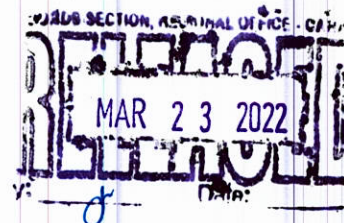




Republic of the Philippines
Department of Education
CARAGA REGION



March 23, 2022

REGIONAL MEMORANDUM
No. 0234, s. 2021

To: SCHOOLS DIVISION SUPERINTENDENTS
This Region

UPDATED PRE-DISASTER RISK ASSESSMENT (PDRA) INDICATORS FOR
HYDROMETEOROLOGICAL HAZARDS

1. In reference to NDRRMC Memo No. 39, s. 2022 and RDRRMC MC No. 21, s. 2022 issuances, all DepEd Offices and schools are hereby informed of the **Updated PDRA Indicators for Hydrometeorological Hazards** (as of March 16, 2022), herewith attached for complete reference.
2. The updated PDRA Indicators shall have to be included as reference guide specifically in the division and school-level localization of policies, contingency planning, and preparedness and response planning, among others.
3. For information and guidance.


MA. GEMMA MERCADO LEDESMA
Regional Director 

Encl/s.: RDRRMC No. 21, s. 2022
Reference/s: NDRRMC Memo No. 39, s. 2022
To be indicated in the Perpetual Index
under the following subjects:

DRRM PDRA

ESS/ mpb
03/23/2022



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Document Control No:
DepEdRO13-F-REC-013/R3/02-18-2020



Republic of the Philippines
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REGIONAL DISASTER RISK REDUCTION AND MANAGEMENT OPERATIONS CENTER
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Facebook Page: Civil Defense Caraga



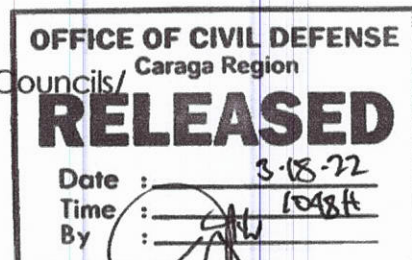
RDRRMC Memorandum Circular
No. 21, series of 2022

To : Chairpersons, Provincial/City/Municipal DRRM Councils/
Barangay DRRM Committees
All Members, RDRRMC

From : RDRRMC Chairperson

Subject : **Dissemination of NDRRMC Memorandum Order No. 39, s. 2022 dated March 16, 2022 re: Updated PDRA Indicators for Hydrometeorological Hazards**

Date : March 17, 2022



As an update on the recent national issuance, a copy of NDRRMC Memorandum Order No. 39, s. 2022 dated March 16, 2022, with the subject: "Updated PDRA Indicators for Hydrometeorological Hazards" is provided to all concerned for information.

In view of this, all members of the PDRA Analyst Groups at the Regional and Local Levels are hereby enjoined to utilize the updated indicators for the conduct of PDRA within their respective areas of jurisdiction. As emphasized, the updated indicators can be subjected to subsequent enhancements and localization/customization/modification based on the requirements of the emergency situation and the technical assessment/recommendation of the PDRA Analyst Group.

Furthermore, all Local DRRM Councils and RDRRMC members-agencies are requested to ensure the widest dissemination of this memorandum to their regional and local counterparts in their respective area of responsibility/operation.

For guidance and strict compliance.


DIR. LIZA R. MAZO
Chairperson, RDRRMC Caraga
Regional Director, OCD



REPUBLIC OF THE PHILIPPINES
NATIONAL DISASTER RISK REDUCTION AND MANAGEMENT COUNCIL
National Disaster Risk Reduction and Management Center, Camp Aguinaldo, Quezon City, Philippines

MAR 16 2022

MEMORANDUM
No. 39, s. 2022

TO : ALL MEMBERS OF PRE-DISASTER RISK ASSESSMENT (PDRA) ANALYST GROUPS AT THE NATIONAL, REGIONAL, AND LOCAL LEVELS

SUBJECT : Updated PDRA Indicators for Hydrometeorological Hazards

In the effort to enhance the conduct of Pre-Disaster Risk Assessment (PDRA) for Hydrometeorological Hazards, hereby approved are the updated indicators, particularly the Probability and Impact Indicators for use in the Risk Matrix as well as the simplified Emergency Preparedness and Response (EPR) Protocols.

All members of the PDRA Analyst Groups at the National, Regional and Local Levels are hereby enjoined to utilize the updated indicators for the conduct of PDRA within their respective areas of jurisdiction. It is understood that the updated indicators can be subjected to subsequent enhancements and localization/customization/modification based on the requirements of the emergency situation and the technical assessment/recommendation of the PDRA Analyst Groups.

All previous issuances of PDRA indicators are hereby superseded by this Memorandum.

For information and guidance.

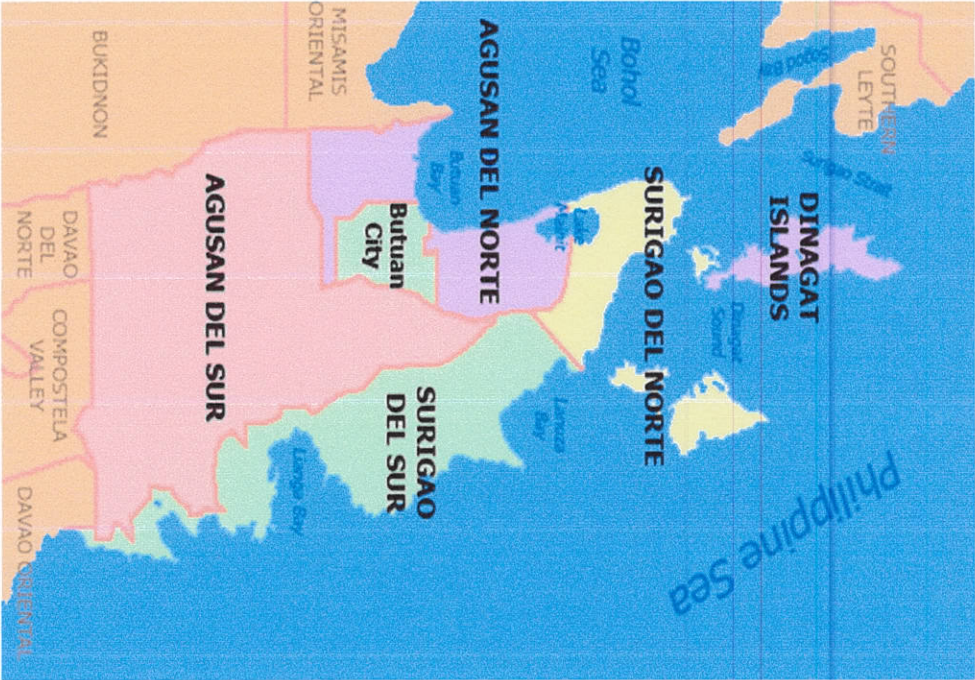
For the Executive Director, NDRRMC:


ASEC BERNARDO RAFAELITO R. ALEJANDRO IV, CESO IV, MNSA
Deputy Administrator for Operations

CARAGA - Assessment

PROBABILITY	
IMPACT	
AFFECTED POPULATION	

PARTICULARS	PROJECTIONS FOR 2022 (based on 10 year historical data, 95% confidence interval)	WORST CASE: ODETTE (2021)
Dead	0 to 13 persons	71
Injured	0 to 93 persons	508
Missing	0 to 2 persons	5
Affected Population	0 to 343,603 persons	1,491,644
Displaced Population	0 to 212,005 persons	181,804
Totally Damaged Houses	0 to 12,676 houses	67,668
Partially Damaged houses	0 to 18,995 houses	101,673
Power Interruption	0 to 18 cities/municipalities	73
Water Interruption	0 to 2 cities/municipalities	11
Communication Interruption	0 to 17 cities/municipalities	73



Legend for Hazards Exposure

Wind/TTC Track

Flood

Landslide

CARAGA Probability

Rating Scale	Tropical Cyclone Track	Flood	Landslide	Escalation Protocol
D Certain/ Imminent	More than 2 provinces/highly urbanized cities exposed	More than 2 provinces/highly urbanized cities exposed	More than 2 provinces/highly urbanized cities exposed	RDRRMC to take lead and manage
C Highly Likely	2 provinces/highly urbanized cities exposed	2 provinces/highly urbanized cities exposed	2 provinces/highly urbanized cities exposed	RDRRMC to augment
B Less Likely	1 province/highly urbanized city exposed	1 province/highly urbanized city exposed	1 province/highly urbanized city exposed	RDRRMC to monitor
A Unlikely	No exposure	No exposure	No exposure	No incident management
Source	PAGASA	MGB	MGB	Consultation with RDRRMC

Impact

Rating Scale	Wind Impact	Landslide	Flood	Critical Cyclone Chart Track	Affected Population
4 Catastrophic	TCWS 3 and above	High to very high susceptibility	High to very high susceptibility	RED ALERT LEVEL Within 200 KM diameter	15 or more than 15% of the overall Region population
3 Major	TCWS 2	Moderate susceptibility	Moderate susceptibility	ORANGE ALERT LEVEL 201 to 400 KM diameter	11 to 14% of the overall Region population
2 Minor	TCWS 1	Low susceptibility	Low susceptibility	YELLOW ALERT LEVEL 401 to 600 KM diameter	Up to 10 % of the overall Region population
1 Negligible	No TCWS	No susceptibility	No susceptibility	Not within the Critical Cyclone Chart Track	No affected population
Source	PAGASA	MGB	MGB	PAGASA/DILG	GeoAnalytics

UPDATED PDRA RATING SCALES FOR PROBABILITY AND IMPACT
FOR USE IN NDRRMC PDRA MEETINGS FOR HYDROMETEOROLOGICAL HAZARDS
as of 16 March 2022

User: NDRRMC PDRA Analyst Group
To be Assessed: Regions

PROBABILITY
(in the next 72 hours)

Rating Scale	Tropical Cyclone Track	Flood	Landslide	Escalation Protocol
D Certain/ Imminent	More than 2 provinces/highly urbanized cities exposed	More than 2 provinces/highly urbanized cities exposed	More than 2 provinces/highly urbanized cities exposed	RDRRMC to take lead and manage
C Highly Likely	2 provinces/highly urbanized cities exposed	2 provinces/highly urbanized cities exposed	2 provinces/highly urbanized cities exposed	RDRRMC to augment
B Less Likely	1 province/highly urbanized city exposed	1 province/highly urbanized city exposed	1 province/highly urbanized city exposed	RDRRMC to monitor
A Unlikely	No exposure	No exposure	No exposure	No incident management
Source	PAGASA	MGB	MGB	Consultation with RDRRMC

IMPACT

Rating Scale	Wind Impact	Landslide	Flood	Critical Cyclone Chart Track	Affected Population
4 Catastrophic	TCWS 3 and above	High to very high susceptibility	High to very high susceptibility	RED ALERT LEVEL Within 200 KM diameter	15 or more than 15% of the overall Region population
3 Major	TCWS 2	Moderate susceptibility	Moderate susceptibility	ORANGE ALERT LEVEL 201 to 400 KM diameter	11 to 14% of the overall Region population
2 Minor	TCWS 1	Low susceptibility	Low susceptibility	YELLOW ALERT LEVEL 401 to 600 KM diameter	Up to 10 % of the overall Region population
1 Negligible	No TCWS	No susceptibility	No susceptibility	Not within the Critical Cyclone Chart Track	No affected population
Source	PAGASA	MGB	MGB	PAGASA/DILG	GeoAnalytics

UPDATED PDRA RATING SCALES FOR PROBABILITY AND IMPACT
FOR USE IN RDRRMC PDRA MEETINGS FOR HYDROMETEOROLOGICAL HAZARDS
as of 16 March 2022

User: RDRRMC PDRA Analyst Group
To be Assessed: Provinces/Highly Urbanized Cities

PROBABILITY
(in the next 72 hours)

Rating Scale	Tropical Cyclone Track	Flood	Landslide	Escalation Protocol
D Certain/ Imminent	More than 2 cities/municipalities exposed	More than 2 cities/municipalities exposed	More than 2 cities/municipalities exposed	Provincial/HUC DRRMC to take lead and manage
C Highly Likely	2 cities/municipalities exposed	2 cities/municipalities exposed	2 cities/municipalities exposed	Provincial/HUC DRRMC to augment
B Less Likely	1 city/municipality exposed	1 city/municipality exposed	1 city/municipality exposed	Provincial/HUC DRRMC to monitor
A Unlikely	No exposure	No exposure	No exposure	No incident management
Source	PAGASA	MGB	MGB	Consultation with Provincial/HUC DRRMC

IMPACT

Rating Scale	Wind Impact	Landslide	Flood	Critical Cyclone Chart Track	Affected Population
4 Catastrophic	TCWS 3 and above	High to very high susceptibility	High to very high susceptibility	RED ALERT LEVEL Within 200 KM diameter	15 or more than 15% of the overall Province/HUC population
3 Major	TCWS 2	Moderate susceptibility	Moderate susceptibility	ORANGE ALERT LEVEL 201 to 400 KM diameter	11 to 14% of the overall Province/HUC population
2 Minor	TCWS 1	Low susceptibility	Low susceptibility	YELLOW ALERT LEVEL 401 to 600 KM diameter	Up to 10 % of the overall Province/HUC population
1 Negligible	No TCWS	No susceptibility	No susceptibility	Not within the Critical Cyclone Chart Track	No affected population
Source	PAGASA	MGB	MGB	PAGASADILG	GeoAnalytics

PDRA RATING SCALES FOR PROBABILITY AND IMPACT
FOR USE IN LDRRMC PDRA MEETINGS FOR HYDROMETEOROLOGICAL HAZARDS
as of 16 March 2022

User: Provincial/City/Municipal DRRMC PDRA Analyst Group
To be Assessed: Cities and Municipalities

PROBABILITY
(in the next 72 hours)

Rating Scale	Tropical Cyclone Track	Flood	Landslide	Escalation Protocol
D Certain/ Imminent	More than 2 barangays exposed	More than 2 barangays exposed	More than 2 barangays exposed	City/Municipal DRRMC to take lead and manage
C Highly Likely	2 barangays exposed	2 barangays exposed	2 barangays exposed	City/Municipal DRRMC to augment
B Less Likely	1 barangay exposed	1 barangay exposed	1 barangay exposed	City/Municipal DRRMC to monitor
A Unlikely	No exposure	No exposure	No exposure	No need for incident management
Source	PAGASA	MGB	MGB	Consultation with City/Municipal DRRMC

IMPACT

Rating Scale	Wind Impact	Landslide	Flood	Critical Cyclone Chart Track	Affected Population
4 Catastrophic	TCWS 3 and above	High to very high susceptibility	High to very high susceptibility	RED ALERT LEVEL Within 200 KM diameter	15 or more than 15% of the overall City/Municipality population
3 Major	TCWS 2	Moderate susceptibility	Moderate susceptibility	ORANGE ALERT LEVEL 201 to 400 KM diameter	11 to 14% of the overall City/Municipality population
2 Minor	TCWS 1	Low susceptibility	Low susceptibility	YELLOW ALERT LEVEL 401 to 600 KM diameter	Up to 10 % of the overall City/Municipality population
1 Negligible	No TCWS	No susceptibility	No susceptibility	Not within the Critical Cyclone Chart Track	No affected population
Source	PAGASA	MGB	MGB	PAGASA/DILG	GeoAnalytics

TROPICAL CYCLONE WIND SIGNAL #1		WINDS: 30-60 kph may be expected in at least 36 hr SEA CONDITIONS (Open Sea) Wave Height: 1.25-4.0 meters	DAMAGE TO STRUCTURE: • Very light or no damage to high risk structures, • Light to medium and low risk structures • Slight damage to some houses of very light materials or makeshift structures in exposed communities. DAMAGE TO VEGETATION: • Some banana plants are tilted, a few downed and leaves are generally damaged • Twigs of small trees may be broken. • Rice crops, however, may suffer significant damage when it is in its flowering stage.
TROPICAL CYCLONE WIND SIGNAL #2		WINDS: 61-120 kph may be expected in at least 24 hr SEA CONDITIONS (Open Sea) Wave Height: 4.1-14.0 m Storm surge possible at coastal areas.	DAMAGE TO STRUCTURE: • Light to Moderate damage to high risk structures; • Very light to light damage to medium-risk structures; • No damage to very light damage to low risk structures • Unshielded, old dilapidated school-houses, makeshift shanties, and other structures of light materials are partially damaged or unroofed. • Some old galvanized iron (G.I.) roofs may be peeled or blown off. • Some wooden, old electric posts are tilted or downed. • Some damage to poorly constructed signs/billboards. DAMAGE TO VEGETATION: • Most banana plants, a few mango trees, ipil-ipil and similar trees are downed or broken. • Some coconut trees may be tilted with few others broken. • Rice and corn may be adversely affected. • Considerable damage to shrubbery and trees with some heavy-foliated trees blown down.
TROPICAL CYCLONE WIND SIGNAL #3		WINDS: 121-170 kph may be expected in at least 18 hr SEA CONDITIONS (Open Sea) Wave Height: > 14.0 meters Storm surge possible at coastal areas.	DAMAGE TO STRUCTURE: • Heavy damage to high-risk structures; • Moderate damage to medium-risk structures; • Light damage to low-risk structures • Increasing damage to old, dilapidated residential structures and houses of light materials (up to 50% in a community) • Houses of medium strength materials (old, timber or mixed timber-CHB structures, usually with G.I. roofings), some warehouses or bo-dega-type structures are unroofed DAMAGE TO VEGETATION: • Almost all banana plants are downed, some big trees (acacia, mango, etc.) are broken or uprooted. • Dwarf-type or hybrid coconut trees are tilted or downed • Considerable damage to shrubbery and trees with heavy foliage blown off; some large trees blown down.
TROPICAL CYCLONE WIND SIGNAL #4		WINDS: 171-220 kph may be expected in at least 12 hr SEA CONDITIONS (Open Sea) Wave Height: more than 14.0 meters Storm surge 2-3m possible at coastal areas.	DAMAGE TO STRUCTURE: • Very heavy damage to high-risk structures; • Heavy damage to medium risk structures; • Moderate damage to low-risk structures • Considerable damage to structures of light materials (up to 75% are totally and partially destroyed); complete roof structure failures. • Many houses of medium-built materials are unroofed, some with collapsed walls; extensive damage to doors and windows • A few houses of first-class materials are partially damaged • All signs/billboards are blown down. DAMAGE TO VEGETATION: • There is almost total damage to banana plantation. • Most mango trees, ipil-ipil and similar types of large trees are downed or broken. • Coconut plantation may suffer extensive damage. • Rice and corn plantation may suffer severe losses.
TROPICAL CYCLONE WIND SIGNAL #5		WINDS: > 220 kph may be expected in at least 12 hr <i>A Super Typhoon will affect the locality.</i> SEA CONDITIONS (Open Sea) Wave Height: more than 14.0 m Storm surge more than 3 meters possible at coastal areas	DAMAGE TO STRUCTURE: • Widespread damage to high-risk structures • Very heavy damage to medium-risk structures • Heavy damage to low-risk structures; • Almost total damage to structures of light in highly exposed coastal areas. • Complete roof failure on many residences and industrial buildings. Severe and extensive window and door damage • Most residential and institutional buildings of mixed construction may be severely damaged. • Electrical power distribution and communication services severely disrupted. • All signs/billboards blown DAMAGE TO VEGETATION: • Total damage to banana plantation • Most tall trees are broken, uprooted or defoliated; • Coconut trees are stooped, broken or uprooted. • Few plants and trees survived.



EMERGENCY PREPAREDNESS AND RESPONSE (EPR) PROTOCOLS

as of 16 March 2022

STANDBY	ALPHA	BRAVO	CHARLIE
No to Very Low Risk	Low Risk	Moderate Risk	High Risk
☐ Send warnings and advisories ☐ Prepare standby list of trained and available rapid deployment teams (IMT, RDANA, etc.) ☐ Prepare inventory of standby resources ☐ Monitor and prepare for untoward incident escalation	☐ Send warnings and advisories ☐ Cascade preparedness directives ☐ Prepare standby list of trained and available rapid deployment teams (IMT, RDANA, etc.) ☐ Prepare inventory of standby resources ☐ Issue directives to anticipate possible augmentation to other areas ☐ Account, assess and ensure operational readiness of response facilities (EOCs, evacuation centers, etc.) ☐ Account, assess and ensure operational readiness of critical lifelines (water, communications, power, etc.) ☐ Monitor secondary hazards (such as dam release, flashfloods, etc.) ☐ Release Situational Report	☐ Send warnings and advisories ☐ Cascade preparedness directives ☐ Activate EOC to Blue Alert ☐ Activate selected Response Clusters ☐ Preemptively evacuate communities ☐ Pre-activate rapid deployment teams (IMT, RDANA, etc.) ☐ Preposition resources ☐ Account, assess and ensure operational readiness of response facilities (EOCs, evacuation centers, etc.) ☐ Account, assess and ensure operational readiness of critical lifelines (water, communications, power, etc.) ☐ Monitor secondary hazards (such as dam release, flashfloods, etc.) ☐ Secure properties, small sea vessels and other movable assets to safer ground ☐ Ensure maritime safety of all watercrafts (as appropriate) ☐ Issue appropriate travel advisory ☐ Arrange for advance assistance for communities, as authorized ☐ Release Situational Report	☐ Send warnings and advisories ☐ Cascade preparedness directives ☐ Activate EOC to Red Alert ☐ Activate majority or all Response Clusters ☐ Recommend for work and/or class suspension ☐ Preemptively (or forcibly) evacuate communities ☐ Mobilize rapid deployment teams (IMT, RDANA, etc.) in strategic areas ☐ Provide advance augmentation of resources ☐ Account, assess and ensure operational readiness of response facilities (EOCs, evacuation centers, etc.) ☐ Account, assess and ensure operational readiness of critical lifelines (water, communications, power, etc.) ☐ Monitor secondary hazards (such as dam release, flashfloods, etc.) ☐ Secure properties, small sea vessels and other movable assets to safer ground ☐ Ensure maritime safety of all watercrafts (as appropriate) ☐ Issue appropriate travel advisory ☐ Arrange for advance assistance for communities, as authorized ☐ Release Situational Report

EPR Protocols

DRRMC	Description	Action	Emergency Preparedness and Response (EPR) Protocol
	High Risk	Requires immediate action	CHARLIE
	Moderate Risk	Requires high priority for action	BRAVO
	Low Risk	Requires preparatory and initial action	ALPHA
	No to Very Low Risk	Requires monitoring and standby for assistance	Standby

Risk Matrix

P
R
O
B
A
B
I
L
I
T
Y

D					
C					
B					
A					
	1	2	3	4	

IMPACT

