

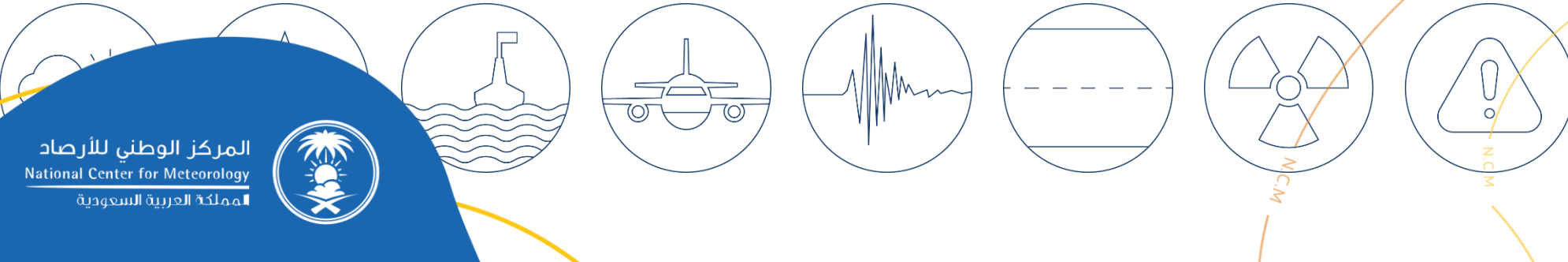


المركز الوطني للأرصاد
National Center for Meteorology
المملكة العربية السعودية

Design, Supply, Installation, Operation & Maintenance of 5 Met-Ocean Buoys for National Center for Meteorology (NCM)-KSA

Project: Floating Marine Buoys

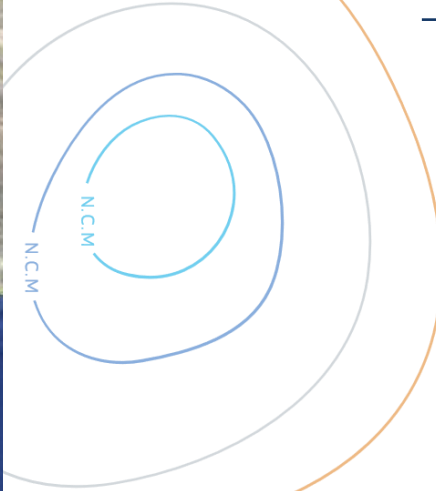
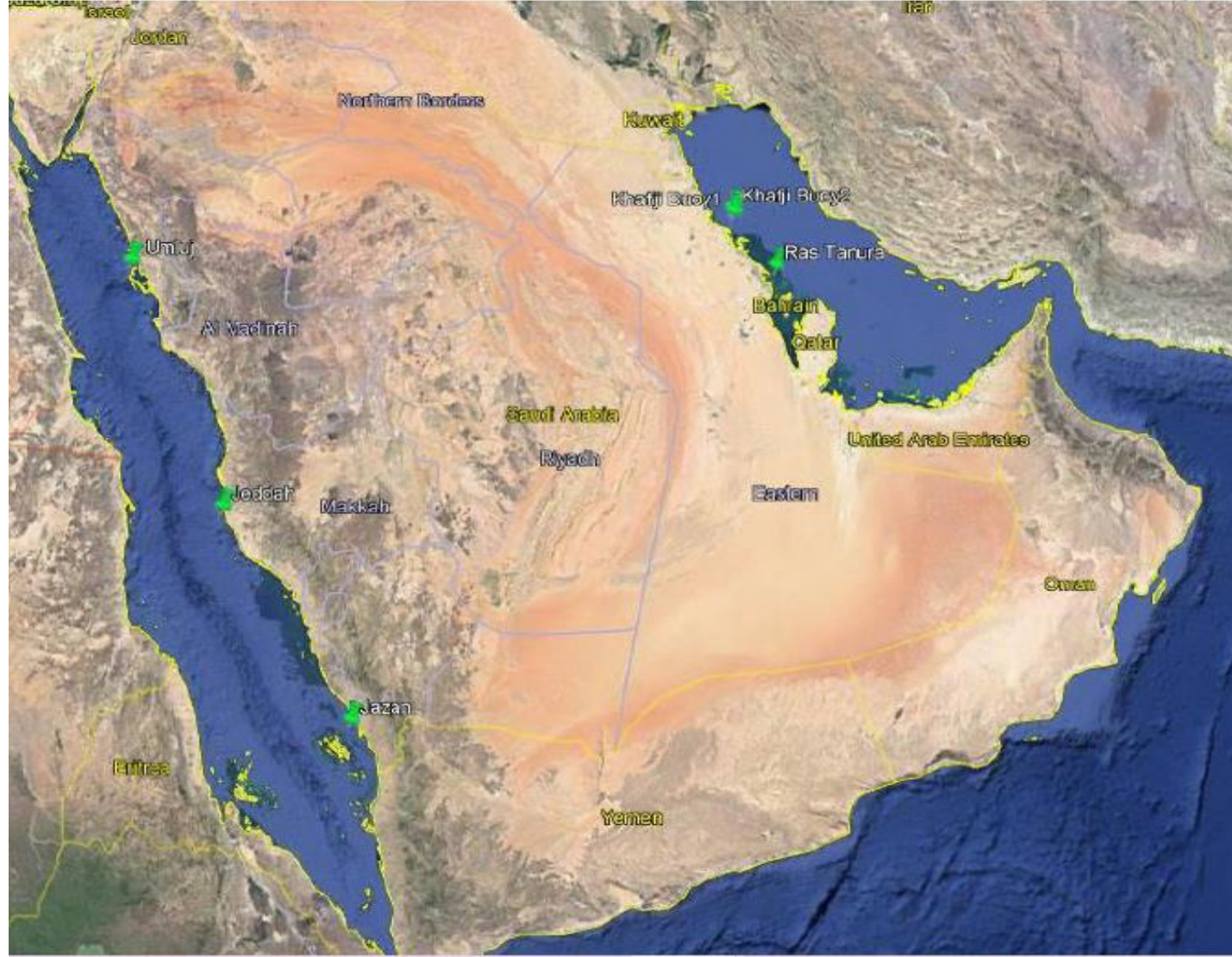
Increase the Geographical Coverage of Observation Stations Initiative



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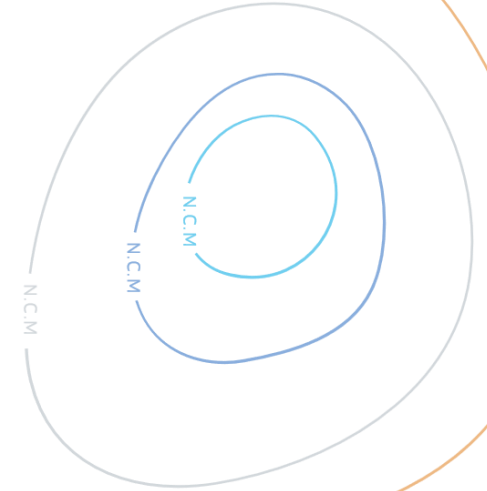
FLOATING BUOYS LOCATIONS



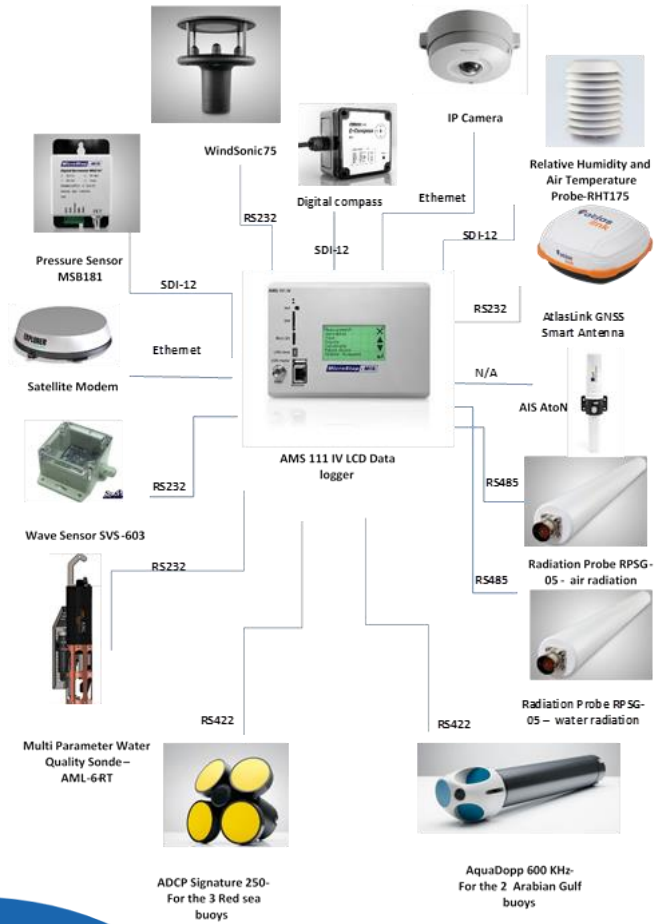
BUOY LOCATIONS COORDINATES

- Deployment site locations are 5 locations 3 in Red sea, and 2 in Arabian Gulf.
- Below are the final 5 locations, where the site survey would be conducted.

Red Sea Site Buoy Location Details				
S.No	Site Location Name	Site Location Co-ordinates	Water Depth at Site Location	Nearest Port
1.	South of Jeddah	Lat : 21° 4'41.261"N Long: 39° 5'6.91"E	48m	Jeddah Port
2.	Between Umluj and AlWajh	Lat:25° 46'15.744"N Long: 36° 27'10.897"E	270m	Umluj Port
3.	Jazan	Lat : 17° 9'38.689"N Long: 42° 6'28.846"E	74m	Jazan Port
Arabian Gulf Site Buoy Location Details				
4.	Ras Tanura	Lat : 26°36'56.97"N Long: 50°14'40.58"E	14m	Al-Dammam Port & Ras Tanura Port
5.	Khafji	Lat : 27°39'29.60"N Long: 49°19'24.75"E	11m	Ra's al Khair Port



BUOY SCHEMA



STATION LIST

Buoy platform

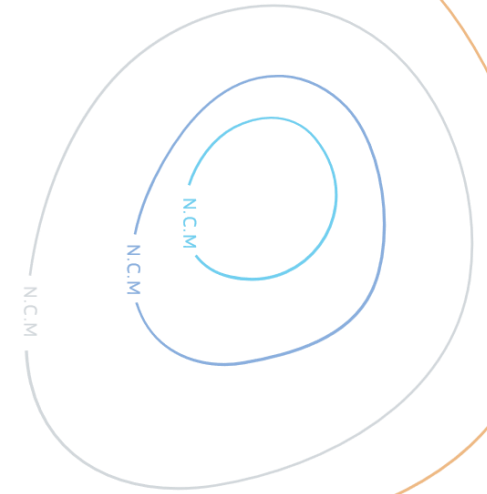
- Buoy platform
- Hexagonal aluminum topside
- Top side sensor ring mast
- Float Collars
- Marine lantern
- Radar reflector
- Solar panels
- Batteries power pack
- Electronics Enclosure
- Battery Enclosure



CENTRAL SYSTEM

Integration of the Marine data buoys to the existing NCM Central System

- The buoy stations has been integrated to the existing NCM UDCS/CLDB software to collect and archive all the marine data as well as meteoroidal data in one unified structure
- The NCM IMS UDCS/CLDB software has been upgraded to accommodate the buoy stations for data acquisition and processing, as well as reporting of met-marine parameters.
- The Upgraded IMS UDCS provides users with easy-to-use and efficient web interface on HTML technology. An authorized user has access to all data, statistics and full functionality from any computer on the network.



CENTRAL SYSTEM



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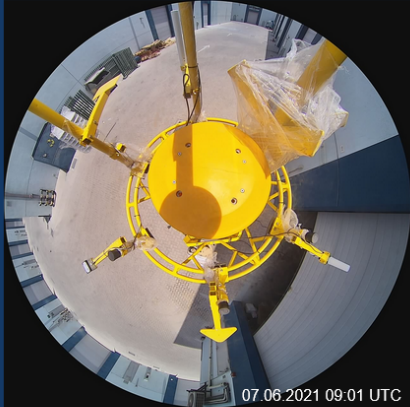
Time 09:30:22 UTC Server Status ●

Current Data

Buoy1

Met. Ocean Water Quality Water Current Profile

Longitude (x): 55.40375 Latitude (y): 25.28918



07.06.2021 09:01 UTC

Alerts

Dry Temperature



45.0°C

Wind Direction
Wind Speed




50°
1.3m/s

Wind Gust Speed




3.2
m/s

Relative Humidity



37
%

Pressure



998.8
hPa

Dew Point



26.9
°C

Dose Rate 90 nSv/h
Dose Rate Water 83 nSv/h

Current Data Map
Measured Data
Graph
Graph Stations
Expert Screen
Logout



CENTRAL SYSTEM



CENTRAL SYSTEM



CERTIFICATES AND COMPLIANCES

Certification provided with buoy:

1. IALA Certification.
2. Company ISO Certificate.
3. Impact test of Poly foam density test.
4. Coil and Tensile Test.
5. Steel Core test.
6. Sensors calibration certificates.

WMO conformance and compliance :

Marine Buoys systems fully conforms to the following WMO documents:

1. WMO No. 306 - Manual on Codes
2. WMO No. 386 - Manual on Global Telecommunication System



Thank You for Your Attention

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NCM

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