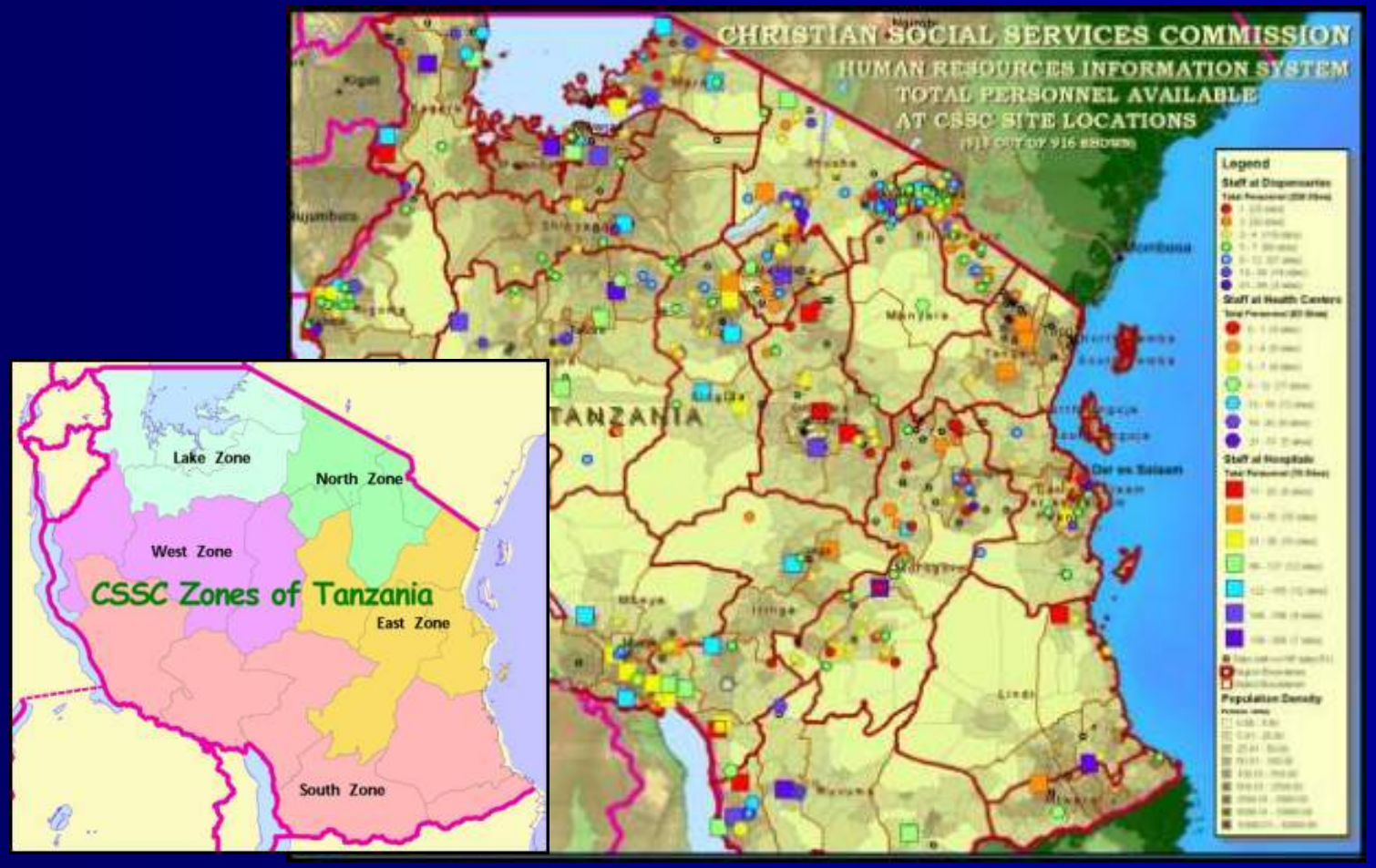
The CSSC Geographic and Human Resource Information Systems



Outline of Presentation

- Introduction (Simon Haule)
  - GIS, HRIS and CSSC
  - Progress to date
- Preliminary Results (Franklin Baer)
  - Health Infrastructure
  - Human Resources
  - Programs & Interventions
  - Next Steps & Challenges

INTRODUCTION

A Need to Improve Partnerships

- FBOs are usually the most important partner with the MOH for provision of health services.
- CSSC manages 35% of health facilities and human resources in Tanzania.
- However, coordination with the MOH is often more "parallel" than "integrated."
- Improving our respective information systems can help improve our partnering with the MOH.

The Role of GIS

- Access to health services is largely dependent on distance and geography, especially in rural areas.
- Defining population catchment areas around health facilities is a key to coordination.
- Mapping, including Geographic Information Systems, can help us to better view and understand complex elements affecting the provision of health services.

The Role of HRIS

- Qualified Health Workers are the key to providing quality (and accessible) Primary Health Care.
- Too often, however, health workers are not equitably deployed, properly trained, or adequately supported.
- A Human Resource Information System (HRIS) can improve coordination within a diverse FBO network (like CSSC) and in partnership with the MOH.

CSSC Objectives for 2007

- Complete CSSC facilities and HRIS databases.
- Begin integration of CSSC & MOH systems.
- Train zonal coordinators and CSSC members in GIS and HRIS usage.
- Develop data maintenance and quality assurance mechanisms.

CSSC Partners for GIS & HRIS

Interchurch Medical Assistance (coordination)

The ACCESS project (FANC)

The CAPACITY Project (HR)

Global Mapping International (TA in GIS)

Christian Connections for Int'l Health

GRAHM (Global Religious Health Assets Mapping)

USAID (funding for all of the above)

Key Events in 2006

- March: Initial feasibility & planning
- April: Data collection instruments developed
- May: Training of Zonal team in data collection
- June: Data collection begins in E. & N. Zones
- July: Data collection continues in Lake Zone
- Aug: Data collection in W. & S. Zones
- Sep: Data entry and cleaning
- Oct: Laptop & GIS software provided to CSSC
- Nov: Database creation linked to ArcView GIS
- Dec: Preliminary mapping results reviewed

Funding (through Dec 2006)

Category	Access CSSC managed	Access IMA managed	Capacity CSSC managed	Capacity IMA managed	Capacity Capacity managed	CSSC Cost Share	IMA	GMI & JSI	Cordaid	TOTAL
1. Personnel										
Data Entry Pers										$500
CSSC Technica										$1,200
Zonal Interviewe										$2,300
Zonal Coordinat										$1,450
IMA Technical/S										
Consultant TA s										$23,200
2. Travel Costs										
Per Diems (data										$9,500
Car Rental (50%										$7,500
Vehicle, Driver,										$3,300
Mileage Costs f										$4,400
Travel+PerDiem										$8,970
Travel (Trip One										$3,000
Travel (two techr										$5,600
3. Other Direct										
Equipment										$5,900
CSSC support costs	$1,300									$1,300
Supplies, Communication, Pre-Testing	$2,030									$2,030
IMA Management Support		$2,100								
	$19,000	$19,800	$11,850	$11,200	$5,600	$11,800	$11,930	$1,200	??	$92,380

Approximately $100,000

ACCESS: $38,800 (data collection & TA)

CAPACITY: $28,650 (data collection & TA)

CSSC: ~$21,000 (cost share for personnel)

IMA: ~ $12,000 (Personnel & Trips)

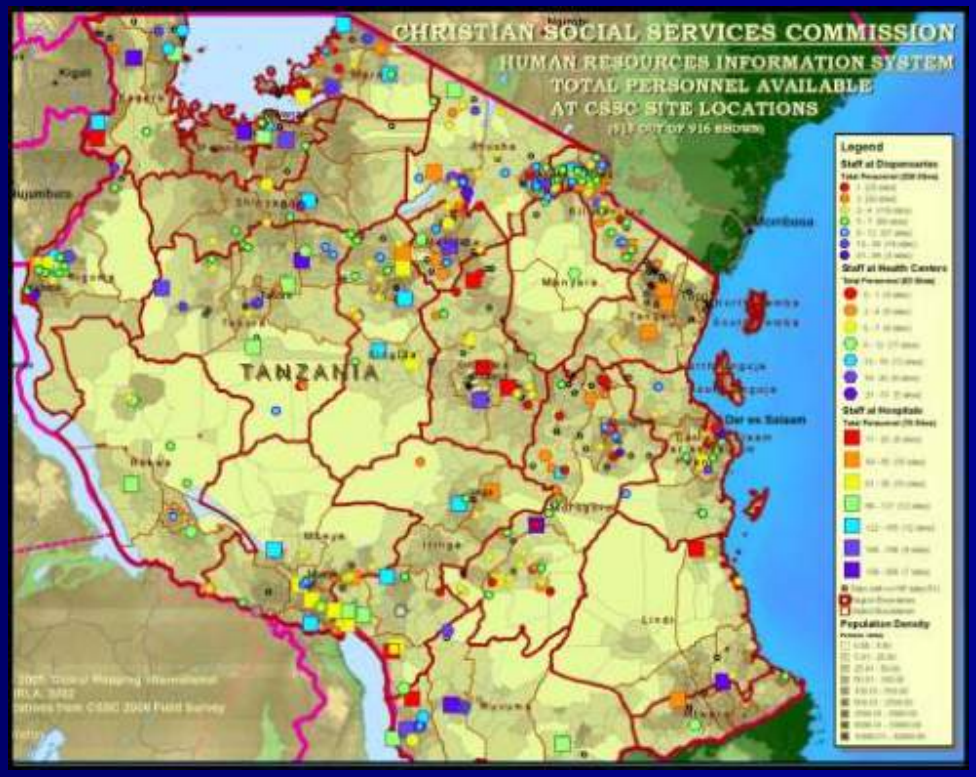
Common Findings in All Zones

- Data collection and record keeping-poor management of data and record keeping and health staff record
- High staff attrition rates – unstable staffing in all cadres
- Unsatisfactory functioning of medical Stores department (MSD)

Common Findings (cont'd)

- Training institutions –all faced inadequate number of tutors
- Shortage of equipment and instruments
- Power fluctuations
- Newly established health facilities not registered and therefore CSSC has no records either
- Some dispensaries had been closed down due to financing problems

PRESENTATION OF RESULTS



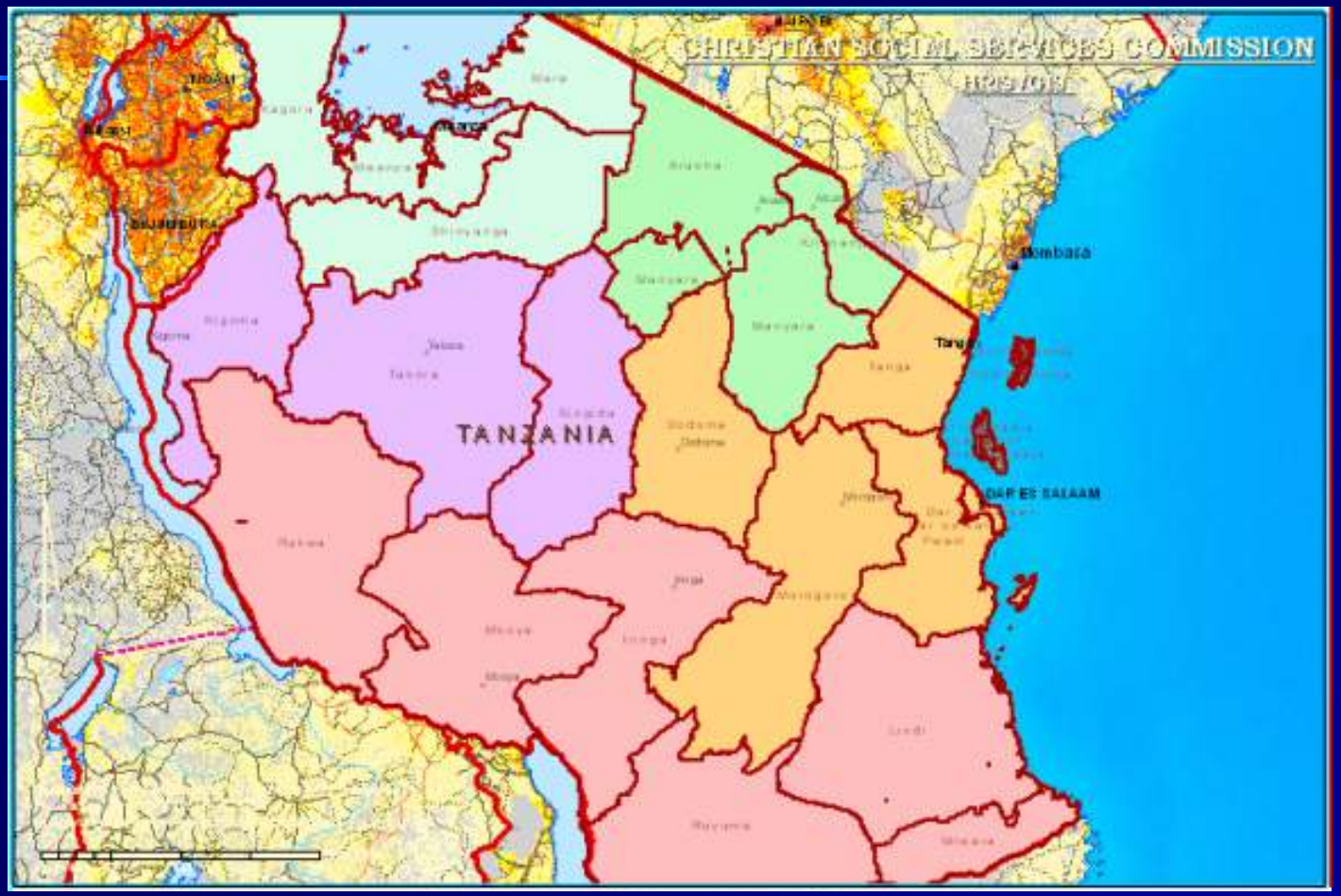
One HR WG Objective

- Enhance human resource management systems of CHA secretariats and their institutions
- HRIS and GIS are two enhancement tools to accomplish this objective

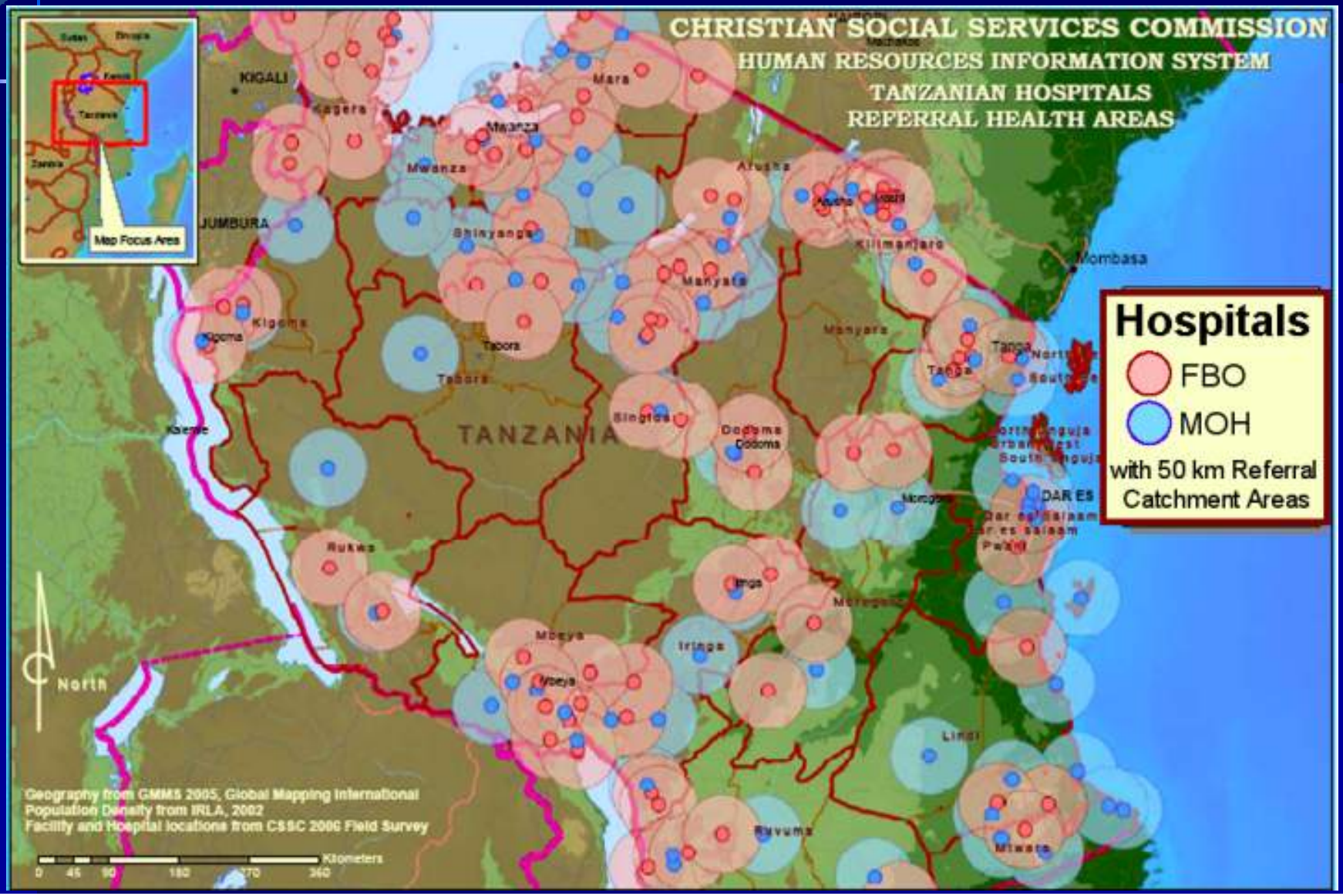
Basic Principles of GIS

- GIS provides a way to look at health data geographically
- GIS does not replace, but rather builds on, traditional mapping systems.
- GIS software makes it possible to add and combine layers of information to create enhanced views of data.

GIS Layering



Hospitals of Tanzania



Basic Principles of HRIS
Human Resource Information System

- Human Resource data is extremely difficult to collect and maintain.
- It requires local data collection, yet traditionally is centrally managed (if at all).
- A HRIS creates a large database of records – one for per health worker.
- When linked to a GIS, HRIS data can also be mapped, viewed, and analyzed and geographically.

HR Functions

- **PLANNING** the health workforce
  - Formulating and implementing HR policies
  - *How many health workers are needed?*
- **DEVELOPING** the health workforce
  - Training (basic and in-service)
  - Deployment
  - *Where are additional health workers needed?*
- **SUPPORTING** the health workforce
  - Supervision systems
  - Compensation, retention, promotion, etc.
  - *How many are dropping out (or staying in) the system?*

HR Information Collected

- CSSC Code
- ID Number
- Name
- Sex
- Year of Birth
- Staffing Category
- Employed by:
- Paid by:
- Highest Prof. Qualification
- Year of Qualification
- Nbr Years at this Facility
- Year of Last Promotion
- Last Training Received (yr)
- Training Topic
- Monthly Salary
- Revision date

HR Staff Categories

CODE	VALUE
MO	Medical Officer
AMO	Assistant Medical Officer
CO	Clinical Officer
CA	Clinical Assistant
NO	Nursing Officer
NM	Nurse Midwife
PHN	Public Health Nurse
LT	Lab Technician
LA	Lab Assistant
PHA	Pharmacist
PA	Pharmacy Assistant
DS	Dental Surgery
DA	Dental Assistant
MR	Medical Recorder
MA	Medical Attendant

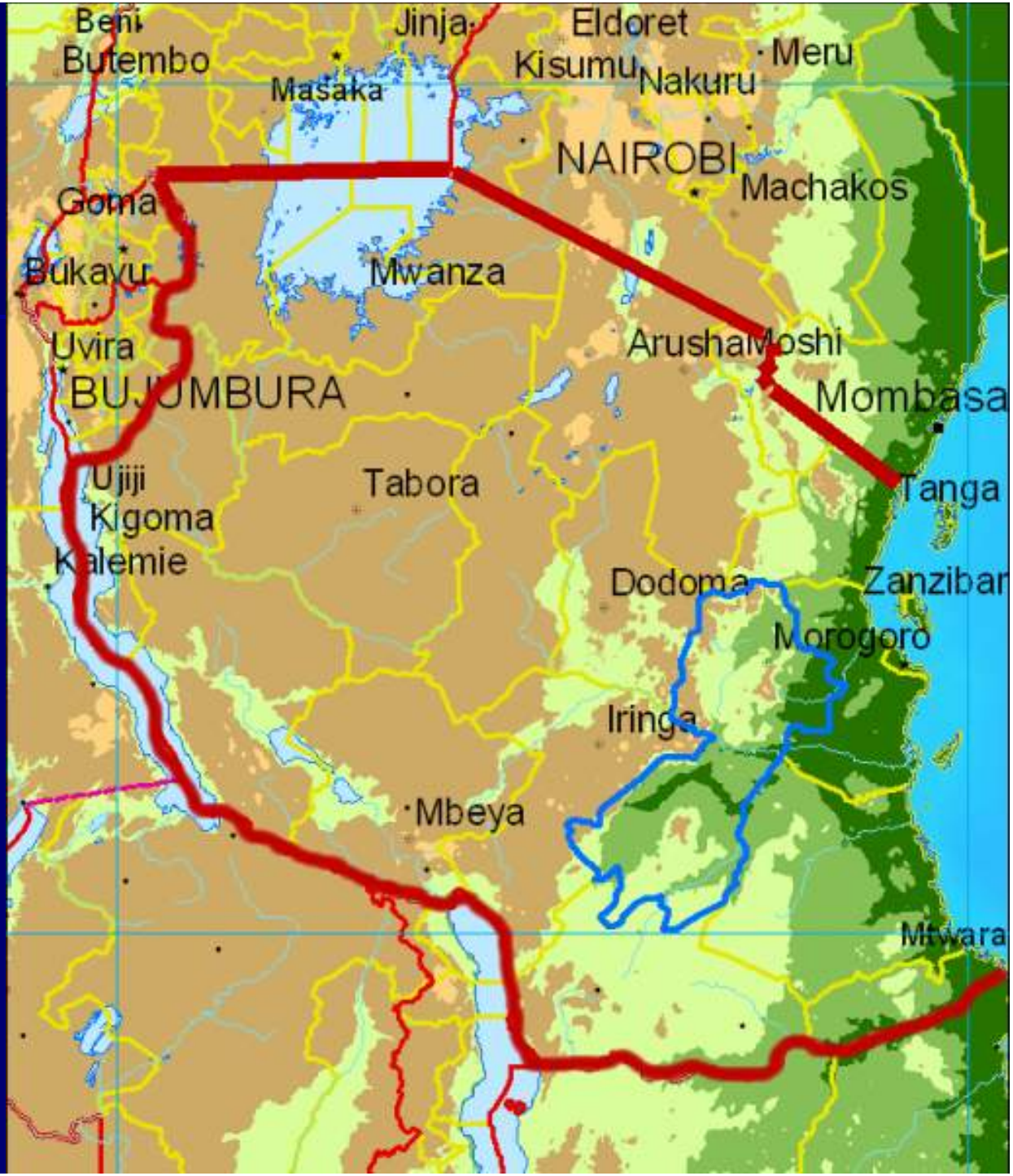
HR Employed By

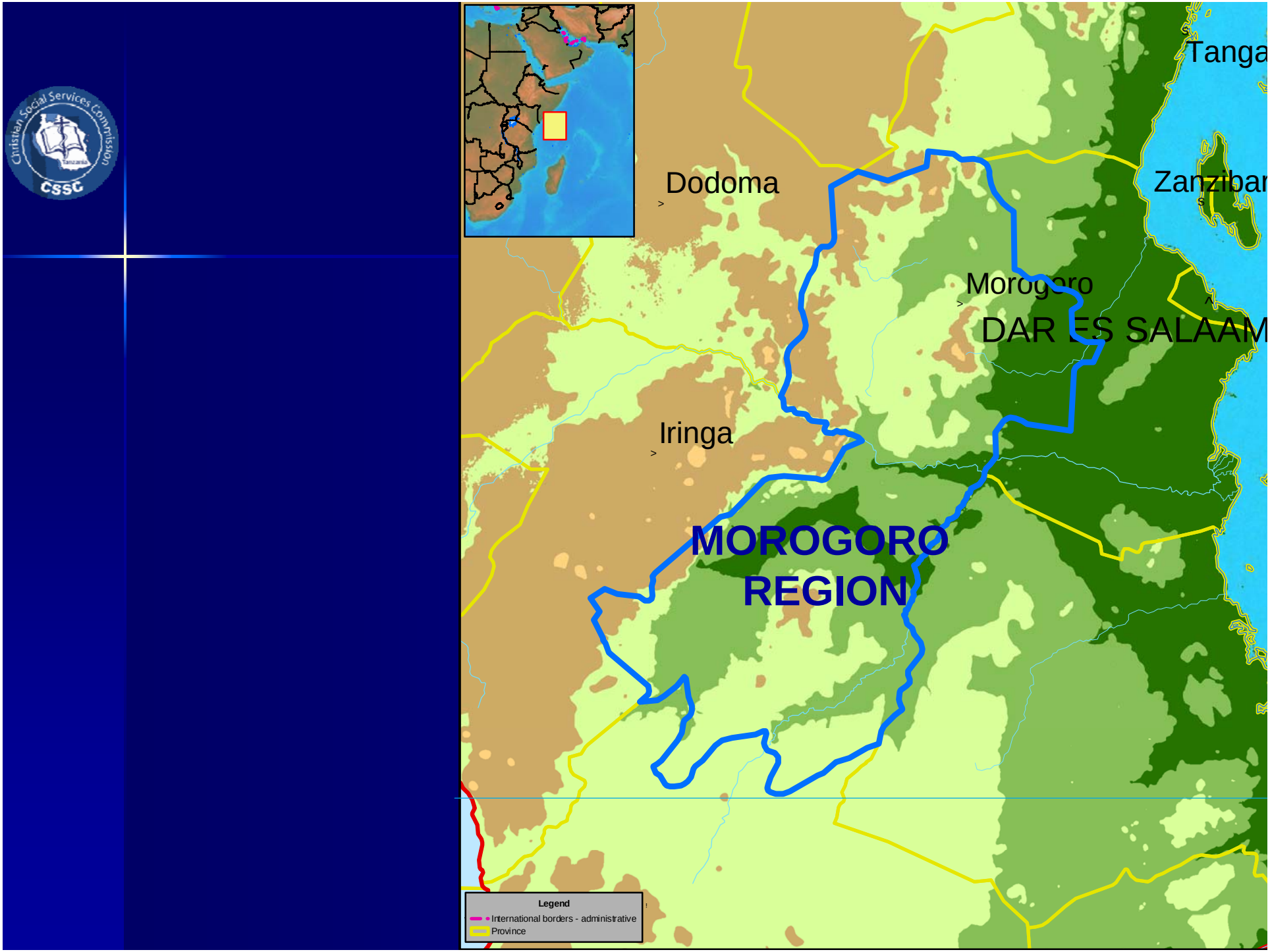
CODE	VALUE
C	Church
G	Gov't
O	Other

HR Paid By

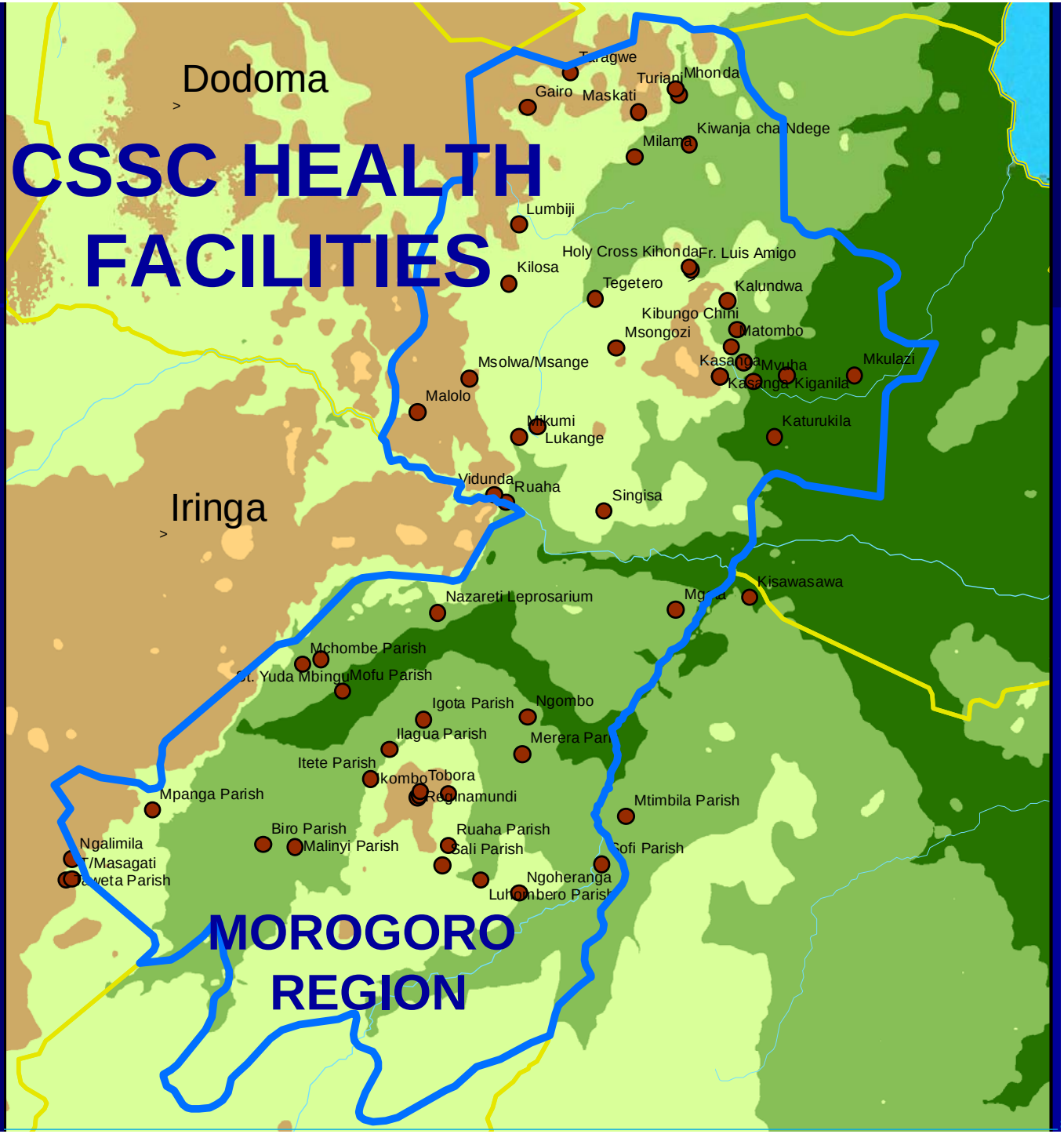
CODE	VALUE
D	Diocese
M	MOHSW
U	User Fees
P	Project/Partner
O	Other

Existence of Trained Health Workers for Specific Programs




Tanga
Dodoma
Zanzibar
Morogoro
DAR ES SALAAM
Iringa
MOROGORO
REGION
Legend
International borders - administrative
Province

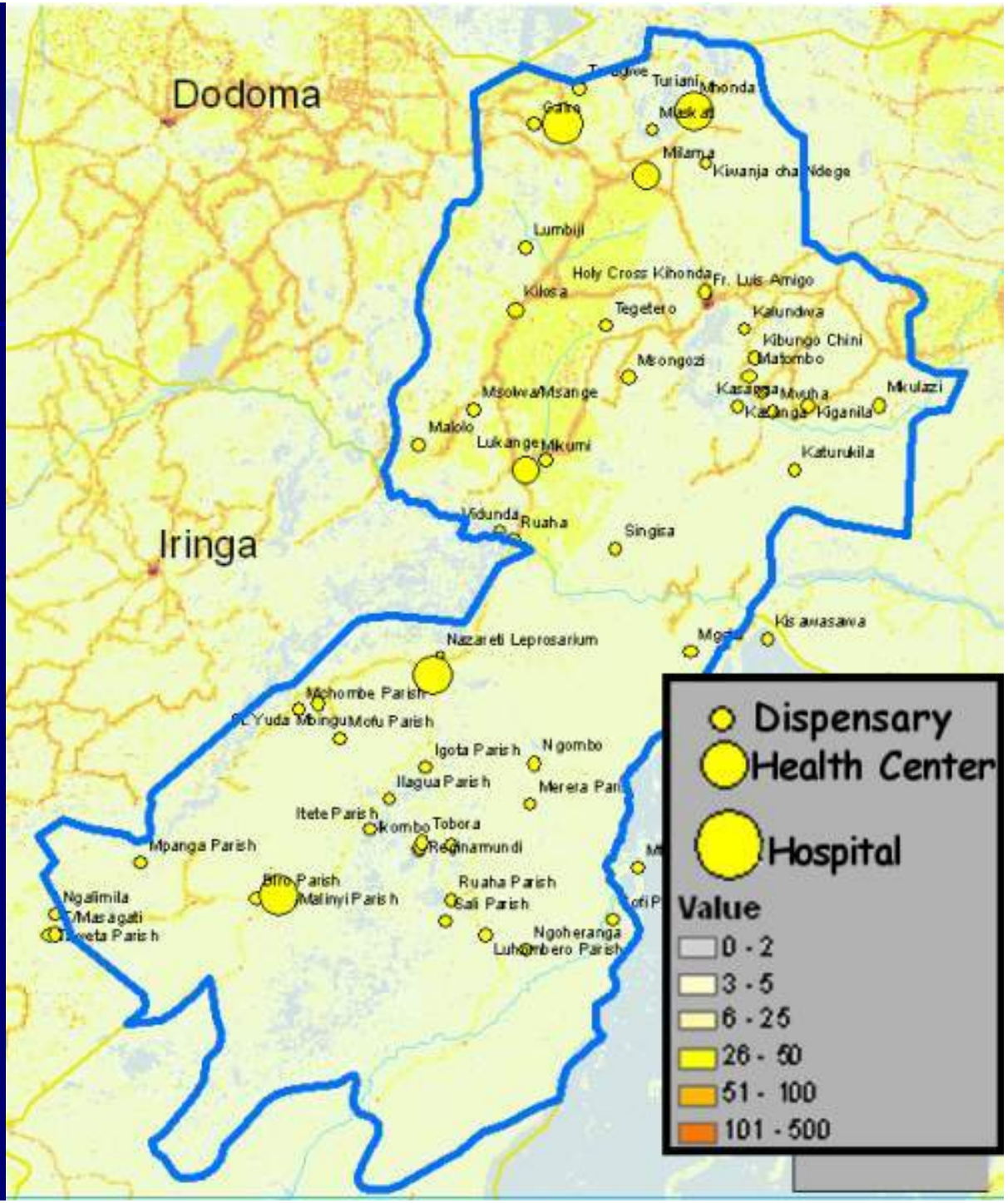
CSSC HEALTH FACILITIES



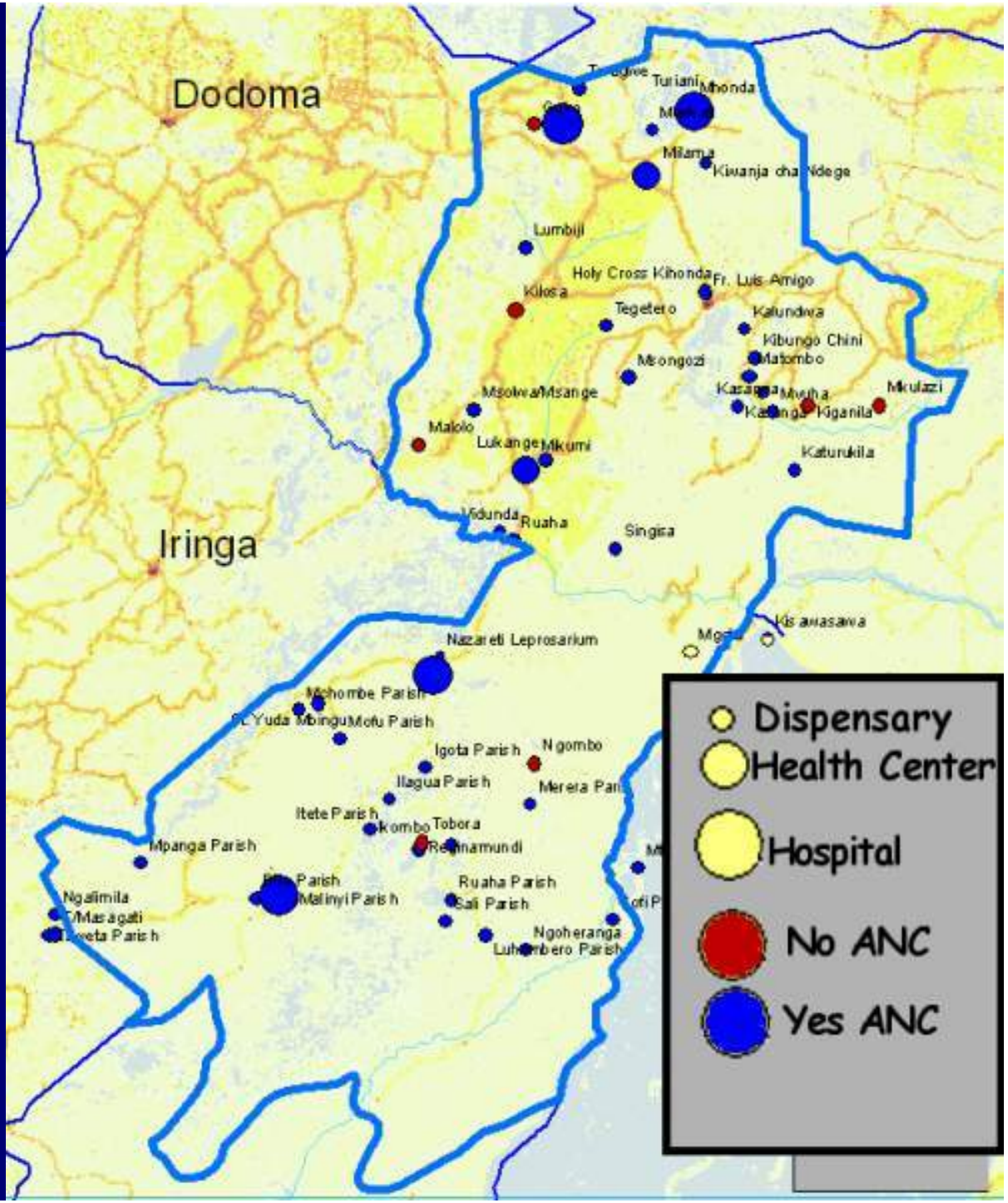
CSSC HEALTH FACILITIES

In Five Districts of Morogoro Region

CSSC Health Facilities by Type

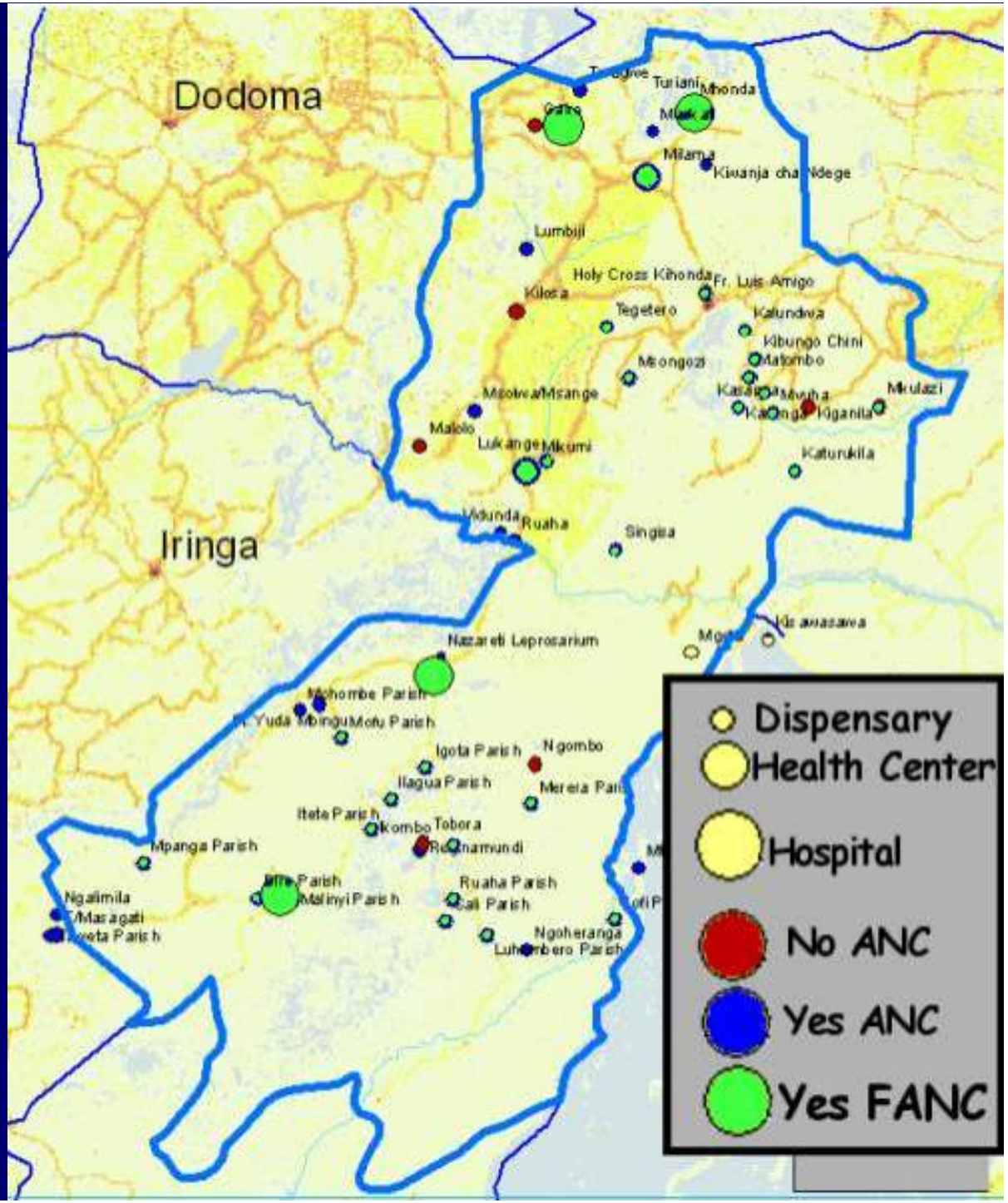


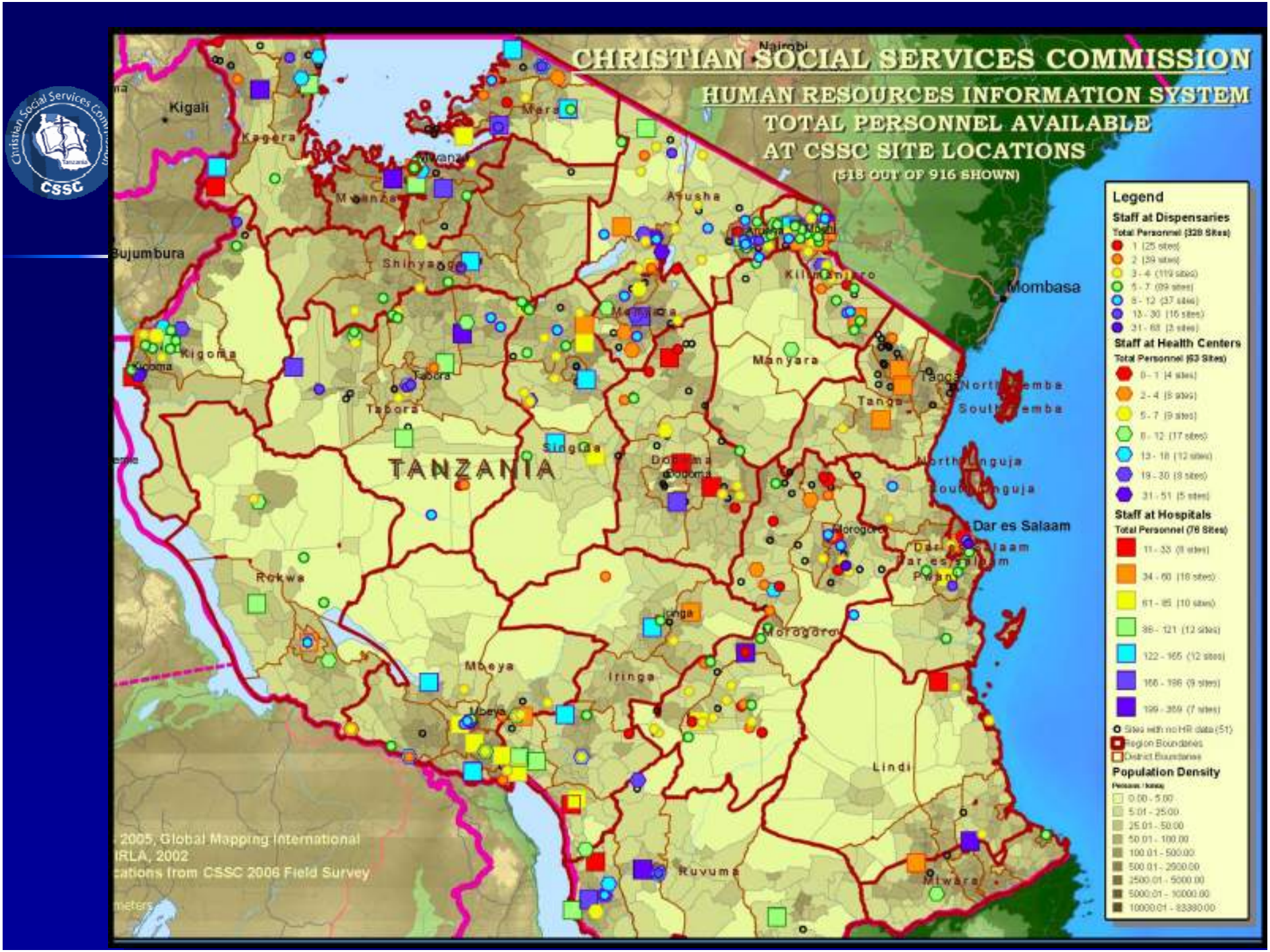
Functional Status of Health Programs, e.g., Antenatal Care (ANC)

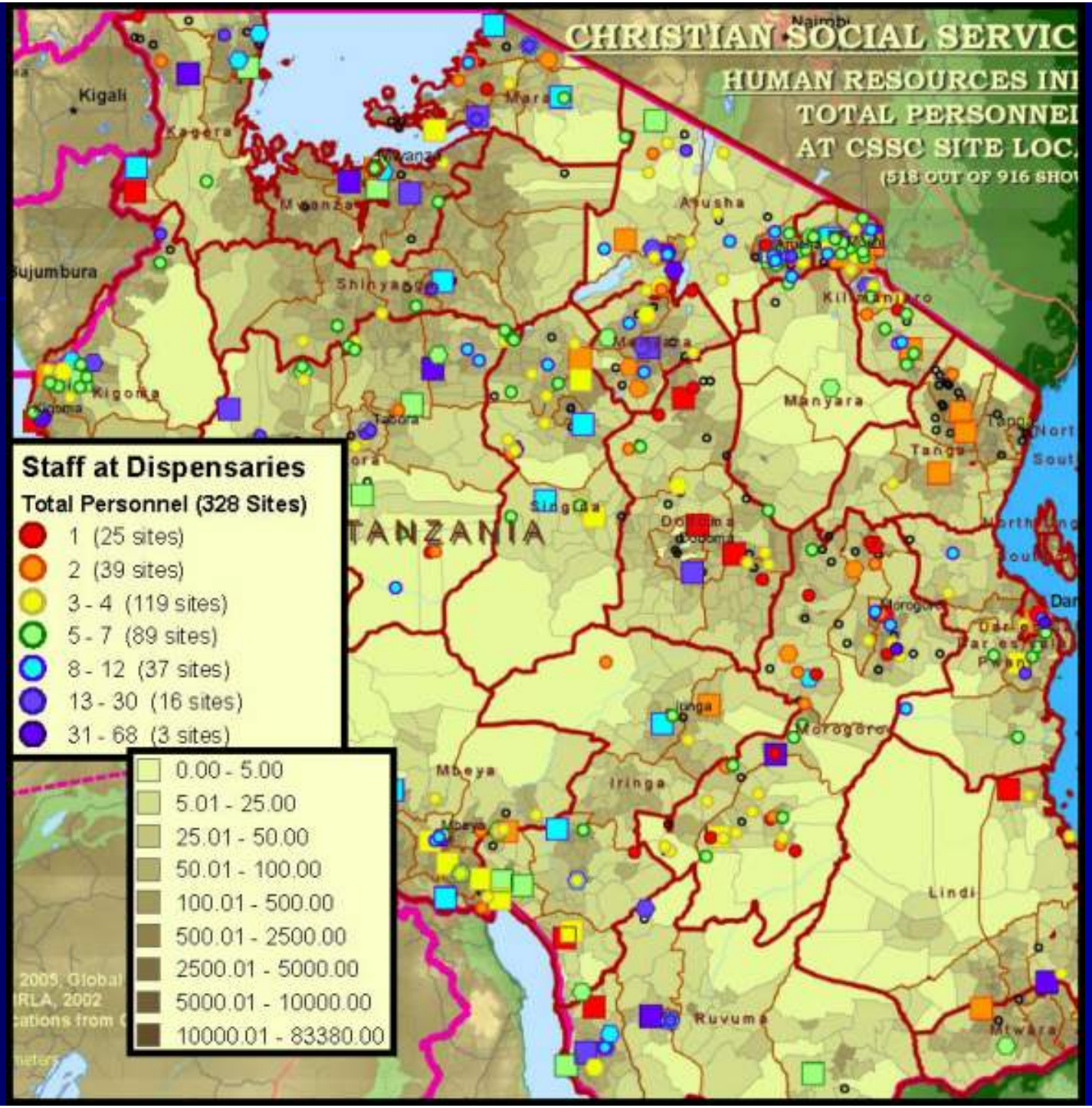


Existence of Trained Health Workers in FANC, e.g., Nurse Midwifes

Monitor status of training campaign




CHRISTIAN SOCIAL SERVICES COMMISSION
HUMAN RESOURCES INFORMATION SYSTEM
TOTAL PERSONNEL AVAILABLE
AT CSSC SITE LOCATIONS
(518 OUT OF 916 SHOWN)
Legend
Staff at Dispensaries
Staff at Health Centers
Staff at Hospitals
Population Density
TANZANIA
Kigali
Bujumbura
Kigoma
Tabora
Mwanza
Arusha
Mombasa
Dar es Salaam
Morogoro
Mbeya
Iringa
Rukwa
Ruvuma
Lindi
Mtwara
Manyara
Nairobi
2005, Global Mapping International
IRLA, 2002
cations from CSSC 2006 Field Survey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AT CSSC SITE LOC.
(518 OUT OF 916 SHO
Staff at Dispensaries
Total Personnel (328 Sites)
1 (25 sites)
2 (39 sites)
3 - 4 (119 sites)
5 - 7 (89 sites)
8 - 12 (37 sites)
13 - 30 (16 sites)
31 - 68 (3 sites)
0.00 - 5.00
5.01 - 25.00
25.01 - 50.00
50.01 - 100.00
100.01 - 500.00
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TANZANIA
Kigali
Kagera
Mwanza
Arusha
Kilimanjaro
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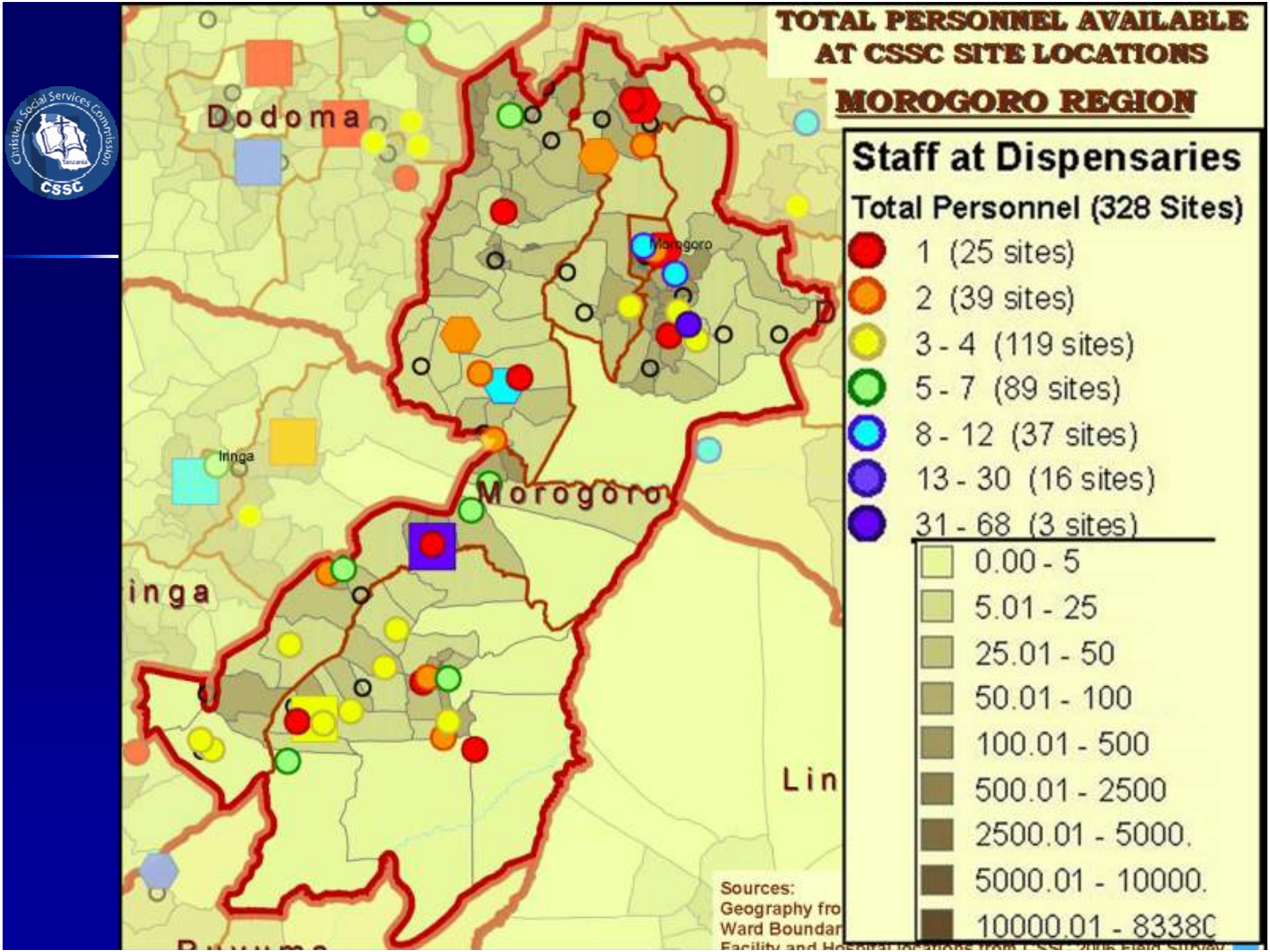
Mtwara


TOTAL PERSONNEL AVAILABLE AT CSSC SITE LOCATIONS
MOROGORO REGION
Staff at Dispensaries
Total Personnel (328 Sites)
1 (25 sites)
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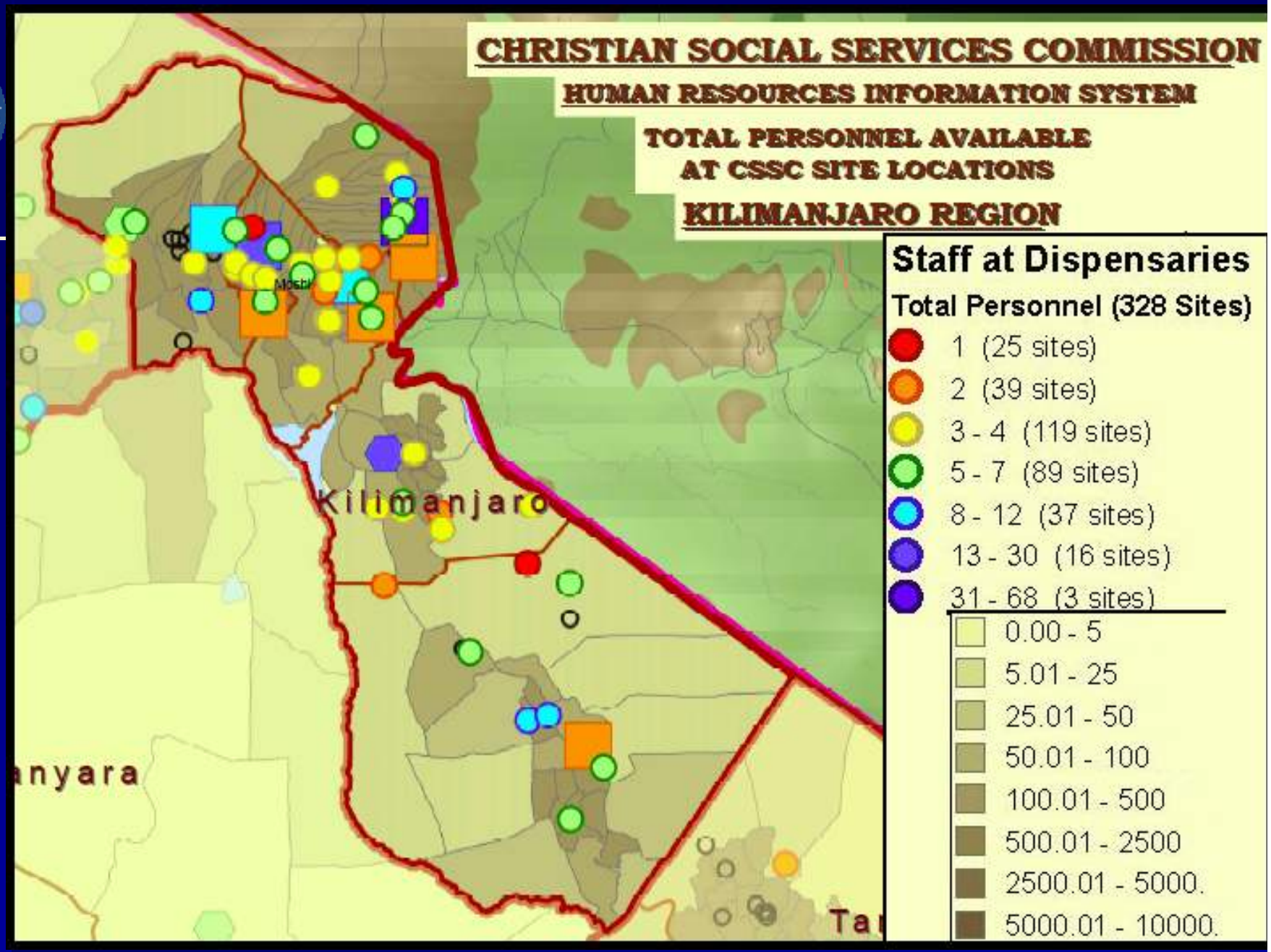
10000.01 - 83380
Dodoma
Morogoro
Iringa
Sources:


CHRISTIAN SOCIAL SERVICES COMMISSION
HUMAN RESOURCES INFORMATION SYSTEM
TOTAL PERSONNEL AVAILABLE
AT CSSC SITE LOCATIONS
KILIMANJARO REGION
Staff at Dispensaries
Total Personnel (328 Sites)
1 (25 sites)
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0.00 - 5
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25.01 - 50
50.01 - 100
100.01 - 500
500.01 - 2500
2500.01 - 5000.
5000.01 - 10000.
Kilimanjaro
anyara

Challenges

- HR data collection is only 60% completed
- No mechanisms yet in place to update data?
- Lack of integration with MOH data to complete district mapping (facilities & HR)

Key Health Facility Issues

- How do FBO and MOH compare in numbers and location?
- Do coverage gaps for PHC exist between CSSC and MOH health facilities?
-

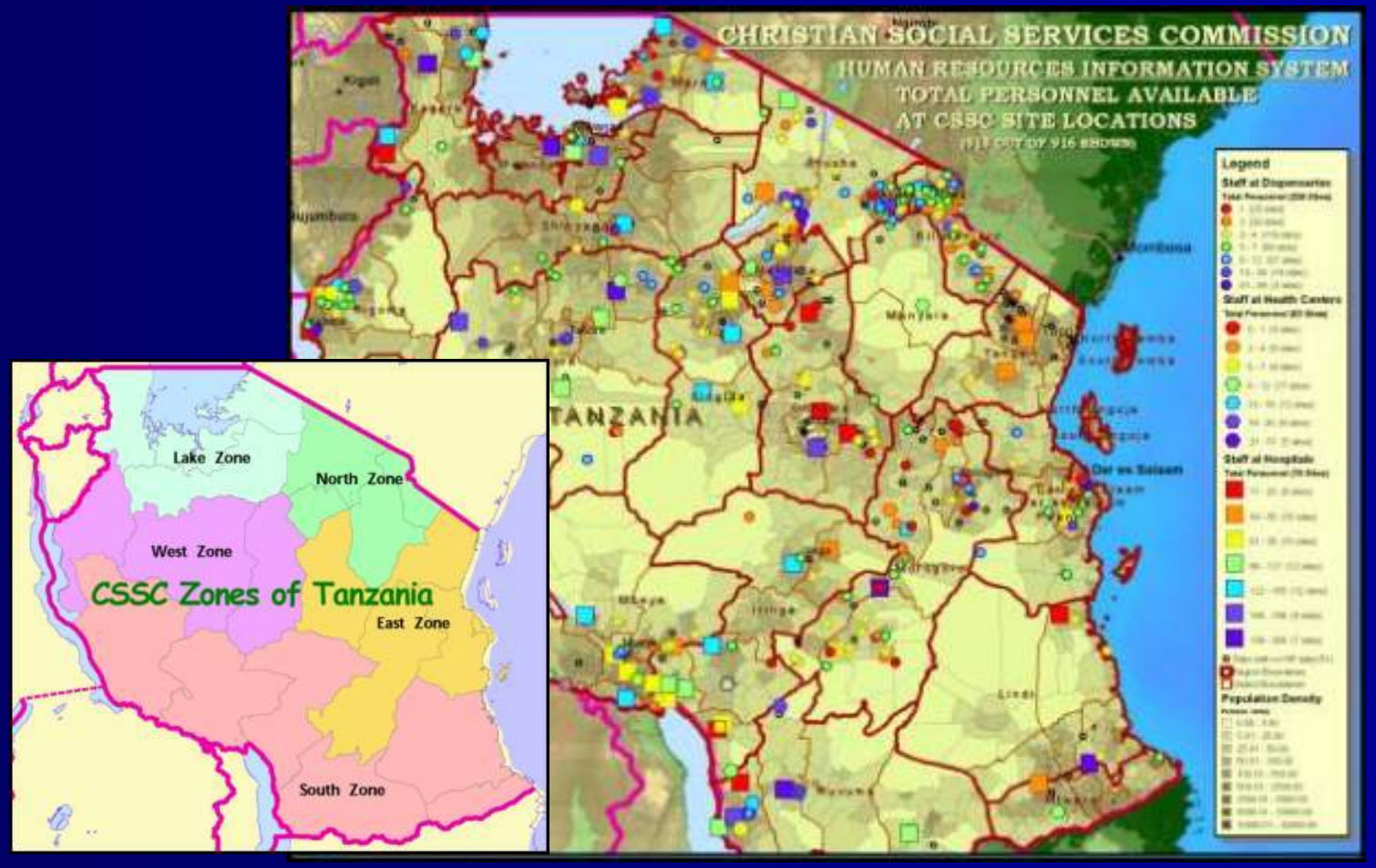
Key Human Resource Issues

- How does existing staffing of dispensaries compare with CSSC averages and MOH standards?
- How many health facilities lack a nurse midwife?

Key Programmatic Issues

- Do some FBO facilities not have a functional EPI program?
- What role do FBO health facilities play in distribution of ITNs?
- Are CSSC health facilities providing Focused Antenatal Care (FANC)?

The CSSC Geographic and Human Resource Information Systems



What do you see in this picture?

GIS provides various ways to view and interpret geographic data.