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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **VOS Report for 2018** | | | | | **Country =** | | | | | | | **BRAZIL** | | |
|  | | | | | | | | | | | | | | | |
|  | **a.** | **Programme description:** | | | | | | | | | | | | | |
| **Category** | | **No. of ships at**  **31 Dec 2018** | | | **Recruitments in 2018** | | | **De-recruitments**  **In 2018** | | | **Comments** | | | |
| *Selected* | | 22 | | | 1 | | | 0 | | | The amount refers to the Brazilian Navy blue water ships that regularly contribute to VOS by means of SHIP code messages relayed to GTS by the Navy Hydrographic Center/INMET. There are no voluntary civilian vessels subscribed to date. | | | |
| *Selected AWS* | | 11 | | | 0 | | | 2 | | | All AWS are onboard ships with regular conventional stations that are already accounted for in line above. | | | |
| *VOSClim* | | - | | | - | | | - | | | - | | | |
| *VOSClim AWS* | | - | | | - | | | - | | | - | | | |
| *Supplementary* | | - | | | - | | | - | | | - | | | |
| *Supplementary AWS* | | - | | | - | | | - | | | - | | | |
| *Auxiliary* | | - | | | - | | | - | | | - | | | |
| *Auxiliary AWS* | | - | | | - | | | - | | | - | | | |
| *Other* | | - | | | - | | | - | | | - | | | |
| **National VOS Total** | | 22 | | |  | | |  | | |  | | | |
|  |  | |  | | |  | | |  | | |  | | | |
|  | **National VOS Target** | | - | | |  | | |  | | |  | | |  |
|  | **National VOSClim Target** | | - | | |  | | |  | | |  | | |  |
|  |  | |  | | |  | | |  | | |  | | |  |
|  | **b.** | **Data management:** | | | | | | | | | | | | | |
|  | *Total number of ship observations (BBXX) distributed on the GTS in 2018* | | | | | | | | | 1107 | | | | | |
|  | *Dates when VOS data submitted to the GCCs in 2018* | | | | | | | | | - | | | | | |
|  | c. | **Shipboard Automatic Weather System** | | | | | | | | | | | | | |
| **Type** | | | | **No. of ships at 31 Dec 2018** | | | **Manual Input**  **Yes / No** | | | **Method of Comms** | | | **Year1 Plans** | |
| VAISALA Maritime Observation System MAWS410 | | | | 9 | | | Yes | | | HF Radio/Satellite | | | - | |
| VAISALA Maritime Observation System MAWS430 | | | | 2 | | | Yes | | | HF Radio/Satellite | | | - | |
| - | | | | - | | | - | | | - | | | - | |
| - | | | | - | | | - | | | - | | | - | |
| - | | | | - | | | - | | | - | | | - | |
| - | | | | - | | | - | | | - | | | - | |
|  |  | | | | | | | | |  | | | | | |
|  | **d.** | **Electronic logbooks: (TurboWin, SEAS, OBSJMA)** | | | | | | | | | | | | | |
| **Software & version** | | | **No. of ships at**  **31 Dec 2018** | | | Implementation plans | | | | | | | | |
| - | | | - | | | - | | | | | | | | |
| - | | | - | | | - | | | | | | | | |
| - | | | - | | | - | | | | | | | | |
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| - | | | - | | | - | | | | | | | | |

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| **e.** | **Standard Meteorological Equipment: (Types and Settings)** | | |
| **Equipment Type / Element** | | **Manual Instrumentation** | **AWS Instrumentation** |
| Barometer | | Aneroid Barometer | Aneroid Barometer |
| - | - |
| - | - |
| *Default national setting* | | *Station Level or Mean Sea Level* | *Station Level or Mean Sea Level* |
| Barograph | | - | - |
| - | - |
| *Default national setting* | | *Station Level or Mean Sea Level* | *Station Level or Mean Sea Level* |
| Thermometers | | Mercury for maximum and minimum thermometers | Eletric thermometers |
|  | | Hygrometer – whirling psycrometer | - |
| Sea Surface Temperature | | Bucket thermometer | SST sensor |
|  | | - | - |
| Wind Speed | | Cup anemometer and wind vane | Sonic anemometer |
|  | | - | - |
| Wind Direction | | Cup anemometer and wind vane | Sonic anemometer |
|  | | - | - |
|  | | - | - |
|  | | - | - |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **f.** | **PMO ship visit activities: (if a visit is for dual purposes, include all purposes)** | | | | |
| **Activity** | | **Manual Ship** | | **AWS**  **Ship** | **Comment** |
| Routine VOS inspections | | 1 | | 1 | The need of maintenance and calibration of weather instruments onboard Navy ships are identified by their own personnel and carried out on a Naval Base. PMO provides technical advice and training as requested. Calibration of some equipments are available at PMO´s Naval Base, but cost issues are discussed as needed. Operation instructions of instruments are available at PMO or by the AWS Companies.  Ship visited: NApOc Ary Rongel. |
| VOS recruitment visits | | 0 | | 0 | - |
| VOS de-recruitment visits | | 0 | | 0 | - |
| VOS courtesy or foreign visits | | 0 | | 0 | - |
| *Total visits to VOS* | | 0 | |  |  |
| Routine ASAP inspections | | 0 | |  | - |
| ASAP recruitment visits | | 0 | |  | - |
| ASAP de-recruitment visits | | 0 | |  | - |
| ASAP courtesy visits | | 0 | |  | - |
| *Total visits to ASAP* | | 0 | |  |  |
| Routine SOOP visits | | 0 | |  | - |
| SOOP recruitment visits | | 0 | |  | - |
| SOOP de-recruitment visits | | 0 | |  | - |
| SOOP courtesy visits | | 0 | |  | - |
| *Total visits to SOOP* | | 0 | |  |  |
| Visits in support of DBCP (drifting buoys) | | 0 | |  | - |
| Visits in support of Argo (profiling floats) | | 0 | |  | - |
| *Total visits to other programs* | | 0 | |  |  |
| **Total visits by national PMOs** | | 1 | | *Sum of all ship visits (VOS + ASAP + SOOP) + visits to other program (DBCP + Argo)* | |
| **Total number of PMOs (FTE\*)** | | 0 | |  | |
| (\*FTE-Full Time Employee) | |  |  | |  |

|  |  |
| --- | --- |
| **g.** | **Major challenges and difficulties:** |
| 1. Costs to acquire and provide weather instruments, to help with maintenance and calibration issues and of satellite transmissions are deemed elevated in comparison to other demands for public resources; 2. PMO personnel visits to ships in order to help with maintenance, calibration and training are deemed expensive in face of the large area of the country. There is no availability of local PMO representatives to the ports; 3. Training of Navy personnel to operate the weather instruments is provided by the Navy, but there is no how to vouch for the qualification of other mariners. | |
|  |  |
| **h.** | **Research / development / testing:** |
| Although JCOMM have organized several workshops/seminars/training for SOT programmes, costs are deemed elevated to have a representative in all events. Webinars are a more cost-effective solution. | |
|  |  |
| **i.** | **Other comments** |
|  | |