

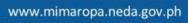
Palawan Rehabilitation and Recovery Program for Areas Affected by Typhoon Odette

Agustin C. Mendoza

Regional Director

Regional Disaster Risk Reduction and Management Meeting February 16 | 10:00 AM

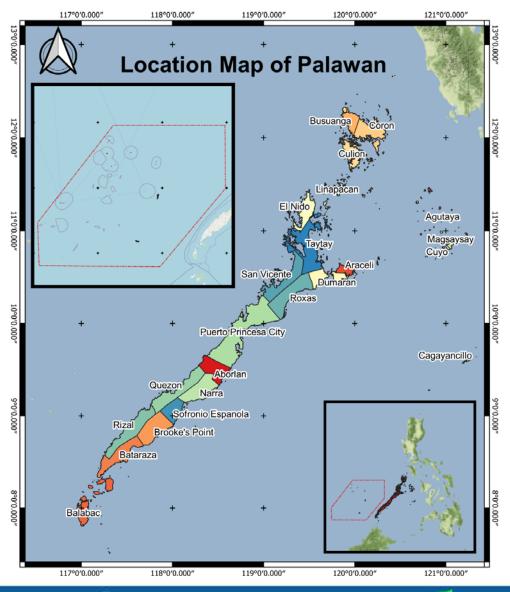




Outline of Presentation

- Background and Description of Affected Areas
- Description of Hazard Event
- Assessment of the Effects of the Disaster
- Immediate and Early Responses
- Rehabilitation and Recovery Framework
- Objectives of the Program
- Rehabilitation and Recovery Strategies
- Development Objectives and Targets
- Proposed Spatial Strategy of Palawan
- Financing and Investment Requirements
- Mechanism for Monitoring and Evaluation
- Communication Strategy

Background and Description of Affected Areas



- Largest province in the Philippines with a total land area of approximately 1.451 million hectares or roughly 5% of the country's 30 million hectares and 54% of the total MIMAROPA land area;
- Known as the country's "last frontier," Palawan is considered one of the most bio-diverse and ecologically pristine areas in the country;
- Composed of 1,769 islands and islets with a total coastline of 1,959 kilometers;
- 23 municipalities, one highly-urbanized city, and 432 barangays;
- Total population of 1,246,673 as of May 01, 2020



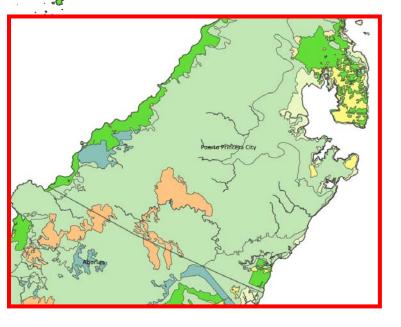
Background and Description of Affected Areas Socioeconomic Profile

Land Use – Land Cover Map of Palawan, 2010

- In 2010, the total built-up area of Palawan was 13,782 hectares, accounting to 1% of its total land area
- Agricultural lands represent 22% of total land area
- Forest lands correspond to 77% of total land area

Agricultural Lands Built-up Areas Closed Forest Communal Forest Mangrove Forest Open Forest Unclassified Public Forest

Land Use/ Land Cover	Area (Has)	% Share
Agricultural Lands	314,828.93	21.70
Built-up Areas	13,782.74	0.95
Closed Forest	86,861.46	5.99
Communal Forest	1,149.70	0.08
Mangrove Forest	63,608.71	4.38
Open Forest Unclassified Public	803,568.42	55.39
Forest	167,068.37	11.52
Total	1,450,868.34	100.00



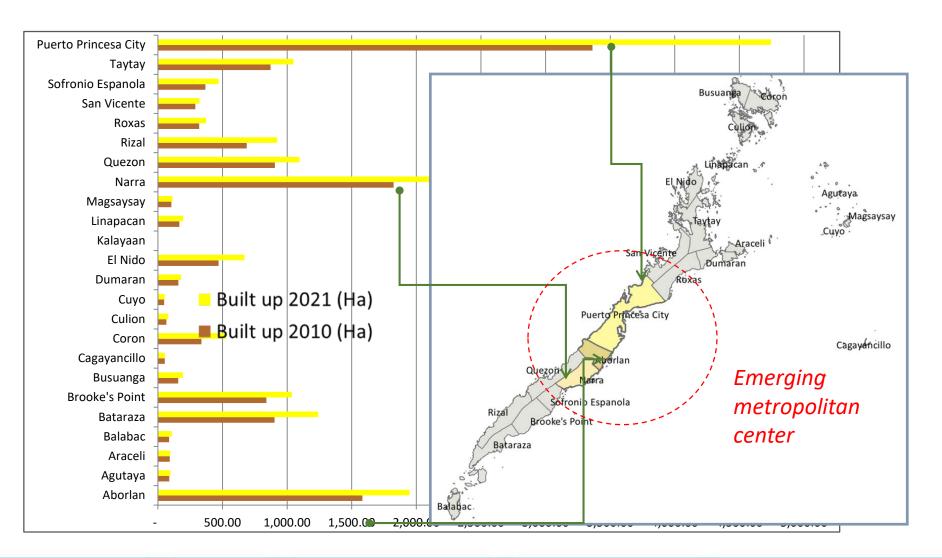
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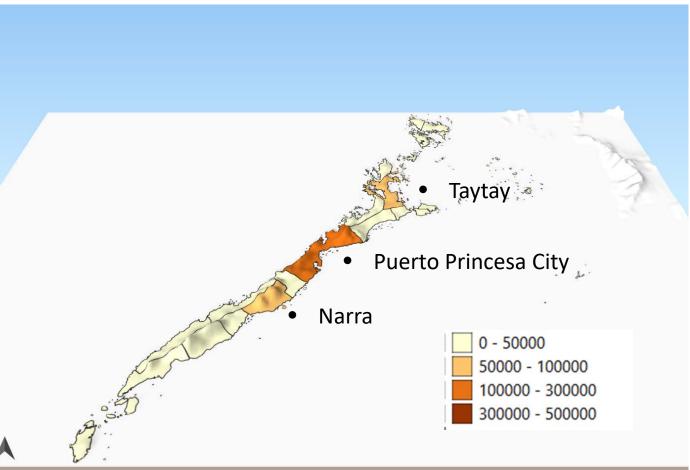
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Background and Description of Affected Areas

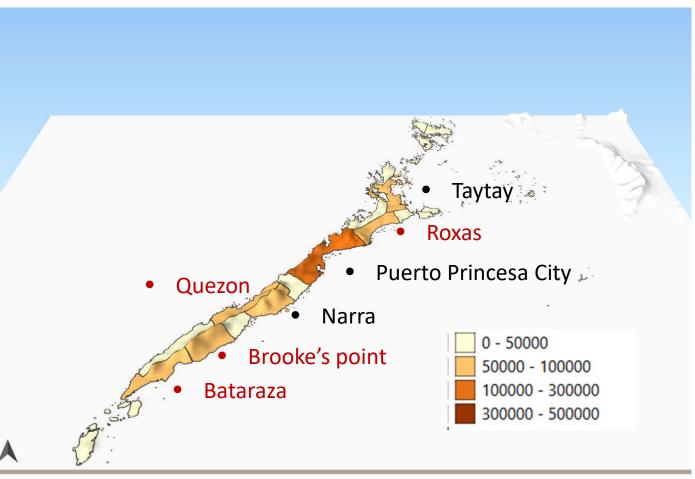
- Palawan's total built-up area of 13,783 hectares in 2010 was estimated to expand to 17,795 hectares in 2021
- Built-up development momentum is strong in Pueto
 Princesa City, Narra, and Aborlan



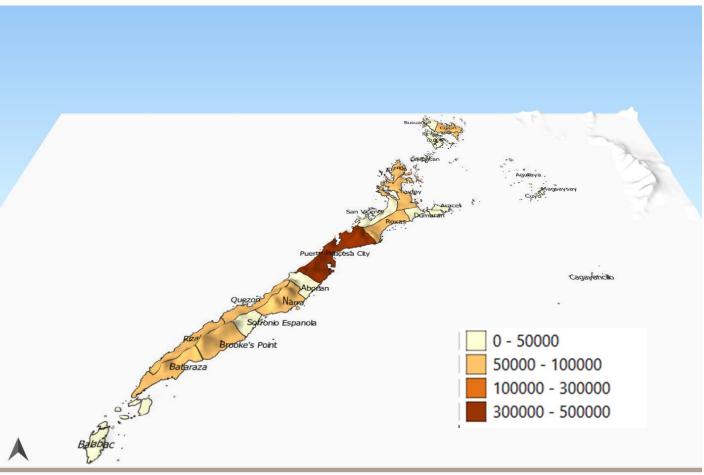
- In 2000, most of the municipalities of Palawan were considered small towns (<= 50,000) in terms of population level
- Taytay and Narra were in medium town category
- Puerto Princesa may already be considered then as a large town



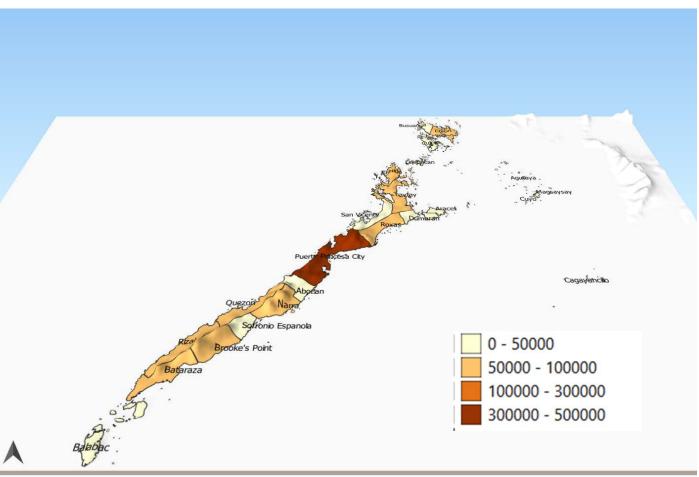
- Roxas, Quezon, Brooke's Point, and Batalaraza reached or breached the medium town population category in 2010
- Areas south of Puerto Princesa expanded faster than those in the North



- In 2020, Puerto Princesa City reached the upper tier – very large town category
- Other areas north of PPC, including El Nido and Coron reached the medium town population level, also in 2020



- While population may be a strong driver of urbanization, built-up area expansion is an equally important indicator of socioeconomic growth
- The contiguous areas of Puerto Princesa, Aborlan, and Narra, by virtue of population and built-up development, may be converging to form a metropolitan area

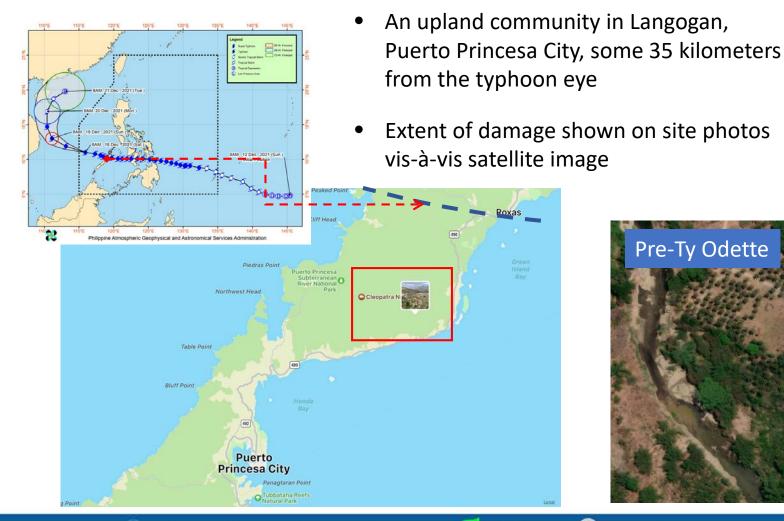


Description of Hazard Event Track and Strength of Typhoon Odette



- In December 2021, Typhoon Odette made several landfalls starting from the Pacific seaboard, before cutting through Roxas, Palawan, and exiting PAR in WPS
- PPC and 8 of 23 municipalities of Palawan were severely affected
- To build-back better and to achieve resiliency, a recovery and rehabilitation program (RRP) is needed

Description of Hazard Event Track and Strength of Typhoon Odette







Source: NEDA Mimaropa January 2022

Source: Maps-IOS

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Description of Hazard Event Geographic Extent and Affected Population



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Description of Hazard Event Declaration of State of Calamity

- Five municipalities, and the whole province of Palawan issued declaration of state of calamity by virtue of local resolutions
- On December 21, 2021, President Rodrigo Roa Duterte signed Proclamation No. 1267 declaring a state of calamity in regions MIMAROPA, VI (Central Visayas), VII (Central Visayas), VIII (Eastern Visayas), X (Northern Mindanao), and CARAGA

Province/City/Municipality	Date	Resolution
Municipality of Cagayancillo	Dec. 20, 2021	Municipal Resolution No. 422, s. 2021
Municipality of Roxas	Dec. 20, 2021	Resolution No. 596, s. 2021
Whole Province of Palawan	Dec. 21, 2021	Provincial Resolution No. 16377, s. 2021
Municipality of Aborlan	Dec. 21, 2021	Municipal Resolution No. 507, s. 2021
Municipality of Kalayaan	Dec. 21, 2021	Municipal Resolution No. 116-014, s. 2021
Municipality of San Vicente	Dec. 21, 2021	Municipal Resolution No. 2021-132
City of Puerto Princesa	Dec. 22, 2021	Resolution No. 1509, s.2021

Assessment of the Effects of the Disaster Physical Assessment

- Destroyed infrastructure
- Fallen and uprooted trees
- Flooding incidents in low lying areas
- Soil erosion and landslides
- Storm surges in coastal areas

Assessment of the Effects of the Disaster

Socioeconomic Assessment



Productive Sector Damages: ₱1.48 billion Losses: ₱2.09 billion



Social Sector Damages: ₱ 2.25 billion Losses: ₱ 2.02 billion



Infrastructure Sector

Damages: ₱371.2 million Losses: ₱99.5 million



Cross Sectoral Damages: ₱285.7 million Losses: ₱24.7 million

Total Damages:₱4.39 billionTotal Losses:₱4.24 billion

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Source: Palawan PDNA for Areas affected by Typhoon Odette

Assessment of the Effects of the Disaster

Productive Sector

Sector/Subsector	Damages (in ₱)	Losses (in ₱)
Productive	1,484,802,001.63	2,093,464,266.40
Agriculture and Fisheries	1,077,463,571.63	1,796,411,599.39
Crops	213,209,474.29	1,298,410,589.89
Livestock and Poultry	0.00	62,642,098.50
Fisheries	814,894,414.58	435,238,911.00
Forest / Agroforestry	0.00	0.00
Irrigation Facilities	33,425,682.76	120,000.00
Agricultural Assets	15,934,000.00	0.00
Mining and Quarrying	3,695,000.00	274,000.00
Industry, Trade, & Services	61,184,736.00	79,237,965.00
Tourism	342,458,694.00	217,540,702.01



Agriculture and Fisheries

Damages: ₱1.07 billion Losses: ₱1.79 billion



Trade Industry and Services

Damages: ₱61.18 million Losses: ₱79.23 million



Mining and Quarrying

Damages: ₱3.69 million Losses: ₱0.27 million



Tourism

Damages: ₱342.45 million Losses: ₱217.54 million

Source: Palawan PDNA for Areas affected by Typhoon Odette

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Assessment of the Effects of the Disaster **Social Sector**

Sector/Subsector	Damages (in ₱)	Losses (in ₱)					
Social	2,257,131,557.92	2,026,205,559.80					
Housing	1,522,952,856.97	2,020,603,241.25					
Education	694,240,222.18	4,737,500.00					
Health	39,938,478.77	864,818.55					



Education

Damages: ₱694.24 million Losses: ₱4.74 million



Housing

Damages: ₱1.52 billion Losses: ₱2.02 billion

Totally Damaged Houses: 15,463 Partially Damaged Houses: 74,319



Health

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Damages: ₱39.94 million Losses: ₱0.86 million

Source: Palawan PDNA for Areas affected by Typhoon Odette



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Assessment of the Effects of the Disaster

Infrastructure Sector

Sector/Subsector	Damages (in ₱)	Losses (in ₱)
Infrastructure	371,261,933.90	99,554,511.46
Power	57,266,405.90	39,764,228.35
Water Supply	35,397,228.00	48,955,280.03
Transportation	257,833,800.00	10,809,503.08
Roads	81,098,625.00	6,792,503.08
Bridges	159,980,000.00	3,847,000.00
Airport	0.00	0.00
Seaports	16,755,175.00	170,000.00
Flood Control	20,764,500.00	25,500.00
Telecommunication	0.00	0.00



Power

Damages: ₱57.26 Million Losses: ₱ 39.76 Million



Water Supply

Damages: ₱36.39 Million Losses: ₱48.95 Million



Telecommunication Damages: ₱0.00 Losses: ₱0.00



Flood Control Damages: ₱20.76 million Losses: ₱0.025 million



Transportation

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Damages: ₱257.83 million Losses: ₱10.80 million

Source: Palawan PDNA for Areas affected by Typhoon Odette

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Assessment of the Effects of the Disaster Cross Sectoral

Sector/Subsector	Damages (in ₱)	Losses (in ₱)
Cross Sectoral	285,742,314.59	24,792,723.87
Governance and DRRM	188,531,206.75	5,350,502.30
Environment	97,211,107.84	19,442,221.57



Governance and DRRM

Damages: ₱188.53 million Losses: ₱5.35 million



Environment

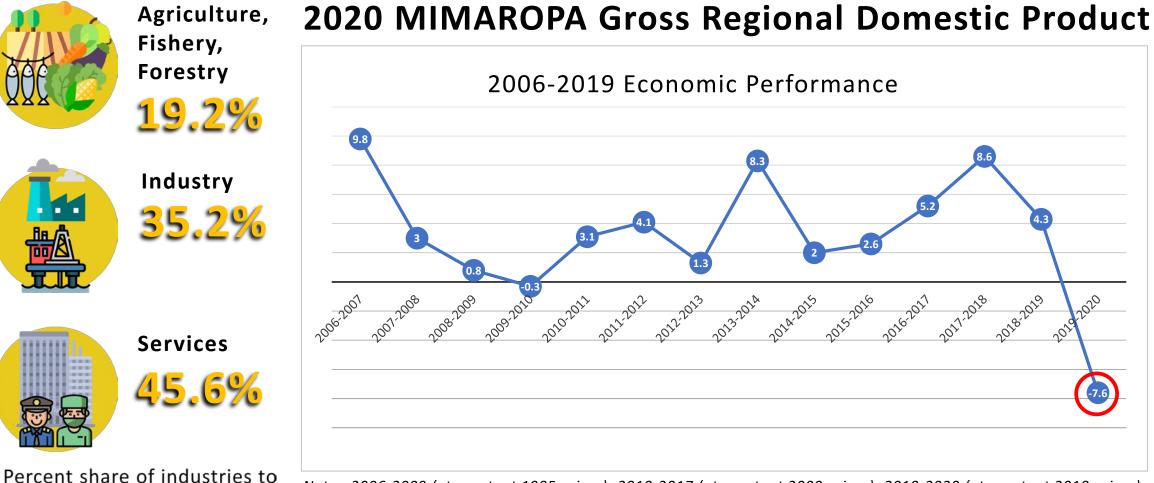
Damages: ₱97.21 million Losses: ₱19.44 million

Source: Palawan PDNA for Areas affected by Typhoon Odette

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- More complicated evacuation of individuals due to physical distancing implemented brought about by the pandemic
- Farmers and fisherfolks incurred huge losses on crops and fisheries
- Preparations for face-to-face classes were impeded
- Damages in government infrastructures, particularly health facilities
- Operations of healthcare facilities were interrupted due to power outage
- Medical supplies and equipment were depleted especially for COVID-19 patients

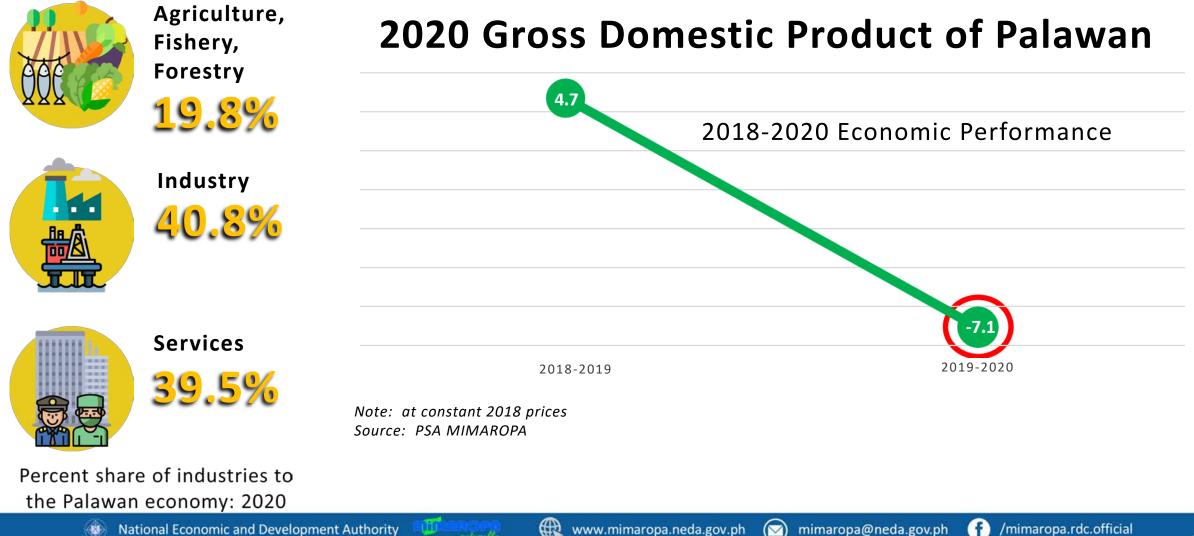


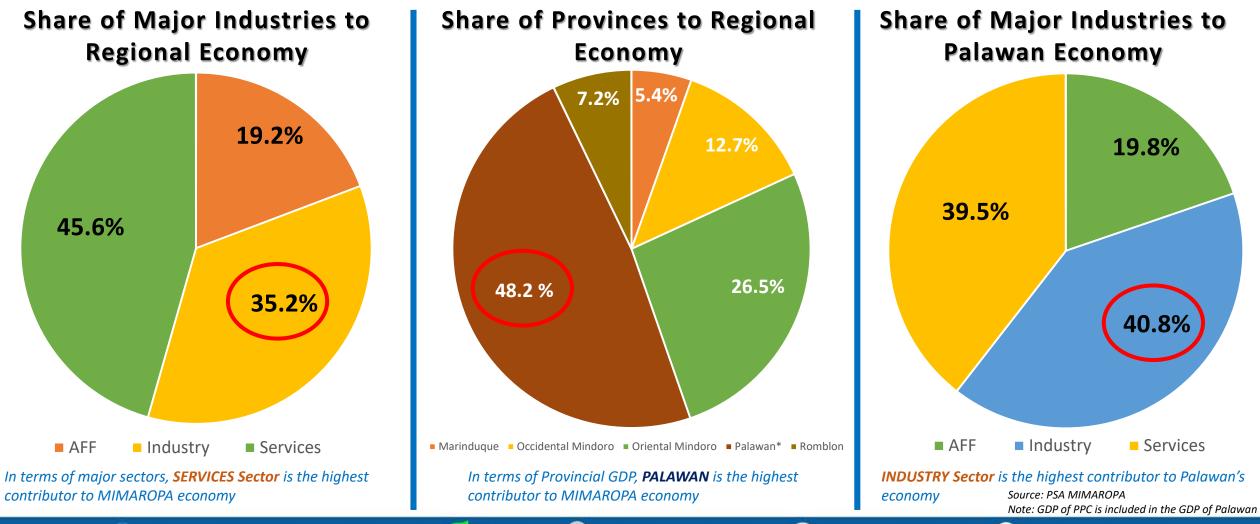


Note: 2006-2009 (at constant 1985 prices); 2010-2017 (at constant 2000 prices); 2018-2020 (at constant 2018 prices) Source: PSA MIMAROPA

the regional economy: 2020



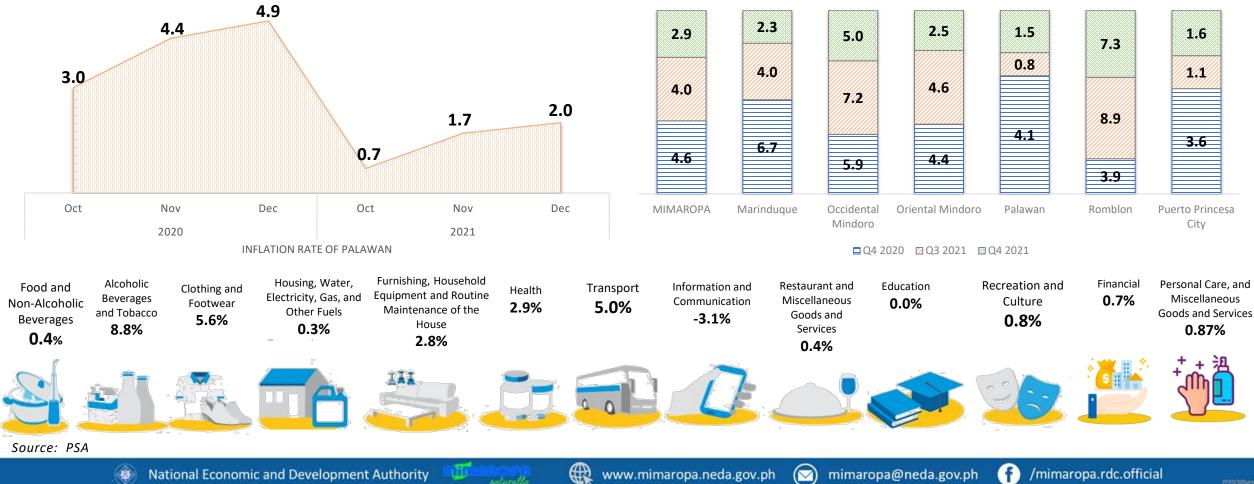




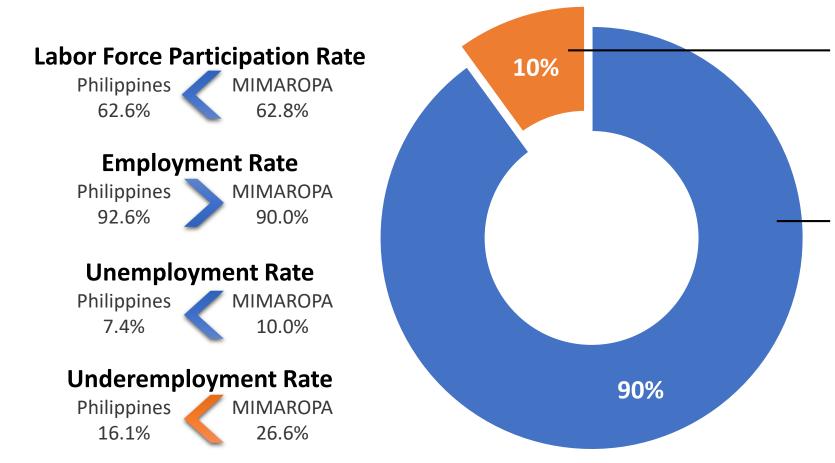
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Inflation in Palawan increased to 1.5% in October-December 2021



Employment rate decreased by 2.11 percentage points



Source: PSA MIMAROPA

Unemployment rate increased to 10.0% in October 2021 from 7.9% in October 2020

- Employment rate employment decreased to 90.0% in October 2021 from 92.1% in October 2020
- Underemployment rate worsen to 26.6% in October 2021 from 22.2% in October 2020

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Affected MSMEs in Palawan



Agriculture, Forestry, and Fishing Sector





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Estimated Impact of Typhoon Odette in 2022 MIMAROPA GRDP

GRDP/Sector	Constant Price ector (Original Projection)		Estimate	d Losses	Constar (Revised P	nt Price Projection)	Growt (Orig Projec	ginal	Growth Rate (Revised Projection)		
	Low	High	Output	GVA	Low	High	Low	High	Low	High	
GRDP	383,787,248,827	390,402,170,295	4,244,017,062	2,376,385,938	384,421,945,283	391,174,317,185	3.6	4.5	3.8	4.7	
AFF	69,459,964,664	70,152,827,854	1,815,853,821	924,782,105	68,868,564,081	69,561,427,272	0.5	1.0	-0.4	0.1	
Industry	132,079,644,417	134,669,379,741	94,369,511	34,913,542	133,015,062,626	135,604,797,950	2.5	3.5	3.2	4.2	
Services	183,034,618,652	186,504,392,039	2,333,793,730	1,416,690,291	182,538,318,576	186,008,091,963	6.0	7.0	5.7	6.7	

Source: PDNA Validated Results



Estimated Impact of Typhoon Odette in 2022 Palawan GDP

GRDP/Sector		nt Price Projection)	Estimate	ed Losses	Constai (Revised P	nt Price Projection)	Growt (Orig Projec	ginal	Growth Rate (Revised Projection)		
	Low	High	Output	GVA	Low	High	Low	High	Low	High	
GDP	184,875,692,071	188,062,192,374	4,244,017,061.53	2,376,385,938.28	184,783,021,485	187,969,521,788	3.6	4.5	3.6	4.5	
AFF	36,524,537,482	37,154,071,026	1,815,853,820.96	924,782,105.15	35,944,321,017	36,573,854,561	3.6	4.5	2.0	2.9	
Industry	75,355,427,582	76,654,246,752	94,369,510.68	34,913,542.47	76,336,951,612	77,635,770,782	3.6	4.5	5.0	5.9	
Services	72,995,727,007	74,253,874,596	2,333,793,729.89	1,416,690,290.65	72,501,748,856 73,759,896,4		3.6	4.5	2.9	3.8	

Source: PDNA Validated Results



₽924.78 million Losses in Agriculture (in GVA)





₱1.41 billion

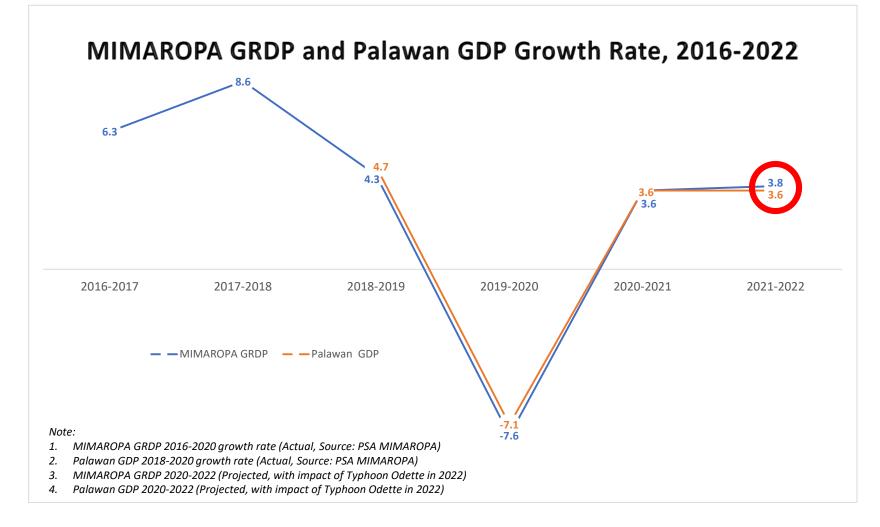
Losses in Services (in GVA)



2022 Target ₱184.78 billion to ₱187.96 billion

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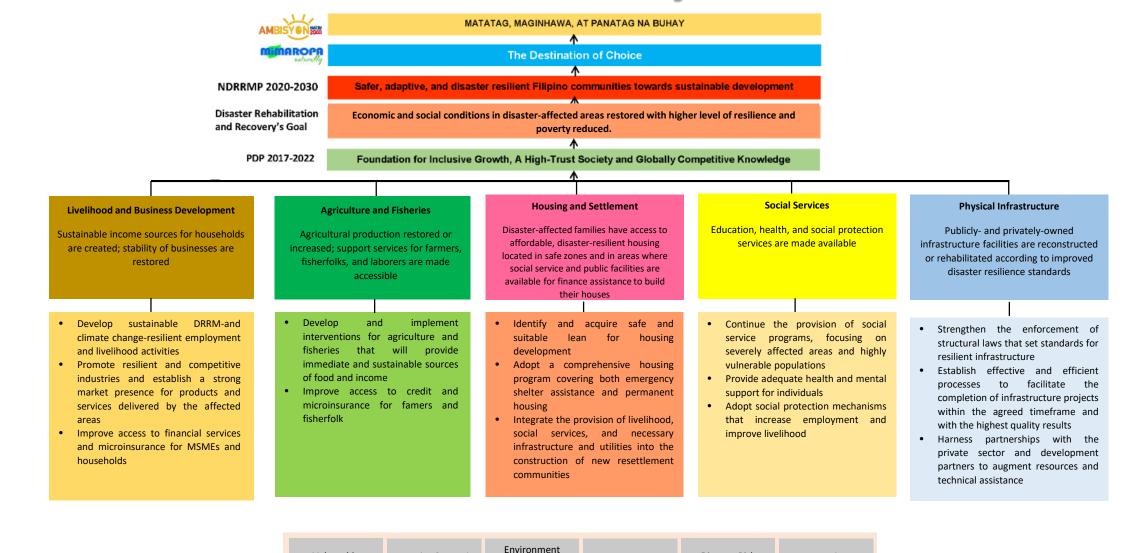
- Assuming that all proposed PPAs for 2022 will be funded and implemented in Palawan, MIMAROPA's economy is still expected to grow by as much as 3.8% (low) to 4.7% (high) in 2022 despite losses from Typhoon Odette. This exceeds the revised GRDP target growth rate, which was set at 3.6%-4.5% in 2022.
- Palawan's economy is also expected to grow by as much as 3.6% (low) to 4.5% (high) in 2022 despite losses from Typhoon Odette.

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Immediate and Early Responses

- Conducted and participated in PDRA core group meetings
- Coordinated closely with RDRRMC member agencies and LDRRMOs
- Activated Emergency Operations Center
- Disseminated weather advisories
- Prepositioned rescue vehicles and equipment
- Prepositioned food and non-food items
- Prepositioned drugs and medicines in Regional Office and Provincial DOH offices
- Conducted pre-emptive evacuation
- Provided assistance to affected individuals

Rehabilitation and Recovery Framework



Vulnerable

Groups

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Protection &

Sustainability

Gender & Social

Inclusivity

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Reduction

Disaster Risk

Reduction

Local

Governance

Objectives of the Program



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Restore, rehabilitate, or reconstruct damaged infrastructure

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Repair and rebuild settlements



Restore and enhance economic activities in the region

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Increase resilience capacities of communities in coping with future hazard events



Rehabilitation and Recovery Strategies Livelihood and Business Development



Provision of financial assistance to business and tourism stakeholders



Provision of technical assistance



Recovery of infrastructure facilities



Rehabilitation of tourism access roads, bridges, and slop protection measures

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Rehabilitation and Recovery Strategies Agriculture and Fisheries



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Distribution of highquality seeds of rice, corn, and vegetables



Rehabilitation and restoration of agricultural infrastructure



Provision of financial assistance



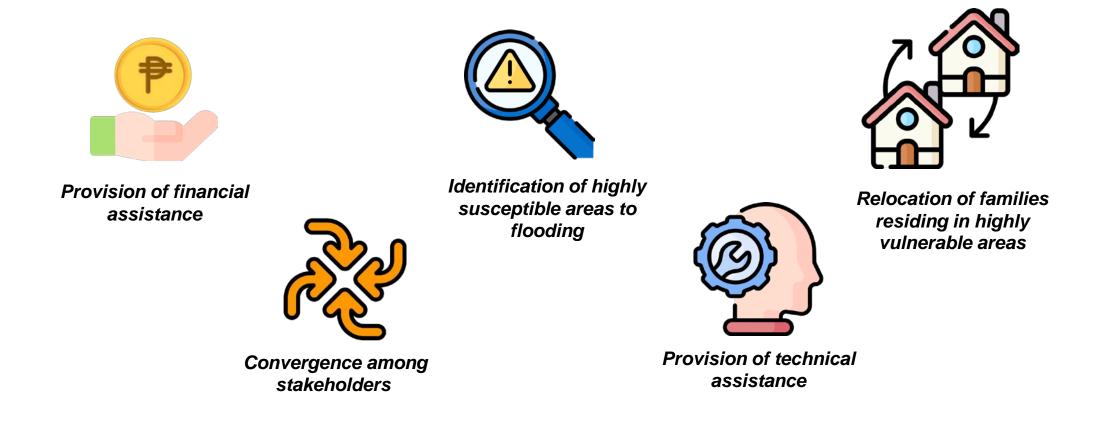
Registration of fisherfolks in their respective LGUs



Procurement of high breed livestock



Rehabilitation and Recovery Strategies Housing and Settlement



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Rehabilitation and Recovery Strategies Social Services



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Repair and rehabilitation of damaged school and health facilities



Improve health and nutrition of the public



Improvement of communication infrastructure



Provision of mental health and psychosocial support



Continuous delivery of health services

Rehabilitation and Recovery Strategies Physical Infrastructure



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Enhancing structural resiliency through upgraded standards



Capacity building and training on maintenance of physical public infrastructure



with the private sector and development partners



Monitoring and evaluation of all projects



Repair, rehabilitation, and reconstruction of roads

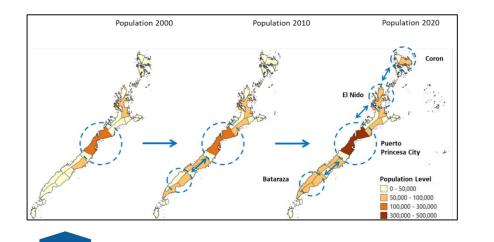
Development Objectives and Targets

Outcome	Number of Indicators
Sustainable income sources for households are created; stability of businesses are restored	4
Agricultural production restored or increased; support services for farmers, fisherfolks, and laborers are made accessible	6
Affordable, disaster-resilient housing located in safe zones with available social services and public facilities are made accessible	3
Education, health, and social protection are made available	7
Publicly, and privately-owned infrastructure are reconstructed or rehabilitated according to improved disaster resiliency standards	5
Total	24

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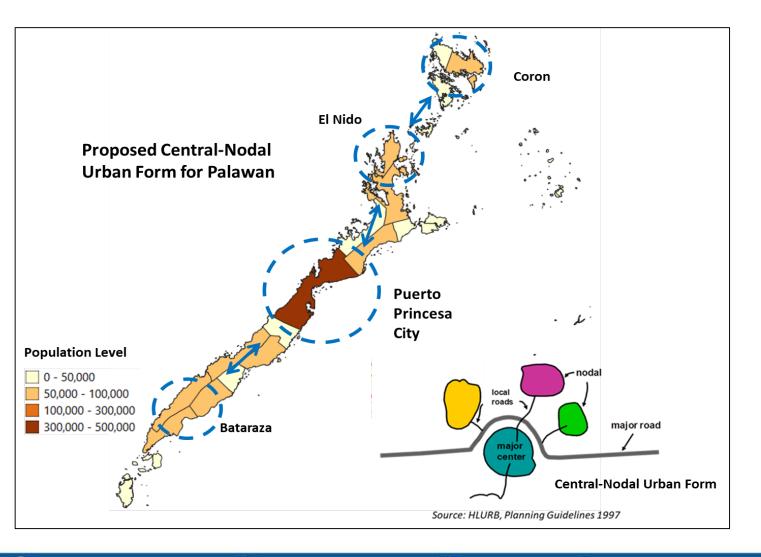


Proposed Spatial Strategy of Palawan



Growth of population of the different towns of Palawan and Puerto Princesa City from 2000 to 2020

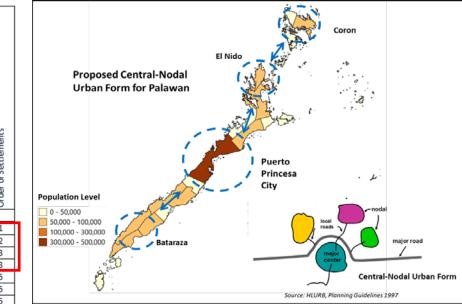
The Proposed Urban Form of the Province of Palawan



Proposed Spatial Strategy of Palawan

Scalogram of Population and Urban Services

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Province/Municipality	2010 Built-up Area	2021 Built-up Area (projected)	Total Population*	Delivery/Logistic Services	Health Center	National Government Agencies	Seaport	Tertiary Education (College, University, TechVoc)	Microfinance	Restaurant (Fast Food, Fine Dining)	Other Medical Facilities	Shopping Centers	Transport Terminal	Domestic and Community Airports	Rural Bank	Other Residential Subdivisions	Other Hotels	National Developer Subdivision	Township Development	Automotive Vehicle Dealerships	Government Centers (City Hall, Provincial Capitol)	3-Star Hotel	International Airport	Commercial Bank	Credit Uniions		Number of Functions	Order of Settlements
Palawan	13,782.74	17,794.52	939,594																								_	_
City of Puerto Princesa	3,363.56	4,744.64	307,079		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		22	1
Coron	336.58	527.99	65,855	1	1	1	1	1	1	1	1	1	1	1	1	1	1										14	2
Bataraza	903.24	1,240.29	85,439	1	1	1	1	1	1	1	1	1	1	1	1	1											13	3
El Nido	469.13	669.50	50,494	1	1	1	1	1	1		1	1	1	1	1		1										13	3
Narra	1,823.83	2,228.11	77,948	1	1	1	1	1	1			1	1		1	1											12	5
Brooke's Point	839.79	1,036.86	73,994	1	1	1	1	1	1	1	1	1	1	1	1	1											12	5
Roxas	319.65	372.83	69,624	1	1	1	1	1	1	1	1	1	1	1	-	1			<u> </u>		-						12	5
Quezon	904.81	1,095.72	65,283	1	1	1	1	1	1	1	1	1	1		1	-											11	8
Aborlan	1,582.38	1,946.57	38,736	1	1	1	1	1	1	1	1	1		1	1	1											11	8
San Vicente	290.38	321.88	33,507	1	1	1	1	1	1	1	1	1		1		1											11	8
Taytay	871.55	1,049.05	83,357	1	1	1	1	1	1	1	1	1			1						<u> </u>						10	11
Sofronio Española	368.14	469.69	37,416	1	1	1	1	1	1	1	1	1			1				<u> </u>	<u> </u>	<u> </u>						10	11
Сиуо	47.88	52.66	23,489	1	1	1	1	1	1	1	1	1	1	1	1												10	11
Rizal	686.78	922.69	56,162	1	1	1	1	1	1				1	1		1											9	14
Balabac	87.34	106.24	42,527	1			1	1	1	1		1	1	1		1					<u> </u>						9	14
Busuanga	157.80	193.60	25,617	1	1	1	1	1	1	1	1	1		1													9	14
Culion	65.93	80.10	23,213	1		1		1	1	1	1																9	14
Dumaran	159.12	178.97	23,528	1	1	1	1	1	•	1																	8	18
Linapacan	165.72	196.34	16,424	1	1	1	1	-	1	-		<u> </u>	1						<u> </u>		<u> </u>						4	19 20
Agutaya	88.54	97.88	12,867	1	1		1	1	1	<u> </u>		<u> </u>									-						6	20
Araceli	91.13	95.33	14,434 12,603	1	1	1	1			-				1													5	21
Magsaysay	104.69	112.79		1	1	1	1			<u> </u>		<u> </u>		1													5	
Cagayancillo	52.92	52.92	6,884	1	1	1	1			<u> </u>		<u> </u>	1	-														21
Kalayaan	1.85	1.85	193	24	24	24	23	20	20	17	16	15	12	11	11	9	3	1	1	1	1	1	1	1	1	\vdash	4	24
Number of Municipalities				24	24	24	23	20	20	1/	10	12	12	11	11	3	5	1	1	1	1	1	1	1	1			



- Based on the scalogram, higher level urban services and economic activities tend to converge in four growth nodes: Puerto Princesa City, Bataraza, El Nido, and Coron
- Thus, the Central-Nodal Urban Form is recommended to be pursued



Financing and Investment Requirements

Summary of total investment requirements by sector, FY 2021-2023 (in Millions)

Source of Fund	Number of PPAs		ng Requirem n million ₱)	Total Funding Requirements			
Fund	UIPPAS	2021	2022	2023	Requirements		
Livelihood and Business Development	21	10.48	339.28	266.26	616.02		
Agriculture and Fisheries	78	24.80	616.71	146.76	788.27		
Housing and Settlement	12	287.00	173.63	2,145.68	2,606.30		
Social Services	181	370.61	498.39	859.38	1,728.37		
Physical Infrastructure	1,319	0.00	2,541.37	2,673.96	5,215.33		
TOTAL	1,611	692.89	4,169.37	6,092.04	10,954.30		

Summary of total investment requirements by source of fund, FY 2021-2023 (in Pesos)

Source of	Number		Funding Requirements (in million ₱)									
Fund	of PPAs	2021	2022	2023	Requirements							
NDRRM Fund	2	0.00	121.99	2,040.00	2,161.99							
Agency Regular Budget	767	122.73	2,460.57	3,366.69	5,949.99							
LGU Funds	779	566.16	1,264.68	685.34	2,516.18							
Non- Government (Private Sector /Development Partners)	45	4.00	0.89	0.00	4.89							
Others	18	0.00	321.25	0.00	321.25							
TOTAL	1,611	692.89	4,169.37	6,092.04	10,954.30							

- 1,611 proposed PPAs with investment requirements amounting to ₱10.95 billion
- ₱4.17 billion for FY 2022 and ₱6.09 billion for FY 2023

Mechanism for Monitoring and Evaluation

Project monitoring through the eRPMES



- physical and financial progress of programs and projects on quarterly basis
- quick summary of RRP projects status will be posted on the NEDA MIMAROPA website:

<u>mimaropa.neda.gov.ph</u>

Communication Strategy

Regional Launching of the rehabilitation and recovery program

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Preparation of electronic information materials



Branding of the Palawan RRP



Status updates of the identified PPAs for the Palawan RRP



Addressing issues on the implementation of the RRP



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Palawan Rehabilitation and Recovery Program for Areas Affected by Typhoon Odette

Agustin C. Mendoza

Regional Director

Regional Disaster Risk Reduction and Management Meeting February 16 | 10:00 AM



