|  |  |  |  |
| --- | --- | --- | --- |
|  | **VOS Report for 2016** | **Country =** | **BRAZIL** |
|  |
|  | **a.** | **Programme description:** |
| **Category** | **No. of ships at** **31 Dec 2016** | **Recruitments in 2016** | **De-recruitments****In 2016** | **Comments** |
| *Selected* | 85 | 0 | 0 |  |
| *Selected AWS* | - | - | - |  |
| *VOSClim* | - | - | - |  |
| *VOSClim AWS* | - | - | - |  |
| *Supplementary* | - | - | - |  |
| *Supplementary AWS* | - | - | - |  |
| *Auxiliary* | - | - | - |  |
| *Auxiliary AWS* | - | - | - |  |
| *Other* | - | - | - |  |
| **National VOS Total** | 85 |   |  |  |
|  |  |  |  |  |  |
|  | **National VOS Target** | - |  |  |  |  |
|  | **National VOSClim Target**  | - |  |  |  |  |
|  |  |  |  |  |  |  |
|  | **b.** | **Data management:** |
|  | *Total number of ship observations (BBXX) distributed on the GTS in 2016* | 1049 |
|  | *Dates when VOS data submitted to the GCCs in 2016* | - |

|  |  |  |
| --- | --- | --- |
|  | c. | **Shipboard Automatic Weather System** |
| **Type** | **No. of ships at 31 Dec 2016** | **Manual Input****Yes / No** | **Method of Comms** | **Year1 Plans** |
| VAISALA Maritime Observation System MAWS410 | 06 | No | Not available |  |
|  |  |  |  |  |
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|  |  |  |
|  | **d.** | **Electronic logbooks: (TurboWin, SEAS, OBSJMA)** |
| **Software & version** | **No. of ships at**  **31 Dec 2016** | Implementation plans |
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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 | Electric (resistence) |
|  | Hygrometer – whirling psycrometer |  |
| Sea Surface Temperature | Bucket thermometer |  |
|  |  |  |
| Wind Speed | Cup anemometer and wind vane (combined unit) | Sonic anemometer |
|  |  |  |
| Wind Direction | Cup anemometer and wind vane (combined unit) | Sonic anemometer |
|  |  |  |
|  |  |  |
|  |  |  |

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| --- | --- |
| **f.**  | **PMO ship visit activities: (if a visit is for dual purposes, include all purposes)** |
| **Activity** | **Manual Ship**  | **AWS****Ship** | **Comment** |
| Routine VOS inspections | - | - | Equipment maintenance of Brazilian Navy’s ships are made by specialized companies according to the needs of each ship. The admeasurement of the equipments are carried out periocally at PMO. Instructions on operation of equipaments to observers are made at PMO or by the AWS Companies |
| VOS recruitment visits |  |  |  |
| VOS de-recruitment visits |  |  |  |
| VOS courtesy or foreign visits |  |  |  |
| *Total visits to VOS* |  |  |
| Routine ASAP inspections |  |  |  |
| ASAP recruitment visits |  |  |  |
| ASAP de-recruitment visits |  |  |  |
| ASAP courtesy visits |  |  |  |
| *Total visits to ASAP* |  |  |  |
| Routine SOOP visits |  |  |  |
| SOOP recruitment visits |  |  |  |
| SOOP de-recruitment visits |  |  |  |
| SOOP courtesy visits |  |  |  |
| *Total visits to SOOP* |  |  |  |
| Visits in support of DBCP (drifting buoys) |  |  |  |
| Visits in support of Argo (profiling floats) |  |  |  |
| *Total visits to other programs* |  |  |  |
| **Total visits by national PMOs** |  | *Sum of all ship visits (VOS + ASAP + SOOP) + visits to other program (DBCP + Argo)* |
|  |  |  |  |

|  |  |
| --- | --- |
| **g.** | **Major challenges and difficulties:** |
| a) Costs of satellite transmissions of SHIP messages;b) Lack of qualified personnel to make observations on board ships;c) Costs for maintenance of meteorological instruments;d) Costs to keep qualified personnel training ship personnel in the methods of meteorological conventional observation; ande) Lack of qualified personnel to deal with development and implementation of masking and quality control programmes and softwares, whichcompromise the submission of the data to the GCC. |
|  |  |
| **h.** | **Research / development / testing:** |
| Although JCOMM have organized several workshop/seminar and training for VOS-SOT program in order to present the characteristics and operational requirements of the programs, such as the recommended forms of transmission, data processing, softwares for electronic logbooks and data management (callsign masking scheme, quality control data) and other related material, difficulties related to the costs to send a representative have forbidden the Brazilian Navy to take part in such events. |
|  |  |
| **i.** | **Other comments** |
|  |