The Global Ocean Observing System for Climate

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Annual Report

Ocean Climate Observation Program

Climate Program Office
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The Ten Climate Monitoring Principles

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1. The impact of new systems or changes to existing systems should be assessed prior to implementation.

2. A suitable period of overlap for new and old observing systems is required.

3. The details and history of local conditions, instruments, operating procedures, data processing algorithms, and other factors pertinent to interpreting data (i.e., metadata) should be documented and treated with the same care as the data themselves.

4. The quality and homogeneity of data should be regularly assessed as a part of routine operations.

5. Consideration of the needs for environmental and climate-monitoring products and assessments, such IPCC assessments, should be integrated into national, regional, and global observing priorities.

6. Operation of historically uninterrupted stations and observing systems should be maintained.

7. High priority for additional observations should be focused on data-poor regions, poorly observed parameters, regions sensitive to change, and key measurements with inadequate temporal resolution.

8. Long-term requirements, including appropriate sampling frequencies, should be specified to network designers, operators, and instrument engineers at the outset of system design and implementation.

9. The conversion of research observing systems to long-term operations in a carefully planned manner should be promoted.

10. Data management systems that facilitate access, use, and interpretation of data and products should be included as essential elements of climate monitoring systems.