



## REGIONAL SEASONAL CLIMATE OUTLOOK AND ADVISORY

August 2023 to January 2024

CLIMATE OUTLOOK SUMMARY		WEATHER SYSTEMS THAT MAY AFFECT THE REGION																																																																						
<p>El Niño is present in the Tropical Pacific and will persist until the first quarter of 2024, showing signs of strengthening in the coming months.</p>		<table border="1"> <thead> <tr> <th rowspan="2">Month</th> <th rowspan="2">Tropical Cyclones</th> <th rowspan="2">Prov</th> <th colspan="6">No. of Dry Days</th> </tr> <tr> <th>Aug</th> <th>Sep</th> <th>Oct</th> <th>Nov</th> <th>Dec</th> <th>Jan</th> </tr> </thead> <tbody> <tr> <td>Aug</td> <td>2 or 3</td> <td>ALB</td> <td>15</td> <td>13</td> <td>19</td> <td>12</td> <td>12</td> <td>15</td> </tr> <tr> <td>Sep</td> <td>2 or 3</td> <td>CN</td> <td>18</td> <td>14</td> <td>14</td> <td>11</td> <td>9</td> <td>14</td> </tr> <tr> <td>Oct</td> <td>2 or 3</td> <td>CS</td> <td>16</td> <td>13</td> <td>17</td> <td>11</td> <td>11</td> <td>16</td> </tr> <tr> <td>Nov</td> <td>1 or 2</td> <td>CAT</td> <td>16</td> <td>15</td> <td>16</td> <td>12</td> <td>12</td> <td>19</td> </tr> <tr> <td>Dec</td> <td>1 or 2</td> <td>MAS</td> <td>17</td> <td>16</td> <td>20</td> <td>17</td> <td>17</td> <td>20</td> </tr> <tr> <td>Jan</td> <td>0 or 1</td> <td>SOR</td> <td>16</td> <td>15</td> <td>19</td> <td>13</td> <td>13</td> <td>15</td> </tr> </tbody> </table>	Month	Tropical Cyclones	Prov	No. of Dry Days						Aug	Sep	Oct	Nov	Dec	Jan	Aug	2 or 3	ALB	15	13	19	12	12	15	Sep	2 or 3	CN	18	14	14	11	9	14	Oct	2 or 3	CS	16	13	17	11	11	16	Nov	1 or 2	CAT	16	15	16	12	12	19	Dec	1 or 2	MAS	17	16	20	17	17	20	Jan	0 or 1	SOR	16	15	19	13	13	15	<ul style="list-style-type: none"> <li>♣ Localized Thunderstorm</li> <li>♣ Southwest Monsoon</li> <li>♣ Northeast Monsoon</li> <li>♣ Shearline</li> <li>♣ ITCZ</li> <li>♣ LPA</li> <li>♣ Easterlies</li> <li>♣ Tropical Cyclones</li> <li>♣ HPAs</li> <li>♣ Frontal System</li> </ul>
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FORECAST RAINFALL ANALYSIS																		
Prov	August 2023			September 2023			October 2023			November 2023			December 2023			January 2024		
	Normal (mm)	Forecast (mm)	% of Normal	Normal (mm)	Forecast (mm)	% of Normal	Normal (mm)	Forecast (mm)	% of Normal	Normal (mm)	Forecast (mm)	% of Normal	Normal (mm)	Forecast (mm)	% of Normal	Normal (mm)	Forecast (mm)	% of Normal
ALB	211.6	236.7	99.2	269.4	246.2	80.8	349.2	229.9	80.5	458.8	226.0	72.4	463.2	314.4	73.2	276.5	164.5	81.2
CN	158.1	144.9	90.9	261.2	244.3	87.7	454.5	368.3	83.9	491.7	298.1	61.6	504.5	382.1	65.5	255.0	194.1	71.6
CS	190.8	203.5	97.4	266.3	258.2	75.3	401.4	274.6	80.0	444.3	203.6	60.4	475.8	307.6	71.1	258.5	138.0	74.1
CAT	165.9	172.4	92.0	239.4	229.0	85.4	385.6	288.1	76.6	443.3	255.1	63.3	465.8	365.1	70.9	269.5	210.5	74.4
MAS	186.1	165.7	91.8	226.8	212.5	93.8	282.9	205.6	77.4	306.5	185.7	69.5	316.6	252.0	70.5	183.7	165.7	82.0
SOR	196.9	198.8	99.8	244.4	217.6	93.6	326.1	249.2	79.0	424.6	311.0	69.3	451.1	349.1	72.6	293.2	238.3	79.0

All Climate Forecast/Information is based on LA NINA Ended & CLIMATE OUTLOOK August 2023 to January 2024), issued by PAGASA. Source: <http://bagong.pagasa.dost.gov.ph/climate>

Legend:  
 🟡 Way below normal (<40%); 🟠 Below normal (41%-80%);  
 🟢 Normal (81%-120%); 🟣 Above Normal (>120%)

### IMPACT OUTLOOKS

**General Outlook:**

- 🕒 Generally, Bicol Region will likely experience below normal to near normal rainfall condition during the forecast period with 144.9mm to 382.1mm.
- 🕒 Supplemental irrigation may be needed in the month of August in CN, Cat'nes, Masbate and Sorsogon due to <200mm rainfall. Forecast rainfall in the remaining months (Sept-Oct) of the wet season cropping may suffice (>200mm) despite below normal projection in other provinces. However, there could be delayed in postharvest operations due to forecast typhoons (2 or 3 each in Sept-Oct). Typhoon-induced strong winds, at 70-100kph with a greater than 12 hr exposure, yield loss ranges from 15-50% at reproductive and maturing stage for rice and corn.
- 🕒 For the upcoming dry season cropping, even if below normal rainfall is projected, farmers should take advantage of the available moisture from Nov to Dec (185mm to 365mm).
- 🕒 Should El Niño progresses, upland, rainfed and tail-end of irrigation systems may incur estimated **Rice yield loss** at 40% at seedling stage, 50% at vegetative, 60% at reproductive and 15% at maturity stage. For **Corn**, estimated yield loss is 25%, 50%, 80% and 15% at seedling, vegetative, reproductive and maturity stage, respectively. 70,123.47 ha and 39,710 ha are prone to prone to drought for rice and corn, respectively.
- 🕒 Salt-water intrusion, especially along the Bicol River Basin and coastal production areas, may occur due to backflow. Bicol River Basin is at sea level in its mouth along San Miguel Bay.
- 🕒 High heat index may result to poor pollination, thereby reducing crop yield as anther becomes dry & sterile at >35°C for rice production.
- 🕒 **Common plants pests and diseases due to high temperature (>25°C), precipitation and humidity (>80%):** rice blast, sheath blight, sheath rot, bacterial leaf blight, bacterial leaf streak, black bug, green leafhopper, brown planthopper, common armyworm, fall armyworm, bacterial stalk rot, thrips, lepidopterans, hopper, thrips, pod borer, bean black aphids, southern blight, bacterial wilt
- 🕒 **Livestock and poultry heat stress reactions:** behavioral changes, increases in respiration rate, rectal temperature and heart rate, lowers growth rate, production, reproduction, and even death in severe cases. >30°C ruminants are inhibited from eating.
- 🕒 At 34 °C, **40% reduction in feed intake and 13.2% decrease in final weight** was observed compared to pigs kept at 22 °C (Oliveira et.al, 2018). A change in

### CLIMATE-RESILIENT AGRICULTURE PRACTICES

- 🕒 **Risk transfer.** Register the farm area to PCIC prior to planting. 🕒 Immediate position of planting materials and farm inputs
- 🕒 Maximize the residual moisture from STY Betty, ITCZ, and Habagat.
- 🕒 **Use of stress-tolerant varieties and farm diversification**
- 🕒 Plant stress-tolerant (such as GSR-lines), early maturing varieties (102-106 Days After Planting) such as NSIC Rc 438, PSB Rc10, NSIC Rc 440/GSR 8, NSIC Rc 480), saline tolerant such as GSR 11 and NSIC Rc 190 and pest and disease-tolerant varieties (e.g. GM corn with tolerance to FAW)
- 🕒 **Plant gabi, practice diversification (rice-duck or rice-fish farming) and root crops (Cassava and Ube)**
- 🕒 **Practice community seed banking**
- 🕒 **Maximize available moisture by planting forage. Prepare silage for livestock.**
- 🕒 **Use of water-saving technologies**
- 🕒 Alternate Wetting and Drying
- 🕒 Aeroponics/hydroponics
- 🕒 Use of plastic and bio-mulch
- 🕒 **Expedite Farm Operations using Production and Postharvest Machineries**
- 🕒 Use mechanical rice transplanter, corn planter, drone sprayers to save from labor and inputs
- 🕒 For postharvest, use combine harvester and mechanical dryers to save up to 5% of the harvest
- 🕒 **Crops**
- 🕒 **Abonong SWAK**-Require scattering of 3.8MT rice straw and 10 bags of manure reduces cost by PHP 2,000.00 to 4,000.00/ha (**Combo 1** - 3-4MT/Ha, **Combo 2** - 5-6MT/Ha, **Combo 3** - 7-8 MT/ha yield).
- 🕒 Planting in the greenhouses/rain shelter and planting in beds to reduce rots and diseases.
- 🕒 UVS Plastic for alternative drying facility for Abaca (sun dry without using of UVS plastic PhP 60.00/kl while using UVS Plastic PhP 80.00/kl). Additional PhP 2,200/ha due to high quality produce.
- 🕒 Mulching using rice husks and coconut husks to conserve moisture especially in the upland areas.
- 🕒 Practice community seed banking/buffer stocking in the community
- 🕒 **Livestock Evacuation Center**
- 🕒 Establish a designated evacuation center. Observe pest and disease-protocols to minimize its spread. Early Administration of vaccine to animals to prevent outbreaks
- 🕒 Cut and carry of forages for those with limited pasture areas
- 🕒 Provide enough drinking water to avoid dehydration
- 🕒 Well ventilated and bio secured housing for swine to avoid heat stroke
- 🕒 Tether carabaos in shady areas to avoid heat stroke if wallowing areas not available
- 🕒 Engage in value-adding and emerging enterprise cost market such as (e.g. Egg production (500 heads, PhP 10,000. 00 to 35,000.00 net income/month), vegetable production (PhP 10,000.00 to 50, 000.00/cropping).

### DEPARTMENT OF AGRICULTURE SUPPORT

- 🕒 Pre-positioned and ongoing distribution of planting materials and other farm inputs
- 🕒 Farm operations, technical and marketing assistance
- 🕒 Farm machineries stationed in the DA RFO 5 and Research Outreach Station in every province.
- 🕒 Climate-information services

