|  |  |  |  |
| --- | --- | --- | --- |
|  | **VOS Report for 2016** | **Country =** | **INDIA** |
|  |
|  | **a.** | **Programme description:** |
| **Category** | **No. of ships at** **31 Dec 2016** | **Recruitments in 2016** | **De-recruitments****In 2016** | **Comments** |
| *Selected* |  |  |  |  |
| *Selected AWS* |  |  |  |  |
| *VOSClim* | 32 | 13 | 3 | I-RAWS installed in 3 ships were discontinued due to system failure and logistical issues. Hence the number of active I-RAWS systems reduce to 32 |
| *VOSClim AWS* |  |  |  |  |
| *Supplementary* |  |  |  |  |
| *Supplementary AWS* |  |  |  |  |
| *Auxiliary* |  |  |  |  |
| *Auxiliary AWS* |  |  |  |  |
| *Real-time ship mounted wave height meter* | 1 |  |  |  |
| **National VOS Total** | 33 |   |  |  |
|  |  |  |  |  |  |
|  | **National VOS Target** |  |  |  |  |  |
|  | **National VOSClim Target**  | 100 |  |  |  |  |
|  |  |  |  |  |  |  |
|  | **b.** | **Data management:** |
|  | *Total number of ship observations (BBXX) distributed on the GTS in 2016* | Exact number to be obtained |
|  | *Dates when VOS data submitted to the GCCs in 2016* |  |

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| --- | --- | --- |
|  | c. | **Shipboard Automatic Weather System** |
| **Type** | **No. of ships at 31 Dec 2016** | **Manual Input****Yes / No** | **Method of Comms** | **Year1 Plans** |
| Indian Real-time AWS system (I-RAWS) | 32 | Nil | INSAT satellite | 15 |
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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 |  | Setra – Barometer 270 |
|  |  |
|  |  |
| *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 |  |  |
|  |  |  |
| Sea Surface Temperature |  | Wetlab FLNTUS - Ecco |
|  |  |  |
| Wind Speed |  | Gill - Ultrasonic |
|  |  |  |
| Wind Direction |  | Gill - Ultrasonic |
|  |  |  |
|  |  |  |
|  |  |  |

|  |  |
| --- | --- |
| **f.**  | **PMO ship visit activities: (if a visit is for dual purposes, include all purposes)** |
| **Activity** | **Manual Ship**  | **AWS****Ship** | **Comment** |
| Routine VOS inspections |  |  |  |
| 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:** |
| Integrating the instruments with Indian satellite (INSAT)Convincing the shipping companies for installationsUtilization of the data for ocean services |
|  |  |
| **h.** | **Research / development / testing:** |
| Published the results in high impact factor Journals such as JAOT, Ocean Engineering, IEEE |
|  |  |
| **i.** | **Other comments** |
| I-RAWS system helps in a big way for providing realiable Ocean State Forecasts (OSF) for a wide sprectrum of users. This serves as an assimilation dataset as well as an evaluation tool of various OSF activities. |