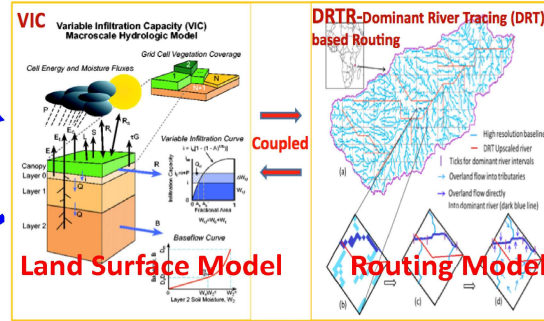
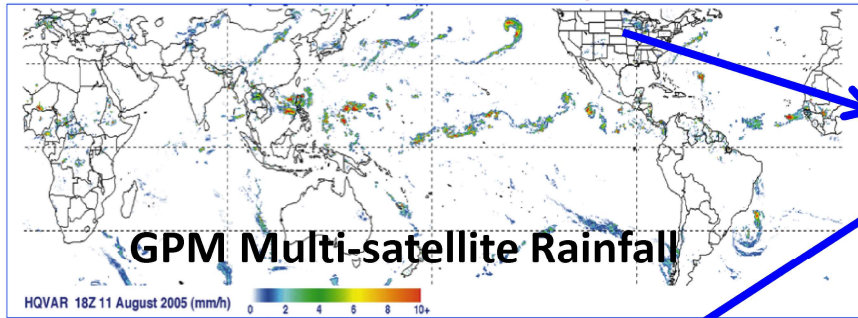


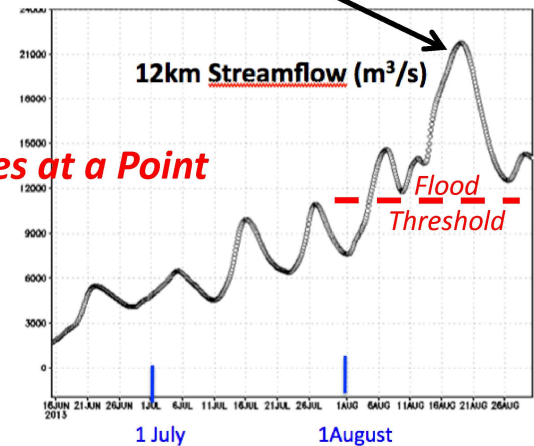
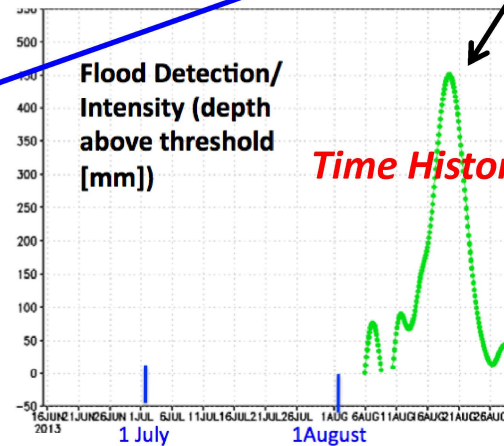
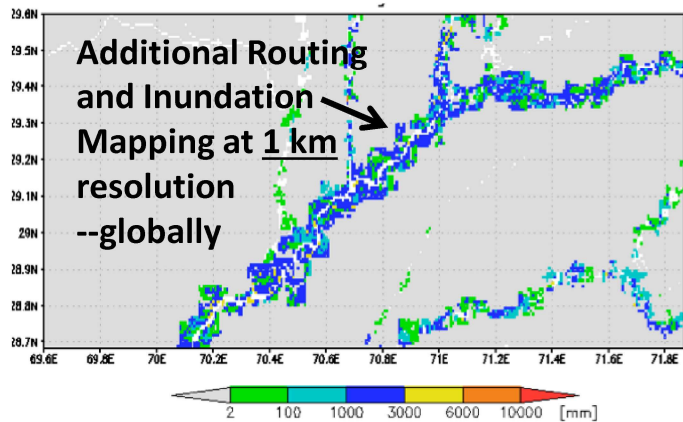
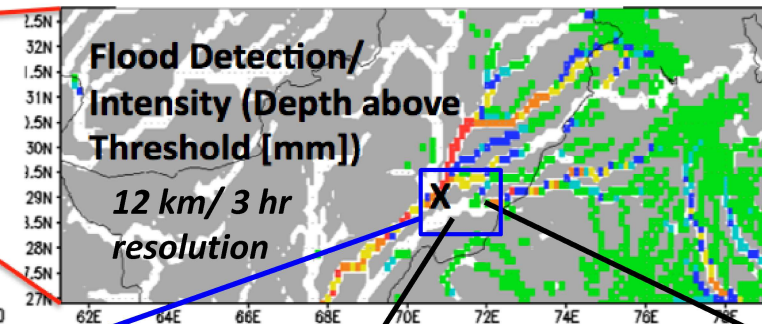
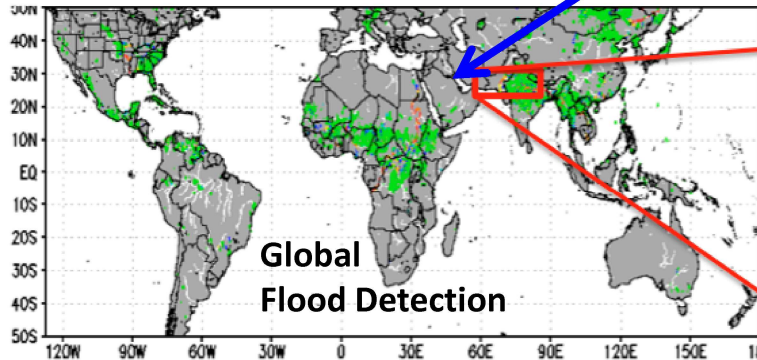
# Global Flood Monitoring System (GFMS)

Robert Adler/Huan Wu-- U. of Maryland

## Global Real-time Flood Calculations Using Satellite Rainfall and Hydrological Model



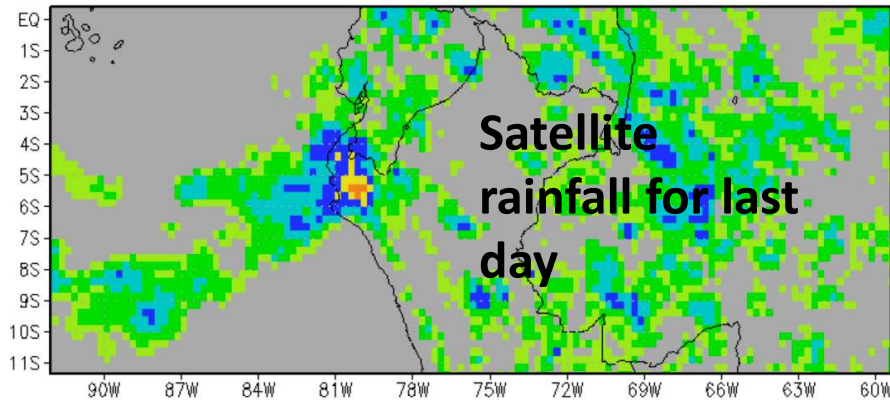
*TRMM/GPM rainfall into land surface and routing models for water depth and stream flow calculations compared to flood thresholds*



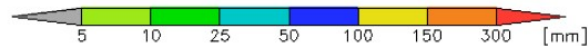
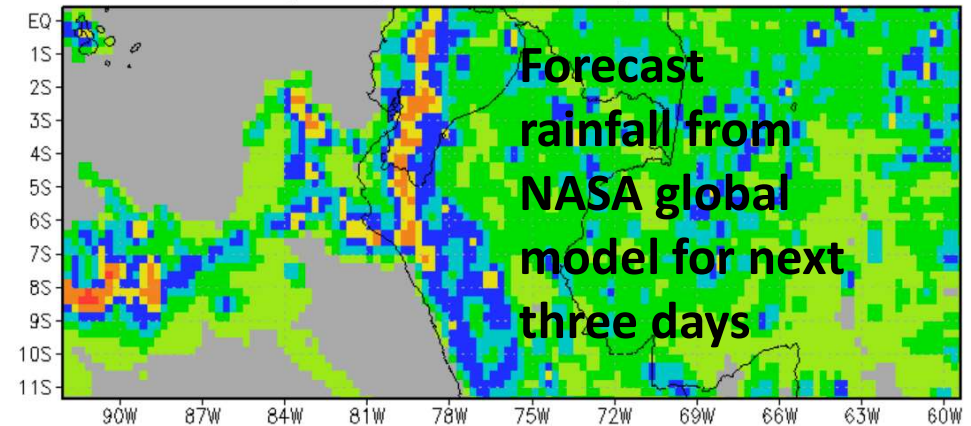
<http://flood.umd.edu/>

## Peru Flooding—Status 26 March 2017

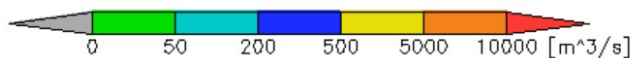
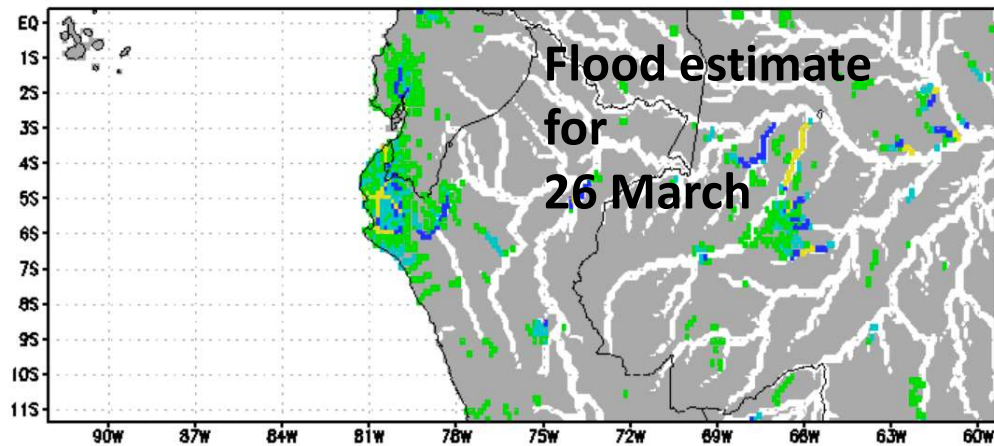
Rainfall (1-day accum.) [mm] 15Z26Mar2017



Rainfall (3-day accum.) [mm] 12Z29Mar2017



Streamflow above Flood Threshold [ $\text{m}^3/\text{s}$ ] 15Z26Mar2017

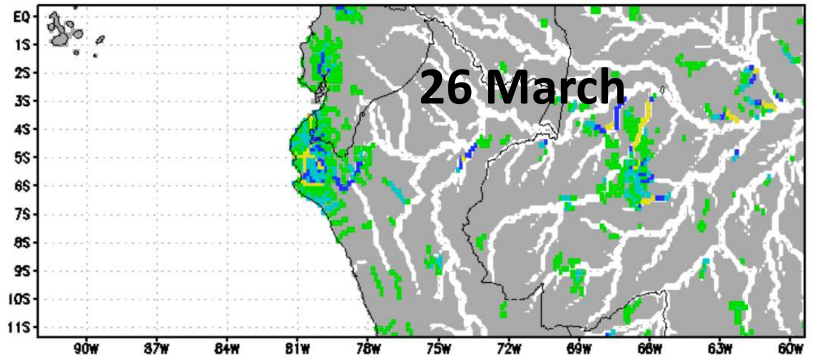


Rain over the last day still concentrated in northwest Peru. Forecast rainfall for next three days from NASA GEOS-5 global model shows continued concentration in northwest (over 150 mm) and along coast to the south. The overview flood calculation from Global Flood Monitoring System (GFMS) [flood.umd.edu] today shows flooding still concentrated in the northwest—forecast flood maps on next slide.

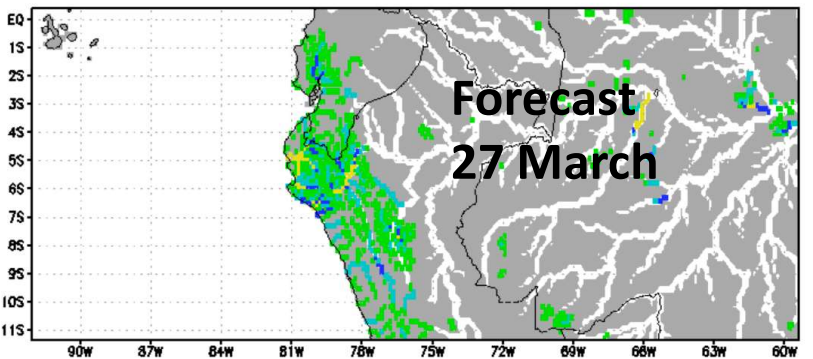


# Forecast of Flooding (Streamflow above Flood Threshold) over 26-30 March

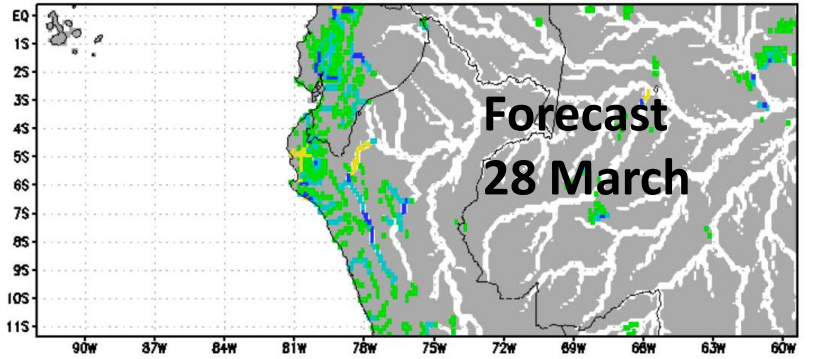
Streamflow above Flood Threshold [ $m^3/s$ ]  
12Z26Mar2017



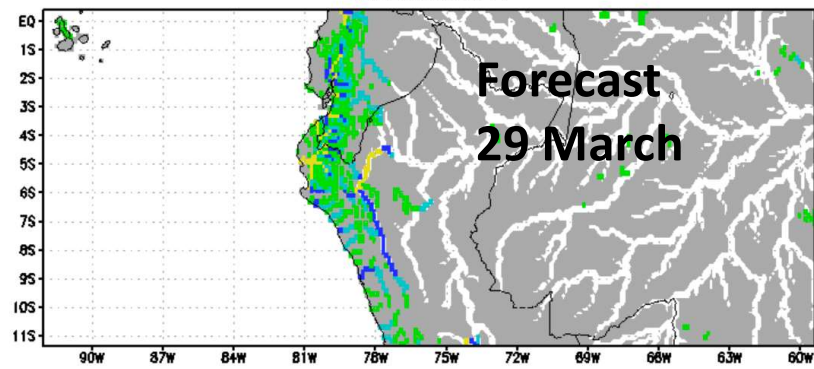
Streamflow above Flood Threshold [ $m^3/s$ ]  
12Z27Mar2017



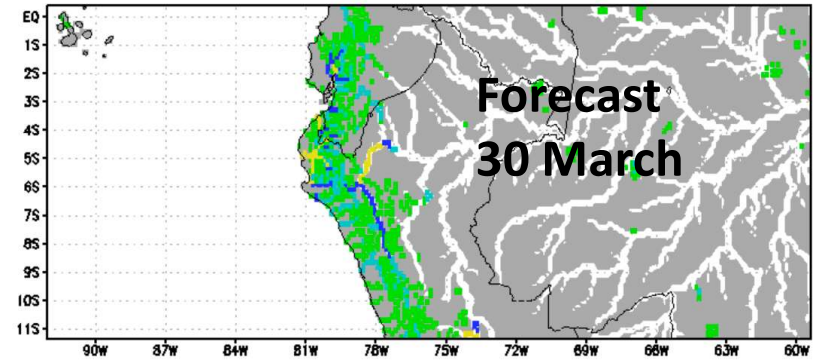
12Z28Mar2017



Streamflow above Flood Threshold [ $m^3/s$ ]  
12Z29Mar2017

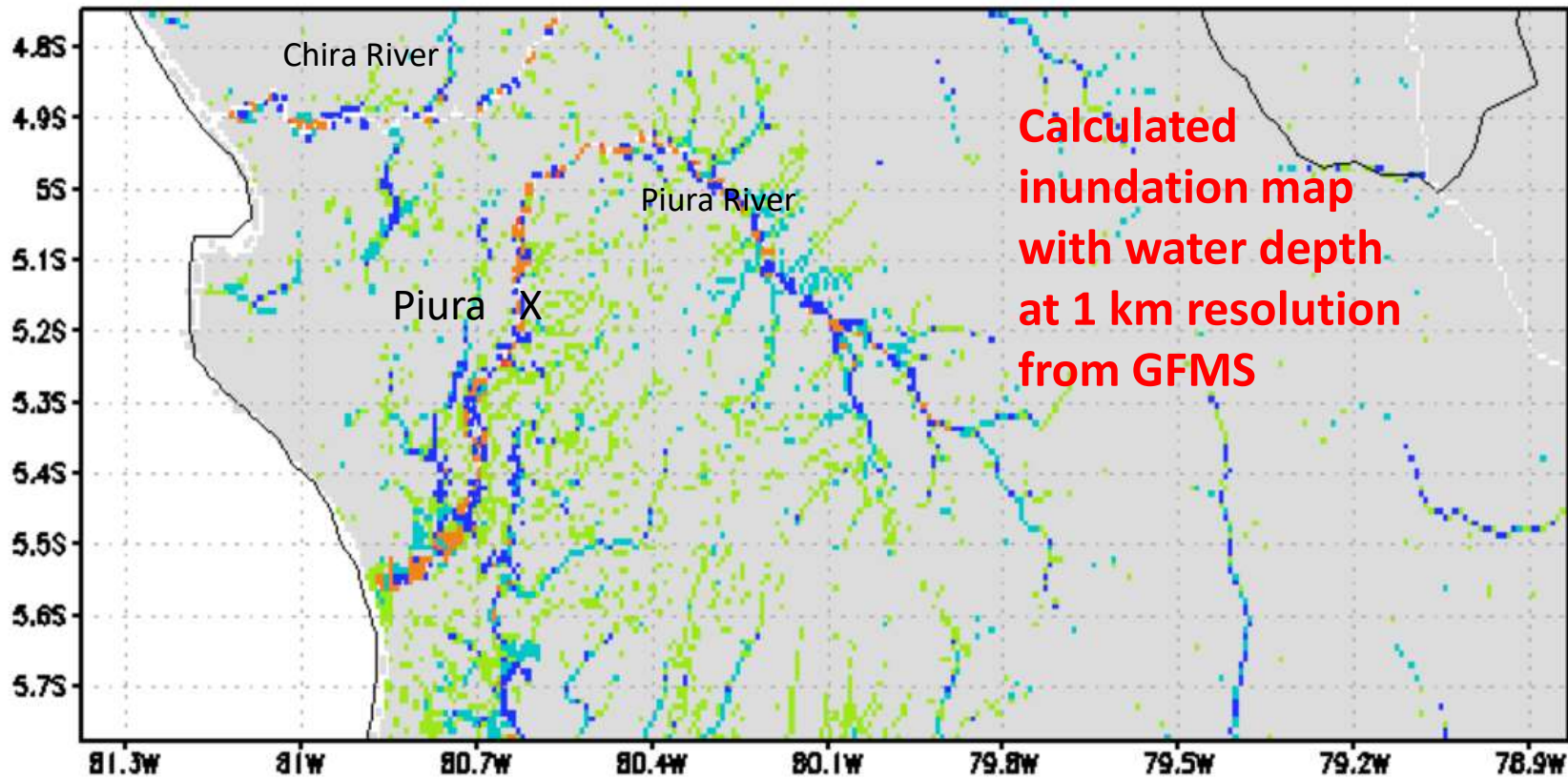


Streamflow above Flood Threshold [ $m^3/s$ ]  
00Z30Mar2017



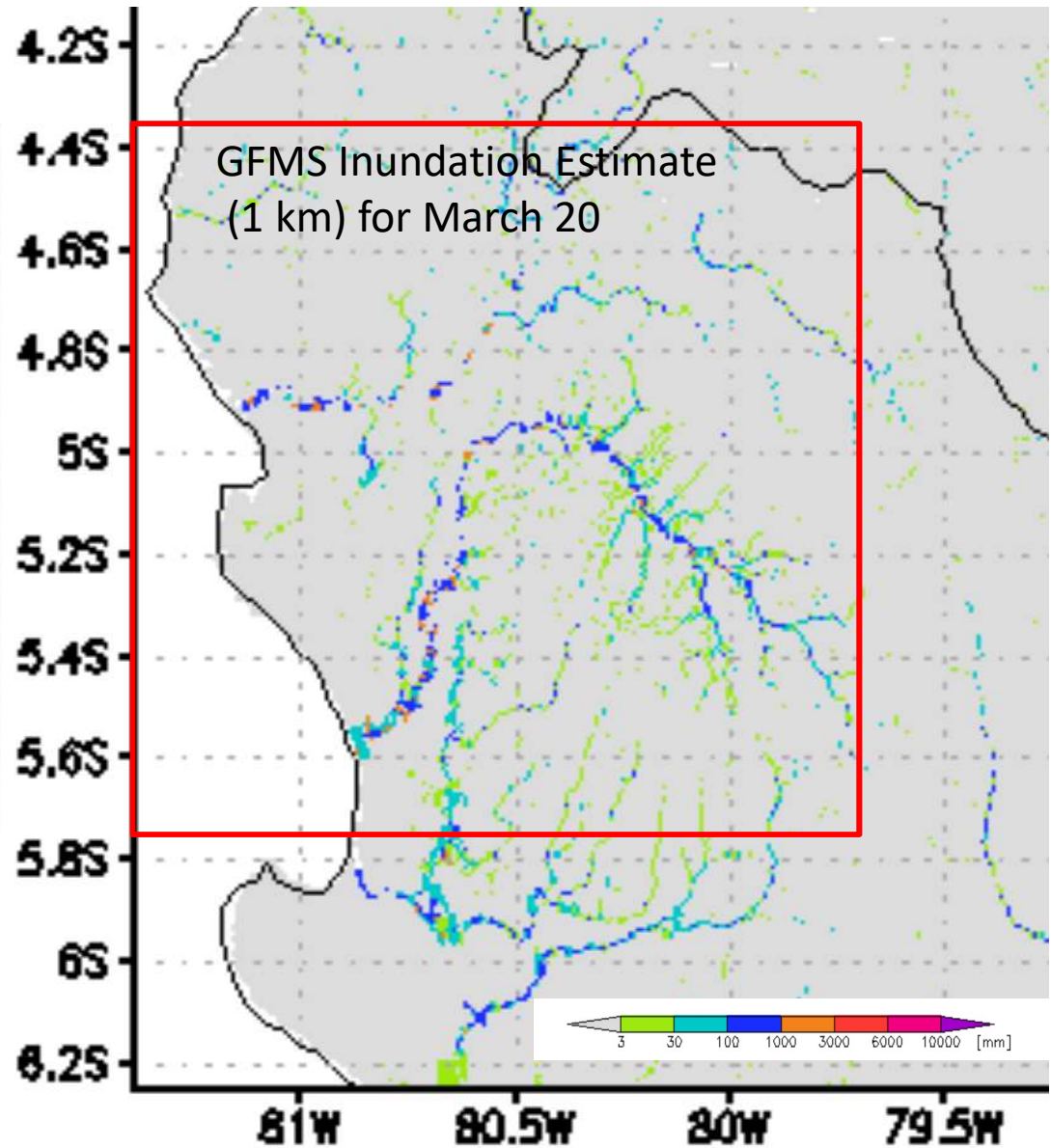
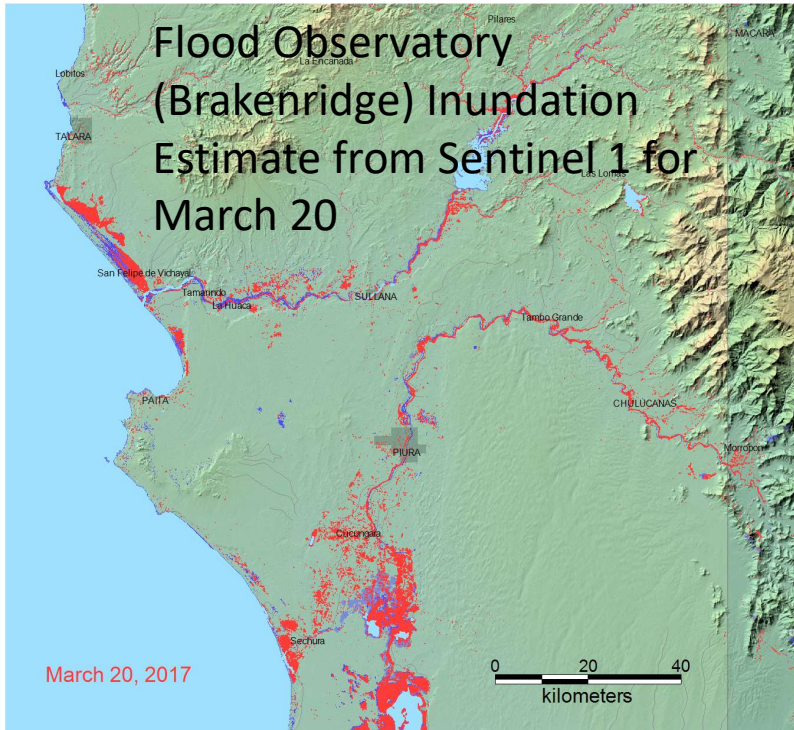
## Inundation Estimate 26 March 2017

Inundation map 1km res. [mm]  
15Z26Mar2017

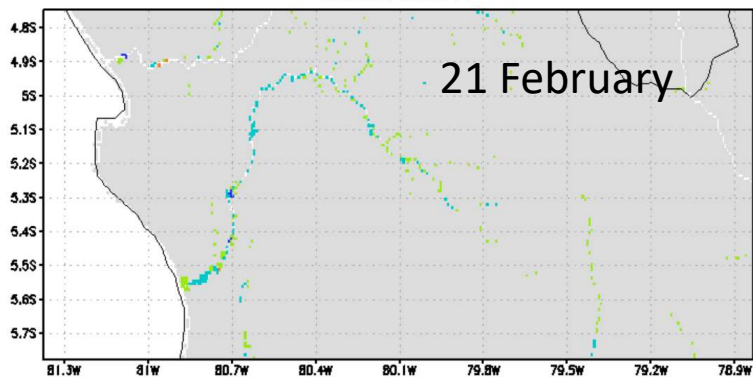




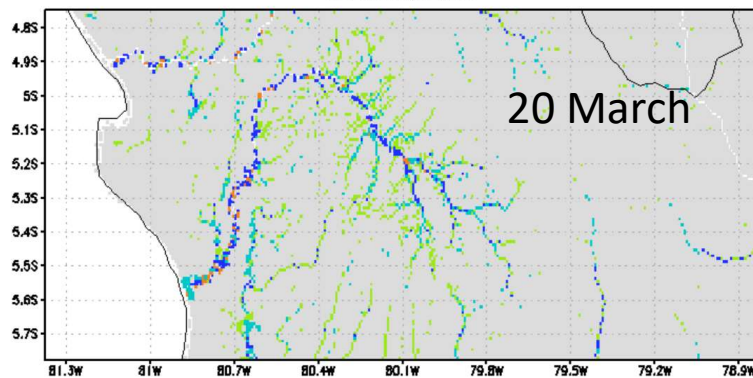
# Comparison of Sentinel and GFMS Inundation Estimates



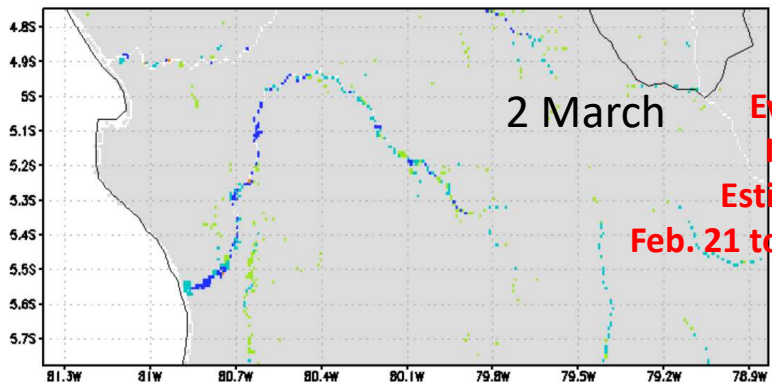
Inundation map 1km res. [mm]  
03Z21Feb2017



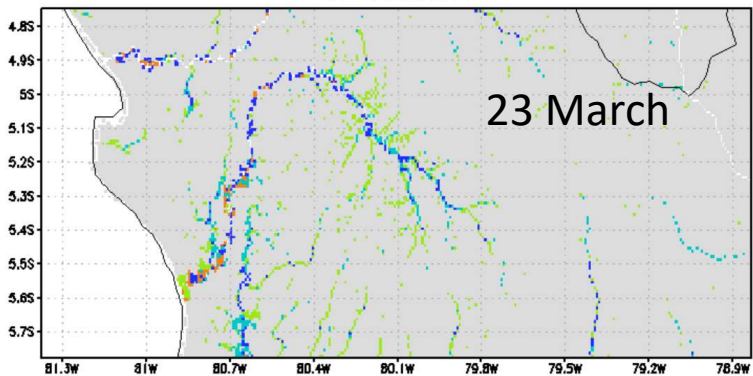
Inundation map 1km res. [mm]  
12Z20Mar2017



Inundation map 1km res. [mm]  
12Z02Mar2017

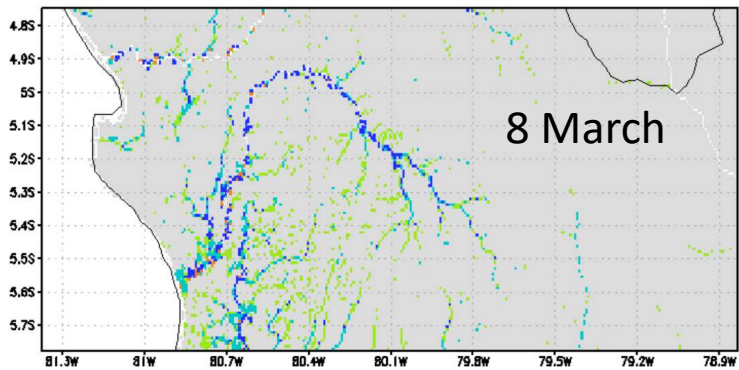


Inundation map 1km res. [mm]  
12Z23Mar2017

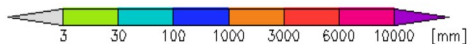
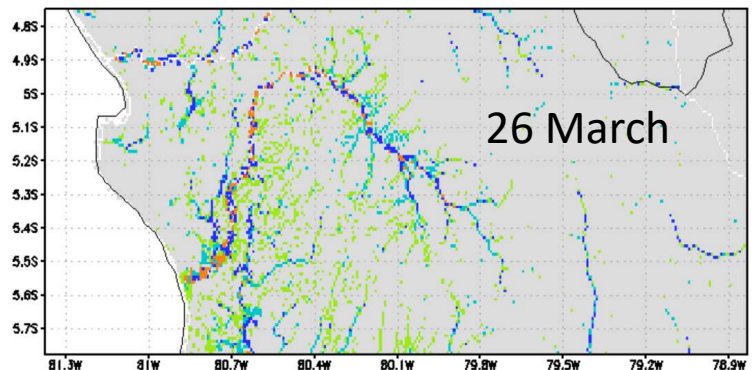


Evolution of  
Inundation  
Estimations—  
Feb. 21 to March 26

Inundation map 1km res. [mm]  
12Z08Mar2017



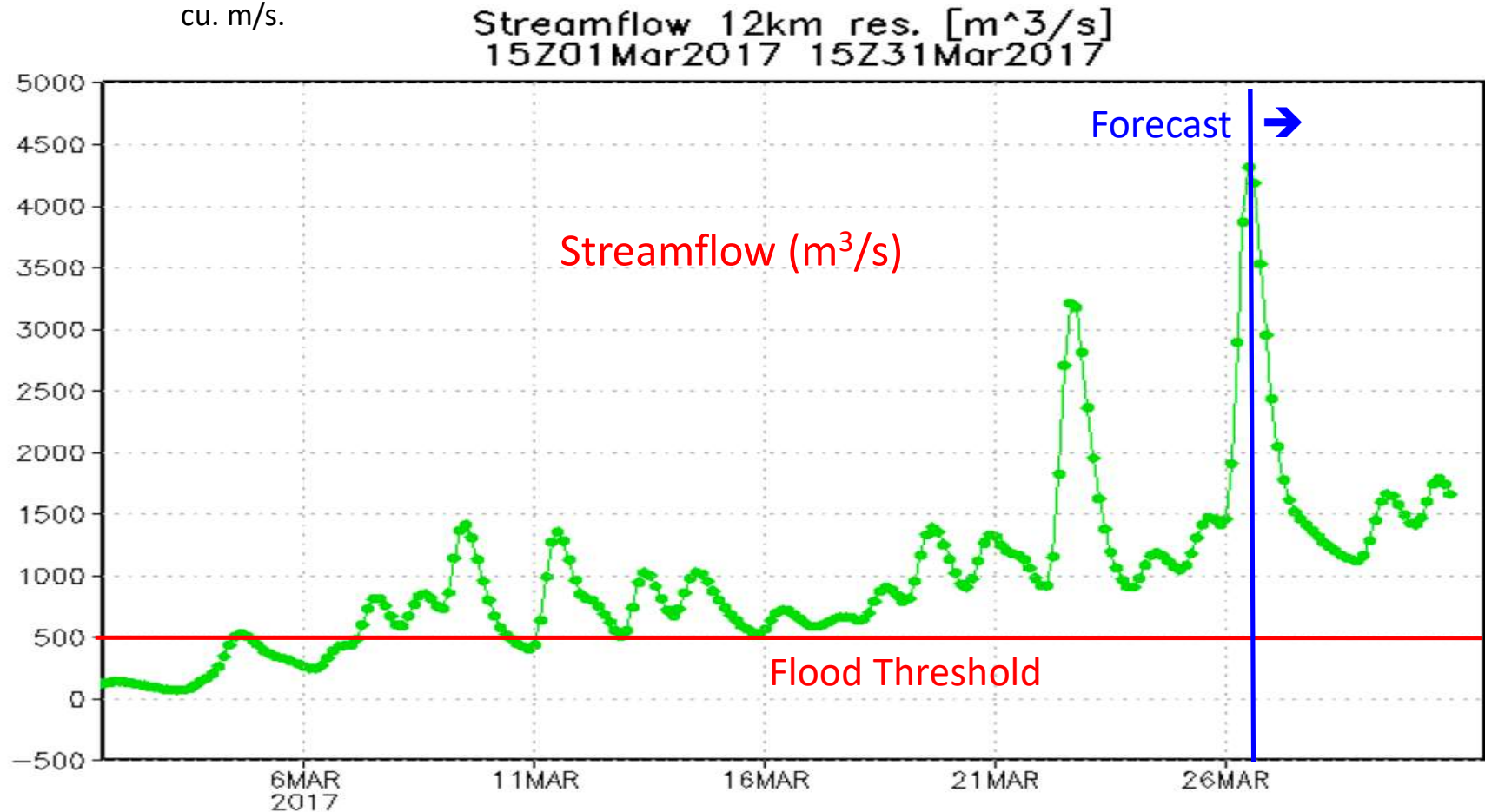
Inundation map 1km res. [mm]  
15Z26Mar2017





## Estimated and Forecast Streamflow at city of Piura along Piura River

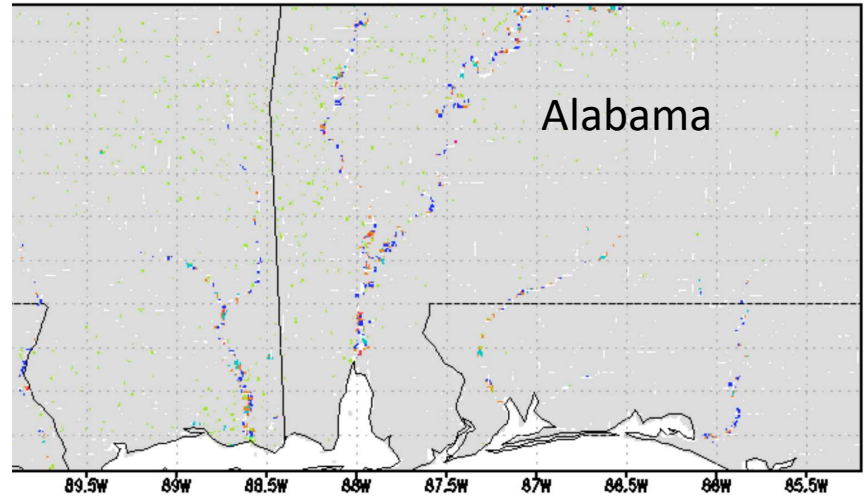
Streamflow at city of Piura (see location on a previous slide) hit new peak today. Forecast to drop quickly over next few days, although still above flood level. Lower bound of streamflow also gradually increasing all during March from near zero to 1500 cu. m/s.



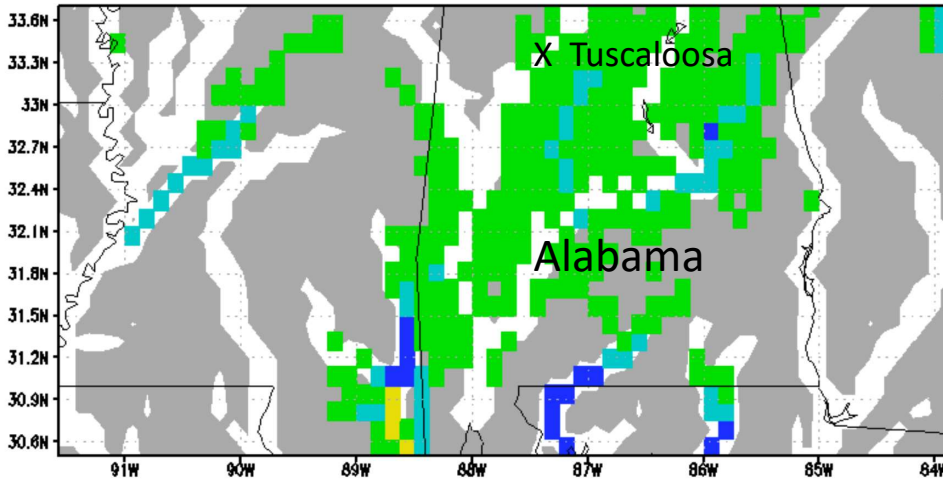
# Last Week's TS Cindy with Flooding in Mississippi, Alabama

Friday 23 June

Inundation map 1km res. [mm]  
06Z23Jun2017

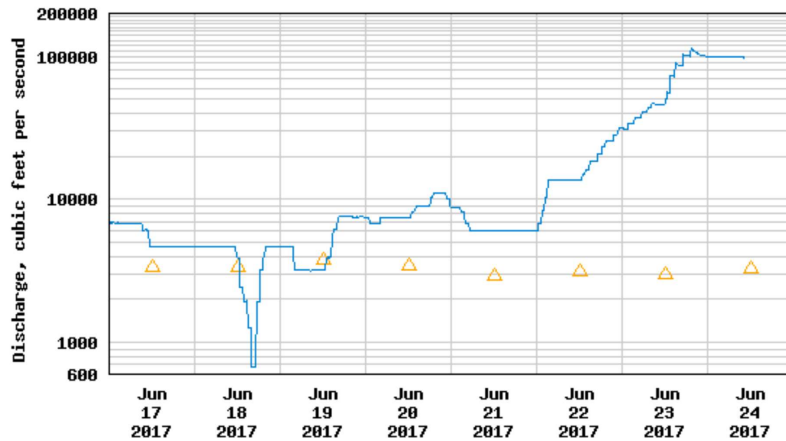


Streamflow above Flood Threshold [ $m^3/s$ ]  
06Z23Jun2017

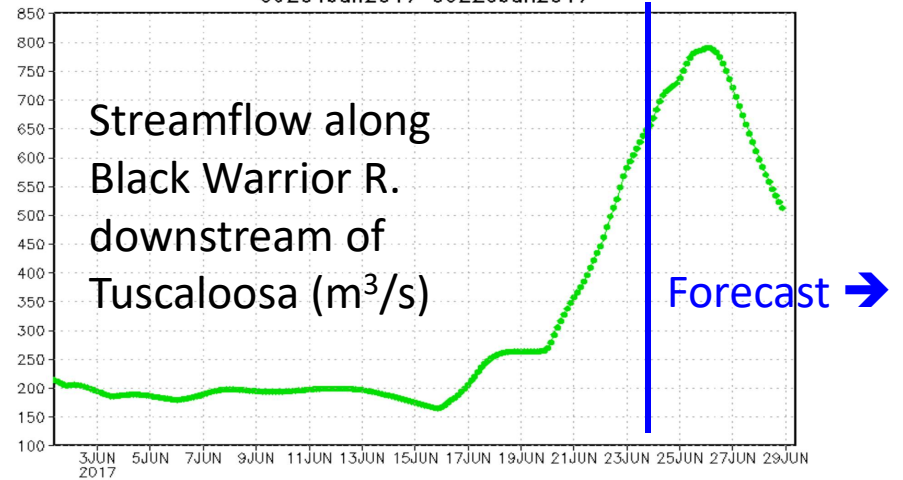


0 50 200 500 5000 10000 [ $m^3/s$ ]

USGS 02466030 BLACK WARRIOR RIVER AT SELDEN L & D NEAR EUTAW, AL



Streamflow 12km res. [ $m^3/s$ ]  
09Z01Jun2017 09Z29Jun2017



GFMS (U. of Maryland) [flood.umd.edu](http://flood.umd.edu)