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| --- | --- | --- | --- |
|  | **VOS Report for 2015** | **Country =** | **United States** |
|  |
|  | **a.** | **Programme description:** |
| **Category** | **No. of ships at** **31 Dec 2015** | **Recruitments in 2015** | **De-recruitments****In 2015** | **Comments** |
| *Selected* | 134 | 3 | 12 |  |
| *Selected AWS* | 12 | 0 | 2 |  |
| *VOSClim* | 13 | 1 | 0 |  |
| *VOSClim AWS* | 5 | 1 | 0 |  |
| *Supplementary* | 387 | 33 | 22 |  |
| *Supplementary AWS* | 16 | 1 | 0 |  |
| *Auxiliary* | 175 | 22 | 17 |  |
| *Auxiliary AWS* | 3 | 0 | 0 |  |
| *Other* | 0 | 0 | 0 |  |
| **National VOS Total** | 745 |   |  |  |
|  |  |  |  |  |  |
|  | **National VOS Target** | 600 |  |  |  |  |
|  | **National VOSClim Target**  | 300 |  |  |  |  |
|  |  |  |  |  |  |  |
|  | **b.** | **Data management:** |
|  | *Total number of ship observations (BBXX) distributed on the GTS in 2015* | 479,583 |
|  | *Dates when VOS data submitted to the GCCs in 2015* | Monthly |

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|  | c. | **Shipboard Automatic Weather System** |
| **Type** | **No. of ships at 31 Dec 2015** | **Manual Input****Yes / No** | **Method of Comms** | **Year1 Plans** |
| **Integrated** using compliant e-logbook and ships instrumentation. | 16 | yes | VSAT/Ships email | - |
| **Integrated** using no e-logbook | 15 | Yes | EMAIL |  |
| Autonomous | 0 | 0 | n/a | Plan on purchasing (amount TBD) Autonomous AWS with data-logger and using TW |
|  |  |  |
|  | **d.** | **Electronic logbooks: (TurboWin, SEAS, OBSJMA)** |
| **Software & version** | **No. of ships at**  **31 Dec 2015** | Implementation plans |
| AMVER SEAS 2K | 4 | Upgrade to Turbowin e-logbook asap |
| AMVER/SEAS 8.00/5.37 | 3 | Upgrade to Turbowin e-logbook asap |
| AMVER/SEAS 8.00/6.54 | 24 | Upgrade to Turbowin e-logbook asap |
| AMVER/SEAS 8.00/6.57 | 284 | Upgrade to Turbowin e-logbook asap |
| SEAS AUTOIMET 9.1.4.2.2  | 10 | TBD |
| TW+ 2.2 | 59 |  |
| TW+ 2.4.0 | 8 |  |
| TW+ 2.4.7 | 8 |  |
|  | TW+ 2.4.9 | 3 |  |
|  | TW 4.0 | 2 |  |
|  | TW 4.5 | 6 |  |
|  | TW 5.0 | 1 |  |

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| **e.** | **Standard Meteorological Equipment: (Types and Settings)** |
| **Equipment Type / Element** | **Manual Instrumentation** | **AWS Instrumentation** |
| Barometer | Belfort AneroidFischer AneroidAquatech Digital DBX1Meteograf Digital Mintaka Duo  | RM Young 61201-integrated AWSVaisala PTB330-integrated AWS |
| *Default national setting* | *Mean Sea Level* | *Mean Sea Level* |
| Barograph | Aquatech Digital DBX1Meteograf DigitalMintaka Duo | RM Young 61201-integratedVaisala PTB330-integrated AWS |
| *Default national setting* | *Mean Sea Level* | *Mean Sea Level* |
| Thermometers | Mason Hygrometer-Glycol Glass- Zeal P2505Extech RH300 Psychrometer-DigitalPHT-771 Prostat Digital Psychrometer | RM Young 26800-integratedRM Young 41372VC-integrated |
| Sea Surface Temperature | Insulated Sea Temperature Bucket Model 2170-TX | SBE-38 (Sea Bird 38)-integratedSBE-32 (Sea Bird 32)-integratedSBE-21 (Sea Bird 21)-integratedSBE-19 (Sea Bird 19)-integrated |
| Wind Speed | Estimated | R M Young-integratedVaisala WMT700 Ultrasonic-integratedVisalia-Integrated-integratedIMET WIND Sensor-integratedRM Young 5106-integrated |
| Wind Direction | Estimated | R M Young-integratedVaisala WMT700 Ultrasonic-integratedVisalia-Integrated-integratedIMET WIND Sensor-integratedRM Young 5106-integrated |

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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 | 794 | 8 |  |
| VOS recruitment visits | 35 | 1 |  |
| VOS de-recruitment visits | 0\* | 0 | ***\*No visits***: 2015, 4 decommissioned, 1 sank, 52 scrapped, 10 no longer wanted to participate in VOS, changed from inactive to derecruited. |
| VOS courtesy or foreign visits | 63 | 0 |  |
| *Total visits to VOS* | 901 |  |
| Routine ASAP inspections | 1 |  |  |
| ASAP recruitment visits | 0 |  |  |
| ASAP de-recruitment visits | 0 |  |  |
| ASAP courtesy visits | 1 |  |  |
| *Total visits to ASAP* | 2 |  |  |
| Routine SOOP visits | 1 |  |  |
| SOOP recruitment visits | 0 |  |  |
| SOOP de-recruitment visits | 0 |  |  |
| SOOP courtesy visits | 0 |  |  |
| *Total visits to SOOP* | 1 |  |  |
| Visits in support of DBCP (drifting buoys) | 5 |  |  |
| Visits in support of Argo (profiling floats) | 0 |  |  |
| *Total visits to other programs* | 8 |  |  |
| **Total visits by national PMOs** | 909 | *Sum of all ship visits (VOS + ASAP + SOOP) + visits to other program (DBCP + Argo)* |
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| **g.** | **Major challenges and difficulties:** |
| -The travel caps (past and present-most likely future) places constraints on travel needed to visit ships and obtain training for the PMO’s on new protocols and skill sets. Over the past year VOS management has initiated bimonthly calls in the continued effort to afford proper networking and problem solving among the PMO’s, regional offices and management. In addition, monthly training on various aspects of PMO tasks have been performed via WEBEX and this training is available by placing these sesions on the VOS website for future reference. Telecoms and training webinars provide opportunity for team work and best practices but nothing can take the place of on hands training and yearly workshops.-The mandate to switch from AMVERSEAS e-logbook to TurboWin e-logbook has enhanced the US VOS program by normalizing and standardizing within JCOMM SOT. Challenges to this change of e-logbook use for the PMO’s; the ability to visit some of the remote ships that continue to use the old non-compliant AMVERSEAS software. In addition, some of the shipping companies take it upon themselves to distribute the AMVERSEAS e-logbook to their fleet. Hence the 342 ships that are identified as using AMVERSEAS e-logbook.  |
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| **h.** | **Research / development / testing:** |
| **-**AWS- Autonomous units are being researched and all specifications have been decided. A RFP has been developed for possible purchasing in FY17.-iVOS database upgrades and development. Pub 47 v. 4 is now in production.-U.S. VOS video – purpose/training and program overview-ENCODE software (necessary to take the marine observations in FORMAT 101 from TurboWin (compressed message) and code it to BUFR) has been received and the process towards integration into our data collection process at the SEAS SERVER is actively being developed.  |
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| **i.** | **Other comments** |
| -None |