**DATA BUOY COOPERATION PANEL (DBCP)**

**FORMAT FOR NATIONAL REPORTS ON CURRENT AND
PLANNED BUOY PROGRAMMES**

|  |  |
| --- | --- |
| **Country** | AUSTRALIA |
| **Year** | 2022 |

**Please Identify your Programme’s Major Opportunities and Challenges/Risks during the upcoming year and how DBCP can most effectively assist your Programme.**

1. ***CURRENT PROGRAMME:***

**Please Identify your Programme’s Major Opportunities and Challenges/Risks during the upcoming year and how DBCP may assist your Programme.**

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| --- | --- |
| **Agency or programme** | Bureau of Meteorology - Deep-ocean Assessment and Reporting Tsunameter. |
| Number and type of buoys | (a) deployed during the year | SAIC Tsunami Buoy x 3 |
| (b) operational as of 31 August | SAIC Tsunami Buoy x 6 |
| (c) reporting on GTS as of 31 August | SAIC Tsunami Buoy x 6 |
| Purpose of programme*(check/uncheck boxes using [\_] or [x] as appropriate)* | (a) operational | [x] |
| (b) met / ocean research |  |
| (c) developmental |  |
| Main deployment areas | Indian Ocean, Coral Sea, Tasman Sea |
| Vandalism incidents | (a) Number of incidents: 0 Indian Ocean 1 moved within Australian EEZ in December 2021. No vandalism since. |

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| **Agency or programme** | Bureau of Meteorology - Drifting Buoy Program (BOM) |
| Number and type of buoys | (a) deployed during the year | 11 x SVP-B |
| (b) operational as of 31 August | 27 x SVP-B |
| (c) reporting on GTS as of 31 August | 27 x SVP-B |
| Purpose of programme*(check/uncheck boxes using [\_] or [x] as appropriate)* | (a) operational | [x] |
| (b) met / ocean research |  |
| (c) developmental |  |
| Main deployment areas | Indian & Southern Oceans |
| Vandalism incidents | (a) Number of incidents = NilIf vandalism incidents have occurred during the year, please provide the details using the form in the annex. |

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| **Agency or programme** | Bureau of Meteorology – Drifting Buoy Barometer Upgrade Program (UPG) |
| Number and type of buoys | (a) deployed during the year | 6 x SVP-B |
| (b) operational as of 31 August | 6 x SVP-B |
| (c) reporting on GTS as of 31 August | 6 x SVP-B |
| Purpose of programme*(check/uncheck boxes using [\_] or [x] as appropriate)* | (a) operational | [x] |
| (b) met / ocean research |  |
| (c) developmental |  |
| Main deployment areas | Indian & Southern Oceans |
| Vandalism incidents | (a) Number of incidents = NilIf vandalism incidents have occurred during the year, please provide the details using the form in the annex. |

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| **Agency or programme** | Bureau of Meteorology – Deployments on behalf of Global Drifter Program (GDP) |
| Number and type of buoys | (a) deployed during the year | 10 x SVP-B |
| (b) operational as of 31 August | 22 x SVP-B |
| (c) reporting on GTS as of 31 August | 22 x SVP-B |
| Purpose of programme*(check/uncheck boxes using [\_] or [x] as appropriate)* | (a) operational | [x] |
| (b) met / ocean research |  |
| (c) developmental |  |
| Main deployment areas | Indian & Southern Oceans |
| Vandalism incidents | (a) Number of incidents = NilIf vandalism incidents have occurred during the year, please provide the details using the form in the annex. |

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| --- | --- |
| **Agency or programme** | Bureau of Meteorology – Moored Buoy Program |
| Number and type of buoys | (a) deployed during the year | 0 x SVP-B modified |
| (b) operational as of 31 August | 2 x SVP-B modified |
| (c) reporting on GTS as of 31 August | 2 x SVP-B modified |
| Purpose of programme*(check/uncheck boxes using [\_] or [x] as appropriate)* | (a) operational |  |
| (b) met / ocean research |  |
| (c) developmental | [x] |
| Main deployment areas | Gulf of Carpentaria |
| Vandalism incidents | (a) Number of incidents = NilIf vandalism incidents have occurred during the year, please provide the details using the form in the annex. |

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| **Agency or programme** | Bureau of Meteorology – Wave Buoy Program |
| Number and type of buoys | (a) deployed during the year | 2 x Triaxys |
| (b) operational as of 31 August | 2 x Triaxys  |
| (c) reporting on GTS as of 31 August | 2 x Triaxys  |
| Purpose of programme*(check/uncheck boxes using [\_] or [x] as appropriate)* | (a) operational | [x] |
| (b) met / ocean research |  |
| (c) developmental |  |
| Main deployment areas | West coast of Tasmania and Kangaroo Island, South Australia |
| Vandalism incidents | (a) Number of incidents = NilIf vandalism incidents have occurred during the year, please provide the details using the form in the annex. |

|  |  |
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| **Agency or programme** | Integrated Marine Observing System (IMOS) – Wave Buoy Program |
| Number and type of buoys | (a) deployed during the year | 2 x Triaxys -B |
| (b) operational as of 31 August | 1 x Triaxys -B |
| (c) reporting on GTS as of 31 August | 1 x Triaxys -B |
| Purpose of programme*(check/uncheck boxes using [\_] or [x] as appropriate)* | (a) operational |  |
| (b) met / ocean research | [x] |
| (c) developmental |  |
| Main deployment areas | Goodrich Bank (NT) & Maria Island (TAS) |
| Vandalism incidents | (a) Number of incidents = NilIf vandalism incidents have occurred during the year, please provide the details using the form in the annex. |

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| **Agency or programme** | Australian Antarctic Division – Drifting Buoy Program |
| Number and type of buoys | (a) deployed during the year | Unknown |
| (b) operational as of 31 August | Unknown |
| (c) reporting on GTS as of 31 August | Nil |
| Purpose of programme*(check/uncheck boxes using [\_] or [x] as appropriate)* | (a) operational |  |
| (b) met / ocean research | [x] |
| (c) developmental |  |
| Main deployment areas | Antarctic – coastal near Davis and Mawson stations |
| Vandalism incidents | (a) Number of incidents = NilIf vandalism incidents have occurred during the year, please provide the details using the form in the annex. |

***2. PLANNED PROGRAMMES:***

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| --- | --- |
| **Agency or programme** | Bureau of Meteorology – Deep-ocean Assessment and Reporting of Tsunami. |
| Number and type of buoys | planned for deployment in the next 12 months | 2 x SAIC 3G-STB1 x DART II/STB |
| Purpose of programme*(check/uncheck boxes using [\_] or [x] as appropriate)* | (a) operational | [x] |
| (b) met / ocean research |  |
| (c) developmental |  |
| Main deployment areas | Coral Sea, Tasman Sea & Indian Ocean |

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| **Agency or programme** | Bureau of Meteorology - Drifting Buoy Program (BOM) |
| Number and type of buoys | planned for deployment in the next 12 months | 20 |
| Purpose of programme*(check/uncheck boxes using [\_] or [x] as appropriate)* | (a) operational | [x] |
| (b) met / ocean research |  |
| (c) developmental |  |
| Main deployment areas | Indian & Southern Oceans |

|  |  |
| --- | --- |
| **Agency or programme** | Bureau of Meteorology – Deployments on behalf of Global Drifter Program (GDP) |
| Number and type of buoys | planned for deployment in the next 12 months | 20 |
| Purpose of programme*(check/uncheck boxes using [\_] or [x] as appropriate)* | (a) operational | [x] |
| (b) met / ocean research |  |
| (c) developmental |  |
| Main deployment areas | Indian & Southern Oceans |

|  |  |
| --- | --- |
| **Agency or programme** | Bureau of Meteorology – Drifting Buoy Barometer Upgrade Program (UPG) |
| Number and type of buoys | planned for deployment in the next 12 months | 10 |
| Purpose of programme*(check/uncheck boxes using [\_] or [x] as appropriate)* | (a) operational | [x] |
| (b) met / ocean research |  |
| (c) developmental |  |
| Main deployment areas | Indian & Southern Oceans |

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| --- | --- |
| **Agency or programme** | Bureau of Meteorology – Wave Buoy Program |
| Number and type of buoys | planned for deployment in the next 12 months | Routine change out 2 x Triaxys buoys |
| Purpose of programme*(check/uncheck boxes using [\_] or [x] as appropriate)* | (a) operational | [x] |
| (b) met / ocean research |  |
| (c) developmental |  |
| Main deployment areas | West coast of Tasmania and Kangaroo Island, South Australia |

|  |  |
| --- | --- |
| **Agency or programme** | Integrated Marine Observing System (IMOS) – Wave Buoy Program |
| Number and type of buoys | planned for deployment in the next 12 months | Routine change out 2 x Triaxys buoys |
| Purpose of programme*(check/uncheck boxes using [\_] or [x] as appropriate)* | (a) operational |  |
| (b) met / ocean research | [x] |
| (c) developmental |  |
| Main deployment areas | Goodrich Bank (NT) & Maria Island (TAS) |

|  |  |
| --- | --- |
| **Agency or programme** | Bureau of Meteorology – Moored Buoy Program |
| Number and type of buoys | planned for deployment in the next 12 months | 1 x modified minimet buoy |
| Purpose of programme*(check/uncheck boxes using [\_] or [x] as appropriate)* | (a) operational |  |
| (b) met / ocean research |  |
| (c) developmental | [x] |
| Main deployment areas | Gulf of Carpentaria |

|  |  |
| --- | --- |
| **Agency or programme** | Australian Antarctic Division – Sea Ice Buoy Program |
| Number and type of buoys | planned for deployment in the next 12 months | Unknown |
| Purpose of programme*(check/uncheck boxes using [\_] or [x] as appropriate)* | (a) operational |  |
| (b) met / ocean research | [x] |
| (c) developmental |  |
| Main deployment areas | Antarctic – coastal near Davis and Mawson stations |

*(repeat table above as often as necessary)*

***3. TECHNICAL DEVELOPMENTS:***

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| --- | --- |
| (a) Buoy design | * Modified Scripps Minimet buoy with 100m mooring replacing the drogue will be deployed in the Gulf of Carpentaria.
* Deck drifter consisting of a Metocean SVP-B re-housed in an IP67 box was deployed on 'Climate Action Now' with one quarter of the standard battery pack. Deck drifter reported consistently during Antarctic circumnavigation and is still reporting with a battery voltage of 13.2V after 10 months of operation.
 |
| (b) Instrumentation |  |

***4. PUBLICATIONS (on programme plans, technical developments, QC reports, etc.):***

|  |  |  |
| --- | --- | --- |
| ***Ref*** | ***Title*** | ***Type[[1]](#footnote-2)*** |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |

*(repeat rows in the table above as necessary)*

***5. ADDITIONAL COMMENTS:***

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| --- | --- |
| (a) Quality of buoy data |  |
| (b) Communications |  |
| (c) Buoy lifetimes | * **Lifetimes Mean / Maximum**
* Metocean =1.09years /3.69years
* PacificGyre = 1.08years / 2.13 years
* DBi = 0.89 years / 2.75 years

\*\*Only sampled buoys deployed since January 2016 |
| (d) Data Accessibility[[2]](#footnote-3) |  |
| (e) New Observations[[3]](#footnote-4) |  |
| (f) GFCS and WIGOS[[4]](#footnote-5) |  |
| (g) Additional Requirements[[5]](#footnote-6) |  |
| (h) DBCP Linkages[[6]](#footnote-7) |  |
| (i) Contribution to UN Decade and UN SDGs[[7]](#footnote-8) | ●  |
| (j) Other (i.e. Impact of COVID19 on observing systems and mitigation efforts) | * COVID-19 restrictions have not significantly impacted our buoy deployment program, as the majority of deployments are made from commercial vessels.
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Note: It is recommended that this form is filled in electronically and returned also electronically to the Secretariat. A template of the form can be downloaded from the following SharePoint site:

[https://wmoomm.sharepoint.com/:w:/s/wmocpdb/EQ1z8KndbxREkzE6RH4NFkkBDdvOItne74OP8f4voMMSbg?e=pgru6r](https://wmoomm.sharepoint.com/%3Aw%3A/s/wmocpdb/EQ1z8KndbxREkzE6RH4NFkkBDdvOItne74OP8f4voMMSbg?e=pgru6r)

**ANNEX - FORM FOR REPORTING INCIDENTS OF VANDALISM ON DATA BUOYS**

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| --- | --- |
| **Country** |  AUSTRALIA |
| **Contact person e-mail** | Adam.Gimes@bom.gov.au |
| **Year** | **Buoy Location** | **Type of Buoy****(e.g. Tsunami / Met -Ocean Buoy/Drifter/ARGO floats/ Other)** | **Type of damage to buoy** | **Buoy id/WMO id** | **Number of days of transmission lost** | **Cost of replacement** | **Remarks****(e.g. whether photos have been taken)** |
| **Latitude** | **Longitude** |  |  |  |  |  |  |
| 2021 | 13.9853 S  |  110.005 E  |  Tsunami |  Dragged away from bottom pressure recorder |  56001 |  212 |  >$350,000 | Indian Ocean 1 was misused (vandalised) by foreign fishing vessels over a prolonged period and succumbed on 25 Jan 2021 |
|   |   |   |   |   |   |   |   |   |
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|   |   |   |   |   |   |   |   |   |
| **Efforts taken against vandalism** |  Relocation of mooring to new site within Australian EEZ (SE of Christmas Island) |
| **Awareness meeting Organised**  |  |
| **Suggestions (if any)** |  |
| **Photos on Vandalism** | (please include pictures if available; and email electronic versions to dbcp-tc@jcommops.org and karen.grissom@noaa.gov ) |

Note: It is recommended that this form is filled in electronically and returned electronically also to OceanOPS (dbcp-tc@jcommops.org and karen.grissom@noaa.gov ). A template of the form can be downloaded from the following SharePoint site: [https://wmoomm.sharepoint.com/:w:/s/wmocpdb/EXsq1FXv0vpHmOjQA-tTobwBMrNnjXnaQok3oudPhKIb3A?e=2IR9Wh](https://wmoomm.sharepoint.com/%3Aw%3A/s/wmocpdb/EXsq1FXv0vpHmOjQA-tTobwBMrNnjXnaQok3oudPhKIb3A?e=2IR9Wh)

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1. : Types of publications: (1) Implementation, (2) Operations, (3) Instrumentation, (4) Quality Management, (5) Data Management, (6) Data collection and/or location, (7) Data use, (8) Other [↑](#footnote-ref-2)
2. How does the international community access the ocean observing data provided by your Organization [↑](#footnote-ref-3)
3. What new ocean observations does your Organization plan to make in the upcoming year (i.e. new parameters, expanding geographic scope, filling spatial or latency gaps)? [↑](#footnote-ref-4)
4. How do your Organization’s observations contribute to the WMO’s Integrated Global Observing System (WIGOS) and/or Global Framework for Climate Services (GFCS)? [↑](#footnote-ref-5)
5. What additional requirements (other than climate) does your organization have that are currently not adequately addressed by the DBCP? [↑](#footnote-ref-6)
6. How would your organization benefit from DBCP’s closer linkages to the Global Ocean Observing System(GOOS), Data Management and Modelling Communities? [↑](#footnote-ref-7)
7. How do your ocean observing networks contributing to the UN decade on Ocean Science and UN Sustainable Development Gloas . [↑](#footnote-ref-8)