

October 29, 2019 Theory, CI and Joint Forecasting Standards Working Group Call

Attendees: Mike Dietze, Bryce Mecum, Chris, Christine Laney, Alexey Shiklomanov, Rob Kooper

Agenda using Notes from Oct 1 Call:

- Next Steps from Oct 1 Call. Think about for Nov call
 - Look at archiving options and think about **Input Standards**
 - Below are 4 forecasts that Mike shared with the Theory group previously that we can look at for Input Standards
 - Cayelan and Quinn's reservoir forecast is another option
 - Other next steps?
 - Anyone willing to provide leadership on flushing out details around archived standards?
 - For RCN short term goal - is there a specific single archive to have people use? Or do we want to have people have the option for using any of multiple archives and say let us know where you put your forecasts
 - One option - start with assembling and then distribute a few minor tools. Here is your forecast, then we give script that uploads to Zenodo, OSF, etc. That eliminates decision making and gives them the option to archive elsewhere
 - Before now and RCN in May converge on recommended archive. We may need to check in with the archive to make sure they are ready for forecasts to be added
 - We could pick one archive system now. We can still change it if we test it out before May RCN meeting and it doesn't work, then we can make changes if needed.
 - Things to consider:
 - Size limit and size/cost trade-off
 - Metadata is the other main issue. Discoverability (e.g., put all variables for a forecast into one archive, or have each variable for a forecast into individual archives)
 - Do we want the ability to update datasets? This also goes along with reproducibility
 - Need to make sure we know/archive what the true forecast was vs. subsequent reanalysis efforts
 - Alexey - OSF has versioning and has been able to do machine writes. He has not found any issues with size
- **Path forward - create a subcommittee to explore archiving options and provide a recommendation**
 - **Create list of requirements needed.** Then for next call discuss/link to example for the different archiving platforms from people who have experience with each platform

- This could then become a blog post summarizing what we learn to make it more open to the EFI community
 - Alexey volunteers to do this for OSF
 - Check with Ethan and Matt/Bryce for their experiences
- New items
 - NSF RFI on community CI needs (**deadline Dec 16**) [thanks for the heads up Carl]
 - https://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf20015
 - Would be good to submit an EFI-wide response -- if CI drafts I suspect more will sign
 - Shouldn't be a big lift. 200 word abstract. 400 word response to question about current emerging data challenges. 600 word section and 300 word section.
 - This will be an area that NSF will most likely be spending money on in the next round in 2020. This is an opportunity for the things we want to write proposals about. We won't get money now but will have options for writing proposals later and for shaping what the community needs
 - **Google doc with questions, start outlining**
- **Mike to lean on folks to fill in Forecast Standards document**
- Punt Input Standards discussion to lower priority to RFI. Nailing down outputs and archives is higher priority

Email from Mike to Theory group July 22

Here are some **example forecasts** to look at that I know are running iteratively and making near-term forecasts:

* My own group has a forecast of carbon and water fluxes and pools that's accessible through a Shiny app (takes a while to load):

MIKE NEEDS TO UPDATE THIS URL

http://test-pecan.bu.edu/shiny/Willow_Creek/

This one is definitely still beta, and we haven't started writing it up yet, but we can answer any questions on Slack. FYI, this app shows one of our sites (Willow Creek, WI) but we're actually up and running at a couple more so we could look at multiple sites.

http://test-pecan.bu.edu/shiny/Flux_Dashboard/

* Portal rodent forecast: <https://portal.naturecast.org/>

This one also has a paper describing it: <https://besjournals.onlinelibrary.wiley.com/doi/full/10.1111/2041-210X.13104>

* C-HARM -Day Advanced Forecast: Pseudo-Nitzschia, cellular domoic acid, and particulate domoic acid probability, California and Southern Oregon coast <https://coastwatch.pfeg.noaa.gov/erddap/griddap/charmForecast3day.graph>
Project description: <http://sccoos.org/california-hab-bulletin/>

* Atlantic Sturgeon Risk of Encounter forecast: <http://basin.ceoe.udel.edu/shiny/sample-apps/sturgeon/>

Also has a paper: <https://academic.oup.com/icesjms/article/doi/10.1093/icesjms/fsx187/4222666>