

***Intra-ACP Climate Service and related applications
(ClimSA)***

Climate Station

Product Report

Version 1.1.1

July 2022

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Abstract / Résumé
This document lists all the products available on Climate Station (or C-Station)

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ACRONYMS and DEFINITIONS

ACMAD	African Centre of Meteorological Applications for Development
AGRHMET	Centre Régional de Formation et d'Application en Agro météorologie et Hydrologie Opérationnelle
AU	African Union
CAPC-CA	Central Africa Regional Climate Centre
CIMH	Caribbean Institute of Meteorology and Hydrology
EO	Earth Observation
EUMETSAT	European Organisation for the Exploitation of Meteorological Satellites
EUMETCast	EUMETSAT's primary dissemination mechanism for the near real-time delivery of satellite data and products
FTP	File Transfer Protocol
GIS	Geographical Information System
IOC	Indian Ocean Commission
JRC	Joint Research Centre of the European Commission
MOI	Mauritius Oceanography Institute
REC	Regional Economic Communities
RCC	Regional Climate Centre
SADC-CSC	SADC Climate Services Centre
SPREP	Secretariat of Pacific Regional Environment Programme
TA	Technical Assistance
TAT	Technical Assistance Team
ACP	Africa Pacific Caribbean
ECCC	Environment and Climate Change Canada
NCEP	National Centers for Environmental Prediction
MF	Meteo France
UKMO	UK Met Office
JMA	Japan Meteorological Agency
ECMWF	European Centre for Medium-Range Weather Forecasts

1. INTRODUCTION

1.1 APPLICABLE AND REFERENCE DOCUMENTS

Id	Title	Date	Reference
AD-1			
AD-2			
AD-3			
AD-4			

Table 1: Applicable documents

Id	Title	Date	Reference
RD-1			
RD-2			
RD-3			

Table 2: Reference documents

1.2 SCOPE OF THE DOCUMENT

This document describes all EO products processed and visualized on the Climate Station, release 1.1.1. It is meant mainly for the thematic expert making use of the system.

2. DATASETS DISTRIBUTED ON CLIMATE STATION

The following tables contain the products treated on the Climate Station: firstly, the input products are listed, followed by the derived products computed by each processing chain. The reference period for the computation of LTA (Long Term Anomalies) is also indicated: normally, it corresponds to the whole datasets length, and is therefore longer than the temporal extension of time series locally available on the stations.

2.1 VEGETATION PRODUCTS

The products indicated in grey correspond to previous versions, which are still available on the Climate Station but not automatically activated.

2.1.1 Input products

Product code	Version	Ingested sub-product	Description	Coverage	Period for LTA	Ref
vgt-ndvi	vgt-pv-olci ¹	ndvi	NDVI from CGLS (1km)	Africa	1999-2019	link
vgt-ndvi	olci-v2.0	ndv	NDVI from CGLS (300m)	Africa	N/A	link
modis-ndvi ²	1.0	ndvi, zndvi, ndvid	NDVI from BOKU university (1km)	Africa	N/A	link
modis-fapar ³	1.0	fapar, 10dzscore	FAPAR products from DRO (0.01 degree)	Africa	N/A	link
wsi-hp	V1.0	pasture, crop	Water Satisfaction Index from JRC/MARS (1km)	Africa	N/A	link

¹ Since July 2020, the PROBAV platform ended its operations and was replaced by Sentinel-3 products in Copernicus Global Land Service (CGLS). The NDVI vgt-pv-olci version is the temporal composition of VEGETATION, PROBAV and S3-OLCI (see olci-v2.0 below) products into a single timeseries, in order to allow LT anomaly detection.

² These products are available only for visualization on eStation online version <http://estation.jrc.ec.europa.eu/eStation2/>

2.2 INLAND WATER PRODUCTS

The following table describes the 'Inland water' products that are retrieved and ingested in the Climate Station. The reference period for the computation of LTA (Long Term Anomalies) is also indicated: normally, it corresponds to the whole datasets length, and is therefore longer than the temporal extension of timeseries locally available on the stations.

2.2.1 Input products

Product code	Version	Ingested sub-product	Description	Coverage	Period for LTA	Ref
wd-gee	V1.0	occurr	Inland water surface from Landsat – monthly occurrences (30m)	Africa ³		link
wd-gee	V1.0	avg	Long Term average occurrences (30m)	Africa	1985-2015	
theia-wl	1.0	n.a.	Water level over lakes and rivers (CSV Point data) ⁴			link

³ The product is computed globally, but distributed over Africa only, divided by region

⁴ This product serves only for data download over the lakes and rivers selected in data source description

2.3 RAINFALL PRODUCTS

The following table describes the 'rainfall' monitoring products that are retrieved and ingested in the Climate Station. The reference period for the computation of LTA (Long Term Anomalies) is also indicated: normally, it corresponds to the whole datasets length, and is therefore longer than the temporal extension of timeseries locally available on the stations.

2.3.1 Input Products

Product code	Version	Ingested sub-product	Description	Coverage	Period for LTA	Ref
fewsnet-rfe	2.0	10d	Precipitation estimates over 10 days (8km)	Africa	2001-2017	link
tamsat-rfe	3.0	10d	Precipitation estimates over 10 days (4km)	Africa	1983-2017	link
tamsat-rfe	3.1	10d	Precipitation estimates over 10 days (4km)	Africa	1983-2020	link
tamsat-rfe	3.1	1d	Precipitation estimates over 1 day (4km)	Africa	NA	link
chirps-dekad	2.0	10d	Precipitation estimates over 10 days (0.05deg)	Global	1981-2017	link
arc2-rain	2.0	1d	Precipitation estimates from NASA-CPC(1983-Present) (0.1deg)	Africa	NA	link
rain-spi	V1.0	spi-1mon	Standard Precipitation Index over 1month from JRC-MARS (0.05deg)	Global	NA	link
rain-spi	V1.0	spi-3mon	Standard Precipitation Index over 3months from JRC-MARS (0.05deg)	Global	NA	link
era-hourly-tp	1.0	tp	CDS ERA5 Total Precipitation rate hourly (25km)	ACP	NA	link
cdas-monthly-prcp	1.0	prcp	CDAS Monthly Precipitation (2.5 Degree)	ACP	NA	link

2.4 RAINFALL FORECAST PRODUCTS

The following table describes the 'rainfall' forecast products that are retrieved and ingested in the Climate Station.

2.4.1 Input products

Product code	Version	Ingested sub-product	Description	Coverage	Period for LTA	Ref
ecc3-monthly-tp	1.0	tp	Seasonal forecast - Environment and Climate Change Canada system 3 monthly mean of Total Precipitation rate (1 degree)	ACP	NA	link
ukmo601-monthly-tp	1.0	tp	Seasonal forecast - UK met office system 601 monthly mean of Total Precipitation rate (1 degree)	ACP	NA	link
mf8-monthly-tp	1.0	tp	Seasonal forecast - Meteo France system 8 monthly mean of Total Precipitation rate (1 degree)	ACP	NA	link
s5-monthly-tp	1.0	tp	Seasonal forecast - ECMWF system 5 monthly mean of Total Precipitation rate (1 degree)	ACP	NA	link
jma3-monthly-tp	1.0	tp	Seasonal forecast - JMA system 3 monthly mean of Total Precipitation rate (1 degree)	ACP	NA	link
ncep2-monthly-tp	1.0	tp	Seasonal forecast - NCEP system 2 monthly mean of Total Precipitation rate (1 degree)	ACP	NA	link
efi-spi	1.0	1month	Wet and Dry Spells 1month forecast (1 degree)	ACP	NA	link
efi-spi	1.0	3month	Wet and Dry Spells 3 months forecast (1 degree)	ACP	NA	link
efi-spi	1.0	6month	Wet and Dry Spells 6 months forecast (1 degree)	ACP	NA	link
s5-subdaily-tp	1.0	tp	Seasonal forecast - ECMWF system 5 subdaily 4 weeks forecast of Total Precipitation rate (1 degree)	ACP	NA	link

2.5 FIRE PRODUCTS

The following table describes the 'Fire' products that are retrieved and ingested in the Climate Station. The reference period for the computation of LTA (Long Term Anomalies) is also indicated: normally, it corresponds to the whole datasets length, and is therefore longer than the temporal extension of timeseries locally available on the stations.

2.5.1 Input Products

Product code	Version	Ingested sub-product	Description	Coverage	Period for LTA	Ref
modis-firms	V6.1	1day	Daily Active Fires at 1 km resolution	Africa	2002-Till date	link

2.6 MISCELLANEOUS (MONITORING & FORECAST) PRODUCTS

The following table describes the 'Miscellaneous' monitoring and forecast products that are retrieved and ingested in the Climate Station. The reference period for the computation of LTA (Long Term Anomalies) is also indicated: normally, it corresponds to the whole datasets length, and is therefore longer than the temporal extension of time series locally available on the stations.

2.6.1 Input Products

Product code	Version	Ingested sub-product	Description	Coverage	Period for LTA	Ref
ascat-swi	V3.1	swi	Soil Water Index- Every day product (0.1 degree)	Global	NA	link
cpc-sm ⁵	1.0	sm	Soil Moisture – Monthly product (0.5 degree)	Global	NA	link
lsasaf-et	Undefined	et	Evapotranspiration 30mins product (1km)	MSG-disk	NA	link
lsasaf-lst	Undefined	lst	Land Surface temperature 15mins product (1km)	MSG-disk	NA	link
era-hourly-ssrd	1.0	ssrd	ERA5 hourly Surface solar radiation downwards (25km)	ACP	NA	link
era-hourly-10uwind	1.0	10uwind	ERA5 hourly 10m u component of wind (25km)	ACP	NA	link
era-hourly-10vwind	1.0	10vwind	ERA5 hourly 10m v component of wind (25km)	ACP	NA	link

⁵ This product data are available on JRC server since 2008.

s5-monthly-10mws	1.0	10mws	Seasonal forecast - ECMWF system 5 - monthly mean of 10m Wind Speed (1 degree)	ACP	NA	link
s5-monthly-mslp	1.0	mslp	Seasonal forecast - ECMWF system 5 - monthly mean of Mean sea level pressure (1 degree)	ACP	NA	link
s5-monthly-ssrd	1.0	ssrd	Seasonal forecast - ECMWF system 5 - monthly mean of Surface solar radiation downwards (1 degree)	ACP	NA	link
s2-l1c ⁶	V1.0	N/A	Sentinel 2 L1C products from SentinelSat API	NA	NA	link

2.7 MARINE PRODUCTS

The following table describes the ‘Marine’ monitoring and forecast products that are retrieved and ingested in the Climate Station. The reference period for the computation of LTA (Long Term Anomalies) is also indicated: normally, it corresponds to the whole datasets length, and is therefore longer than the temporal extension of time series locally available on the stations.

2.7.1 Input Products

Product code	Version	Ingested sub-product	Description	Coverage	Period for LTA	Ref
modis-sst	v2019.0	sst-day	Ingested daily Sea Surface temperature SST (4km)	Global	Since 2002	link
modis-chla	v2018.0	chl-day	Ingested daily Chlorophyll a (4km)	Global	Since 2002	link
modis-par	v2018.0	par-day	Ingested daily Photosynthetically Available Radiation - PAR (4km)	Global	Since 2002	link
modis-kd490	v2018.0	kd490-day	Ingested daily Diffuse attenuation coefficient for downwelling irradiance at 490 nm - KD490 (4km)	Global	Since 2002	link
pml-modis-chla	3.0	chl-3day	Ingested CHL (1km)	Region	NA	link
pml-modis-sst	3.0	sst-3day	Ingested SST (1km)	Region	NA	link
olci-wrr	V02.0	chl-oc4me	Chlorophyll-a computed with oc4me algo (1km)	Africa	NA	link
olci-wrr	V02.0	tsm-nn	Total Suspended Matter computed with nn algo (1km)	Africa	NA	link
slstr-sst	1.0	wst	Sea Surface Temperature (1km)	Africa	NA	link

⁶ This product is introduced for Sentinel 1 & 2 data acquisition [SentinelSat API](#). The detailed description how to use the acquisition for other Sentinel 2 sensors (L2A) is mentioned in Appendix. Also this product should be activated manually from Product Administrator and not available from Portfolio

era-hourly-sst	1.0	sst	ERA5 Sea Surface Temperature hourly (25km)	ACP	NA	link
era-monthly-sst	1.0	sst	ERA5 Sea Surface Temperature Monthly (25km)	ACP	NA	link
s5-monthly-sst	1.0	sst	Seasonal forecast 5 ensemble monthly mean of Sea Surface temperature (1 degree)	ACP	NA	link

2.8 TEMPERATURE MONITORING PRODUCTS

The following table describes the 'Temperature' monitoring products that are retrieved and ingested in the Climate Station.

2.8.1 Input Products

Product code	Version	Ingested sub-product	Description	Coverage	Period for LTA	Ref
era-hourly-2mt	1.0	2mt	ERA5 2 meter temperature hourly (25km)	ACP	NA	link
era-hourly-2mt	1.0	2mtmax	ERA5 Hourly maximum 2m temperature since previous post processing (25km)	ACP	NA	link
era-hourly-2mt	1.0	2mtmin	ERA5 Hourly minimum 2m temperature since previous post processing (25km)	ACP	NA	link
era-monthly-2mt	1.0	2mt	ERA5 2 meter temperature monthly (25km)	ACP	NA	link
era-hourly-2mdw	1.0	2mdw	ERA5 2 meter dew point temperature hourly (25km)	ACP	NA	link
cdas-daily-temperature	1.0	tmax	Gridded daily temperature max (0.5 degree)	ACP	NA	link
cdas-daily-temperature	1.0	tmin	Gridded daily temperature min (0.5 degree)	ACP	NA	link

2.9 TEMPERATURE FORECAST PRODUCTS

The following table describes the 'Temperature' forecast products that are retrieved and ingested in the Climate Station.

2.9.1 Input products

Product code	Version	Ingested sub-product	Description	Coverage	Period for LTA	Ref
s5-monthly-2mt	1.0	2mt	Seasonal forecast - ECMWF system 5 - monthly mean of 2 meter temperature (1 degree)	ACP	NA	link
eccc3-monthly-2mt	1.0	2mt	Seasonal forecast - Environment and Climate Change Canada(ECCC) system 3 - monthly mean of 2 meter temperature (1 degree)	ACP	NA	link

ecc3-monthly-2mt	1.0	2mtmax	Seasonal forecast - ECCC system 3 - monthly mean of 2 meter temperature maximum in the last 24 hours (1 degree)	ACP	NA	link
ecc3-monthly-2mt	1.0	2mtmin	Seasonal forecast - ECCC system 3 - monthly mean of 2 meter temperature minimum in the last 24 hours (1 degree)	ACP	NA	link
mf8-monthly-2mt	1.0	2mt	Seasonal forecast – Meteo France (MF) system 8 - monthly mean of 2 meter temperature (1 degree)	ACP	NA	link
mf8-monthly-2mt	1.0	2mtmax	Seasonal forecast – Meteo France (MF) system 8 - monthly mean of 2 meter temperature maximum in the last 24 hours (1 degree)	ACP	NA	link
mf8-monthly-2mt	1.0	2mtmin	Seasonal forecast – Meteo France (MF) system 8 - monthly mean of 2 meter temperature minimum in the last 24 hours (1 degree)	ACP	NA	link
ukmo601-monthly-2mt	1.0	2mt	Seasonal forecast – UK Met Office (UKMO) system 601 - monthly mean of 2 meter temperature (1 degree)	ACP	NA	link
ukmo601-monthly-2mt	1.0	2mtmax	Seasonal forecast – UK Met Office (UKMO) system 601 - monthly mean of 2 meter temperature maximum in the last 24 hours (1 degree)	ACP	NA	link
ukmo601-monthly-2mt	1.0	2mtmin	Seasonal forecast – UK Met Office (UKMO) system 601 - monthly mean of 2 meter temperature minimum in the last 24 hours (1 degree)	ACP	NA	link
s5-monthly-2mt	1.0	2mtmax	Seasonal forecast - ECMWF system 5 - monthly mean of 2 meter temperature maximum in the last 24 hours (1 degree)	ACP	NA	link
s5-monthly-2mt	1.0	2mtmin	Seasonal forecast - ECMWF system 5 - monthly mean of 2 meter temperature minimum in the last 24 hours (1 degree)	ACP	NA	link
s5-monthly-2mdw	1.0	2mdw	Seasonal forecast ECMWF system 5 - monthly mean of 2 meter dew point temperature (1 degree)	ACP	NA	link
s5-subdaily-2mdw	1.0	2mdw	Seasonal forecast ECMWF system 5 - subdaily 4 weeks forecast of 2m dew point temperature (1 degree)	ACP	NA	link
s5-subdaily-2mt	1.0	2mt	Seasonal forecast ECMWF system 5 - subdaily 4 weeks forecast of 2m temperature (1 degree)	ACP	NA	link
s5-subdaily-2mt	1.0	2mtmax	Seasonal forecast ECMWF system 5 - subdaily 4 weeks forecast of 2m temperature maximum in the last 24 hours (1 degree)	ACP	NA	link
s5-subdaily-2mt	1.0	2mtmin	Seasonal forecast ECMWF system 5 - subdaily 4 weeks forecast of 2m temperature minimum in the last 24 hours (1 degree)	ACP	NA	link
ncep2-monthly-2mt	1.0	2mt	Seasonal forecast – NCEP system 2 - monthly mean of 2 meter temperature (1 degree)	ACP	NA	link

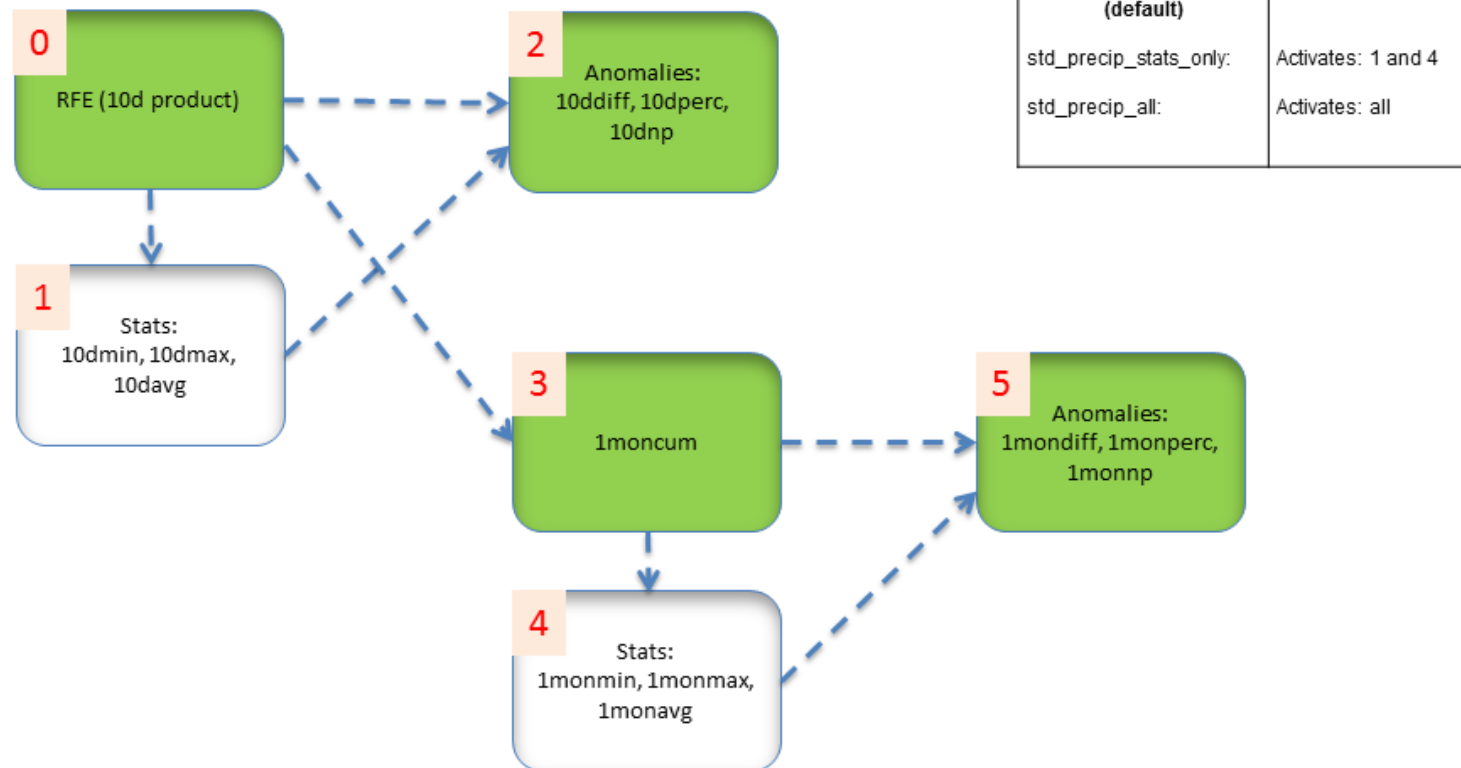
ncep2-monthly-2mt	1.0	2mtmax	Seasonal forecast – NCEP system 2 - monthly mean of 2 meter temperature maximum in the last 24 hours (1 degree)	ACP	NA	link
ncep2-monthly-2mt	1.0	2mtmin	Seasonal forecast – NCEP system 2 - monthly mean of 2 meter temperature minimum in the last 24 hours (1 degree)	ACP	NA	link
jma3-monthly-2mt	1.0	2mt	Seasonal forecast – JMA system 3 - monthly mean of 2 meter temperature (1 degree)	ACP	NA	link
jma3-monthly-2mt	1.0	2mtmax	Seasonal forecast – JMA system 3 - monthly mean of 2 meter temperature maximum in the last 24 hours (1 degree)	ACP	NA	link
jma3-monthly-2mt	1.0	2mtmin	Seasonal forecast – JMA system 3 - monthly mean of 2 meter temperature minimum in the last 24 hours (1 degree)	ACP	NA	link

3. DESCRIPTION OF THE 'STANDARD' PROCESSING CHAINS

The current paragraph presents in a graphic manner how the 'derived' products are computed in the 'standard' processing chains, available in release 2.X.X, according to the following conventions:

- The 'entry' point of the processing chain is displayed at the top-left corner, and indicated with the number **0**. It is normally an ingested product.
- Every group of derived products is indicated with an increasing number, according to the order of the computation.
- Some processing chains can be called with an option, which activates/deactivates some steps. When the steps are de-activated, the corresponding outputs are not updated (e.g. long-term statistics).
- The options are indicated in a table, together with the products the chain is applied to (non-exhaustive list). The default option is also indicated, for which the active computational steps are indicated in green in the diagram.

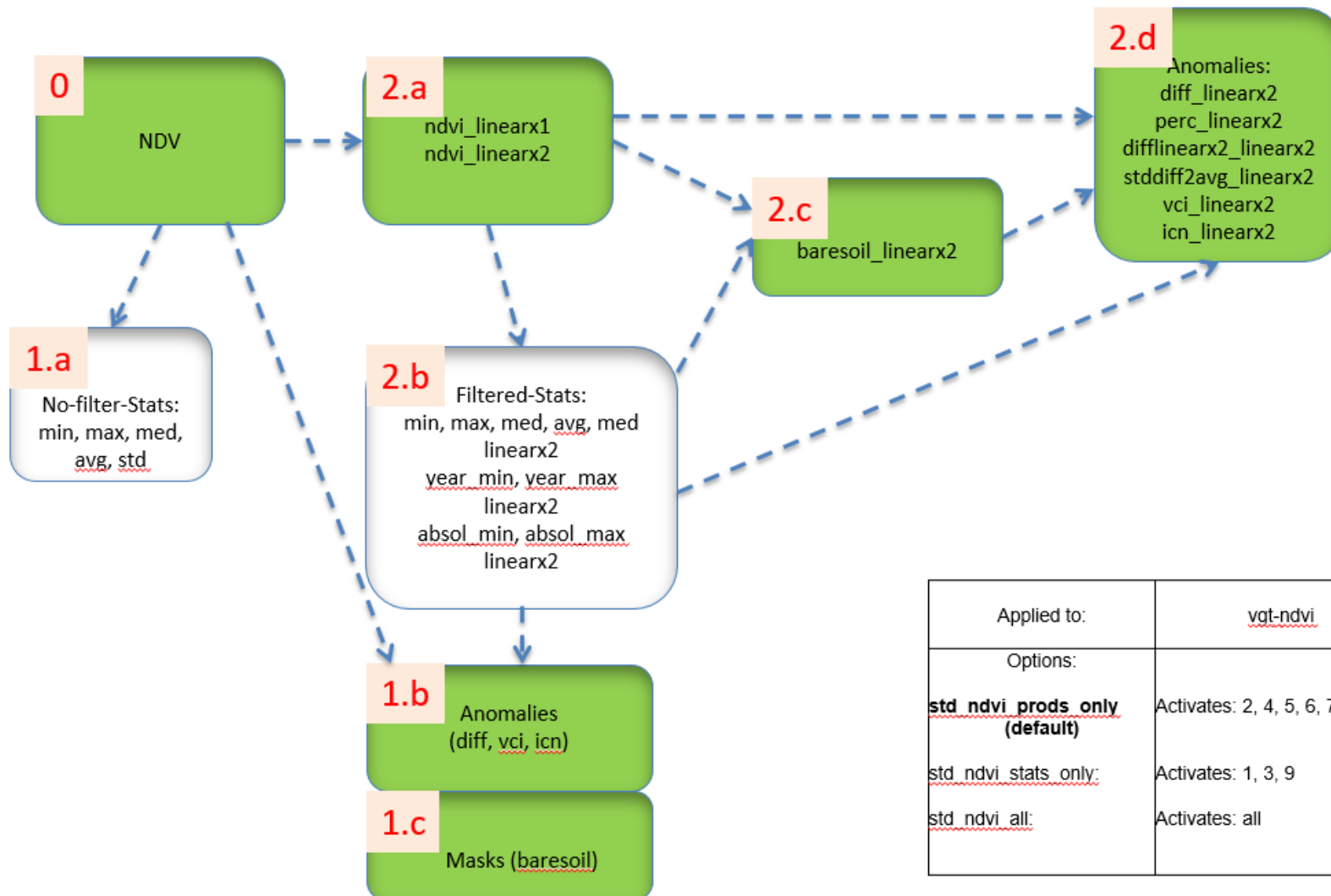
Processing chain: std_precip



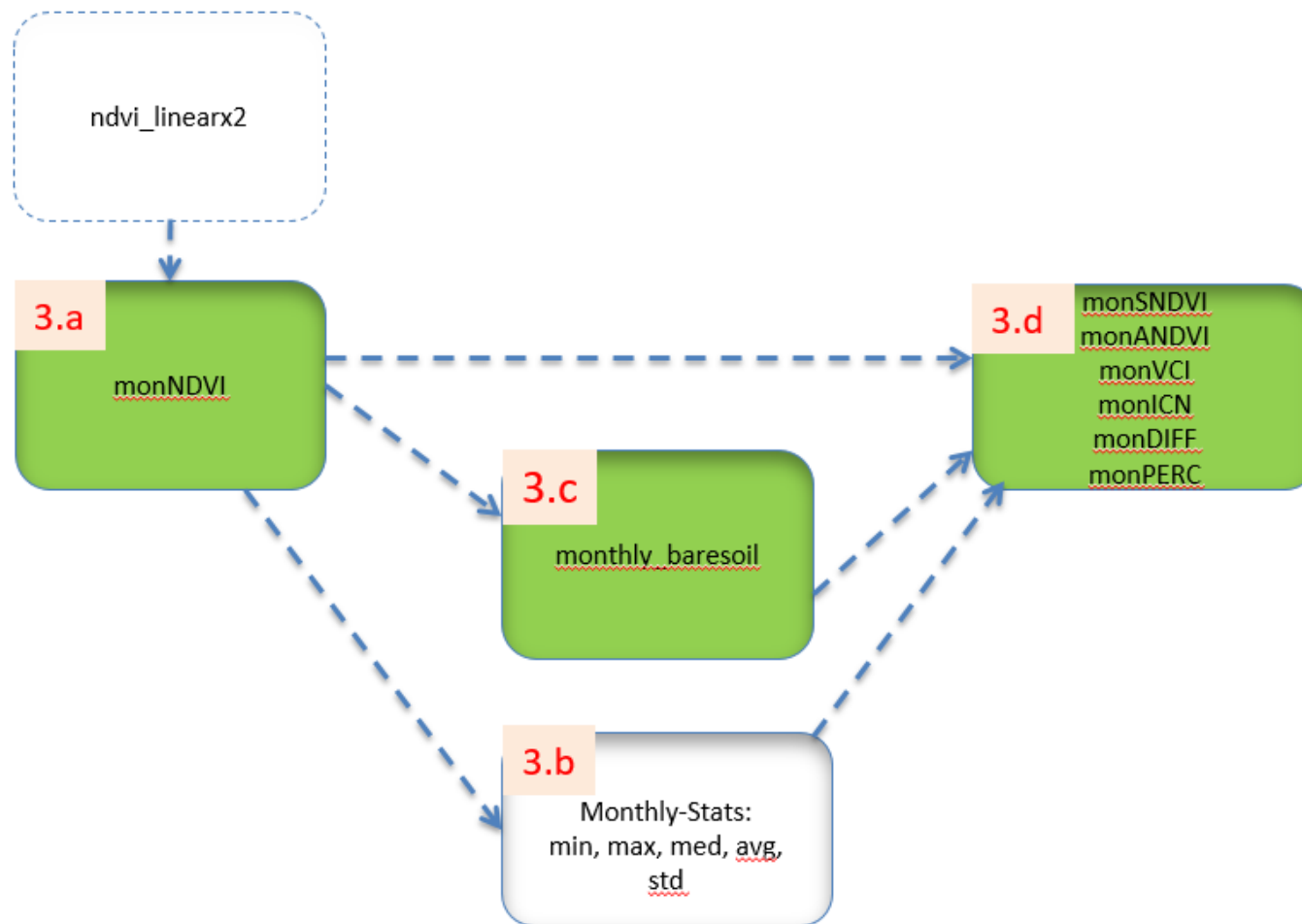
Processing chain: Standard Precipitation processing chain (**std_precip**)
 Applied to: fewsnet-rfe, tamsat-rfe, chirps-dekad

10davg	Statistic: multi-years average for each dekad
10dmin	Statistic: multi-years minimum for each dekad
10dmax	Statistic: multi-years maximum for each dekad
10ddiff	Anomaly: ABSOLUTE DIFFERENCE (10d – 10davg)
10dperc	Anomaly: RELATIVE DIFFERENCE % ((10d – 10davg)/10davg)
10dnp	Anomaly: Normalized Precipitation (10d- 10dmin)/(10dmax-10dmin)
10dratio	Anomaly: Precipitation Ratio 100*(10d/10davg)
1moncum	Cumulated 10day RFE over each month
1monavg	Statistic: multi-years average for each month
1monmin	Statistic: multi-years minimum for each month
1monmax	Statistic: multi-years maximum for each month
1mondif	Anomaly: ABSOLUTE DIFFERENCE (1moncum-1monavg)
1monperc	Anomaly: RELATIVE DIFFERENCE (1moncum-1monavg)/1monavg
1monnp	Anomaly: Normalized Precipitation (1moncum- 1monmin)/(1monmax-1monmin)

Processing chain: std_ndvi



Processing chain: std_ndvi (continued)



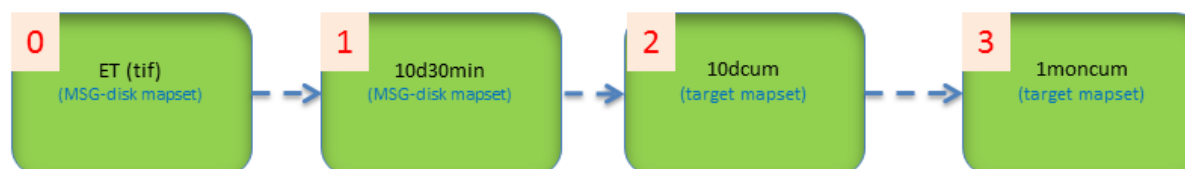
Derived products

Processing chain: Standard Precipitation processing chain for VGT NDVI (**std_vgt_ndvi**)

Applied to: vgt-ndvi

ndvi-linearx2	Filtered NDVI (linear filtering applied twice)
10davg-linearx2	Statistic: AVG of ndvi-linearx2
10dmin-linearx2	Statistic: MIN of ndvi-linearx2
10dmax-linearx2	Statistic: MAX of ndvi-linearx2
10dmed-linearx2	Statistic: MED of ndvi-linearx2
10dstd-linearx2	Statistic: STD of ndvi-linearx2
10ddiff-linearx2	Anomaly: DIF of ndvi-linearx2
10dsndvi-linearx2	Anomaly: SNDVI of ndvi-linearx2 (aka z-score)
10dperc-linearx2	Anomaly: PERC difference of ndvi-linearx2 ($100 * (\text{curr-LTA}) / \text{LTA}$)
linearx2diff-linearx2	Anomaly: Absolute Difference (ndvi-linearx2 -10davg-linearx2)
vci-linearx2	Anomaly: VCI (linearx2 vs. linearx2 statistics)
icn-linearx2	Anomaly: ICN (linearx2 vs. linearx2 statistics)
ratio-linearx2	Anomaly: Ratio ($100 * \text{ndvi-linearx2} / 10\text{davg-linearx2}$)
monndvi	Indicator: monthly NDVI (from ndvi-linearx2)
1monavg	Statistic: monthly multi-year average NDVI
1monmin	Statistic: monthly multi-year min NDVI
1monmax	Statistic: monthly multi-year max NDVI
1monicn	Statistic: monthly ICN NDVI
1monvci	Statistic: monthly VCI NDVI
1monstd	Statistic: monthly std NDVI
1mondiff	Anomaly: monthly diff NDVI
1monperc	Anomaly: monthly perc NDVI
1monsndvi	Anomaly: monthly SNDVI (aka z-score)
monthly-ratio	Anomaly: monthly ratio

Processing chain: std_lsasaf_et



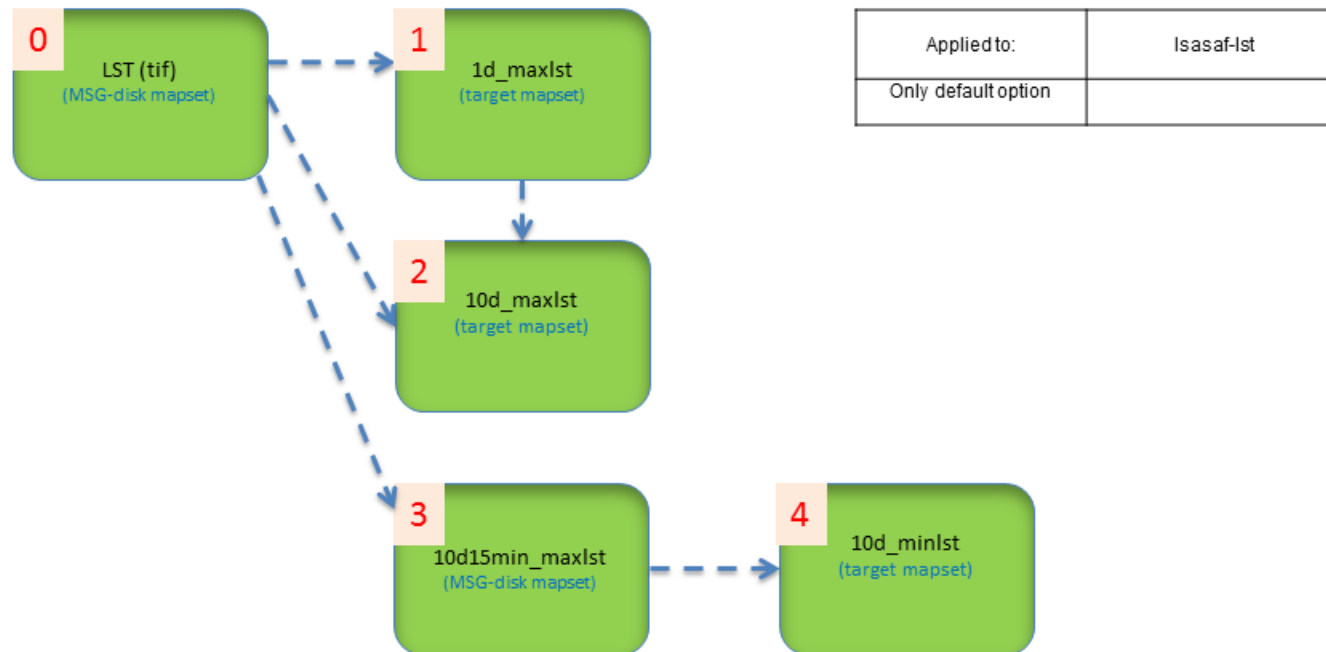
Applied to:	lsasaf-et
Only default option	
Notes:	10d and 1mon stats and anomalies to be added

Processing chain: Standard Processing chain for LSASAF ET related products (**std_lsasaf_et**)

Applied to: lsasaf-et

10d30min ²	Statistics (30min average over 10 days)	MSG-disk
10dcum	Indicator: ET cumulated over 10 days	Africa
1moncum	Indicator: ET cumulated over 1 month	Africa

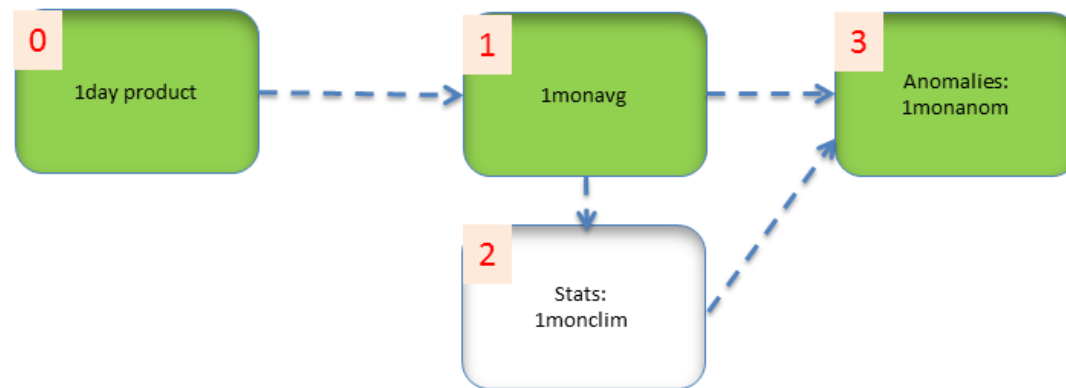
Processing chain: std_Isasaf_Ist



Processing chain: Standard Processing chain for LSASAF LST related products (std_Isasaf_Ist)

Applied to: Isasaf-Ist

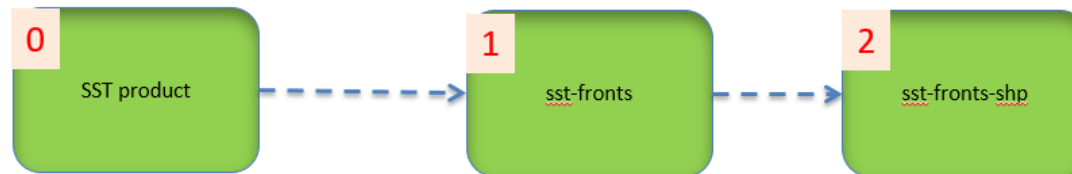
10d15min ²	Statistics (15min max over 10 days)	MSG-disk
1dmax	Indicator: LST maximum over 1 day	Africa
10dmax	Indicator: LST maximum over 10 days	Africa
10dmin	Indicator: LST minimum over 10 days	Africa



Applied to:	modis-chla modis-sst modis-kd490 modis-par
Only default option	
Notes:	The computation of 1monclim is done once for all (no updated)

Processing chain: Standard Processing chain for MODIS monthly average computation (**std_modis_derived**)
 Applied to: modis-chla, modis-sst, modis-par, modis-kd490

8daysavg	8 days Average
monavg	Monthly average
monclim	Monthly Climatology
monanom	Monthly Anomaly (monthly - climatology)



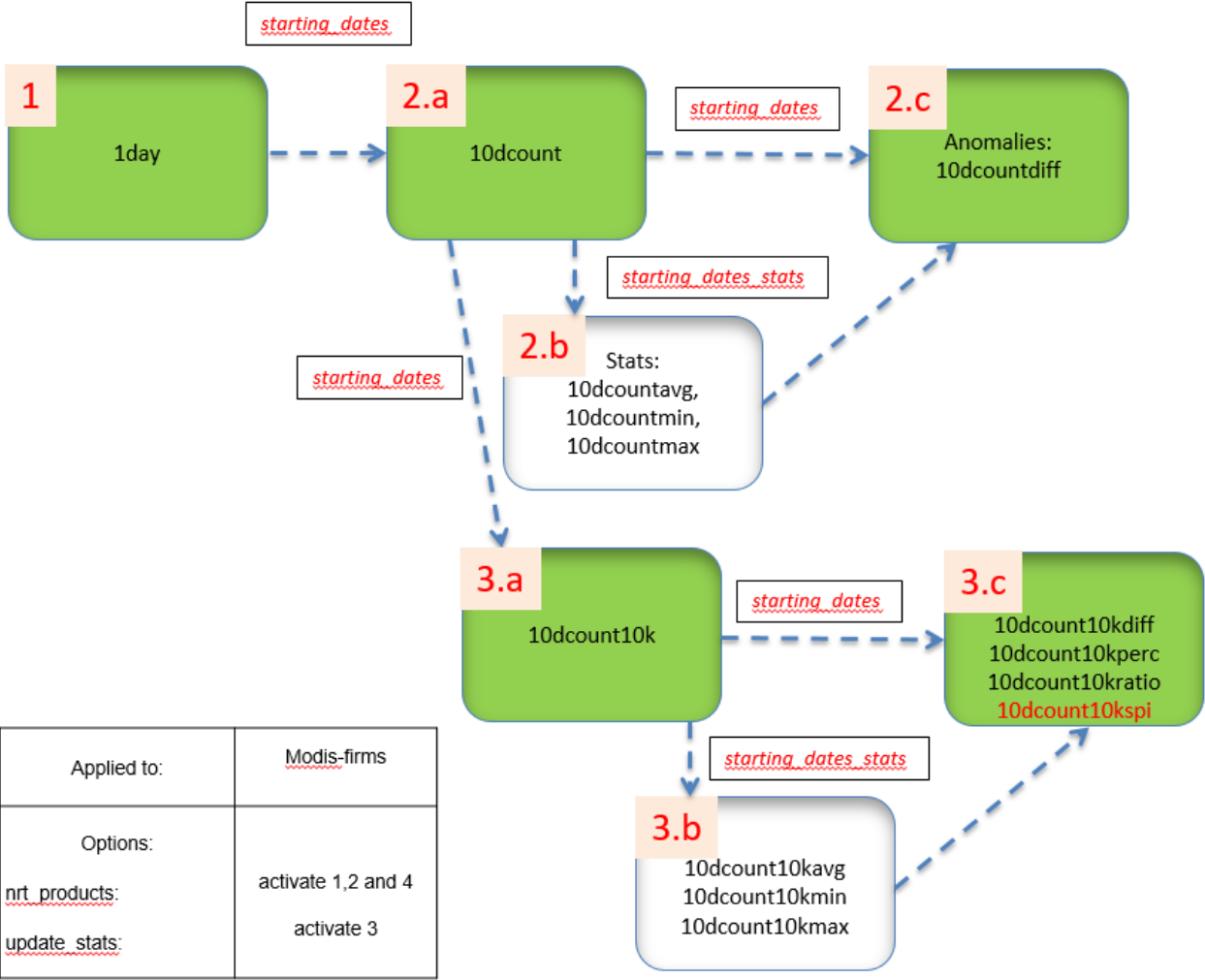
Applied to:	modis-sst pml-modis-sst slstr-sst
Only default option	

Processing chain: Proc library based processing chain for front's computation (**proc_fronts**)
 Applied to: pml-modis-sst, slstr-sst

sst-fronts	Fronts of Sea Surface Temperature
sst-fronts-shp ⁷	Fronts of SST in shapefile format

⁷ On top of the GeoTiff file (sst-fronts) this product is created for usage in QGIS or other applications (it is not visualized by Climate Station viewer).

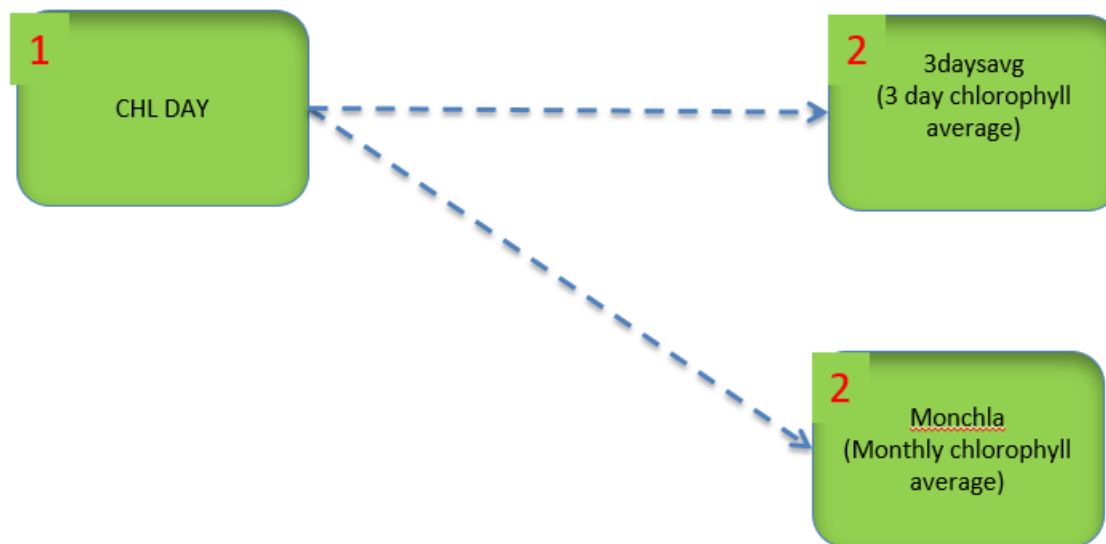
Processing chain: std_modis_firms



Processing chain: Processing chain of standard MODIS FIRMS products (**std_modis_firms**)
 Applied to: modis-firms

10dcount	Number of fires over 10 day period
10dcountavg	Multi-years average number of 10dcount
10dcountmin	Multi-years minimum number of 10dcount
10dcountmax	Multi-years maximum number of 10dcount
10dcountdiff	Difference between 10dcount and 10dcountavg
10dcount10K	Number of fires over 10 day period over 10 Km grids
10dcount10Kavg	Multi-years average number of 10dcount over 10 Km grids
10dcount10Kmin	Multi-years minimum number of 10dcount over 10 Km grids
10dcount10Kmax	Multi-years maximum number of 10dcount over 10 Km grids
10dcount10Kdiff	Difference between 10dcount and 10dcountavg over 10 Km grids
10dcount10Kratio	Ratio between 10dcount and 10dcountavg over 10 Km grids

Processing chain: std_olci_wrr



Processing chain: Standard Processing chain for 3day average, monthly average products computation (std_olci_wrr)
Applied to: slstr-sst, olci-wrr

3daysavg	3day average Product
monavg	Monthly average product

Processing chain: std_gradient



Processing chain: std_monavg



Processing chain: std_3dayavg



Processing chain: Proc library based Processing chain for gradient computation (**proc_gradient**)
Applied to: modis-chla, slstr-sst, olci-wrr

gradient	Horizontal Gradient for chlorophyll and sea surface temperature.
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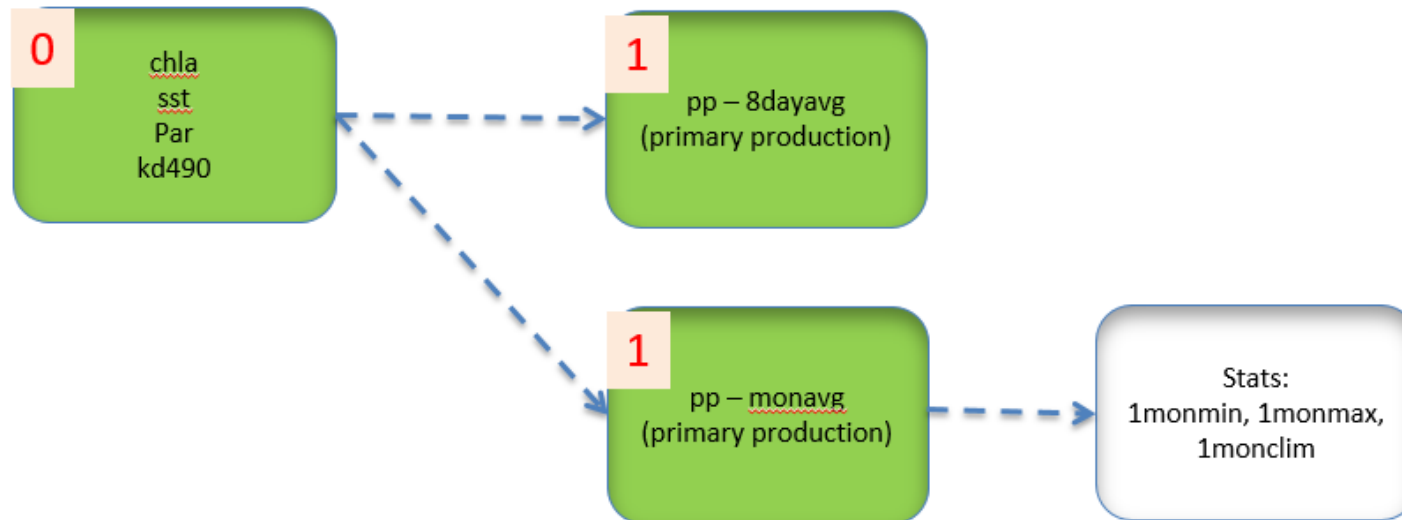
Processing chain: Standard Processing chain for monthly average computation from daily products (**std_monavg**)
Applied to: slstr-sst, olci-wrr

monavg	Monthly averaged for sst or chla
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Processing chain: Standard Processing chain for monthly average computation from daily products (**std_3dayavg**)
Applied to: slstr-sst

3dayavg	Three day averaged for sst or chla
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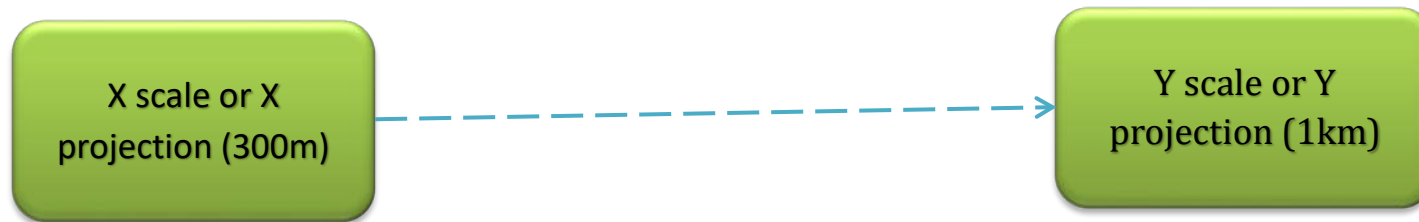
Processing chain: modis_pp



Processing chain: Non Standard Processing chain for Primary production computation (**modis_pp**)
 Applied to: modis-chla, modis-sst, modis-par, modis-kd490 are the 4 inputs for computing PP

8daysavg	Average Primary production over 8 days
monavg	Monthly average primary production

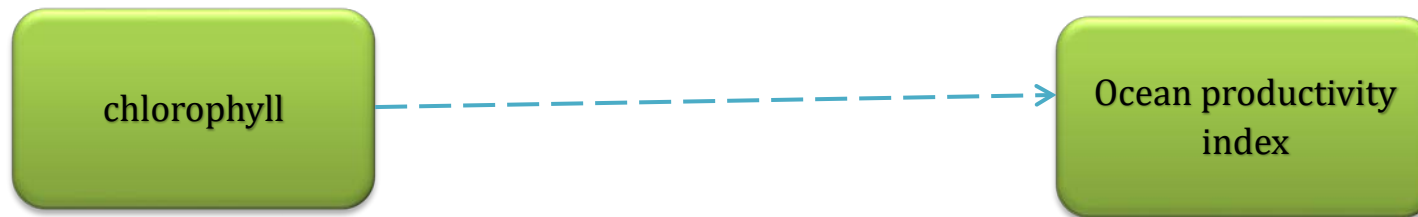
Processing chain: std_reproject



Processing chain: Standard Processing chain to convert to one resolution, one projection from existing resolution and projection (**std_reproject**)
Applied to: vgt-ndvi

ndvi	Reprojected data from 300m to 1km
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Processing chain: std_opfish



Processing chain: Standard Processing chain to generate Ocean productivity index from chlorophyll (**std_opfish**)
Applied to: modis-chla

opfish	Ocean productivity index from Modis chlorophyll data
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