# **Pan-Third Pole Ecological Datasets**

Table 1. Pan-Third Pole ecological datasets

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| Dataset Name | Spatial Resolution | Temporal Resolution | Year of Data | Data Format | Data Citation |
| Pan-Third Pole Gross Primary Product Datasets | 0.05° | 8 days | 2002-2019 | nc/tif | Zhang, Y. (2020). PML\_V2 global evapotranspiration and gross primary production (2002.07-2019.08). National Tibetan Plateau Data Center, DOI: 10.11888/Geogra.tpdc.270251. |
| Pan-Third Pole Vegetation Transpiration Datasets | 0.05° | 8 days | 2002-2019 | nc/tif |

The Pan-Third Pole gross primary product datasets and vegetation transpiration datasets were obtained from the PML\_V2 global evapotranspiration and gross primary production (2002.07-2019.08) of the National Tibetan Plateau Science Data Center (Zhang et al., 2016). Based on the Penman-Monteith-Leuning (PML) model, gross primary product datasets were obtained by coupling based on stomatal conductivity theory. The datasets were cropped using the Pan-Third Pole basin boundary to obtain the Pan-Third Pole gross primary product datasets and the vegetation transpiration datasets. The temporal resolution of the dataset was 8 days. The spatial resolution was 0.05°. In addition, the time span was 2002.07-2019.08. The dataset contains two data formats : TIFF and NETCDF. The TIFF format is named "xx\_yyyy\_mm\_dd\_clip.tif", where xx denotes the name of the variable, such as GPP and Ec, yyyy denotes the year, mm denotes the month, dd denotes the day, such as "Ec\_2002\_07\_04\_clip.tif", which corresponds to GPP and ET in the 8 days from 2002-07-04 to 2002-07-11. NETCDF format is named " xx\_yyyy\_mm\_dd\_clip.tif.nc ", where xx denotes variable names, such as GPP and Ec, yyyy denotes year, mm denotes month, dd denotes day, such as "Ec\_2002\_07\_04\_clip.tif.nc", which corresponds to Ec in the 8 days from 2002-07-04 to 2002-07-11. It should be noted that the true values of GPP and Ec = pixel value \* scale \_ factor ( scale \_ factor = 0.01 ).

**References**

[1] Zhang, X., Liu, L., Wu, C., Chen, X., Gao, Y., Xie, S. and Zhang, B.: Development of a global 30&thinsp;m impervious surface map using multisource and multitemporal remote sensing datasets with the Google Earth Engine platform, Earth Syst. Sci. Data, **12**(3), 1625-1648, <http://dx.doi.org/10.5194/essd-12-1625-2020>, 2020.

[2] Zhang, Y., Peña-Arancibia, J. L., McVicar, T. R., Chiew, F. H. S., Vaze, J., Liu, C., Lu, X., Zheng, H., Wang, Y., Liu, Y. Y., Miralles, D. G. and Pan, M.: Multi-decadal trends in global terrestrial evapotranspiration and its components, Scientific Reports, **6**(1), 19124, <http://dx.doi.org/10.1038/srep19124>, 2016.