

ALCS Data Training

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NCI
AUSTRALIA

programmatic data access examples using GSKY – a scalable Geospatial data server

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You can browse and search NCI's data collection published through GSKY by going to the [Terria Map](#) or [National Map](#) websites.

To view the DEA or GEOGLAM collections, click on Add Data -> My Data -> Add Web Data and enter the following URLs respectively:

<http://gsky.nci.org.au/ows/dea>

<http://gsky.nci.org.au/ows/geoglam>

Digital Earth Australia (DEA) Geoscience Earth Observations, which include the following products of the Landsat 5, 7 and 8 satellite missions:

- Surface reflectance (NBAR/NBART true and false colour)
- Terrain corrected surface reflectance geometric median (geomedian)
- Intertidal Extents Models (ITEM)
- High and Low Tide Composites (HLTC)
- Water Observations from Space (WOfS)
- Sentinel 2 Analysis Ready Data (Beta)
- Blended service (landsat + sentinel)

GEOGLAM, the GEO Global Agricultural Monitoring initiative, which include the following products:

- MODIS Total Vegetation Cover v3.1 (8-day and Monthly)
- MODIS Total Vegetation Cover Anomaly v3.1 (Monthly)
- MODIS Total Vegetation Cover Decile v3.1 (Monthly)
- MODIS Vegetation Fractional Cover 8-day v3.1 (8-day and Monthly)
- CHIRPS Precipitation v2.0 (Monthly)

Koondrook forest

<https://terria-cube.terria.io/#share=s-cQBEsxJIW4nxQMEkOpaBa0SChfU>

Northern connectivity event

<https://terria-cube.terria.io/#share=s-gHSQuI0QZHx12ZHYcFOJgtEE8g8>

king sound

<https://terria-cube.terria.io/#share=s-wGIN5rxm9p7FSw7MOmyGHteDQmU>

Fraser Island

<https://terria-cube.terria.io/#share=s-xJAaBEMSDFuC3ircRfKYw3TT6oc>

Narrabi

<https://terria-cube.terria.io/#share=s-6J47U0PTSPRKgjupkFDJMWGVyQE>

Kinglake

<https://terria-cube.terria.io/#share=s-5ZFvg18Vg1gvA82CVXBznpWi4Xk>

Download notebooks

```
$ git clone https://github.com/nci-training/notebooks-demo.git*  
$ cd notebooks-demo
```

Running notebooks

```
$ Jupyter notebook  
$ Jupyter notebook Notebook_GSKY_WCS.ipynb
```

For these tutorials, you need these libraries: [owslib](#), [matplotlib](#), [pillow](#), [gdal](#), [netCDF4](#).

- install them if you run these examples on your local computer
- load those modules if you run on VDI

See instruction on setting up python environment in [local computer](#) and [VDI](#).

***NOTES:** the notebooks-demo repo is used for temporarily storing jupyter notebooks for training purposes. It is valid only during the training webinar or event. The content in this repo is subject to change without notice.

1. [Construct WMS GetCapabilities and GetMap requests](#)
2. [Programmatic WMS requests GSKY's blended services from Python](#)
(request_GSKY_WMS_sentinel2_bushfire_NSW_Sep2019.ipynb)
3. [Construct WCS GetCoverage, GetCapabilities and DescribeCoverage requests](#)
4. [Request map images through GSKY WCS from Python.](#)
(Notebook_GSKY_WCS.ipynb)
5. [WCS click to select the region, then ship the data](#)
(Notebook_GSKY_ClicknShip.ipynb)

GSKY time-out error: exceed GSKY processing time limit (maximum 30 seconds)

Import error: libraries are not installed

Empty images:

- data is not available in selected time frame/location
- areas requested are too large (>50km is not available in dea data collections to download) - we are working on this issue right now

GetMap or GetCoverage error: arguments are not set properly

Software:

1. [QGIS](#)
2. [ArcGIS](#)

Platform:

1. [TerriaJS](#)
2. [National Map](#)
3. [GEOGLAM RAPP](#)

