
Human Resource Information System Documentation

Release 3.0

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Get started fast with the **HRIS**

analysis and decision making. It is a generic software tool that allows customization to fit organization specific requirements, its built with open meta-data models and flexible and customizable user interface that allows user to adjust the system to perform, behave, look and feel based on organisation's specific requirements without the need for software development.

HRIS Software is a loosely coupled modular web based software bundle that is built with free and open source PHP \geq 5.3 Web Frameworks. Among the frameworks Involves

- Symfony2 PHP Web Development Framework
- Doctrine is PHP Object Relational Mapper used for persistence abstraction
- PHPUnit Testing Framework for testing overall system behaviors and functions
- Twig Template Engine for presentation layer
- Composer Package manager

Why Would you want to choose **HRIS**

- Faster response and less greedy on system resources HRIS was conceived from the start to be fast and to favor performance, its based on Symfony2 Framework that is about 3 times faster than Zend-Framework 1.10 while taking 2 times less memory.
- Unlimited flexibility through customization Whatever your needs are, HRIS will be adaptable. Its customizable capacity makes it entirely configurable, with less required to be done. Its also extensible, based on framework dependency injection and event dispatchers, more modules can be plugged in with simplicity. HRIS is distributed under GNU General Public Licence which does allow modification and extension of existing features.
- Ease of use through intuitive, user-friendly interfaces Simple and Flexible user interfaces allows performing advanced tasks simply and intuitively, which allows beginners to the system to quickly feel at ease with HRIS

- Stable and sustainable The system is in-built with self system tests, that ensures shipped system behaves and performs what is needed with guaranteed compatibility between versions
- Inteoperable Through Web APIs, HRIS can be interoperated by third party applications through the powerful RESTful APIs

Introduction to HRIS

The HRIS software was first developed with basic functionalities in 2009 by University of Dar es salaam to address Human Resource for Health software need, to track human resource in the health sector, while used by health secretaries at district level for day to day tasks and for reporting, it can also be used to analyse and help in decision making at higher administrative levels.

HRIS has currently been rolled out in the whole of Tanzania, it's operational and used in all 131 districts in 21 Regions, 17 Regional hospitals, 8 Referral Hospitals of Tanzania, 118 Health Traning institutions and Ministry departments. A rapidly increasing demand for a flexible, faster and user friendly Human Resource Information tool arose a need for re-implementation of the software under open source copy-left licence.

System Administration

Users with System administrative priviledge can customize the system to reflect the organisational hierarchy of the company, information to be collected by an organisation, set of validation constraints that collected dat must adhere to, control of access of data and different system parts, and other system customizations that affect the system at large.

Accessing the System

System is in-built with secured Authentication and Authorization system that requires users to be authenticated to use any service that requires a user to be loged in and require user to be authorised as cleared to use some of priviledged system services, such as right to control data to be collected.

Managing Employee Records

System uses Records management module to control collection, human resource information such as personnel particulars, in service training and employee's history.

Modules and Features

HRIS Version 3 Consist of Several modules designed to collect, validate, report and analyse human resource information, the modules consist

- Forms Management Creates and manages forms used as data collection tools along with the information collected with them
- Organisationunits Management Creates and manages organisation units, it's properties as in ownership, type, and other attributes, like level in a hierarchy, etc.

- Data Quality Management Creates and manages validation constraints that are used to test and ensure quality data is being collected
- Records Management Creates and manages collection, storage and retrieval of Human resource information in a faster and secure way.

Properties of HRIS

- Web enabled
- Platform independent
- Runs on all major web browsers
- Runs on most relational databases
- Licenced under open source licence terms
- Works Off-line
- Loosely coupled with Bundle/Modular approach
- Interoperable
- Internationalized

Notes on Installation of HRIS

Installing HRIS Software

PHP5-INTL Dependency

On Systems running Linux Operating systems run:

```
sudo apt-get install php5-intl
```

On Systems running Mac OSX Operating systems run:

```
brew install icu4c
```

Download system source codes from our [github repository](https://github.com/hrisproject/hris) - <https://github.com/hrisproject/hris>:

```
git clone git@github.com:hrisproject/hris.git
```

Install composer inside project directory - hris Note: hris now comes with composer pre-installed:

```
curl -s https://getcomposer.org/installer | php
```

Note: If you don't have curl, install composer with this script `php -r "eval('?'>.file_get_contents('https://getcomposer.org/installer'));"`

Update your repository with latest dependencies:

```
php composer.phar install
```

```
php composer.phar update
```

Symbolic Link your web directory to the webroot directory:

```
ln -s ${PWD}/web/ /var/www/hris #Assuming your current directory(PWD) ↵  
↵ is inside hris project and your webroot is on /var/www/
```

Set date time zone inside php.ini to your location, change line date.timezone to your locale, e.g in *Dar-es-salaam, Tanzania*:

```
date.timezone = 'Africa/Dar_es_Salaam'
```

Turn off short_open_tag inside php.ini to disable detection of PHP codes between <? and ?> for better PHP >=5.3 Experience:

```
short_open_tag = Off
```

Give Web readwrite access to cache and log directory in your hris directory. To enjoy both user and web read-write access in linux use the following commands:

```
rm -rf app/cache/*  
rm -rf app/logs/*
```

On Systems supporting chmod +a(e.g. Mac), you can give readwrite permission via:

```
sudo chmod +a "www-data allow delete,write,append,file_inherit,directory_  
↵inherit" app/cache app/logs  
sudo chmod +a "`whoami` allow delete,write,append,file_inherit,directory_  
↵inherit" app/cache app/logs
```

On Systems that don't support chmod +a(e.g. Linux), you can give readwrite permission via:

```
sudo setfacl -R -m u:www-data:rwX -m u:`whoami`:rwX app/cache app/logs  
sudo setfacl -dR -m u:www-data:rwX -m u:`whoami`:rwX app/cache app/logs
```

Database Setup

System source code can be downloaded from [github](#)

Configuration file can be found from `hris/app/config/parameters.yml`

Parameters.yml:

```
database_driver: pdo_pgsql  
database_host: %databasehost%  
database_port: %portnumber%  
database_name: %databasename%  
database_user: %databaseuser%  
database_password: %userpassword%  
mailer_transport: smtp  
mailer_host: %mailerhost%  
mailer_user: null  
mailer_password: null  
locale: en  
secret: %secret_generated_key%  
database_path: null
```

Generating database:

```
app/console doctrine:database:drop --force      #Drops Database if it exist
app/console doctrine:database:create           #Creates Fresh new database
app/console doctrine:schema:update --force     #Updates Database schema
app/console list                               #List all commands offered
```

Creating, Activating, Changing password, deactivate, demote & promote login-user from commandline:

```
app/console fos:user:create                    #Create User account
app/console fos:user:activate                 #Activate a user
app/console fos:user:change-password         #Change the password of a user.
app/console fos:user:create                  #Create a user.
app/console fos:user:deactivate              #Deactivate a user
app/console fos:user:demote                  #Demote a user by removing a role
app/console fos:user:promote                 #Promotes a user by adding a role
```

Regenerating assets:

```
app/console assetic:dump
php app/console assets:install web
```

Shell Console:

```
app/console --shell
```

Performance tuning

```
File php.ini can be used to tweak performance of the system
```


3.1 Introduction



The Ministry of Health and Social Welfare (MOHSW) has initiated development of Human Resource for Health Information System (HRHIS) with the essence of establishing a national database, to address and strengthen existing information system through coordinating and networking of existing human resource data collection systems. MoHSW consulted a team of experts from department of Computer Science and Engineering of University of Dar es Salaam, to take the responsibility of developing, implementing and maintaining HRHIS system in Tanzania Mainland. As for any big system development the process is not an overnight thing. HRHIS is evolving, though with a remarkable speed, the inputs of stakeholders are alltime required. This manual outlines the systematic procedures for accessing and using various parts of the system. In case you do not get the assistance you expected from the manual please consult your system administrator or any person authorized to work as the member of the help desk team at your organization.

Description of the System

The following part is intended to give user an insight on how to use the system and access different features and system components.

Login

Open the browser and type the following address: <http://www.hrhis.moh.go.tz> then a page similar to the one shown in the image below will be displayed whereby a user will be required to type in their correct username and password. In the instance where one does not have a username or password please see register information following next. This system works best with Mozilla Firefox, Google Chrome or Opera browsers. From here on, the use of the word “browser” will refer to above mentioned web browsers only.

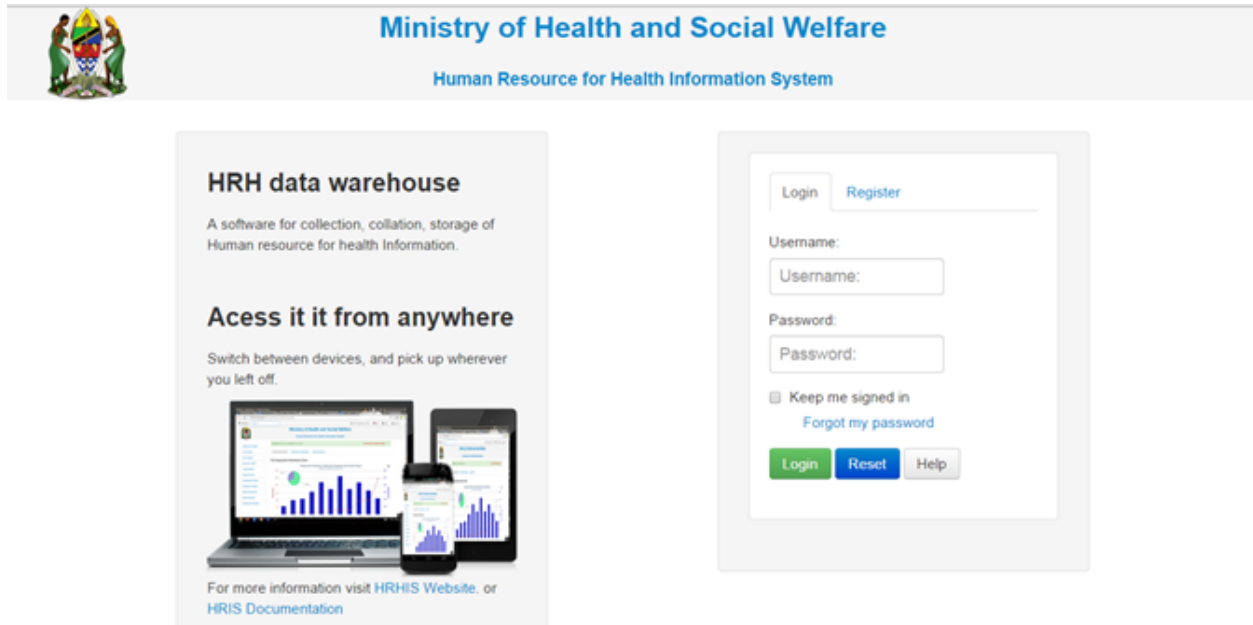


fig 1.1: Image showing login Interface.

Upon successful login, a user will be directed to the page with the menu on the left hand side through which he can access various parts of the system (see figure 1.3 below). However on unsuccessful login an error message will be displayed (see figure 1.2 below) and you will be required to re-type the username and password.

fig 1.2: Image showing error message displayed on unsuccessful login.

fig 1.3: Image showing HRHIS home page on successful Login.

Register

In the case where one does not have a username or password, they will be required to first register themselves in order to have an account in the system. To do so; besides the login page, there is a register tab. On selecting it, a page similar to one shown below (Figure 1.4 below) will appear requesting the new user to fill in all required details and submit them by clicking the “Register” button. After doing so an email to activate the account will be sent to the users email account provided during registration; and the registering user will be prompted to visit their email and follow link sent for activating their account. These steps so far, will enable for an account to be created but access to information already in the system will still not be possible until verification of user is done by the help desk team who will then assign new user to an organization unit for complete registration.

fig 2.1: Image showing Register Page for new user.



Ministry of Health and Social Welfare

Human Resource for Health Information System

HRH data warehouse

A software for collection, collation, storage of Human resource for health Information.

Access it it from anywhere

Switch between devices, and pick up wherever you left off.



For more information visit [HRHIS Website](#), or [HRIS Documentation](#)

Login
Register

Username:

Password:


Keep me signed in

[Forgot my password](#)

Login
Reset
Help

Access Denied Invalid username or password ✕

HRHIS
28th April 2014 Help minja



Ministry of Health and Social Welfare

Human Resource for Health Information System

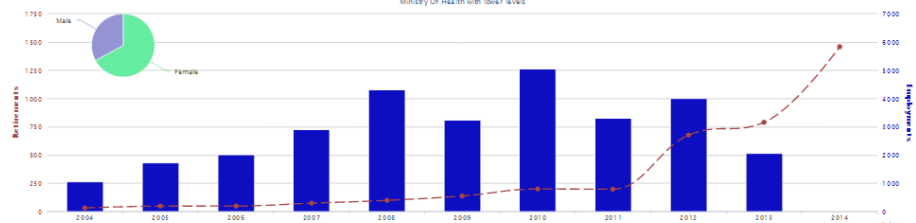
- HelpCentre Module
- User Module
- Form Module
- Resource Tables
- Target Module
- Orgunit Module
- DataQuality Module
- Integraton Module
- Data Management
- Reports Module
- ImportExport Module

Welcome! Please use navigation on your left.

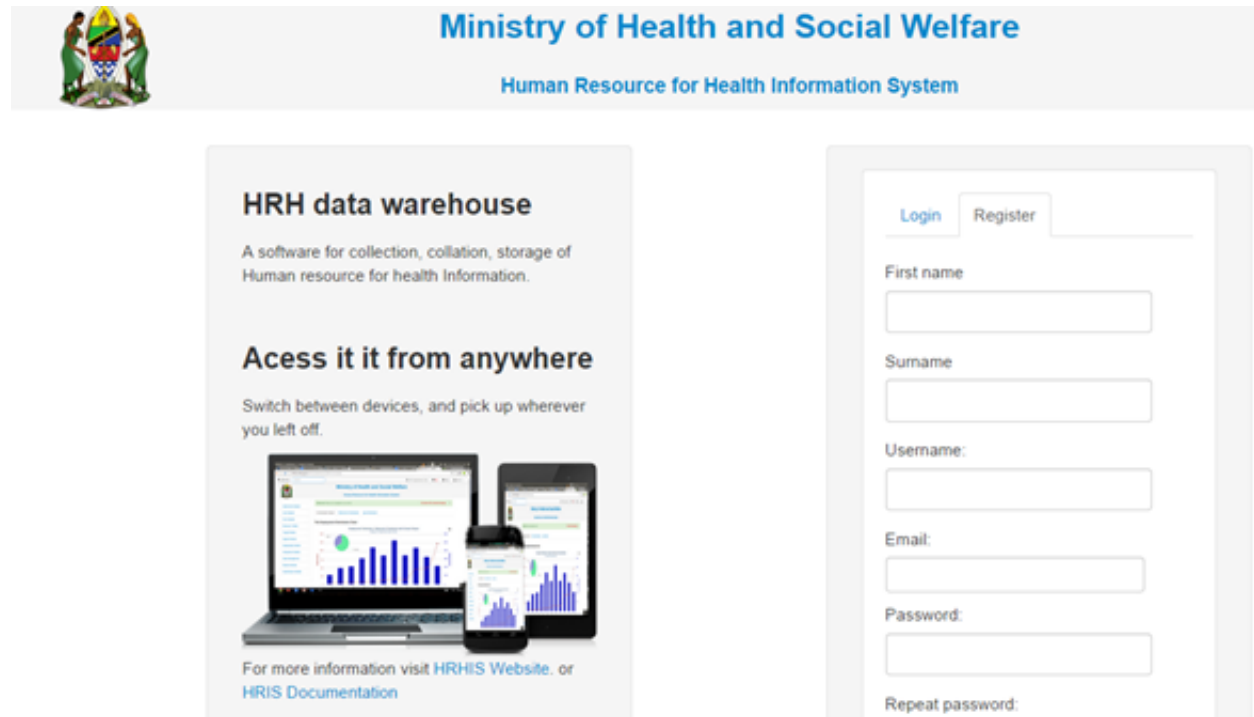
Combination Report
Retirement Distribution
Age Distribution

The Employment Distribution Chart

Employment Distribution, Retirement Distribution with Gender Report
Ministry Of Health with lower levels



Year	Employment (Approx.)	Retirement (Approx.)
2004	250	100
2005	350	150
2006	450	200
2007	550	250
2008	700	300
2009	850	350
2010	1000	400
2011	800	450
2012	1000	500
2013	600	550
2014	1500	6000



Forgot password

In the instance where a user forgot his password, the “Forgot my Password?” link on the login page is there to assistance. On clicking the link a user will be sent to a page as shown in the Figure 3.1 and required to provide either a username or email address used initially during registration. After that the user can click the “reset password” button to reset password. A prompt will appear on the page informing that an email has been sent to his particular email account for resetting password. The user can login into his email to follow a link sent to his email and click the attached link to get a HRHIS page for setting a new password.

fig 3.1: Image showing required details for resetting password.

Home page

On successful login, a user is directed to the Home Page which consists of the main menu on the left side and dashboard charts in the middle. At the top most part of the system you will have on your left a home icon to denote the home page while on the left side will be today’s date, a message icon with the number of un read messages in red, a help button- which contains this help manual and the name of the user currently accessing the system

fig 4.1: User Home Page displaying interactive components.

Message feature

This feature enables user to interact with each other, and with a technical team of HRHIS for instant support. To write a new message simply select the message button and click on options of either “create a new message” or “create a feedback”. Feedback is used to keep in touch with all the technical team of

Ministry of Health and Social Welfare

Human Resource for Health Information System

Username or email address:

Reset password

Back to Login

The screenshot shows the HRIS dashboard interface. Callouts point to various elements: 'Home Button' points to the top-left navigation area; 'Date', 'Message', 'Help', and 'User Profile' point to the top-right user navigation area; 'Main Menu' points to the left sidebar menu; and 'Dashboard Graph' points to the main chart area.

The Employment Distribution Chart

Employment Distribution, Retirement Distribution with Gender Report
Ministry of Health with lower levels

Year	Number of Employees
2006	200
2007	300
2008	350
2009	450
2010	550
2011	450
2012	500
2013	400
2014	600

HRHIS while create new message user is required to select to whom the message should be sent- recipient. A recipient in this case could be an individual or all users in a given organization unit.

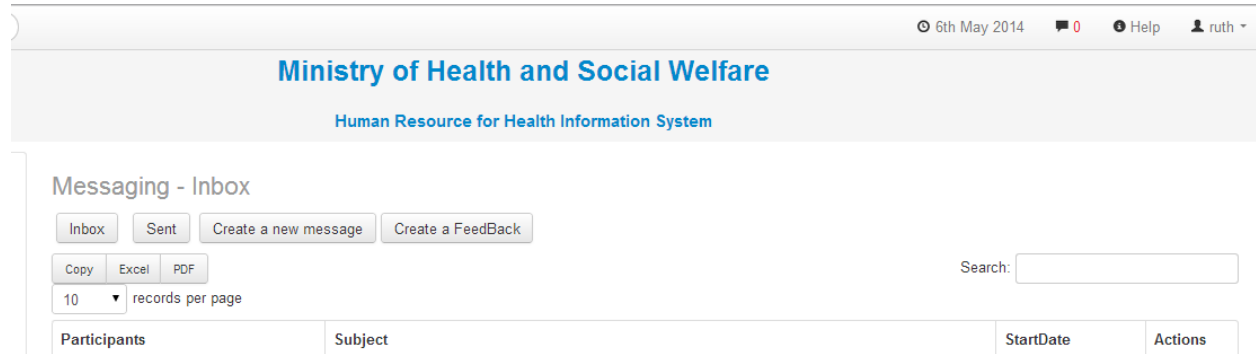


fig 4.2: Image showing different message options.

User profile

User profile enables a user to view their profile, customize dashboard reports, view settings, change user password or log out of the system. To access the user profile click on the username and a drop down list as seen in the diagram will appear.

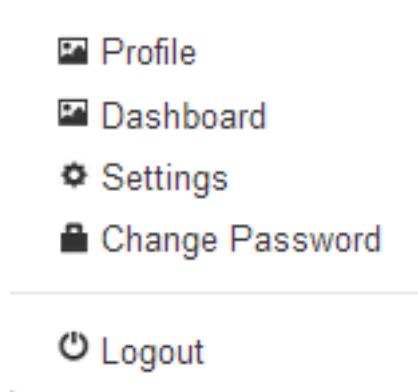


fig 4.3: Image showing User Profile options.

Data Management

This is the part where every day uses of the system depend. It contains functionalities which involve the regular management and use of Human Resource data.


Data entry

In here you can select the forms designed in the previous part so that you can populate data. On Clicking data entry the screen below will be displayed before a list of available forms.

fig 3.1: Image showing the Interface of a Data entry form loading data.

Ministry of Health and Social Welfare

Loading Data ...



Data Entry Forms

Title	Actions
Training Institution Employee Form	↓
Public Employee Form	↓
Private Employee Form	↓
Referral Hospital Employee Form	↓

Data Entry Forms

Title	Actions
Training Institution Employee Form	↓
Public Employee Form	↓
Private Employee Form	↓
Referral Hospital Employee Form	↓

fig 3.2: Image showing the List of Forms Available for Entering Data.

Data entry forms are categorized according to the type of Employer. Select Public Employee form when entering public employee record and private employee form private/FBO Employee record. Also select Referral Hospital Employee Form when entering record for specialized/Consultant hospital employee by clicking on down arrow on the right hand of Data entry Forms.

An example of the form ready for data entry is as follows:

Public Employee Form

Duty Post: ▼

Work Station: ▼

Public Employee Data Entry Form	
1.	First Name <input type="text"/>
2.	Middle Name <input type="text"/>
3.	Surname <input type="text"/>
4.	Date of Birth <input type="text"/> <input type="text"/>
5.	Sex <input type="text" value="--"/> ▼
6.	Marital Status <input type="text" value="--"/> ▼
7.	Nationality <input type="text" value="--"/> ▼
8.	Religion <input type="text" value="--"/> ▼
9.	Basic Education Level <input type="text" value="--"/> ▼
10.	Profession Education Level <input type="text" value="--"/> ▼
11.	Number of Children/Dependents <input type="text"/>
12.	District of Domicile <input type="text"/>
13.	Check Number <input type="text"/>
14.	Employer's File Number <input type="text"/>
15.	Registration Number <input type="text"/>
16.	Terms of Employment <input type="text" value="--"/> ▼
17.	Profession <input type="text" value="--"/> ▼
18.	Present Designation <input type="text" value="--"/> ▼
19.	Superlative Substantive Position <input type="text" value="--"/> ▼
20.	Department <input type="text" value="--"/> ▼
21.	Salary Scale <input type="text" value="--"/> ▼
22.	Monthly Basic Salary <input type="text"/>
23.	Date of First Appointment <input type="text"/> <input type="text"/>
24.	Date of Confirmation <input type="text"/> <input type="text"/>
25.	Date of Last Promotion <input type="text"/> <input type="text"/>
26.	Employer <input type="text" value="--"/> ▼
27.	Employment Status <input type="text" value="--"/> ▼
28.	Registered Disability <input type="text" value="--"/> ▼
29.	Contacts of Employee <input type="text"/>
30.	Nest of Kin <input type="text"/>
31.	Relationship to Nest of Kin <input type="text" value="--"/> ▼
32.	Contacts of Nest of Kin <input type="text"/>

fig 3.3: Image Showing Data entry Form ready for Data Entry(Public Employee form).

Fill the form with the appropriate data then click on the “Save Records” button to submit data to the database. There are a few things to notice though; of these fields there are compulsory ones which need to be filled in for any data entry to be successful. In addition one must select first Duty post and work station before entering other informations.

- HelpCentre Module
- User Module
- Form Module
- Resource Tables
- Target Module
- Orgunit Module
- DataQuality Module
- Intergration Module
- Data Management
- Reports Module
- ImportExport Module

Public Employee Form


Public Employee Data Entry Form		
1.	First Name	<input type="text"/>
2.	Middle Name	<input type="text"/>
3.	Surname	<input type="text"/>
4.	Date of Birth	<input type="text"/> 
5.	Sex	-- <input type="button" value="v"/>
6.	Marital Status	-- <input type="button" value="v"/>
7.	Nationality	-- <input type="button" value="v"/>
8.	Religion	-- <input type="button" value="v"/>
9.	Basic Education Level	-- <input type="button" value="v"/>
10.	Profession Education Level	-- <input type="button" value="v"/>
11.	Number of Children/Dependants	<input type="text"/>
12.	District of Domicile	<input type="text"/>
13.	Check Number	<input type="text"/>
14.	Employer's File Number	<input type="text"/>
15.	Registration Number	<input type="text"/>

fig 3.4: The red covered Fields are the Compulsory ones.

Update Records

This option allows user to view the records already entered into the system of their respective organization unit. If Update records option is selected, it will load data before listing available forms.

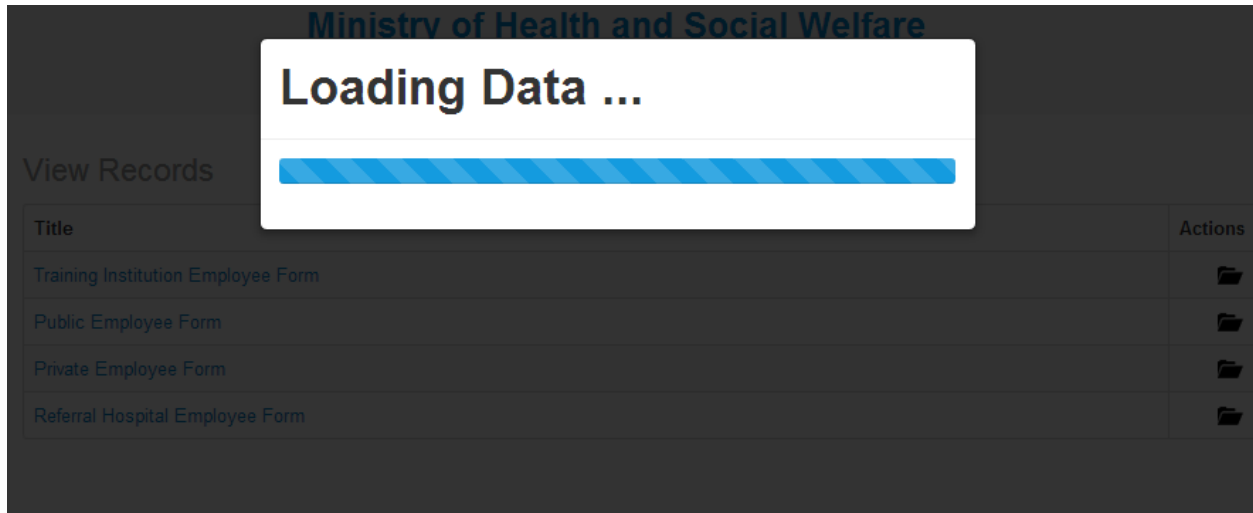


fig 3.5: Update records Loading Data.

View Records

Title	Actions
Training Institution Employee Form	
Public Employee Form	
Private Employee Form	
Referral Hospital Employee Form	

fig 3.6: List of forms in View records options.

If Show all records options is selected, the system will display all records that have already been entered into the database for the respective user’s organization and form type. See image below

fig 3.7: An example of records in the system for Arusha City Council, Public Employee Form.

At the end of each record row, there are six options discussed here under in details:

Edit Records

It is used in case you need to update some information of a particular record that was entered initially. Click the edit icon, and the form will be opened for you to update the selected record.

Employee Records for Arusha City Council for Public Employee Form

Copy Excel PDF Search:

10 records per page

Sn.	First Name	Middle Name	Surname	Age	Basic Education Level	Profession Education Level	Check Number	Present Designation	Profession	Employment Duration	Department	Employment Status	Retirement Date	Last updated	Duty Post	Actions
15	MICHAEL	NAIMAN	MASHAMBO	58	Primary Education	Certificate	4425548	Prinicipal Medical Attendant	Medical Attendant	18y9m	OutPatient Department	On Duty	2018-01-07	05/01/2014	Themi Health Centre	
28	MARTHA	JOSEPH	ASENGO	53	Primary Education	Certificate	5713019	Prinicipal Medical Attendant	Medical Attendant	31y5m	Medical Department	On Duty	2020-12-30	05/01/2014	Themi Health Centre	
34	Anna	Michael	Karata	51	Primary Education	Certificate	5712447	Medical Attendant	Medical Attendant	32y3m	Curative Services	On Duty	2022-05-30	05/01/2014	Themi Health Centre	
35	Scholastica	Jackson	Lema	58	Primary Education	Certificate	4428806	Nurse I	Nurse	34y11m	Curative Services	On Duty	2016-02-08	05/01/2014	Themi Health Centre	
43	ZAITUNI	JUMAA	MUSSA	44	Primary Education	Certificate	8407845	Prinicipal Medical Attendant	Medical Attendant	24y9m	Medical Department	On Duty	2029-07-27	05/01/2014	Terrat Dispensary	
50	AISHA	JUMA	LEMA	38	Primary Education	Certificate	110769885	Medical Attendant	Medical Attendant	2y2m	OutPatient Department	On Duty	2037-11-28	05/01/2014	Oikerenyan Dispensary	
51	GLADNESS	ANAELY	ACKYOO	40	Primary Education	Certificate	1981643	Senior Nurse	Nurse	18y2m	Curative Services	On Duty	2033-05-22	05/01/2014	Oikerenyan Dispensary	
72	EVALINE	MERANI	LERINGA	58	Primary Education	Certificate	5345128	Prinicipal Medical Attendant	Medical Attendant	32y9m	Preventive Service	On Duty	2015-08-12	05/01/2014	Ngarenaro Health Centre	
77	Sophia	Nyachisamwa	Museru	47	Primary Education	Certificate	8298818	Prinicipal Nurse II	Nurse	23y9m	Curative Services	On Duty	2028-08-30	05/01/2014	Ngarenaro Health Centre	
80	Petronila	Marki	Matemu	57	Primary Education	Certificate	4161679	Prinicipal Nurse II	Nurse	37y3m	Curative Services	On Duty	2016-07-27	05/01/2014	Ngarenaro Health Centre	

Showing 1 to 10 of 395 entries

← Previous 1 2 3 4 5 Next →

History Management

This stands for Record’s History Management, by Selecting History option of a particular record, that record’s history will be displayed as if has been added before. If the record has no history details the interface shown in the image bellow will be displayed:

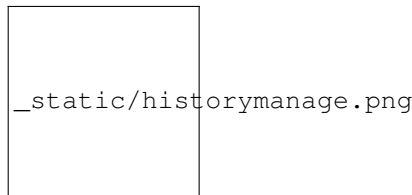


fig 3.8: Image showing a table of an employee record that has no History Details.

To add a history click “Add History” and then an interface shown in the image below will be displayed:

fig 3.9: Image showing an Interface for adding History to a record.

To add history update of an employee record fill the form as displayed in the above figure then tick the “updaterecord” check box to make the record updated and finally click “Create” to add the history.

fig 3.10: Image showing an interface of History Details of an employee record.

The image above shows a list of History details of an employee with each detail having options to show, edit or delete a history detail in the column titled “Action”.

New History for Alex Simon Mamboya

Field

--SELECT-- ▼

History

Startdate



Reason

Updaterecord

Create

Back to the list

History List for Alex Simon Mamboya

[Add History](#) [Back to Records](#)

[Copy](#) [Excel](#) [PDF](#)

Search:

10 ▼ records per page

Id	History	Date	Reason	Actions
1	Transferred	01/09/2012	Transferred to Karatu DC Note: This is previous Employment Status held before changed to Transferred. Note: This is previous Employment Status held before changed to On Duty.	 
2	On Duty	25/06/2013	Transferred to Karatu DC Note: This is previous Employment Status held before changed to Transferred.	 

Showing 1 to 2 of 2 entries

← Previous 1 Next →

In-service Training Management




This refers to different courses, mostly short courses attended by an employee. The trainings include HRHIS, DHIS, Malaria and Reproductive Health Trainings/courses. The diagram below displays an interface showing how In-service training details of an employee record is displayed

Training list for James Pancras Lobikoki

Add Training Back to Records

Copy Excel PDF Search:

10 records per page

SN ▲	Course Name	Course Location	Start Date	End Date	Sponsor	Actions
1	SOLID WASTE MANAGEMENT COURSE	Sturtigut university	01/07/2003	30/06/2004	Development Partner	  

Showing 1 to 1 of 1 entries

← Previous 1 Next →

fig 3.11: In-service training information of a record.

However options Add Training and Back to Records will be displayed if the employee record has no In-service Training details. To add a new in In-Service Training detail click “Add Training” and a form displayed in the image below will be displayed:

fig 3.12: Image showing an interface for adding an In-Service Training of an employee record.

Change Form

This is a functionality which can be used to transfer employee information from one data entry form to another. It can be used when an employee previously employed in a private/FBO facility has been employed by a public facility. Also it might be that by mistake an employee was entered into an incorrect form and thus his/her details have to be transferred to another form. Click the second button from left then the interface like the one shown in the image below here will appear where the choice of the form to which you need to transfer the employee’s details can be made.

fig 3.13: Image showing an interface for changing a form (Transfer an employee’s data from one form to another).

Data Validation

This functionality is used to verify the logical correctness of the data entered into the System. For instance to check if the records already entered have all the compulsory fields filled with data. To run validation click “data validation”, select Organization unit, then click “Use data for selected unit with lower level” – if you want to run validation for all the organization units under your organization unit. Now, select from validations available (you can run more than one validation at once), thereafter select the type of form(s) from “Available Forms”. Finally click “Submit” button to see the results. The image below shows the interface for running the validation:

fig 3.14: Image showing an interface for running Data Validation.

Add Training for James Pancras Lobikoki

Coursename


Courselocation

Sponsor

Startdate

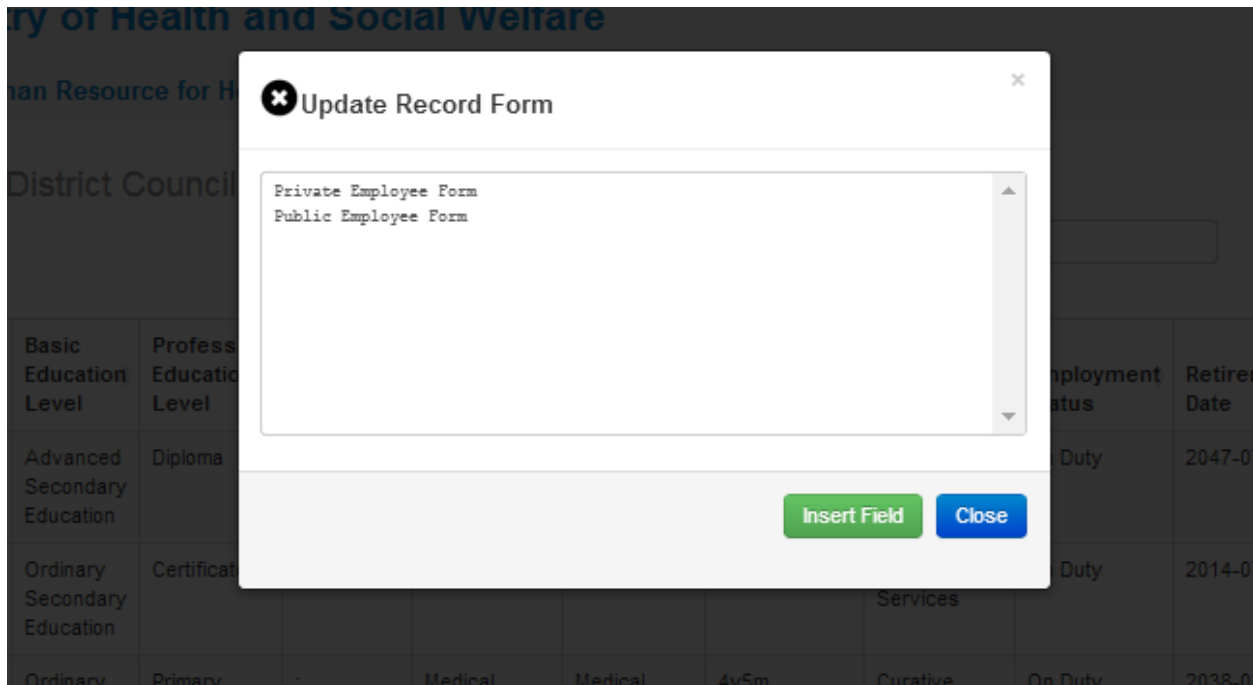


Enddate



Create

Back to the list



Reports

Reports are the most important component of any information system. HRHIS allows users to generate various reports from already entered data and export these reports from the system to other formats such as excel or portable document format (pdf) for further manipulation, interpretation or analysis use . HRHIS groups reports in six main groups; namely, “Records report” which is basically a report of the list of all records entered by specified user with exception of those whose employment status has been updated to retired, deceased and transferred. Secondly is “Aggregated Reports” which as suggested by the name are outputs that aggregate data of fields specified by user. Thirdly, “Completeness Report” which is used to determine the entered number of records in each organization unit against the initial expected value entered for each facility. Fourth, is the “Orgunit reports” these are reports of organization units in specified users account. The organizations units are categorized either by level or by group set.

Fifth, is the “History and training report” which tracks all the history updates of records as have been done for already entered records while training report is for all the In-service trainings updated for each record. Lastly, “Friendly reports” which is a combination of reports for human resource required in Health Plan such as CCHP and CHOP.

Records reports

There are only three items to select in order to generate this report – the organization unit, which form should the data be included from and if it should use only selected organization unit or with lower levels. If the check box is not selected it will only use data of selected organization unit without the facilities under that unit. After generating a report, the system will filter the available data and display them according to selected specifications. Note that the results from this report will exclude all entered stuff whose employment status is set to retired, off duty, transferred and deceased.

fig 4.1: Image showing Steps to Generate Records Report.

Run Validation

Select Organisationunit *

📁 Ministry Of Health

Use data for selected unit with lower level

Select Validations *

Available Validations

- DateOfBirth Vs
- DateOfFirstAppnt
- DateOfBirth Vs
- DateOfLastPromo
- Staff Age
- FirstAppointment Vs
- DateOfLastPromo
- First Appointment

Selected Validations

Select Forms *

Available Forms



- Private/FBO Employee Form
- Public Employee Form
- Institution Employee Form
- Hospital Employee Form
-

Selected Forms

Submit

Report Employee Records

Select Organisationunit *

  Ministry Of Health

Select Forms

*

Available Forms

Private/FBO Employee Form
Public Employee Form

Selected Forms

--

Use data for selected
unit with lower level

Generate report

Below is an example of a record report generated from Arusha City Council with its lower levels, the facilities.

Records Report for Arusha City Council with Lower Levels for Private Employee Form and Public Employee

Form

10 records per page Search:

No.	First Name	Middle Name	Surname	Age	Basic Education Level	Profession Education Level	Terms of Employment	Present Designation	Profession	Department	Check Number	Employment Duration	Employment Status	Retirement Date	Last Updated	Duty Post
1	Abdulaziz	Hussein	Mnenwa	27	Ordinary Secondary Education	Diploma	Permanent and Pensionable	Nurse II	Nurse	Curative Services		3y2m	On Duty	2046-06-10	05/01/2014	Arusha City Council
2	ABDURAZACK	HUSSEIN	ABDALLAH	28	Advanced Secondary Education	Diploma	Permanent and Pensionable	Clinical Officer II	Clinical Officer	Curative Services	12317100	1y4m	On Duty	2045-05-04	05/01/2014	Levolosi Health Centre
3	Abel	Ronald	Nkya	25	Advanced Secondary Education	Diploma	Permanent and Pensionable	Medical Attendant	Radiographer	X-Ray Dept		1y7m	On Duty	2048-09-14	21/02/2014	Arusha Lutheran Medical Hospital
4	ABEL	MISSUNGWI	NGUSSA	28	Advanced Secondary Education	Diploma	Permanent and Pensionable	Clinical Officer II	Clinical Officer	Curative Services	12317270	3y4m	On Duty	2045-11-15	05/01/2014	Kaloleni Health Centre
5	Adiel	Lesikar	Lukumay	46	Primary Education	Primary School	Permanent	Driver I	Driver	Other		24y8m	On Duty	2028-06-04	19/02/2014	Arusha Lutheran Medical Hospital
6	Adimila	Njiku	Venance	35	Ordinary Secondary Education	Diploma	Permanent and Pensionable	Assistant Nursing Officer I	Assistant Nursing Officer	Curative Services	10792131	7y3m	On Duty	2038-10-11	05/01/2014	Aico Hospital
7	Adria	Gasper	Moshi	46	Ordinary Secondary Education	Certificate	Permanent	Nurse Grade II	Nurse	Obst and Gynae		18y2m	On Duty	2028-08-05	20/02/2014	Arusha Lutheran Medical Hospital
8	Afzay	Samwel	Mkufya	59	Advanced Secondary Education	Advance Diploma	Permanent	Assistant Nursing Officer I	Assistant Nursing Officer	Surgical Department		5y3m	On Duty	2014-07-01	17/02/2014	Arusha Lutheran Medical Hospital

fig 4.2: Screenshot showing part of Record Report Generated for Arusha City Council with Lower Levels.

When the report has been generated, there are two buttons at the end, “Export to EXCEL” option, found at the lower left corner of the screen, that will enable you to export your report to excel sheet (spreadsheet) for further personal manipulation without affecting the data in the system.

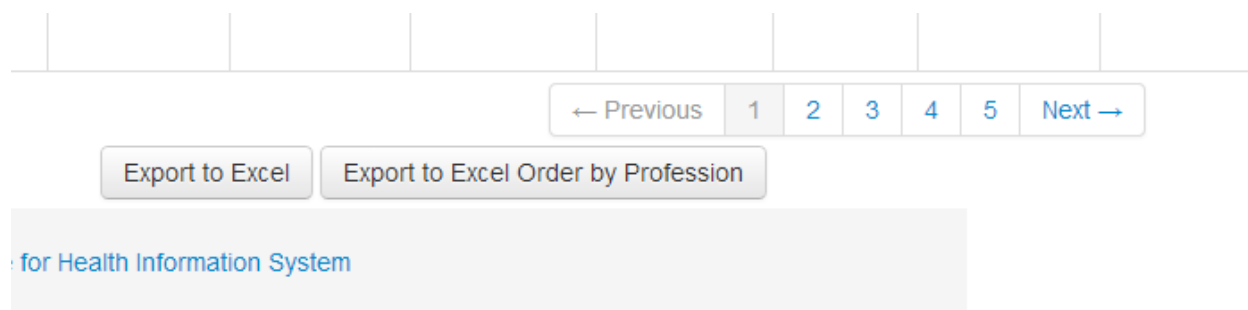


fig 4.3: Export to Spreadsheet Buttons.

Click it and see the results – the spreadsheet “Export to Excel Order by Profession” which also sends the report to spreadsheet but groups the information by profession. For instance all the doctor records will be under doctor profession, nurses under nurses and so forth.

fig 4.4: Image showing example of spreadsheet file part for Arusha City Council with Lower Levels using export to excel button.

A1											fx	Records Report for Arusha City Council with Lower Levels for Private/FBO Employee Form,Public Employee Form
A	B	C	D	E	F	G	H	J	K	L		

SN	First Name	Middle Name	Surname	Date of Birth	Age	Sex	Marital Status	Nationality	Basic Education	Profession	Nun
1	Athanacia	Ndewedo	Kisera	1962-07-01	51	Female	Married	Tanzanian	Ordinary	Certificate	3
2	Mary	August	Mamuya	1972-04-03	42	Female	Single	Tanzanian	Ordinary	Certificate	1
3	Loishiye	Kireku	Kivuyo	1961-07-01	52	Male	Married	Tanzanian	Primary	Primary School	4
4	Masuma	Ashiq	Ladha	1986-07-30	27	Female	Married	Tanzanian	Ordinary	Secondary	1
5	Ruth	Emanuel	Letara	1978-03-29	36	Female	Single	Tanzanian	Advanced	Certificate	
6	Hidaya	Juma	Masudi	1966-06-20	47	Female	Married	Tanzanian	Primary	Primary School	2
7	Chausiku	Njire	Masanja	1970-12-30	43	Female	Single	Tanzanian	Primary	Primary School	2
8	Ernest	Azigadi	Mfangavo	1967-02-04	47	Male	Married	Tanzanian	Primary	Primary School	4
9	Iluminata	Michael	Mallya	1969-12-29	44	Female	Married	Tanzanian	Primary	Primary School	2
10	Iluminata	Lucian	Kitundu	1972-07-01	41	Female	Single	Tanzanian	Primary	Primary School	2
11	Naomi	Loibanguti	Laizer	1985-08-05	28	Female	Married	Tanzanian	Ordinary	Secondary	2
12	Lizy	Nelson	Ngowi	1992-05-25	21	Female	Single	Tanzanian	Ordinary	Secondary	
13	Afizay	Samwel	Mkufya	1954-07-01	59	Male	Married	Tanzanian	Advanced	Advance	
14	Scolastica	Fraterin	Rimoy	1990-11-28	23	Female	Single	Tanzanian	Ordinary	Certificate	
15	Daniel	Manyange	Ogechi	1980-10-28	33	Male	Married	Kenyan	Ordinary	Diploma	2
16	Maria	Mengoru	Lukumay	1993-05-26	20	Female	Single	Tanzanian	Ordinary	Certificate	3
17	Rose	John	Wanyanza	1989-11-28	24	Female	Single	Tanzanian	Ordinary	Certificate	
18	Godfrey	Paul	Ngaya	1990-05-25	23	Male	Single	Tanzanian	Ordinary	Diploma	2
19	Hellena	Zephania	Ng'ora	1991-05-23	22	Female	Single	Tanzanian	Ordinary	Certificate	
20	Naima	Hassan	Mnzava	1978-12-19	35	Female	Single	Tanzanian	Ordinary	Secondary	1
21	Anna	Edward	Myegeta	1978-09-18	35	Female	Married	Tanzanian	Ordinary	Diploma	3
22	Faith	Veronica	Mwanzia	1976-07-01	37	Female	Single	Tanzanian	Ordinary	Diploma	2
23	Neema	Rogasian	Shirima	1985-01-20	29	Female	Married	Tanzanian	Ordinary	Diploma	1

Aggregated Reports

These are the reports whose output is of graph format depending upon the selected Field Option for instance Present Designation. Similar procedures of generating a record report are used, but in this case you have to select one or two Fields using which the “Aggregated Report” should be generated.

fig 4.5: Image showing steps to generate aggregated report.

The aggregated data, in this new release gives the user more ways to explore the data that are in the system already. It allows a user to specify the organization units they want the report for, select the form in which the data will be chosen for report and then select the data to view. These data are in two fields, field one and field two. However, you can also generate this report by selecting only one field and not comparing it to any other field. To do so you have to specify field one and in field to select the option for “use only one field”. This will aggregate only data for field one selected.

fig 4.6: An aggregated report (field one: age distribution, field two: sex).

fig 4.7: An aggregated report (field one: employment distribution, field two: sex).

fig 4.8: An aggregated report (field one: Retirement distribution, field two: sex).

History and Training Reports

These are the reports related to the “History Management” and “In service Training management”. The following figure shows the interface to “History and Training Report”. To generate the report you start with selecting an organization unit followed by selecting the check box if it is to include lower level, then user will have to specify which report they want to generate, “History” report or “In service Training” report. If one selects the “In Service Training” report they will just have to select the form to use while selecting the “History” report, they will be required to select a form where data will be picked and also, what field of history is sought Lastly there is an option of which graph type you would like the data to be

Report Aggregation

Organisationunit

📁 Ministry Of Health

With lower levels

Organisationunit group

Available Groups

- Administrative Unit
- Institution**
- Clinics
- Public Administration
- Health Centre
- Private Facilities

Selected Groups

Forms

Available Forms

- Private/FBO Employee Form
- Public Employee Form

Selected Forms

Fields

—SELECT— ▼

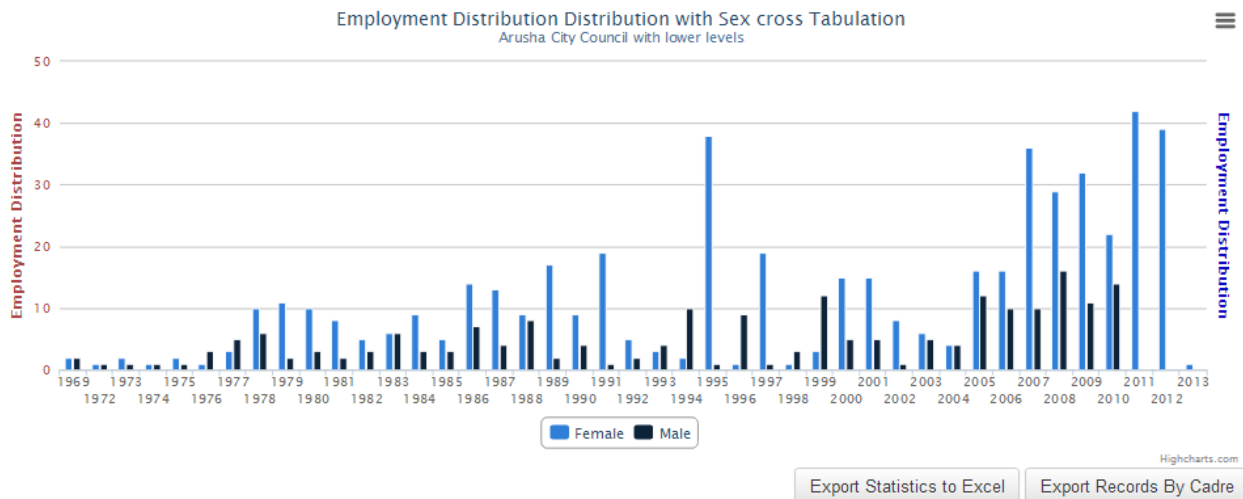
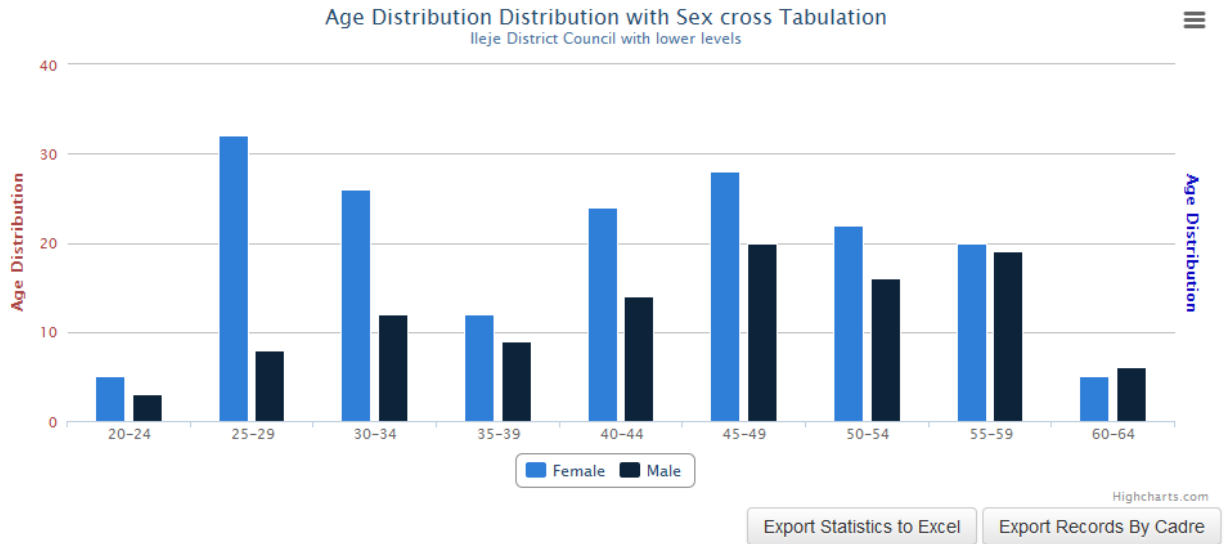
Fields two

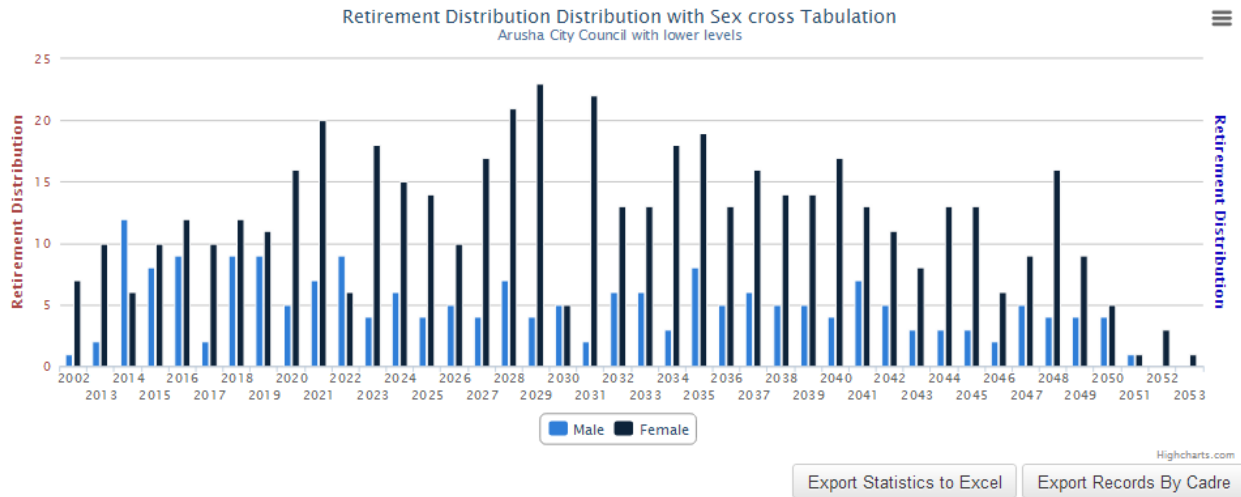
—SELECT— ▼

Graph type

Bar Chart ▼

Generate report





presented. There are three layouts of graph in the system Bar, Pie and Line graphs the default graph type is the bar graph.

fig 4.9: History and In service Training report.

Friendly Report

This report gives a set of generic reports as required by CCHP or CHOP for information on Human Resource specifically Table 11. To generate the report you first have to select which report you need from the drop down at generic report, then select organization unit followed by which form to be used. After that one has to select target according to the group of interest. These targets have been pre-defined already in the system and are updated according to changes in the scheme of service. It is optional though to select the target or not.

fig 4.10: Friendly Reports.

Completeness Report

This report gives the percentage of data entered into the System that help users assessing data coverage. The report consists of names of facility, value of entered records and the expected number by facility, district and region. Depending on the user account one will be able to see only the levels below that of the organization unit assigned to them.

To generate the report is in two easy steps; first one has to select the organization unit then secondly select the form. See image below

fig 4.11: Image Showing steps to generate completeness Report.

On selecting generate report one will see completeness as shown in the image below and will be able to download this report to excel by clicking the button labeled “Download to Excel” and will be able to manipulate the report further to suit their need.

fig 4.12: Image showing Completeness report of Meru District Council.

History and Training Report

Organisationunit



A tree view showing the organizational structure. The root is 'Ministry Of Health', which contains several sub-units: 'Health Training Institutions', 'Mohsw Agencies', 'Mohsw Departments', 'Referral Hospitals', and 'Regions'. The 'Regions' unit is expanded to show a list of ten regions: 'Arusha Region', 'Dar Es Salaam Region', 'Dodoma Region', 'Geita Region', 'Iringa Region', 'Kagera Region', 'Katavi Region', and 'Kigoma Region'. Each folder icon has a plus sign next to it, indicating it can be expanded or collapsed.

With lower levels

Report type

--SELECT-- ▼

Forms

Private/FBO Employee Form ▼

Fields

--SELECT-- ▼

Graph type

Bar Chart ▼

Generate report

Friendly Report

Generic report

--SELECT-- ▼

Organisationunit

- Ministry Of Health
 - Health Training Institutions
 - Mohsw Agencies
 - Mohsw Departments
 - Referral Hospitals
 - Regions
 - Arusha Region
 - Dar Es Salaam Region
 - Dodoma Region
 - Geita Region
 - Iringa Region
 - Kagera Region
 - Katavi Region

Forms

Avaiable Forms

Private/FBO Employee Form
Public Employee Form

Selected Forms

--

Targets

Avaiable Targets

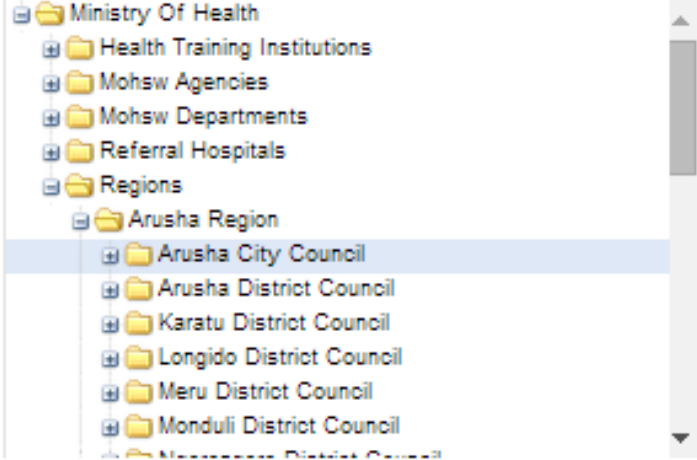
Hospital Target
Health Centre Target
Dispensary Target
Regional Hospital Target

Selected Targets

--

Generate report

Report Organisationunit Completeness

Select Organisationunit * 

Organisationunit Level *

Select Form *

Available Forms	Selected Forms
Hospital Employee Form	Public Employee Form
Institution Employee Form	
Private/FBO Employee Form	

Completeness Report for All Facility Under Meru District Council

Back To Arusha Region

Copy Excel PDF Search:

10 records per page

Sn	Organisationunit	Private/FBO Employee Form			Public Employee Form		
		Entered Records	Expected Records	Percentage	Entered Records	Expected Records	Percentage
1	Valeska Dispensary	5	5	100	0	-	-
2	Usa River Gvt Health Centre	0	-	-	8	11	72.73
3	Usa River Community Dispensary	0	5	0	0	-	-
4	Usa Rc Health Centre	0	10	0	2	2	100
5	Upendo Dispensary Geita	0	-	-	0	-	-
6	Tumaini Rc Health Centre	8	-	-	0	-	-
7	Tumaini Crc Fbo Dispensary	4	-	-	0	-	-
8	Tac Dispensary	8	8	100	0	-	-
9	Sura Dispensary	0	-	-	1	3	33.33
10	Shishtoni Dispensary	0	-	-	1	2	50

Showing 1 to 10 of 54 entries

← Previous 1 2 3 4 5 Next →

Download to Excel

Organization Unit by Level Report

This is a report of all organization units below the level which the specified user has been assigned to. These levels starting from the top are as shown in the diagram below:

fig 4.13: Image showing organization Structure by Levels in HRHIS.

To report is easily generated in one step, by selecting the organization unit and clicking the “generate report” button

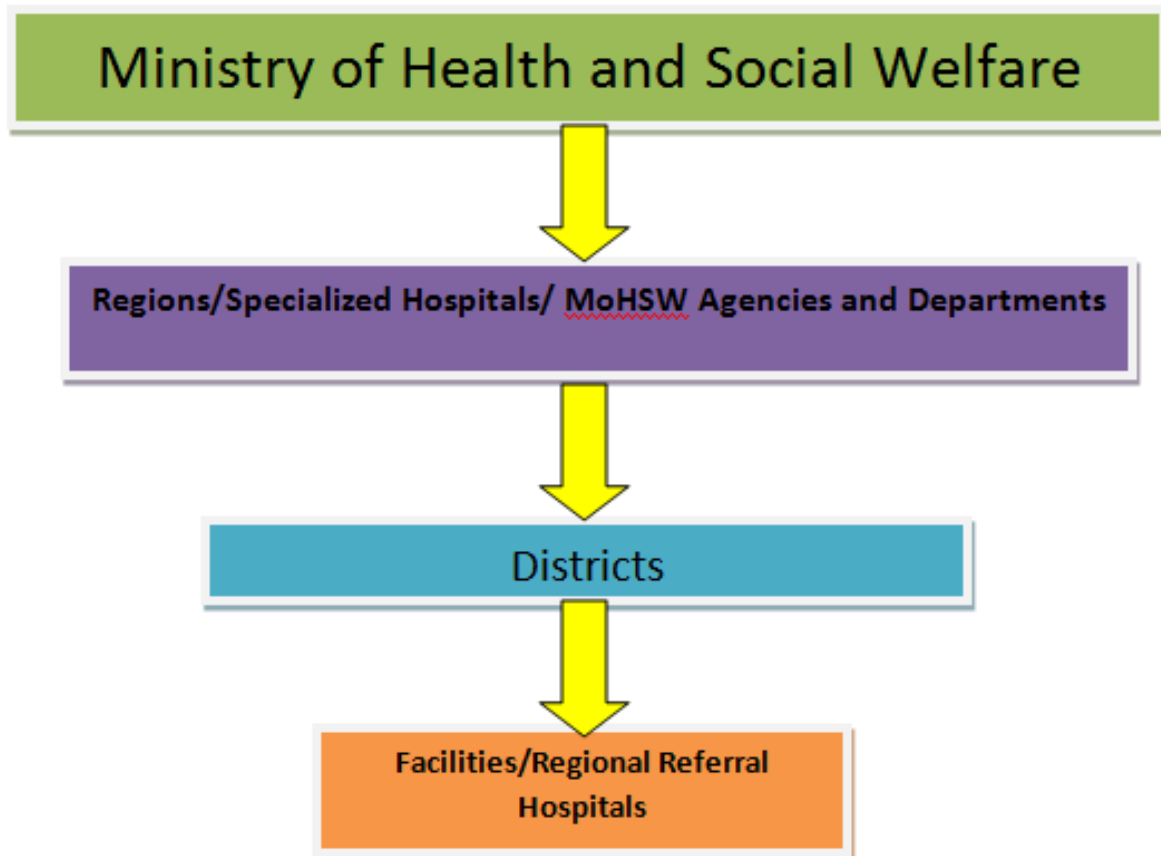
fig 4.14: Image Showing steps to generate organization unit report by levels.

Organization Units by Groupsets Report

Organization Units are grouped in two ways. One is by Ownership- this helps to identify who owns the organization and second one is by Type- this identifies what category of service the organization unit is capable of offering, whether it is a Hospital, Health Center, Dispensary, or Clinic. It gives the total number in each category under selected organization unit.

As previous organization unit report by level, to generate this report is in one easy step of just selecting the organization unit and clicking the “generate report” button as seen in the following diagram.

fig 4.15: Image showing steps to generate organization unit report by groupset.



Report Organisationunit By Levels



Organisationunit

  Ministry Of Health

Organisationunit level

Report Organisationunit By Groupset

Organisationunit

  Ministry Of Health

Organisationunit groupset

4.1 User Module

This module consists of two sub menu namely “System Users” and “User Groups”. Each sub menu is described below.

System Users

In this sub menu one can edit user credentials, delete a user or assign new registered user to their organization right organization unit.

Ministry of Health and Social Welfare
Human Resource for Health Information System

User list

Create a new user
Copy Excel PDF

Search:

10 records per page







Username	Firstname	Surname	Forms	Organisationunit	Actions
test	test	test	Private/FBO , Public	Kilindi District Council	  
mchix	MCHIWA	NONDO	Private/FBO , Public	Longido District Council	  

fig 1.1: Image showing sample of users already registered in the System.

Users Groups

These are the groups to which the created users are assigned to according to the access level given to each. A user can be assigned to more than one group. One can create a new group, view group information, edit or delete a group.

User Group list

Create a new Group

Copy Excel PDF Search:

10 records per page

Name	Description	Users	Roles	Actions
Data Manager	Data Manager, with ability to add/edit and delete records below his/her organisationunit.	422	3	i ✎ ✕
Data Viewer	Users with ability to view data only, without downloading.	4	20	i ✎ ✕
Feedback Group	A group to technical support to users	17	0	i ✎ ✕
Super User	User with all privileges, to access all parts of the system.	20	1	i ✎ ✕
Update Completeness	Users with Ability to update completeness of organisation units through completeness report.	2	1	i ✎ ✕

Showing 1 to 5 of 5 entries

-- Previous 1 Next --

fig 1.2: Image showing the different User Groups available in the System.

Form Management

This module deals with the management of the data entry forms including the field options. This module is used mostly by system administrator for modification of form fields when there is a change of requirements.

Fields

This sub module is used to add, edit, or delete database fields which hold data supplied by the user. Examples of the fields include dob (stands for Date of Birth), file_no (stands for file number), etc. The table shown in the image below shows a specific fields, their input type, data type, caption, a mark to show whether it is compulsory or not, and options to show field details, edit or delete.

fig 2.1: Image showing Form Fields Interface.

Note: For the fields with the combo input type click on the icon following the edit options to assign more field options. Click the next icon to merge field options, if any is needed.

Fields Options

Combo form fields have options that allow users to select in combo box. The screen shot below shows some combo field options.

fig 2.2: Image showing interface of combo field options.

Field list

Create a new entry

Copy Excel PDF Search:

10 records per page

Name	Caption	InputType	DataType	Compulsory	Unique	Calculated	Actions
Age	Age	Date	Integer	TRUE	FALSE	TRUE	
AgeDistribution	Age Distribution	Date	String	FALSE	FALSE	TRUE	
basic_education_level	Basic Education Level	Select	String	TRUE	FALSE	FALSE	
check_no	Check Number	Text	String	TRUE	FALSE	FALSE	
confirmation_date	Confirmation Date	Date	Date	FALSE	FALSE	FALSE	
contact	Contacts	TextArea	String	TRUE	FALSE	FALSE	
contact_of_Next_of_Kin	Contact of Next of Kin	TextArea	String	FALSE	FALSE	FALSE	
department	Department	Select	String	TRUE	FALSE	FALSE	

FieldOption list

Create a new entry Merged Field Options

Copy Excel PDF Search:

10 records per page

Value	Sort	Field	SkipInReport	Description	Actions
Abscondent		Employment Status	True		
Academic Officer		Superlative Substantive Position	False		
Accountant		Present Designation	False		
Accountant		Profession	False		
Accountant I		Present Designation	False		
Accountant I		Hospital Designation	False		
Accountant II		Hospital Designation	False		
Accountant II		Present Designation	False		
Accounts		Hospital Department	False		
Accounts Technician		Profession	False		

Showing 1 to 10 of 2,022 entries

Forms

This sub-module is used to create new or edit already existing data entry forms. On the right hand side of each form are the options to view, edit form details, design, and deleting the form.

Form list

Create a new entry

Copy Excel PDF Search:

10 records per page

Id	Name	Title	Actions
5	Public Employee Form	Public Employee Form	
6	Private/FBO Employee Form	Private Employee Form	
7	Hospital Employee Form	Referral Hospital Employee Form	
8	Institution Employee Form	Training Institution Employee Form	

Showing 1 to 4 of 4 entries ← Previous 1 Next →

fig 2.3: Image showing list of forms available in the system and icons to manage them.

Show Details

The first option is the “Show Icon”, necessary details of the form are shown after clicking this icon. For example, details for Public employee form are as shown in the screen shot below:

Public employee form

Id	5
Uid	52893cd128bd2
Name	Public Employee Form
Title	Public Employee Form
Datecreated	2013-11-17 22:01:53
Lastupdated	2013-11-18 12:58:18

Back to the list

Edit

design Form

Delete Public employee form

fig 2.4: Image showing Public Employee Form Details.

Edit Form

To edit a form, click on the third icon in its field of “Actions”. Click the specific field on the left to add it to the form. Once a specific field option is clicked from the “Available Fields”, the field option will be moved to the right side, named “Selected Fields”.

fig 2.5: Interface for editing the form and adding details.

Form Design

On the second option, Design, the screen shot below should appear. Put the names of the form fields you want and for each field assign the database field corresponding to it and then click on the “Save Form” button to save the form. At any point during the design of the form, clicking the “Reset” button should instigate clearing.

fig 2.6: Interface for editing the form and adding details.

Delete Form

The last icon is the delete option, Delete icon was placed purposely for the removal of the unwanted option in the list. However this option has to be used with care since if the field is deleted there is no way to be recovered that is why user has to confirm the details displayed once the delete icon is clicked, Below is a screen shot of the details displayed including the name of the field, date of creation and update that user is attempting to delete.

fig 2.7: Interface for the MOHSW Children.

Target Module

Targets means expected numbers of employees of a certain profession corresponding to a given type of facility as detailed in the Scheme of Service of the Health Sector.

Targets

To set target click targets, there will be an option to either create a new Target, to edit the already created Targets or to delete a Target as shown below.

fig 3.1: Figure showing Targets Information.

Orgunit Module

This module is used for managing organization units in the System such as to create a new one, view the lower level of a given organization unit, move organization units from one upper level organization unit to another, view, edit or delete the details of an organization unit.

 Form edit

Name

Title

Unique record fields

Available Fields

Basic Education Level	▲
Check Number	
Confirmation Date	
Contacts	
Contact of Next of Kin	
Registered Disability	▼

Selected Fields

Surname
Date of Birth
First Name

Form field members

Available Fields

E-mail Address	▲
Hospital Designation	
Hospital Salary Scale	
Hospital Superlative Post	
Age Distribution	
Retirement	▼

Selected Fields

Profession	▲
Basic Education Level	
Check Number	
Confirmation Date	
Contacts	
Contact of Next of Kin	
Registered Disability	▼

Form visible fields

Available Fields

Confirmation Date	▲
Contacts	
Contact of Next of Kin	
Registered Disability	
Date of Birth	
District of Domicile	▼

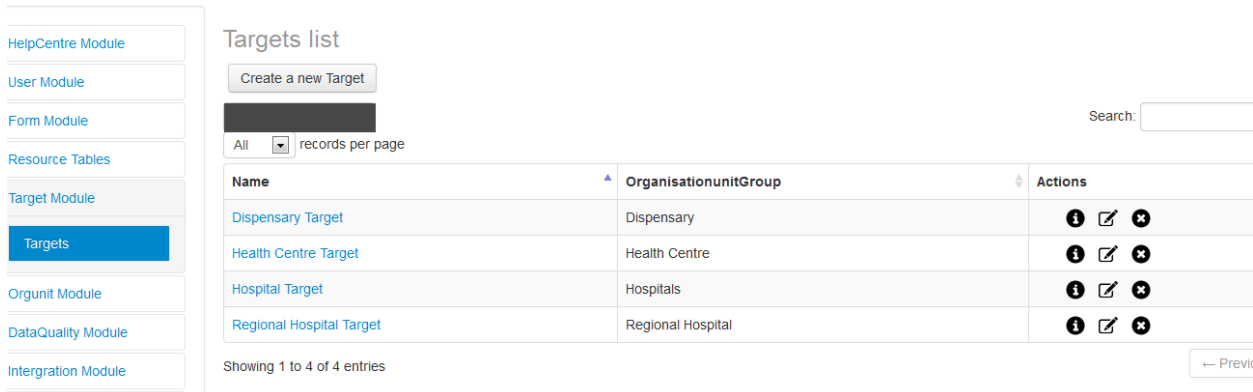
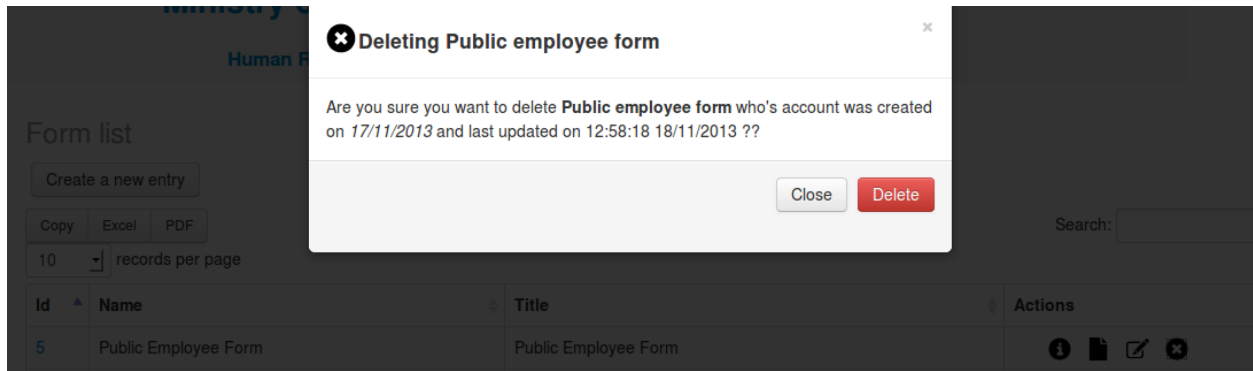
Selected Fields

Retirement Date	▲
Basic Education Level	
Check Number	
First Name	
Middle Name	
Age	
Profession	
Education Level	▼

Form design

Public Employee Data Entry Form		
1.	First Name	<input type="text"/>
2.	Middle Name	<input type="text"/>
3.	Surname	<input type="text"/>
4.	Date of Birth	<input type="text"/>
5.	Sex	<input type="text"/>
6.	Marital Status	<input type="text"/>
7.	Nationality	<input type="text"/>
8.	Religion	<input type="text"/>
9.	Basic Education Level	<input type="text"/>
10.	Profession Education Level	<input type="text"/>
11.	Number of Children/Dependants	<input type="text"/>
12.	District of Domicile	<input type="text"/>
13.	Check Number	<input type="text"/>
14.	Employer's File Number	<input type="text"/>
15.	Registration Number	<input type="text"/>
16.	Terms of Employment	<input type="text"/>

table



Organization Units

With this sub-module one can create new organization units, view the lower level of a given organization unit, view, edit or delete the details of an organization unit.

fig 4.1: Image showing the Lower Level Organization units (Children) of MoHSW .

Organization Groups

Organization units can be grouped together to help in the analysis and use of data. In this sub-module one can create a new a new organization units group, view, edit or delete the details of a given organization units group. Example of the organization units groups can be hospitals, health centers, dispensaries and others as shown in the image below:

fig 4.2: Interface for displaying organization unit groups.

To create a new organization unit groups click on the “create a new entry” button and the following will appear (see image below).

fig 4.3: Image showing the Creation of a new OrganizationUnit Group.

Organization Unit Group Sets

OrganizationUnit GroupSets are used to group the organization units in terms of ownership or type, again, to help in the analysis and use of data. This part of the system is used to create and edit organizationUnit

Organisationunit list

[Create a new entry](#) [Back Up](#)

[Copy](#) [Excel](#) [PDF](#)

Search:

10 records per page

Shortname	Longname	Parent	Active	Actions
Institutions	Health Training Institutions	Ministry Of Health	Active	i edit down x
MOHSW Agencies	Mohsw Agencies	Ministry Of Health	Active	i edit down x
MOHSW Departments	Mohsw Departments	Ministry Of Health	Active	i edit down x
referralhosps	Referral Hospitals	Ministry Of Health	Active	i edit down x
regions	Regions	Ministry Of Health	Active	i edit down x

Showing 1 to 5 of 5 entries

[← Previous](#) [1](#) [Next →](#)

OrganisationunitGroup list

[Create a new entry](#)

[Copy](#) [Excel](#) [PDF](#)

Search:

10 records per page

Name	Description	Organisationunits	Actions
Administrative Unit		95	i edit x
Army	Faith Based Facilities	134	i edit x
Clinics	Clinics	22	i edit x
Dispensary	Dispensaries	5943	i edit x
District	District	155	i edit x
Faith Based Facilities	Faith Based Facilities	939	i edit x
Health Centre	Health Centres	685	i edit x
Hospitals	Hospitals	255	i edit x
Institution	Institution	112	i edit x
Private Facilities	Private Facilities	990	i edit x

Showing 1 to 10 of 14 entries

[← Previous](#) [1](#) [2](#) [Next →](#)

- HelpCentre Module
- User Module
- Form Module
- Resource Tables
- Target Module
- Orgunit Module
- DataQuality Module
- Intergration Module
- Data Management
- Reports Module
- ImportExport Module

OrganisationunitGroup creation

Name

Code

Description

Dhis uid

  Ministry Of Health

GroupSets. The procedure and interfaces used are as shown in the figure below:

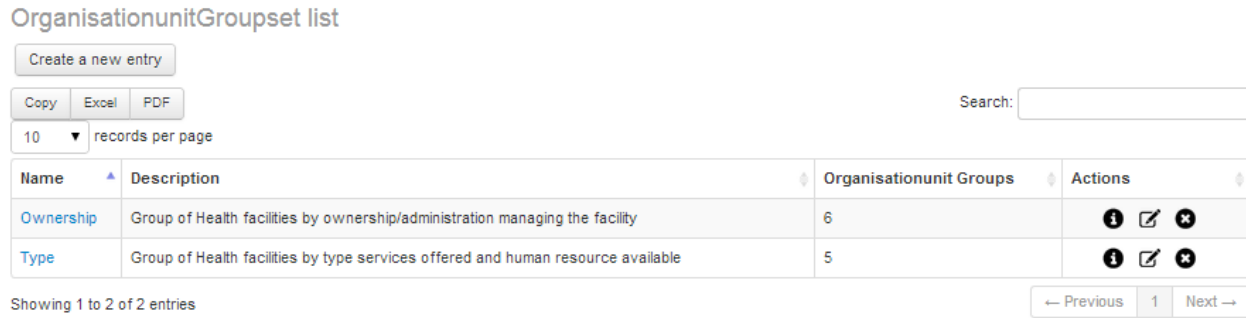


fig 4.4: Image showing the List of the available organizationUnit GroupSets.

Hierarchy Operations

Hierarchy Operations is used to move an organization unit from one part of the organization units' tree to another. This is mostly used when a new organization unit such as a region or a council is created and thus results a need to move lower level (child) organization units from one higher (parent) organization units to another.

Hierarchy Operations

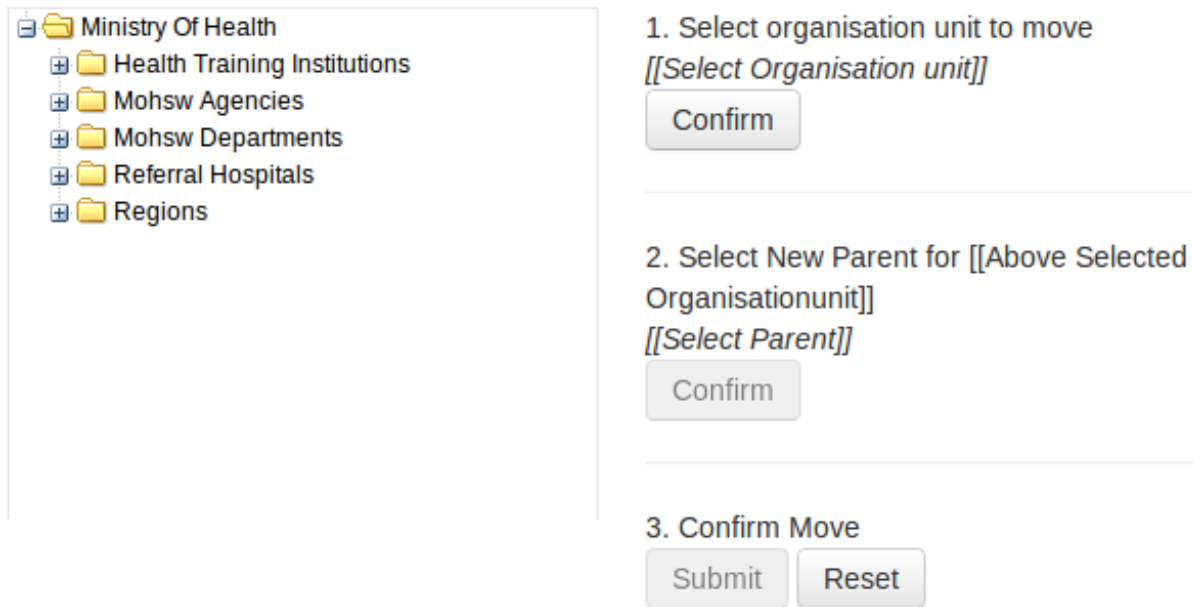


fig 4.5: Image showing the Interface for performing Hierarchy Operations.

You first select the organization Unit you intend to move then you click confirm, then you select the parent organization unit to which you intend to move the child organization unit then you confirm it too. Finally you click submit to move the organization unit.

Organization Unit Levels
















Organisationunit Levels lists the various organization unit levels together with their descriptions and are usually used in the analysis and use of data.

OrganisationunitLevel list

Create a new entry Generate Organisationunit Structure

Copy Excel PDF Search:

10 records per page

Name	Level	Description	Dataentrylevel	Actions
Categories	2	Level2	False	  
Districts/Reg_Hospitals	4	Level4	True	  
Facility	5	Level5	False	  
MoHSW	1	Level1	False	  
Regions/Departments/Institutions/Referrals	3	Level3	False	  

Showing 1 to 5 of 5 entries

fig 4.6: Image showing the Organization unit Levels List.

Like in the other feature, here one can also view, edit or delete the details of a particular organization unit level as well as create a new one.

5.1 Software & Hardware requirements for development

technologies

languages

paradigms

IDEs

tools

how they fit together

best development practices

6.1 Contribute to Software Source Codes

Code

In case you will notice inconsistencies in the HRIS System please follow the instructions below.

Reporting a Bug

Whenever you find a bug in HRIS, we kindly ask you to report it. It helps us make a better HRIS.

Reporting a Security Issue

If you find a security issue in HRIS please do not reveal the issue to the public, report it to the HRIS-Project Team via [John F. Mukulu](#)

For each report, we first try to confirm the vulnerability. When it is confirmed, the Team works on a solution following these steps:

1. Send an acknowledgement to the reporter;
2. Work on a patch;
3. Write a post describing the vulnerability, the possible exploits, and how to patch/upgrade affected applications;
4. Apply the patch to all maintained versions of HRIS;
5. Inform the reporter of the Security Issue that the Issue has been resolved:

Note: While we are working on a patch, please do not reveal the issue publicly.

Contribute to Documentation

Documentation is as important as code. It follows the exact same principles: DRY, tests, ease of maintenance, extensibility, optimization, and refactoring just to name a few. And of course documentation has bugs, typos, hard to read tutorials, and more. Human resource for health information system 3.0. source code and documentation are hosted on github:

- [Hris Website](https://github.com/hrisproject/hris) - <https://github.com/hrisproject/hris>
- [Hris Documentation](https://github.com/hrisproject/hris-docs) - <https://github.com/hrisproject/hris-docs>

If you want to submit a patch, fork the official repository on GitHub and then clone your fork:

```
$ git clone git://github.com/YOURUSERNAME/hris-docs.git
```

Make your changes into the documentation, when you're done create a pull request on github.

GitHub covers the topic of [pull request](#) in detail.

Contributing

Before contributing, you need to become familiar with the markup language used by the documentation.

HRIS Documentation uses reStructuredText as its markup language and Sphinx for building the output(HTML,PDF, etc...).

reStructuredText

reStructuredText “is an easy-to-read, what-you-see-is-what-you-get plaintext markup syntax and parser system”.

If you're familiar with Markdown, be careful as things are sometimes very similar but different

- Lists start at the beginning of a line(no indentation)
- Inline code blocks use double-ticks(like this)

Quick overview on reStructuredText can be found on [sphinx website](#) A more detailed documentation can be found at [reStructuredText website](#)

Sphinx

Sphinx is a build system that adds some nice tools to create documentation from reStructuredText documents. As such, it adds new directives and interpreted text roles to standard reST markup.

Quick overview on setting your sphinx up for documentation can be found from [matplotlib website](#), a more detailed documentation can be found at [sphinx website](#)

Testing Documentation

To test documentation before a commit:

- Install Sphinx;
- Run the Sphinx quick setup;
- Install the Sphinx extensions (see below);
- Run `make html` and view the generated HTML in the build directory.

Installing the Sphinx extensions

Download the extension from the source repository Copy the `sensio` directory to the `_exts` folder under your source folder (where `conf.py` is located) Add the following to the `conf.py` file:

```
# ...
sys.path.append(os.path.abspath('_exts'))

# adding PhpLexer
from sphinx.highlighting import lexers
from pygments.lexers.web import PhpLexer

# ...
# add the extensions to the list of extensions
extensions = [..., 'sensio.sphinx.refinclude', 'sensio.sphinx.
↪configurationblock', 'sensio.sphinx.phpcode']

# enable highlighting for PHP code not between `<?php ... ?>` by_
↪default
lexers['php'] = PhpLexer(startinline=True)
lexers['php-annotations'] = PhpLexer(startinline=True)

# use PHP as the primary domain
primary_domain = 'php'
```

Generating PDF Using rest2pdf

st2pdf user manual (you can simply refer to the “Sphinx” chapter) <https://docs.google.com/viewer?url=http%3A%2F%2Fsphinx.pocoo.org%2Fsphinx-rst2pdf.pdf>

Install `rst2pdf`

- use your package manager (or)
- `pip install rst2pdf` (or)
- `easy_install rst2pdf`

Add `rst2pdf` to the list of extensions in `conf.py`:

```
extensions = ['rst2pdf.pdfbuilder']
```

This list will be empty if you accepted the defaults when the project was setup. If not, just append `'rst2pdf.pdfbuilder'` to the list.

Add a `pdf_documents` variable to `conf.py`:

```
pdf_documents = [('index', u'rst2pdf', u'Sample rst2pdf doc',  
↳u'Your Name'),]  
  
# index - master document  
# rst2pdf - name of the generated pdf  
# Sample rst2pdf doc - title of the pdf  
# Your Name - author name in the pdf
```

For all supported options, please check the manual

Generate pdf:

```
sphinx-build -b pdf source build/pdf
```

The generated pdf will be in the build/pdf directory.

Financing the Open Source Project

CHAPTER 7

References

Project References

8.1 Recommendations for Deployment and Implementation

Development

In the development of the HRIS System the knowledge bases which were used include:

1. Git Source code management
2. Composer
3. Symfony2
4. PHPUnit
5. Doctrine
6. Twig
7. {less} - The dynamic stylesheet language
8. Internationalization

Eclipse Tricks

Eclipse is the favoured IDE for HRIS development, followed by PHPStorm, the following are development plugins for eclipse.

1. Yedit - Eclipse plugin for YAML Files from Update site: <http://dadacoalition.org/yedit>
2. Symfony Eclipse Plugin from Update site: <http://p2.dubture.com> or MarketPlace
3. With those software sources, install plugins from the two sources, that is Composer Json Edit Miscellaneous Phing Symfony Twig YEdit.
4. Install PHP Tool Integration for testing offers PHPUnit test and Copy/Paste Detector, update site: <http://www.phpsrc.org/eclipse/pti/>

5. Less - Eclipse plugin offers support for less syntax, update site:

<http://download.eclipse.org/modeling/tmf/xttext/updates/composite/releases/>

Database Development

Co-ordinating and Managing Existing Databases with HRIS

Intergration With Other Systems

The HRIS has been integrated with the District Health Information System (DHIS) and is in the process of being integrated with TIIS.

Best Pilot Approach

Trainings

Data Utilization Trainings (DUTs)

Data Utilization Trainings (DUTs) were the trainings which were done to equip the consumers of the System(HRIS) with the relevant knowledge on HRH management and use. The training are done to the managers at CHMTs, RHMTs, Referral Hospitals and MoHSW HQ on how best they can understand, analyze and use the information collected in informing the management of HRH under their capacity. Therefore, conducting of DUTs is meant to enforce effective utilization of the HRHIS system as a key source of human resource for health information for planning, development, and decision making mechanism.

The intended participants for DUTs from the CHMT level were the District Medical Officers (DMOs), District Health Secretaries (DHSs), and District Nursing Officers (DNOs) and from the RHMT were Regional Medical Officers (RMOs), Regional Health Secretaries (RHSs), and Regional Nursing Officers (RNOs). On the other hand, participants from training institutions were Principals, Academic Officers and Administrators.

In these trainings UDSM is the leading implementing consultant. The trainings are organized and facilitated by experts from **MoHSW/JICA** while **UDSM** and **Intersoft** were providing technical support in showing how get different information and report from HRHIS and TIIS applications.

Training Modality

Data utilization trainings are conducted collaboratively between UDSM, MoHSW/JICA and Intersoft. UDSM is involved in making sure the mobile computer laboratory is set where the trainings are organized; stationeries are made available for trainings; and system support is given in the cause of the training. Depending on the number of attendants, sometimes it is necessary for UDSM to provide one or two experts per session.

Challenges encounter during DUTs

Challenges encountered during the DUTs include the number of the Training Laptops not being enough in some of the sessions, Venue problems, punctuality of the training attendants leading to training starting time delays and limited time for hands on sessions, Computer Literacy of the training Participants, POver Cut-off, some of the required participants sending representatives who were new to the system leading to delays as some of the time had to be used to introduce them to the System before conductind the DUT to them, another challenge was the number of the participants being larger than that expected thus leading to the division of the training sessions into two and the extension of the the training period.

Rollout

Needed Resources Throughout Rollout

CHAPTER 9

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