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|  | **SOOP Report for 2018** | **Country =** |  |  | **AUSTRALIA** |
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|  | **a.** |  |  | **Programme description:** |
| **Line** | **Agency** | **XBT/XCTD/CTD/pCO2** | **Sampling mode (if applicable), eg High Density, Frequently repeated, ad hoc etc** | **No. of Ships** | **No. of Ship Riders** **(if applicable)** |
| IX01 | BOM | XBT | FRX+ | 1 | N/A |
|  | IX12 | BOM | XBT | FRX | 0 | N/A |
|  | PX11-IX22 | BOM | XBT | FRX | 1 | N/A |
|  | PX02 | BOM | XBT | FRX | 3 | N/A |
|  | IX28 | CSIRO | XBT, SST/SSS, pCO2, TCO2, alkalinity, pigments, fluorescence, macronutrients | HDX | 1 | 8 |
|  | PX30 | CSIRO | XBT | HDX | 2 | 1 |
| PX34 | CSIRO | XBT | HDX | 1 | 1 |
| PX32 | CSIRO | XBT | HDX | 1 | 1 |
|  | RAN | XBT | Operational requirements and or hydrographical surveying |  | N/A |

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|  | **b.** | **Data management** |
|  | **Agency** | **No. of BUFR messages sent to the GTS in 2018** | **Delayed-mode data archive location (external)** | **Originating bulletin header** |
|  | BOM | **Total: 1589** 9V8218 (776), VNVZ (548), VRDE7 (48), VRGE3 (92), VRDP4 (125) | US NODC, AODN | AMMC |
|  | CSIRO | **Total: 1046** 9V3505 (210), 9V9713 (103), D5BG5 (51), FASB (582), OWKF2 (100) | US NODC, AODN | AMMC |
|  | RAN | **Total: 138** (SHIP) | RAN (not distributed) | AMMC |

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|  | **c.** | **Major challenges and difficulties:** |
|  | **BOM:** IX12 remains unoccupied and has not been sampled since early 2016. Some shipping changes were required for PX02. Despite numerous efforts, real-time communications **via Argos** could not be established on the Northwest Sanderling (VNVZ).**CSIRO:** Shipping routes remain a challenge, with ships continually going off the PX30 and PX34 runs. We have substituted PX32 for PX34 until another ship becomes available. PX32 will continue to replace PX34 indefinitely. Shipping on PX30 may be discontinued and we may need to find alternatives in conjunction with the science users. |
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|  | **d.** | **Research / development / testing:** |
| **BOM:** With input from CSIRO, an **Iridium** transmitter was developed for use with the Bureau's Ocean Temperature Profiler. Real-time decoding software was also written to process this new data stream. This new comms system has now been successfully implemented on VNVZ and some PX02 ships, resulting in improved real-time data delivery from these ships. **CSIRO:** Funding has been obtained from CSIRO to build an autolauncher. The build is underway and the system will be operational in 2019. |
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|  | **e.** | **Other comments:** |
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