



03 | 08 | 23

CNO
709

Seguimiento y Predicción Climática



Variaciones del **clima** nacional

ENOS

océano - atmósfera



MJO

Propagación
hacia el este

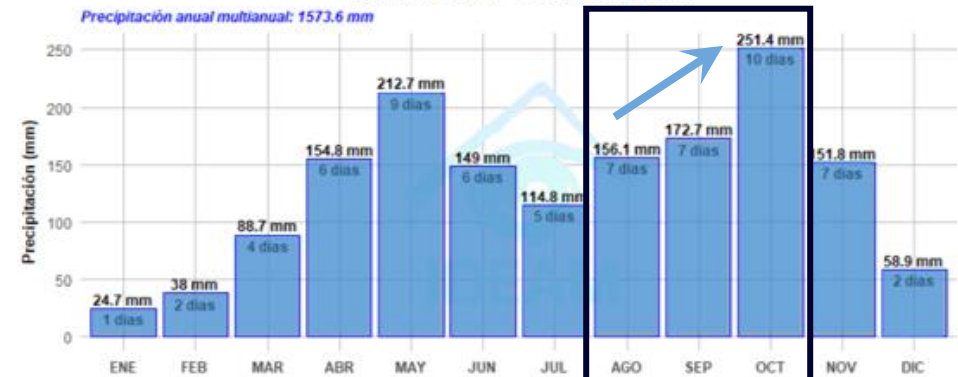
TEMPORADA HURACANES

Atlántico

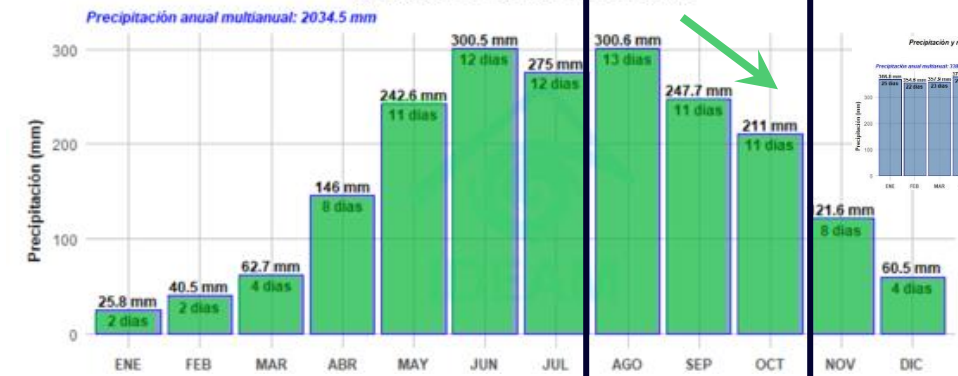


Régimen Pluviométrico

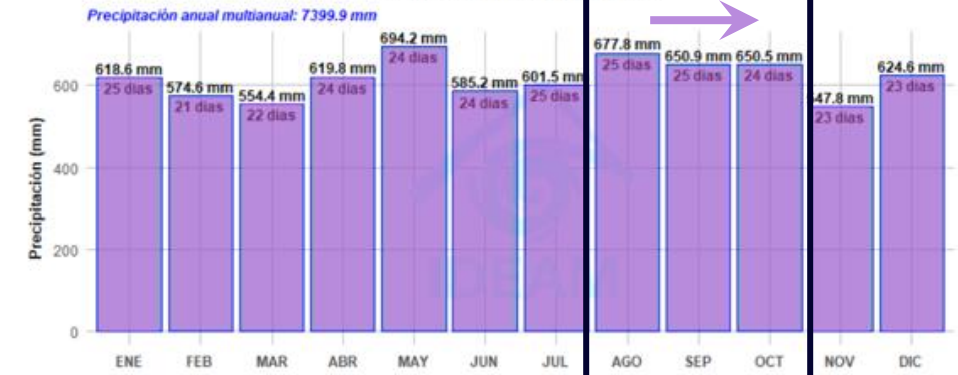
Precipitación y número de días con lluvia mensual multianual (1981 - 2010)
Estación Codazzi Dc [28020460]
Agustín Codazzi - Cesar | 90 m.s.n.m.



Precipitación y número de días con lluvia mensual multianual (1981 - 2010)
Estación Pica Pica [25010080]
Montelibano - Cordoba | 100 m.s.n.m.



Precipitación y número de días con lluvia mensual multianual (1981 - 2010)
Estación Apto Condoto [54025020]
Condoto - Choco | 66 m.s.n.m.



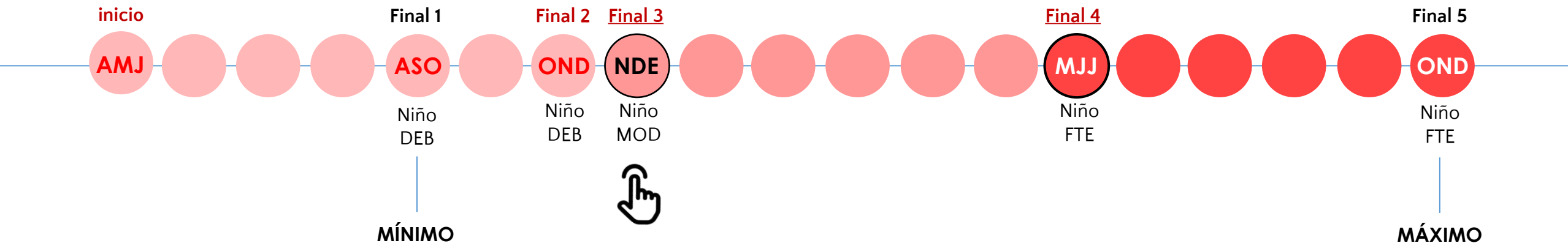
ENOS
océano - atmósfera

Duración

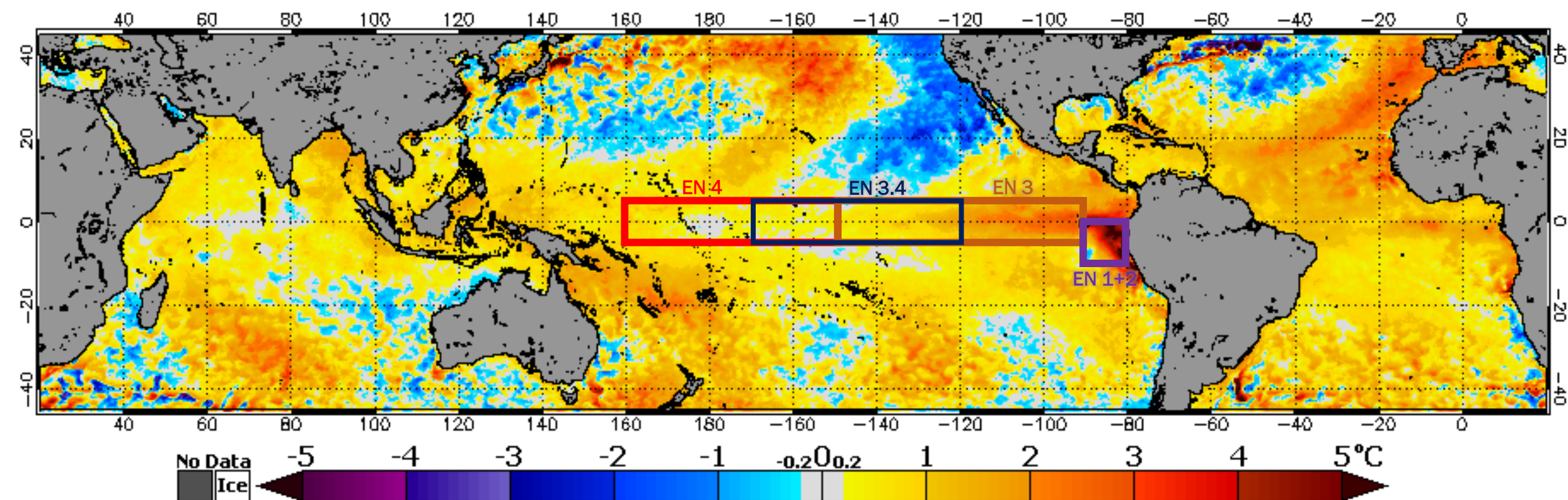
El Niño 2023-2024

Con base en el ONI - Preliminar

EL NIÑO	D	M	F
TOTAL EVENTOS	9	5	9
TOTAL MESES - MÍNIMO	5	7	9
TOTAL MESES - PROMEDIO	7	8	14
TOTAL MESES - MÁXIMO	13	9	19



NOAA Coral Reef Watch Daily 5km SST Anomalies (Version 3.1) 4 May 2023





1. SISTEMA CLIMÁTICO

MJO | TEMPORADA HURACANES | ENOS

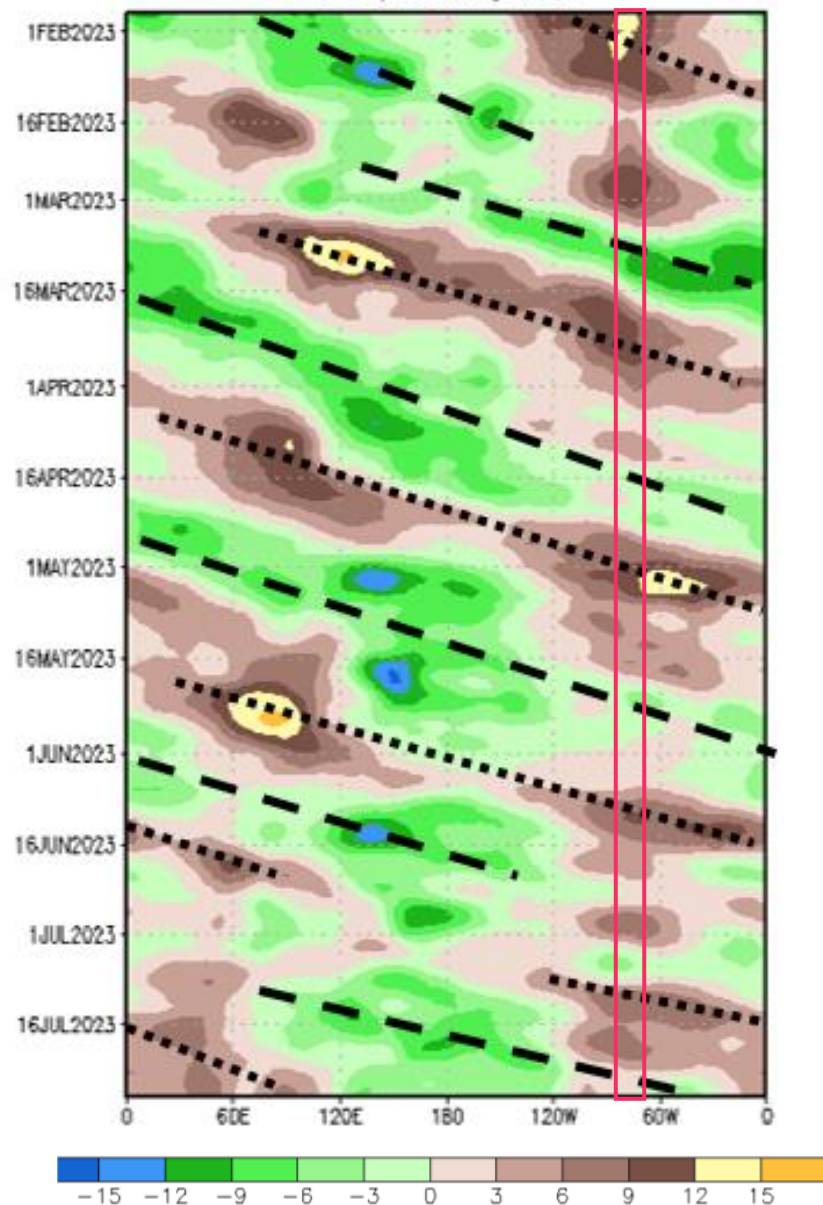
MJO

Intraestacional

Julio
Predominio de fase subsidente.

200-hPa Velocity Potential Anomaly: 5N-5S

5-day Running Mean Colombia



Favorece
Convección



Inhibe
Convección

27 Ondas

5 Depresiones

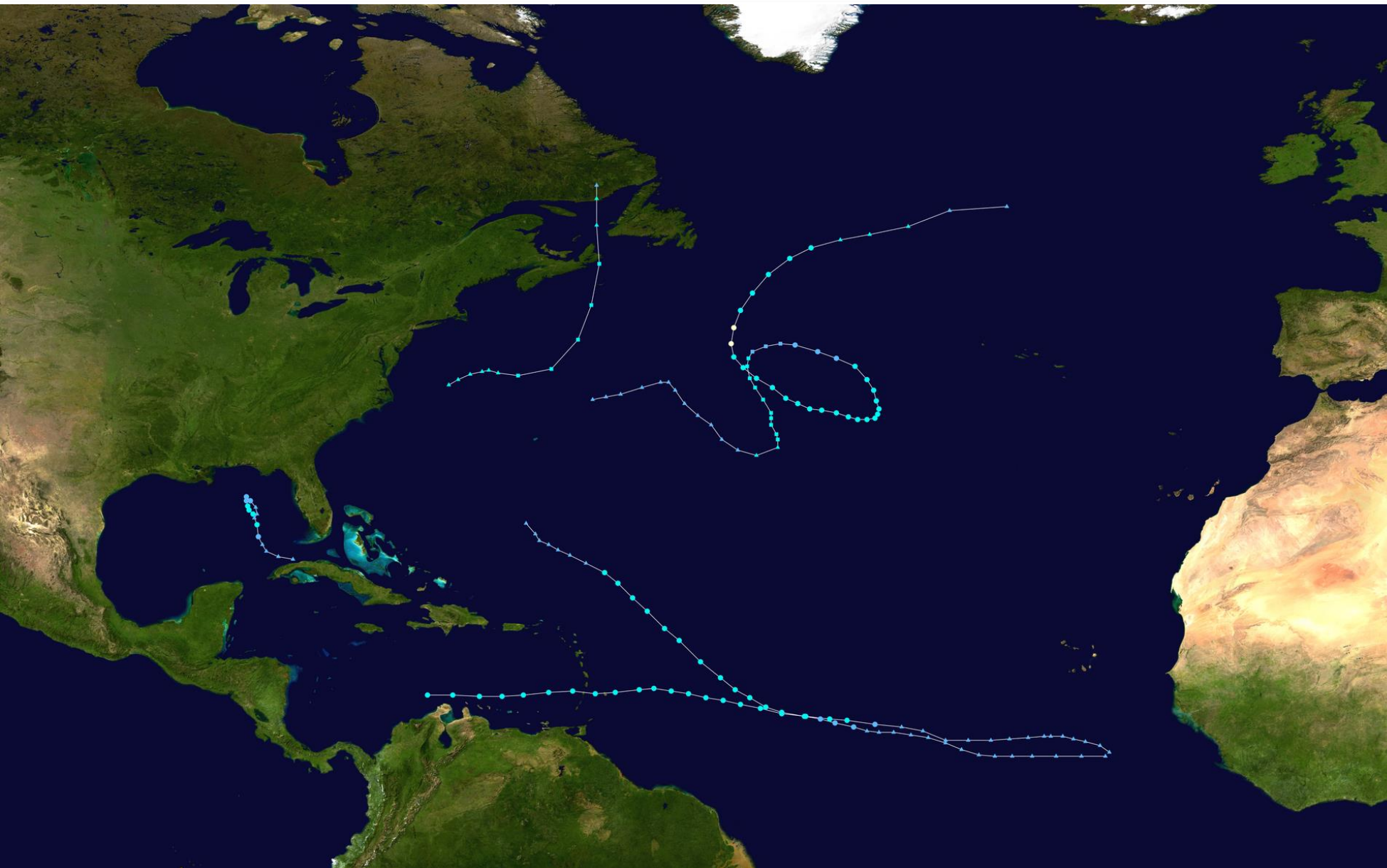
5 Tormentas

1 Huracán

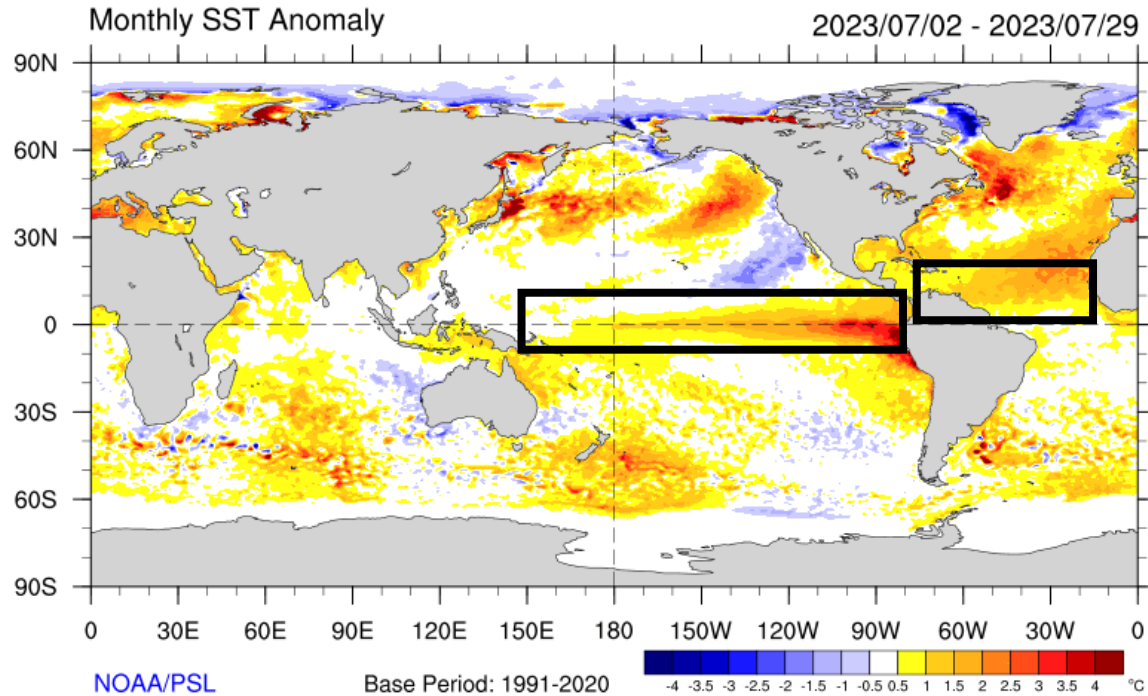
TEMPORADA HURACANES Atlántico

Varias ondas transitando y transportando humedad.

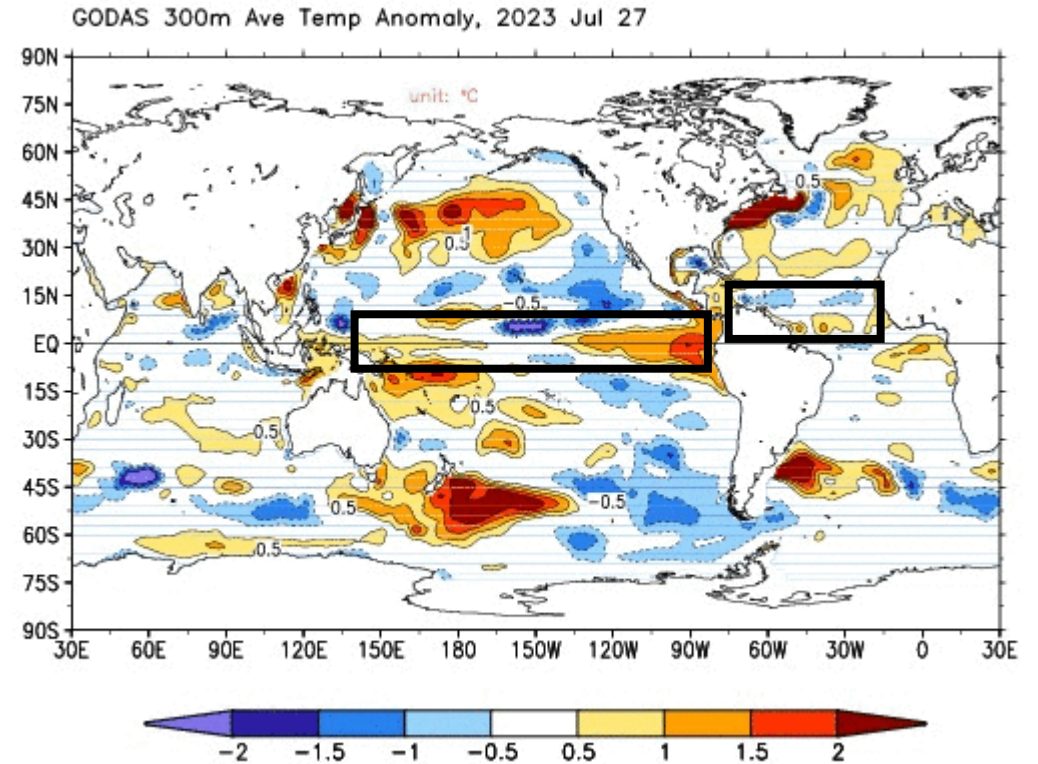
Desde el 15 de mayo han transitado **27** ondas.



CAMPO TÉRMICO SUPERFICIAL

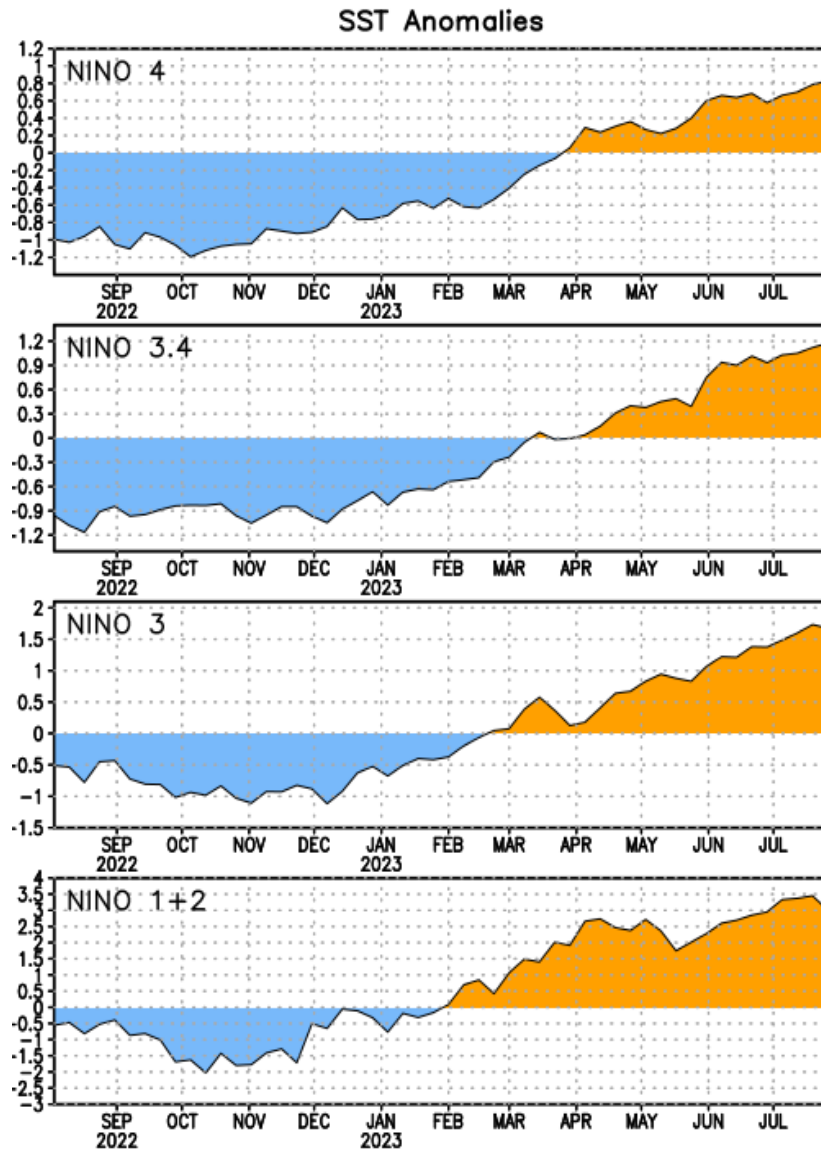


CAMPO TÉRMICO SUBSUPERFICIAL

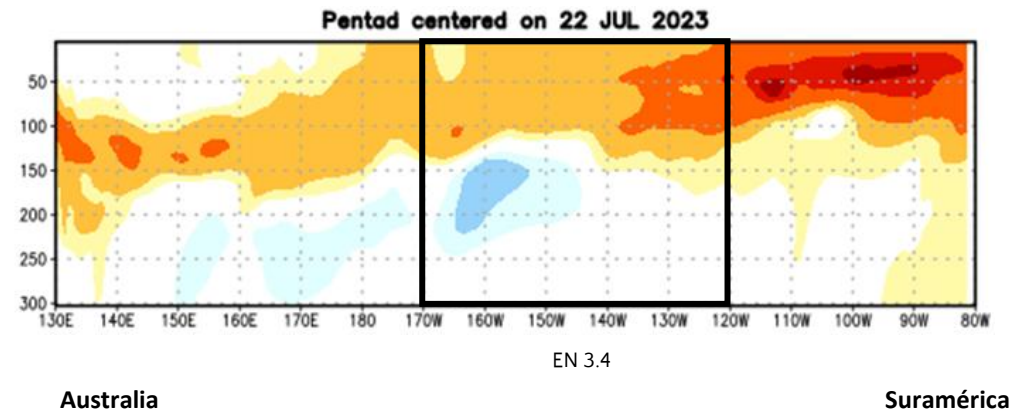


Región	Semana Anterior	Semana Actual
Niño 3.4	1.1 °C	1.2 °C

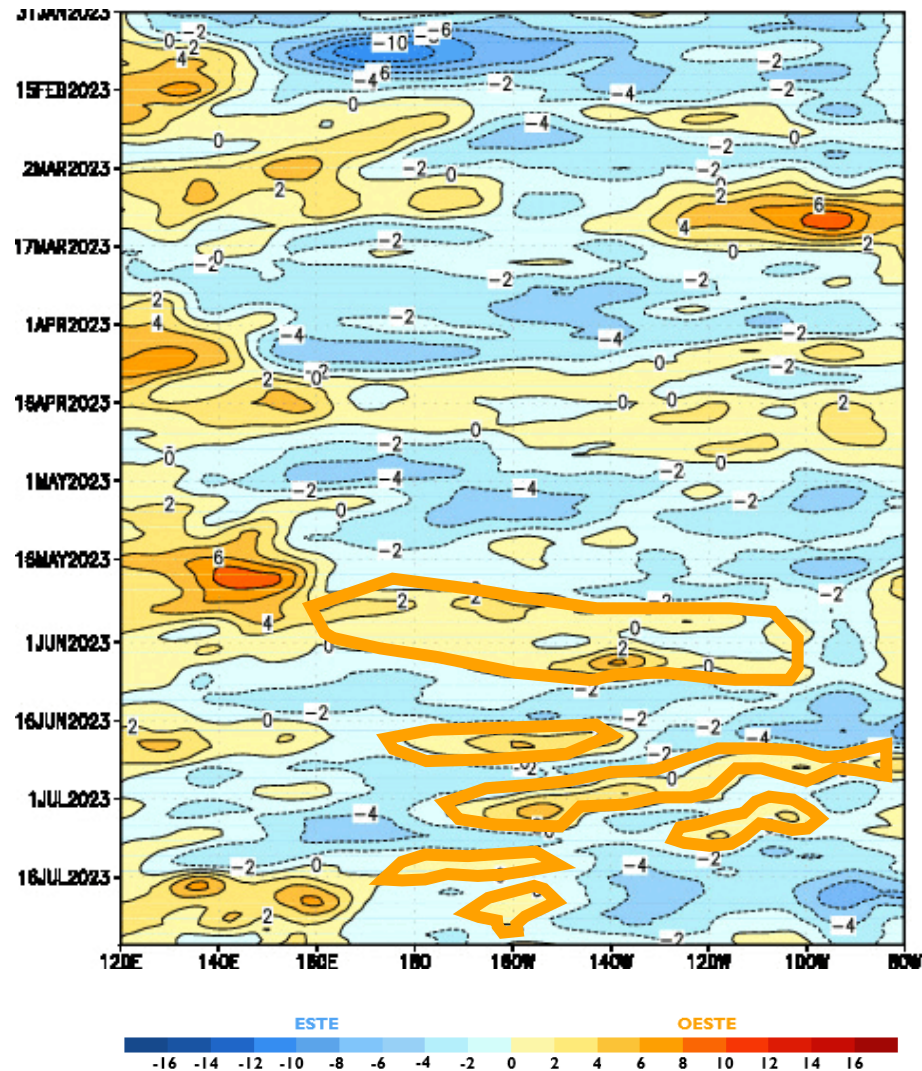
Anomalías de Temperatura Superficial del Mar



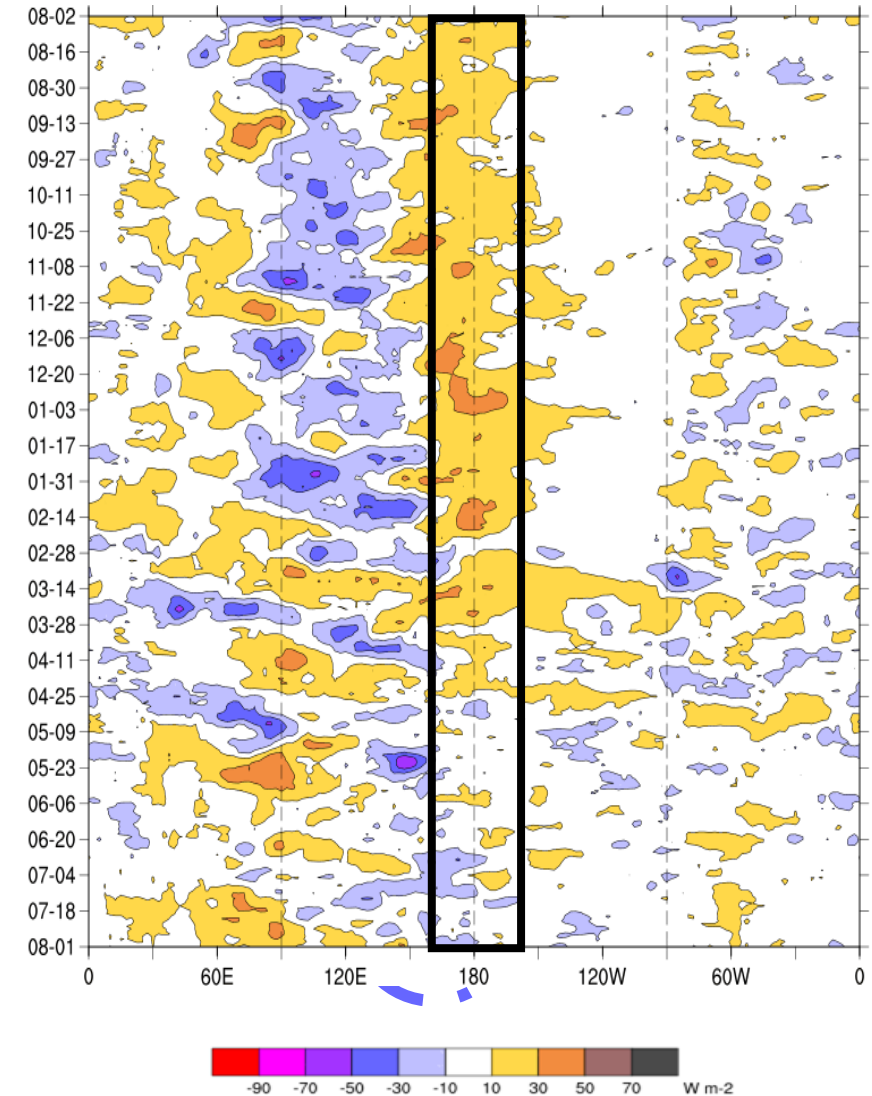
Anomalías de Temperatura Subsuperficial del Mar



ANOMALÍA DEL VIENTO EN SUPERFICIE



ANOMALÍA DE RADIACIÓN DE ONDA LARGA



INDICADORES DEL CICLO ENOS

MEIv2

Índice Multivariado del Ciclo El Niño - Oscilación del Sur.

Basado en:

1. Presión del Nivel del Mar.
2. Temperatura Superficial del Mar.
3. Componente Zonal de Viento (este-oeste).
4. Componente Meridional del Viento (norte-sur).
5. Radiación de Onda Larga.

Condición más reciente

MJ: Neutral

Interpretación

Valores
≥ 0.5
El Niño

Valores
>-0.5 < 0.5
Neutral

Valores
≤ -0.5
La Niña

ONI – ERSST.v5

Indicador El Niño.

Basado en:

1. Temperatura Superficial del Mar.

Condición más reciente

AMj: Niño

Tabla
No. 1

MEIv2

<https://www.esrl.noaa.gov/psd/enso/mei/>

	DE	EF	FM	MA	AM	MJ	JJ	JA	AS	SO	ON	ND
2010	0.9	1.3	1.3	0.5	-0.2	-1.3	-2.4	-2.4	-2.3	-2.2	-2	-1.9
2011	-1.8	-1.6	-1.8	-1.7	-1.3	-1.1	-0.9	-0.9	-1.2	-1.4	-1.2	-1.2
2012	-1.1	-0.7	-0.6	-0.4	-0.3	-0.3	0.3	-0.1	-0.3	-0.2	-0.1	-0.1
2013	0	-0.1	-0.1	-0.4	-0.7	-1.2	-0.8	-0.5	-0.4	-0.2	-0.2	-0.3
2014	-0.5	-0.4	-0.1	-0.2	-0.2	0	0.3	0.2	-0.1	0.1	0.3	0.3
2015	0.2	0.1	0.1	0.4	1	1.9	1.7	1.9	2.2	2.1	1.9	1.9
2016	1.9	1.8	1.3	1.3	1.3	0.4	-0.5	-0.3	-0.3	-0.6	-0.5	-0.3
2017	-0.4	-0.4	-0.6	-0.2	0.2	-0.3	-0.7	-0.8	-0.8	-0.6	-0.6	-0.7
2018	-0.8	-0.7	-0.8	-1.3	-0.9	-0.5	-0.2	0.4	0.5	0.4	0.3	0.1
2019	0.1	0.5	0.8	0.3	0.3	0.4	0.2	0.3	0.2	0.3	0.5	0.4
2020	0.3	0.3	0.2	-0.1	-0.2	-0.7	-1.0	-1.0	-1.2	-1.2	-1.1	-1.2
2021	-1.2	-0.9	-0.8	-1	-1.1	-1.1	-1.5	-1.3	-1.4	-1.5	-1.4	-1.2
2022	-1	-1	-1.3	-1.6	-1.7	-1.9	-2.2	-1.8	-1.8	-1.7	-1.5	-1.3
2023	-1.1	-0.8	-0.7	-0.4	-0.1	0.2						

Tabla
No. 2

ONI - ERSST.v5

https://origin.cpc.ncep.noaa.gov/products/analysis_monitoring/ensostuff/ONI_v5.php

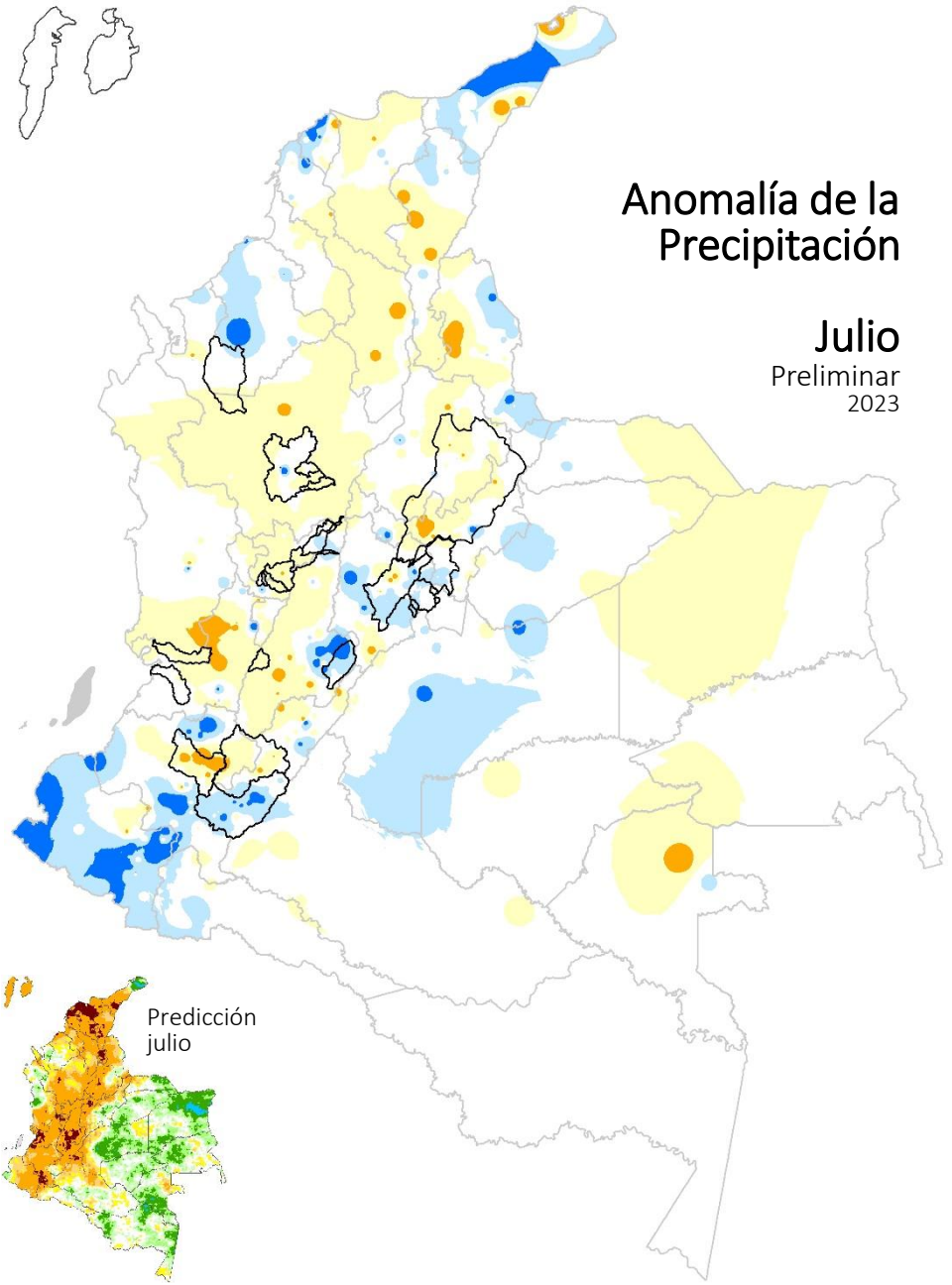
	DEF	EFM	FMA	MAM	AMJ	MJJ	JJA	JAS	ASO	SON	OND	NDE
2010	1.5	1.3	0.9	0.4	-0.1	-0.6	-1.0	-1.4	-1.6	-1.7	-1.7	-1.6
2011	-1.4	-1.1	-0.8	-0.6	-0.5	-0.4	-0.5	-0.7	-0.9	-1.1	-1.1	-1.0
2012	-0.8	-0.6	-0.5	-0.4	-0.2	0.1	0.3	0.3	0.3	0.2	0.0	-0.2
2013	-0.4	-0.3	-0.2	-0.2	-0.3	-0.3	-0.4	-0.4	-0.3	-0.2	-0.2	-0.3
2014	-0.4	-0.4	-0.2	0.1	0.3	0.2	0.1	0.0	0.2	0.4	0.6	0.7
2015	0.6	0.6	0.6	0.8	1.0	1.2	1.5	1.8	2.1	2.4	2.5	2.6
2016	2.5	2.2	1.7	1.0	0.5	0.0	-0.3	-0.6	-0.7	-0.7	-0.7	-0.6
2017	-0.3	-0.1	0.1	0.3	0.4	0.4	0.2	-0.1	-0.4	-0.7	-0.9	-1.0
2018	-0.9	-0.8	-0.6	-0.4	-0.1	0.1	0.1	0.2	0.4	0.7	0.9	0.8
2019	0.8	0.8	0.8	0.7	0.6	0.5	0.3	0.1	0.1	0.3	0.5	0.5
2020	0.5	0.6	0.4	0.3	0.0	-0.2	-0.4	-0.6	-1.0	-1.2	-1.3	-1.2
2021	-1.1	-0.9	-0.8	-0.7	-0.5	-0.4	-0.4	-0.5	-0.7	-0.8	-1.0	-1.0
2022	-1.0	-0.9	-1.0	-1.1	-1.0	-0.9	-0.8	-0.9	-1.0	-1.0	-0.9	-0.8
2023	-0.7	-0.4	-0.1	0.2	0.5							





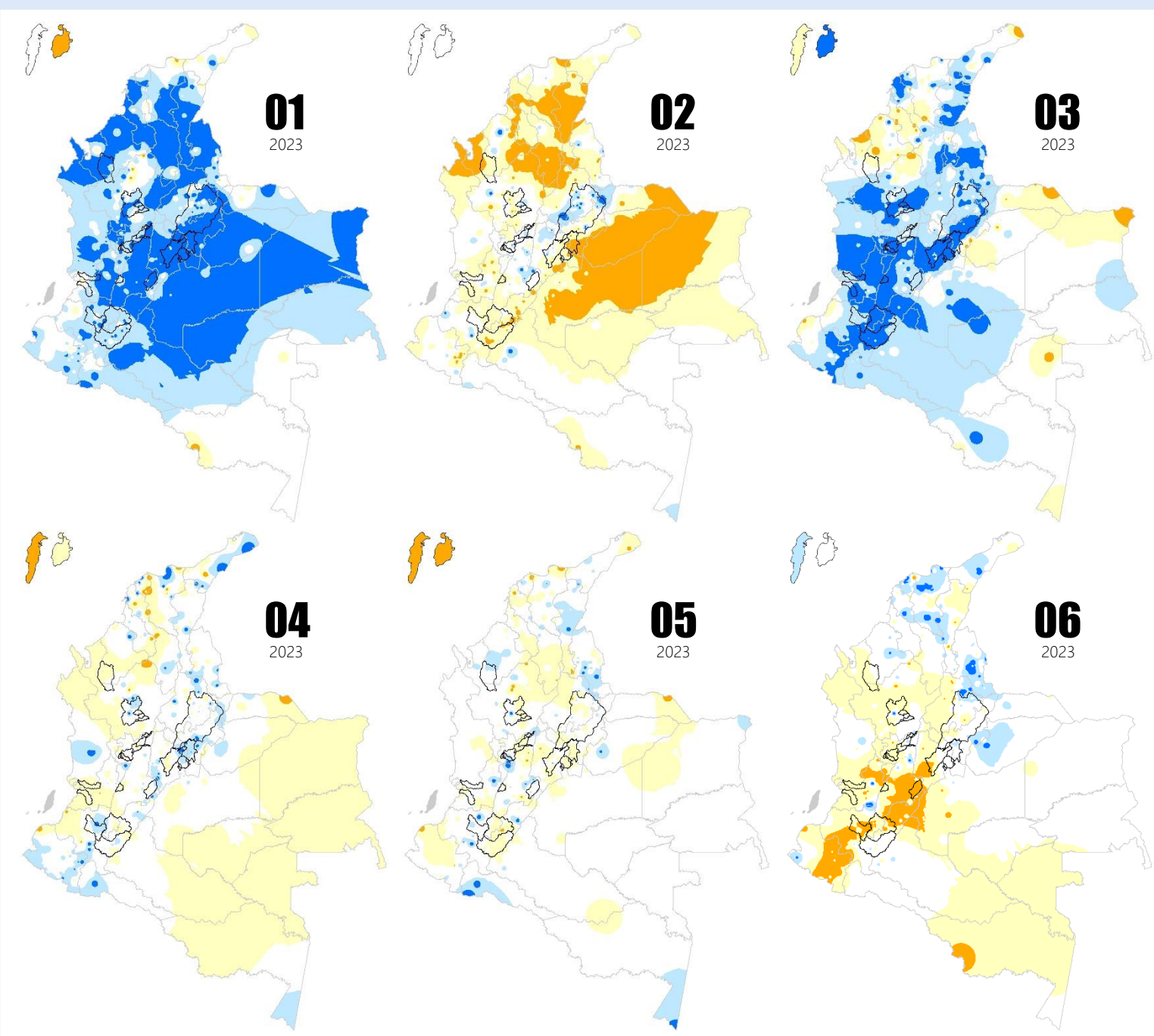
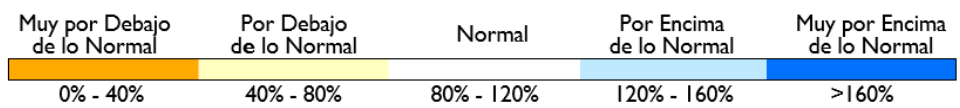
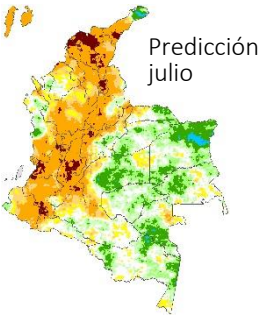
MINISTERIO DE AMBIENTE Y
DESARROLLO SOSTENIBLE

2. SEGUIMIENTO CLIMÁTICO 2023



Anomalía de la
Precipitación

Julio
Preliminar
2023



01
2023

02
2023

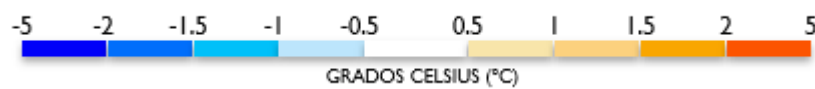
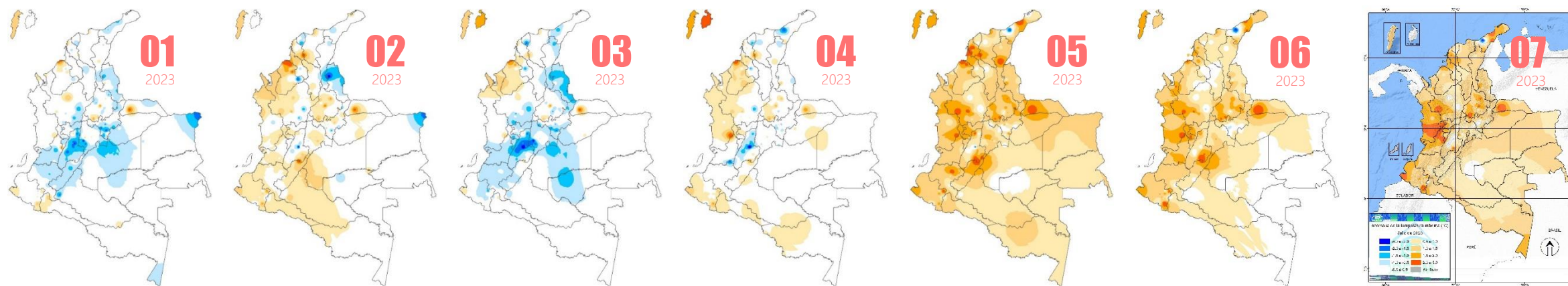
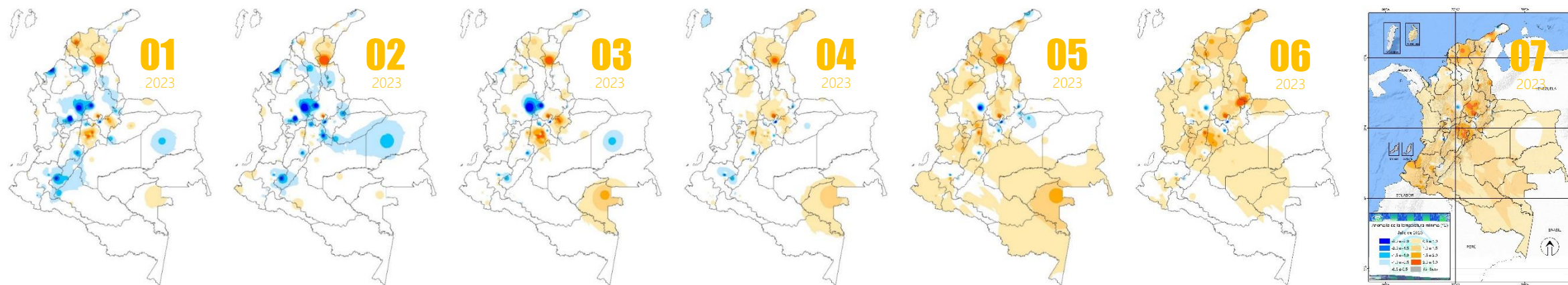
03
2023

04
2023

05
2023

06
2023

Anomalía de las temperaturas extremas (mínimas y máximas)

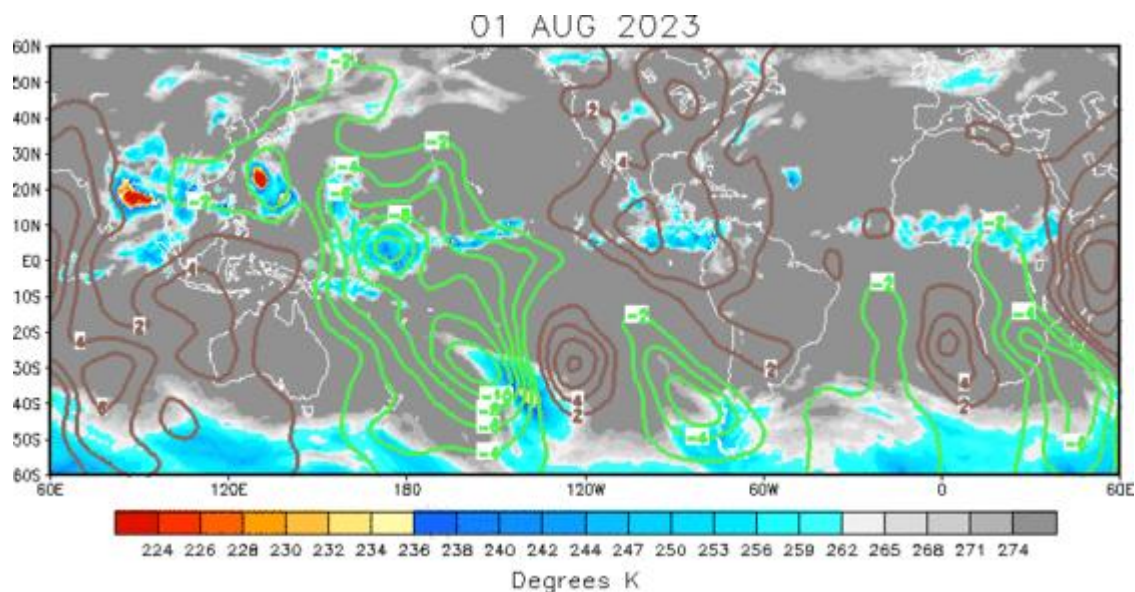




3. PREDICCIÓN CLIMÁTICA

AGO | SEP | OCT

MJO+



Fase Actual
Subsidente

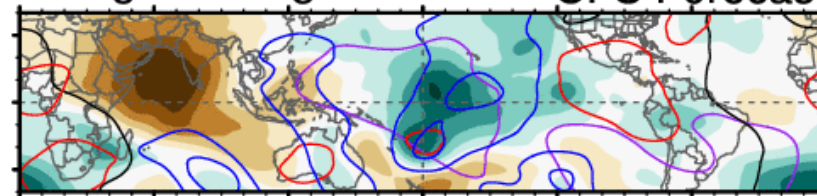
03 - 14 Favorable

ONDAS ECUATORIALES

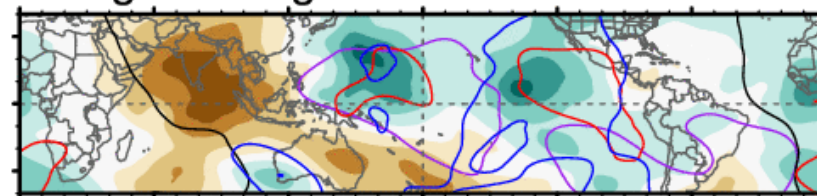
Proyección

3-Aug to 5-Aug

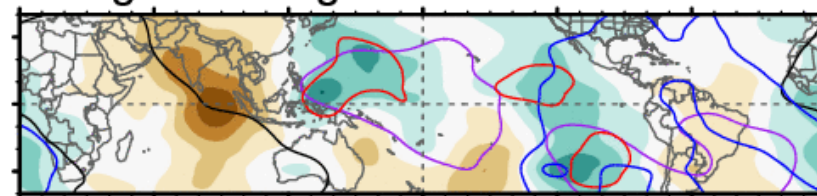
CFS Forecast



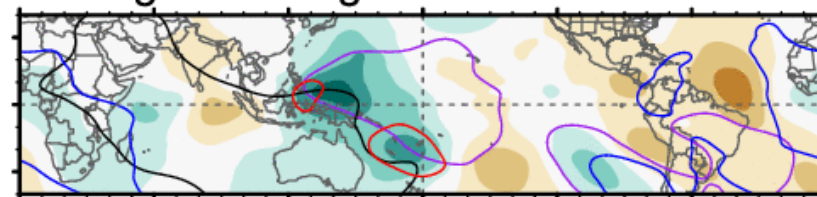
6-Aug to 8-Aug



9-Aug to 11-Aug



12-Aug to 14-Aug



0 60E 120E 180 120W 60W 0

— MJO

— Kelvin x2

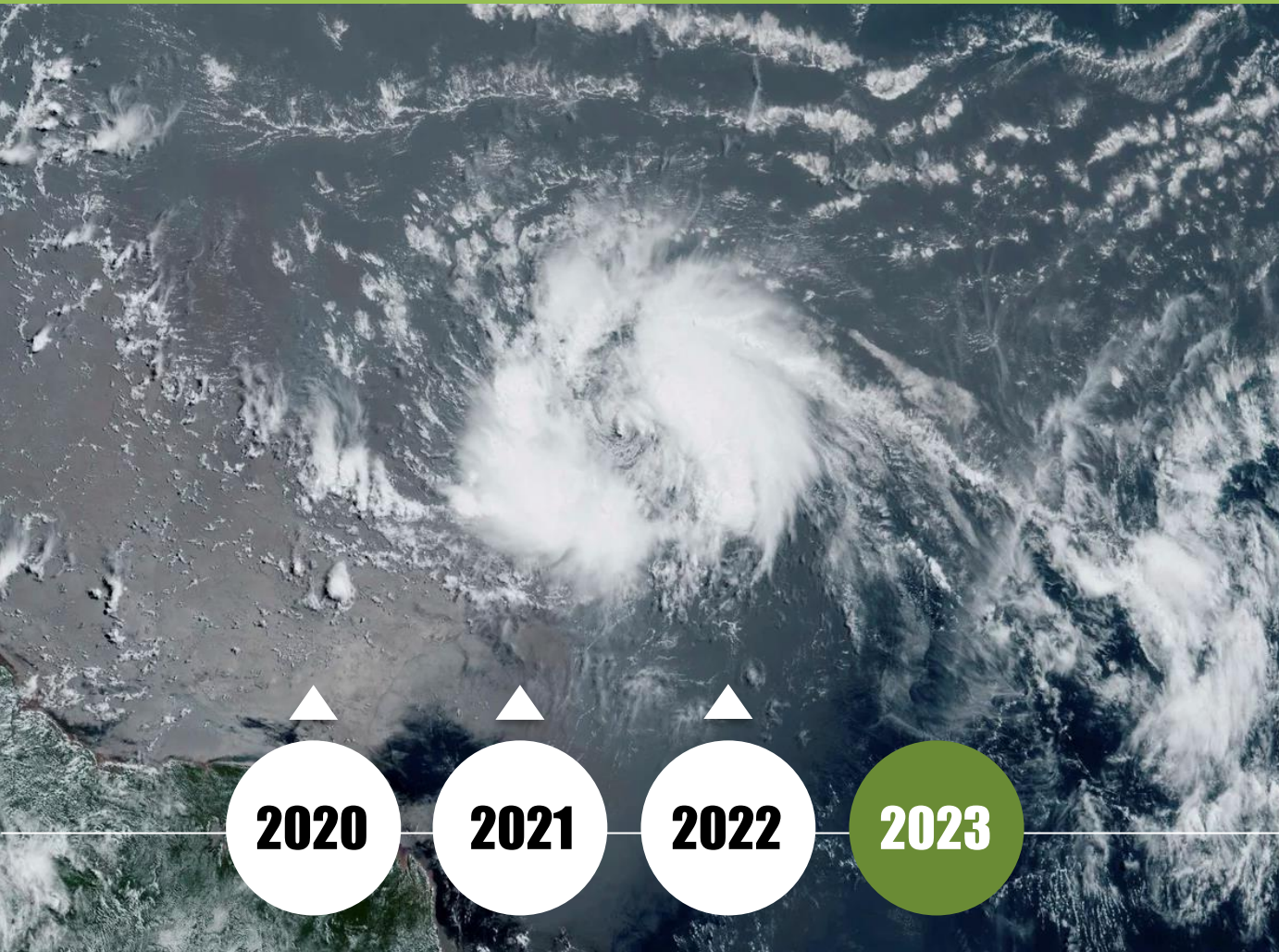
— Low

— ER

+ nubes

- nubes

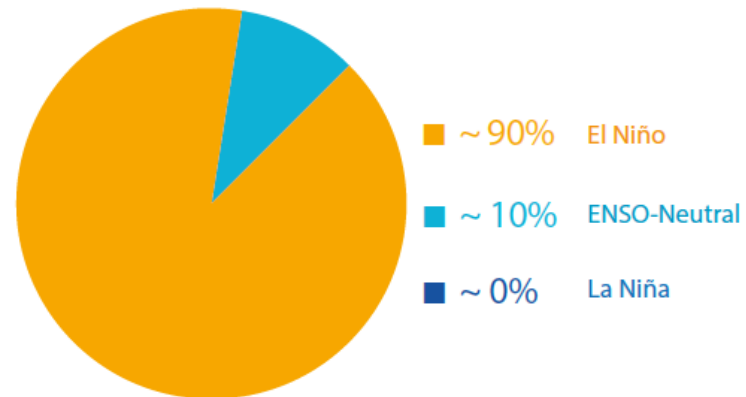
Temporada de Huracanes



Source	Date	Named storms	Hurricanes	Major hurricanes
<i>Average (1991–2020)</i>		14.4	7.2	3.2
<i>Record high activity</i>		30	15	7†
<i>Record low activity</i>		1	0†	0†
TSR	December 6, 2022	13	6	3
TSR	April 6, 2023	12	6	2
UA	April 7, 2023	19	9	5
CSU	April 13, 2023	13	6	2
TWC	April 13, 2023	15	7	3
NCSU	April 13, 2023	11–15	6–8	2–3
MU	April 27, 2023	15	7	3
UPenn	May 1, 2023	12–20	N/A	N/A
SMN	May 4, 2023	10–16	3–7	2–4
NOAA	May 25, 2023	12–17	5–9	1–4
UKMO*	May 26, 2023	20	11	5
TSR	May 31, 2023	13	6	2
CSU	June 1, 2023	15	7	3
UA	June 16, 2023	25	12	6
TWC	June 17, 2023	17	9	4
CSU	July 6, 2023	18	9	4
TSR	July 7, 2023	17	8	3
TWC	July 19, 2023	20	10	5
Actual activity		5	1	0

OMM

ESTIMATED ENSO PROBABILITIES
FOR JULY - SEPTEMBER 2023



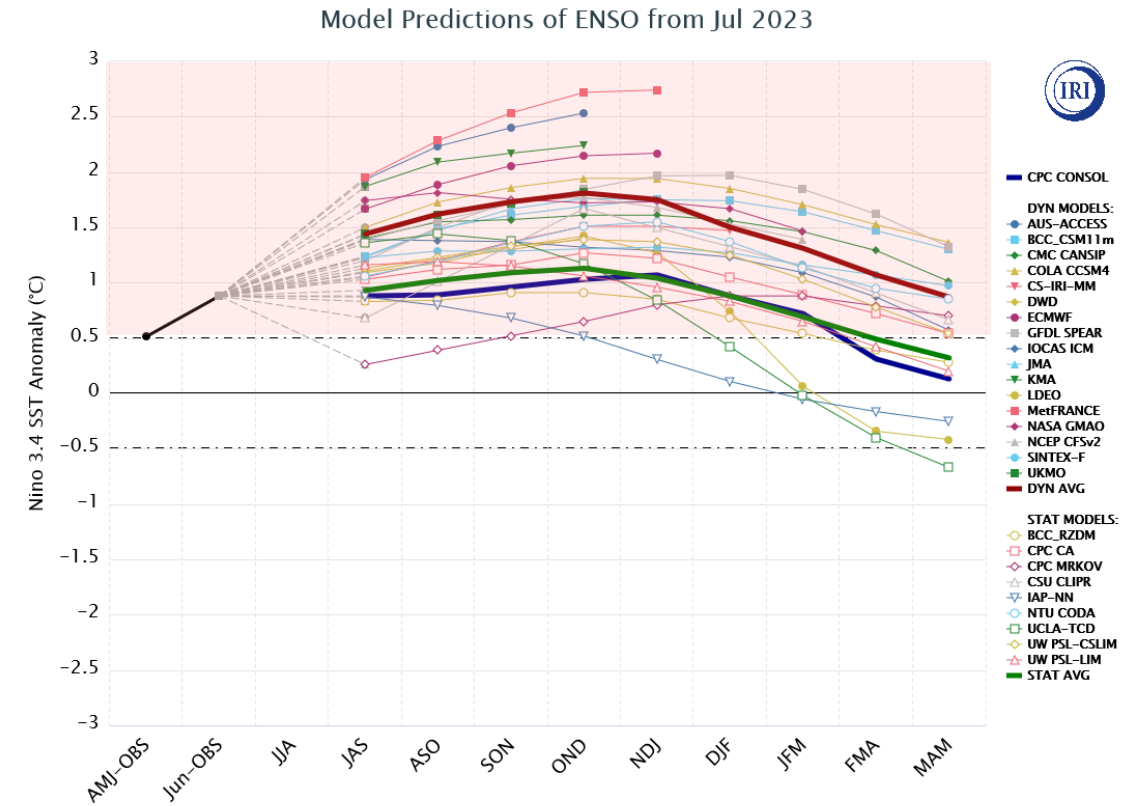
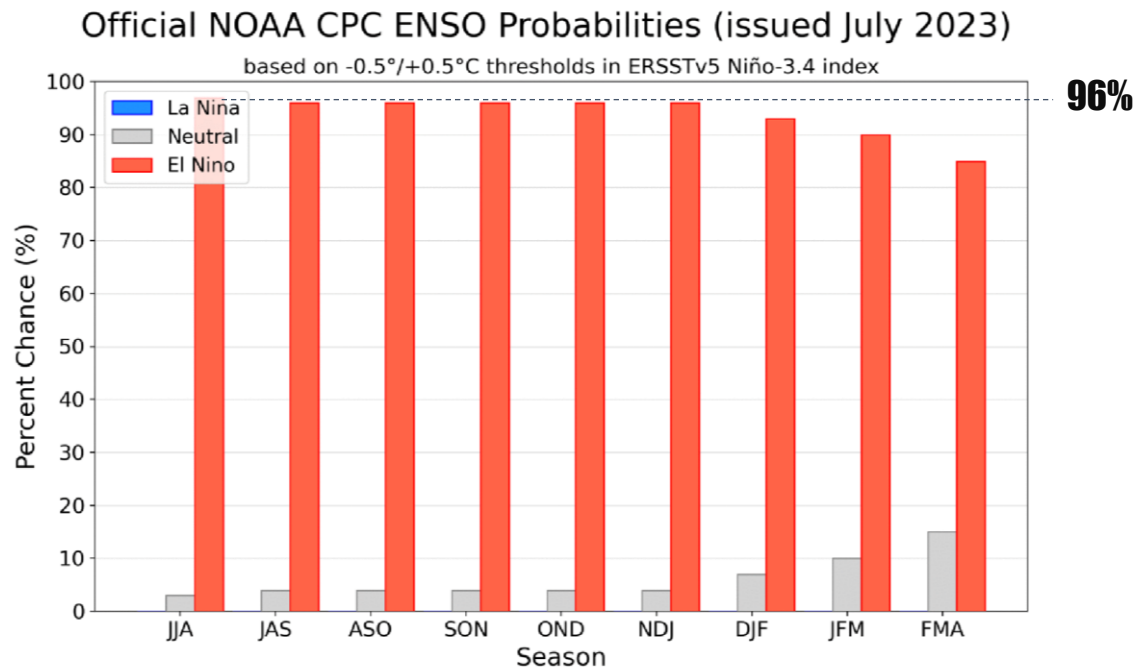
CPC - NOAA

ADVERTENCIA DE EL NIÑO

Existe una probabilidad sobre el 90% de que El Niño continúe durante el invierno del hemisferio norte.

81%
Niño Moderado

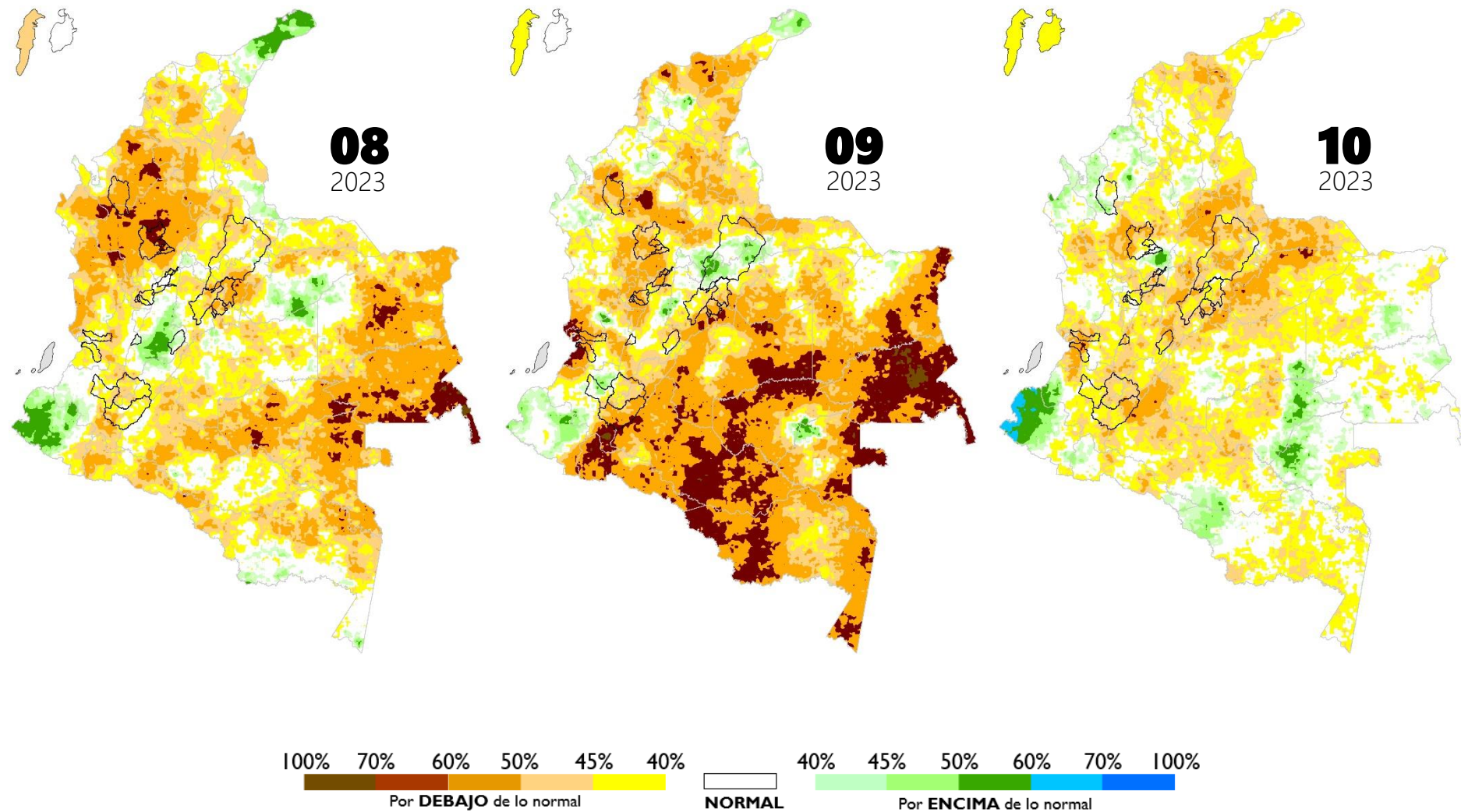
1/5
Niño Fuerte



Predicción probabilística

Probabilidad que se presente las
categorías: por debajo, normal y
por encima

AGO - OCT

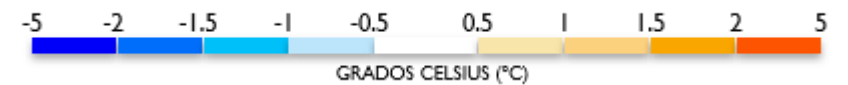
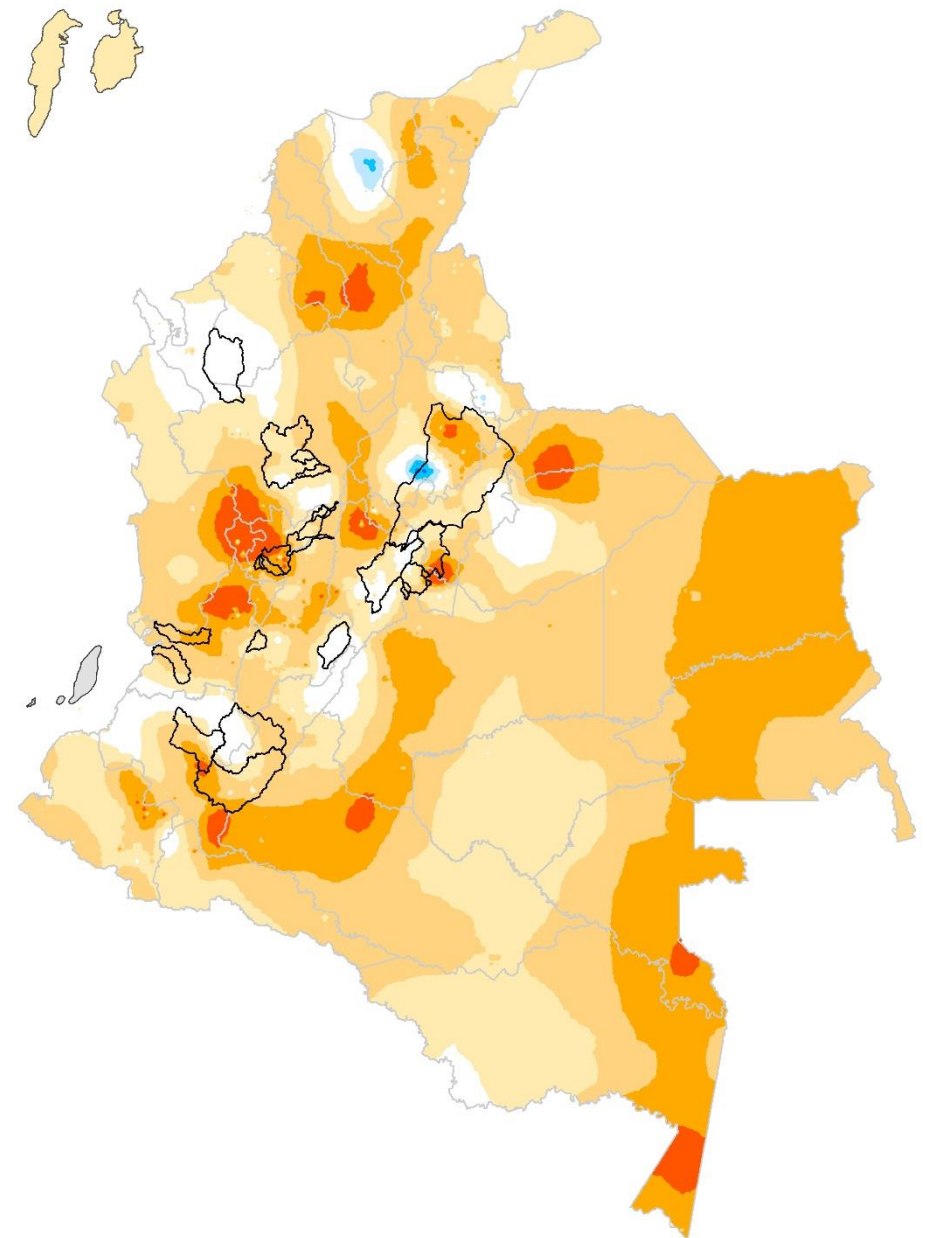
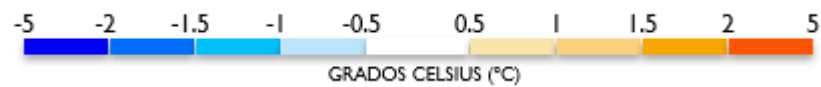
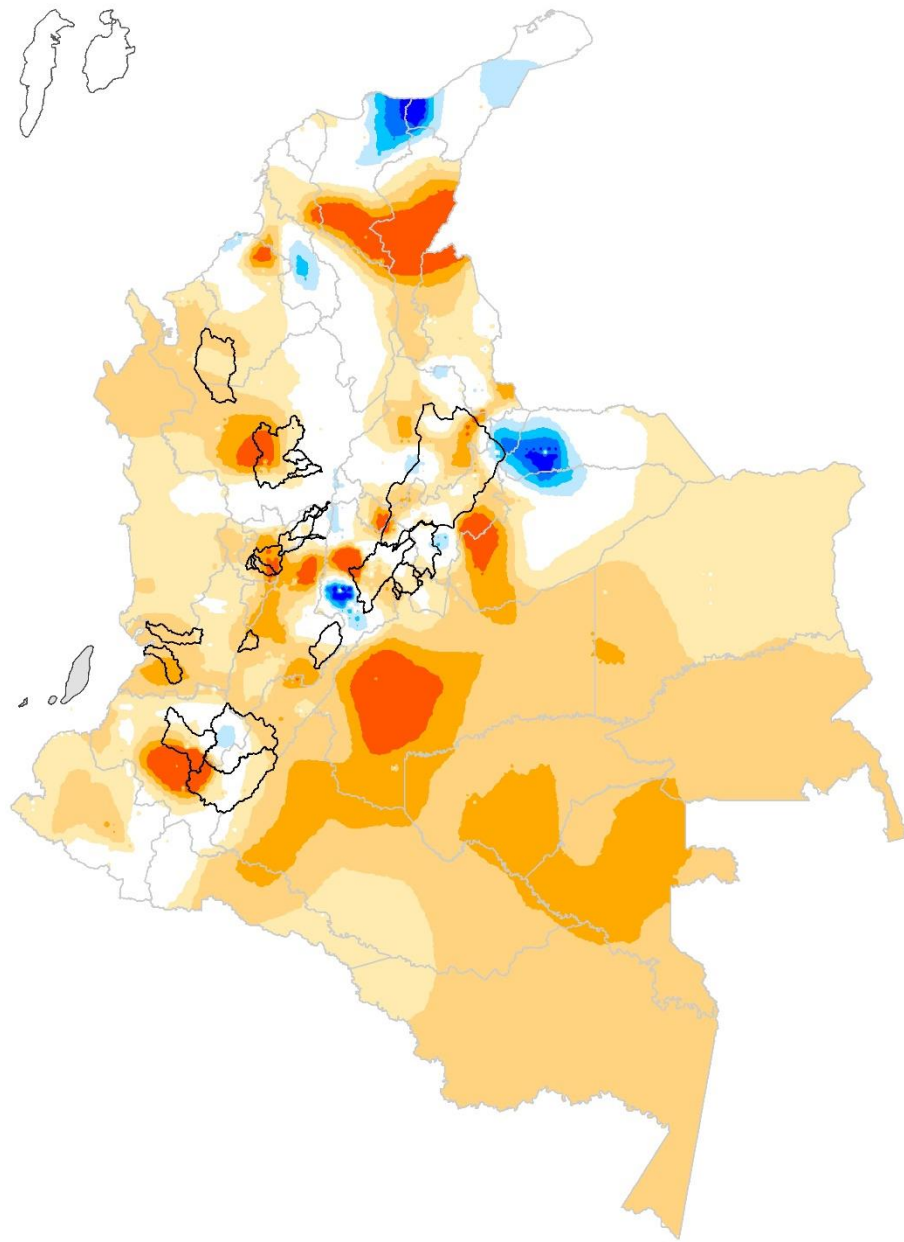


Predicción Temperaturas Extremas

Mínima | Máxima

AGO
2023

AGO
2023





4. CONCLUSIÓN

Lluvias

Déficit

50% - 60%

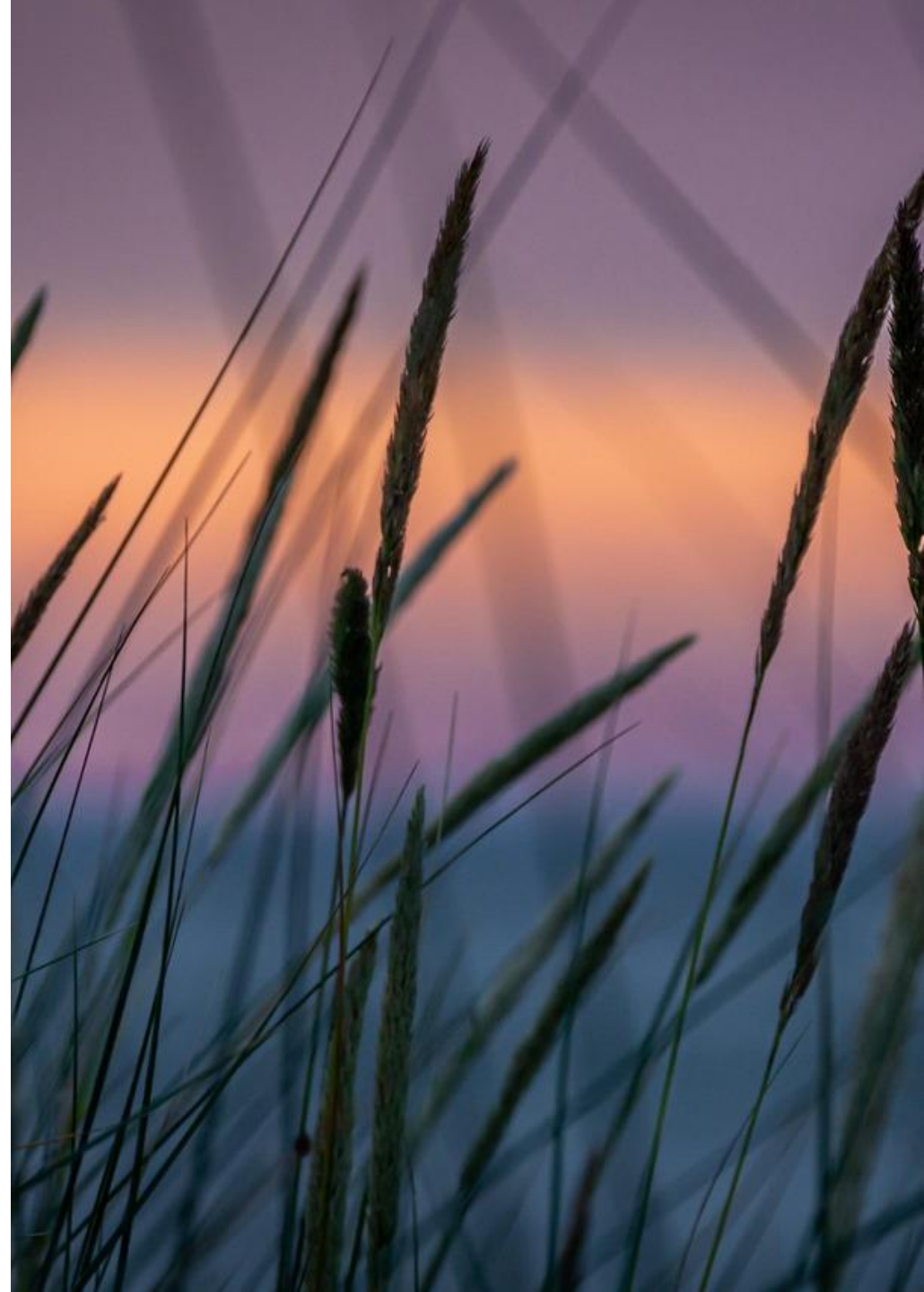
Agosto

60% - 70%

Septiembre

50% - 60%

Octubre





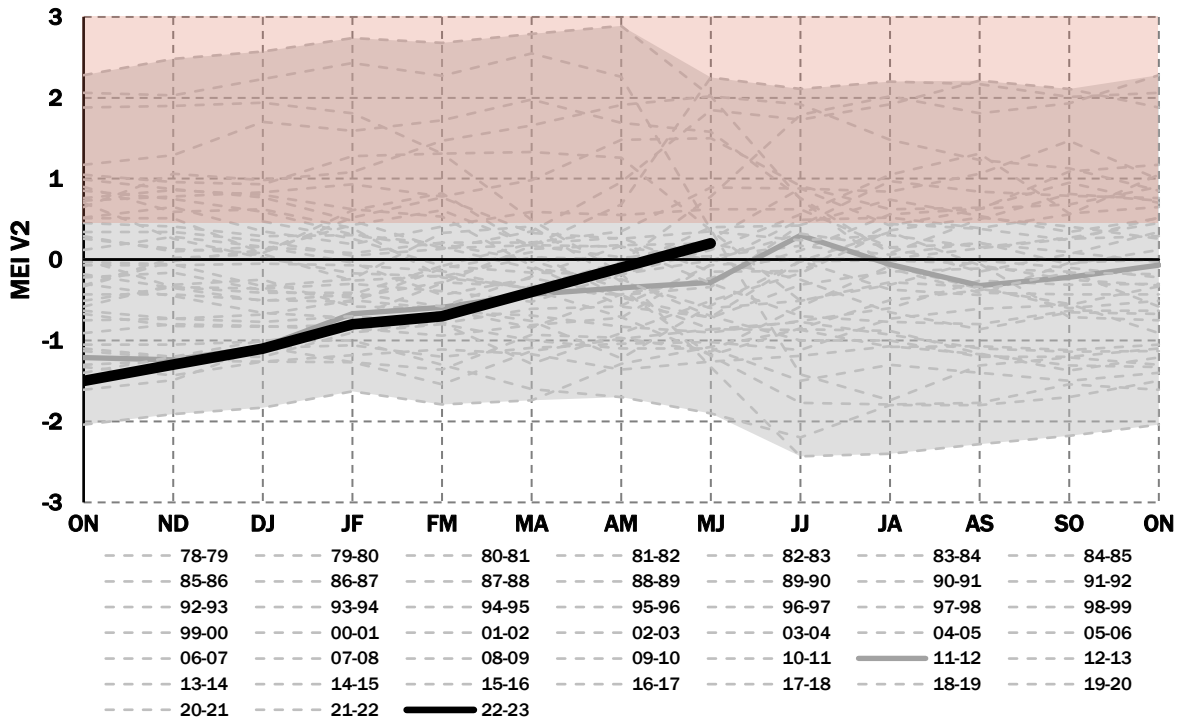
MINISTERIO DE AMBIENTE Y
DESARROLLO SOSTENIBLE



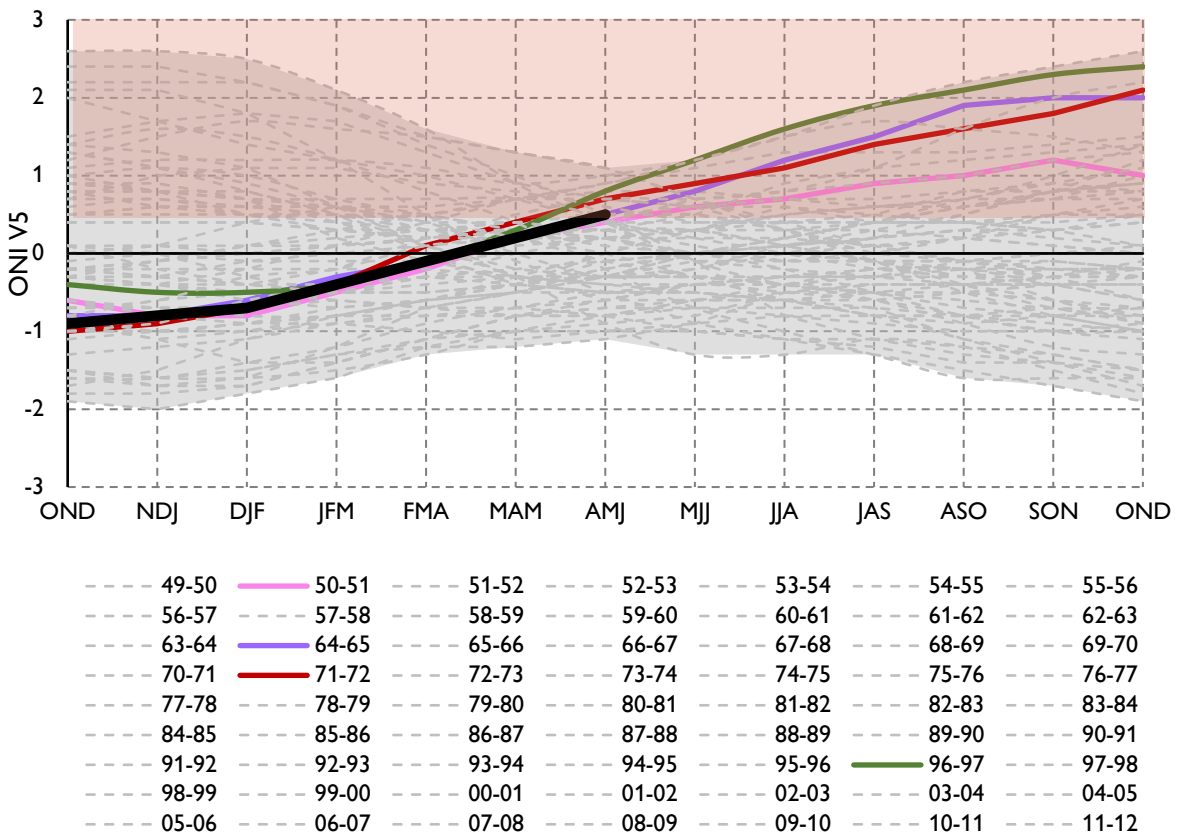
Instituto de Hidrología,
Meteorología y
Estudios Ambientales

Análogos

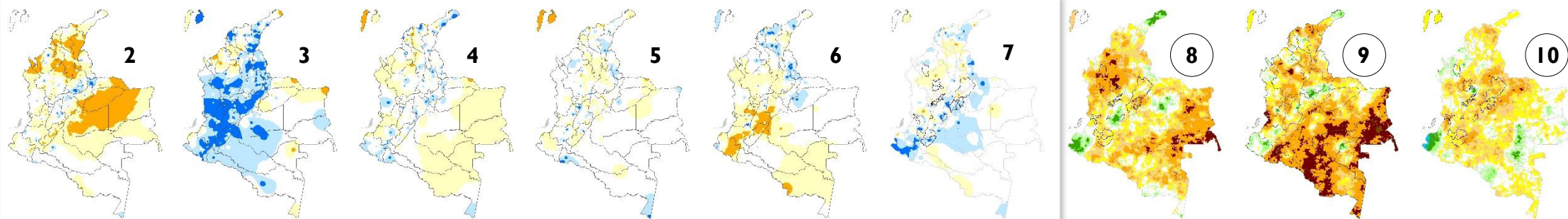
MEIv2



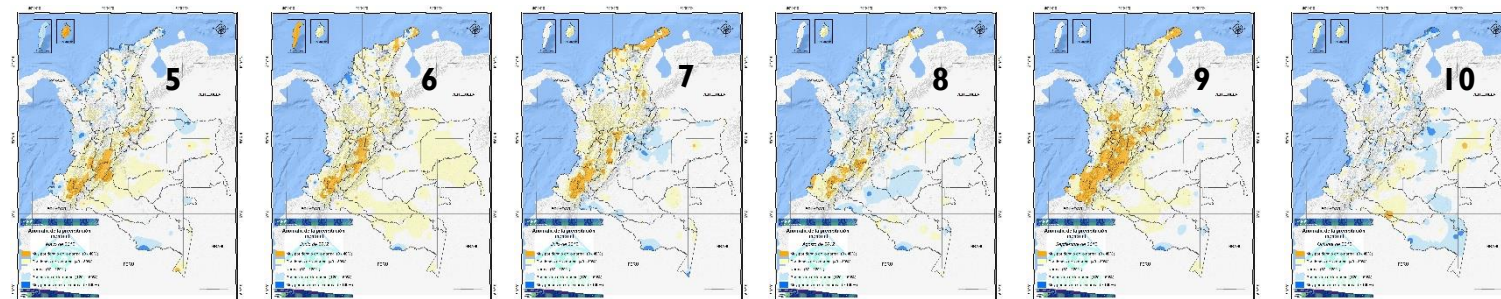
ONIv5



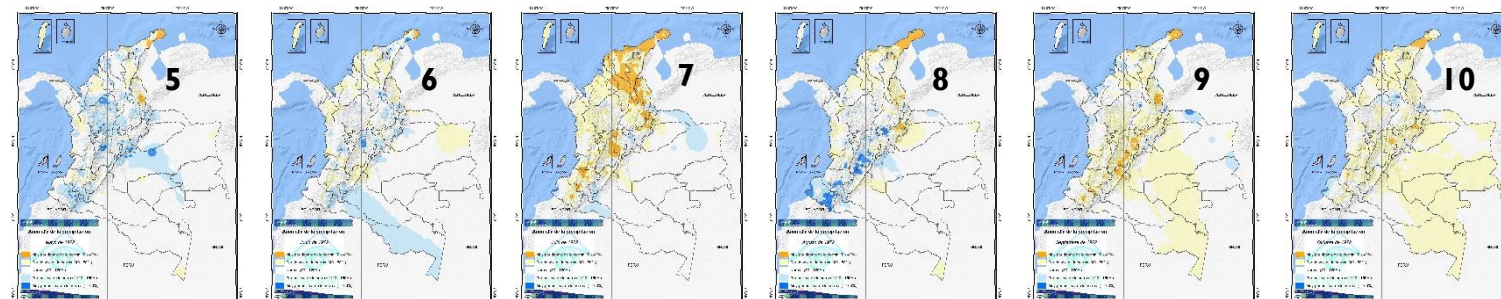
2023



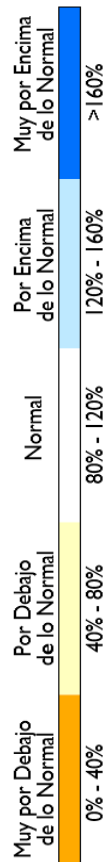
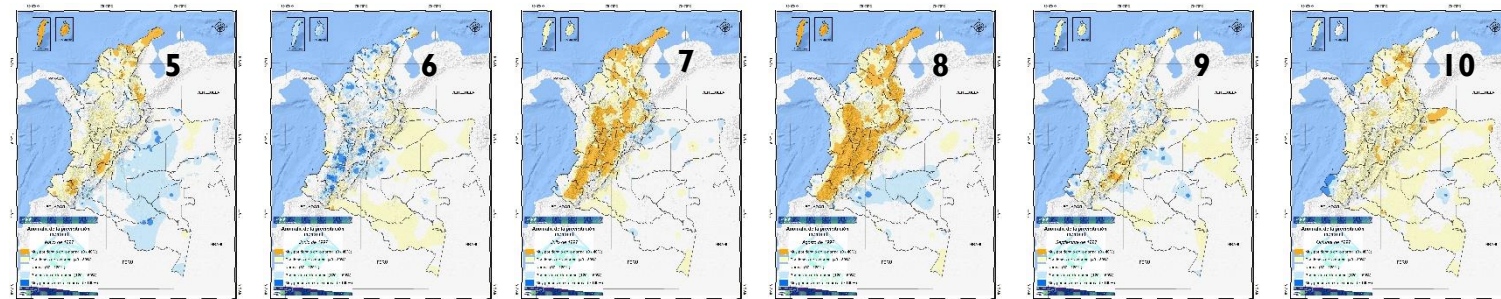
2012



1972



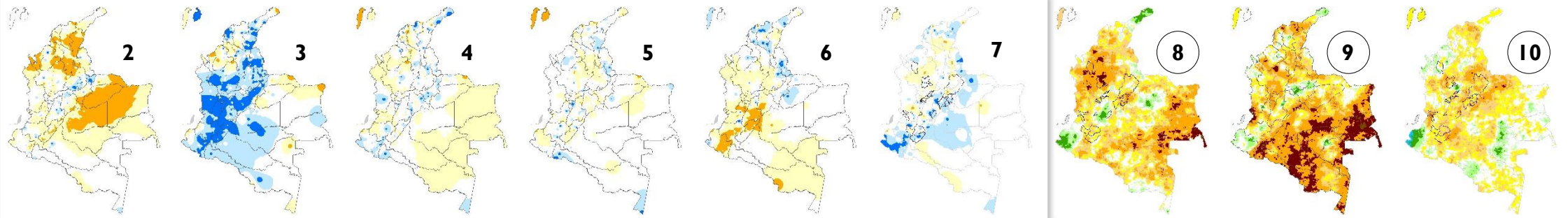
1997



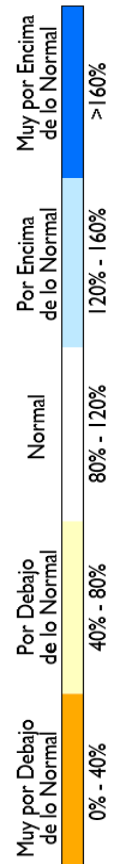
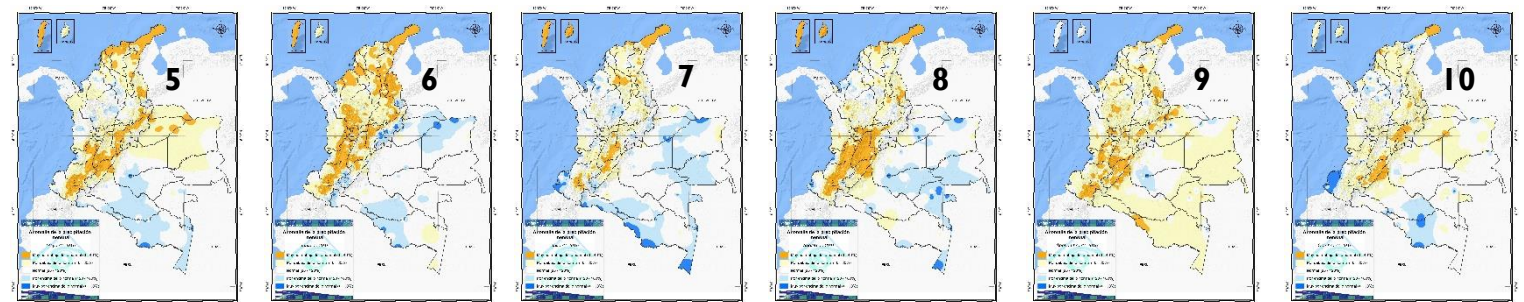
2015

Niño fuerte

2023



2015





MINISTERIO DE AMBIENTE Y
DESARROLLO SOSTENIBLE

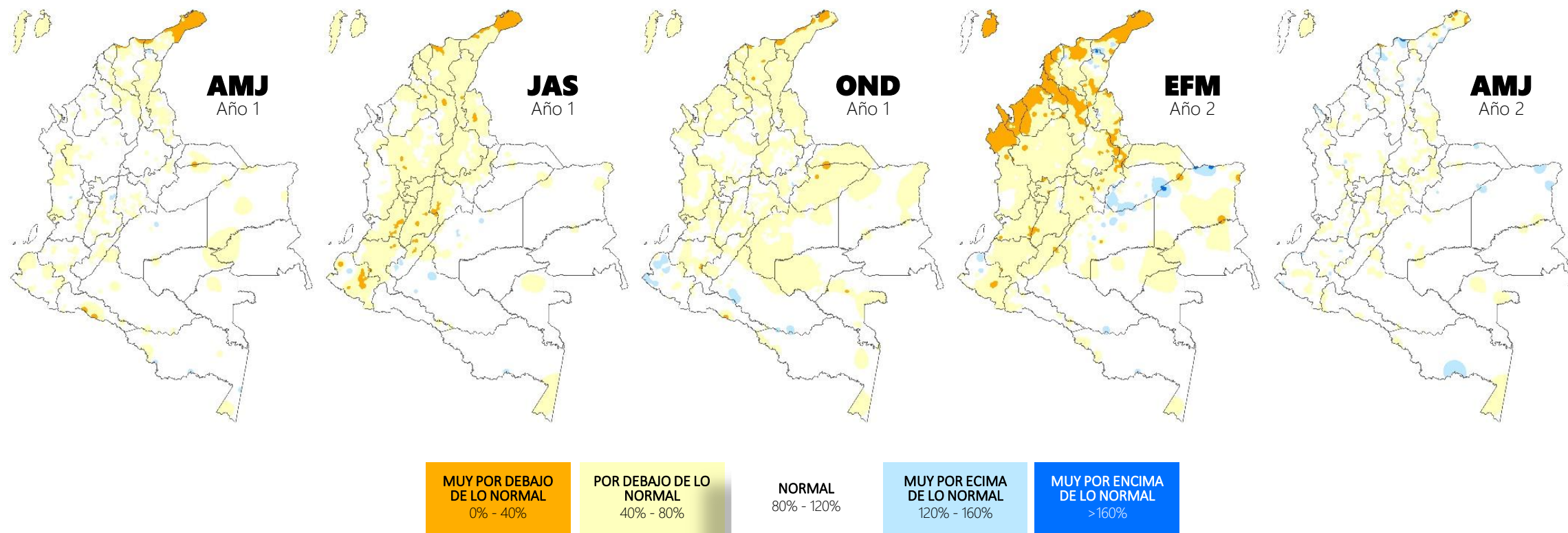


IDEAM

Instituto de Hidrología,
Meteorología y
Estudios Ambientales

Fenómeno El Niño

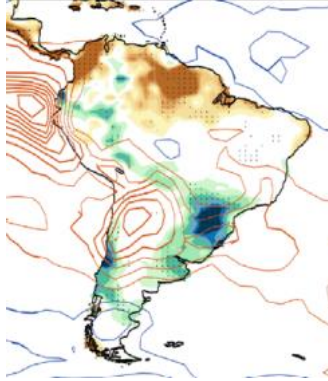
Alteraciones más probables en la precipitación ante la ocurrencia de un fenómeno El Niño típico



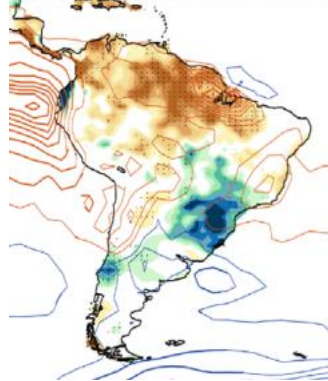
Alteraciones más probables en la precipitación ante la ocurrencia de un **fenómeno El Niño EP | CP**

CUENCA
Oriental

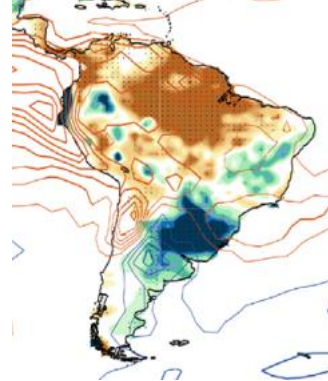
JJA
Año 1



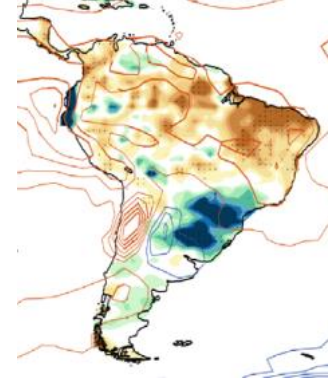
SON
Año 1



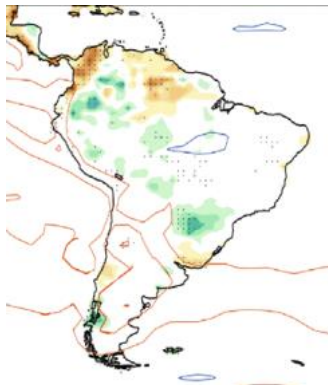
DEF
Año 1



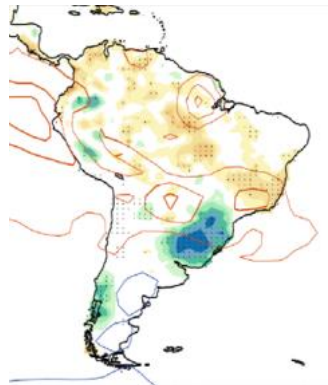
MAM
Año 2



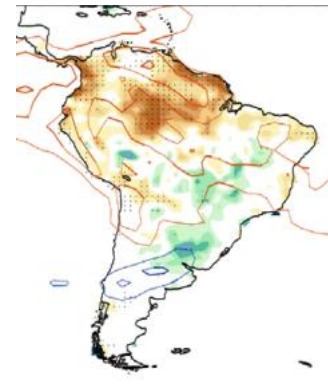
JJA
Año 1



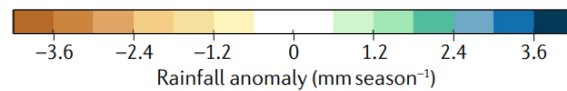
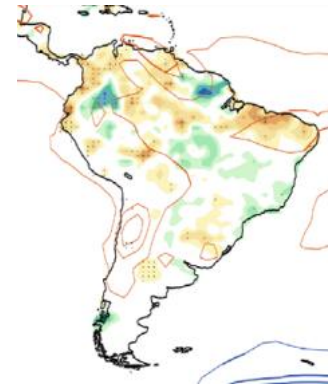
SON
Año 1



DEF
Año 1



MAM
Año 2





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