



POSI Self-Assessment

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Summary

Governance

Score	Principle
Compliant/aligned	Coverage across the research enterprise
Compliant/aligned	Stakeholder Governed
Compliant/aligned	Non-discriminatory membership
In progress/less aligned	Transparent operations
Compliant/aligned	Cannot lobby
Not aligned/major gaps exist	Living will
In progress/less aligned	Formal incentives to fulfill mission & wind-down

Sustainability

Score	Principle
Not aligned/major gaps exist	Time-limited funds are used only for time-limited activities
Not aligned/major gaps exist	Goal to generate surplus
Not aligned/major gaps exist	Goal to create contingency fund to support operations for 12 months
Compliant/aligned	Mission-consistent revenue generation
Compliant/aligned	Revenue based on services, not data

Insurance

Score	Principle
Not applicable	Open source
Compliant/aligned	Open data (within constraints of privacy laws)
Compliant/aligned	Available data (within constraints of privacy laws)
Not aligned/major gaps exist	Patent non-assertion

Key

Score	Principle
	Compliant/aligned
	In progress/less aligned
	Not aligned/major gaps exist
	Not applicable

Detailed Assessment

Governance

Coverage across the research enterprise (*Compliant/aligned*)

“It is increasingly clear that research transcends disciplines, geography, institutions and stakeholders. The infrastructure that supports it needs to do the same.” - POSI

As an international organization focused on encouraging best practices in data repositories, WDS aims to have members distributed worldwide, as demonstrated in our WDS membership map¹. Additionally, as all research fields create some form of scientific data, we seek membership from all disciplines, which can be seen through the WDS member directory², which lists the scientific field(s) the member represents. A full description of the membership categories can be found in the WDS Bylaws³. The WDS membership structure includes ways for all stakeholders who support or provide services to data repositories to engage. These stakeholders can also be seen in our membership directory and as listed in the 2025-2027 WDS Action Plan⁴. Finally, WDS hosts the international Early Career

¹ WDS Membership Map: <https://worlddatasystem.org/members/members-map>

² WDS Membership Directory: https://worlddatasystem.org/members/member_directory

³ WDS Bylaws: <https://worlddatasystem.org/about/bylaws>

⁴ World Data System. (2025). World Data System Action Plan 2025-2027. Zenodo. <https://doi.org/10.5281/zenodo.14536641>

Researcher Network⁵ to give early-career researchers opportunities to contribute to WDS's goals.

International Data Week⁶ It is a bi-annual event co-hosted by WDS, the International Science Council's Committee on Data (CODATA), and the Research Data Alliance. It brings together data scientists, researchers, industry leaders, entrepreneurs, policymakers and data stewards from disciplines across the globe to explore how best to exploit the data revolution to improve science and society through data-driven discovery and innovation.

Stakeholder Governed (*Compliant/aligned*)

"A board-governed organisation drawn from the stakeholder community builds more confidence that the organisation will take decisions driven by community consensus and consideration of different interests." - POSI

The World Data System is governed by a Scientific Committee (WDS-SC)⁷ which is composed of leading scientists and experts who are actively involved with data. The Committee includes directors of WDS member organizations and *ex officio* (observer) members, who do not have voting privileges. Past WDS-SC members are also listed online⁸. As stated in the constitution and bylaws, WDS hosts a Members Forum where members not only share updates and challenges, but also have an opportunity to vote on items brought forth by the WDS-SC. https://worlddatasystem.org/members_forum/

⁵ WDS Early Career Research Network: <https://worlddatasystem.org/early-career-researchers-network>

⁶ International Data Week: <https://internationaldataweek.org/about-idw/>

⁷ WDS Scientific Committee: <https://worlddatasystem.org/about/scientific-committee>

⁸ Past WDS-SC members: <https://worlddatasystem.org/past-wds-sc-members>

Non-discriminatory membership (*Compliant/aligned*)

“We see the best option as an “opt-in” approach with a principle of non-discrimination where any stakeholder group may express an interest and should be welcome. The process of representation in day to day governance must also be inclusive with governance that reflects the demographics of the membership.” - POSI

As shared in the WDS Constitution in section 4.4, “At least four members (one-third) of the WDS-SC shall be executive leads of WDS Member Organizations,” which means that at least four data repository executives serve on the governing body. Although not currently visible, included in calls for nominations for WDS-SC members, the WDS-SC encourages nominations that maintain a balance of gender, academic discipline, and geographic representation. Additionally, the three WDS ECR co-chairs rotate to serve as an *ex officio* member to give a voice to the early career audience and to provide them experience in board service.

Transparent operations (*In progress/less aligned*)

“Achieving trust in the selection of representatives to governance groups will be best achieved through transparent processes and operations in general (within the constraints of privacy laws).” - POSI

The World Data System follows the member approved constitution and bylaws. The constitution⁹ states in Article IV the composition of the WDS Scientific Committee, including responsibilities, positions, schedules and support provided to the SC. Article VI shares details on the WDS Executive Committee and its composition. The Terms of Reference of the ISC World Data System Scientific Committee is provided in the Appendix. Additionally, the WDS bylaws (Article II.2)¹⁰ shares that the WDS Scientific Committee will appoint one of its members to co-chair each WDS sponsored working group.

⁹ WDS Constitution: <https://worlddatasystem.org/about/constitution/>

¹⁰ WDS Bylaws: <https://worlddatasystem.org/about/bylaws/>

Cannot lobby (*Compliant/aligned*)

“The community, not infrastructure organisations, should collectively drive regulatory change. An infrastructure organisation’s role is to provide a base for others to work on and should depend on its community to support the creation of a legislative environment that affects it.” - POSI

The World Data System does not lobby for regulatory change as this is not in the organization’s mandate. However, WDS does offer endorsements¹¹ of various initiatives, such as POSI, that aid the scientific community in demonstrating global leadership in data governance.

Living will (*Not aligned/major gaps exist*)

“A powerful way to create trust is to publicly describe a plan addressing the condition under which an organisation would be wound down, how this would happen, and how any ongoing assets could be archived and preserved when passed to a successor organisation. Any such organisation would need to honour this same set of principles.” - POSI

As an Affiliated Body of the International Science Council, the WDS needs to coordinate with our parent organization to better define how the organization would transfer to another. Although the WDS International Program Office has transferred from Japan to the United States in the past (2021), written and publicly displayed information on the steps is not available. The only assets transferred in the past were the website content and access to a Google Drive containing the WDS Scientific Committee minutes and documents. WDS has work to do here.

Similarly, the ITO has not formally documented sufficient continuity plans for a living will. The ITO Director has begun preliminary work to understand the range of options

¹¹ WDS Endorsements: <https://worlddatasystem.org/endorsements>

available and will coordinate with the host organizations (University of Victoria and Ocean Networks Canada), the ISC and funders on a viable approach.

Formal incentives to fulfil mission & wind-down (*In progress/less aligned*)

“Infrastructures exist for a specific purpose and that purpose can be radically simplified or even rendered unnecessary by technological or social change. If it is possible the organisation (and staff) should have direct incentives to deliver on the mission and wind down.” - POSI

WDS’s mission is to support worldwide data repositories and services in becoming or maintaining their trustworthiness. As long as there are data to be stored, WDS will be necessary. Additionally, repositories and services greatly need guidance on sustainability, how to continue to evolve after seed funding is received and spent, hence our interest in POSI. Finally, the evolution of technology, specifically AI, is making the WDS mission even more important as data repositories and services will continue to require support to build their path forward.

Sustainability

Time-limited funds are used only for time-limited activities (*Not aligned/major gaps exist*)

“Day to day operations should be supported by day to day sustainable revenue sources. Grant dependency for funding operations makes them fragile and more easily distracted from building core infrastructure.” - POSI

WDS is currently funded through bilateral cooperation with WDS-IPO and WDS-ITO. The WDS-IPO is funded by a five-year cooperative agreement with the U.S. Department of Energy Office of Science. The WDS-ITO has been mostly funded by the Digital Research Alliance of Canada, and is currently seeking more diversified funding. Thus, WDS is currently dependent on this grant funding. We agree that this dependency can make an organization

“more easily distracted from building core infrastructure” and will consider ways to obtain more stable and diversified revenue source(s).

Goal to generate surplus (*Not aligned/major gaps exist*)

“Organisations which define sustainability based merely on recovering costs are brittle and stagnant. It is not enough to merely survive, it has to be able to adapt and change. To weather economic, social and technological volatility, they need financial resources beyond immediate operating costs.” - POSI

As WDS is currently dependent on time-limited grant funds, there is currently no way to generate a surplus. Again, WDS will explore ways to generate a surplus as we review the time-limited funds challenge.

Goal to create a contingency fund to support operations for 12 months (*Not aligned/major gaps exist*)

“A high priority should be generating a contingency fund that can support a complete, orderly wind down (12 months in most cases). This fund should be separate from those allocated to covering operating risk and investment in development.” - POSI

As the WDS is currently funded by time-limited grant funds, there is no current plan to build a contingency fund to support the organization’s operations to wind down. This sustainability challenge will be addressed with WDS leadership and the Scientific Committee.

Mission-consistent revenue generation (*Compliant/aligned*)

Potential revenue sources should be considered for consistency with the organisational mission and not run counter to the aims of the organisation. For instance...” - POSI

WDS potential revenue sources are evaluated to ensure they meet the mission of the organization and are compatible with the organization’s current action plan.

Revenue based on services, not data (*Compliant/aligned*)

“Data related to the running of the research enterprise should be a community property. Appropriate revenue sources might include value-added services, consulting, API Service Level Agreements or membership fees.” - POSI

The World Data System does not currently charge members for our services. Data is provided to members and the general public via annual reports and updates to the current Action Plan¹².

Insurance

Open source (*Not applicable*)

“All software required to run the infrastructure should be available under an open source license. This does not include other software that may be involved with running the organisation.” - POSI

As the World Data System offices do not host a specific data repository or service, our infrastructure is centered on running the organization.

Open data (within constraints of privacy laws) (*Compliant/aligned*)

“For an infrastructure to be forked it will be necessary to replicate all relevant data. The CC0 waiver is best practice in making data legally available. Privacy and data protection laws will limit the extent to which this is possible.” - POSI

WDS supports the call for CC0 waivers on its relevant data, as demonstrated by publishing our presentations, posters, and publications in our Zenodo community¹³ and posting of recorded presentations and workshops videos to our website¹⁴. Likewise, a public

¹² WDS Action Plan and annual updates: <https://worlddatasystem.org/action-plan-update-2025/>

¹³ WDS Zenodo community: https://zenodo.org/communities/icsu_wds/

¹⁴ WDS past webinars: <https://worlddatasystem.org/webinars/wds-webinars-past-recordings/>

archive of our member newsletter and Early Career Researcher Network newsletter¹⁵ is provided online. Furthermore, all WDS members agree to the WDS Data Sharing Principles¹⁶ which emphasizes that data should be shared openly by default but allowing for restrictions based on legal and ethical reasons.

Available data (within constraints of privacy laws) (*Compliant/aligned*)

“It is not enough that the data be made “open” if there is not a practical way to actually obtain it. Underlying data should be made easily available via periodic data dumps.” - POSI

WDS-IPO research utilizes Dryad to make its research data available, as this is the repository that our hosting organization, University of Tennessee, offers¹⁷.

In general, WDS-ITO is planning to deposit research data with the University of Victoria Dataverse, which is CoreTrustSeal certified and a World Data System member. Other data repositories may be used on a case-by-case basis on the relevant discipline and project partners.

Patent non-assertion (*Not aligned/major gaps exist*)

“The organisation should commit to a patent non-assertion covenant. The organisation may obtain patents to protect its own operations, but not use them to prevent the community from replicating the infrastructure.” - POSI

Patents have not been considered as an output by the World Data System. Further discussions with the Scientific Committee and the organizational leadership will be needed to determine whether a covenant will be established or is needed.

¹⁵ WDS member and Early Career Researcher Network newsletter archive <https://worlddatasystem.org/wds-newsletter-archive/>

¹⁶ World Data System Data Sharing Principles: <http://worlddatasystem.org/about/data-sharing-principles/>

¹⁷ UTK Dryad access: <https://lib.utk.edu/services/archive-and-share-your-data-with-dryad>