## REGIONAL ACTION PLAN FOR IMPLEMENTING THE PHILIPPINE MASTER PLAN FOR CLIMATE RESILIENT FORESTRY DEVELOPMENT

**Region 8, Eastern Visayas** 

### I. Background and Rationale

The first Philippine forestry master plan which was formulated in 1990 was revised in 2003 in view of new developments in the forestry and environment sectors both at the local and international scenes. Ten years after its implementation, the Forest Management Bureau (FMB) again decided to update the 2003 revised master plan for forestry development (RMPFD), to take into consideration the potential impacts of climate change to the forestry sector. The revision was in consonance with the Climate Change Act of 2009 requiring that all government programs and policies should consider the impacts of climate change. Hence, a Philippine master plan for climate resilient forestry development (PMPCRFD) was formulated where three strategic programs were identified for implementation to ensure that the forestry sector can respond to the adverse impacts of climate change and address varying demands for forest ecosystems goods and services from multiple clients. The three major programs include the following:

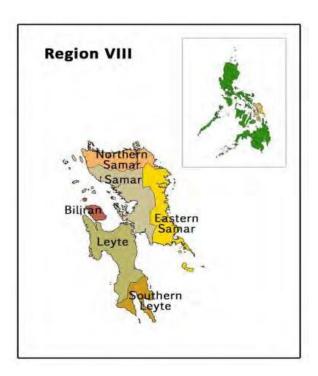
- 1. Program on strengthening resilience of forest ecosystems and communities to climate change;
- 2. Program responding to demands for forest ecosystem goods and services; and
- 3. Program promoting responsive governance in the forestry sector.

This plan outlines DENR Region 8's action plan to support implementation of the PMPCRFD for CY 2016-2028.

### II. Regional Profile

Eastern Visayas is located in the eastern part of the Philippine islands, facing the Pacific Ocean. It lies in the mid-easternmost border of the Philippine archipelago linking Luzon and Mindanao through the national arterial road network called he Maharlika Highway. Region VIII is strategically located because it is the only gateway to northern and southern parts of the country via the Philippine-Japan Highway and roll-on roll-off ports. The region is bounded on the south by the Surigao Channel and the Mindanao Island; on the north by San Bernardino Strait and the tip of the Bicol Peninsula; on

Figure 1. Location of Region 8



the west by the Surigao Channel, Camotes and Visayan Seas, and the Cebu and Bohol Islands; and on the east by the Leyte Gulf, the Philippine Sea and the Pacific Ocean.

#### 2.1 Physical features

The Eastern Visayas region is composed of the islands of Leyte, Samar and Biliran. These three islands have relatively flat areas near and along the coasts and mountainous areas in the middle section. The Samar Island is characterized by mountain ranges with forest and deep valleys. The Leyte Island, is extensively flat on the northern part and mountainous on its southern and south western portions. Scattered coastal flatlands are found in the northwest of the island. Biliran, the smallest island of the region, has large mountainous interior and narrow coastal areas.

There are two types of climate prevailing in the region under the Corona system of classification: Type II and Type IV. Type II climate is characterized by having no dry season but a pronounced maximum rainfall from November to January. Samar Island and the eastern part of Leyte Island fall under this type of climate. Type IV on the other hand has an even distribution of rainfall the year round and a short period of dry season that can be observed starting February up to May. This type of climate is well exhibited at the western half of Leyte island and some portion of Samar..

#### 2.2 Socio-Economic Profie

The Eastern Visayas Region is composed of six provinces: Biliran, Samar, Eastern Samar, Northern Samar, Leyte, and Southern Leyte and seven cities (Ormoc City, Baybay City, Maasin City, Calbayog City, Catbalogan City, Borongan City, and the regional center - Tacloban City).

Based on the 2015 national census Region 8 has a total population of 4,440,150. Its average annual population growth rate from 2000 to 2015 is 1.36. Leyte is the most populated province and has the highest annual population growth rate in the region (Table 1).

Table 1. Population and Annual Population Growth Rates of Region 8

Provinces	Population			Annual Pop. Growth Rate		
	May 2000	May 2010	Aug.	2000-2010	2010-2015	2000-2015
			2015			
REGION VIII	3,610,355	4,101,322	4,440,150	1.28	1.52	1.36
(EASTERN						
VISAYAS)						
EASTERN	375,822	428,877	467,160	1.33	1.64	1.44
SAMAR						
LEYTE	1,413,697	1,567,984	1,724,679	1.04	1.83	1.31
(excluding						
TACLOBAN						
CITY)						

Provinces	Population			Annual Pop. Growth Rate			
	May 2000	May 2010	Aug.	2000-2010	2010-2015	2000-2015	
			2015				
TACLOBAN	178,639	221,174	242,089	2.16	1.73	2.01	
CITY							
NORTHERN	500,639	589,013	632,379	1.64	1.36	1.54	
SAMAR							
SAMAR	641,124	733,377	780,481	1.35	1.19	1.30	
(WESTERN							
SAMAR)							
SOUTHERN	360,160	399,137	421,750	1.03	1.05	1.04	
LEYTE							
BILIRAN	140,274	161,760	171,612	1.43	1.13	1.33	

Source: PSA, CY 2000, 2010, 2015

Farming and fishing are the main livelihood in the region. Among agricultural products, coconut is the major crop that utilizes a large part of its agricultural land. Rice comes in second; majority of it is found in the province of Leyte and in the three provinces of the Samar Island.

The women of Basey, Samar also weave a variety of intricately designed mats from sedge grass locally known as tikog (*Fimbristylis milliacea*). This tradition was handed down from past generations. They also produce mats embroidered with flowers, birds, fishes, mermaids and scenes from folktales and legends. Other traditional art forms of the region are pottery of Tanauan, Leyte and Biliran, basketry of Calbiga, Samar and Carigara, Leyte, Matalom, Leyte. Abaca is abundantly grown in the province of Northern Samar while sugarcane is grown mainly in Leyte. Based on recent statistics, the region produces the biggest bulk of abaca for international export.

#### 2.3 Resources

Region 8 has varied resources that include land, forests and biodiversity resources, water, minerals and ecotourism areas, among others. It is one of the fish exporting regions of the country. Its sea and inland waters are rich sources of salt and fresh water fish and other marine products.

The region has abundant geothermal energy and water resources. There are also substantial forest reserves in the interiors of the islands. Mineral resources that abound in the region are chromite, uranium (in Samar), gold, silver, manganese, magnesium, bronze, nickel, clay, coal, limestone, pyrite, and sand and gravel. (http://r8.denr.gov.ph/index.php/about-us/regional-profile)

#### **Land Resources**

The Eastern Visayas Region has a total land area of 2,143,169 hectares. Of the region's total land area, forest land accounts for 52% or 1,118,214 while 48% or 1,024,955 are alienable and disposable lands.

Table 2. Land Classification in Region 8

Land Classification	Area (ha)	%
Forestlands	1,118,214	52%
Classified Forestlands	1,076,442	50%
Established Timberlands	1,014,151	47%
Forest Reserves, National Park/ Prot. Areas & Other Reservations	62,291	3%
Unclassified forestlands	41,772	2%
Alienable and disposable lands	1,024,955	48%
Total	2,143,169	100%

Source: Philippine Forestry Statistics, CY 2014

#### Forests Resources

About 24% (514,464 hectares) of the region's land area are still forested consisting of open forest (20%), closed forest (2.14%), and mangrove forests (1.86%). Most of the forests are located in Eastern Samar (186,201 ha.) followed by the provinces of Samar (165,463 ha) and Leyte (78,221 ha.). Biliran has the least forest, covering only an estimated area of 8,669 hectares. Table 3 summarizes the land cover per province in Region 8 for CY 2010.

Table 3. Land Cover of Region 8, CY 2010

						% of	% of	% of total	
		Total	Close	Open	Mangrove	Region	Province	Forest	
Province	Land Area	Forest	Forest	Forest	Forest	Forested	Forested	Closed	
Region 8	2,143,169	514,464	45,948	426,863	41,654	24%	24%	9%	
Biliran	626,826	8,669	0	8,383	286	4%	13.9%	19.8%	
Leyte	020,020	78,221	17,170	52,773	8,279	470	13.9%	19.0%	
Eastern									
Samar	433,965	186,201	21,828	156,539	7,834	9%	43%	12%	
Northern									
Samar	349,798	46,281	0	35,494	10,787	2%	13%	0%	
Samar	559,100	165,463	3,748	147,835	13,880	8%	30%	2%	
Southern									
Leyte	173,480	29,630	3,202	25,839	589	1%	17%	11%	
% of									
Region		24%	2%	20%	2%				

Source: Phil Forestry Statistics, CY 2014

In general, there was a decrease in the forest cover of Region 8. From about 519,848 hectares in 2003 its total forest (close, open and mangrove forests) has decreased to 514,466 hectares in 2010. This means that around 5,382 hectares of forests were lost in Region 8 in a span of 7 years or an annual decrease of 678.86 hectares. While there was an overall decrease in forest cover, close forests increased in the region, particularly in Leyte, southern Leyte and Eastern Samar. Mangrove forests also increased across all provinces. The forest cover change in Region 8 is summarized in table 4.

Table 4. Forest Cover Change in Region 8 (CY 2003-CY 2010)

Provinces	Close Fo	rest		Open For	rest		Mangro	ve Forest		Net
	2010	2003	Change	2010	2003	Change	2010	2003	Change	Change
Biliran	0	205	(205)	8,383	23317	(14,934)	286	108	178	(14,961)
Eastern Samar	21,828	20681	1,147	156,539	144882	11,657	7,834	7328	506	13,310
Leyte	17,170	3962	13,208	52,773	57332	(4,559)	8,279	4683	3,596	12,245
Northern Samar	0	2867	(2,867)	35,494	27426	8,068	10,787	10718	69	5,270
Samar	3,748	8451	(4,703)	147,835	162572	(14,737)	13,880	16337	2,457	(21,897)
Southern Leyte	3,202	307	2,895	25,839	28552	(2,713)	589	120	469	651
Region 8 Total	45948	36473	9,475	426,863	444,081	(17,218)	41655	39294	2,361	(5,382)

<sup>\*</sup> Include plantations

Source: Philippine Forestry Statistics, CY 2004 and CY 2014.

#### Water resources

Region 8 is drained by many river systems that are used for irrigation and domestic/industrial purposes. It has 8 watershed forest reserves covering approximately 29,457 hectares (table 5). Many of its watersheds support national irrigation systems.

Table 5. List of Watershed Forest Reserves in Region 8

Name of Reserve	Location	Area (ha)	Proc. No.
Bulosao Watershed Forest Reserve	Lawa-an, Marabut	4,055	106
Catbalogan Watershed Forest Reserve R	Catbalogan, Jiabong	804	413
Hinabian-Lawigan Watershed	Libagon,	4,536	107
Reservation	Hinunangan, St.		
	Bernard and Silago		
Jicontol Watershed Forest Reserve	Dolores and Can-	7,390	882
	avid		
Loog Watershed Forest Reserve	Basey	1866	703
Palompon Watershed Forest Reserve	Palompon, Villaba	2,392	212
Pan-as Falls Hay-ban Watershed Forest	Catarman and	7,832	318
Reserve	Calbayog City		

Patag-Gabas Watershed Forest Reserve	Baybay	582	1202
Region 8 Total		29,457	3,943

Source: Philippine Forestry Statistics, CY 2014

#### **Biodiversity Resources**

Leyte and Samar have rich resources of an island ecosystem. The land and water display a rich biodiversity. While a comprehensive inventory of biodiversity resources has not been undertaken in the region, a number of protected areas had been established to conserve its biodiversity.

The following sites in Region VIII were declared by law as protected areas and components of the National Integrated Protected Areas System (NIPAS): the Calbayog-Pan-As Hayiban Protected Landscape (in Samar), the Guiuan Protected Landscape/Seascape (in Eastern Samar), the Calbiga Caves Protected Landscape (in Samar), the Cuatro Islas Protected Landscape/Seascape (in Leyte), the Biri Larosa Protected Landscape/Seascape (in Northern Samar), the Jicontol Natural Park (in Eastern Samar), the Mahagnao Volcano Natural Park (in Leyte), the Lake Danao Natural Park (in Leyte), the Samar Island Natural Park (in the Provinces of Samar, Eastern & Northern Samar), and the Taft Forest Philippine Eagle Wildlife Sanctuary in Eastern Samar.( <a href="http://r8.denr.gov.ph/index.php/about-us/regional-profile">http://r8.denr.gov.ph/index.php/about-us/regional-profile</a>)

#### **Ecotourism Areas**

Most of the protected areas in region VIII also serve as ecotourism destinations. In an ecotourism exhibit organized by the Department of Environment and Natural Resources (DENR) 12 ecotourism sites were featured in Eastern Visayas region.

The Biri-Larosa Protected Landscape and Seascape in Northern Samar was one of the featured destinations. This protected landscape and seascape is one of the awesome destinations in the region with its unique and amazing rock formations aptly named the Biri Islands Rock Formations.

The other sites featured were Guiuan-Calicoan Surf Camp in Eastern Samar, and the San Pablo and San Pedro Islands in Hinunangan, Southern Leyte. Also included were Lake Danao in Ormoc City, Kalanggaman in Palompon, Hindang Cave in Hindang, and Cuatro Islas in Hindang and Inopacan Protected Landscape and Seascape, all in Leyte province.

In Samar province, the eco-tourism sites that were featured in the exhibit were the Sohoton Natural Bridge/Natural Park in Basey Samar; Calbiga Caves/Langon-Gobingob Cave and the Lulugayan Falls in Calbiga; and the Torpedo Boat Ride in Paranas.

#### Coastal and Marne Resources

Being an island region, Eastern Visayas is rich in coastal and marine resources. It has rich fishing grounds making it one of the leading fish producing regions in the country. Its beaches are also developed into tourist sites which contributes to local employment. There

is still significant areas of mangroves in the region which contribute to enhancing the fisheries in the region. Existing data indicate that these mangroves have increased significantly from 2003 to 2010.

#### 2.4 Vulnerability to Climate Change Hazards.

Climate projections by PAGASA (2011) indicate that there will be increasing temperature in 2050. In terms of rainfall, rainy season will have more rainfall while dry season will become drier. For Region 8, the estimated increase in temperature will range from 1.7°C to 2.4°C, with higher temperature increase during the months of March to May. Meanwhile, decrease in rainfall is estimated to range from –10.7% to -26.8%. Higher reduction in rainfall is expected from March to May, while up to 22.1% increase in rainfall is expected during the rainy months of June, July and August. (table 6 and 7).

Table 6. Seasonal Temperature Increases in 2050 Under Medium-Range Emission Scenario, Region 8

	Observed Baseline in °C (1971-2000) Change in 2050 in °C (2065)				(2036-			
Provinces	DJF	MAM	JJA	SON	DJF	MAM	JJA	SON
Eastern Samar	26.1	27.7	28.3	27.7	1.7	2.1	2.2	1.8
Leyte	26.4	27.8	28	27.7	1.8	2.3	2.2	1.9
Northern Samar	26	27.5	28.3	27.5	1.8	2.4	2.0	1.7
Samar	26.3	27.9	28.4	27.8	1.8	2.4	2.1	1.8
Southern Leyte	26.4	27.7	27.8	27.5	1.7	2.1	2.3	1.9

Source: PAGASA, 2011

Table 7. Seasonal Rainfall Change (in %) in 2050 Under Medium-Range Emission Scenario in Region 8

	Observ	Observed Baseline (1971-2000)				Change in 2050 (2036-2065)			
Provinces	DJF	MAM	JJA	SON	DJF	MAM	JJA	SON	
Eastern Samar	987	464.1	559.8	871.4	1.7	-26.8	2.2	15.8	
Leyte	689.5	342	568.7	725.5	9.4	-18.9	19.6	19.5	
Northern Samar	1128.9	462.2	566.8	981.4	-10.7	-20.2	22.1	18.7	
Samar	889.5	437	599.8	879.4	-11.1	-23	20.8	21.1	
Southern Leyte	818.6	362.2	510.6	695.6	17.1	-16	13	17.9	

Source: PAGASA (2011)

With more rains during the rainy season, floods, soil erosion and landslide may be aggravated endangering lives and properties of communities especially in Northern Samar, Samar and Leyte. On the other hand, with less rains during the dry season, water availability for irrigation, power generation and domestic use will be adversely affected. The region is also vulnerable to storm surge as demonstrated during typhoon Yolanda that led to

loss of lives and properties. In addition, the projected increase in temperature is likely to led to more forest fires threatening the existing forests in the region.

### III. Development Challenges in the Forestry Sector of Region 8

The challenges faced by the forestry sector in Region 8 is summarized in the succeeding discussions

- .
- 1. There is a need to protect the existing forests and rehabilitate degraded forestlands in Region 8. While the general trend is that there was an overall increase in both the close and mangrove forest cover, large areas of open forests were also lost leading to a net decrease in forest cover in Region 8, The critical provinces are Samar and Biliran. The former registered a decrease in cover in all forest types (i.e. close, open and mangrove forests) while the later lost large areas of open forests and its remaining small patches of close forests.2. With a general decrease in forest cover, the protection and rehabilitation of watersheds becomes urgent to ensure adequate supply of water for irrigation, domestic use and power generation. If this problem is not addressed, the ability of the region to continuously supply irrigation and domestic water as well as hydro electric energy may be compromised. 3. With rising cost of fuel and an increasing population, there is a growing demand for fuelwood in the region. In the absence of legitimate sources of fuelwood, some of the existing forests has been destroyed partly to respond to this demand. Thus, fuelwood plantations will have to be established as sources of fuelwood for the growing population and to support the needs of key livelihood in the cities (such of bakeries, restaurants and barbecue stalls).
- 4. Loss of Biodiversity is a critical problem that is going on unnoticed. A closer examination of the forest cover loss data in Region 8 would show that large areas of close forests (7,570 hectares) had been destroyed in Samar and Morthern Samarin a span of 7 years from 2003 to 2010. Since close forests are known to contain rich biodiversity resources, large scale destruction of this type of forest imply loss of habitat of important biodiversity species.
- 5. Reducing the impacts of climate change hazards must be given priority attention. Region 8 is highly vulnerable to climate related hazards such as typhoons, floods, landslides, and storm surge. The increased frequency and intensity of these hazards, aggravated by changes in climatic conditions, will continue to endanger the lives and properties of communities. Most LGUs and majority of the population are not prepared for hazards and communities are not organized for disaster risk reduction. The experiences during typhoon Yolanda demonstrate the urgent need to develop more mangrove forests to mitigate the adverse impacts of storm surge in the future. Livelihood sources of communities should also be diversified (such as through agroforestry) to reduce vulnerability to crop failures.
- 6. Collaborative management is necessary to address the overlapping mandates of different agencies in the management of forests and forestlands. However, to be effective, the capabilities of members of the collaborative management bodies must be upgraded. Most LGUs for instance, lack technical capability and financial resources to manage and implement devolved forestry programs. They also have insufficient capability in enforcing

forestry laws and regulations and mobilizing communities in forest protection activities. Most of them do not have approved forest land use plans which can complement their comprehensive land use plans and local development plans.

# IV. Regional Comparative Advantages and Competitive Goods and Services: Opportunities for Forestry Development

While lots of challenges exist in the forestry sector, the region has inherent comparative advantages and competitive goods and services which can be strengthened to maximize the forestry sector's contribution to regional development. The comparative advantages of Region 8 include the following:

- 1. It has vast areas of agricultural lands suited for the production of rice, corn, coconut and other crops;
- 2. Presence of watershed reservations that provide water for dams and other reservoirs for irrigation, and for domestic use;
- 3. Extensive areas of forests, lakes, rivers, biodiversity resources, beaches and presence of dolphins that are potential for ecotourism;
- 4. ;Vast areas of natural forests for REDD+
- 5. Existing plantations of coconuts and abaca that provide livelihood to local population and which have potential for agroforestry farms;
- 6. Skilled mat weavers
- 7. Established markets for various products such as, rice, coconuts fuelwood and other non-timber products (abaca, mats,etc.);
- 8. Presence of mangroves and coastal resources that support fisheries
- 9. Relatively high rainfall in most provinces

The following are the region's competitive goods and services which can be supported through its regional action plan for PMPCRFD implementation, to maximize the forestry sector's contribution to regional and national development.

- 1. Ecotourism
- 2. Rice
- 3. Coconut products;
- 4. Abaca products
- 5. Mats and other handicrafts
- 6. Water production for domestic use and to support rice production;
- 7. Fuelwood
- 8. Cacao, coffee and banana
- 9. Fisheries products such as the sinarapan in Camarines Sur and
- 10. REDD+sites

The matrix of comparative advantages and competitive goods and services of Region 8 as identified by DENR Region 8 is attached as annex 1.

## V. Regional Action Plan for Implementing the Philippine Master Plan for Climate Resilient Forestry Development

The regional action plan for implementing the PMPCRFD addresses the forestry challenges and maximizes the opportunities provided by the comparative advantages and competitive goods and services of the region. It focuses on ensuring the health and resiliency of forest ecosystems and communities to climate change hazards so that forest resources can sustainably provide and meet the increasing demands for forest ecosystems goods and services. Equally important is the institutionalization of climate responsive governance where various stakeholders collaborate and participate in making decisions in the management of forest resources and ecosystems.

#### 5.1 The Forestry Sector Vision

The region adopts the vision of the Philippine master plan for climate resilient forestry development as follows:

Climate resilient and sustainably managed watersheds and forest ecosystems, providing environmental and economic benefits to society

To achieve the vision and address the challenges in the forestry sector, the region has adopted the following goals of the PMPCRFD:

- 1. To place all forestlands under sustainable management in order to meet demands for forest goods and services and to promote resilience to climate change;
- 2. To strengthen resilience of forest dependent communities to climate change hazard;
- 3. To place all forestlands of the region under appropriate land management arrangements; and
- 4. To sustainably manage watersheds in partnership with stakeholders.

#### 5.2 Strategic Programs

Considering the identified issues and the region's comparative advantages and competitive goods and services, the forestry programs in Region 8 will focus on the following:

- 1. Protection of existing forests to support ecotourism, hazard mitigation and watershed management for power generation, irrigation and domestic water supply;
- 2. Forest Plantation development to address local demand for fuelwood;
- 3. Rehabilitation of watersheds and other protection forests to sustain water supply and mitigate climate change hazards such as flooding;
- 4. Agroforestry farm development to diversify livelihood of communities & support bamboo, coffee, cacao and banana production;

- 5. Rehabilitation of degraded mangroves for fisheries and disaster risk reduction;
- 6. Institutionalization of collaborative management; and
- 7. Enhancing the capabilities of key stakeholders in forest management and in adapting to climate change hazards.
  - **a.** <u>Program to Strengthen Resilience of Forest Ecosystems and Communities to Climate Change Hazards</u>

Effective climate change mitigation and adaptation strategies will be integrated into the regional forestry action plan to meet the multiple objectives of preventing further forest degradation, reducing disaster risks, maximizing productivity, and reducing vulnerability to climate hazards.

#### Objectives

- 1. To align land uses within watersheds and forest ecosystems by integrating the forest land use plans of 79 LGUs into their comprehensive land use plans;
- 2. To undertake vulnerability assessment and adaptation planning in 50 watersheds;
- 3. To formulate the integrated watershed management plan of 75 priority watersheds;
- 4. To protect 542,658 hectares of existing forests and plantations starting in 2016 gradually increasing to 783,602 hectares in 2028;
- 5. To diversify livelihood of local communities by developing 16,532 hectares of agroforestry farms;
- 6. To rehabilitate 142,463 hectares of protection forests through assisted natural regeneration and
- 7. Rehabilitate 16,224 hectares of degraded mangrove areas

#### Strategic Activities, Targets and Period of Implementation

The activities that will be implemented to strengthen resilience of forest ecosystems and communities to climate change hazards, and their implementation period and targets are summarized in table 8.

Table 8. Summary of Activities and Period of Implementation to Strengthen Resilience of Communities and Ecosystems to Climate Change Hazards

Strategic Programs and Activities	Targets and Implementation Period				
	2016	2017 -	2023 -	Total	
		2022	2028		
1. Vulnerability assessment and adaptation	7	24	19	50	
planning in priority watersheds (no.)					
2. Formulation of integrated watershed	3	36	36	75	
management plans (no.)					

Strategic Programs and Activities	Targets and	d Implementa	tion Period	
	2016	2017 -	2023 -	Total
		2022	2028	
3. Updating of IWMP (No)	0	0	0	
4. FLUP formulation (no. of LGUs)	7	36	36	79
5. Protection of existing forests and	542,658	657,586	783,602	783,602
plantations including mangroves (ha)				
6. Mangrove rehabilitation (ha)	14824	1,400	0	16,224
7. Agroforestry development (mixed crops	0	16,237	295	16,532
in ha)				
8. Rehabilitation of protection forests	863	69,600	72,000	142,463
(ANR) in ha.				
9. Training on vulnerability assessment,	6	36	36	78
adaptation planning, integrated pest				
management, IWM, FLUP (no. of				
training)				

#### b. Program to Address Increasing Demands for Forest Goods and Services

Considering the regional comparative advantages, and its competitive goods and services, the regional action plan of Region 8 will give more focus on addressing demands for fuelwood, agroforestry products such as bamboo, coffee and cacao, water for irrigation and domestic use, biodiversity for ecotourism, and the need to reduce disaster risks and improve environmental conditions especially in urban centers..

#### Objectives

The specific objectives of this program are:

- 1. To develop 81,865 hectares of fuelwood plantation;
- To protect and conserve existing watersheds and rehabilitate priority watersheds through vegetative measures (800 hectares) and structural measures (26,215 cu. meters) for power generation, domestic and industrial use and for irrigation to support production of rice and other agricultural crops;
- 3. To develop forest parks, and green belts in 12 key cities and urban centers of the region; and
- 4. To organize and capacitate at least six watershed management bodies

#### Strategic Activities, Targets and Period of Implementation

The activities, targets and their period of implementation to address demands for forest goods and services are summarized in table 9.

Table 9. Summary of Activities, Targets and Period of Implementation to Address Demands for Forest Goods and Services

Strategic Activities	Target	s and Implem	nentation Per	iod
	2016	2017 -	2023 -	Total
		2022	2028	
1. Demarcation of forestland boundaries &	0	1,118,214	0	1,118,214
forest management zones (ha.)				
2. Development of seed production areas in all	6	6	6	6
provinces(no.of sites)				
3. Establishment of mechanized nurseries	1			1
(no.)		0	0	
4. Fuelwood/ bio energy plantation dev't in all	0	36,384	45,481	81,865
provinces (ha)				
5. Watershed rehabilitation				
Vegetative SWC (ha)	0	800	0	800
Structural soil and water conservation (cu.	3,115	23,500	0	26,615
Meters)				
6. Organization and capacitation of watershed				
management bodies, such as the watershed	0	6	6	6
management council (no.)				
7. Support to urban forestry in major cities and				
urban centers (LGUs assisted)	0	6	6	12

#### **c.** <u>Institutionalizing Responsive Governance in Forestry</u>

The governance of forestlands and protected areas in the region has been complicated, by overlapping institutional mandates and overlapping tenure at the forest management unit level. With different policy issuances, such as the local government code, indigenous peoples rights act, national integrated protected area system act and the water code, among others, DENR no longer has exclusive jurisdiction over forest ecosystems. This overlapping mandates have resulted to overlapping tenure instruments at the forest management unit level. In many instances, CADTs, protected areas, watershed reserves, and CBFMAs overlap with each other, leading to confusion on who is accountable for the management of the allocated forestlands and protected areas.

Apart from overlapping mandates and overlapping tenure, the different demands for forest ecosystems goods and services from multiple clients, which often times are conflicting, requires collaborative management of forests and forestlands. In view of this situation, the forestry sector in the region will enhance the skills and capabilities of its personnel so that it can effectively collaborate with other stakeholders in implementing programs on strengthening resilience to climate change hazards and respond to demands for forest ecosystems goods and services.

#### Objectives

The primary objectives of this program are the following:

- 1. To establish clear accountability in the management of forestlands;
- 2. To promote active participation of stakeholders in the management of forests and forestlands;
- 3. Keep track of progress in the implementation of the Philippine forestry master plan and
- 3. Strengthen the capabilities of DENR and other stakeholders in implementing forest management programs related to enhancing resilience to climate change and responding to demands for forest goods and services from multiple clients.

#### Strategic Activities and Targets

The activities, targets and their implementation periods to institutionalize responsive governance in the forestry sector in Region 8 are summarized in table 10.

Table 10. Summary of Activities, Targets and Period of Implementation to Institutionalize Responsive Governance in Region 8

Strategic Programs and Activities	Targets per Implementation Period					
	2016	2017 -	2023 -	Total		
		2022	2028			
Promoting Responsive Governance						
1. Inventory of forest occupants (No. Of	0	18	18	36		
LGUs)						
2. Tenure issuance in open access	0	100,000	100,000	200,000		
forestlands (ha)						
3. Organization and capacitation of multi-	2	6	6	14		
sectoral collaborative management bodies						
(region and province)						
4. Creation and operationalization of	0	7	7	7		
regional/ provincial TWG on climate						
change (no.)						
5. Capability enhancement for DENR/	2	12	12	26		
LGUs (no. of trainings)						
6. Semi-annual / annual monitoring and	2	12	12	26		
evaluation of PMPCRFD implementation						
(No.)						
7. Performance assessment of tenure	0	6	6	12		
holders (No.)						

#### d. Support programs

Cross cutting support programs will focus on facilitating implementation of the three major forestry programs in the region. These are designed to inform the public of the important role of forest ecosystems in mitigating the adverse impacts of climate change and in securing water supply and other forest ecosystems goods and services. These are also intended to develop sustainable financing mechanisms, promote science based decision making and improve accountability through forest certification and improved data base.

#### Objectives

The support programs aim to:

- 1. Generate stakeholders' support in the implementation of the Philippine master plan for climate resilient forestry development;
- 2. Develop a data base management system to establish appropriate baseline data as basis for management decisions and monitoring and evaluation
- 3. Identify sustainable sources of financing for implementing the forestry master plan
- 4. Institutionalize a system for certifying sustainably managed forests and industries
- 5. Provide research based information for forest management decision making, vulnerability assessment and climate change adaptation planning

#### Strategic Activities, Targets and Period of Implementation

The strategic activities, targets and period of implementation to achieve the objectives of this program are summarized in table 11.

Table 11. Summary of Support Program Activities, Targets and Implementation Period

Strategic Activities	Targets per Implementation Period				
	2016	2017 - 2022	2023 - 2028	Total	
Information, education and communication campaign (no. of LGUs)	16	48	48	112	
2. Upgrading of regional MIS facilities (no.)	1	7	7	7	
Implementation of forest certification (Provinces)	0	6	6	6	
4. Identification and assessment of sustainable sources of financing in forestry projects (No. of sites assessed)	0	6	6	12	
5.Forestry research (no. of studies)	2	6	12	20	

### VI. Plan Implementation

This regional action plan shall be implemented by DENR Region 8 in collaboration with LGUs, NCIP, CBFMA/ CADT holders, private investors, and other relevant stakeholders. Orientation/ information campaign about the regional action will be undertaken for LGUs and key stakeholders to encourage them to participate in its implementation.

Financing of the regional action plan for implementing the PMPCRFD will come both from the government and the private sector. Government financing will primarily come from existing programs/ projects of the DENR and to some extent from existing programs of the LGUs, especially those related to disaster risk reduction, climate change adaptation and the formulation/ updating of the comprehensive land use plans which integrates the FLUP, protected area management plans, ADSDPP and the watershed management plans as mandated under existing guidelines. Fund sourcing will be undertaken for activities and programs which are not included in existing programs and projects of DENR, LGUs and other agencies. Where there are opportunities for donor assistance, unfunded programs and projects will be submitted for possible financial support. Attachment 4 presents the distribution of regional forestry targets by fund sources.

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# **ANNEXES**

## Annex 1. Comparative Advantages and Competitive Goods and Services, Region 8

#### **COMPETITIVE GOODS AND SERVICES**

Comparative advantages	Fuel- wood	Rice	Water	Ecotourism	Fisheries	Non timber ( Mat weaving)	Bamboo	Cacao	Coffee	Coconut	Abaca	Banana	REDD+
Vast areas of agricultural lands		All prov.								All prov.		All prov.	
Established Watersheds		All prov.	Leyte Samar		All prov.								Eastern & W. Samar
More rainfall	All	All Prov.	Leyte Samar				All prov	All	All	All prov	N. Samar	All prov	
Dams for irrigation	prov	Leyte & samar island	Leyte, samar island					prov	prov		Salliai		
Existing plantations							All prov.	All prov.	All prov.	All prov.	N. Samar	All prov.	
Established markets	All prov	All prov	Leyte Samar	All prov	All prov	All prov	All prov	All	All	All prov	All prov	All prov	
Natural forests			Leyte Samar	All prov		All prov							Eastern & W. Samar
Protected areas			Leyte Samar	All prov									Eastern & W. Samar
Caves				All prov									Jamai
Beaches				All prov									
Waterfalls				All prov									
lakes and rivers				All prov									
Mangroves and marine resources				All prov	All prov								
Coffee/cacao investors								All prov.	All prov.				
Skilled mat weavers & handicraft makers						All prov.	All prov.				All prov.		