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|  | **VOS Report for 2016** | **Country =** | **SPAIN** |
|  |
|  | **a.** | **Programme description:** |
| **Category** | **No. of ships at** **31 Dec 2016** | **Recruitments in 2016** | **De-recruitments****In 2016** | **Comments** |
| *Selected* |  |  |  |  |
| *Selected AWS* |  |  |  |  |
| *VOSClim* |  |  |  |  |
| *VOSClim AWS* |  |  |  |  |
| *Supplementary* |  |  |  |  |
| *Supplementary AWS* |  |  |  |  |
| *Auxiliary* |  |  |  |  |
| *Auxiliary AWS* |  |  |  |  |
| *Other* | 5 |  |  | These ships do not transmit data through the GTS. |
| **National VOS Total** |  |   |  |  |
|  |  |  |  |  |  |
|  | **National VOS Target** |  |  |  |  |  |
|  | **National VOSClim Target**  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  | **b.** | **Data management:** |
|  | *Total number of ship observations (BBXX) distributed on the GTS in 2016* | **NO DATA.**Two ships send the data to the IEO Data Center once a day (data are collected on boards the ships each 1 minute) and the others three to the CSIC Data Center. |
|  | *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** |
| Automatic meteorological Station  | **2**R/V Ramón Margalef R/V Angeles Alvariño |  | Daily email to IEO Data Center |  |
| Automatic meteorological Station | **3**R/V HespéridesR/V Sarmiento de GamboaR/V García del Cid |  | Data sent to the CSIC Data Center in real time every 10 seconds. |  |
|  |  |  |
|  | **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** |
| BarometerYES |  | AANDERAA Scanning Unit 3010 Station (*R/V Hespérides)* |
|  | Geonica Meteodata Station (*R/V Sarmiento de Gamboa*) |
|  | AANDERAA Scanning Unit 3010 Station (*R/V* *García del Cid)* |
|  | AANDERAA Automatic weather Station AWS 2700 *(R/V R. Margalef)* |
|  | AANDERAA Automatic weather Station AWS 2700 *(R/V A. Alvariño)* |
| *Default national setting* | ***Station Level or Mean Sea Level*** | *Station Level or Mean Sea Level* |
| ThermometersYES |  | AANDERAA Automatic weather Station AWS 2700 *(R/V R. Margalef)* |
|  | AANDERAA Automatic weather Station AWS 2700 *(R/V A. Alvariño)* |
|  | AANDERAA Scanning Unit 3010 Station (*R/V Hespérides)* |
|  | Geonica Meteodata Station (*R/V Sarmiento de Gamboa*) |
|  | AANDERAA Scanning Unit 3010 Station (*R/V García del Cid)* |
| Sea Surface TemperatureYES |  | AANDERAA Automatic weather Station AWS 2700 *(R/V R. Margalef)* |
|  |  | AANDERAA Automatic weather Station AWS 2700 *(R/V A. Alvariño)* |
| **Wind Speed**YES |  | AANDERAA Automatic weather Station AWS 2700 *(R/V R. Margalef)* |
|  | AANDERAA Automatic weather Station AWS 2700 *(R/V A. Alvariño)* |
|  | AANDERAA Scanning Unit 3010 Station *(R/V Hespérides)* |
|  | Geonica Meteodata Station (*R/V Sarmiento de Gamboa*) |
|  | AANDERAA Scanning Unit 3010 Station (*R/V García del Cid)* |
| Wind DirectionYES |  | AANDERAA Automatic weather Station AWS 2700 *(R/V R. Margalef)* |
|  | AANDERAA Automatic weather Station AWS 2700 *(R/V A. Alvariño)* |
|  | AANDERAA Scanning Unit 3010 Station *(R/V Hespérides)* |
|  | Geonica Meteodata Station (*R/V Sarmiento de Gamboa*) |
|  | AANDERAA Scanning Unit 3010 Station (*R/V García del Cid)* |
| Humidity |  | AANDERAA Automatic weather Station AWS 2700 *(R/V R. Margalef)* |
|  | AANDERAA Automatic weather Station AWS 2700 *(R/V A. Alvariño)* |
|  | AANDERAA Scanning Unit 3010 Station *(R/V Hespérides)* |
| YES |  | Geonica Meteodata Station (*R/V Sarmiento de Gamboa*) |
|  | AANDERAA Scanning Unit 3010 Station (*R/V García del Cid)* |
| Solar radiationYES |  | AANDERAA Scanning Unit 3010 Station (*R/V Hespérides)* |
|  | AANDERAA *Automatic weather Station AWS 2700*  (Ramón Margalef) |
|  | AANDERAA *Automatic weather Station AWS 2700*  (Angeles Alvariño) |
|  | Geonica Meteodata Station (*R/V Sarmiento de Gamboa*) |
|  | AANDERAA Scanning Unit 3010 Station (*R/V García del Cid)* |

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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 |  |  |  |
| 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)* |
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| **g.** | **Major challenges and difficulties:** |
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| **h.** | **Research / development / testing:** |
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| **i.** | **Other comments** |
|  |