

# 2021

## ANNUAL REPORT

.....

### *Build Back Better*



#### DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

#14 Dalan na Pagayaya cor. Angicacua, Regional Government Center  
Carig Sur, Tuguegarao City, Cagayan, 3500  
Regional Hotline: 096506550  
www.r2.denr.gov.ph; E-mail: r2@denr.gov.ph





## BUILD BACK BETTER ANNUAL REPORT

### TABLE OF CONTENTS

---

#### I. ABSTRACT

#### II. INTRODUCTION

- a. *The Flooding Situation in Cagayan Valley*
- b. *Executive Order No. 120. Series of 2020*
- c. *The Cagayan Valley Build Back Better Task Force*
- d. *Proposed Solutions to Cagayan Flooding*

#### III. REHABILITATION FOR CAGAYAN VALLEY: Initial Accomplishments

- a. *KRA 1: Better and Resilient Infrastructure (DPWH)*
- b. *KRA 2: Stronger Shelter and Resilient Settlements (DSHUD)*
- c. *KRA 3: Improved System and Essential Services (OCD)*
- d. *KRA 4: Restored Sustainable Livelihood (DTI)*
- e. *KRA 5: Strengthened Governance thru Broad Based Citizen Input (DILG)*
- f. *KRA 6: Intensified Watershed Management (DENR)*

#### IV. ISSUES and CONCERNS

#### V. SURGING ON: 2021 BUDGET FOR CAGAYAN RIVER

#### VI. EDUCATION AND SUSTAINMENT





## I. ABSTRACT

Despite the impact of Global Crisis brought about by COVID-19, the government's effort has been full on and focused at suppressing and surviving the pandemic. Since 2020, all operations were halted and majority of the government agencies, private sector & business sector set out alternative work arrangements to prevent the spread of virus while continuously delivering its functions, services and activities. In the latter half of the year, the government has already adapted to the new normal, hence, programs and projects were launched to cope with the current situation which included the creation of the Build Back Better Program.

The Build Back Better (BBB) Task Force was created through the Executive Order No. 120 series of 2020, composed of the following member agencies:

1. Department of Environment and Natural Resources (DENR);
2. Department of Public Works Highways (DPWH)
3. Department of National Defense (DND)
4. National Economic Development Authority (NEDA)
5. Department of Transportation (DOT)
6. Department of Interior and Local Government (DILG)
7. Department of Energy (DOE)
8. Department of Trade Industry (DTI)
9. Department of Agriculture (DA)
10. Department of Budget and Management (DBM)
11. Department of Finance (DOF)
12. Department of Education (DepEd)
13. Department of Health (DOH)
14. Department of Social Welfare and Development (DSWD)
15. Department of Labor and Employment (DOLE)
16. Department of Science and Technology (DOST)
17. National Housing Authority (NHA)
18. Land Registration Authority (LRA)
19. Local Water Utilities Administration (LWUA)
20. National Electrification Administration (NEA)
21. National Irrigation Administration (NIA)
22. Philippine Coconut Authority (PCA)
23. Cooperative Development Authority (CDA)

The task force focuses on the post-disaster rehabilitation and recovery phase in typhoon affected areas, beginning with those hit by the typhoon Ulysses. This agency untiringly supports the program for the rehabilitation and recovery of the identified devastated areas.

The Cagayan Valley River Restoration Program led by the DENR aims to rehabilitate the areas affected by flooding brought by typhoon Ulysses in 2020. Also, this program implements the planting of Bamboo and other indigenous species along riverbanks and its tributaries of Cagayan Valley to prevent





soil erosion and flood in the province. After few months in implementing this program, different agencies and other sectors of the government including private sector joined the Tree Planting activities along riverbanks which was launched by the DENR.

On the brighter side, the current worldwide pandemic has enjoined everyone to put greater effort which will definitely lead to the completion of their goals.

## II. INTRODUCTION

### A. The Flooding Situation in Cagayan Valley

Region 2 or the Cagayan Valley region is strategically located on the northeastern part of mainland Luzon. It is the 4<sup>th</sup> largest region of the Philippines accounting for about 9% of the national land area. It is also considered one of the largest catchments or watershed basins in the country. As a valley and as a catchment, it has peripheral high altitudinal boundaries distinctly separating it from the neighboring regions. The region is bounded by the Sierra Madre mountains to the east which extends from north (Sta. Ana, Cagayan) to south (Quezon in Southern Tagalog), the Caraballo mountains to the south, Cordillera Mountain ranges to the west and the Babuyan Channel to the north where the river networks drain its collective precipitations.

The Cagayan River is the longest river in the country, it has a total stretch of about 520 kilometers from its source in Kasibu, Nueva Vizcaya and meanders down to its mouth in Aparri, Cagayan to the Babuyan Channel. It has a drainage area of almost 2.8 million hectares that extends to the Cordillera Administrative Region.

Flood is a prevalent hazard in the river basin as it has been yearly battering the provinces in Region 2 and lower parts of CAR. Most parts of Isabela and Cagayan which lie near the river systems have high to very high susceptibility to flooding. Provinces with high elevations have lesser problems on flooding though natural waterways might swell also which could trigger flash flood. Since the river basin is in a valley, the occurrence of flood becomes natural in the area. Water from the mountains like the Sierra Madre and Cordillera Mountains converges in the valley that usually causes the flooding in the area.

On November 13, 2020, the provinces of Cagayan and Isabela were submerged by water due to Typhoon Ulysses. Lack of impounding facilities in the area somehow worsened the problem in flooding. Since such infrastructure is limited, existing impounding structures in the area rapidly reached its spilling level. When it happens, operators will release water from the dams to maintain its normal capacity which will eventually exacerbate the occurrence of flooding.





## Areas Affected by Flood

Provinces / City	No. of Cities / Municipalities		FLOODED AREAS			
	City	Municipality	City	Municipality	Barangays	Unpassable Roads
<u>Cagayan</u>	1	28	1	21	167	68
<u>Isabela</u>	2	35	2	22	10	11
<u>Nueva Vizcaya</u>	0	15	0	15	0	0
<u>Quirino</u>	0	6	0	5	0	0
Santiago City	1	0	1	0	6	0
<b>TOTAL</b>	<b>4</b>	<b>84</b>	<b>4</b>	<b>63</b>	<b>183</b>	<b>79</b>



Flooding is a serious problem in the area as it has been a constraint in the development of socio-economic and living condition of the affected communities. Further, agricultural and settlement areas near river systems had also incurred substantial loss due to inundation.

On December 16, 2020, heavy downpour brought about by the northeast monsoon and the tropical depression "Vicky" inundated the provinces of Cagayan and Isabela, submerging them in deep flood waters.

Water level continuously rise within the Upper Cagayan River and its tributaries – Ganano and Magat. Widespread flooding is experienced in the tributaries of Siffu-Mallig, Pinacanauan Rivers of Ilagan, Tumauni, San Pablo, Pinacanauan de Tuguegarao, Chico, Pared and Dummun. In Cagayan, 12 municipalities and 1 city had impassable roads as well as damaged and obstructed bridges until



December 22, 2020. The most affected municipalities were Gattaran, Baggao, Sta. Ana, Amulung, Alcala, Tuao, Sto. Niño, Lasam, Rizal, Enrile, Peñablanca, Solana and Tuguegarao City.

Consequently, blocked roads also resulted to isolation of Barangays Auitan and Guminga in San San Pablo, Isabela while the National Highway at Casibarang Norte in Cabagan which leads to Santa Maria was also engulfed with flood waters.

Based from reports, a total of 7,263 and 7,648 families was affected in the provinces of Cagayan and Isabela, respectively. Further, 13 municipalities were devastated in Cagayan while 12 municipalities were also affected in Isabela.

### **B. Executive Order No. 120 Series of 2020**

On November 18, 2021, President Rodrigo Roa Duterte signed Executive Order No.120 Series of 2020 strengthening the rehabilitation and recovery efforts in typhoon-hit areas through the creation of Build Back Better Task Force.

Under the EO 120, the BBB Task Force is chaired by Environment Secretary Roy A. Cimatu and co-chaired by Public Works and Highways Secretary Mark Villar. Moreover, the EO 120 directed all government agencies, including government-owned or –controlled corporations and government financial institutions, as well as state universities, colleges and LGUs enjoined, to provide the necessary support and assistance to the Task Force in the implementation of the Order. The DENR shall provide the secretariat support to the Task Force. In this purpose, the DENR is assisted by existing personnel from member-agencies of the Task Force.



Secretary Roy A. Cimatu visited Cagayan Valley on November 23, 2020 to personally check the current situation and to lead the planning of solutions in order to avoid the re-occurrence of massive flooding that submerged the provinces of Cagayan and Isabela during the onslaught of Typhoon Ulysses. Sec. Cimatu directed for the immediate dredging and strict enforcement of 20-meter easement along Cagayan River. These plans for the Cagayan River received a warm reception from the four (4) Governors and thirty-one (31) Mayors in Cagayan Valley.

During his visit, Sec. Cimatu also ordered to address the problem on illegal structures along creeks that block the waterways and the relocation of communities living along riverbanks . He also ordered for the closure of small-scale mining operations in a hazard-prone area in Quezon, Nueva



Vizcaya where nine deaths were reported due to landslides during the onslaught of Typhoon Ulysses. He also called on local officials to ensure the availability of water, electricity, transportation, telecommunication and adequate basic needs of the affected families and communities and further urged the officials to help their constituents in bringing back the normality in the devastated areas.

The BBB Task Force has identified six Key Result Areas (KRAs) composing of different agencies in order to have a concerted, well-coordinated and adequately funded set of programs, projects and activities. The KRAs are better and resilient infrastructures, stronger shelter and resilient resettlement, improved systems and essential services, restored sustainable livelihood, strengthened governance thru broad-based citizen-input and intensified watershed management.

Secretary Cimatú has ordered the immediate, impactful and doable solutions to rehabilitate the Cagayan River. This was declared by Assistant Secretary Joselin Marcus Fragada together with Gen. Benito Antonio De Leon during their visit in the region. The members of the regional task group were convened and the DENR with DPWH agreed to undertake immediate interventions such as dredging of sandbars to start from the Magapit Narrows and easement recovery and stabilization of riverbanks through bamboo plantation. The Assistant Secretary also directed DENR region 2 to conduct initial steps such as survey of residential, farmlands and buildup areas which will be affected by the easement recovery. He also requested the Department of Agriculture to assist in finding alternative livelihood for the residents whose farmlands will be affected by the easement recovery.

Therefore, the Department of Agriculture and the Department of Trade and Industry committed to support the DENR in implementing vegetative measures to stabilize riverbanks.

The DENR's top officials also discussed with Cagayan Governor Manuel Mamba the interventions to be undertaken. They also asked the support of the Local Chief Executives of Alcala, Gattaran and Lallo for the relocation of the hard-hit communities living in the hazard-prone areas adding that the department will provide assistance to LGUs in the identification of relocation sites that are safe and livable.



### C. The Cagayan Valley Build Back Better Task Force

Government institutions in Region 2 have committed to support to the Cagayan River rehabilitation. The DENR Region 2 convened the National Agencies to formalize the creation of the regional task force pursuant to Executive Order No. 120.

During the meeting which was presided by DENR Director Gwendolyn C. Bambalan who chairs the regional task force, the member agencies discussed the proposed interventions on forest and watershed rehabilitation program. The DENR as the lead agency has proposed various interventions which include enhancement of existing forest cover, easement recovery and riverbank stabilization, soil and water conservation and establishment of check dams, ripraps and gabions as structural measures. The intensified forest protection and anti-illegal logging campaign including the enforcement of other environment and natural resources and protected area laws were also proposed as interventions.

The regional task force approved the expansion of membership of KRA 6 to include the Department of Trade and Industry for its bamboo industry development and the Provincial Local Government. The Department of Labor and Employment and the Department of Social Welfare and Development have also committed to support the bamboo planting along riverbanks.

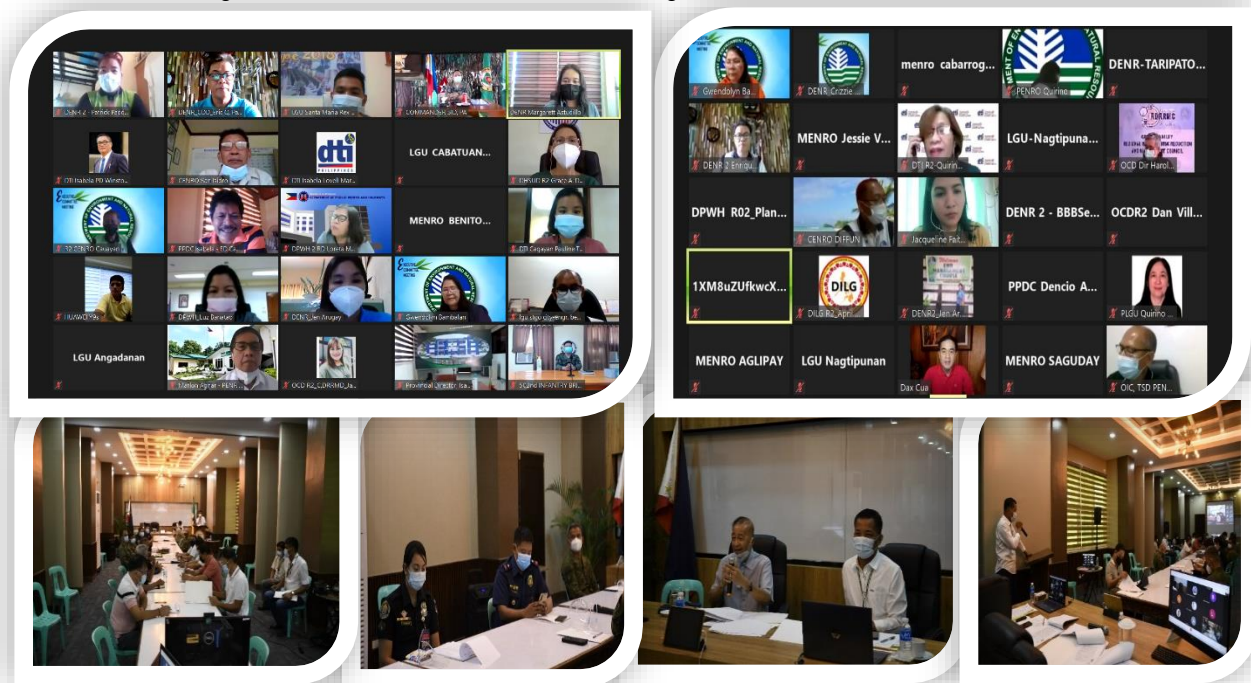


The Build Back Better Task Force composed of 6 Key Result wherein Better and Resilient Infrastructure for KRA 1 led by the DPWH, KRA 2: Stronger Shelter and Resilient Settlements led by the DHSUD, KRA 3: Improved System and Essential Services by the OCD, KRA 4: Restored Sustainable Livelihood led by the DTI, KRA 5: Strengthened Governance thru Broad Based Citizen Input led by DILG, KRA 6: Intensified Watershed Management led by the DENR.





The R2-BBBTF regularly convene to provide updates on KRAs and discuss issues/ interventions for a better Cagayan Valley. The task force also conducted Consultation Meeting and Planning Sessions with the local government units in the provinces of Cagayan, Isabela, Nueva Vizcaya and Quirino. This is being conducted to determine priority concerns of every municipality to address the effects of flooding and other natural calamities in the region.



#### D. Proposed Solutions to Cagayan Flooding

➤ ***Determination and recovery of legal easement situated in Cagayan River and its tributaries***

The region will organize a team to conduct ocular inspection and determine the width including legal easement of the Cagayan River and its tributaries. Using the approved Cadastral Maps of the region, the area of the river will be determined and measured. As to the width of the legal easement, this will depend on the classification of the adjoining areas (3 meters for highly urbanized areas, 20 meters for agricultural lands and 40 meters for forest lands.)

Areas which are already issued with titles will be assessed and will be evaluated for possible expropriation procedures. Reversion of titles fraudulently issued regarding lands within easement and natural waterways shall also be taken into consideration in coordination with the Office of the Solicitor General.

Further, collaboration shall be made with Local Government Units for stricter implementation of the legal easement disallowing permanent structures in accordance with the Comprehensive Land Use Plan (CLUP). Nuisance structures within natural waterways and legal easement that impede the flow of waterways shall be removed in accordance with related laws, rules and regulations.



➤ ***Riverbank stabilization***

Upon determination of the legal easement, further assessment will be done to determine the types of riverbank stabilization measures to be introduced: vegetative measures or structural measures. On areas suitable for the adoption of vegetative measures, planting of bamboos and other forest species along the easement will be undertaken in collaboration with the local government units, other government agencies, local communities and other stakeholders. As to the structural or engineering measures, coordination with the Department of Public Works and Highways (DPWH) will be done for the possible implementation of river control projects.

➤ ***Conduct of Hydrographic Survey along Cagayan River***

In CY 2019, a hydrographic survey was conducted by a private entity and it has recommended for dredging of about 32 kilometers stretch starting from the mouth upstream. In view of the need to get an updated situation of the river, there is a need to conduct/update the hydrographic survey.

➤ ***Dredging of Cagayan River***

Research undertaken by the Japan International Cooperation Agency in 1987 and the Cagayan River Master Plan recommend for the dredging of Cagayan River. In addition, DENR has recently issued Department Administrative Order No. 2020-07 "Rationalizing Dredging Activities in Heavily Silted River". Thus, in the province of Cagayan, an Inter-agency Committee (IAC) was created to oversee and manage the restoration of the Cagayan River. The IAC is chaired by the Provincial Governor, Vice Chair, Regional Executive Director of DENR, and the Regional Directors of the Environmental Management Bureau (EMB) and Mines and Geosciences Bureau, and DPWH as members. Per approved River Dredging Plan, a river dredging zone of about 30.2 kilometers was approved by the IAC.

➤ ***Construction of flood control dams***

In partnership with concerned agencies particularly the National Irrigation Administration (NIA), Magat River Integrated Irrigation System (MARIIS), National Power Corporation and Aboitiz Power Corporation, construction of dams and small water impounding system is needed for the purpose of flood control and mitigation of flood risks.

In addition, through strategic engineering, diversion of water to unirrigated areas may be done to support vegetation in sun-scorched lands.

Post dam socio-economic and environmental impact assessment criteria should be established as part of the implementation in order to avoid negative impacts on ecosystems lowland communities.

➤ ***Intensified Information Education Campaign***

In order to intensify environmental awareness, social media and other media platforms (Broadcast and Print Media) shall be used to educate the community regarding management, conservation, protection, development and proper use of the country's environment and natural resources. In coordination with the National Commission on Indigenous Peoples (IPs) as well as those who are







engaged in illegal activities regarding their limitations as well as boundaries in the use of the country's natural resources. Coordination with the IPs gate keepers is also needed in this endeavor.

To add, environmental education campaign shall be made that stakeholders may be informed about geohazards particularly landslide, flood and karst subsidence hazards (sink holes). Lastly, inclusion of IEC activities in LGU meetings shall be done.

➤ ***Banning the use of herbicides and other hazardous chemicals***

Coordination with the Department of Agriculture for the banning of herbicides that weaken the soil and threaten the groundwater resource shall be made. This endeavor shall also be done through intensified education campaign.

➤ ***For Forestlands***

There must be stricter enforcement of laws, rules and regulations in coordination with other enforcement agencies or men in uniform assigned on strategic areas. As a starter, the Regional Environmental Law Enforcement Council (RELEC) composed of different enforcement agencies and stakeholders of this region forged a Memorandum of Agreement on October 19, 2020 for the purpose of fast response to environmental violations within the region and improvement of environmental law enforcement, ranging from deterrence, investigation, arrest, searches and prosecution to enforcement of judgement among others.

It is further proposed that forest lands must not be converted into upland rice and corn farm. Monocropping shall not also be allowed. Forest cover in the region shall be increased taking into consideration the rehabilitation of denuded areas.

Coordination and partnership with group of mountaineers to assess high areas shall be made.





### III. REHABILITATION FOR CAGAYAN VALLEY: First Semester Accomplishments

The Build Back Better Task Force led by Secretary Roy A. Cimatu together with Sec. Mark Villar, Sec. Arthur Tugade, Sec. Silvestre Bello, Gov. Rodito Albano, Gov. Dakila Cua, Gov. Carlos Padilla, Gov. Manuel Mamba and other stakeholders joined in the launching of the Cagayan River Restoration Program on February 2, 2021 with the theme ***“The H.O.P.E We Long For”***. The DENR Chief led other Cabinet Secretaries and heads of national government agencies in region 2 in the planting of bamboos along the Cagayan riverbank at Barangay Bangag, Lallo, Cagayan.



On the other hand, no less than Public Works and Highways Secretary Mark A. Villar led the ceremonial dredging in one of the priority areas in Lallo, Cagayan. The dredging aims to widen the Cagayan River to increase its capacity in cases of river swelling to avoid future flooding in adjacent communities.







The Local Government Units also committed to unite and help strengthen their resilience to natural calamities. With the continuous dredging and tree planting activities around the Cagayan River and with the partnership with the different national agencies, the BBB is hoping to bring significant and lasting impact not only to the people of Cagayan Valley but to the environment as well.



## A. KRA 1: Better and Resilient Infrastructure (DPWH)

The Department of Public Works and Highways is the lead agency tasked to implement the immediate dredging or desilting of sandbars in identified priority sites covering the 275 hectares from Gattaran, Cagayan to Babuyan Channel and approximately 7 million cubic meters of sandbars will be removed.

After decade since the formulation of Cagayan River Master Plan, actual river restoration through dredging have already started in the mouth of the river. This would alleviate fears of the massive flooding experienced during typhoon Ulysses.

Nineteen (19) sandbars constricting the flow of water in Cagayan River shall be removed starting with Magapit Narrows in Bangag, Lallo, Cagayan. As of June, the removal of sandbars along the Magapit Narrows is already 80.39 percent complete with a total of 276,795 cubic meters excavated. This was reported during the inspection of the dredging activities in the Magapit Narrows.

The inspection was led by Secretary Roy A.

### PRIORITY SITES FOR DREDGING WORKS

Site No.	Location
1	Bangag, Lallo
2	Casicallan Norte, Gattaran
3	L. Adviento, Gattaran
4	Callao Sur, Gattaran
5	Dummun, Gattaran
6	Lapogan, Gattaran
7	San Vicente, Gattaran
8	Matalao, Sto. Niño
9	Centro Sur, Alcala
10	Tamban, Alcala
11	Malalatan, Alcala
12	Gabut, Alcala
13	Logung - Palacu - Abolo, Amulung
14	Concepcion, Amulung
15	San Isidro, Iguig
16	Dassun, Solana
17	Cattaran, Solana
18	Linao East, Tuguegarao City
19	Calamagui, Solana



Cimatu and Secretary Mark Villar as part of the BBBTF to address the perennial flooding.



The dredging/removal of sand bars in portions of the Cagayan River particularly in Magapit Narrows is one of the structural measures identified in the Cagayan Valley Flood Mitigation and Rehabilitation Program approved by the Cagayan Valley Regional Development Council in December 2020. DPWH have already dredged 513,307 cubic meters in Bangag, Lallo and 97,096 cubic meters in Dummun, Gattaran, Cagayan.



## **B. KRA 2: Stronger Shelter and Resilient Settlements (DHSUD)**

“Build safer sites for housing under the township approach”. This KRA involves ensuring sites for housing development are suitable and safe for settlement. Activities include the delineation of areas that are prone to various climate-related hazards, relocation of informal settler families residing in these areas, rebuilding or repairing houses to be more resilient to hazards, and construction of evacuation facilities, among others.

The Department of Human Settlements and Urban Development which lead the KRA 2 in the implementation of the Build Back Better Rehabilitation in which the main role is to facilitate the relocation of poor households exposed to climate change- related hazards and oversee the construction of safe evacuation facilities.

On the status of National Housing Authority project in Baggao, Cagayan, the LGU is still on the process of lot acquisition. In Amulung, Cagayan, the lot is donated by Congressman Joseph L. Lara and the deed of donation is on process and for coordination. For the Enrile Resettlement Project, on the process of completing various documentary requirements by the concerned agencies. Only 40 million approved by the NHA for the resettlement project of Quezon, Nueva Vizcaya wherein 2 million from the NDRRMC fund and the remaining PHP 926,000 shall be the counterpart of the LGU. The PGU of Quirino had submitted the required documents for the review and evaluation. Also, for the landslide in Benito, Soliven, Isabela the NHA is waiting for the emergency housing assistance program fund to be downloaded for distribution to the affected families.

Below is the status of the Emergency Housing Assistance Program (EHAP)

PROVINCE /CALAMITY	LGU	No. OF BENEFICIARIES	FUNDING REQUIREMENT	STATUS
<b>CAGAYAN</b> (Flooding due to Typhoon Ulysses)	1. Amulung 2. Enrile	150 150	980,000.00 760,000.00	Distributed January 12, 2021
<b>ISABELA</b> (Flooding due to Typhoon Ulysses)	1. Ilagan City 2. Sta. Maria	54 41	320,000.00 215,000.00	Distributed January 13, 2021
<b>CAGAYAN</b> (Landslide due to Typhoon Ulysses)	1. Baggao	36	290,000.00	Distributed January 12, 2021
<b>NUEVA VIZCAYA</b> (Landslide due to Typhoon Ulysses)	1. Quezon 2. Ambaguio	16 50	90,000.00 270,000.00	Distributed January 14, 2021
<b>QUIRINO</b> (Landslide due to Typhoon Ulysses)	1. Nagtipunan	98	970,000.00	Distributed January 21, 2021
		<b>TOTAL</b>	<b>3,895,000.00</b>	

The DENR-PENRO Quirino thru the approval of the PAMB donated lumber used in the construction of these temporary shelters. An initial volume of 3,338.65 bd. ft. of confiscated common hardwood lumber for temporary housing for the San Pugo evacuees was donated.





Meanwhile, on November 15, the Ground-breaking of the seven (7) hectares Resettlement Area was conducted together with DHSUD and Municipal Mayor of Enrile, Cagayan at Sitio Dapang, San Roque, Enrile, Cagayan. The DENR handed over the approved Gss-af-02-001374 Resettlement Area to Hon. Miguel Decena with the presence of DENR Officials, PENRO Cagayan, CENRO Solana and LGU and DHSUD. The survey plan was approved by the Regional Office on November 12 covering 132 lots which is now ready for One-Stop Shop acceptance/processing of public land application in favour of the beneficiaries of the Resettlement Area.



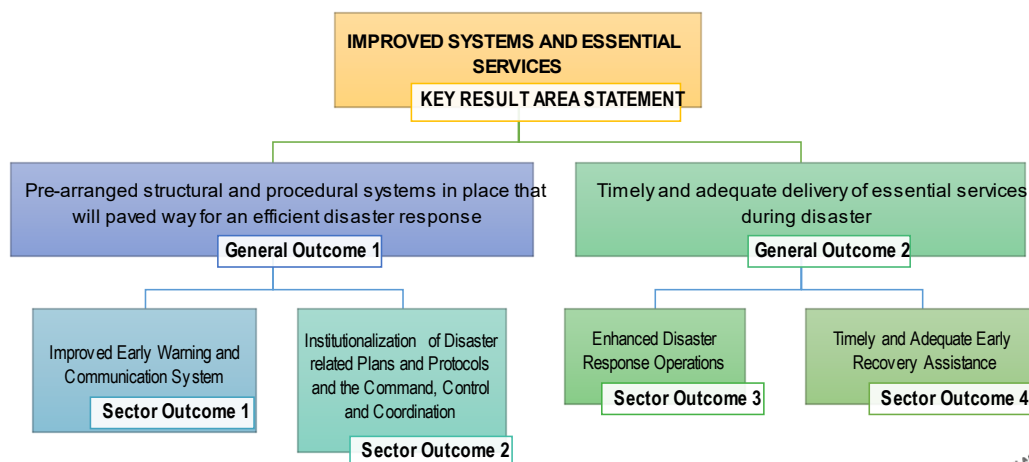
### C. KRA 3: Improved System and Essential Services (OCD)

Office of Civil Defense lead the preparation, implementation and monitoring of a Post-Disaster Rehabilitation and Recovery Program for typhoon-affected areas aligned with the Disaster Rehabilitation and Recovery Planning Guide. They will also ensure availability and adequacy of key lifelines such as basic needs (eg. food, water, clothing and shelter, but also sanitation, education, and healthcare), medical services, electricity, roadlines, sewers, telecommunication and transportation that can be mobilized immediately after the typhoon.

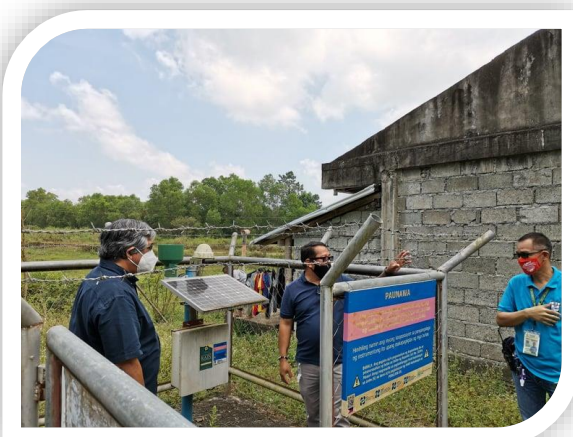
The Key result Area 3 led by OCD consists of two (2) General outcome namely: 1.) Pre-arranged structural and procedural systems in place that will paved way for an efficient disaster response and 2.) Timely and adequate delivery of essential services during disaster.

The two general outcome consists of four sector outcomes. Under the General Outcome 1, two sector outcomes are expected namely Improved Early Warning and Communication System and Institutionalization of Disaster related Plans and Protocols and the Command, Control and Coordination. For general outcome 2, it consists of Enhanced Disaster Response Operations and Timely and Adequate Early Recovery Assistance.

## KRA 3 FRAMEWORK

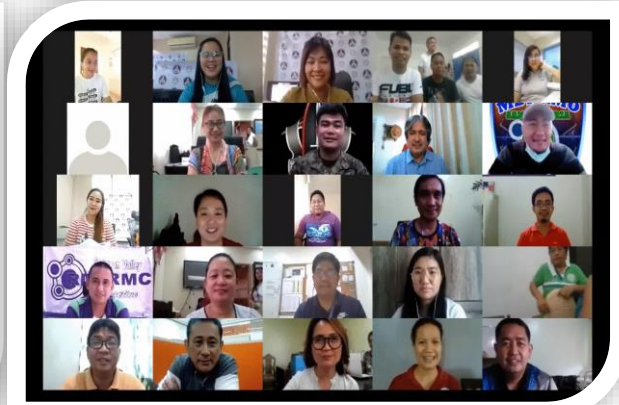


**Under the Sector Outcome 1: Improved Early Warning and Communication System,** the OCD conducted ocular inspection on the early warning devices such as Water level monitoring, flood siren and flood markers in Cauayan City.





**For the Sector Outcome 2:** Institutionalization of Disaster related plans and protocols and the Command Control and Coordination, the KRA 3 members conducted Contingency Plan Training for selected LGUs and RDRRMC member-agencies on March 15-19, 2021 in preparation for the formulation of Contingency Plan on Dam Break.



Under the same sector outcome, series of Incident Command System and Emergency Operations Center Trainings were conducted. Below are the trainings conducted during the first quarter:

Training	Date
Basic ICS Training for Volunteers	February 18-20, 2021
Basic ICS Training for LDRRMOs	February 22-24, 2021
ICS Executive Course for CDRRMC Santiago City	February 10, 2021
ICS Executive Course for LDRRMC San Isidro, Isabela	February 11, 2021
ICS Executive Course for LDRRMC Echague, Isabela	February 26, 2021
EOC Training for RDRRMC Member Agencies	March 3-5, 2021
ICS Executive Course for LDRRMC San Guillermo	March 22, 2021
Basic ICS for DSWD personnel	March 23-25, 2021

**Sector Outcome 3:** Enhanced Disaster Response Operations



- ✓ Conducted site visits and ocular inspection in the existing Regional Permanent Evacuation Centers in the provinces of Cagayan, Isabela and Nueva Vizcaya.
- ✓ Conducted site visits and ocular inspection in the proposed Multipurpose TTMF (Evacuation Centers/Logistics Hub) in the provinces of Cagayan, Isabela and Nueva Vizcaya.
- ✓ Prepositioned Food and Non-Food items at OCDR2 Warehouse (Family pack, Hygiene kits, beddings)

#### D. KRA 4: Restored Sustainable Livelihood (DTI)

For KRA 4, led by DTI, one of the strategies is to engage with DSWD and DOLE through its cash for work program or the TUPAD program and Technical Education and Skill Development Authority to provide training and assistance for livelihood of the affected communities.

The main issues to be addressed under this KRA are the 1.) early recovery of poor, low-income families in the informal sector whose livelihood were affected, 2.) damages to micro enterprises and cooperatives, 3.) damages to small and medium enterprises and cooperatives and 4.) deforestation.

Through these BBB, the issues were addressed that will help restore, strengthen and expand economic activities in typhoon-hit areas in close partnership with the relevant government agency. DTI is committed to pursue sustainable livelihood programs such as community-based enterprise development (agroforestry and ecotourism), climate resilient agriculture and fisheries cottage-based, and other programs deemed applicable.

#### Early recovery of poor, low-income families in the informal sector whose livelihood were affected

Through the DOST-PCAARRD, the following are the accomplishments:

- ✓ Distributed relief food and hygiene kit packs to beneficiaries
- ✓ Launched rice-fish-duck gabi technology in Barangay Agani, Alcala, Cagayan and provided fish feeds for the beneficiaries
- ✓ Distributed 24,000 fingerlings to four (4) rice farmers
- ✓ Interviewed 1,357 families and identified target beneficiaries in coordination with LGU





- ✓ Attained damage reports brought by typhoon Ulysses and the widespread flooding
- ✓ Distributed S&T-based food packages, sanitation and hygiene kits to beneficiaries
- ✓ Conducted four (4) trainings among thirty (30) beneficiaries on:
  - ✓ 1) crop production
  - ✓ 2) livestock production;
  - ✓ 3) integrated farming system; and
  - ✓ 4) integrated pest management

In partnership with the Department of Social Welfare and Development, provision of livelihood grants was done.

a.) Monitoring activities on LAG-funded projects - On-going monitoring for the 1,757 low-income families provided with LAG

b.) CY 2021 Implementation - On-going proposal development and expected to be fully obligated by June 2021.

### **Damages to Micro Enterprises and Cooperatives**

The DTI commitment through the Negosyo Serbisyo sa Barangay was able to extend the following activities in the provinces of Cagayan and Isabela:

- ✓ 7 Livelihood Kits provided
- ✓ 622 MSMEs Assisted
- ✓ 36 Barangays. Assisted
- ✓ 163 Negosyo Center Cliniquing conducted
- ✓ 163 Entrepreneurial Seminars conducted
- ✓ 2,775 Clients Assisted



### **Damages to Micro Enterprises and Cooperatives**

- The DOST through their SETUP: Innovation – enabling fund (iFund) provided assistance to eight (8) firms from Cagayan and Isabela amounting to Ten million pesos.
- The Department of Labor and Employment provided assistance thru their DOLE Integrated Livelihood Program (DILP) wherein 171 individuals benefitted amounting to 4,129,146.00
- Cooperative Development Authority was able to provide assistance to the following:
  - ✓ 5 cooperatives provided regulatory relief
  - ✓ 1 cooperative provided assistance by CDA and/or with in partnership with NGAs, LGUs, NGOs, and cooperatives
  - ✓ 3 cooperatives provided assistance through partnership with Big Brother Cooperatives to Small Brother Cooperatives
  - ✓ 1 cooperative assisted in attendance to BCM Training
  - ✓ 30 cooperatives provided with handholding services

### **Damages to Small and Medium Enterprises (SMEs) and Cooperatives**

Through the Pondo sa Pagbabago at Pag-asenso of DTI, there are 317 loan applications approved in Cagayan amounting to Php 44,009,860.00 and 338 loans approved in Isabela amounting to Php 116,614.661.

### **Deforestation**

Through the DENR, Region 2 has a total of 151, 381 produced bamboo planting materials; with Cagayan and Isabela producing 85, 155 and 41,100 planting materials, respectively.





The Cagayan Valley Bamboo Development Council was formally launched on June 25, 2021 through a virtual MOA signing chaired by DTI and co-chaired by DENR.

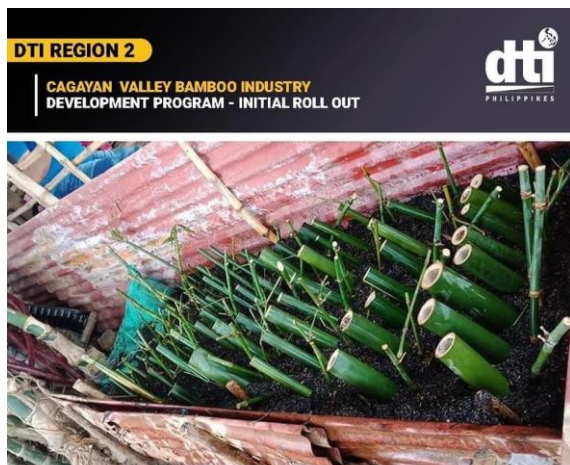
### **Buy-in of Bamboo Ordinance to Local Government Units**

- List of LGUs with approved and enacted bamboo ordinance:

• Tuguegarao City, Cagayan	• Saguday, Quirino
• Allacapan, Cagayan	• Santiago City
• Aparri, Cagayan	• San Guillermo, Isabela
• Baggao, Cagayan	• Cabagan, Isabela
• Buguey, Cagayan	• Mallig, Isabela
• Camalaniugan, Cagayan	• San Manuel, Isabela
• Alcala, Cagayan	• Sta. Maria, Isabela
• Sanchez Mira, Cagayan	• Quirino, Isabela
• Cabarroguis, Quirino	• Diffun, Quirino

DTI Region 2 facilitated the roll-out of the Cagayan Valley Bamboo Industry Development Program on October 20-30. This initiative is in collaboration with LGUs of Tuguegarao City, Camalaniugan and Buguey with the support of the Philippine Bamboo Foundation Inc.

The 10-day activity included site visits and assessment of the proposed bamboo nurseries and plantation sites of the three municipalities. Capacity building and mentoring of project beneficiaries and turn-over of bamboo tools and materials to the beneficiaries were also undertaken.



### **E. KRA 5: Strengthened Governance thru Broad Based Citizen Input (DILG)**

The Department of Interior and Local Government (DILG) as the chair of KRA5 shall engage in the affected communities and non-government, youth and civic organization in the crafting, implementation and evaluation of the various rehabilitation and recovery program and projects. The

KRA 5 composed of five (5) members namely; NEDA, DBM, DepEd, DPWH, NHA, DHSUD, LRA, DTI, DENR and DOE. These agencies continuously performing their functions and duties.

As of the lead agency, the DILG focuses on strengthening the institutional knowledge and expertise of LGUs on disaster recovery and rehabilitation. The function of this KRA centers on intervention on improved land-use planning, enforcement of building codes and other necessary programs.

Series of workshops on the formulation of Comprehensive Development Plan (CDP) which ensures integration of DRR- CCA components. Table review of the Comprehensive Development Plan of the Municipalities of Santa Teresita and Camalaniugan was conducted last May 17, 2021.

DILG also provided assistance in the drafting of Local Climate Change Action Plan (LCCAP) to ten (10) municipalities in the province of Cagayan. (Abulug, Claveria, Enrile, Lasam, Pamplona, Penablanca, Rizal, Sto Nino, Santa Ana, Sta Praxedes).



#### **F. KRA 6: Intensified Watershed Management (DENR)**

The Build Back Better Task Force led by Secretary Roy A. Cimatu together with Sec. Mark Villar, Sec. Arthur Tugade, Sec. Sivestre Bello, Gov. Rodito Albano, Gov. Dakila Cua, Gov. Carlos Padilla, Gov. Manuel Mamba and other stakeholders joined in the launching activities last February 02, 2021.

The Rehabilitation and Restoration of the Cagayan River aims to reduce the flood in the province and also to recover the affected areas brought by typhoon Ulysses and Rolly. The priority will be focusing on the dredging activities of the river and planting of bamboos along riverbanks and also to improve the water quality of the Cagayan River and to provide shelter for those affected areas in implementation of the dredging activities.

Watershed management is the process of guiding and organizing land and other resource uses in a watershed to provide desired goods and services without adversely affecting soil and water





resources. The key result area pursues programs on enforcement of environmental laws, riverbank stabilization, river easement recovery, reforestation and forest protection measures.

- **Natural Resources Enforcement and Regulatory Program**

Based on 2015 map, region 2 has 1,050,963 hectares of forest cover. Per ridge to reef principle, whatever is done in the upland will have a corresponding effect all down to the reef. With the unabated practice of illegal and environmental destruction activities for decades, we have seen how fast our forestlands had been degraded. During rainy season, we observed flash floods, severe erosions and landslides silting our river system and seriously threatening biodiversity. To address these issues, an intensified forest protection is vital. Region 2 has continually conducted anti-illegal logging campaigns, created the Regional/Provincial Environmental Law Enforcement Committee, hired Forest Protection Officers and Bantay-Bakir, entered into Memorandum of Agreement (MOA) with nearby regions, MOA with rebel returnees, coordination with Local Government Units and other stakeholders and signing of covenants/agreements with BLGUs.



To date, there are 50 Bantay-Gubat and 245 Forest Protection Officers (FPOs) under the Build Back Better Program. Selected FPOs and Bantay-bakir are living adjacent to the Local Conservation Area or Forest Conservation Area for better implementation of activities.

PROVINCE	Forest Protection Officer	Bantay-Bakir	Total
Cagayan	122	29	151
Isabela	93	8	101
Nueva Vizcaya	15	9	24
Quirino	15	4	19
<b>TOTAL</b>	<b>245</b>	<b>50</b>	<b>295</b>



The hired FPOs have helped prevent the construction of access as ingress and egress of timber poachers in the hotspot areas & reported observed cultivation/conversion into agricultural of some portion of the forest. Moreover, their patrolling activities had thwarted illegal logging/timber poaching and *kaingin* making within the region.

They also curbed illegal forest activities and transport of forest products coming from the Cordillera Administrative Region (CAR).

OFFICE	TARGET (KM.)	ACCOMPLISHMENT	% ACCOMP.
PENRO Cagayan	420	373.257	89%
PENRO Isabela	210	210.67	100%
PENRO Quirino	210	353.01	168%
PENRO Nueva Vizcaya	210	609.98	290%
<b>TOTAL</b>	<b>1,050</b>	<b>1,548.887</b>	<b>147%</b>

Confiscated forest products in CENRO Cabagan, Isabela



FPOs during foot patrolling in hotspot area of Diffun, Quirino







Poblacion, San Pablo outlet



APPREHENDED 1 CHAINSAW THAT WAS ABANDONED BY UNIDENTIFIED PERPETRATORS DURING THE CONDUCT OF ANTI-ILLEGAL LOGGING SURVEILLANCE OPERATION OF FOREST PROTECTION OFFICER (FPO) AND BRANGAY BANTAY BAKIR (BBB) ON AUGUST 14, 2021 AT DISSIMUNGAL NAGTIPUNAN QUIRINO

As of today, FPOs have accomplished 1,548 kms. or 147% of the target.

Series of Consultation Meetings have been conducted in every province for the implementation of the BBB activities. Meanwhile, on February 4, three regions intensify resource protection in Northern Luzon following the interregional convergence agreement signed by the environment chiefs of Ilocos, Cagayan Valley and the Cordillera Administrative Region (CAR).







- **Soil Conservation and Watershed Management including River Basin and Mgt. & Development**

The DENR Regional Office thru the Conservation and Development Division (CDD) has submitted proposals for Small Water Impounding Structure (SWIS) riprap and gabion as part of the Soil and Water Conservation Measures (SWCM) under KRA 6 last December 2020. These projects are based on the recommended interventions or projects in the Climate-Responsive Integrated Cagayan River Basin Master Plan and Integrated Watershed Management Plans of Critical Watersheds in the Region to arrest or mitigate soil erosion and flooding within the watershed areas.

The approved budget for Soil and Water Conservation measures under the Build Back Better is **THIRTY THREE MILLION EIGHT HUNDRED THIRTEEN THOUSAND PESOS (P33,813,000.00)** for the construction of 250 cubic meter SWIS, 2,500 cubic meter gabion and 2,500 cubic meter riprap.

### **Construction of Gabion**

For the construction of riprap and gabion within Pared Watershed, coordination with Hon. Mayor Joan Dunuan including the Municipal Planning and Development and Municipal Engineering Office in Baggao.

The constructed gabion is situated in Dalin, Baggao, Cagayan. The site is one of the priority areas for rehabilitation of LGU Baggao because the confluence of Paranan River and Agaman River had caused severe river erosion and scouring in barangay Dalin, Baggao, Cagayan. The area also requires immediate rehabilitation since there are houses near the riverbank and the municipal road is approximately 100 meters away from the eroded riverbank.



### **Construction of Riprap**

The riprap is being constructed along eroded portion of barangay road near Pared River. The said road connects Sitio Sadi, Canagatan, Baggao, Cagayan wherein some of the residents are members of CBFM- Cagayan Valley Resources Developers Ass'n. Approximately, 780 cu.m or 80 meters of riprap is being constructed to mitigate riverbank erosion.



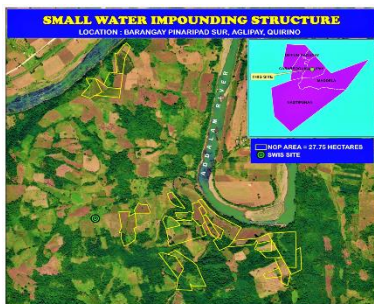
Both the gabion and grouted riprap projects were awarded to FBS Engineering and Construction with a total project of Php, 12,932,819.16. These projects are expected to be completed on January 2022.



## Construction of Small Water Impounding Structure (SWIS) in Quirino

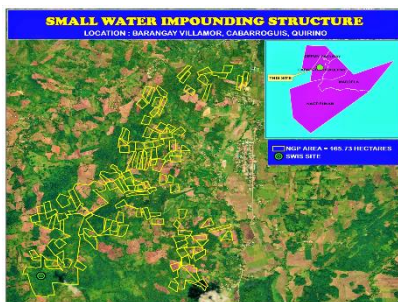
### Pinaripad SWIS

The 25 cu. m SWIS is situated within the CBFMA of Pinaripad Sur Integrated Agro-Forest Association in Pinaripad, Aglipay, Quirino. The service area is 27.75 hectares established NGP area. The Project was awarded to NTL Builders and Developer with a total project cost of Php 1,805,059.58. Target completion is on February 2022.



### • Villamor SWIS

The SWIS is located in Villamor, Cabarroguis, Quirino with a water storage tank capacity of 100 cubic meter. The constructed SWIS could irrigate the established NGP areas of CY 2012, 2013, 2017, 2021 covering an area of 165.73 hectares. The project was awarded to Brigestone Builders and Trading with a total project cost of Php 6,517,108.99 and expected to be completed on Feb 14, 2022

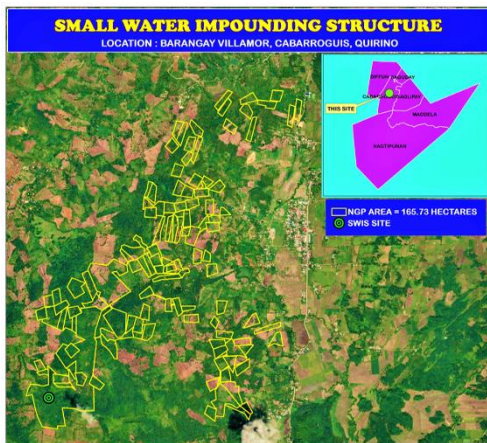




- **Construction of Small Water Impounding Structure (SWIS) in Isabela San Guillermo SWIS**

The SWIS is located within the CBFMA of Rizal Integrated Development Association in San Guillermo, Isabela. The water source is from Jet Creek, a perennial creek within the CBFMA that could supply a 75 cubic meter of storage tank. The expected service area of the SWIS are the established NGP covering a total area of 178.29 hectares.

The project was awarded to RBV Construction with total project cost of Php 3,181,413.28 and expected to be completed on March 22, 2022



- **San Agustin SWIS**

The SWIS is situated within the CBFMA of Ayangan Dapiz Agroforestry Development Association in San Agustin Isabela. The water source is from unnamed perennial creek within the CBFMA that could supply a 55 cubic water storage tank capacity. The service area of the project are the NGP areas and CBFM-CARP projects covering an area of 18.74 and 50.02 hectares, respectively. The project was awarded to RBV Construction with total project cost of Php 3,181,413.28. It was started on October 12, 2021 and expected to be completed on January 6, 2022.







- **Easement Recovery and Retrieval**

Conduct of research work, actual survey, delineation and demarcation of the recovery of 20-meter easement along the Cagayan river and its tributaries shall be done. Series of meetings with Registry of Deeds and research works were conducted.

As of December 2, 2021 the teams have already surveyed 862 kms. regionwide as showed in the table below.

PROV	TARGET (Km)	DISTANC E SURVEYED (Km.)	LOTS AFFECTED (No.) /Area	STRUCTURES AFFECTED (AREA/NO)	NO OF MARKERS ESTABLISHED	REMARKS
Cagayan	457.63	217.085	4,410 lots/ 3,081.642 ha	1,254 ha/ 4820 structures	1187 markers	Amulung, Alcala, Gattaran, Sto Nino, Lasam, Camalanuigan, Solana and Iguig
Isabela	824.24	467.18	3,359 lots	1.8832 ha/ 5 structures	1,294 markers 27 Signages	Delfin Albano, Sto.Tomas and Tumauni, Isabela
Nueva Vizcaya	34.67	86.51	1,410 lots	5.3264 ha/ 319 structures	433 markers/ 9 signages	Santa Fe and Magat River
Quirino	212.11	91.5	255 lots	3.158 ha/	494 markers/ 12 signages	From Gulac to Doña Imelda, Diffun, Quirino
<b>TOTAL</b>	<b>1,528.65</b>	<b>862.275</b>	<b>9,434 lot/ 3,081.642 ha</b>	<b>1,264.3676 ha/ 5,144 structures</b>	<b>3,408 markers/ 48 signages</b>	<b>56%</b>





- **Enhancement of watersheds' forest cover**

To address elevated run-off, fast downstream water transmission, establishment of vegetation shields using native trees and bamboo along floodplains at the base of abandoned riverbanks and around communities in low-lying parts was done. Simultaneous tree planting activities were also conducted after the flooding incident. DENR engaged with the DOLE through its TUPAD Program and DSWD for cash for work assistance.



*MOA signing of DENR, DOLE, DSWD, City LGU and BLGU in the conduct of tree planting activities along Cagayan River for riverbank stabilization*

As of December 2, 2021 about 820.62 hectares were already planted along the Cagayan River thru the initiatives of field offices and the National Greening Program target.







Table showing the Area and Seedling Planted through PENRO Initiatives

PROVINCE	AREA PLANTED (ha.)	SEEDLINGS PLANTED (No.)
CAGAYAN	9.5	4,650
ISABELA	23.94	12,623
NUEVA VIZCAYA	12.91	3,177
QUIRINO	80.47	17,343
<b>TOTAL</b>	<b>126.82</b>	<b>37,793</b>

Under the National Greening Program, 682 hectares of bamboos were planted by Peoples Organizations.

PROVINCE	TARGET	ACCOMPLISHMENTS
	Target Area (Ha)	Area Planted (Ha)
BATANES	12	12
CAGAYAN	375	375
ISABELA	200	200
NUEVA VIZCAYA	60	60
QUIRINO	35	35
<b>TOTAL</b>	<b>682</b>	<b>682</b>

The province of Cagayan has a target of 585 hectares under BBB. The proposed management arrangement is that DENR will enter into a Memorandum of Agreement with the Local Government Units. Below are the details of the area to be contracted with LGUs and the seedlings to be delivered by DENR.

PARTNER	AREA (Ha.)	NO. OF BAMBOOS TO BE PLANTED	SPECIES TO BE PLANTED
---------	------------	---------------------------------	--------------------------



LGU Claveria	12	2,448	Kawayan Tinik
LGU Sta Praxedes	8	332	Kawayan Tinik
		1,300	Kiling
City of Tuguegarao	60	5,800	Bayog
		3,220	Kawayan Tinik
		3,220	Kiling
LGU Penablanca	40	4,500	Bayog
		1,830	Kawayan Kiling
		1,830	Kawayan Kiling
LGU Enrile	73.61	8,603	Bayog
		6,068	Kiling
		345	Yellow Kiling
LGU Solana	61.39	7,359	Bayog
		5,165	Kiling
LGU Alcala	50	7,650	Bayog
		900	Kawayan Kiling
		1,650	Kawayan Tinik
LGU Amulung	50	7,140	Bayog
		1,020	Kawayan Kiling
		2,040	Kawayan Tinik
LGU Baggao	50	6,120	Bayog
		2,100	Kawayan Kiling
		1,980	Kawayan Tinik





## SEVERE TROPICAL STORM “MARING”

On October 11, 2021, Severe Tropical Storm “Maring” hit the region that brought huge amount of rainfall that caused flooding and submerged parts of the Cagayan Valley. Three (3) dead were reported in Claveria, Iguig and Sta Ana and 1 still missing in Sta Ana, Cagayan.

There were 19,235 families or 71,135 affected population. A total of 982 families or 3171 persons stayed on evacuation center. All evacuees have returned to their respective residences. While 2,811 families/ 9,246 persons evacuated to their neighbor or relative houses. A total of 81 Evacuation Centers were opened during the response period. Twenty nine (29) municipalities experiencing power interruption. All of which has been restored.



On October 22, 2021, the DENR Regional Executive Director, PENRO Cagayan and CENRO Aparri conducted ocular inspection of rivers in downstream Cagayan particularly the **Mission River** in **Sta. Teresita** and the **Cagayan River** at the dredging sites in **Dummun, Gattaran** and **Bangag, Lal-lo**.

Per assessment report of the MGB & EMB team, the river channel of the Mission River has changed and parts of the riverbanks have eroded.





## EDUCATION AND SUSTAINMENT

Series of Information Education and Communication campaign were undertaken with LGUs, communities down to the barangay level. IEC teams were created in each PENRO to undertake continuous education with the affected communities.



## IV. ISSUES AND CHALLENGES

The issues are still on the flooding, as it involves the impact of disaster to the environment. The sudden loss of the soil, the impact to the community and to the forest. The government is already working on the alternative plan to prevent the sudden massive flooding which is the dredging activities as part of the Rehabilitation of the Cagayan River. The challenge of the COVID-19 has a big impact in the whole world including the implementation of the programs and projects; against all the issues and challenges if we work together, everything around us becomes better. Secretary Roy A. Cimatu said "Removing these obstructions is the most immediate measure that should be undertaken to avoid a repeat of massive flooding in the region, particularly the provinces of Cagayan and Isabela".