



S4 : Large scale situation

- Analysis & forecast from 2021/09 -

Laurent LABBE

METEO FRANCE (Indian Ocean Regional Center – La Réunion)

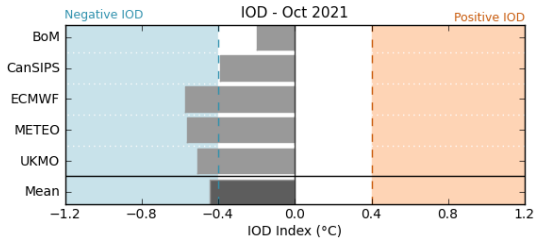
laurent.labbe@meteo.fr

Regional Outlook Forum for South-West Indian Ocean countries

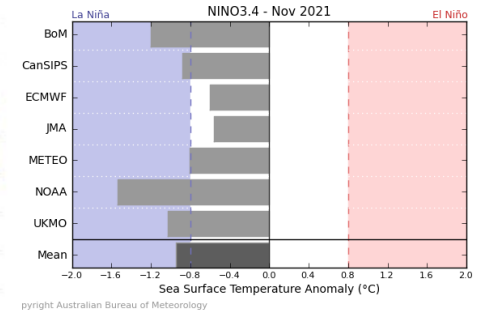
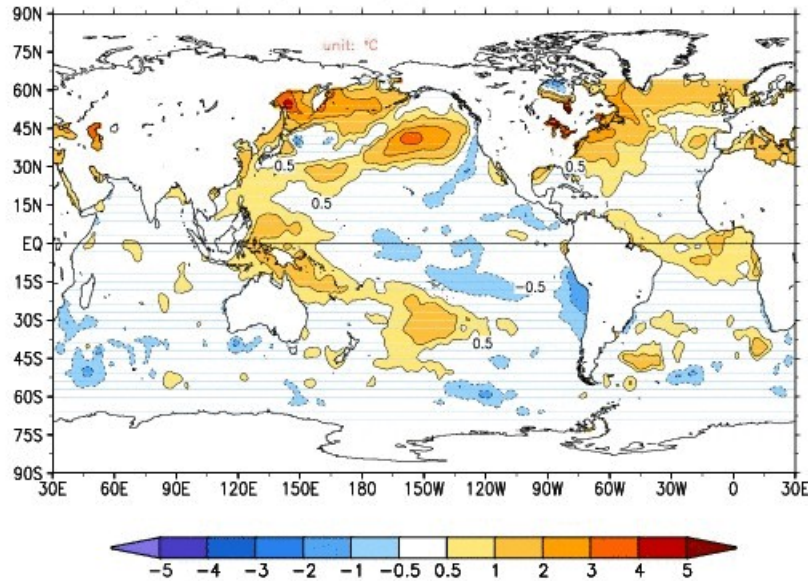
September 20-23 2021

- WebConference -

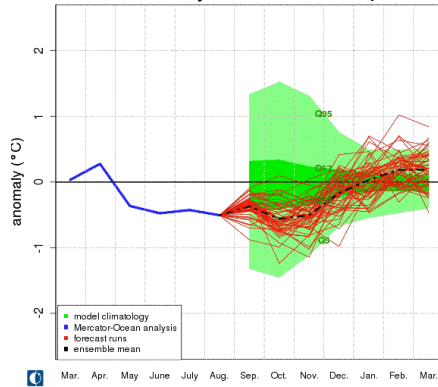
SST situation



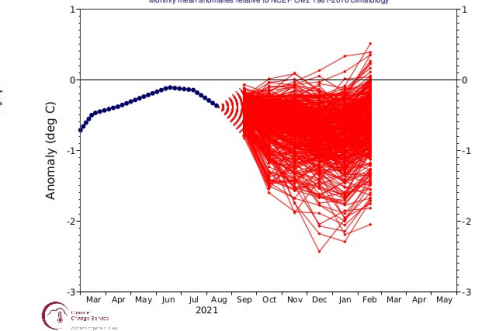
OISST Anomaly, 08/21/2021-09/15/2021



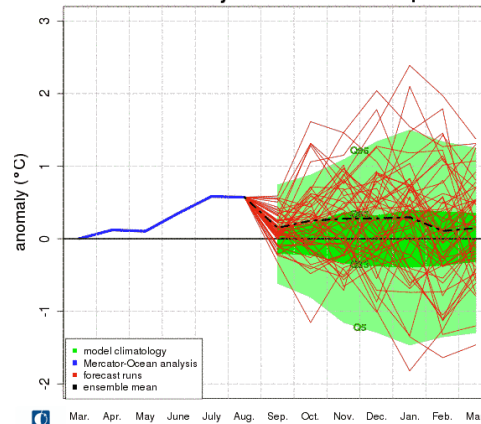
DMI SST anomaly plume
Meteo-France system 8 - Issued Sep. 2021



NINO3.4 SST anomaly plume
C3S multi-system forecast from 1 Sep 2021

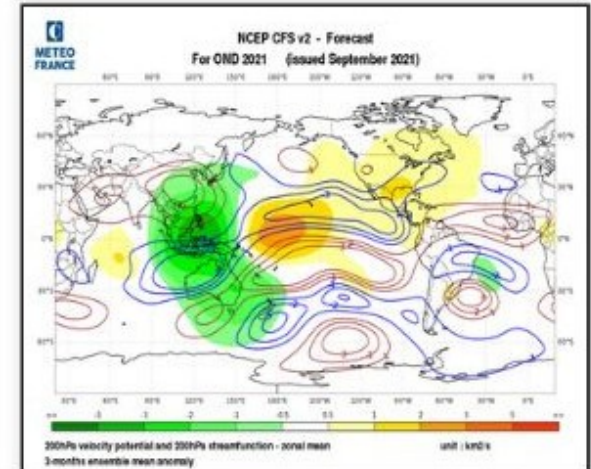
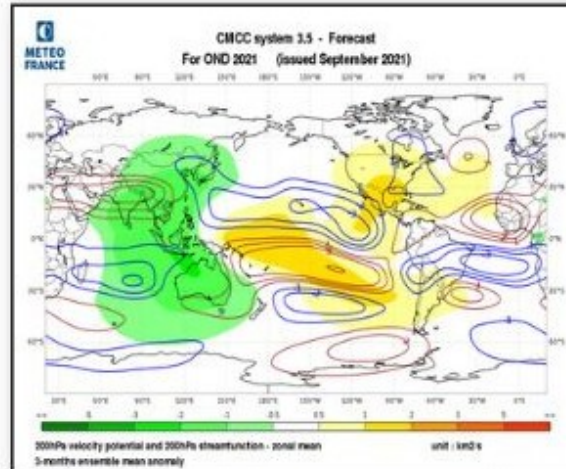
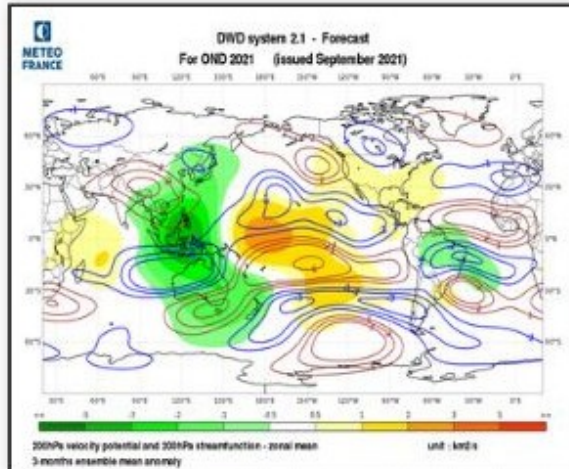
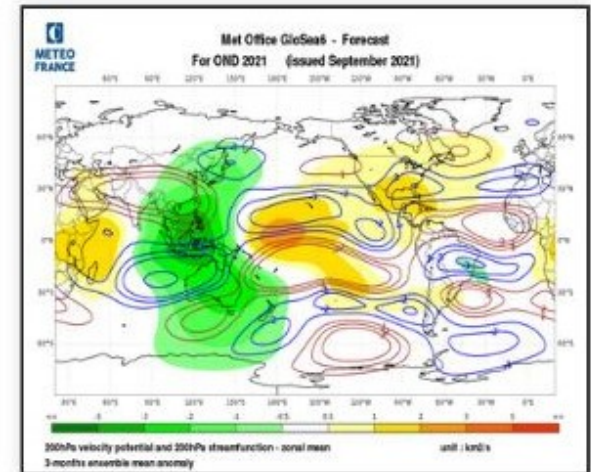
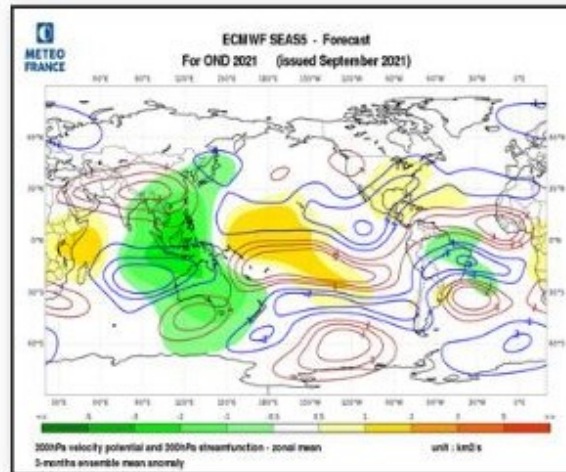
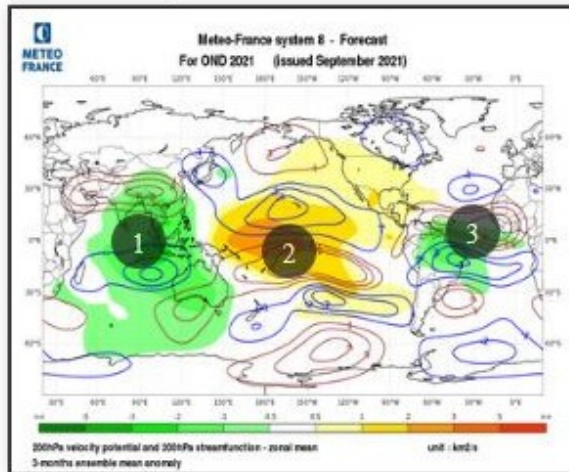


SIOD SST anomaly plume
Meteo-France system 8 - Issued Sep. 2021



Atmospheric impact

Velocity Potential anomalies (green = upward motion / orange = downward motion)

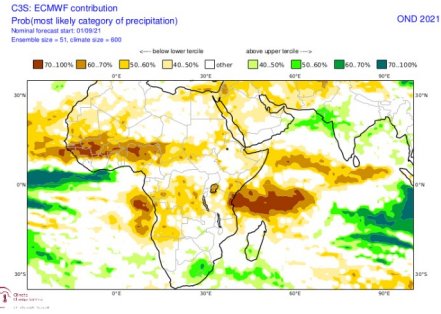


MF8, SEAS5, UKMO, DWD, CMCC and NCEP 200hPa velocity potential anomalies (color range, green : ascending, orange : subsidence) and stream function anomalies (isolines),

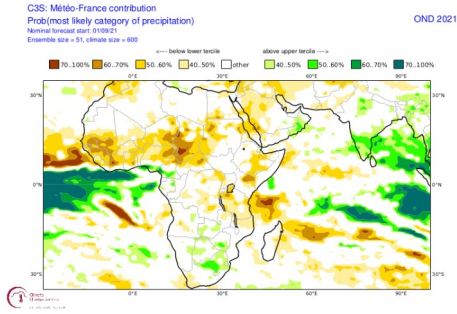
GCM forecasts – OND (It1)

Rainfall

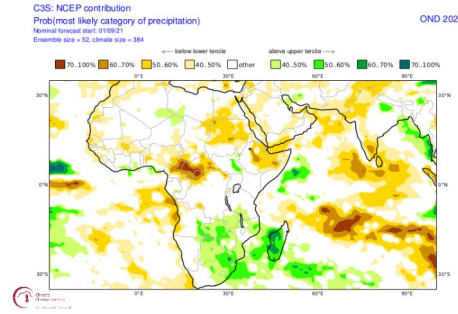
ECMWF



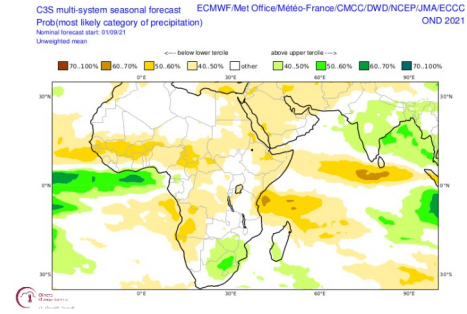
MF



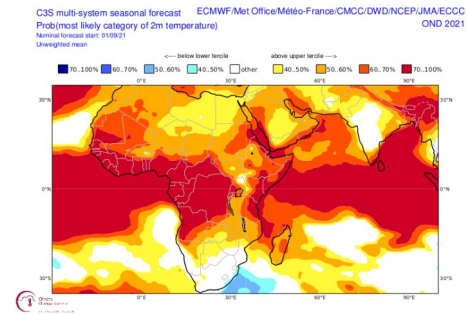
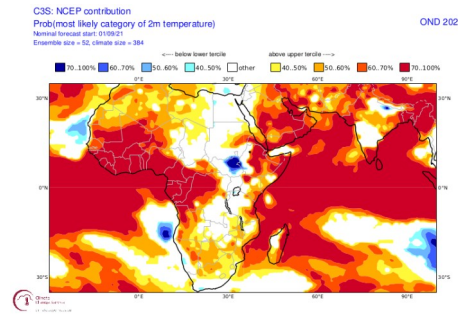
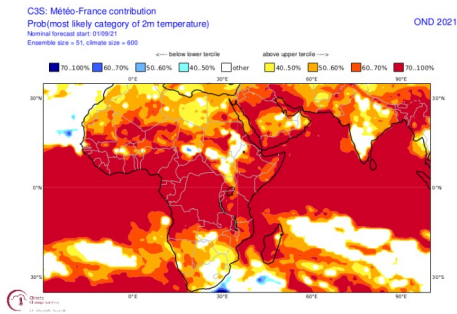
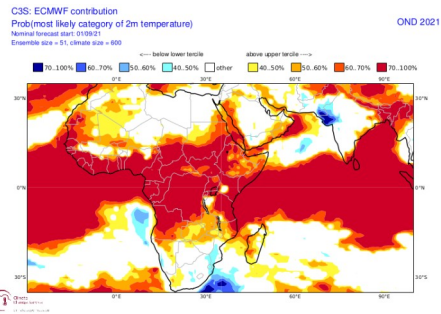
NCEP



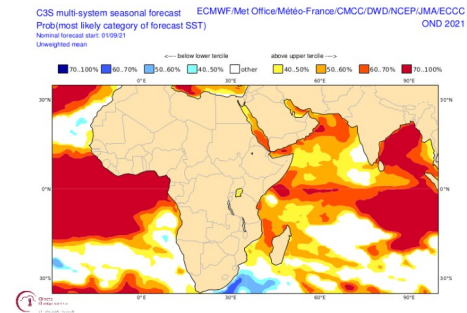
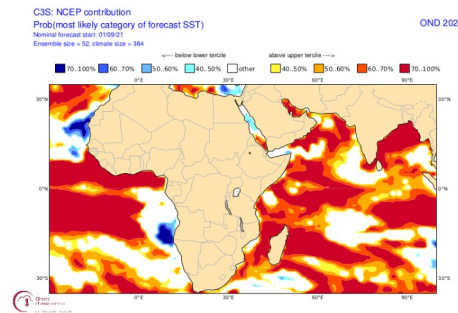
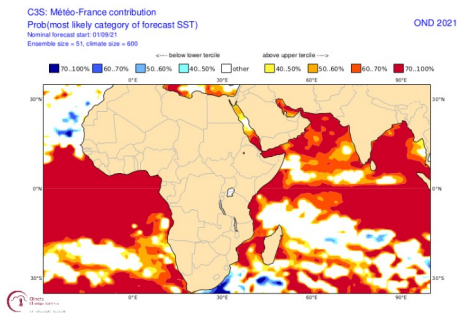
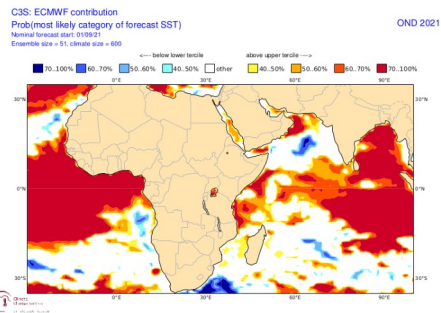
Mix



Temperature



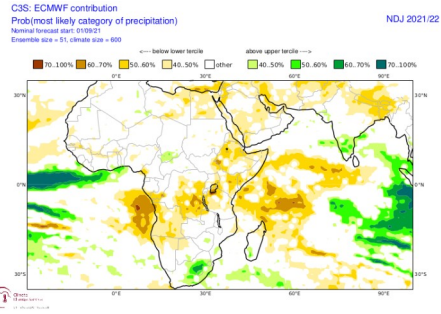
SST



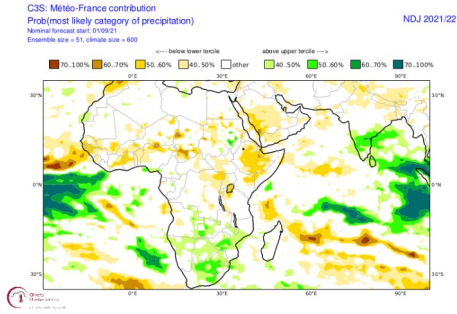
GCM forecasts – NDJ (It2)

Rainfall

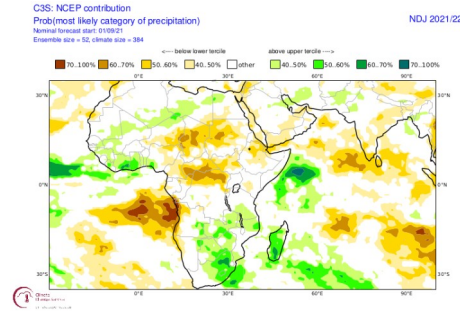
ECMWF



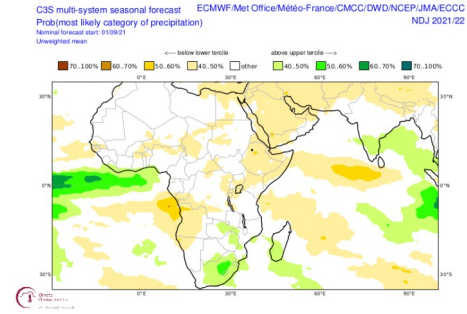
MF



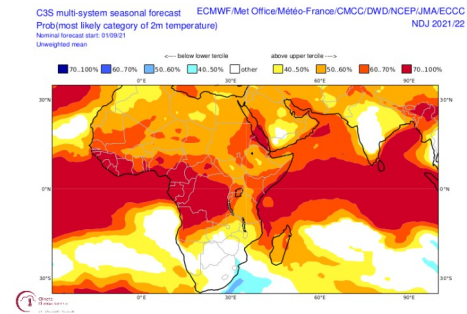
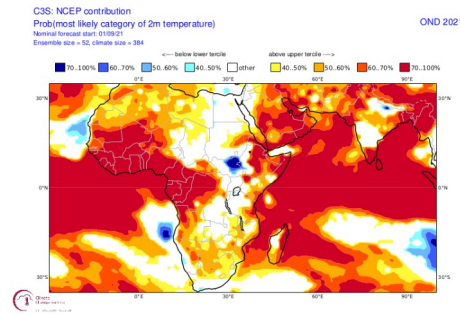
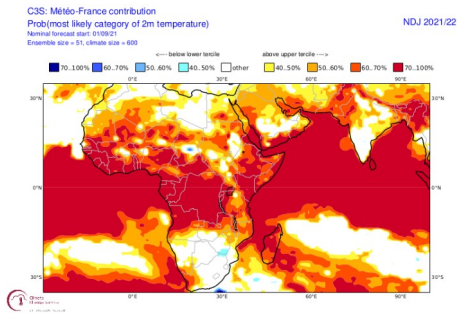
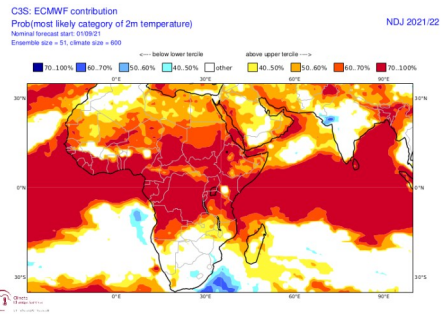
NCEP



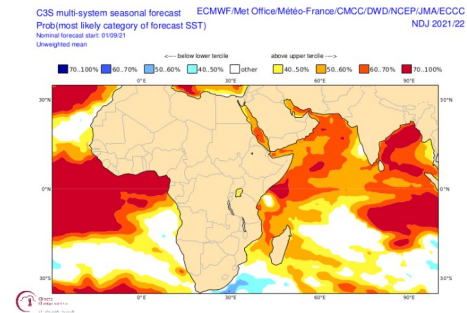
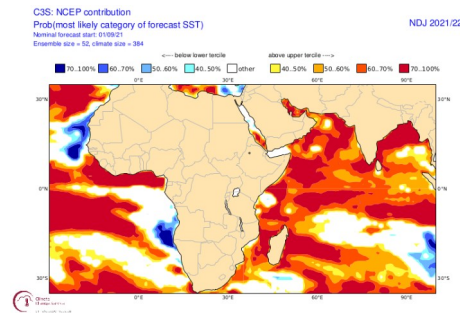
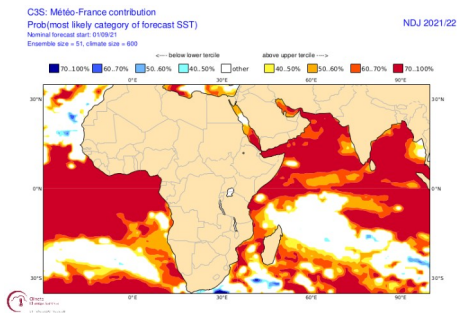
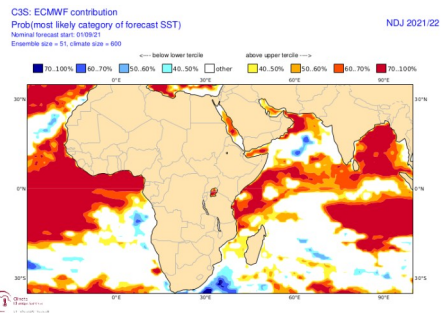
Mix



Temperature



SST



SEAFORDS Practice



> Process the forecast downscaling at regional and local scale

SEAFORDS Regional forecast – OND (It1)

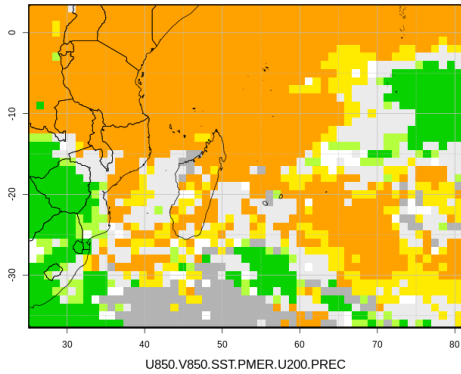
ECMWF

MF

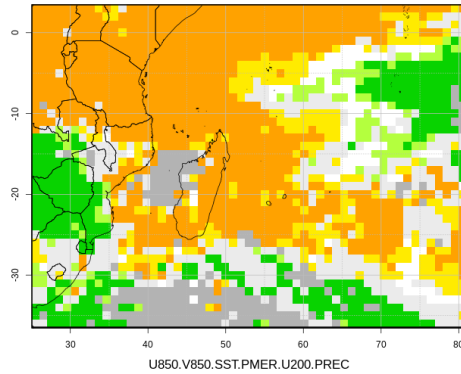
NCEP

Rainfall (PREC_ERA5_SWIO)

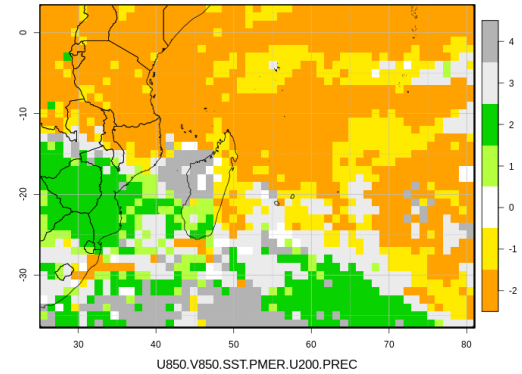
Scenario PREC_ERA5_SWIO OND 2021 It: 1



Scenario PREC_ERA5_SWIO OND 2021 It: 1

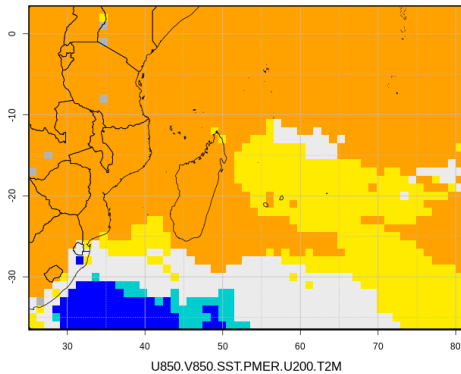


Scenario PREC_ERA5_SWIO OND 2021 It: 1

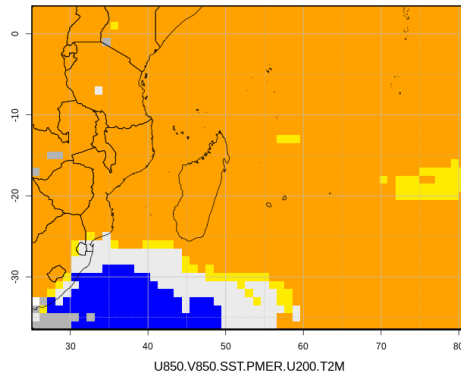


Temperature (T2M_ERA5_SWIO)

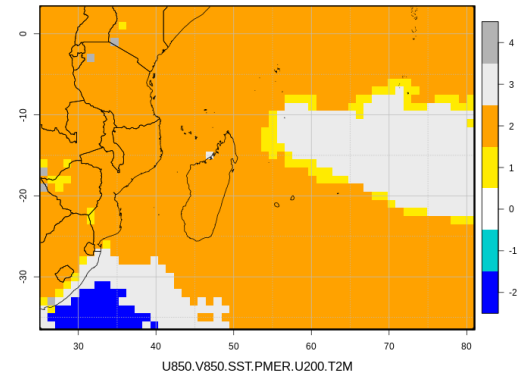
Scenario T2M_ERA5_SWIO OND 2021 It: 1



Scenario T2M_ERA5_SWIO OND 2021 It: 1



Scenario T2M_ERA5_SWIO OND 2021 It: 1



SEAFORDS Regional forecast – OND (It1)

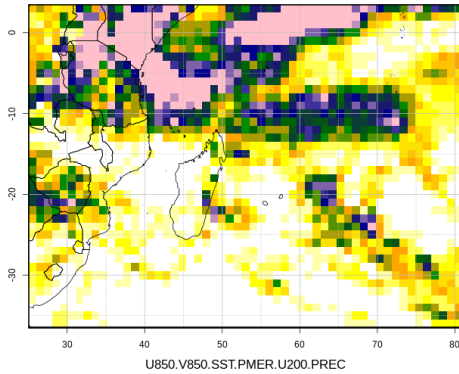
ECMWF

MF

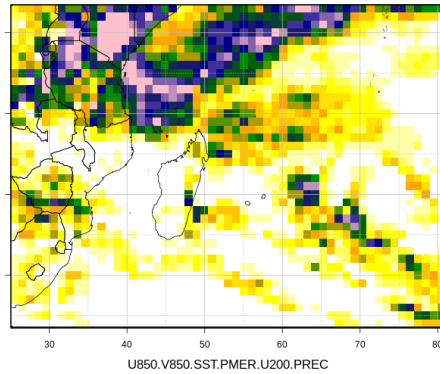
NCEP

Rainfall forecast confidence index

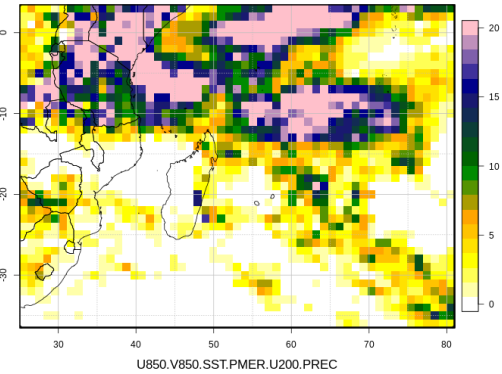
Confidence Index PREC_ERA5_SWIO OND 2021 It: 1



Confidence Index PREC_ERA5_SWIO OND 2021 It: 1

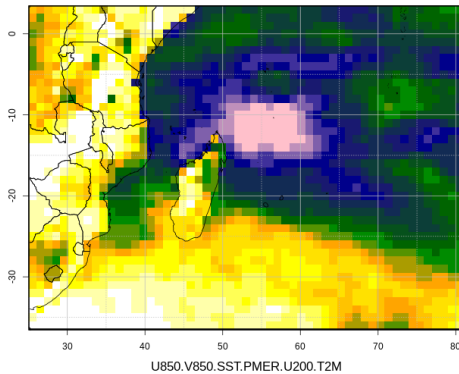


Confidence Index PREC_ERA5_SWIO OND 2021 It: 1

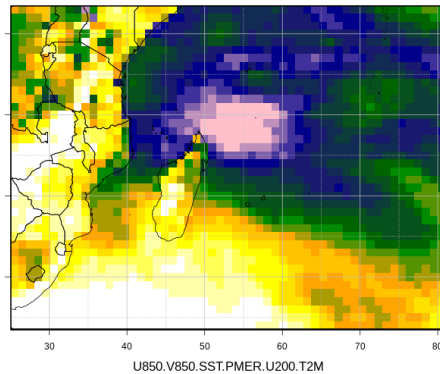


Temperature forecast confidence index

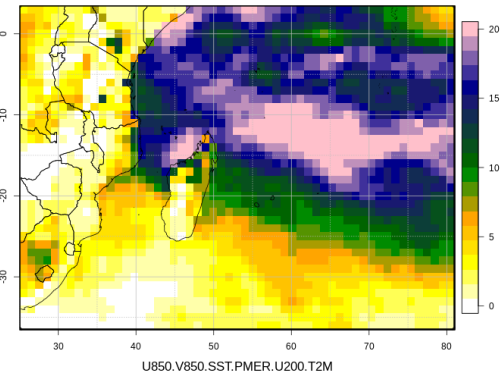
Confidence Index T2M_ERA5_SWIO OND 2021 It: 1



Confidence Index T2M_ERA5_SWIO OND 2021 It: 1



Confidence Index T2M_ERA5_SWIO OND 2021 It: 1



SEAFORDS SWIO zones forecast – OND (It1)

ECMWF

MF

NCEP

Mix

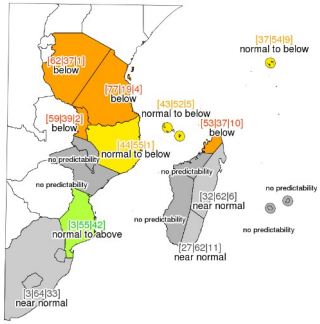
Rainfall

Precipitation Seasonal Outlook CEP - OND 2021 It1

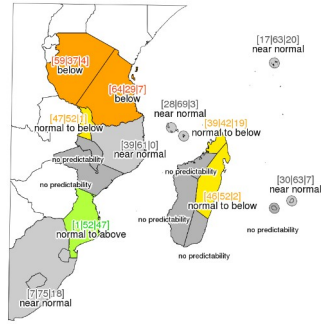
Precipitation Seasonal Outlook MF8 - OND 2021 It1

Precipitation Seasonal Outlook NCEP - OND 2021 It1

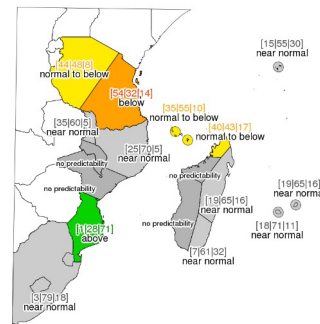
Rainfall Seasonal forecast - OND 2021 - It 1



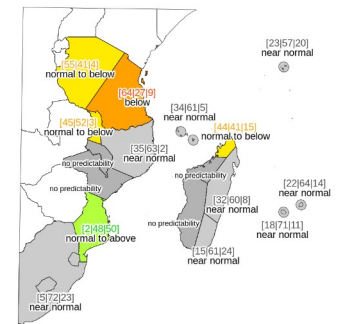
U850.V850.SST.PMER.U200.PREC



U850.V850.SST.PMER.U200.PREC



U850.V850.SST.PMER.U200.PREC



CEP.MF8.NCEP

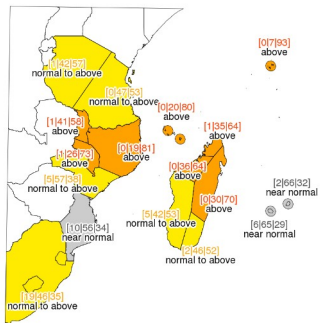
Temperature

T2M Seasonal Outlook CEP - OND 2021 It1

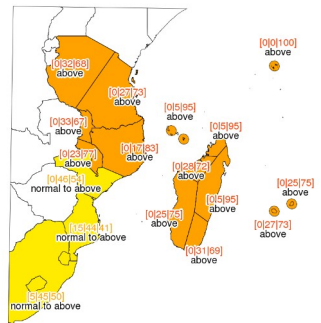
T2M Seasonal Outlook MF8 - OND 2021 It1

T2M Seasonal Outlook NCEP - OND 2021 It1

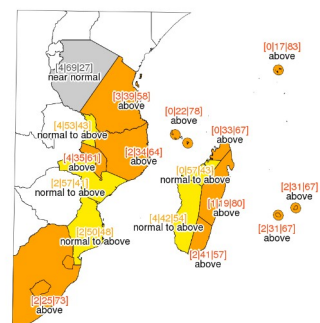
Temperature Seasonal forecast - OND 2021 - It 1



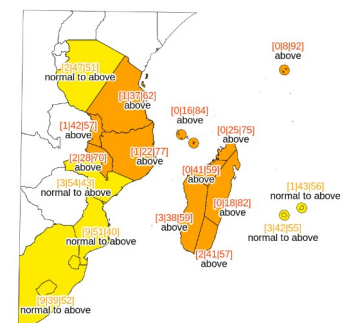
U850.V850.SST.T2M



U850.V850.SST.T2M



U850.V850.SST.T2M



CEP.MF8.NCEP

SEAFORDS Regional forecast – NDJ (It2)

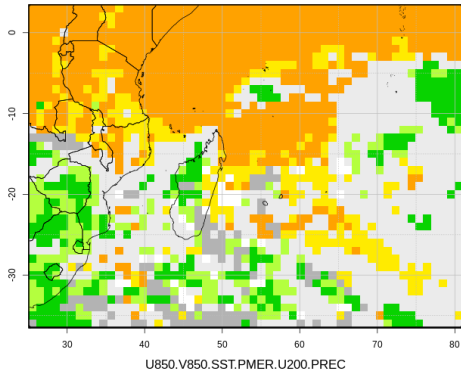
ECMWF

MF

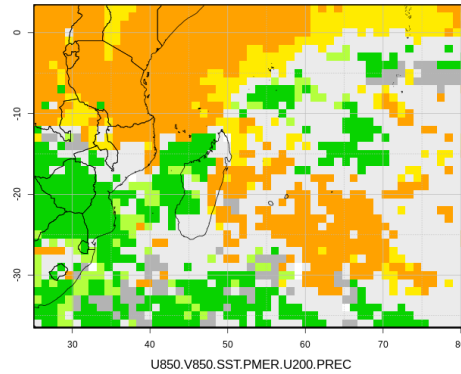
NCEP

Rainfall (PREC_ERA5_SWIO)

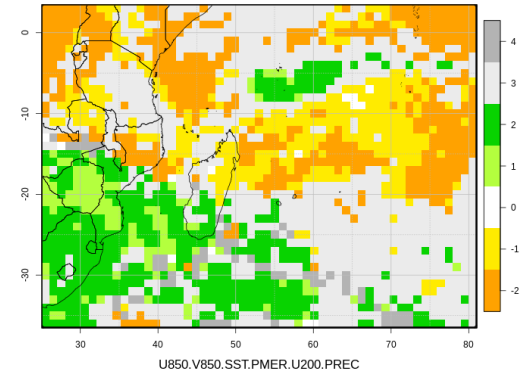
Scenario PREC_ERA5_SWIO NDJ 2021 It: 2



Scenario PREC_ERA5_SWIO NDJ 2021 It: 2

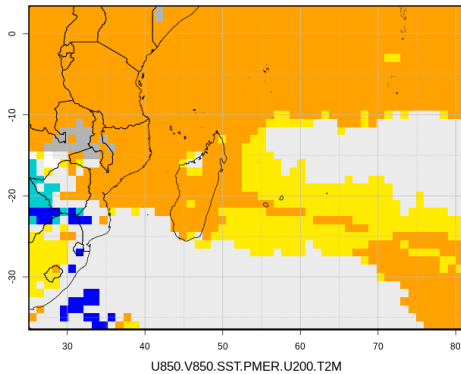


Scenario PREC_ERA5_SWIO NDJ 2021 It: 2

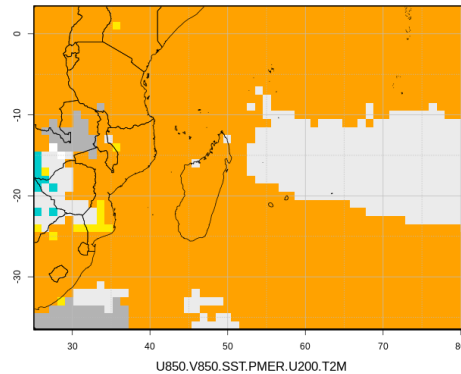


Temperature (T2M_ERA5_SWIO)

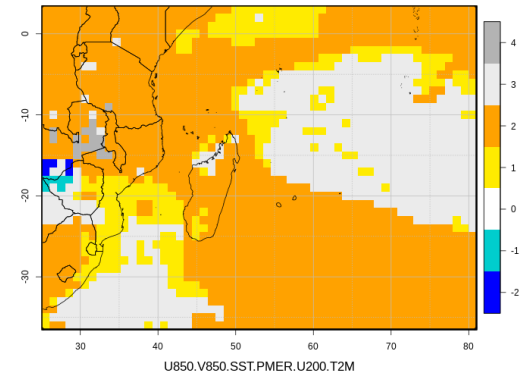
Scenario T2M_ERA5_SWIO NDJ 2021 It: 2



Scenario T2M_ERA5_SWIO NDJ 2021 It: 2



Scenario T2M_ERA5_SWIO NDJ 2021 It: 2



SEAFORDS Regional forecast – NDJ (It2)

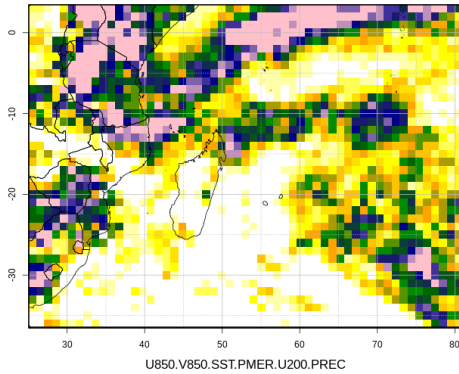
ECMWF

MF

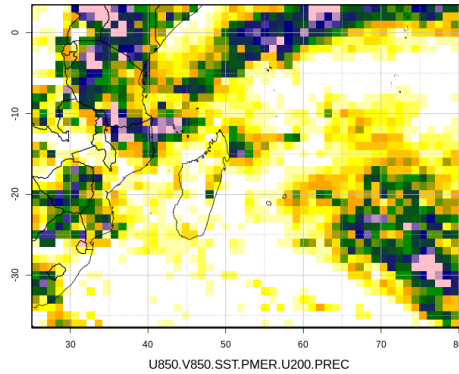
NCEP

Rainfall forecast confidence index

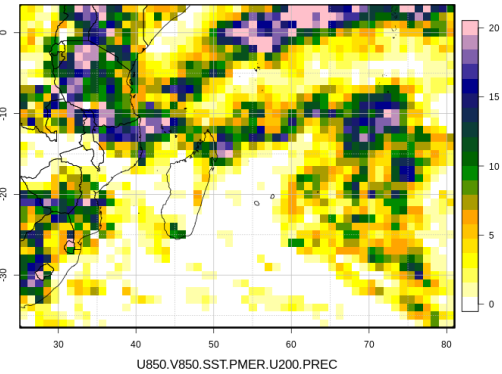
Confidence Index PREC_ERA5_SWIO NDJ 2021 It: 2



Confidence Index PREC_ERA5_SWIO NDJ 2021 It: 2

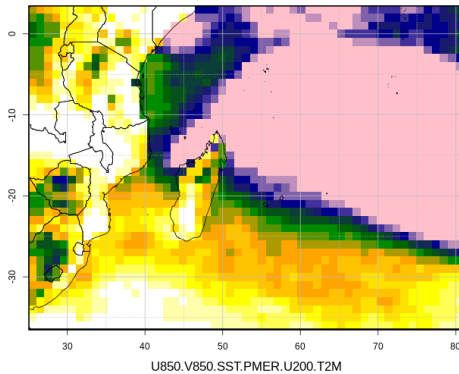


Confidence Index PREC_ERA5_SWIO NDJ 2021 It: 2

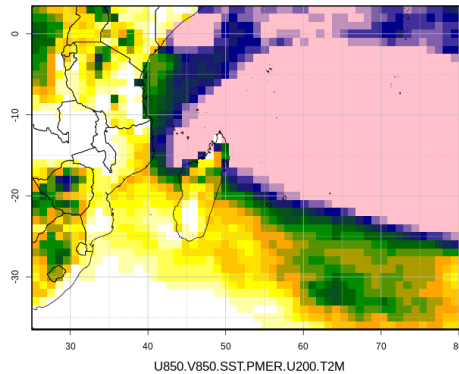


Temperature forecast confidence index

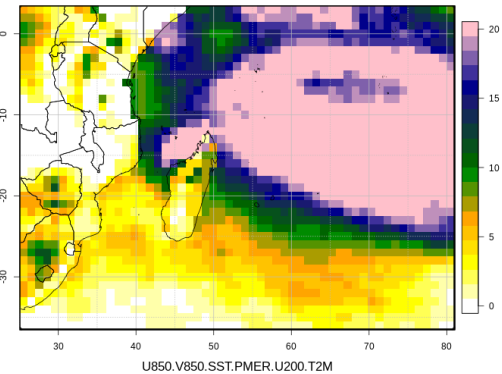
Confidence Index T2M_ERA5_SWIO NDJ 2021 It: 2



Confidence Index T2M_ERA5_SWIO NDJ 2021 It: 2



Confidence Index T2M_ERA5_SWIO NDJ 2021 It: 2



SEAFORDS SWIO zones forecast – NDJ (It2)

ECMWF

MF

NCEP

Mix

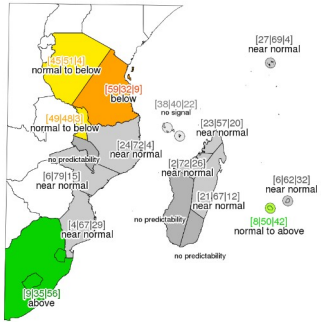
Rainfall

Precipitation Seasonal Outlook CEP - NDJ 2021 It2

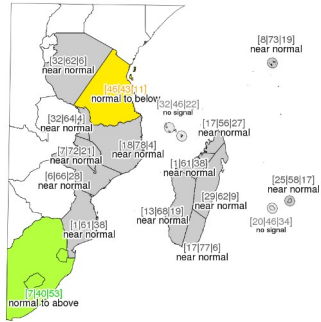
Precipitation Seasonal Outlook MF8 - NDJ 2021 It2

Precipitation Seasonal Outlook NCEP - NDJ 2021 It2

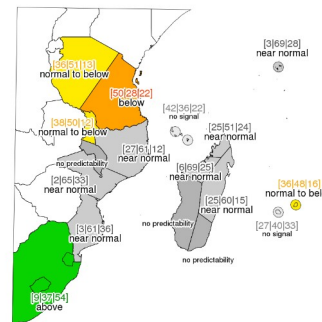
Rainfall Seasonal forecast - NDJ 2021 - It 2



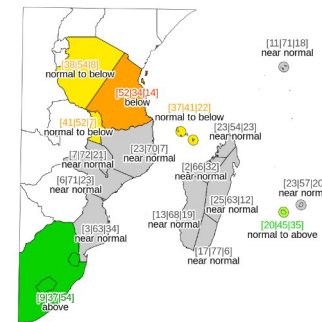
U850.V850.SST.PMER.U200.PREC



U850.V850.SST.PMER.U200.PREC



U850.V850.SST.PMER.U200.PREC



CEP.MF8.NCEP

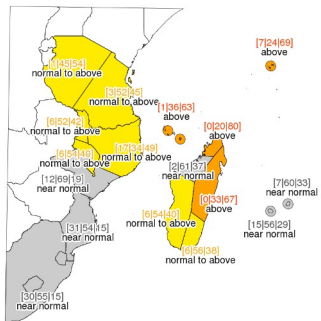
Temperature

T2M Seasonal Outlook CEP - NDJ 2021 It2

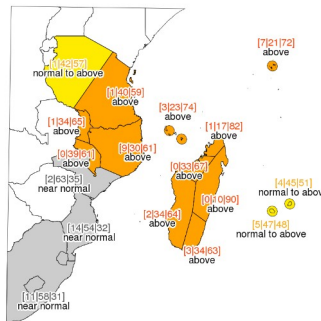
T2M Seasonal Outlook MF8 - NDJ 2021 It2

T2M Seasonal Outlook NCEP - NDJ 2021 It2

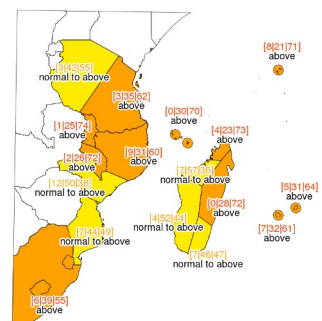
Temperature Seasonal forecast - NDJ 2021 - It 2



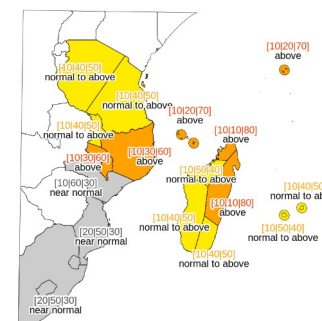
U850.V850.SST.T2M



U850.V850.SST.T2M



U850.V850.SST.T2M



CEP.MF8.NCEP

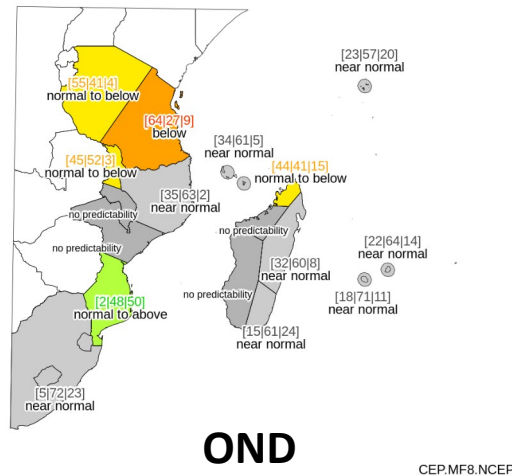
A meteorological map of the Indian Ocean region, showing wind vectors and cloud cover. The map features a grid of latitude and longitude lines. The text "Thank you for your attention" is overlaid in yellow. The map shows a large-scale circulation pattern with a low-pressure system over the southern Indian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

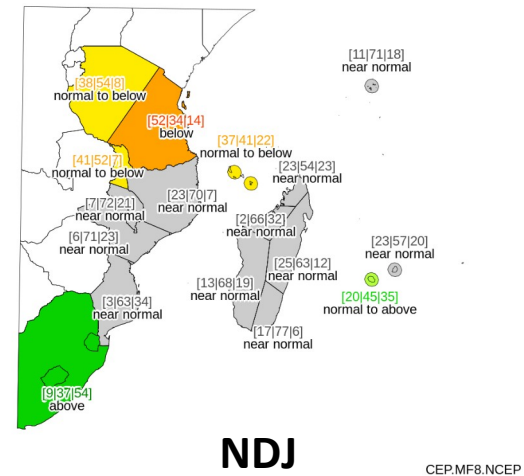
SEAFORDS SWIO zones forecast (Mix scenario)

Rainfall

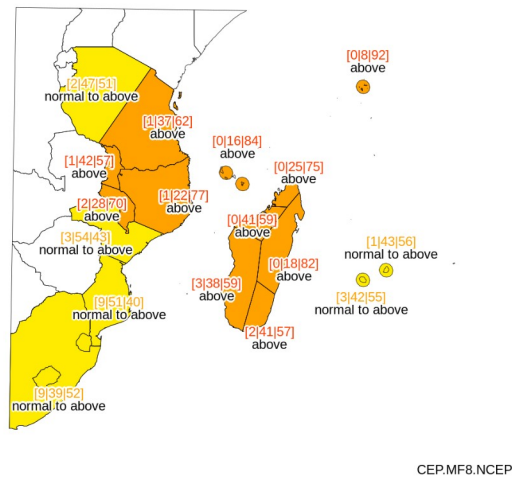
Rainfall Seasonal forecast - OND 2021 - It 1



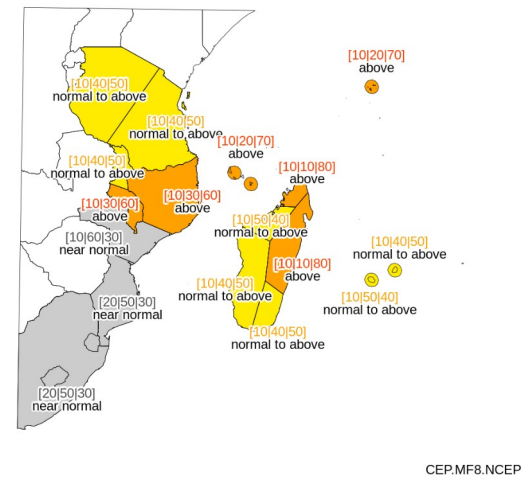
Rainfall Seasonal forecast - NDJ 2021 - It 2



Temperature Seasonal forecast - OND 2021 - It 1



Temperature Seasonal forecast - NDJ 2021 - It 2



Temperature