FEWS SOS, WRSI, AND SWI ZIP PRODUCTS

Instruction and Explanation Document for distributed zipped WRSI images products

October 29, 2020

Steps to get zip products

Zipped raster data are made available for download from the EROS FTP site.

There are only 3 basic steps required to download the images. A brief explanation on naming convention and product description is documented below.

Step 1. Connect to the EROS ftp server at

https://edcftp.cr.usgs.gov/project/fews/

Step 2. Go to the following sub directory path

- For Africa products using RFE and GDAS as inputs go to `/dekadal/`
  Files are organized by region, where region takes one of the following:

    - africa_east

    - africa_south

    - africa_west

- For Africa products using PRELIM/FINAL CHIRPS and ETos as inputs (NEW) go to `/africa/<region>/dekadal/wrsi-chirps-etos/<wrsi_region>`
  Files are organized by region (`<region>`), where region takes one of the following:

    - east

    - southern

    - west

    For each `<region>`, there are region/crop/season folders defined as `<wrsi_region>`

- For Central America products go to `/camcar/<wrsi_region>`

    - centam-aprsep/pentadal

    - centam-augdec/pentadal

Step 3. Download the latest dekadal or pentadal zip products by region of interest

Important Note: data are retained on the EROS FTP for about one (1) year and are then deleted.

Description of zip products by region codes and product description

Zipped file naming convention for WRSI products

`W%yy%%kk%%rg%%f%.zip`

Where:

- **W**: single character "w" stands for WRSI

- **yy**: two-digit year, e.g., 2006 as 06

- **kk**: two-digit dekad, e.g., dekad 16

- **rg**: two-character **region code** as shown in the Table 1

- **f:** (optional): a single character to differentiate raster dataset types. At this moment, this only applies to Central America products.

For example: `w0617ee.zip` for June dekad 2 of 2006 corresponding to period June 16-20, 2006 (dekad 17 of the year), for East Africa-long rains (`ee`)

Table 1: Region code and season description.

Region	Region code	Crop	Description
africa_south	SA	Maize	Southern Africa: Oct-May
africa_west	WA	Millet	West Africa: May-Nov
	W1	Rangeland	West Africa: May-Nov
africa_east	EE	Maize	East Africa: Mar-Nov (long rains, maize)
	ET	Maize	East Africa: Oct-Feb (short rains)
	EK	Grains (Sorghum)	East Africa: Mar-Sep (belg)
	EL	Grains	East Africa: Mar-Nov (long rains, grains)
	E1	Rangeland	East Africa: Sep - Jan (short rains)
	E2	Rangeland	East Africa: Feb-Jul (long rains)
centam*	C1	Corn	Premera season (Apr-Sep)
	C2	Corn	Postrera season (Aug-Dec)

* centam (Central America) only contains images.

Important Note: Crop specific simulation was conducted based on the predominant crop in the region; however, the index is also indicative of other cereal crops in the region growing in the same season.

The zipped files contain

- Onset of Rains (SOS, surrogate for crop Start of Season)
- Current Crop Water Requirement Satisfaction Index (WRSI)
- Extended WRSI
- Soil Water Index (% WHC)
- Anomaly WRSI
- Anomaly SOS
- Season progress

For Africa products, the corresponding WINDISP color files are also included. The attached word document (`w_color.doc`) lists the relationships between images and color files.

Summary of Products

Product Name	Description
`W%yy%%dk%dt.TIF`	Start of Season map showing dekads where planting started in the WRSI model
`W%yy%%dk%dd.TIF`	SOS anomaly maps: Average SOS minus current SOS
`W%yy%%dk%dl.TIF`	Length of Growing Period Fraction ("Season Progress"). **Note:** possible start areas (as of this dekad) may show the previous dekad or this dekad as the start dekad if enough rainfall is registered in this dekad and the next dekad(s). The SOS algorithm requires three dekads before a start dekad is confirmed (see the readme file)
`W%yy%%dk%do.TIF`	Current WRSI values showing crop condition until this dekad
`W%yy%%dk%eo.TIF`	Forecast WRSI values showing crop condition at the end of the season using long-term average climatic data
`W%yy%%dk%dw.TIF`	Current Soil Water Content Index showing the moisture status at the end of the dekad
`W%yy%%dk%er.TIF`	WRSI Anomaly map; extended WRSI as a percentage of median WRSI (1996 - 2002/03)
`W%yy%%dk%ep.TIF`	WRSI Anomaly map; extended WRSI as a percentage of the previous year WRSI

Where:

- **yy**: two-digit year
- **dd**: two-digit dekad

For example: `W0101do` will be simulation at the end of January 10, 2001; `W0136do` represents December 31, 2001.

More information can be found in the "documentation" tab at the following web pages:

Dekadal WRSI

https://earlywarning.usgs.gov/fews/product/124#documentation

Pentadal WRSI:

https://earlywarning.usgs.gov/fews/product/198#documentation

Important Notes:
- Read Start of Season (SOS) map while interpreting the WRSI images. Particularly when the SOS indicates dekads labeled as "<= Dekad", the actual rainy season could have started much earlier than the labeled dekad, in which case the WRSI values are not representative of the crop condition of those areas with that SOS. Thus, WRSI is more reliable for areas whose SOS occurred after the initial label.

Point of Contacts

Please note that your comments and suggestions will help improve the accuracy and significance of these products. We strongly recommend to contact us at
https://earlywarning.usgs.gov/fews/contact

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