

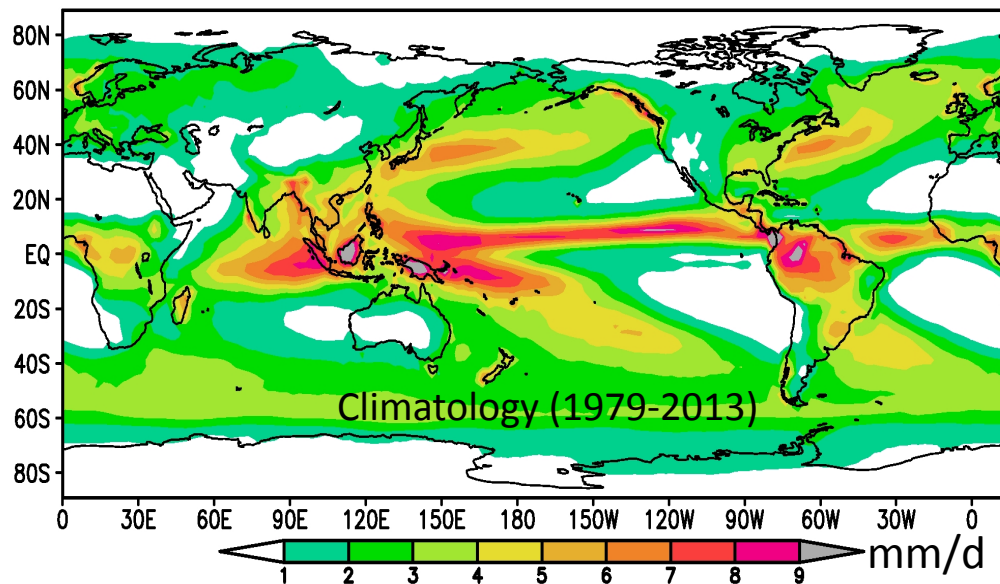
The Global Precipitation Climatology Project (GPCP): Research to Real-time Climate Monitoring

A NOAA Climate Data Record (CDR) Project

Robert Adler, Matt Sapiano, Guojun Gu **University of Maryland**

LARGER GPCP COMMUNITY

Pingping Xie (**NCEP/CPC**), George Huffman and David Bolvin (**NASA-Goddard**), Long Chiu (**GMU**), Udo Schneider (**DWD**), Ralph Ferraro (**NESDIS**)



GPCP CDR Objectives

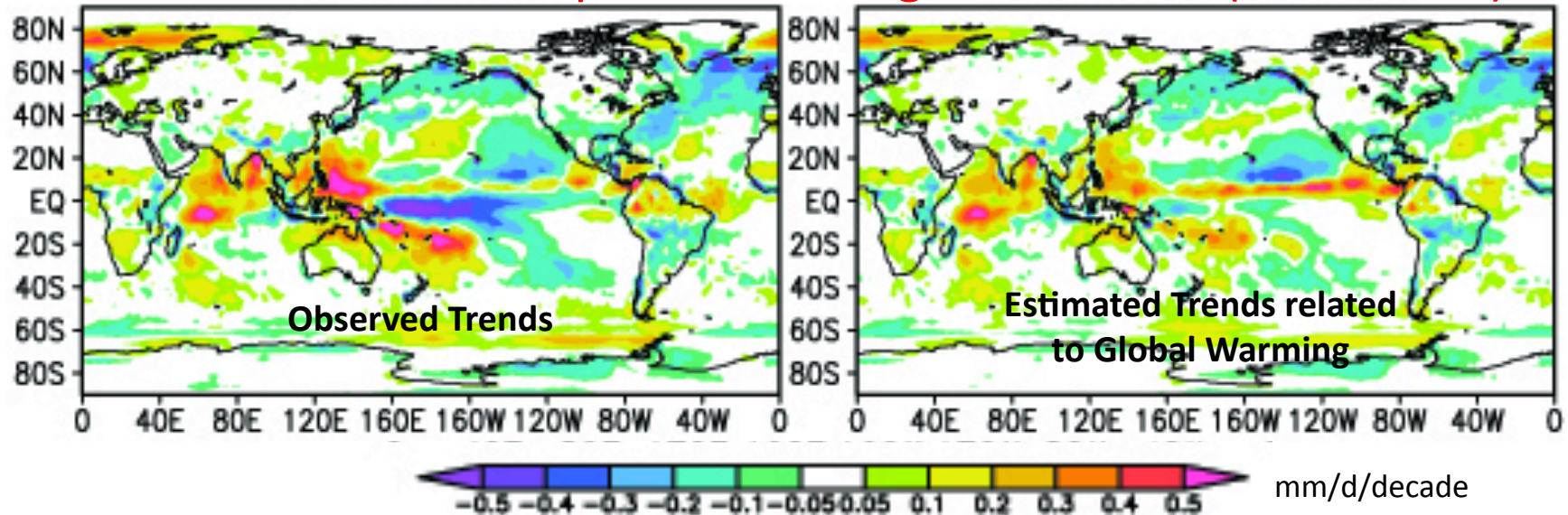
- 1) To successfully update, streamline and integrate the GPCP production code for monthly, pentad and daily products for “automated” production,
- 2) Transfer the routine production of GPCP products to CICS-MD and then to NCDC from the manually driven processing of the Co-Is,
- 3) Develop an “interim” CDR (ICDR) for GPCP monthly for operational climate analysis.

Research into Variations of Global Precipitation using GPCP and other data sets (e.g., TRMM/GPM, CMORPH)

Topics include: Climatology, Trends, Global Warming, PDO, AMO, ENSO, Volcanoes

Example:

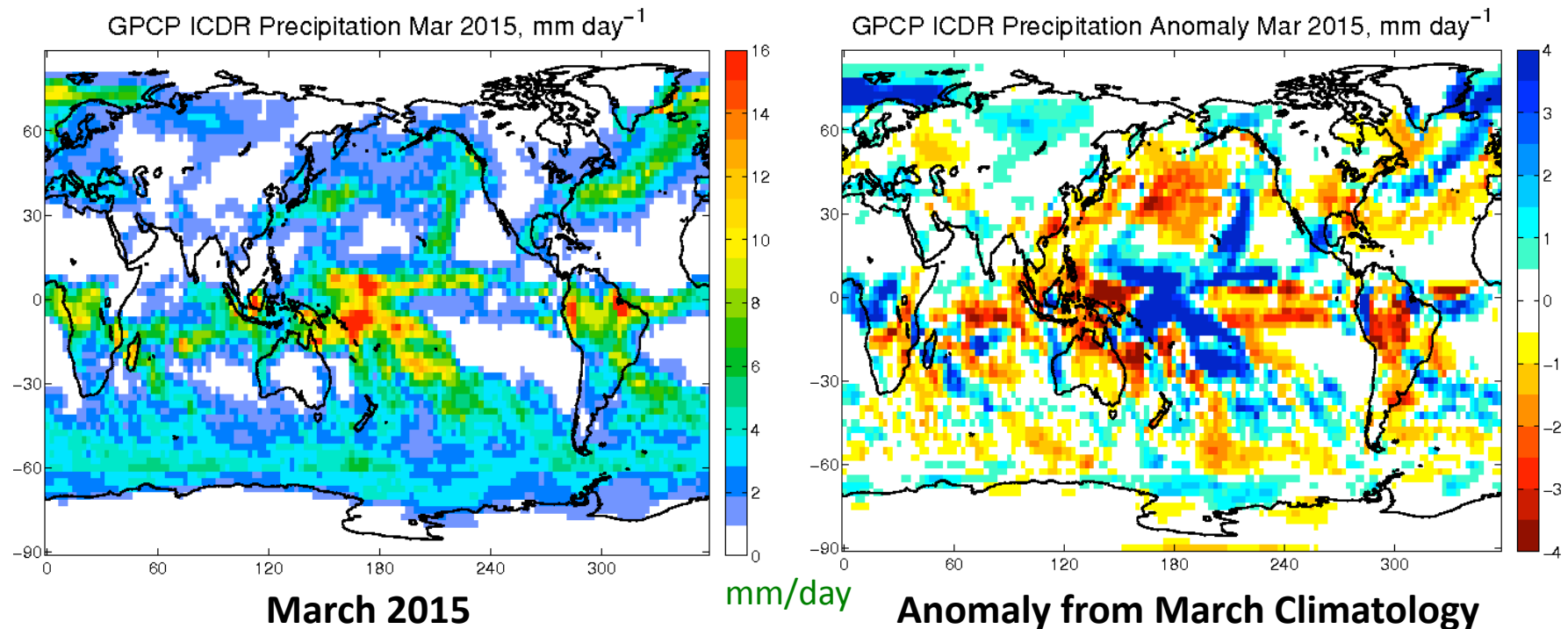
Trends in Global Precipitation During Satellite Era (1979-2013)



Although the trend in global total precipitation is near zero (in GPCP analysis), the pattern of observed regional trends (left panel) is related to Global Warming (GW) plus inter-decadal signals such as PDO and AMO (ENSO impact is small). Right panel shows trend pattern after PDO effect is removed, a better estimate of of GW impact on precipitation regional trends and also a pattern closer to that predicted by CMIP climate models.

Gu, Adler and Huffman (2015) Climate Dynamics (accepted)

Interim CDR GPCP Monthly Analysis for March 2015



An Interim CDR of monthly, global precipitation (within 10 days of the end of the month) is being produced at UMD using almost the same data sources and analysis strategy to produce an estimate of the past month's precipitation that can be used reliably to compare against the research quality GPCP product over the past 35 years.

http://eagle1.umd.edu/GPCP_ICDR/index.htm