

Experimental Downscaling Forecast over South America

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- **JACZEWSKI, ADAM (POLAND)**
- **REJZER, MAGDALENA (POLAND)**
- **Maimone, Filippo (Italy)**
- **Araujo, Janduy Guerra (Brazil)**

Motivation

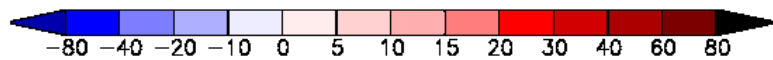
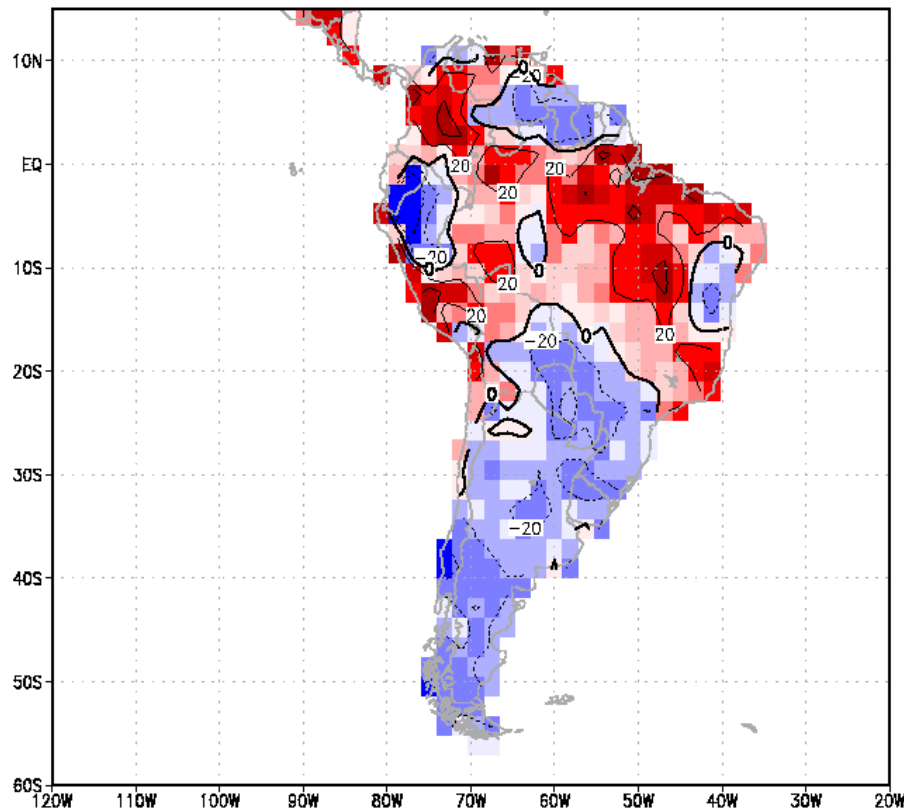
- Siraj

GCM Forecast Skill Maps

ECPC-NOAH

2m Air Temperature Anomalies : 1950-2000 MAM

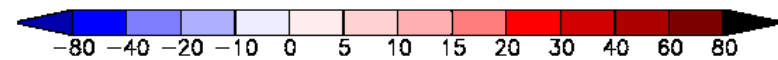
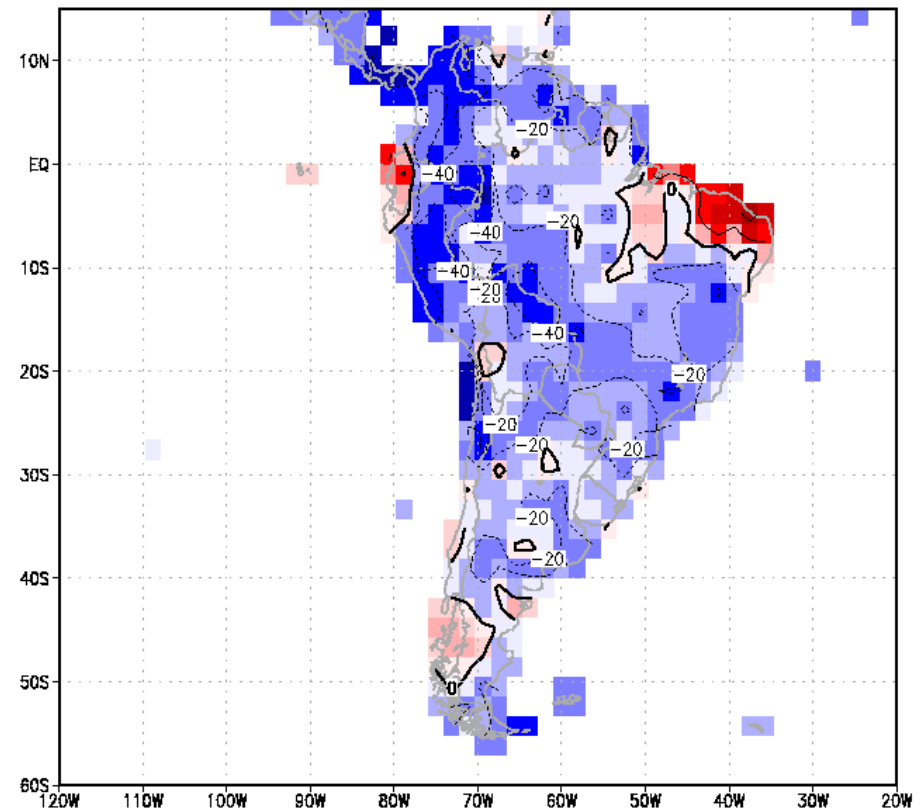
Ranked Probability Skill Scores (%)



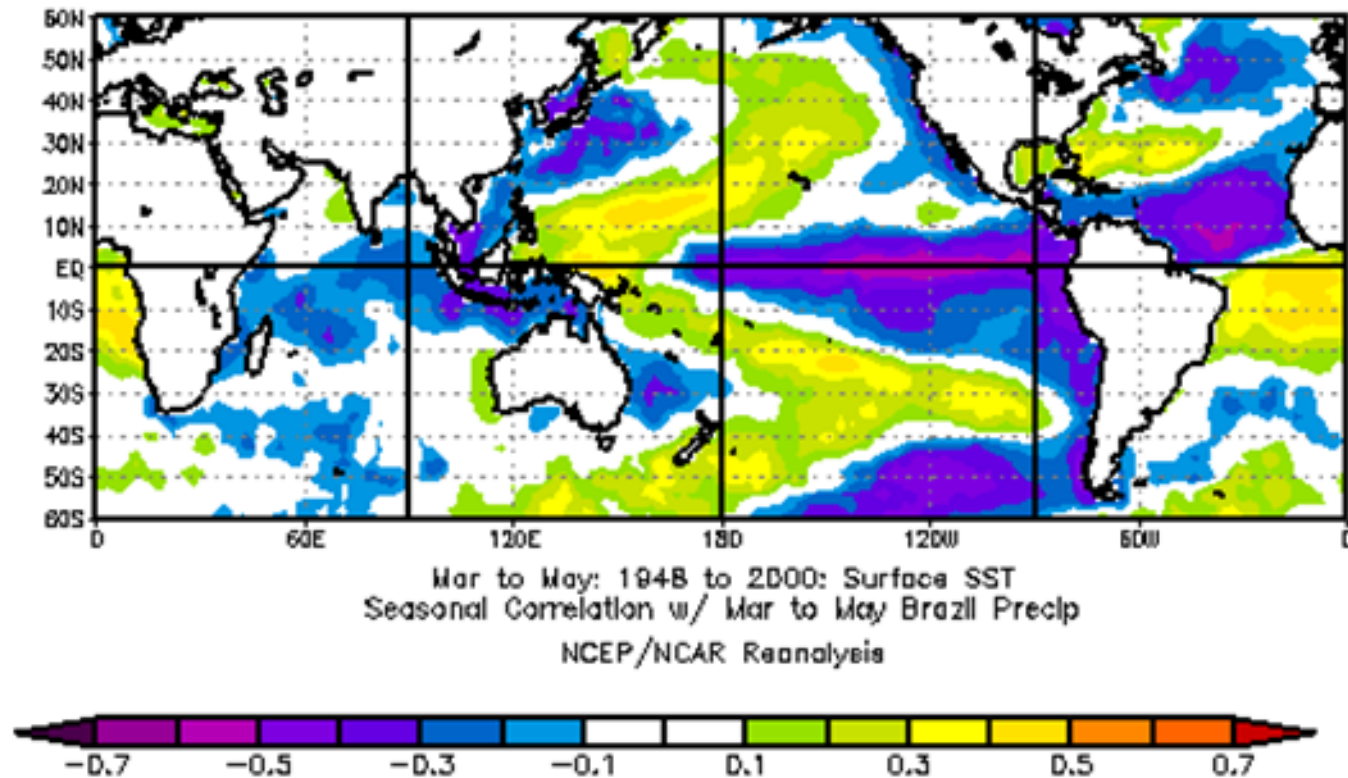
ECPC-NOAH

Precipitation Anomalies : 1950-2000 MAM

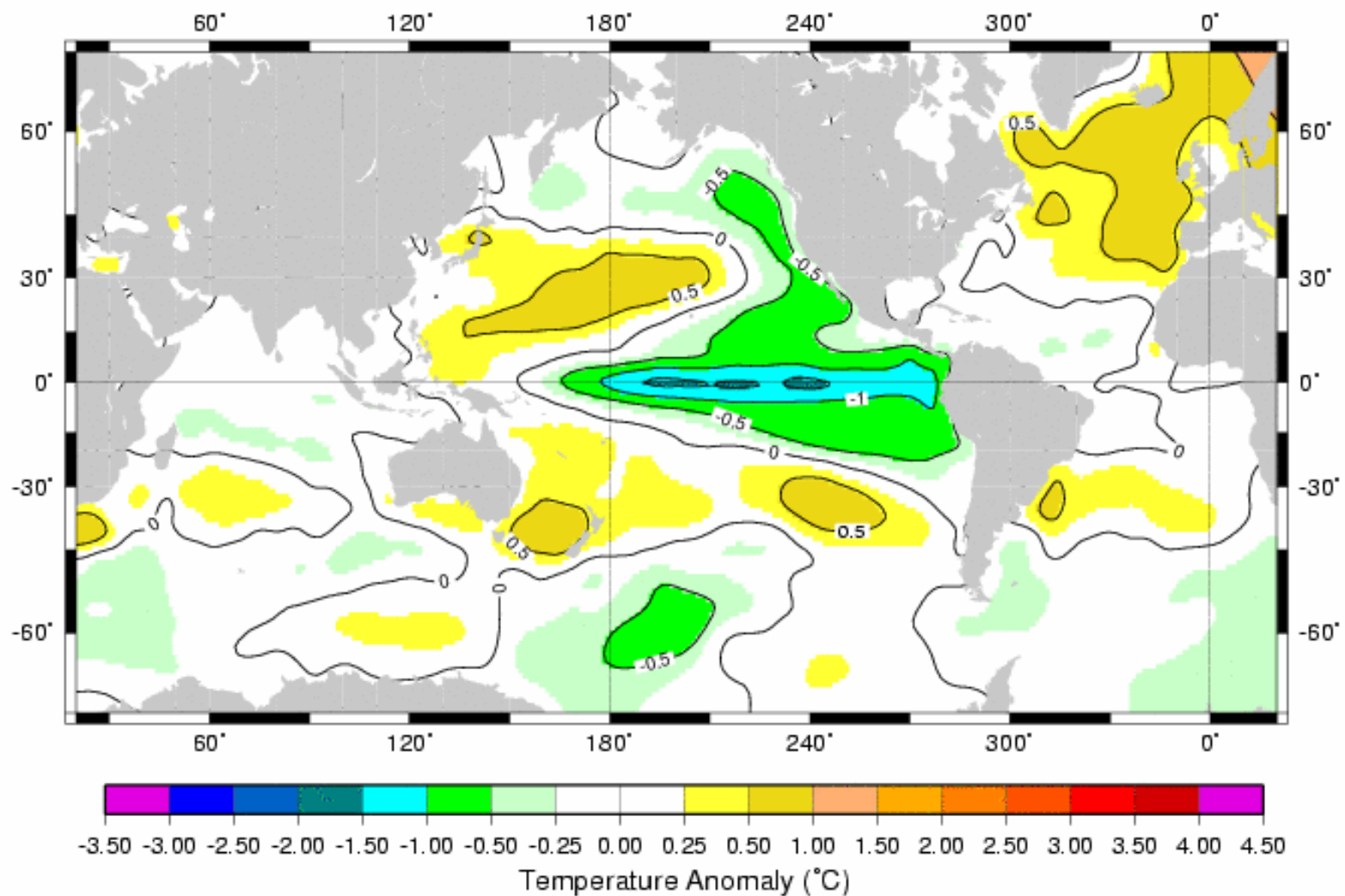
Ranked Probability Skill Scores (%)



Northeast Brazil Rainfall with SST



Global Blend SST Anomalies
(Tropical Forecast: Mean)
Forecast from FEB-2008 - Season MAM-2008



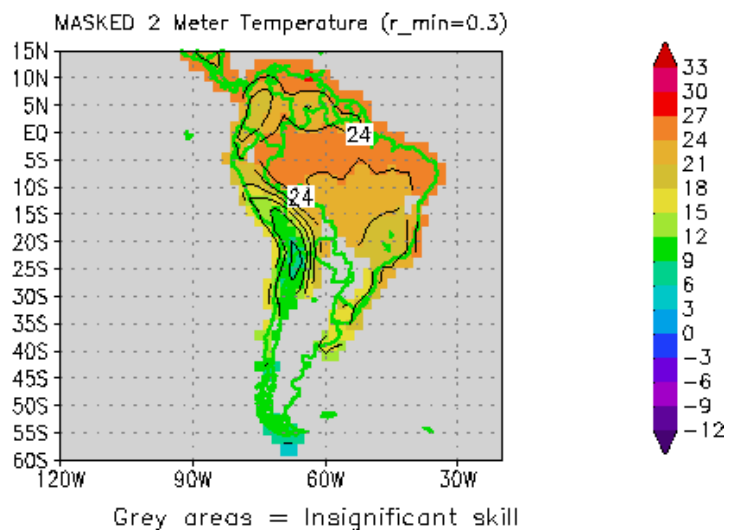
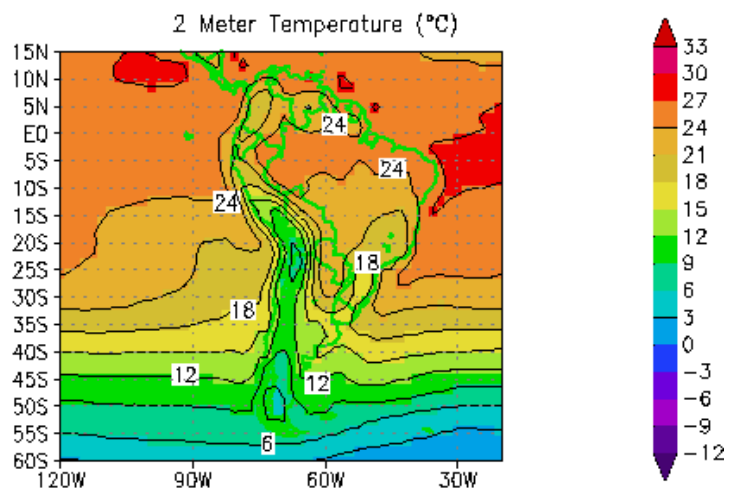
Minus & Plus SST

- siraj

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ECPC 2MT Ensemble Mean

Trop. Ocean SSTa forecast (IRI Multi-Model Scenarios)
from Jan 2008



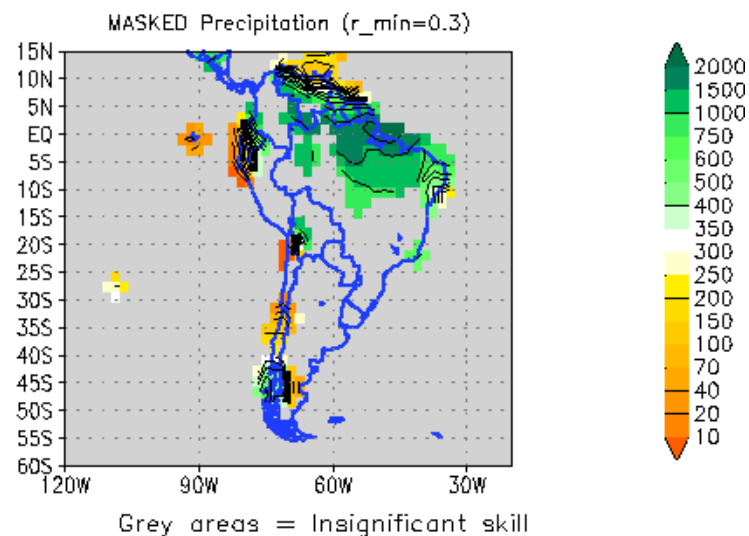
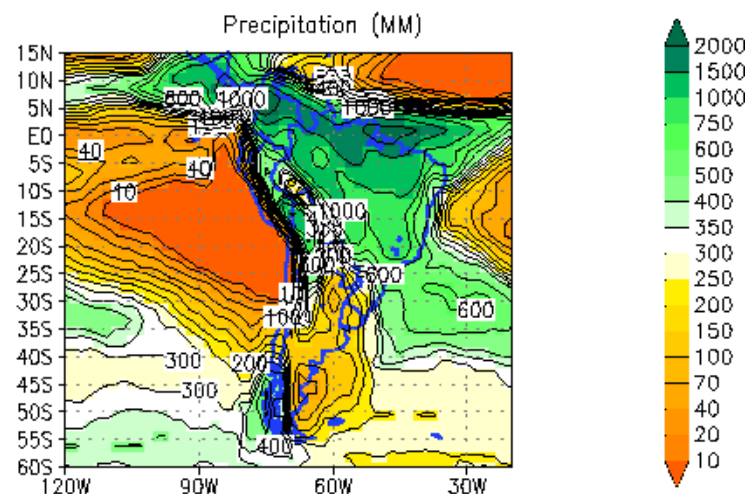
IRI International Research Institute
for climate and society

NOTE: This is a research product and should be used with caution.
Consult your local weather/climate authorities for further interpretation.

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ECPC PRECIP Ensemble Mean

Trop. Ocean SSTa forecast (IRI Multi-Model Scenarios)
from Jan 2008



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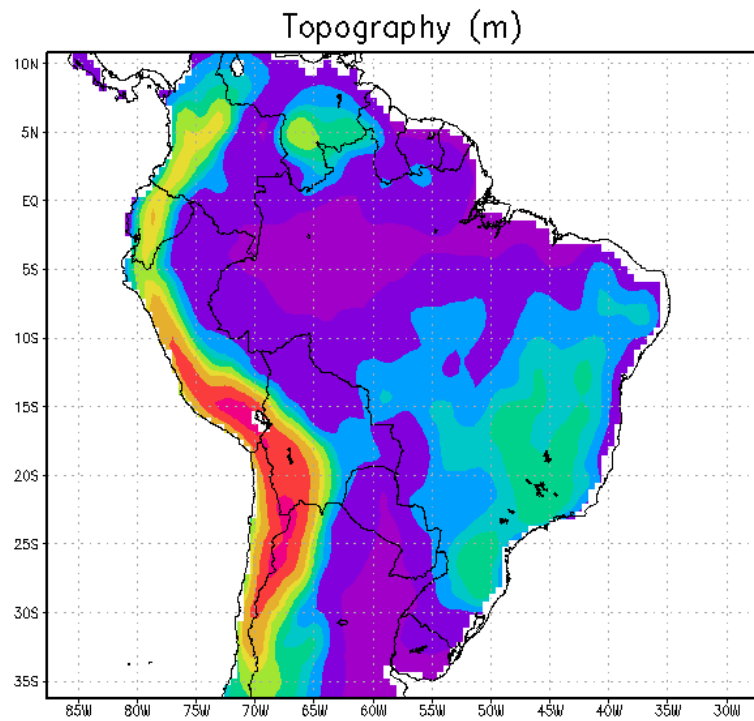
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Downscaling forecast using RSM

RSM Description

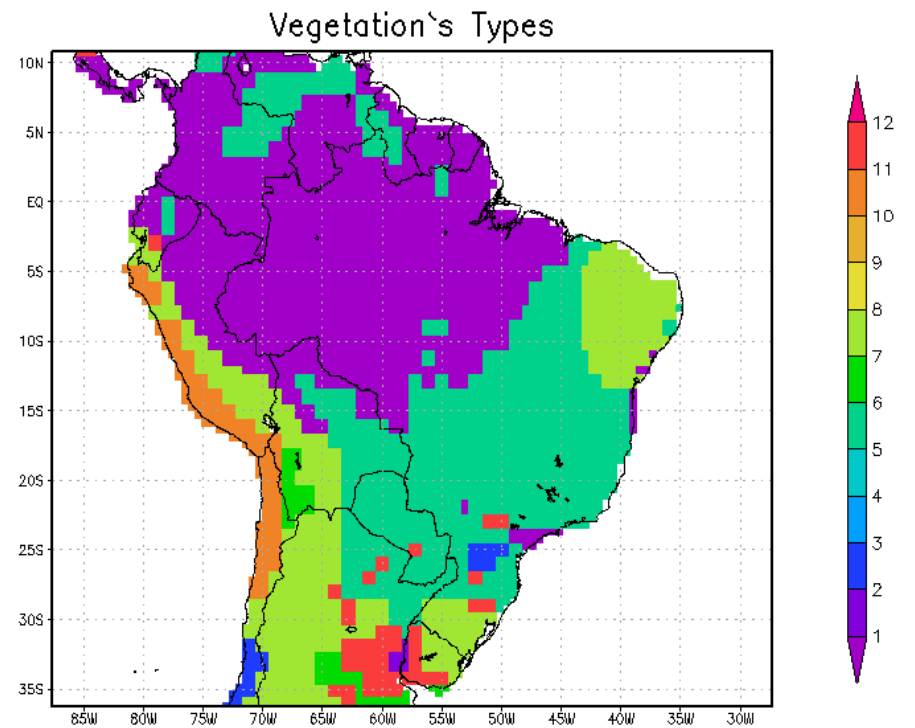
- fillipo

Model Domain



GRADS: COLA/IGES

2008-03-11-14:27 GRADS: COLA/IGES



2008-03-11-14:27

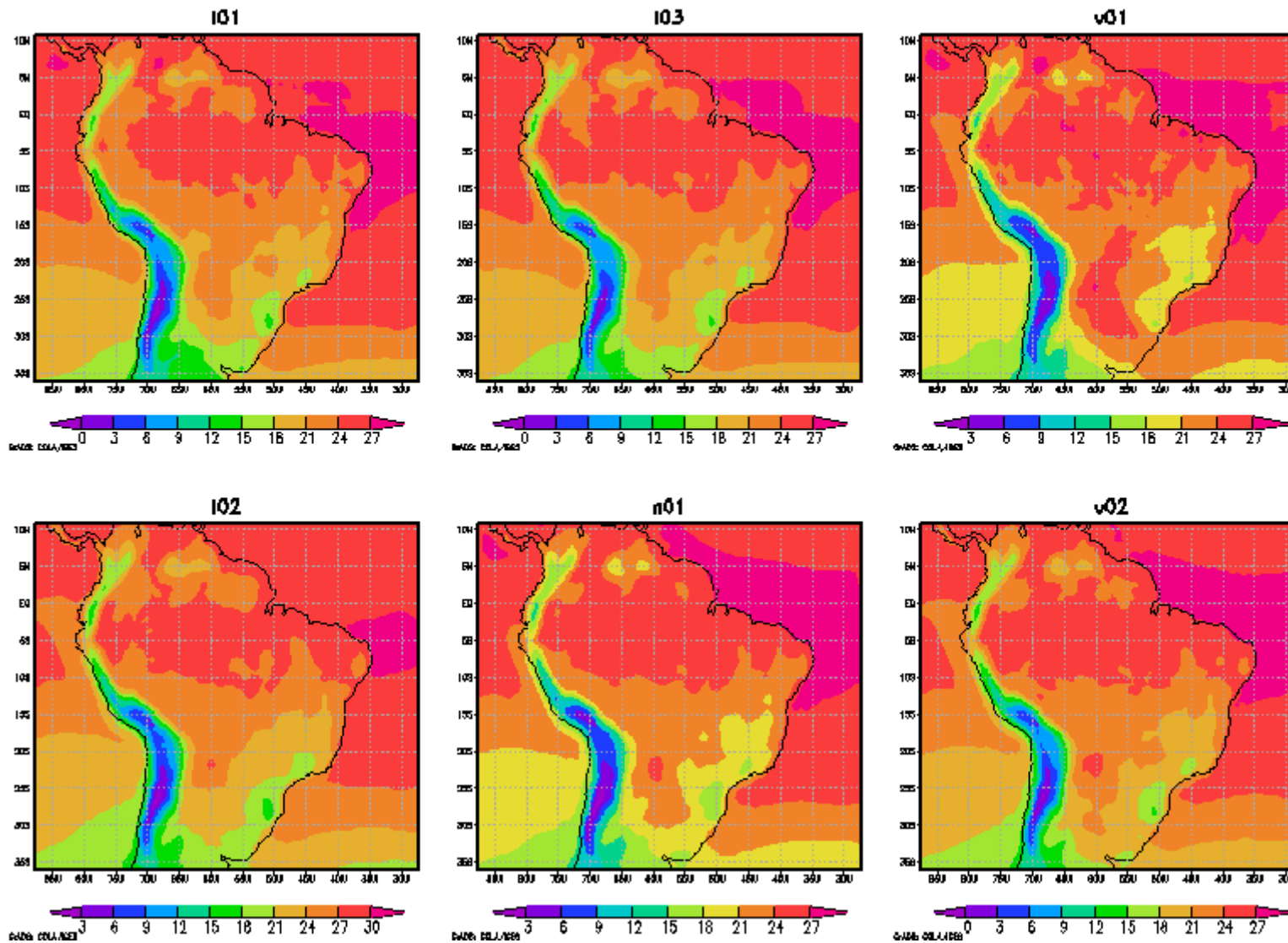
Results of Downscaling

Precipitation Members

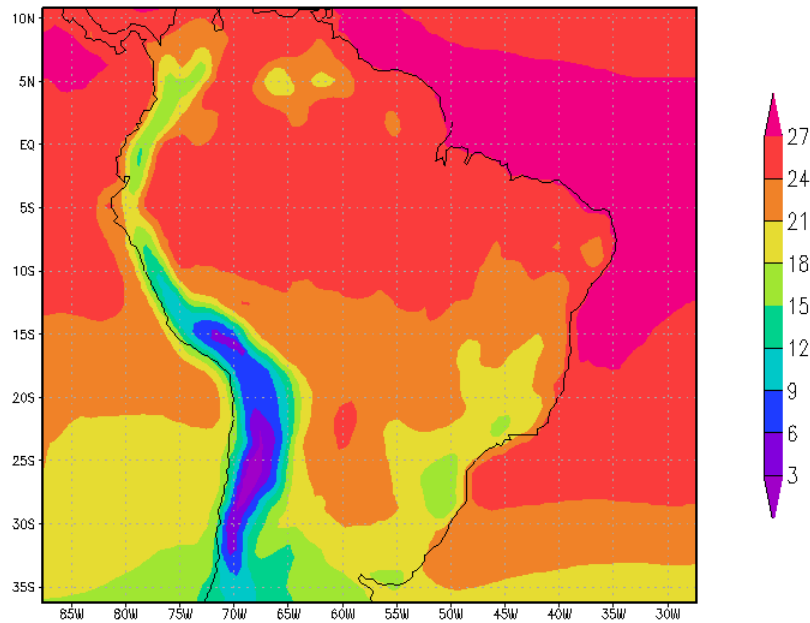
- MIARGEI

Temperature Members

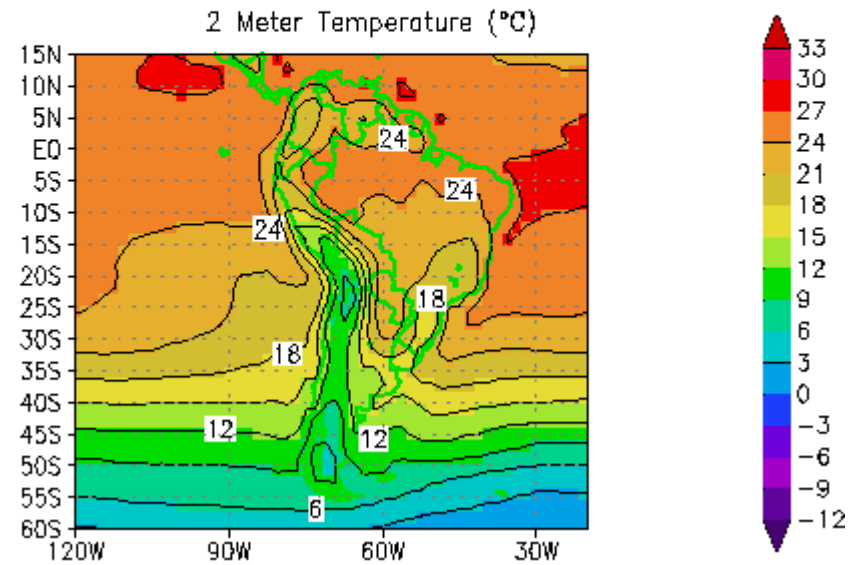
Temperature MAM 2008 ensemble runs



Temperature MAM 2008 ensemble mean



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ECPC 2MT Ensemble Mean
Trop. Ocean SSTa forecast (IRI Multi-Model Scenarios)
from Jan 2008

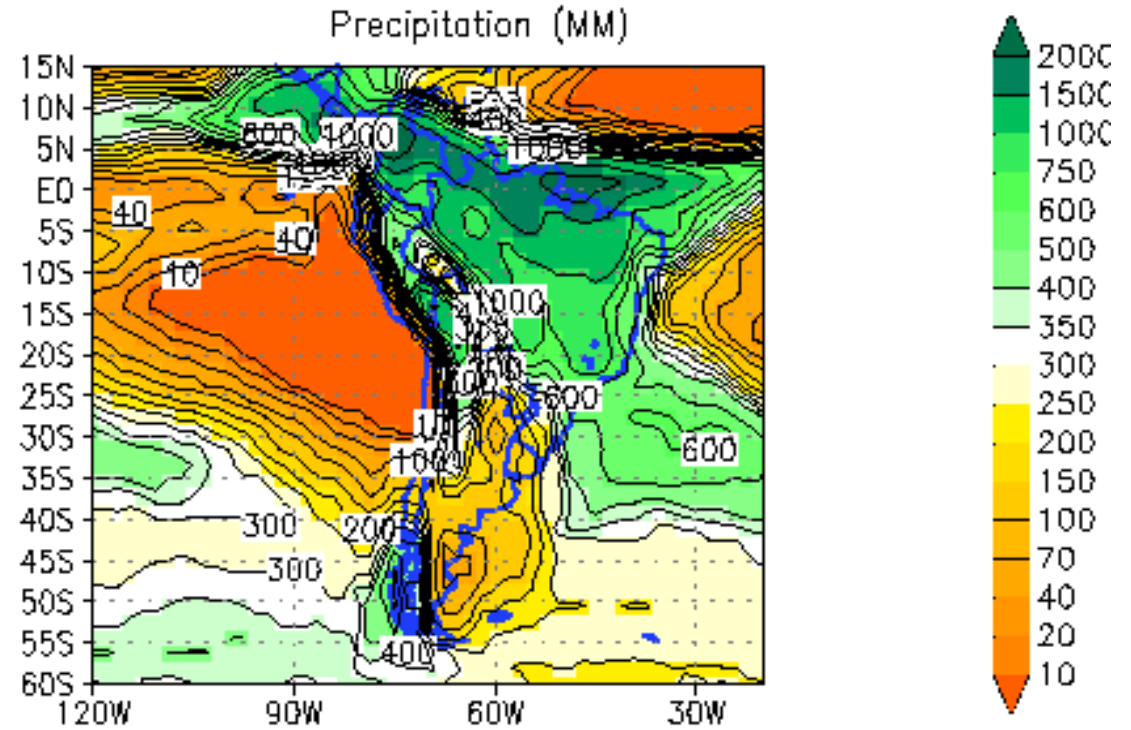
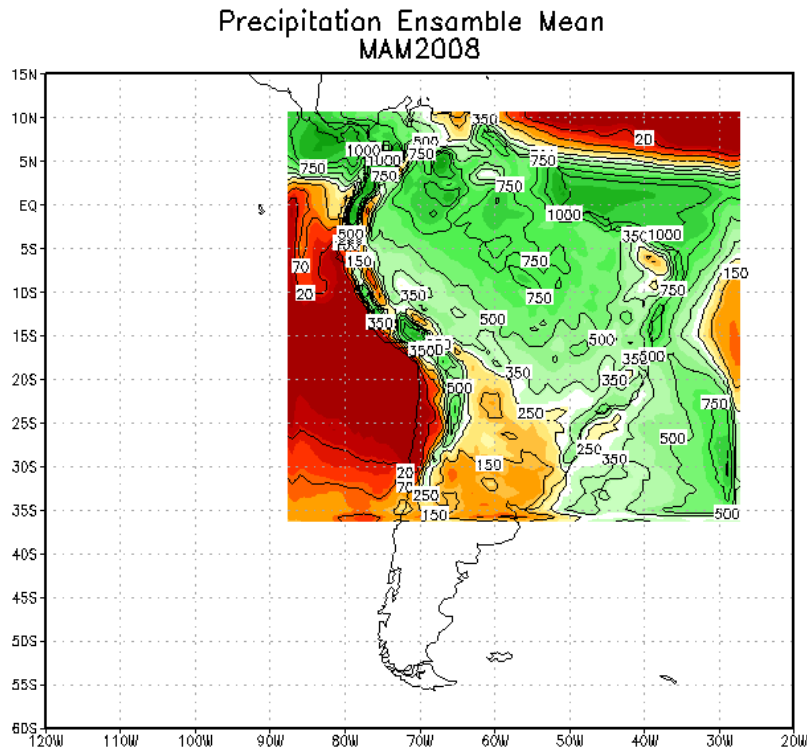


Color change MARGI

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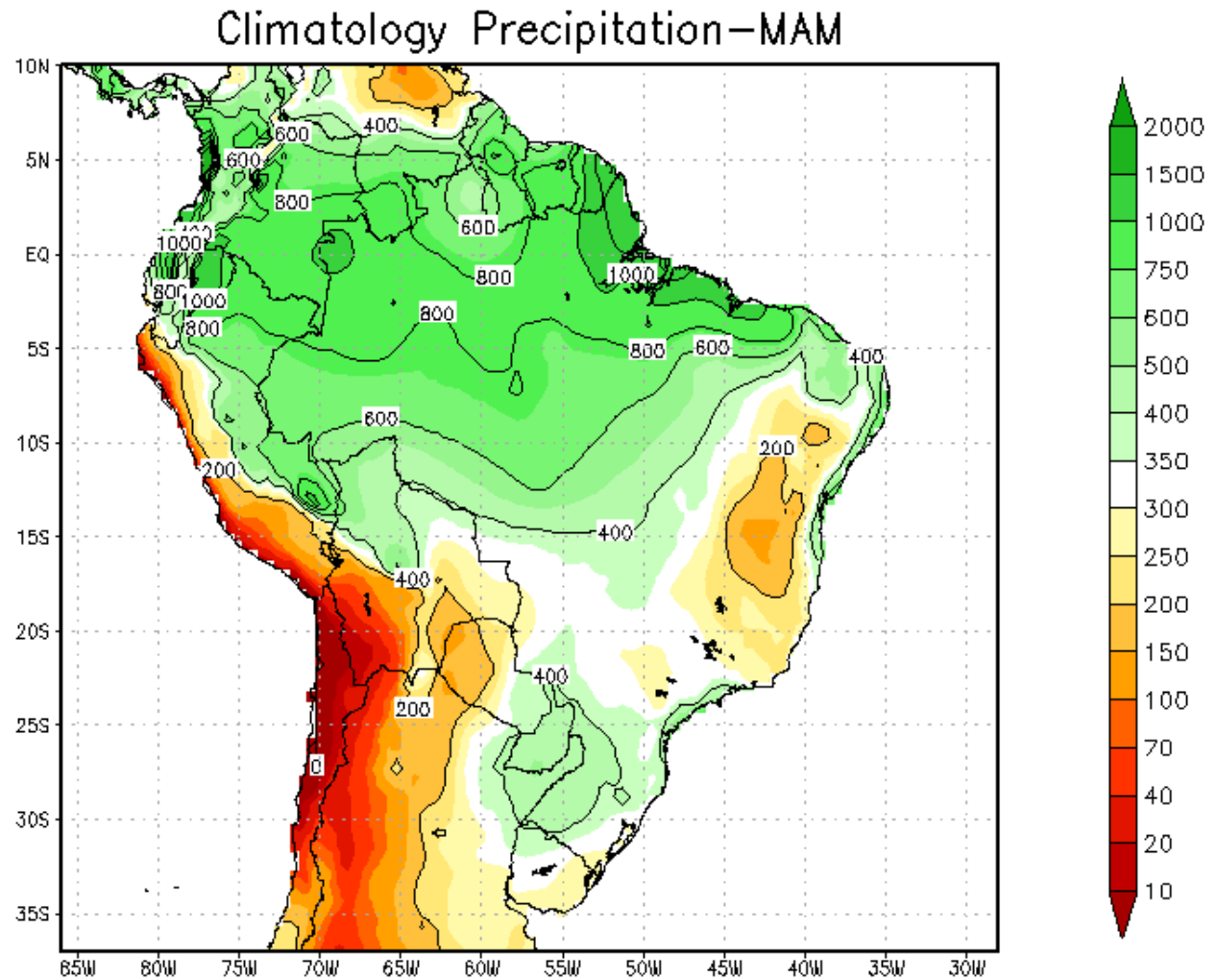
ECPC PRECIP Ensemble Mean

Trop. Ocean SSTa forecast (IRI Multi-Model Scenarios)
from Jan 2008



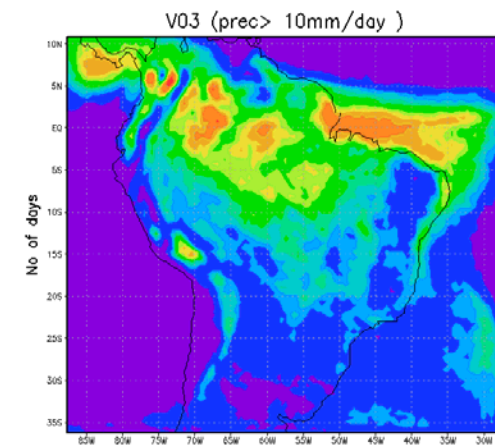
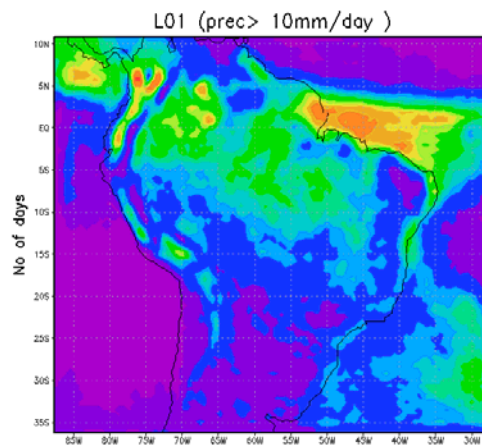
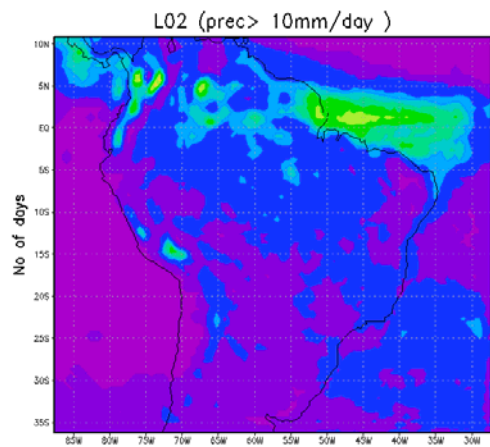
Forecast vs CRU

- David

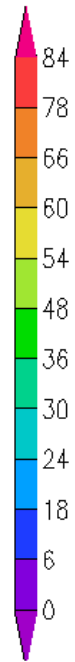
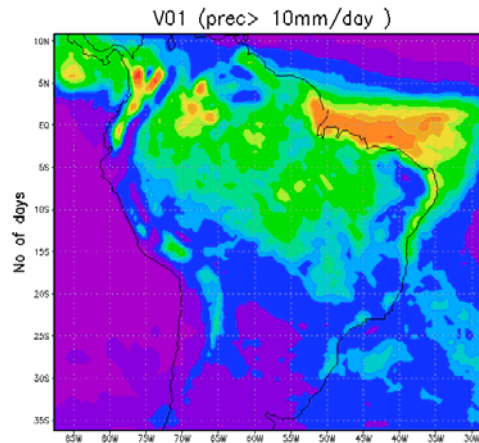
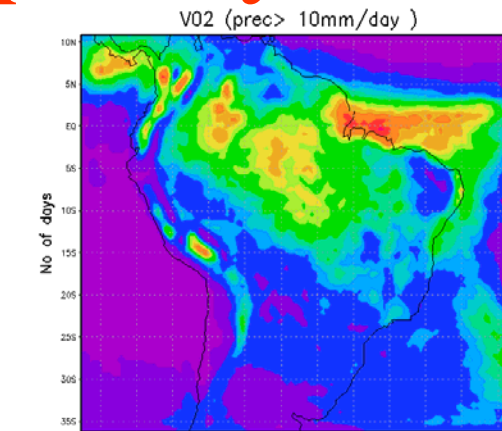
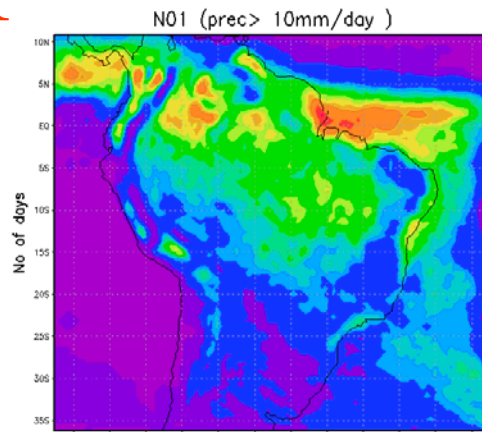
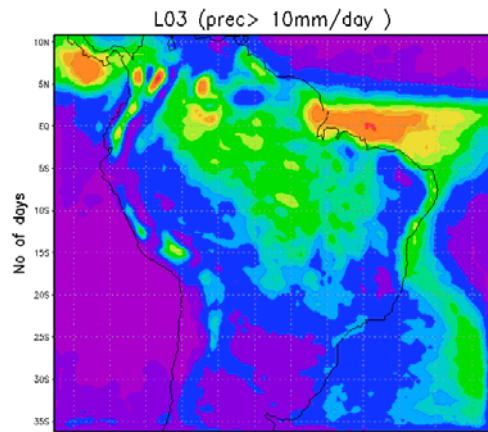


Ensemble Spread

- Siraj

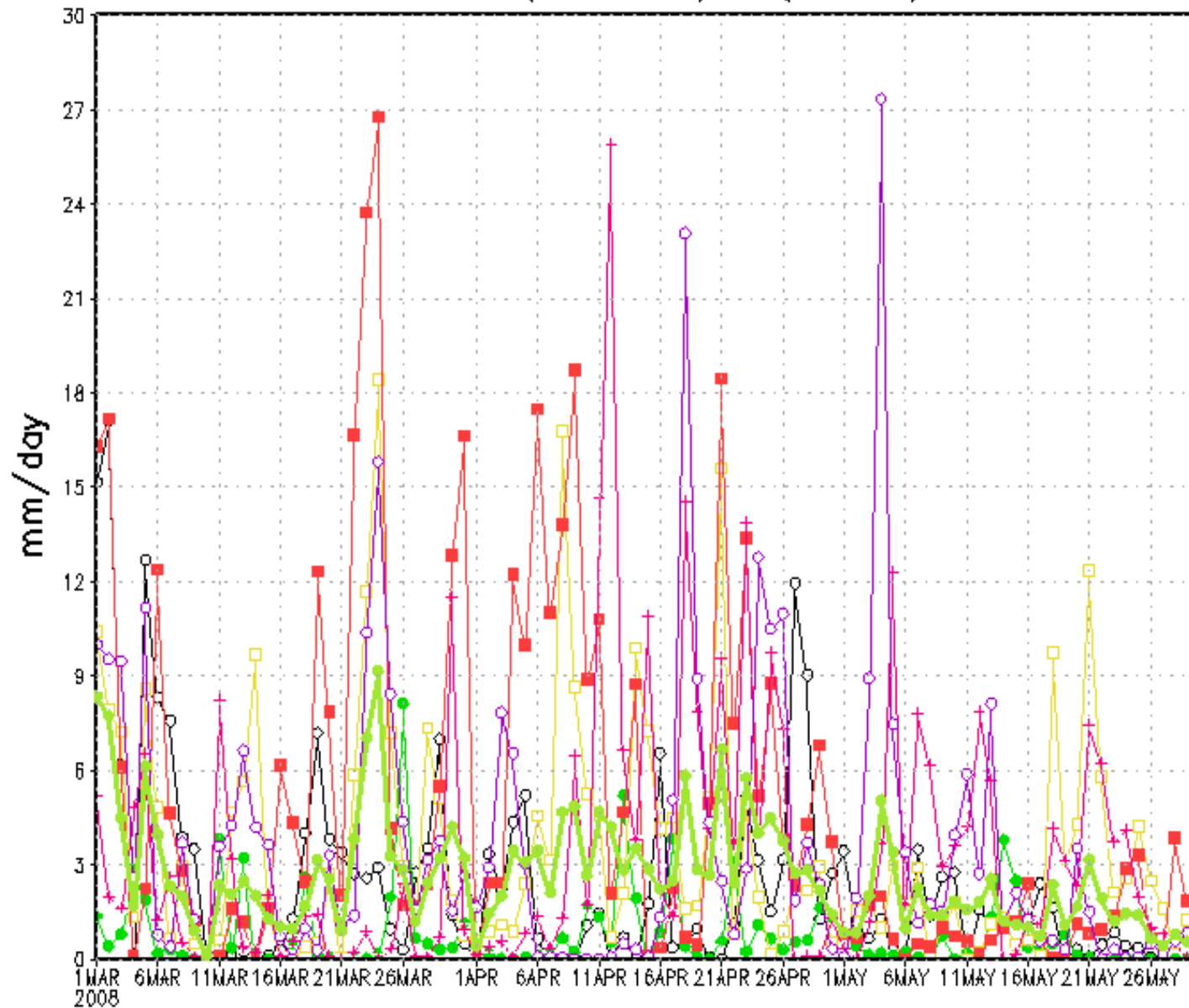


Precipitation Frequency



Daily Variability of Rainfall

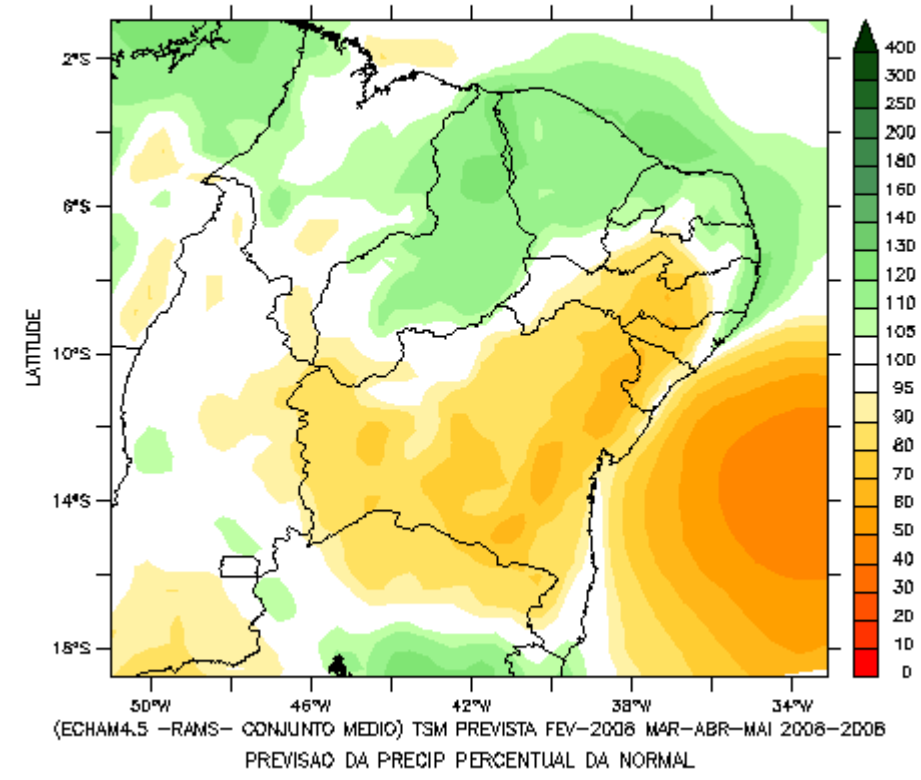
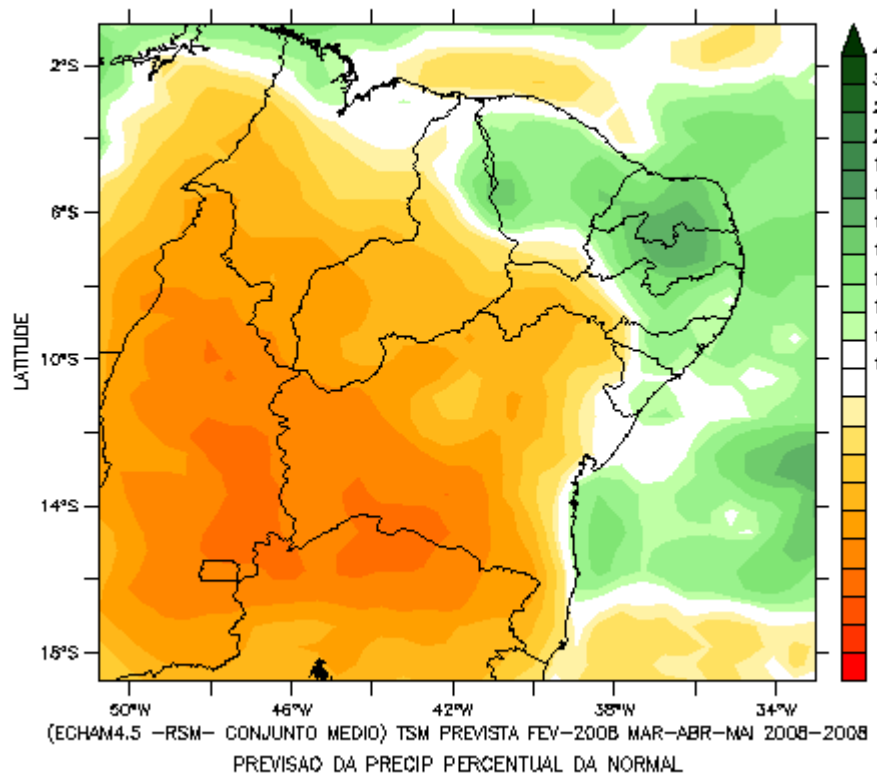
Daily Rain Members and Mean
over lon(-41,-38) lat(-9,-5)



Summary

Future Work

- Collaboration
- Data Requirement





METEOROLOGIA E OCEANOGRAFIA

