

ISTI all participants call

Tuesday July 28th

Present on call: Peter Thorne, Victor Venema, Blair Trewin, David Lister, Kate Willett, Rachel Warren, Albert Klein Tank, Enric Aguilar, Xiaolan Wang, Steven Worley, Michael de Podesta, Renate Auchmann, John Christy, Colin Morice, Peter Domonkos, Stefan Bronnimann, Hermann Machel

Apologies in advance: Richard Chandler, Andrea Merlone, Ian Jolliffe, Matt Menne, Lisa Alexander, Jay Lawrimore (unable to connect)

Actions

ACTION: Peter follow up on Madagascar data for POST

ACTION: Victor Venema to contact Albert Klein Tank regarding ETCCDI involvement in POST.

ACTION: Colin Morice to follow up with David Parker and Jared Rennie on associating databank stations with land-use CCI data to provide land-use (modern) metadata per station.

ACTION: Kate Willett to include Jared Rennie in discussions on CF conventions for stations.

ACTION: Kate Willett to contact Jay Lawrimore and Jared Rennie about linking daily benchmarking dataset on NCEI data homepage.

ACTION: Kate Willett to contact Peter Domonkos about his Spanish project to see if there are any useful linkages between the benchmarking groups.

ACTION: Colin Morice and Victor Venema to discuss possible PhD student

ACTION: Steve Worley to raise land ICOADS in upcoming ICOADS meeting.

Information items

Leaflets for distribution at conferences can be found at http://www.surfacetemperatures.org/promotional_materials - please consider taking to relevant conferences / meetings. Available in English, Spanish, French and German

Please remember that progress reports are due in October. All groups should try to have at least one call between now and then if they can please.

Original etherpad notes

1. General update - Peter

The Parallel observations science team has been instigated and has started working. [see item below]

A new implementation plan was drafted -

http://www.surface temperatures.org/steering-committee/Surface_Temperatures_Initiative_Implementation_Plan_2015_2017_final.pdf?attredirects=0&d=1

The 1-side info sheets have been translated into French, Spanish and German. Available from the website. Please use at relevant conferences / events.

The annual reporting was done (no feedback)

The recent Karl et al. paper used the databank first release for the land side of the analysis and referenced the ISTI databank paper.

2. Updates from groups

2.1 Databank WG - Jay

We are in the process of completing version 1.1.0 of the Databank. This will include some changes to the metadata thresholds and the addition of about 1400 RBCN stations from the GSOD data set that have been added via GHCN-Daily. This addition ensures that all RBCN sites are available for updates in GHCN-Daily and, in turn, the stage 3 ISTI monthly database (MM).

2.2 Data rescue task team - Peter

We tried to have a call in June but ended up sub-quorate. Data rescued continues to be shared with the databank when possible.

2.3 Benchmarking WG - Kate

I've been State of the Climate-ed for months so this has really been parked. I've just started back on it. Victor is visiting for two weeks from Monday 3rd August so my focus for the next month is benchmarking. Working group call planned for during Victor's visit.

2.4 Parallel observations science team - Victor

We have homepage:

http://www.surface temperatures.org/databank/parallel_measurements

and gather a team of interested scientists (20 members and 27 associate members):

http://www.surface temperatures.org/databank/parallel_measurements/members

We are behind schedule on coding the data processing of the database, but on the other hand we have started working actively on the first two papers, on the transition to automatic weather stations for temperature and for precipitation. A first talk on both papers will be presented at EMS2015, two talks on each of the papers at the Data Management Workshop in St. Gallen. We (Enric, Renate, Petr and me) had a meeting in Brno beginning July to outline the papers and the programming of the data processing.

Enric: so far we're working with data from Brazil, Argentina, Australia, Spain, Sweden, Kyrgyzstan, Slovenia, Israel and Peru. At this moment coding in R and working locally in our computers

Having parallel measurements means that we could do a better QC than normal by comparing them with each other. Such a higher quality would be nice to study physical reasons for differences. However, we have decided to use a normal simple QC because we want to focus this paper on what the transition means for the climate record and changes in measurement errors may lead to non-climatic changes in estimates of weather variability or extremes.

We will also compute indices for weather variability. The ETCCDI also plans to introduce such indices in a future expanded set of indices. We should coordinate this. (Because our series are normally short, we cannot compute every ETCCDI index, we will try to stay close to them, next to introducing our own indices.)

Albert: ETCCDI would like to be involved.

VV: Welcome, we planned that already.

ACTION: Victor Venema to contact Albert Klein Tank regarding ETCCDI involvement in POST.

We will use a code repository for the joint coding of the database processing and the analysis for the specific papers. Probably using RedMine. (Alternative would be GitHub. Does anyone have experience with this?) As long as the data is not published, we will simply store it in a cloud server accessible to members only.

GitHub: <https://github.com> (Pay for privacy of your repository)

BitBucket: <https://bitbucket.org/> (Pay for more than 5 collaborators)

Redmine: <http://www.redmine.org/> (No limits, but you need your own server.)

POST Redmine: <http://git.meteo.uni-bonn.de/projects/post>

Learning GIT: <http://swcarpentry.github.io/git-novice/>

<https://www.youtube.com/playlist?list=PLkBeePYo-VCXtMNGDboOL66V-P2-jAoM>

The WMO Regional Association VI for Europe has as one of its priority topics the transition to AWS. They have offered to help us with a survey among their members. Enric has many personal contacts in South America. Difficult are Africa and Asia, while tropical and continental climates likely make a difference. Help to make contacts here is appreciated.

Peter: Did Tim Oakley ever follow up on the Madagascar AWS parallel data that UKMO hold under GCOS program support auspices? Do I need to nudge him/

VV: We did not push much yet, but have now started gathering data. So yes a little nudge would be nice.

ACTION: Peter follow up on Madagascar data for POST

Colin: Can we discuss possible PhD studentship?

VV: Yes.

ACTION: Colin Morice and Victor Venema to discuss possible PhD student

3. Updates from individuals on relevant activities we should be aware of - all

Please place here items of interest ahead of the call that are ISTI relevant.

Peter: A grant proposal has been lodged with the Irish science funders for 5 million euros (26 staff / students!) which would address data rescue, data homogenization and data serving aspects of ISTI with a citizen science focus. It is unclear how likely this is to succeed. Thanks to several ISTI colleagues who provided letters of support / stepped up as potential collaborators.

Peter: Went to the Earthtemp meeting on urban temperatures which was interesting. Raised the question of at what scale urban influence is a contaminant vs. a regional forcing response. For very large urban centres arguably it is a signal not a contaminant. Also that question is application specific. For many applications removing the urban influence is counter-productive e.g. human thermal comfort - the humans are feeling the measured heat not a hypothetical cooler temperature that would exist were it rural!

VV: I would say that it is a question of the station density and the scale you are interested in. For studying global warming urbanization is a problem if you have one station in the urban centre and that one is taken as representative for the country side. If your station network oversamples the urban area and its surrounding, there should be no bias. The urban stations will simply get the small weight they deserve.

VV: Also the issue of preponderance of coastal stations is important.

BT: Steep gradients is an issue generically.

VV: Implications for benchmarking?

CM: David Parker has categorised based upon CCI land-use for databank.

ACTION: Colin to follow up with David Parker and Jared Rennie on associating databank with land-use CCI data.

Peter: I plan to finalize an update on DTR based on the databank and submit by end of August. This has been hanging over me for 5 years!

Kate: I attended the Copernicus Climate Change Service workshop (ECMWF, June) and presented a poster on ISTI. The workshop aimed to gather requirements for the Copernicus Climate Data portal. This is intended to host

high quality products operationally specifically for climate services with a focus on Europe (although not limited to). There was talk of a Land ICOADS (see discussion later), data rescue, data sharing and license/policy, homogenisation and using the maturity matrix for climate data records. I mentioned a need for something like a QA4InSitu akin to QA4ECV (satellite only!) and QA4EO. A multi-variable land meteorological database appears to be at the heart of a lot of these things. I personally think there would be much greater value from Copernicus supporting the work of NCEI (and ISTI) rather than attempting to duplicate. I haven't seen a workshop report yet. The feeling was that data sharing issues (at least in Europe) would be vastly improved in ~10 yrs but at present many NMHSs are unable to make data freely available because their Governments will not make up the shortfall from loss of revenue in sale of data.

BT: Any link to eumetnet data management workshop?

KW: Not clear. Will keep in mind.

AKT: Copernicus will include some funding for quality control and evaluation.

Kate: Through my work with CLIPC I've been investigating Climate Forecasting standard names for in situ data. We are looking at CF standard names for metadata to put in netCDF files containing station data. This may be relevant to the ISTI data that is in netCDF format. Some joining up on this with the Databank working group could be good - and NCEI more generally.

ACTION: Kate to include Jared in discussions on CF conventions for stations.

WMO Congress - data sharing resolution - anyone who can speak to this?

VV: Some background information: <http://variable-variability.blogspot.com/2015/06/Sharing-climate-data-global-framework-climate-services.html> (BT - I think Victor's blog post sums up the situation pretty well as I understand it).

BT: May yield some new data if lucky. Move is towards open data.

VV: Will help those who want to.

Any update from EUSTACE?

Renate: Collected data and coded up break detection.

Update on the daily benchmarks?

Kate: Rachel is now writing up her thesis. She has built daily mean temperature benchmarks for four regions of the USA exploring shelter changes, station moves and urbanisation along with station density. 7 different algorithms have been tested against these benchmarks and Rachel is now running the assessment of their performance. This work is due to be completed by the end of September 2015.

RW: The clean benchmark data will be uploaded to the website once the project is finished.

VV: Thoughts for future work?

RW: Will no longer be blind but could be used still.

ACTION: Kate to contact Jay and Jared about linking daily benchmarking dataset on NCEI data homepage.

VV: Multi element database, iCOADS for land?

Matt Menne: There is growing momentum for building a multi-element land surface station database, which was re-iterated at the recent Coperinus workshop on climate observations at the ECMWF in June. NCEI is nearing completion of a new multi-element monthly dataset that is based on GHCN-Daily and will ultimately integrate the ISTI stage 3/4/5 monthly temperature dataset via GHCN-Monthly v4 and the forthcoming GHCN v3 monthly precipitation databases. This effort will complete the vertical integration of the GHCN-Daily and Monthly. In addition, work is planned to begin in 2016 to re-engineer the sub-daily ISD dataset so that it will be vertically integrated with the daily and monthly datasets. Rough plans are in place to incorporate many of the design principles used to develop GHCN-Daily including a regular reprocessing schedule, easier integration of new sources, continual re-synchronization of source datasets, etc. During this process, NCEI will seek input from international stakeholders with the intent that the overall vertical integration effort can serve as the foundation of a new ICOADS for land (MM).

ACTION: Steve Worley to raise land ICOADS in upcoming ICOADS meeting.

KW talked about import of cross-domain formatting consistency.

Update on GHcnv4? A beta release that include TAVG is planned for October 2015. MAX/MIN/DTR will likely follow sometime in 2016.

Update on the REZATEC activity: REC: this is continuing, but slowly. I have just returned from holiday to a few messages from Rezatec that are clearly designed to reassure me that they are still on the case. When my holiday backlog is under control, I will chase them to find out what timescale they currently envisage.

Enric: just submitted today a proposal to the spanish science ministry to continue research on AWS vs conventional. Cross fingers.

Peter Domonkos: We, in Spain, have a small national project for measuring the efficiency of automatic monthly homogenization methods. It has connections with ISTI project in several points, (homogenization of large datasets needs automatic tools; problems of benchmarking for measuring efficiency, etc.)

ACTION: Kate to contact Peter Domonkos about his Spanish project to see if there are any useful linkages between the benchmarking groups.

4. Upcoming meetings of interest

Peter will give an invited talk on ISTI in the Earthtemp related session at AGU assuming that funding can be cleared.

Blair: Still planning to do something at St. Gallen workshop in October.

Enric: in our meeting in Brno we discussed to have a POST meeting in Sofia (EMS) and in Saint Gallen (DMW).

AOB

Kate: COP21 not looking great for a side event on data. I have spoken to Tim Oakley and Carolin Richter (GCOS) and they were interested but could not lead. Met Office cannot lead - currently trying to join up with other Institutions so that limits topics a lot. Still an outside chance of something in the EU pavillion or a possible link with USA parties? Not 100% sure how much to push on this given other commitments but it would be nice to see.

Could all groups try to have at least one call between now and October? Progress reports shall be due then.