IHB File No. S3/2750

CIRCULAR LETTER 38/2004
21 June 2004

VANDALISM ON METEOROLOGICAL AND OCEANOGRAPHIC DATA BUOYS

Dear Hydrographer,

The World Meteorological Organization (WMO) has written to the IHO seeking their assistance in reducing the ongoing vandalism to their data gathering buoys. These buoys provide marine observational data essential to maritime safety, to global climate studies, and to many other applications of value to mariners. An extract on the subject from the October 2003 Data Buoy Cooperation Panel 19th Meeting Report and an article from the NOAA web site www.dbcp.noaa.gov/dbcp are attached for your information.

Member States are requested to bring this matter to the attention of as wide a maritime audience as possible.

On behalf of the Directing Committee
Yours sincerely,

(original signed)

Vice Admiral Alexandros MARATOS
President

Encls: Data Buoy Cooperation Panel 19th Meeting Report - NOAA web site printout

DATA BUOY COOPERATION PANEL
NINETEENTH SESSION

Angra dos Reis, Brazil, 20-24 October 2003

FINAL REPORT

JCOMM Meeting Report No. X

8.6.3 Vandalism

8.6.3.1 The panel recalled that, at DBCP-18, it had discussed the ongoing problem of vandalism of ocean data buoys, in particular a proposal from Mr K. Premkumar (India) to publicise the importance of data buoys through various media outlets, as a possible way of combating such vandalism. *"The panel agreed that such an action might indeed have value in publicizing the existence and value of ocean data buoys among fishermen and other marine users. It therefore requested the Secretariat to write to relevant National Meteorological Services, requesting them to take such action through their national/private media outlets. It also requested the Secretariat to discuss with IHO about the possibility for similar actions through the weekly Notices to Mariners and similar outlets."*

8.6.3.2 As a follow-up to this discussion, the Secretariat had prepared and issued a JCOMM Joint Circular Letter containing the proposal. There had not been, as yet, any further discussion with IHO on the issue.

8.6.3.3 The panel noted with interest and appreciation that KNMI, Netherlands had, in 2001 and on the basis of a small information leaflet prepared by the technical coordinator, included information on ocean data buoys and their applications in an information booklet for mariners and fisherman, and that this appeared to have had some positive impact. In addition, the South African Weather Service had, following receipt of the JCL, taken the initiative to include information on ocean data buoys in media weather bulletins, as suggested.

8.6.3.4 The panel expressed its appreciation for these initiatives. It recognized the potential value of the leaflet prepared by the technical coordinator, and requested him to review and update this as appropriate, and to make it available on the DBCP web site. The Secretariat was then requested to again contact relevant international organizations, such as IHO, IMO, FAO, as well as international fisheries bodies such as the International Tuna Commission, on the issue of vandalism, to provide them with the leaflet and to request them to distribute it widely among their member countries and institutions. It also requested the Secretariat to send a reminder to Member States at an appropriate time regarding the need to publicize widely the value and applications of buoy data through media outlets.

Vandalism on data buoys

Vandalism on data buoys

See also:

- **background information (PDF, 350 KO) and**
- **Effects of fishing activity on Tropical moored buoy arrays (ZIP of PDF, 12 MO))**

Meteorological and oceanographic data buoys

Thanks to internationally coordinated efforts, the Data Buoy Cooperation Panel working under the auspices of the World Meteorological Organization and the Intergovernmental Oceanographic Commission maintains arrays of instrumented drifting and moored buoys in the world oceans. These automated buoys make routine measurements and transmit their data in real-time through satellites. Such measurements include wind speed and direction, air temperature, air humidity, atmospheric pressure, currents, sea surface temperature, but also water temperatures at various depths to 500 meters below the surface for certain types of moored buoys. All buoys routinely transmit their positions along with the data.

What are the buoys used for?

There are numerous applications for collected data which complement data collected through other means such as satellites:

- **Weather forecasts**. Meteorological models routinely assimilate observational data from various sources including satellites, weather balloons, land stations, ships, and data buoys. Most of the models are global and assimilate observational data from all sources around the planet to make their national forecasts. Distribution of meteorological data world-wide is coordinated through the World Weather Watch. Buoy data are crucial because deployed in data sparse ocean area where no other source of valuable data are available.

- **Marine forecast**. For similar reasons, buoy data are essential for producing improved marine forecasts.
- **Assistance to fisheries**. Sea surface temperature is an important tool to find many different species of fish. The buoys provide this information to weather centres daily. These centres, in turn, produce charts of sea surface temperature and distribute them via radiofax broadcasts to fishermen at sea or to your home office. Knowing where to look for fish saves both fuel and time. Also, using data buoys and other instruments such as sub-surface floats, many advanced oceanographic models now can be used to predict El Niño events and other ocean disturbances. Such information can help fishermen plan their operations in advance.
- **Safety at sea**. Several nations have successfully used surface wind and ocean current information from the buoys to help locate missing or overdue boats.
- **Climate prediction, meteorological and oceanographic research**. For example, researchers use the data from the equatorial Pacific moorings (TAO) to learn how to predict future changes in the world's climate. The buoys were first deployed to learn how to predict the El Niño / Southern Oscillation phenomenon. El Niño events involve disruptions in the ocean surface winds and the upper ocean temperature pattern. These disruptions lead to seasonal climate variations and changes in fish migration patterns in many areas of the world ocean including the tropics.

Advice to fishermen and mariners

Do not pick up drifting buoys. Buoy operators do not refurbish the drifting buoys once deployed. They would continue to transmit their position along with erroneous meteorological and oceanographic data from the deck of the ship.

DO keep watch for the moored buoys at sea; they should be visible on radar and can be avoided. Always keep off your fishing operations from the buoys in order to avoid entanglement of your net with the buoy.

DON'T moor to, damage, or destroy any part of the buoys.

Do educate your fellow community about the use of data buoys.

The buoys may attract fish: although it may be tempting, DON'T deploy gear around or near to the buoys. If your gear tangles with the buoy, DON'T damage or cut the buoy to retrieve your gear.

Both drifting and moored buoys provide valuable information to many communities, including fishermen and mariners.

For more information:

Etienne Charpentier

Technical Coordinator of the Data Buoy Cooperation Panel

c/o CLS, 8-10 rue Hermés

31526 Ramonville St. Agne

France

http://www.dbcp.noaa.gov/dbcp/

Longline fishing gear entangled in a TAO mooring.

Wind measuring meteorological drifting buoy

http://www.dbcp.noaa.gov/dbcp/fggewind.html

Oceanographic drifter

http://www.aoml.noaa.gov/phod/dac/gdc.html

PIRATA (Atlantic Ocean) or TAO array moored buoy (equatorial Pacfic).

http://www.pmel.noaa.gov/toga-tao/

http://www.cmcd.inpe.br/pirata/

http://www.brest.ird.fr/pirata/piratafr.html

TRITON moored buoy (Western equatorial Pacific)

http://www.jamstec.go.jp/jamstec/TRITON/

European Group on Ocean Stations moored buoy (North Atlantic)

http://www.shom.fr/meteo/egos/