**DATA BUOY COOPERATION PANEL (DBCP)**

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

|  |  |
| --- | --- |
| **Country** | AUSTRALIA |
| **Year** | 2021 |

**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.**

|  |  |
| --- | --- |
| **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 6 |
| (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: 1 (Indian Ocean)If 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 Program (BOM) |
| Number and type of buoys | (a) deployed during the year | 13 x SVP-B |
| (b) operational as of 31 August | 29 x SVP-B |
| (c) reporting on GTS as of 31 August | 29 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 incidentsIf vandalism incidents have occurred during the year, please provide the details using the form in the annex. |

|  |  |
| --- | --- |
| **Agency or programme** | Bureau of Meteorology – Drifting Buoy Barometer Upgrade Program (UPG) |
| Number and type of buoys | (a) deployed during the year | 5 x SVP-B |
| (b) operational as of 31 August | 10 x SVP-B |
| (c) reporting on GTS as of 31 August | 10 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. |

|  |  |
| --- | --- |
| **Agency or programme** | Bureau of Meteorology – Deployments on behalf of Global Drifter Program (GDP) |
| Number and type of buoys | (a) deployed during the year | 13 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. |

|  |  |
| --- | --- |
| **Agency or programme** | Bureau of Meteorology – Moored Buoy Program |
| Number and type of buoys | (a) deployed during the year | 1 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. |

|  |  |
| --- | --- |
| **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. |

|  |  |
| --- | --- |
| **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:***

|  |  |
| --- | --- |
| **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 | Routine change-out:4 X SAIC 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 |

|  |  |
| --- | --- |
| **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 | 5 |
| 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 – 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:***

|  |  |
| --- | --- |
| (a) Buoy design | * Modified Scripps Minimet buoy with 100m mooring replacing the drogue will be deployed in the Gulf of Carpentaria.
 |
| (b) Instrumentation |  |

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

|  |  |  |
| --- | --- | --- |
| ***Ref*** | ***Title*** | ***Type[[1]](#footnote-1)*** |
| 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 = 0.96 years / 5.21 years
* PacificGyre = 0.85 years / 2.56 years
* DBi = 0.62 years / 2.75 years
 |
| (d) Data Accessibility[[2]](#footnote-2) |  |
| (e) New Observations[[3]](#footnote-3) |  |
| (f) GFCS and WIGOS[[4]](#footnote-4) |  |
| (g) Additional Requirements[[5]](#footnote-5) |  |
| (h) DBCP Linkages[[6]](#footnote-6) |  |
| (i) Contribution to UN Decade and UN SDGs[[7]](#footnote-7) | ● ● ●  |
| (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.
 |

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**

|  |  |
| --- | --- |
| **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-1)
2. How does the international community access the ocean observing data provided by your Organization [↑](#footnote-ref-2)
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-3)
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-4)
5. What additional requirements (other than climate) does your organization have that are currently not adequately addressed by the DBCP? [↑](#footnote-ref-5)
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-6)
7. How do your ocean observing networks contributing to the UN decade on Ocean Science and UN Sustainable Development Gloas . [↑](#footnote-ref-7)