



NASA Remote Sensing Applications for Flood Monitoring and Management Workshop

April 18 to 20
8:30 a.m. to 5:00 p.m.

Tuesday, April 18

Session 1A: Precipitation from Remote Sensing Measurements

8:30-9:00	Introduction	Presentation	Mike Walsh
9:00-9:30	Applied Sciences Program on Disaster Management	Presentation	John Murray
9:30-9:45	About ARSET, Training Outline	Presentation	Amita Mehta
9:45-10:30	Remote Sensing of Precipitation Overview of TRMM and GPM Data and Applications; Demonstration of Data Access and Analysis Tools	Presentation	Amita Mehta
10:30-10:45	Break	Break	—
10:45-12:30	Install and Test QGIS Precipitation Data Access & Analysis in QGIS	Exercise	Amita Mehta, Erika Podest & Participants
12:30-1:30	Lunch Break	Break	—

Session 1B: Digital Elevation Data from Remote Sensing

1:30-2:00	Overview of DEM from the Shuttle Radar Topography Mission and ASTER	Presentation	Amita Mehta
2:00-2:15	Data Access Tools GDEX CGIAR	Demonstration	Amita Mehta
2:15-3:00	Install/Test Python Extract Precipitation Data Using Python Script	Exercise	Amita Mehta, Erika Podest & Participants
3:00-3:15	Break (Potential cushion for running late)	Break	—
3:15-3:45	Potential Topics: i) Type of Work and Flood Management Activities, ii) Data Currently Used, and iii) Data Needs	End-User Presentation or Open Discussion	TBD

3:45-5:00	Terrain and Slope Data Access and Analysis in QGIS; Extract Precipitation and DEM Data	Exercise	Amita Mehta, Erika Podest & Participants
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Wednesday, April 19

Session 2A: Overview of Synthetic Aperture Radar (SAR) Data for Flood Detection

8:30-9:15	Introduction to Synthetic Aperture Radar Introduction to SAR	Presentation	Erika Podest
9:15-10:00	Applications of SAR	Presentation	Erika Podest
10:00-10:15	Break	Break	—
10:15-12:30	Title?? Where to Download SAR data; Downloading Open Access SAR Processing and Analysis Software; SAR Pre-Processing; Detecting Inundation with SAR	Exercise	Amita Mehta, Erika Podest & Participants
12:30-1:30	Lunch Break	Break	—

Session 2B: Soil Moisture Active Passive (SMAP)

1:30-2:30	Overview of the Soil Moisture Active Passive (SMAP) Satellite Mission Objectives, Algorithms, Products, cal/val	Presentation	Erika Podest
2:30-3:00	Overview of SMAP Applications	Presentation	Erika Podest
3:00-3:15	Break (Potential cushion for running late)	Break	—
3:15-4:30	Accessing SMAP Data and a Case Study Where to Access SMAP Data; Opening and Visualizing SMAP Data; SMAP Data Analysis	Exercise	Amita Mehta, Erika Podest & Participants
4:30-5:00	Group Presentations	Presentations	Participants

Thursday, April 20

Session 3A: Flood Management and Monitoring Tools

8:30-9:15	Overview of Flood Monitoring Tools GFMS, MODIS-NRT, DFO, GDACS, ERDS	Presentation	Amita Mehta
9:15-10:00	Overview and Access of Socioeconomic GIS Data	Presentation	Amita Mehta
10:00-10:15	Break	Break	—
10:15-12:30	Assessment for a Flood Case Study Pre-Flood Phase: Monitoring Precipitation and Streamflow using GFMS, Soil Moisture Using SMAP Flood Monitoring: Flood Depth (GFMS), Surface Inundation (SAR, MODIS-NRT, GDACS) Identifying Flood Impacts: QGIS-Based Analysis of DEM/Slope, Population, Infrastructure	Exercise	Amita Mehta, Erika Podest & Participants
12:30-1:30	Lunch Break	Break	—

Session 3B: Flood Monitoring and Management Case Study

1:30-2:30	Post-Flood Relief Planning MODIS NRT, SAR, GDACS, DFO	Presentation	Amita Mehta & Erika Podest
2:30-3:00	Flood Case Study Participants form groups and select a flood case study	Exercise	Participants
3:00-3:15	Break (Potential cushion for running late)	Break	—
3:15-4:15	Conduct a Case Study Independently Groups Conduct Precipitation Monitoring, Flood Monitoring, and Emergency and Relief Planning	Exercise	Amita Mehta, Erika Podest & Participants
4:15-4:45	Group Presentations	Presentations	Participants
4:45-5:00	Training Summary Summarize Training, Participants Take Survey	Presentation	Amita Mehta, Erika Podest & Participants