



Monitoreo y pronóstico de El Niño Enero 2017

Comité Técnico ENFEN

02 de febrero de 2016



INDECI
INSTITUTO NACIONAL DE DEFENSA CIVIL

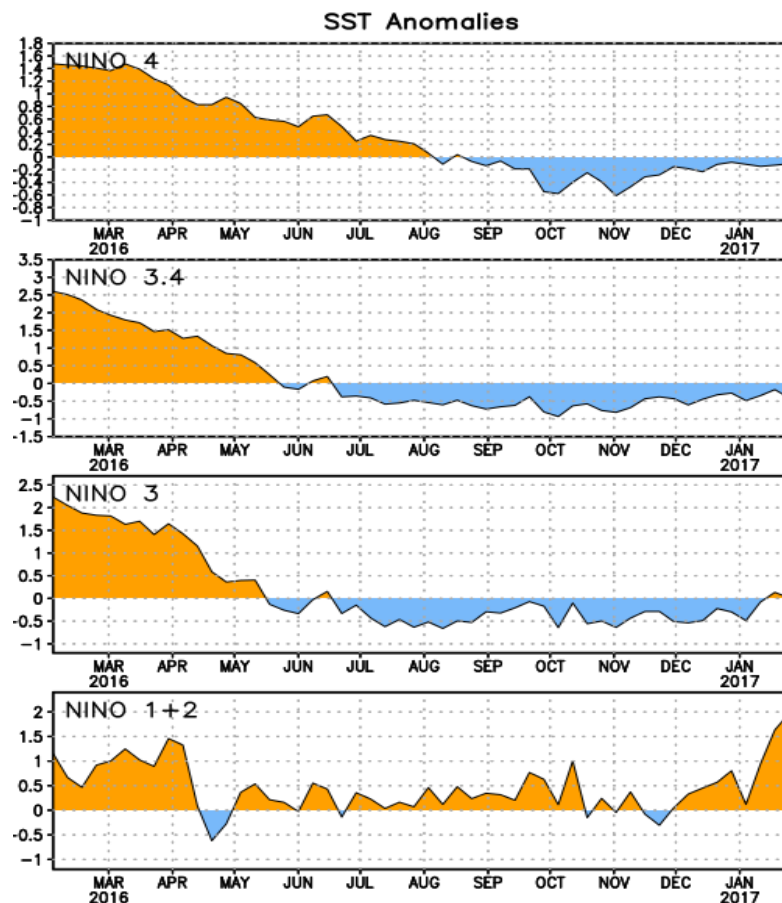
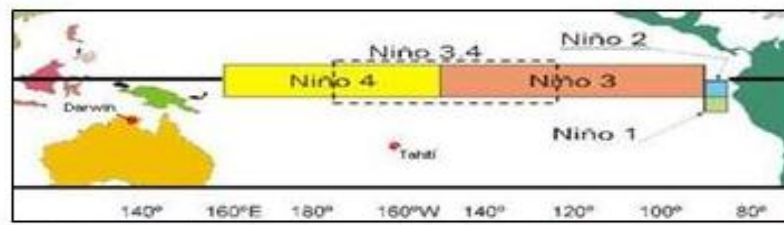




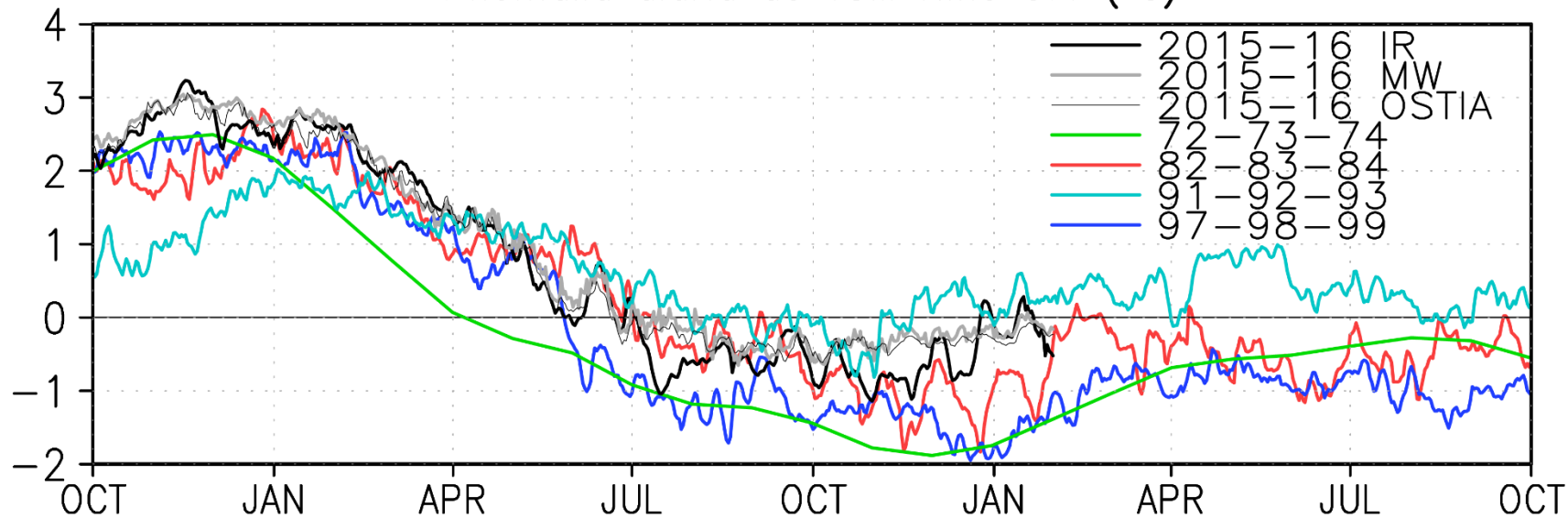
ANOMALÍAS DE LA TEMPERATURA SUPERFICIAL DEL MAR POR REGIONES NIÑO EN EL PACÍFICO ECUATORIAL

Regiones Niño	ATSM (Semanales)			
	Niño 1+2	Niño 3	Niño 3.4	Niño 4
21DEC2016	23.6 0.6	25.0-0.2	26.2-0.3	28.3-0.1
28DEC2016	24.2 0.8	25.0-0.3	26.3-0.3	28.3-0.1
04JAN2017	23.9 0.1	25.0-0.5	26.1-0.5	28.2-0.1
11JAN2017	25.1 0.9	25.5-0.1	26.2-0.3	28.2-0.1
18JAN2017	26.2 1.6	25.8 0.1	26.4-0.2	28.1-0.1
25JAN2017	26.9 2.0	25.9 0.0	26.2-0.4	28.1-0.1
P.T	1.2			

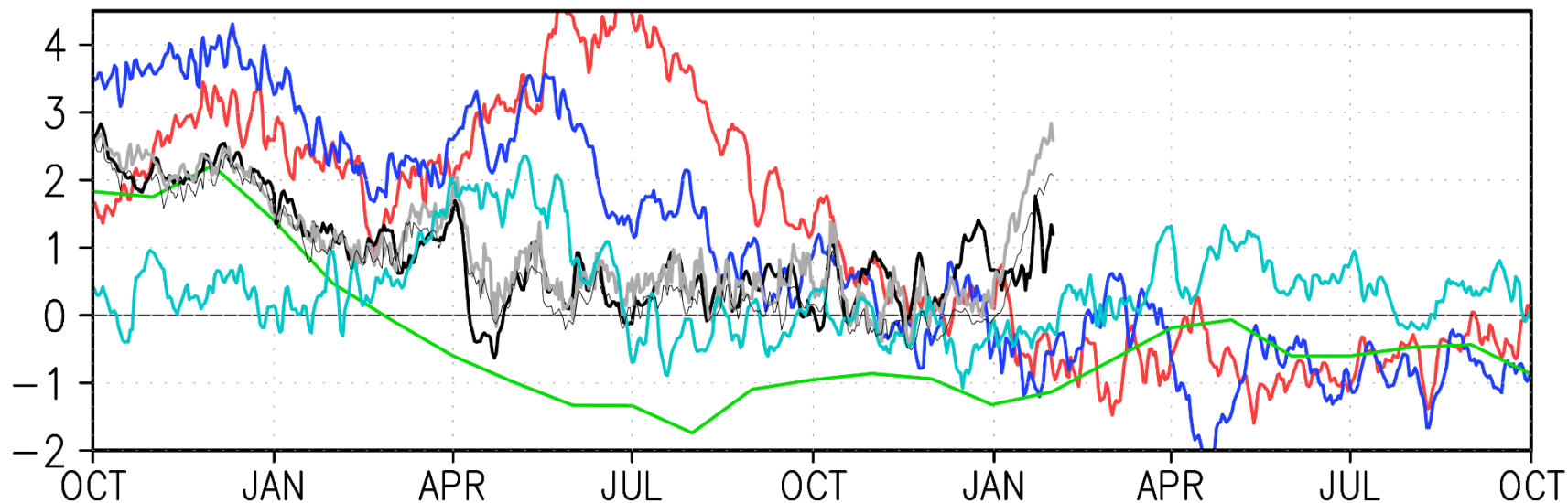
Promedios mensuales 2015						
Regiones Niño	ATSM					
	Niño 1+2		Niño 3		Niño 3.4	
Dic.2016	0.43	23.3	-0.4	24.8	-0.4	26.2
Nov.2016	0.09	21.7	-0.4	24.5	-0.6	26.1
Oct.2016	0.36	21.2	-0.4	24.5	-0.7	26.0
Set.2016	0.53	20.9	-0.2	24.7	-0.6	26.1
Ago.2016	0.4	21.0	-0.5	24.5	-0.5	26.3
Jul.2016	0.2	21.8	-0.5	25.1	-0.5	26.7
Jun.2016	0.3	23.2	-0.1	26.3	-0.1	27.5
May.2016	0.3	24.6	0.0	27.1	0.3	28.2
Abr.2016	0.2	25.8	0.8	28.3	1.1	28.8
Mar.2016	0.9	27.6	1.6	28.7	1.7	28.9
Feb.2016	0.7	26.8	1.9	28.4	2.4	29.1
Ene.2016	1.4	25.9	2.6	28.2	2.6	29.2



Anomalia diaria de TSM Nino 3.4 (°C)



Anomalia diaria de TSM Nino 1+2 (°C)

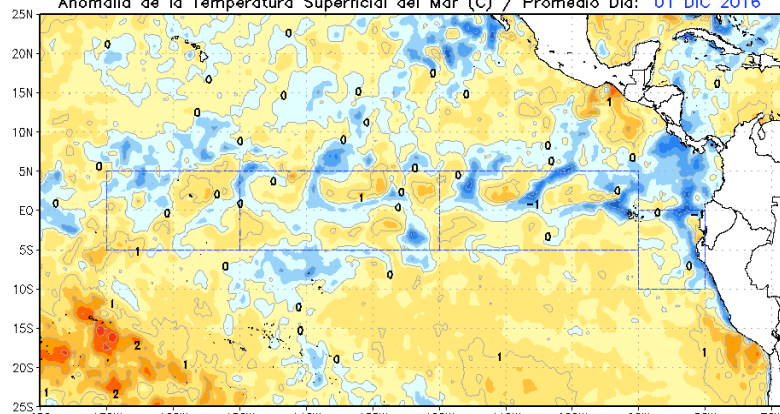


Datos: NOAA Hires OI SST, RSS MW SST, Procesamiento:IGP.

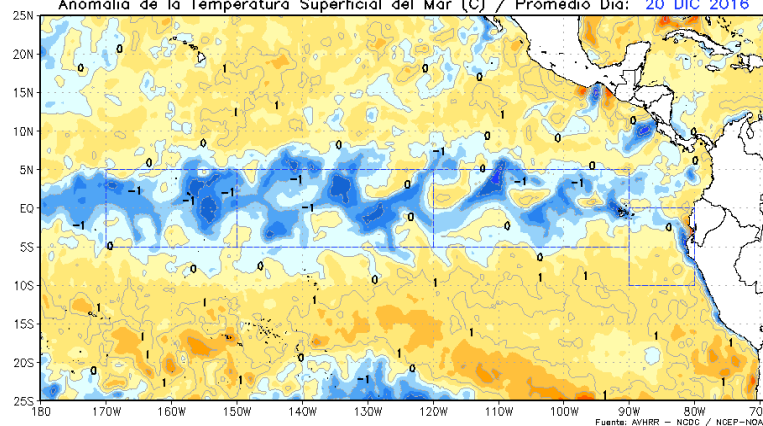
Ultimo dato-MW: 31JAN2017
 Ultimo dato-OISST: 31JAN2017
 Ultimo dato-OSTIA: 31JAN2017



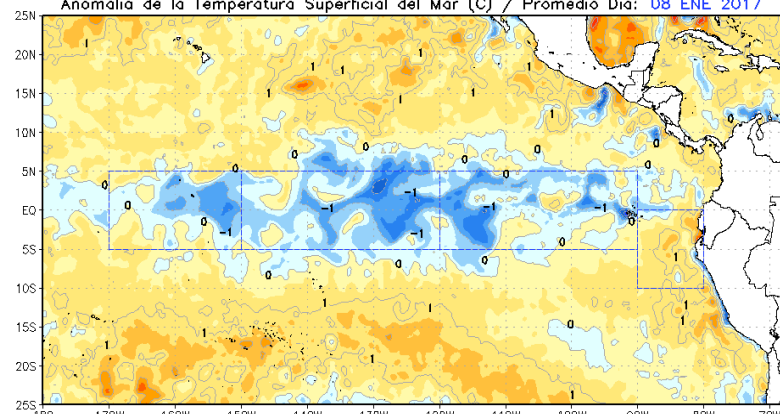
Anomalia de la Temperatura Superficial del Mar (C) / Promedio Dia: 01 DIC 2016



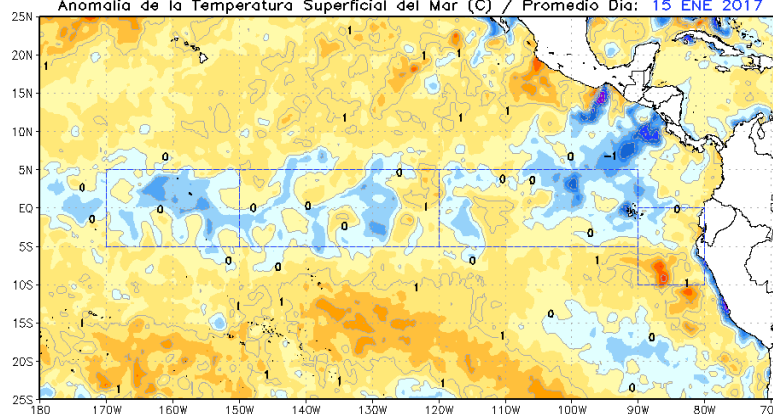
Anomalia de la Temperatura Superficial del Mar (C) / Promedio Dia: 20 DIC 2016



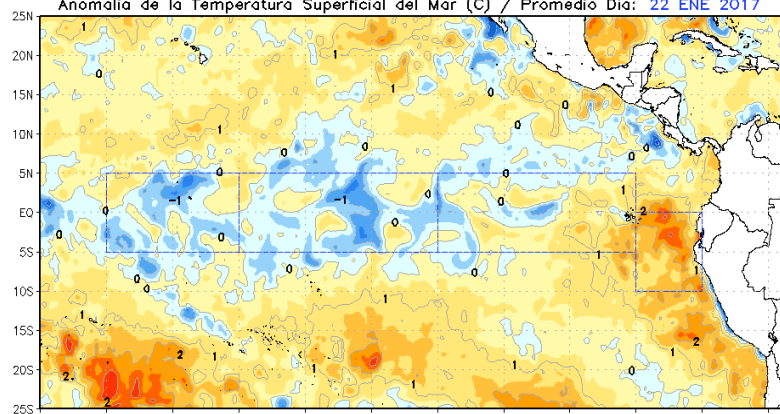
Anomalia de la Temperatura Superficial del Mar (C) / Promedio Dia: 08 ENE 2017



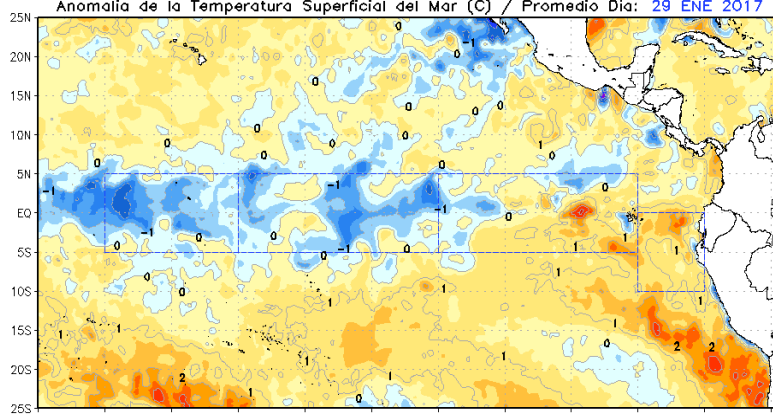
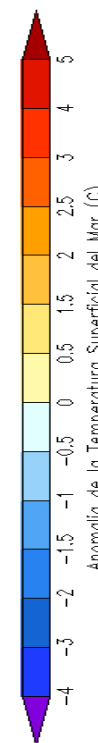
Anomalia de la Temperatura Superficial del Mar (C) / Promedio Dia: 15 ENE 2017



Anomalia de la Temperatura Superficial del Mar (C) / Promedio Dia: 22 ENE 2017

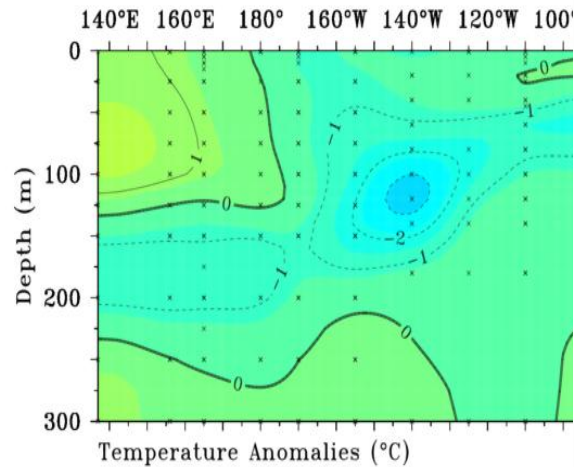


Anomalia de la Temperatura Superficial del Mar (C) / Promedio Dia: 29 ENE 2017

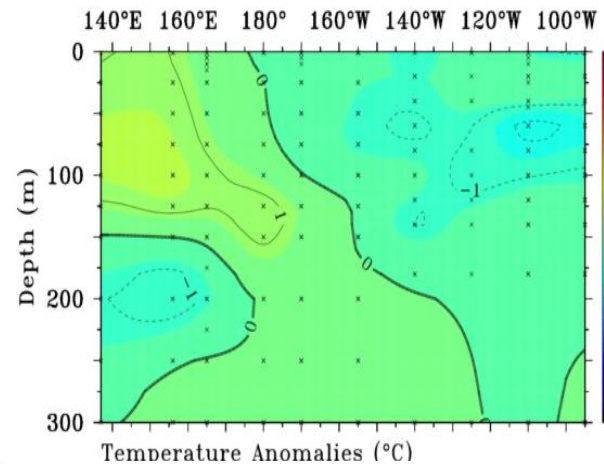


ANOMALÍAS DE LA TEMPERATURA SUBSUPERFICIAL EN EL PACÍFICO ECUATORIAL (TAO TRITON)

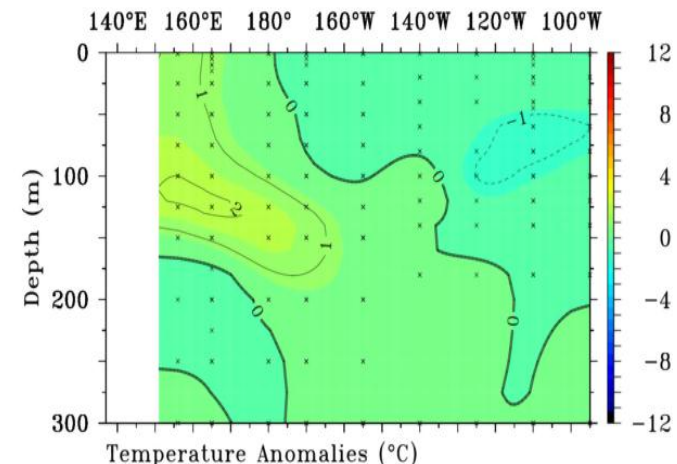
Monthly Data October 2016
2°S to 2°N Average



Monthly Data November 2016
2°S to 2°N Average

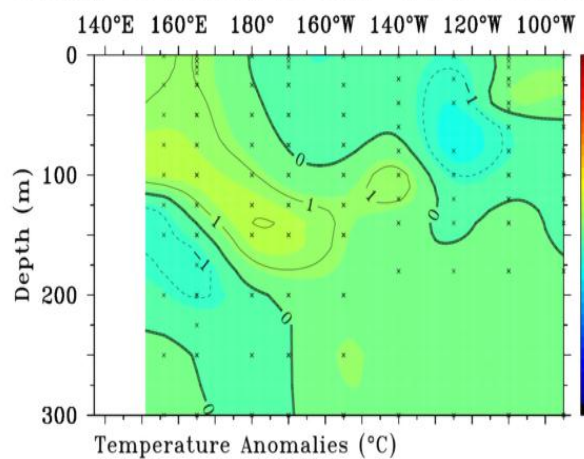


Monthly Data December 2016
2°S to 2°N Average



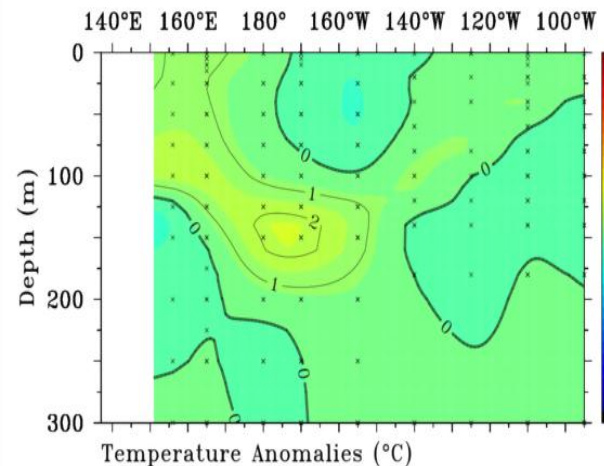
Five-Day Data

Ending On January 11 2017 2°S to 2°N Average



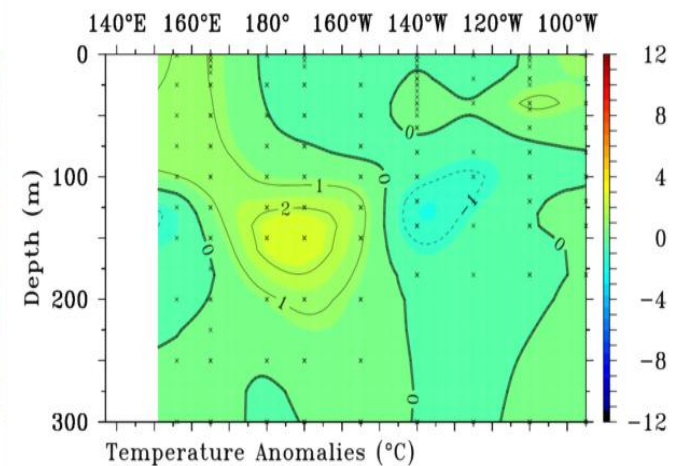
Five-Day Data

Ending On January 21 2017 2°S to 2°N Average



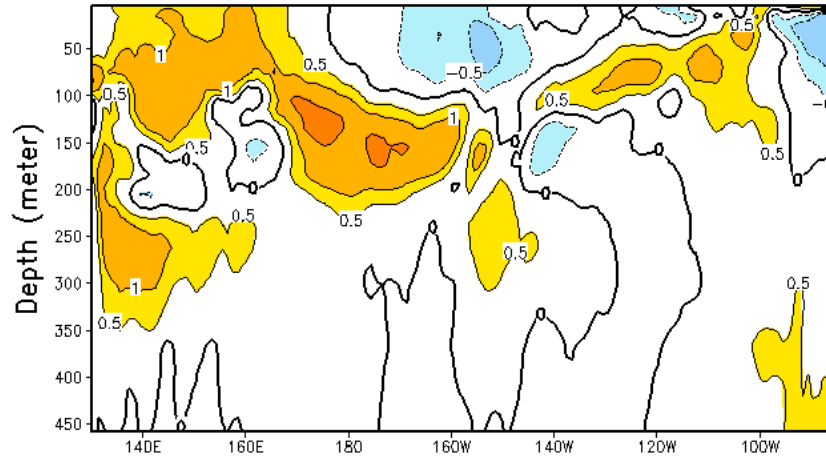
Five-Day Data

Ending On January 31 2017 2°S to 2°N Average

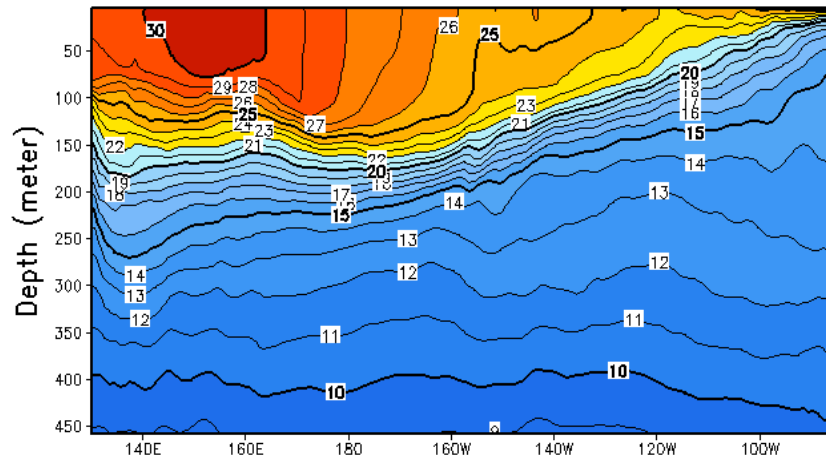


ANOMALÍAS DE LA TEMPERATURA SUBSUPERFICIAL EN EL PACÍFICO ECUATORIAL (NCEP-GODAS)

Equatorial Temperature Anom ($^{\circ}\text{C}$), Jan 28 2017

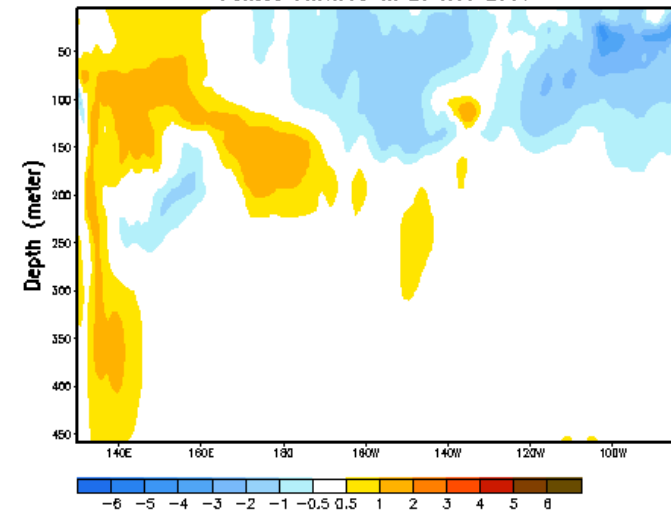


Equatorial Temperature ($^{\circ}\text{C}$), Jan 28 2017

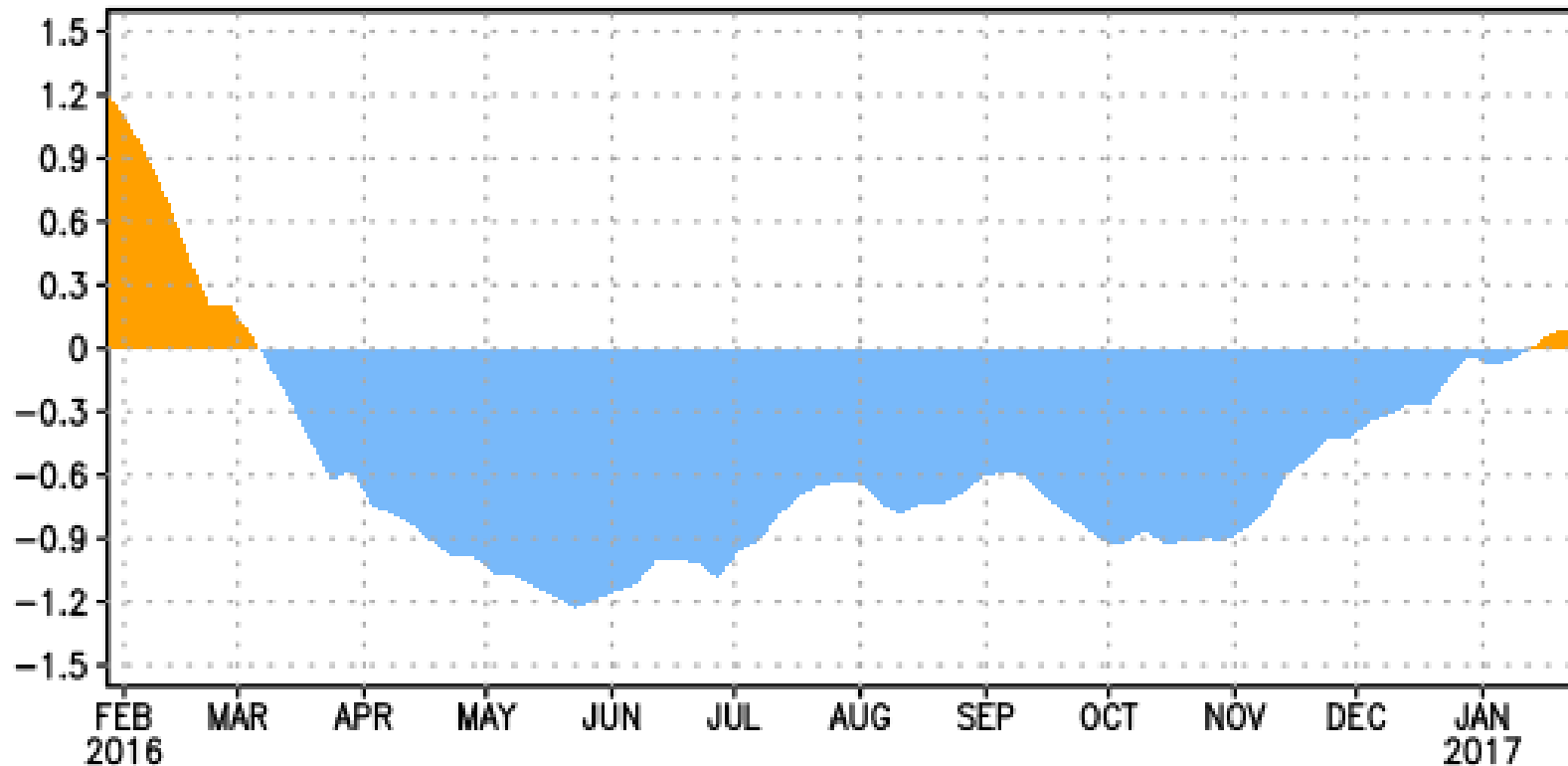


Equatorial Temperature Anomaly ($^{\circ}\text{C}$)

Pentad centered on 29 NOV 2016



Contenido de calor en el Pacífico Ecuatorial (0 – 300m, 180-100W, °C)

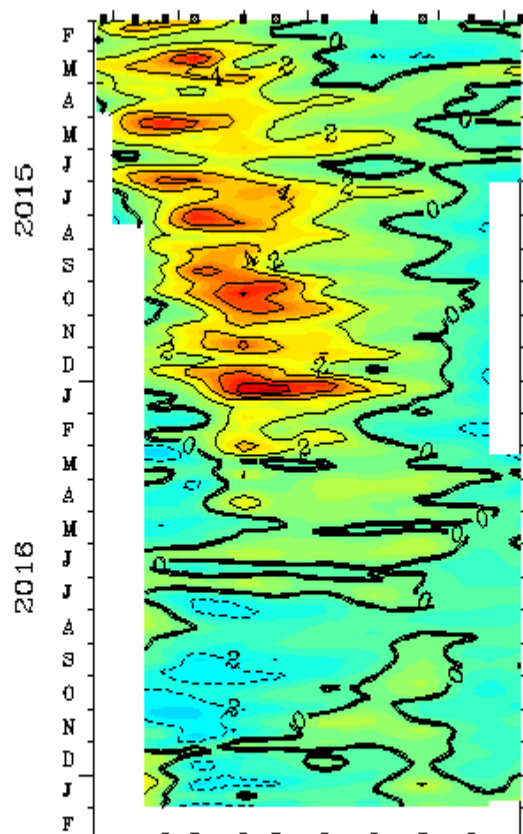
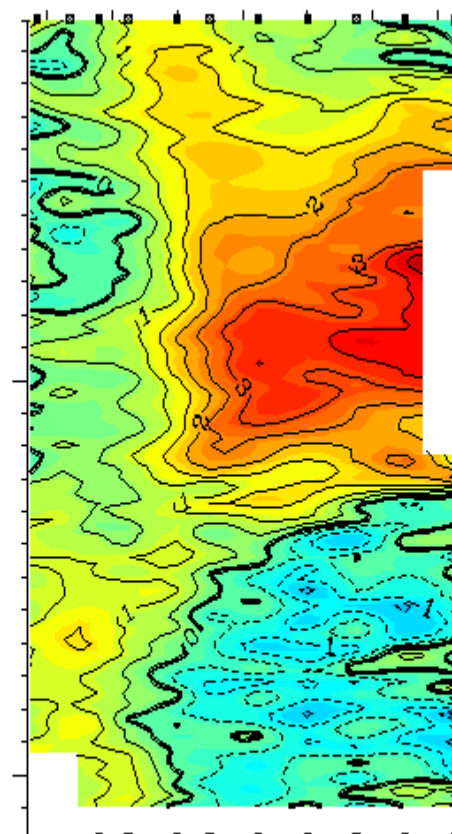
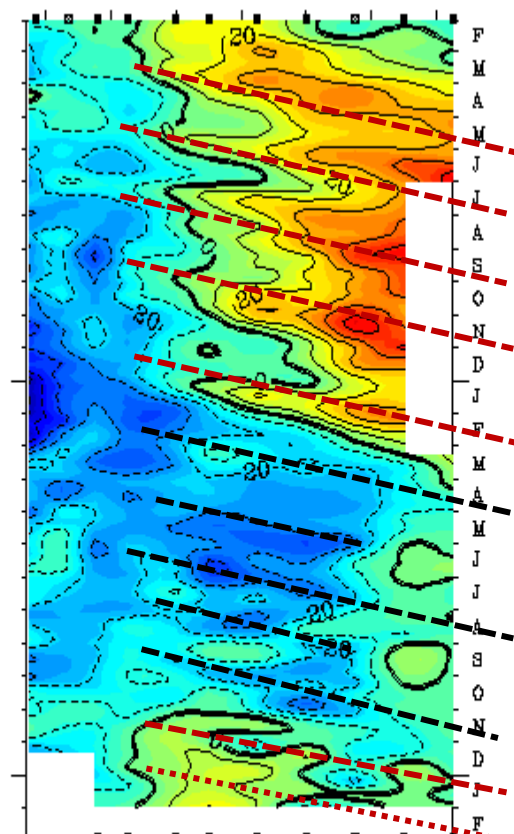


Fuente: NOAA

Viento zonal (m/s)

Anomalía TSM (°C)

Anomalía iso-20°C



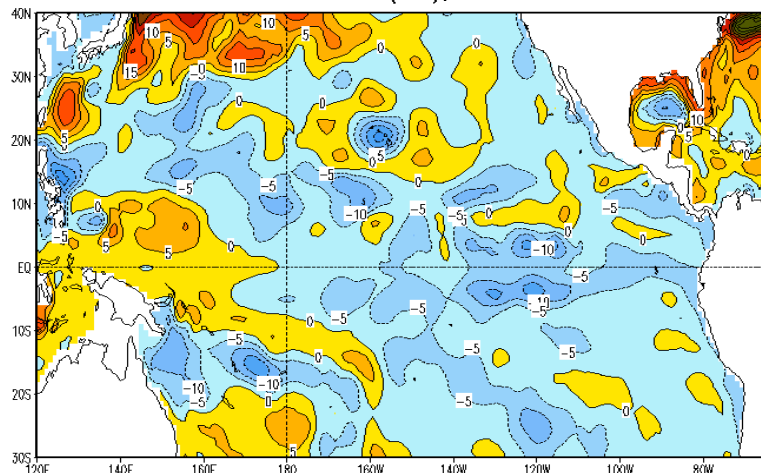
Ondas Kelvin
cálidas

Ondas Kelvin
frías

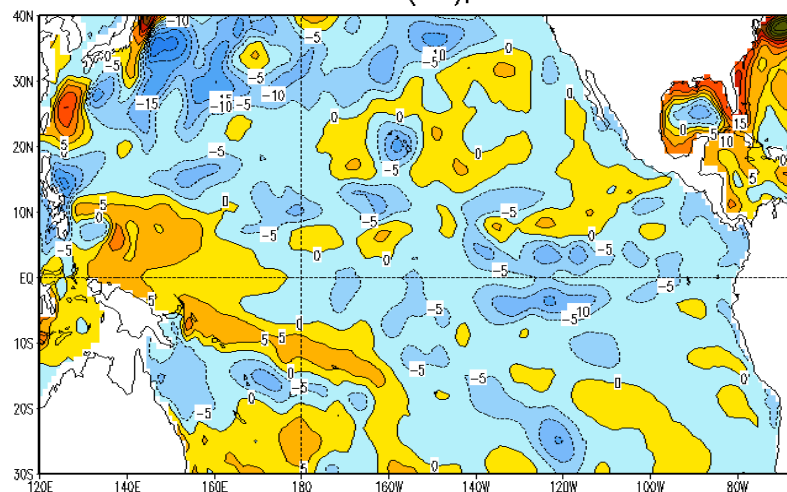


ANOMALÍAS DEL NIVEL DEL MAR EN EL PACÍFICO TROPICAL

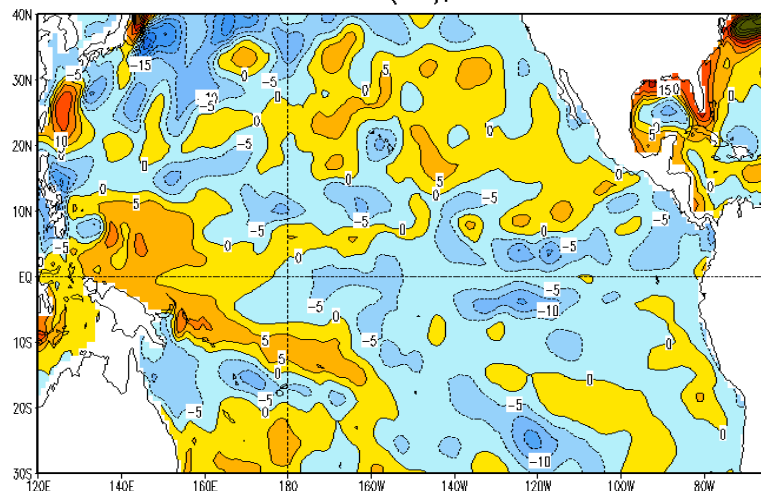
Sea Level Anom (cm), Jan 03 2017



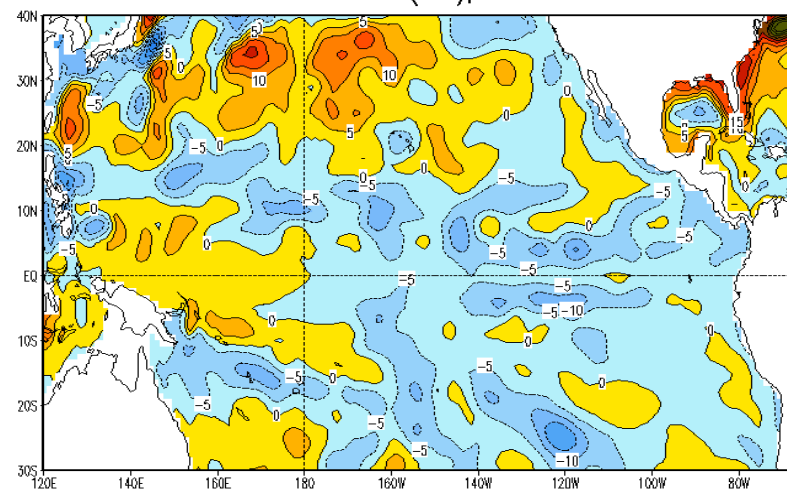
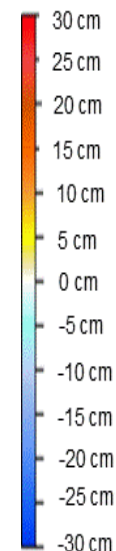
Sea Level Anom (cm), Jan 13 2017



Sea Level Anom (cm), Jan 18 2017



Sea Level Anom (cm), Jan 28 2017



Valores del Índice Costero El Niño

El Niño
costero
duró hasta →
junio

Mes	ICEN	Categoría
03/2016	1.07	Cálida Moderada
04/2016	0.77	Cálida Débil
05/2016	0.54	Cálida Débil
06/2016	0.43	Cálida Débil
07/2016	0.29	Neutra
08/2016	0.17	Neutra
09/2016	0.14	Neutra
10/2016	0.22	Neutra
11/2016	0.37	Neutra

Mes	ICENtmp	Categoría
12/2016	0.70*	Cálida Débil
01/2017	0.77**	Cálida Débil

* Se usaron los datos de (Nov. Y Dic. 2016) ERSST3v, (Ene. 2017) OI-wksst.

** Se usaron los datos de (Dic. 2016) ERSST3v, (Ene2017)OI-wksst y Feb. 2017)NMME
NMME CI 2017 01

Valores del Oceanic Niño Index (ONI)

Mes	ONI	Categoría
03/2016	1.58	Cálida Fuerte
04/2016	1.09	Cálida Moderada
05/2016	0.60	Cálida Débil
06/2016	0.10	Neutra
07/2016	-0.32	Neutra
08/2016	-0.58	Fría Débil
09/2016	-0.75	Fría Débil
10/2016	-0.84	Fría Débil
11/2016	-0.84	Fría Débil

<http://www.cpc.ncep.noaa.gov/data/indices/oni.ascii.txt>

Mes	ONItmp	Categoría
12/2016	-0.59*	Fría Débil
01/2017	-0.29**	Neutra

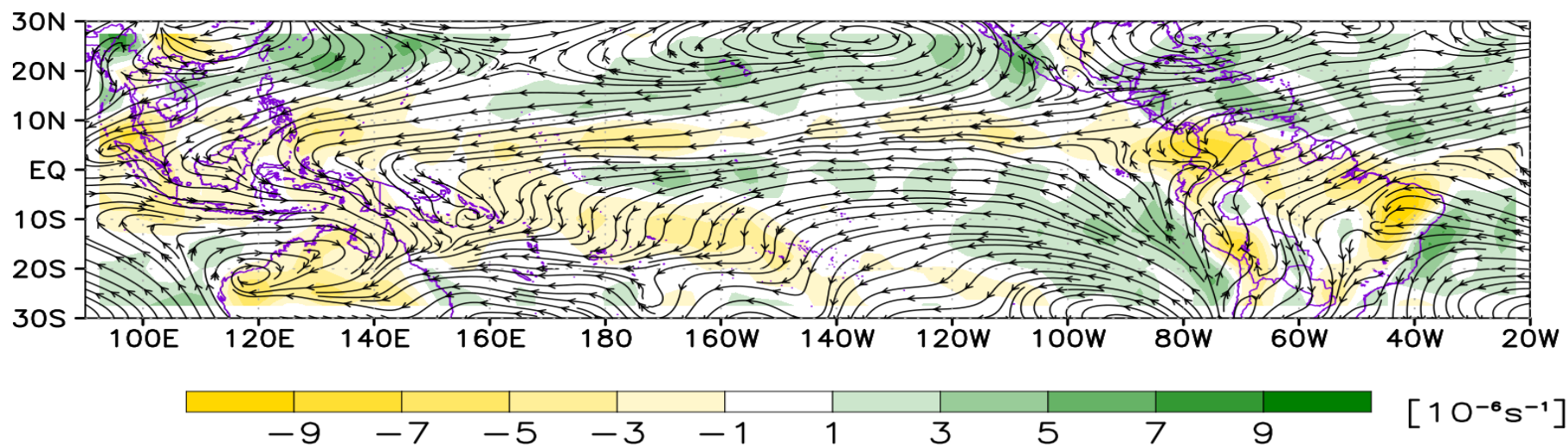
* Se usaron los datos de (Nov. Y Dic 2016) ERSST4, (Ene. 2017) Olwksst .

** Se usaron los datos de (Dic. 2016) ERSST4, (Ene. 2017) OI wksst y (Feb. 2017) NMME NMME (CI 2017 01)

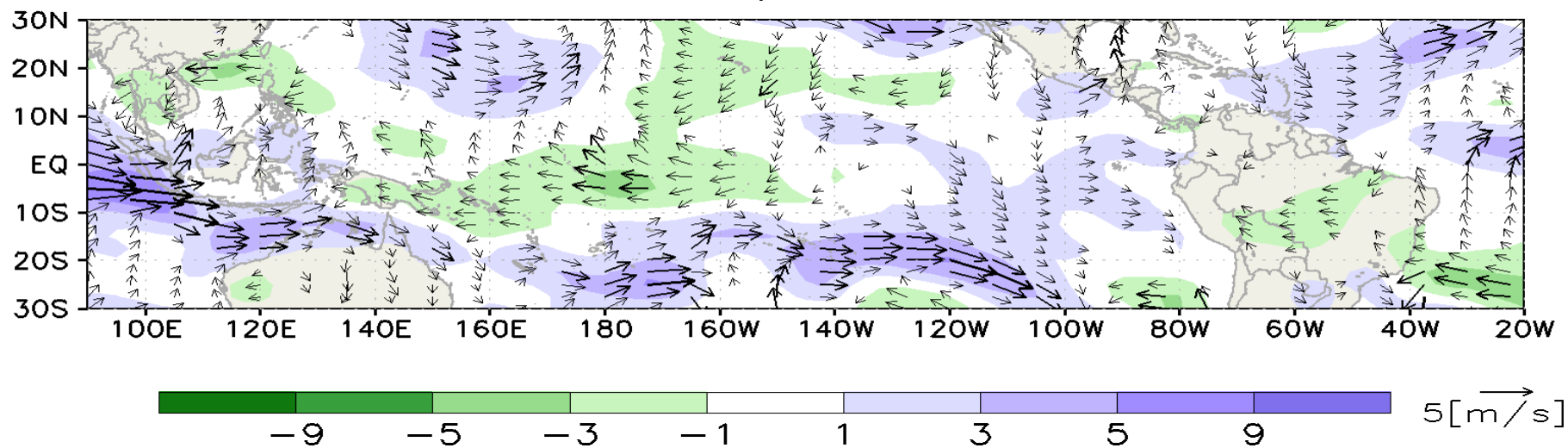
El Niño en
el Pacífico
Central →
duró hasta
mayo

VIENTOS A 925hPa

VIENTO PROMEDIO a 925hPa ENERO 2017
NCEP-NOAA / SENAMHI -DCL

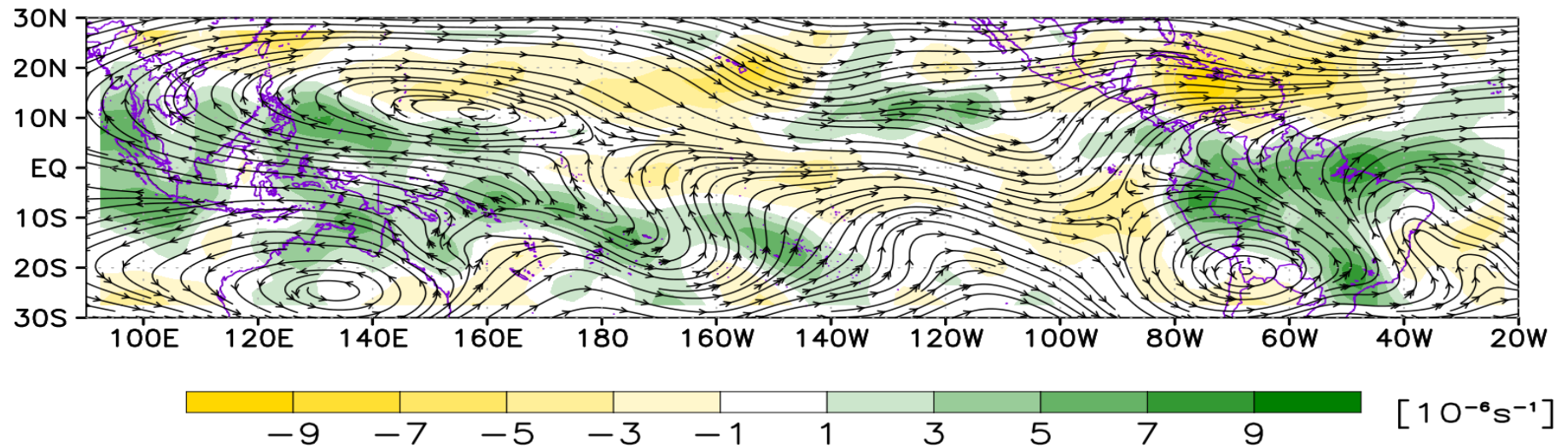


ANOMALIA DE VIENTO a 925hPa ENERO 2017
NCEP-NOAA / SENAMHI -DCL

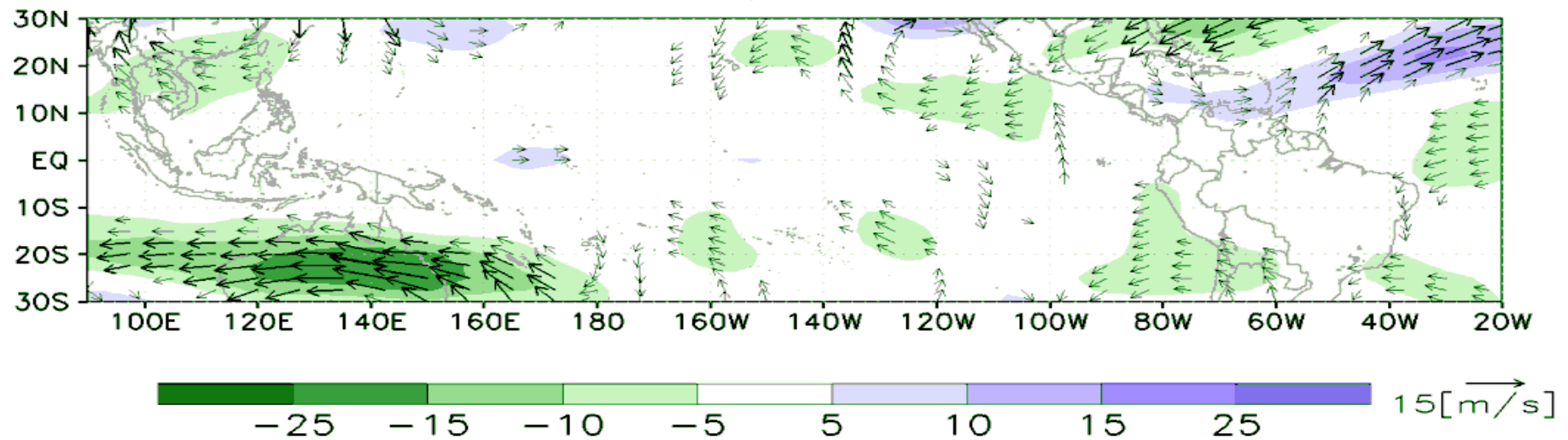


VIENTO A 200 hPa

VIENTO PROMEDIO a 200hPa ENERO 2017
NCEP-NOAA / SENAMHI -DCL

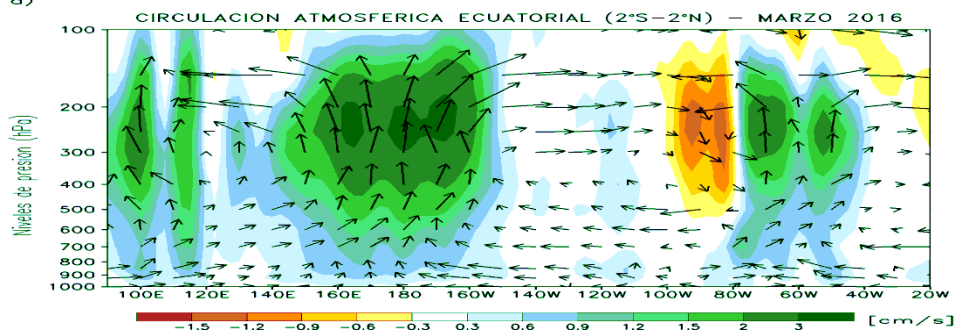


ANOMALIA DE VIENTO a 200hPa ENERO 2017
NCEP-NOAA / SENAMHI -DCL

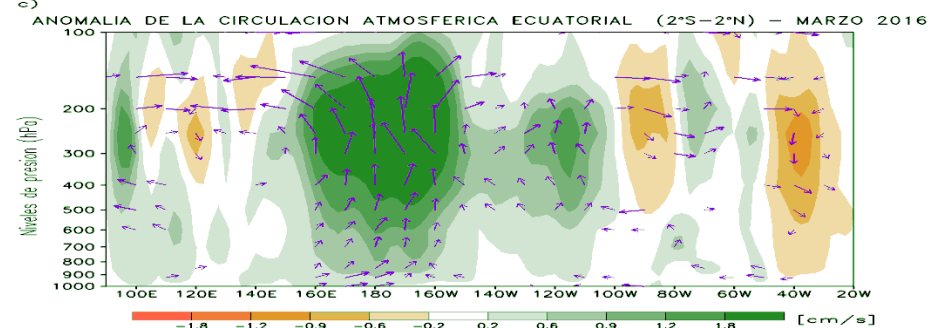


MONITOREO DE LA CIRCULACION ATMOSF. EC. 5°N-5°S

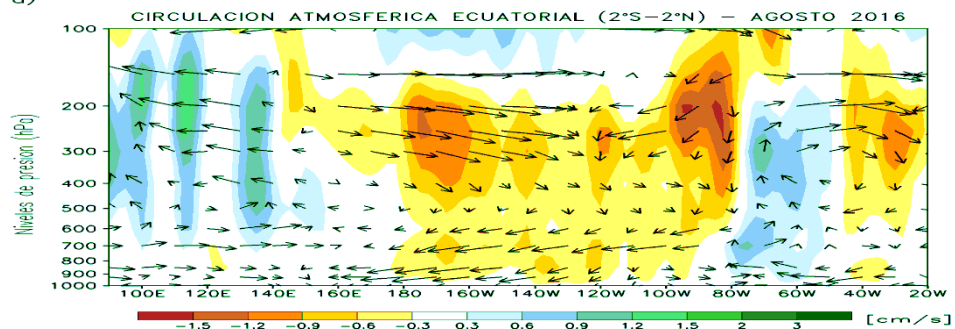
a)



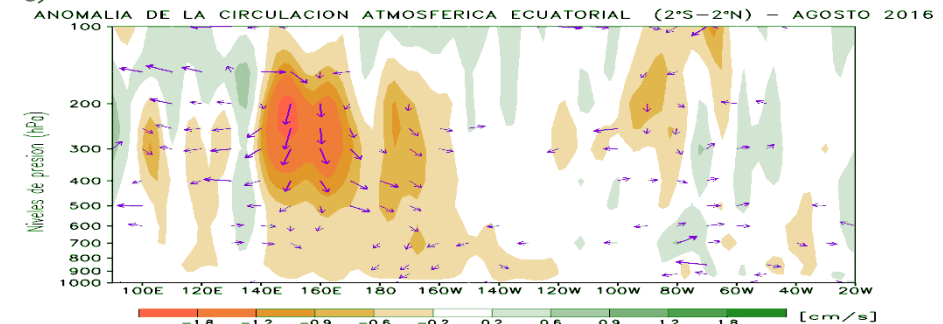
b)



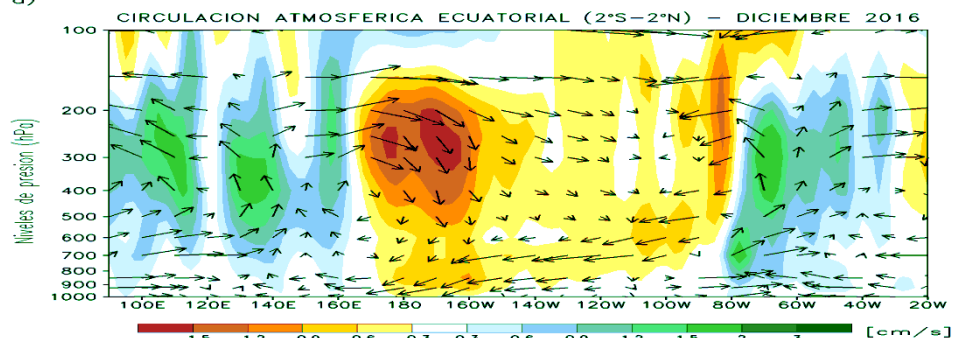
a)



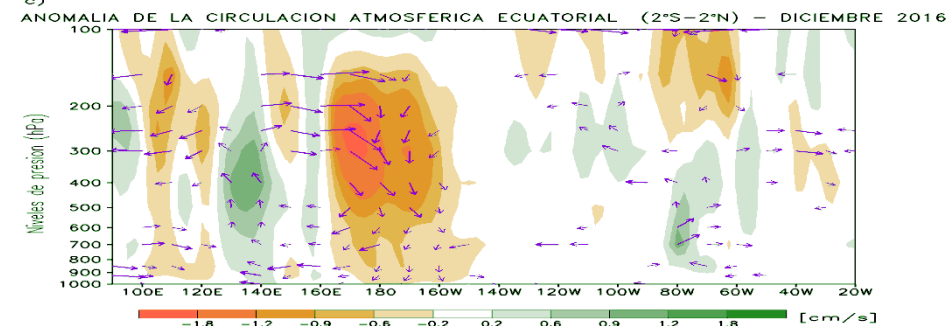
b)



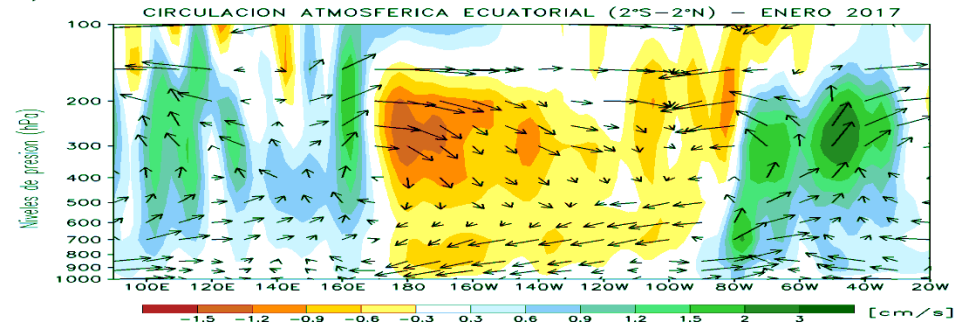
a)



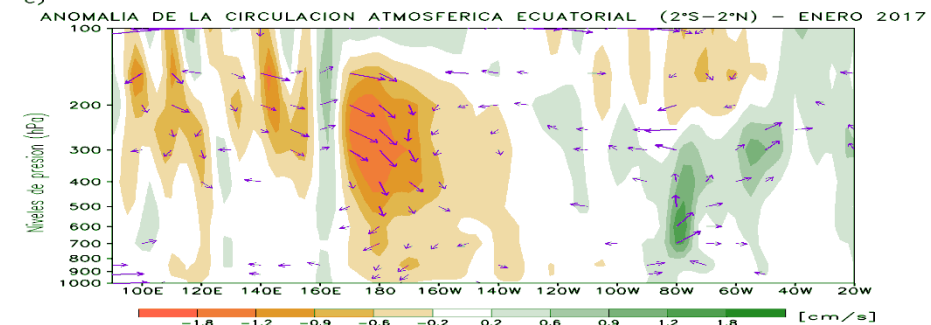
b)



a)

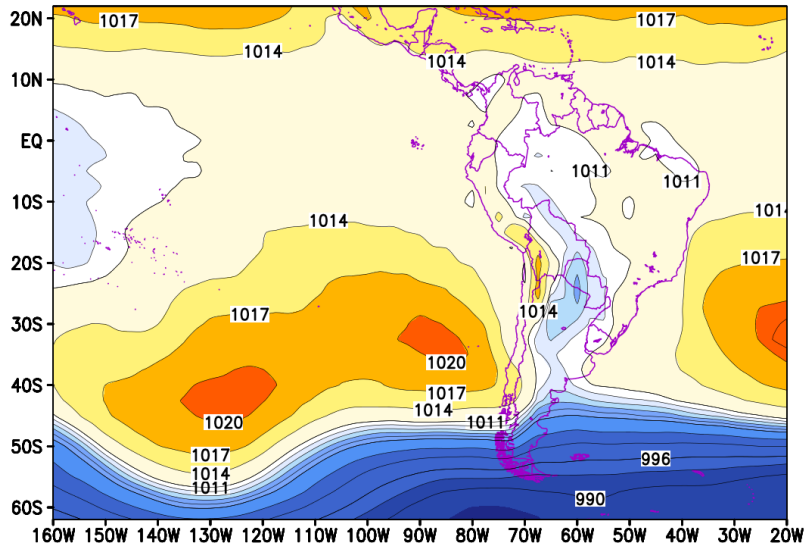
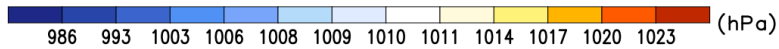


b)

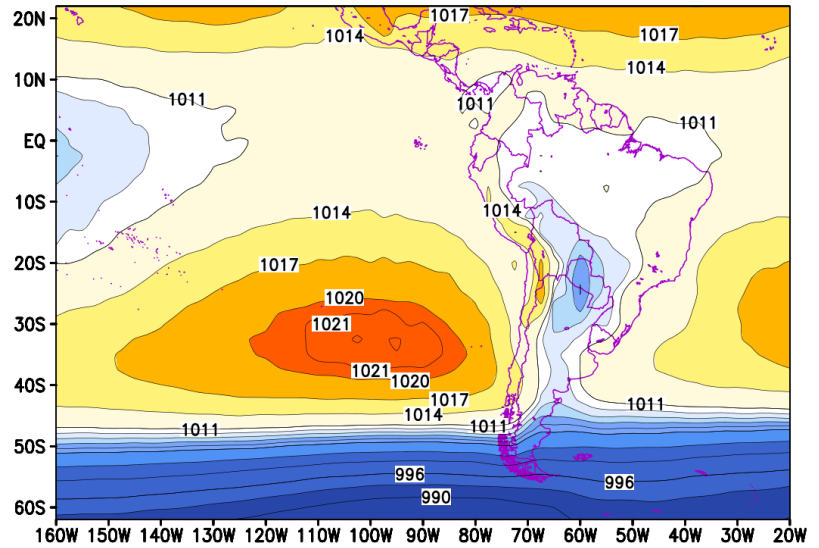
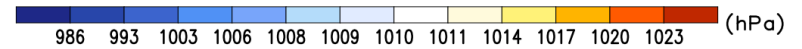


CAMPOS DE PRESIONES

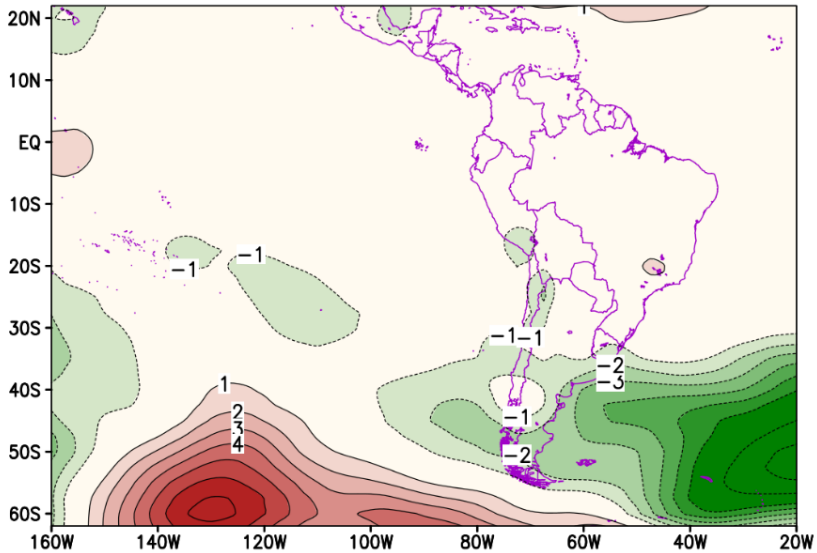
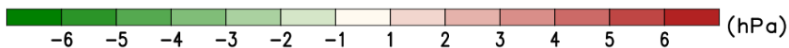
PRESION A NIVEL DEL MAR – 2017 ENERO



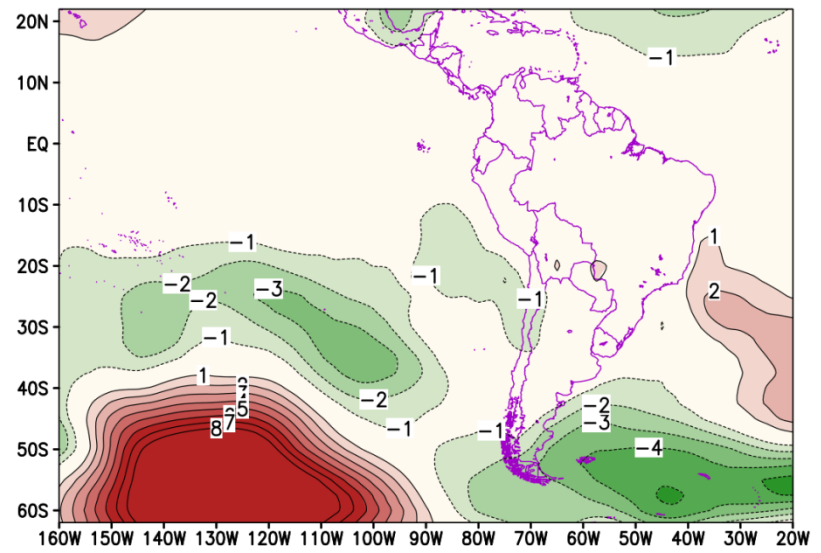
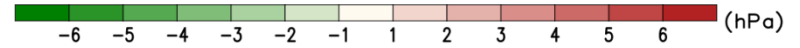
CLIMATOLOGIA DE LA PRESION A NIVEL DEL MAR – ENERO



ANOMALIA DE LA PRESION A NIVEL DEL MAR – 2016 DICIEMBRE

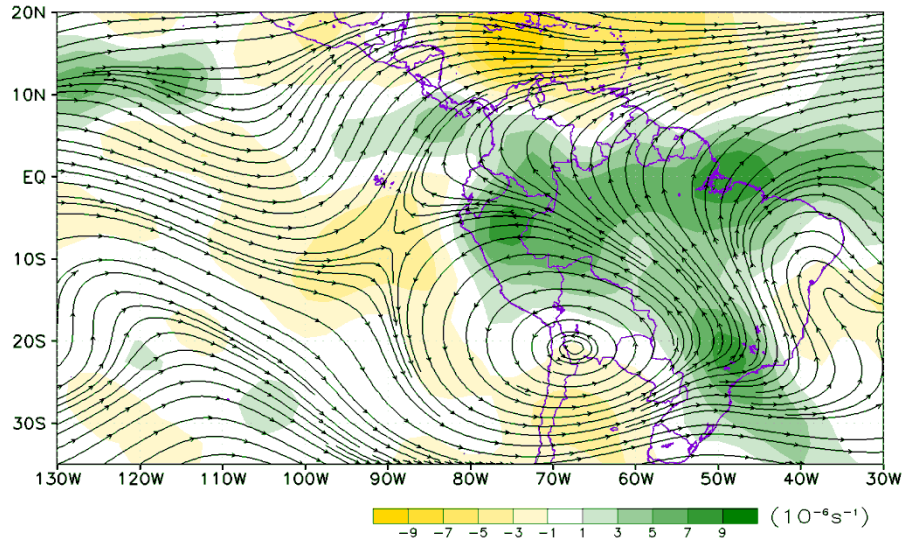


ANOMALIA DE LA PRESION A NIVEL DEL MAR – 2017 ENERO

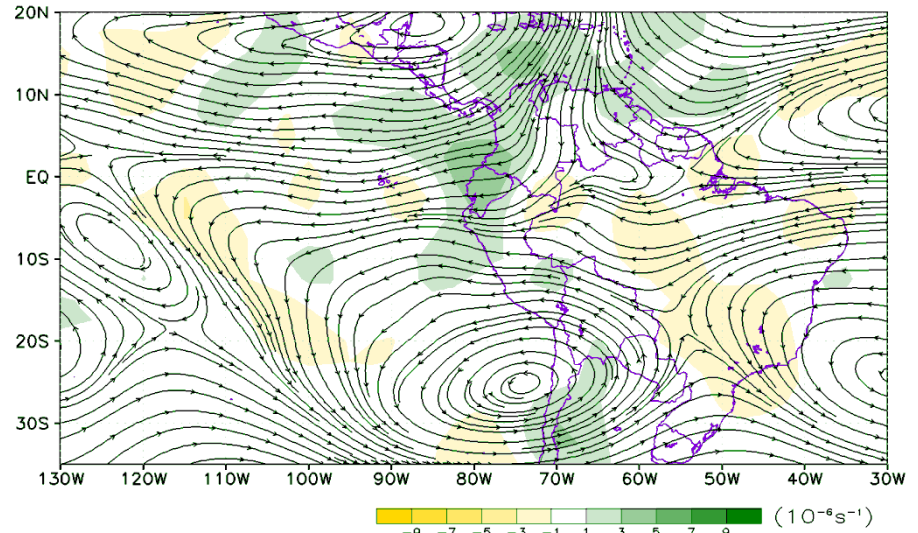


CIRCULACION SOBRE SUDAMERICA

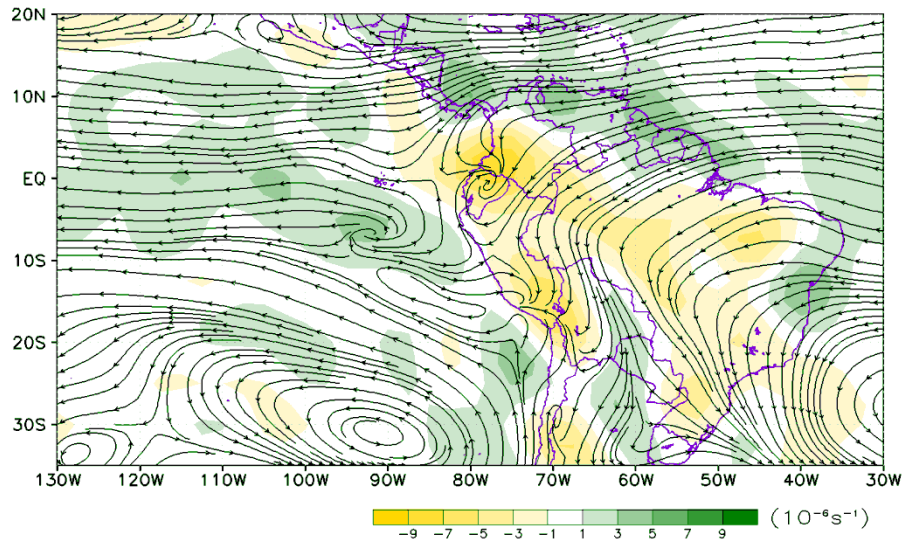
NCEP-NOAA / SENAMHI -DCL
VIENTO PROMEDIO a 200hPa ENERO 2017



NCEP-NOAA / SENAMHI -DCL
VIENTO PROMEDIO a 500hPa ENERO 2017



NCEP-NOAA / SENAMHI -DCL
VIENTO PROMEDIO a 850hPa ENERO 2017



NCEP-NOAA / SENAMHI -DCL
VIENTO PROMEDIO a 925hPa ENERO 2017

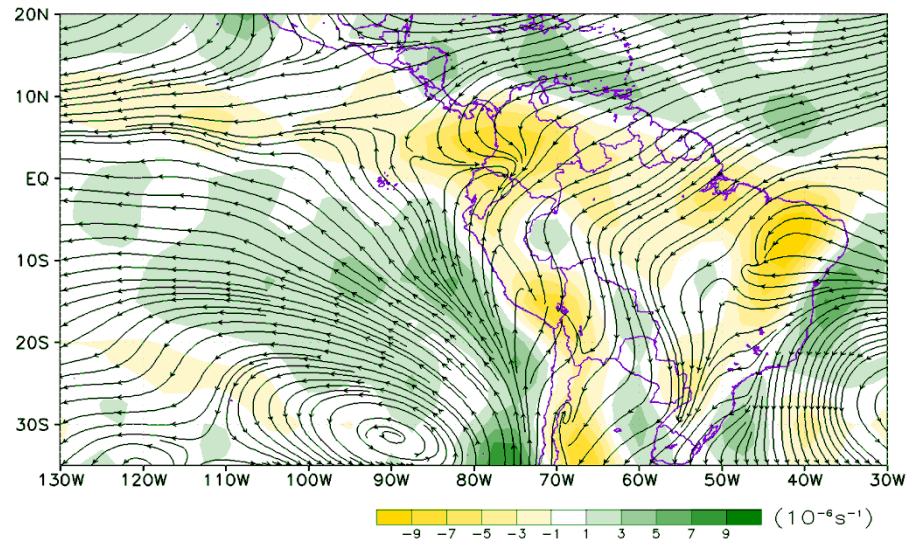
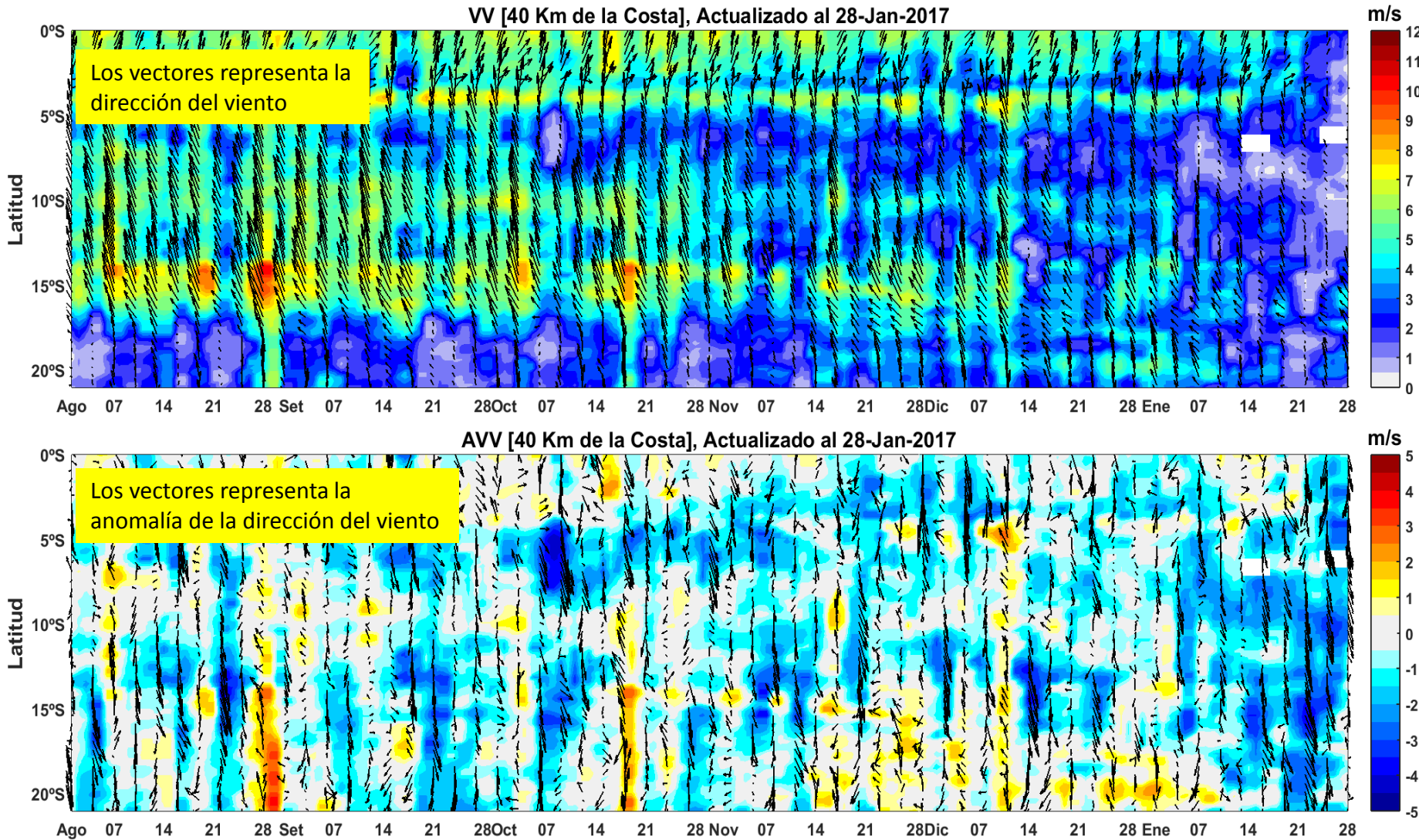


Diagrama Hovmöller de la Velocidad y Anomalías del Viento Satelital a 40 km de la costa (últimos 180 días)

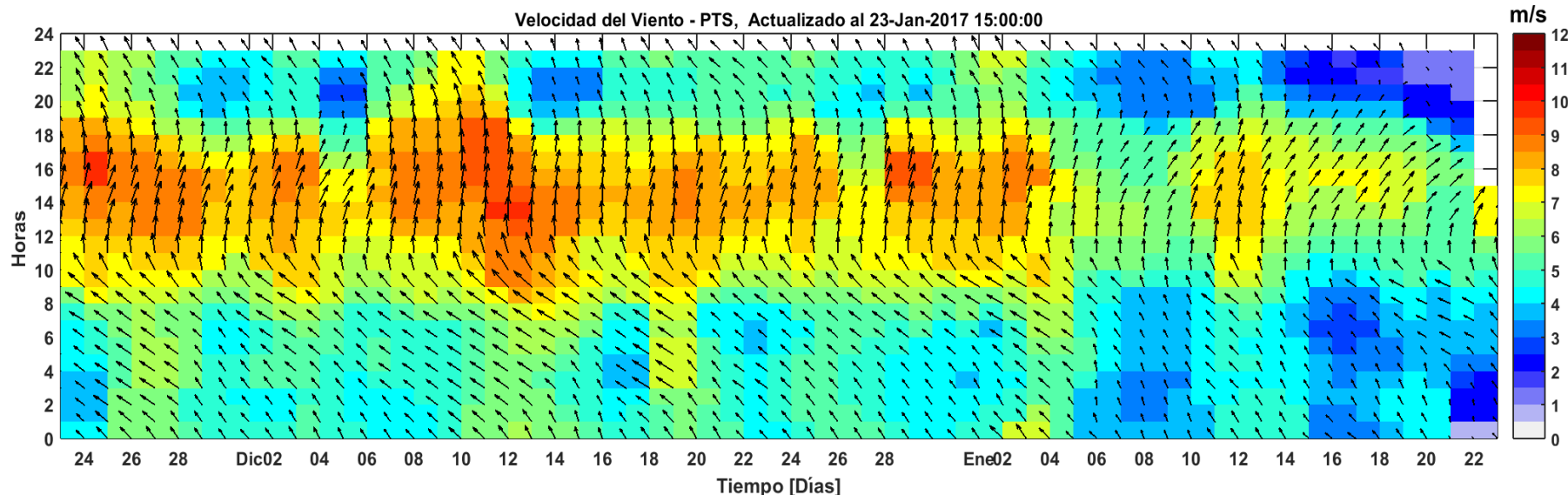




Monitoreo del Viento Costero en el Norte del Perú

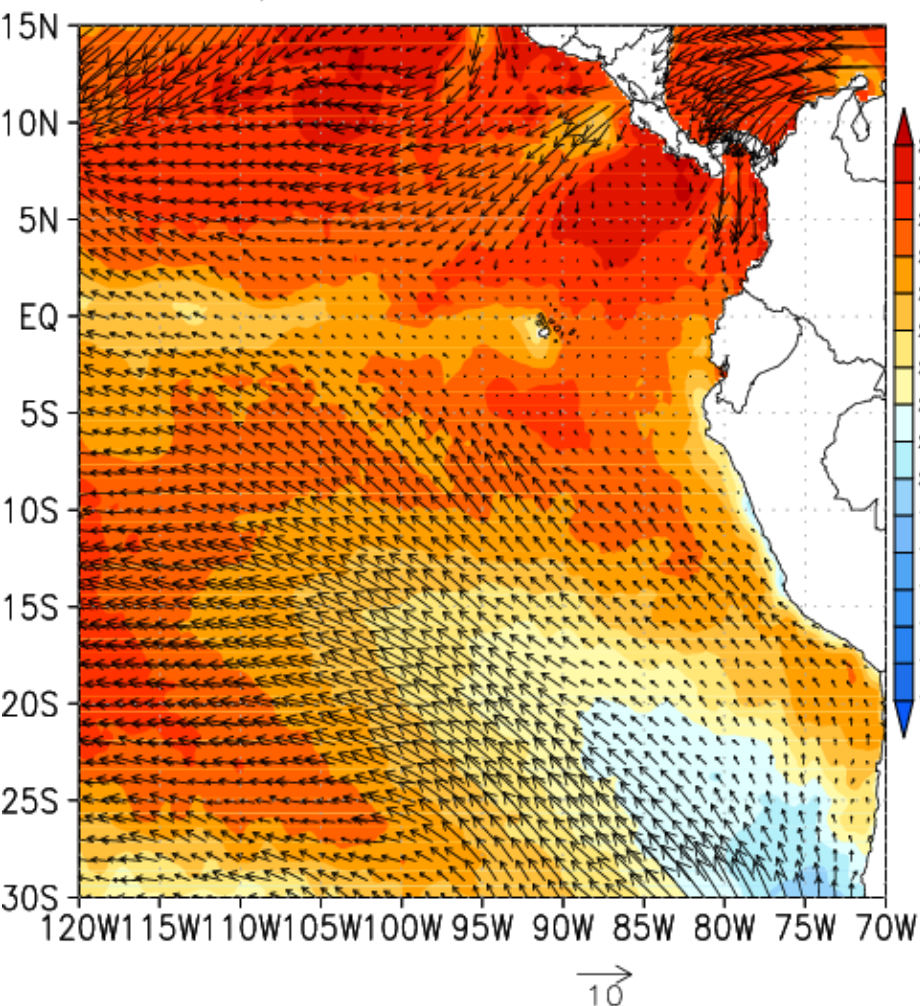


PTS - Talara



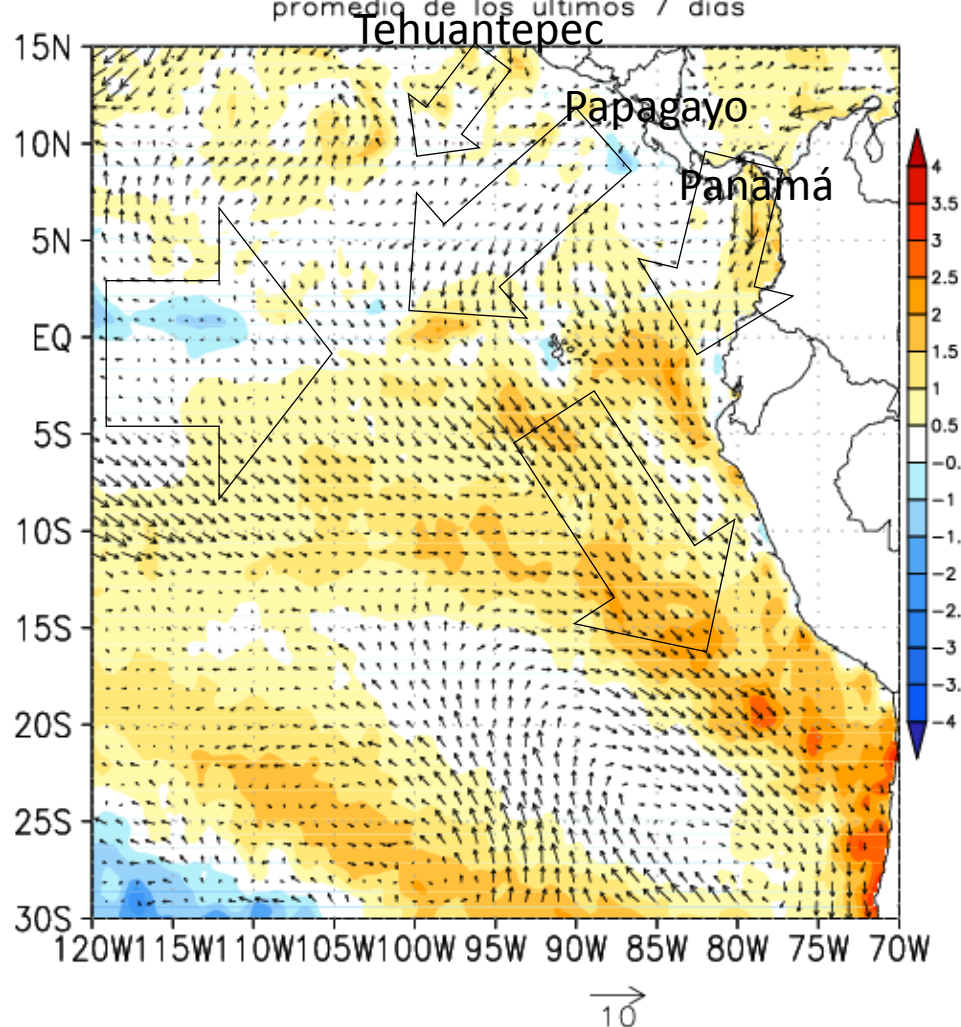
Vientos registrados en PTS en Talara (SAVIA Perú S.A.C): Procesamiento: Laboratorio de Hidro-Física Marina, IMARPE.

Temperatura superficial del mar (C)
Esfuerzo de viento ($N \cdot m^{-2} \cdot 10^{-2}$)
promedio de los últimos 7 días



Fuente: TSM(AVHRR-NCDC), clim: 1982-2011
vientos(ASCAT-Ifremer), clim 2008-2014 corregido con ERA

Anomalia de temperatura superficial del mar (C)
Anomalia del esfuerzo de viento ($N \cdot m^{-2} \cdot 10^{-2}$)
promedio de los últimos 7 días

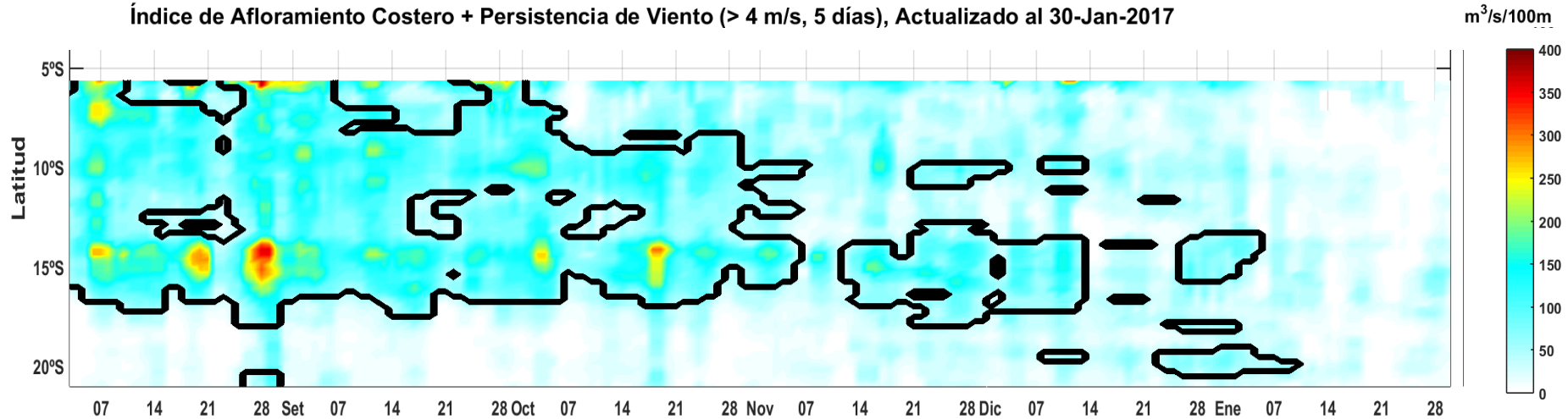


Ultimos datos: 31JAN2017

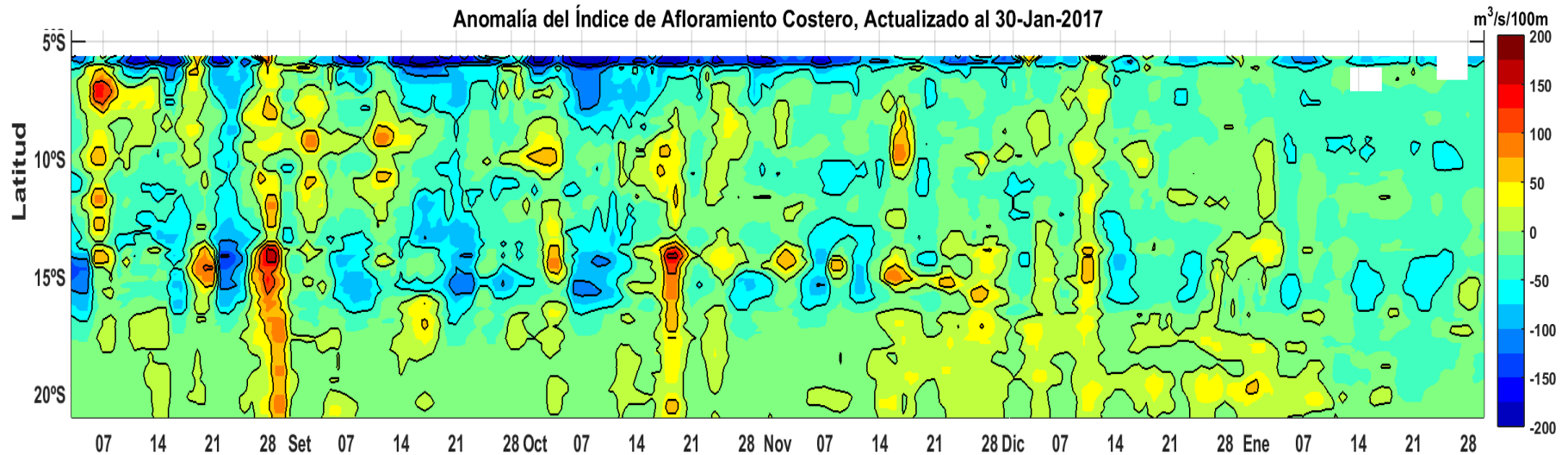
Diagrama Hovmöller del Índice de Afloramiento Costero (últimos 180 días)

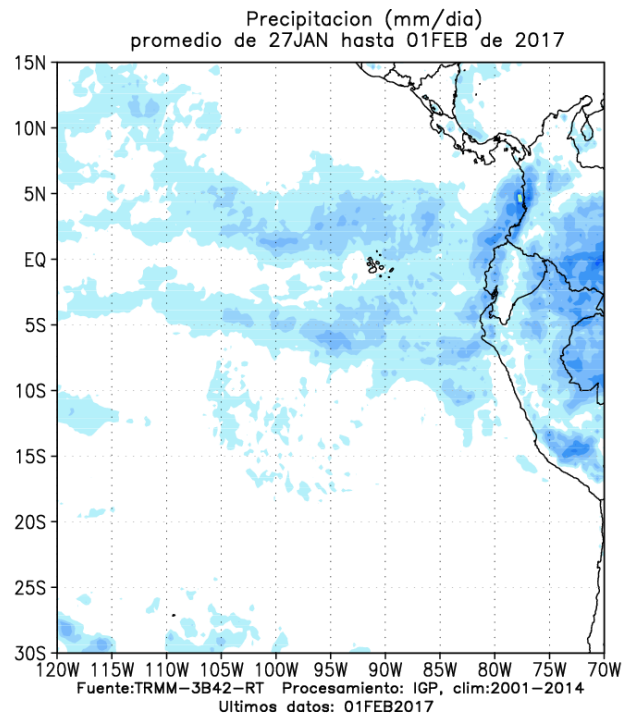
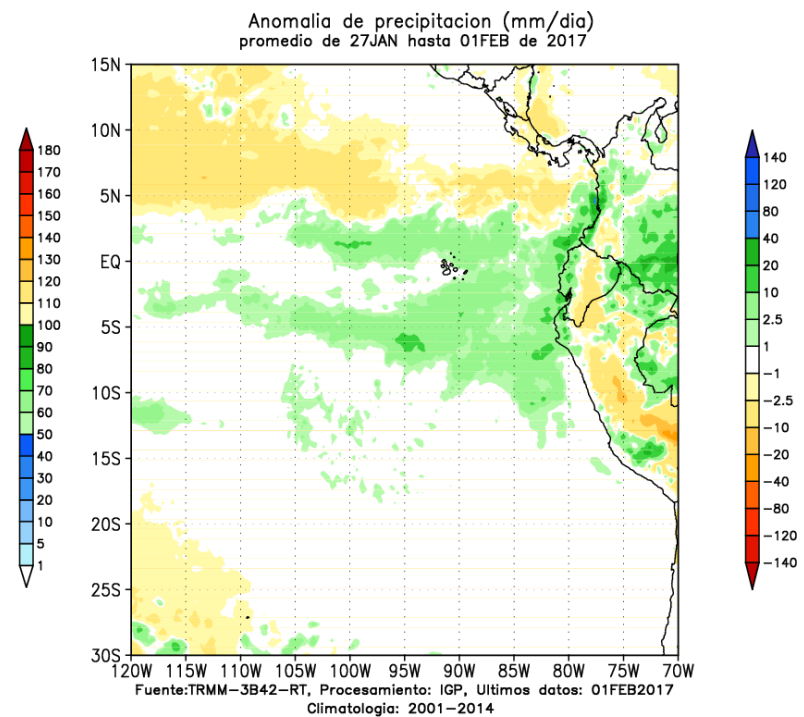
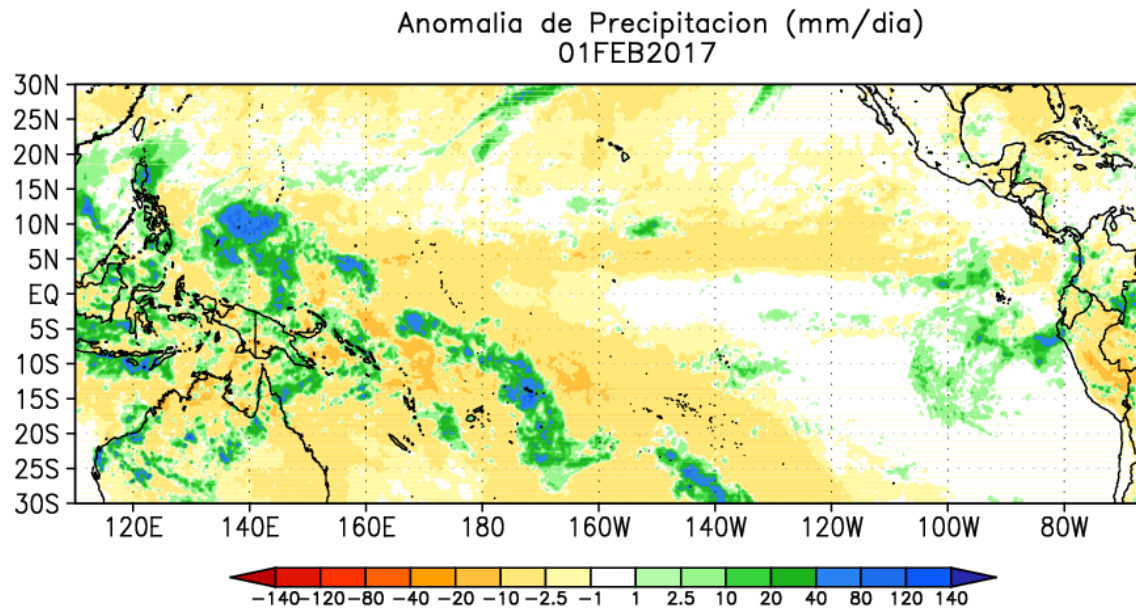


Índice de Afloramiento Costero + Persistencia de Viento (> 4 m/s, 5 días), Actualizado al 30-Jan-2017



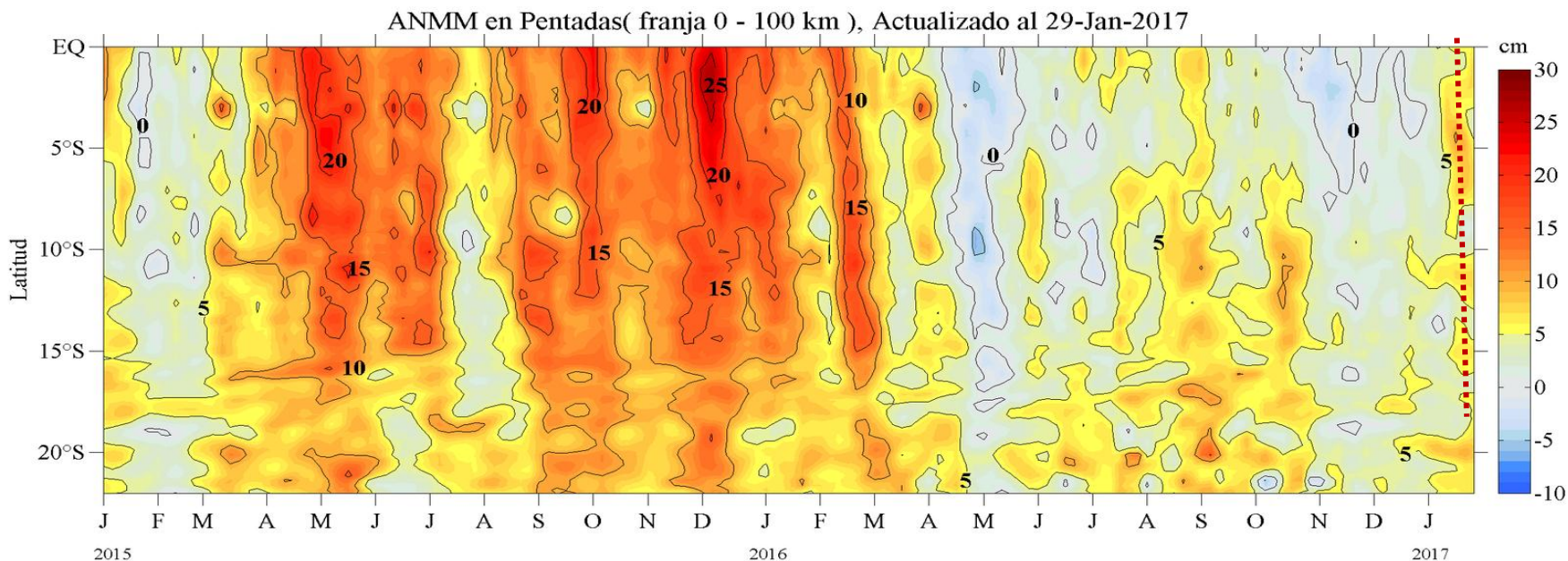
Anomalia del Índice de Afloramiento Costero, Actualizado al 30-Jan-2017



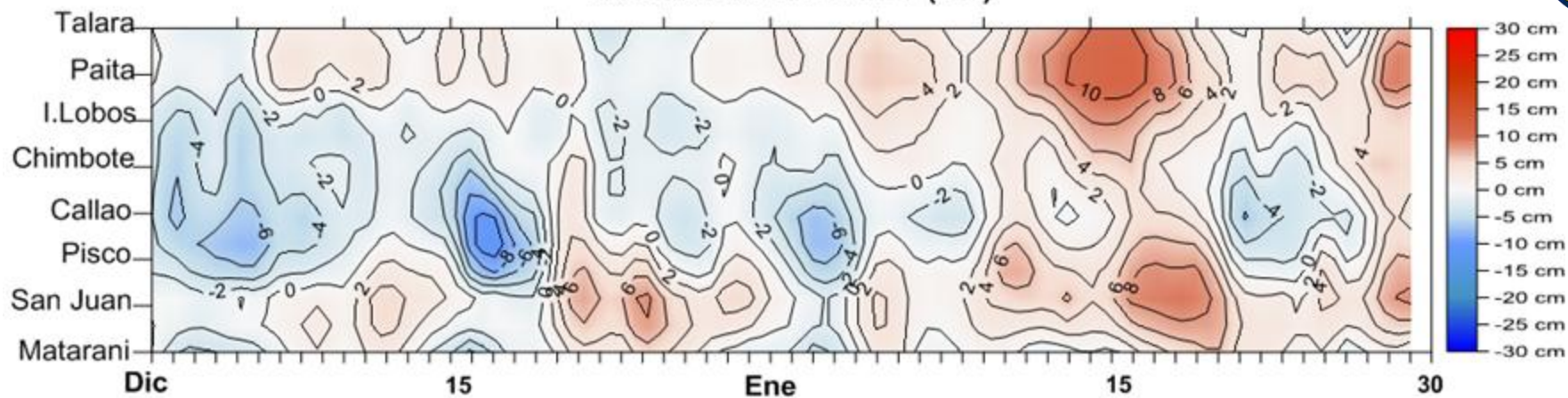


Fuente:TRMM-3B42-RT Procesamiento: IGP
Clim: 2001-2014,Ultimos datos: 01FEB2017

Anomalía del nivel medio del mar (datos satelitales)



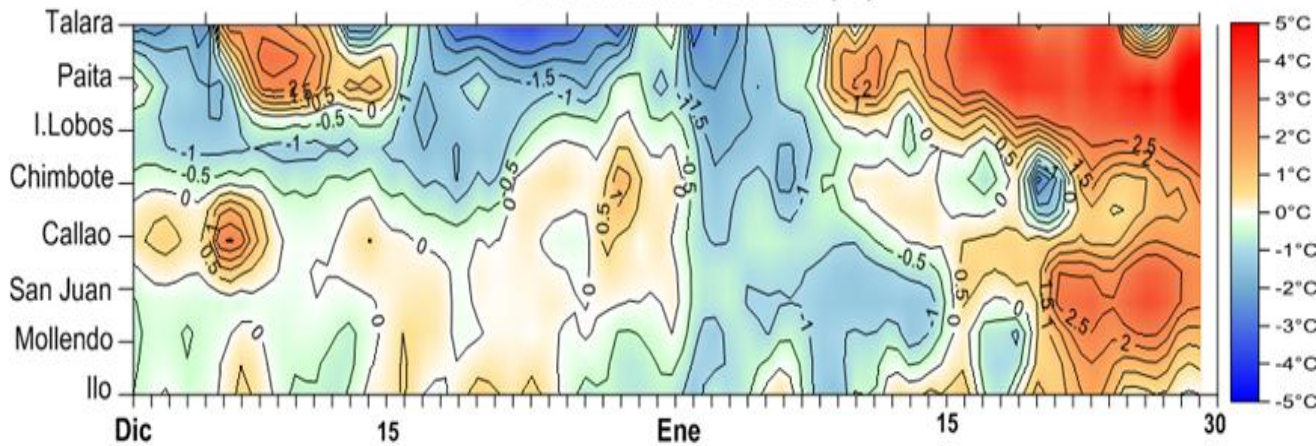
ANOMALÍA DEL NMM (cm)



Anomalías de la temperatura superficial del mar frente a la costa peruana

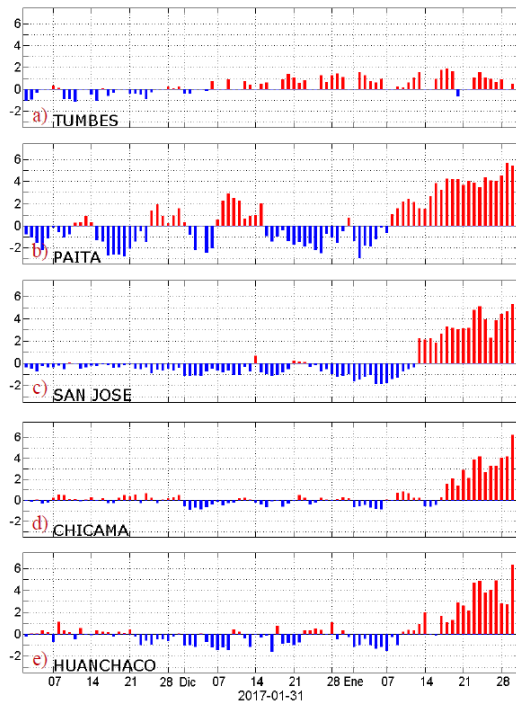
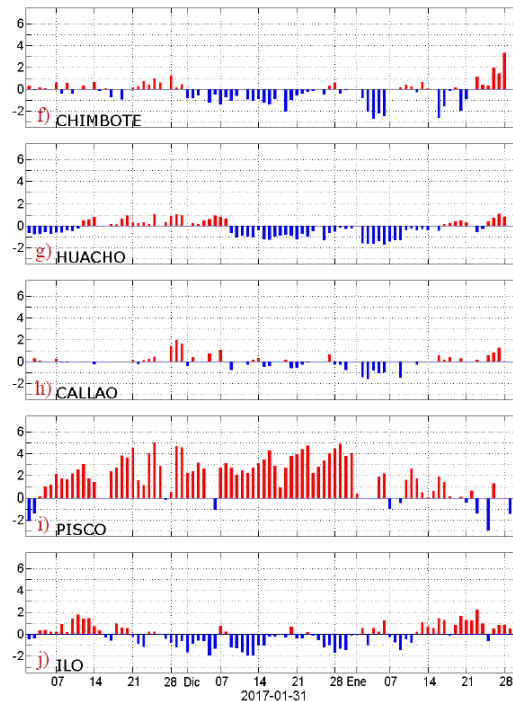
ANOMALÍA DE LA TSM (°C)

DHN



Promedios Diarios TSM		
Estación	Martes 31 Enero 2017	
	TSM (°C)	ATSM(°C)
Talara	25.5	+4.9
Paita	28.0	+7.3
Chimbote	24.5	+2.7
Callao	18.0	+1.7
San Juan	16.3	+0.6
Ilo	17.8	+0.7

31.01.2017

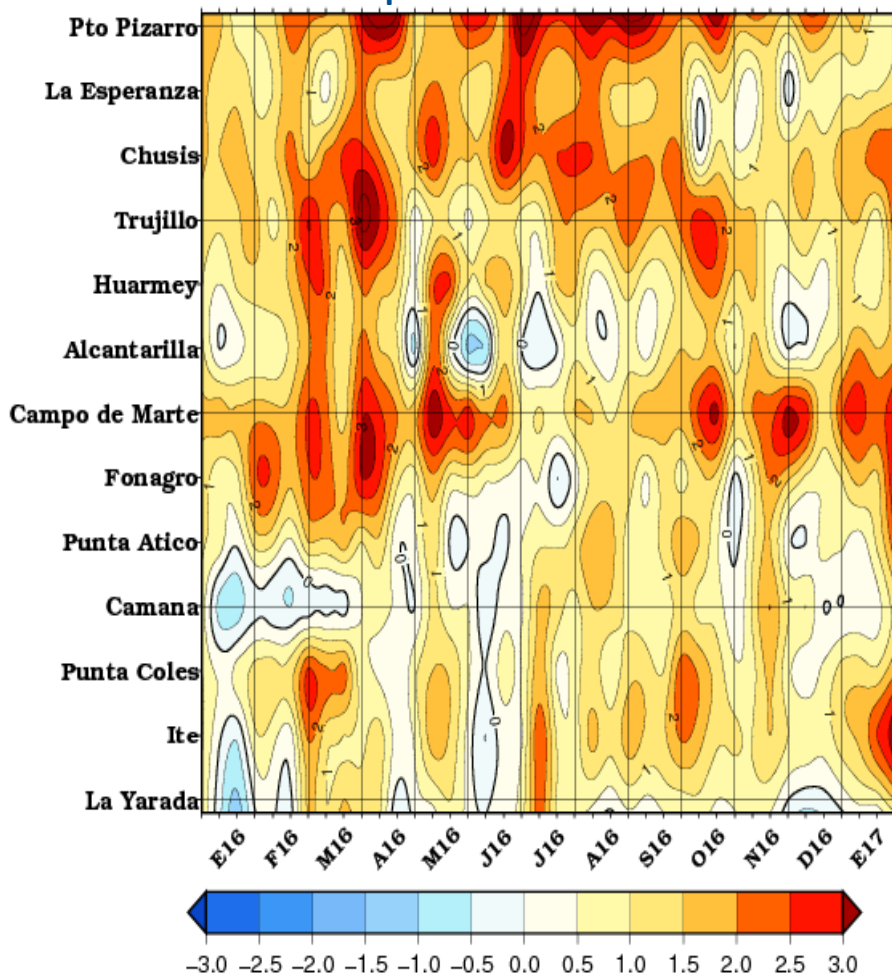


Estación	T, °C	ΔT, °C
Tumbes	28,33	0,93
Paita	27,20	6,60
San José	26,40	5,60
Chicama	23,77	6,37
Huanchaco	22,73	5,33
Chimbote	24,37	3,07
Huacho	18,53	1,23
Callao	17,67	1,37
Pisco	20,50	-2,20
Atico	16,97	-
Matarani	17,13	-
Ilo	18,60	1,40

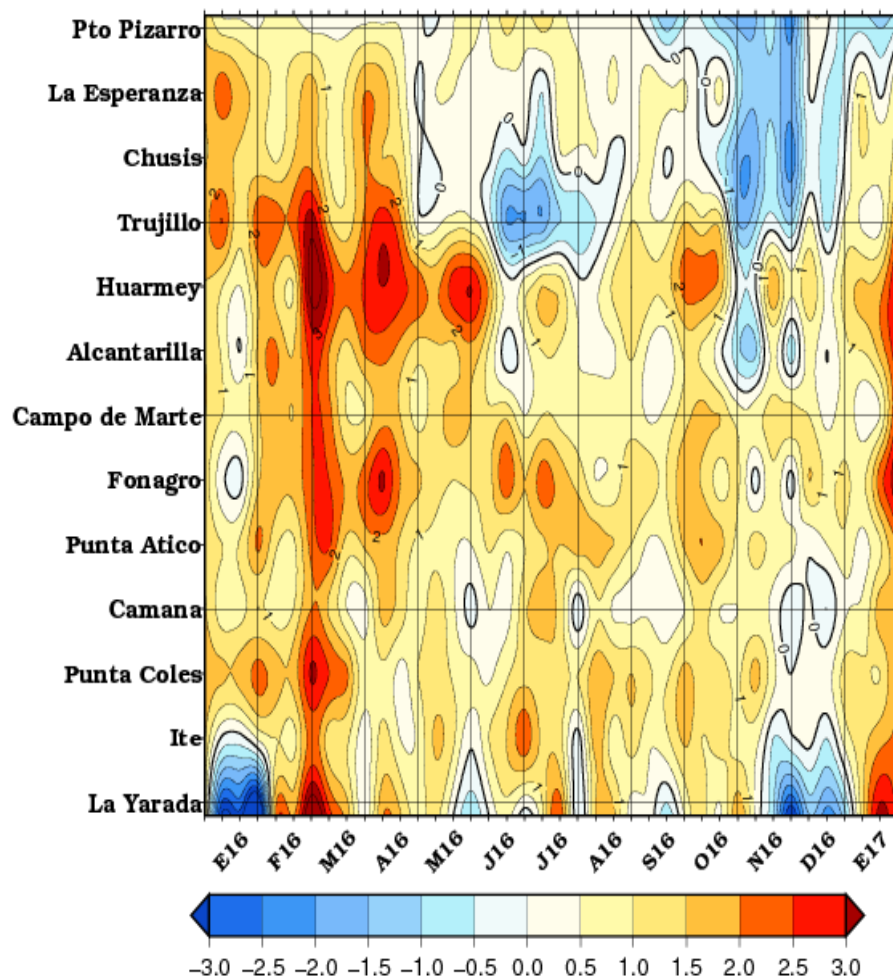
Imarpe

TEMPERATURAS EXTREMAS DEL AIRE

Anomalías de la
Temperatura Máxima



Anomalía de la
Temperatura Mínima



TEMPERATURAS EXTREMAS DEL AIRE

Figura 1

Distribución de las estaciones meteorológicas en el litoral peruano

ANOMALIAS PROMEDIO TEMPERATURA MÁXIMA		
Estación	DICIEMBRE 2016	ENE
Costa Norte	1.4	1.5
Costa Centro	1.2	1.9
Costa Sur	0.5	1.5

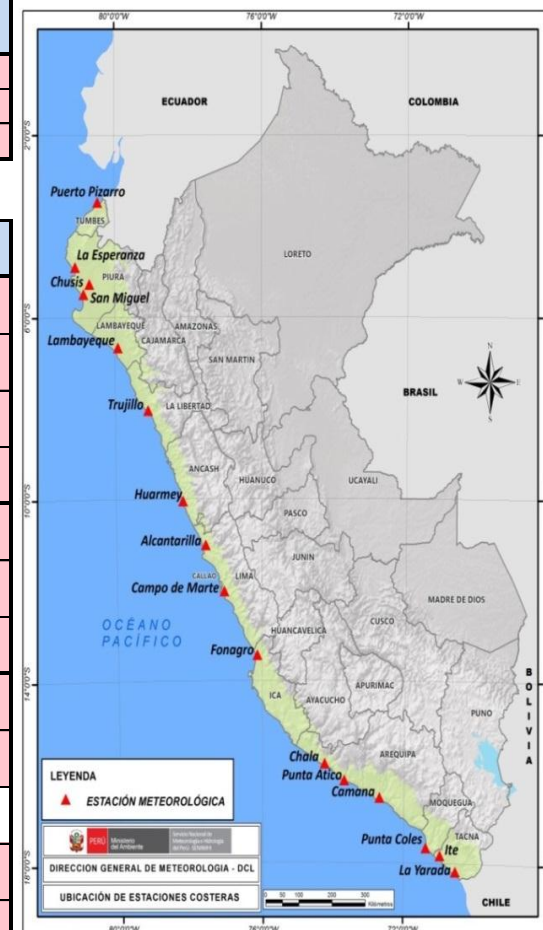
ANOMALIAS PROMEDIO TEMPERATURA MÁXIMA		
Estación	DICIEMBRE 2016	ENE
Costa Norte	1.4	1.5
Costa Centro	1.2	1.9
Costa Sur	0.5	1.5

DATA EXTENDIDA

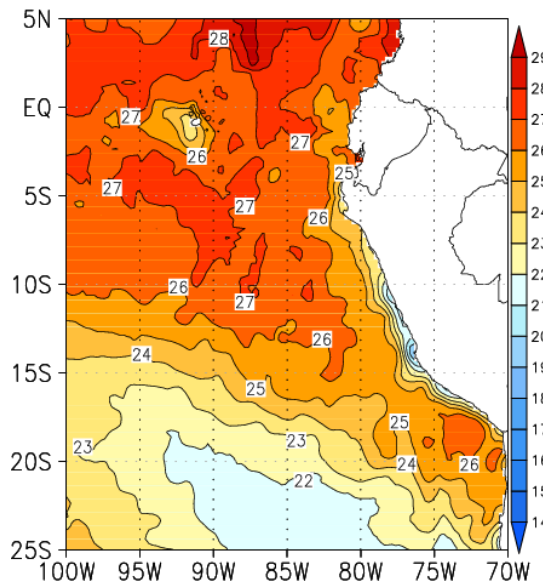
Estación	Dic_2016	ENE
Puerto Pizarro	1.8	1.1
La Esperanza	0.8	1.1
Chusis	1.5	2.2
Trujillo	1.3	1.6
Huarmey	0.7	1.2
Alcantarilla	0.7	1.8
Campo de Marte	2.1	2.7
Fonagro	0.8	2.1
Punta Atico	0.4	1.3
Camana	0.5	0.5
Punta Coles	0.7	1.4
Ite	0.9	2.5
La Yarada	-0.1	1.0

DATA EXTENDIDA

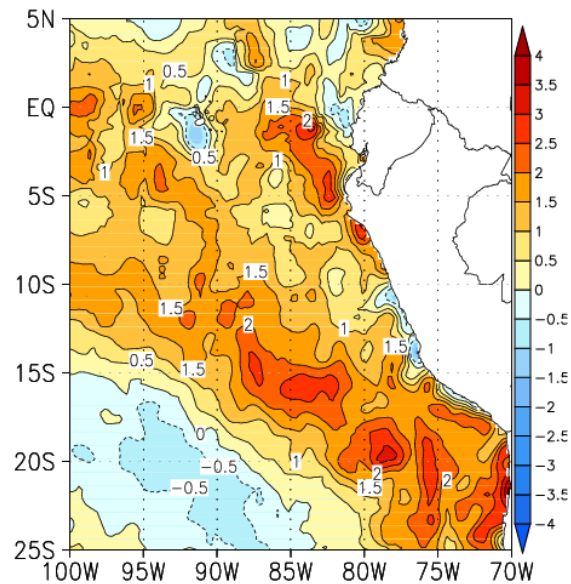
Estación	Dic_2016	ENE
Puerto Pizarro	1.8	1.1
La Esperanza	0.8	1.1
Chusis	1.5	2.2
Trujillo	1.3	1.6
Huarmey	0.7	1.2
Alcantarilla	0.7	1.8
Campo de Marte	2.1	2.7
Fonagro	0.8	2.1
Punta Atico	0.4	1.3
Camana	0.5	0.5
Punta Coles	0.7	1.4
Ite	0.9	2.5
La Yarada	-0.1	1.0



Temperatura superficial del mar(C)
31JAN2017

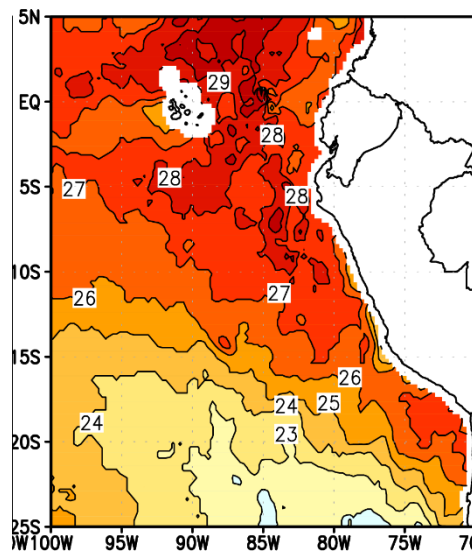


Anomalia de temperatura superficial del mar
31JAN2017

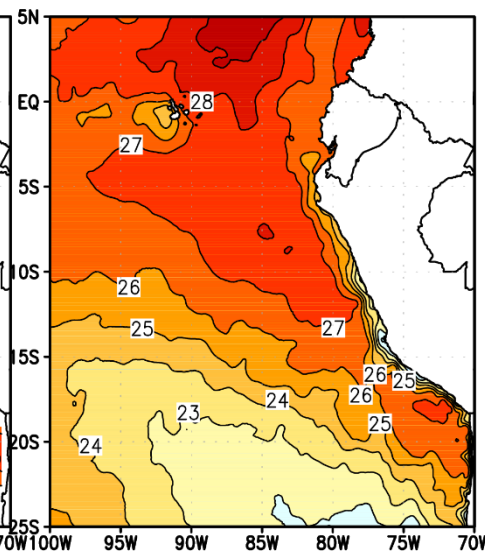
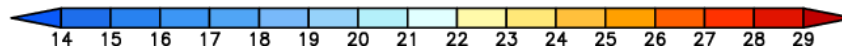


Fuente:TSM de AVHRR-NOAA, Procesamiento: IGP
Clim: 1982-2011,Ultimos datos: 31JAN2017

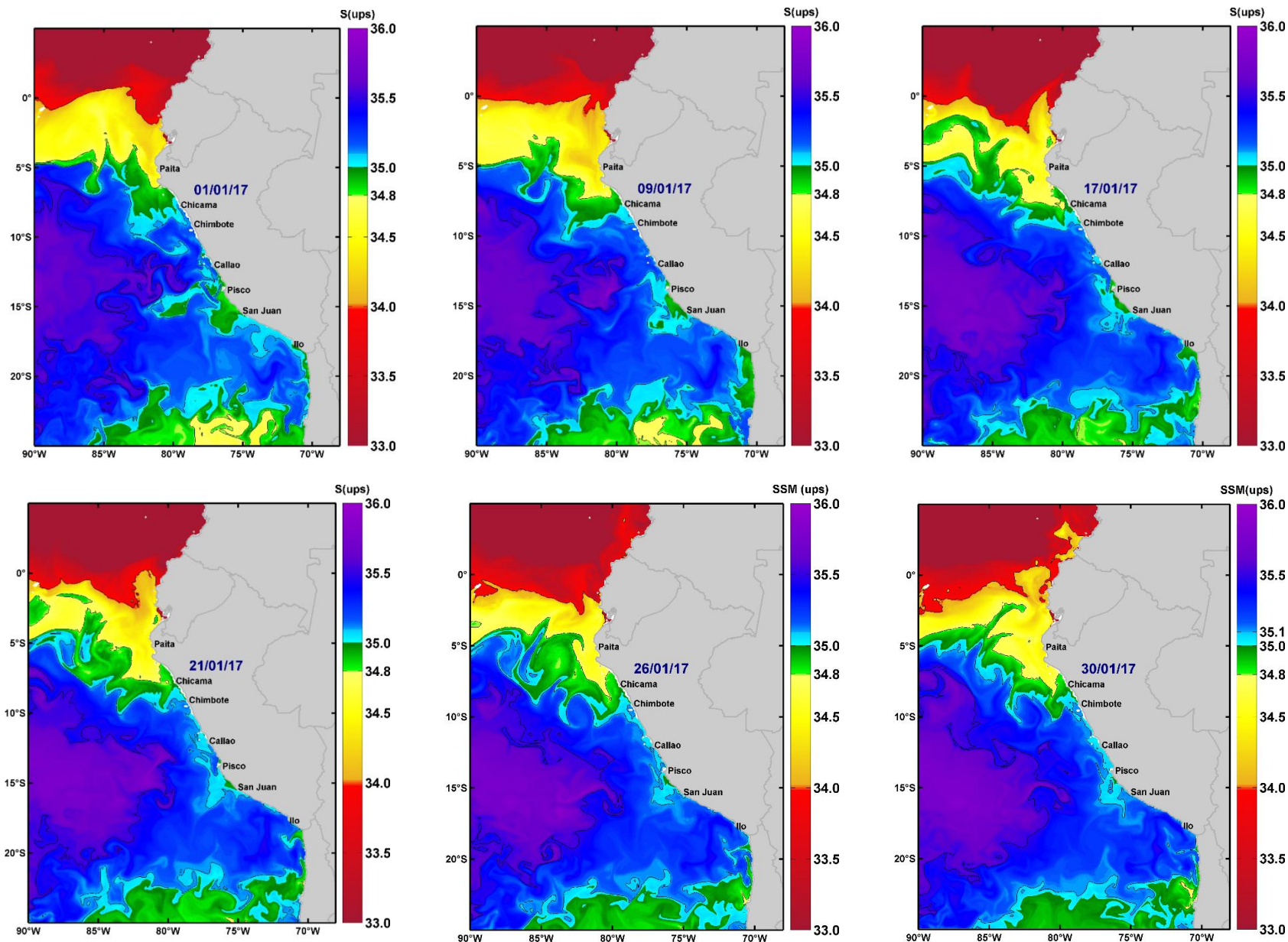
Temperatura superficial del Mar
RSS Microonda(MW)

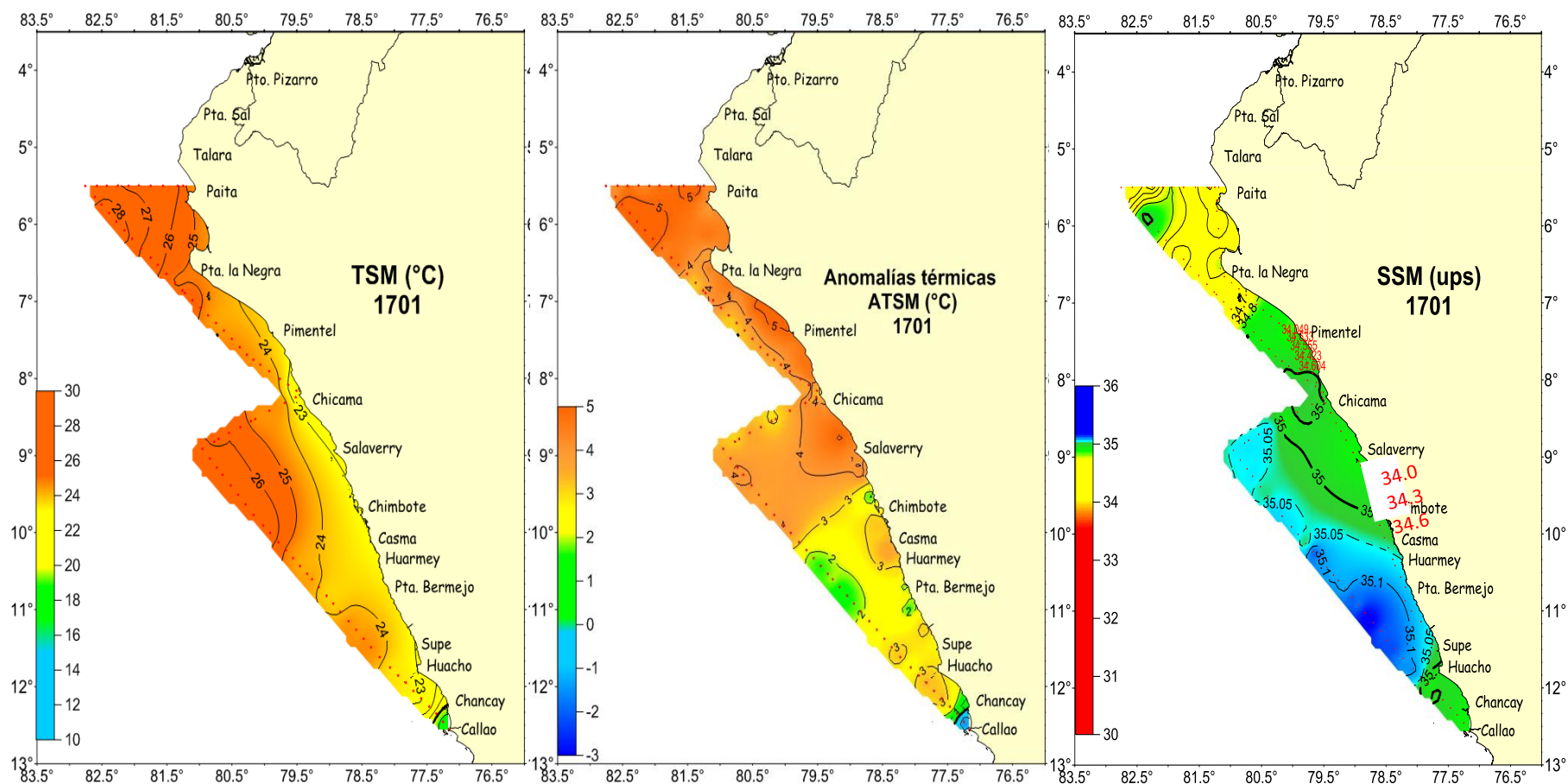


OSTIA

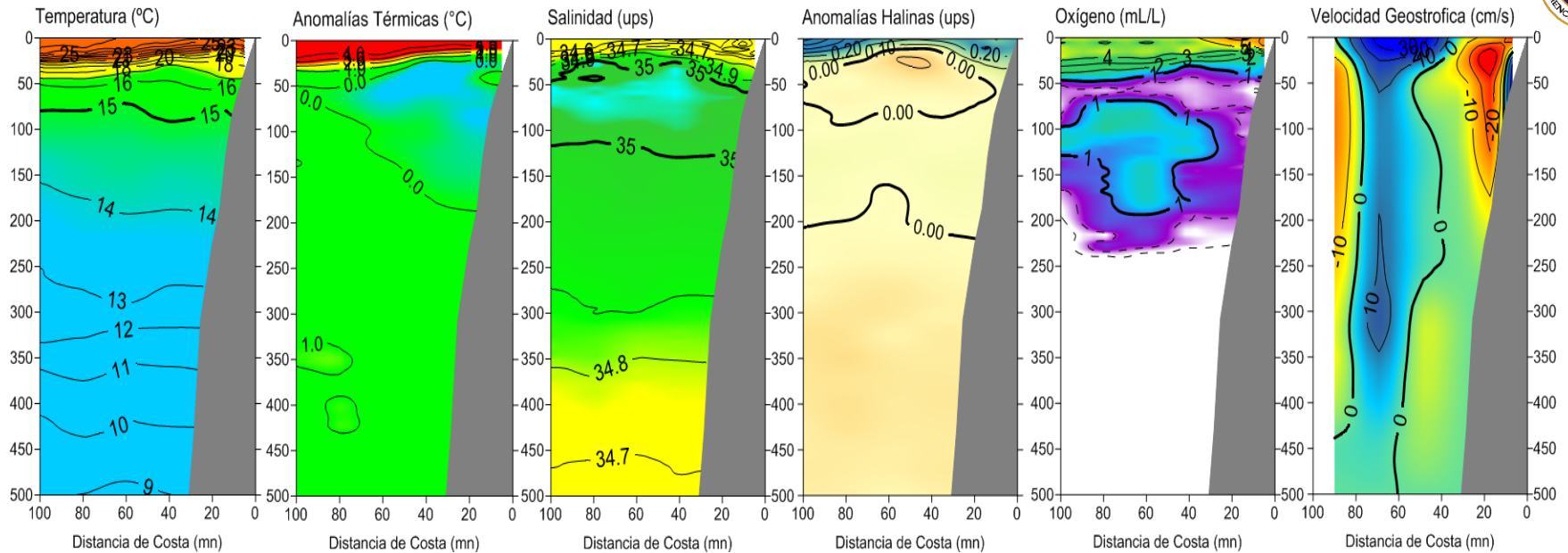


SALINIDAD SUPERFICIAL DEL MAR (HYCOM-NCODA)

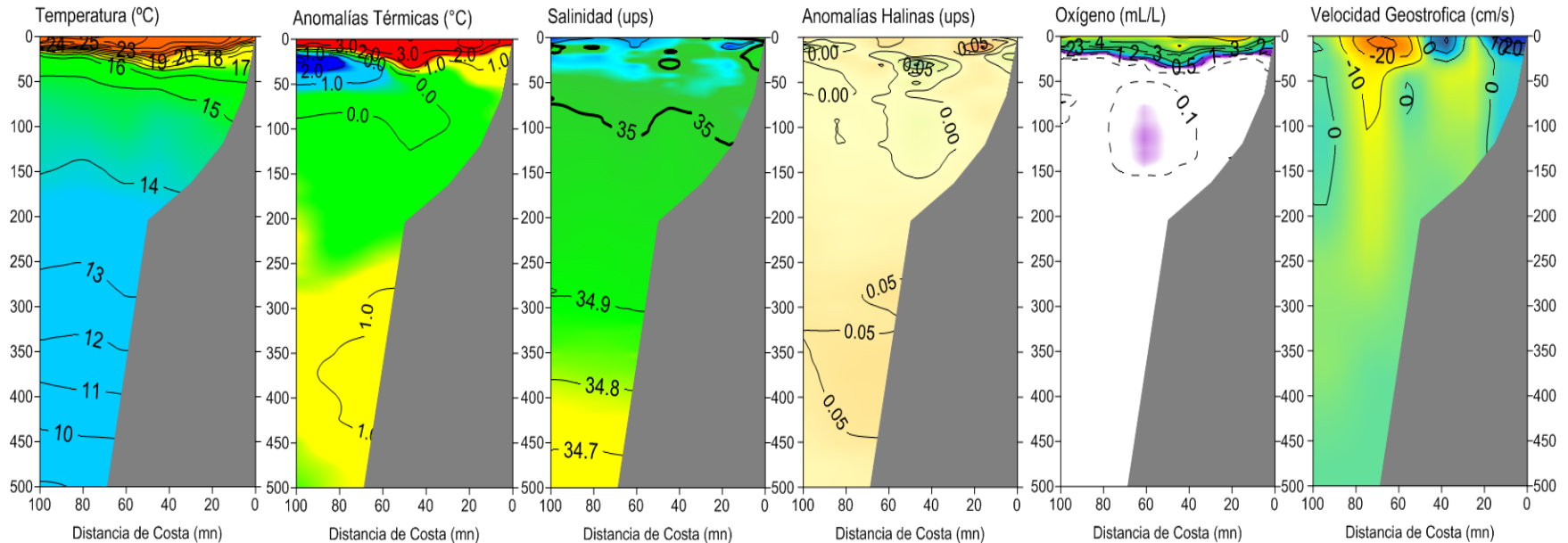




SECCION PAITA (27-28 Enero del 2017)



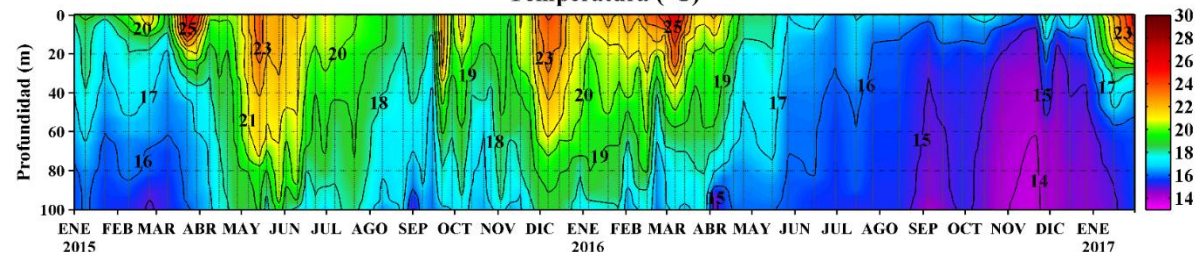
SECCION CHICAMA (25-26 de Enero del 2017)



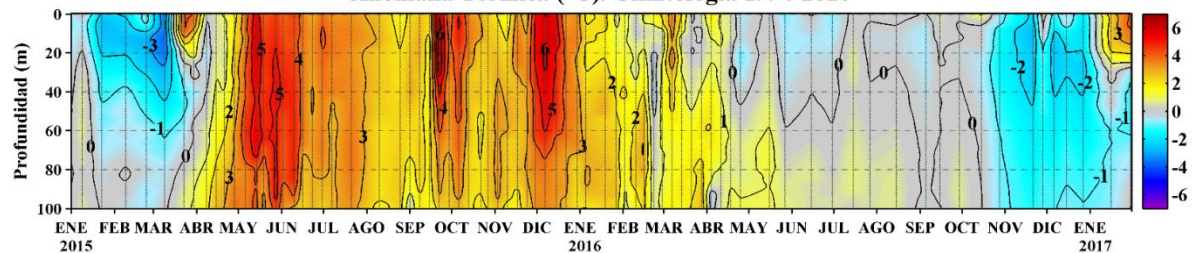
PUNTO FIJO DE PAITA (30 DE ENERO 2017)



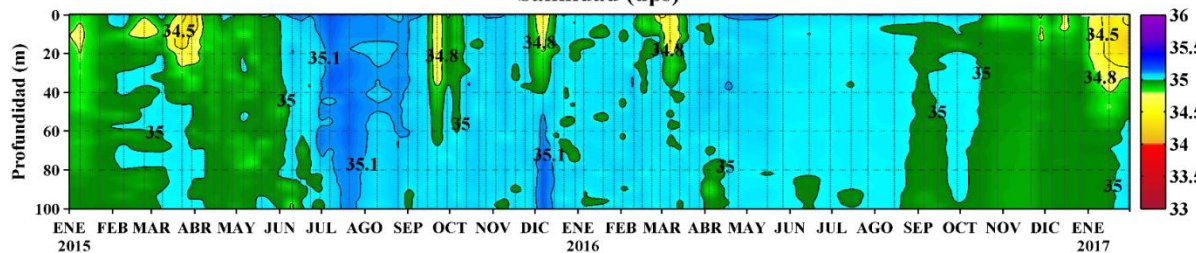
Temperatura (°C)



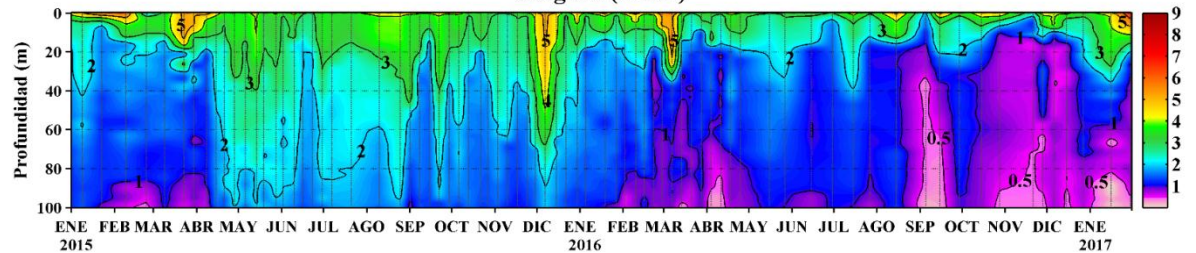
Anomalia Térmica (°C). Clima 1994-2010



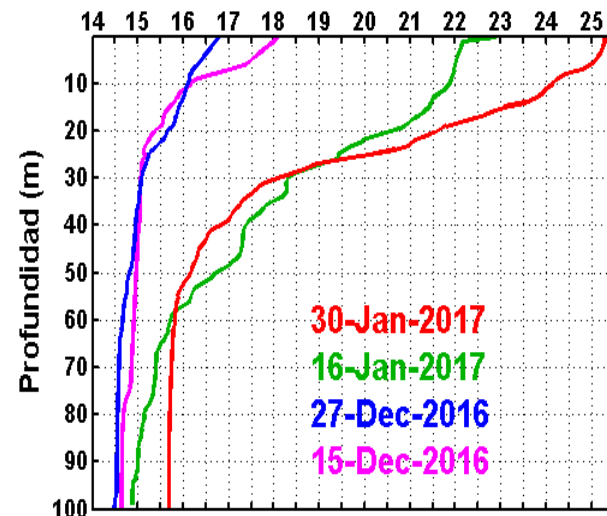
Salinidad (ups)



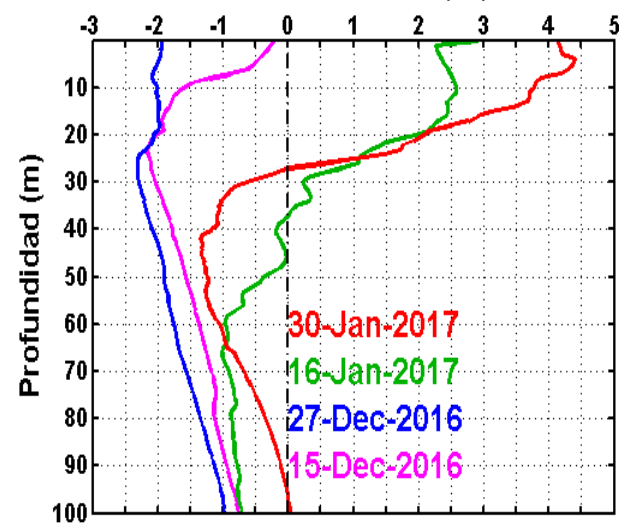
Oxígeno (mL/L)



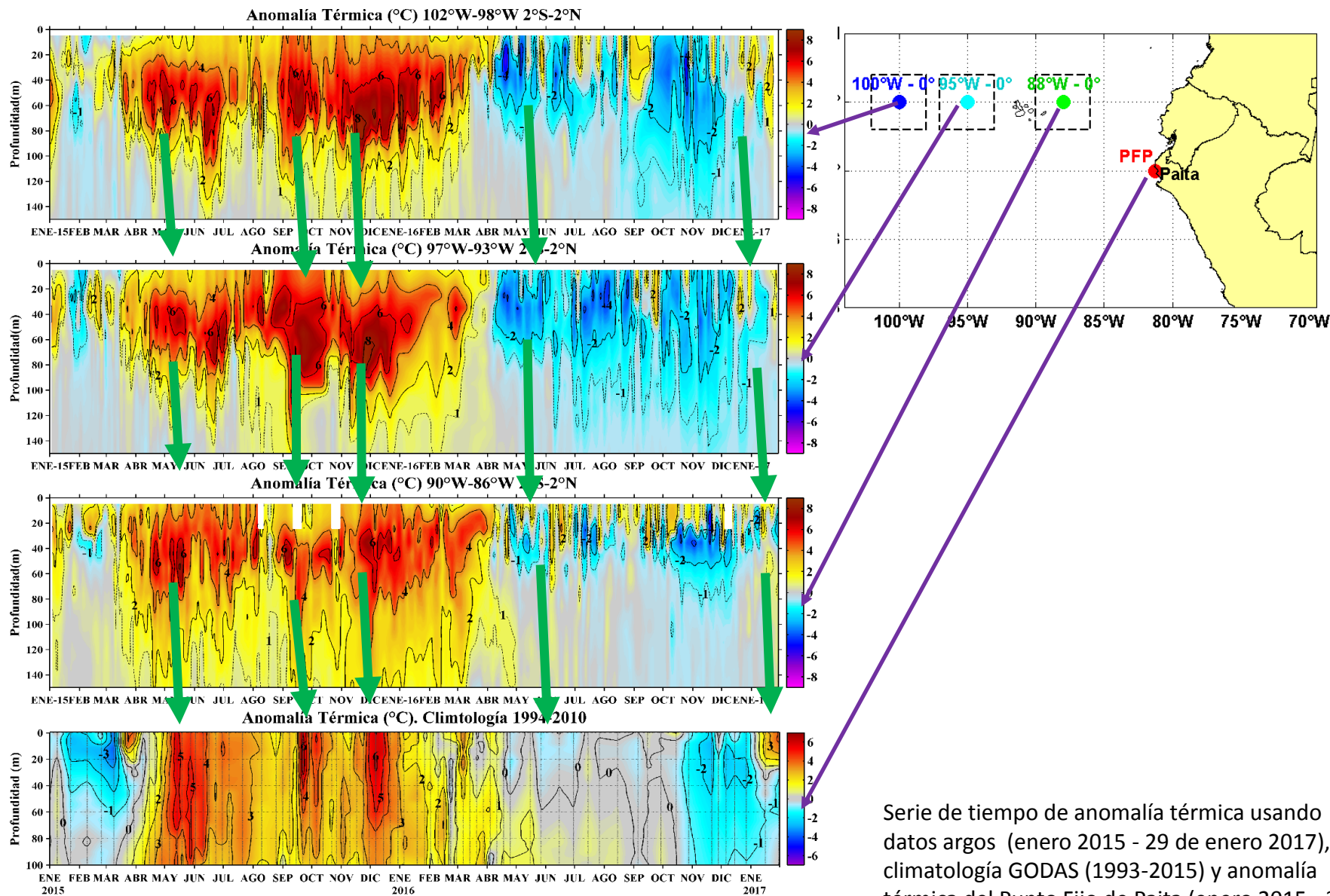
Temperatura (°C)



Anomalia Térmica (°C)



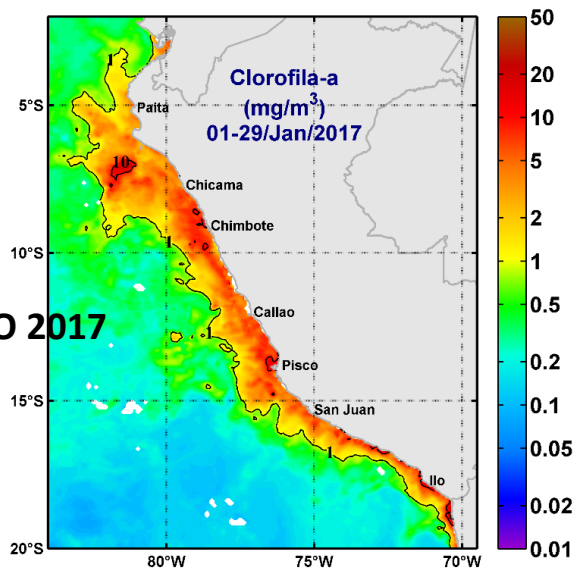
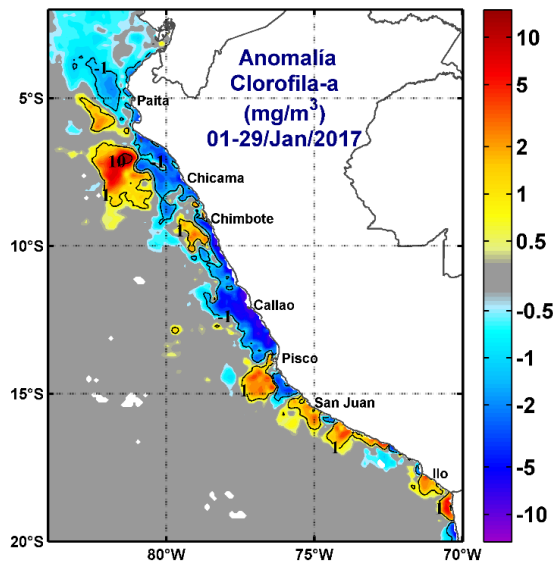
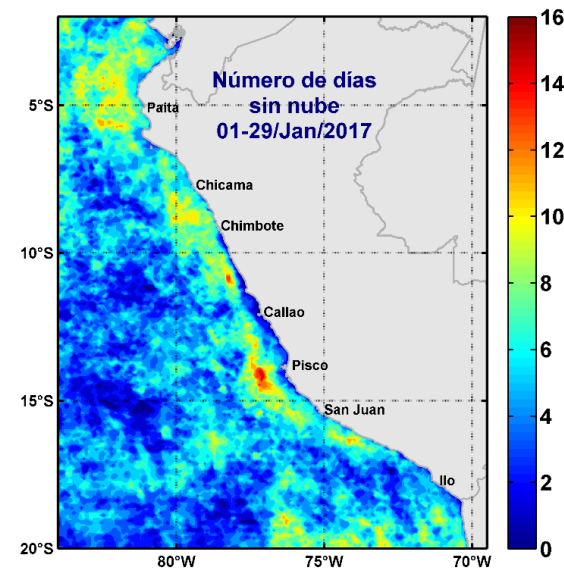
BOYAS ARGOS VS. PUNTO FIJO DE PAITA (30 DE ENERO 2017)



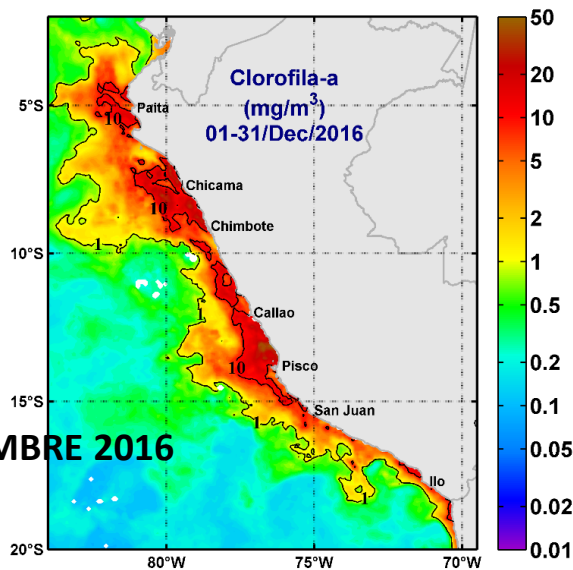
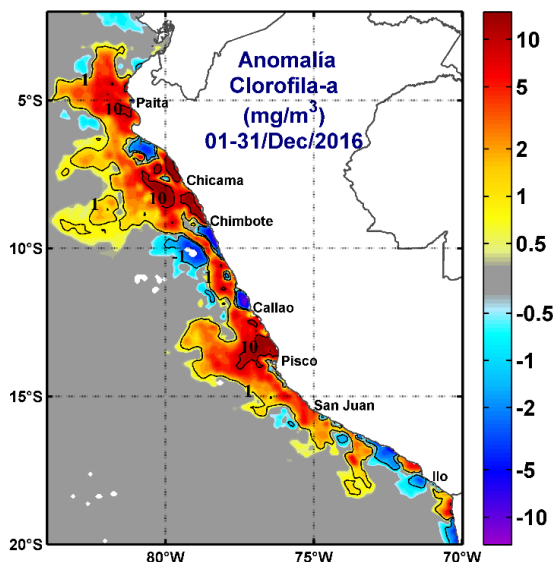
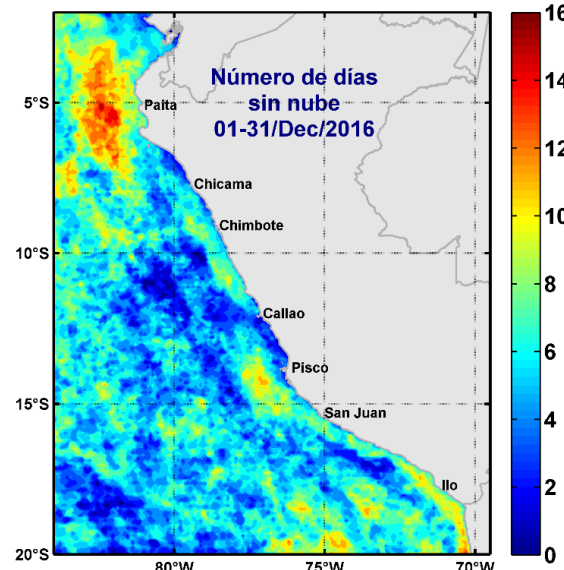
Serie de tiempo de anomalía térmica usando datos argos (enero 2015 - 29 de enero 2017), climatología GODAS (1993-2015) y anomalía térmica del Punto Fijo de Paita (enero 2015 - 30 de enero de 2017)

Clorofila-a en la superficie (MODIS)

ENERO 2017



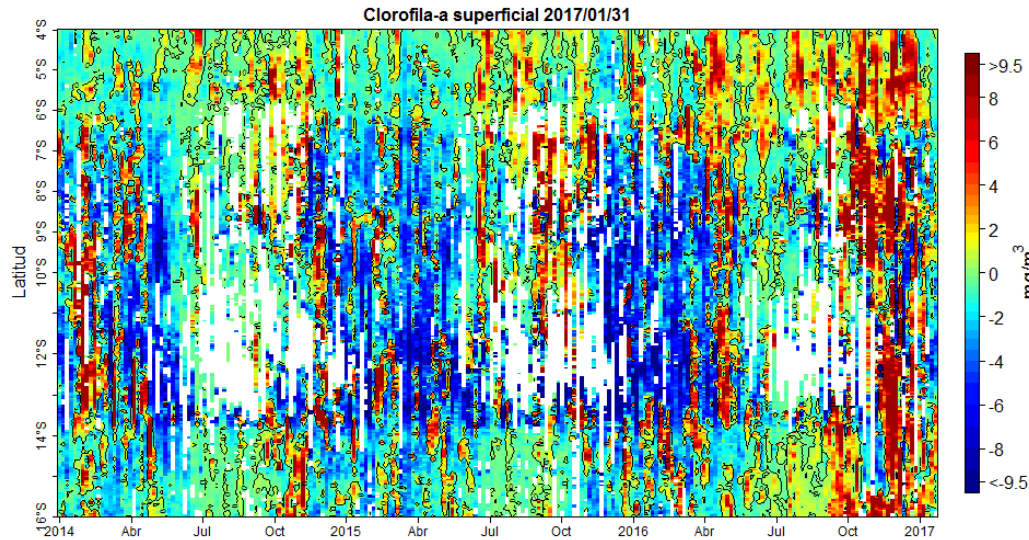
DICIEMBRE 2016



Clorofila-a en la superficie (MODIS)



A

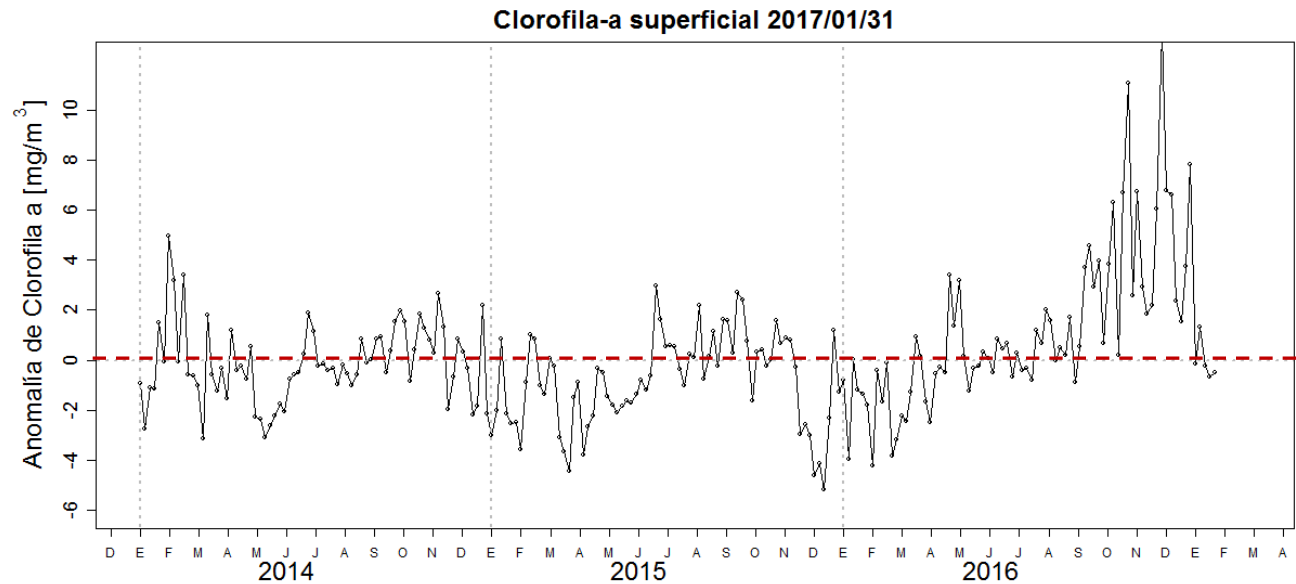


Fuente: Satélite MODIS – 4km

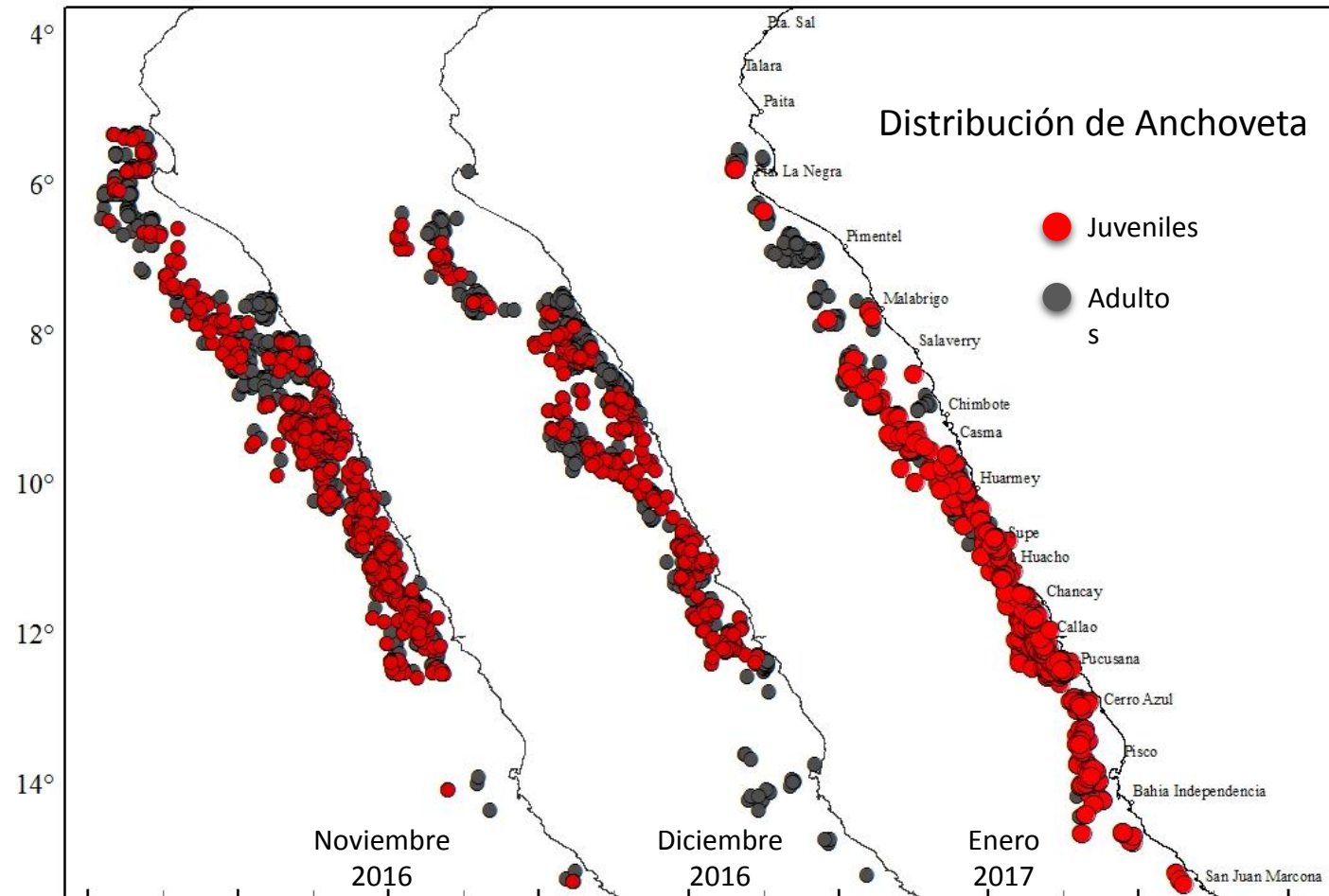
A) Hovmöller de cl-a mensual a lo largo de la costa (0-100km).

B) Promedio pentadal de anomalía de cl-a (0-100km, 4°S-16°S).

B



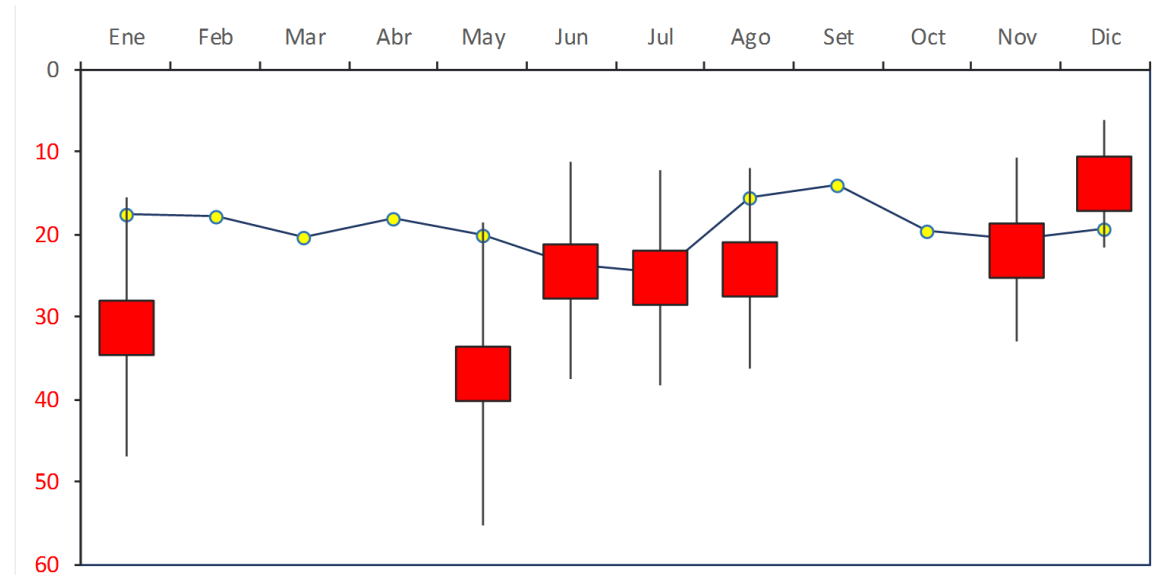
Segunda Temporada de Pesca de anchoveta 2016 - 2017



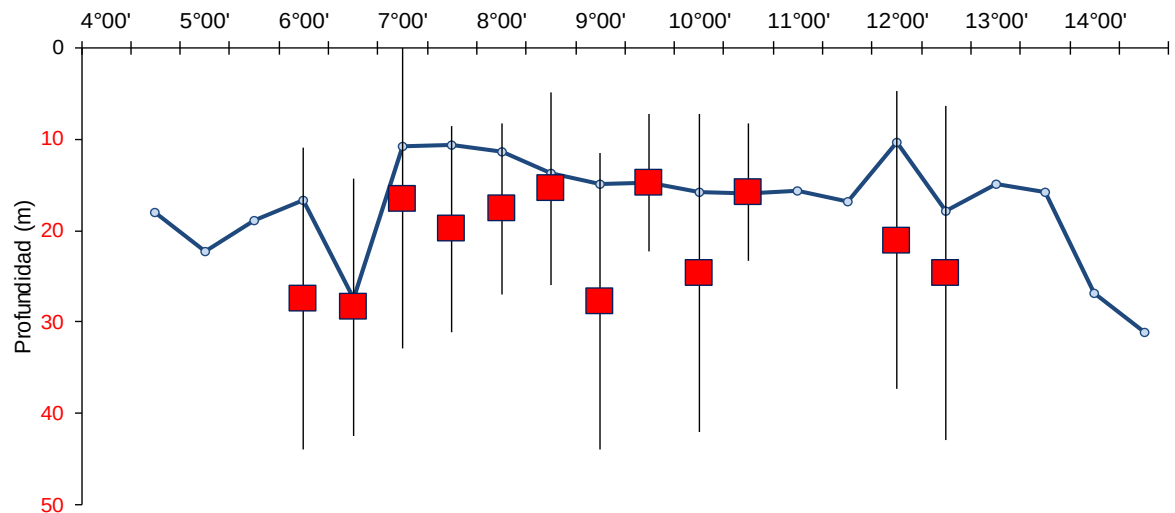
Segunda Temporada de Pesca de anchoveta 2016 - 2017



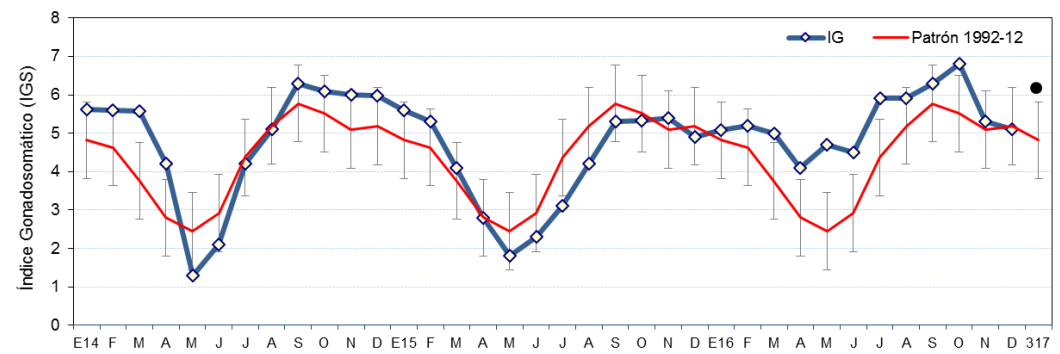
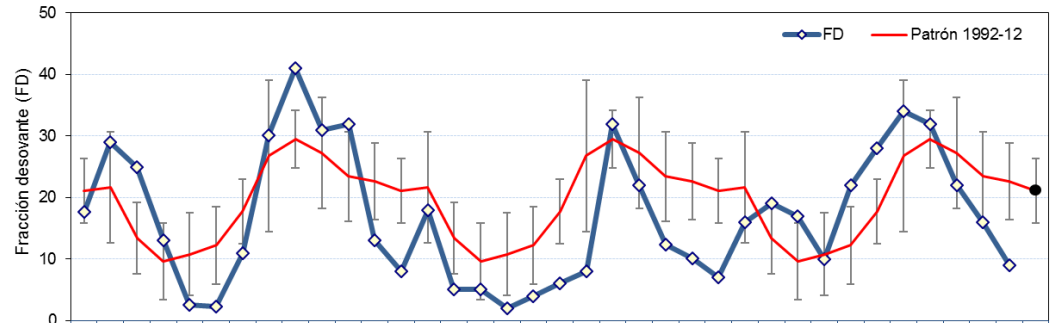
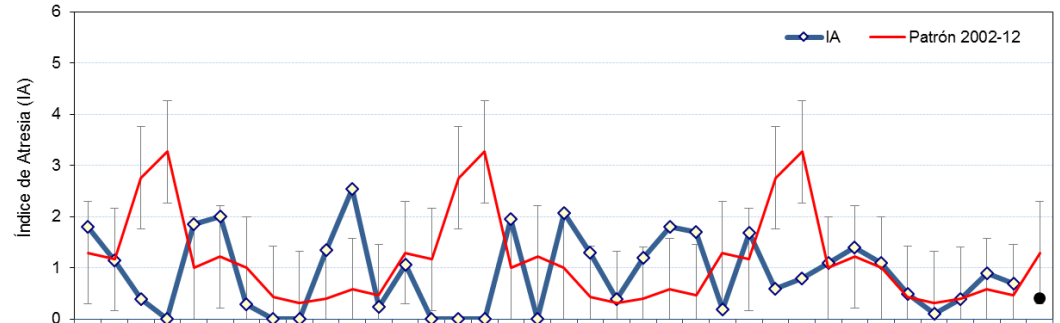
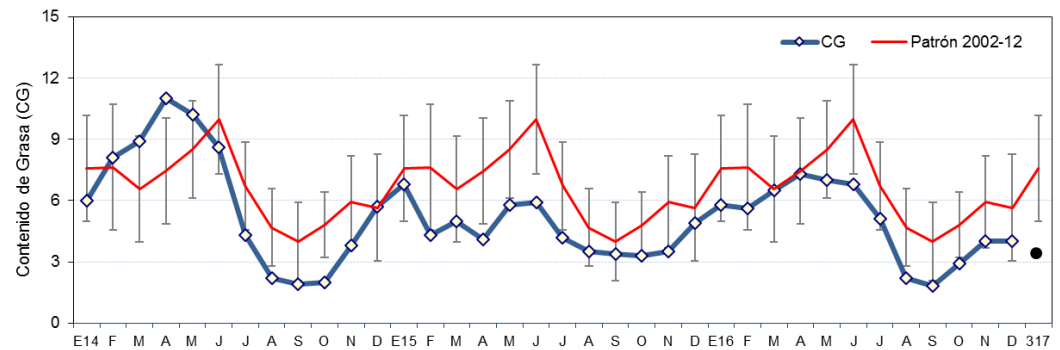
2016



Enero 2017

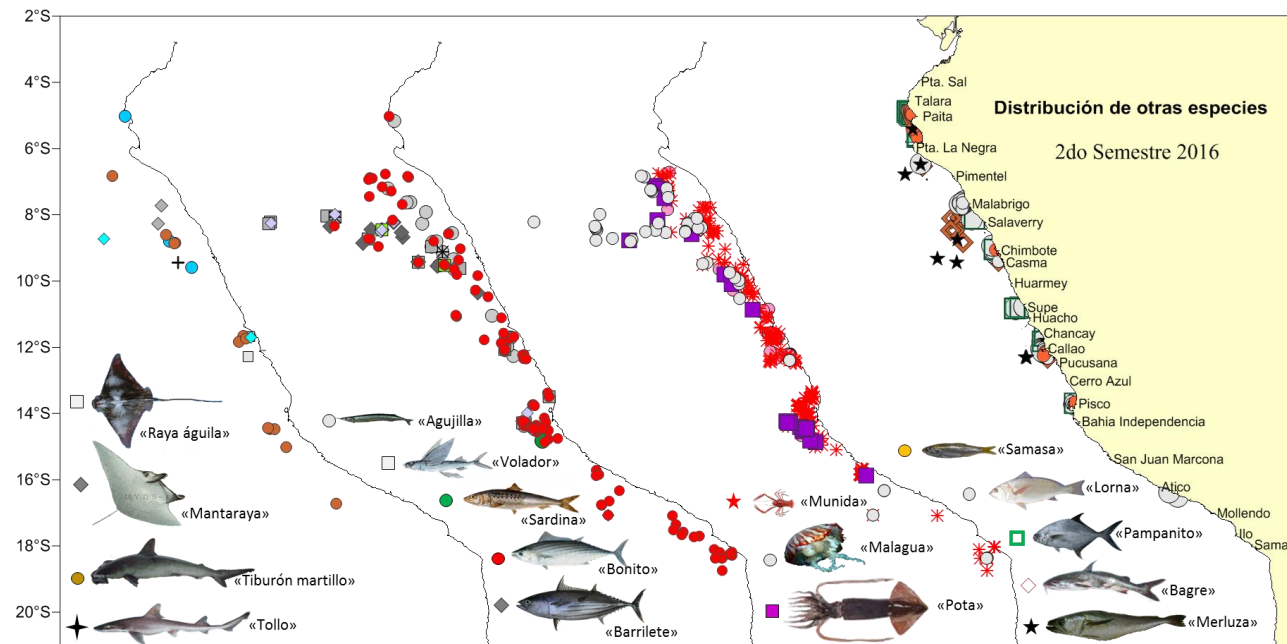


INDICADORES REPRODUCTIVOS DE LA ANCHOVETA

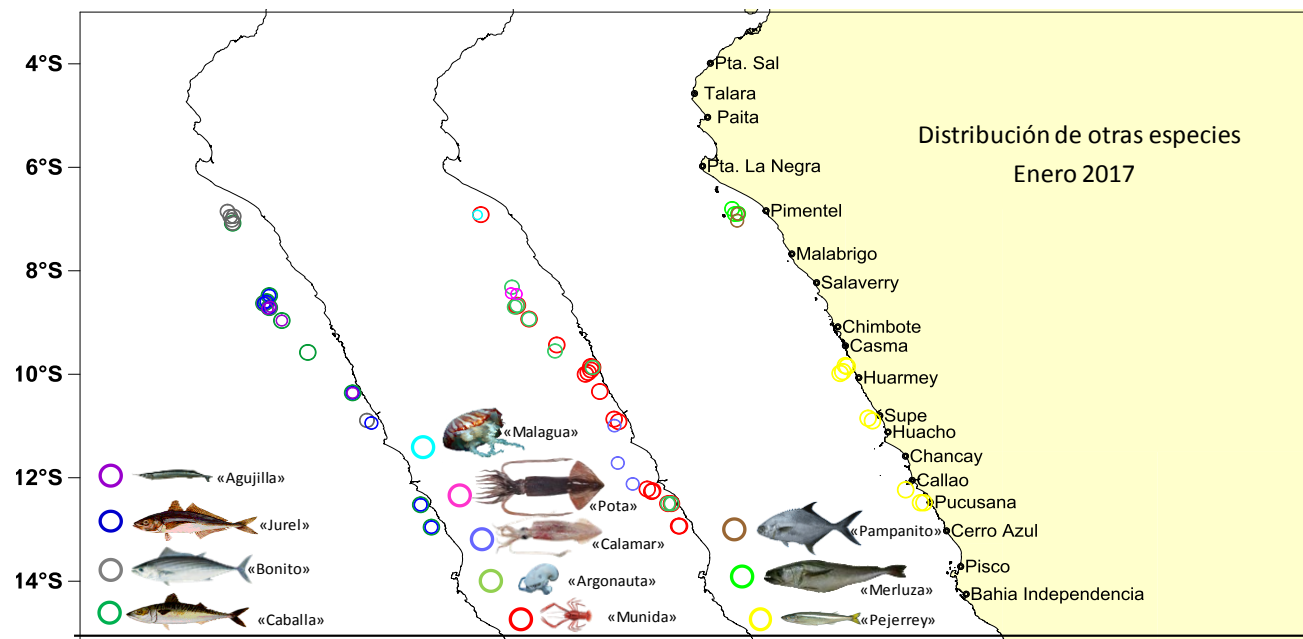


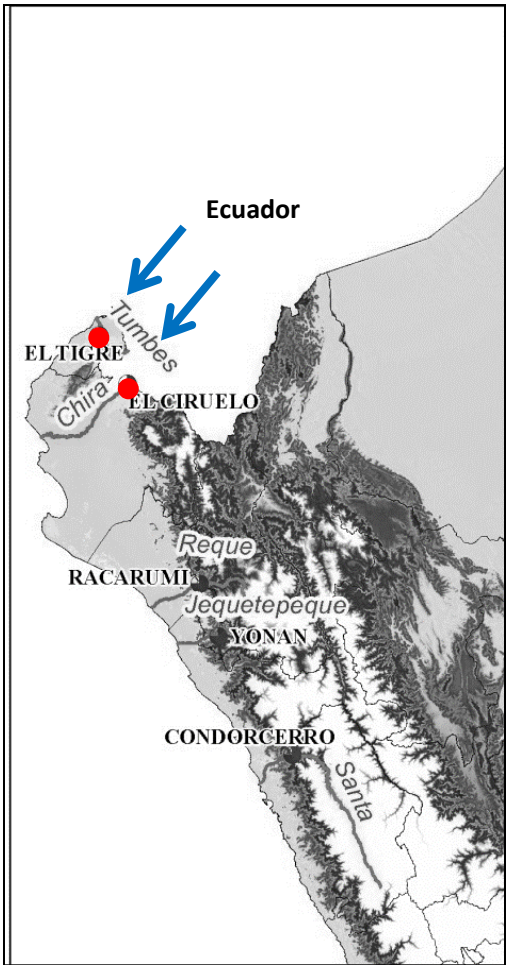
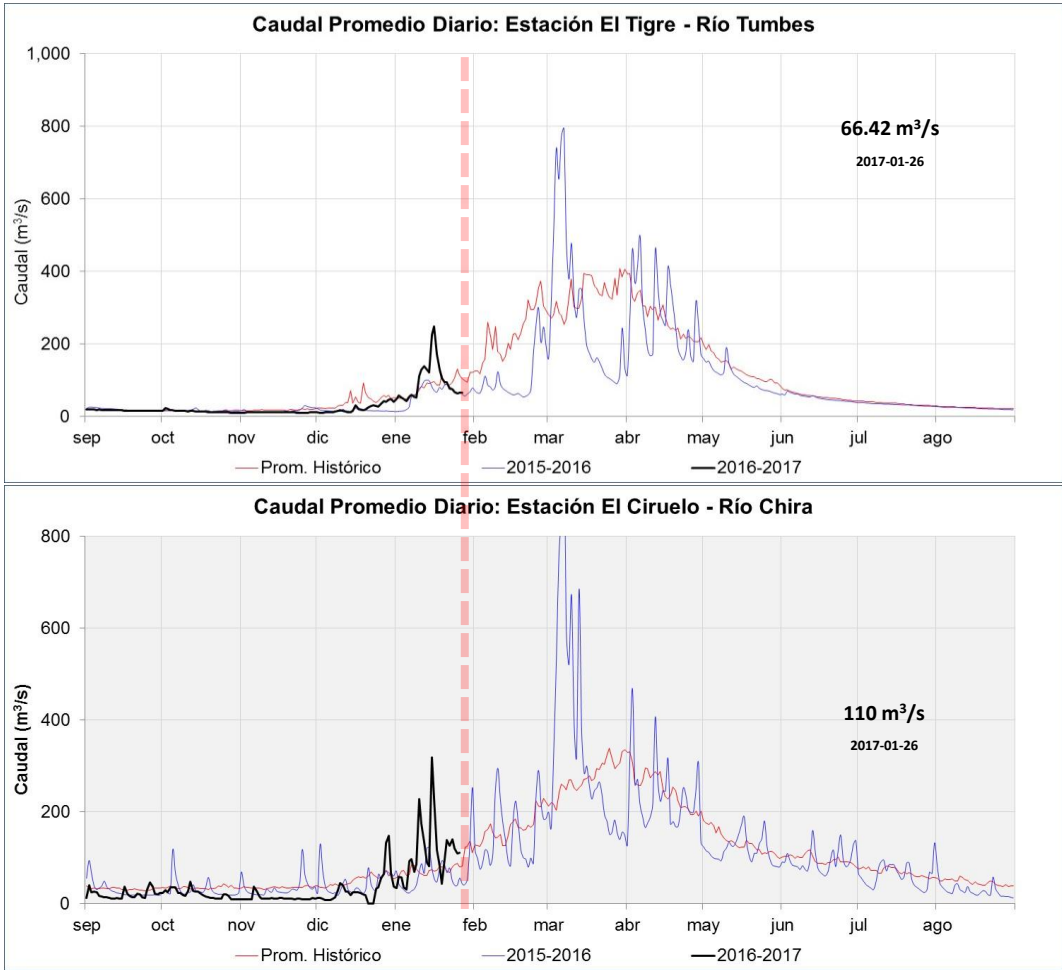
Otras especies 2016 – 2017 – Región Norte - Centro

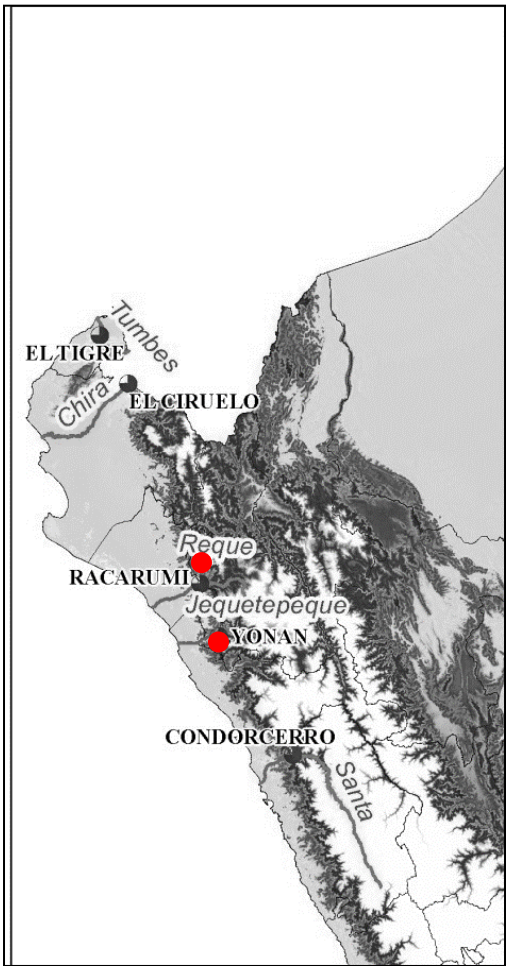
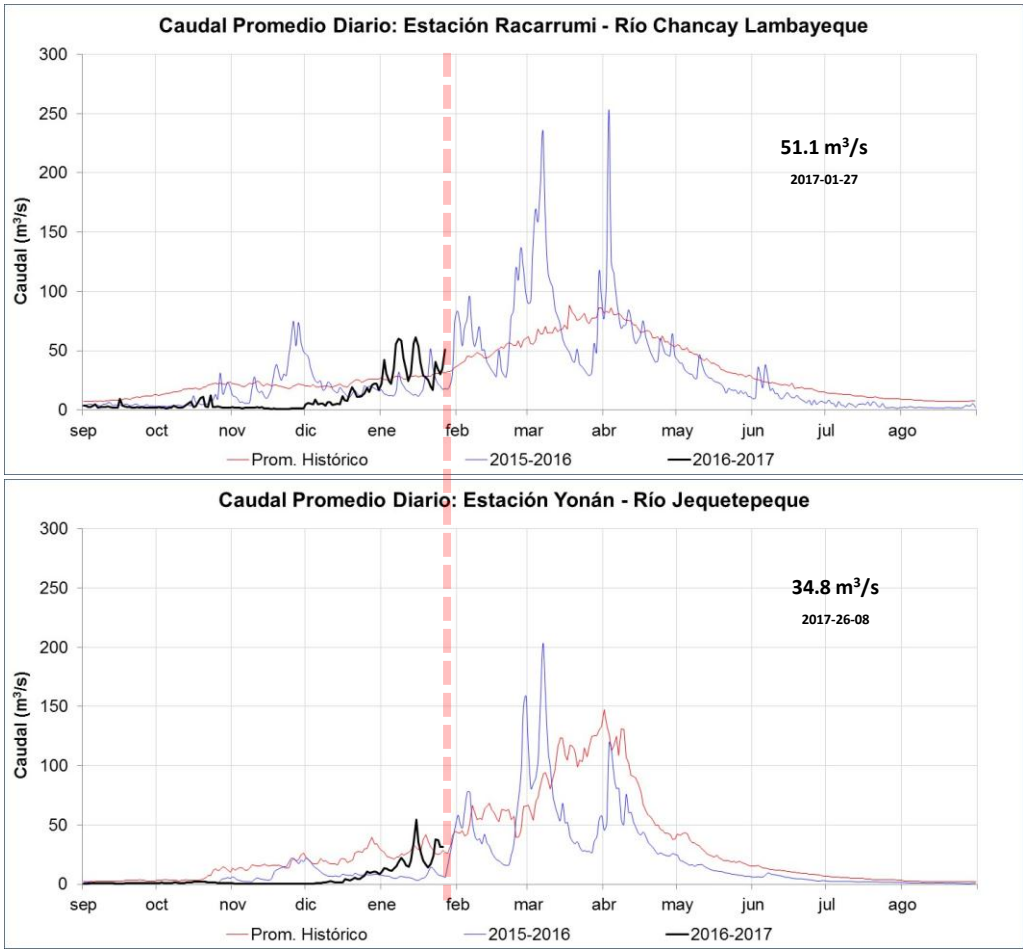
Noviembre – Diciembre 2016

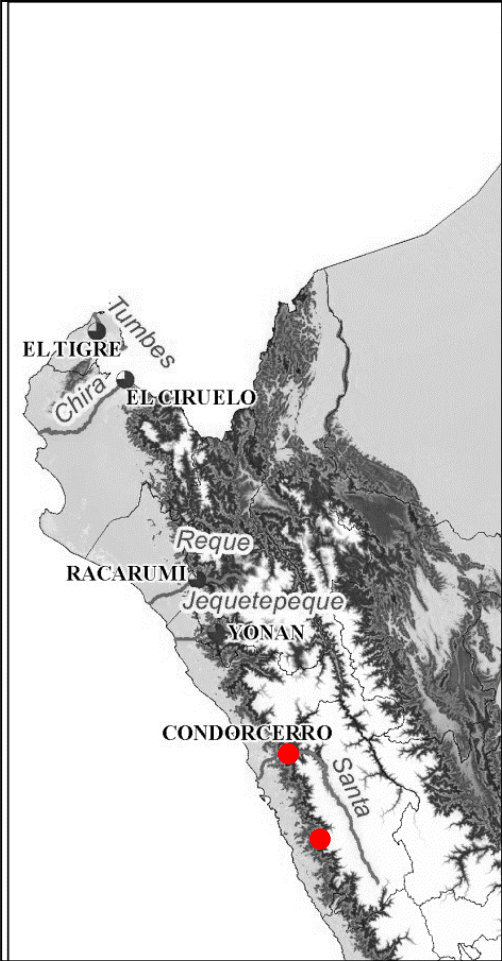
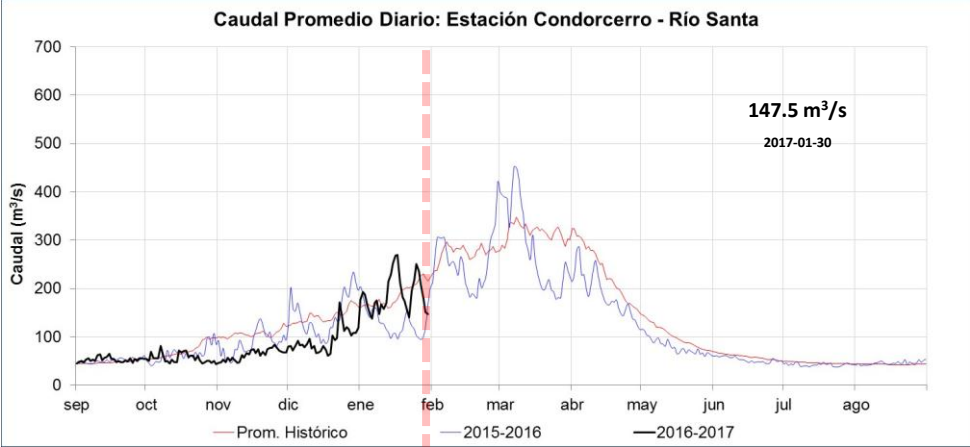
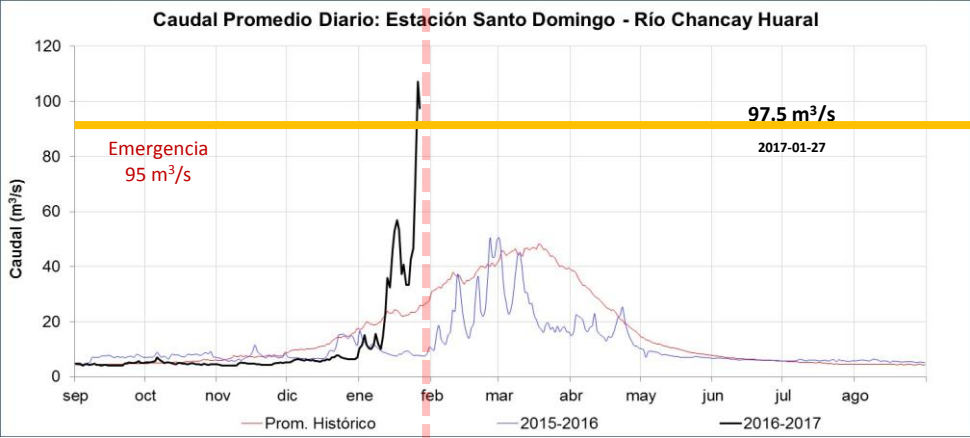


Enero 2017

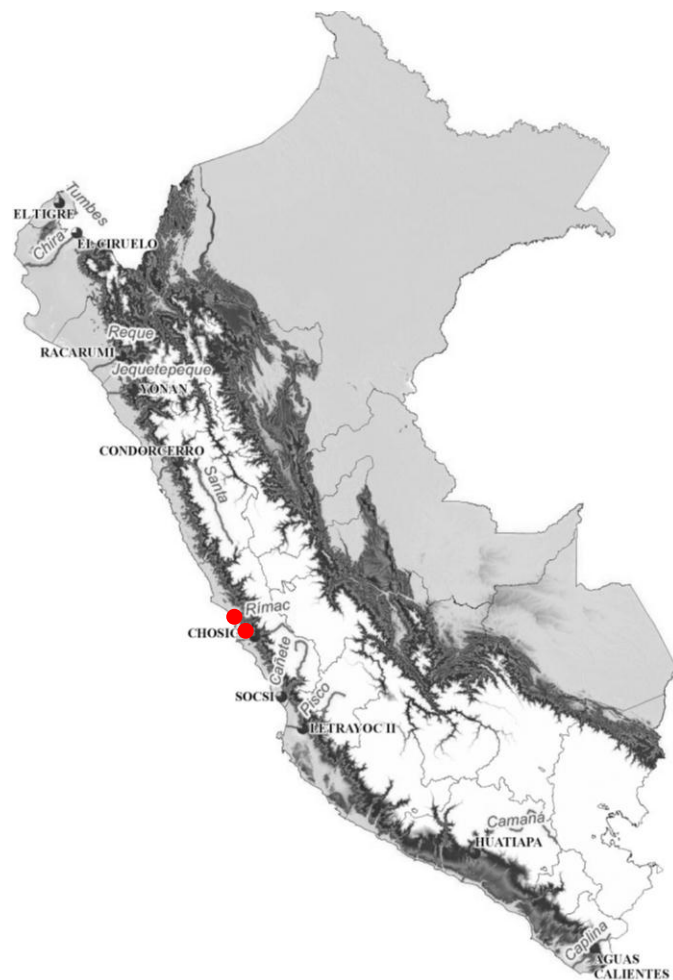


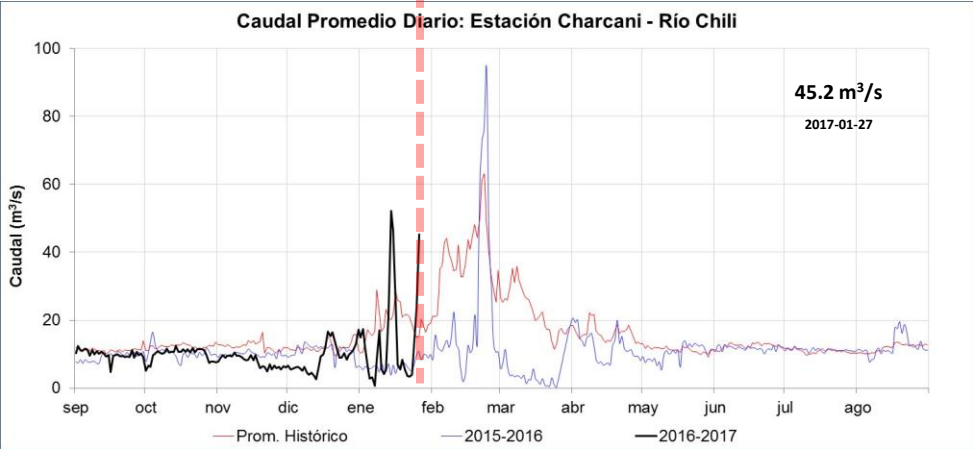


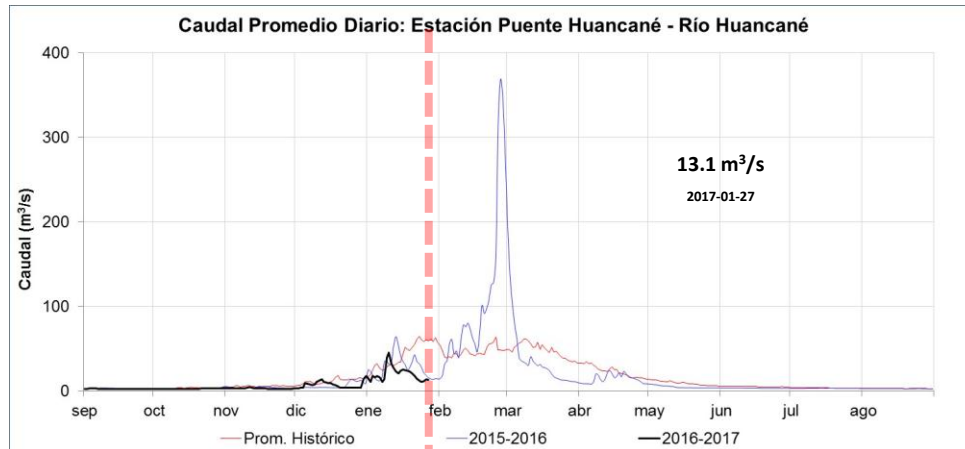
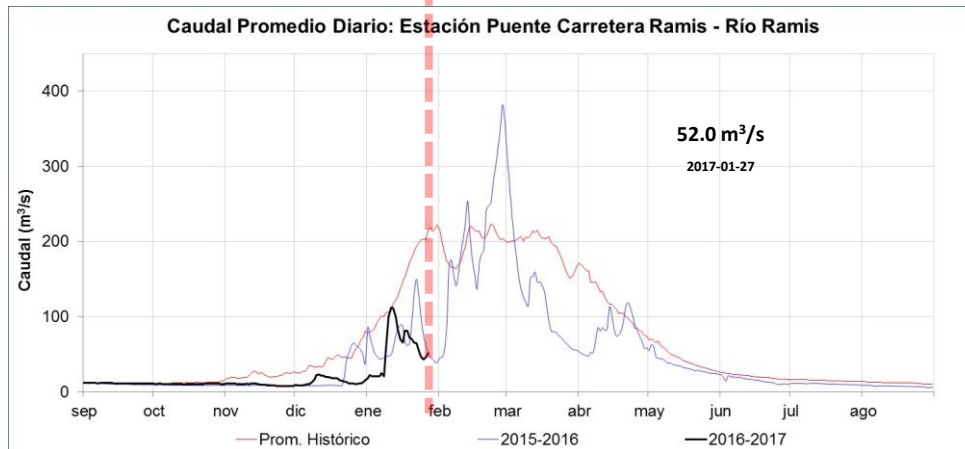




Región hidrográfica Pacífico – Ríos Costa Centro







Resumen del estado de los principales embalses. ENERO 2017.

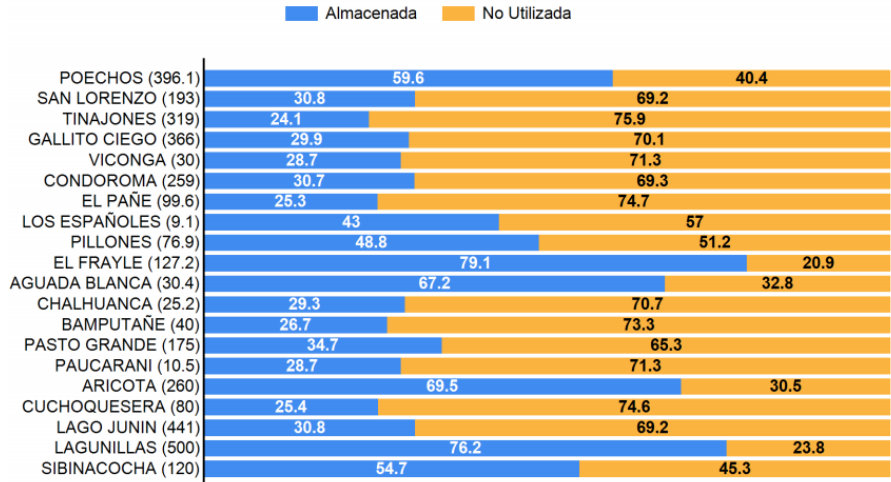


SISTEMA NACIONAL DE INFORMACIÓN DE RECURSOS HÍDRICOS - SNIRH
CUADRO: PERÚ: VOLUMEN DE AGUA ALMACENADO EN RESERVIORIOS PRINCIPALES

Zona	Nombre del Reservoirio	Fecha del dato	Departamento de Influencia	Capacidad Hidráulica (hm3)		Capacidad Hidráulica Almacenada (%)
				Útil	Almacenada	
Costa - Norte	POECHOS	31-ene	Piura	396.1	236.1	59.6
Costa - Norte	SAN LORENZO	31-ene	Piura	193	59.5	30.8
Costa - Norte	TINAJONES	31-ene	Lambayeque	319	76.8	24.1
Costa - Norte	GALLITO CIEGO	31-ene	Cajamarca	366	109.6	29.9
Costa - Centro	VICONGA	30-ene	Lima	30	8.6	28.7
Costa - Sur	CONDOROMA	31-ene	Arequipa	259	79.6	30.7
Costa - Sur	EL PAÑE	31-ene	Cusco	99.6	25.2	25.3
Costa - Sur	LOS ESPAÑOLES	31-ene	Arequipa	9.1	3.9	43
Costa - Sur	PILLONES	31-ene	Arequipa	76.9	37.5	48.8
Costa - Sur	EL FRAYLE	31-ene	Arequipa	127.2	100.7	79.1
Costa - Sur	AGUADA BLANCA	31-ene	Arequipa	30.4	20.4	67.2
Costa - Sur	CHALHUANCA	31-ene	Arequipa	25.2	7.4	29.3
Costa - Sur	BAMPUTAÑE	31-ene	Puno	40	10.7	26.7
Costa - Sur	PASTO GRANDE	31-ene	Moquegua	175	60.7	34.7
Costa - Sur	PAUCARANI	30-ene	Tacna	10.5	3	28.7
Costa - Sur	ARICOTA	31-ene	Tacna	260	180.8	69.5
Sierra - Centro	CUCHOQUESERA	31-ene	Ayacucho	80	20.3	25.4
Sierra - Centro	LAGO JUNIN	31-ene	Junin	441	135.7	30.8
Sierra - Sur	LAGUNILLAS	31-ene	Puno	500	381	76.2
Sierra - Sur	SIBINACocha	31-ene	Cusco	120	65.6	54.7
Situación Nacional		-	-	3558	1623.1	45.6

Durante el mes de enero 2017, los ríos de la vertiente del pacifico, incrementaron significativamente sus caudales, en el norte con valores, ligeramente sobre sus promedios históricos. En cambio los ríos del centro, presentaron valores, muy por encima de sus promedios y los ríos del sur con valores similares a sus medias.

Los reservorios en general tuvieron una tendencia ascendente respecto a su almacenamiento de agua, en la costa norte operaron en promedio al 36% y en la costa sur al 44% respecto a su capacidad hidráulica útil.

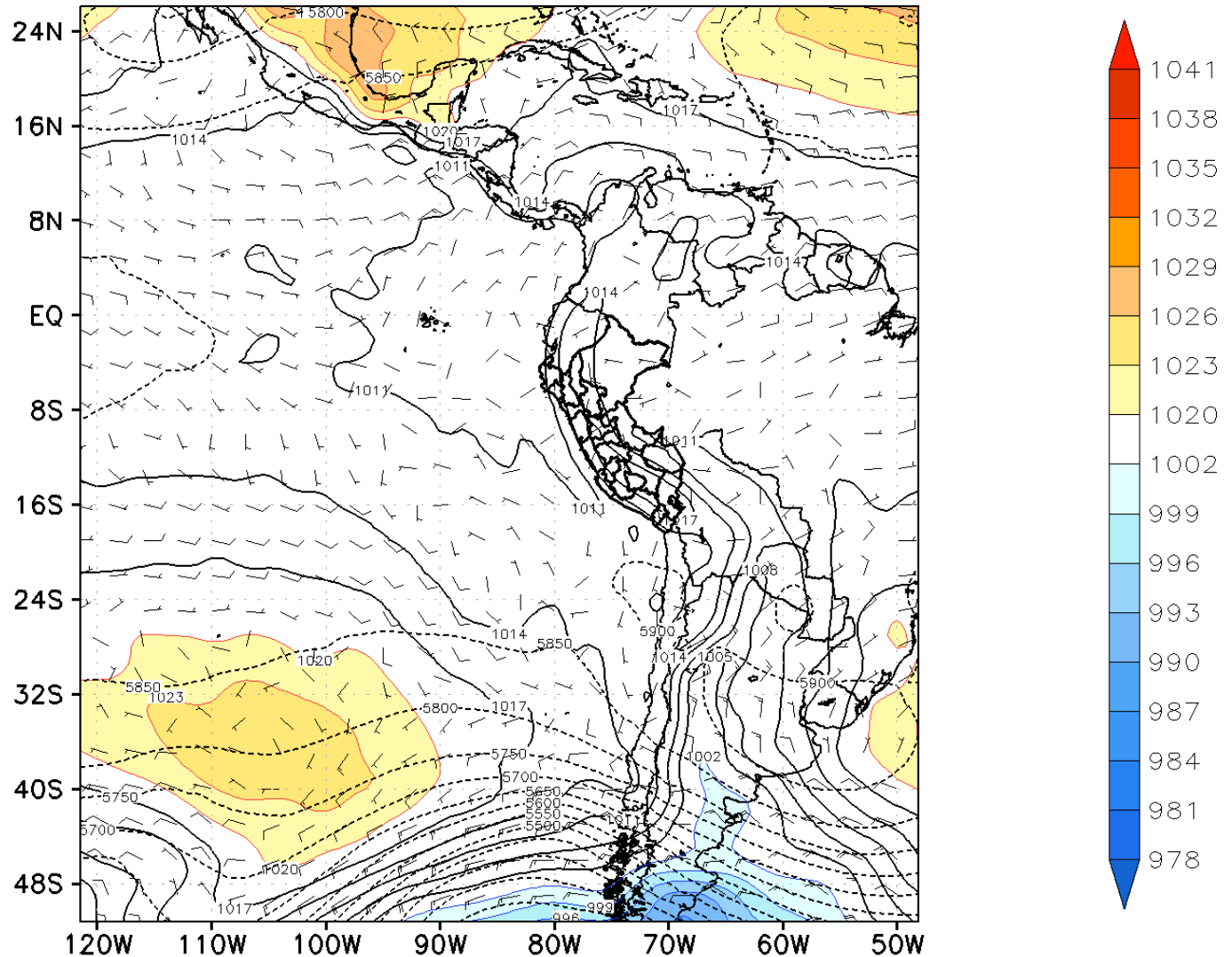


Perspectivas

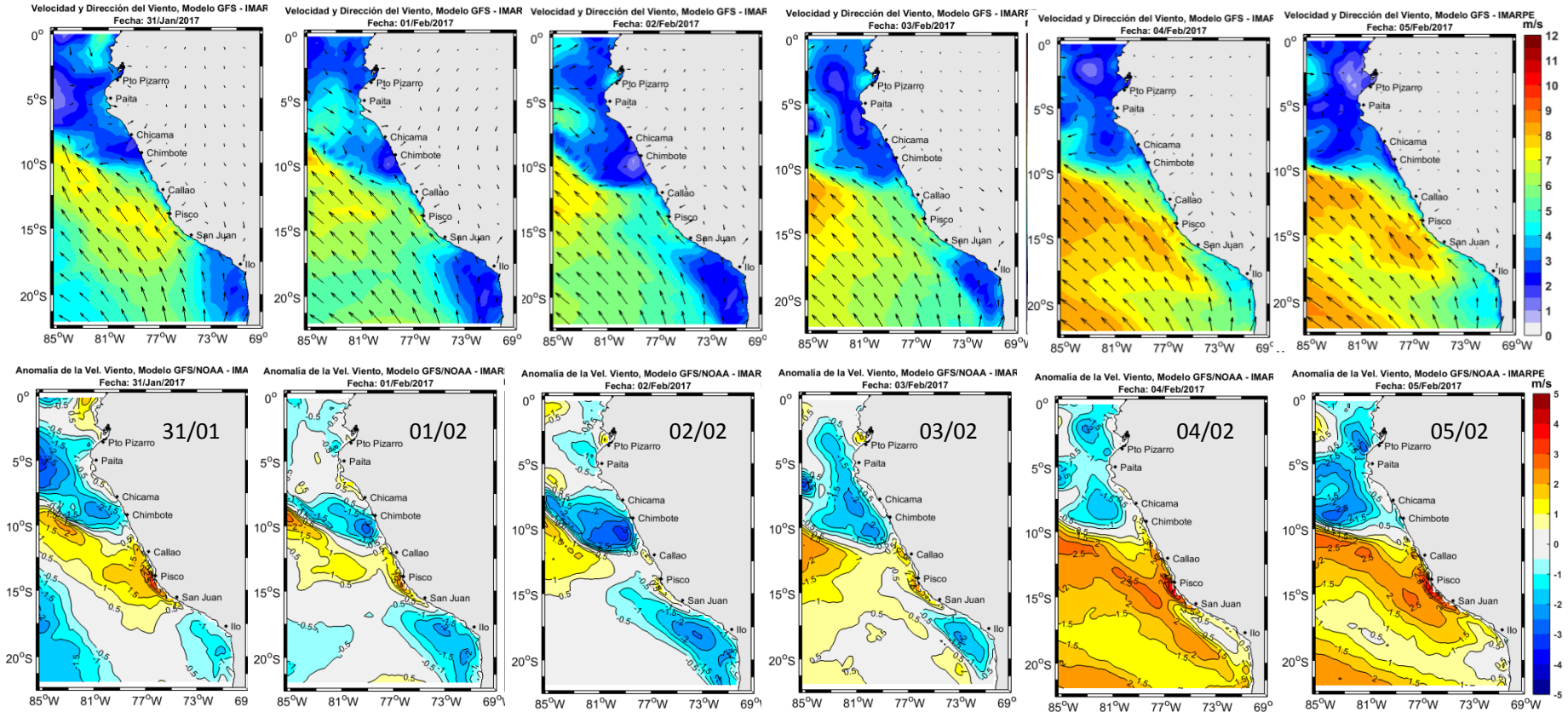
Pronósticos de presión a nivel del mar y APS

www.gif-animator.com - UNREGISTERED

PRESION A NIVEL DEL MAR (hPa), VIENTO 850 hPa, ALT GEO 500hPa
ANALISIS: 00UTC 30ENE2017 VALIDO: 00UTC 30ENE2017

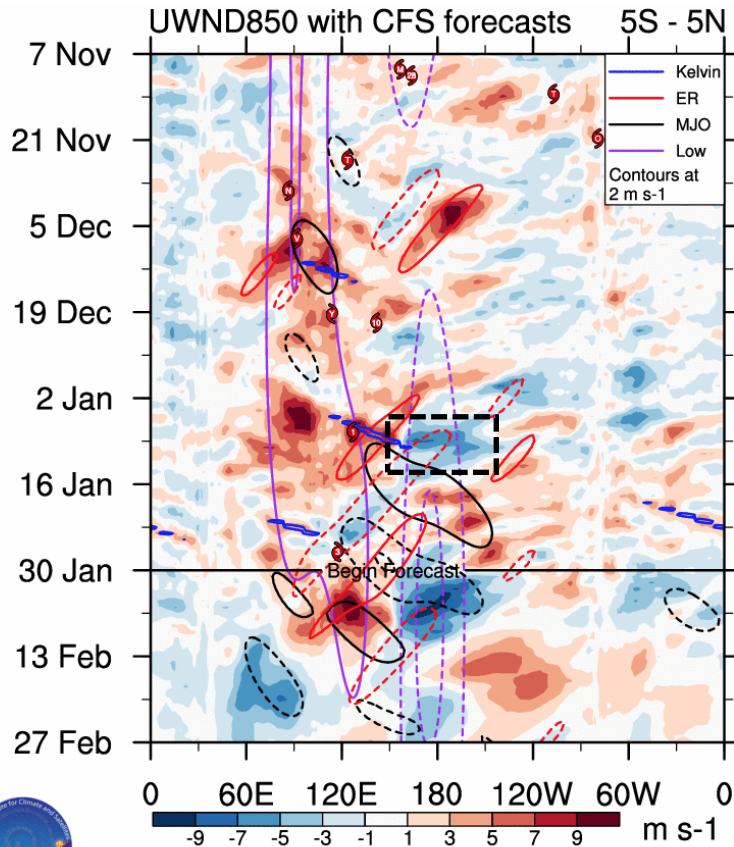


Pronósticos del Viento Costero (Modelo GFS)



Mapas de la velocidad y dirección del viento pronosticado por el modelo GFS (frente a la costa de Perú): Fuente: Modelo GFS-NOAA, Procesamiento: Laboratorio de Hidro-Física Marina, IMARPE

Pronósticos de los vientos ecuatoriales

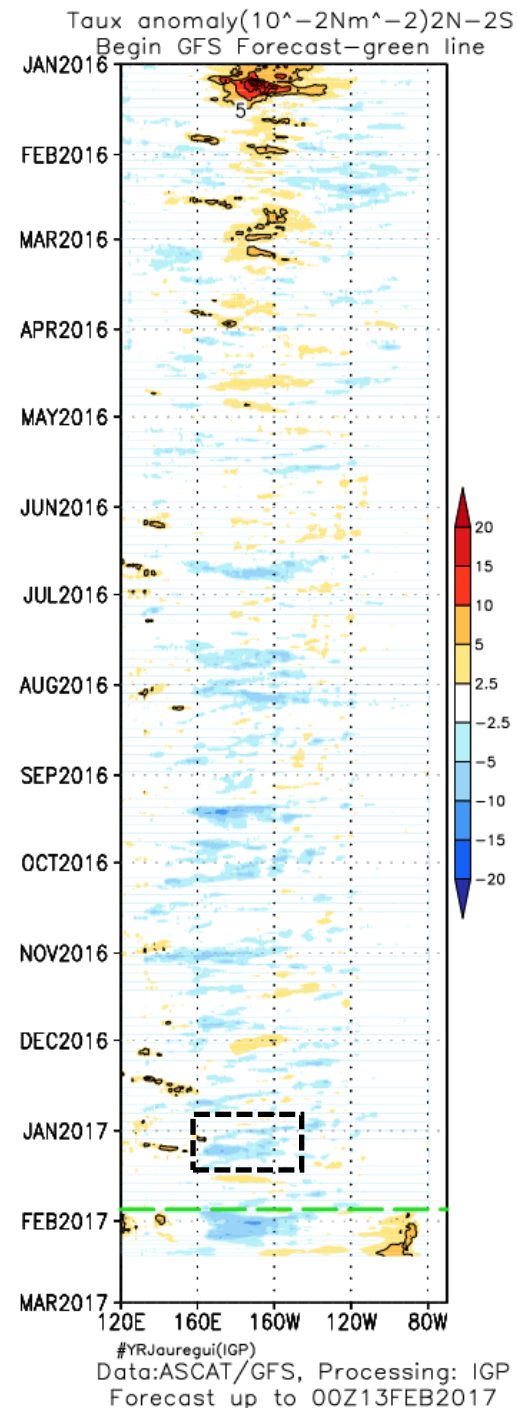


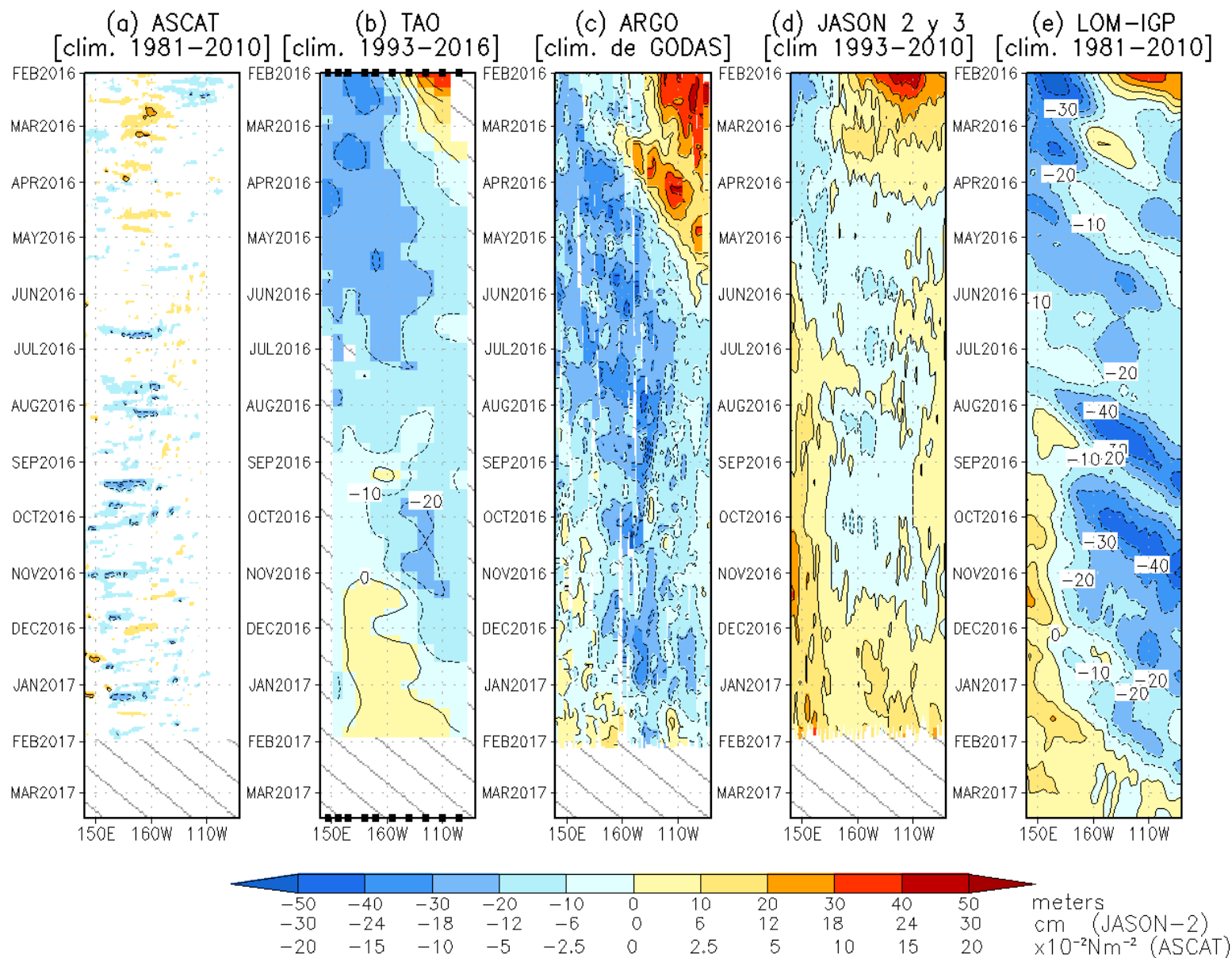
ncics.org/mjo

Tue 2017-01-31 11:07 UTC

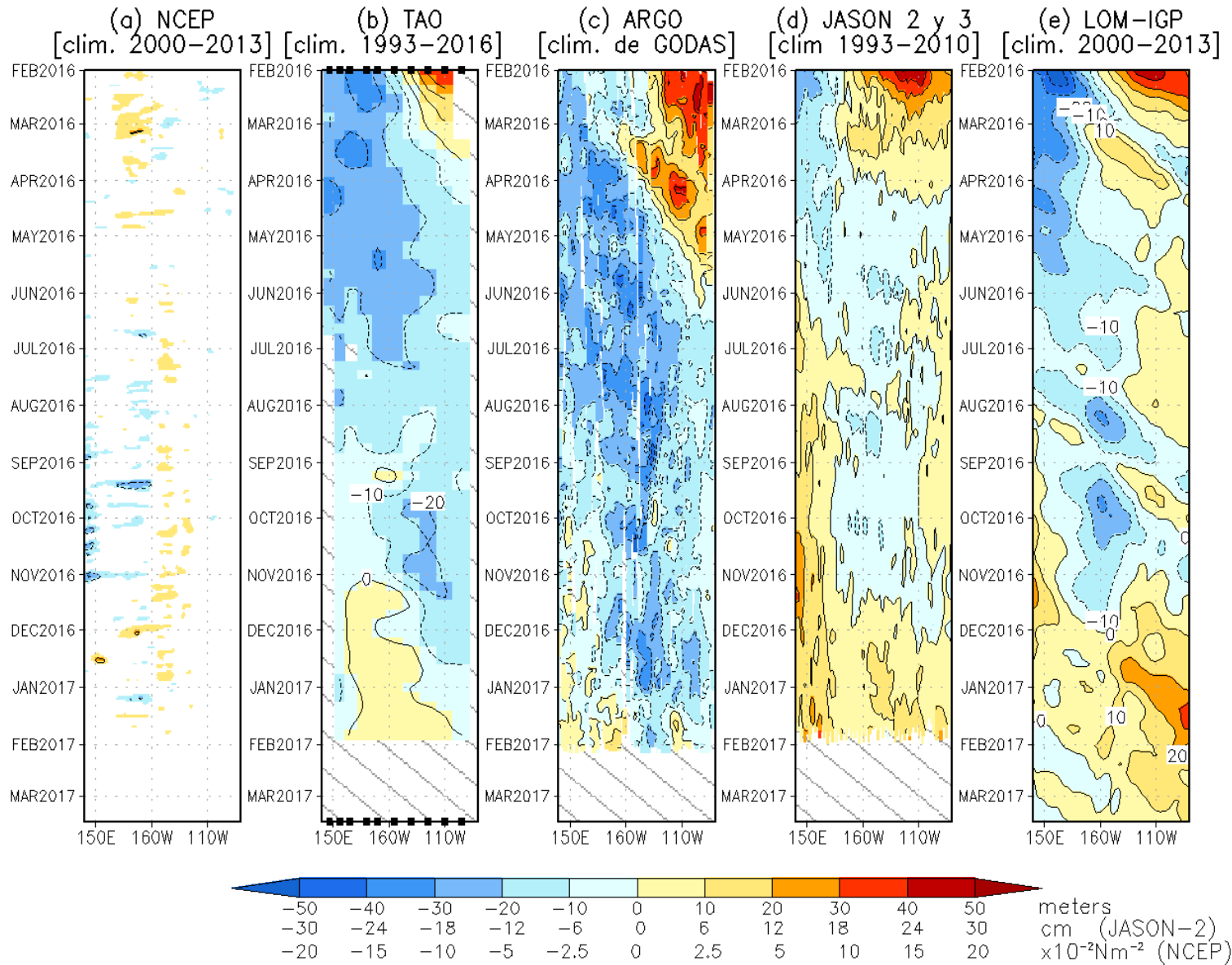
Carl Schreck (cjschrec@ncsu.edu)

Los modelos CFS y GFS pronostican anom de vientos del este en el Pac. central y del oeste en el oriental para la próxima semana.

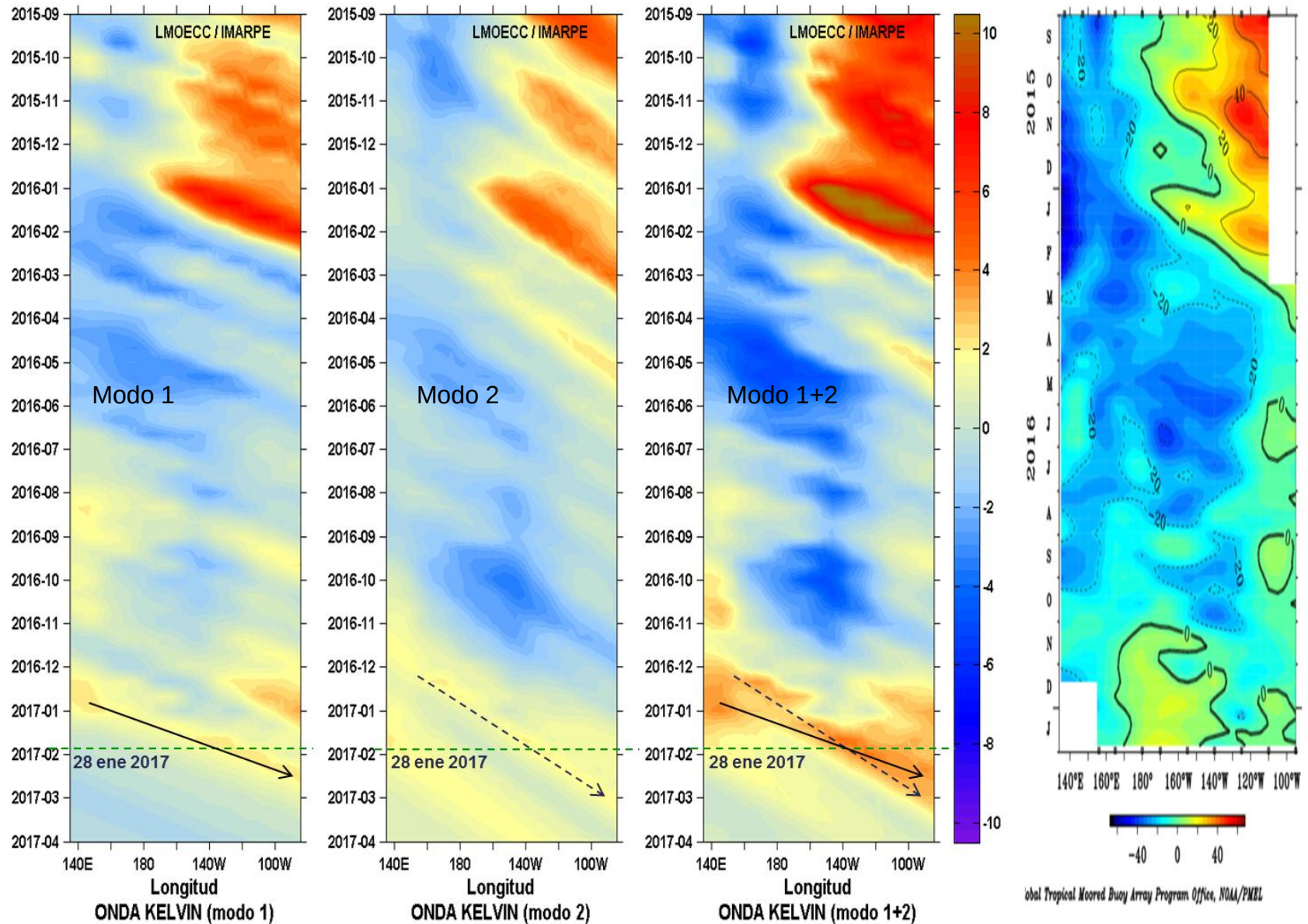




Simulación de la propagación de las ondas Kelvin Ecuatoriales



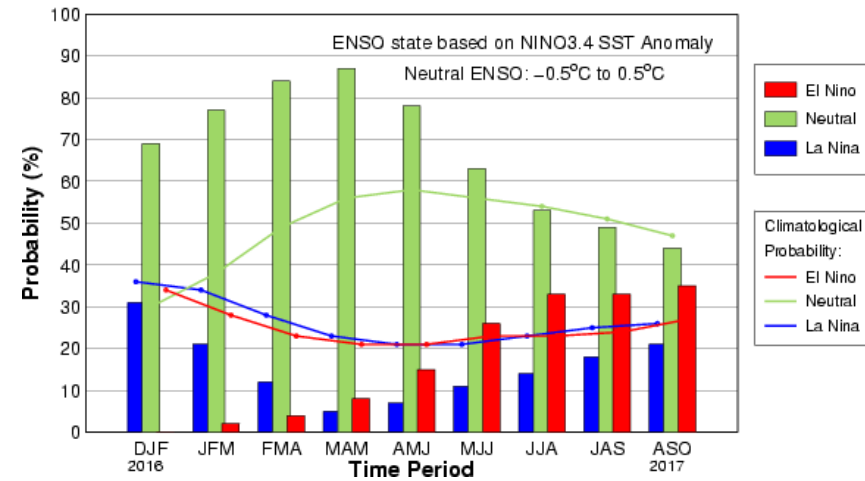
Simulación de la propagación de las ondas Kelvin Ecuatoriales



Probabilidades de El Niño según solo según porcentaje de **modelos** (IRI)

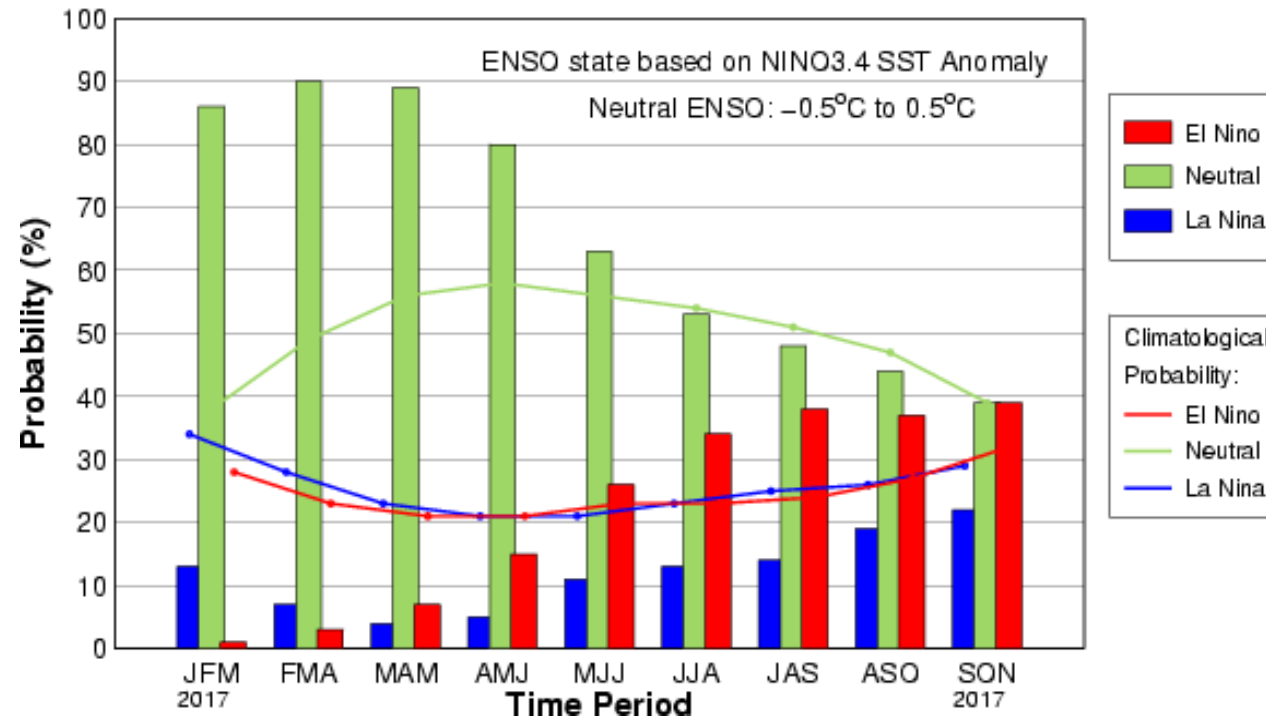
Corrida del mes anterior

Mid-Dec IRI/CPC Model-Based Probabilistic ENSO Forecast



Corrida reciente

Mid-Jan IRI/CPC Model-Based Probabilistic ENSO Forecast



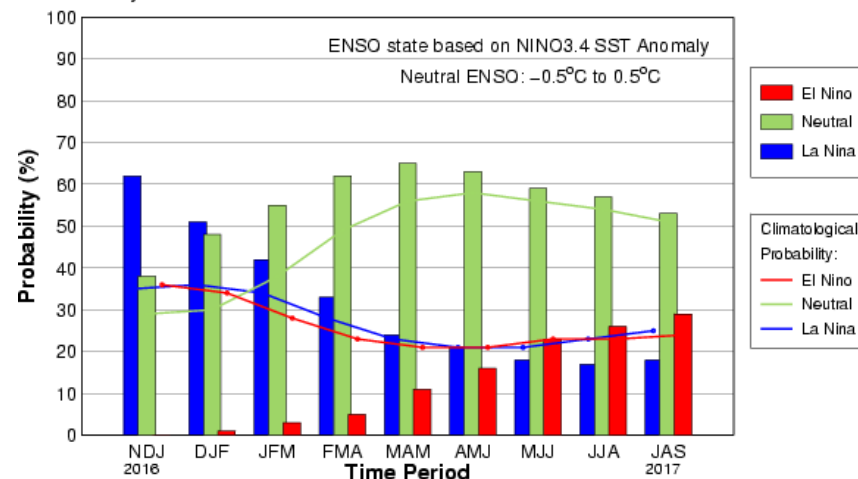
Según la evaluación NOAA/IRI, la probabilidad de condiciones neutras en el Pacífico central es de 90% para marzo, y 89% en el mes de abril

Publicado 19 de Enero de 2017

Probabilidades de El Niño según porcentaje de modelos (IRI) y evaluación experta

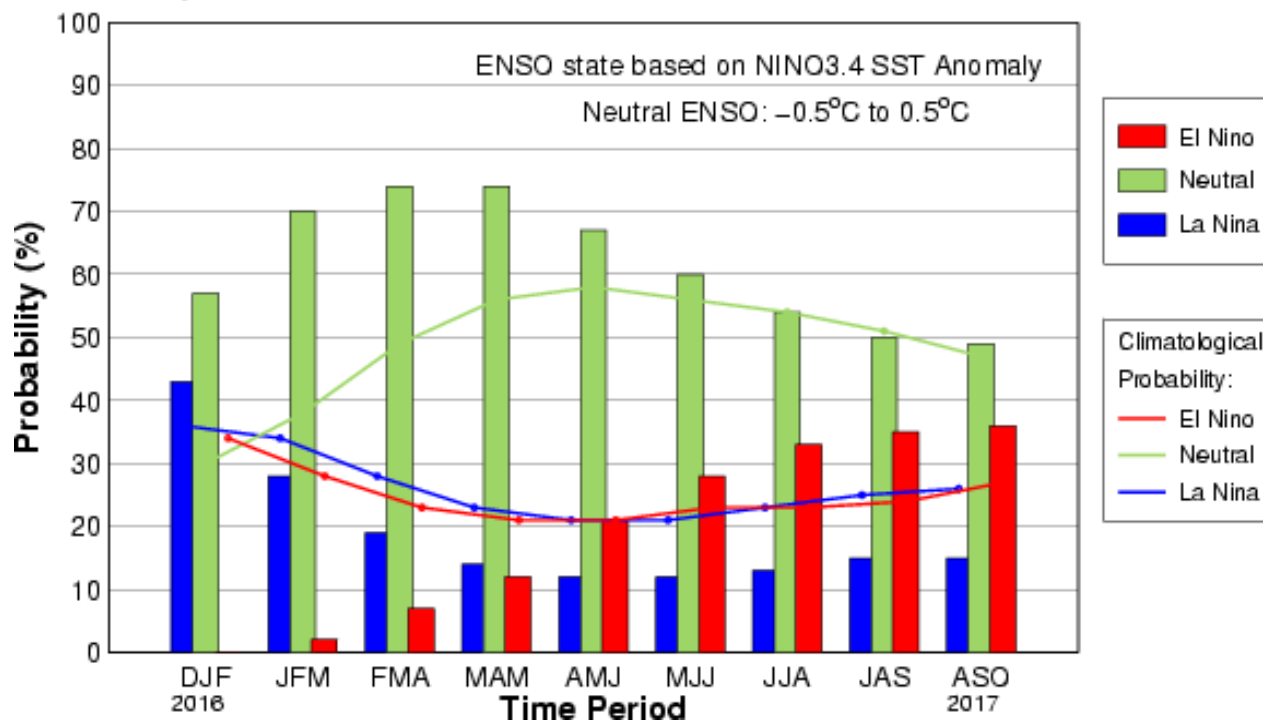
Corrida del mes anterior

Early-Dec CPC/IRI Official Probabilistic ENSO Forecast



Corrida reciente

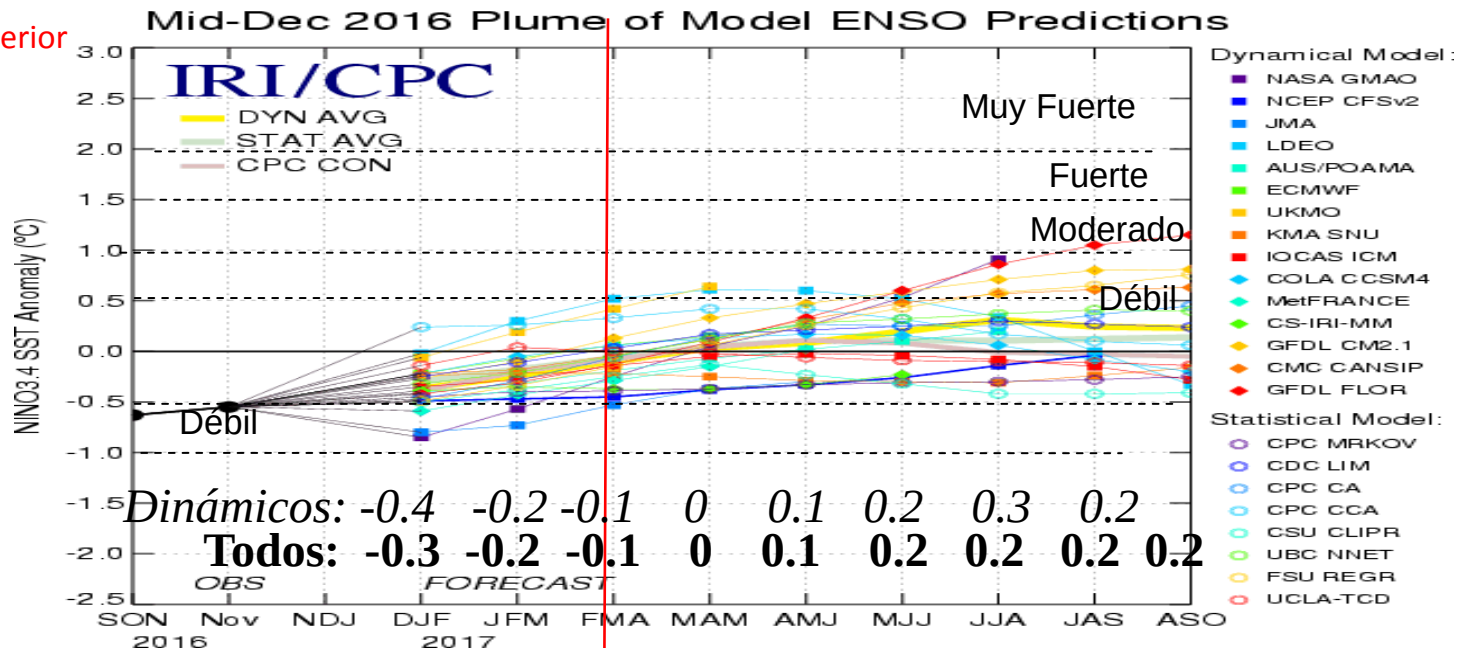
Early-Jan CPC/IRI Official Probabilistic ENSO Forecast



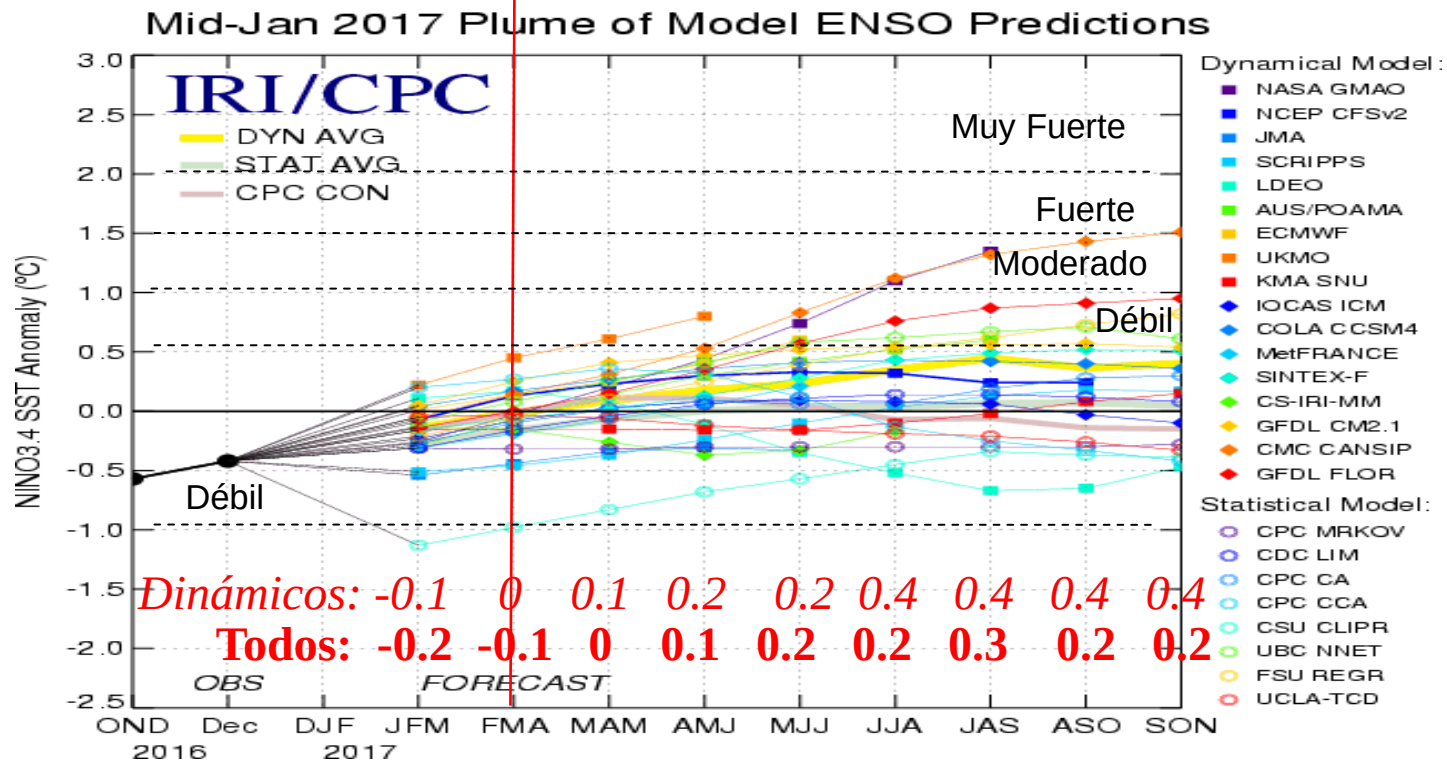
Según la evaluación experta sobre los resultados de la probabilidad de condiciones neutras en el Pacífico central para los meses de marzo y abril es 74% .

Publicado 12 de Enero de 2017

Corrida del mes anterior



Corrida del mes reciente



Ensamblado multimodelos (IRI) para Niño 3.4

CFSv2: Niño 3.4



NWS/NCEP/CPC

Last update: Wed Feb 1 2017
Initial conditions: 1Jan2017-10Jan2017

NWS/NCEP/CPC

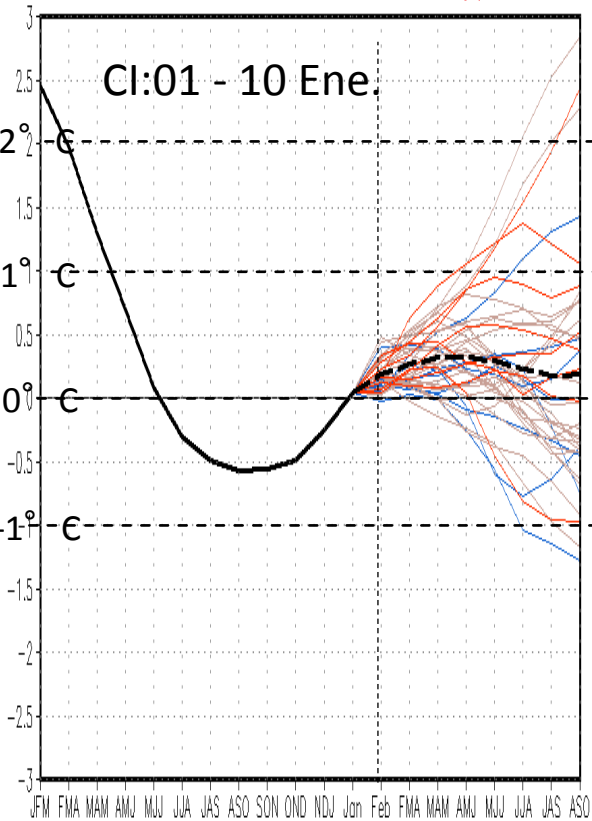
Last update: Wed Feb 1 2017
Initial conditions: 11Jan2017-20Jan2017



NWS/NCEP/CPC

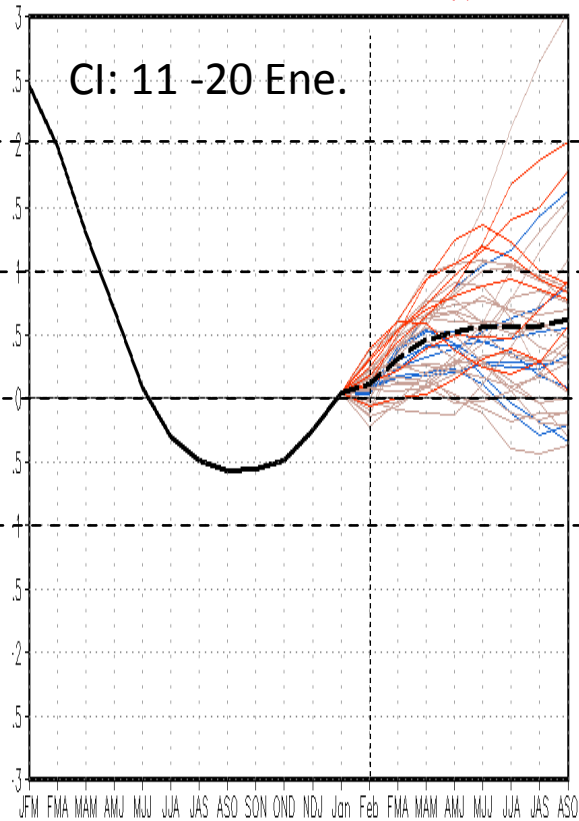
Last update: Wed Feb 1 2017
Initial conditions: 21Jan2017-30Jan2017

CFSv2 forecast Niño3.4 SST anomalies (K)



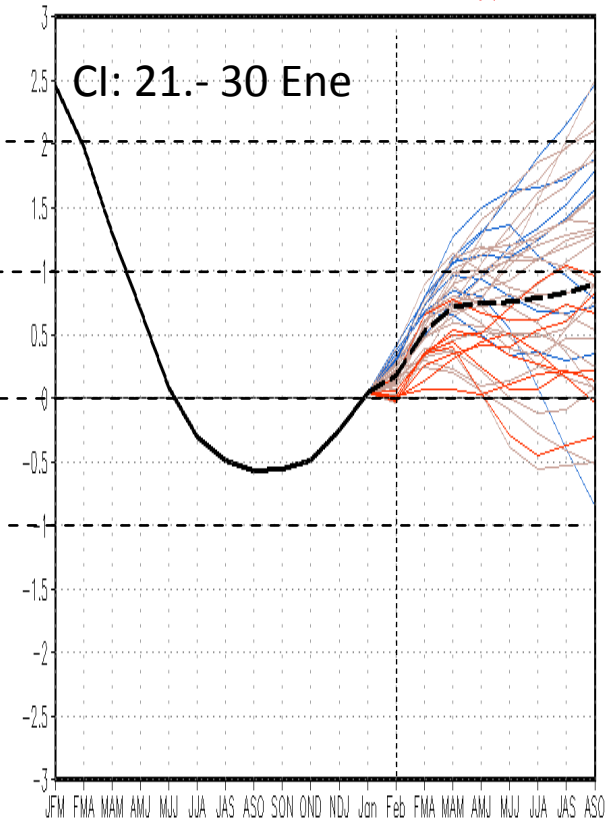
— Latest 8 forecast members
— Earliest 8 forecast members
— Other forecast members
— Forecast ensemble mean
— NCDC daily analysis

CFSv2 forecast Niño3.4 SST anomalies (K)



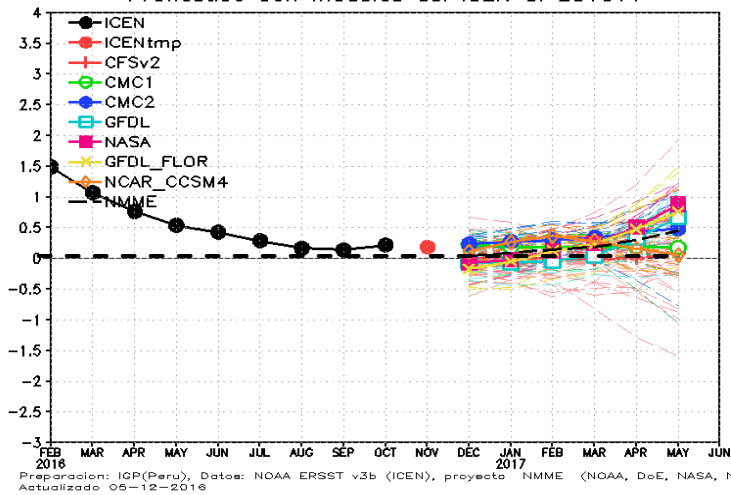
— Latest 8 forecast members
— Earliest 8 forecast members
— Other forecast members
— Forecast ensemble mean
— NCDC daily analysis

CFSv2 forecast Niño3.4 SST anomalies (K)



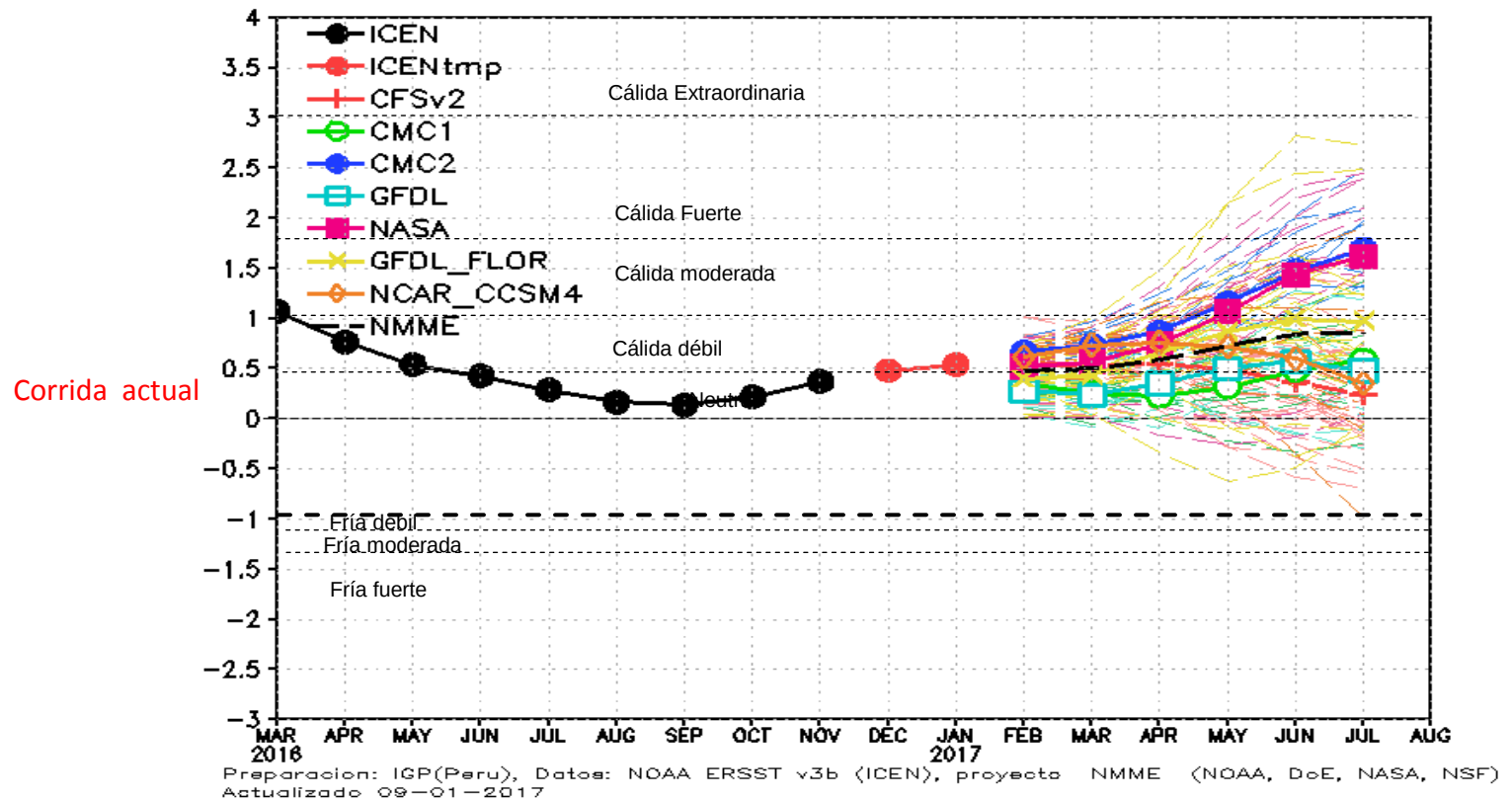
— Latest 8 forecast members
— Earliest 8 forecast members
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— Forecast ensemble mean
— NCDC daily analysis

Pronostico con modelos del ICEN CI 201611



Corrida anterior

Pronostico con modelos del ICEN CI 201701



Nota: Los pronósticos de los modelos CFSv2, CMC1, CMC2, GFDL, NASA, NCAR y GFDL_FLOR tienen como condiciones inicial el mes de enero de 2017.

Pronósticos de ICEN por modelos de NMME (promedios trimestrales de los

CI 2016 12

pronósticos de las anomalías en Niño 1+2)

Modelo	OND	NDE	DEF	EFM	FMA	MAM	AMJ	AMJ
CFS2		0.22	0.17	0.15	0.09	-0.05	-0.25	-0.36
CMC1		0.28	0.19	0.08	0.00	0.01	0.02	0.04
CMC2		0.30	0.35	0.41	0.46	0.42	0.37	0.35
GFDL		-0.10	-0.17	-0.05	0.07	0.18	0.48	0.61
NASA		0.02	-0.03	0.12	0.26	0.46	0.80	1.16
GFDL_FLOR		0.07	0.06	0.22	0.27	0.46	0.70	0.90
NCAR_CCSM4		0.15	0.26	0.54	0.67	0.61	0.41	0.16
NMME		0.13	0.12	0.21	0.26	0.30	0.36	0.41
ICENtmp	0.16							

CI 2017 01

Modelo	NDE	DEF	EFM	FMA	MAM	AMJ	MJJ	JJA
CFS2		0.62	0.55	0.54	0.55	0.49	0.37	0.24
CMC1		0.50	0.35	0.26	0.23	0.32	0.49	0.59
CMC2		0.65	0.67	0.73	0.87	1.16	1.47	1.69
GFDL		0.42	0.28	0.24	0.35	0.50	0.55	0.48
NASA		0.55	0.52	0.57	0.74	1.07	1.44	1.62
GFDL_FLOR		0.51	0.40	0.44	0.66	0.86	1.00	0.97
NCAR_CCSM4		0.59	0.61	0.73	0.76	0.72	0.60	0.35
NMME		0.55	0.48	0.50	0.59	0.73	0.85	0.85
ICENtmp	0.48							

CFS v2: Niño 1+2

NWS/NCEP/CPC

Last update: Wed Feb 1 2017
Initial conditions: 1Jan2017-10Jan2017



NWS/NCEP/CPC

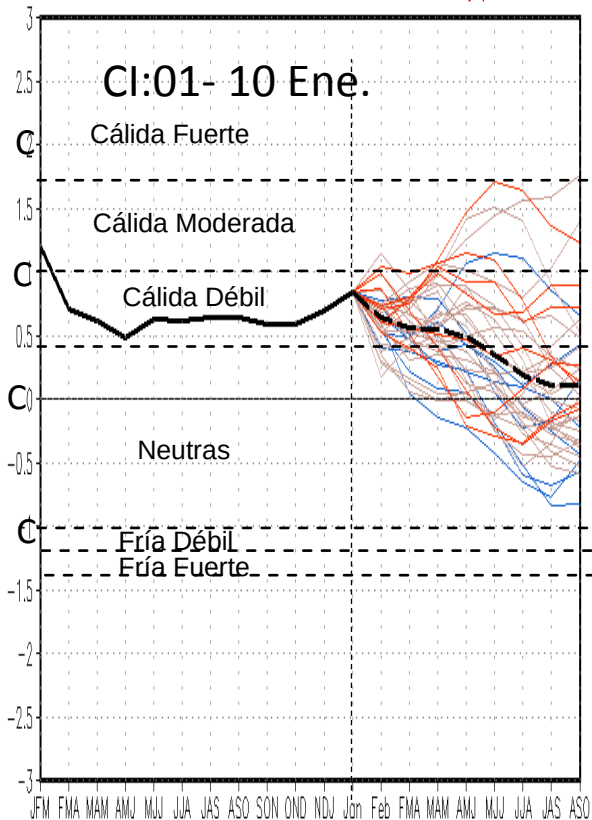
Last update: Wed Feb 1 2017
Initial conditions: 11Jan2017-20Jan2017



NWS/NCEP/CPC

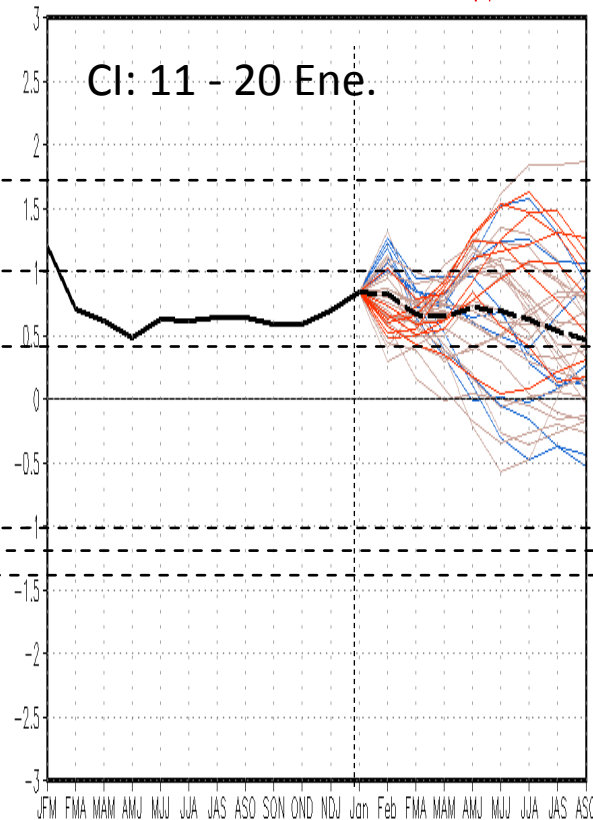
Last update: Wed Feb 1 2017
Initial conditions: 21Jan2017-30Jan2017

CFSv2 forecast Niño1+2 SST anomalies (K)



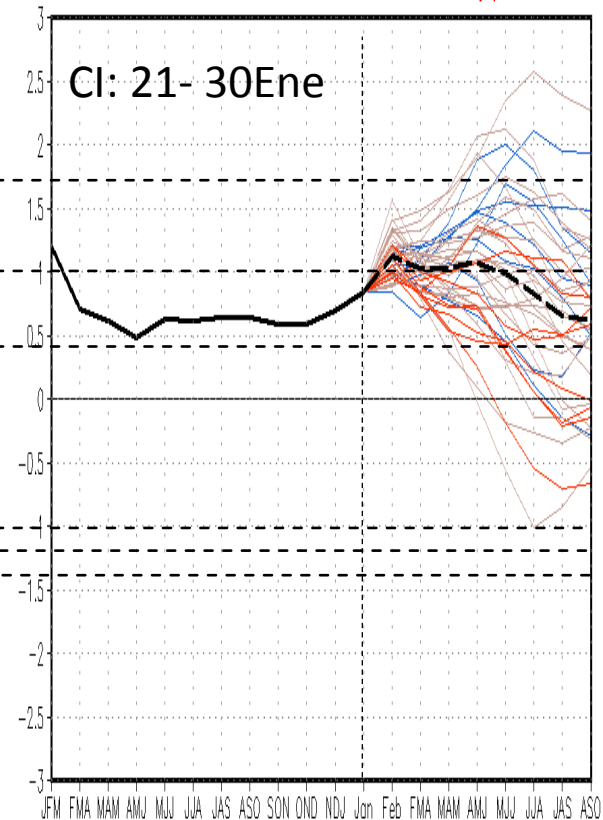
— Latest 8 forecast members
— Earliest 8 forecast members
— Other forecast members
— Forecast ensemble mean
— NCDC daily analysis

CFSv2 forecast Niño1+2 SST anomalies (K)



— Latest 8 forecast members
— Earliest 8 forecast members
— Other forecast members
— Forecast ensemble mean
— NCDC daily analysis

CFSv2 forecast Niño1+2 SST anomalies (K)



— Latest 8 forecast members
— Earliest 8 forecast members
— Other forecast members
— Forecast ensemble mean
— NCDC daily analysis

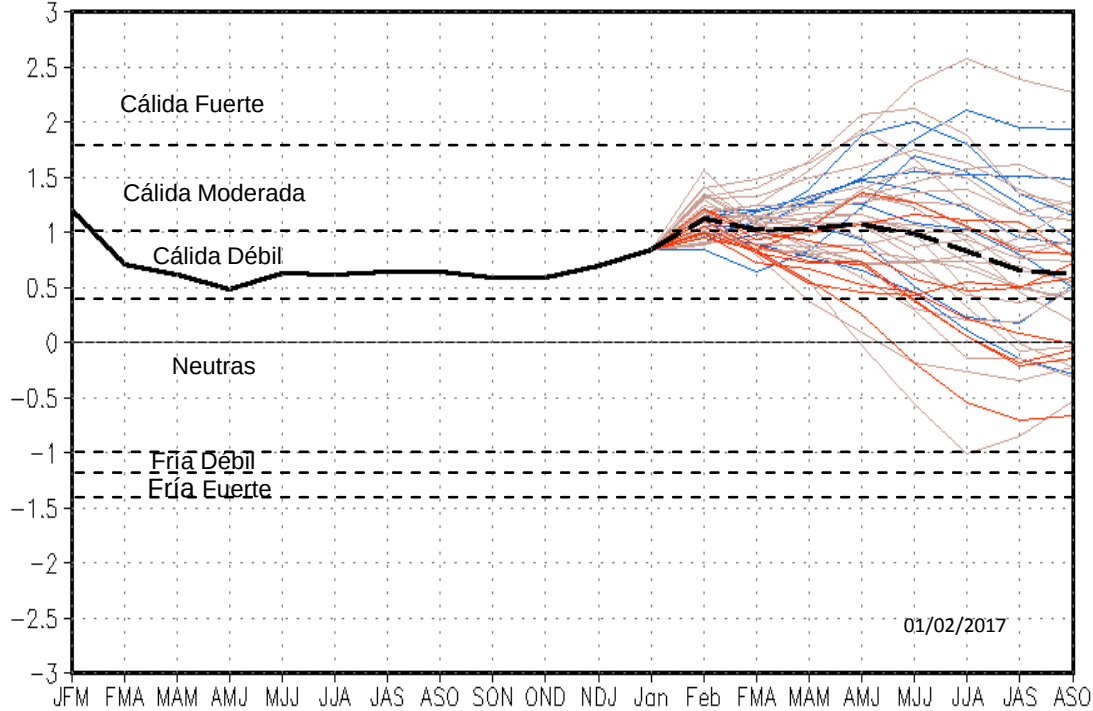
Pronóstico Niño 1+2 de CFS2



NWS/NCEP/CPC

Last update: Wed Feb 1 2017
Initial conditions: 21Jan2017–30Jan2017

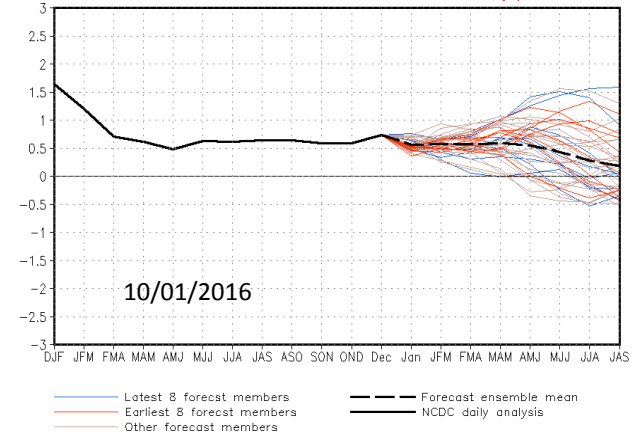
CFSv2 forecast Nino1+2 SST anomalies (K)



NWS/NCEP/CPC

Last update: Tue Jan 10 2017
Initial conditions: 30Dec2016–3Jan2017

CFSv2 forecast Nino1+2 SST anomalies (K)



Corrida anterior

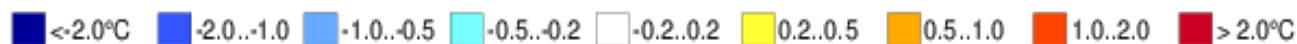
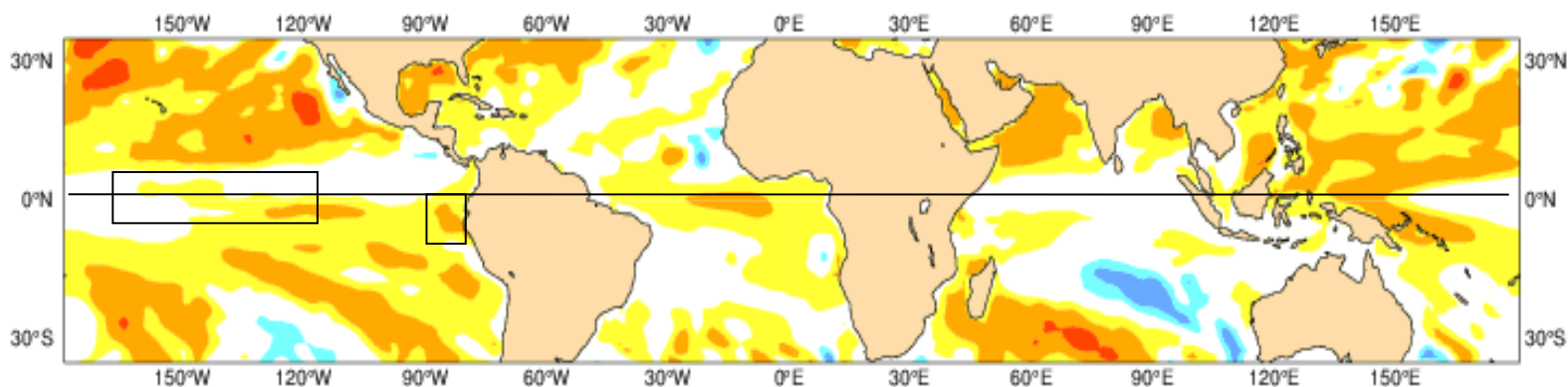
Corrida actual

ECMWF Seasonal Forecast
Mean forecast SST anomaly
Forecast start reference is 01/01/17
Ensemble size = 51, climate size = 450

FMA 2017

System 4
FMA 2017

ECMWF



Pac. Cen.
0.2 ° C

Pac. Or.
0.5° C

CFS2

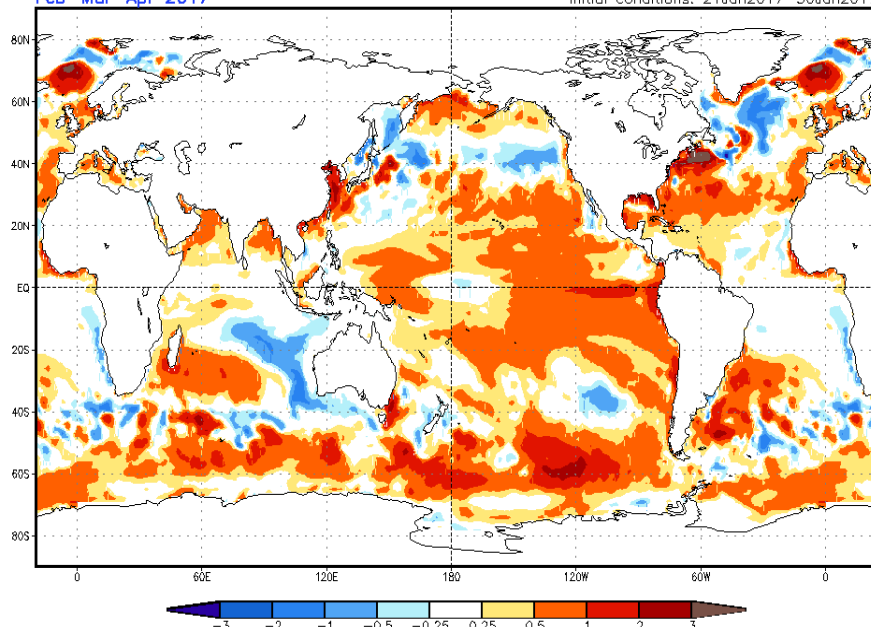
CFSv2 seasonal SST anomalies (K)



NWS/NCEP/CPC

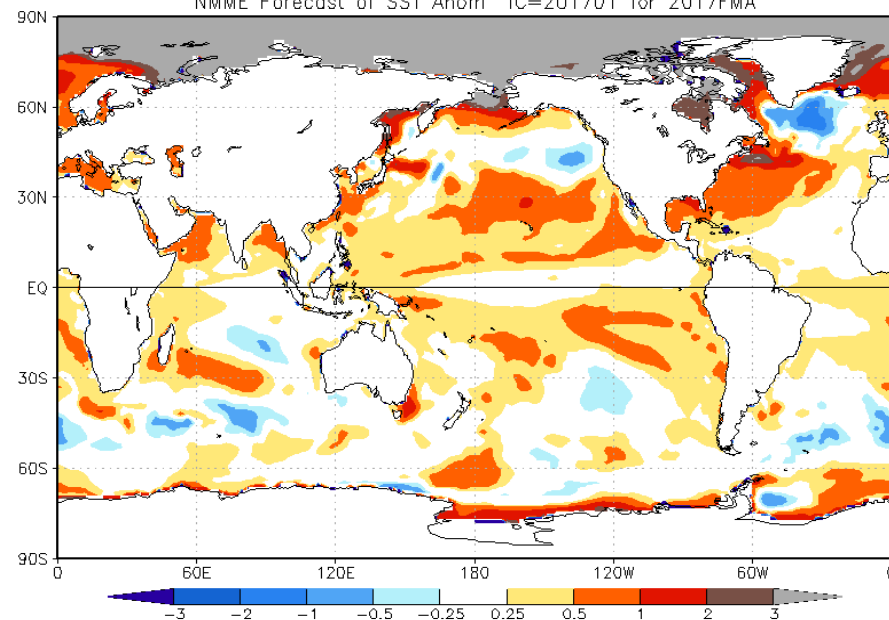
Feb-Mar-Apr 2017

Initial conditions: 21Jan2017-30Jan2017



NMME

NMME Forecast of SST Anom IC=201701 for 2017FMA

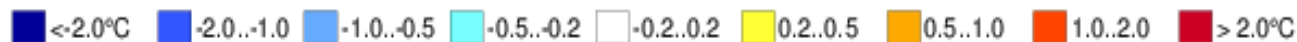
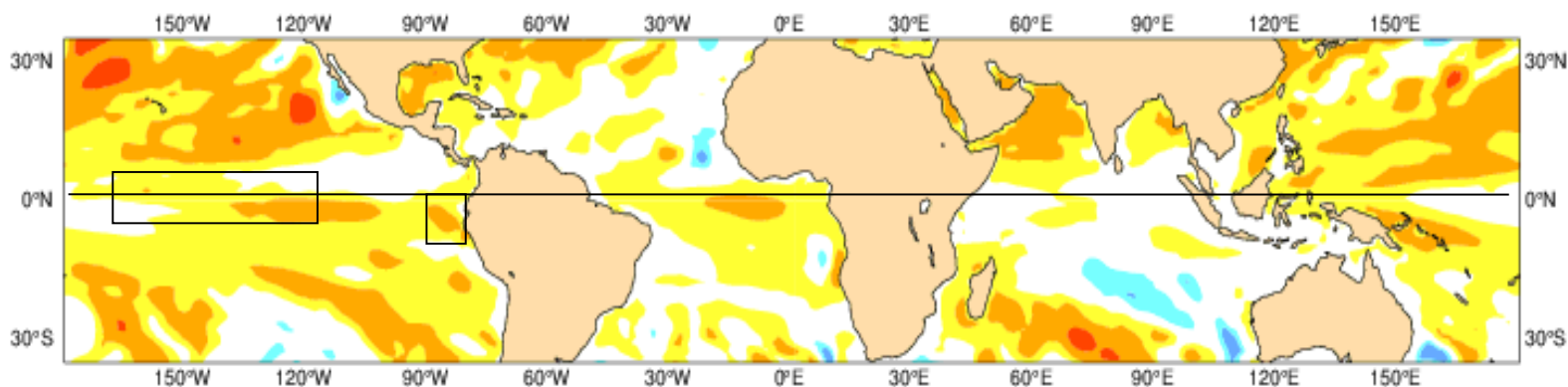


ECMWF Seasonal Forecast
 Mean forecast SST anomaly
 Forecast start reference is 01/01/17
 Ensemble size = 51, climate size = 450

MAM 2017

System 4
 MAM 2017

ECMWF



Pac. Cen.
 0.6 ° C

Pac. Or.
 0.5° C

CFS2

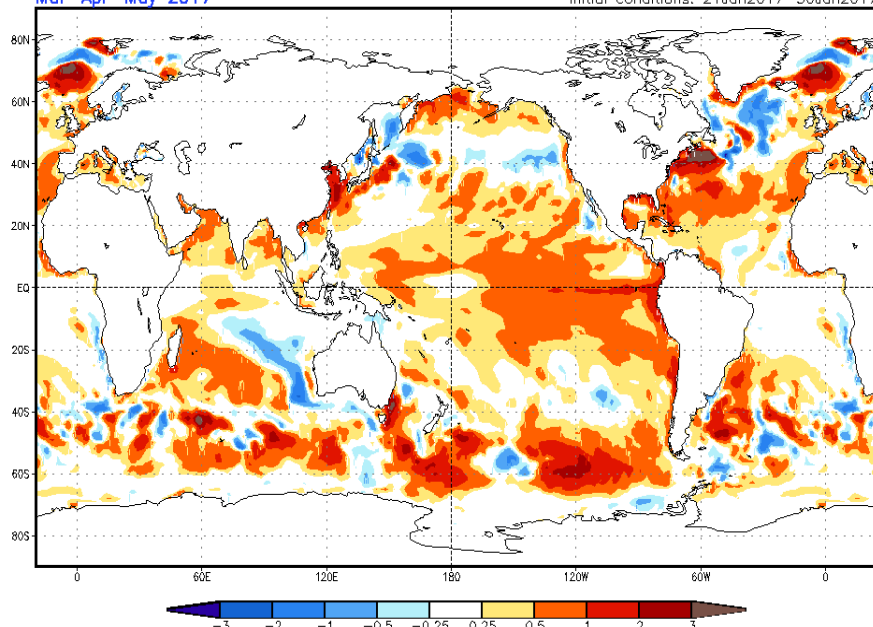
CFSv2 seasonal SST anomalies (K)



NWS/NCEP/CPC

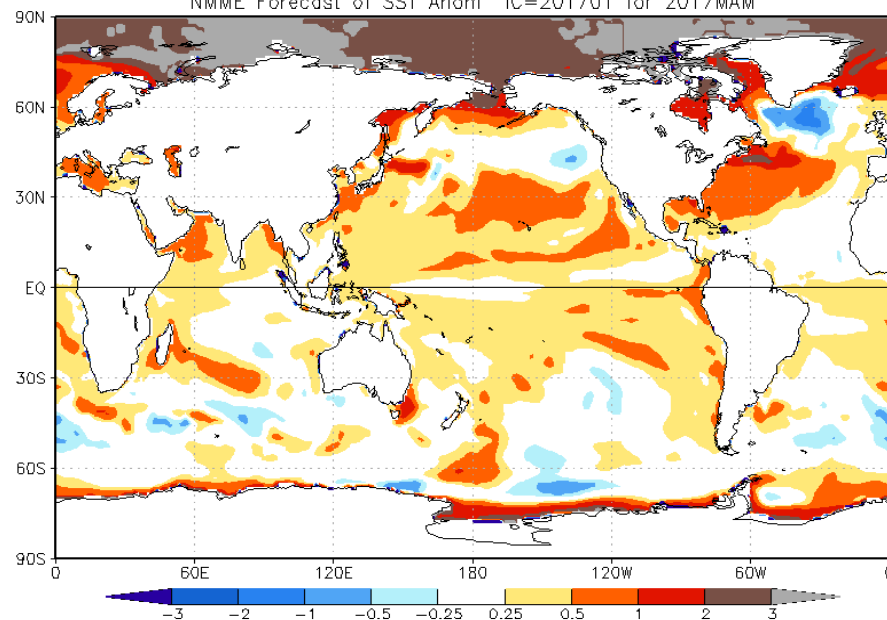
Mar-Apr-May 2017

Initial conditions: 21Jan2017-30Jan2017



NMME

NMME Forecast of SST Anom IC=201701 for 2017MAM



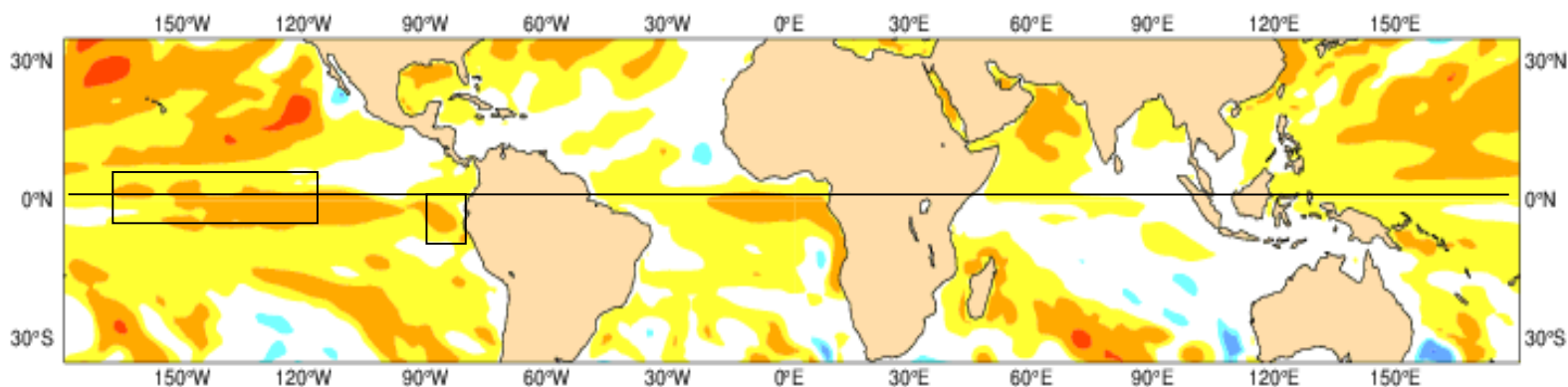
ECMWF Seasonal Forecast
Mean forecast SST anomaly
Forecast start reference is 01/01/17
Ensemble size = 51, climate size = 450

AMJ 2017

System 4
AMJ 2017

ECMWF

■ <-2.0°C
 ■ -2.0..-1.0
 ■ -1.0..-0.5
 ■ -0.5..-0.2
 ■ -0.2..0.2
 ■ 0.2..0.5
 ■ 0.5..1.0
 ■ 1.0..2.0
 ■ > 2.0°C



Pac. Cen.
0.7 ° C

Pac. Or.
0.6 ° C

CFS2

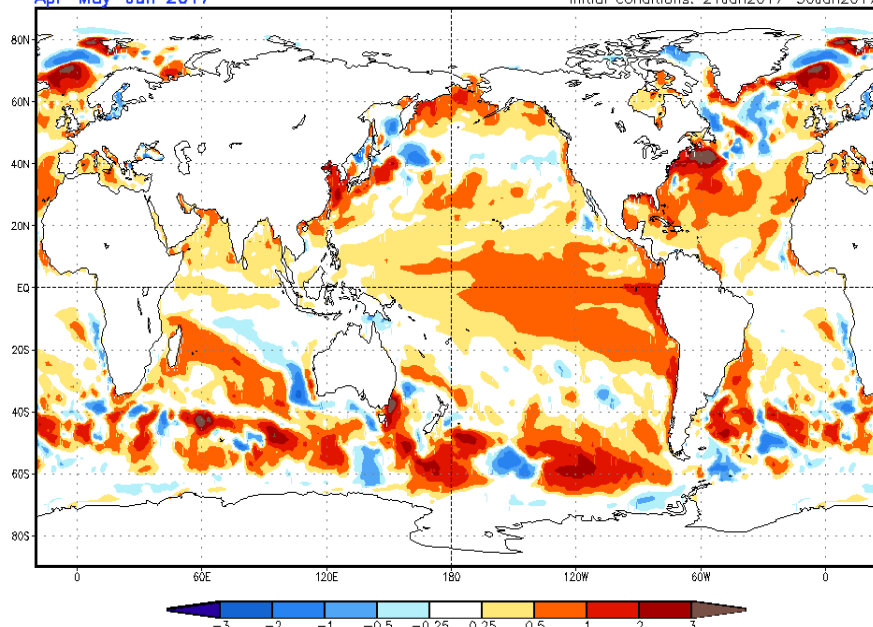
CFSv2 seasonal SST anomalies (K)



NWS/NCEP/CPC

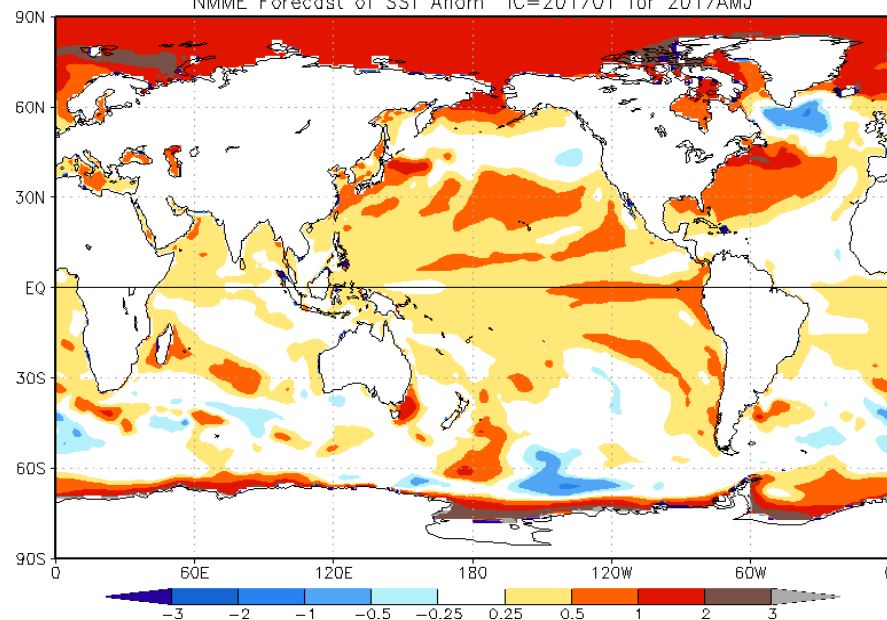
Apr-May-Jun 2017

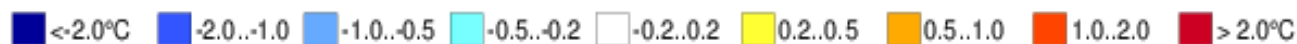
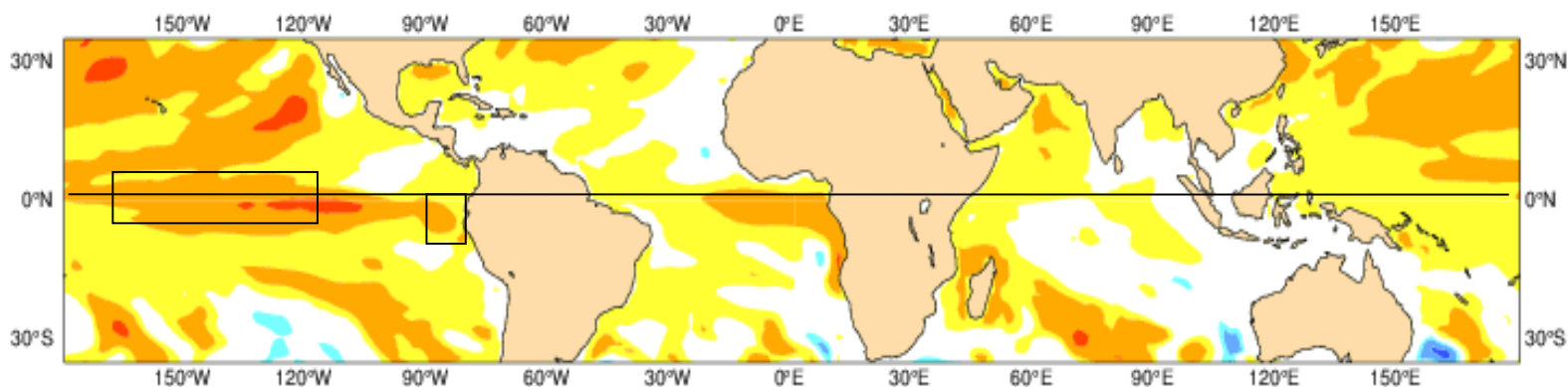
Initial conditions: 21Jan2017-30Jan2017



NMME

NMME Forecast of SST Anom IC=201701 for 2017AMJ





Pac. Cen.
0.9° C

Pac. Or.
0.6° C

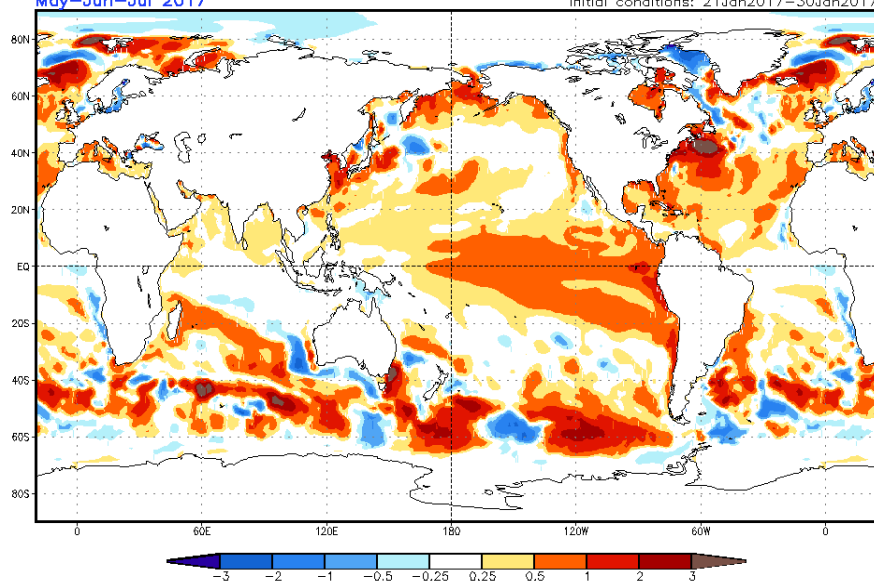
CFS2

CFSv2 seasonal SST anomalies (K)

NWS/NCEP/CPC

May-Jun-Jul 2017

Initial conditions: 21Jan2017-30Jan2017



NMME

NMME Forecast of SST Anom IC=201701 for 2017MJJ

