather more detailed set of zones (ADMIN3, or Dip Tank catchments areas etc..) in the future. Such level of information will remain in the **national LIMS database**, as only aggregated data at ADMIN2 level will be sent to SADC for **regional compilation** at SADC in Botswana.

The facility that allows export of data or import allows the selection of the partitions of preference for data exchange.

Interconnectivity between systems: geographical compliance of observation units:
As an example, if data shall be imported into LIMS by Livelihood zones, this set of partitions must be populated into LIMS, thanks to the technical partition facility predefined in such a way. Or if animal census data (Module 1 of LIMS) shall be exported by dip tank or crush pens zones, or by vaccination zones, LIMS can export such information to be inputted in any other system, including a GIS.

The generic partitions; Admin1, .Admin2; and some technical partitions were revisited andvalidated in SEYCHELLES and we provide them into the annexe with some elements of explanation in the following paragraphs. The **Web-mapping** facility under the AIMS portal (Mapserver cf. http://LIMS.sadc.int or the Geoclip) requires consistent correspondence between partitions implemented on the portal and in LIMS, therefore the need to monitor any changes into the system. This is alos the responsibility of the LIMS nationataskforce to follow up and inform SADC on any change.

Seychelles geography and partition: context and specificity of Islands
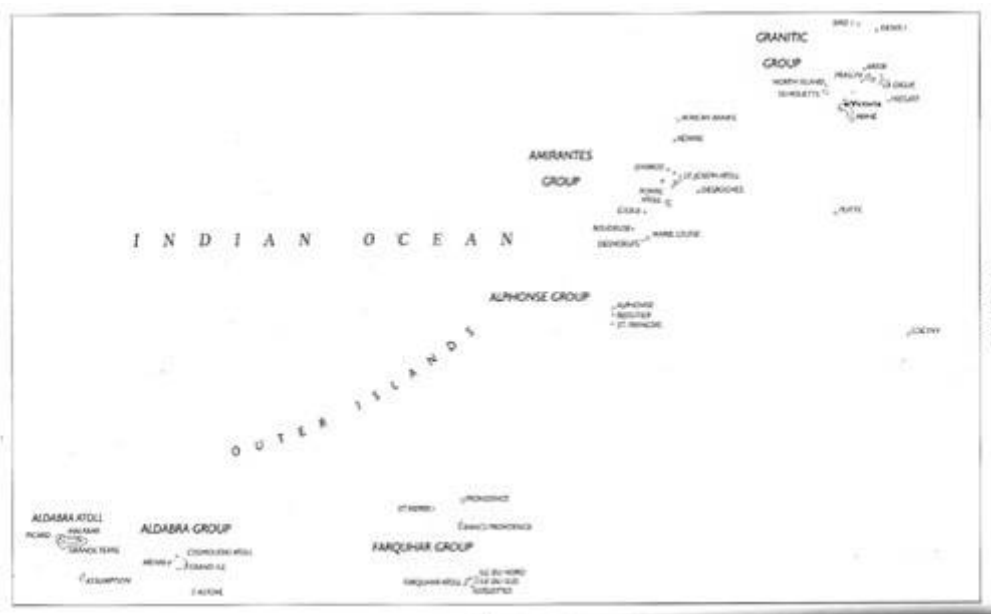
The archipelago is vast and only selected and relevant islands will be covered by the LIMS system

The context of an archipelago of islands like the Seychelles must be appreciated when implementing the LIMS. The 115 islands represent an EEZ of 1 million km2 of sea & 455 km2. Only three islands will be looked at for they participate to the Livetsock sector, i.e. Mahé, Praslin and La Digue forming the inner islands of Seychelles. No LIMS partitions will be implemented on the other islands. Nevertheless, the rest of the islands are important for environmental purpose and for fisheries (national waters) statistics.

The tourism is an important activity and add consumers for livestock products (over 100 000 visitors annually) on top of the residential population of about 85 000 inhabitants.
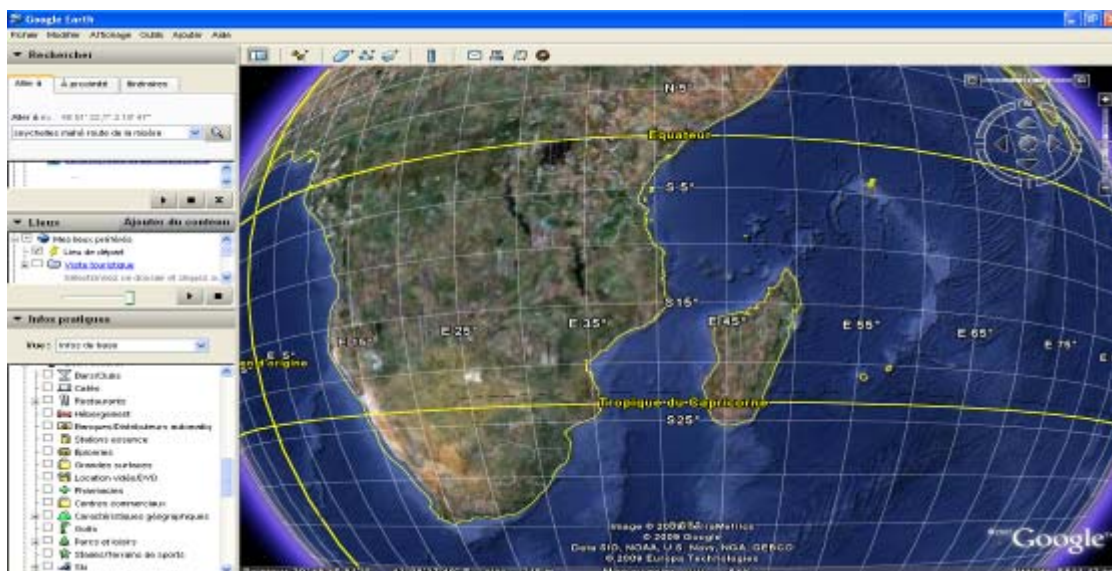
The position of Seychelles in the Indian Ocean making the country an important basiefo fisheries.

The inner islands will be used for LIMS

Administrative partitions (AP)

The sources of information for the item were multiple and were investigated before the mission (desk study), we only cite some of them that may serve as reference source.

Maplibrary
It only features for the island polygone ADMIN0, therefore not for sub zoning

ADMIN type, Level 1 and 2, Region / Province and District names
Proposed Edited Version of Partitions agreed on during the mission **to be implemented into LIMS**
In red result of proof reading of original data provided (i.e. editing)

Old districts as featured in 1998 (official source)

NAME1_
Glacis
English River

Mont Buxton	
St Louis	
Pointe Larue	
Anse Aux Pins	
Baie Lazare	
Takamaka	
Anse Boileau	
Au Cap	
Anse Etoile	
Anse Royale	
Bel Air	
Bel Ombre	
Beau Vallon	
Grand Anse Mahe	
Les Mamelles	
Cascade	
Port Glaud	
Roche Caiman	
Ile Anonyme	
Plaisance	
Mont Fleuri	

New districts (official source NSB, since 2002)

Country	Region (admin level 1)	District (admin level 2)	codes
Seychelles	Central	English River	ER
	Central	Mont Buxton	MB
	Central	St Louis	SL
	Central	Bel Air	BA
	Central	Mont Fleuri	MF
	Central	Plaisance	PA
	Central	Roche Caiman	RC
	Central	Les Mamelles	LM
Seychelles	East	Cascade	CA
	East	Pointe Larue	PL
	East	Anse Aux Pins	AA
	East	Au Cap	AC
	East	Anse Royale	AR
	East	Takamaka	TA
Seychelles	West	Anse Boileau	AB
	West	Baie Lazare	BL
	West	Gran Anse Mahe	GM
	West	Port Glaud	PG
Seychelles	North	Belombre	BO
	North	Beau Vallon	BV
	North	Glacis	GL
	North	Anse Etoile	AE
Seychelles	Praslin La Digue	Grand Anse Praslin	
	Praslin La Digue	Baie Ste Anne	GM
	Praslin La Digue	La Digue	BS
Seychelles	Other Islands	Other Islands	LD

Districts: 26
26 administrative districts shall be considered (source LIMS adoption mission) as they were revised in 2002:

Anse aux Pins   Anse Boileau   Anse Étoile   ~~Anse Louis~~   Anse Royale   Baie Lazare   Baie Sainte-Anne (Ste Anne)   Beau Vallon   Bel Air   Bel Ombre (Belombre)   Cascade   Glacis   Grand' Anse (Mahé) Grand Anse Mahe   Grand' Anse (Praslin) Grand Anse Praslin La Digue   English River ~~La Rivière Anglaise~~   Mont Buxton   Mont Fleuri   Plaisance   Pointe La Rue (Larue)   Port Glaud   Saint-Louis (St Louis)   Takamaka   Roche Caïman Au Cap Les Mamelles Other Islands

One removed: (Anse Louis) not a district
4 added: Roche Caiman, Au Cap, Les Mamelles, Other Islands
+ Some editing in the spelling (the official way to write it only) e.g. Bel Ombre or (Belombre)

Regions: 5
Central, East, West, North, Praslin/La Digue

A correspondance list has been established by NSB for parent / child partitions (with options for writing them)

For the purpose of the training, the regions and the districts of the Seychelles were created in the application under the Administrative module, Reference Data, and provided to the trainees. This, however, should be included into the application in the near future (by the developers , the listing being provided by PRINT to them). Issues of dating the partitioning changes were well addressed and understood in general. Similar arrangement of including the regions and districts in the application were made to the version to be used for live data entry for the interim period.

Major towns

TECHNICAL partitions Type (TP)
Wards electoral districts or enumeration areas (used by NSB) can be implemented into the LIMS
No Technical partitions were implemented prior to the mission into LIMS Seychelles
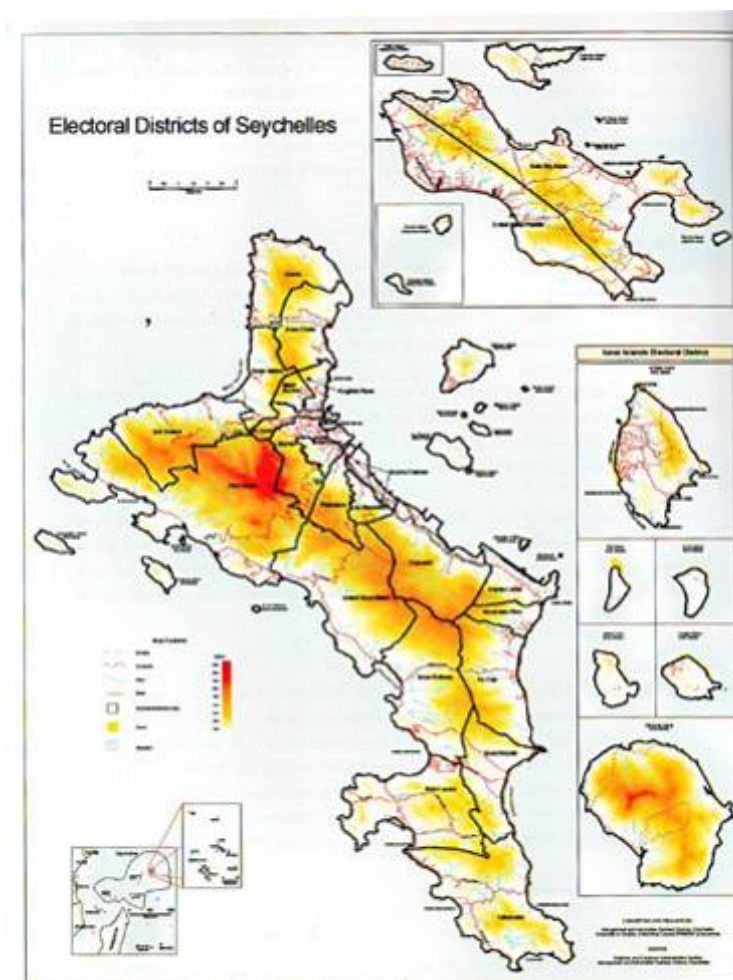
Electoral districts as they feature on a map

Proposed Technical partitions that could be implemented into LIMS Seychelles: Status of our discussions
Areas used by NSB: Enumeration areas
In red result of data provided (i.e. editing)

Enumeration areas: Year 2002 status (source: GIS unit SAA) for enumeration areas (50 households on average per Enum Area). This is a dynamic partition as they are redelineated according to changes in demographic and land use.

NAME Enumeration Areas
PTI BARBARONS
ST LOUIS, BEL AIR
GRAND ANSE ESTATE AREA
PORT LAUNAY
BELLE VUE AREA
DES ARPENTS
UPPER BEOLIERE AREA
FLATS OR SCHOOL AREA
GRAND ANSE VILLAGE
FORET NOIRE AREA
COMMUNITY CENTRE AREA
UPPER MORNE BLANC
FORESTRY AREA

LE NIOL LOWER DANS GALA, RESERVOIR AREA
Limit of mapping - Bel Ombre
LE NIOL - RESERVOIR AREA
SANS SOUCI
ST LOUIS BEL AIR ROAD
GALA ROAD
CURIO ROAD
CURIO ROAD
ST LOUIS, BEL AIR
LA LOUISE, COPOLIA
SOUVENIRE
HELVETIA
Limit of mapping - Grand Anse Mahe 2
FAIRVIEW
COPOLIA
LA MISERE, BELLE VUE, SOLITUDE
ANSE SOLEIL
LE MISERE, BELLE VUE, SOLITUDE
BENGALI
UPPER LA MISERE SCHOOL AREA
LES MAMELLES
ROCHON, BELVEDERE
UPPER HERMITAGE, MONT FLEURI, SANS SOUCIS
SANS SOUCI
FORET NOIRE
FORET NOIRE
MONT FLEURI, HERMITAGE
HERMITAGE
BEL EAU
LPIER
LE CHANTIER, BEL EAU
FORET NOIRE
FORET NOIRE, BEAUFOND LANE
FORET NOIRE
AVENUE PATATRAN
LA LOUISE
LA LOUISE, FRICHOT ESTATE
BELVEDERE, FRICHOT ESTATE
LA LOUISE, PLAISANCE
LA LOUISE
LA LOUISE
PLAISANCE
PLAISANCE
LES MAMELLES
CORGAT ESTATE
LA LOUISE, FRICHOT ESTATE
CORGAT ESTATE
CORGAT ESTATE
PALMIST AVENUE
LA RUE VAVANGUE
HARMONY STREET
CREVE COEUR, UPPER ROCHE BOIS
MARE ANGLAISE

MOUNT SIMSON ESTATE
BELOMBRE
BEL OMBRE, DANZILLES
DANZILLES, POULAILLER, ANSE MAJOR,
DANZILLES
BEL OMBRE CENTRAL
NOE ROAD
CORSAIRE AREA
BEL OMBRE
BEL OMBRE CENTRAL
BEL OMBRE CENTRAL
PASCAL VILLAGE
LE NIOL LOWER
LE NIOL LOWER
BEAU VALLON CANADA
BEAU VALLON , LE NIOL
ST LOUIS (RUSSIAN EMBASSY)
BEAU VALLON PASCAL VILLAGE
BEAU VALLON
MARE ANGLAISE
CAMERRON ESTATE
BEAU VALLON
UPPER ROCHE BOIS
GLACIS, VISTA DO MAR ESTATE
MALENGA, SORENTO
MARE ANGLAISE
SORENTO, MARE ANGLAISE
L'ILOT
GLACIS
GLACIS
UPPER L'ILOT
UPPER L'ILOT
FOND DES LIANE, MACHABEE, L'ILOT
MAJOIE
BELONIE, MOOSA RIVER
ST LOUIS, BEL AIR
UPPER ST LOUIS
ST LOUIS
CATEAU ROAD
SERRET ROAD
BEL AIR
BEL AIR
ST LOUIS BEL AIR RIVER
ST LOUIS ROAD
UPPER BELONIE
LOWER ROCHE BOIS, BELONIE
MIDDLE BELONIE
LABOURDONAIS STREET
MONT BUXTON BELONIE
LOWER MONT BUXTON
LODGE STREET, MALAKOFF STREET
ROCK LANE
VICTORIA

EAU CLAIRE LANE
BEL AIR, LA POUDRIERE, LE CHANTIER,
LABOURDONAIS STREET, HANGARD STREET
HANGARD STREET
PHILOMEL STREET, LODGE STREET, MARKET STREET
ALBERT STREET, QUINCY STREET
MONT BUXTON , LA ROSIERE
BUTON LANE, LA ROSIERE
ENGLISH RIVER
LA ROSIERE , MONT BUXTON
MONT BUXTON
MONT BUXTON
UPPER GREENWICH
MAJOIE
MAJOIE, UNION VALE
ENGLISH RIVER , MONT BUXTON
CASTOR ROAD
THOMPSON LANE
GREENWICH ESTATE
UNION VALE ESTATE
ANSE ETOILE
LA GOGUE
Limit of mapping - Anse Etoile
HANGARD
MA CONSTANCE
LA GOGUE
MALDIVE
MALDIVE
CARANA, MACHABEE
MACHABEE
MACHABEE
MA CONSTANCE
QUINCY VILLAGE
QUINCY VILLAGE
QUINCY VILLAGE
QUINCY VILLAGE
MA CONSTANCE, POINTE CONAN
ANSE ETOILE, LA GOGUE
MALDIVE
LA RETRAITE
NORTH EAST POINT
Limit of mapping - Anse Boileau
ANSE AUX POULES BLEUES
DAME LE ROI UPPER
BAIE LAZARE, ANSE GAULETTE
DAN PEN-PEN, TAKAMAKA BEACH WAY
ANSE GAULETTE
ANSE AUX POULES BLEUES
DAME LE ROI UPPER
BAIE LAZARE
DAME LE ROI LOWER
TAKAMAKA BEACH WAY
INTENDANCE LOWER

VAL D'ENDOR
UPPER ANSE GAULETTE, VAL D'ENDOR
ANSE A LA MOUCHE
VAL D'ENDOR
SANTA MARIA, ANSE A LA MOUCHE
ANSE LOUIS
ANSE LOUIS
ANSE A LA MOUCHE
ANSE LOUIS
ANSE LOUIS
ANSE LOUIS
MONTE CRISTO
ANSE LOUIS
ANSE LOUIS DANS GRAVIERS
ANSE LOUIS DANS GRAVIERS
MONTAGNE POSSE
ANSE LOUIS DANS GRAVIERS
SWEET ESCOTT
INTENDANCE ROAD AREA
QUATRE BORNE
QUATRE BORNE,INTENDANCE AREA
QUATRE BORNE, TAKAMAKA LOWER
CEMETERY, CALORIFER AREA
CEMETERY, CALORIFER AREA
UPPER QUATRE BORNE
VAL D'ENDOR
BOUGAINVILLE
ANSE FORBAN,ANSE MARIE LOUISE AREA
Limit of mapping - Takamaka
QUATRE BORNE
QUATRE BORNE
BOUGAINVILLE
ANSE FORBAN
CAP MAtON, BOUGAINVILLE
ANSE ROYALE, MONT PLAISIR
LES CANELLES
L'ENFONCEMENT
LES CANELLES
ANSE BALEINE
LES CANELLES
LES CANELLES
MONT PLAISIR UPPER, LES CANELLES
MONT PLAISIR UPPER
LIMIT OF MAPPING AU CAP
MONT PLAISIR
MONT PLAISIR, LES CANELLES
MONT PLAISIR
PTE AUX SEL
MONT PLAISIR LOWER
PTE AU SEL
PTE AU SEL UPPER MORIPA
POINTE AU SEL, SADECO AREA
AU CAP

AU CAP
POINTE AU SEL
CASCADE
ANSE BOILEAU, CAP STE MARIE
CAIMAN AREA
ANSE BOILEAU
Limit of mapping - Cascade
Upper Anse Boileau
MONTAGNE POSEE, GRAND BOIS
ANSE BOILEAU
MONTAGNE POSEE, BONNE ESPOIR
CASCADE RIVER SIDE
CASCADE
LES MAMELLES, LE ROCHER
LES MAMELLES
MA JOSEPHIN E
CHURCH AREA
LES MAMELLES
LES MAMELLES LOWER
LA MISERE
LES MAMELLES
AVENUE DES LAURIERS
RUE DES CEDRES
PETIT PARIS, PROVIDENCE
CASCADE
PETIT PARIS
BRILLANT , PETIT PARIS
PETIT PARIS
ANSE AUX PINS
ANSE AUX PINS, HERMITTE ESTATE
REEF ESTATE
MONTAGNE POSEE
REEF ESTATE
GREEN ESTATE
DANS DU RIZ
REEF ESTATE
REEF ESTATE, LONGUE MARE |REEF ESTA
UPPER REEF ESTATE
CAPUCINS
REEF ESTATE
REEF ESTATE
TURTLE BAY
REEF ESTATE
REEF ESTATE
ANSE AUX PINS
ANSE AUX PINS
ANSE AUX PINS
CAPUCINS
CAPUCINS
CAPUCINS
DAN BODAMMIER
KARYOL ESTATE, CAPUCINS
ANSE AUX PINS

KARYOL ESTATE
ANSE AUX PINS
ANSE DEJEUNER
CASCADE
ANSE DEJEUNER
TALBOT
TALBOT
ANSE DEJEUNER
NAGEON ESTATE
PTE LARUE
POINTE LARUE
NAGEON ESTATE
PTE LARUE
ANSE FAURE
PTE LARUE
PTE LARUE
POINTE LARUE
NAGEON ESTATE
MONT BUXTON GREENWICH
MONT BUXTON, GREENWICH
ROCHE CAIMAN INDUSTRIAL ESTATE, AIRTEL AND LUXURY FLATS
LES MAMELLES, LE ROCHER
LES MAMELLES LOWER
LOWER PLAISANCE
CORGAT ESTATE
UPPER ROCHON, LOWER ROCHON
ROCHON, BELVEDERE
BELVEDERE, UPPER ROCHON
BELVEDERE UPPER
UPPER COPOLIA
MARE ANGLAISE
MARE ANGLAISE UPPER
LABATIS MT SIGNAL
LABATIS
LABATIS-JEAN GILL AREA
PASCAL VILLAGE
BEAU VALLON CENTRAL(PT2)
PASCAL VILLAGE
FISHERMANS COVE ESTATE UPPER
BEAU VALLON LOWER
BEAU VALLON
BEAU VALLON LOWER
CENTRAL BEAU BELLE
FISHERMANS COVE ESTATE
BEAU BELLE ESTATE
ST ROCH AREA
VISTA DO MAR ESTATE
NORTH EAST POINT TOP
NORTH EAST POINT TOP2
NORTH EAST POINT
LA GOGUE
LA GOGUE-DANS RACKET
NORTH EAST POINT

NORTH EAST POINT FLATS
NORTH EAST POINT, LA RETARITE,AIRTEL TOWER
NORTH EAST POINT, LA RETRAITE
LA GOGUE/LA RETRAITE
LA GOGUE/LA RETRAITE
LIMIT OF MAPPING-Anse Etoile 2
LA GOGUE/LA RETRAITE
ANSE ETOILE-SACOS FLATS
ANSE ETOILE, MALDIVE
ANSE ETOILE, LA GOGUE
LA RETRAITE , LA GOGUE
UNION VALE
UNION VALE EX PRISON AREA
VILLAGE TRESOR
UNION VALE ESTATE
LOWER MAJOIE
DANS LENN
BELVEDERE, MONT FLEURI
LA LOUISE
LA LOUISE
PLAISANCE, LA LA LOUISE, KOT BABA
PLAISANCE, LA LOUISE, CHENARD ESTATE
LES MAMELLES
LES MAMELLES
LES MAMELLES
LES MAMELLES EX SCHOOL AREA
GUY SINON ROAD/ALDABRA AVENUE PART 1
GUY SINON ROAD/ALDABRA AVENUE PART 2
GUY SINON ROAD/ALDABRA AVENUE PART 4
GUY SINON ROAD/ALDABRA AVENUE PART 3
PETIT PARIS
PETIT PARIS
CASCADE , PETIT PARIS
CASCADE , VILLAGE STE ANDRE
2198_RECLAIMED LAND
Cascade
DANS BODAMIER
KARYOL, DAN BODAMMIER PART 2
TURTLE BAY VAL DES PRES ESTATE
TURTLE BAY
MONTAGNE POSEE, ST JOSEPH ESTATE GAZA
MONTAGNE POSEE LOWER AREA
POINTE AU SEL EX SADECO FARM
POINTE AU SEL
ANSE ROYALE
ANSE ROYALE FAIRY LAND
UPPER CEMETERY AREA
ILIMIT OF MAPPING- GRAND ANSE MAHE
DANN LENN
Limit of mapping-Anse Boileau
CAIMAN 2, ANSE BOILEAU
ANSE LOUIS
HERMITAGE

BARBARONS AREA DAUBAN ESTATE
BARBARONS ESTATE PART 1
BARBARONS AREA DAUBAN ESTATE
LOWER BEOLIERE AREA
LOWER BEOLIERE AREA
SOS Area
Limit of mapping - Port Glaud
CAP TERNAY
ROCHE CAIMAN INDUSTRIAL ESTATE
MONT FLEURI INDUSTRIAL AREA
SEYCHELLES INTERNATIONAL AIRPORT
CAP TERNAY
PORT LAUNAY FLATS
KARYOL DANS BODAMIER PART 1
LIMIT OF MAPPING ANSE AUX PINS
KARYOL DANS BODAMIER PART 3
Limit of mapping - Anse Bel Air
UPPER SANS SOUCIS-VAL RICHE
Limit of mapping- Baie Lazare
DARDANELLES
WATERLOO ROAD
FORET NOIRE Upper
FORET NOIRE
BELVEDERE, CARITAS
BELVEDERE, ROCHON
MONT FLEURI, LOWER ROCHON
MONT FLEURI, PAYNEE SHOP
NOUVELLE VALLEE PART 2
NOUVELLE VALLEE PART 1
UPPER ST LOUIS-ROCHE BOIS
LIMIT OF MAPPING ROCHE BOIS

Villages and towns gazeeter

One can implement a list of Villages, cities, towns with their names into LIMS, since some screens use such details (e.g. Module 10 or modules on infrastructures M6).

One of the problem of implementing a **full Gazetteer** into LIMS is that the implementation of a long list is not always necessary and will render LIMS a bit "heavy" and slow when it comes to accessing such a listing (by a scroll down feature in the software).
As a mater of facts only a few items (a few names from the list) will be finally used (e.g. use of only towns where Livestock infrastructures do exist). This remark is important to consider before we implement such a listing into LIMS.

In Seychelles though the current gazetteer has less than 20 items (towns or cities or village names). PRINT recommends exploring the official list, validating it and only using it as a "reference list of towns" (in LIMS manual and in the guidelines for SEYCHELLES), so that any data capture for a new city or village will be made in compliance with such an official listing and will follow a nomenclature.

Given the small size of Mahe and its districts it is assumed that the capital of districts will be used as village's names.

Official gazeeter (source GIS SAA°

NAME_
Mont Buxton
English River
Anse Etoile
Glacis
Beauvallon
Bel Ombre
St Louis
Bel Air
Plaisance
Cascade
Point Larue
Anse Aux Pins
Takamaka
Baie Lazare
Anse Boileau
Port Glaud
Grand Anse Mahe
Anse Royale
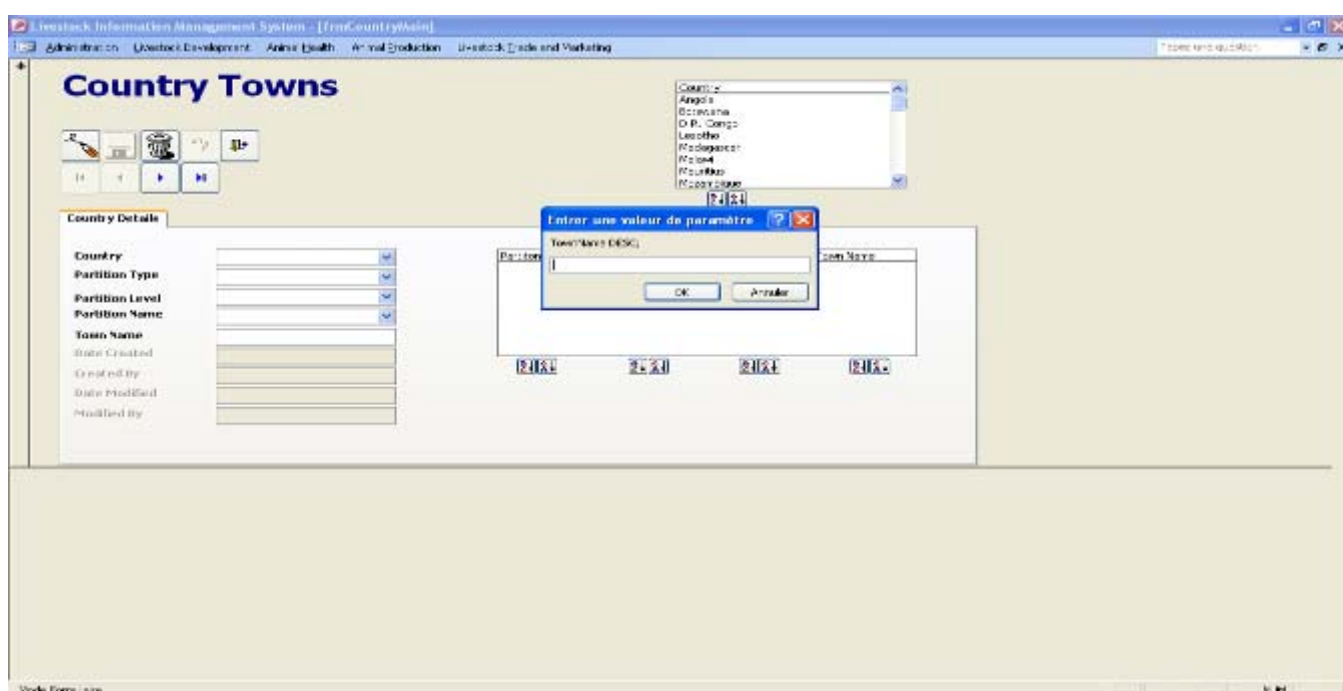
Any city or town' list can be implemented into LIMS thanks to this screen, before becoming available in any screen (by a scroll down menu item) when requiring access to a town name.

Therefore we recommend that a person be in charge of monitoring any change in the national Partitions list (ADMIN1 and 2) and towns and then be updating LIMS with information communicated to SADC

Components, Modules and Templates looked at during the training

The following paragraphs show how the components of LIMS already match some of the available LS data in Seychelles.
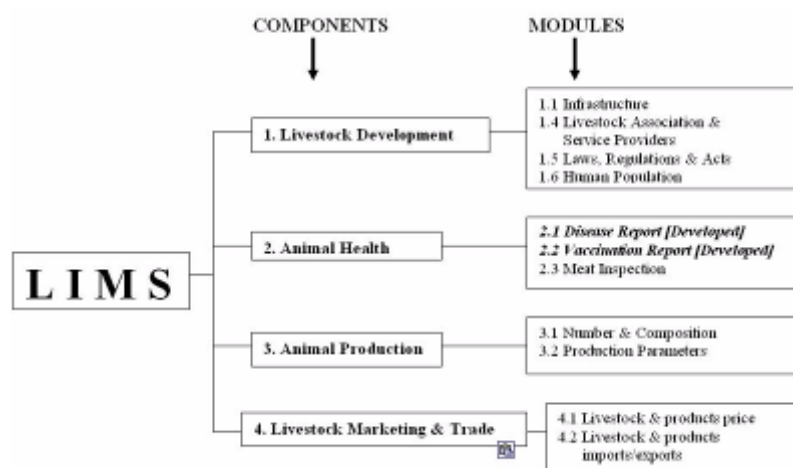
Diagram: the four components of LIMS core on which future trainers have been trained (in addition to the administrative module and other functionalities of LIMS).

According to the LIMS there are 11 modules to be shared

LIMS a Full information system

The Training of Trainers is meant primarily to enable national experts to operate LIMS and that they can conduct similar training sessions at national level at a later stage (multiplier effect), for livestock information officers at provincial, regional and district levels. The replication of training sessions at national level is a prerequisite for the roll-out of LIMS in the country.

The LIMS training had two major components. These are the training on the LIMS template and the training on the operation and use of the LIMS application.

a) Training on the LIMS templates – Before embarking on data entry to the database, trainees need to know the data collection forms or templates. The knowledge of what type of data is collected, how often and the right columns where these should be entered are crucial for better understanding of the database at a later stage. Hence, all the 11 modules templates were described to the trainees. Additional information included as footnotes for the selection of parameters where there are multiple choices to pick from were also covered. The trainees were briefed on the Standard Operating Procedure for providing comments and suggestions for further improvement of the templates as well as for daily use when these are introduced to the grass roots from where data is captured on paper copies or MS Excel sheet. The trainees also received both the electronic and hard copy prints of all the templates for the 11 modules of LIMS.

b) Training on the LIMS application – This component of the training focused on the proper operation and use of the LIMS database. Trainees were taken through the installation and configuration of the application, data entry and modification, query building, report generation, export of data for final analysis and procedures for backing up data and transfer data files between different installation. The complete training timetable is attached. During the training

of the three days, most of the 11 modules were covered, first by demonstration followed by exercise using live and in some cases dummy data. All modules were fully covered.
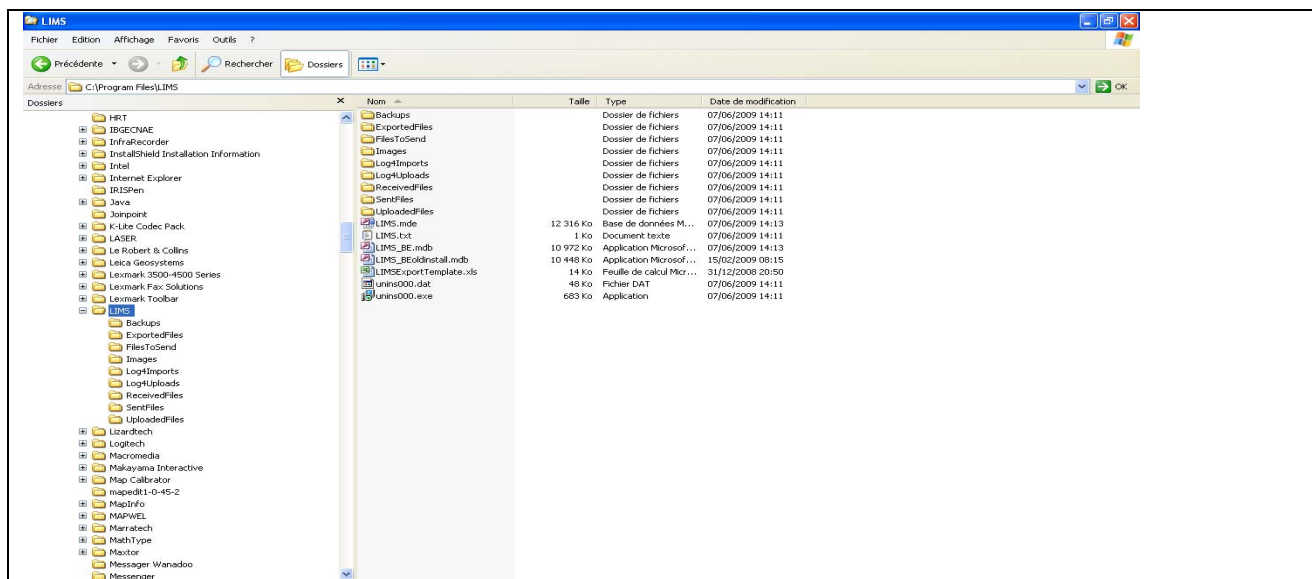
At the end of the three days training, a general discussion was conducted with the participants. The trainees expressed their satisfaction with the LIMS performance, but stressed the need for networking to increase awareness on LIMS. The participants committed themselves to forming a trainer committee and to work out a monitoring and coordination arrangement for LIMS activities.

All the trainees received a CD containing training materials, a copy of the LIMS application ver 204 and templates, SOP, presentations on LIMS and AIMS, among others (cf annexe).
A full and comprehensive compilation of Livestock statistics (production and import) is available on a monthly and quarterly basis from SAA. Hereafter we provide some Stats for 2008, 2007, 2009 available in Excel. Their reformatting to match Import templates of LIMS will allow direct importing into LIMS tables.

	A	B	C	D	E	F	G	H	I	J
	CountryCode	Year	Period	PartitionType	PartitionLevel	PartitionName	RefProductCategoryID	RefSpeciesCategoryID	RefUOMID1	Quanity
	TZ	2006	January	Administrative	2	Arumeru	Hides	Cattle	Pieces	982
	TZ	2006	January	Administrative	2	Arusha	Hides	Cattle	Pieces	3271
	TZ	2006	January	Administrative	2	Arusha	Skins	Sheep	Pieces	1876
	TZ	2006	January	Administrative	2	Arusha	Skins	Goats	Pieces	2735

LivestockProductHSPFF / LivestockProductPDP / LivestockProductTMP

An example of Importing Format

Liste des Modules et écrans (rapports types Excel) correspondants au système LIMS / *Lista dos Modulos e ecrã (relatorios tipo Excel) do LIMS* / **List of Modules and screens (SADC Harmonized templates) of LIMS**

- Front page national / page de guarda nacional / page de garde nationale

  - Headers / Timbre / Entête

- Module 1 *Numbers & Composition of Herds* / Effectivos animais do rebanho nacional / Effectifs nationaux – recensement animal
  - 1. *Nr by species* / effectivos animais por espécies / Nombre par espèce
  - 2. *Nr by economics /* effectivos animais por função economica / Nombre par fonction économique
  - 3. *Nr by breeds* / Effectivos animais por raça / Nombre par race
  - 4. *Nr by herd structure* / Effectivos animais por idade e sexo / Nombre par âge et sexe (démographie)

  The Livestock population (estimates) in Seychelles: composition & infrastructure (source SAA)

Cattle:	1 200 - AMZ, Zebu, Sahiwal, Jersey, Friesian & Brown Swiss
Pig:	10 000 - Duroc, LW, LR,
Poultry:	600 000 - Ross (broiler), WL & GL breds (layers)
Goats:	1 500 – Mixed breed (Anglo Nubian X Sanaan)

- Module 2 *Human Households & Population in Livestock farming* / Agregados familiares criadores / Ménage engagés dans l'agriculture et l'élevage
  - 1. *Human Population* / Agregados familiars / Ménages et population humaine

This information is available from NSB.

- Module 3 *Production Parameters* / Produção animal / Production animale
  - 1.*Slaughter* / Abate (carne) / Abattages
  - 2.*Milk* / Leite / Lait
  - 3.*Dairy products* / Lacticinios / Produits laitiers
  - 4.*Eggs* / Ovos / Oeufs
  - 5.*Hides, skins* / Curos e Peles / Cuirs et peaux

Example of a training sequence: Component Animal Production with two modules and 9 templates (reporting templates)

These templates are all reflected into the LIMS application with a similar tabular visual approach.

Screen corresponding to the census template by economic function (also attached to the header template in the first screen tab).

We will not display in this report the **entire set of templates and related screens** (provided into the CD delivered at the end of the training).

We will only **highlight** hereafter **some templates** where **comments were made** during the presentation and the training on both the templates and the application (screens). More comments will flow to PRINT thanks to the participants who shall use the **comment sheet** provided during the training.

Type of product	Locally produced (tons) and % coverage	Imports (tons)	Total (tons)

Pork	687 (55%)	564 (45%)	1,251
Poultry: broiler	1,439 (60%)	960 (40%)	2,399
Eggs	21 M (100%)	800 (98.8%)	810
Beef	10 (1.2%)		
Lamb	None (though Goat starting)	163.61(100%)	163.61
Goat		59.25 (100%)	59.25
Duck		5.58 (100%)	5.58
Turkey		0.6 (100%)	0.6

Production (% self sufficiency) and Import (source SAA)

Various production are promoted in the Seychelles . Some farm management is trained at SAHCT for young farmers.

Goat trial at SAHTC

Dairy Cattle trial stable at SAHTC, the litter is made of tree leaves

Cattle in the islands : traditional way of rearing (alike most islands in the Indian Ocean
or the Caribean islands where land and space is scarce)

Cattle traditional way of rearing, close to the mangrove swamps: all sort of edible plants can be used.

A Sow at the genetic centre with its piglets, the centre keeps gilts and boars for dissemination. Cuban technical assistance is given to the centre (advisors attended our seminar).

Fatteners use pigglets from the genetic centre or from their own farm breeding system

B. **PIG AND CATTLE**

(i). Pigs and Cattle slaughtered (Mahe & Praslin) during the year

	2006						2007					
	No	Live weight kg	Carcass weight kg	A.L.W. kg	A.C.W. kg	Rec Rate %	No	Live weight kg	Carcass weight kg	A.L.W. kg	A.C.W. kg	Rec Rate
(i) Pigs												
Mahe: SMB	816	60689	46585	74.1	56.9	76.8	437	28923	22020	66.2	50.4	76.1
Butchers	8186	781750	624751	95.5	76.3	79.9	7990	737819	590255	92.3	73.9	80.0
Sub total	9005	842438	671336				8427	766742	612275			
Praslin: Butchers	823	70573	56458	85.7	68.6	80.0	1057	93358	74686	88.3	70.6	80.0
Grand Total	9828	913011	727794				9484	860100	686961			
Average				85.1	67.3					82.3	65.0	
(ii) Cattle												
Mahe	59	15250	7627	258.5	129.3	50%	70	14094	7050	201.3	100.7	50%
Praslin	11	5254	2627	477.6	238.8	50%	12	5036	2518	419.7	209.8	50%
Total	70	20504	10254				82	19130	9568			
Average				368.1	184.1					310.5	155.3	

Production slaughterd in Mahe and Praslin in 2007 and 2006

INTERNAL POLICY

LIVESTOCK PRODUCTION

Poultry

All poultry operations have to be set up in accordance with existing legislation.

Broiler

Existing Producers

Mahe

1.	SADECO	-	45-50,000/cycle
2.	IDC	-	57,000 /cycle
3.	N. Adeline	-	41,000 /cycle
4.	Usice	-	3,000 /cycle
5.	Anse Polite	-	12,000 /cycle+
6.	Pothin	-	1,500 /cycle
7.	R. Pillay	-	4,000 /cycle
8.	Lautee	-	4,000 /cycle
9.	M. Pillay	-	2,000 /cycle

Praslin

10.	Anse Kerlan Farm	-	5,000 /cycle

La Digue

11.	L'Union Estate	-	2,000 /cycle

* The schools, Bird, Denis, Darros and Fregate Islands each take a small amount for teaching/own consumption.

- It is accepted that a total of 15 broiler producers will be allowed within the country ie:- 13 on Mahe
  1 on Praslin
  1 on La Digue

Production Quotas are provided to the producers.

Farms and farming premises can be high in altitude within the slopes of central mountains

Layers in Mahé

Some egg production trays ready to go to Victoria market.

Seasonally Seychellois also eat *Golet* eggs from a natural tern population (collection on the nesting sites where authorized).

Tern eggs are also eaten

(6) **Estimated Egg Production**

Month	Total from Hatchery	Allowance Mortality 10%	Estimated Birds In Lay	Estimated Eggs Per Day	Egg Production For Month
January	104471	10447	94024	61116	1,894,596
February	98056	9806	88250	57363	1,606,157
March	95708	9571	86137	55989	1,735,664
April	95424	9542	85881	55823	1,674,691
May	99410	9941	89469	58155	1,802,800
June	97914	9791	88123	57280	1,718,390
July	104086	10409	93677	60890	1,887,600
August	100147	10015	90132	58586	1,816,165
September	104280	10428	93852	61004	1,830,114
October	95547	9555	85992	55895	1,732,745
November	100825	10082	90743	58983	1,769,479
December	91650	9165	82485	53615	1,662,073
Total					21,130,474
Average/Month			89064	57892	1,760,873

Parameters used for above calculations

- No of day old chick sold by the hatchery over a rearing period of 18 months

- Mortality over rearing period 10%

- Laying period 13 months

- Average laying 65%

Egg production estimates (source SAA)

Wood shaving is used for littering in poultry farms, as forest and trees are plenty in Seychelles

Day old chicken

Performance figures in broilers

(4) **CHICKEN MEAT PRODUCTION**
Local and Imports

	2006			2007			Remarks
	Number Slaughter	Weight Tons	Prod. Ratio %	Number Slaughter	Weight Tons	Prod. Ratio %	
a) Local							
Praslin	85653	157	6.58	65132	118	4.92	
Mahe	810567	1403	58.42	781805	1321	55.06	
Sub Total (local)	896220	1560	65.40	846939	1439	59.98	
b) Imports							
SMB		395.8	16.59		580.03	24.17	
Fregate Island Res.		3.0	.13				
Banyan Tree Res.		33.6	1.41		59	.02	
St. Anne Res.		20.8	.87				
Hospitality Supply		349.0	14.63		183.42	7.64	
Plantation Club		6.6	.28		4.00	.17	
Supa Save		10.5	.44		21.64	.90	
Desroches Res.		2.7	.11				
Global Supply		2.8	.12		23.10	.96	
ISPC Seychelles		.4	.02				
E'Is Product					94.24	3.93	
Fresh Cuts					36.17	1.51	
Sky Chef					3.09	.13	
Peoples Supermarket					11.04	.46	
Leumuria Resort					2.80	.12	
Apex Supply					.21	.01	
Sub Total (Imports)		825.2	34.60		960.33	40.02	
Grand Total		2385.2			2399.33		

Meat production

2008	LIVESTOCK QUARTERLY REPORT: PRODUCTION & IMPORTATION								FIGURES	
2008	JANUARY			FEBUARY		MARCH		QUARTER		
BROILERS	NO.	TONS	NO.	TONS	NO.	TONS	NO.	TONS		
Mahe	67 142	117,34	60 687	104,27	59 137	94,32	186 966	315,93		
Praslin	10 587	18,74	10 376	18,35	9 619	15,59	30 582	52,68		
Total local tons	77 729	136,08	71 063	122,62	68 756	109,91	217 548	368,61		
Import tons	N/A	3,8	N/A	122,15	N/A	40,52	N/A	166,47		
Total local + imports	N/A	139,88	N/A	244,77	N/A	150,43	N/A	535,08		
% local	N/A	97,28	N/A	50	N/A	73,06	N/A	68,88%		
% imports	N/A	2,72	N/A	50	N/A	26,94	N/A	31,12%		

2008	OCTOBER	TONS	NOVEMBER		DECEMBER		QUARTER	
BROILERS	NO.	TONS	NO.	TONS	NO.	TONS	NO.	TONS
Mahe	60 008	116,77	11 420	23,05	24 510	47,6	95 938	187,42
Praslin	16 524	22,33	10 310	14,85	17 679	27,8	44 513	66,98
Total local tons	76 532	139,1	21 730	37,9	42 189	75,4	140 451	254,4
Import tons	N/A	164	N/A	76	N/A	103,09	N/A	343,09
Total local + imports	N/A	303	N/A	114	N/A	178,49	N/A	597,49
% local	N/A	45,9	N/A	3324%	N/A	42,24	N/A	42,57%
% imports	N/A	54,1	N/A	66,76	N/A	57,76	N/A	57,43%

2008	OCTOBER	TONS	NOVEMBER		DECEMBER		QUARTER	
BEEF	NO.	TONS	NO.	TONS	NO.	TONS	NO.	TONS

	NO.	TONS	NO.	TONS	NO	TONS	NO.	TONS
MAHE	2	0,24	1	0,12	8	.0.96	11	1,32
PRASLIN	0	0	0	0	1	0,12	1	0,12
Total local tons	2	0,24	1	0,12	9	1,08	12	1,44
Import tons	N/A	86,16	N/A	44,57	N/A	151	N/A	282
Total local + imports	N/A	86,4	N/A	44,69	N/A	152,08	N/A	283,44
% local	N/A	0%	N/A	0,27	N/A	0,72	N/A	0,50%
% imports	N/A	99,73	N/A	99,73	N/A	99,28	N/A	99,50%

2008	OCTOBER	TONS	NOVEMBER		DECEMBER		QUARTER	
PORK	NO.	TON'S	NO.	TONS	NO	TONS	NO.	TONS
MAHE	506	38,31	335	25,93	562	43,5	1 403	107,74
PRASLIN	75	5,75	33	2,53	36	2,76	144	11,04
Total local tons	581	44,06	368	28,46	598	46,26	1 547	118,78
Import tons	N/A	71,56	N/A	65,65	N/A	41,80	N/A	179,01
Total local + imports	N/A	115,62	N/A	94,11	N/A	88,06	N/A	297,79
% local	N/A	38,1	N/A	30,24	N/A	52,53	N/A	39,88%
% imports	N/A	61,9	N/A	69,76	N/A	47,47	N/A	60,12%

2008	OCTOBER	NOVEMBER	DECEMBER	QUARTER
Eggs	2 044 977	2 103 524	2 051 270	6 199 771
Layer chicks	5 757	6 262	6 666	18 685
Broiler chicks	94 977	65 824	104 292	265 093

	LIVESTOCK QUARTERLY REPORT:PRODUCTION & IMPORTATION						FIGURES	
2007	JULY		AUGUST		SEPTEMBER		QUARTER	
BROILERS	NO.	TONS	NO.	TONS	NO.	TONS	NO.	TONS
Mahe	68 212	121,34	62 644	105,06	58 062	93,26	188 918	319,66
Praslin	6503	11,98	5 980	11,98	6 821	12,63	19 304	36,49
Total local tons	74 715	133,32	68 624	116,94	64 883	105,89	208 222	356,15
Import tons	N/A	70,43	N/A	109,06	N/A	91,72	N/A	271,21
Total local + imports	N/A	203,75	N/A	226	N/A	197,61	N/A	627,36
% local	N/A	65,43	N/A	51,74	N/A	53,59	N/A	56,76%
% imports	N/A	34,57	N/A	48,26	N/A	46,41	N/A	43,24%

	LIVESTOCK QUARTERLY REPORT:PRODUCTION & IMPORTATION						FIGURES	
2007	OCTOBER		NOVENBER		DECEMBER		QUARTER	
BROILERS	NO.	TONS	NO.	TONS	NO.	TONS	NO.	TONS
Mahe	72 182	123,14	62 169	99,08	67 388	117,47	201 739	339,69
Praslin	0	0	8	16,0	9	15,1	18	31,1

			582	5	755	3	337	8
Total local tons	72 182	123,14	70 751	115,13	77 143	132,6	220 076	370,87
Import tons	N/A	126,66	N/A	79,12	N/A	177,76	N/A	383,54
Total local + imports	N/A	249,8	N/A	194,25	N/A	310,36	N/A	754,41
% local	N/A	49,29	N/A	59,26	N/A	42,72	N/A	49,16%
% imports	N/A	50,71	N/A	40,74	N/A	57,28	N/A	50,84%

2009	JANUARY		FEBUARY		MARCH		QUARTER	
BROILERS	NO.	TONS	NO.	TONS	NO.	TONS	NO.	TONS
Mahe	33 005	59,74	45 834	82..96	33 370	60,4	112 209	203,1
Praslin	7 584	8,43	0	0	16 538	27,09	24 122	35,52
Total local tons	10 884	68,17	45 834	82,96	49 908	87,49	136 331	238,62
Import tons	N/A	3	N/A	52,79	N/A	67,01	N/A	122,81
Total local + imports	N/A	71,17	N/A	135,75	N/A	154,5	N/A	361,43
% local	N/A	95,78	N/A	61,11	N/A	56,62	N/A	66,02%
% imports	N/A	4,22	N/A	38,89	N/A	43,38	N/A	33,98%

Diversity of functions of the livestock: Manure could be accounted for in the module M4 of LIMS to value its frequent use like wood shaves kept from fattening pigs. It is used in Seychelles for fertilizing vegetable and gardening of Hotels and private garden etc.. Historically fertilizer was also taken from the *guano* on the coasts.

Diversity of functions of the livestock: Cart and animal draft power is another use of cattle in La Digue (also used by tourists). It is also used in some mills for grinding the *coprah* produced from the coco tree.

- Module 4 *Livestock & Products Price* / Preços dos productos animais / Prix des produits d'élevage et animaux vivants
    - 1. *Live animals* / Animal vivo / Animaux vivants
    - 2. *Meat products* / Producto de carne / Produits carnés
    - 3. *Milk products* / Leite e Lacticinios / Produits laitiers
    - 4. *Eggs* / Ovos / Oeufs
    - 5. *Hides & skins /* Curos e Peles / Cuirs et peaux
    - 6. *Fiber & feathers /* Fibras e plumas / Fibres animales et plumes

Frozen products (from national production) in supermarkets

Frozen products (from national production) in supermarkets

Frozen products (from national production) in supermarkets

Some bush meat (from flying foxes "Roussette bats") can also be found in traditional markets as they abound in the islands.

The rousette bat eats fruits

- Module 5 *Livestock & Products trade: import/export* / Importação e Exportação / Import et Export
    - 1. *Live Animals* / Animal vivo / Animaux vivants
    - 2. *L. stock Products* / Productos animais / Produits d'élevage
    - 3. *L. stock Inputs /* Inputs / Intrants de l'élevage

Import of live animals are summarized in the following items (source SAA)

- Poultry: all hatching eggs imported (Holland).
- Swine : breeding stock imported and distributed to farmers by the Pig Genetic Center, (2007 from Spain & 2003 from RSA)
- Bovine: AMZ in 1979 from Australia Brown Swiss (semen) from Germany
- Small ruminants: last import 1980 from UK

MONTHLY BREAKDOWN FOR CONCESSIONS ON TRADES TAX & G.S.T. - 2007

Month	Serial No	No of application	Farm Inputs	Propagation Materials	Transport	Butchery Machinery Equipment Inputs	Farm Machinery Equipment	Vet Drugs	Total	Remarks
January	01-09	9	8406	1764	317122	223311	791		551394	
February	10-18	9			558990	48712	93494	16931	718127	
March	19-26	8			438161		179977		618118	
April	27-44	18			684220	463404	1423505	25558	2596687	
May	45-57	13			471808	591574	86983	8686	1159051	
June	58-62	5			122801	54400	258740		435941	
July	63-75	13	40066		265063	130184	251553	5614	692480	
August	76-87	12	11897		579146	135542	167942	11654	906181	
September	88-99	12			651309	200044	18959		870312	
October	100-120	21	30070		1494146	167356	674879	41281	2407732	
November	121-128	8	-	-	126981	150264	602157	1284	880686	No 125 Not Approved
December	129-133	2			130000	22529	364724		517253	
Total		133	90439	1764	5829727	2187320	4123704	111008	12353962	

(c) Importers and types of Meats Imported (2007) in tons

Importers	Beef	Pork	Lamb	Goat	Chicken	Duck	Turkey	Remarks
SMB	628.76	434.54	106.05	59.25	580.03	4.52	02	
El's Product	61.56	50.49			94.24			
Global Supply	18.73	15.43	10.80		23.10	25	07	
Hospitality Supply	57.91	22.91	34.84		183.42			
Supa Save					21.64			
Fresh Cut	19.11	37.14			36.17	50		
Banyan Tree	1.54	.53	.50		59			
Sky Chef	2.22	1.49	.99		3.09			
ISPC (Sey)			.32				.10	
Peoples Supermarket	5.13		6.08		11.04			
Plantation Club	2.78	.50	.51		4.00			
Lemuria Resort	.75	.81	.65		2.80			
Apex Supply	1.50	.58	2.87		.21	.31	.40	
Total	799.99	564.42	163.61	59.25	960.33	5.58	.59	

(2) **BEEF PRODUCTION (LOCAL & IMPORTS)**

	2006			2007			
	No	Tons	Ratio %	No	Tons	Ratio %	Remarks
Mahe	59	7.63	1.09	70	7.05	.87	
Praslin	11	2.63	.37	12	2.52	.31	
Sub Total (Local)	70	10.26	1.46	82	9.57	1.18	
Imports							
SMB		566.84	80.89		628.76	77.67	
Fregate Is. Res.		5.77	.82				
Banyan Tree		1.68	.24		1.54	.19	
St Anne Res.		4.13	.59				
Hospitality Supply		39.68	5.66		57.91	7.15	
El's Product		44.54	6.36		61.56	7.61	
Plantation Club		2.72	.39		2.78	.34	
Fresh Cut		22.33	3.19		19.11	2.36	
Desroches Res.		1.53	.22				
Global Supply		1.18	.17		18.73	2.31	
ISPC (Sey)		.09	.01				
Sky Chef					2.22	.28	
Peoples Supermarket					5.13	.63	
Lemuria Resort					.75	.09	
Apex Supply					1.50	.19	
Sub Total (Imports)		690.49	98.54		799.99	98.82	
GRAND TOTAL		700.75			809.56		

Import stats are available from SAA and NSB and can be compared to the national production

- Module 6 LS *Infrastructures* / Infra-Estructuras / Infrastructures

  Generic Partitions / Divisões do pais / Divisions du pays
  - 1.Administrative / Administrativa / Administratives
  - 2.Technical / Tecnico / Techniques

Cf. specific chapter

Infrastructures *Agreg*. / Infra-Estructuras Agregados / Infrastructures description agrégées
- 3.*Dipping* / Tanque banheiros / Bain détiqueur
- 4.*Pens* / currais / Enclos de vaccination
- 5. *Vet clinics* / Clinicas vet. / Cliniques vétérinaires
- 6.*Govt Offices* / Officios do governo / Bureaux de l'état
- 7. *Mun Abattoirs & slabs* / Matadouros municipais e locais e casas de matança / Abattoirs locaux et tueries
- 8. *Milk Collection* / Recolha de leite / Récolte de lait liquide
- 9. *Livestock Markets* / Mercados de Gado / Marchés
- 10.*Storage Products* / Armazens / Entrepôts et Stocks

Infrastructures Detailed / Infra-Estructuras detalhados / Infrastructures détaillées
- 1.*Vet Diagnostic Labs* / Laboratorios de diagnostico / Laboratoires de diagnostic
- 2.*Vet Vaccine Labs* / Productores de Vacinas / Producteurs de vaccins
- 3. I*ndustrial Abattoirs* / Matadouros industriais / Abattoirs industriels
- 4.*Dairy Processing Plants* / Usina de transformação de leite / Unité de transformation laitière
- 5.*Secondary Markets*, / Mercados segundarios / Marchés secondaires
- 6. *Port of Entry & Exit* / Portos de entrada e saida / Postes d'inspection en frontière PIF

The abattoir in Mahé can slaughter poultry and large animals (ruminants)

2) **Abattoir Throughput**

(i) **Mahe**

Month	Birds slaughtered	Live Weight		Dead on Arrival		Condemned			Dressed Weight		Recovery Rate	No of Days Slaughter	Average No per Day	Av. Days At Slaughter
		Total (Kg)	Kg/Bird	No	Kg	No	Kg	Parts	Total	Kg/Bird	%			
Jan	73426	165308	2.25	100	215	132	152	704	134704	1.83	81.74	21	3496	44
Feb	57518	112986	1.96	119	210	193	154	400	90502	1.57	80.35	16	3595	43
March	66111	139201	2.11	63	134	62	64	397	113323	1.71	81.64	19	3480	42
April	60088	120179	2.00	266	512	110	105	293	97373	1.62	81.54	16	3756	43
May	74708	153810	2.06	105	201	115	114	358	125073	1.67	81.58	18	4150	45
June	59290	124678	2.10	277	605	79	81	277	100715	1.70	81.46	16	3706	43
July	68212	150919	2.21	102	240	51	62	435	121338	1.78	80.66	18	3790	43
Aug	62644	131245	2.10	110	227	56	47	407	105064	1.68	80.36	19	3297	42
Sept	58062	118117	2.03	95	160	133	142	466	93256	1.61	79.31	15	3871	44
Oct	72182	150684	2.06	135	291	57	52	354	123135	1.71	82.01	19	3799	42
Nov	62169	122392	1.97	91	175	79	73	362	99975	1.60	81.23	17	3657	44
Dec	67388	142053	2.11	71	171	74	80	358	117476	1.75	82.06	18	3744	43
Total	**781805**	**1631612**		**1534**	**3141**	**1134**	**1126**	**4831**	**1320048**			**212**		
Average			**2.09**							**1.69**	**81.16**	**18**	**3695**	**43**

Production at the abattoir in Mahé

The Pig Breeding centre

Some of the IS of interest that could be recorded are the Hatchery, the Feed mill & the Abattoirs (in Praslin and Mahé), the breeding centre etc… If no GPS marks is know it is easy to use Google Earth or zonum to record their GPS location in WGS 84.
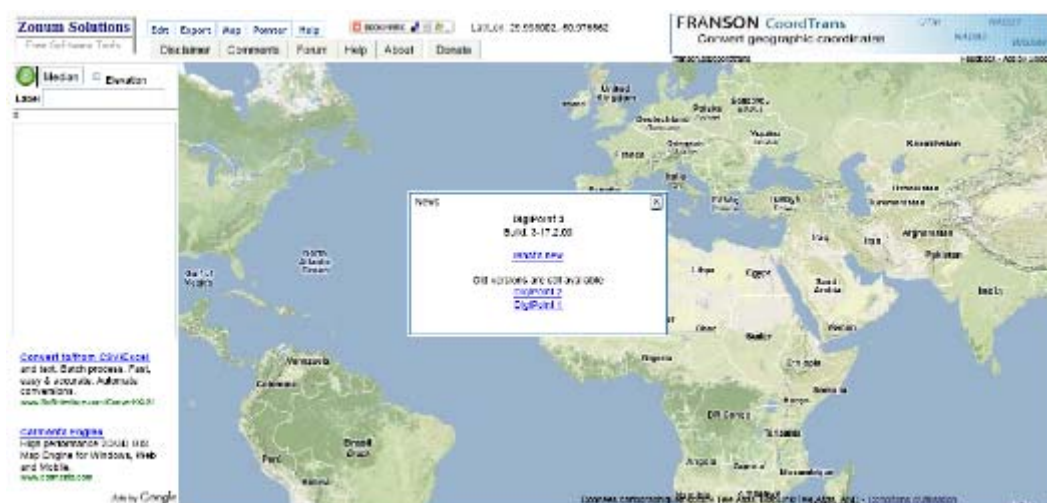
Marking and informing on a location, you do not need a GPS: in some cases you can do it from your office cf. http://www.zonums.com/gmaps/digipoint.php
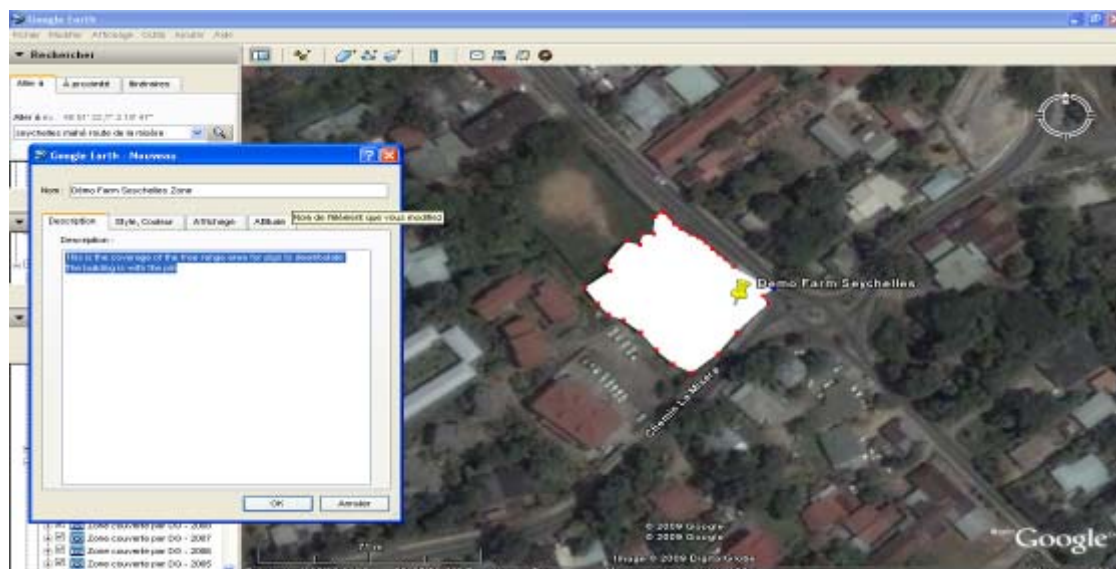
An example demonstrated during the training on how to record a location without a GPS using Google Earth: Training on GIS concepts, Lat: -4°38'22.67"S / Long: 55°27'53.97"E

- Module 7 *Meat Inspection / Food safety* / Segurança Sanitaria dos alimentos / Sécurité sanitaire des aliments
  - 1. Ante-mortem / Inspecção ante mortem / Inspection ante mortem en abattoir
  - 2. Post-mortem / Inspecção post mortem / Inspection post mortem en abattoir

- Module 8 *Livestock Associations and Service Providers /* Associações de criadores e fornecedores de servicios / Association d'éleveurs et fournisseurs de services
  - 1.*Umbrella org & assoc* / Associações profissionais / Associations et Confédérations
  - 2.*Private companies* / Sector Privado / Secteur privé
  - 3.*Government* / Sector Publico / Secteur public

The SFM (SFM Seychelles Farmer's Marketing) is one of the associations that can be inventoried into the LIMS. They nowadays are the owners & managers of Abattoir, the Hatchery, Feed mill

- Module 9 *LS related Laws, Regulation and Acts, policy docs* / Legislação e politicas agro pecuaria / Législation et documentsd e politique sur le secteur élevage
  - 1.*National Docs* / Documentos al Nivel nacional / niveau national
  - 2.*International Docs* / Documentos al Nivel internacional e regional (SADC) / Niveau international ou sous régional (SADC)

Regulations covering livestock production:

Pig Production Control Act (1984 – SAA)
Poultry Keepers Act 1986 (SAA)
Animal (Diseases and Imports) Act (1981 – SAA)
Public Health Act (1978 MoH)
Food act (MoH)
Environment Management and Protection Act (MENR & T) -
Town and Country Planning Act (MND -)

Policy documents

The Agricultural Development strategy (2007-2011) launched in November 2007.
The Food Security Strategy 2008-2011 launched May 2008
Economic restructuring programme

- Module 10 *Disease Outbreak notification* / Notificação dos surtos de doenças / Information sanitaire notification d'épidémies animales
  - *Outbreaks* / Epidemias focos / Foyers d'Epizooties animales

Seychelles has a **highly favourable** animal health status and is free from a number of livestock diseases of public health & economic importance. Over the years, the surrounding seas have been an effective barrier against unwanted pest and diseases (TADs & NEDs). Nevertheless informal trade in neighbouring islands (Comorus and Madagascar) should be looked at seriously as it may represent a threat to the local animal population (e.g. after the recent importation of theileriosis (ECF) in Comorus). Besides the climat change is bringing new conditions that may pose the problem of vector import and newly emerging diseases (NED's).

Some diseases are of public health concern like **leptospirosis**. The ministry of Health and the SAA can easily collaborate by sharing epidemiological data and information in view of tackling the disease. It was not possible to know the leptospirosis strains involved.

Reported Cases of Leptospirosis by Sex 1995 to 2008 in Seychelles

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Female	5	5	6	1	5	2	10	5	1	1	2	12	9	6
Male	53	50	45	35	16	22	60	47	34	34	24	34	49	34

Number of Cases by Year and Sex
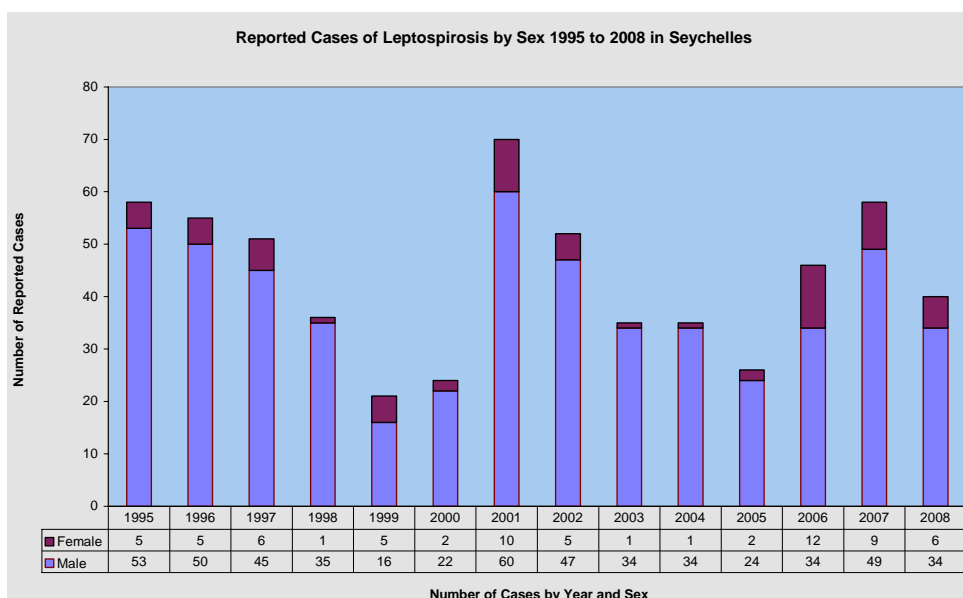
Information on **leptospirosis (source MoH) :** Time series **leptospirosis**

Total cases of leptospirosis by district 2001 to 2008
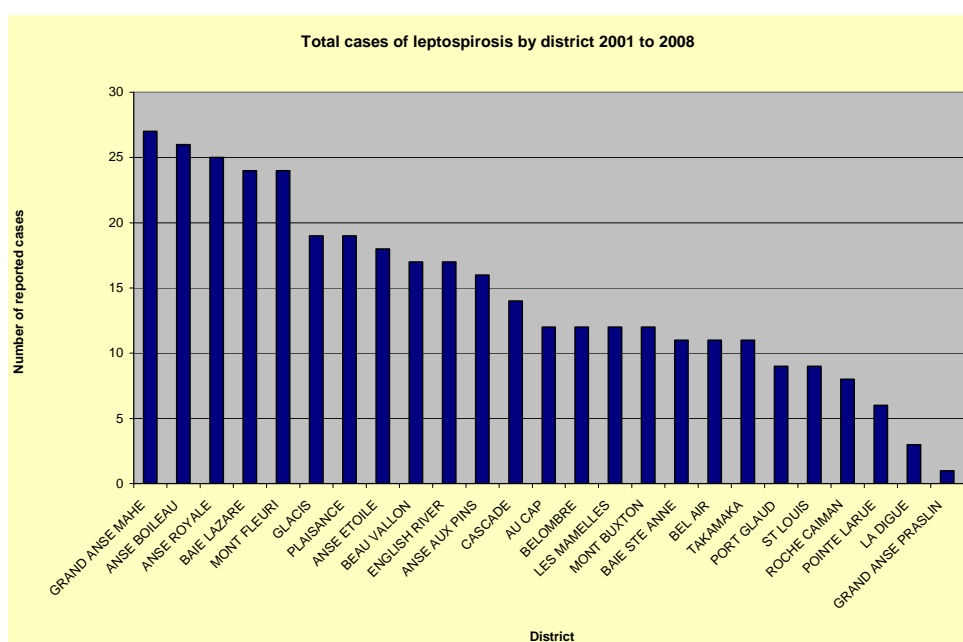
Leptospirosis by district

- Module 11 *Vaccinations* (e.g. TAD's) / Vacinação / Vaccinations
  - 1.*Vaccination* / Vacinações efectuadas / Vaccinations effectuées (prophylactique et de contrôle)

Mareks – layer DOCs (hatchery 72K ds)
IBD – layers (1 farm 60Kds)
Fowl pox – layers (1 farm 60Kds)

Principles to be used for LIMS management

Components have **modules** with indicative "reporting **templates"** (provided as an Excel data sheet, all contents reproduced into the application in MS Access© into screens) which pertain to modules. Therefore there are three levels for categorizing and coding the contents Component Ci Module Mj Template Tk, example C1M1T1.

4. Processed Dairy Products (from all species)												
Partition 1, e.g. Region/Province	Partition 2, e.g. District	Pasteurized milk Lt**	UHT milk Lt	Fermented milk Lt	Yoghurt Lt	Cheese Kg**	Butter Kg	Cream Lt	Powder milk Kg	Other* products	Other * products	Other * products
Reg/prov 1…….	Dist 1…..											
	Dist 2…..											
	Dist 3…..											
Reg/prov 2…….	Dist 1…..											
	Dist 2…..											
	Dist 3…..											
etc												

* Specify which product
** Lt= Litres, Kg= Kilograms

LIMS gives option for cattle and goat = wrong

LIMS: Milk equivalent not working   *LIMS: take out option "milk"*
LIMS: unit of measure kiloliters??   *Not in LIMS: fermented milk, cream, other products*
    LIMS: Yoghurt/fermented products together

The dairy production template belongs to the production parameters module and to the animal production component.

An SoP sheet can be informed indicating the responsibility for this module and template

The header of the template also repeats the source of information used.
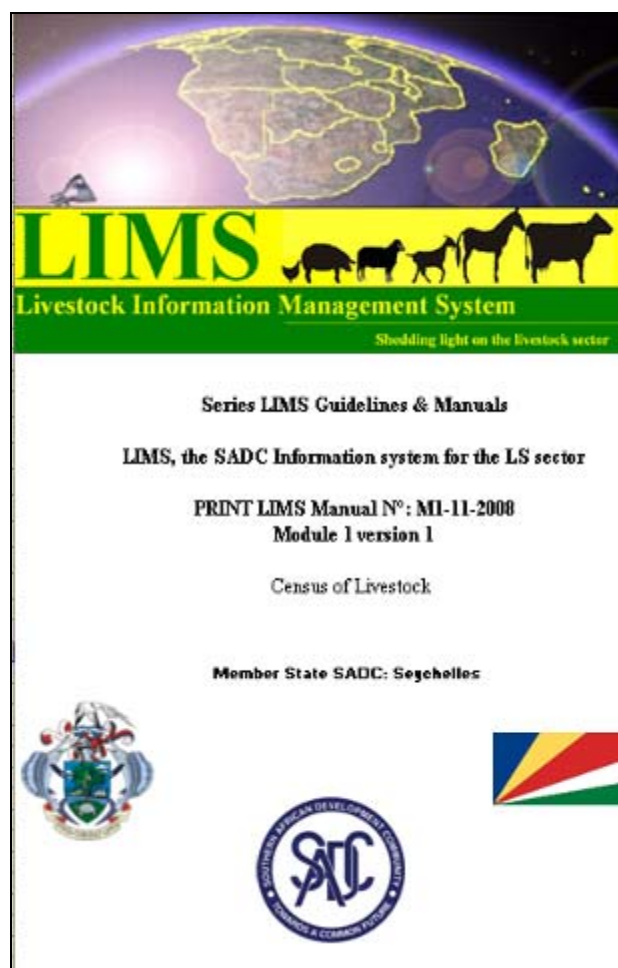
Customized front page are used (can be changed by MS) to improve national ownership on the system

The data templates can be customized using the country and institutions' logos or insignas.
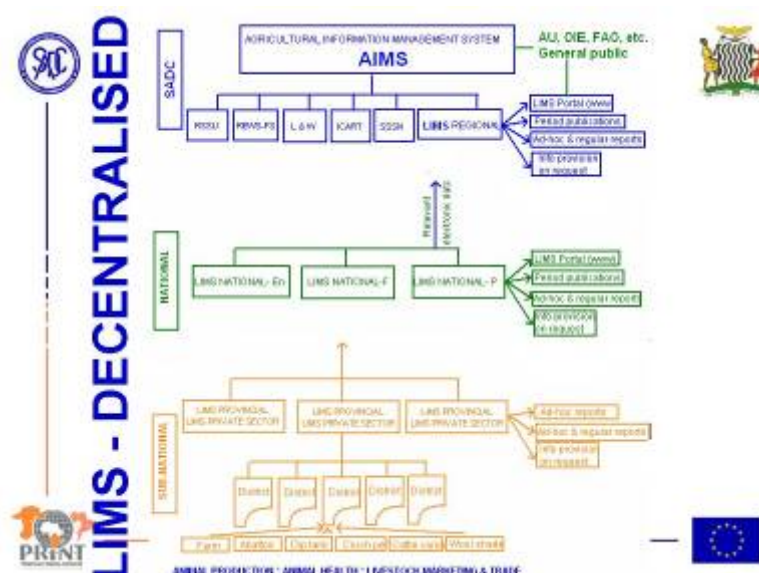
Figure: a simplified and structured Diagram of the potential ways of transferring data within a country and between SADC and countries. All layers cannot be equipped with **computers** or connectivity so far, therefore the use of **excel templates** and **paper report** mimicking the excel templates is also recommended. The use of some **cell phone and mobile Internet (3G modem**

technology) should soon facilitate the sending receiving of some information from a level to another.

The classic way of using LIMS is to directly type data into the database.
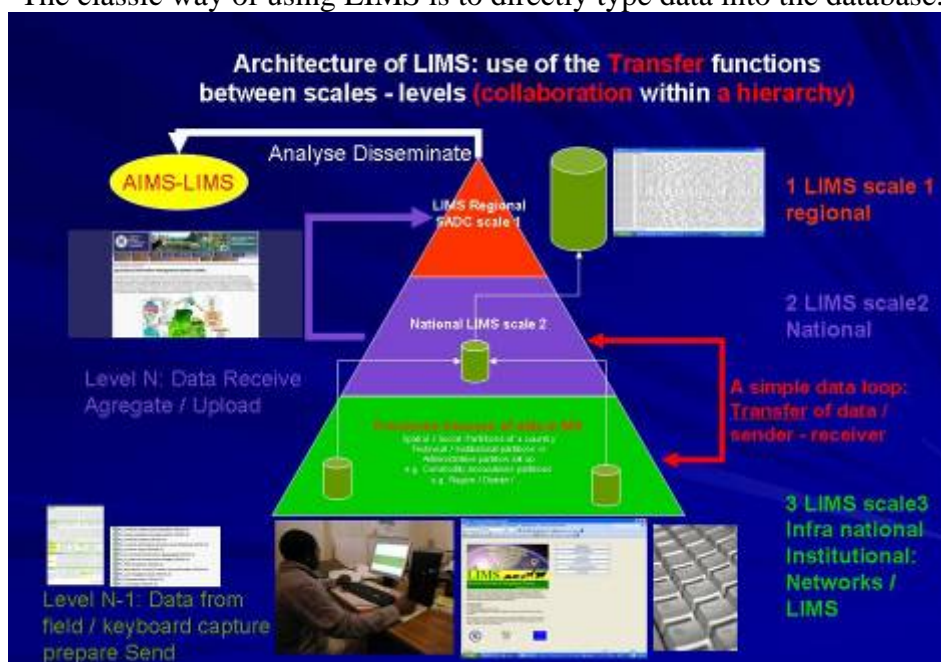
Field survey questionnaires can be derived from the tables to be used in the field at any hierarchical level, for instance linking the system with field data capture devices like Palm PC or the DPT (digital pen) technologies, soon to smart phones equipped with databases.

The templates can be used to derive field questionnaires used for censuses and surveys as they will represent the minimum dataset expected to be recorded in MS. The next agricultural and human censuses palnned in 2010 and 2011 could be an opportunity to record LIMS data is the most appropriate way by adapating the already existing survey material.

DPT Questionnaire derived from the template (minimum data set included): they are developed for Module 1 (census), Module 10 (disease), and 11 (vaccinations).
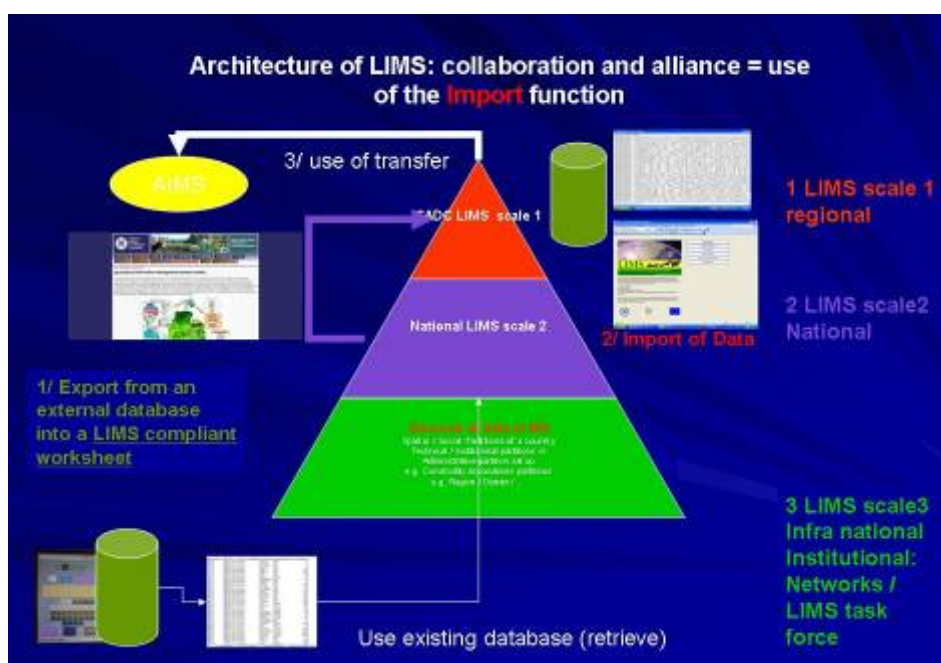
Once data captured it can imported using the Import facility of LIMS

Related Manuals on templates and the LIMS application

The generic manuals prepared by PRINT were released in the CD at this stage; they will be soon uploaded on the LIMS portal (Seychelles being the last country to be visited). The same applies for the Users manual (on how to manage the software).

They will be posted on line for download (last agreed version), including in a dynamic *wiki* manual for suggesting improvement, hard copies distributed during further meetings and workshops and sent to MS by the end of 2009 and in 2010.

The purpose of WIKI manuals: In general we recommend specific illustrations and comments for the country be added for any national training, to make them user friendly and more specific for the country. Therefore, it is recommended to add an empty frame in any national manual for MS to add

their own illustrations and text, in addition to the SADC "generic" contents in the manual provided. The revision of the manuals shall be further part of the mandate of the sub committees of SADC LTC which can make use of the WIKI platform.
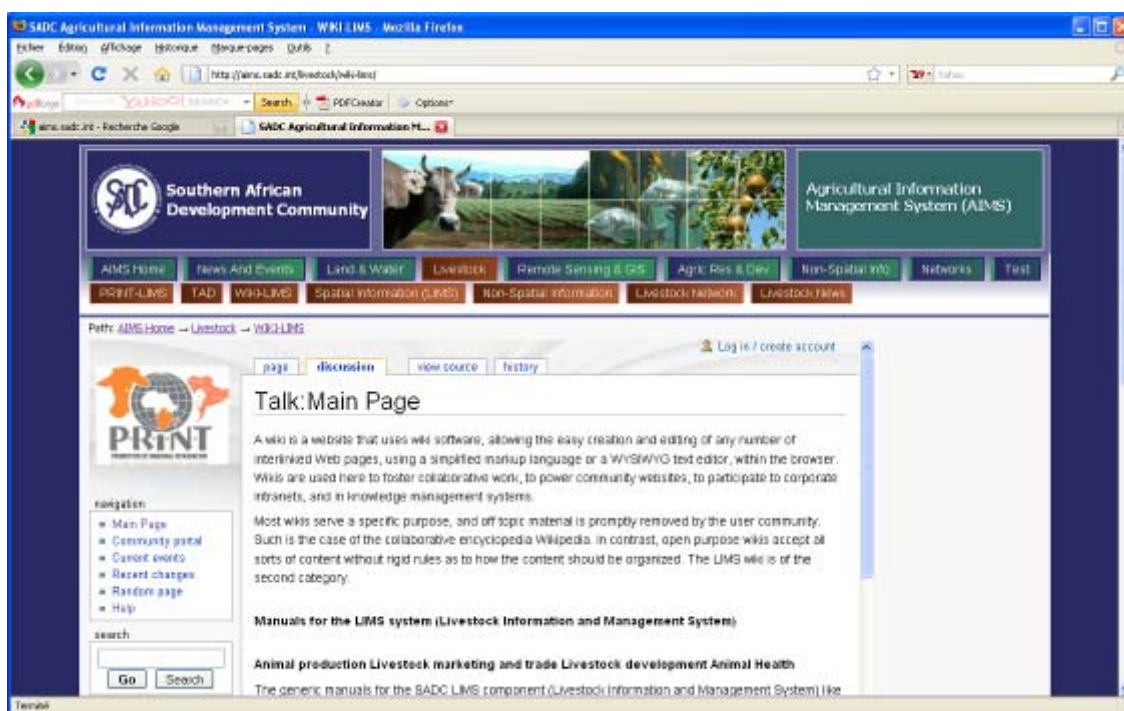
The wiki manuals on line (cf chapter 3-4)

3-3. Drafting of first LIMS SoP's for SEYCHELLES

The general principle of LIMS is to share the effort of collecting the data therefore it is named a collaborative statistical system. It requires the contribution of various institutions selected from the existing sources belonging to the national AIMS / LIMS networks. Therefore it is essential that such LIMS networks are formed and strengthened in all MS and procedures agreed upon by the members.

All **templates** (part of the modules) shall be associated with an **SoP**. This SoP is actually made of some **Metadata** (source of data etc..) on the report and statistics, plus an indication of which **institution** and **person** is dealing with the particular set of statistics (**module or template**) discussed. We at SADC recommend the drafting of SoP on the principle of at least "**one SoP per Module**" (or ideally it should be one SoP per template as part of a given module, but in general one institution will be in charge of an entire module).

The two following screens show the Excel version of one Metadata and one SoP as part for one module.

Every time a template is filled (equivalent of a data screen in the application) then a **header must be filled** with the given template to indicate e.g. the methodology used to get the data, the source of the data and the person responsible for the module. There are 11 modules, some have quantitative attributes (9/11) and two are non-quantitative (listing). All modules have such a header, which is almost similar in all templates, indicating the frequency of reporting and of submission to SADC, the person responsible and some indication on methodology and source for data submitted to the secretariat.

Metadata

SoP worksheet embedded into the LIMS Excel files (there is also a word version for a comprehensive SoP, with an indication of the process recommended to collectively build an SoP by the LIMS national networks, cf. Annexe)

SoP's are aimed at indicating the **roles and functions** of institutions when **contributing** (and **using**) the LIMS. After listing (mapping) the relevant institutions that could contribute to the LIMS, one should select the most relevant ones, and then convene a meeting with them and then agree on to organize the data flow. Therefore it will support the completion of the entire information chain for the given module or component of LIMS taken care of.
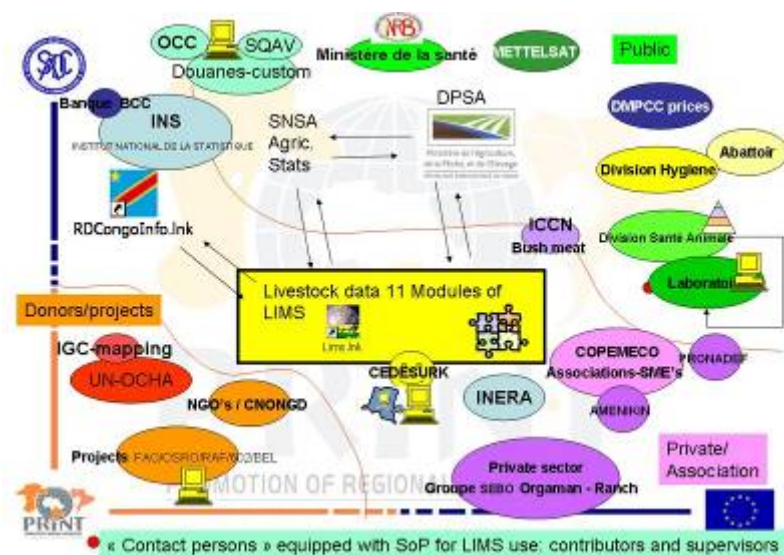
An example: a comprehensive **stakeholder map** made in DRC for LIMS information, shall now be reduced according to templates and modules and then reorganized in order to produce a set of recognized and accepted diagrams for contribution and use to/of LIMS.
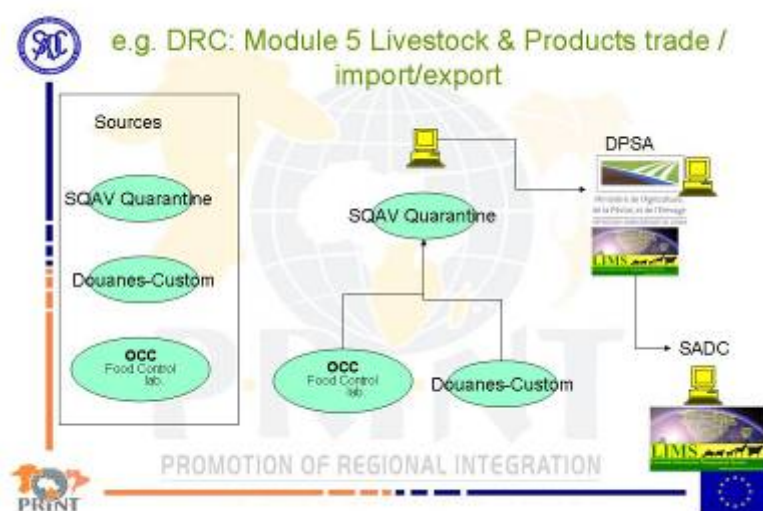
An example: a diagram to be included into an SoP for the Module 5: in DRC three institutions were identified as potential sources and one was selected to capture the data into LIMS and then transfer dataset to a national database, before it is reported to SADC. An information system using a LAN is highly recommended though the system provides for transferring data in other means (email an attached file, uploading through FTP, physical transfer by flash disk etc..).

The aggregation of individual diagrams can be attempted to present a global picture on how information will flow, therefore providing for the entire rationale of the LIMS network. It would explain how data flows from primary source to secondary and to the central database, using multiples sources (private and public) and multiple scales, all data being aggregated at a certain stages, therefore respecting the privacy of information provided.

It is essential to derive from such diagrams and SoP's (hardcopies) the roles and functions that will be implemented into the database (cf dedicated screens in the Administration Module), therefore giving access to some or all the functionalities and/or modules.

The person who submits the information should always be indicated into the header of the template and therefore its details should too be well described into the database.

The structure of the LIMS Folders reflects the circulation of information which is transferred: i.e. it is easy for training purpose to establish a correspondence with a letter which is written (files to send), posted (at the post office, sent files), then received (received files), open and read (uploaded files), and contents well recorded with traceability (log4upload)

Besides the Import and Export functions, back up & archiving functions are also featured in the structure with folders corresponding:

Stages recommended for implementing the LIMS in a given country.

In general, we recommend MS be gradually implementing the LIMS, by upgrading **hardware, software and humanware** given a national road map (a business plan specific to the country), though taking into account with due respect some **regional milestones** agreed upon at LTC and in sub committees of the LTC.

First stage
Firstly, it is advisable to make an **inventory** of what **data is available** without effort (already available in some institutions being major sources) therefore only requiring a networking exercise.

Second stage
Secondly, the system shall be improved by adding information when it will require little effort.

Third stage
A third stage will be when the completion of the data collection which will require significant effort. It is advised to benefit from other project funds, especially when such projects have been tasked to implement an **information system or a monitoring tool** for a part of or the entire Livestock sector.

An important aspect to consider is **HOW** the contributors will send their contribution **WHO** will, **WHEN**, **WHERE** with which **WHAT** i.e. their dataset (therefore contributing to the LIMS).
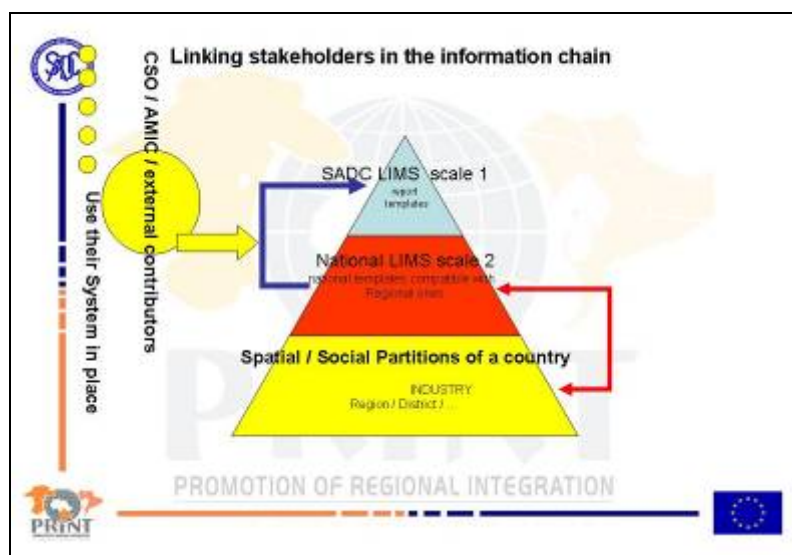
Last stage: Contribution and adoption of LIMS procedures, system and tools into other global information chains designed for monitoring the economic development of a country

LIMS SoP's Sheet (cf annexe)

A SoP sheet has been proposed by PRINT to be used as a guideline when drafting Standards procedures for exchange of information between the various members of LIMS network and sources (such SoP should be designed and improved by MS during their networking exercise).

This sheet shall be used to respond to the questions: **Who** will do **What** regarding LIMS templates and LIMS application? **Why When and Where**? This check list requires firstly the description of all potential actors: Institutions and name of a personnel and its details etc..

The objective of such guideleine is to develop and gradually finalize the **National & specific LIMS SoP's** in the country, i.e. **standard operating procedures** for running the LIMS system, therefore generating a **national network** of **stakeholders** (with their names and positions) which will have **FUNCTIONS** regarding data contribution and use of the system, such as:

- Be part of the **LIMS national Taskforce** which meets quarterly
- Take a responsibility or/and leadership to **provide** data (**contributors** as **primary** source **or secondary** source) and/or **submit dataset** to a "**parent**" **partner** (it could be NALEIC…) in the information chain. Such function can be broken down like:
  - o filling some templates (paper work or possibly into the corresponding excel worksheets)
  - o entering data into the screens of LIMS application (where ever it is installed)
- **Coordinate** the data capture, **follow up** the versioning of the LIMS application and update LIMS software in locations where it is installed (update may include changes in the reporting excel templates), and coordinate and **monitor** the submission to SADC
  - o **Act as** a national coordinator for the regular **submission to SADC**, but it could be required for any level of submission in the information chain
  - o **Download** the new **versions** of the LIMS **application** and **templates** (cf. versioning code) and of the **training material** (manuals) when released and
  - o **Revise** the national **SoP's** regularly (yearly)
- Act as a **Trainer** on LIMS, using generic manuals and update manuals by drafting country specific contents to better illustrate the use of LIMS (to **customize manuals** for a national purpose)

- **Use and Interact on the AIMS** / LIMS **portal**: use and contribute to the portal with general information on LS related events and information
- Participate to the **AIMS national network**

Drafting the first **country SoP's**, one by LIMS module, will also ensure:
- 1/ the proper **starting of the data reporting** to SADC (in excel or with LIMS) after the date of the visit of PRINT to MS (firstly using LIMS templates and preparing the compilation of datasets, secondly and gradually using the LIMS application)

    - by using **TEMPLATES in EXCEL** if one cannot use the application for some reasons, or if one wishes to use the excel templates in hard and soft copies in the field (at province and district levels). One should then also follow up updates of new versions of templates (if any) on the LIMS AIMS portal
    - by using **LIMS application** facilities, one should then also follow up updates of new versions on the LIMS AIMS portal: http://aims.sadc.int (Livestock part)

The drafting of SoP will again need to clearly:
- **Identify and list the various and potential source**(s) of information, the **types of data** that sources could provide and manage, one should acquire and share the knowledge on when and where data are available and published (.i.e. sources like web sites) in institutions where data are managed by experts (CSO etc..).
- **Prioritize** and **Select** a few **sources** which will contribute to the core system of 11 modules and start dispatching the LIMS roles and functions: list functions firstly so that *in fine* one institution will be selected to report to SADC

- 2/ A second goal during the networking effort with partners (when drafting SoP's) is also to start an in depth collection of the most recent **dataset available in the country for a year of reference (retrospective and detailed data** in hard or electronic copies using the LIMS templates).

It is needed in order to properly analyse some trends in the sector and therefore adequately prepare presentations for various SADC meetings like the LTC. It is also needed to prepare the drafting of the Regional Agricultural Policy during the planned workshops, where such data will be used). Electronic files should be preferred and sent to SADC PRINT.

- 3/ thirdly to **start process of collecting** elements for a "*5 years data retrospective time series*" in hard or electronic copies as well (in order to properly continue trends analysis)

(Particularly ask NSO to provide all relevant documents (possibly purchased for PRINT))

Constitution of a LIMS task force

It is recommended that a **LIMS task force** be constituted and that it meets **quarterly**.

It was agreed that the **Seychelles Agriculture Agency** should spearhead the adoption and day to day operation of LIMS in the countries. That is justified because the majority of data for several modules of LIMS are the mandates of the Agency. The stakeholders present at the meeting agreed to cooperate and with other partners whether these are data sources or users were identified.

As the way forward in creating the LIMS working group, it was agreed that the **SAA board** meet and discuss the LIMS adoption issues followed by invitation of the supervisors of the stakeholders present at the meeting for further concrete actions. Meanwhile, each participant will brief supervisors about the outcomes of the training and the stakeholder's seminar.

Potential contributors to LIMS in Seychelles
Some of the stakeholders mapped during the training and seminar:

Ministry of Environment, Natural Resources and Transport (MENRT)
Three departments:
Department of Environment:
This department has the port folio responsibility for biodiversity conservation through management of the National Botanic Gardens, the forestry sector, and the National Parks and reserves – both terrestrial and marine. Other responsibilities include Pollution Prevention and control, Environmental Impact assessment on a large scale projects, and solid waste management. The department also oversees the National Meteorological and climatological services section, the wetlands unit and the Drainage Unit.

Department of Natural Resources:
This department is the major government body engaged in the agricultural sector. Up until December 2008 this Department was responsible for development and implementation of all agricultural policies and the development of all fisheries policies. Fisheries policy implementation rests with the Seychelles Fishing Authority (SFA).

Department of Transport:
This department holds the responsibility for land transport, road works and maintenance, for maritime safety administration and the Seychelles Civil Aviation Authority.

SAA: Seychelles Agricultural Agency.
The Seychelles Agricultural Agency was enacted in December 2008 to see to the provision of better output and facilitation of better output and facilitation of the sector.

The **Agricultural Statistics Unit of SAA** collects production data from registered farmers.
In 2007 the unit received technical assistance from FAO (TCP Assistance) to develop a database and plan for agricultural census in 2011. Therefore the LIMS model shall be used to ascertain full compliance to the SADC system and collect the minimum data set recommended for SADC regional statistics. Other additional data and information can be collected too for national use.

SAA has also a **GIS unit** which is currently revising the agricultural cadastre.

The central database of LIMS will be established at SAA which objectives are:
- To facilitate and support the enhancement of **national food security**;
- To facilitate the increase of the **contribution of agriculture** in the country's gross domestic product;
- To facilitate the modernisation and development and **development** of the agricultural sector.
- To assist in the formulation of **national agricultural policies** and implementation of those policies.
- To support the development of the agricultural sector by providing **technical assistance and services** to that sector;
- To facilitate formal and informal **training of food producing entrepreneurs and technical personnel**;
- To facilitate the **maximisation of local production of meat**, such as **pork** and broiler **poultry**, table eggs and **valorise** other livestock types;
- To facilitate the maximisation of local production of arable crops;
- To encourage and promote **agricultural production at household level**;

- To encourage the exploitation of spices, floriculture, essential oils and traditional plantation crops for export as **value added products** and raw materials;
- To promote the production of **organic** crops;
- To promote **small scale agro processing** in collaboration with other organisations;
- To assist with the stocking of adequate amounts of quality **agricultural inputs and supplies** to meet the requirements of the agricultural sector;
- To ensure compliance with frameworks;
- To implement **programmes and projects** relating to agriculture and collaborate with relevant agencies in the implementation of those programmes and projects;
- To participate in **meetings, seminars and discussions** relating to agriculture at **national, regional** and international level;
- To perform such other functions that the minister, by order published in the Official Gazette prescribed.

LIVESTOCK PRODUCTION (TONS)

Year	Pork Local	Pork Import	Pork Total	Chicken Local	Chicken Import	Chicken Total	Beef Local	Beef Import	Beef Total
1988	350	-	350	546	-	545	61	-	61
1989	391	185	576	664	102	766	65	271	335
1990	456	215	671	669	203	872	60	233	293
1991	521	148	669	681	191	572	60	260	320
1992	366	165	531	830	262	1092	49	348	397
1993	468	254	622	935	138	1073	53	395	448
1994	615	14	629	991	30	1021	42	272	314
1995	422	165	587	934	151	1085	26	316	342
1996	371	192	563	1050	241	1291	24	322	346
1997	357	355	712	1262	144	1406	13	414	427
1998	450	448	898	1127	348	1475	16	460	476
1999	478	336	814	1158	300	1458	26	489	515
2000	574	436	1010	1279	285	1564	25	536	561
2001	588	365	953	1207	584	1791	20	503	523
2002	692	431	1123	1274	683	1957	14	590	604
2003	601	615	1216	1414	637	2051	12	424	436
2004	649	395	1044	1504	244	1748	17	519	536
2005	668	313	981	1544	336	1880	16	559	575
2006	671	638	1309	1560	825	2385	10	691	701
2007	687	564	1251	1439	960	2399	10	800	810

A summary of LS stats as provided by the SAA

Ministry of Health and Social Services MofHSS

Some topics are already source of collaboration between SAA and the Ministry of Health and Social Services

National Statistics Bureau

It is the official source of data collected nationally. The NSB collects agricultural data as part of the National Census. The last published National Agricultural survey was in 1978. The national statistics Bureau is the official information collection centre. Important agricultural information is collected during each population census. The last official agricultural survey was carried out in 1978 and one is being planned for 2011.
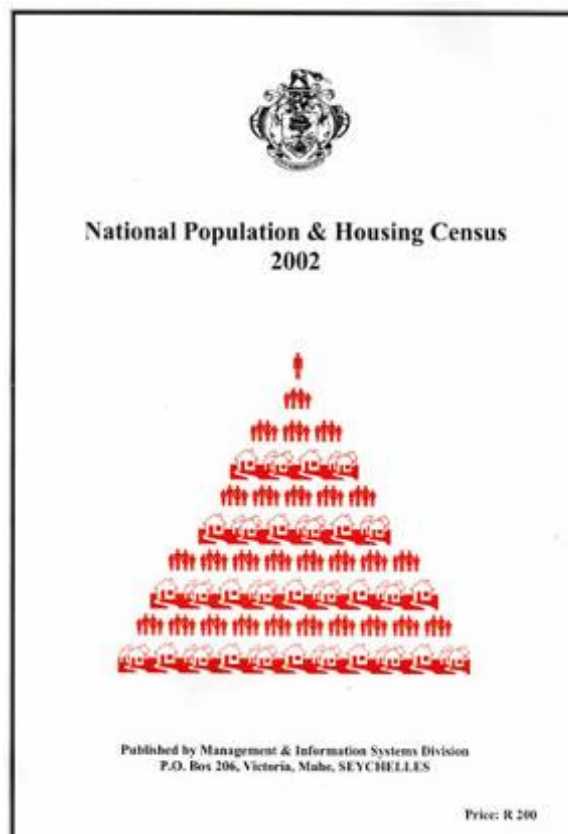
The NSB provides for the following list of publications, which contents can be selected to be used into LIMS

Title / Year / Prices

Census Report 1977 SR 80.00
Census Report 1987** SR 75.00
Census Report 1994 Volume 1 1994 SR 90.00
National Population & Housing Census 1997 SR 125.00
National Population & Housing Census 2002* SR 200.00
Seychelles Population & Housing Census - Atlas 2002* SR 150.00
The Population of Seychelles 1987 - 2012 1992** SR 35.00
Seychelles Population Projections 1996-2019 1997 SR 50.00
Household Expenditure Survey 1978 SR 60.00
1983/84 SR 45.00
1991 SR 60.00
1999* SR 115.00
Labour Force Survey 2005 SR 200.00
Agriculture Survey 1978 SR 60.00
Statistical Abstract 1977 SR 60.00
1978 - 1982 SR 50.00 each
1983 - 1986 SR 60.00 each
1987 - 1993 SR 70.00 each
1994 SR 75.00
1995 SR 85.00
1996 - 1998 SR 100.00 each
1999 - 2001 SR 115.00 each
2002 SR 130.00
2003 - 2005 SR 140.00 each
2006 SR 150.00
Trade Report 1978 - 1980 SR 60.00 each
1981 SR 30.00
1982 - 1983 SR 60.00 each
1984 - 1986 SR 70.00 each
1987 - 1994 SR 80.00 each
1995 SR 115.00
1996 SR 150.00
1997 SR 140.00
1998 SR 175.00
1999 - 2002 SR 230.00
2003-2005* SR 230.00
Fishing Survey Report 1980 - 1983 SR 20.00
Sources and Methods of Estimating National Accounts for Seychelles
at Current and Constant Prices 1980 SR 110.00
National Income and Expenditure 1989 SR 30.00
1990 - 1991 SR 35.00 each
1992 - 1993 SR 40.00 each
1996 - 1999* SR 50.00 each
Migration and Tourism Statistics 1978 SR 15.00
1979 - 1980 SR 25.00 each
1983 - 1987 SR 15.00 each
1988 - 1994 SR 30.00 each
1995 - 1996 SR 35.00 each

1997 - 2002 SR 40.00 each
2003 SR 45.00
2004 - 2007 SR 25.00 each
Literacy Survey 1989 Out of print **
Seychelles in Figures (Edition) 1983 - 1987 SR 2.50 each
1988 - 1989 SR 3.50 each
1990 - 2000 SR 5.00 each
2001 - 2007 SR 15.00 esch
Statistical Bulletin Quarterly: 1980 - 1981 SR 25.00 each
New series introduced since July 1982
(Yearly Airmail Subscription) SR 500.00
- Tourism Monthly SR 5.00
- External Trade Quarterly SR 5.00
- Retail Price Index Monthly SR 5.00
- Production Indicators Quarterly SR 5.00
- Employment and Earnings Half Yearly SR 5.00
- Population and Vital Statistics Half Yearly SR 5.00
- Visitors Survey Annually SR 5.00
- National Accounts Annually (Pre 1989) SR 5.00

Other sources of information could be used though it is not recommended that such institutions be members of the "first" Livestock forum .

Development Bank of Seychelles

The Development Bank of Seychelles (DBS) was established in 1977 with a specific mandate to assist in the economic development of the Seychelles. DBS engages in local and external borrowings to finance economically liable projects in all sectors of the economy, particularly Agriculture, Fisheries, Industry, Tourism and Service.

Interoperability with other systems:

In some instances, one could insert the LIMS system into a more global system therefore reinforcing it. Here the diagram is highlighting how LIMS can be inserted into the information chain of DEVinfo; all supported by UN, and generally carried out by CSO's in SADC region. These systems are generally weak in capturing indicators and information related to the LS sector. We can actively change this by adopting LIMS as a standard in MS. The same principle applies for chain of information on agricultural statistics that can be sometimes a bit weak on the livestock sector.
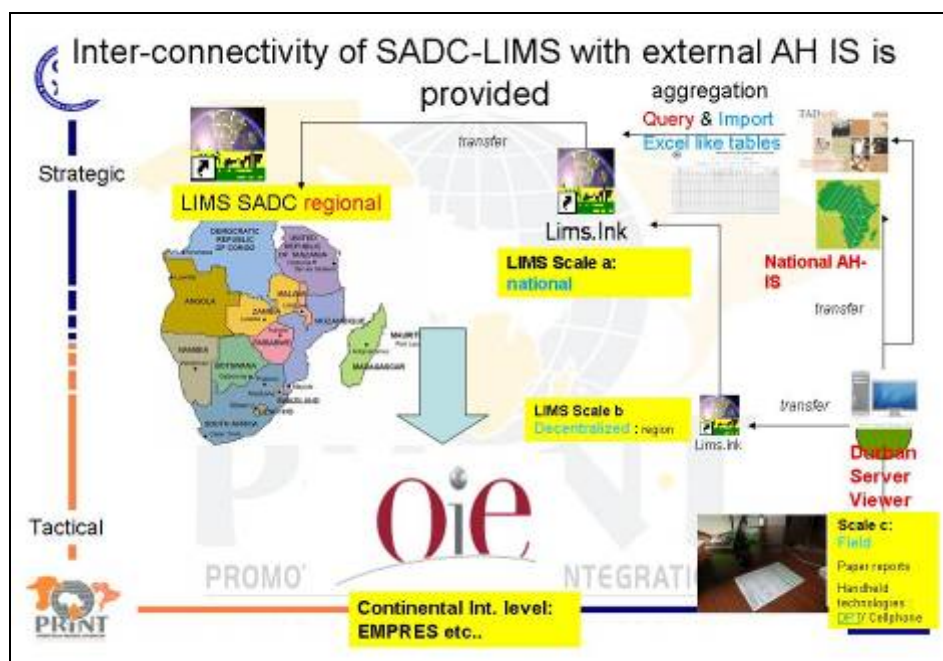
LIMS into a series of global information chains: towards development of links with external databases at various scales (national regional international) like OIE FAO AU IBAR, COI

3-4. Presentation of some features of the LIMS web portal

*"A **web portal** presents information from diverse sources in a unified way. Apart from the standard search engine feature, web portals offer other services such as e-mail, news, stock prices, information, databases and entertainment. Portals provide a way for enterprises to provide a consistent look and feel with access control and procedures for multiple applications and databases, which otherwise would have been different entities altogether. (source Wikipedia)."*

Web LIMS basic Training on the use of WEB portal and communication tools
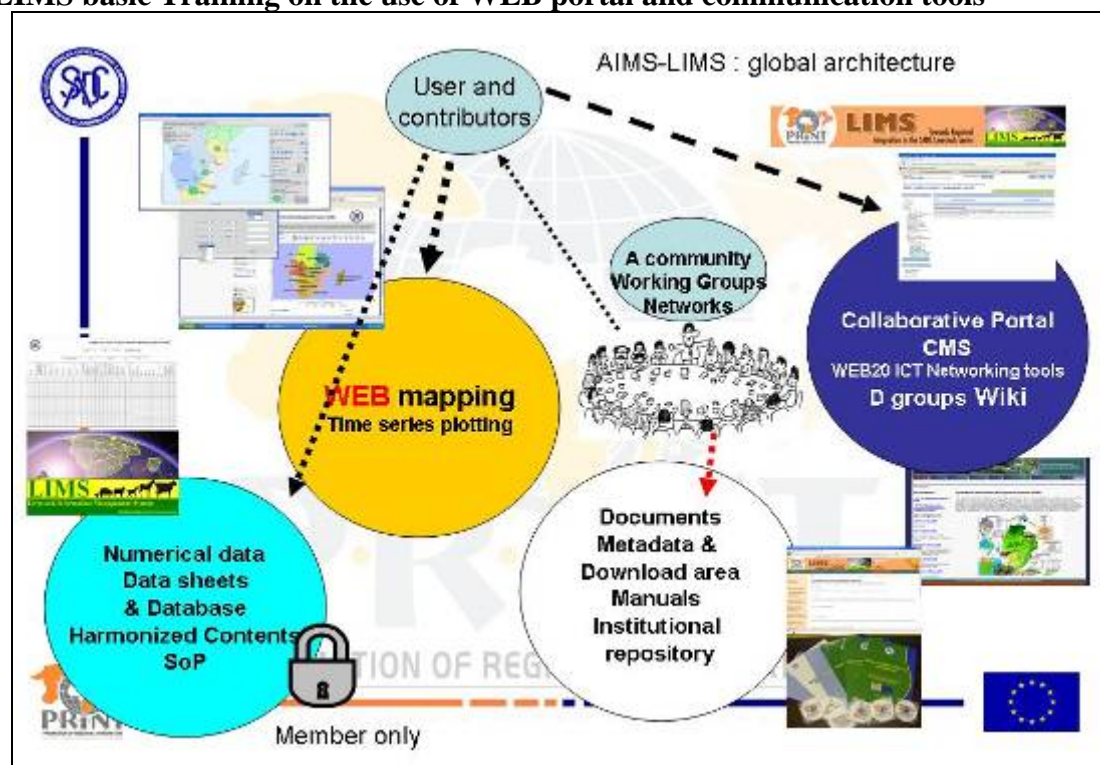
LIMS portal under AIMS

As part of the LIMS system the portal is an important component. Therefore, a basic exposure to the portal was done by the facilitators with firstly the presentation of the general characteristics of the AIMS portal and its tools and secondly an highlight was given on the specific livestock and LIMS pages. About the later the focus was given on a few components:

The web part of the LIMS system can be seen integrated into the AIMS portal or independently. Therefore it can be accessed through different means:
SADC web: http://www.sadc.int/fanr/print/index.php
AIMS site : http://aims.sadc.int
Web-mapping AIMS-LIMS Mapserver: http://lims.sadc.int
Direct link to LIMS web pages: http://www.printlims.org for the temporary and independent LIMS site.

The preferred option is through the AIMS portal.
http://aims.sadc.int/printlims is an iframe of LIMS pages into AIMS

Link to livestock pages through AIMS: http://aims.sadc.int/livestock/
Link to LIMS contents (and PRINT) through AIMS: http://aims.sadc.int/livestock/print-lims/
Link to LIMS Wiki through AIMS: http://aims.sadc.int/livestock/wiki-lims/
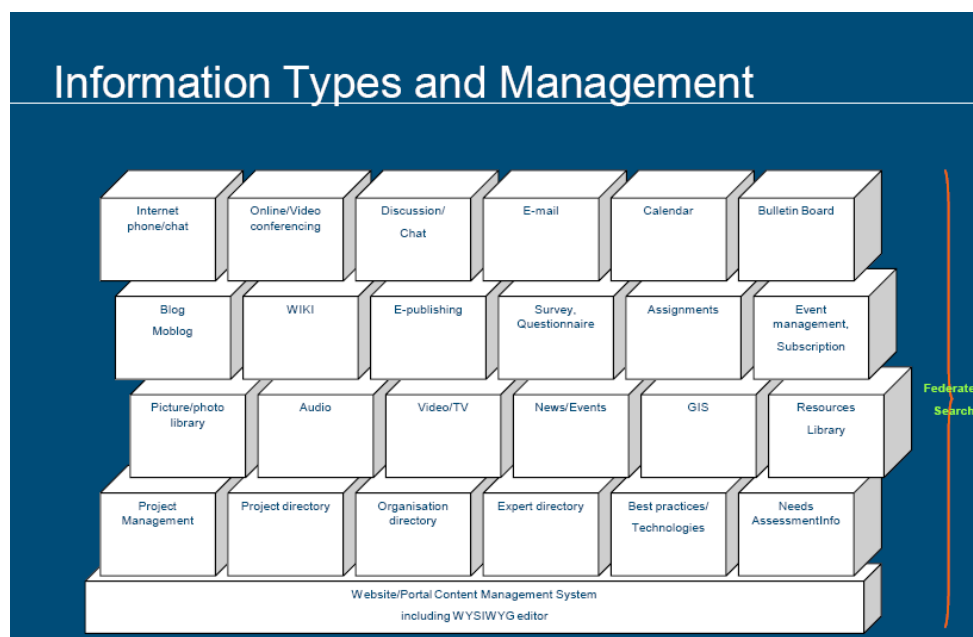

The AIMS portal has numerous features inherited from the WEB20 that facilitate interaction between stakeholders. Some are specific to LIMS.

D-groups

The Trainers of Seychelles will be invited to register to the LIMS D-groups and will soon become members of the SADC LIMS community.

- Discussion forums & mailing lists with D-groups enabling exchange and communication via e-mail keeping records of discussions messages (online). This will be used to run thematic and technical forum e.g. on the use of tools and templates.
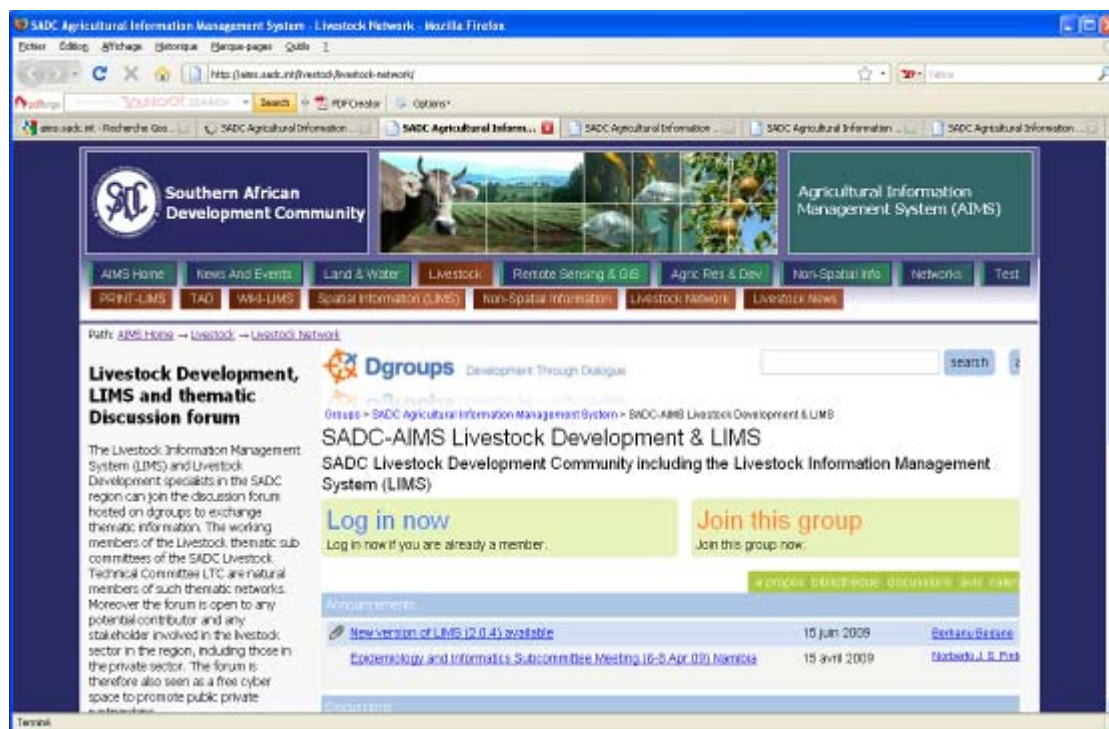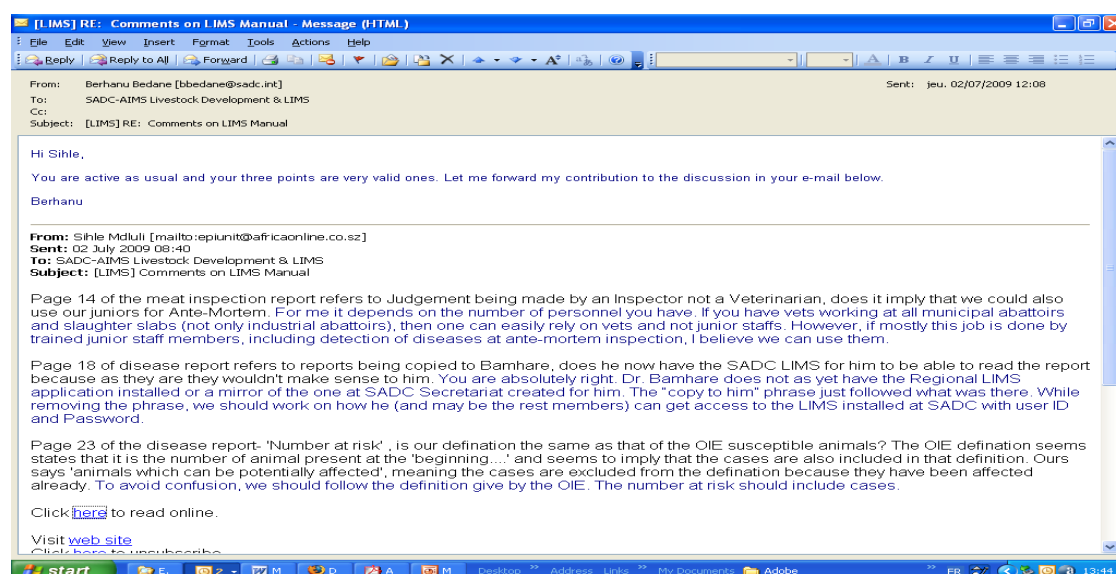
The pages to register in the group

LIMS dgroups a tool for the community:
It can be accessed through different means. It is a subgroup of AIMS Dgroup a larger community.
- AIMS community
  - address : AIMS@d2.dgroups.org
- Livestock subgroup created
  - LIMS@d2.dgroups.org

http://aims.sadc.int/livestock/livestock-network
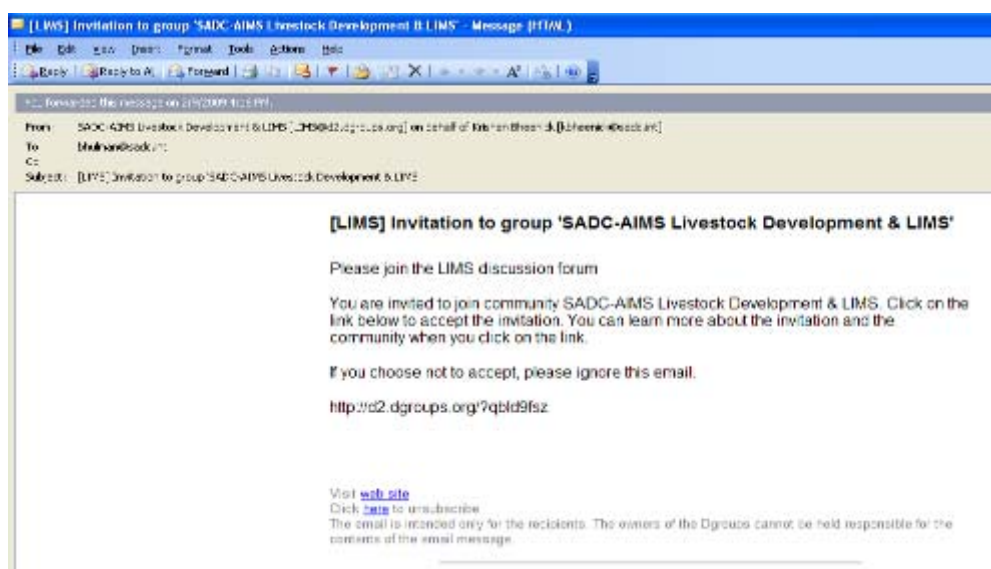http://d2.dgroups.org/groups/SADC-AIMS/LIMS

Dgroups use a normal email procedures hence facilitating adoption.

Membership of LIMS Dgroup is growing

The LIMS regional community

Specific Dgroup invitation for Seychelles

The week after the training in Seychelles, the following list of people were invited to register and participate to the LIMS community discussions (list from which some were already members and therefore were discarded from the invitation by the Dgroup system administration):

l.motta@yahoo.com, dr_joel@intelvision.net, jmelanie@intelvision.net, tyron@finance.gov.sc, stats@email.sc / sandroernesta@yahoo.com, therese@nsb.gov.sc
peho1@moh.gov.sc or neshamlaye@yahoo.com, mmpayet@yahoo.com,
laurette1965@hotmail.com, sandrou@seychelles.sc

|	
Invité(e)(s):	l.motta@yahoo.com, dr_joel@intelvision.net, tyron@finance.gov.sc, therese@nsb.gov.sc, mmpayet@yahoo.com, laurette1965@hotmail.com
Discarded (already members)	Les utilisateurs suivants ont déjà accès à cette communauté: Jimmy Melanie, Sandra Moumou.
Message:	Dear LIMS "task force" from the Seychelles I am very grateful of what we have accomplished there in your wonderful islands We came back safely Berhanu and myself and it is time by now to reactivate the group as promissed This is an invitation to join the SADC LIMS discussion group (LIMS Dgroup community) Just follow the procedure indicated in the email Best regards Dr. Pascal Bonnet PhD CTA Chief Technical Adviser SADC / FANR directorate / PRINT project, Promotion of Regional Integration in the SADC Livestock Sector SADC Secretariat Southern African Development Community, FANR directorate Millenium Office Park, Kgale views, SADC Building Ground Floor P/Bag 0095, Gaborone Botswana Tel: (267) 3951863 / 3611052 Extension 5124 SADC Fax: (267) 3924099 / 3181070 / 3952848 / Fax direct line PRINT in office: + 267 3959834 Email: PBonnet@sadc.int Pascal.bonnet@cirad.fr http://aims.sadc.int LIMS Dgroups You are invited to join community SADC-AIMS Livestock Development & LIMS. [Accept the invitation](Le lien d'inscription sera inséré ici).

You can learn more about the invitation and the community when you click on the link.

If you choose not to accept, please ignore this email.
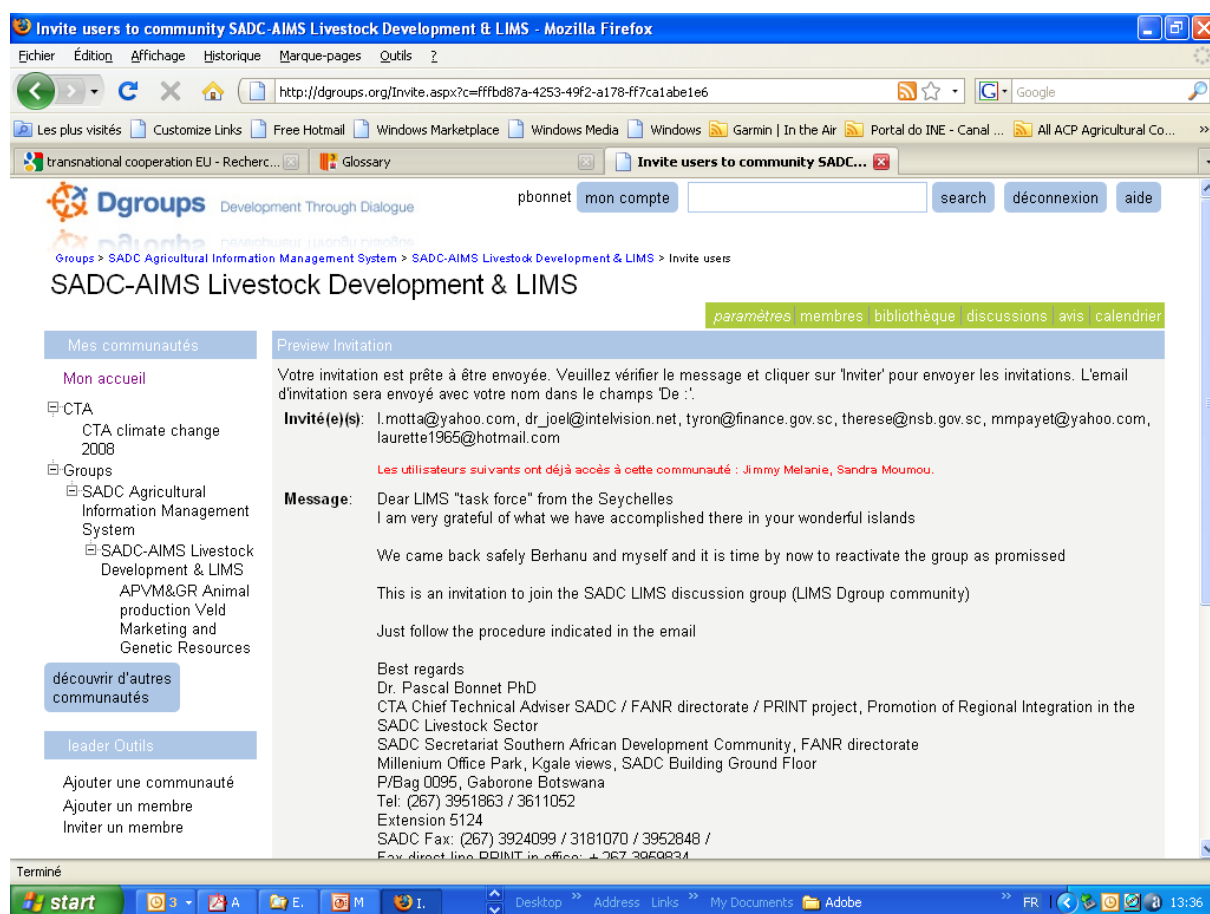
Dgroups should support the work of national LIMS networks and of regional subcommittees. PRINT is studying the interest of forming sub groups like the livestock subcommittees thematic groups:
- LIMS-EIS@d2.dgroups.org
- LIMS-APVMGR@d2.dgroups.org

Wiki

*"A **wiki** is a website that uses wiki software, allowing the easy creation and editing of any number of interlinked Web pages, using a simplified markup language or a WYSIWYG text editor, within the browser.Wikis are often used to create collaborative websites, to power community websites, for personal note taking, in corporate intranets, and in knowledge management systems.""Most wikis serve a specific purpose, and off topic material is promptly removed by the user community. Such is the case of the collaborative encyclopedia Wikipedia.In contrast, open purpose wikis accept all sorts of content without rigid rules as to how the content should be organized."*

For LIMS, the Wiki is based on the model of Wikipedia, it will serve the collaborative enrichment and editing of LIMS manuals

Though the generic LIMS manuals have been released and given in the training CD and will be posted for download in the LIMS website, it is important that WIKI version are enriched gradually with illustrations by member states.
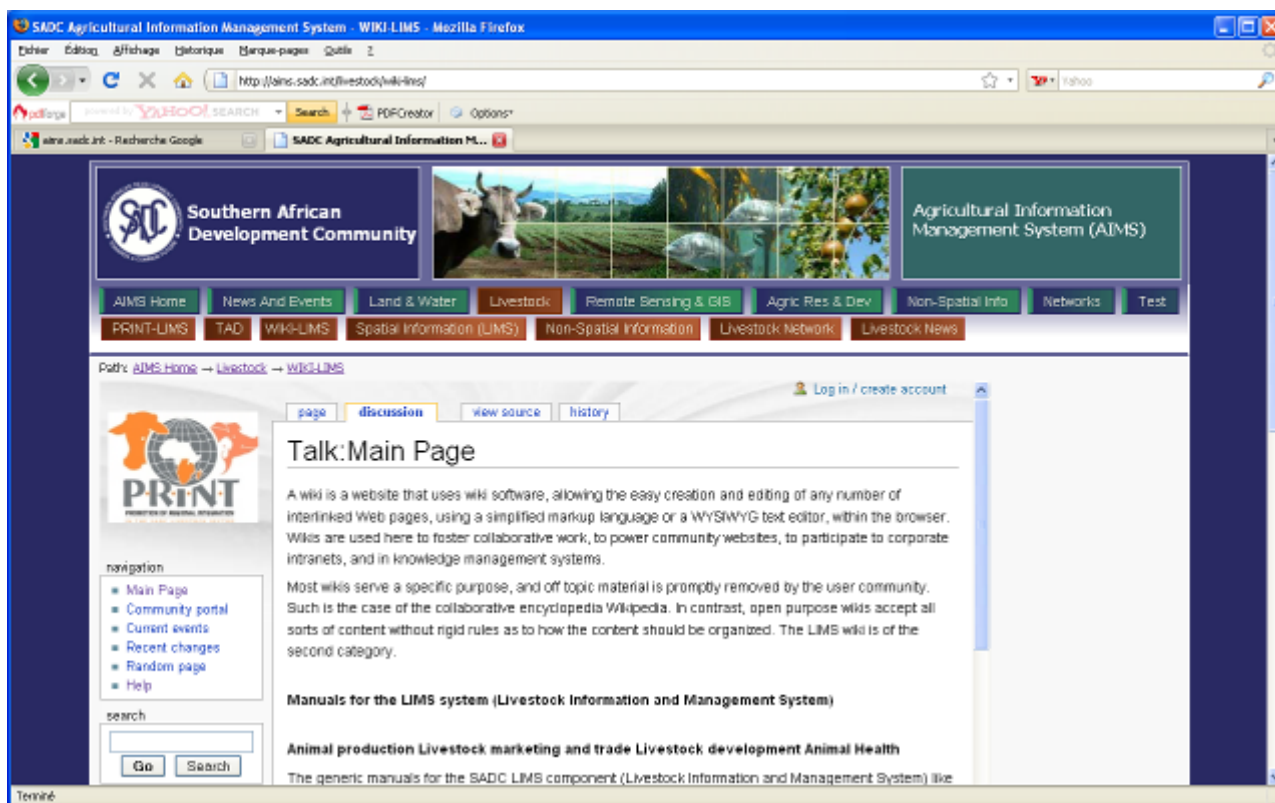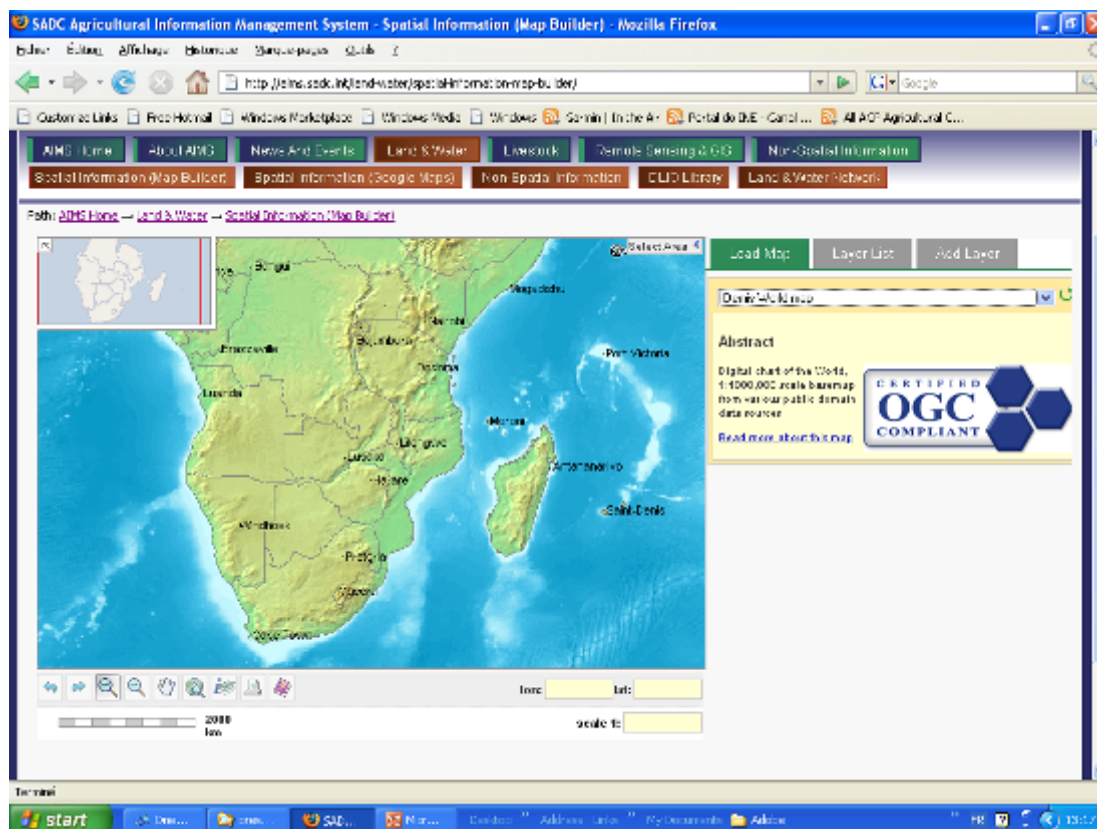

Besides, other documents could be edited / commented / enriched, on line using their WIKI version, e.g. the annual yearbook on animal health or animal production that should be produced by MS
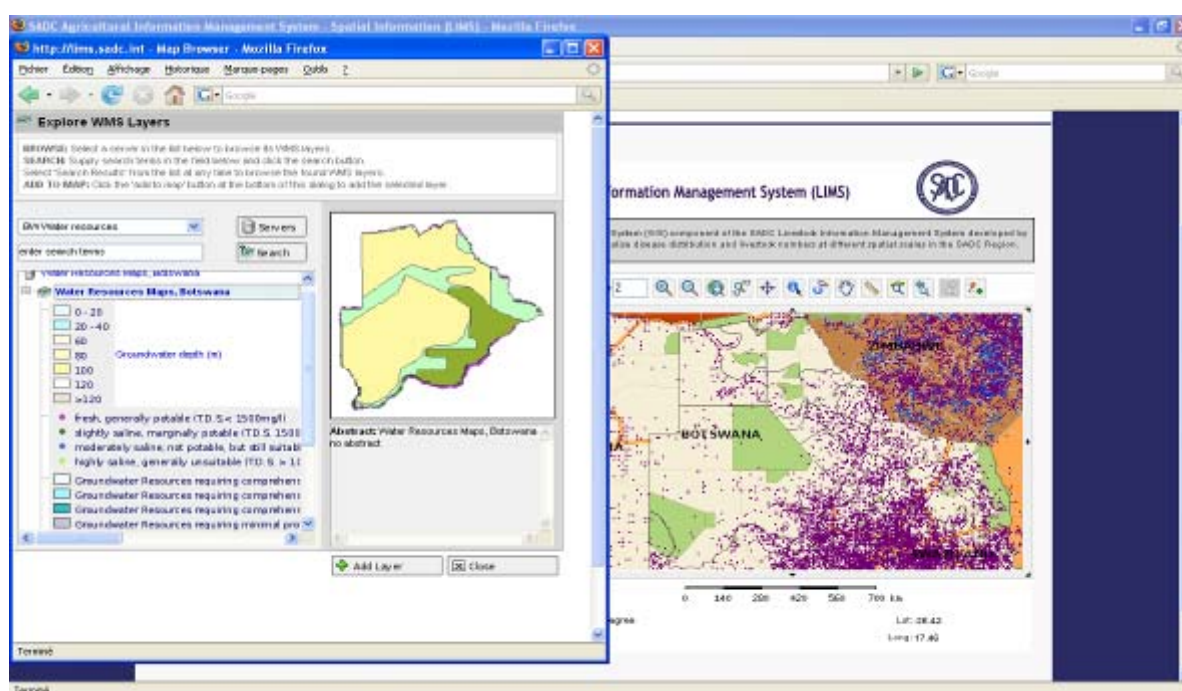

Web mapping

Web mapping / collaborative cartography: Regional Mapserver

The Mapserver is already a component of AIMS and LIMS. It is where one can display regional data using WMS web map servers & services (OGC standards).

Specific National Interactive Geoclips for Seychelles

Geoclips maps are small flash-based maps that can be generated with little effort from shape files and slected attribute data and posted online for consultation. SADC (PRINT) has acquired a license for using it.

An example of a geoclip map was put on the web site representing the % of HH involved in Livestock farming in the Seychelles' main islands, thanks to data provided by NSB. The followings screen shots show some of the various displays allowed by the system including the option for displaying specific data (table) retrieving raw data from the geoclips on line (in text format).
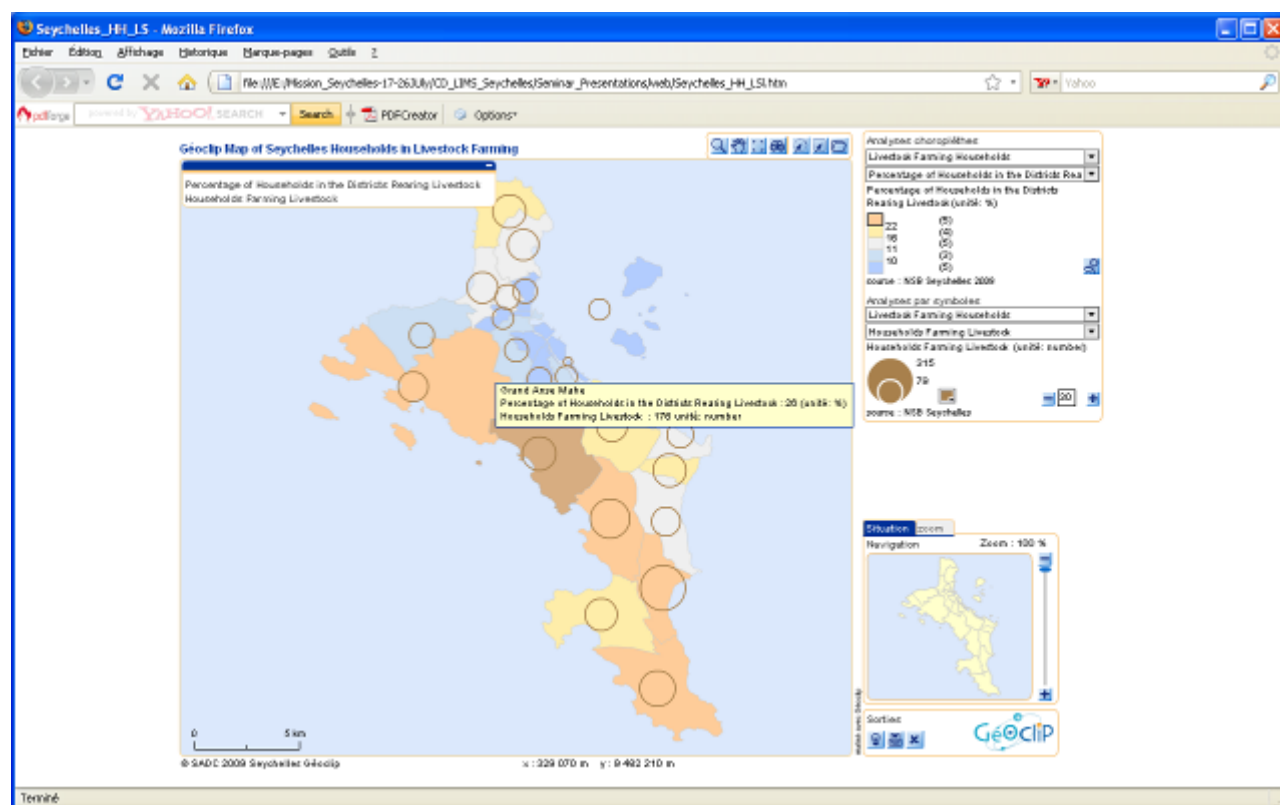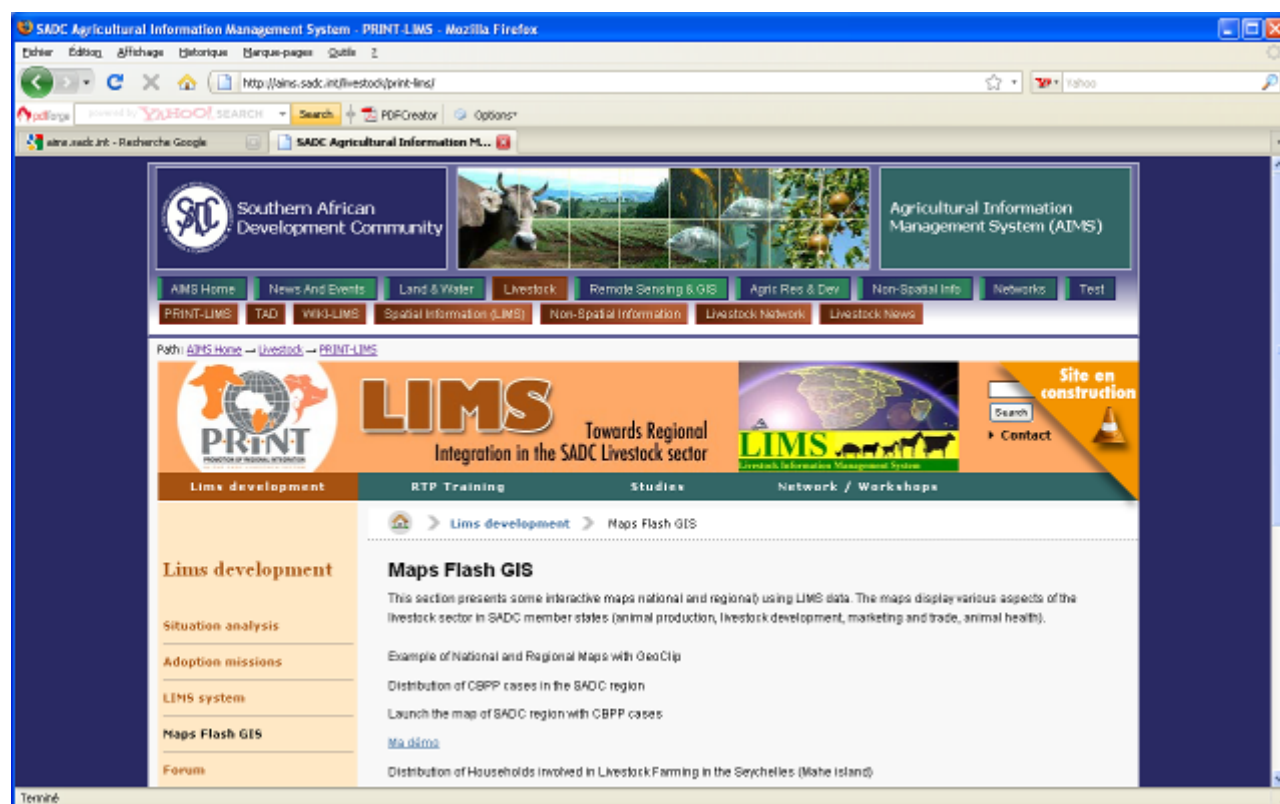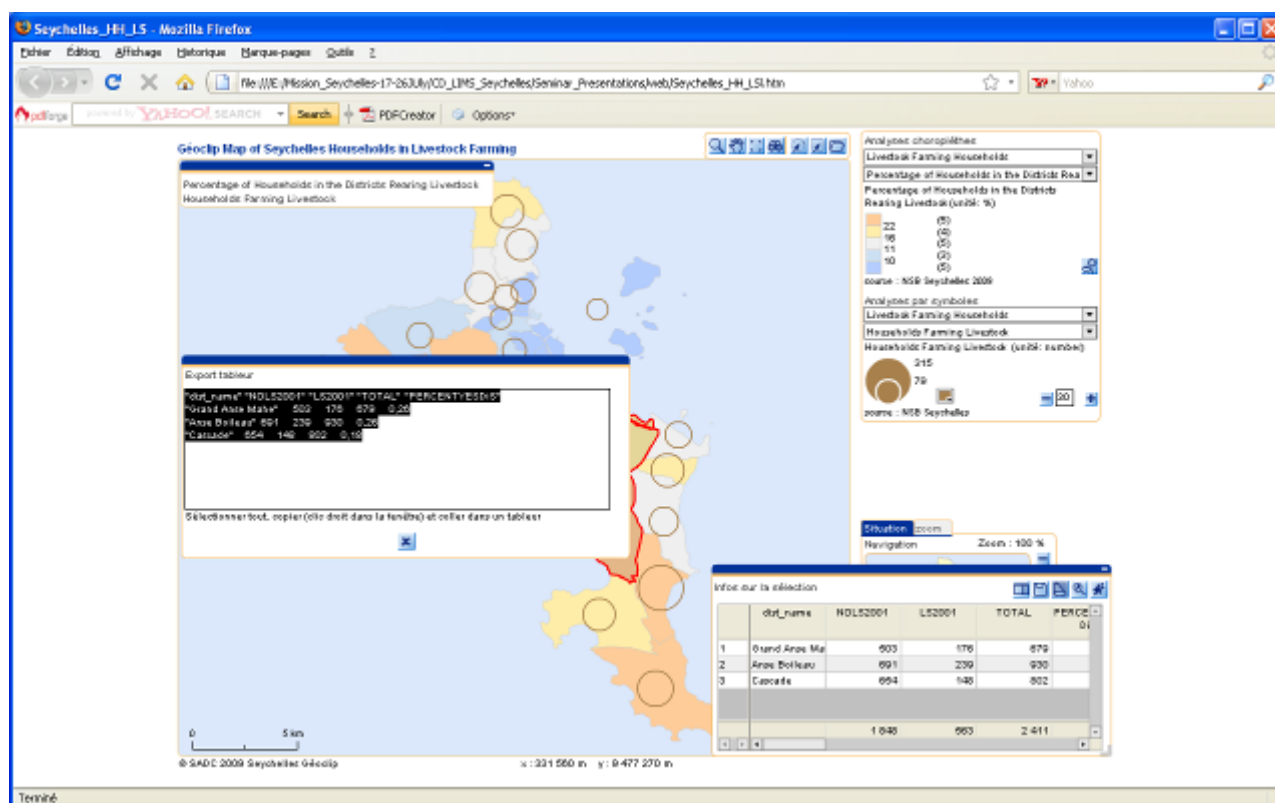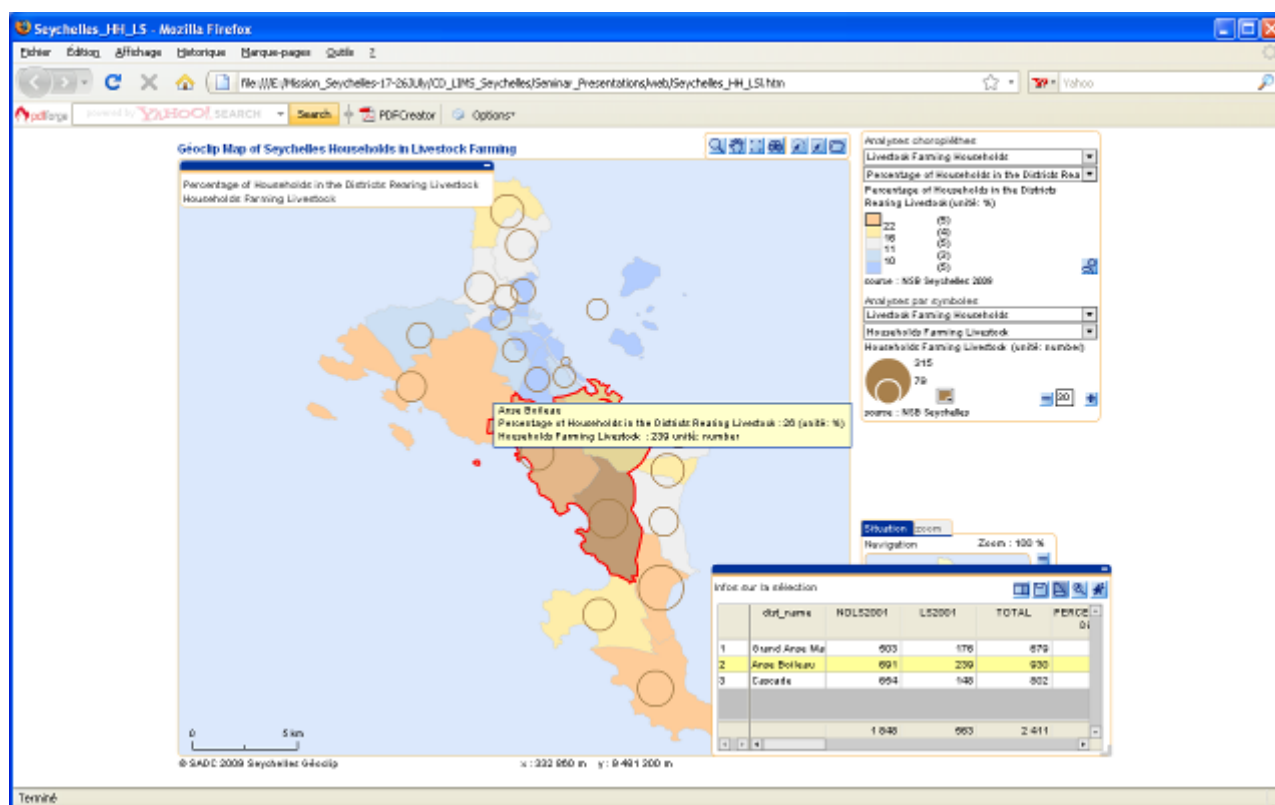
CMS

The final objective of the LIMS web site is to use a Web site managed by MS themselves through a CMS Content management system (software) directly managed by institutions. For LIMS we have selected EZ publish to complement the one used into AIMS.

The CMS allows inputting contents and making accessible items and documents (though some documents will be made accessible only to registered members).

An example of a screen and CMS administration page.

The full report on how to use EZ publish is available at PRINT.
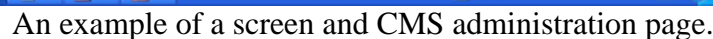
LIMS EZ publish portal contents as managed by EZ Publish

LIMS portal: a summay of contents and structure

The LIMS web site is provided as an independent site (http://www.printlims.org) to allow its launching (in 2009 and its sustainable management by CIRAD in 2010) , and is also included as an iFrame under AIMS main portal to show the integration of sub systems.

LIMS web site as an independent site (http://www.printlims.org)
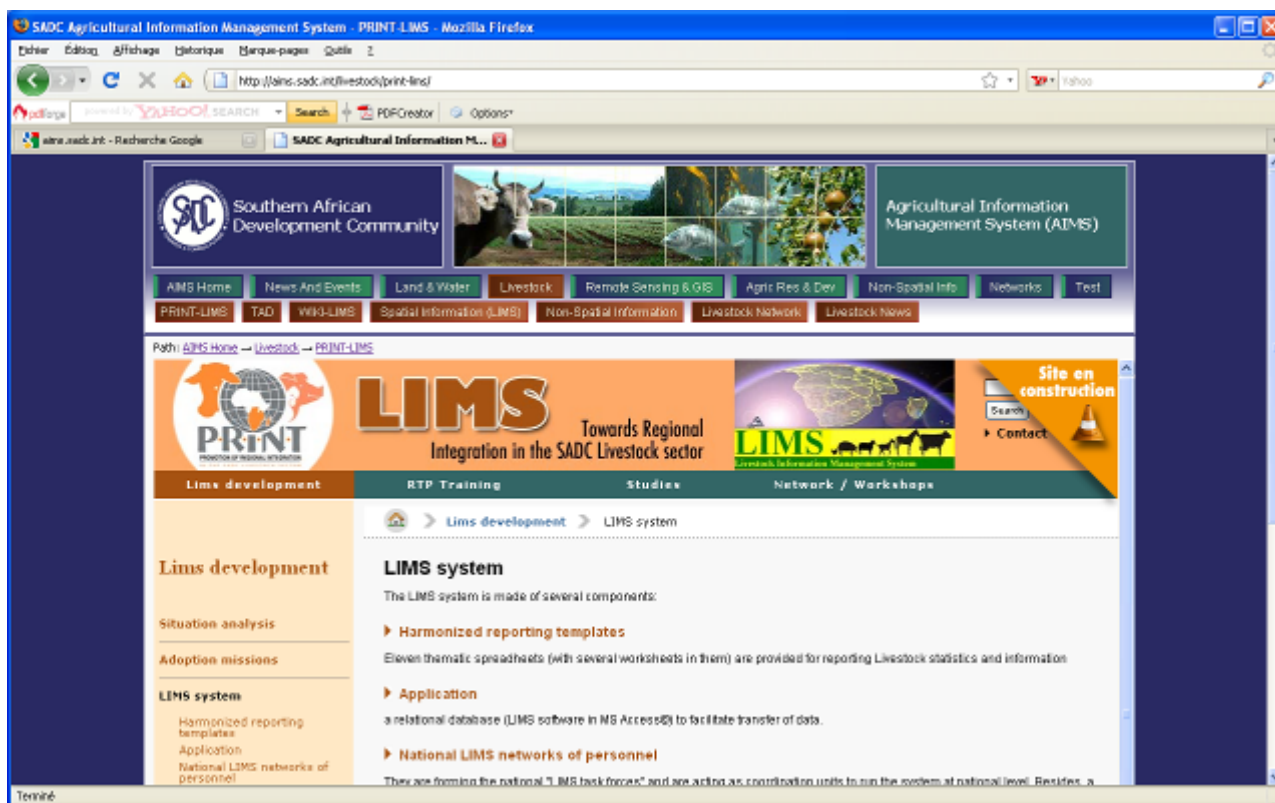
LIMS website included as an iFrame under the AIMS main portal & site
(http://aims.sadc.int/printlims) here displaying the RTP contents (training)

A few Screen shots showing the structure of the various LIMS component
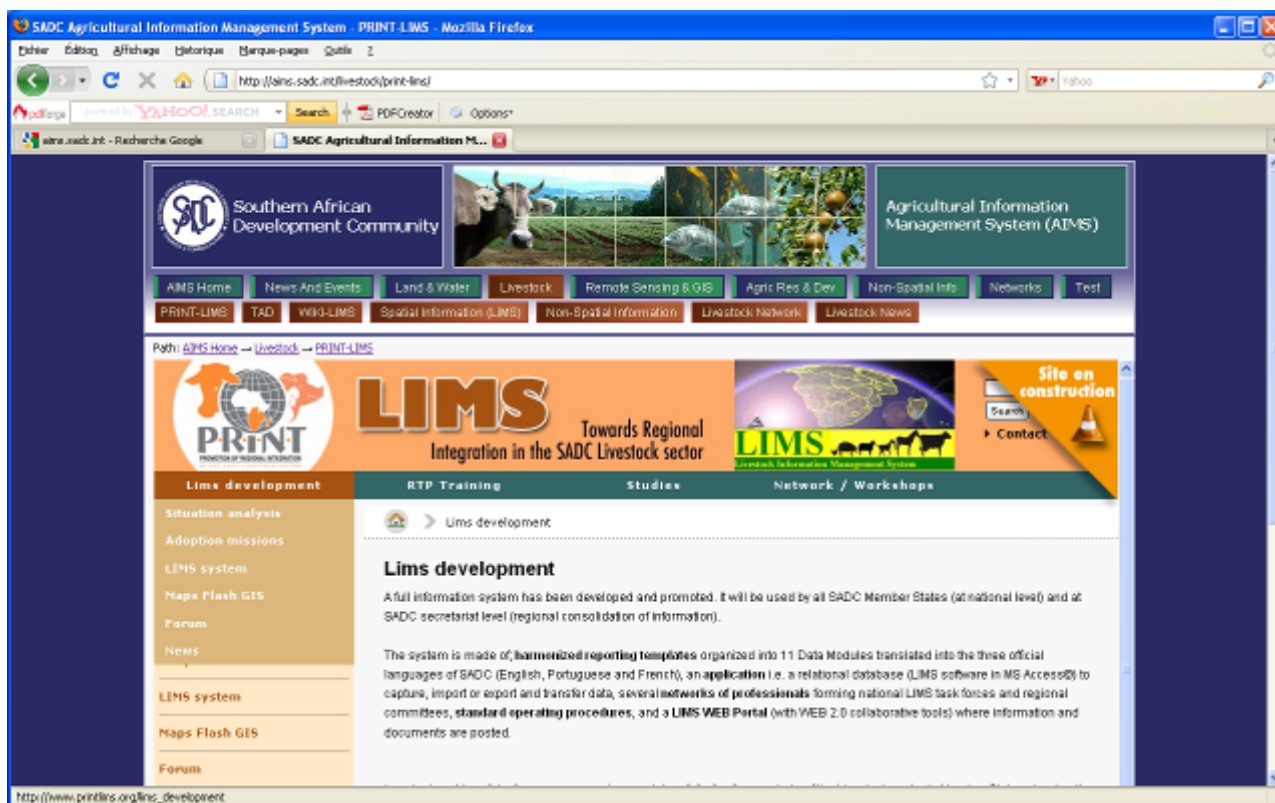
LIMS development

LIMS training
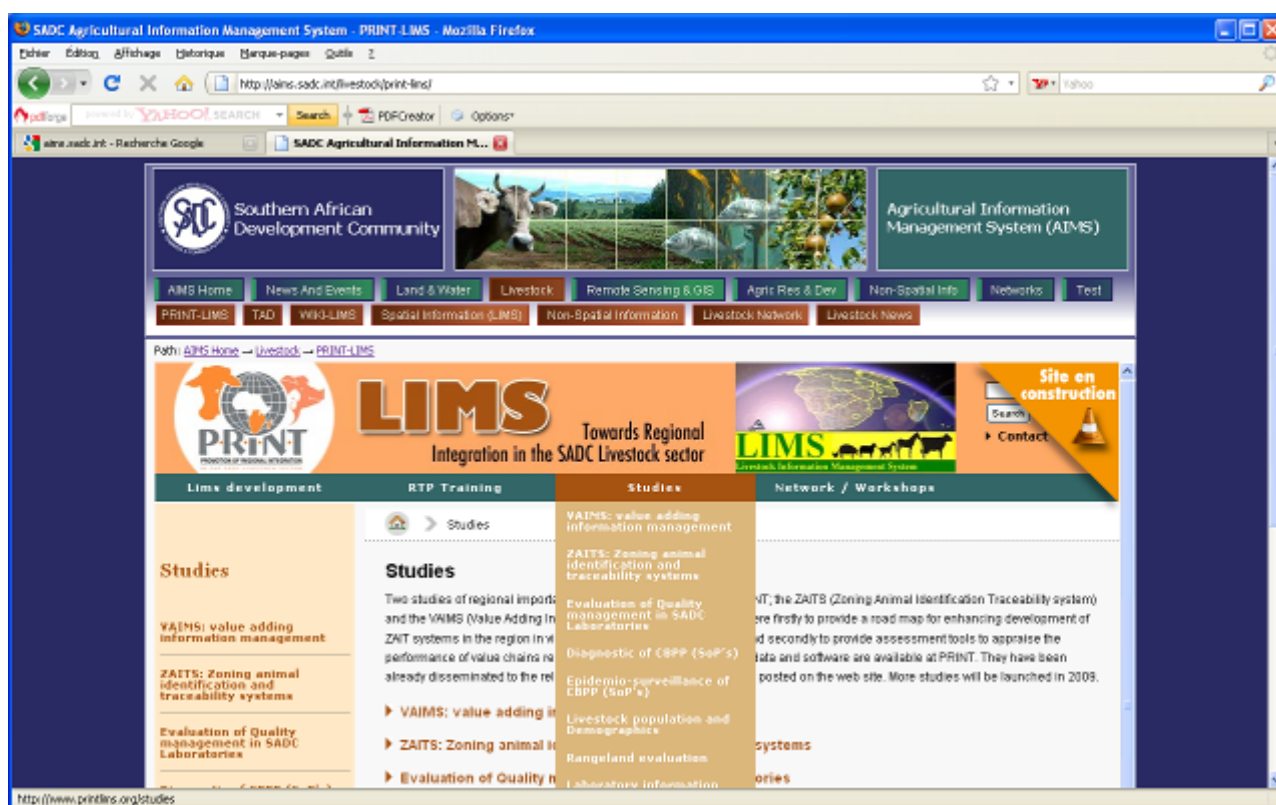
LIMS studies
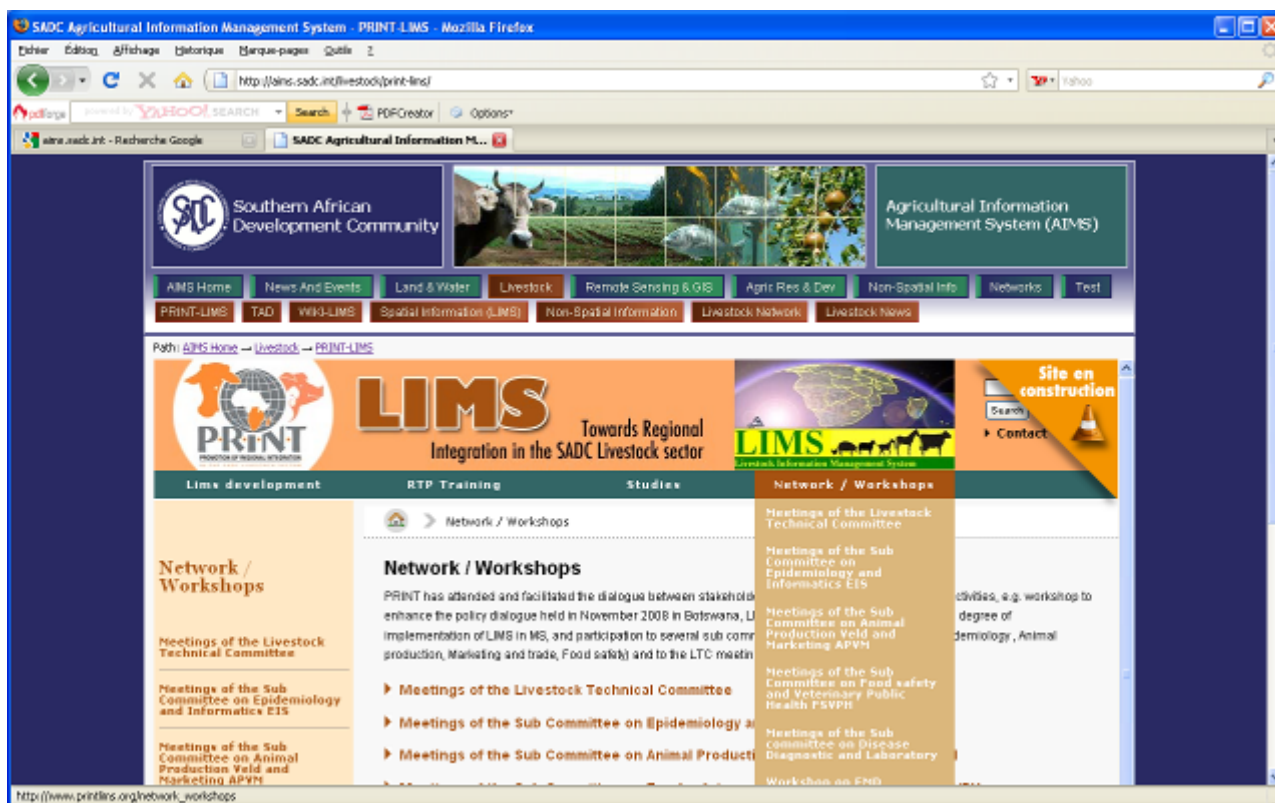
LIMS networks and Workshops

FAQ and LIMS application forum

A Specific forum on LIMS software is available with the objective of managing **FAQ** about the LIMS application, on Topics like *Install, Roles and Functions, Data Capture, Transfer of data files (sending receiving), Query Export, Others (use of webtools)*. Registration is managed by an administrator.
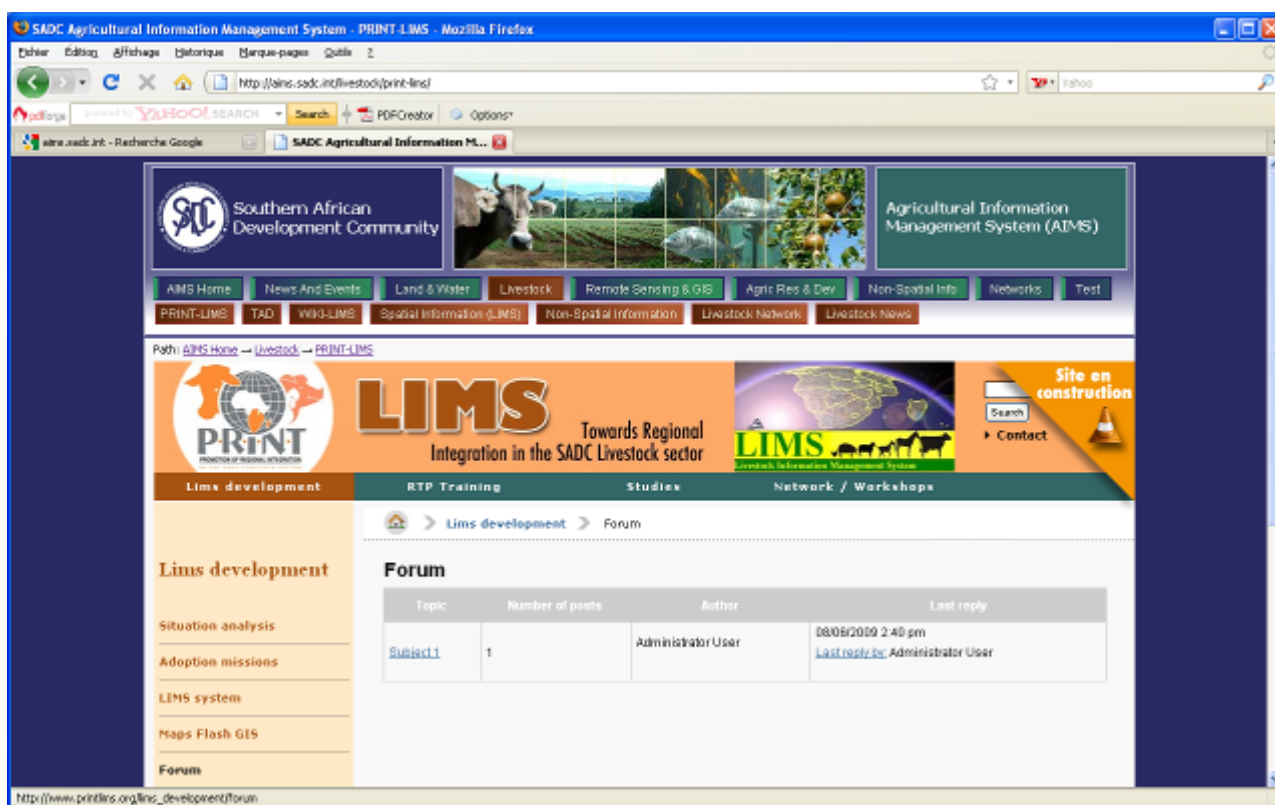
AIMS tools and specific Django CMS

The main Livestock page of the AIMS portal.

AIMS is using the Django CMS.

A list of Links (to be established and fine tuned any time) with websites that allow RSS feeds can be established for feeding the AIMS portal with the relevant news in the livestock sector.
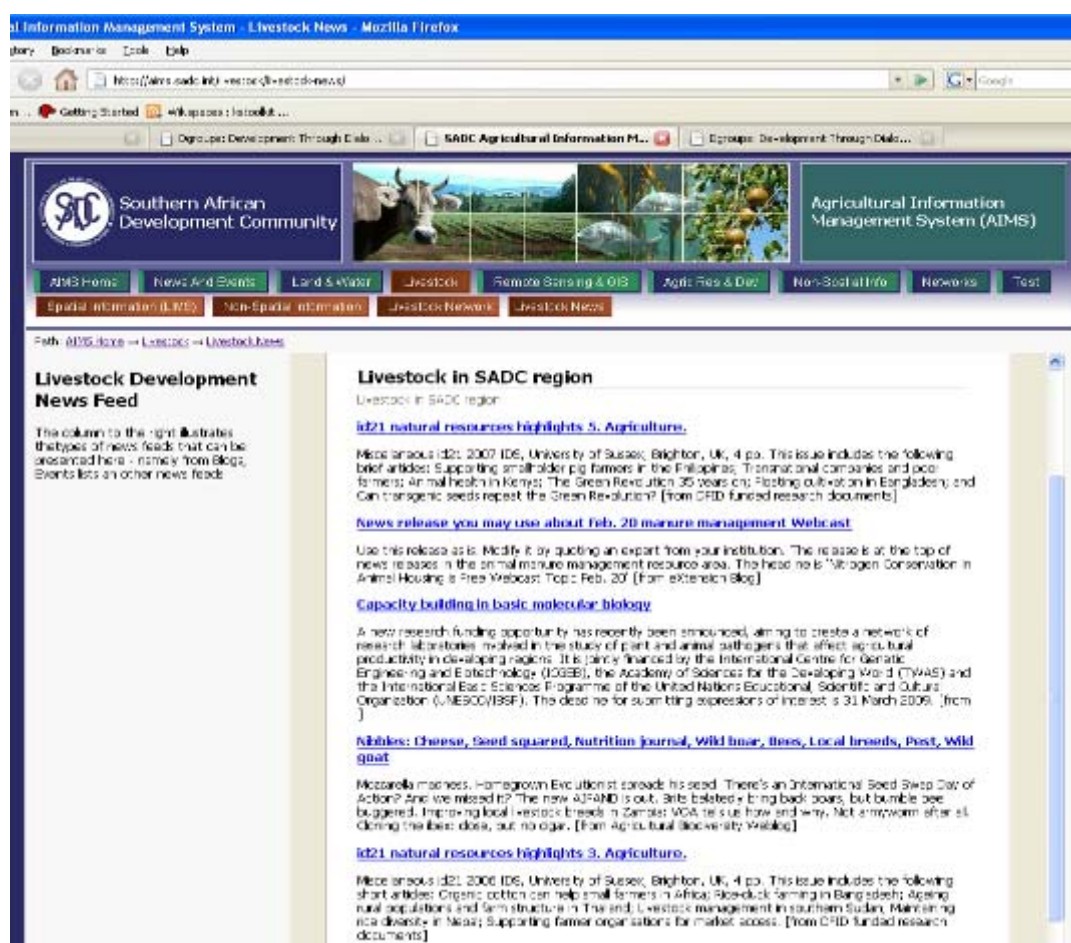
Similarly a list of relevant web sites that could be linked to AIMS portal should be implemented.
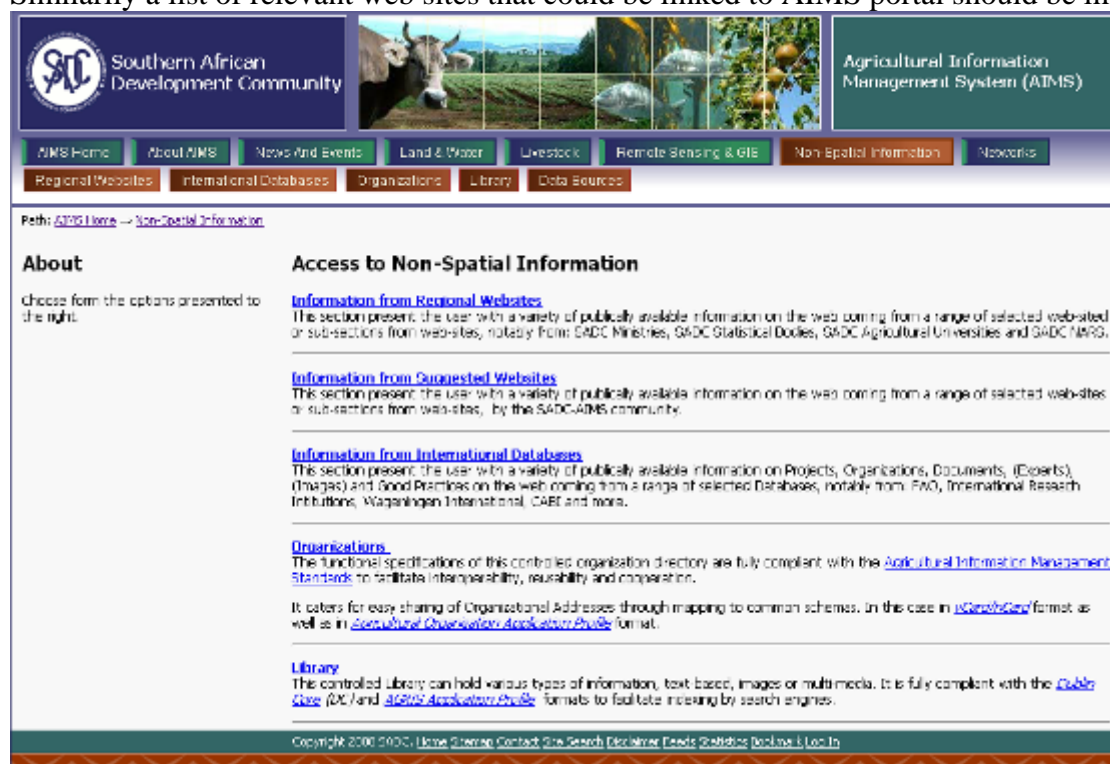
The following list of sites relevant for Seychelles provides as a starting point

http://www.nation.sc/index.php?art=16351
http://www.natureseychelles.org/index.php?option=com_content&task=view&id=151&Itemid=149
http://www.virtualseychelles.sc/gover/me.htm
http://www.nsb.gov.sc/pages/Statistics/CPI.aspx
http://www.cbs.sc/
http://www.sib.gov.sc/

A few Seychellois have been trained by ICART Implementation & Coordination of Agricultural Research & Training project (Krishan J Bheenick, Regional Information, Communication and Training Officer), about the use of some tools available in the AIMS portal (e.g. sessions at NIIT in June and May 2009) and development of a RAILS website for the research in Seychelles e.g. www.e-rails.net.

The ICART last trainee's names are mentionned as follows with their institutional origin: (Sandra Sinon (Res), Jose Guerreiro (Ext), Maryse Arrisol (Info), Emie Joseph (Info), Keven Nancy (Res), Joy Govinden (Res)). One should remember that the livestock sector is not represented in the research station in Seychelles. Research on livestock is partly the mandate of the SAA though not well developped.
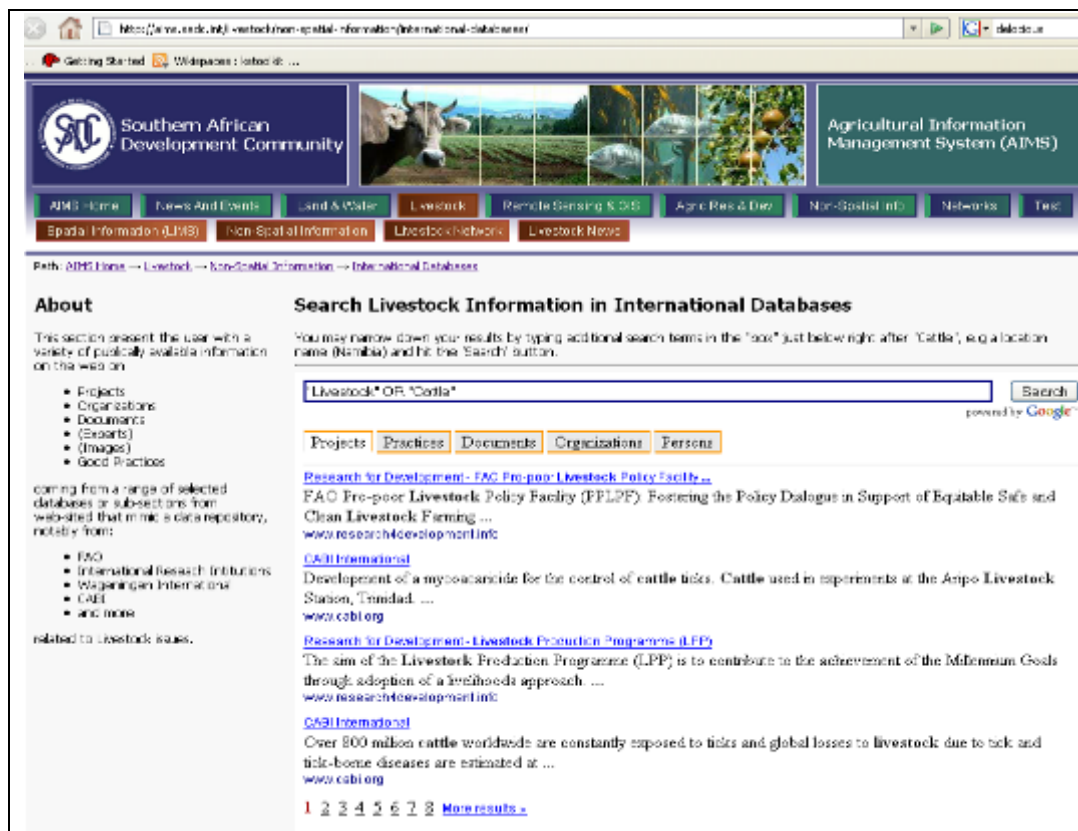
The search tool using key words specific to agricultural research is implemented into AIMS.

4. Other Topics (than LIMS) discussed during the mission: FaNGR

Situation analysis, meetings with key informants in institutions

During the mission some key institutions were visited and discussions undertaken on how SADC could help developing the sector through trainings, studies, participation to regional meetings etc… Beside the already provided lists, the following persons were also met and visited.

SURNAME	FIRST NAMES	TITLE	Gender	DATE OF BIRTH	DESIGNATION	MINISTRY/ORGANISATION	FULL ADDRESS	PHYSICAL ADDRESS	Landline FAX	MOBILE	E-MAIL
Agathine	Danny					SAHCT	PO BOX 383	Victoria Mahe Seychelles	Landline : +248 514126	Cell: +248 783898	danagathine@yahoo.com
Humphreys	Herdleys				Field officer	GIS unit SAA, Agric. Land Management			Landline : +248 566868		Herdley_seychelles@yahoo.com
Tilly	Julina					National Statistics Bureau	P. O. Box 206	Caravelle House, Manglier Street, 3rd Floor	Landline : +248 611651 / FAX: +248 225634		Stats@nsb.gov.sc / Website: www.nsb.gov.sc

- **The Participation to the LTC and to sub committees**

The Participation to the LTC and to sub committees was addressed as Seychelles is not used to the modus operandi adopted by SADC. The web site will help them keeping abreast fo new development and opportunities.

Results of last LTC meeting are accessible by MS on the web site

The next APVM&GR SC meeting should be focussing on genetic resources. It is important that Seychelles participate.

- ➢ Introduction to Animal Genetic Resources
  - o *Farm Animal Genetic Diversity*
  - o *Roles and values of Animal Genetic Resources*
  - o *Driving Forces in the Livestock Sector – future challenges and issues*
  - o *Assessment of major needs*

- ➢ Inventory and characterization
  - o *Introduction*
  - o *Assessment*
  - o *Main area, Strategic Priorities and list of actions*

(these subchapter are repeated in each of the four chapters)
- ➢ State of Utilization
- ➢ State of Conservation
- ➢ Institutions and Capacity Building

1. *Improving the understanding of the status and characteristics of animal genetic resources to enable their sustainable use, development and conservation (5 SP*)*

2. *Enhancing the use and development of animal genetic resources in all relevant production systems as part of efforts to achieve food security and alleviate poverty* (4 SP)
3. *Conserving animal genetic resources to ensure their availability for future use and development in all production systems* (5 SP)
4. *Enhancing institutional development and capacity building to achieve the successful implementation of national programmes for animal genetic resources* (9 SP)

- **Training for the SAHTC Seychelles Agricultural and Horticulture Training Centre**

The Participation to trainings was particularily discussed during a visit to the SAHTC in Mahé. The centre will be added in the inventory of training institutions made by SADC ICART.

The visit to SAHTC (the CTA with Danny Agathine and Maryanne from the centre) showed the need to train trainers of such centres to new agricultural technologies that could be adopted in Seychelles and to ICT tools.
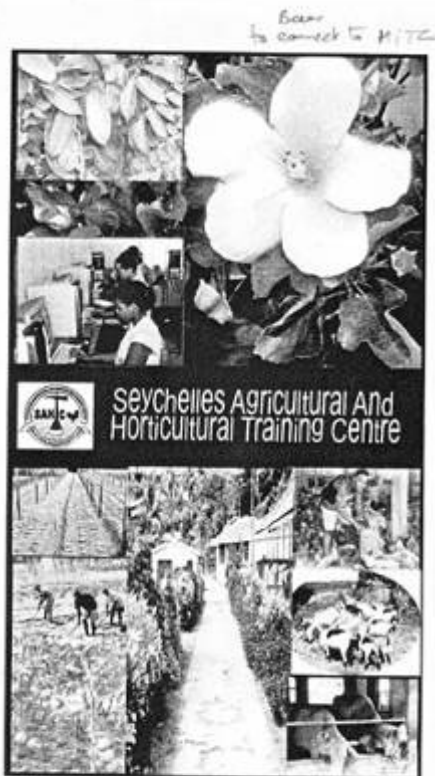
The General Agriculture Phase 1 Programme is made up of the following modules and Co-modules.

Compulsory Modules	1	Factors Affecting Agriculture
	2	Soils Science
	3	Soil Fertility
	4	Farm Machanisation
	5	Crop Protection
	6	Irrigation and Fertigation
	7	Farm Management and Farming Systems
	8	Crop Production
	9	Poultry and Health
	10	Piggery & Health
	11	Cattle & Health
Co-Modules	1	Technical English
	2	Agri-Maths
	3	Personnel & Social Education
	4	Information and Communication Technology
Elective Modules	1	Horticulture & Landscaping
	2	Small Ruminants and Bee Keeping
	3	Agro-Processing
	4	Information and Communication Technology

The training courses catalogue at SAHTC

- **Use of PRINT Studies and toolkits.**

- **Piggery Poultry production and value adding: use of the PRINT VAIMS toolkit**

The VAIMS toolkit was designed firstly for use on ruminants though it can be used for poultry and piggrey too with some adjustements. We recommend its use as a training item e.g. at the SAHCT centre at Anse la Mouche before being fully used by SAA and possibly at the research centre (which so far does not cover the livestock research).
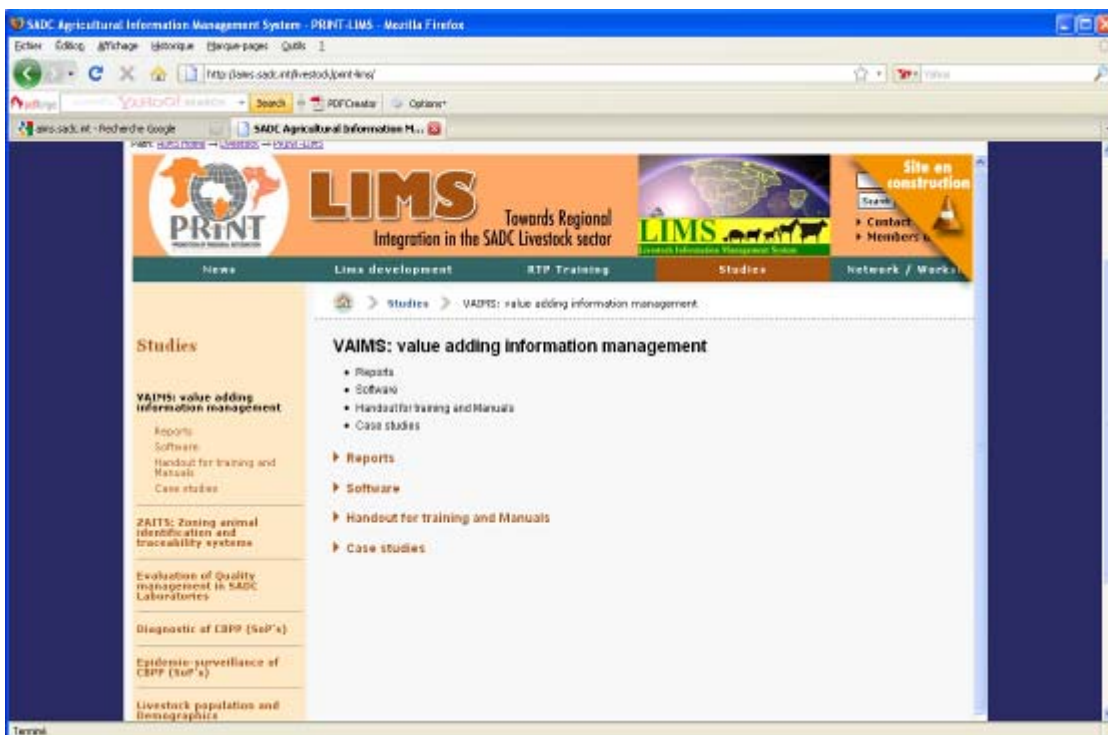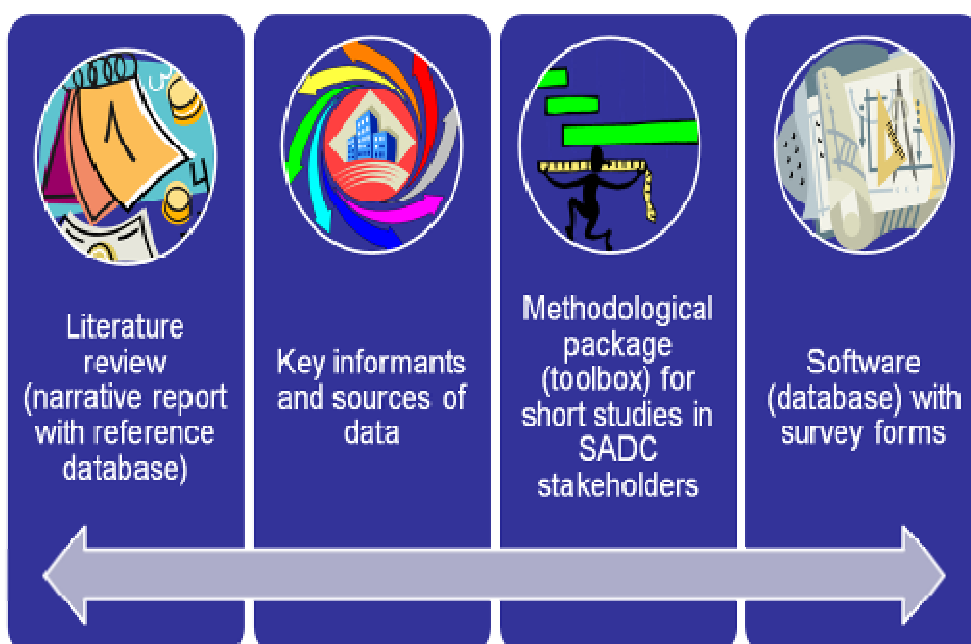
- **Demographic modelling and surveying the LS Foot-print:**

In a context where the foot print of Livestock is seriously considered (piggery and poultry could easily be hampering the environment in an island), the use of demographic tools to monitor LS population should be promoted. Some were developed and made available by PRINT.

The Environmental Management Plan of islands (Mahé and others) is based upon Land Use Plan LUP which sets out categories of land usage e.g. as listed below for Denis island. The LUP is the foundation upon which other aspects of the EMP (such as Biodiversity plan and ecotourism plan) are logically built.

- **Zone A:** Primary Production Area: designated for intensive human activity, infrastructure placement and production landscapes.
- **Zone B:** Secondary Production Area: designated primarily for production landscapes and low-density tourism/residential infrastructure.
- **Zone C:** Conservation Management Area: designated primarily for management to attain conservation/biodiversity objectives.
- **Zone D:** Ecosystem Restoration Area: area designated for restoration to island's natural state. All other activities are subordinated to that end.
- **Coastal Zone:** Land within 25m of high water mark – designated for management to optimise natural vegetation cover, structure and function for specific defined ends depending on locality – no permanent infrastructure.
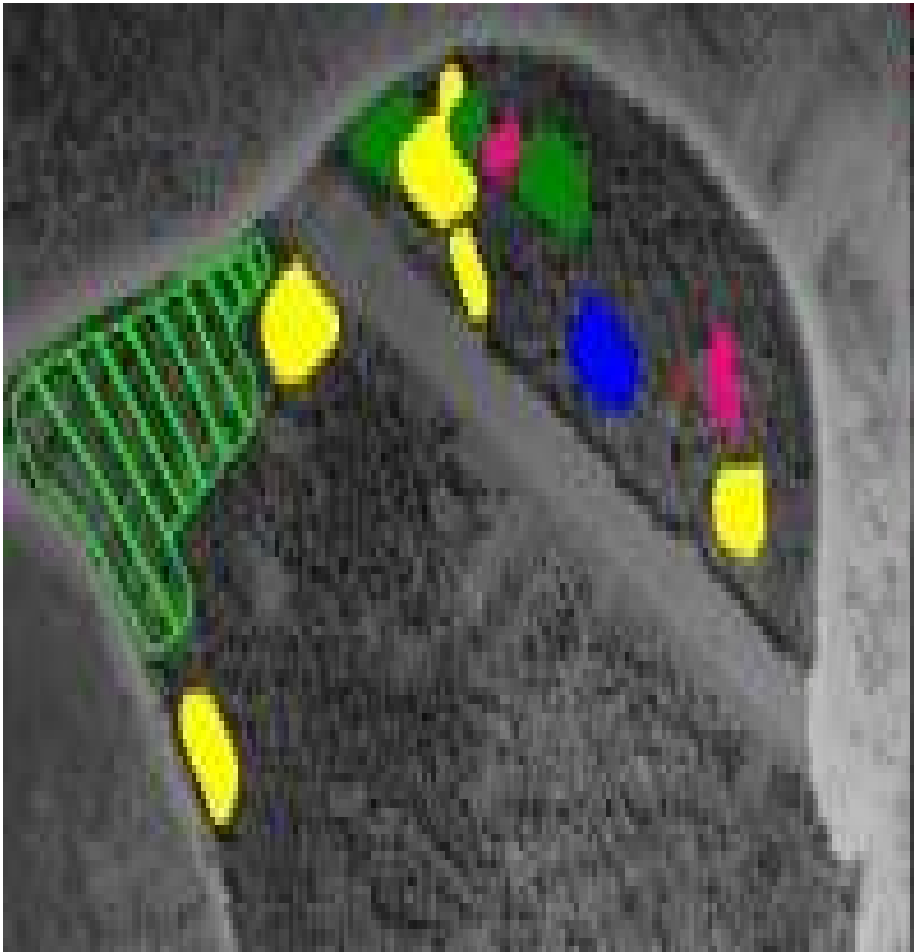
- Pink: Livestock areas.
- Dark Green: Vegetable and fruit production.
- Light Green: Hotel complex and guest villas.
- Brown: Incinerator and solid waste sorting area.

The full report on Demographic tools is available on line and under request at PRINT

5. CONCLUSIONS & Way forwards

All the points debated in this report will be soon presented during further sub committees meetings and at the next LTC in November 2009.

The road map for the way forward shall be decided by MS regarding the development of LIMS in their respective country, by **establishing a 5 years roll out plan for LIMS**.

The success of the LIMS relies on the **formation and the activity of national LIMS network**s (human-ware) and on the **collaboration between national institutions** holding information on the LS sector. Therefore, we recommend MS use the SoP's provided for guiding such exercise and convene frequent meetings of the LIMS network.

PRINT has continued providing support to MS in 2009 through the CIRAD service contract lasting up to November 2009, whereas the program estimate PE4 of PRINT ended in March 2009. The 5 years rolling plan for LIMS should be ready by then. The support in 2009 will be devoted to more training on LIMS and AIMS and to the support to MS to form their LIMS network.

Countries are expected to start drafting their **national SoP's** and build their **national system** firstly for the **9 quantitative modules** (and particularly for the following Five modules i.e. M1 census, M3 production , M5 trade, M10 outbreaks, M11 vaccination on one hand, which are considered as priority Modules, plus when possible on M2 Households and M6 infrastrcutures).

Member states should also **collect and send information** to **SADC** secretariat (to Livestock unit FANR c/o PRINT LS project), i.e. the last numerical datasets available for these priority Modules. To do so they should use preferably the software though they could use firstly the **templates provided in Excel** and formatted as import formats**,** as the use of LIMS software will be heterogeneous and gradually implemented in MS. They should start by providing data on **M1, M3, M5, M11**, and continue reporting on **M10** which are essential Modules if we want to publish a **production and trade yearbook** plus a **disease control yearbook** by next year 2009. M10 is relatively well advanced because of the historical accumulation of data regarding outbreaks in the region, and a first disease yearbook has already been published.

Thirdly, they should start collecting **retrospective data** to provide elements for a trends analysis (5 years retrospective data), preferably by formatting the data to be compliant with an LIMS import template.

ANNEX I – Terms of reference for the mission and Speech of the CEO SAA for the launching of LIMS

Annexe Ia TERMS OF REFERENCE FOR PRINT LIVESTOCK PROJECT MISSION ON LIMS Launching in SEYCHELLES

LIMS Adoption Missions: Stakeholder Consultations on AIMS and LIMS & LIMS Training: July 2008 to October 2009

A major expected output of the PRINT Livestock Project is the development of a Livestock Information Management System (LIMS) for the collection of livestock data, processing and reporting of information between Member States and the SADC Secretariat. LIMS is a component of the SADC/FANR/AIMS i.e. Agricultural Information Management System.

The development of LIMS has necessarily, been undertaken in stages as follows:
- Situation Analyses to establish systems of livestock data management in Member States;
- Consultative workshops on the development of reporting templates for data-capture with Sub Committees of the SADC Livestock Technical Committee, namely:- 1) Epidemiology & Informatics, 2) Animal Production, Veld & Marketing, 3) Veterinary Public Health & Food Safety, and 4) Veterinary Laboratories & Diagnostics;
- Approval of the data-capture templates by the Livestock Technical Committee; and
- Sub-contracting of the LIMS database development.

The LIMS application is now in its final stages of development. The stage has been reached where the LIMS application must be rolled out to Member States for installation, training and final testing, whilst providing an opportunity for establishing institutional networks for livestock data collection at the national level.

To this end, so-called LIMS Adoption Missions to Member States are planned from July to December 2008. Attached is a table giving details regarding the month and proposed dates relevant for each Member State.

The LIMS Adoption Missions will comprise the following activities:
- A stakeholders workshop to present the entire SADC/FANR information strategy i.e. the AIMS portal, the LIMS application, the LIMS Web/GIS, associated reporting templates, national standard operating procedures (SOPs), and the institutional network for implementation;
- Training of trainers on the LIMS application for a limited number of key personnel who will conduct further training at national level;
- A final evaluation of sources of information and use of the harmonized data-capture templates;

Therefore member(s) of the PRINT Livestock Project will firstly hold a one-and-half day workshop whose participants should include representatives of livestock departments, public and private institutions who are a source of livestock data and / or information, including all livestock personnel

who have participated in previous workshops or training courses organized by the project as well as selected participants to recent AIMS workshops.

The one-day workshop will be followed by a three-day LIMS training course of a maximum 8 identified personnel involved in livestock data management.

Please note that there will be follow-up communication with each Member State close to the date of the mission. The PRINT Livestock Project will meet all costs associated with the above-mentioned activities i.e. per diems, travel and workshop facilities.

We look forward to your usual support in this important regional activity.

Yours Sincerely,

Dr Pascal Bonnet
CTA
PRINT Livestock Project

Annexe I b
Speech from the CEO of SAA in Seychelles

The speech delivered by the SAA CEO during launching LIMS in the Seychelles.

A Statement at the Launching of the Livestock Information Management System (LIMS) and the Agricultural Information Management System (AIMS) in the Seychelles Delivered on the 23rd July 2009 at the Care House Conference Room

Workshop facilitators, participants, ladies and gentlemen .Welcome to the launching of the livestock information management system (LIMS) and the agricultural information management system (AIMS) in the Seychelles. A special welcome to the two facilitators who travelled from afar just to be with us at this historic occasion and who have been facilitating since the beginning of the week.

Seychelles rejoined the Southern African Development Community (SADC) in August 2008 after an absence of more than two years in order to promote as well as benefit from regional trade. Evidently as a member state it also has the responsibility to fulfill a number of obligations.

One of Seychelles' obligations as SADC member states is to collate in the correct format and forward livestock data to the SADC headquarters. There are different stages of the adoption process and some have already been completed. The launching brings us one step closer to the adoption point and I am glad all of you are here to witness it.

Since Monday, the two facilitators have been involved in the training of the officers in charge of livestock information collection. As I understand it the training has been a success. So I believe then that you are now equipped with the tools to provide accurate livestock production data to the decision makers and to SADC headquarters. I appreciate the enthusiasm displayed by the facilitators and the officers collecting data.

Seychelles has some advantages that will make livestock production data collection somewhat easier in comparison to the other member states. Firstly, the country is physically small with much fewer livestock producers, so getting livestock production information should be easier.

Secondly, most livestock i.e. broilers, cattle and pigs are slaughtered at one abattoir which makes the data easily available. A set back though is that no red meat abattoir is available currently on Praslin Island. We look forward to this issue being resolved in the near future. The broiler abattoir is still in working order on the island.

Every one of us here has a stake in proper livestock production data. I therefore seize this opportunity to make a plea to some of the layer farmers to help us, help themselves and help the country at the same time in providing their livestock production statistics on a consistent basis. I say this because even though there are many layer farms that keep records, there are still few that don't. To get the correct data, all the layer farms without exception have to keep daily records of eggs laid and the number of birds left on the farm. The livestock officers will be going round soon to see how we can help you keep these records required. I thank you in advance because I know you will cooperate with us. After today's launching, there will be a wrap-up session tomorrow, when the final touches and the icing on the cake will be put. I believe every person will participate actively as in the past three days.
I thank you all in your dedicated participated and above I thank the facilitators for a job well done.
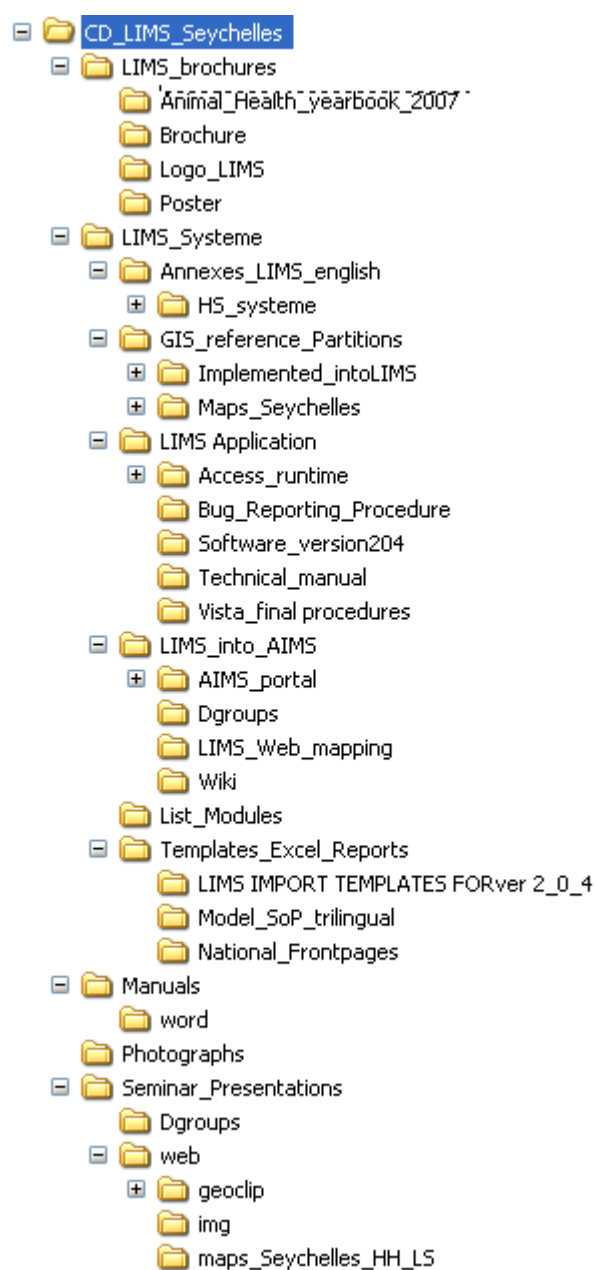
ANNEX II – Training Handout left to Seychelles:
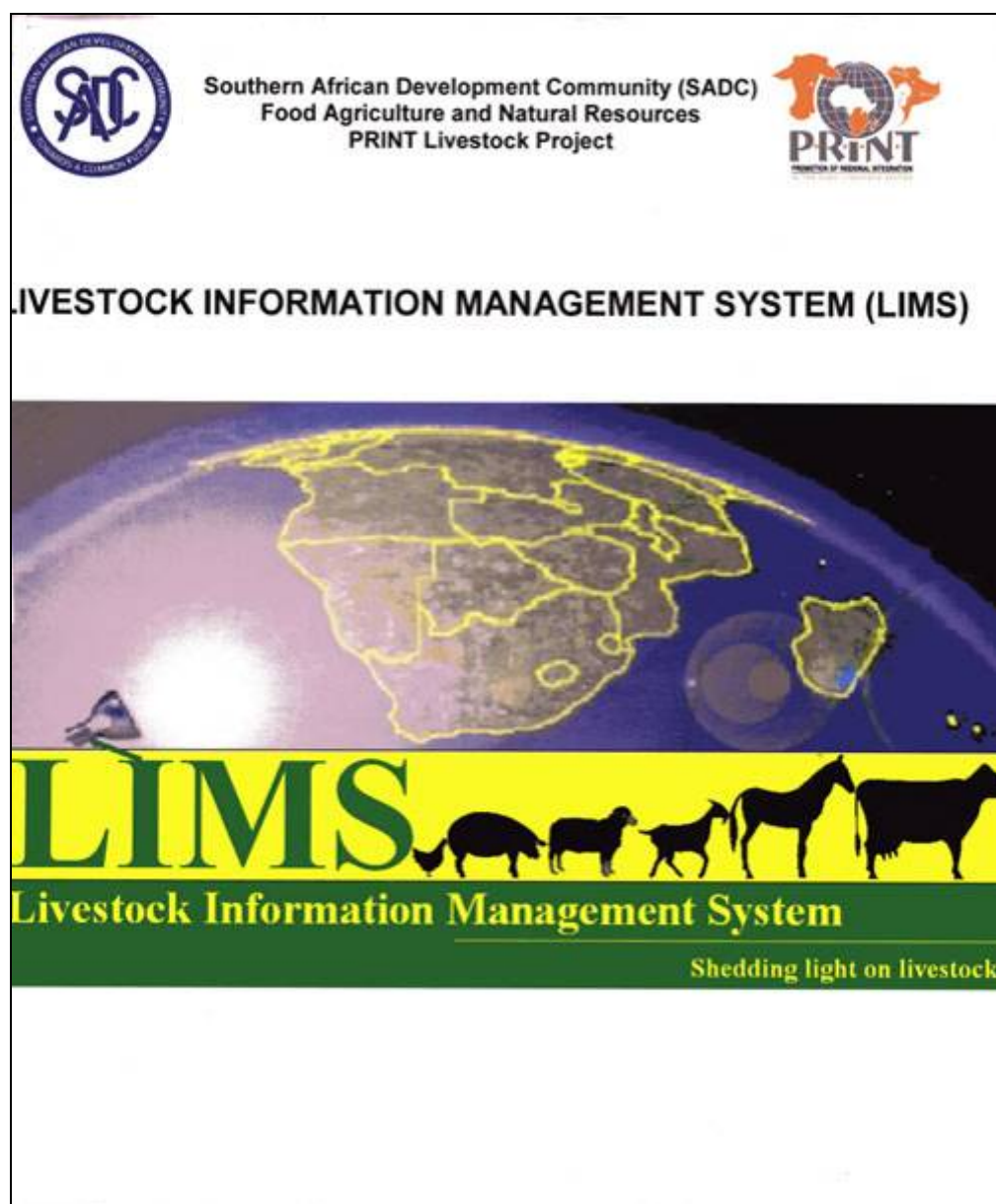
A full package of documents has been distributed at the end of the training with a CD including.

- Software's released at per the date of the training (Beta version still under evolution): LIMS beta version

- CODEC to read movie for the AIMS demo video (in file .avi)

- LIMS Templates in Excel (version to date)

- Etc..

ANNEX III – CD (electronic annexes) left to Seychelles

- CD_LIMS_Seychelles
  - LIMS_brochures
    - Animal_Health_yearbook_2007
    - Brochure
    - Logo_LIMS
    - Poster
  - LIMS_Systeme
    - Annexes_LIMS_english
      - HS_systeme
    - GIS_reference_Partitions
      - Implemented_intoLIMS
      - Maps_Seychelles
    - LIMS Application
      - Access_runtime
      - Bug_Reporting_Procedure
      - Software_version204
      - Technical_manual
      - Vista_final procedures
    - LIMS_into_AIMS
      - AIMS_portal
      - Dgroups
      - LIMS_Web_mapping
      - Wiki
    - List_Modules
    - Templates_Excel_Reports
      - LIMS IMPORT TEMPLATES FORver 2_0_4
      - Model_SoP_trilingual
      - National_Frontpages
  - Manuals
    - word
  - Photographs
  - Seminar_Presentations
    - Dgroups
    - web
      - geoclip
      - img
      - maps_Seychelles_HH_LS

- 📁 SoP_Diagrams_and_Procedures
  - 📁 Examples_SoP_diagrammes
  - 📁 Model_SoP_Excel_trilingual
- 📁 Strategic_Documents_SADC
  - 📁 DaarEsSalam
    - 📁 Food_security
  - 📁 FTA_trade
  - 📁 SADC_RISDP
  - 📁 Trade_protocole
    - 📁 SPS_annexe
- 📁 Training_material
  - 📁 Agenda_TIMETABLE
  - 📁 Attendance_Training
  - 📁 Comment_sheet_LIMS
    - 📁 Minilaptops_eee_ASUS
  - 📁 Data_Seychelles_Backend
    - 📁 imports 2008 start of march 08
    - 📁 leptospirosis
    - 📁 to_replace_empty_backend
  - 📁 ToR_missions
  - 📁 Training_handout
  - 📁 Training_package_LIMSfrontpage

ANNEX IV – Proposed SoP sheet (excerpt to be improved by MS)

			LIMS / *Seychelles*

LIMS Standard Operating Procedures
SoP 'elaboration Sheet for a module or some excerpts of a Module (template) (to complement the LIMS Comment sheet)

_____

Country: **Seychelles**

_____
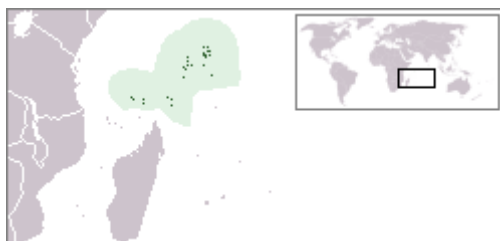
Preamble

This sheet is used to respond to the 5W questions: Who will do What regarding LIMS templates (harmonized reports on Livestock LS stats) and LIMS application (software), Why? When? and Where? (Who = Institution and name of a personnel with details etc..)?

Why such a procedure?: The objective is to develop and gradually finalize the **national & specific SoP's** on **LIMS** in the country (SoP: i.e. **standard operating procedures).** The SoP is used for running the LIMS system, using a **national network** of **stakeholders** (with their names and positions) which will have **FUNCTIONS** regarding data contribution and use of the system, such as:

- Be part of the **LIMS national taskforce** which establish the organizational chart and specific procedures for the country
- Take responsibility and **leadership** to **provide data** (**contributors** as **primary of secondary** sources) and **submit** dataset to "parent" partners within the country (could be e.g. Meat board transmitting information to Agric Stats or DVS…) following an organizational chart established for the country (a decentralized system)
  - o e.g. function like fill some templates (Paper report or Excel based)
  - o e.g. enter data into screens of the LIMS application (MS Access based)
  - o e.g. transfer (send) such data regularly to a parent partner
- Take a responsibility and **leadership** to **coordinate** the LIMS system and its various functions e.g. the data capture within the country and the submission of regular statistics to SADC (i.e. manage the centralized database in the country and liaise with SADC secretariat)
  - o Submit to SADC and **liaise** with the Livestock unit of SADC
  - o Download the new **versions** of LIMS application and of training material (manuals) when released and
  - o Revise the national SoP's regularly (yearly), make sure that the procedures used by the contributors follow the one agreed upon
  - o Organize **refreshing training** when need be
- Act as a Trainer on LIMS system using the generic manuals and update some contents by drafting "**country specific contents**" (to customize manuals for national purpose)
- Interact on the **AIMS LIMS portal**: use the tools provided and contribute to the forums through the portal, participate to the **AIMS national network**

This activity of drafting the very first SoP's will also insure the proper collection of data with **three folds**:
1/ to assure the proper **starting of the data reporting onwards** (to SADC) from the date of the visit to MS or from the date agreed upon during the November 2008 and April 2009 LTC' and other sub committee's meetings,

   - By using LIMS application (software), you will also have to follow up updates of new versions on the LIMS software and manuals on the AIMS portal; http://aims.sadc.int (livestock section); web-mapping at http://lims.sadc.int (new specific LIMS pages will be added after the first round of country visits achieved by PRINT by mid 2009)

   - By using TEMPLATES in EXCEL, only if you cannot use the application for some reasons (you must have agood reason!), or in a decentralized system when you wish firstly to use the excel templates in hard and soft copies in the field (at province and district levels), before capturing aggregates in the LIMS software

      firstly look at the LIMS templates and prepare the compilation of datasets, and gradually move to full use of the application

This activity needs to clearly:

- **Identify and list the various & potential source**(s) of **information** / **data** in the country, with the type of data that they could provide / manage. One should know when and where data are available and published, .i.e. use some sources like the web sites of institutions where data are managed by experts and published after finalization of specific surveys, like the CSO and agricultural surveys, or the Meat board which provides regular compilation of data on trade & commodity prices etc...
   - **Prioritize** and **Select** the **most relevant sources** that will contribute to the system (relevant means also that the methodology to acquire the data is well described and known and accessible, cf. Metadata part of the LIMS) and start dispatching the roles and functions in the organizational chart established by the LIMS national task force (a network)
      - firstly list the sources so that one or two will be selected to report / contribute to the system

2/ to start the in depth collection of at least **one year of detailed data** in hard or electronic copies. This dataset is needed in order to properly prepare the **SADC Regional Livestock yearbook like the Animal Production and Trade Yearbook** for 2007-2008 (or with the year of reference according to stats available in the MS) to be published in 2009 and onwards. This dataset will be used to support various on going initiatives at SADC level, like the drafting of a regional livestock policy part for the RAP Policy an initiative lead by FANR

      -(Electronic files are preferred)

3/ thirdly to **continue this process by collecting** and sending elements for a "*5 years data retrospective time series*" in hard or electronic copies as well (in order to properly prepare trends analysis which will complement the simple snapshot of one year data from 2/)

      -(Particularly ask NSO to provide all relevant documents (possibly purchased for PRINT))

_____

SoP LIMS for Country = **Seychelles**
For a Component or a Module = Templates / Screens part of a Module

SoP's per Module (11 Modules with their Template) / part of component (4 components see LIMS structure)
Use **one individual SoP sheet per template / screen** so that we can update one individually if the source or the procedure is changing

Recap on Modules and templates
- Headers
- Module 1 Numbers & Composition of Herds
   - 1. Nr by species
   - 2. Nr by economics
   - 3. Nr by breeds
   - 4. Nr by herd struct
- Module 2 Human Households & Population in Livestock farming
   - 1. Human Population
- Module 3 Production Parameters
   - 1.Slaughter
   - 2.Milk
   - 3.Dairy products
   - 4.Eggs
   - 5.Hides, skins

- Module 4 Livestock & Products Price
  - 1. Live animals
  - 2. Meat products
  - 3. Milk products
  - 4. Eggs
  - 5. Hides & skins
  - 6. Fiber & feathers
- Module 5 Livestock & Products trade: import/export
  - 1. Live Animals
  - 2. L.stock Products
  - 3. L.stock Inputs
- Module 6 LS Infrastructures

  Agreg.
  - 3.Dipping
  - 4.Pens
  - 5.Vet clinics
  - 6.Govt Offices
  - 7. Mun Abattoirs & slabs
  - 8.Milk Collection
  - 9. Livestock Markets
  - 10.Storage Products

  Generic Partitions
  - 1.Admin
  - 2.Technical

  Detailed
  - 1.Vet Diagnostic Labs
  - 2.Vet Vaccine Labs
  - 3.Industrial Abattoirs
  - 4.Dairy Processing Plants
  - 5.Secondary Markets, etc
  - 6. Port of Entry & Exit

- Module 7 Meat Inspection / Food safety
  - 1.Ante-mortem
  - 2.Post-mortem
- Module 8 Livestock Associations and Service Providers
  - 1.Umbrella org & assoc
  - 2.Private companies
  - 3.Government
- Module 9 LS related Laws, Regulation and Acts, policy docs
  - 1.National Docs
  - 2.International Docs
- Module 10 Disease Outbreak notification
  - Outbreaks
- Module 11 Vaccinations (e.g. TAD's)
  - 1.Vaccination

Part 1: Header of the SoP

Date of elaboration of the SoP:

Persons who elaborated the SoP:
(Generally elaborated after a meeting of the LIMS taskforce in MS, give details and email of contact persons for the modification requested):

This SoP is for which Template / Screen : Give Number: (code : **Component** - **Module** - and **Template** Number / **Screen number** taken from Excel templates or MS Access Screens read from left to right if possible, or copy paste the image of the screen or template)

Part 2: Image of the templates / screens dealth with (when needed)

Template
e.g. Module 3, Template 4 / Screen 4 (with header accounted for in numbering Excel working sheets)

Corresponding Screen
e.g. Module 3, Template 4 / Screen 4 (with header accounted for in numbering Tab of screens)

Part 3: Comments on who could / will be responsible for the templates / screens of the module studied, and with which functions?
Firstly List all potential sources of information for the Module / Template / Screen

Make assumption on where the system will be centralized at national level. Here it is assumed that DVS will take this leading role.

List them: e.g. hierarchical role of DVS from HQ to region, districts, and elaborate on Partnership / Functional role of other institutions (Meat Dairy Boards, CSO's, Agric Stats…)
e.g. Hierarchical role: how the information will flow from fields to HQ DVS
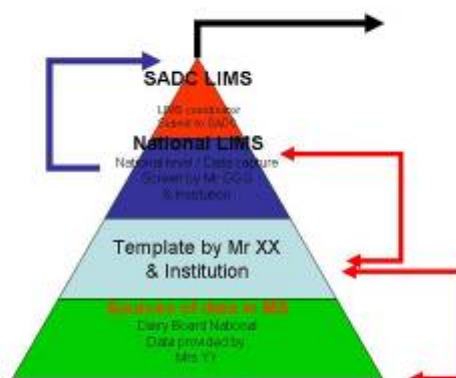
LIMS Module 3 / Template - Screen Dairy ##

e.g. Functional role: Which institutions outside DVS could take a role , or have a function regarding this template? Do they cover the entire territory or not (partial coverage of a commodity association for instance)? Therefore, should they report to intermediate levels like to regions / province / district offices or to HQ? etc..
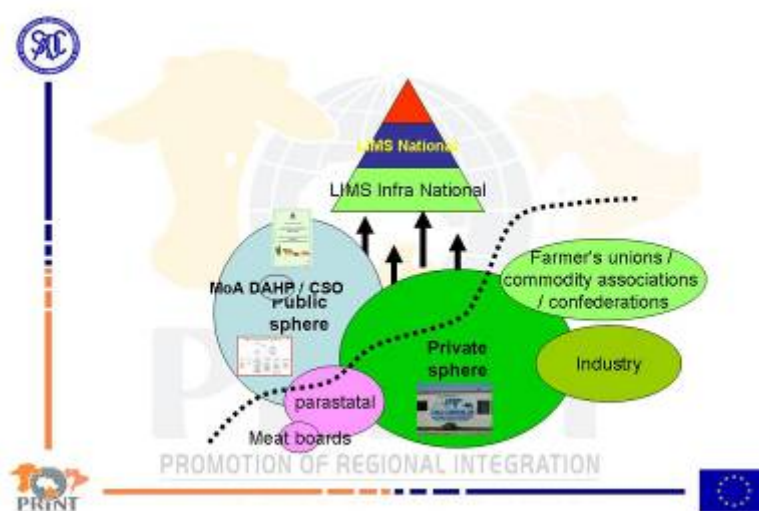
Link such institutions to the hierarchical system at the appropriate level to start drafting the organisational chart for running the LIMS system (here for a selection of templates or modules)
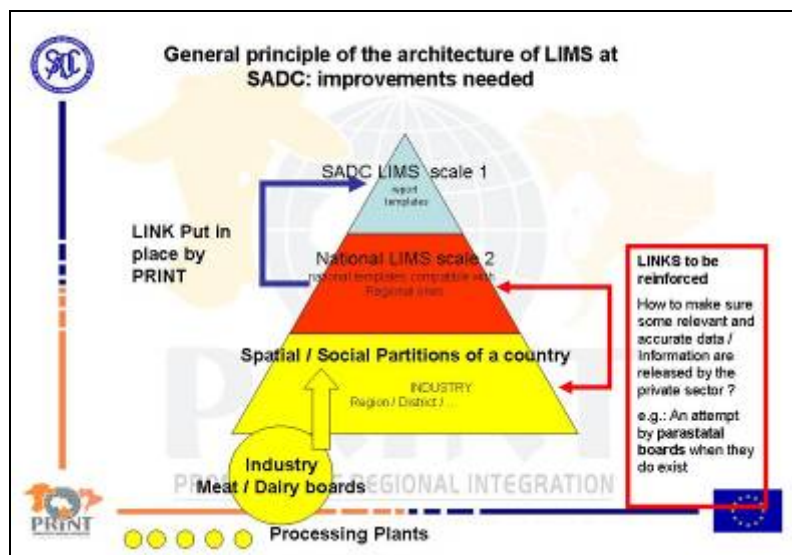
e.g. a dairy board having national coverage may report to HQ where LIMS is installed
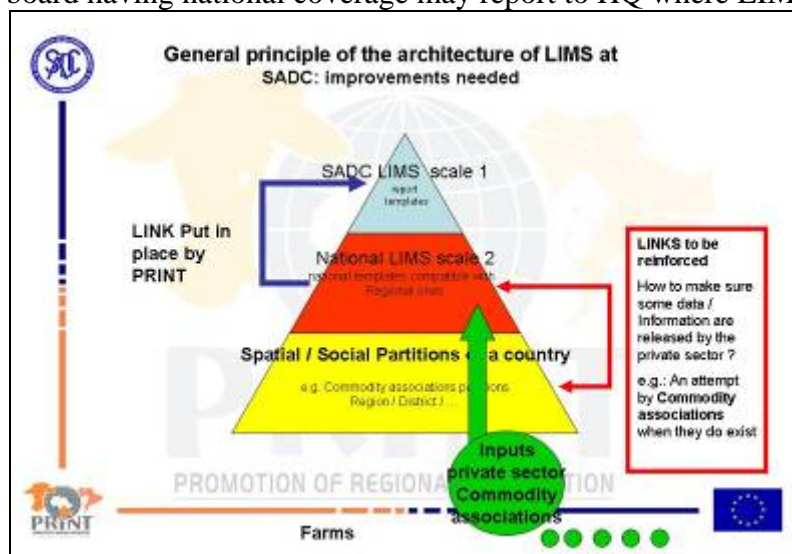
e.g. a commodity association having provincial coverage may report to HQ or to the province where LIMS is installed

Selection of sources: after having listed them now rank the "players", make the selection for the best bet (and also keep some alternatives, therefore the ranks 2 and 3)

a/ Major Role for the template / module to be distributed to:

1/

2/

3/

b/ **Describe role** and responsibility of selected sources / methods they use / frequency of their reports

1/

2/

3/

Part 4: Elaborate a Diagram with Boxes (institutions) and Flows (relationship between institutions) for SoP / i.e. an Organisational chart for the template / module
i.e. take an image of what you have drafted on a flip chart with the flow of data between partners, type of transfer, i.e. who does what? Each flow can be given attributes like in this small table attached to the flow

Source involved directly into LIMS which will contribute to the system	Parent partner? (primary source) if any one	Child partner to receive data
What is transferred		
How is it transferred		
Who is transferring		
When is it done		
Where: From Where to Where ?		
Etc..		

Functions to be achieved: Stage 1: collection and capture of data
What?
- Collection with paper report?
- Collation into Excel templates (and compile report by printing in hard copy when needed)
- Direct Data capture into LIMS screens?

- **Who is responsible for filling** the paper report / template / **capturing** data into LIMS excel sheets or application' screens (can be private / public sector)
- Name of stakeholder(s) and **Institution(s) of reference** at **national** level
    - o (email of contact person)
- **Name of Institution**(s) of reference at **regional/provincial** level
- Name of Institution(s) of reference at **district** level

Functions to be achieved: Stage 2: Supervision and submission
Data transfer is **controlled** by a supervisor / Data **submission** to upper scales / levels (the data collected will flow to "child partners": HQ? province etc..? and eventually to SADC

Who is responsible for coordinating & controlling data quality for this module? = Who is responsible for **coordinating the completion** on time, and **submission to SADC** for this set / component / module?
- Name of stakeholder(s) and **Institution(s) of reference** at **national** level
    - o (email of contact person)
- **Name of Institution**(s) of reference at **regional/provincial** level
- Name of Institution(s) of reference at **district** level

How to formulate responsibility in the SoP

e.g. LIST of players

ORGANIZE FLOW of DATA between players

Diagram of REPORT USING TEMPLATES or ELECTRONIC FILE + DIRECT input into LIMS Screen

---

Part 5: Rank the difficulty of this module / screen / template in terms of contents and organisation of data flow

- Easy to fill with little effort: □ Y/N □
- Relatively Easy to fill with significant effort: □ Y/N □
- To gradually o fill with strong effort: □ Y/N □

Part 6: Can this Module/ Template be integrated in another IS and methodologies of surveys that co exists at national level (by CSO etc..):
e.g. DEVinfo, VACinfo, M and E systems of Programs, CSO surveys etc..
if yes then this module could be adopted as one component of a larger survey initiative

Part 7: In conclusion Decision Table (to be consolidated for all modules)
5 W : What to do / when? where? who is in charge, why?

After having elaborated the diagram, try to fill in a summary table a bit like this one:

What	Who	When	Where	Why	How
Module Number Screen / template number					
e.g. supervising M10 / S2 / T2	Name of the Institution and name of a person and his functions:	Frequency will be monthly	At National level HQ		LIMS application Or TEMPLATES in EXCEL

Note:
When various sources coexist in an information chain, put them by order and indicate the one used to input data into LIMS
- Primary source: Institution & Person in charge for the template in Module
- Secondary source: Institution & Person in charge for the template in Module
e.g. Institution that will enter data into LIMS
e.g. Institution who will submit data from LIMS to SADC: Frequency of submission

Part 8: How to gradually implement the LIMS in the entire territory with its hierarchy /Comments on Hierarchical partition

Hierarchical partition
Provinces / Regions:

Districts

Try to indicate in which Partitions you should start implementing the **LIMS system** with:
a/ **LIMS application** installed on computers or/and

b/ **Paper Report + Excel sheet (template)**

ADMIN type, Level 1 and 2, Region / Province and District names
Proposed Edited Version of Partitions agreed on during the mission **to be implemented into LIMS**
In **red** result of proof reading of original data provided (i.e. editing)

25 administrative districts (source LIMS adoption mission):
Districts:
Anse aux Pins   Anse Boileau   Anse Étoile   ~~Anse Louis~~ Anse Royale   Baie Lazare   Baie Sainte-Anne (Ste Anne)   Beau Vallon   Bel Air   Bel Ombre (Belombre)   Cascade   Glacis   Grand' Anse (Mahé) Grand Anse Mahe   Grand' Anse (Praslin) Grand Anse Praslin La Digue   English River ~~La Rivière Anglaise~~   Mont Buxton   Mont Fleuri   Plaisance   Pointe La Rue (Larue)   Port Glaud Saint-Louis (St Louis)   Takamaka   Roche Caïman Au Cap Les Mamelles Other Islands

One removed: (Anse Louis) not a district
4 added: Roche Caiman, Au Cap, Les Mamelles, Other Islands
Some editing in the spelling (the official way to write it only one way please !) e.g. Bel Ombre or (Belombre)

Regions: 5, Central, East, West, North, Praslin/La Digue

A correspondance list has been established by NSB for parent / child partitions (with options for writing them)

Country	Region (admin level 1)	District (admin level 2)	codes
Seychelles	Central	English River	ER
	Central	Mont Buxton	MB
	Central	St Louis	SL
	Central	Bel Air	BA
	Central	Mont Fleuri	MF
	Central	Plaisance	PA
	Central	Roche Caiman	RC
	Central	Les Mamelles	LM
Seychelles	East	Cascade	CA
	East	Pointe Larue	PL
	East	Anse Aux Pins	AA
	East	Au Cap	AC
	East	Anse Royale	AR
	East	Takamaka	TA

Seychelles	West	Anse Boileau	AB
	West	Baie Lazare	BL
	West	Gran Anse Mahe	GM
	West	Port Glaud	PG
Seychelles	North	Belombre	BO
	North	Beau Vallon	BV
	North	Glacis	GL
	North	Anse Etoile	AE
Seychelles	Praslin La Digue	Grand Anse Praslin	
	Praslin La Digue	Baie Ste Anne	GM
	Praslin La Digue	La Digue	BS
Seychelles	Other Islands	Other Islands	LD

Major towns

TECHNICAL Type

Proposed Technical partitions to be implemented into LIMS: Status of our discussions
Areas used by Extension services etc..
<mark>In red</mark> result data provided (i.e. editing)

Enumeration areas used in census

Signatures of partners

LIMS PRINT officer

Stakeholders

ANNEX V – Comment sheets (a/ bugs & b/ templates/screens)

a/ Bug records table

List of errors detected in LIMS application and suggested corrections

Name of reporter_____   Position_____   Date errors
detected_____

Any report should be reported firstly to PRINT: BBedane@sadc.int
CC to Livestock Unit BHulman@sadc.int
CC to the developer: INFORMATIX INDUSTRY SERVICES Pty Ltd / Thulagano Segokgo
tsegokgo@gmail.com
CC to the external tester: Xavier Juanes Xavier.Juanes@cirad.fr

No.	Component	Module	Tab page	Error detected	Suggested correction

b/

Comment sheet on LIMS Modules (to complement the SoP sheet)

Country: **Seychelles**

- • Headers
- • Module 1 Numbers & Composition of Herds
  - • 1. Nr by species
  - • 2. Nr by economics
  - • 3. Nr by breeds
  - • 4. Nr by herd structure
- • Module 2 Human Households & Population in Livestock farming
  - • 1. Human Population
- • Module 3 Production Parameters
  - • 1.Slaughter
  - • 2.Milk
  - • 3.Dairy products
  - • 4.Eggs
  - • 5.Hides, skins
- • Module 4 Livestock & Products Price
  - • 1. Live animals
  - • 2. Meat products
  - • 3. Milk products
  - • 4. Eggs
  - • 5. Hides & skins
  - • 6. Fiber & feathers
- • Module 5 Livestock & Products trade: import/export
  - • 1. Live Animals
  - • 2. L.stock Products
  - • 3. L.stock Inputs
- • Module 6 LS Infrastructures
  - Agreg.
  - • 3.Dipping
  - • 4.Pens
  - • 5.Vet clinics
  - • 6.Govt Offices
  - • 7. Mun Abattoirs & slabs
  - • 8.Milk Collection
  - • 9. Livestock Markets
  - • 10.Storage Products
  - Generic Partitions
    - ▪ 1.Admin
    - ▪ 2.Technical
  - Detailed
    - • 1.Vet Diagnostic Labs
    - • 2.Vet Vaccine Labs
    - • 3.Industrial Abattoirs
    - • 4.Dairy Processing Plants
    - • 5.Secondary Markets, etc
    - • 6. Port of Entry & Exit

- Module 7 Meat Inspection / Food safety
  - 1.Ante-mortem
  - 2.Post-mortem
- Module 8 Livestock Associations and Service Providers
  - 1.Umbrella org & assoc
  - 2.Private companies
  - 3.Government
- Module 9 LS related Laws, Regulation and Acts, policy docs
  - 1.National Docs
  - 2.International Docs
- Module 10 Disease Outbreak notification
  - Outbreaks
- Module 11 Vaccinations (e.g. TAD's)
  - 1.Vaccination

Comments sheet and reports to be sent to

<mark>A generic address will be created at LIMS@sadc.int</mark>
Meanwhile use PRINT: BBedane@sadc.int
CC to Livestock Unit BHulman@sadc.int
If bugs reports: CC to the developer: INFORMATIX INDUSTRY SERVICES Pty Ltd / Thulagano
Segokgo tsegokgo@gmail.com
If bugs reports: CC to the external tester: Xavier Juanes Xavier.Juanes@cirad.fr and
pascal.bonnet@cirad.fr

Part 1: Header
Comments on which Template Number & Screen number: (code : **Component** - **Module** - and
Template Number / **Screen number** from left to right when possible to account like this)

Date:

Name of stakeholder(s) commenting & Institution(s) of reference
(email of contact person for the modification requested):

Part 2: images (when needed)
e.g. Module 3, Screen 4 (with header accounted for)

Template

4. Processed Dairy Products (from all species)												
Partition 1, e.g. Region/Province	Partition 2, e.g. District	Pasteurized milk Lt**	UHT milk Lt	Fermented milk Lt	Yoghurt Lt	Cheese Kg**	Butter Kg	Cream Lt	Powder milk Kg	Other* products	Other * products	Other * products
Reg/prov 1…….	Dist 1…..											
	Dist 2…..											
	Dist 3…..											
Reg/prov 2…….	Dist 1…..											
	Dist 2…..											
	Dist 3…..											
etc												

* Specify which product
** Lt= Litres, Kg= Kilograms

LIMS: Milk equivalent not working
LIMS: unit of measure kiloliters??

LIMS gives option for cattle and goat = wrong
LIMS: take out option "milk"
Not in LIMS: fermented milk, cream, other products
LIMS: Yoghurt/fermented products together

Corresponding Screen

Part 3: Comments on the template

Part 4: Comments on the screen

Part 5: Modifications / Adjustments suggested / requested by categories (referring to the application screen, and template)

e.g. Contents, functionalities (export etc..) , categories / parameters etc..

Part 6: Comments on the **Queries** / **Reports** implemented in LIMS screen / Module
e.g. Request for Modifications / Addition of some queries, to provide tables as input to other external info. System e.g. to export to CSO (CSO surveys, Agric. Stats…)

Part 7: Comments on **specific contents** that would be useful in **national manuals** used during a LIMS training (on line or classic training)
LIMS Manuals: Manual for Data Clerk (reporting manual) / Manual for trainers (these manuals are pending and will be posted on line and send to the group)
e.g. special "convention" or definitions for proper interpretation of some categories implemented into the screens and templates (e.g. Grading system, follow up of an outbreak, names of category for small stock)

Part 8: Bugs identified (please use the form attached): *Error detection sheet2.doc*
and send the table to:
A generic address will be created at LIMS@sadc.int
Meanwhile use PRINT: BBedane@sadc.int and PBonnet@sadc.int
CC to Livestock Unit BHulman@sadc.int
If bugs reports: CC to the developer: INFORMATIX INDUSTRY SERVICES Pty Ltd / Thulagano Segokgo tsegokgo@gmail.com
If bugs reports: CC to the external tester: Xavier Juanes Xavier.Juanes@cirad.fr and pascal.bonnet@cirad.fr

Part 9: Validation of ADMIN and TECHNICAL partitions

ADMIN Partition list as implemented into LIMS before the training

Public Web source: 23 administrative districts (source Wikipedia):
District Anse aux Pins Anse Boileau Anse Étoile Anse Louis Anse Royale Baie Lazare Baie Sainte-Anne Beau Vallon Bel Air Bel Ombre Cascade Glacis Grand' Anse (Mahé) Grand' Anse (Praslin) La Digue La Rivière Anglaise Mont Buxton Mont Fleuri Plaisance Pointe La Rue Port Glaud Saint-Louis Takamaka

ADMIN type, Level 1 and 2, Region / Province and District names
<mark>Proposed Edited Version of Partitions agreed on during the mission **to be implemented into LIMS,**</mark> In red result of proof reading of original data provided (i.e. editing)

25 administrative districts (source LIMS adoption mission)
Districts : Anse aux Pins   Anse Boileau   Anse Étoile   ~~Anse Louis~~ Anse Royale   Baie Lazare   Baie Sainte-Anne (Ste Anne)   Beau Vallon   Bel Air   Bel Ombre (Belombre)   Cascade   Glacis   Grand' Anse (Mahé) Grand Anse Mahe   Grand' Anse (Praslin)   Grand Anse Praslin   La Digue   English River ~~La Rivière Anglaise~~   Mont Buxton   Mont Fleuri   Plaisance   Pointe La Rue (Larue)   Port Glaud   Saint-Louis (St Louis)   Takamaka   Roche Caïman   Au Cap   Les Mamelles   Other Islands
One removed: (Anse Louis) not a district, **4 added:** Roche Caiman, Au Cap, Les Mamelles, Other Islands ; **Some editing in the spelling** (the official way to write it to comply with NSB) e.g. Bel Ombre or (Belombre)

Addition of Regions: 5; Central, East, West, North, Praslin/La Digue

A correspondance list has been established by NSB for parent / child partitions (with options for writing them)

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	Central	Roche Caiman	RC
	Central	Les Mamelles	LM
Seychelles	East	Cascade	CA
	East	Pointe Larue	PL
	East	Anse Aux Pins	AA
	East	Au Cap	AC
	East	Anse Royale	AR
	East	Takamaka	TA
Seychelles	West	Anse Boileau	AB
	West	Baie Lazare	BL
	West	Gran Anse Mahe	GM
	West	Port Glaud	PG
Seychelles	North	Belombre	BO
	North	Beau Vallon	BV
	North	Glacis	GL
	North	Anse Etoile	AE
Seychelles	Praslin La Digue	Grand Anse Praslin	
	Praslin La Digue	Baie Ste Anne	GM
	Praslin La Digue	La Digue	BS
Seychelles	Other Islands	Other Islands	LD

TECHNICAL Type:

Proposed Technical partitions to be implemented into LIMS: Status of our discussions
Areas used by Extension services etc..
<mark>In red</mark> result data provided (i.e. editing)

Enumeration areas: mad of 50 dwelling , therefore dynamic changes from census to census
Health zones: no
Agro Eco zones: no
Vet districts: no

Extra comments
Part 10: Comments on the **Functionalities of AIMS portal** (cf. portal) and LIMS portal (web mapping so far) on the web that you would like:
http://aims.sadc.int / http://lims.sadc.int

Reminder: objectives of functionalities:
  – To present spatial and non-spatial information
  – To develop directories of institutions (and experts) – information exchange standards
  – To carry out customised search for projects, technologies, people, institutions, publications
  – To establish electronic networks- thematic & national, with associated tools (discussion forums, collaborative, dissemination)
  – To devolve content generation to level of information producer
  – To aggregate national news/events at regional level
  – To host Learning tools and materials
  – …

Facilities to use / Facilities to contribute to:

  – Web pages: create new contents and Web pages (e.g. national LS pages)
  – Web mapping
  – Post News and use News list (events list) and their aggregation (i.e. of most recent news, through « syndication » of news and RSS feeds)
  – Use Search engine (custom search with specific engine)
  – Use and contribute to a Non spatial library: documents of interest
  – Wiki : contribute to an encyclopaedia of LS sector in SADC, to the LIMS manual enriching the manual about the country livestock profile
  – Use D-groups (discussion), e.g. one group for LIMS Seychelles, possibly link to SMS
  – Build contents for a Distance learning and Training on line – (Moodle platform), e.g. training on LIMS adapted for the National context
  – Use links to important Information sites thanks to E-Frame (web frame of other sites into AIMS)
  – Use RSS feeds
  – ……

e.g. I would like a web page to get the updated versions of LIMS and of the manual
I would like a FAQ questions page
I would like a D-Group for discussing agric. stats in a forum

Most feature to be used:

Most feature to contributed to:

Signatures

LIMS PRINT officer

Stakeholders

ANNEX VI – List of Modules into LIMS

Module per component (see LIMS structure : individual sheet per module so that we can update one individually

Modules et écrans correspondants au système LIMS / *Modulos e ecrã do LIMS* **/ Modules and screens (templates) of LIMS**

- Headers / Timbre / Entête

- Module 1 *Numbers & Composition of Herds* / Effectivos animais do rebanho nacional / Effectifs nationaux – recensement animal
    - 1. *Nr by species* / effectivos animais por espécies / Nombre par espèce
    - 2. *Nr by economics /* effectivos animais por função economica / Nombre par fonction économique
    - 3. *Nr by breeds* / Effectivos animais por raça / Nombre par race
    - 4. *Nr by herd structure* / Effectivos animais por idade e sexo / Nombre par âge et sexe (démographie)

- Module 2 *Human Households & Population in Livestock farming* / Agregados familiares criadores / Ménage engagés dans l'agriculture et l'élevage
    - 1. *Human Population* / Agregados familiars / Ménages et population humaine

- Module 3 *Production Parameters* / Produção animal / Production animale
    - 1. *Slaughter* / Abate (carne) / Abattages
    - 2. *Milk* / Leite / Lait
    - 3. *Dairy products* / Lacticinios / Produits laitiers
    - 4. *Eggs* / Ovos / Oeufs
    - 5. *Hides, skins* / Curos e Peles / Cuirs et peaux

- Module 4 *Livestock & Products Price* / Preços dos productos animais / Prix des produits d'élevage et animaux vivants
    - 1. *Live animals* / Animal vivo / Animaux vivants
    - 2. *Meat products* / Producto de carne / Produits carnés
    - 3. *Milk products* / Leite e Lacticinios / Produits laitiers
    - 4. *Eggs* / Ovos / Oeufs
    - 5. *Hides & skins /* Curos e Peles / Cuirs et peaux
    - 6. *Fiber & feathers /* Fibras e plumas / Fibres animales et plumes

- Module 5 *Livestock & Products trade: import/export* / Importação e Exportação / Import et Export
    - 1. *Live Animals* / Animal vivo / Animaux vivants
    - 2. *L. stock Products* / Producto animais / Produits d'élevage
    - 3. *L. stock Inputs /* Inputs / Intrants de l'élevage

- Module 6 LS *Infrastructures* / Infra-Estructuras / Infrastructures

    Generic Partitions / Divisões do pais / Divisions du pays
    - 1. Administrative / Administrativa / Administratives
    - 2. Technical / Tecnico / Techniques

    Infrastructures *Agreg.* / Infra-Estructuras Agregados / Infrastructures description agrégées
    - 3. *Dipping* / Tanque banheiros / Bain détiqueur
    - 4. *Pens* / currais / Enclos de vaccination
    - 5. *Vet clinics* / Clinicas vet. / Cliniques vétérinaires
    - 6. *Govt Offices* / Officios do governo / Bureaux de l'état
    - 7. *Mun Abattoirs & slabs* / Matadouros municipais e locais e casas de matança / Abattoirs locaux et tueries
    - 8. *Milk Collection* / Recolha de leite / Récolte de lait liquide
    - 9. *Livestock Markets* / Mercados / Marchés
    - 10. *Storage Products* / Armazens / Entrepôts et Stocks

Infrastructures Detailed / Infra-Estructuras detalhados / Infrastructures détaillées
- 1.*Vet Diagnostic Labs* / Laboratorios / Laboratoires de diagnostic
- 2.*Vet Vaccine Labs* / Productores de Vacinas / Producteurs de vaccins
- 3. I*ndustrial Abattoirs* / Matadouros industrias / Abattoirs industriels
- 4.*Dairy Processing Plants* / Usina de transformação de leite / Unité de transformation laitière
- 5.*Secondary Markets*, / Mercados segundarios / Marchés secondaires
- 6. *Port of Entry & Exit* / Portos de entrada e saida / Postes d'inspection en frontière PIF

- Module 7 *Meat Inspection / Food safety* / Segurança Sanitaria dos alimentos / Sécurité sanitaire des aliments
  - 1. Ante-mortem / Inspecção ante mortem / Inspection ante mortem en abattoir
  - 2. Post-mortem / Inspecção post mortem / Inspection post mortem en abattoir

- Module 8 *Livestock Associations and Service Providers /* Associações de criadores e fornecedores de servicios / Association d'éleveurs et fournisseurs de services
  - 1.*Umbrella org & assoc* / Associações / Associations et Confédérations
  - 2.*Private companies* / Privado / Secteur privé
  - 3.*Government* / Publico / Secteur public

- Module 9 *LS related Laws, Regulation and Acts, policy docs* / Legislação e politicas agro pecuaria / Législation et documentsd e politique sur le secteur élevage
  - 1.*National Docs* / Nivel nacional / niveau national
  - 2.*International Docs* / Niveis internacional e regional (SADC) / Niveau international ou sous régional (SADC)

- Module 10 *Disease Outbreak notification* / Notificação dos surtos de doenças / Information sanitaire notification d'épidémies animales
  - *Outbreaks* / Epidemias focos / Foyers d'Epizooties animales

- Module 11 *Vaccinations* (e.g. TAD's) / Vacinação / Vaccinations
  - 1.*Vaccination* / vacinações efectuadas / Vaccinations effectuées (prophylactique et de contrôle)

ANNEX VII – Installation and Running Procedures with Vista and Access 2007

LIMS training
Procedures with VISTA

There are two security features into VISTA: UAC User Account Control & W.R.P / Windows Ressource Protection, put in place to protect systeme partition & register base
We will change the UAC: User Account Control: this introduce a first grading system for allowing some rights to administrators, users, guests etc..

Any report should be reported to PRINT: BBedane@sadc.int
CC to Livestock Unit BHulman@sadc.int
CC to the developer: INFORMATIX INDUSTRY SERVICES Pty Ltd / Thulagano Segokgo
tsegokgo@gmail.com
CC to the external tester: Xavier Juanes Xavier.Juanes@cirad.fr

- **Stage 1:**

Start with Turning User account control UAC off
Control panel / user account
Turn User account control on or off / off UAC
Then restart your computer to apply the rules
Enter as a user
Example users in Zambia
Users (Terminial2NZILA\users)

When you will exit your LIMS "session" we suggest you turn it on again for security reasons

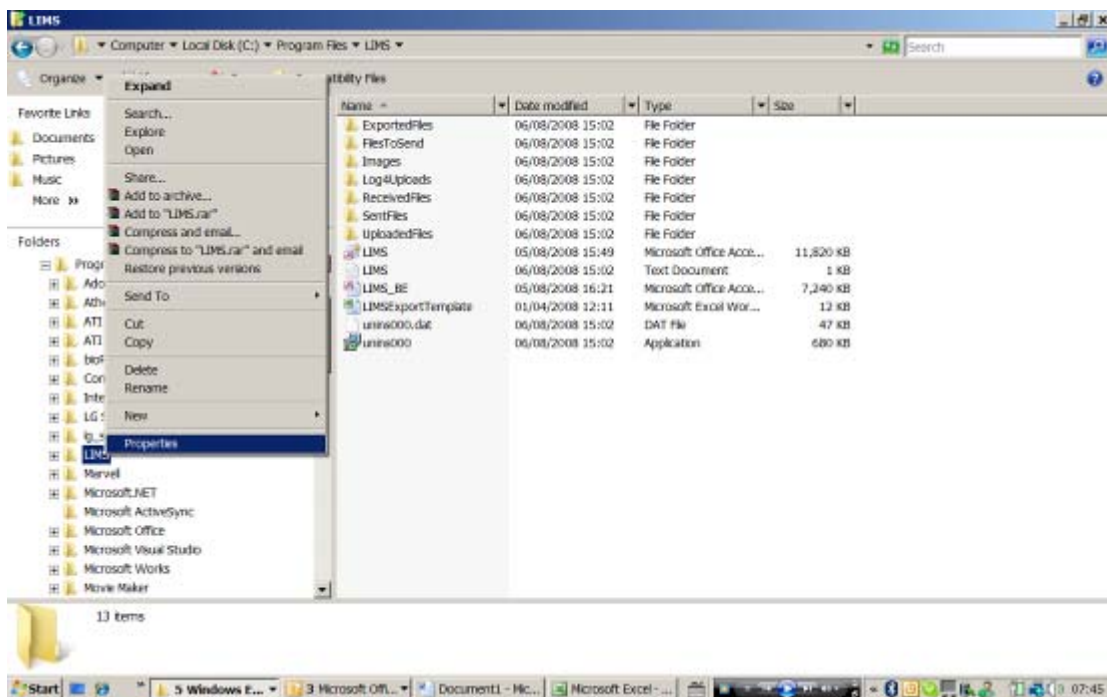- **Stage 2**

Install LIMS
Go to the folder

- **Stage 3**

Secondly allow all privileges to users for the LIMS folder properties
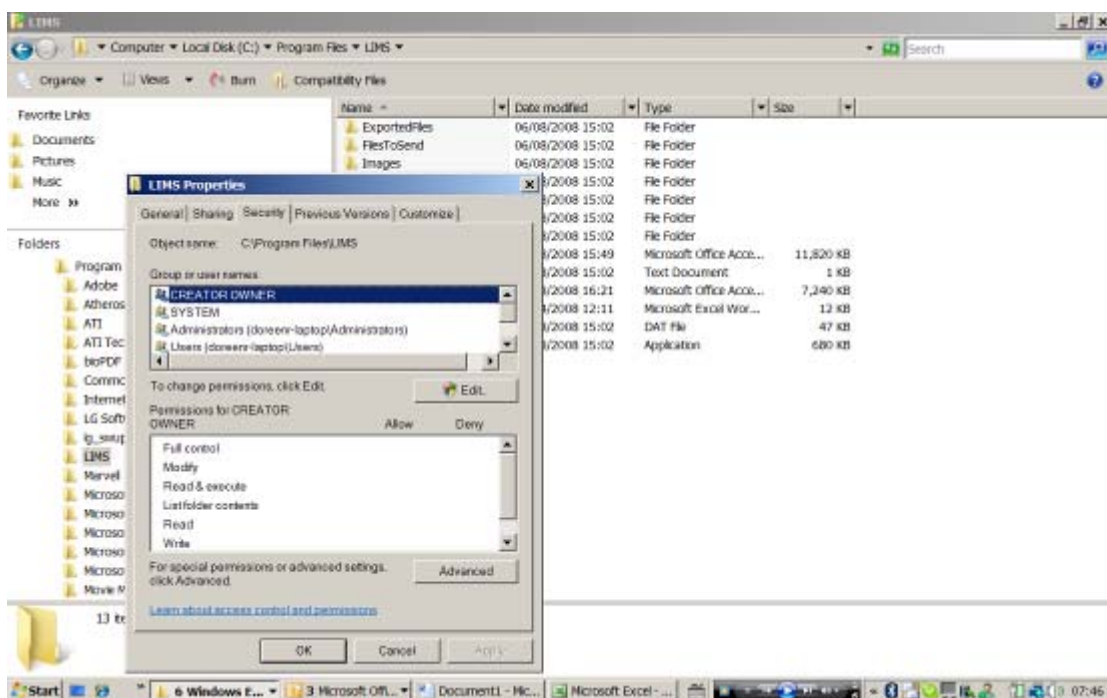
Way one to "allow" all privileges to users
Step 1
Go the LIMS folder under Program Files (where generally LIMS is installed)
Right click on the "LIMS" folder and select properties

Step 2

You may have in fact no creator owner but users only, do it on users
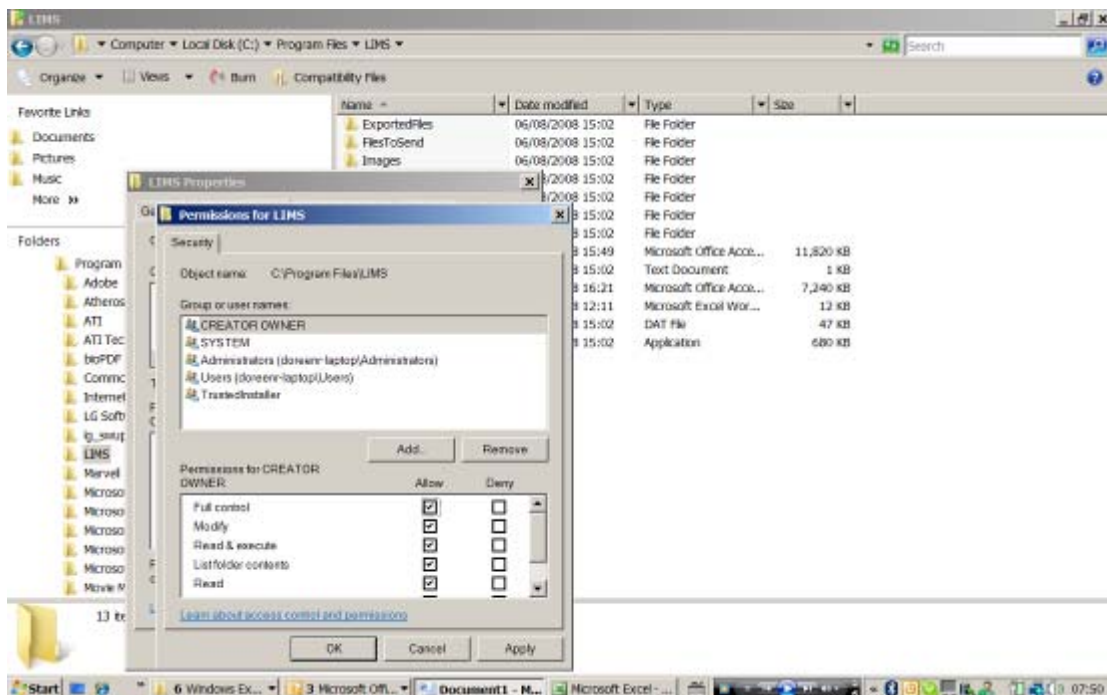
Step 3

Click Edit button and Click on continue if prompted
You may have to enter the windows by clicking advanced etc..

Step 4

Click Full control for "CREATOR OWNER" or USERS (better as VISTA generally does not allow changes on creator owner) or select the "Modify", "Read & Execute", … permission. The permission settings should rather be modified for "Users".

Step 5 – Click Ok

OS (Vista or XP) and versions of Access 2003 2007

Under Access 2007 (what ever the OS Vista or XP)
The header under Access 2007 will change according to the type of database application we are dealing with

LIMS is based on Access 2003 and should appear as the top header in your computer
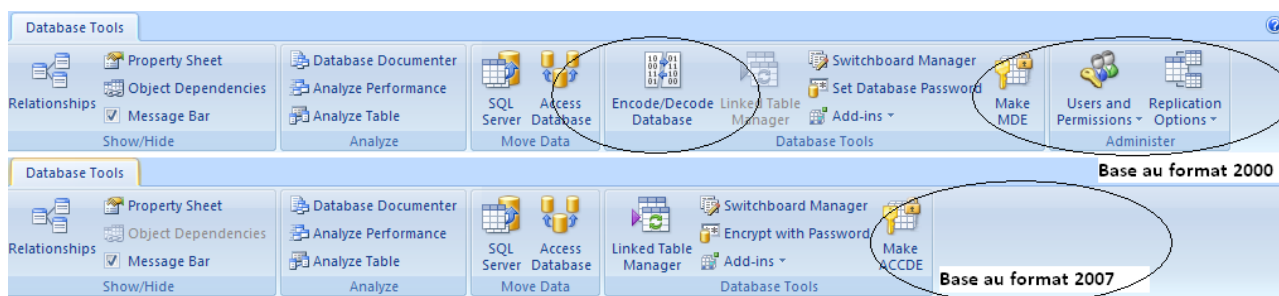
You may face problems but every time you record and report bugs please do indicate under which platform OS and version of Access you got these bugs

The four possible configurations you will have to mention

	Access 2003	Access 2007
OS XP	1	2
OS Vista	3	4

EPIDEMIOLOGY AND INFORMATICS SUBCOMMITTEE MEETING

MAURITIUS 15 – 17 APRIL 2008

LIMS Web GIS – Introduction

The SADC Livestock Information Management System (LIMS) is a tool for collection, collation and analysis of livestock related data and sharing of information for decision making and planning. The System relies on the network of livestock professionals in the SADC Member States for data provision and operates a database for the storage and analysis of data and a portal and hardcopy publication for the dissemination of information. The PRINT Livestock Project is in charge of the establishment and running of LIMS on behalf of the Livestock Sector Unit under the Food Agriculture and Natural Resources (FANR) Directorate of the SADC Secretariat. The types of information LIMS covers include Animal Production, Animal Health and Livestock Marketing and Trade.

The LIMS Web GIS is a portal for interactive query and display of livestock information for the SADC region. The system is composed of a simple and user friendly query building and a basic mapping facility for searching animal diseases based on different criteria as well as the number of livestock by species at different administrative level in each Member State. The next target of LIMS Web GIS is expanding the interactive queries to other topics of livestock information.

This introduction highlights some of the basic functionalities that are available within the system so as to help users understand the functionality and effectively use the system for searching livestock-related information. The following section summarizes the functionality and the operation of the application.
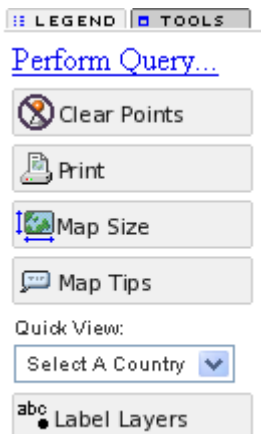
Using LIMS Web GIS

The Web GIS application interface has four main areas summarized below.

A) The Map & Navigation Tools
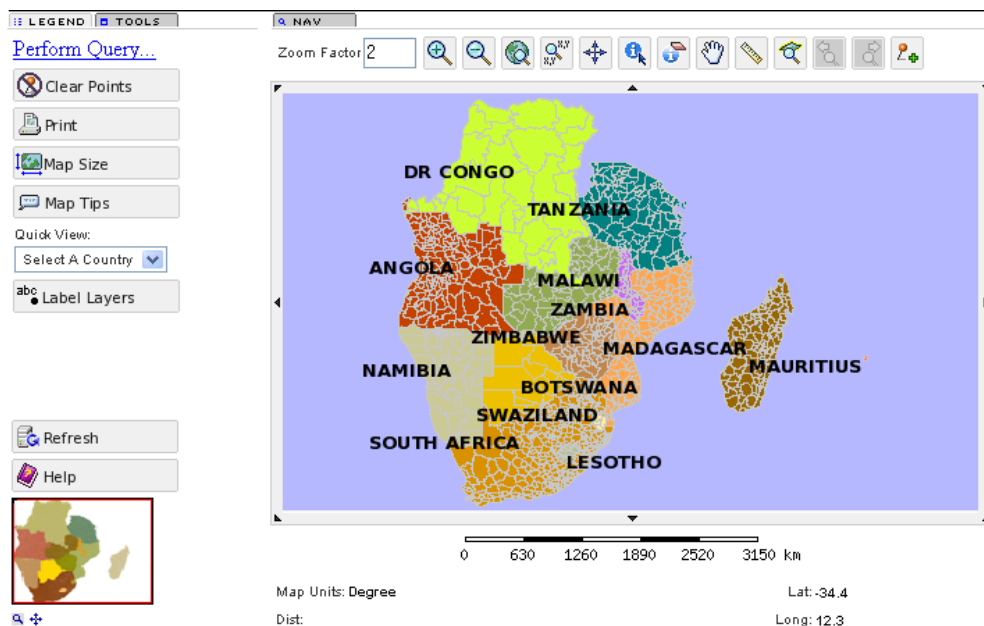
B) The Tools Tab

The tools tab shown on the left has a critical functionality for the user. The *Perform Query* function is the most important and is summarized in the following sections. The *Print* **option** is for printing maps and query results. There is a wizard which guides the user in customizing the map to be printed out. The *Map Size* option allows the user to change the size of the map display area. The *Map Tip*s option allows the user to display a selected feature attribute on the map. The *Label Layer* option allows the user to label a selected layer with an attribute on the map. Users can zoom to any particular country by using the *Quick View* option.

C) The Legend Tab
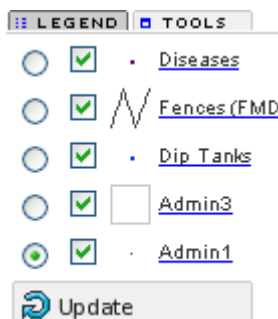
The *Legend* tab displays all the map data layers. The user can select or switch off any map layer. The *Update* button regenerates the map and displays a new map after switching on or off map layers.

D) The Query Page

PRINT

The *Perform Query* option on the Tools Tab opens the query page shown on the next page. Users can query all the map layers. The most important queries are on livestock diseases (Diseases) and Livestock numbers (Census) or the location of a specific administrative layer (e.g. district – Admin 3). Querying diseases and livestock numbers can be done using four criteria, namely <u>Disease</u>, <u>Species</u>, any <u>administrative layer</u> (spatial) and <u>Month</u> and <u>Year</u> (temporal). This implies that the user can combine various criteria e.g. disease type, species, district, and year at the same time. The user has up to 35 different queries he can perform for different criteria combinations.
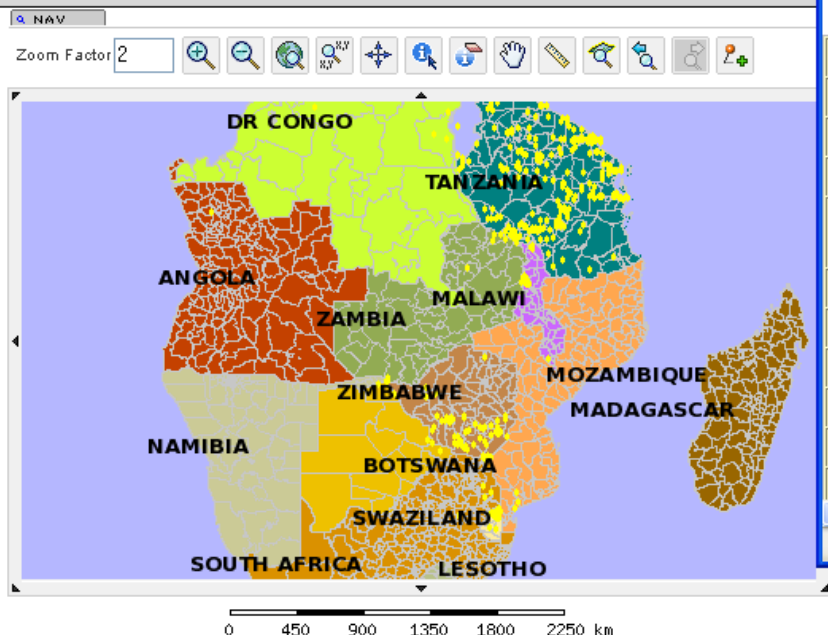

E) Query results

The query results are automatically displayed (as shown below) both in a table and on the map. The user can zoom to the query results using the map navigation tools.

Livestock Information Management System (LIMS)

phical Information System (GIS) component of the SADC Livestock Information Management System developed b
can query and visualise disease distribution and livestock numbers at different spatial scales in the SADC Region.

NAV

Zoom Factor 2

DR CONGO
TANZANIA
ANGOLA
MALAWI
ZAMBIA
ZIMBABWE
MOZAMBIQUE
MADAGASCAR
NAMIBIA
BOTSWANA
SWAZILAND
SOUTH AFRICA   LESOTHO

0   450   900   1350   1800   2250 km

http://192.168.1.10:8080 - Search Results - Moz

File   Edit   View   History   Bookmarks   Tools   Help

Search results (463 found) for 'Diseases' that meet the followi
{DISEASE is equal to 'fmd'}

ID	DISEASE	SPECIES	ADMIN3
2517	FMD	Bov	MHALA DITSTRICT
2898	FMD	Bov	MATSILOJE
2899	FMD	Bov	RAKOP
3472	FMD - SAT2	Bov	Kasane
3473	FMD	Bov	PANDAMATENGA
3915	FMD	Bov	Selibe Phikwe
4045	FMD	Bov	Kasane
4046	FMD	Bov	Kasane
4047	FMD	Bov	Kasane
4408	FMD	Bov	KILIBA ONDS

Done

Users can further query each distribution point (location of disease outbreak) to get additional information. This can be achieved using the   button (information) and clicking on individual points (the yellow points in the example above). The table like the one shown below will be displayed. Depending on the number of points selected or the distance between each of them, one or many rows of information will be displayed. The zoom-in function can be used to select the specific point of interest.

http://192.168.1.10:8080 - Query Results - Mozilla Firefox

EN English (United Kingdom)   Microphone   Tools

Google

Query Results

Admin3

ADMIN1	ADMIN2	ADMIN3	SHAPE_INDEX	TILE_IND
Zimbabwe	Midlands	Gweru Rural	980	-1
Zimbabwe	Midlands	Shurugwi	987	-1
Zimbabwe	Matebeleland South	Insiza	988	-1
Zimbabwe	Midlands	Zvishavane Rural	993	-1
Zimbabwe	Masvingo	Chivi	995	-1

Queryresult

ID	MONTH	YEAR	DISEASE	SPECIES	NO_FOCI	LATITUDE	LONGITUDE	LOCALITY	ADMIN3	ADMIN2	ADMIN1	SH
46945	Oct	2004	FMD	Bov	1	-19.89000	29.84000		ZVISHAVAN		Zimbabwe	448
46946	Oct	2004	FMD	Bov	1	-19.89000	29.84000		SHAVAN		Zimbabwe	449
47028	Sep	2004	FMD	Bov	1	-19.97000	29.78000		MABIKA		Zimbabwe	452
47029	Sep	2004	FMD	Bov	1	-19.97000	29.78000		MABIKA		Zimbabwe	453

Done

Select A Country

abc Label Layers

ANGOLA
MALAWI
ZAMBIA
ZIMBABWE
MOZAMBIQUE
MADAGASCAR
NAMIBIA
BOTSWANA
SWAZILAND
SOUTH AFRICA
LESOTHO

Refresh

Help

0   450   900   1350   1800   2250 km

Map Units: Degree   Lat: -14.25
Dist: Long: 46.97

Done

start | Inbox - Microso... | Symantec AntiV... | LIMS Web GIS.... | Module 12 | untitled - Paint | 3 Firefox | 14:59

ANNEX IX – Some preamble before embarking on LIMS training

It is recommended to check for some language and numerical references (decimal issues) before starting with LIMS
Check visually the version of a keyboard you are using (external or integrated)

- QWERTY
- AZERTY
- QWERTY Portuguese etc..

1/ Do you have configured the equivalent on your laptop? If not do it
Example: This is for an AZERTY keyboard (French language in SADC)
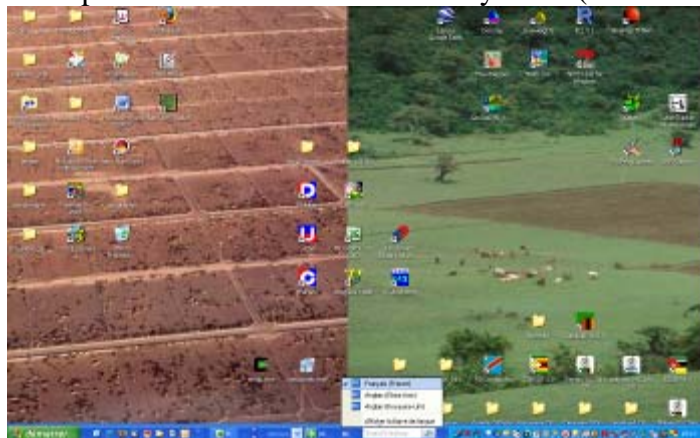
2/ Regional parameters for numerical data
LIMS works with English UK parameter where decimal is a dot

Check on control panel and set the regional parameters accordingly
We will then have to use a dot for a decimal (in general, a space is also provided for separation of thousands)