



IST-KIU Training Workshop (2019)

Tentative Program		
Day-01, Monday July 22		
Time	Activity	Speaker
8:30-9:00 AM	Registration	
9:00-9:30 AM	Opening Ceremony	Prof. Dr. Attaullah Shah VC KIU Gilgit
9:30-10:30 AM	Earth Climate System	Dr. Mujtaba Hassan IST Islamabad
10:30-11:00 AM	Tea Break	
11:00-12:00 PM	Earth Rotation, Seasons and Atmospheric Circulations	Dr. Mujtaba Hassan IST Islamabad
12:00-2:00 PM	Lunch and Prayer Break	
2:00-4:00 PM	Hands-on Climate Extremes	Dr. Mujtaba Hassan IST Islamabad; Mr. Asghar Ali IST Islamabad
4:00-4:30 PM	Tea Break	
4:30-5:30 PM	Hands-on Climate Extremes/RCLimDex	Dr. Mujtaba Hassan IST Islamabad; Mr. Asghar Ali IST

		Islamabad
Day-02, Tuesday July 23		
Time	Activity	Speaker
08:30-09:30 AM	Moisture, Clouds and Precipitation	Dr. Mujtaba Hassan IST Islamabad
9:30-10:30 AM	Introduction to Climate Modeling	Dr. Mujtaba Hassan IST Islamabad
10:30-11:00 AM	Tea Break	
11:00-12:00 PM	Climate Models and Modeling	Dr. Mujtaba Hassan IST Islamabad
12:00-2:00 PM	Lunch and Prayer Break	
2:00-3:00 PM	Hands-on Climate Data Operators (CDO)	Dr. Mujtaba Hassan IST Islamabad; Mr. Asghar Ali IST Islamabad
3:00-4:00 PM	Hands-on Post-Processing of climate data for climate change impact assessment	Dr. Mujtaba Hassan IST Islamabad; Mr. Asghar Ali IST Islamabad
4:00-4:30 PM	Tea Break	
4:30-5:30 PM	Hands-on Grid Analysis and Display System (GrADS)	Dr. Mujtaba Hassan IST Islamabad; Mr. Asghar Ali IST Islamabad
Day-03, Wednesday July 24		

Time	Activity	Speaker
8:30-9:30 AM	Climate Change and its impacts on Water Resources of Pakistan: Findings and gaps	Dr. Shabe ul Hasson University of Hamburg, Germany
9:30-10:30 AM	How can we assess the future water availability under climate change	Dr. Shabe ul Hasson University of Hamburg, Germany
10:30-11:00 AM	Tea Break	
11:00-12:00PM	Basic Concept on Spatial Processes in Hydrology: SPHY Model Overview	Ms. Eshrat Fatima IST Islamabad
12:00-2:00 PM	Lunch and Prayer Break	
2:00-3:00 PM	Hands-on: Setting up SPHY Model for a watershed (Group Task)	Dr. Shabe ul Hasson University of Hamburg, Germany; Ms. Eshrat Fatima IST Islamabad
3:00-4:00 PM	Hands-on: Calibrating the SPHY Model for a watershed (Group Task)	Dr. Shabe ul Hasson University of Hamburg, Germany; Ms. Eshrat Fatima IST Islamabad
4:00-4:30 PM	Tea Break	
4:30-5:30 PM	Hands-on: Assessing Validation of the SPHY Model (Group Task) Validation	Dr. Shabe ul Hasson University of Hamburg, Germany
Day-04, Thursday, July 25		
Time	Activity	Speaker
8:00-9:30 AM	Prediction, projections and Scenarios	Dr. Shahid Iqbal IST Islamabad
9:30-10:30 AM	Overview of SRES/RCP Scenarios	Dr. Shahid Iqbal IST Islamabad
10:30-11:00 AM	Tea Break	

11:00-12:00 PM	Shared Socioeconomic Pathways (SSPs)	Dr. Shahid Iqbal IST Islamabad
12:00-2:00 PM	Lunch and Prayer Break	
2:00-4:00 PM	Hands-on: Accessing SSP scenarios (Group Task)	Dr. Shabe ul Hasson University of Hamburg, Germany
4:00-4:30 PM	Tea Break	
4:30-5:30 PM	Hands-on: pre-processing of SSP scenarios using CDO (Group Task)	Dr. Shabe ul Hasson University of Hamburg, Germany
Day-05, Friday, July 26		
Time	Activity	Speaker
8:30-9:30 AM	Biases in SSP scenarios and their adjustments	Dr. Shabe ul Hasson University of Hamburg, Germany
9:30-10:30 AM	Hands-on: Adjusting biases in SSPs (Group Task)	Dr. Shabe ul Hasson University of Hamburg, Germany
10:30-11:00 AM	Tea Break	
11:00-12:00 PM	Driving SPHY model with SSP scenarios (Group Task)	Dr. Shabe ul Hasson University of Hamburg, Germany; Ms. Eshrat Fatima IST Islamabad
12:00-2:00 PM	Lunch and Prayer Break	
2:00-3:00 PM	Plotting Results of future water availability	Dr. Shabe ul Hasson University of Hamburg, Germany
3:00-4:00 PM	Interpretation of future water availability	Dr. Shabe ul Hasson University of Hamburg, Germany
4:00-4:30 PM	Tea Break	

4:30-5:30 PM	Surface Dynamics of Snow and Glacierized Catchment using Geospatial techniques-A case study of Astore Basin	Ms. Saleha Fatima IST Islamabad
Day-06, Day-07		
Saturday and Sunday, July 27-28 Would be dedicated for field visits		
Day-08, Monday July 29		
Time	Activity	Speaker
9:00-10:30 AM	Constrained and biases in the climate change projections over the Hindukush Karakoram and Himalaya (HKH) region	Dr. Asif Khan UET Peshawar
10:30-11:00 AM	Tea Break	
11:00-12:00 PM	Applications of Remote Sensing/GIS in the watershed modeling for big DAM sites	Dr. Syed Amer University of the Punjab Lahore
12:00-2:00 PM	Lunch and Prayer Break	
2:00-4:00 PM	Introduction to SAR Remote Sensing	Dr. Waqas Qazi IST Islamabad
4:00-4:30 PM	Tea Break	
4:30-5:30 PM	Hydrological & Geological Applications of SAR Remote Sensing	Dr. Waqas Qazi IST Islamabad
Day-09, Tuesday, July 30		
Time	Activity	Speaker

8:30-09:30 AM	Palaeochannel Detection using Optical and SAR Data Fusion	Dr. Waqas Qazi IST Islamabad
9:30-10:30 AM	Introduction to MATLAB	Dr. Waqas Qazi IST Islamabad
10:30-11:00 AM	Tea Break	
11:00-12:00 PM	MATLAB: Handling scientific data formats (netCDF, HDF, etc.) datasets	Dr. Waqas Qazi IST Islamabad
12:00-2:00 PM	Lunch and Prayer Break	
2:00-4:00 PM	MATLAB: Handling scientific data formats (netCDF, HDF, etc.)	Dr. Waqas Qazi IST Islamabad
4:00-4:30 PM	Tea Break	
4:30-6:00 PM	MATLAB: Plotting / analyzing spatial data, analysis of directional data	Dr. Waqas Qazi IST Islamabad
Day-10, Wednesday, July 31		
Time	Activity	Speaker
8:30-09:30 AM	Introduction to Google Earth Engine and datasets	Dr. Hammad Gilani IST Islamabad
9:30-10:30 AM	Satellite Images Classification and Change Analysis using Earth Engine	Dr. Hammad Gilani IST Islamabad
10:30-11:00 AM	Tea Break	
11:00-12:00 PM	Basic JavaScript Syntax and Earth Engine Code Platform and Editor	Dr. Hammad Gilani IST Islamabad
12:00-2:00 PM	Lunch and Prayer Break	
2:00-3:00 PM	Hands on Exercise: Satellite	Dr. Hammad Gilani IST

	Image Visualization and Metadata	Islamabad
3:00-4:00 PM	Mathematical Operations and Spectral Indices (NDVI, NDWI, NDSI, etc.)	Dr. Hammad Gilani IST Islamabad
4:00-4:30 PM	Tea Break	
4:30-5:30 PM	Phonological Time Series Analysis;	Dr. Hammad Gilani IST Islamabad
5:30-6:30 PM	Closing Ceremony	Prof. Dr. Wilayat Hussain VC IST Islamabad

