



DATA BUOY COOPERATION PANEL

Increasing the quantity, quality and timeliness of atmospheric and oceanographic data in ocean areas where few other measurements are taken.

IMPROVING GLOBAL FORECASTS OF WEATHER & OCEAN CONDITIONS

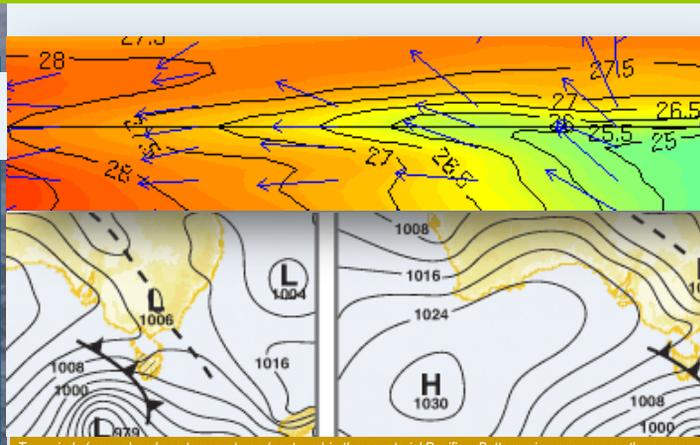
» Moored and drifting data buoys measure a range of atmospheric and oceanic variables including air pressure, temperature (sea-surface & air), salinity, ocean current velocity, winds, and waves across all oceans. These observations are relayed by satellite and used to improve forecasts and increase marine safety. They also contribute to assessments of climate change

SHIPS AHOY!

» Most data buoys are deployed by commercial ships and research vessels. Without such cooperation the global buoy network of over 1300 **drifting buoys** and 400 **moored buoys** could not exist today and would be hard to sustain in future.

HOW CAN MARINERS HELP?

» The DBCP is looking for ships to be part of this global effort. We have an ongoing need to deploy drifting buoys in order to maintain the global network. Drifters are pre-packaged for easy deployment from the lowest deck or ramp whilst underway.



Top: winds (arrows) and sea temperatures (contours) in the equatorial Pacific. Bottom: air pressure over the ocean.



Data Buoy Cooperation Panel **Platform Operating Countries** **June 2019**

Platforms operational during the month. GTS data as received by Météo France.

Drifting Buoys	UK (25)	GREECE (2)	SPAIN (15)
AUSTRALIA (41)	USA (107)	GERMANY (4)	UNKNOWN (2)
CANADA (20)	UNKNOWN (4)	PORTUGAL (8)	INDIA (17)
EUROPE (185)	Costal/National MB	UK (7)	JAPAN (2)
FRANCE (89)	AUSTRALIA (7)	BRAZIL (1)	REPUBLIC OF KOREA (17)
INDIA (8)	NORWAY (1)	IRELAND (3)	Thailand MB
ITALY (13)	CANADA (32)	UK/FRANCE (1)	USA (84)
JAPAN (2)	FRANCE (26)	USA (178)	USA/INDIA (3)

Tide Gauges

AUSTRALIA (5)	USA (1)
CHILE (3)	THAILAND (1)
USA (2)	GERMANY (2)
UK (6)	

Generated by www.joosmops.org, 13/07/2019



The DBCP is an **international** program coordinating the use of autonomous **data buoys** to observe the **atmosphere** and **ocean** for forecasting and research.

The DBCP was formed in 1985 as a joint body of the World Meteorological Organization (WMO) and Intergovernmental Oceanographic Commission (IOC) of UNESCO. It coordinates the data buoy component of the Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM).

Global Drifter 1250



The DBCP was the first component of the Global Ocean Observing system (GOOS) to achieve its initial goal, when in 2005, it reached its 1250th operating drifter, with coverage of approximately every five degrees.

DATA BUOYS

» **Data Buoys**, whether drifting or moored, measure and routinely transmit their data in real time via satellite systems such as Iridium and Argos. Their observations make significant contributions to our ability to model, understand and describe global weather and climate on all time and space scales. The observations complement data from other platforms such as from Voluntary Observing Ships and are used to validate remotely-sensed data from satellites.



A Drifting Buoy at sea



Drifting Buoys during manufacture

» **Drifting Buoys**, generally attached to a drogue (sea-anchor), are easy to deploy and relatively inexpensive, with an average lifetime of 18 months. They typically measure sea-surface temperature and air pressure, and track ocean currents at the depth corresponding to the centre of their drogue. Under the DBCP there is a standard design for drifting buoys to best meet the observational requirements for meteorological and oceanographic applications.

» **Moored Buoys** are anchored at fixed locations and can collect observations for a much wider range of atmospheric and oceanic variables. Moored buoys are usually deployed to serve national needs for forecasting, maritime safety, or research, or to observe regional climate patterns. They are generally replaced or serviced yearly.

A Moored Buoy being serviced



WHERE THE ACTION IS

Much of the work achieved by the DBCP is through **Action Groups**. Each group maintains an observational buoy program that supplies data for operational and research purposes.

The DBCP has the following action groups:

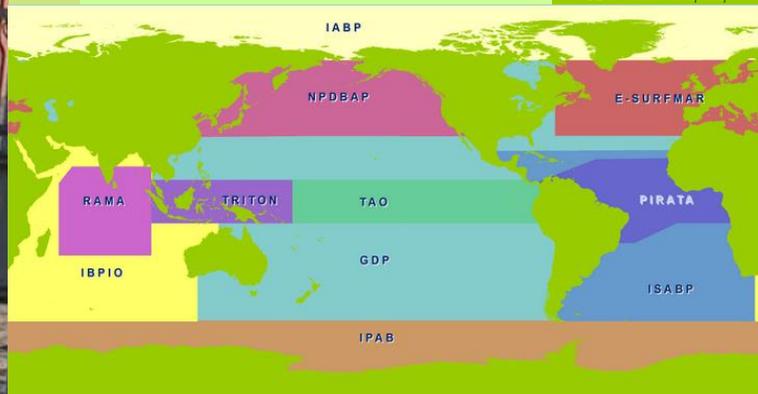
Global

- » The Global Drifter Program (GDP)
- » Tropical Moored Buoy Implementation Panel (TAO, TRITON, PIRATA, RAMA)

Regional

- » European EUCOS Surface Marine Programme (E-SURFMAR)
- » International Arctic Buoy Programme (IABP)
- » International South Atlantic Buoy Programme (ISABP)
- » North Pacific Data Buoy Advisory Panel (NPDBAP)
- » International Buoy Program for the Indian Ocean (IBPIO)
- » International Programme for Antarctic Buoys (IPAB)

DBC Action Group Map



GET INVOLVED

Membership

All IOC and WMO member states are invited to participate in the DBCP. Panel membership is also open to any other interested parties, such as buoy manufacturers, data users, researchers and ship operators.

Annual meetings

Join us each year as we meet to progress our work and continually improve our coordination and impact to users. We meet alternately between Switzerland, France and elsewhere in the world.

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