

IOOS Compliance Checker

CF Workshop

June 10, 2020

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Outline

- Background
- Metadata Standards
- Use Cases
- Upcoming Milestones



Compliance Checker

U.S. IOOS Overview

U.S. IOOS is a cooperative, coordinated network of federal and non-federal observing networks since 2009, consisting of:

Global Component

- US contribution to Global Ocean Observing System (GOOS)
- 1 of 15 Regional Alliances of GOOS



National Component

- 17 Federal agencies



Regional Component

- 11 Regional Associations
 - Stakeholder driven
 - Academia, state/local/tribal government, private industry



Background

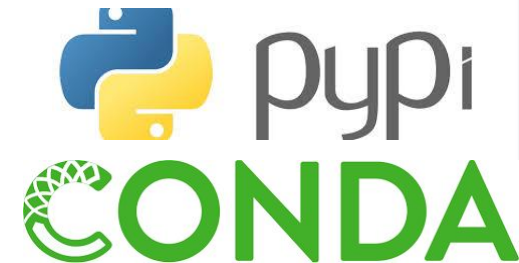


- Python-based tool to check for community standard compliance of local or remote netCDF or CDL files
 - First commit in September 2013
 - Use as command-line tool or integrate into other software
- Install with conda or pip



```
pip install compliance-checker
```

```
conda install -c conda-forge compliance-checker
```



- Text, HTML, and JSON report outputs
- Web Version: <https://compliance.ioos.us>

<https://github.com/ioos/compliance-checker>



27 Contributors



34

Releases



47

Stars

1,44

5

Commits

43

Forks

1

Command Line Interface (CLI)

2

Available on package managers



metadata

standards

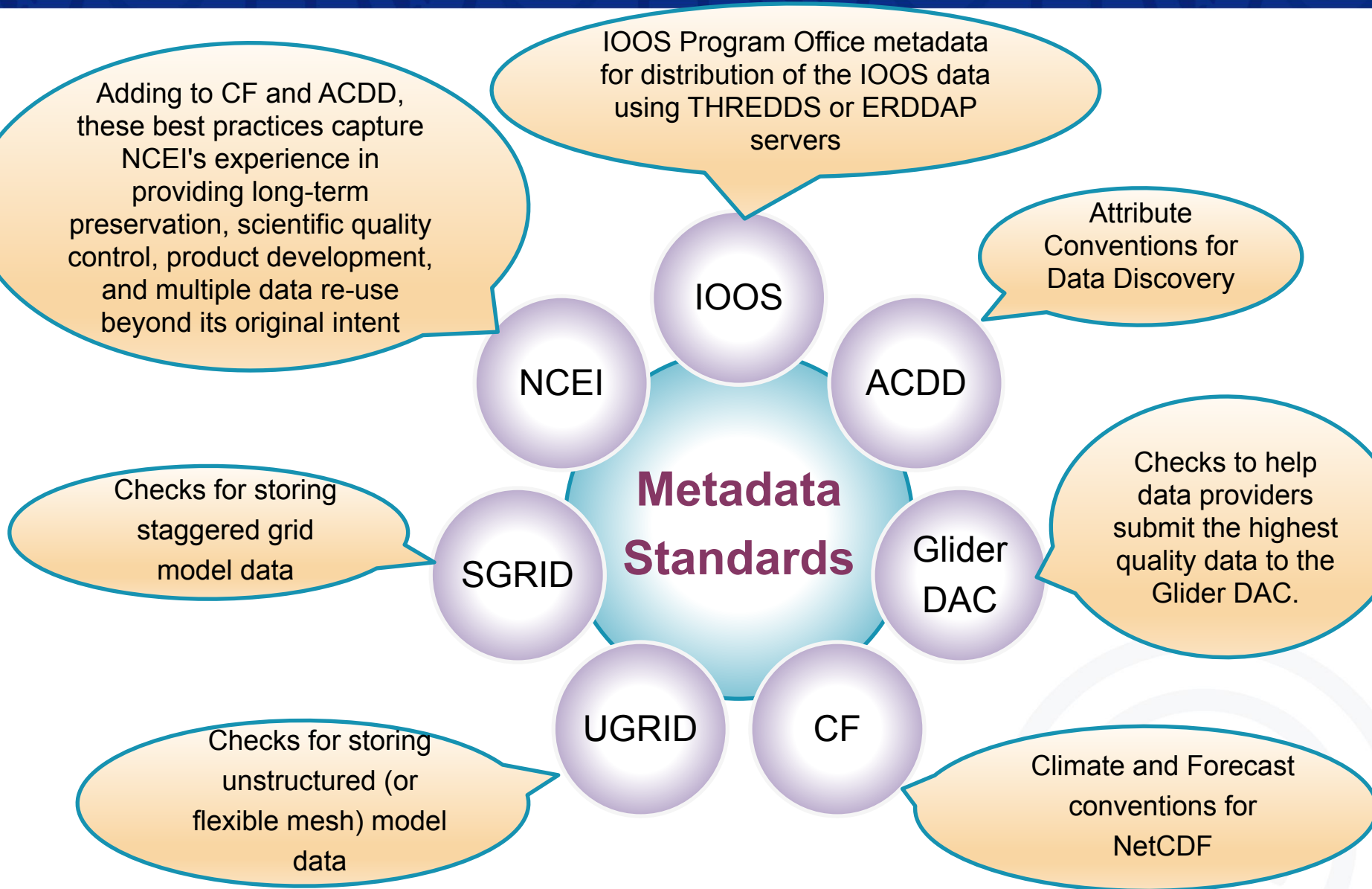
Plugin

5



1

Website



What's Next?

- CF 1.8 checker
- Additional plugin developments
 - * IOOS Profile Metadata
 - * Glider DAC
- Tighter integration with Web Version
 - * Automatically pull latest standard name table

Demo
<https://compliance.ioos.us>

Compliance Checker Web

- Select Metadata Standard and Version
- CF 1.6 and 1.7 currently available
- Upload local netCDF or CDL file

OR...

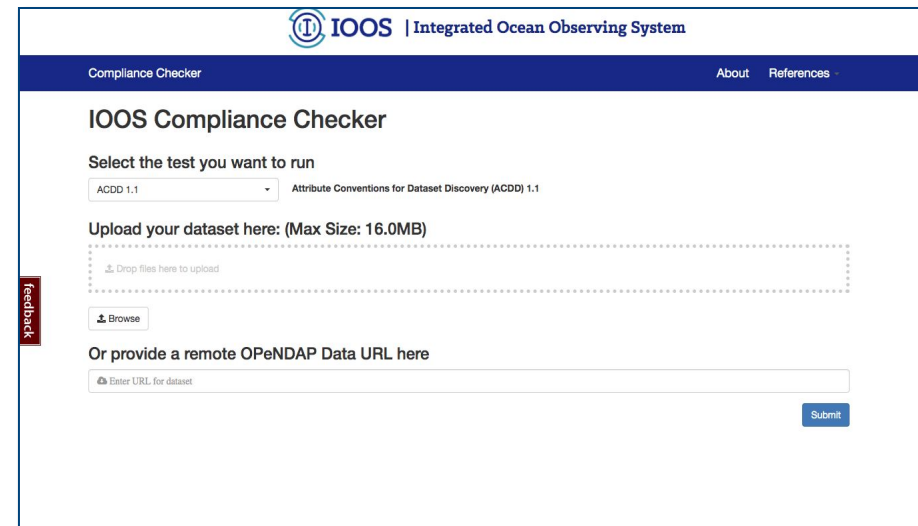
- Provide remote DAP URL
- View HTML report

Additional Features

- Download text report
- API

JSON -

https://compliance.ioos.us/api/run?report_format=json&test=acdd&url=http://sos.maracoos.org/stable/dodsC/hrecos/stationHRMARPH-agg.ncml



The screenshot shows the IOOS Compliance Checker web interface. At the top, it says "IOOS | Integrated Ocean Observing System". Below that, there's a navigation bar with "Compliance Checker", "About", and "References". The main heading is "IOOS Compliance Checker". Underneath, it asks "Select the test you want to run" and shows a dropdown menu with "ACDD 1.1" selected, and "Attribute Conventions for Dataset Discovery (ACDD) 1.1" as the description. Below that, it says "Upload your dataset here: (Max Size: 16.0MB)" and provides a dashed box for file upload with the text "Drop files here to upload". There's a "Browse" button next to it. Below the upload section, it says "Or provide a remote OPeNDAP Data URL here" and has a text input field with a placeholder "Enter URL for dataset" and a "Submit" button.

Compliance Checker Web

IOOS | Integrated Ocean Observing System

Compliance Checker About References

IOOS Compliance Checker Report

For dataset WIS-ocean_waves_ST61001_201712.nc

[Download Report](#)

cf:1.6
Corrective Actions

Errors 3

Name	Reasoning
§3.3 Standard Name	standard_name sea_surface_wave_mean_period_from is not defined in Standard Name Table v49
§3.3 Standard Name	standard_name modifier variance_spectral_density_inverse_frequency_moment for variable waveTm is not a valid modifier according to appendix C
§3.3 Standard Name	standard_name sea_surface_wind_wave_mean_period_from is not defined in Standard Name Table v49
§3.3 Standard Name	standard_name modifier variance_spectral_density_first_frequency_moment for variable waveTm1Windsea is not a valid modifier according to appendix C
§3.3 Standard Name	standard_name sea_surface_wave_mean_period_from is not defined in Standard Name Table v49
§3.3 Standard Name	standard_name modifier variance_spectral_density_first_frequency_moment for variable waveTm1 is not a valid modifier according to appendix C
§3.3 Standard Name	standard_name sea_surface_swell_wave_mean_period_from is not defined in Standard Name Table v49
§3.3 Standard Name	standard_name modifier variance_spectral_density_first_frequency_moment for variable waveTm1Swell is not a valid modifier according to appendix C
§3.3 Standard Name	standard_name sea_surface_wind_wave_mean_period_from is not defined in Standard Name Table v49
§3.3 Standard Name	standard_name modifier variance_spectral_density_inverse_frequency_moment for variable waveTmWindsea is not a valid modifier according to appendix C

Use Cases (Who's Using It?)

- NASA JPL podaac
(physical oceanography distributed active archive center)
<https://podaac-tools.jpl.nasa.gov/mcc/>
Using ACDD and CF checks
GDS2 (Group for High Resolution Sea Surface Temperature Data Spec, Version 2)
- CEDA (Centre for Environmental Data Analysis)
<https://github.com/ukcp-data/cc-plugin-ukcp18>
UKCP18
- IOOS Glider Data Assembly Center
- IOOS data catalog
- Anyone else?