
Read the Docs Template Documentation

Release 1.0

Read the Docs

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WHAT IS PYE3SM?

1.1 Overview

1.2 Development

1.3 Objective

CHAPTER
TWO

QUICK START

INSTALLATION

REFERENCES

HISTORY

- 2020-10-01: Design

AUTHORS

- Chang Liao (Pacific Northwest National Laboratory)

SUPPORT

Support is provided through Github issue(<https://github.com/changliao1025/pye3sm/issues>).

CONTRIBUTION

PyE3SM was developed and maintained by

- Chang Liao (Pacific Northwest National Laboratory)

FREQUENTLY ASKED QUESTIONS

1. Why my *conda* cannot create environment?

Turn off the VPN or bypass it.

2. Why import *GDAL* failed?

Consider using the *conda-forge* channel.

3. *proj* related issue <https://github.com/OSGeo/gdal/issues/1546>,

Make sure you correctly set up the *PROJ_LIB*

Because the *GDAL* library is used by this project and the *proj* library is often not configured correctly automatically. On Linux or Mac, you can set it up using the *.bash_profile* such as:

Anaconda:

```
export PROJ_LIB=/people/user/.conda/envs/hexwatershed/share/proj
```

Miniconda:

```
export PROJ_LIB=/opt/miniconda3/envs/hexwatershed/share/proj
```

4. What if my model doesn't produce the correct or expected answer?

Answer: There are several hidden assumptions within the workflow. For example, if you provide the DEM and river network for two different regions, the program won't be able to tell you that. A visual inspection of your data is important.

Optionally, you can turn on the *iFlag_debug* option in the configuration file to output the *intermediate files*.

ADDENDUM**10.1 Glossary****10.1.1 Great circle**

In mathematics, a great circle or orthodrome is the circular intersection of a sphere and a plane passing through the sphere's center point.

10.1.2 DGGS

A discrete global grid (DGG) is a mosaic that covers the entire Earth's surface. Mathematically it is a space partitioning: it consists of a set of non-empty regions that form a partition of the Earth's surface. In a usual grid-modeling strategy, to simplify position calculations, each region is represented by a point, abstracting the grid as a set of region-points. Each region or region-point in the grid is called a cell.

10.1.3 TIN

In computer graphics, a triangulated irregular network (TIN) is a representation of a continuous surface consisting entirely of triangular facets (a triangle mesh), used mainly as Discrete Global Grid in primary elevation modeling.

10.1.4 MPAS

Model for Prediction Across Scales.

INDICES AND TABLES

- `genindex`
- `modindex`
- `search`