February 21, 2022

DIVISION MEMORANDUM
No. 44, s. 2022

DISSEMINATION OF REGIONAL ADVISORY NO. 34, S. 2022
(LA NIÑA ADVISORY NO. 4 FOR MINDANAO)

To: Chief Education Supervisors (CID and SGOD)
District In-Charge
Elementary and Secondary School Heads
Elementary and Secondary School DRRRM Coordinators
This Division

1. Mindanao PAGASA Regional Services Division (MPRSD) has been continuously monitoring the weather systems that affect Mindanao. Accordingly, La Niña continues to prevail over the tropical pacific. Most climate models combined with expert judgment suggest the likely persistence of La Niña until March-April-May (MAM) 2022 season and the return to El Niño-Southern Oscillation (ENSO)-Neutral during April-May-June (AMJ) 2022 Season.

2. See attached **REGIONAL ADVISORY NO. 34, S. 2022** for your reference.

3. Wide dissemination of this Memorandum is desired.

AGUSTINES E. CEPE, CESO V
Schools Division Superintendent

Republic of the Philippines
Department of Education
REGION X – NORTHERN MINDANAO

0770
2/17/22

Office of the Regional Director

Regional Advisory No. 34, s. 2022
February 16, 2022
This Advisory is issued for the information of DepEd Officials, personnel/staff, learners, and the concerned public.
(Visit deped10.com)

LA NIÑA ADVISORY NO. 4 FOR MINDANAO

Mindanao PAGASA Regional Services Division (MPRSD) has been continuously monitoring the weather systems that affect Mindanao. Accordingly, La Niña continues to prevail over the tropical pacific. Most climate models combined with expert judgment suggest the likely persistence of La Niña until March-April-May (MAM) 2022 season (~60% chance), and the return to El Niño-Southern Oscillation (ENSO)-Neutral during April-May-June (AMJ) 2022 season.

In addition, weather systems that will likely affect Mindanao during the period of February to July 2022 include Tropical Cyclones, Low Pressure Areas (LPAs), Intertropical Convergence Zone (ICTZ), Easterlies, Northeast Monsoon (in transition up to mid-way). Yet, monthly deterministic forecasts from computer models suggest that most areas in the Region will likely receive **near-to-above-normal rainfall** from February until March 2022 and **mostly-near-normal rainfall** from April to July 2022.

Hence, with the development of these above normal rainfall conditions to be expected over some parts of the country in the coming several months, potential adverse impacts of the developing La Niña will include floods and landslides over vulnerable areas with varying magnitude. All DRRM coordinators, school heads, teachers, and other concerned personnel shall take precautionary measures to mitigate the potential adverse impacts of La Niña.

Please be aware of the regular updates and advisories to be issued, as appropriate, in monitoring these weather conditions. For more information, please coordinate with the regional disaster risk reduction and management coordinator at 0926-568-0095 or e-mail at [redacted] . You may also contact Mindanao PAGASA Regional Services Division (MPRSD) at (088) 555-0485 or Climatology and Agrometeorology Division (CAD) at 8284-0800 or e-mail at [redacted].

This Office directs the immediate and wide dissemination of this Advisory.

DR. ARTURO B. BAYOCOT, CESO III
Regional Director

ESSD/chard

Republic of the Philippines
DEPARTMENT OF SCIENCE AND TECHNOLOGY
Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA)
Mindanao PAGASA Regional Services Division (MPRSD)

Issued on 08 February 2022

LA NIÑA ADVISORY NO. 4 FOR MINDANAO

La Niña continues to prevail over the Tropical Pacific. Most climate models combined with expert judgement suggest the likely persistence of La Niña until March-April-May (MAM) 2022 season (~60% chance), and the return to ENSO-neutral during April-May-June (AMJ) 2022 season.

Climate Assessment for January 2022

The weather systems that affected Mindanao during the month include *Intertropical Convergence Zone (ITCZ), Low Pressure Area (LPA), Trough of LPA, Shear Line, Northeast Monsoon, Easterlies* and *localized thunderstorms*. No tropical cyclone (TC) entered the Philippine Area of Responsibility (PAR) during the month. In total, MPRSD issued *twenty (20)* Heavy Rainfall Warnings due to the aforementioned weather systems (*Table 1*). Reported incidents due to heavy rains are shown in *Figure 1*.

Table 1. Heavy Rainfall Warnings issued by MPRSD Local Weather Forecasting Section for January 2022.

WEATHER SYSTEM	HEAVY RAINFALL WARNINGS		
	Yellow	Orange	
Shear Line	4	0	0
Northeast Monsoon	3	2	0
Trough of Low Pressure Area / Wind Convergence	4	0	0
Low Pressure Area	5	2	0
TOTAL	***16***	***4***	***0***

In comparison to the forecasted *near normal with patches of above normal rainfall* in Mindanao for January 2022, actual rainfall analysis showed that *below to near normal rainfall* were received in the region (*Figure 2 and Table 2*).

Based on the weather observations in Mindanao (*Table 2*), ***Surigao*** station recorded the *highest total monthly rainfall*. It documented an actual rainfall amount (i.e. ***557.9mm***) near its climatological normal value (i.e. ***609.4mm***) for January. Furthermore, ***Surigao*** also recorded the *greatest 24-hour rainfall* for the month, and the *highest number of wet days*. Meanwhile, ***Zamboanga*** station recorded the *lowest total monthly rainfall* and the *lowest number of wet days*. More analysis showed that mostly near normal with patches of below and above normal number of wet days were observed in Mindanao for the month of January (*Figure 3*).

Meanwhile, ***Malaybalay*** and ***Zamboanga*** stations exceeded their previous climatological extremes in terms of maximum temperature (*Table 3*).

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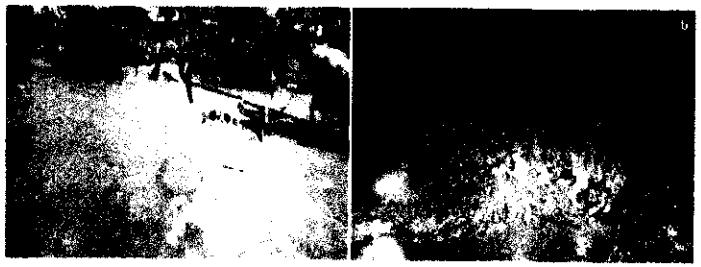

Figure 1. (a) Flooded community in Mawab, Davao de Oro on 16 January 2022 due to the Shear Line.[1] (b) Fallen trees in Santo Tomas, Davao del Norte on 17 January 2022 caused by heavy rains brought by the Shear Line.[2]

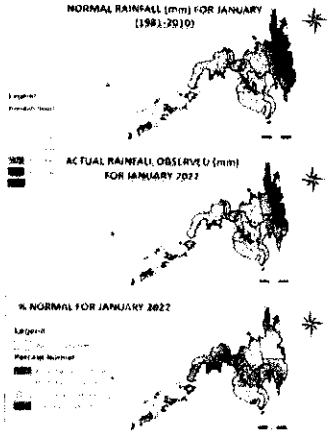

Figure 2. Actual Rainfall Observed (mm and %Normal) in Mindanao for January 2022.

News: Jasmin Joy Evangelista of BULGAR Online / Photo: MDRRMO Mawab, Davao de Oro
News/Photo: Official Facebook Account of the Municipal Government of Santo Tomas, Davao del Norte.

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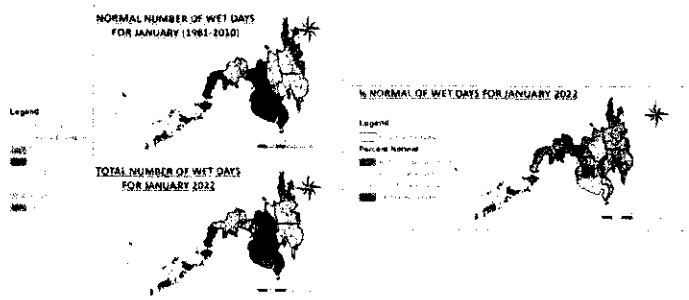

Figure 3. Actual Number of Wet Days (mm and %Normal) in Mindanao for January 2022.

Table 2. Monthly Rainfall Assessment in Mindanao for January 2022.

STATION	RAINFALL								
	Total Monthly RR, mm	NORMAL Monthly RR, mm	QUANTATIVE CLASSIFICATION	QUALITATIVE CLASSIFICATION	Greatest Daily RR, mm	Date of Greatest Daily RR	EXTREME Greatest Daily RR, mm	EXTREME Date of Greatest Daily RR	No. of wet days
Malaybalay	90.3	142.5	42.3	BELOW NORMAL	34.6	16-Jan-2022	142.6	14-Jan-2014	8
Butuan	227.7	318.0	71.6	BELOW NORMAL	80.4	24-Jan-2022	277.5	4-Jan-1985	19
Surigao	557.9	609.4	91.5	[redacted]	140.6	1-Jan-2022	351.8	24-Jan-1963	21
Cotabato	59.7	88.4	67.5	BELOW NORMAL	18.2	27-Jan-2022	62.4	31-Jan-2004	8
Dipolog	56.8	129.7	34.9	BELOW NORMAL	35.2	13-Jan-2022	226.5	23-Jan-1984	16
Davao	90.7	140.3	64.6	BELOW NORMAL	43.0	13-Jan-2022	122.4	28-Jan-2000	8
Hinatuan	541.3	776.3	69.7	BELOW NORMAL	102.6	24-Jan-2022	378.0	26-Jan-1995	20
Zamboanga	57.1	49.7	114.9	[redacted]	13.4	25-Jan-2022	128.0	23-Jan-1916	5
Lagaminegan	124.7	98.3	126.6	[redacted]	89.9	25-Jan-2022	104.4	23-Jan-2005	7
Tagum	285.8	208.4	137.1	[redacted]	88.1	13-Jan-2022	[redacted]	[redacted]	15
Bago City	171.3	137.4	124.8	[redacted]	47.7	26-Jan-2022	[redacted]	[redacted]	11
Marawi	134.4	125.6	107.0	[redacted]	29.7	27-Jan-2022	[redacted]	[redacted]	13
Camiguin	324.0	333.2	97.2	[redacted]	73.6	1-Jan-2022	[redacted]	[redacted]	19
CVI Substation	83.0	141.9	58.5	BELOW NORMAL	37.6	15-Jan-2022	[redacted]	[redacted]	6

Red box in **Table 2** indicate derived normal values.

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Table 3. Monthly Temperature Assessment in Mindanao for January 2022.

STATION	MAXIMUM TEMPERATURE					MINIMUM TEMPERATURE				
	Highest Tmax, deg C	Date of Highest Tmax	EXTREME Highest Tmax, deg C	EXTREME Date of Highest Tmax	CLIMATOLOGICAL NORMALS, deg C (CY 1981-2010)	Lowest Tmin, deg C	Date Lowest Tmin	EXTREME Lowest Tmin, deg C	EXTREME Date Lowest Tmin	CLIMATOLOGICAL NORMALS, deg C (CY 1981-2010)
Malaybalay	34.0	8-Jan-2022	34.0	23-Jan-1988	29.0	15.8	20-Jan-2022	11.7	16-Jan-1956	17.9
Butuan	34.7	29-Jan-2022	36.4	16-Jan-1998	30.2	21.2	20-Jan-2022	18.5	4-Jan-1985	22.5
Surigao	32.2	26-Jan-2022	33.7	15-Jan-1916	29.4	22.0	13-Jan-2022	16.5	2-Jan-1978	23.2
Cotabato	36.5	12-Jan-2022	36.6	31-Jan-2020	32.7	23.0	3-Jan-2022	18.9	15-Jan-2004	22.9
Dipolog	33.2	1-Jan-2022	35.7	28-Jan-2019	30.3	22.9	7-Jan-2022	18.4	12-Jan-1957	22.8
Davao	34.7	12-Jan-2022	36.0	15-Jan-1973 22-Jan-2016	30.8	22.8	13-Jan-2022	17.6	10-Jan-1956	23.2
Hinatuan	32.2	25-Jan-2022	36.2	5-Jan-2019	29.7	21.9	3-Jan-2022	17.2	27-Jan-1969	23.0
General Santos	34.6	12-Jan-2022	37.5	24-Jan-1988	32.8	23.0	13-Jan-2022	17.7	24-Jan-1969	22.5
Zamboanga	36.8	3-Jan-2022	38.8	29-Jan-2016	32.3	21.2	2-Jan-2022	15.8	22-Jan-1969	23.5
Lagaminegan	30.2	30-Jan-2022	36.2	8-Jan-2016	29.5	23.0	27-Jan-2022	15.1	3-Jan-1956	23.6
Tagum	33.4	30-Jan-2022	[redacted]	[redacted]	[redacted]	21.6	16-Jan-2022	[redacted]	[redacted]	[redacted]
Bago City	34.2	11-Jan-2022	[redacted]	[redacted]	[redacted]	20.5	20-Jan-2022	[redacted]	[redacted]	[redacted]
Marawi	23.0	9-Jan-2022	[redacted]	[redacted]	[redacted]	12.3	17-Jan-2022	[redacted]	[redacted]	[redacted]
Camiguin	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	22.4	1-Jan-2022	[redacted]	[redacted]	[redacted]
CVI Substation	33.3	30-Jan-2022	[redacted]	[redacted]	[redacted]	19.1	26-Jan-2022	[redacted]	[redacted]	[redacted]

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Seasonal Climate Outlook for February to July 2022

Weather systems that will likely affect Mindanao during the period include *Tropical Cyclones, Low Pressure Areas (LPAs), Intertropical Convergence Zone (ITCZ), Easterlies, Northeast Monsoon, Tail-End of the Frontal System (TEFS), localized thunderstorms,* and *Southwest Monsoon (in transition up to mid-May).*

PAGASA monthly deterministic forecasts from computer models suggest that most areas in the region will likely to receive *near to above normal rainfall from February until March 2022 (Figure 4a),* and *mostly near normal rainfall from April to July 2022 (Figure 4b).*[1] In comparison to selected international climate forecasts [2, 3], majority of the models suggest the likelihood of *near to above normal rainfall conditions* from *February to April 2022,* and *near normal rainfall conditions* in most areas *from May to July 2022, with patches of below normal rainfall during the last month of the forecast period.* These international climate forecasts also show that *near to above normal rainfall* is likely for *FMA and MAM seasons* and *near normal rainfall* for *AMJ and MJJ seasons.* On the other hand, official rainfall probabilistic forecasts show that there is approximately 40% to 55% chance of *above normal rainfall* conditions in most areas of the region from *February to April 2022,* and higher probability for *near normal rainfall conditions* from *May to July 2022.*[4] Comparatively, most of the international climate models [2] and multi-model ensembles (MMEs) [3, 5, 6] show 40% to 60% probability of *above normal rainfall* conditions in most areas of the region from *February to April 2022.* Meanwhile, the likelihood of *near normal rainfall* is highly likely in most areas in Mindanao from *May to July 2022.* Model outputs also illustrate 40% to 50% likelihood of *below normal rainfall* conditions in the Zamboanga Peninsula during the months of *June and July 2022,* as well as the *MJJ season.*

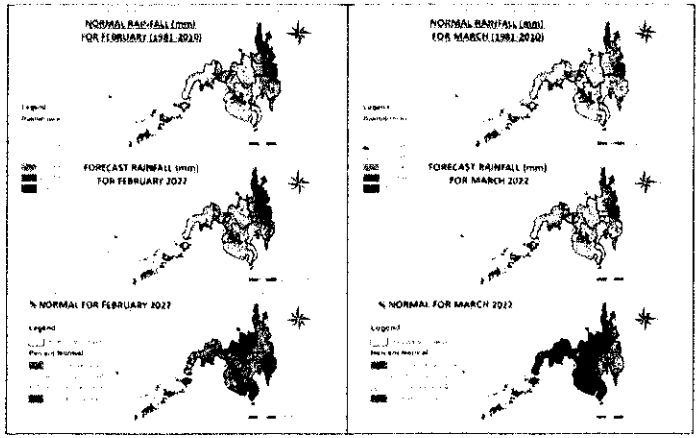

Figure 4a. Forecast Rainfall (mm and %Normal) in Mindanao for February to March 2022.

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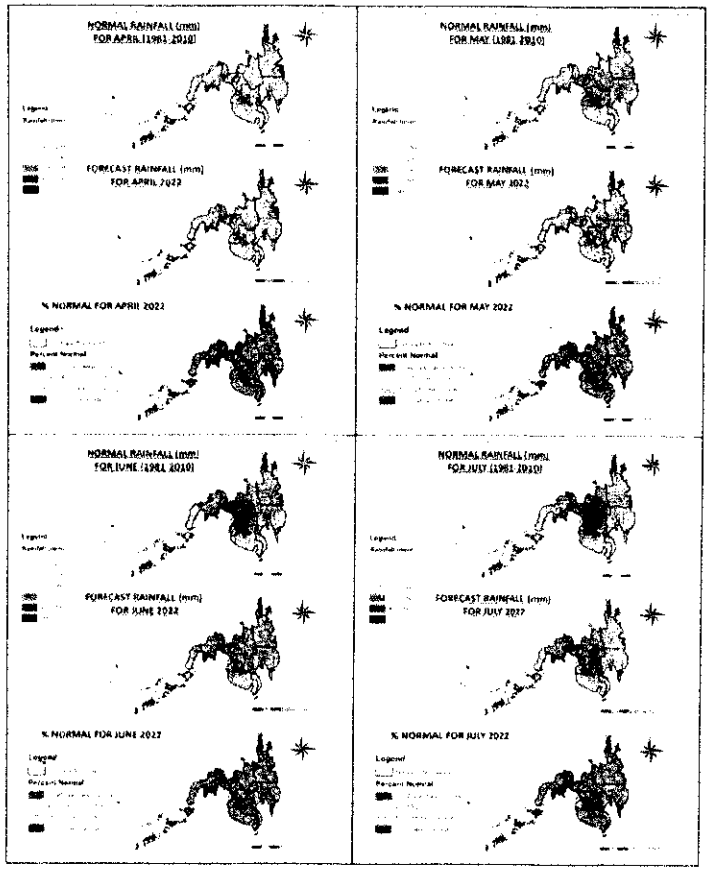

Figure 4b. Forecast Rainfall (mm and %Normal) in Mindanao for April to July 2022.

tracking the sky; defying the country

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Table 4. Observed Rainfall in Percent of Normal (Aug 2021 – Jan 2022) and Forecast Rainfall in Percent of Normal (Feb 2022 – Jul 2022).

PROVINCE	OBSERVED RAINFALL (%NORMAL)						FORECAST RAINFALL (%NORMAL)					
	AUG '21	SEP '21	OCT '21	NOV '21	DEC '21	JAN '22	FEB '22	MAR '22	APR '22	MAY '22	JUN '22	JUL '22
[illegible]												
ZAMBOANGA DEL NORTE	77.6											
ZAMBOANGA DEL SUR												
ZAMBOANGA SIBUGAY	65.6				75.4							
[illegible]												
BUKIDNON						67.5						
CAMIGUIN												
LANAO DEL NORTE												
MISAMIS OCCIDENTAL												
MISAMIS ORIENTAL						76.2						
[illegible]												
DAVAO DE ORO												
DAVAO CITY					66.1							
DAVAO DEL NORTE												
DAVAO DEL SUR					65.5							
DAVAO OCCIDENTAL												
DAVAO ORIENTAL					74.4							
[illegible]												
SOUTH COTABATO						52.3						
NORTH COTABATO	77.9											
SARANGANI						52.5						
SULTAN KUDARAT	68.0					52.6						
[illegible]												
AGUSAN DEL NORTE						75.3						
AGUSAN DEL SUR						71.2						
DINAGAT ISLANDS												
SURIGAO DEL NORTE												
SURIGAO DEL SUR						75.2						
[illegible]												
BASILAN	96.3				73.9							
MAGUINDANAO	80.5					72.7						
LANAO DEL SUR												
SULU	73.3					56.3						
TAWI-TAWI	74.6					58.5						

Legend

[illegible]

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Moreover, dry days[1] forecast for Mindanao is shown in *Table 5*. Temperature forecast on the other hand, [illegible] indicates that Mindanao will likely experience near to warmer than average surface temperatures for *February to July 2022*.

Table 5. Forecast Dry Days in Mindanao for February to July 2022 per province.

PROVINCE	FORECAST					
	FEB 2022	MAR 2022	APR 2022	MAY 2022	JUN 2022	JUL 2022
[illegible]						
ZAMBOANGA DEL NORTE	20	22	23	21	15	19
ZAMBOANGA DEL SUR	20	21	22	21	14	18
ZAMBOANGA SIBUGAY	20	21	22	21	15	18
[illegible]						
BUKIDNON	17	20	21	15	10	12
CAMIGUIN	18	24	25	24	17	16
LANAO DEL NORTE	19	23	23	20	13	15
MISAMIS OCCIDENTAL	19	23	23	21	14	17
MISAMIS ORIENTAL	18	23	24	21	15	16
[illegible]						
COMPOSTELA VALLEY/ DAVAO DE ORO	14	18	19	19	17	18
DAVAO CITY	20	20	20	13	13	14
DAVAO DEL NORTE	17	19	20	16	14	15
DAVAO DEL SUR	21	22	21	16	15	16
DAVAO OCCIDENTAL	21	25	25	23	20	22
DAVAO ORIENTAL	14	18	19	20	19	21
[illegible]						
SOUTH COTABATO	20	23	23	21	17	19
NORTH COTABATO	19	20	20	14	11	12
SARANGANI	20	25	25	24	19	21
SULTAN KUDARAT	20	20	22	18	14	16
[illegible]						
AGUSAN DEL NORTE	13	17	18	21	17	19
AGUSAN DEL SUR	12	15	17	17	14	17
DINAGAT ISLANDS	8	13	18	22	17	20
SURIGAO DEL NORTE	8	12	15	21	17	21
SURIGAO DEL SUR	7	12	14	18	17	20
[illegible]						
BASILAN	22	22	24	25	19	20
MAGUINDANAO	19	19	20	16	12	14
LANAO DEL SUR	18	21	23	17	11	13
SULU	23	22	25	26	21	23
TAWI-TAWI	24	22	23	26	21	23

[1] ***Dry day*** refers to a day with ***less than 1 mm of rain (being issued February - April)***.

[illegible]

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With this development, MPRSD will continue to closely monitor the ongoing La Niña, which could influence development of extreme weather conditions that can adversely affect Mindanao islands. Updates shall be issued as appropriate. All concerned Government Units and institutions including non-government organizations and the public are advised to take appropriate actions concerning this current climate condition and keep monitoring for updates. For further information, please contact the Mindanao PAGASA Regional Services Division (MPRSD) at (088) 555-0485 or the Climatology and Agrometeorology Division (CAD) at (02) 8284-0800 local 906.

ANTHONY JOSEPH R. LUCERO, M.Sc.
Weather Services Chief
Mindanao PAGASA Regional Services Division

Climate Outlook (February – June 2022) during the 144th National Climate Forum by PAGASA CAD-CLIMPS on 26Jan2022.

Rainfall Forecast and % Normal Maps for Mindanao for February to July 2022 provided by PAGASA CAD-CLIMPS.

National Weather Service (NWS) Climate Prediction Center (CPC) / National Oceanic and Atmospheric Administration (NOAA). Seasonal climate forecast from CFSv2 for Feb to Oct 2022, updated 01 February 2022

APEC Climate Center (APCC) Deterministic Multi-model Ensemble (MME) Forecasts, issued on 20 January 2022

Climate Outlook (February – June 2022) during the 144th National Climate Forum by PAGASA CAD-CLIMPS on 26Jan2022

UK Met Office Global long-range model probability maps for FMA 2022, MAM 2022 and AMJ 2022 issued January 2022

APEC Climate Center (APCC) Probabilistic Multi-model Ensemble (MME) Forecasts, issued on 20 January 2022

World Meteorological Organization (WMO) Lead Centre for Long Range Forecast (LRF) Multi-Model Ensemble (MME for February to July 2022, issued on January 2022

International Research Institute for Climate and Society, IRI Multi-Model Probability Forecast for Precipitation for FMA 2022, MAM 2022, AMJ 2022 and MJJ 2022 issued January 2022

Forecast Monthly Mean Temperature Anomaly for February to July 2022, relative to 1981-2010 climatological normal issued by PAGASA CAD-CLIMPS