

WMO – WIS Manual (2023)	CoreTrustSeal Requirements	Survey Questions
<p>Principle 1: Information is a valued asset</p> <p>1.1 An information asset is information that has value. This value may be related to the cost of generating and collecting the information, a value associated with the immediate use or a value associated with the longer term preservation and subsequent reuse of the information.</p> <p>1.2 This value should be recognizable and quantifiable, and the asset should have an identifiable lifecycle. Risks associated with, and to, an information asset should also be identified. As such, information management must be considered an integral part of a climate data centre’s responsibilities and needs to be adequately resourced over the full lifecycle of the information.</p>	<p>R00: Background Information and Context (defines the information managed and its value);</p> <p>R01: Mission & Scope (addresses data management mission of data center);</p> <p>R03: Continuity of Service (addresses services provided and long-term risks);</p> <p>R06, R09, R10, and R13 cover understanding and preserving value to designated users.</p>	
<p>Principle 2: Information must be managed</p> <p>2.1 An information asset must be managed throughout its lifecycle, from creation to use to eventual disposal, in a way that makes it valuable, maximizes its benefits and reflects its value in time and its different uses.</p> <p>2.2 Information managers must consider the entire information lifecycle, from identifying needs and business cases to creating, quality assurance, maintenance, reuse, archiving, and disposal. Careful consideration must be given to disposal, ensuring that information is destroyed only when it has ceased to be useful for all categories of users.</p> <p>2.3 Professionally qualified and adequately skilled staff with clear roles and responsibilities should apply a sound custodianship framework concerning security, confidentiality, and other statutory requirements of different types of information.</p>	<p>R02 and R04 address statutory, legal, ethical requirements;</p> <p>R05 and R06 cover availability of appropriate staffing, skills, and expertise;</p> <p>R01, R03, and R13 cover business case and identification of user needs;</p> <p>R07-R11 cover information management over the life cycle;</p> <p>R14, R15, and R16 cover availability of appropriate technical infrastructure, data storage management, and security procedures.</p>	

<p>Principle 3: Information must be fit for purpose</p> <p>3.1 Information should be developed and managed in accordance with its function and use for internal and external users.</p> <p>3.2 Data centres should regularly assess information to ensure that it is fit for its purpose and that processes, procedures, and documentation are adequate.</p> <p>3.3 Processes should be consistent with the general provisions and principles of quality management.</p>	<p>R08, R10, and R13 in particular address relevance and understandability for designated users;</p> <p>R07-R10 address quality management;</p> <p>R03, R07, R09, R10, R11, R13, and R14 address ensuring continued value over time.</p>	
<p>Principle 4: Information must be standardized and interoperable</p> <p>4.1 Information must be stored and exchanged in standardized formats to ensure wide usability in the short and long term. It is essential for long-term archiving that information is stored in a form that can be understood and used after several decades.</p> <p>4.2 Standardization is essential for structured information such as data set definitions and metadata to support interoperability.</p> <p>4.3 Interoperability is essential for users to utilize information through different systems and software. Open standards help ensure interoperability with their openness and wide adoption across various communities. The use of closed and proprietary standards is strongly discouraged.</p> <p>4.4 Which standards to use depends on the user community and organizational policies. Interoperability requirements should be considered when selecting the standard for internal use and broader dissemination.</p>	<p>R08, R09, and R12 cover file formats & metadata schemas accepted, stored, and distributed.</p> <p>R12 covers use of standard persistent identifiers, searchable and machine-harvestable metadata catalog, and sharing metadata with resource registries.</p>	

<p>Principle 5: Information must be well documented</p> <p>5.1 Climate data centres should comprehensively document information processes, policies, and procedures to facilitate broad and long-term use.</p> <p>5.2 Climate data centres should keep documentation up to date to ensure full traceability of processes along the information lifecycle, particularly for its creation. Previous versions of the documentation should be retained, versioned, archived and made readily available for future use. In addition, versions should be assigned a unique and persistent identifier for future unambiguous identification.</p>	<p>Documentation is controlled to demonstrating compliance with CoreTrustSeal requirements;</p> <p>R07 to R11 cover procedures, workflows, and checks applied throughout life cycle;</p> <p>R07, R12, R14, and R15 cover version management and persistent identifiers for data, metadata, documentation, and software.</p>	
<p>Principle 6: Information must be discoverable, accessible and retrievable</p> <p>6.1 Information should be easy to find through the Web, and for this purpose, the publisher should share discovery metadata with a catalogue service. The catalogue service should include a Web Application Programming Interface (API) to be used by other applications in order to offer user-tailored search portals.</p> <p>6.2 For information to be easily retrievable once discovered, it should be accessible using standard data exchange protocols.</p>	<p>R12 covers searchable catalog service and exchange protocols used;</p> <p>R15 covers need for sufficient bandwidth and other technical infrastructure to serve users;</p> <p>R13 addresses collection of information on what makes data and metadata understandable to designated users.</p> <p>R10 covers providing sufficient quality information for users to assess suitability.</p>	

<p>Principle 7: Information should be reusable</p> <p>7.1 In order to maximize the economic benefits of an information asset it should be made as widely available and as accessible as possible.</p> <p>7.2 The WMO Unified Data Policy encourages the reuse of data and information through the open and unrestricted exchange of core WMO data. The WMO encourages the free and unrestricted exchange of information in all circumstances.</p> <p>7.3 The publisher should provide an explicit and well-defined license for each information item or data set as part of the associated metadata.</p> <p>7.4 The Findable, Accessible, Interoperable and Reusable (FAIR) data principles promote open data with the ultimate goal of optimizing reuse of data. These principles should be followed where possible. Note: Information on the FAIR data principles can be found at: FAIR Principles - GO FAIR (go-fair.org)</p>	<p>R02 covers licensing;</p> <p>R10 and R13 address making data & metadata usable and understandable.</p> <p>R03, R09, R12, R13, and R14 address continuity of utility over time.</p>	
<p>Principle 8: Information management is subject to accountability and governance.</p> <p>8.1 Information management processes must be governed as the information moves through its lifecycle. All information must have a designated owner, steward, curator and custodian. These roles may be invested in the same person but should be clearly defined at the time of creation. A climate data centre with responsibility for managing information should ascertain:</p> <ul style="list-style-type: none"> • General information management practices, procedures and protocols, including well-defined roles, responsibilities and restrictions on managing the information; • Definition and enforcement of appropriate retention policy, taking into account stakeholder needs and variations in value over the information lifecycle; • Licensing and defining and enforcing any access restrictions. <p>8.2 The designated owner should have budget and decision-making authority about preservation and data usage, including passing ownership to another authority.</p>	<p>R01 and R03 address the overall function of the data center with respects to data management;</p> <p>R04 and R05 address applicable legal requirements and governance structure;</p> <p>R02, R04, and R16 address licensing, disclosure risk and management, and physical and digital security.</p> <p>R15 addresses IT infrastructure standards;</p> <p>R11 covers relevant workflows.</p>	

