

Review of Climate and Forecast Metadata Conventions Implementation and Operational Suitability

NASA's Earth Science Data Systems Standards Process Group (SPG) is considering the Climate and Forecast (CF) Metadata Conventions, for adoption as a community standard. You are invited to review this Requests For Comment (RFC) in the context of your **implementation experience** with this specification and its **suitability for operational use**. You only need to answer questions that are applicable to you. Please send completed review to:

spg-rfc-021@lists.nasa.gov.

Implementation Experience questions:

1. *(Your background)* Describe in a sentence or two your overall implementation experience related to the proposed specification. (e.g., *specification implementer, tools developer, data provider, scientific analyst, science user, etc.*) Have you directly implemented the CF metadata conventions? Did you use pre-existing software, and if so, what did you use?

We are a Data Center that provides data and data services, develops tools, and conducts scientific analyses. We have directly implemented CF metadata conventions within our netCDF files and in our custom in-house tools such as the Weather and Climate Toolkit and will be employing in Climate Data Record production and dissemination.

2. *(Completeness)* Does the specification (the online documents referenced) provide all the detail you need to implement it in software? (e.g., *to read or write a data file; to implement or modify a profile or extension; or develop a tool such as a metadata translator*) If not, describe what is missing in the specification.

Yes, but some remote sensing-related elements are still missing.

3. *(Accuracy)* Do any parts of the specification contain inaccuracies, or internal inconsistencies? If so, please provide details.

No.

4. *(Clarity)* Is any part of the specification ambiguous, or poorly explained? If so, please provide details.

No.

5. *(Balance)* Does the standard describe the right set of concepts and attributes and enable the appropriate operations for its intended users? In particular, have the guiding principles outlined in section 5.2 been followed in the development of standard names?

Yes.

6. *(Usefulness)* How well does this specification meet your information sharing needs? (e.g., *Does it properly represent and describe your datasets? What are the pros and cons of these metadata convention attributes?*)

It represents the large majority of our datasets but some elements are missing or underdeveloped.

7. *(Implementation)* What implementation challenges does the proposed standard present? (e.g., *does it conflict with other metadata requirements for your data? Is it compatible with the data formats you use?*)

It is compatible with CDM/netcdf4 which is our target data format.

8. *(Flexibility)* In what software environment(s) have you used the CF metadata conventions (e.g., Solaris, Linux, Windows, Mac OS X)?

Linux, Windows.

9. *(Standard Names)* In your opinion, does the standard name table provide an adequately comprehensive set of names for the metadata representation?

Yes

Operational Suitability questions:

10. Do you currently use or plan to use CF conventions in a production setting? What types of applications do you use with CF Conventions? Does the metadata model work well with the data types and data manipulations in your application?

Currently use for current data sets and plan to expand it to both future and legacy sets.

11. Why do you choose to use the CF metadata conventions for your applications?

To promote interoperability with the community and its tools.

12. Have you or your users encountered any difficulty when using some of the data access or visualization tools (e.g., IDL, GrADS, etc.) on files with CF metadata? If you have, please provide a brief description of your experience.

Xxx

13. Does the CF metadata conventions meet your requirements for discovering, accessing, providing interoperability of data and metadata? (e.g., *Can it handle the data types in your applications? Do you provide catalog services that utilize*

CF conventions?)

Mostly, yes.

14. What operational challenges or limitations do the CF metadata conventions present? (*e.g., Does it take a long time to learn how to use it? Does it require advanced processing power, large amounts of memory, complex configuration, etc.*)

Application to legacy datasets and formats is a challenge.

15. What benefits do CF conventions present? Do the benefits of CF conventions outweigh the challenges? (*e.g., Do the conventions offer the flexibility you want to package the data types in your applications? Do they facilitate interdisciplinary studies?*)

Interoperability. Yes.

16. How much data do/ will you provide using these CF metadata specifications? (*number of distinct data products or data sets, total data volume, number of files.*)

PBs.

17. How many users and user-groups do you have or expect to have for data using CF metadata conventions, and what is your expected user community?

Climate and weather communities.

18. (*User comments*) Any additional comments, observations or criticisms of CF metadata conventions and the RFC can be provided here.