FLASH DROUGHT PROJECT MEETING
8 OCTOBER 2024

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- Potential to share code to the ARC W21C library at Monash, being set up by Michael Barnes. Mike H. already publishes his on the USGS science base.
- Include global regions, e.g. Southern Africa, and look at food security – this is good for Mike's collaborations/time allocation.
- Mike will share his code for the EDDI decomposition. We will meet about this on 12 November (11th Boulder time).
- There are nuances to the decomposition, e.g. using smoothed data rather than daily. Mike will describe how the components of the code need to be run.
- We need to consider the differences and benefits of ERA5 vs ERA5-Land (David spoke to someone from Copernicus regarding this at AMOS this year).
- There is potential to use the double-standardised method from Jason/Jordan's paper, where they have done this for their ESI. As Mike points out, this solves the problem with the EDDI as outlined in Pendergrass et al. – there are spurious results. Reference ET is naturally very variable in some regions. The rapid change type index addresses this shortcoming. Can just use the method and replace ESI with EDDI.
- Mike supports a range of metrics: soil moisture (SSMI), ESI, EDDI, SPI. So we have one state and three fluxes, which can all be run in the rapid change/double standardisation framework.
- We could potentially run all in parallel and see which "flash" at the same time. Some measure of unanimity regarding flash drought, if there.
- The three requirements for flash drought are Flash – Drought – Impacts.
- (Note here: we should remember our earlier conversations about flash drying, or thirst waves.)
- We need to ensure that the code can read a range of data sets, e.g. reanalyses, models, etc. Jess and David have experience with this from ACS drought and aridity work.
- We might also consider later looking at the large ensemble approach to extreme events for some cases (CSIRO).
- Rick McCrae from UNSW Canberra has been in touch with Tess regarding flash drought and fire danger in the region.
- Mike is presenting a talk at AMS in New Orleans regarding the connection between flash drought and wildfire.

Next steps:
We'll meet on 12 November 10:00 AEDT, 11 November 4 pm Boulder time. Mike will present his decomposition method, and explain the code and how it works.