THE GAMBIA MARINE METEOROLOGICAL SERVICES

Training Workshop on Marine Forecasting for Gulf of Guinea and North Atlantic Region
3 – 7 March 2014, Dakar, Senegal

George Stafford
Head of Central Forecast Office, Department of Water Resources
E-mail: (njaggas@ymail.com / njagastar@gmail.com)
Outline of Presentation

1. Overview
2. Organizational Chart
3. Network of Observations within NMHS
4. National Observing and monitoring systems
5. Marine Forecasting tools and Sample bulletins
6. Marine Forecast Applications
7. Achievements
8. Challenges
9. Recommendation
10. Conclusion
1. OVERVIEW

- The National Meteorological and Hydrological Service (NMHS) is part of the Department of Water Resources (DWR) which is under the Ministry of Fisheries and Water Resources (MoFWR)

- The NMS commences data collection since Mid-1940’s under the Ministry of Works and Communications. Hydro-Meteorological services was establish in 1974 and in 1979 the Water Resources Act was enacted, transforming the Hydro-Meteorological services to the Department of Water Resources

- The NMHS rely on a network of weather, climate and freshwater observation and monitoring stations to collect, analysed, transmit and, store data and information

- Data and information obtained from the NMHS Network of Stations are crucial in the production of various Weather forecast products, Climate Change monitoring including Early Warning bulletins for Saving lives and the protection of properties including the enhancement of the socio-economic wellbeing of residents

- Routine Operational Marine Forecasting commences since May 2010.

- Currently we have Six (6) Operational Forecasters
3. NETWORK OF OBSERVATION & MONITORING STATIONS

- Met. Synoptic Stations operational
- Met. Synoptic Stations closed

www.mofwrnam.gov.gm
4. NATIONAL OBSERVING SYSTEMS
5. FORECASTING TOOLS IN USE:

- EUMETSAT data & products
- ECMWF products
- UK Met-Office Products
- AEMET Products
- Meteo-France Products
- NOAA/ NWS/ NCEP – NESDIS Products
- FNMOC Products
- ACMAD Products
- National and Regional Weather Collectives
THREE (3) HOURLY SYNOPTIC OBSERVATION
Satellite Imagery & Wave Model
GAMBIA MARINEMET DOMAIN
Divisions (Zones) depicting Offshore and Inshore Coastal Areas
Samples; Early Warning Products

Marine (Shipping & Fishing) Forecasts

FXAO22 GBYD DateTime
COASTAL WATERS FORECAST FOR THE GAMBIA
FROM TimeUTC Day Date Month UNTIL TimeUTC Day Date Month 2013

Wind Warnings:

General Synoptic Situation:

Wind:
Sea State:
Weather:
Visibility:
6. MARINE FORECAST APPLICATIONS

- Transport
- Early Warning Services
- Disaster
- Security
- Public
  - Environment
  - Fisheries
  - Tourism
  - www.mofwrnam.gov.gm
APPLICATIONS Contd:

Gambia Ports Authority

Liberation Avenue, P O Box 617, Banjul, The Gambia, West Africa
TELEPHONES: Managing Director: 4227266, Others: 4229940, 4227269, 4227270, FACSIMILE: 4227268
CABLES: Gamports Banjul, TELEX: 2235 GAMPORTS GV, EMAIL: gamport@gamtel.gm
Visit Our Web Site On http://www.gamport.gm

Our Reference: GPA/801/Vol.4 (104)

30 January 2014

The Director
Attn: Mr. George Stafford
Department of Water Resources
7 Marina Parade
Banjul
The Gambia

Dear Sir,

RE: FEEDBACK ON MARINE - MET FORECAST PRODUCTS

Acknowledged receipt of your letter dated 26th January, 2014 on the above captioned subject.

As previously highlighted in our series of meetings with your team and the most recent one with your consultants, almost all our operations are highly dependent on weather conditions thus the significance of the forecast we have been receiving from your daily routine forecast cannot be over emphasized.

The daily forecast received is being routinely broadcasted by our Port Control Radio Room on VHF channel 16 for general information of shipping. It also assists Pilots in their routine pilotage operations and enables them to take appropriate and informed decision on safe handling of vessels.

On the operations of cross channel ferries, the forecast assist us in planning passage and transit times especially during the period of storm and/or raining season.

Although we are yet to experience any major search and rescue operations since the commencement of this project, this routine forecast will in no doubt immensely contribute to safe and successful conduct of any future search and rescue operations within the Gambian waters.
APPLICATIONS Contd:

NHQ/358/G

Director
Department of Water Resources
7 Marina Parade,
Banjul

13 February 2014

HEADQUARTERS
Gambia Navy
7 Marina Parade
Banjul
PMB 40
Tel: (220) 4226778
(220) 4201753/4
Email: gannavy@rocketmail.com

FEEDBACK ON MARINE-MET FORECAST PRODUCTS

Reference:


1. The Gambia Navy appreciates the collaborative effort with the Department of Water Resources particularly the Meteorological Department. We have been relying on the weather forecasts we received from you over the years to plan our maritime operations. We are therefore grateful and glad to give our feedback on this very useful tool in your drive to improve the product.

2. The Marine-Met weather forecasts assist the Gambia Navy to plan our operations in the Gambian territorial waters and Exclusive Economic Zone (EEZ) to ensure the safety and security of own personnel and naval assets. Prior knowledge of the weather conditions helps the Navy to avoid risky missions at sea in unfavorable weather conditions.

3. Timely weather forecasts enhances own troops safety and as well provides information that enables us to deploy appropriate assets and resources to undertake various mission, such as Search and Rescue missions, security patrols, fisheries protection and other surveillance operations.

4. Weather forecasts also play an important role in the protection of our vessels from the impact of heavy rains and wind storms, as information on the predicted weather condition helps us to pre position assets out of the way of wind storms for their safety and security.
19th February 2014

RE-FEEDBACK ON MARINE/MET FORECAST PRODUCTS
I am directed to write and forward the following information to you for your necessary action.

1. The Gambia Fire and Rescue Services really well come and appreciates the useful information about Marine/Met Forecast Products the Department of Water Resources and Meteorological Department for that matter. The Gambia Fire and Rescue Services have been receiving this information from your institution for couple of years back in order to prepare us for our emergencies respond at sea. We would be grateful to return our feedback on this useful tool in your endeavor to improve the product.

2. The Marine-Met weather forecast assist the Gambia Fire and Rescue Services for their rescue at sea operations in all the fish landing sites we are operating, to name them: Gunjur Fish landing site, Tanji Fish landing site, Brufut fish landing site, Bakau fish landing site and Barra/Banjul ferry crossing point respectively, and hopefully also Sanyang fish landing site.

3. With regards to the information received daily from the Meteorological Department reduce the emergencies that we have during the day to day in our operations to save life at sea and also alert fishermen the level of risk they may take for their daily fishing operation.

4. Marine-Met weather forecasts protect the life of our personnel on standby for emergency and also prevent and protect the life of the artisanal fisherman, tourist and any beach user for that matter, our personnel also acknowledge the important of the Marine-Met weather forecast received from Metrological Department daily.

Preventing - Protecting - Responding

DEPT. OF WATER RESOURCES

M Met Fire Officer, Mr. Bakurin ORG

RECEIVED

DATE 19-2-14

ANT 170/307/01
7. ACHIEVEMENTS

- Improvement on the Department’s Visibility through Public and Media Sensitization and Workshops
- Ongoing Recruitment and Training of personnel
- Stakeholder/users consultation strengthened
- Focus groups (e.g. Radio listeners and Television viewers) established and feedbacks on products communicated.
8. CHALLENGES

**Met-Ocean Data**
- Inadequate observing or monitoring sensors and or platforms

**Forecast Write-up & Dissemination**
- Require different end user needs & operational thresholds.
- Appropriate terminology & coding.
- Details & level of accuracy required
- Time required to prepare, disseminate or issue Product
- Impact of the forecast on the user
- Forecasts are disseminated via the Internet to various recipients (users/stakeholders) and broadcast over GRTS and FM radios.

www.mofwrnam.gov.gm
9. RECOMMENDATION

- Enhancement of a competent workforce by recruiting and training more Meteorologist “Forecasters”, Technicians & Weather Presenters
- Continual feedbacks from key stakeholders and users of processed data and information so as to improve on the products
- Enhance cooperation and collaboration with sister institutions in the sub-region, stakeholders in the Maritime Sector including both local, regional and international development partners.
- Professionals must be encouraged and well enumerated.
10. CONCLUSION

The Gambia currently operates:

- 1 MarineMet Station (AEMET & WMO cooperation)

In order to enhance our Monitoring & Forecast products.

- We plan to operate:
  - 2 Coastal MarineMet Stations
  - 1 Offshore Met-Ocean Station
  - Train 5 Meteorologist & 1 Oceanographer
THE END

THANK YOU