

What is the KBDIS Tool?

We've developed the KBDIS for calculating Keetch-Byram Index as a drought index. You can import your data as excel file and calculate KBDI in yearly, seasonally, monthly, and daily Formats. This software can draw linear, Columnar, and box-plot graphs. The user can easily determine the field capacity option in this tool. This index, which conceptually describes the soil moisture with several simple criteria, is based on the amount of daily precipitation, daily maximum temperature and mean annual precipitation.

Some of Agrimetsoft Products:

DMAP (Drought Monitor And Prediction Tool): The DMAP tool is a comprehensive tool that can run 18 drought indices, namely meteorological drought (SPI, PN, DI, RAI, RDI, ZSI, CZI, MCZI, EDI, KBDI, PDSI, PHDI, SPEI), agricultural drought (ETDI, SMDI, ARI), and hydrological drought (SWSI and SDI).

RDIT (Rain-based Drought Indices): The "RDIT" tool can calculate and perform rain-based drought indices with severity and duration of the drought event.

NetCDF (Unidata's Network Common Data Form):The NetCDF Extractor software is an easy tool for all users to extract their aim region from the main files in nc format. This tool is flexible to run for various datasets such as CMIP5 models, AgMERRA datasets, CRU, CORDEX, and etc.

SDGCM (Statistical Downscaling of General Circulation Models): The SDGCM is a useful tool for downscaling CMIP5 models under RCPs Scenarios, such as EQM, QM, Delta.

CORDEX Data Extractor:This tool is a windows desktop software for extracting data from CORDEX NetCDF files.

P6

International Workshop Advanced Tools for Drought Monitoring and Adaptations

10th Oct 2018 9:30 a.m. to 4:30 p.m.

Resource Persons 1-Dr. Nasrin Salehnia 2- Sohrab Kolsoumi

Focal Person Dr. M. Habib ur Rahman Department of Agronomy, MNS-University of Agriculture, Multan-Pakistan



Agrimetsoft's goal is to develop various user-friendly software applications that they can assist scholars, researchers, and scientists to investigate, evaluate and assess these changes through this software tools. A variety of software packages related to meteorological, Agricultural and climate sciences are developed, maintained, and supported by the Agrimetsoft. In one of our products, we apply CMIP5 data outputs and new statistical downscaling to produce future weather data that they can be used in agricultural models inputs to depict better agricultural insight for the future.

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P5

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Our motto is to simplify researches for researchers.



What will we do in the workshop?

- * Introduction and clarifications of drought event (indices, types, research in this field, and etc.).
- * Introduce of WD (Weather Data Tool,Excel add-ins) and MDM (Meteorological Drought Monitor) Tools.
- * Introduce of KBDI (Keetch-Byram Drought Index) Tool.

* Do excersises and run the tools.



<u>What Is The WD Tool?</u>

When you want to use weather variables in a specific shape, you require different time amounts in columns or rows, or change monthly data to yearly, daily to monthly or seasonaly, and etc., if you want to do this transformation for whole data by Excel or coding, it would be tedious and time-consuming, in this time WD assists you easily.

As well, in your researches and papers, for presenting the ability of your model, you need to calculate different efficiency criteria, such as R², NSE Nash–Sutcliffe model efficiency coefficient, d, MAE (Mean Absolute Error), MBE (Mean Bias Error), and etc., WD computes these indices for you just easily by selecting the data.

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We Want to Assist you! Please send us an email (support@agrimetsoft.com), we will help you!



What Is The MDM Tool?

"MDM" (Meteorological The Drought Monitoring) software application is used for calculating precipitation-based indices, namely SPI (Standardized Precipitation Index), DI (deciles index), PN (Percent of Normal Index), RAI (Rainfall Anomaly Index), EDI (effective drought index), CZI (China-Z index), MCZI (modified CZI), and ZSI (Z-Score Index) in form of yearly, seasonally, monthly and moving average for 3, 6, 9, 12, 18, 24, and 48 months. MDM can plot different graphs and show the amount of rain-based indices. It uses AgMERRA data for calculating the indises by easily click on the map.

