El ambiente es de todos

Minambiente

IDEAM

PREDICCIÓN CLIMÁTICA
Resultado Modelos
DIC-ENE-FEB

Ruiz, J. F & Melo, J. Y
Grupo Modelamiento Numérico de Tiempo y Clima
Subdirección de Meteorología

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VERIFICACIÓN DE LA PREDICCIÓN DEL MES ANTERIOR

ISO 9001: 2008
NTCGP 1000:2009
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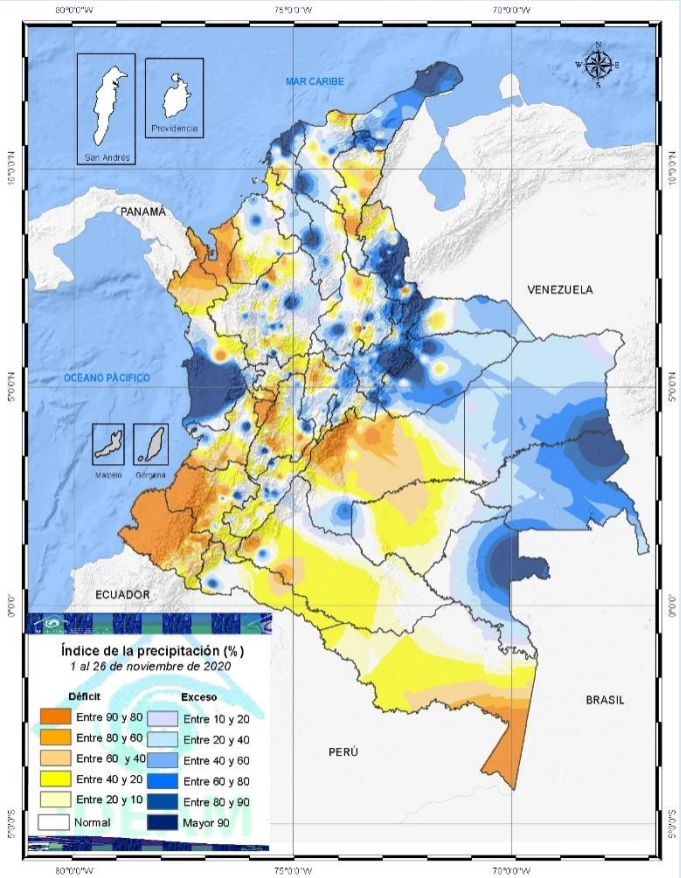
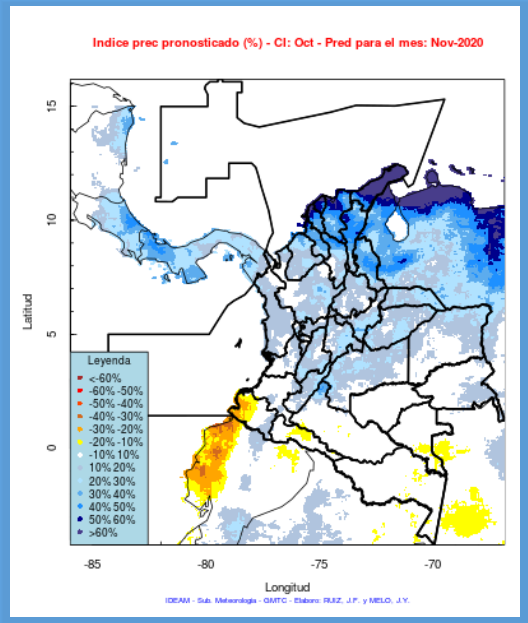
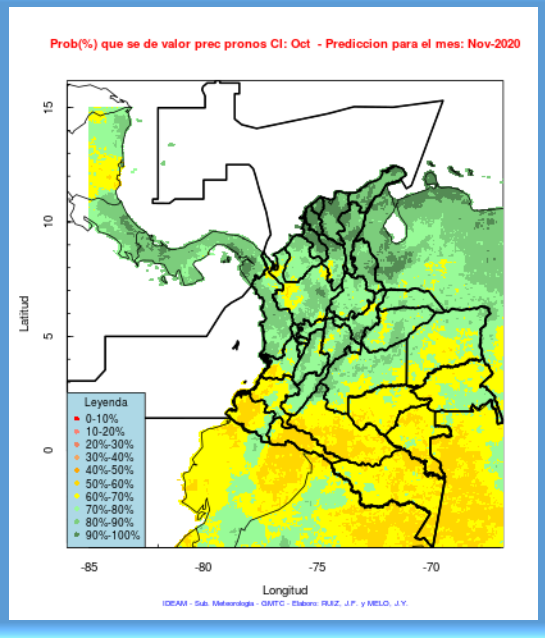
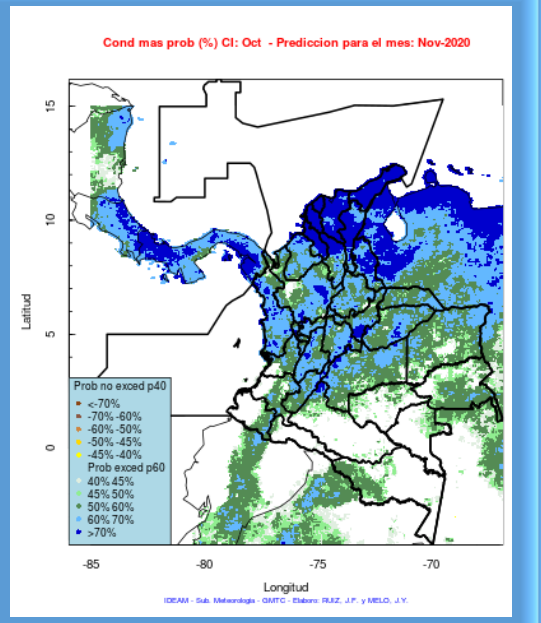
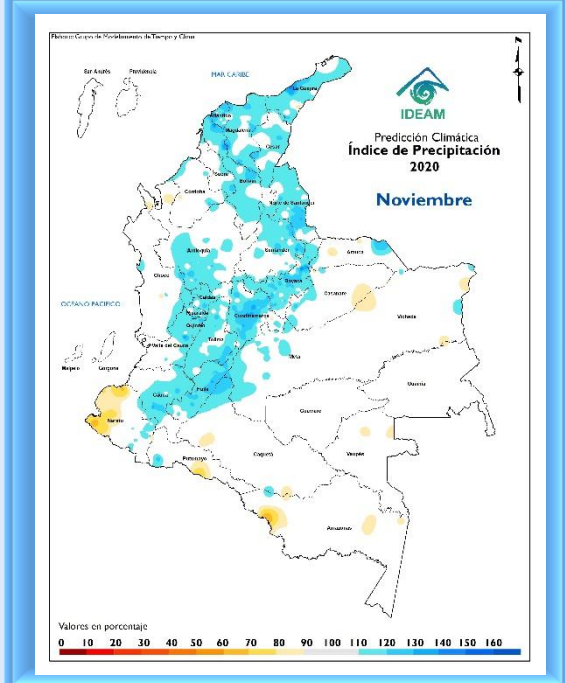
VERIFICACIÓN DE LA PREDICCIÓN MENSUAL DE LA PRECIPITACIÓN DEL MES DE **NOVIEMBRE DE 2020**











CONDICIONES PRONOSTICADAS DE VARIABILIDAD INTERANUAL E INTRAESTACIONAL

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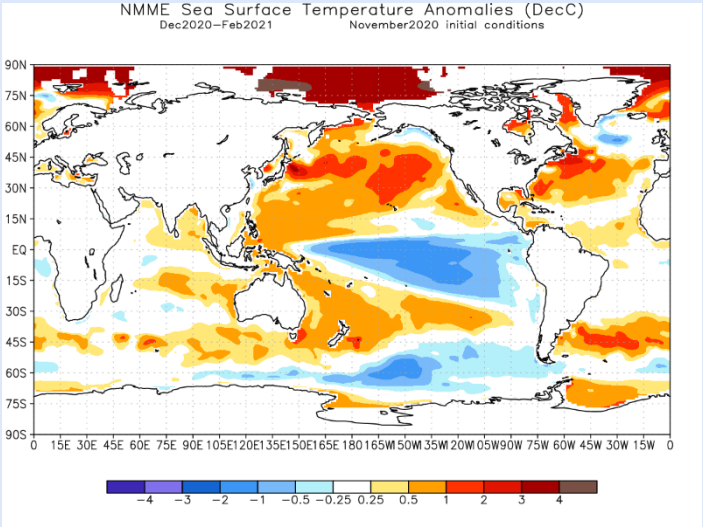
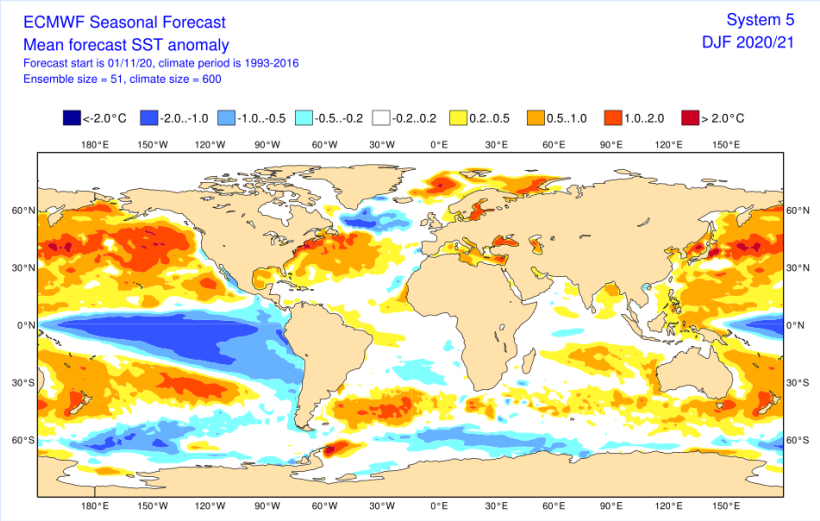
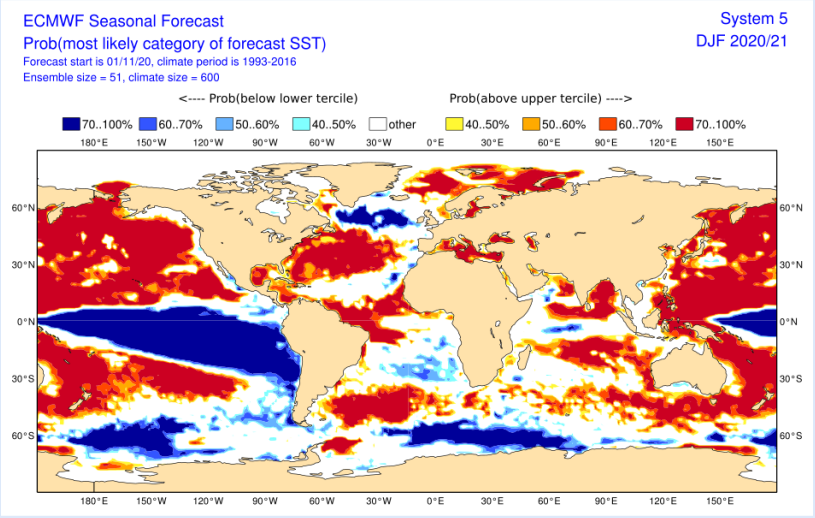
PREDICCIÓN CLIMÁTICA DE LAS CONDICIONES OCEÁNICAS (ONI)

VARIABILIDAD INTERANUAL







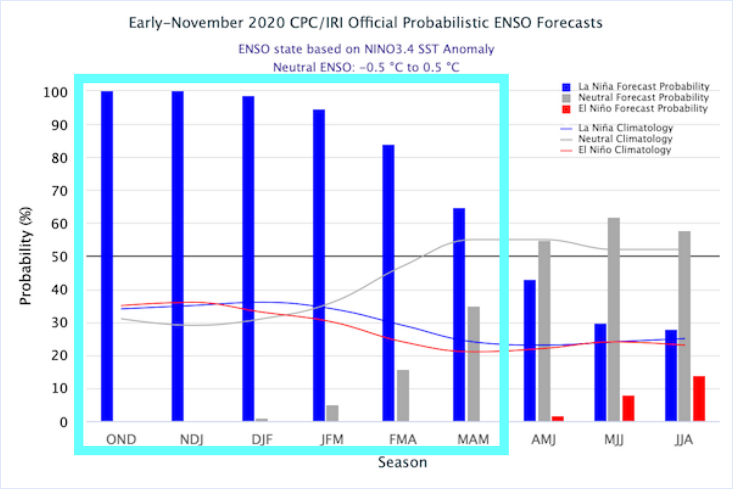
PREDICCIÓN CLIMÁTICA DE LAS CONDICIONES OCEÁNICAS (ONI)

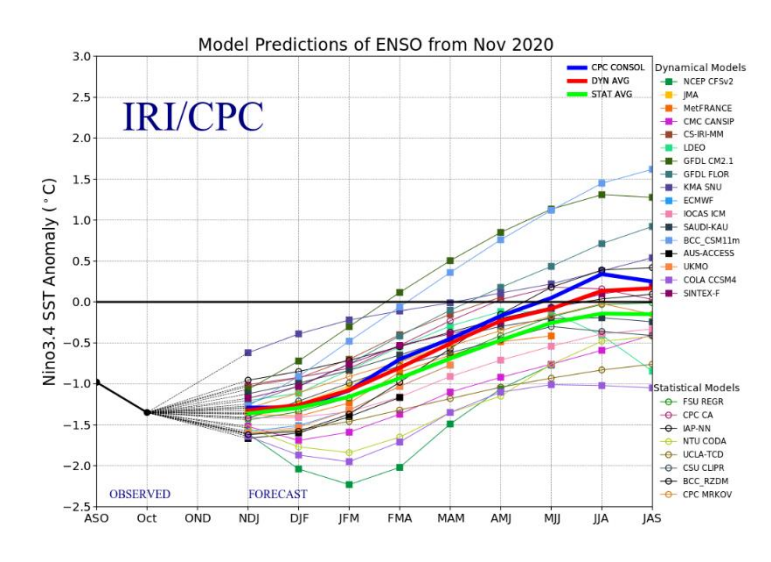
VARIABILIDAD INTERANUAL

ÍNDICE ONI

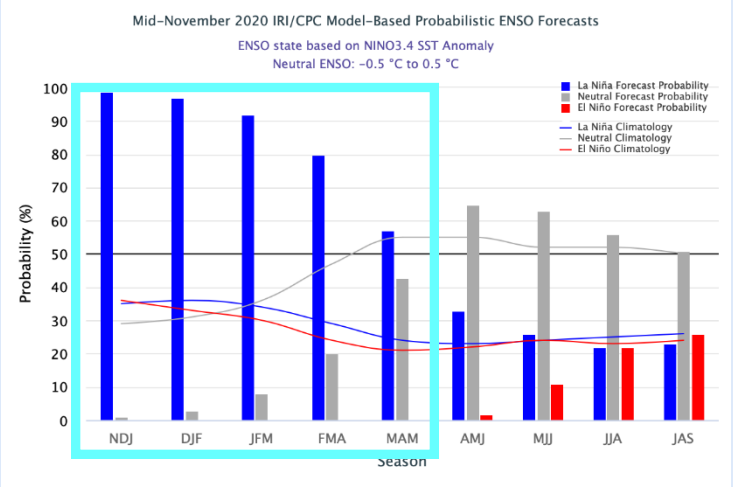
Year	DJF	JFM	FMA	MAM	AMJ	MJJ	JJA	JAS	ASO	SON	OND	NDJ
2010	1.5	1.3	0.9	0.4	-0.1	-0.6	-1.0	-1.4	-1.6	-1.7	-1.7	-1.6
2011	-1.4	-1.1	-0.8	-0.6	-0.5	-0.4	-0.5	-0.7	-0.9	-1.1	-1.1	-1.0
2012	-0.8	-0.6	-0.5	-0.4	-0.2	0.1	0.3	0.3	0.3	0.2	0.0	-0.2
2013	-0.4	-0.3	-0.2	-0.2	-0.3	-0.3	-0.4	-0.4	-0.3	-0.2	-0.2	-0.3
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
Year	DJF	JFM	FMA	MAM	AMJ	MJJ	JJA	JAS	ASO	SON	OND	NDJ
2020	0.5	0.6	0.5	0.3	0.0	-0.2	-0.4	-0.6	-0.9			

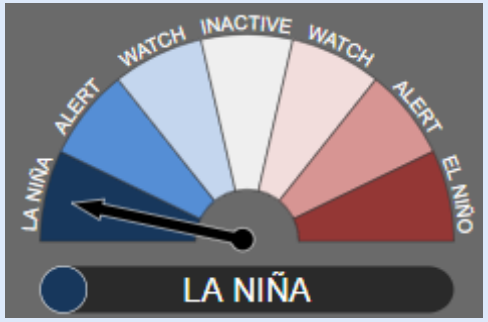
CONSENSO IRI





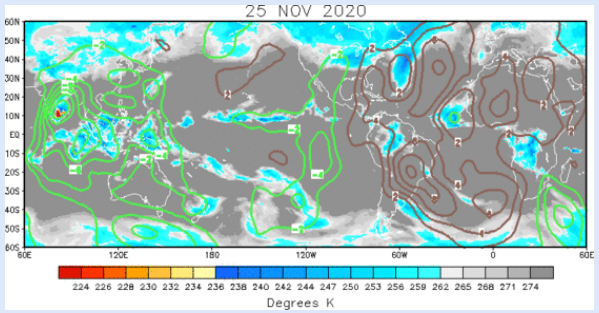
PLUMA DE MODELOS IRI

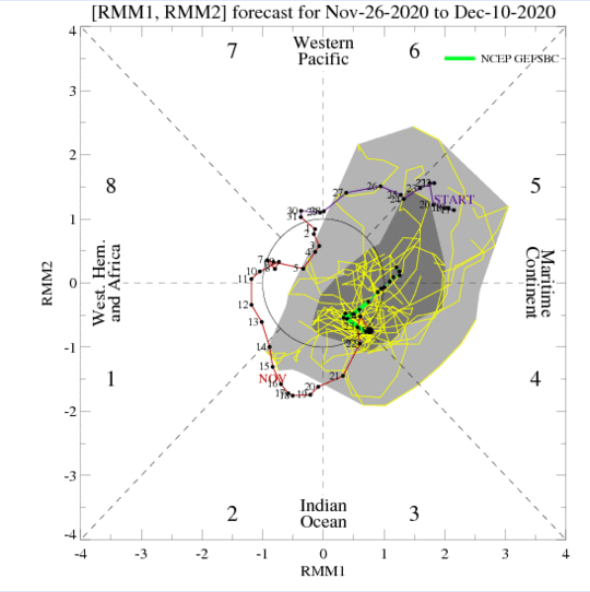


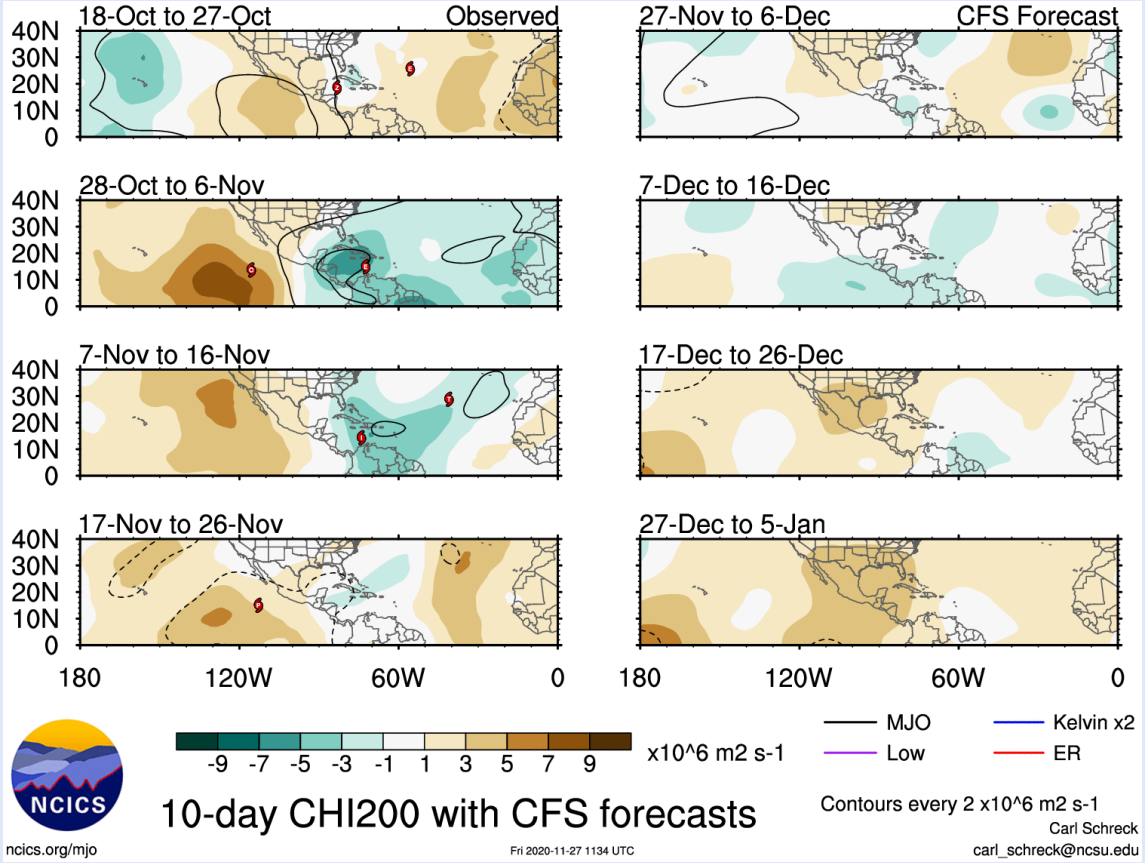


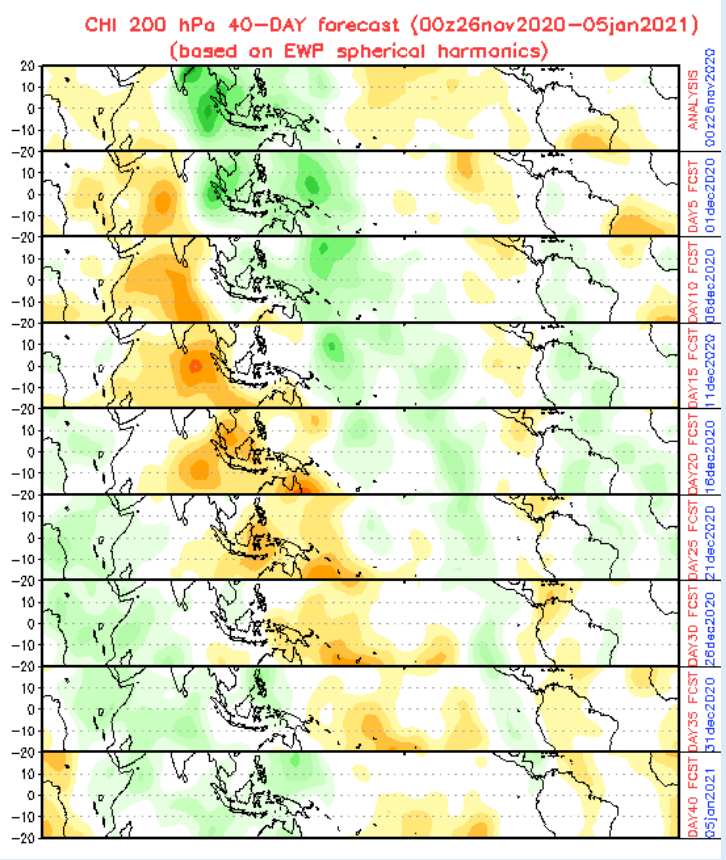
Seasons (2020 – 2021)									
Model	NDJ	DJF	JFM	FMA	MAM	AMJ	MJJ	JJA	JAS
	Dynamical Models								
Average, Dynamical models	-1.32	-1.26	-1.08	-0.80	-0.51	-0.23	-0.08	0.14	0.17
Average, Statistical models	-1.36	-1.29	-1.16	-0.93	-0.69	-0.47	-0.26	-0.14	-0.15
Average, All models	-1.34	-1.27	-1.10	-0.84	-0.57	-0.32	-0.15	0.01	0.03

PREDICCIÓN CLIMÁTICA - **VARIABILIDAD INTRAESTACIONAL**









PREDICCIÓN PROBABILÍSTICA ESTACIONAL

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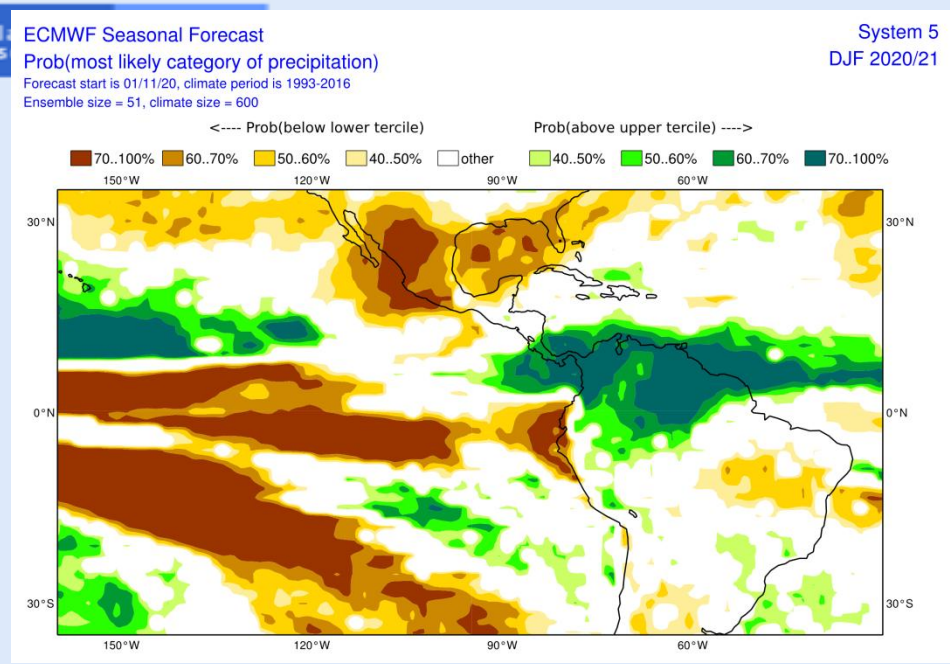
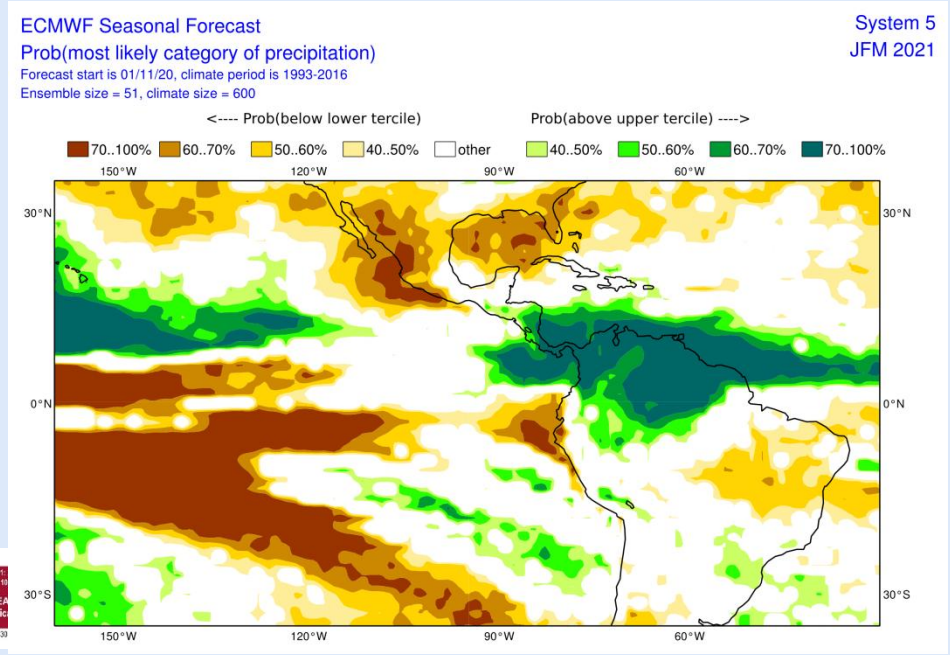
ECMWF





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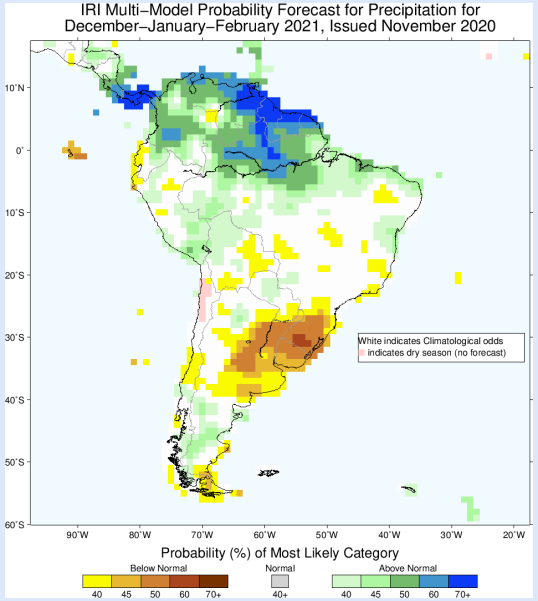

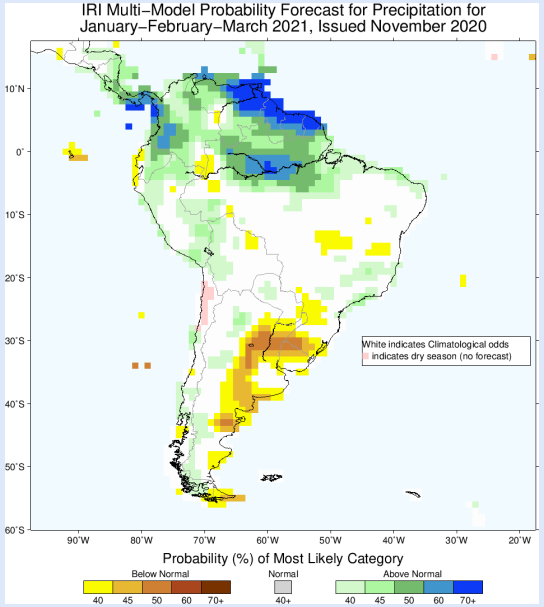

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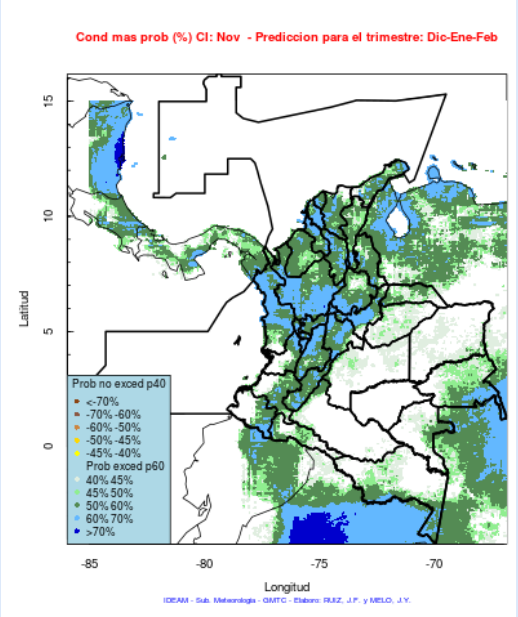
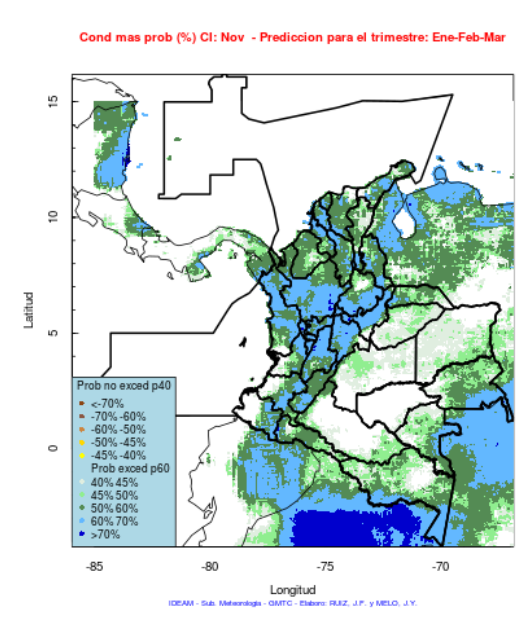
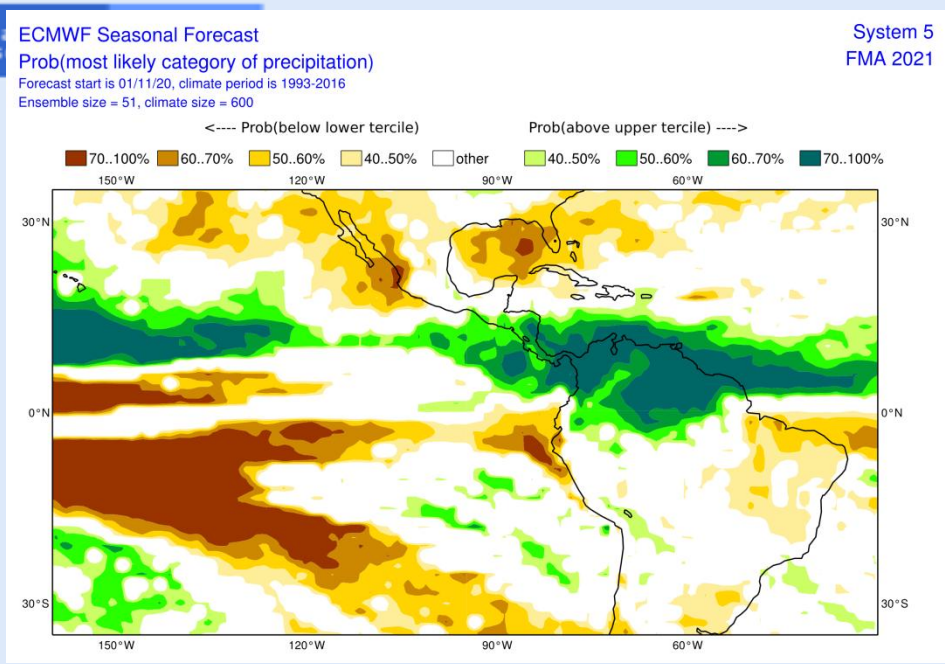
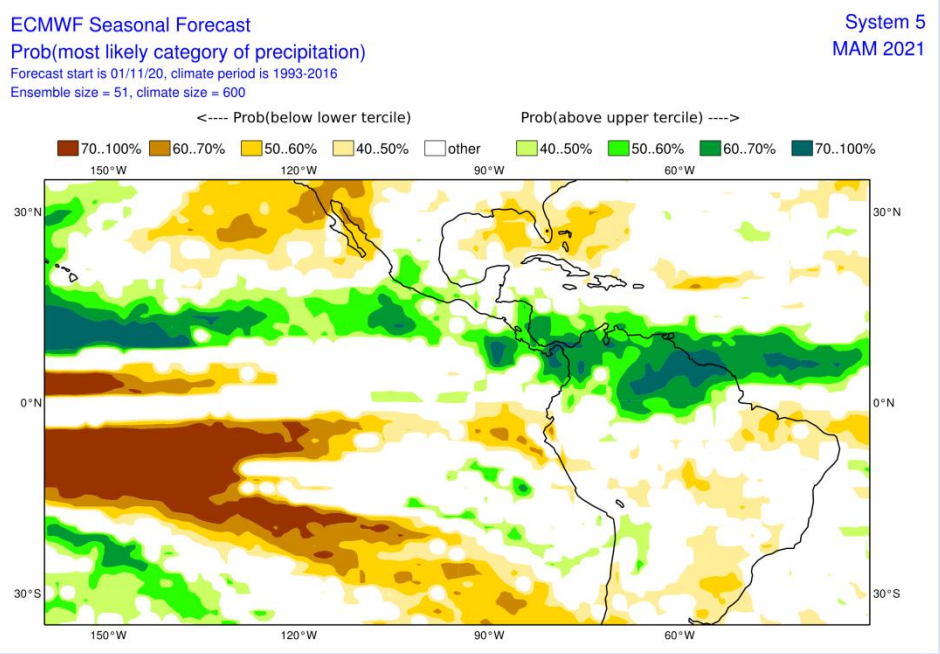




ECMWF





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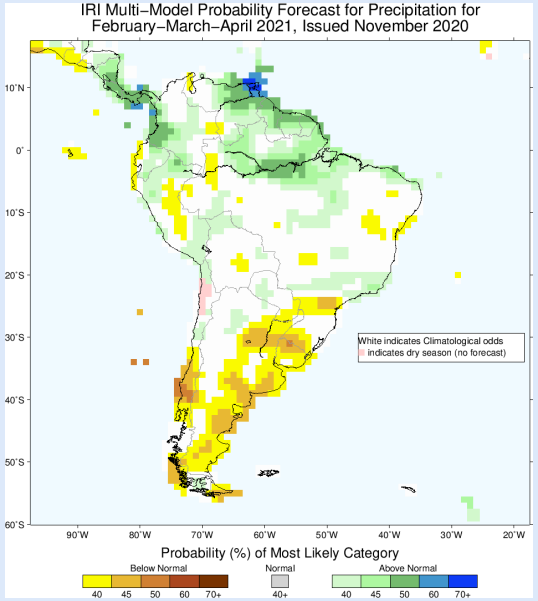

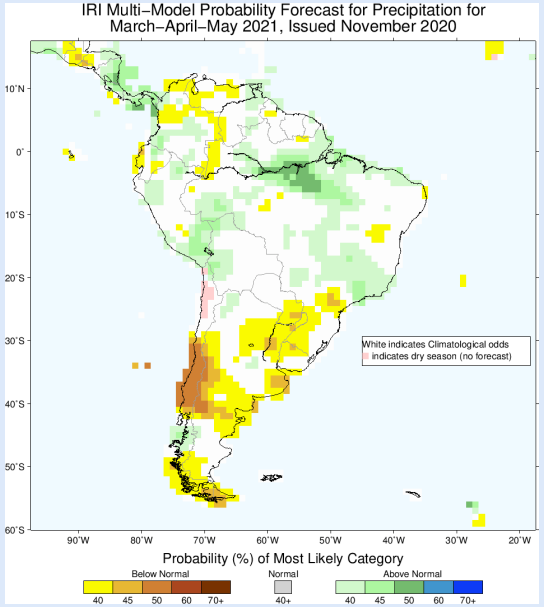

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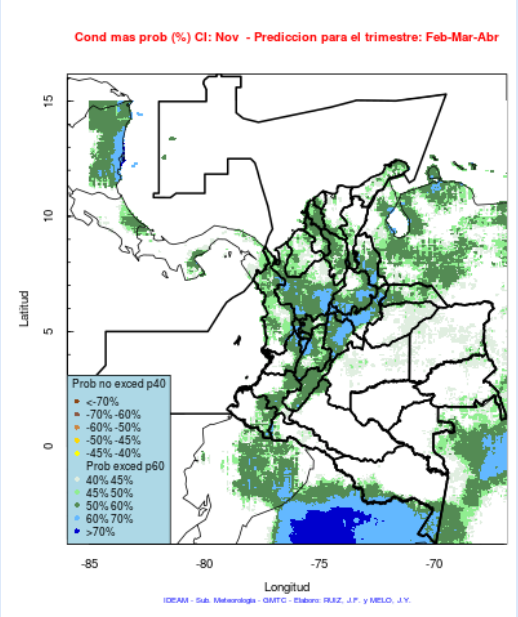
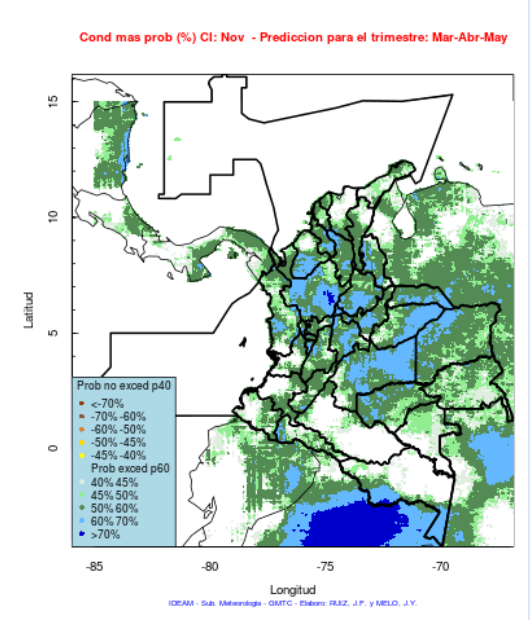
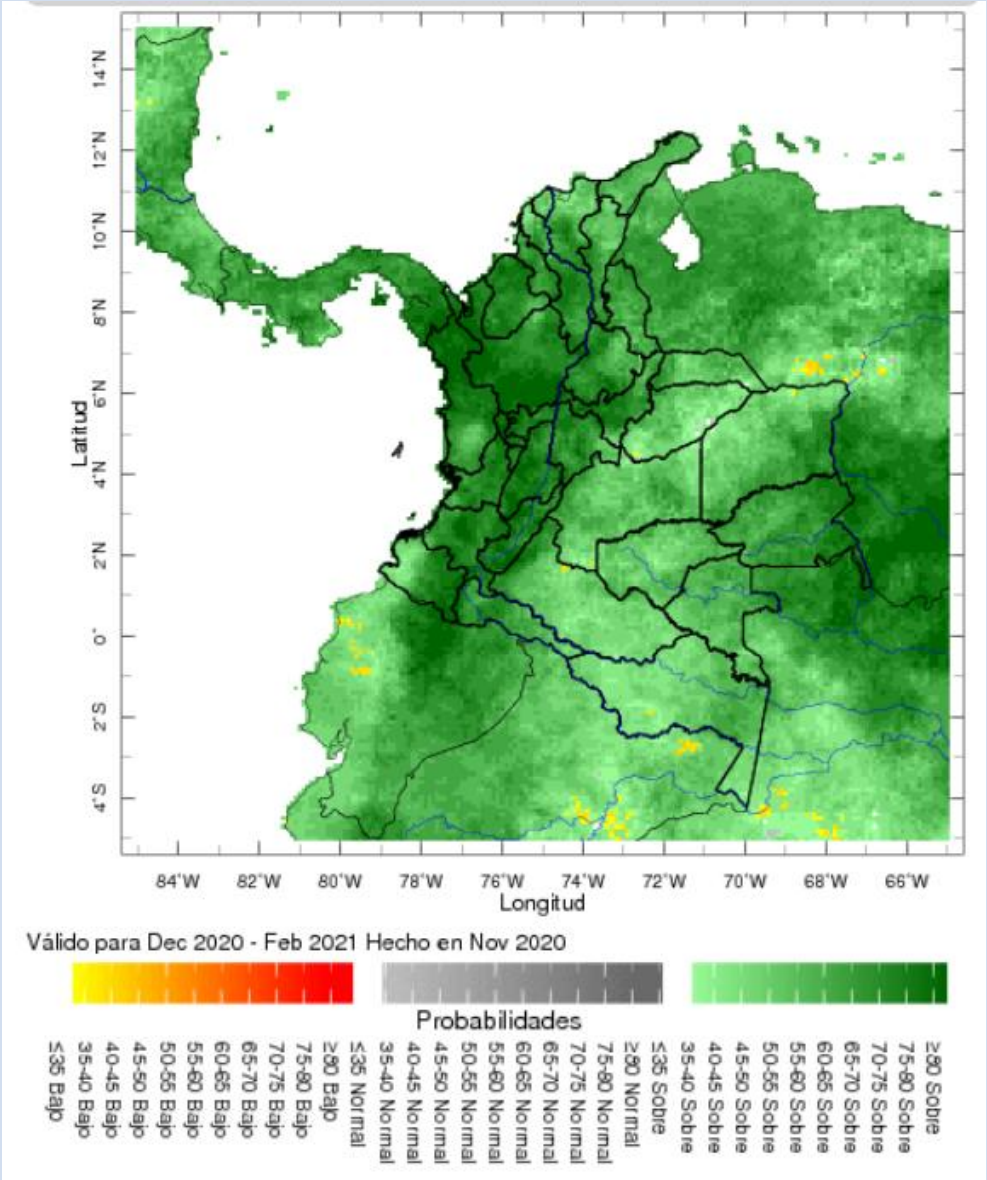




CONDICION MÁS PROBABLE



PREDICCIÓN DETERMINÍSTICA ESTACIONAL

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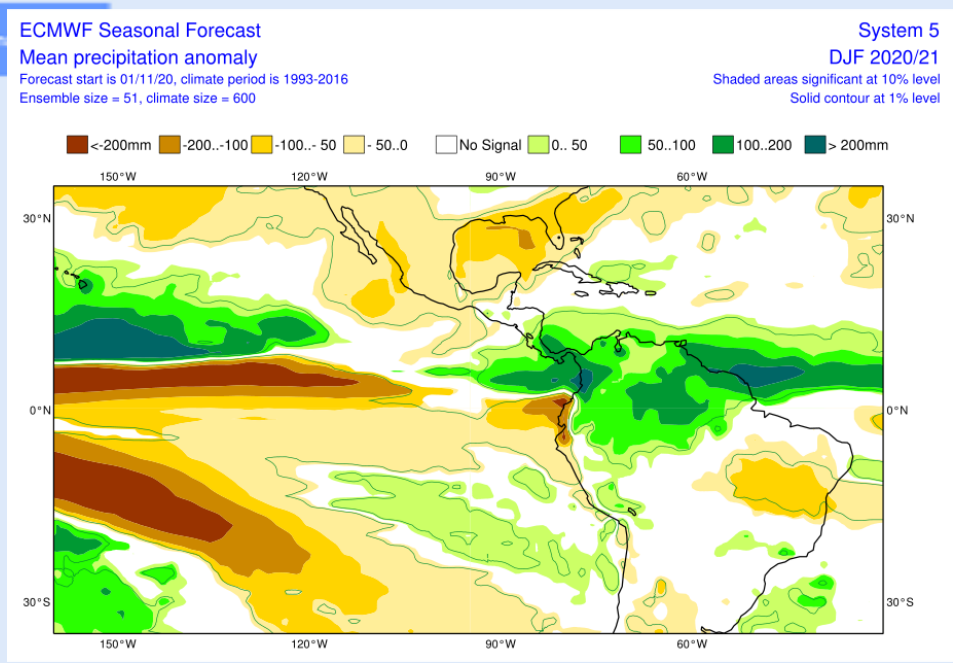
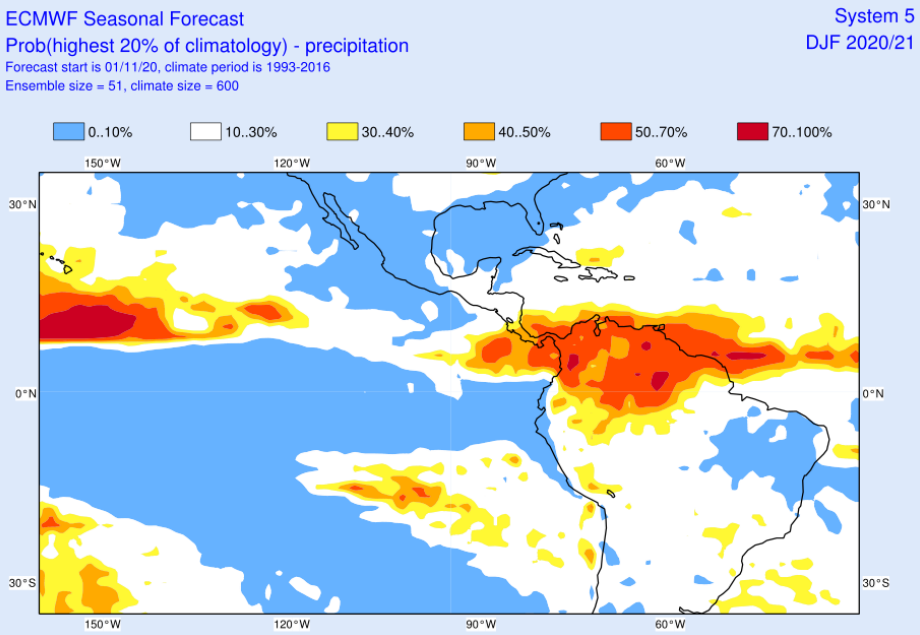
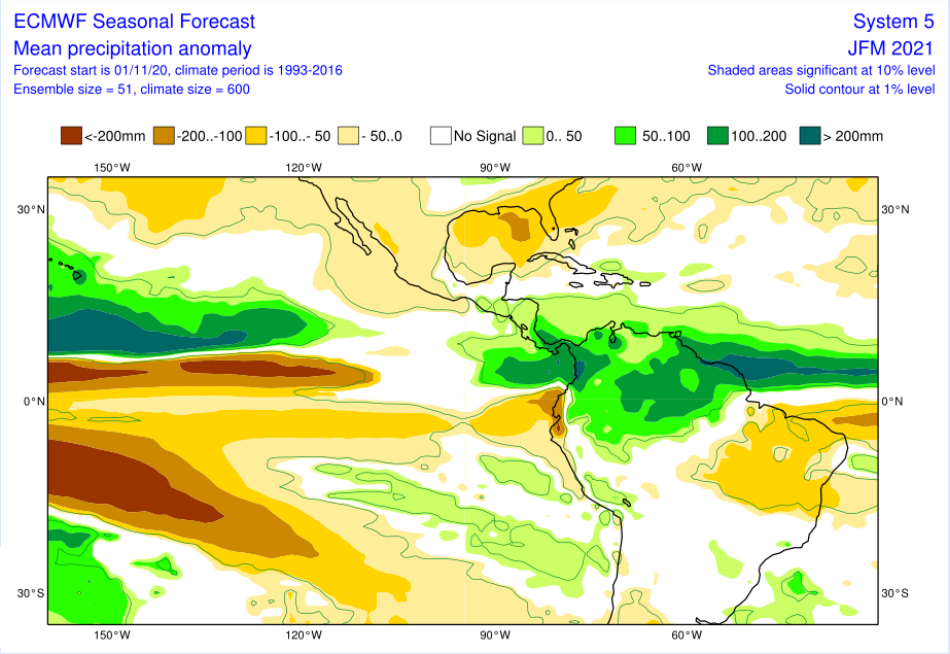
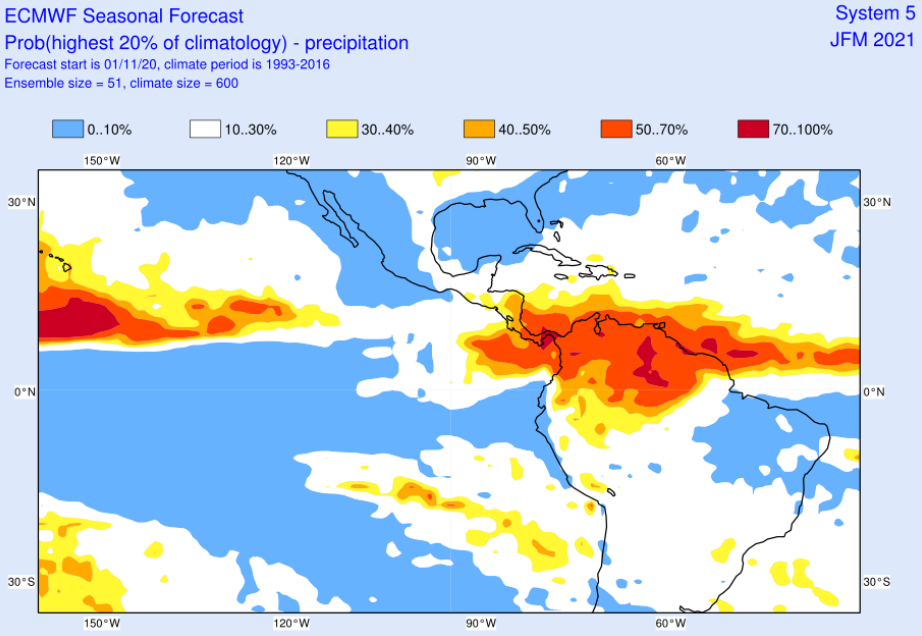
ECMWF

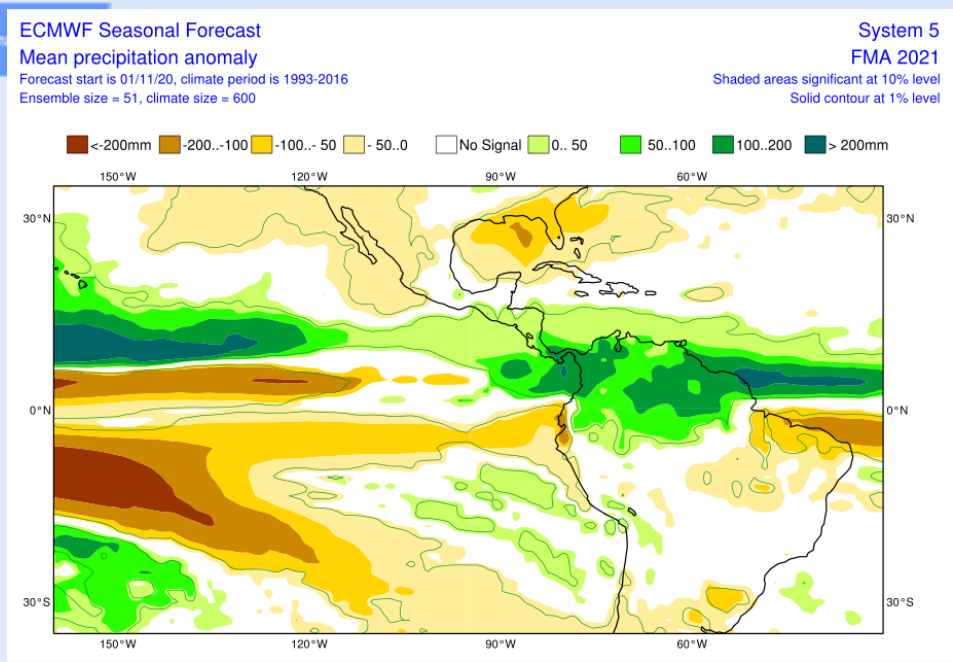

ECMWF Seasonal Forecast
Mean precipitation anomaly
Forecast start is 01/11/20, climate period is 1993-2016
Ensemble size = 51, climate size = 600
System 5
DJF 2020/21
Shaded areas significant at 10% level
Solid contour at 1% level
<-200mm
-200..-100
-100..- 50
- 50..0
No Signal
0.. 50
50..100
100..200
> 200mm
150°W
120°W
90°W
60°W
30°N
0°N
30°S

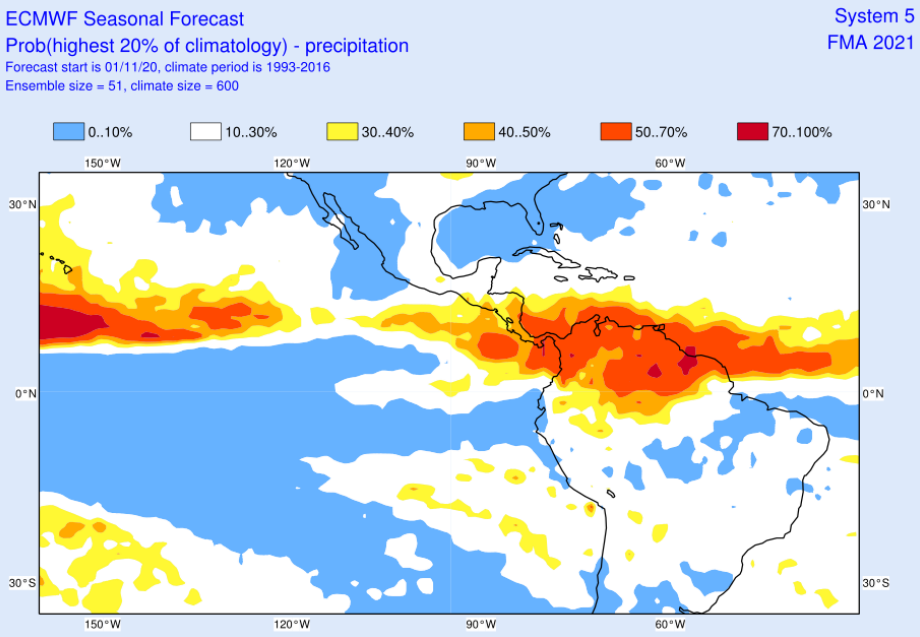

ECMWF Seasonal Forecast
Prob(highest 20% of climatology) - precipitation
Forecast start is 01/11/20, climate period is 1993-2016
Ensemble size = 51, climate size = 600
System 5
DJF 2020/21
0..10%
10..30%
30..40%
40..50%
50..70%
70..100%
150°W
120°W
90°W
60°W
30°N
0°N
30°S

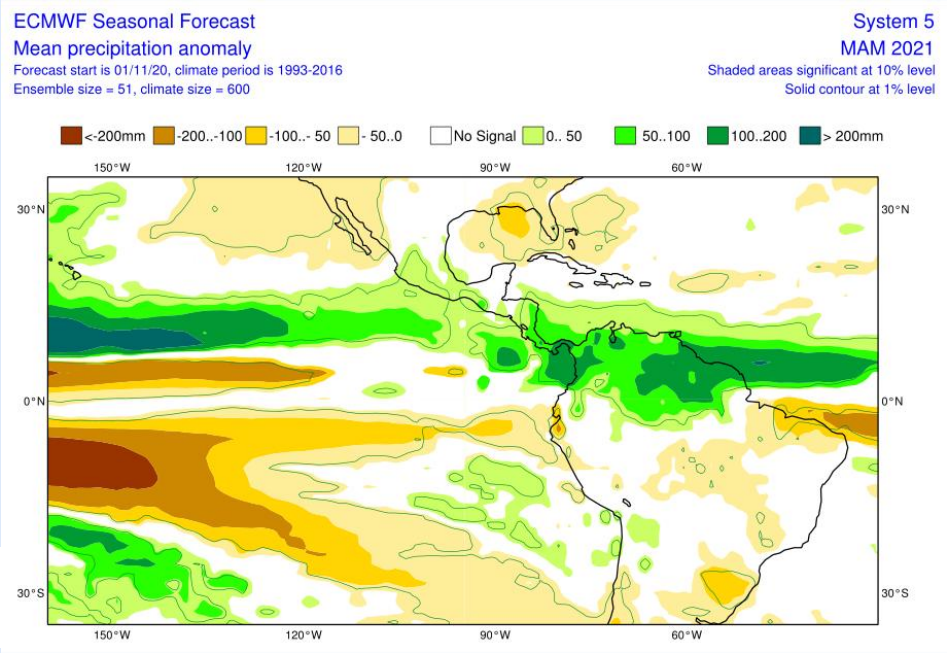

ECMWF Seasonal Forecast
Mean precipitation anomaly
Forecast start is 01/11/20, climate period is 1993-2016
Ensemble size = 51, climate size = 600
System 5
JFM 2021
Shaded areas significant at 10% level
Solid contour at 1% level
<-200mm
-200..-100
-100..- 50
- 50..0
No Signal
0.. 50
50..100
100..200
> 200mm
150°W
120°W
90°W
60°W
30°N
0°N
30°S

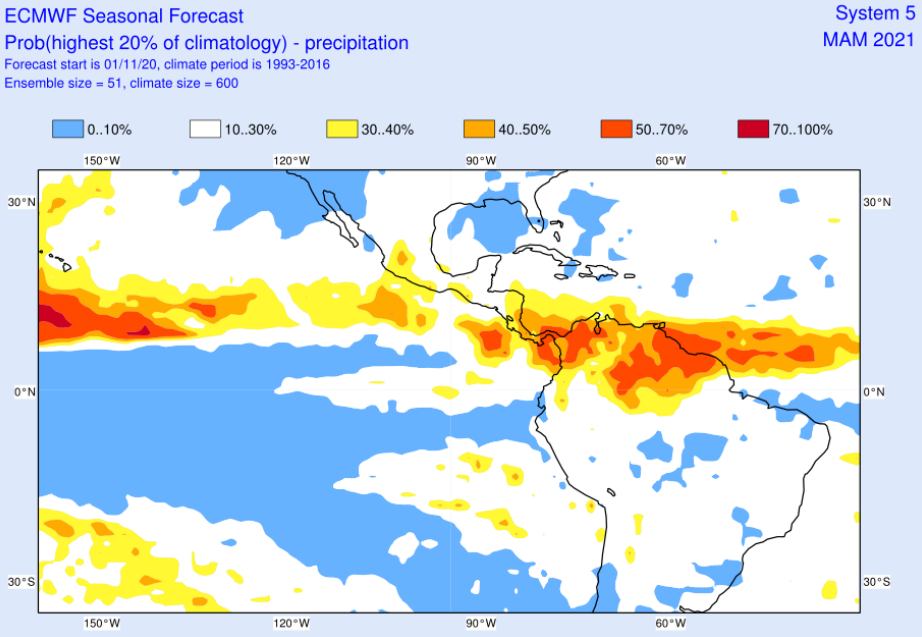

ECMWF Seasonal Forecast
Prob(highest 20% of climatology) - precipitation
Forecast start is 01/11/20, climate period is 1993-2016
Ensemble size = 51, climate size = 600
System 5
JFM 2021
0..10%
10..30%
30..40%
40..50%
50..70%
70..100%
150°W
120°W
90°W
60°W
30°N
0°N
30°S

ECMWF

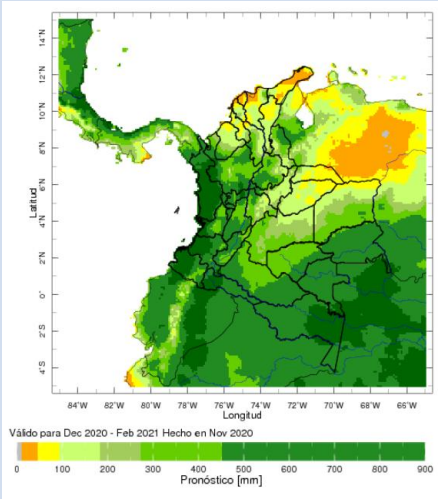
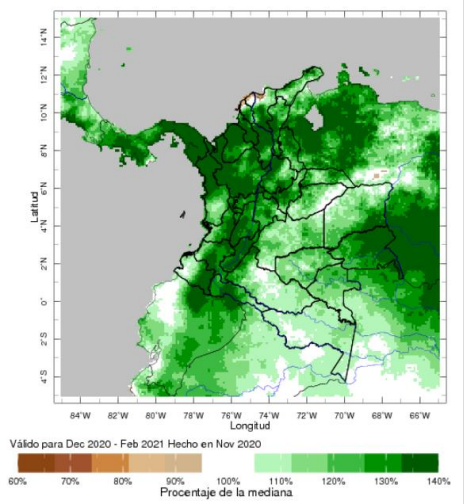
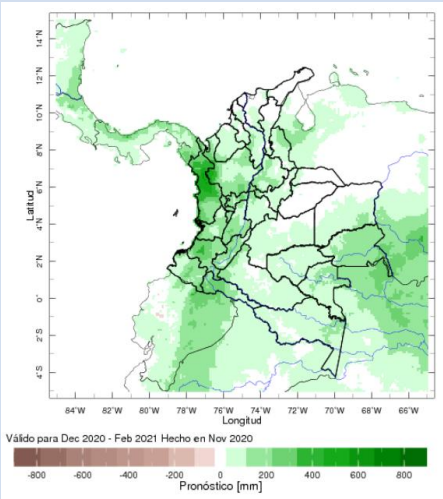
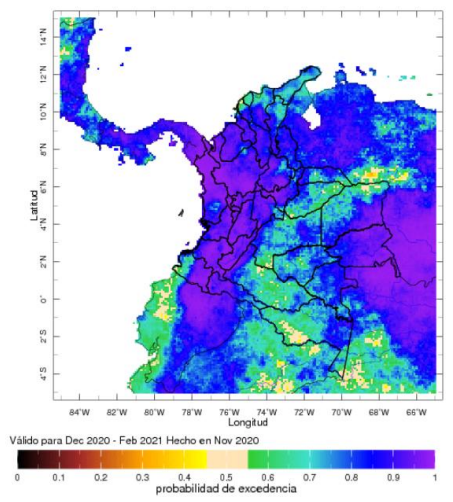

ECMWF Seasonal Forecast
Mean precipitation anomaly
Forecast start is 01/11/20, climate period is 1993-2016
Ensemble size = 51, climate size = 600
System 5
FMA 2021
Shaded areas significant at 10% level
Solid contour at 1% level
<-200mm
-200..-100
-100..- 50
- 50..0
No Signal
0.. 50
50..100
100..200
> 200mm
150°W
120°W
90°W
60°W
30°N
0°N
30°S


ECMWF Seasonal Forecast
Prob(highest 20% of climatology) - precipitation
Forecast start is 01/11/20, climate period is 1993-2016
Ensemble size = 51, climate size = 600
System 5
FMA 2021
0..10%
10..30%
30..40%
40..50%
50..70%
70..100%
150°W
120°W
90°W
60°W
30°N
0°N
30°S


ECMWF Seasonal Forecast
Mean precipitation anomaly
Forecast start is 01/11/20, climate period is 1993-2016
Ensemble size = 51, climate size = 600
System 5
MAM 2021
Shaded areas significant at 10% level
Solid contour at 1% level
<-200mm
-200..-100
-100..- 50
- 50..0
No Signal
0.. 50
50..100
100..200
> 200mm
150°W
120°W
90°W
60°W
30°N
0°N
30°S


ECMWF Seasonal Forecast
Prob(highest 20% of climatology) - precipitation
Forecast start is 01/11/20, climate period is 1993-2016
Ensemble size = 51, climate size = 600
System 5
MAM 2021
0..10%
10..30%
30..40%
40..50%
50..70%
70..100%
150°W
120°W
90°W
60°W
30°N
0°N
30°S

PREDICCIÓN CLIMÁTICA ESTACIONAL DE PRECIPITACIÓN (DEF)

PRONÓSTICO (mm)	ÍNDICE (%)	ANOMALÍA (mm)	PROBABILIDAD (%) DE OCURRENCIA DEL PRONÓSTICO DETERMINÍSTICO
			

PREDICCIÓN CLIMÁTICA MENSUAL PRECIPITACIÓN

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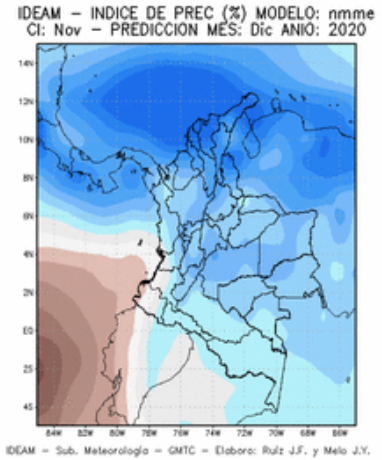
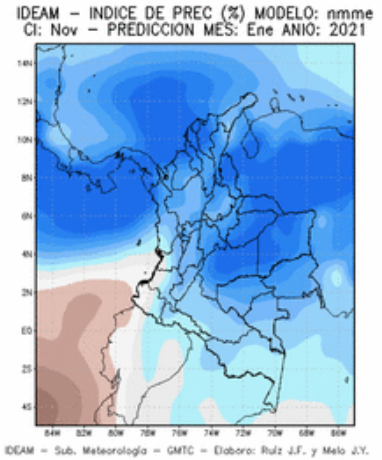
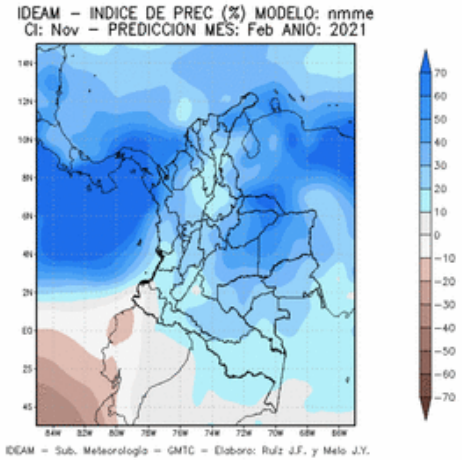
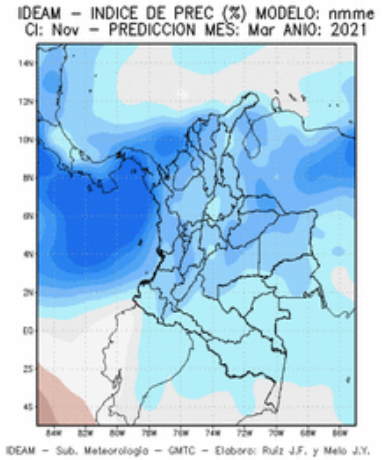
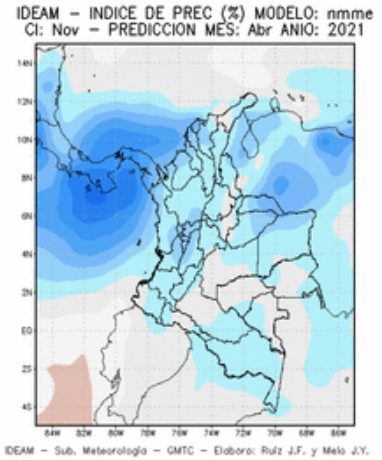
PREDICCIÓN CLIMÁTICA MENSUAL DEL ÍNDICE DE PRECIPITACIÓN
ENSAMBLE MODELOS GLOBALES NMME (NOAA)

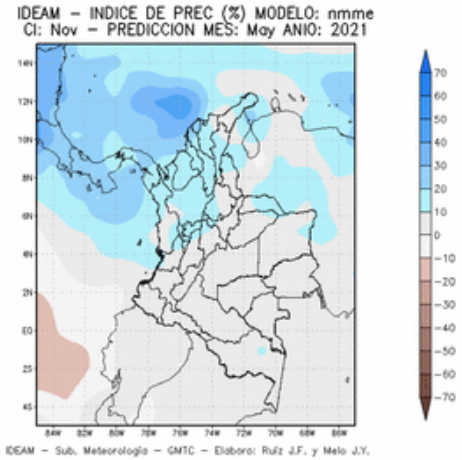




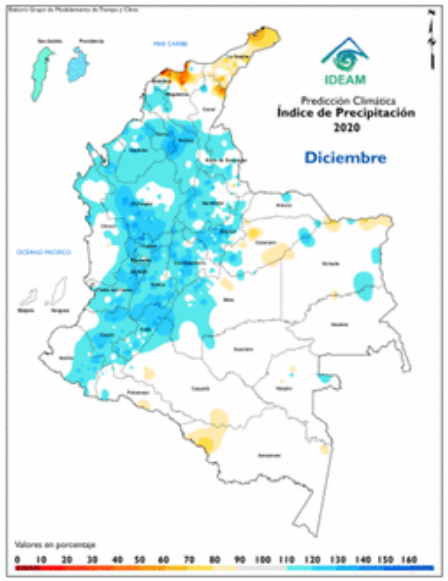


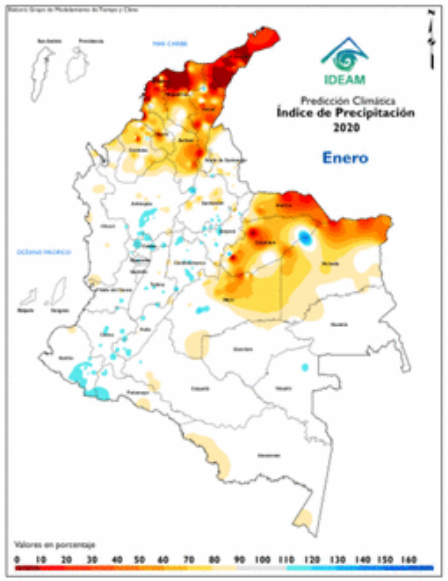


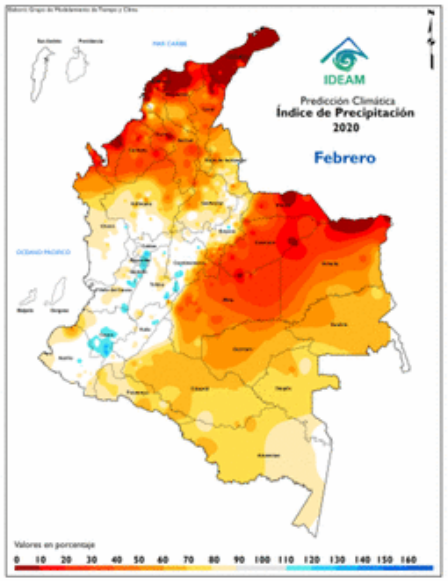


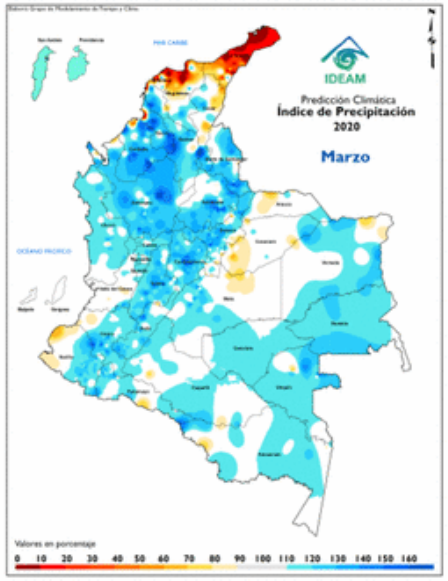


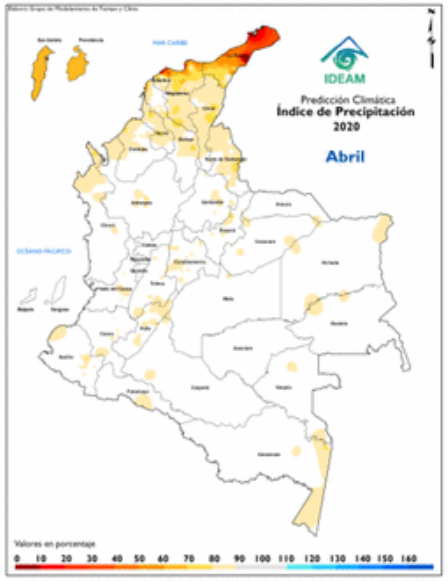
ÍNDICE DE PRECIPITACIÓN ENTRE DIC/20 – MAY/21 - **TSM ESTACIONES**



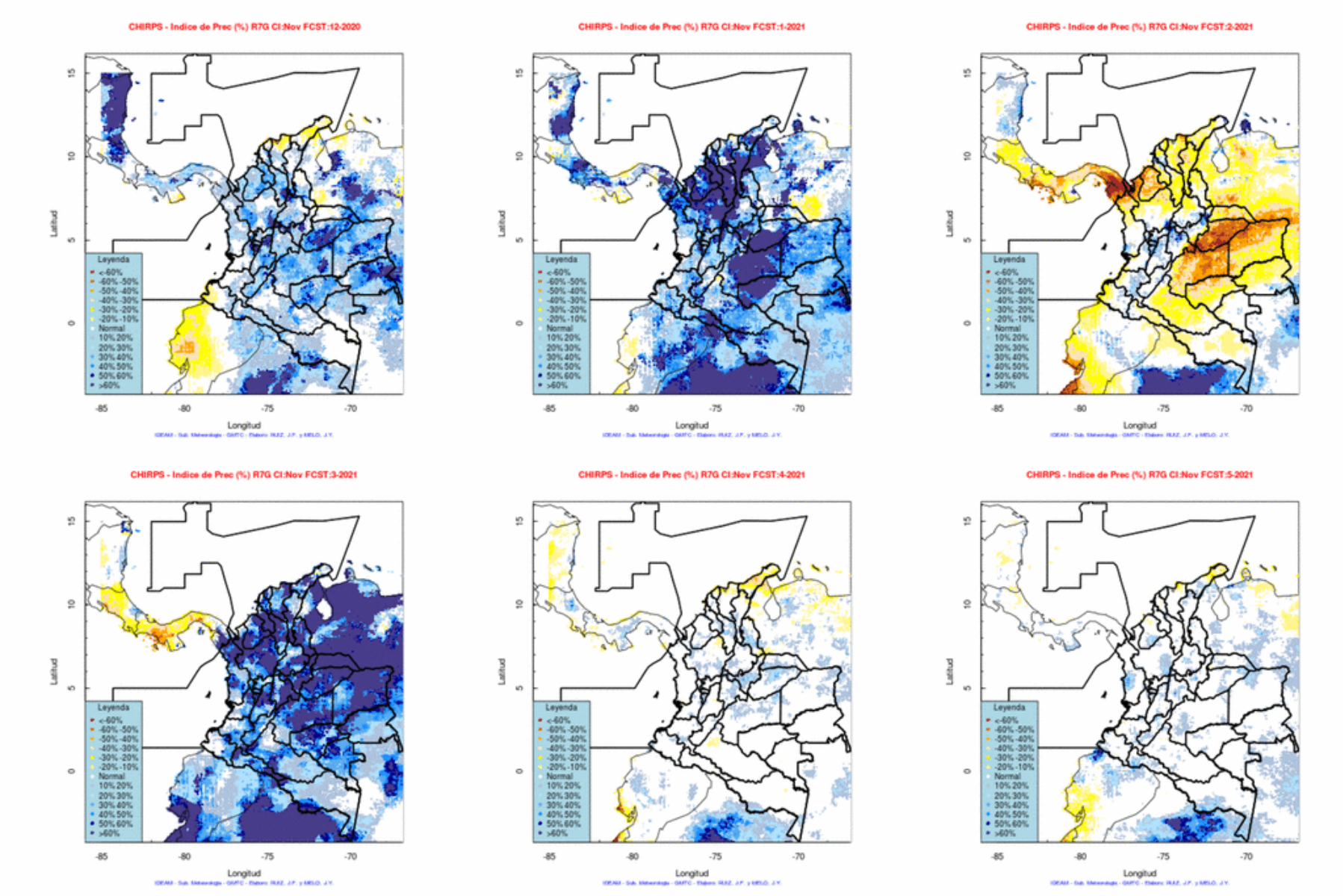




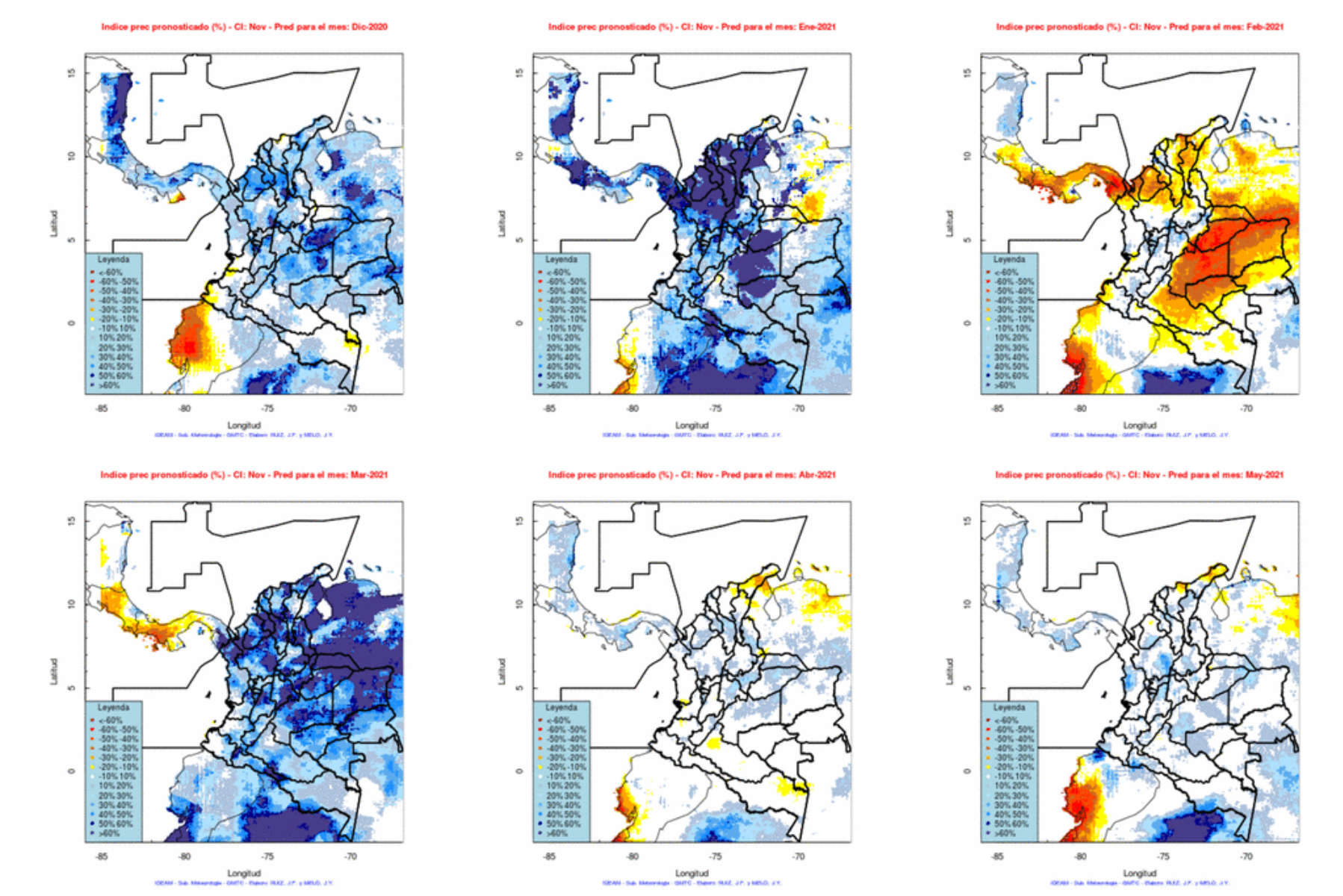




ÍNDICE DE PRECIPITACIÓN ENTRE DIC/20 – MAY/21 - **TSM CHIRPS**

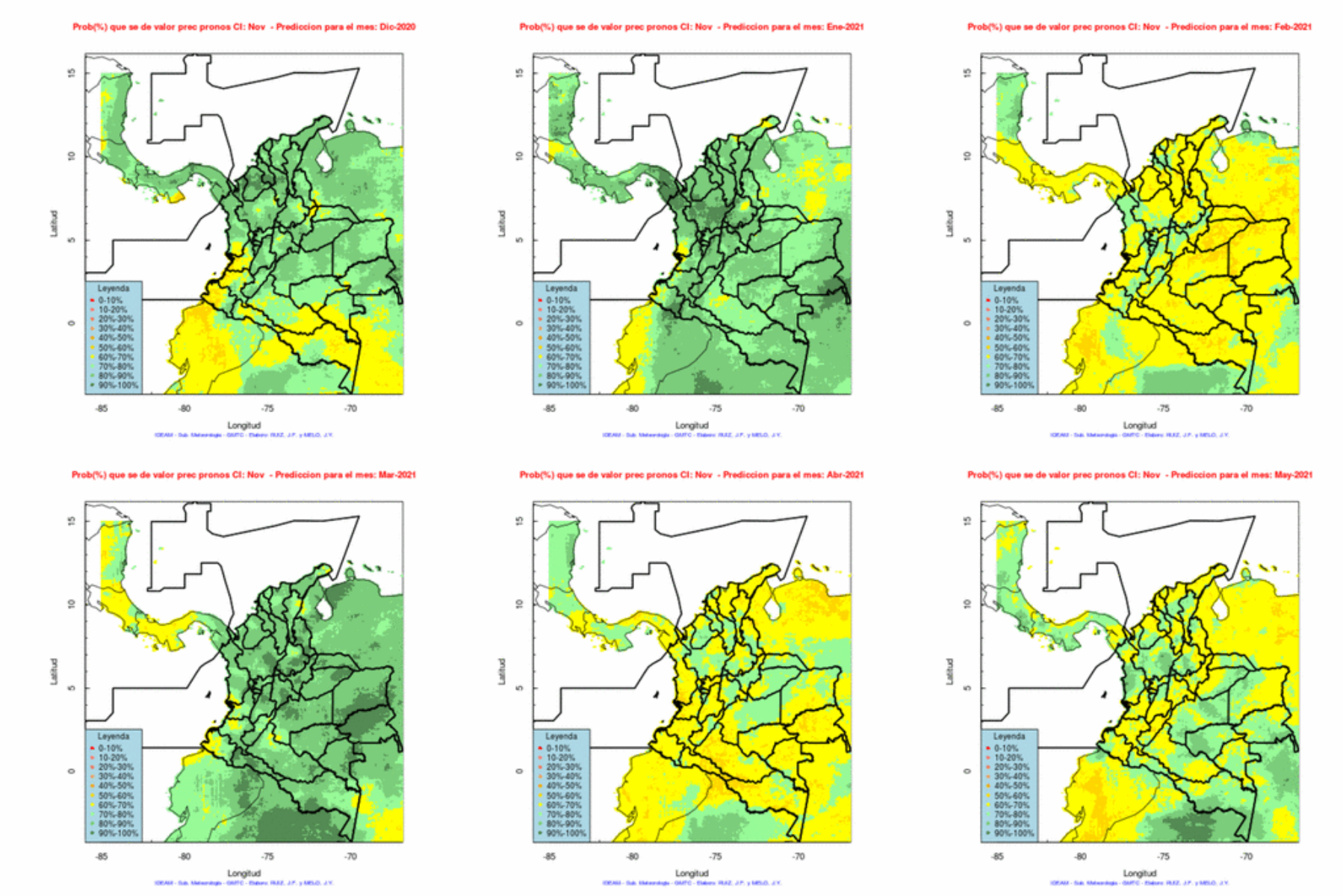


ÍNDICE DE PRECIPITACIÓN ENTRE DIC/20 – MAY/21 - **ENSAMBLE MODELO IDEAM**

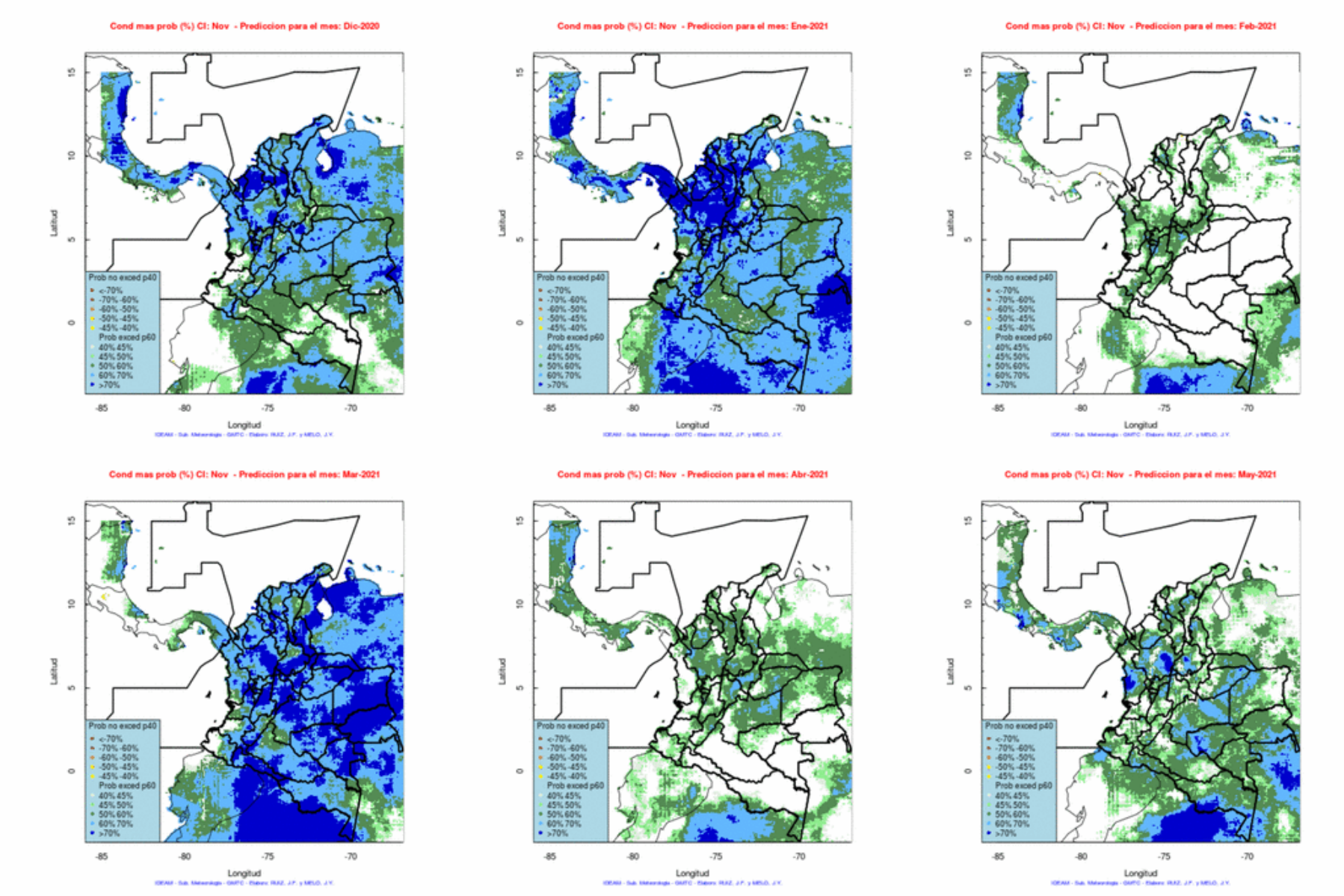


PROBABILIDAD DE OCURRENCIA DEL ÍNDICE DE PRECIPITACIÓN ENTRE DIC/20 – MAY/21

ENSAMBLE MODELO IDEAM



CONDICIÓN MÁS PROBABLE ENTRE DIC/20 – MAY/21 - **ENSAMBLE MODELO IDEAM**



TEMPERATURA DEL AIRE

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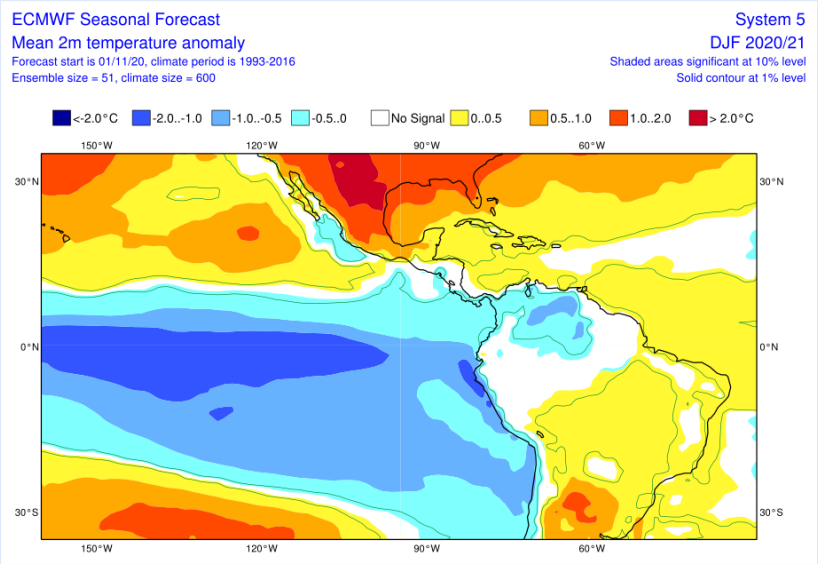
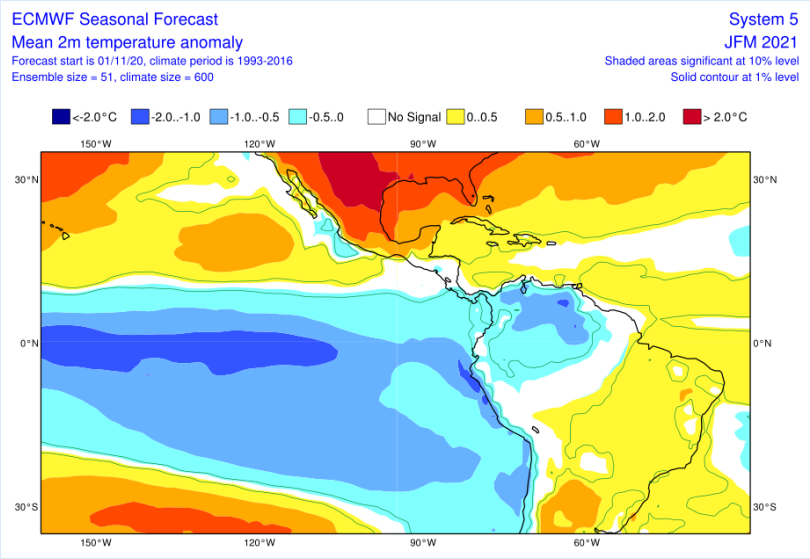
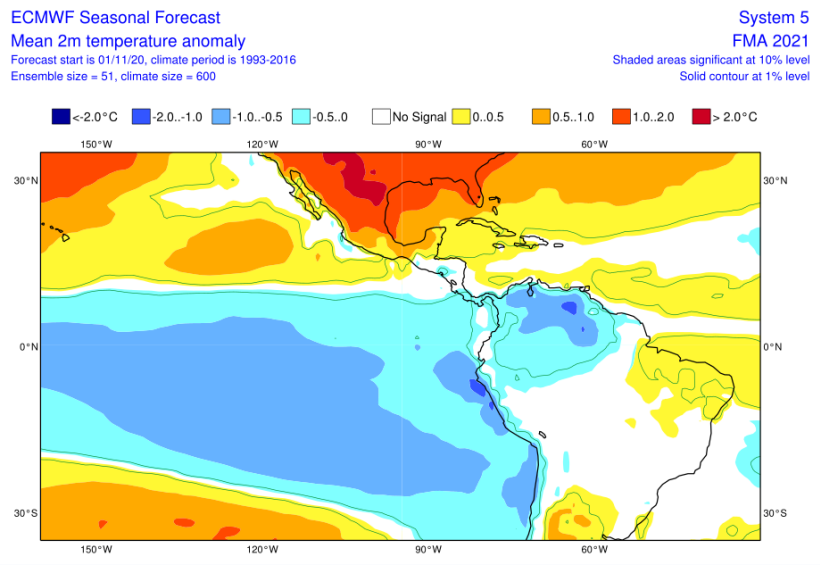
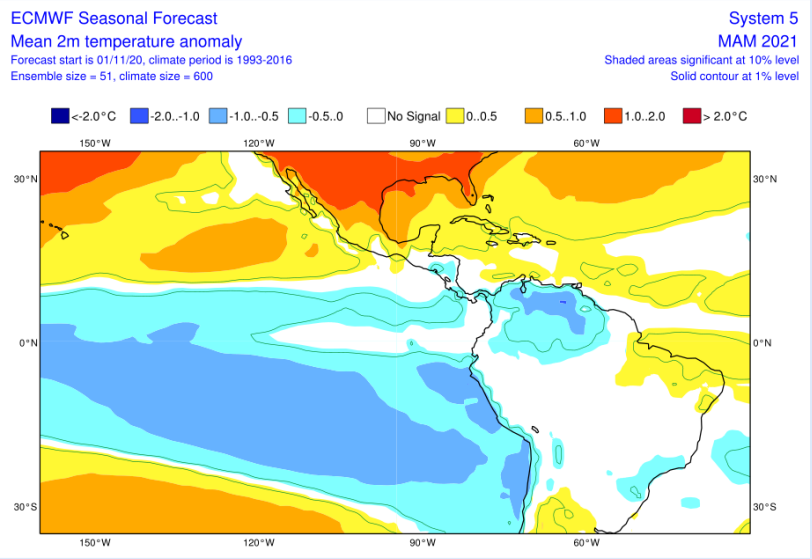
PREDICCIÓN ESTACIONAL DE LA TEMPERATURA MEDIA DEL AIRE

MODELOS GLOBALES - ECMWF



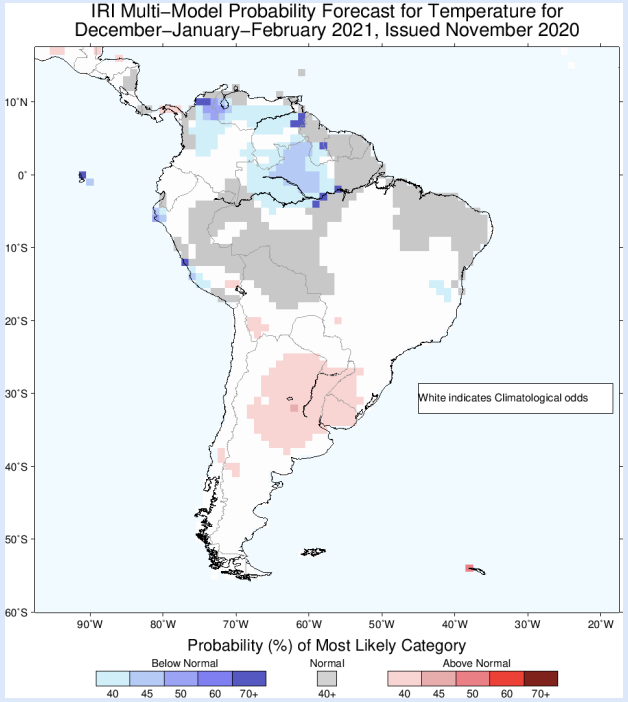


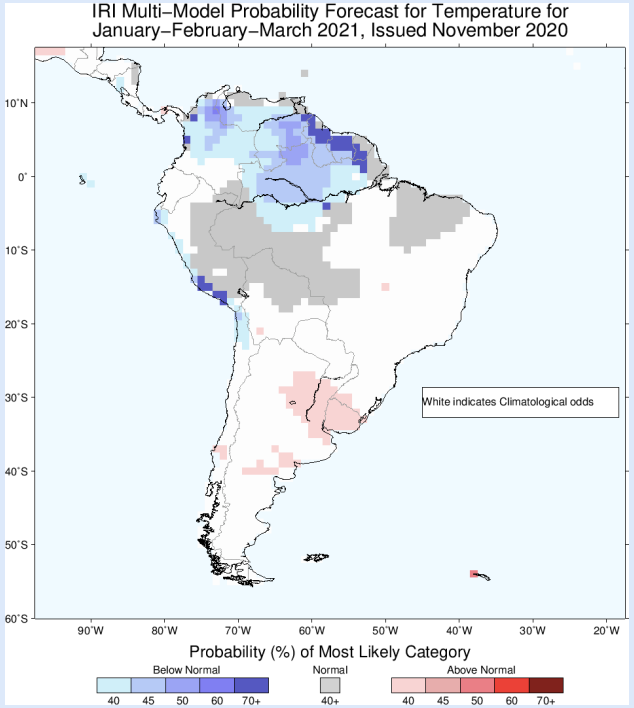


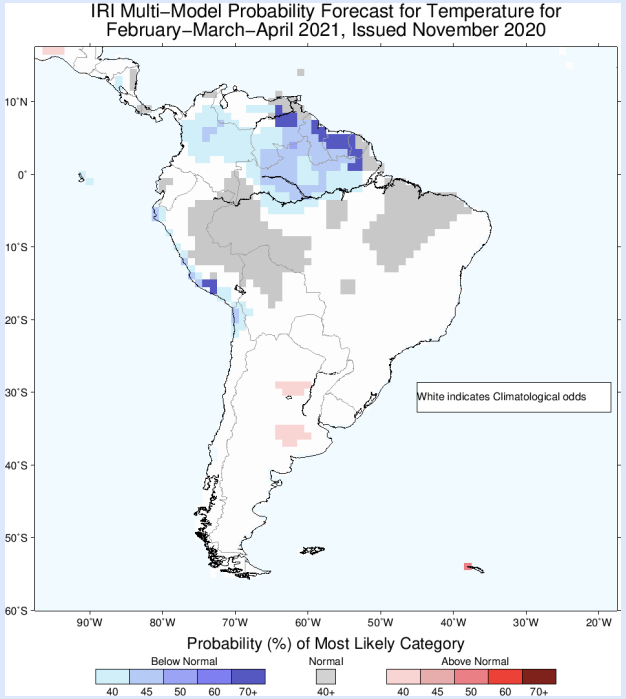


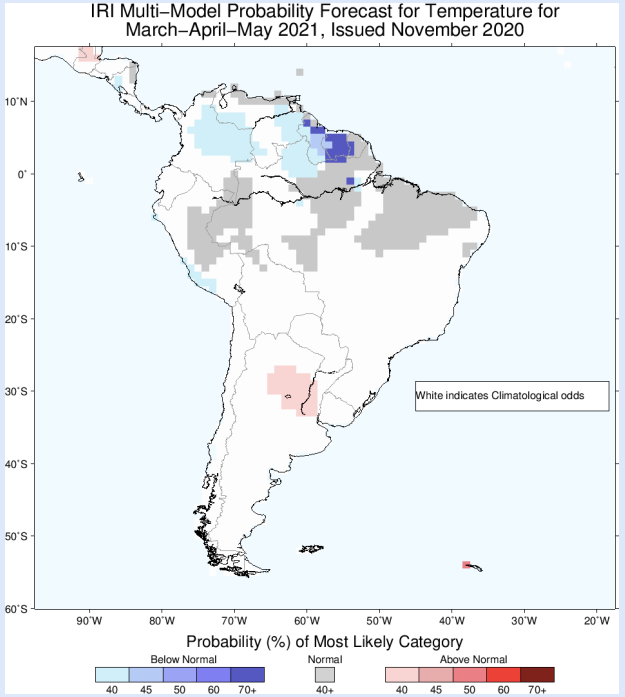
PREDICCIÓN ESTACIONAL DE LA TEMPERATURA MEDIA DEL AIRE

MODELOS GLOBALES - IRI



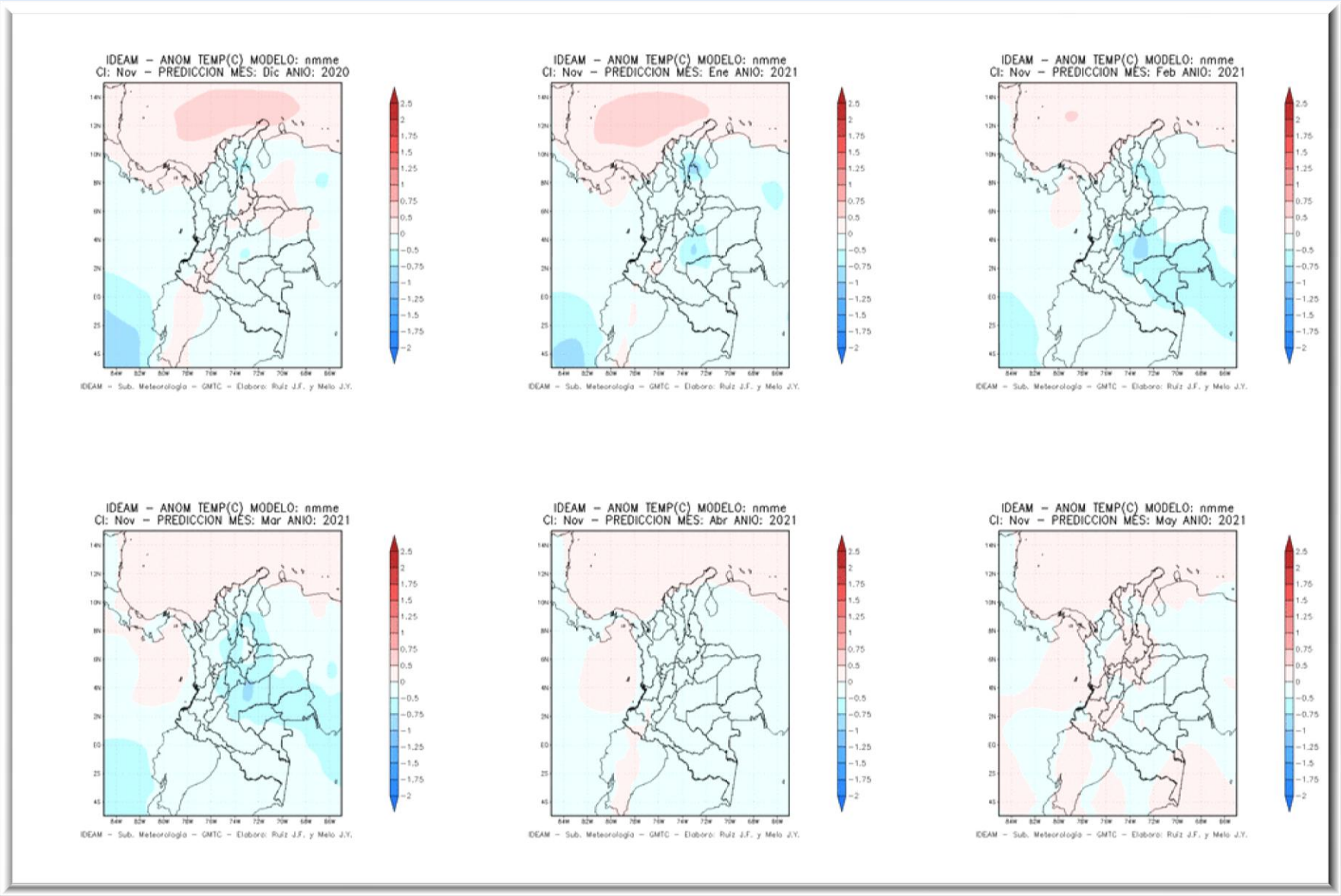




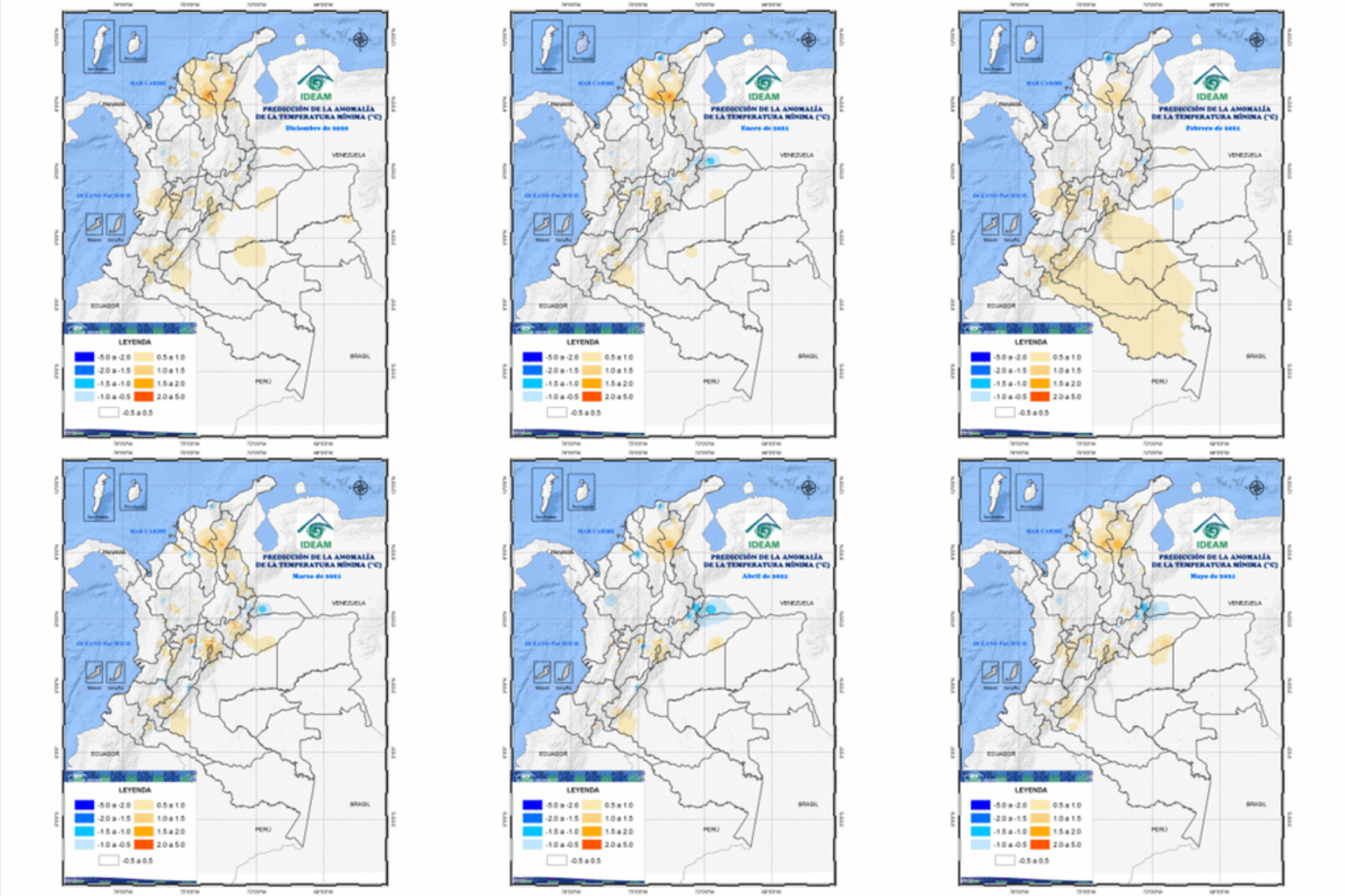


PREDICCIÓN CLIMÁTICA MENSUAL DE LA ANOMALÍA DE LA TEMPERATURA MEDIA DEL AIRE

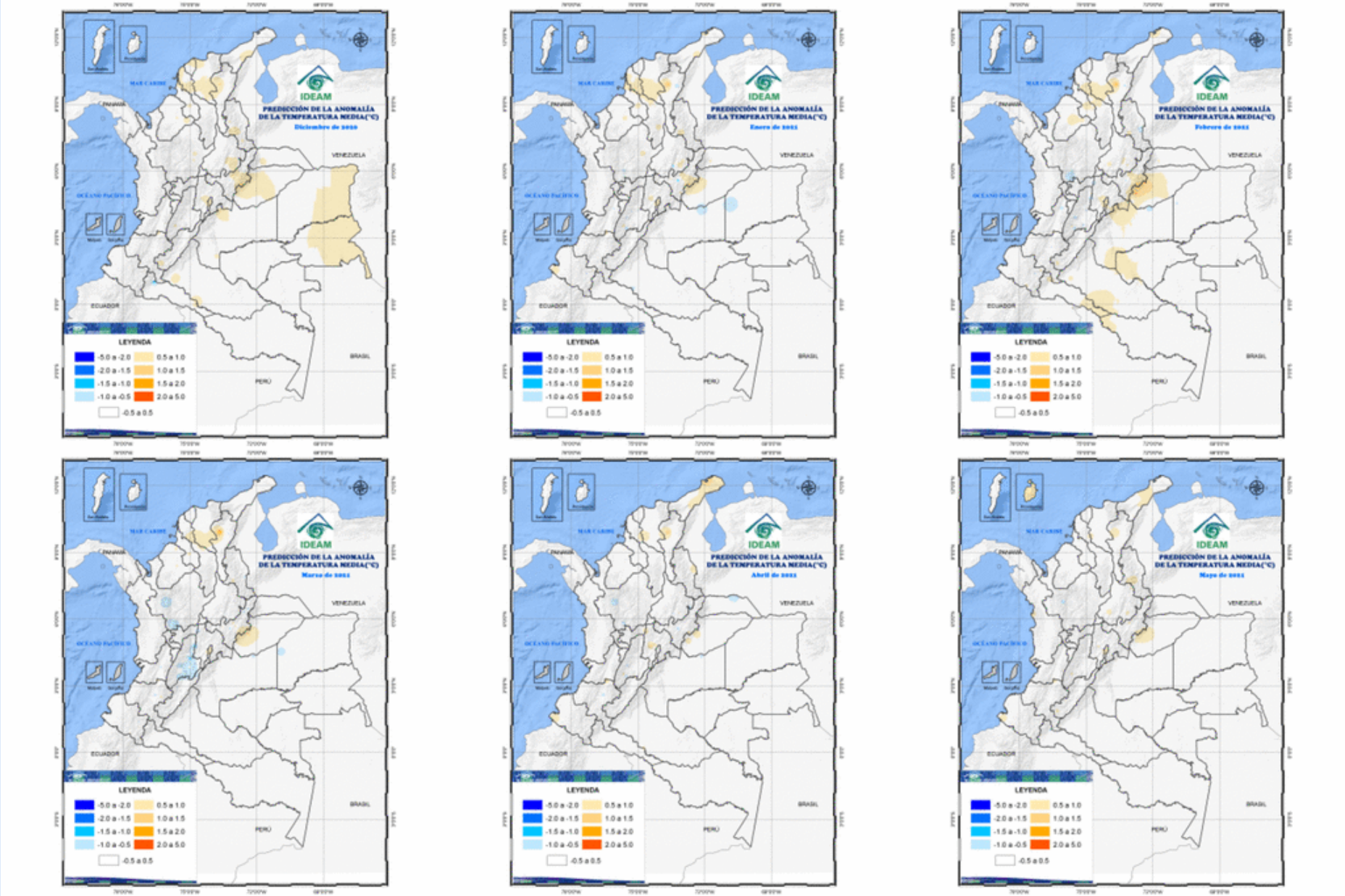
ENSAMBLE MODELO NMME



PREDICCIÓN CLIMÁTICA MENSUAL DE LA ANOMALÍA DE TEMPERATURA MEDIA MÍNIMA DEL AIRE ENTRE DIC/20 – MAY/21 - **ESTACIONES IDEAM**



PREDICCIÓN CLIMÁTICA MENSUAL DE LA ANOMALÍA DE TEMPERATURA MEDIA DEL AIRE ENTRE DIC/20 – MAY/21 - **ESTACIONES IDEAM**



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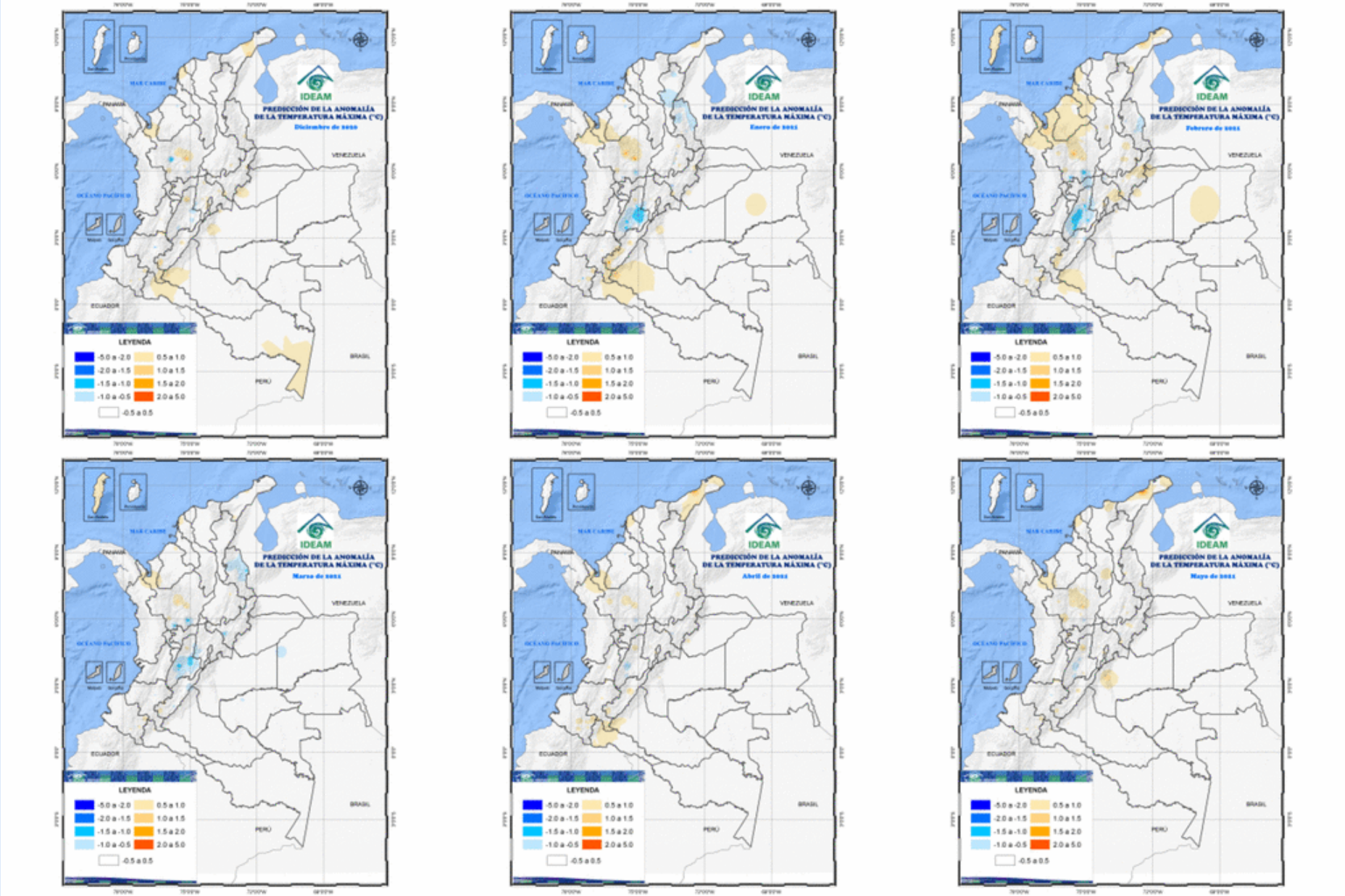

VIENTO EN SUPERFICIE

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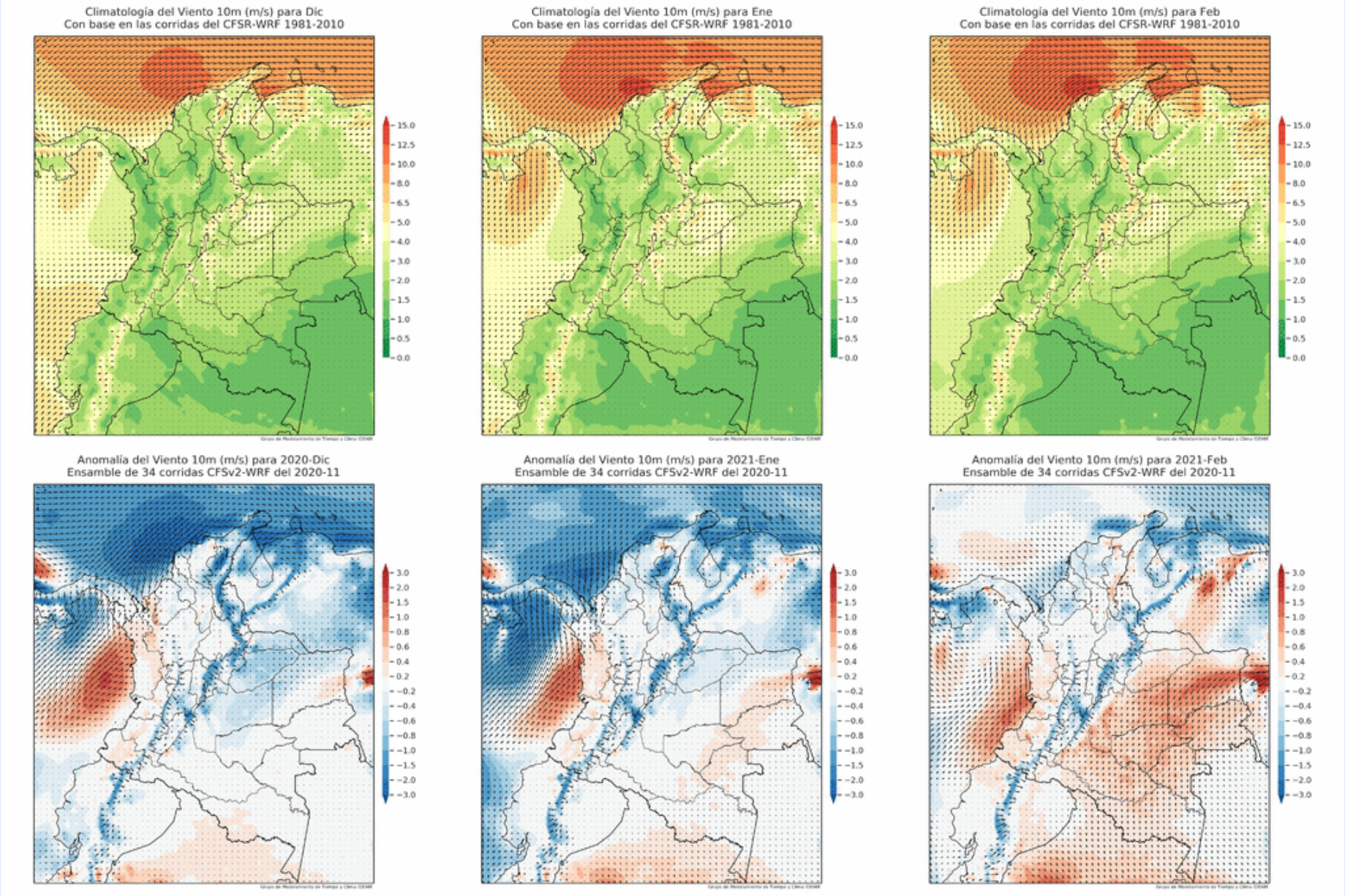
PREDICCIÓN CLIMÁTICA MENSUAL DE LA ANOMALÍA DE LA DIRECCIÓN Y VELOCIDAD DEL VIENTO ENTRE DIC/20 – FEB/21 - **MODELO DINÁMICO IDEAM CFSv2-WRF**



CONCLUSIONES

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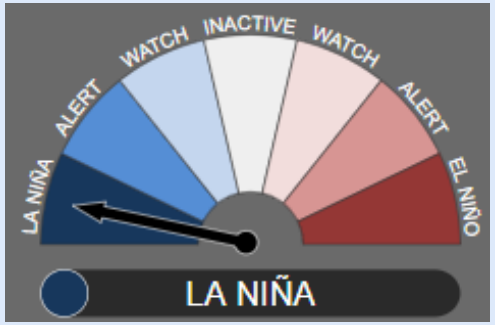
- La condición actual en la cuenca centro-oriental del océano Pacífico tropical está asociado a la presencia del fenómeno **ENOS-La Niña**

- Hay absoluta certeza de que esta condición persistirá entre diciembre de 2020 y febrero de 2021 (De acuerdo con la OMM y los análisis del IRI y CPC-NOAA, la probabilidad es superior al **90%**).

- Existen probabilidades superiores al 65% de que el fenómeno **La Niña**, se mantenga hasta el trimestre marzo-abril-mayo de 2021.

- El comportamiento esperado de las variables meteorológicas para los próximos meses en Colombia, no solo estaría influenciado por el ciclo estacional propio de la época del año y de oscilaciones de distinta frecuencia como las ondas intraestacionales y ecuatoriales; sino también por la incidencia de éste fenómeno de variabilidad climática interanual (**La Niña**), que en Colombia, tiende a aumentar los volúmenes de precipitación con respecto a los promedios históricos, particularmente en las regiones Caribe, Andina y Pacífica.

- Los modelos del IDEAM resuelven precipitaciones superiores a la climatología de referencia 1981-2010 entre diciembre de 2020 y mayo de 2021, esperando incrementos que oscilarían entre el **10%** y **60%** en la mayor parte del país, particularmente en ***diciembre de 2020*** y los meses de ***enero*** y ***marzo de 2021*** sobre grandes extensiones de las regiones Caribe, norte y centro de la región Andina y centro-oeste de los Llanos Orientales. Las probabilidades de que se presenten estas excedencias en la pluviometría, en los meses y lugares antes mencionados, son superiores al 60%.



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