

Nigerian Meteorological Agency

AN OVERVIEW OF SIGNIFICANT GAPS AND WAY FORWARD TO ENHANCE THE CAPACITY OF NMHSs IN AFRICA



CAPACITY ENHANCEMENT IN CONTEXT

- ❑ It is a process. **NOT** a **One-Off** activity
- ❑ Through it organizations **obtain, strengthen** and **maintain** the **capabilities** to set and achieve their own developmental objectives over time.
- ❑ It is all about growth: growth in **knowledge, skills** and **competence**.
- ❑ It is therefore an important activity in all aspects of professional life.
- ❑ Every day, people are confronted with new situations, compelling them to **respond** appropriately.
- ❑ This can be achieved through specially designed capacity enhancement program.

NMHSs AND CAPACITY ENHANCEMENT

- ❑ For organizations, like NMHs, **capacity enhancement may relate to almost any aspect of their work:**
 - ✓ Institutional strengthening (**laws, policies, etc**),
 - ✓ Developed infrastructural base (**data generation, management and effective utilization**)
 - ✓ Effective management system (**including human resources and financial management**),
 - ✓ Product development and program implementation,
 - ✓ Fund-raising and income generation,
 - ✓ Diversification of revenue sources,
 - ✓ Increased partnership and collaboration

WHY AFRICAN NHMSs?

- ✓ Africa is the 2nd most populous continent
- ✓ African shocks invariably impact (in some cases ALMOST directly) on other continents.
Esp. Europe, Asia and Americas
- ✓ African NMHSs make up about a third of WMO
- ✓ Most are existing on weak legal frameworks
- ✓ Most have no sustainable internal funding mechanism
- ✓ Most relying on handouts for survival
- ✓ Most have ineffectively developed infrastructure
- ✓ Most face serious natural (sometimes even forcefully induced) manpower attrition, with weak succession system

NATURAL ATTRITION AND CAPACITY GAPS

- ❑ Natural Attrition is the overall reduction of work force due to employees leaving on their own accord
- ❑ Could be due to: **retirement**, **internal job relocation**, or leaving to **pursue other opportunities**, etc.
- ❑ Most NMHSs in Africa **suffer** from **mass exodus** of **technically skilled** staff
- ❑ This has attendant implications on operations and products generation for decision support.
- ❑ Unfortunately Meteorologists are **NOT Finished Products** always **available in the market**
- ❑ In NiMet: Annual trend of staff attrition (mostly technical) has been:

2015 = 73

2016 = 64

2017 = 56

2018 = 52

Total staff lost in four years = 245

Institutional capacity building as a way forward

- ❑ For African NMHSs, the following are imperative:
 - ✓ Establishment of strong legal and administrative frameworks
 - ✓ Establishment of effective managerial system;
 - ✓ Development and maintenance of infrastructure for data collection, maintenance, transmission and utilization;
 - ✓ Development of efficient and effective data processing and dissemination capabilities.

Operational capacity as a Way Forward

□ For African NMHSs, the following are required:

- ✓ Capacities to provide logistics for operations
- ✓ Adequate budget for operational costs
- ✓ An enabling environment for generation and retention of revenue towards cost recovery
- ✓ Self-sustaining **funding** mechanism.
- ✓ Developing systems to deliver services, products and decision support systems to end users and customers,
- ✓ An effective outreach mechanism to address the needs of our teeming customers/users across all sectors of the economy.

Improving Human resources Capacity as a Way Forward

□ For African NMHSs, the following are needed:

- ✓ Have enough capacity to generate data and process for information and services generation
- ✓ Be able to deliver services, products and decision systems and tools to end-users.
- ✓ Acquisition of specialized training to improve forecasting techniques
- ✓ Be able to use outputs and products from cutting-edge technologies (RADAR, Satellite-based rainfall estimates, NWPm e.t.c.) as inputs in weather/climate prediction for instance

NIMET's STRATEGIC PLAN FOR CAPACITY ENHANCEMENT

1. Improvement of Mgt. & Technical Infrastructure
2. Improving Operational Forecasting and Early Warning Systems
3. Increase in Nos. & Automation of Observation Network
4. Enhancing the Provision of Climate Services to Non-Aviation Sectors
5. Improved IT and Data Management
6. Development of New Commercial Services
7. Training, Education and Capacity Building
8. Strong emphasis on Research and Development
9. General Staff Welfare and Reward System
10. Partnership/Collaboration & International Cooperation

1. Improvement in Personnel Capacity & Tech Infrastructure

1. Drafting & implementing a 5 year Strategic Impact Plan (2018 – 2022)
2. Staff motivation (settle all outstanding allowances, cleared backlog of promotions and generally improved personnel welfare)
3. Decentralization of Management/Institutional framework for improved service delivery
4. Improved Records management & Documentation processes
5. Remodelled/upgraded **27 forecast and synoptic offices** in 2017 and **30** for 2018.
6. **Training of staff across and beyond the Country**

2. Automation of Observation Network

1. Purchased **28 AWOS** using internal resources
2. Acquired **37 AWOS** from **TAHMO** under **PPP**
3. Received additional **6 AWOS** from **WASCAL**
4. **Networked** all our Stations
5. Added additional **57 Stations** across Nigerian Universities/Higher Institutions (targeting **200** in 2019)
6. **Automation** of the Data Management Unit for improved service delivery to end users
7. WMO **Technically** assisted us on **NWP** and **Data Rescue Initiatives**



THE VICE CHANCELLOR, AHMADU BELLO UNIVERSITY, ZARIA

Professor Ibrahim Garba, FNMGS

AND

HEAD, DEPARTMENT OF GEOGRAPHY & ENVIRONMENTAL MANAGEMENT,

Dr. Usman A. Kibon

WELCOME THE GENERAL PUBLIC

to the

**COMMISSIONING OF DEPARTMENTAL WEATHER STATION
AND SIGNING OF MoU BETWEEN ABU AND NIGERIAN
METEOROLOGICAL AGENCY (NiMet) ABUJA**

by



NiMet
NIGERIAN METEOROLOGICAL AGENCY

Prof. Sani Abubakar Mashi
DIRECTOR GENERAL/CEO,
NIGERIAN METEOROLOGICAL AGENCY

DATE WEDNESDAY, 23rd MAY, 2018

VENUE OPPOSITE ABU WATER BOARD

TIME 10:00 AM PROMPT

3. Data Rescue Initiatives

- ✓ NiMet has been generating met. data for over 100 years
- ✓ They are natural treasures, but are largely in hard copy format
- ✓ Modern data mgt. system requires that such data must be archived in digital and WMO-approved format
- ✓ The aim is to avoid physical deterioration and hence may be lost
- ✓ Such data must therefore be rescued



- ❑ IN 2017 WE COMMENCED DATA RESCUE AND DIGITIZING.
- ❑ SOUGHT FOR AND OBTAINED THE TECHNICAL SUPPORT OF WMO FOR A WMO DATA RESCUE EXPERT
- ❑ HE UNDERTOOK COMPREHENSIVE EXAMINATION OF OUR ICT INFRASTRUCTURE AND NATIONAL ARCHIVE AND
- ❑ GAVE DETAILED ADVISES AND SPECIFICATIONS OF ICT INFRASTRUCTURAL, MANPOWER AND PHYSICAL ELEMENTS THAT NEED TO BE PROVIDED
- ❑ ALREADY THE PROCESS HAS STARTED

4. Enhancing Climate Services and feedback

1. Continuous downscaling of **SRP** and other products across the country
2. **Mobile Weather Services** (with GSM service providers for **170m registered** users)
3. Working to improve **our marine and Oil and gas forecasting** services
4. Commenced issuing **Climate & Health Bulletins**
5. Supporting the generation of **customized** services
6. Creating **user-feedback mechanisms** for improved performance
7. Trimming Project brought **10 Hydromet** Stations into our Network
8. Collation and Reporting of **Extreme Events** in the country

5. Capacity on IT & Data Management Services

1. Data is best used efficiently if well managed but our **DBMS framework** has been weak
2. Made huge investment to provide ICT infrastructure
3. Created **DMU** for improved data rescuing, archiving and storage.
4. Merged the **ICT Unit** with the DMU
5. Produced **data policy** and **regulations**
6. Increased **efficiency** in data management and delivery of meteorological data, services and products to stimulate national development

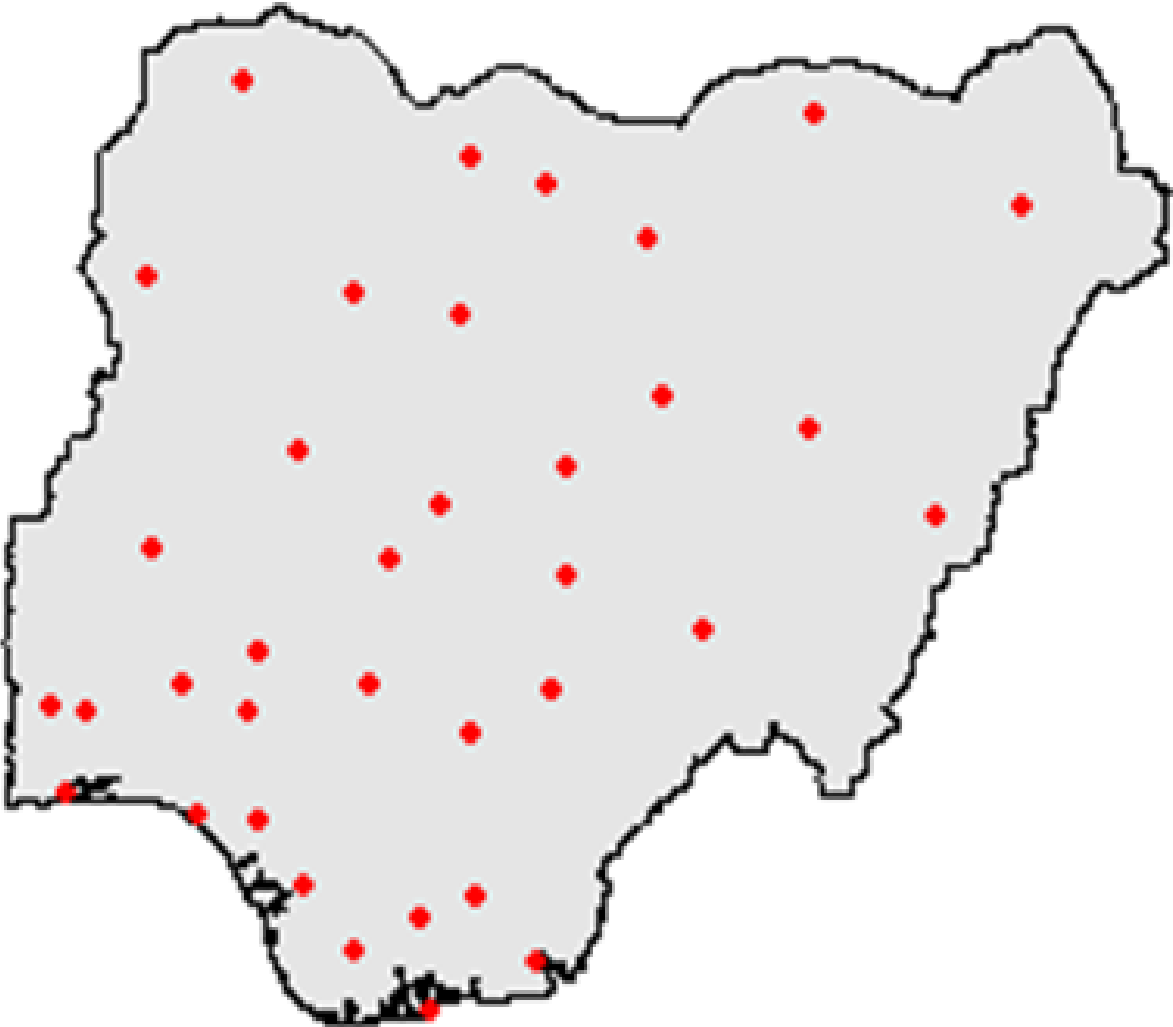
6. Training, Education & Capacity Building

1. Support staff local, Regional and International trainings, workshops, symposia (more than 100 staff)
2. Training Needs now **bottom-up**, from each Directorate/Unit
3. Secured and supported staff for **WMO fellowships**
4. Sponsored staff at **NOAA African Desk**, USA (Got 12 additional slots for technical staff for the next ten years).
5. Implementing the **2018 Local Training plan** for staff
6. Training of **Gambian Met Personnel** in Banjul for 2 years, with NiMet staff being sent to serve in the Gambia.
7. Training of **Liberian** and **Sierra Leone** Met. Personnel
8. Technical Support to **Malawi and Gambia** Met. Depts. on **ISO 9001: 2015**

7. Research and Development

1. Actively collaborating with Universities
2. Continuous support to NiMet Research **Working Groups**
3. Implementation of a 5 year **UK/African SWIFT** Project on improved Forecasting and User Communication
4. Participation in the Severe Weather Forecasting Project (ACMAD/AGHYMET)
5. Research **collaborations** with: IITA, NARSDA, IAR and many Universities & Research Institutes
6. The Agency now have a **strong research links with several Universities**

New Automated Stations established in 2018



A Return Technical Visit for Partnership by the KMA



The WMO SG Making a Presentation in our PWS Studio

Aired on our National Television (more than 100 million Viewers) on 16th September 2018



THE WMO SG AT NIMET HQ. DURING HIS VISIT TO NIGERIA IN SEPT 2018



CONCLUSION

In conclusion, African NMHSs need to tackle capacity challenges using a 4-fronged multi-dimensional approach

1. **Improve Institutional capacity (esp. strong legal and administrative frameworks and managerial systems) .**

2. **Develop operational capacity (logistics for operations and adequate budget, enhanced revenue generation and self-sustenance).**

3. **Develop capacity to deliver services, products and decision support systems to end users and customers**

4. **Thinking inwardly as much as possible**



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