Canadian Drifting Buoys

GDAC Report

DBCP– 38, Hybrid meeting, Geneva, Switzerland,

1-4 November 2022

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OVERVIEW

- Overview and status of Drifting Buoy processing and products at MEDS
- Plans and challenges
- Input and feedback welcome

Drifting Buoy Data Flow Monitoring

- Real-time BUFR TM315009 acquired from GTS
- Monitoring of compliance of encoded messages, volumes of data flows
- All decoded BUFR drifting buoy data (TM315009) are made available (monthly compiled files) on an FTP server with anonymous login: ftp://ftp.meds-sdmm.dfo-mpo.gc.ca/pub/DRIBU_BUFR/

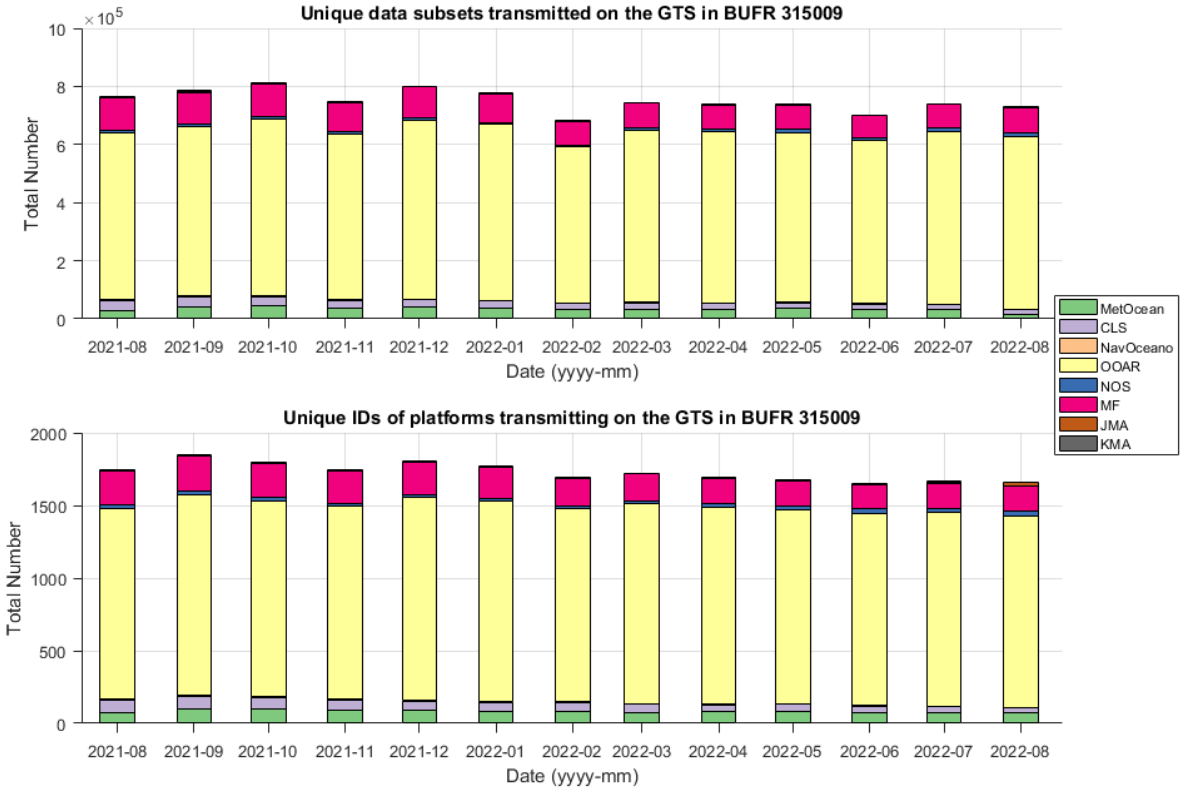

Figure 1: Monthly drifting buoy data subsets (a) and platforms (b) transmitted on the GTS for the last 13 months from 8 encoding / transmitting centers.

Drifting Buoy Data Flow Monitoring

- GTS data bundled by year/month

  ftp://ftp.meds-sdmm.dfo-mpo.gc.ca/pub/DRIBU_BUFR/

- Three files zipped:
  - BUFR_MESSAGE
    - Bulletin information, heading, time, source
  - BUFR_DB_315009_SUBSET
    - WMO ID, date/times (obs, pos), position, surface variables
  - BUFR_DB_315009_SUBSET_TS
    - Subsurface variables, depth dependent
- Updated monthly

Drifting Buoy Data Flow Monitoring

- **Coverage and density of datasets for the past year**

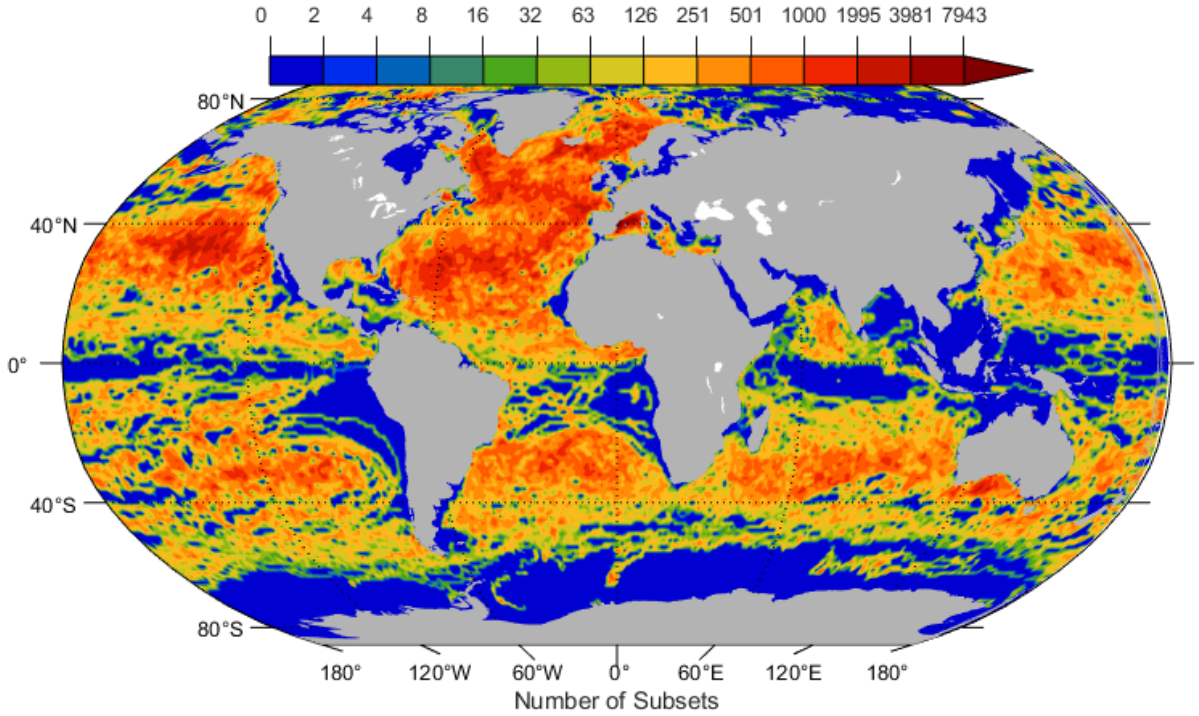

Figure 2: Map of total subsets per 1x1 deg. area for the last 13 months.

Drifting Buoy Data Flow Monitoring

- **Coverage and density of datasets for the past year**

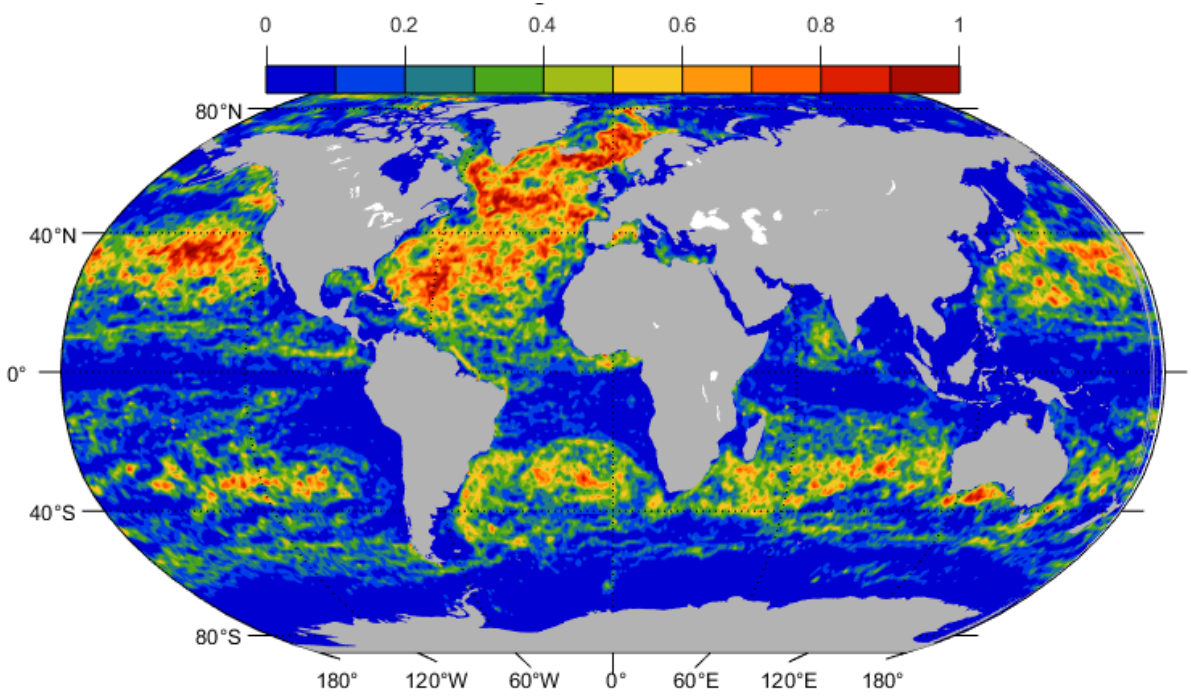

Figure 2: Map showing the subset fraction of the number of months in which at least one subset is available during the past year.

Plans & Challenges

Plans

- Continue monitoring and reporting identified GTS routing issues and format issues
- Facilitate publishing of additional drifting buoy datasets from Canadian data contributors (ERDDAP, GTS?)
- Coordinate

Challenges

- Additional partner coordination and feedback needed: on data products, metadata management & standardized QC methodologies
- Additional data user feedback needed

Thank you

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There are 8 data encoding / transmitting centers for drifting buoys and their symbols, related bulletin headings and their data providers can be seen in Table 1. The names of data provider groups are referenced to OceanOps metadata (https://www.ocean-ops.org/share/OceanOPS/GTS/wmo/wmo_list.txt).

Table1: GTS encoding/ transmitting centres with their bulletin headings and data provider groups.

Symbol	***Originating / generating centre (table C-1)***	***Bulletin heading(s)***	***Groups (according to OceanOps except KMA)***	***Average monthly subsets (1e4)***
MetOcean	MSC Monitoring	CWAO (Canada)	AWI (Germany), DFO (Canada), ECCC (Canada), USCG (USA), BOM (Australia), NOAA (USA), Univ. Washington (USA)	3.4±0.6
CLS	Service ARGOS - Toulouse	LFVW (France)	AARI (Russia), Meteo France (France), NIO (India), DBCP, NOAA (USA), US NavOceano (USA), Univ. Washington (USA)	2.4±0.7
NavOceano	US Naval Oceanographic Office	KWBC (USA)	US NavOceano (USA)	0.3±0.1
OOAR	US NOAA Office of Oceanic and Atmospheric Research	KWBC (USA), KWNB (USA), VHHH (Hong Kong)	BOM (Australia), JMA (Japan), Meteo France (France), Hong Kong (China), DBCP, SIO (USA), OGS (Italy), NOAA (USA), SAWS (South African), UK Meteorological Office (UK)	58.4±2.1
NOS	US NOAA National Ocean Service	KWBC (USA)	Univ. Washington (USA)	0.96±0.3
MF	Toulouse (RSMC)	LFPW (France)	Meteo-France (France), OGS (Italy), DBCP, SIO (USA), NOAA (USA), UK MetOffice (UK)	9.3±1.2
JMA	Tokyo (RSMC), Japan Meteorological Agency	RJTD (Japan)	Japan Meteorological Agency (Japan)	0.3±0.1
KMA	Seoul	RKSL(South Korea)	Korean Meteorological Administration (Korea)	0.1±0.1