

# NASA ARSET Training on Climate Variability, Hydrology, and Flooding



## Summary



# Training Summary

## This Training Focused on:

- NASA remote sensing data relevant to monitoring past and current climate state, hydrology and flooding, including Temperature, Precipitation, Soil Moisture, ET, Vegetation Index, and Terrain
- Flood monitoring tools
- NASA Socio-economic data useful for disaster management and planning
- NOAA and International Research Institute data and tools for monitoring past, present and future ENSO states
- Importing remote sensing data into GIS for further applications
- **Hands-on activities and case studies for data access, analysis, and visualization**

**A list of important links to data and tools used in this training is provided in the Appendix**

# Concluding Remarks

- There are multiple data products available from NASA with different spatial and temporal resolutions and coverage, data selection depends on the applications they are used for
- Regional validation is highly recommended to assess accuracy of the remotely sensed data products
- ARSET provides advanced on-line and in-person trainings for Air Quality, Land, Water Resources and Disasters Management. If you are interested, you can request a training for your organization or region at <http://arset.gsfc.nasa.gov/training>

# Thank You!

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# **Appendix**

Links to the Data and Tools Covered In this  
Training

# Websites for NASA Missions and Sensors

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<http://landsat.gsfc.nasa.gov>

<http://trmm.gsfc.nasa.gov>

<http://pmm.nasa.gov/GPM>

<http://terra.nasa.gov>

<http://aqua.nasa.gov>

<http://smap.jpl.nasa.gov>

# NASA Earth Science Data Centers

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<http://science.nasa.gov/earth-science/>

<http://earthobservatory.nasa.gov/>

<http://www2.jpl.nasa.gov/srtm/>

<http://disc.sci.gsfc.nasa.gov/>

<https://lpdaac.usgs.gov/>

<http://sedac.ciesin.columbia.edu/>

<http://snow.jpl.nasa.gov/portal/>

<http://nsidc.org/>

# NASA Earth Science Data Access and Analysis Tools

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Mirador

<http://mirador.gsfc.nasa.gov>

Giovanni

<http://giovanni.gsfc.nasa.gov/giovanni/>

PPS/STORM

<https://storm.pps.eosdis.nasa.gov/storm>

NSIDC

<http://nsidc.org/>

Reverb-ECHO

<http://reverb.echo.nasa.gov/reverb>

LANCE

<http://lance-modis.eosdis.nasa.gov/>



# NASA Earth System Models Relevant for Climate, Hydrology, and Flood Monitoring

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<http://gmao.gsfc.nasa.gov/merra/>

<http://ldas.gsfc.nasa.gov/>

# Flood Monitoring Tools

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[http://trmm.gsfc.nasa.gov/publications\\_dir/potential\\_flood\\_hydro.html](http://trmm.gsfc.nasa.gov/publications_dir/potential_flood_hydro.html)

<http://flood.umd.edu>

<http://oas.gsfc.nasa.gov/floodmap>

<http://floodobservatory.colorado.edu/>

<http://www.gdacs.org/flooddetection/>

<http://risk.preventionweb.net/capreviewer/main.jsp?countrycode=g15>

<http://www.ithacaweb.org/projects/erds/>

# Climate Information

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<http://climate.nasa.gov>

<http://www.esrl.noaa.gov/psd/data/climateindices/list/>

<http://iridl.ldeo.columbia.edu/maproom/index.html>

<http://www.pmel.noaa.gov/tao/elnino/>

<http://www.cpc.ncep.noaa.gov/>

[http://www.ipcc.ch/pdf/assessment-report/ar5/wg2/WGIIAR5-Chap27\\_FINAL.pdf](http://www.ipcc.ch/pdf/assessment-report/ar5/wg2/WGIIAR5-Chap27_FINAL.pdf)

<http://www.wmo.int/bulletin/en/content/impact-climate-change-migration-and-cities-south-america>

# Climate Forecast

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[http://www.cpc.ncep.noaa.gov/products/analysis\\_monitoring/enso\\_advisory](http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory)

<http://iri.columbia.edu/our-expertise/climate/forecasts/seasonal-climate-forecasts/>