

# CoreTrustSeal Certification: First-Year Perspectives

*Robert R. Downs*

[rdowns@ciesin.columbia.edu](mailto:rdowns@ciesin.columbia.edu)



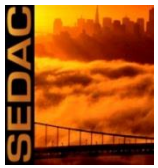
NASA Socioeconomic Data and Applications Center (SEDAC)  
Center for International Earth Science Information Network (CIESIN)  
The Earth Institute, Columbia University

2018 ESIP Summer Meeting

Session: Preparing for the CoreTrustSeal – Insights and Lessons Learned  
Thursday, July 19, 2018; 9:30 a.m. - 11:00 a.m.



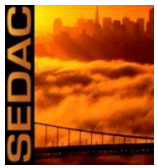
# History of CoreTrustSeal Foundation



- 2014-2016: Convergence of Data Seal of Approval (DSA) and International Council for Science World Data System (WDS) Regular Members Certification Requirements
  - RDA Repository Audit and Certification / DSA–WDS Partnership Working Group
- 2016: Publication of Core Trustworthy Data Repositories Requirements
  - Approved and recommended by Research Data Alliance
  - Pre-approved as a European Commission ICT Technical Specification (2017)
- 2018: Launch of CoreTrustSeal as new certifying organization
  - Founding Standards and Certification Board and Assembly of Reviewers
- 2018: Election of CoreTrustSeal Board by Assembly of Reviewers
  - Elects CoreTrustSeal Standards and Certification Board Members to 3 year terms



# Value in Certification as a Trustworthy Repository



- Improved documentation of processes and procedures
- Benchmark for capabilities and operations
- Needed for membership in ICSU-WDS
  - International community of active data centers
  - Successor to World Data Center system (CIESIN formerly a WDC)
  - Ability to engage with peers in working groups, webinars, biennial conferences (SciDataCon and International Data Week)
  - Representation in related activities and organizations (e.g., Group on Earth Observations, in which ICSU-WDS is a Participating Organization)
- Demonstrated data stewardship capabilities and trustworthiness
- Recognized accomplishment for data stewardship by stakeholders
  - Depositors, users, sponsors, hosting institutions, publishers, and staff
- Greater visibility in international scientific and user communities



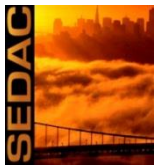


# Obtaining CoreTrustSeal Certification

---

---

---



- Resources to prepare for CoreTrustSeal certification
  - An Introduction to the Core Trustworthy Data Repositories Requirements
  - Core Trustworthy Data Repositories Extended Guidance (webinar & pdf)
  - See <https://www.coretrustseal.org/why-certification/requirements/>
- CoreTrustSeal Application Management Tool
  - Enables entering and submitting CoreTrustSeal application
  - See <https://www.coretrustseal.org/apply/>
- CoreTrustSeal Certification Administrative Fee: EUR 1,000
  - Volume discount of 25% available for umbrella organization certifying 10 or more repositories
  - Repositories in developing countries may request a waiver of the fee
  - See <https://www.coretrustseal.org/apply/administrative-fee/>



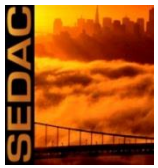


# CoreTrustSeal Review Process

---

---

---



- Data repository submits CoreTrustSeal application (or 3 yr renewal)
  - Online self-assessment application submission, payment of application fee
- Reviewers are assigned to review application
  - Two volunteers from CoreTrustSeal Assembly of Reviewers
- CoreTrustSeal Board assesses reviewer's comments
  - Determination voted on by CoreTrustSeal Board at fortnightly meeting
- Communication of decisions and recommendations to repository
  - CoreTrustSeal Secretariat provides decision and recommendations
  - Repository makes recommended corrections or clarifications
- CoreTrustSeal certification assigned to repository, if applicable
  - Repository may post linked CoreTrustSeal logo on repository website (a dynamic widget with information about certification is in preparation)
  - Linked to Implementation of CoreTrustSeal on CoreTrustSeal website



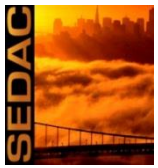


# Future Evolution of CoreTrustSeal Requirements

---

---

---

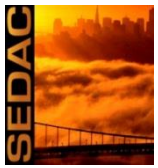


- CoreTrustSeal requirements will evolve
  - Currently Version 01.00
- Changing culture of research data community
  - Need for and value of data stewardship increasingly recognized
  - Publication of sundry principles and practice recommendations
- Improving data curation technology
  - Ongoing enhancements to efficiency and effectiveness of repositories
  - RDA WGs and interest groups, WDS networks and members, etc.
- Evolving data repository practices
  - Repositories are sharing improvements as communities of practice
  - Within and across disciplinary associations: ESIP, CODATA, GEO, ...





# Meeting CTS Preservation Plan Requirement (R10)

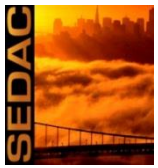


What are some of the preservation levels that repositories are using/referencing?  
(R10 The repository assumes responsibility for long-term preservation and manages this function in a planned and documented way.)

- Compliance Level is proposed by repository, then reviewed
  - CTS Board recommends Compliance Level based on preservation plan
  - Level 3: in process (being implemented); Level 4: Implemented (operational)
- Defined preservation service levels, criteria, process
  - Preservation levels assigned to data products or collections
- Repositories may define a single level of preservation service or specify multiple levels along a continuum
  - E.g. Bit-level preservation (preserve content in original formats)
  - E.g. Ongoing preservation (preserve & maintain content in supported formats)
- Sustainable long-term data preservation
  - Documented procedures, deposit agreement, transformation rights, transfer of custody



# Meeting CTS Quality Control Requirement (R11)



What are some of the preservation levels that repositories are using/referencing?  
(R11. The repository has appropriate expertise to address technical data and metadata quality and ensures that sufficient information is available for end users to make quality-related evaluations.)

- Compliance Level is proposed by repository, then reviewed
  - CTS Board recommends Compliance Level based on QC process description
  - Level 3: in process (being implemented); Level 4: Implemented (operational)
- Documented quality control review processes and procedures
  - Flowcharts, review criteria, reviewer assignments, reviewer instructions
- Scheduled reviews at various data lifecycle stages:
  - Pre-acquisition, development plan, data product development, data product pre-release, post-release
  - Scientific relevance, data product development, data curation, usability
- Publicly accessible documentation of quality assessments
  - Metadata, data documentation, original publication, usage article, ...



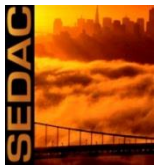


## Related Session at 2018 AGU Fall Meeting

---

---

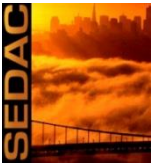
---



- Session ID: 52895
- Session Title: **IN001. Accelerating scientific discovery through data, software, workflow, service, and repository evaluation**
- Section/Focus Group: Earth and Space Science Informatics
- “ ... **This session includes presentations of current assessment efforts around data, software, computational workflows, services, and repositories.**”
- Session Conveners:
  - Robert R. Downs, Annie Burgess, Chung-Yi (Sophie) Hou, H.K. (Rama) Ramapriyan
  - Final Abstract Submission Deadline: 1 August, 11:59 P.M. ET
- Please consider submitting an abstract. The submission link is:  
<https://agu.confex.com/agu/fm18/prelim.cgi/Session/52895>



**Thank you!**



For more information about CoreTrustSeal,  
please visit <https://www.coretrustseal.org/>

