Notes: This is the template xml file used to create the meta data xml file corresponding to each geotiff file in the ET dataset. The xml file for each data file (geotiff) is created operationally with a python script at the same time the data is created, no manual copying or editing.

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<origin>Gabriel Senay</origin>

<origin>Stefanie Kagone</origin>

<origin>MacKenzie Friedrichs</origin>

<origin>Naga Velpuri</origin>

<origin>James Rowland</origin>

<origin>James Verdin</origin>

<pubdate>2017</pubdate>

<title>Global SSEBop Evapotranspiration Data from 2003 to Present: Dekadal (10-day), Monthly, Seasonal, and Annual Time Scales</title>

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<pubplace>Sioux Falls, SD</pubplace>

<publish>U.S. Geological Survey</publish>

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<abstract>On vegetated landscapes, Evapotranspiration (ET) can be simplified as the combination of evaporation from soil and transpiration from vegetation. Actual ET (ETa) is produced using the Operational Simplified Surface Energy Balance (SSEBop) model (Senay et al., 2013) for 2003 to present using data stream from the Aqua satellite. The SSEBop setup is based on the original Simplified Surface Energy Balance (SSEB) approach (Senay et al., 2007, 2011) with unique and improved parameterizations for operational applications. It combines ET fractions generated from remotely sensed MODIS thermal imagery, summarized every 10 days (dekadal), with reference ET, generated from weather data fields using the Penman-Monteith Equation. The unique feature of the SSEBop parameterization is that it uses a pre-defined, seasonally dynamic “surface psychrometer constant” parameter that helps define the “hot/dry” and “cold/wet” reference limits, unique to each pixel. Furthermore, the "cold/wet” limit is determined using the daily maximum air temperature (Ta) using the “c factor” parameter which relates Ta to land surface temperature at well-vegetated/well-watered surfaces. The original SSEB model was formulated based on an adaptation of the “hot and cold” pixel principles of SEBAL (Bastiaanssen et al., 1998) and METRIC (Allen et al., 2007) models. ETa data and anomaly products (current vs. long term (2003 – 2015) mean), produced at 1 km resolution, are available at: https://earlywarning.usgs.gov/fews.</abstract>

<purpose>The model uses remotely sensed thermal data and model-assimilated weather fields to produce global ET (1 km) at dekadal (10-day), monthly, seasonal, and annual time scales. The data is used to assess vegetation and landscape conditions for early warning drought monitoring purposes.</purpose>

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<origin>Gabriel Senay</origin>

<origin>Stefanie (Bohms) Kagone</origin>

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<origin>Prasanna Gowda</origin>

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</cntaddr>

<cntvoice>1-888-275-8747</cntvoice>

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<distliab>Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey (USGS), no warranty expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.</distliab>

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