

Chapter 3 Training

Scripts

The scripts for this training are provided as Jupyter Notebooks. All of the notebooks are included in the zipped “Scripts” folder. These include:

- *EBD_SAR1.ipynb*: Getting to Know SAR Images and Forest Signatures
- *EBD_SAR2.ipynb*: SAR Time Series Visualization and Animations
- *EBD_SAR3.ipynb*: Change Detection with Time Series Metrics and Log Ratio Method
- *EBD_SAR4.ipynb*: SAR Time Series Change Point Detection
- *EBD_SAR5.ipynb*: SAR/Optical (NDVI) Time Series Analysis
- *EBD_SAR6.ipynb*: How to Make RGB Composites from Dual-Polarimetric Data
- *EBD_Sentinel1_vrt.ipynb*: This notebook describes how to stack Sentinel-1 data into time series data stacks with Virtual Raster Tables. For the examples above, data is provided already stacked in the Data.zip file. However, if you would like to run these scripts using your own data, you will need to first use this notebook to convert the Sentinel 1 data of your choice into virtual raster tables.

The data to run the example notebooks above can be found in the data.zip folder, described below.

Data

The data files included in the zipped folder include the following:

- *Hkh.zip* – Includes all of the data needed to run the HKH examples
- *Wa.zip* – Includes all of the data needed to run the WA examples

Data credits:

© [JAXA/METI](#) ALOS PALSAR [2015 – 2017]; Landsat-8 imagery courtesy of the U.S. Geological Survey

--

A note on unzipping files: if you find you are on a Mac and have trouble unzipping the files manually (for example instead of unzipping it gives you a .zip.cpgz file), you will need to use the Terminal to unzip the file. Open up the terminal and run the following command:

```
unzip location/of/file/filename.zip
```

Be sure to replace “location/of/file/filename.zip” with the actual file path of the zipped file.

This will unzip the file into your home directory, which you can then move to whichever location you prefer.

--

Supplemental materials

Additional materials are included in the SupplementaryMaterials.zip folder. These files are not necessary to complete the training, but provide information that may be helpful.

The supplemental materials included in the zipped folder include:

- *Servir_HKH_SAR_Training.pptx*: This is a powerpoint that was used during the training given by J. Kellndorfer at the SERVIR-HKH hub. It includes an overview of the HKH study area as well as data availability for the study area.