



# S2 : Climate monitoring

- OND NDJ DJF 2020 : SWIO region -

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*METEO FRANCE (Indian Ocean Regional Center – La Réunion)*

*laurent.labbe@meteo.fr*

***Regional Outlook Forum for South-West Indian Ocean countries***

*September 20-23 2021*

*- WebConference -*

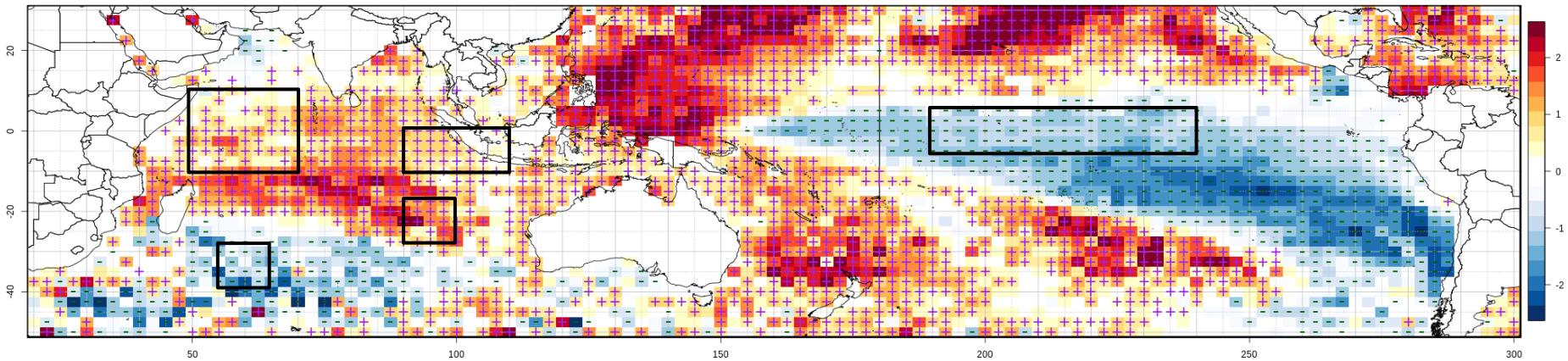
# OND NDJ DJF 2020 – Climate monitoring

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- SST drivers context
- Regional context (Rainfall & Temperature)
- SWIOCOF-9 Forecast verification
  
- Local assessment (countries)

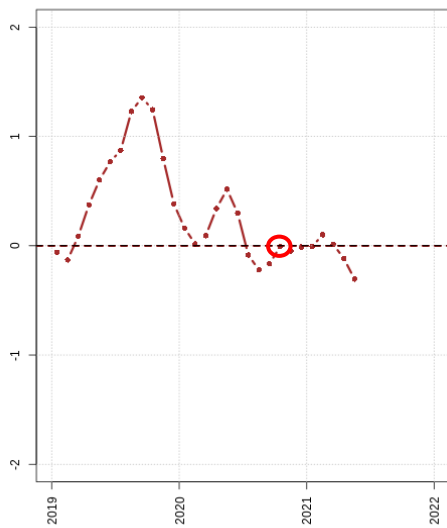
# OND 2020 – Global context

ERA5 SST Std. Anom. : OND 2020

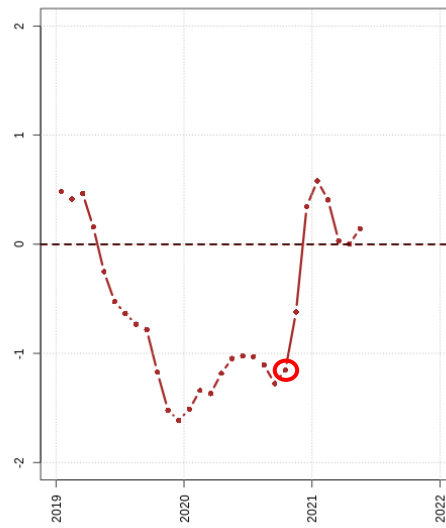


Ref: 1993-2016

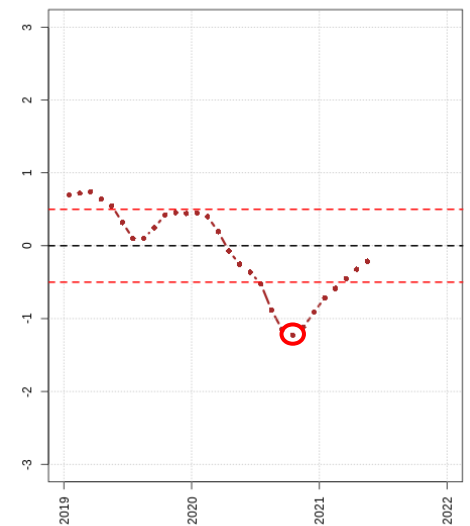
IOD



SIOD

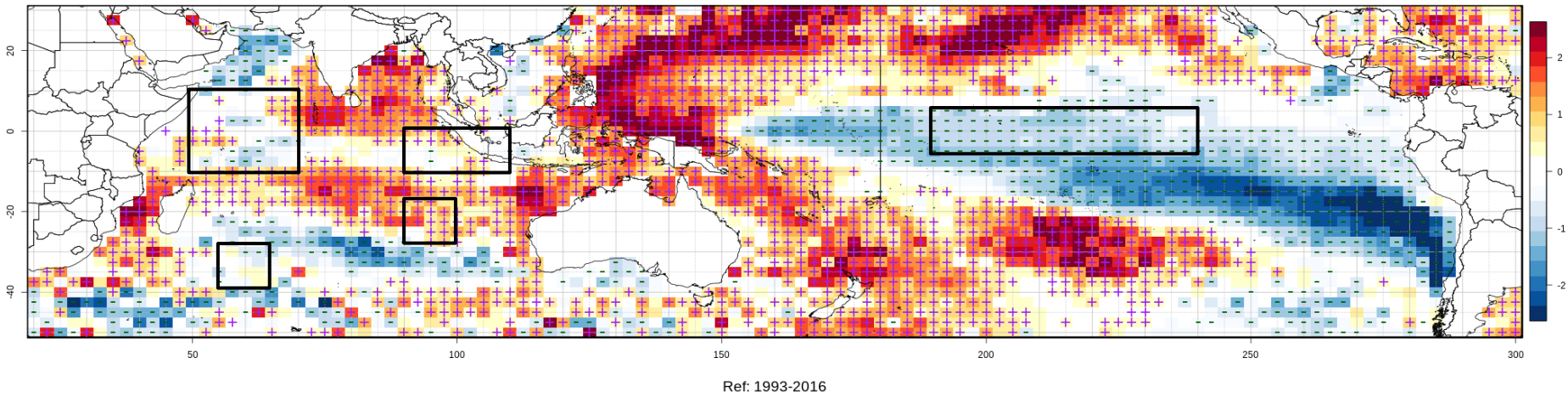


NINO3.4

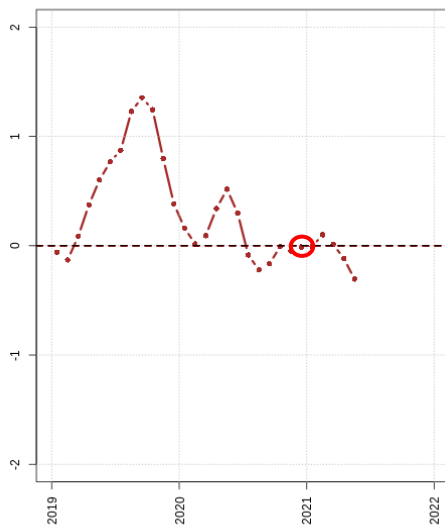


# NDJ 2020 – Global context

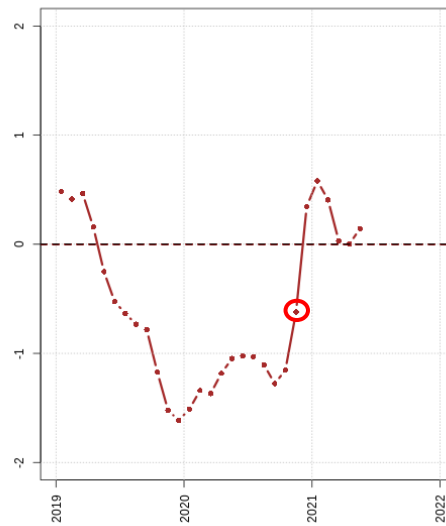
ERA5 SST Std. Anom. : NDJ 2020



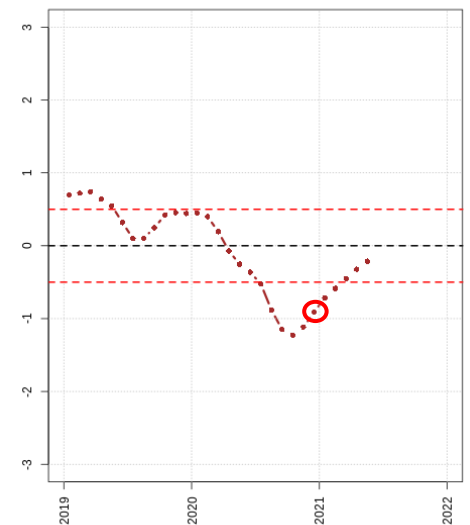
IOD



SIOD

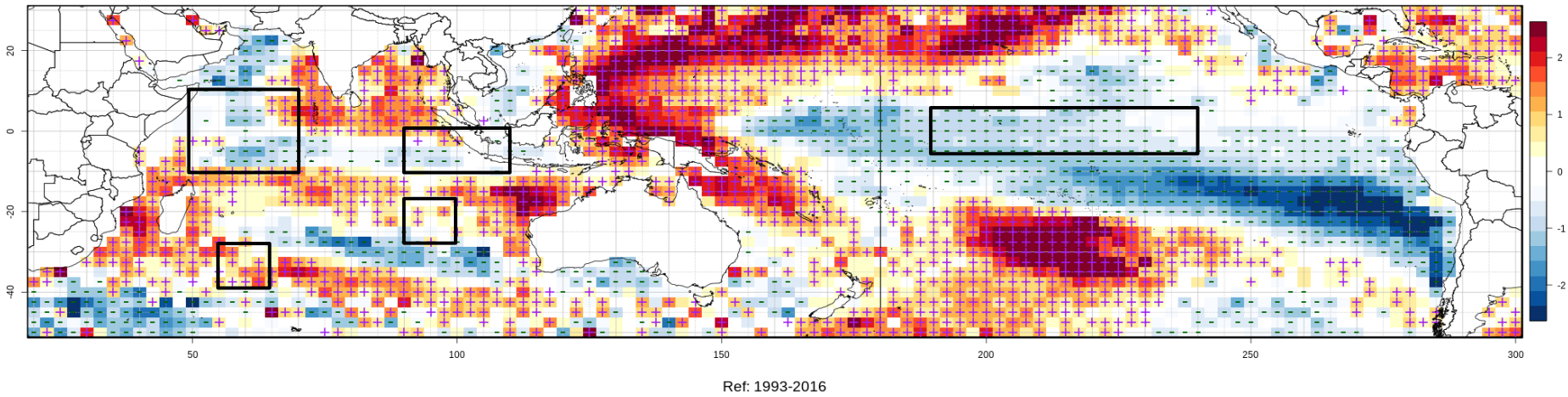


NINO3.4

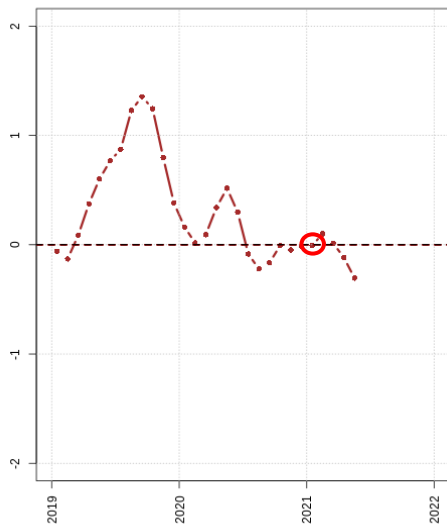


# DJF 2020 – Global context

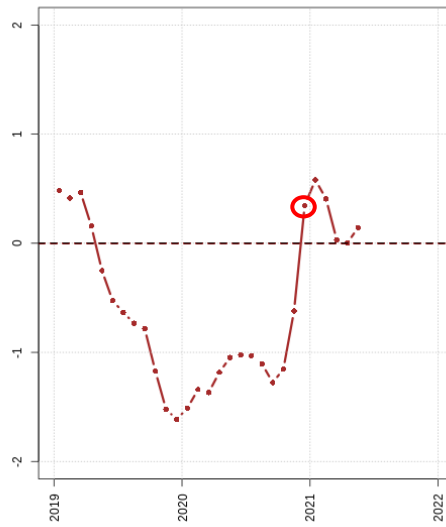
ERA5 SST Std. Anom. : DJF 2020



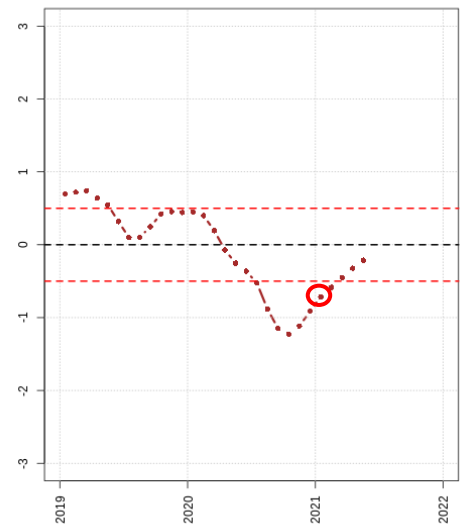
IOD



SIOD



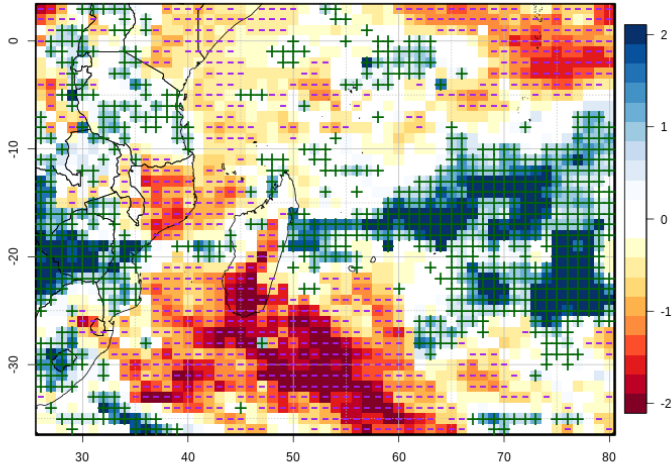
NINO3.4



# OND 2020 – SWIO anomalies

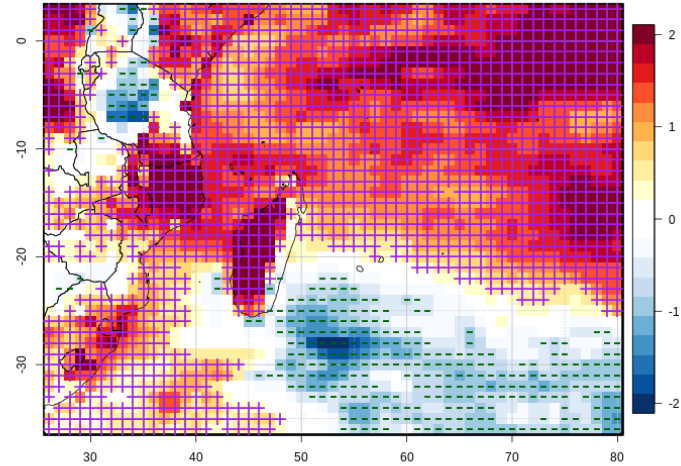
## Rainfall and T2m local anomalies (2020) : SWIO zones reference dataset

PREC\_ERA5\_SWIO Std. Anom.: OND 2020



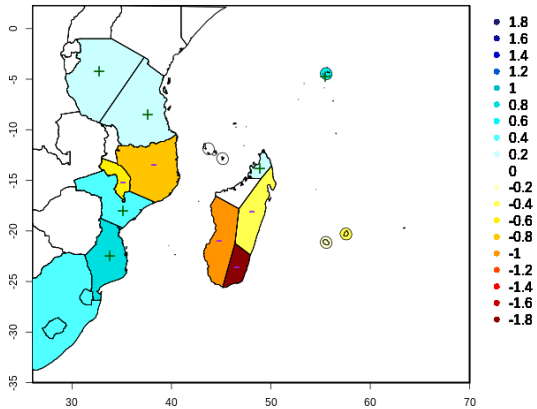
Ref: 1993-2016

T2M\_ERA5\_SWIO Std. Anom.: OND 2020



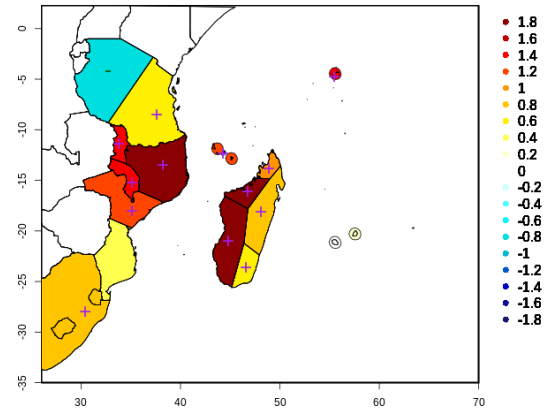
Ref: 1993-2016

RR Std. Anom.: OND 2020



Ref: 1993-2016

T2M Std. Anom.: OND 2020

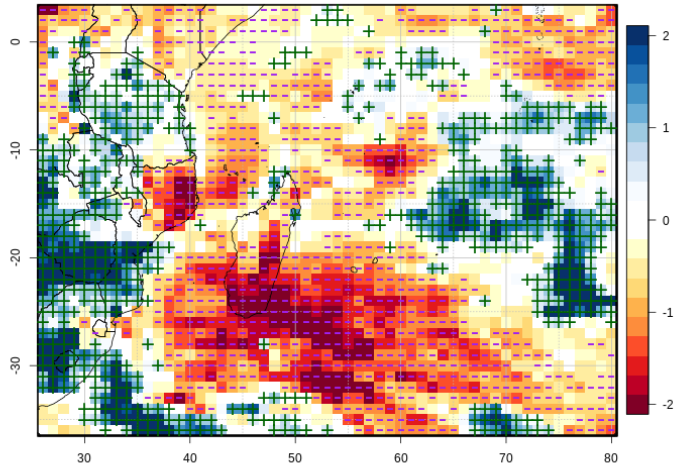


Ref: 1993-2016

# NDJ 2020 – SWIO anomalies

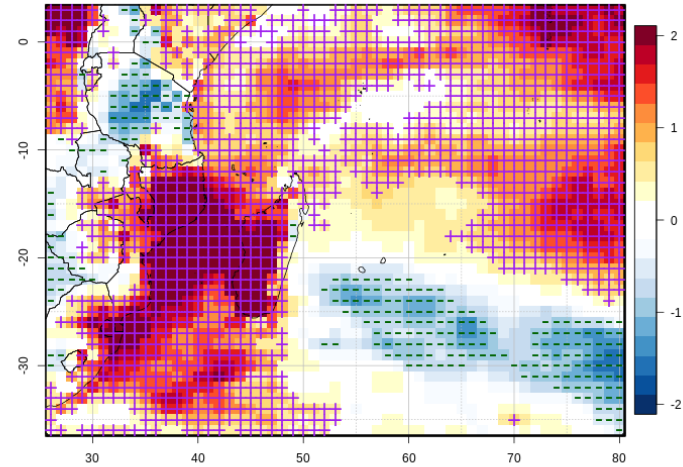
## Rainfall and T2m local anomalies (2020) : SWIO zones reference dataset

PREC\_ERA5\_SWIO Std. Anom.: NDJ 2020



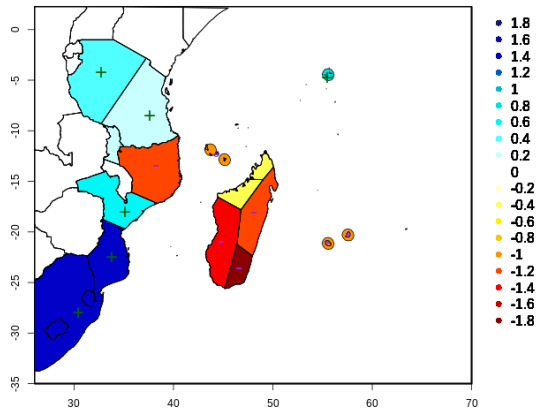
Ref: 1993-2016

T2M\_ERA5\_SWIO Std. Anom.: NDJ 2020



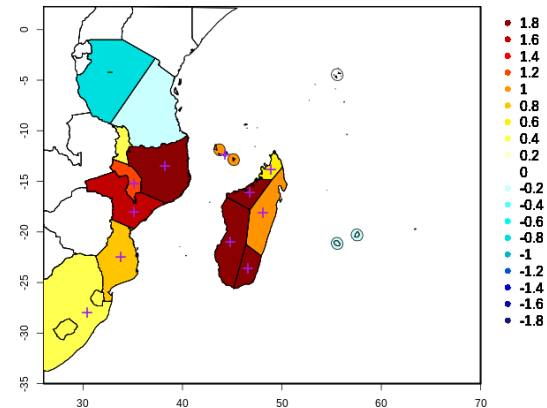
Ref: 1993-2016

RR Std. Anom.: NDJ 2020



Ref: 1993-2016

T2M Std. Anom.: NDJ 2020

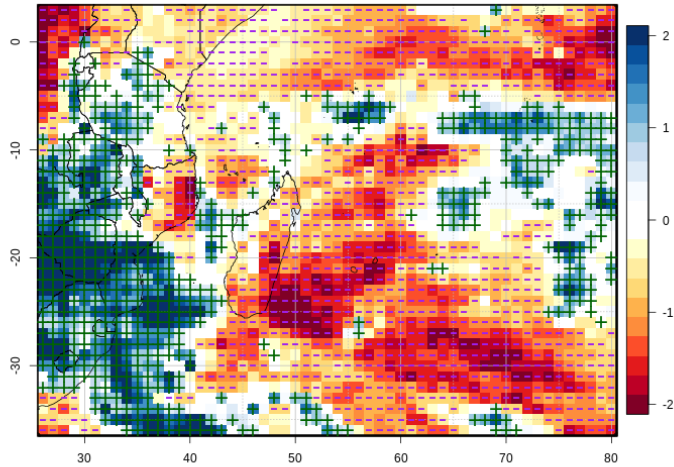


Ref: 1993-2016

# DJF 2020 – SWIO anomalies

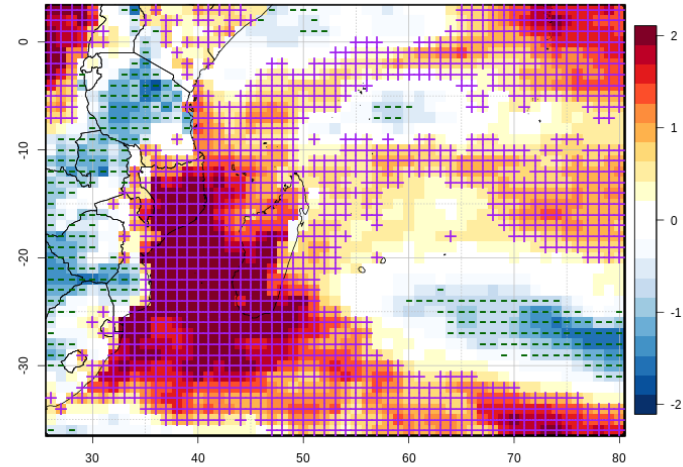
## Rainfall and T2m local anomalies (2020) : SWIO zones reference dataset

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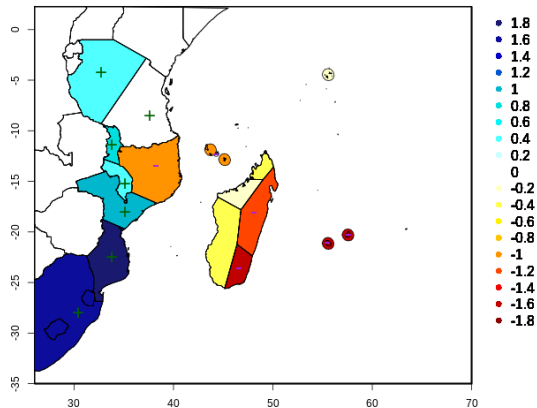
Ref: 1993-2016

T2M\_ERA5\_SWIO Std. Anom.: DJF 2020



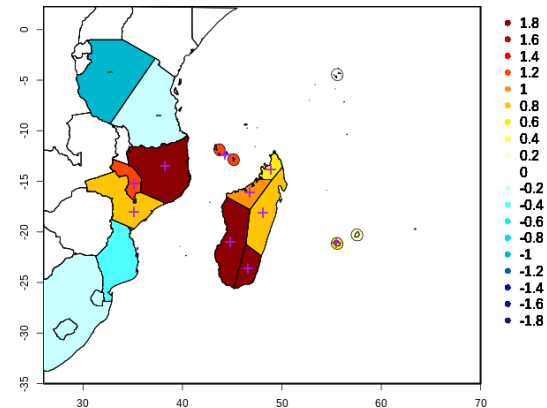
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RR Std. Anom.: DJF 2020



Ref: 1993-2016

T2M Std. Anom.: DJF 2020



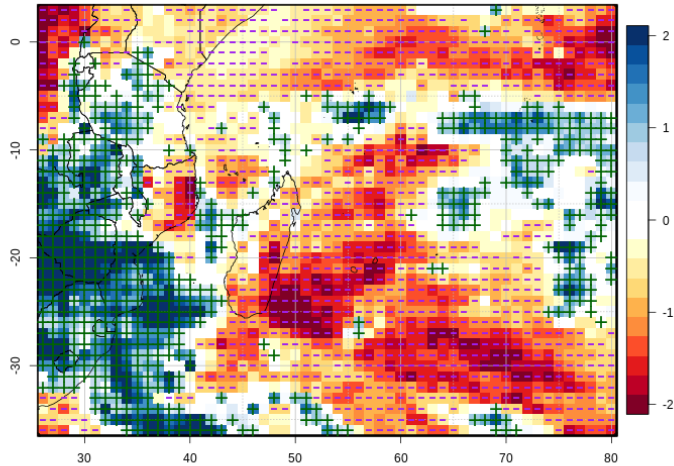
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# DJF 2020 – SWIO anomalies

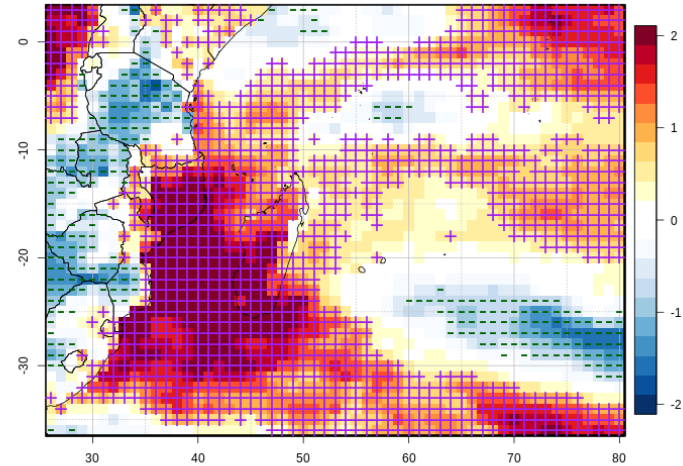
## Rainfall and T2m local anomalies (2020) : SWIO zones reference dataset

PREC\_ERA5\_SWIO Std. Anom.: DJF 2020



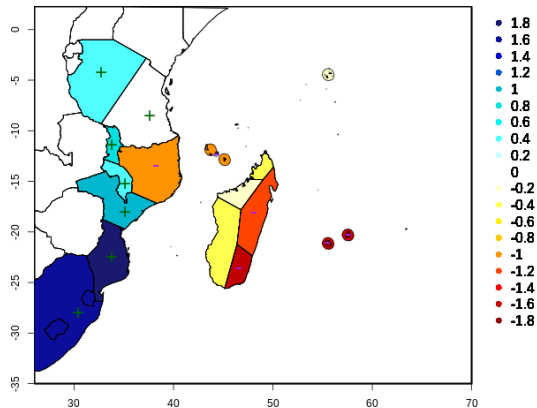
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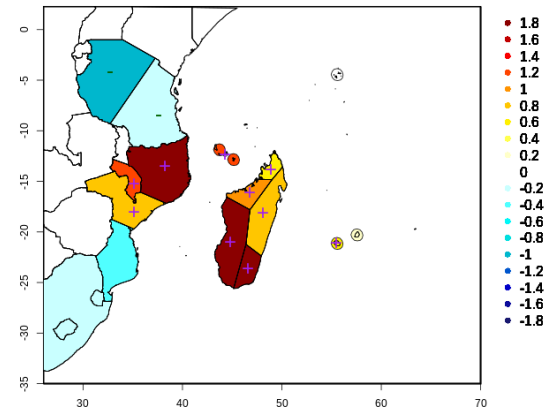
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RR Std. Anom.: DJF 2020



Ref: 1993-2016

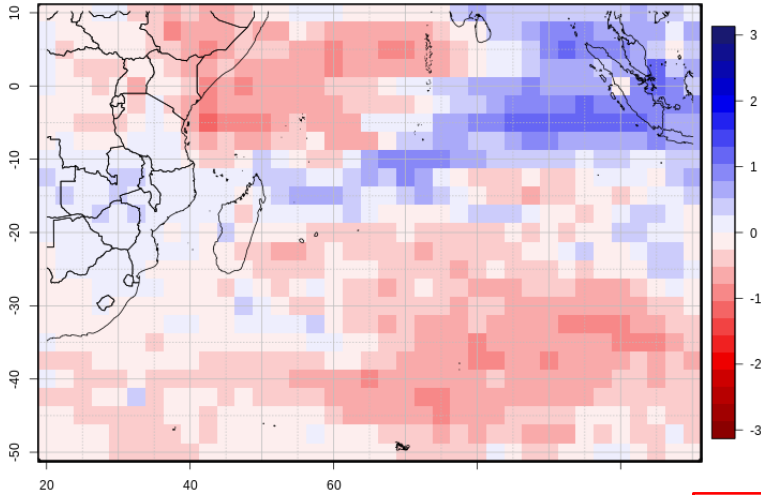
T2M Std. Anom.: DJF 2020



Ref: 1993-2016

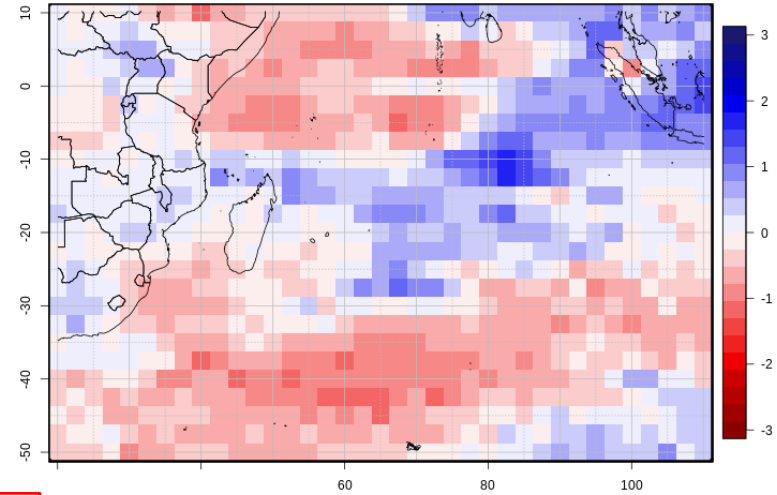
# OND 2020 – SWIO forecast verification

Forecast MF7 PRECglobal



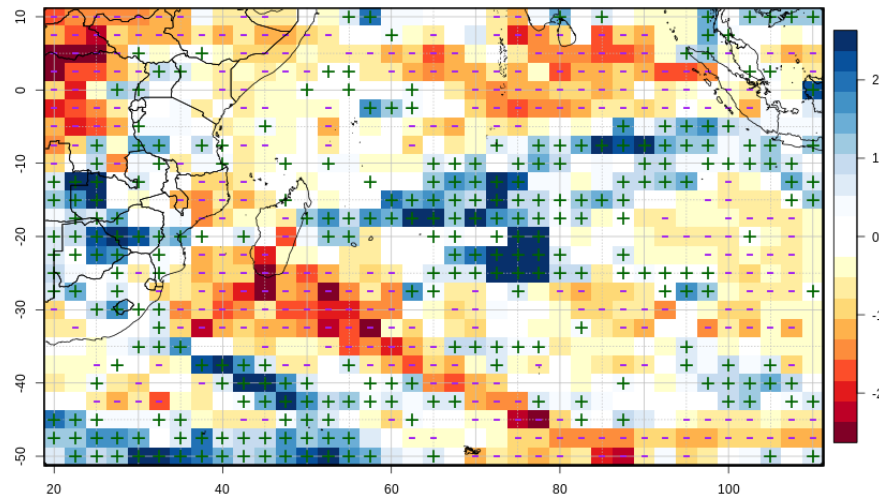
OND 2020 I

Forecast CEP PRECglobal



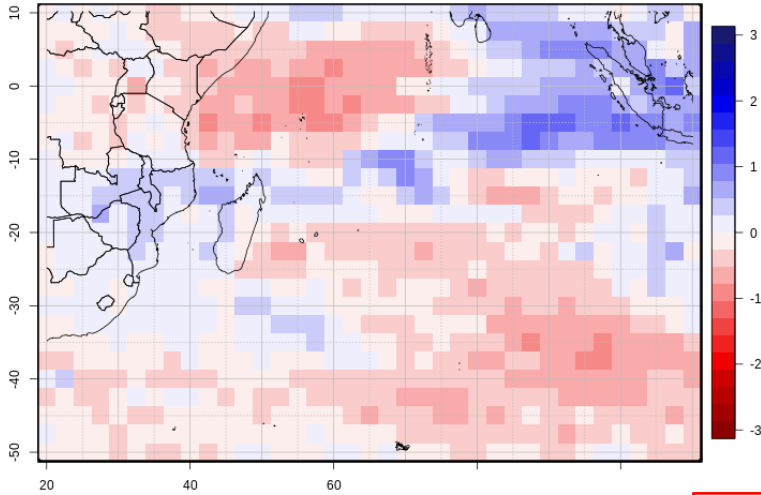
OND 2020 It: 1

ERA5 PREC Std. Anom. : OND 2020



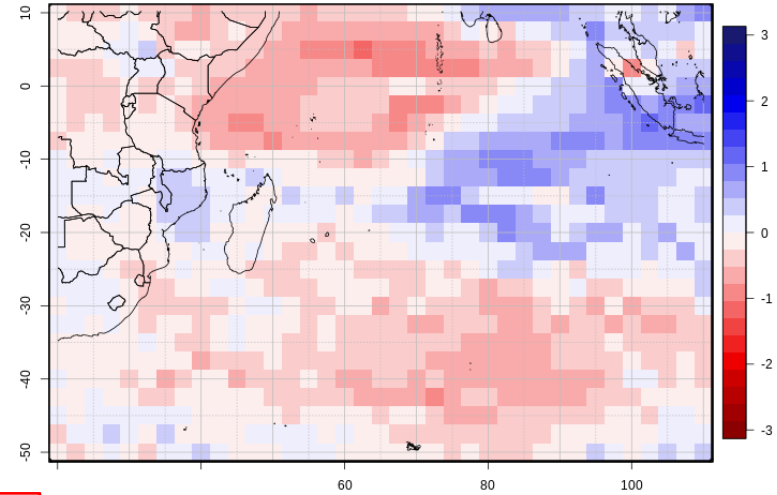
# NDJ 2020 – SWIO forecast verification

Forecast MF7 PRECglobal



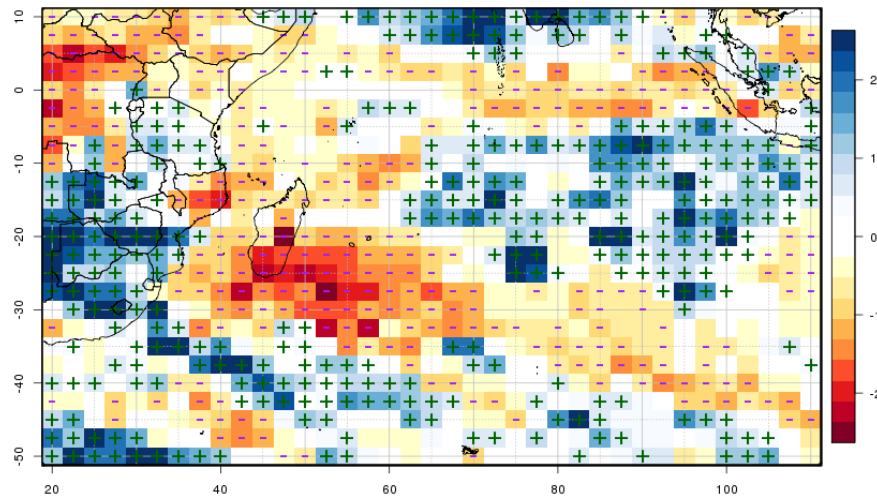
NDJ 2020 I

Forecast CEP PRECglobal



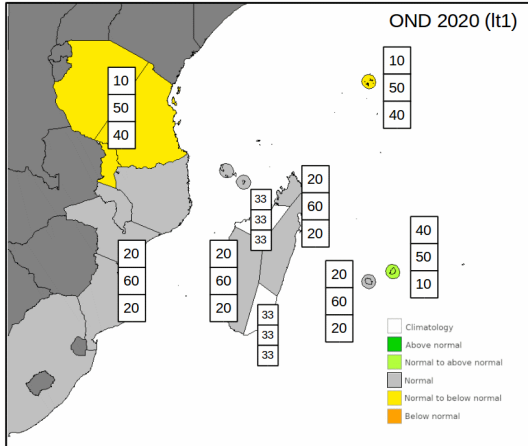
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ERA5 PREC Std. Anom. : NDJ 2020



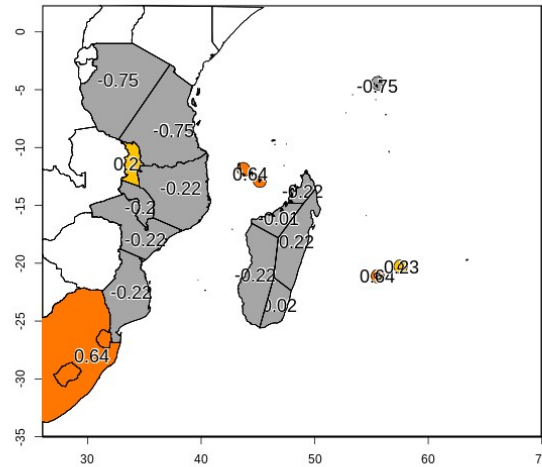
# OND 2020 – SWIO forecast verification

## SWIOCOF-9 outlook

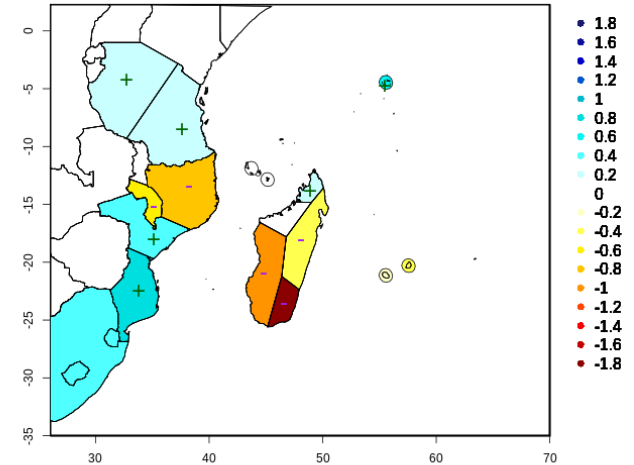


### Rainfall forecast

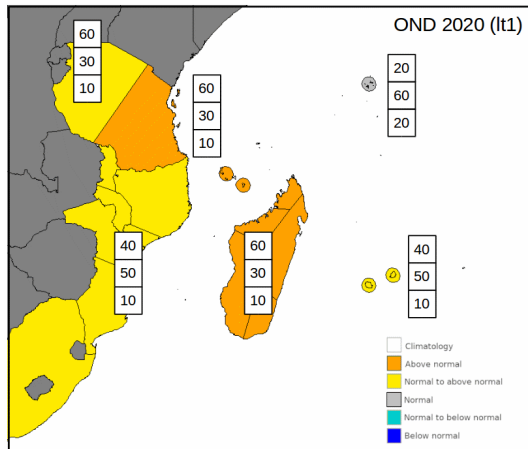
## Score RPSS: RR OND-2020 It1



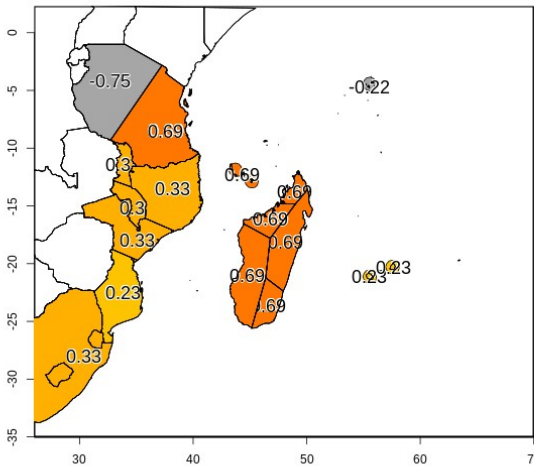
## RR Std. Anom.: OND 2020



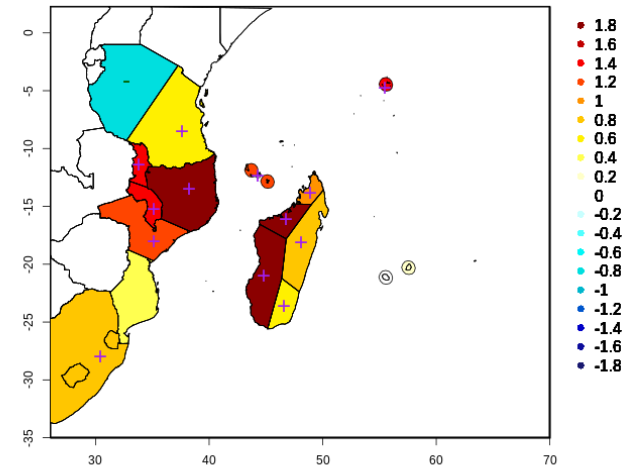
## Score RPSS: T2M OND-2020 It1



### Temperature forecast



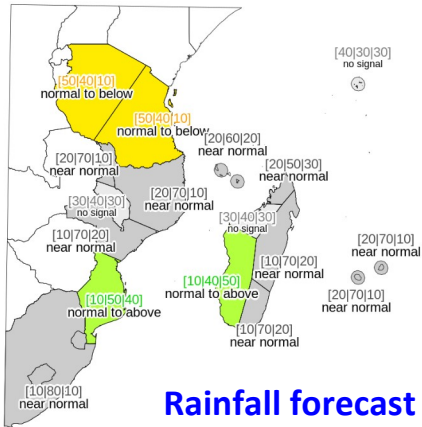
## T2M Std. Anom.: OND 2020



# OND 2020 – SWIO forecast verification

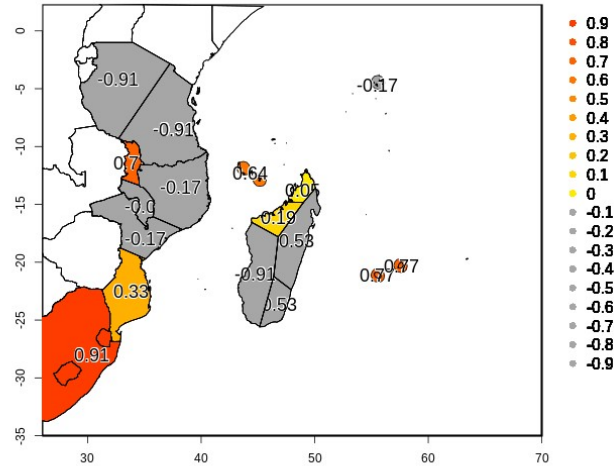
Rainfall Seasonal forecast - OND 2020 - It 1

Mix : ECMWF + MF outlook



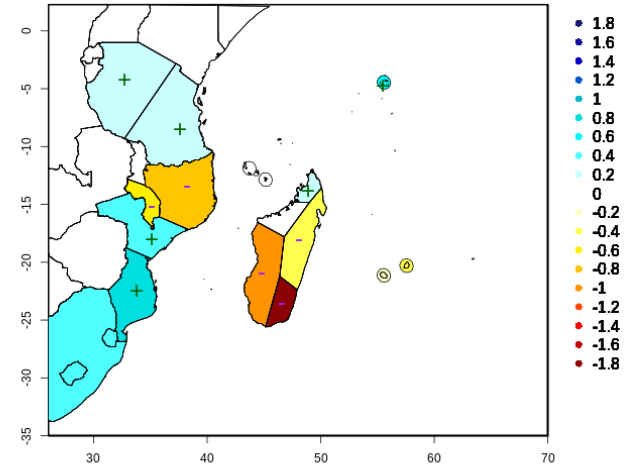
CEP.MF7

Score RPSS: RR OND-2020 It1



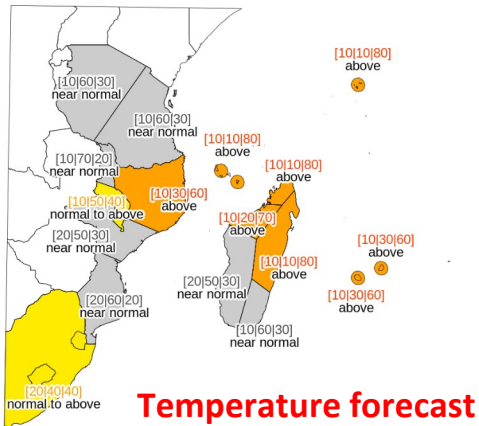
Forecast model: Mix

RR Std. Anom.: OND 2020



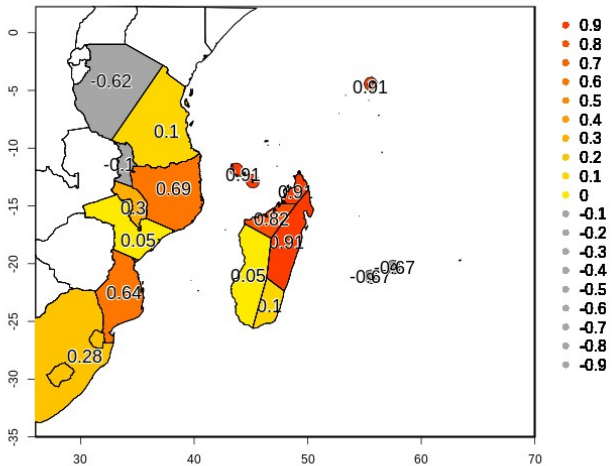
Ref: 1993-2016

Temperature Seasonal forecast - OND 2020 - It 1



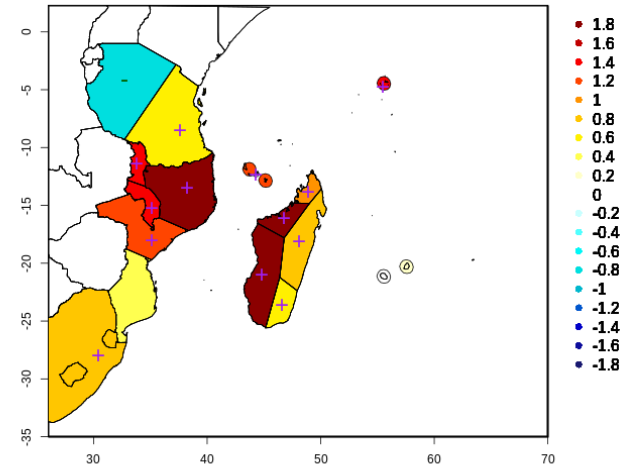
CEP.MF7

Score RPSS: T2M OND-2020 It1



Forecast model: Mix

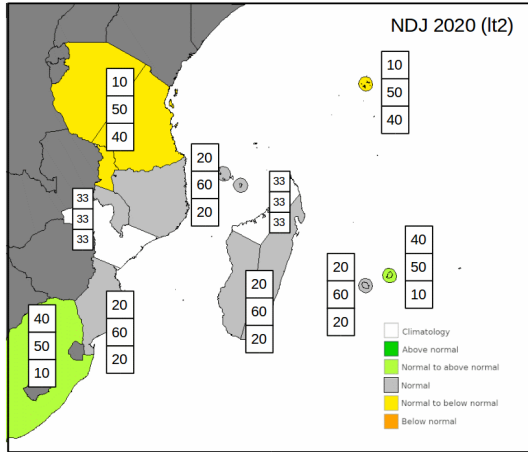
T2M Std. Anom.: OND 2020



Ref: 1993-2016

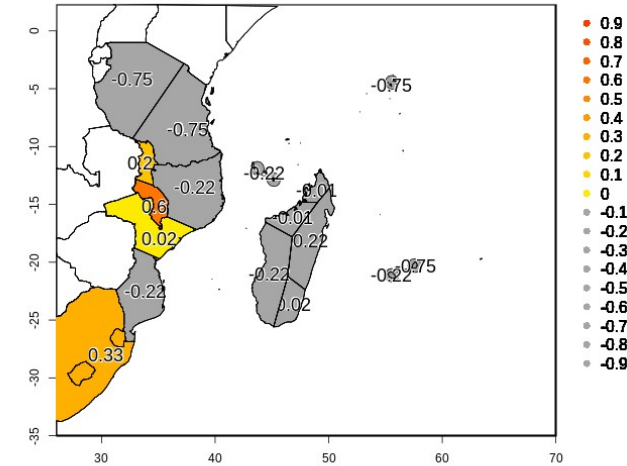
# NDJ 2020 – SWIO forecast verification

## SWIOCOF-9 outlook



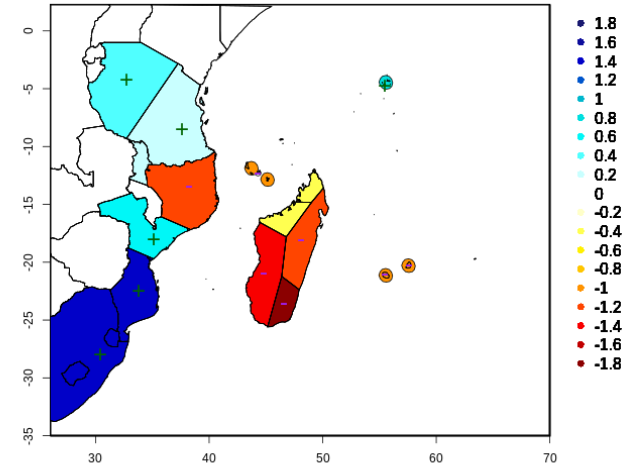
### Rainfall forecast

## Score RPSS: RR NDJ-2020 It2



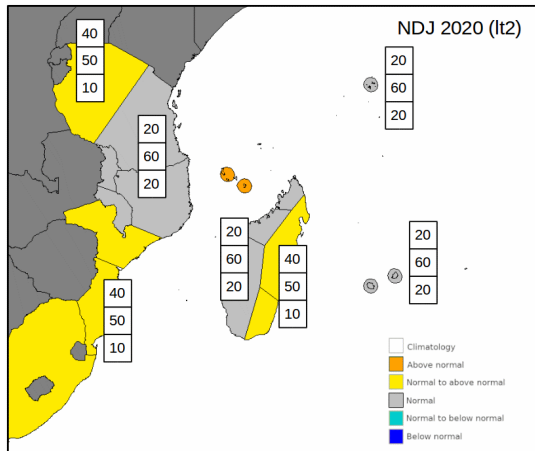
Forecast model: Mix

## RR Std. Anom.: NDJ 2020

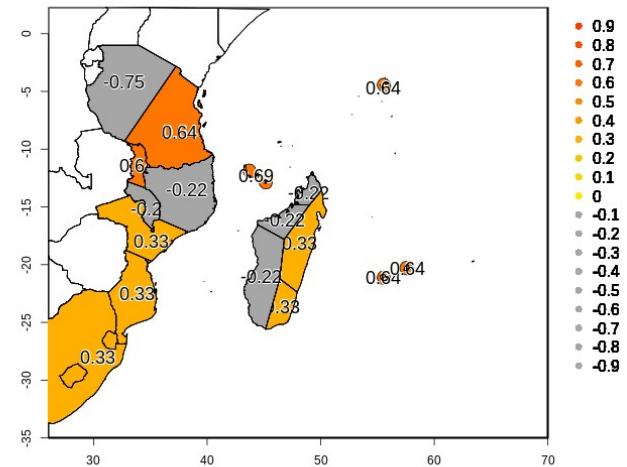


Ref: 1993-2016

## Score RPSS: T2M NDJ-2020 It2

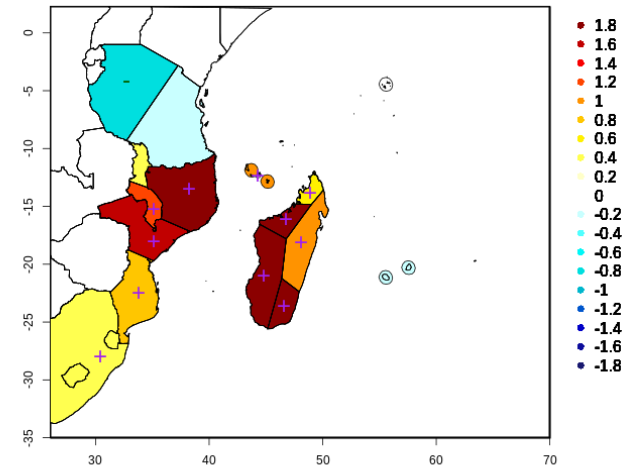


### Temperature forecast



Forecast model: Mix

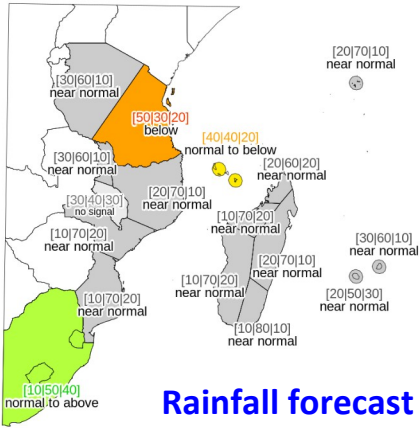
## T2M Std. Anom.: NDJ 2020



Ref: 1993-2016

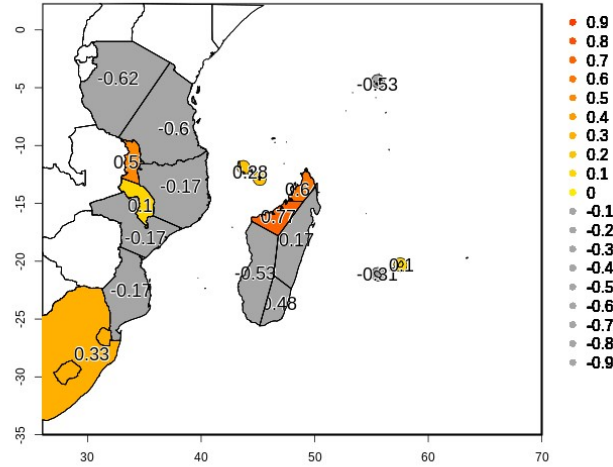
# NDJ 2020 – SWIO forecast verification

Rainfall Seasonal forecast - NDJ 2020 - It 2  
**Mix : ECMWF + MF outlook**



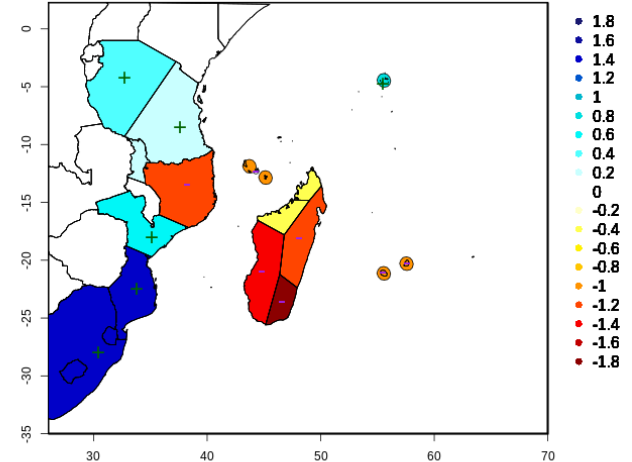
CEP,MF7

Score RPSS: RR NDJ-2020 It2



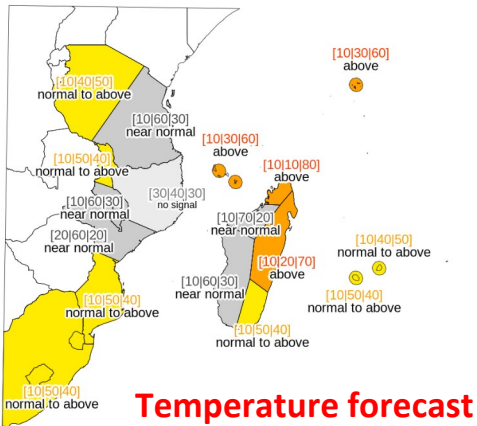
Forecast model: Mix

RR Std. Anom.: NDJ 2020



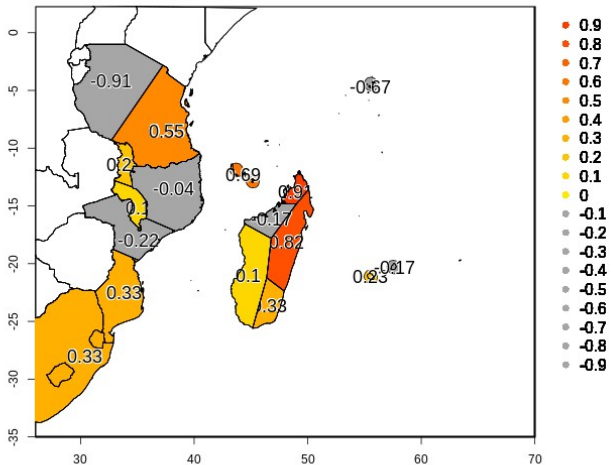
Ref: 1993-2016

Temperature Seasonal forecast - NDJ 2020 - It 2



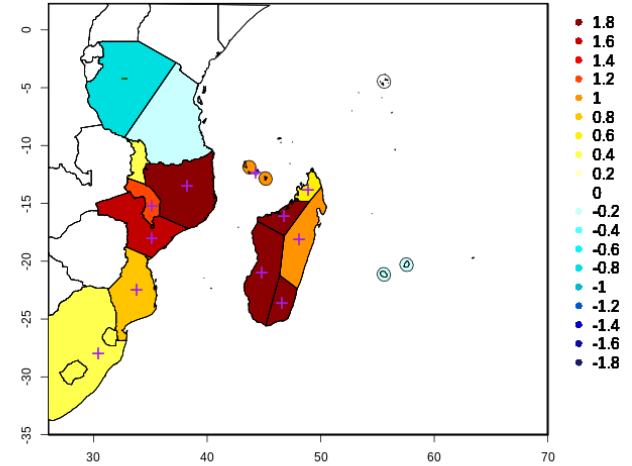
CEP,MF7

Score RPSS: T2M NDJ-2020 It2



Forecast model: Mix

T2M Std. Anom.: NDJ 2020



Ref: 1993-2016

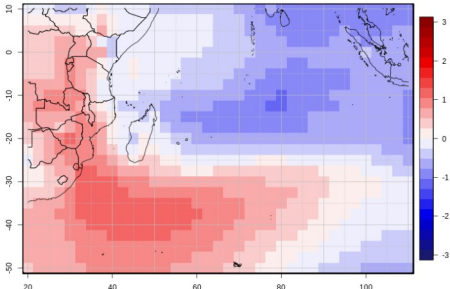
A meteorological map of the Indian Ocean region, showing wind vectors and cloud cover. The map features a grid of latitude and longitude lines. The text "Thank you for your attention" is overlaid in yellow. The map shows a large-scale circulation pattern with a low-pressure system over the southern part of the Indian Ocean and a high-pressure system over the northern part. The wind vectors are represented by white lines with arrows, indicating the direction and strength of the wind. The cloud cover is shown as a grayscale overlay, with lighter areas indicating higher cloud density. The text "Thank you for your attention" is centered on the map in a bold, yellow font.

**Thank you for your attention**



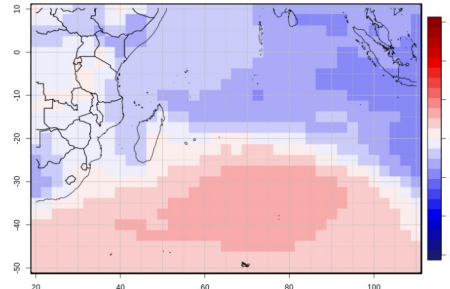
# OND 2020 – SWIO forecast verification

Forecast CEP PMERglobal



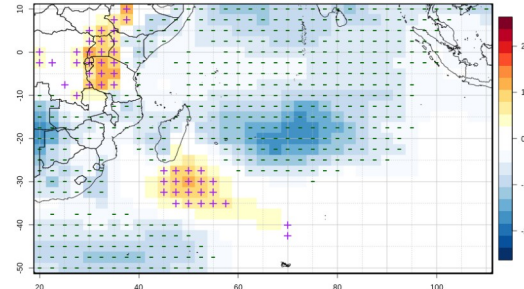
OND 2020 It: 1

Forecast MF7 PMERglobal



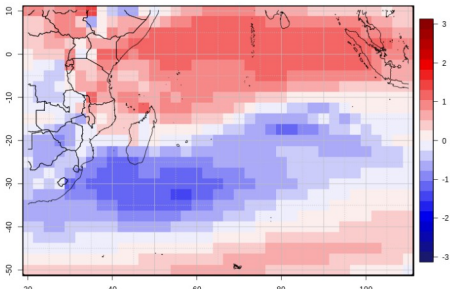
OND 2020 It: 1

ERA5 PMER Std. Anom. : OND 2020



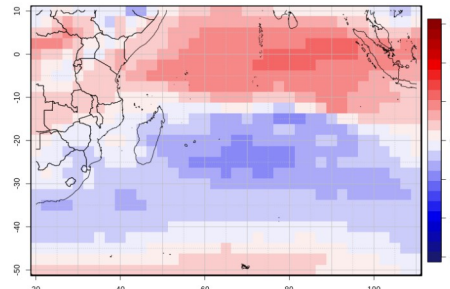
Ref: 1993-2016

Forecast CEP U850global



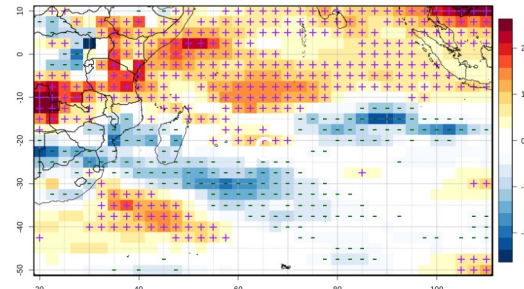
OND 2020 It: 1

Forecast MF7 U850global



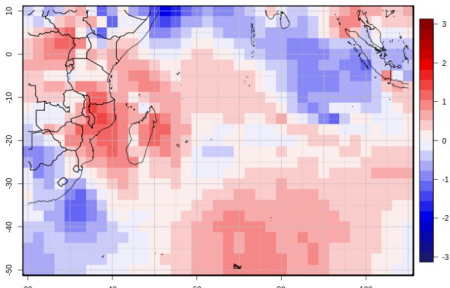
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ERA5 U850 Std. Anom. : OND 2020



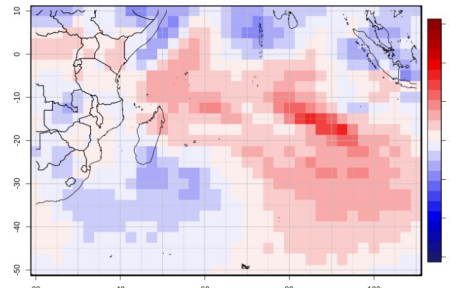
Ref: 1993-2016

Forecast CEP V850global



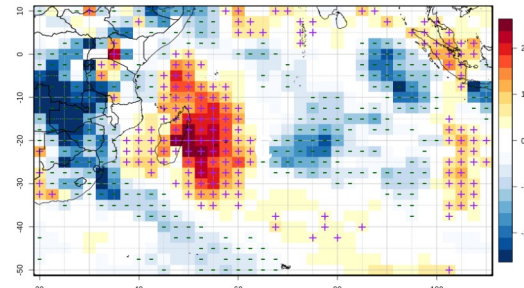
OND 2020 It: 1

Forecast MF7 V850global



OND 2020 It: 1

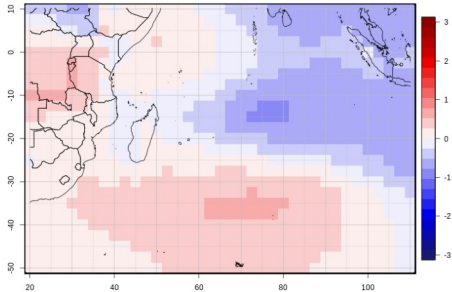
ERA5 V850 Std. Anom. : OND 2020



Ref: 1993-2016

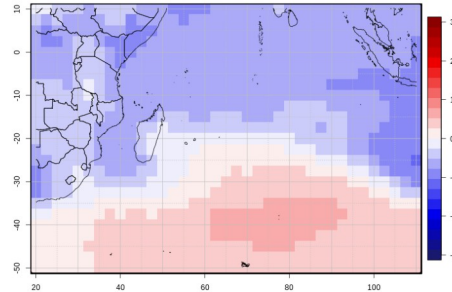
# NDJ 2020 – SWIO forecast verification

Forecast CEP PMERglobal



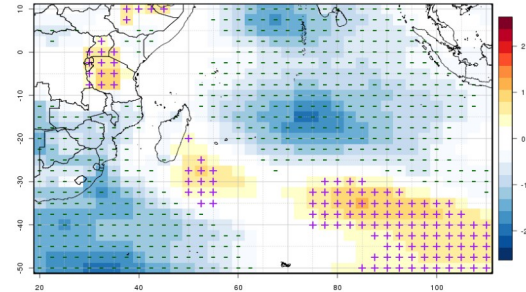
NDJ 2020 It: 2

Forecast MF7 PMERglobal



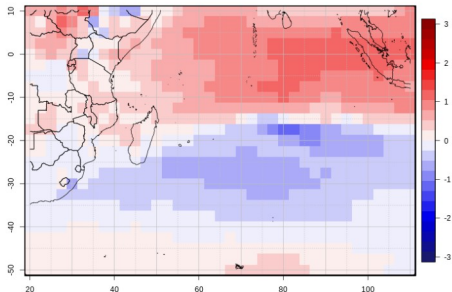
NDJ 2020 It: 2

ERA5 PMER Std. Anom. : NDJ 2020



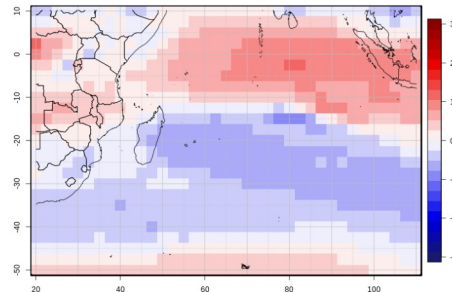
Ref: 1993-2016

Forecast CEP U850global



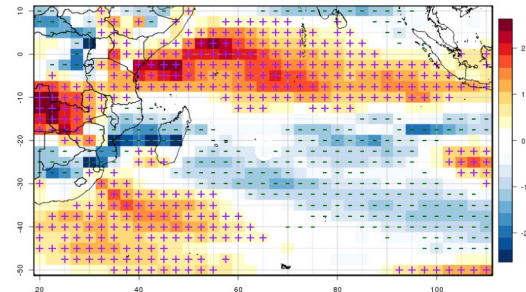
NDJ 2020 It: 2

Forecast MF7 U850global



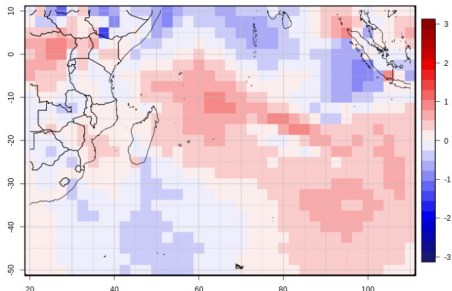
NDJ 2020 It: 2

ERA5 U850 Std. Anom. : NDJ 2020



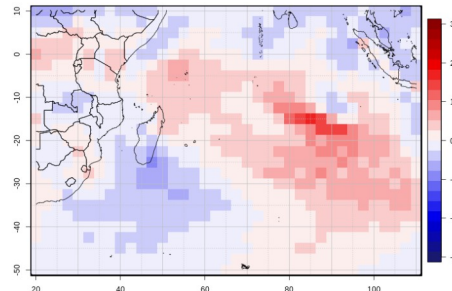
Ref: 1993-2016

Forecast CEP V850global



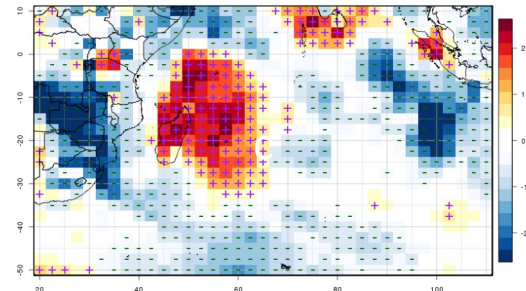
NDJ 2020 It: 2

Forecast MF7 V850global



NDJ 2020 It: 2

ERA5 V850 Std. Anom. : NDJ 2020



Ref: 1993-2016