

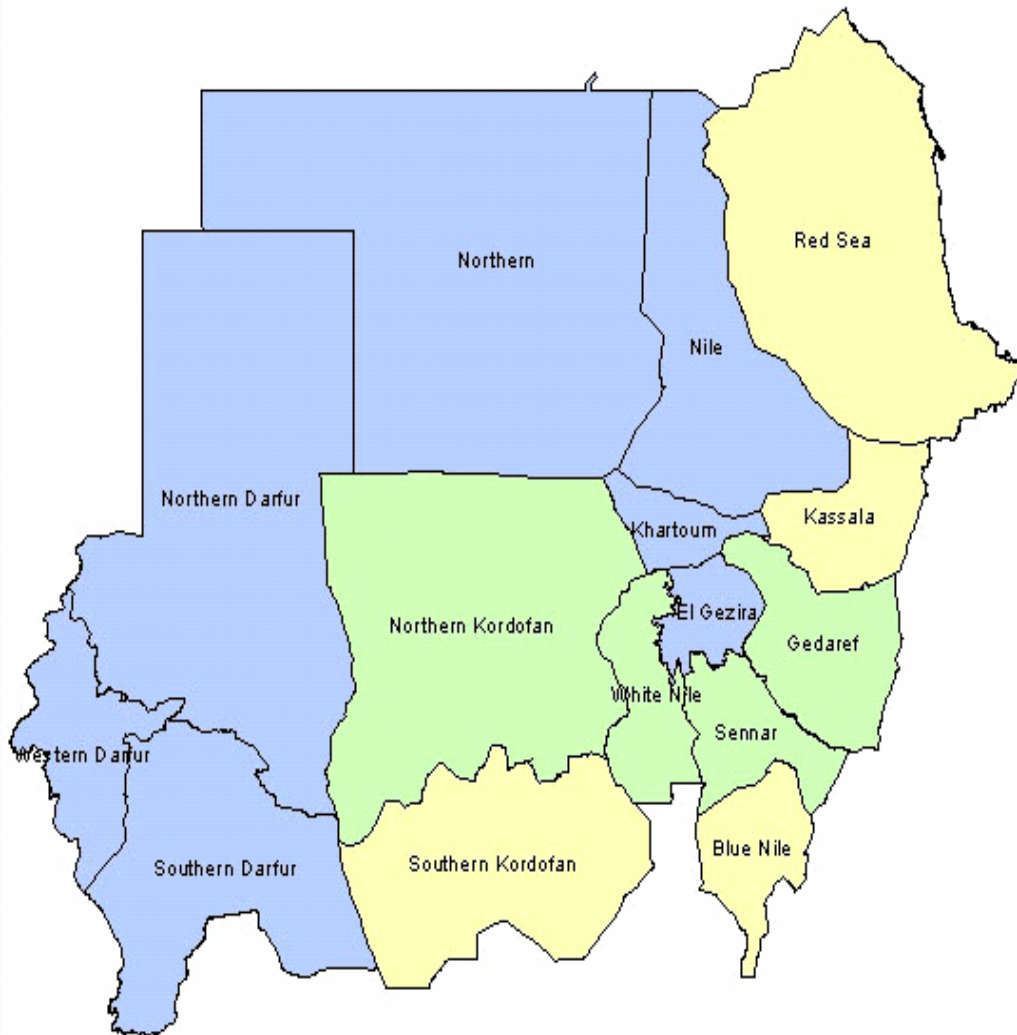
# eHealth Strategy in Sudan : experience and Lessons learned

National eHealth Strategy Development Meeting  
WHO/ITU  
Geneva, July 2012

# Outlines of the presentation

- Country overview
- Evolution of ICT use for health “ehealth implementation”
- Sudan ehealth strategy: development process
- Sudan ehealth strategy: vision, priority areas and components and contents
- Main achievements and progress so far
- Lessons learned and challenges

# Sudan: country overview



1. Federal system
2. Bicameral
3. 17 states
4. 184 localities
5. Population: 34.1 million
6. > 4000 public health centers/units
7. > 350 hospital
8. >33 medical and nursing colleges
9. 67% Rural
10. 43.2 below 15 years
11. Literacy Rate 67%
12. GDP: 74.5 billion USD
13. Per capita GDP: Nominal 2,233 USD

# Sudan: country overview

- **ICT infrastructure and connectivity:**
  - Well developed fiber optic and other infrastructure  
“state of the art building and hardware”
  - The NTC is the government regulatory authority for telecommunications and internet providers

# NCT tower Khartoum



# Sudan: country overview

- Mobile telecom operators: 3 operators (Zain, MTN, Sudani)
- More than 25 million subscribers (73% of the population)
- Landline operators: 2 operators (Canar and Thabit) using “wireless” connectivity “0.6 million subscribers”

# Evolution of “ICT” use for health

- **Early phase: (before 2004)**
  - eMail within and outside the Sudan
  - simple Accounting (expenditure against a stipulated budget),
  - Personnel (mostly individual staff profiles)
  - Staff Salaries
  - Attendance (as a part of “incentives” payments)
  - Fellowships records and monitoring (mostly covering study/training abroad)
  - Voluntary Organization database and profiles



# Evolution of “ICT” use for health

- Diseases Surveillance reporting,
- National Health Statistics (the oldest & best organized family of applications)
- Documents Listing,
- Registry of Pharmaceutical Services, and
- Drugs Information Centre.



# Evolution of “ICT” use for health

- **2004-5**

- Pilot project of telemedicine was started in early 2005 linking 4 remote hospitals with the KRT teaching hospital

- **2005-2010**

- Development of ehealth strategy and its implementation

# Evolution of “ICT” use for health

- **2010-2012**
  - Electronic patient records and HMIS
- **2012-onward**
  - Revisiting the e-health strategy

# Sudan ehealth strategy: milestones and development process

- In 2004: study of the Sudan requirements for Telemedicine links
- In 2005: MOH Initiated the process of developing ehealth strategy “based on the telemedicine requirements assessment”

# Sudan ehealth strategy: milestones and development process

- Supported by WHO/EMRO and ITU
- Part of an ongoing reform agenda for the health system

# Sudan ehealth strategy: milestones and development process

- The underlying motives for the health sector reform are to:
  - increase the capacity of the health care institutions to deliver better quality medical care
  - increase accessibility of the citizens to health care services
  - explore more, and increase the current, uses of “Information & Communication Technologies (ICT)” in support to the National Health Care Services: (clinical, public health and management)

# Sudan ehealth strategy: milestones and development process

- **ehealth strategy was based on:**
  - rigorous *analysis of the requirements* of a wide range of users in health care institutions
  - their various technical and administrative support services
  - analysis of the capacities and potential for running and managing eHealth technological support

# Sudan eHealth Strategy

by

Salah Mandil, Ph.D.  
Expert Consultant  
to the ITU & WHO  
on eHealth & eStrategies

and,

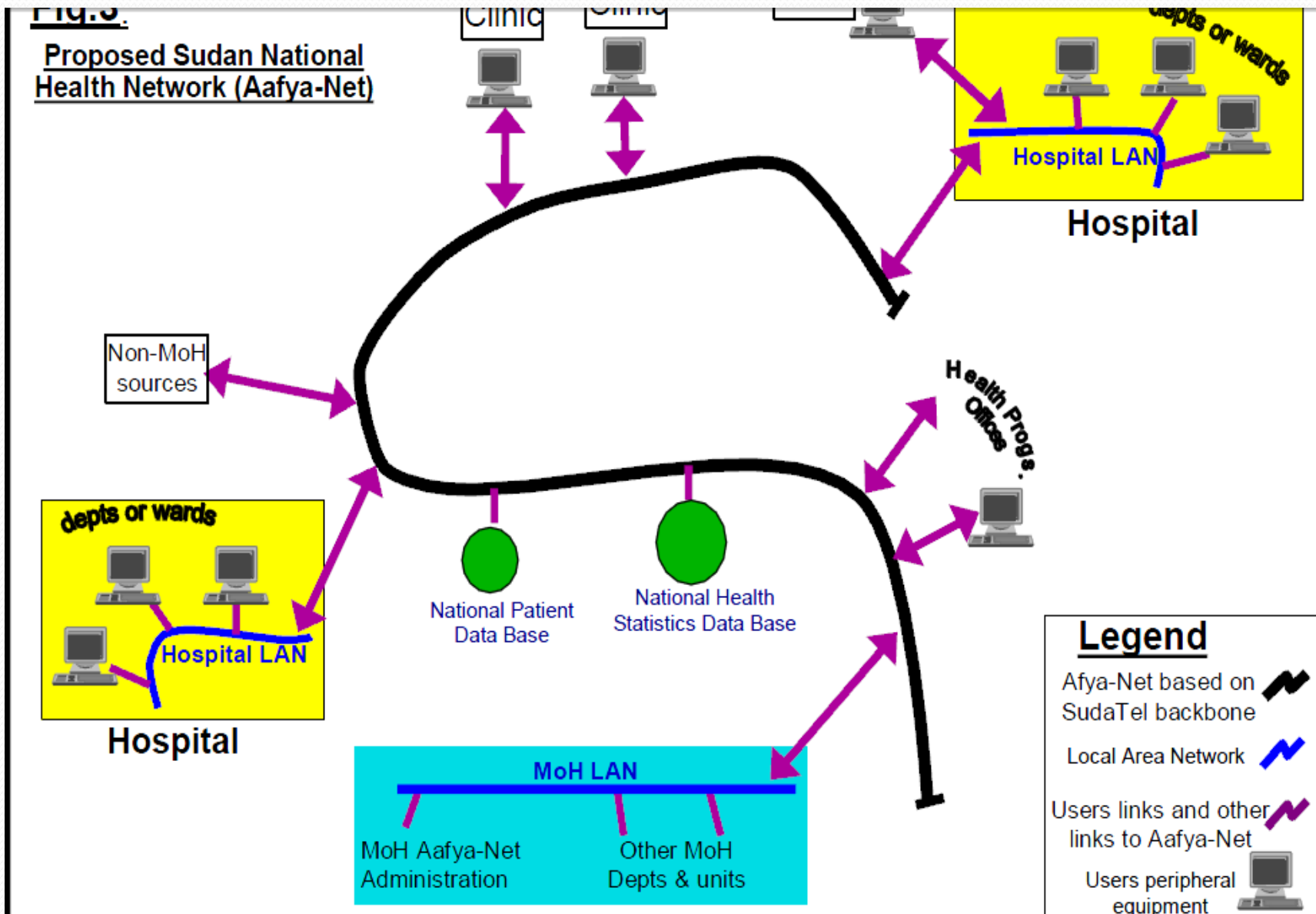
Former Director  
Health Informatics & Telematics  
World Health Organisation  
Geneva, Switzerland



# Sudan ehealth strategy: vision, priority areas and components and contents

- 1. Establishment of Aafya-Net : a “national platform” for Health Information that connects and facilitates communications between all the institutions”: contents include:**
  - national repository of Health Statistics and Epidemiological data bases;
  - national Standards (those agreed to and under consideration);
  - national directories and registers; and
  - national Health Legislation reference manuals.

# Proposed design of Sudan Afya Net



# Sudan ehealth strategy: vision, priority areas and components and contents

## 2. HMIS solutions

- Patient Registration & Master Patient Index including unique identifier
- Inpatient (includes: Admissions, Discharges and Transfers)
- Outpatients
- Etc...

# **Sudan ehealth strategy: vision, priority areas and components and contents**

- 2. Development of National Health Data Dictionary**
- 3. Expand the Telemedicine Network**
- 4. Solutions for Continuing Professional Development/CME**



# Main achievements and progress so far

- **Telemedicine solutions**
  - Tele-radiology
  - Tele consultation
  - Tele-pathology

# Main achievements and progress so far

- **HMIS solutions**
  - Currently the software is under development (support for the Turkish government and people)
  - Global fund
- **Data warehouse and health system observatory**

# Lessons learned and challenges

## 1. Positive aspect/Strength:

- The awareness gained about the importance of ICT and its utility for health
- The assessment of the situation and requirements
- The endeavor of the e-health strategy development
- Some achievement related to HIS and CPD/Tele Medical Education



# Lessons learned and challenges

## 2. Weakness/drawbacks:

- **Development process**

- Still not a full fledged e-health strategy
- No wide stakeholders involvement

- **Contents**

- Governance was not well address
- Inadequate operationalization of the strategy
- No M&E framework



# Lessons learned and challenges

- **Implementation**

- Inadequate implementation arrangements
- Capacity issues
- No institutionalization
- Inadequate financial resources



Thank you