

Cagayan Valley
Annual Regional Development Report
CY 2017





CY 2017 Cagayan Valley Annual Regional Development Report

FOREWORD

In 2017, the Regional Development Council 02 approved the Cagayan Valley Regional Development Plan (CVRDP) 2017-2022. The Plan shall guide our steps towards the desired development direction of Region 02 in the next six years.

The CVRDP 2017-2022 is also the first of the four RDPs geared towards realization of the long-term vision of our fellow Filipinos, a *Matatag, Maginhawa at Panatag na Buhay* by 2040. The implementation and monitoring of this Plan is therefore crucial to keep track of our milestones and accomplishments, the challenges that we need to address, and the strategies or actions that we need to sustain, stop or strengthen. This is made possible through the Annual Regional Development Report (ARDR), a document which provides the full picture of our performance vis-à-vis the enrolled indicators and its corresponding targets in the Plan.

The CY 2017 ARDR has more chapters than the previous annual reports to align with the Regional Development Plan and enable a better dissection of the sectors' performance and needs for the succeeding years of Plan implementation. Each chapter was prepared with inputs and insights from various agencies. This Report was further enhanced through the review, validation and its adoption by the sectoral committees of the Regional Development Council 02.

The gains and achievements highlighted in this Report represent the genuine commitment and hard labor of the local government units, regional line agencies, state universities and colleges, other government institutions and the private sector in order to improve the lives of more than 3.4 million people in the region and provide a better and brighter future for the next generation. As a secretariat of the Regional Development Council 02, the NEDA Regional Office 02 acknowledges the continued support of all stakeholders in the completion of this Report.

We hope that all of us will continue to exemplify the relentless efforts which we have shown at the start of Plan implementation and exceed the gains of what we have started as we aim to lay down the foundation for inclusive growth, a high trust and resilient society, and a globally competitive knowledge economy by 2022.



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ACKNOWLEDGEMENT OF DATA SOURCES

BIR	Bureau of Internal Revenue
BLGF	Bureau of Local Government Finance
BFAR	Bureau of Fisheries and Aquatic Resources
BFP	Bureau of Fire Protection
BSP	Bangko Sentral ng Pilipinas
CAAP	Civil Aviation Authority of the Philippines
CHED	Commission on Higher Education
CHR	Commission on Human Rights
CSC	Civil Service Commission
CEZA	Cagayan Economic Zone Authority
COA	Commission on Audit
DA	Department of Agriculture
DAR	Department of Agrarian Reform
DBM	Department of Budget and Management
DENR	Department of Environment and Natural Resources
DepEd	Department of Education
DILG	Department of Interior and Local Government
DOE	Department of Energy
DOH	Department of Health
DOLE	Department of Labor and Employment
DOST	Department of Science and Technology
DOT	Department of Tourism
DPWH	Department of Public Works and Highways
DSWD	Department of Social Welfare and Development
DTI	Department of Trade and Industry
EMB	Environmental Management Bureau
HUDCC	Housing and Urban Development Coordinating Council
MGB	Mines and Geo-Sciences Bureau
NAPOLCOM	National Police Commission
NCC	National Nutrition Council
NCCA	National Commission for Culture and Arts
NCIP	National Commission on Indigenous Peoples
NEA	National Electrification Administration
NIA	National Irrigation Administration
NTC	National Telecommunications Commission
OCD	Office of Civil Defense
OWWA	Overseas Workers Welfare Administration
PCG	Philippine Coast Guard (District Northeastern Luzon)
PCIC	Philippine Crop Insurance Corporation
PHIC	Philippine Health Insurance Corporation
PLGU- Batanes	Provincial Local Government Unit of Batanes
PLGU- Cagayan	Provincial Local Government Unit of Cagayan
PNP	Philippine National Police
PSA	Philippine Statistics Authority
TESDA	Technical Education and Skills Development Authority

EXECUTIVE SUMMARY

The Cagayan Valley Regional Development Plan (CVRDP) 2017-2022 envisions the region as the “*Prime Water Resource, Agro-Industrial Hub and Emerging Tourism Destination*” in the country and aims to contribute to the national vision of laying down the foundations for inclusive growth, a high trust and resilient society, and a globally competitive knowledge economy by 2022.

To achieve this, the CVRDP 2017-2022 adopted as a framework the bedrock strategies set in the Philippine Development Plan 2017-2022 and translated these at the regional level in consideration of the region’s unique characteristics. The three pillars of development, as specified in the Philippine and the Regional Development Plan, cover various sectors from which strategies and outcomes were identified.

Region 02 was one of the fastest growing regions of the country in 2017. The Gross Regional Domestic Product (GRDP) growth rate reached to 7.2 percent, higher by 3.4 percentage points than the previous year and 1.1 percentage points higher than the upper end of the target growth for the year. The regional economy was driven by the Services Sector with a share of 51.7 percent, followed by the Agriculture, Hunting, Forestry and Fishing (AHFF) with 33.7 percent, and Industry Sector at 15.2 percent share. The following are the highlights of each sectoral performance corresponding to the development pillar that they support.

Malasakit: Enhancing the Social Fabric

In 2017, most of the targets in ensuring people-centered, clean and efficient governance were achieved. Evident were efforts to institutionalize a more efficient and transparent governance, more responsive public service, and more effective and efficient government budgeting and spending at the regional level. Among the achievements include the engagement of the citizenry in auditing the efficiency and effectiveness of government projects and programs, conferment of more LGUs with the Seal of Good Local Governance (SGLG), compliance of LGUs to a more seamless business transaction, and zero COA disclaimer opinions rendered to Local Government Units (LGUs) and National Government Agencies (NGAs).

Swift and fair administration of justice was likewise pursued. Targets were achieved in terms of addressing human rights violation cases, complaints and abuses against women and children, and adjudication of agrarian cases. Reduced incidences were also recorded on crimes committed against women, children and LGBTI. However, the mere presence of such violence despite its reduced occurrence, poses a challenge for the justice sector. There is a need to further strengthen efforts on crime prevention, on ensuring that the rights of the population are upheld, and cases especially in the rural areas are timely resolved.

For this year, the region also promoted awareness on Philippine as well as ethnic culture and values as a means to enhance the social fabric and regain the people's trust. One significant way to preserve the intangible cultural heritage of the Cagayan Valley was the documentation of knowledge systems, practices, languages of the different cultural communities. Utilization of information materials and videos, and conduct of culture and arts festivals were conducted. The participation of the Higher Education Institutions (HEIs) was also strengthened through the provision of research grants on creative projects. Likewise, to ensure culture-sensitive governance, the Department of the Interior and Local Government (DILG) included tourism, culture and arts as a new essential area in the 2017 SGLG. This complements the efforts of local government units in promoting, protecting, and enriching their own culture and heritage. Another milestone was the creation by the Regional Development Council of the Sub-Committee on Culture under the Social Development Committee.

Pagbabago: Inequality-Reducing Transformation

For this Plan period, the Region aims to expand economic opportunities in agriculture, forestry and fisheries (AFF), as well as in industry and services (I&S) through *trabaho at negosyo*.

For the AFF sector, the region performed positively as most of the targets were attained during the year. Specifically, the Gross Value Added (GVA) of the sector recovered from the contraction experienced in the previous years with a 6.2 percent growth rate, surpassing the target of 3.6 to 4.6 percent. The value of production in the agriculture posted increments particularly for crops, forestry and fisheries. Other accomplishments worth emphasizing include the 21.7 percent increase in labor productivity, access to technologies by small farmers and fisher folks, facilitation of different financing schemes and expansion of agricultural insurance. A concern, however, that the region needs to focus on is the instability of employment in agriculture. During the year, employment levels in agriculture declined compared to last year, and a significant portion of those with work were underemployed.

On the performance of the I&S sector, the Industry Sector's growth of 13.9 percent was higher than 11.9 percent growth in 2016 and even beyond the upper bound of the target growth rate for the year. Although the Services Sector slowed down to 6.0 percent from the previous year's 6.6 percent, it is within the target growth for 2017. Employment levels in both the industry and services sectors increased during the year. The tourism industry also flourished registering more visitor arrivals. Investments from Cagayan Economic Zone Authority (CEZA) and Business Name Registration (BNR) also gained positively. Consumer welfare was also ensured. On improving competitiveness of the local industry, particularly the micro, small and medium enterprises (MSMEs), access to production networks, financial institutions and other financing programs offered by various agencies was ensured. Technical assistances were also provided to improve their productivity, efficiency and resiliency.

To accelerate human capital development, access to education in different levels was improved. Enrollment rates in elementary and Junior High School exceeded the targets for the year. More

scholarships, financial assistances and specialized training were also awarded to students under the higher education institutions, technical and vocational education programs. As a result, there were more graduates recorded during the year in both higher education and technical/vocational courses.

Health and nutrition was generally enhanced. The prevalence of infectious diseases like HIV, tuberculosis, and malaria decreased, the latter sustaining zero prevalence rate in all province of the region. The nutrition of children, a primary regional concern, significantly improved. The region registered lesser number of stunted children, overweight and wasting among them. Neonatal and infant deaths and under 5 mortality rate also decreased. The regional fertility rate decreased to 2.7 births per woman.

Key shelter agencies have also undertaken measures to decrease number of informal settlements or address inadequate housing needs. The LGUs have shown full support in the preparation and enhancement of their land use plans along with their continuous capacity enhancements particularly on Comprehensive Land Use Plan (CLUP) related trainings. Much, however, still need to be done as housing backlog increased during the year given the increasing number of displaced houses situated on danger zones, riverbanks, and road-right-of-way as well as those affected by natural phenomenon.

Vulnerabilities of families and individuals was reduced through the provision of social protection programs such as increasing coverage of health insurances, responsive programs and services to overseas workers, and livelihood assistances to the families of child laborers and the disadvantaged. Immediate assistances were provided during natural calamities in all province region-wide. Among the services include provision of emergency shelter cash assistance, support through food-for-work and cash-for-work programs.

Patuloy na Pag-Unlad: Increase Potential Growth

Promotion of science, technology and innovation (STI) is one of the key priorities highlighted for this Plan period as a way to increase the potential growth of the region. Achievements were recorded in terms of extending interventions that foster technology adoption and stimulate innovation in local industries. Specifically, the Small Enterprise Technology Upgrading Program or commonly known as SET-UP, the flagship program of the DOST, has reached more beneficiaries given the extensive technology interventions provided and number of trainings conducted. STI promotion activities such as S&T fairs, caravans, Centruns and technology clinics and investor's fora were intensified as well as the empowerment of local scientists and actors in STI ecosystem through the establishment of local chapters for open collaboration. Partnership with the State Universities and Colleges (SUCs) were also heightened through various projects in the field of research.

Enabling and Supportive Economic Environment

The Cagayan Valley Region displayed strong macroeconomic fundamentals during the year. The high GRDP growth attained shall set a good start for the implementation of the Plan in the succeeding years. However, making the economic growth more inclusive so it will benefit even those in the rural areas is another concern that the region needs to continually focus on. Specific concerns include the need to create more jobs and the need to address underemployment especially those in agriculture and in service sectors.

Inflation rate remained within the target range while the banking system continue to exhibit strong performances given increased savings and loan portfolios, provision of more access points to financial services and products and strengthened financial inclusion and awareness to the regional populace.

To support the National Competition Policy at the national level and strengthen the local market's competitiveness, various activities and programs were undertaken. Prices were monitored in the local market, consumer protection was promoted and advocated, and technical assistances to local investors and exporters were provided. This 2017, the overall competitiveness index of the provinces showed a better standing than the previous year. The index assesses the economic dynamism, government efficiency, infrastructure support and resiliency of the provinces, cities and municipalities.

Foundations for Sustainable Development

Ensuring peace and security is one of the priority thrusts of the Duterte Administration. As such, the region intensified its efforts to achieve public order, security and safety in the community as well as attain just and lasting peace and safeguard territorial integrity. To enable a clear direction on addressing peace and security concerns at the local level, all LGUs have formulated and completed their Peace and Order and Public Safety Plan (POPS PLAN). Most of the barangays in the region have also organized their *MamamayangAyawsaAnomalya*, *MamamayangAyawsaIllegalnaDroga* (MASA MASID) Team in response to the tall order of the President against drug abuse. A total of 2,189 barangays have also complied with the formulation of a Barangay Anti-Drug Plan of Action. In terms of crime prevention, the police and other law enforcement showed strengthened coordination and visibility resulting to lower crime volume and increased efficiency on the arrest of perpetrators and suspects. Fire prevention activities were also conducted, hence, the reduction of fire incidents in 2017 compared to the previous year.

Ecological integrity was likewise pursued. Forestlands were rehabilitated, coastal and marine ecosystems efficiently managed and mining contracts were strictly monitored. Air and water quality constantly monitored while waste management was effectively pursued through the participation of the LGUs. The adaptive capacity and resilience of ecosystems were also reinforced through the conduct of geo-hazard survey and mapping in various municipalities, and skills training program on basic disaster risk and reduction management, incident command system, rapid and post disaster needs assessments, emergency trainings, among others.

The region participated in the thrust of the current administration on “Build, Build, Build” through the acceleration of infrastructure development in various sub-sectors. Among the key projects that were implemented during the year are road and bridge widening projects, flood control, farm to market roads, irrigation and social support infrastructures. While the performance of the region along infrastructure development for the year under review may be modest, prospects for a further acceleration of infrastructure development in the succeeding is promising. Of the 75 flagship projects identified under the “Build, Build, Build”, three projects are located in the region with an estimated cost of PhP 10.7 billion. These projects shall improve the region’s connectivity to Metro Manila and Region III, provide alternative source of power and enhance irrigation service and coverage to boost agriculture production and productivity.

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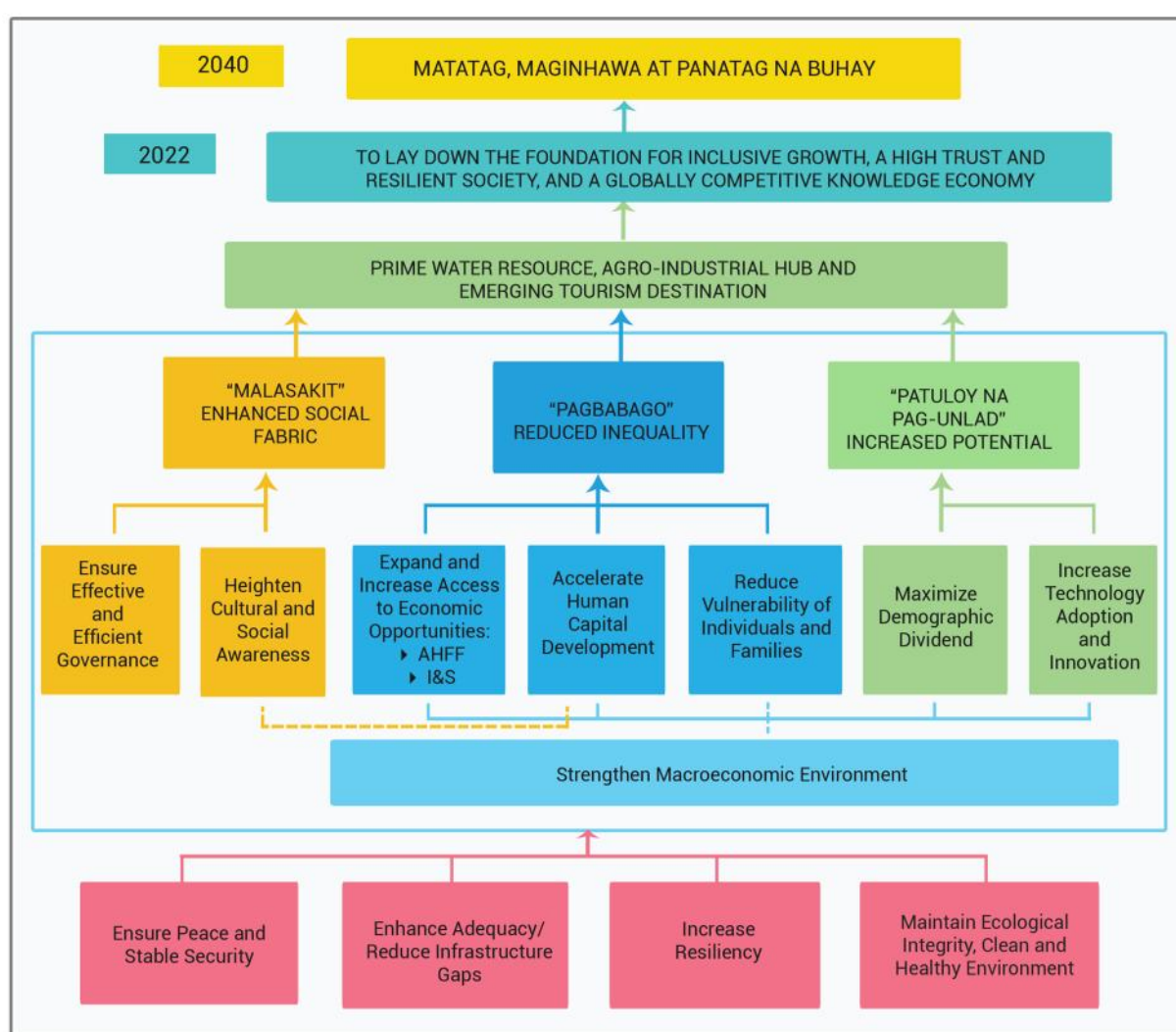
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Cagayan Valley Regional Development Plan 2017-2022 Overall Framework

The Cagayan Valley Regional Development Plan (CVRDP) 2017-2022 supports the national framework of laying down the foundation for *a matatag, maginhawa at panatag na buhay para sa lahat* as spelled out in AmBisyonNatin 2040. It also gears the region towards realizing its vision of becoming the country's "Prime Water Resource, Agro-Industrial Hub, and Emerging Tourism Destination." Realizing these aspirations need the concerted efforts of all stakeholders.

Figure 1. Strategic Framework for CVRDP 2017-2022



CY 2017 reflects the region's performance for the first year of implementing the CVRDP 2017-2022. Comparing the macro-economic achievements of the region vis a vis targets set as presented in Table 1, a robust economic growth alongside a manageable inflation was achieved, setting a good foundation for a more inclusive growth, a high trust and a globally competitive knowledge economy.

Regional gross output reached the 2017 growth target. This year's 7.2 percent growth rate placed the Cagayan Valley Region as one of the fastest growing regions in the country. This growth rate was within the Plan target for the year and higher than the previous year's growth of 3.8 percent. Given the current growth momentum, strategies that would sustain the gains should be implemented as guided by the region's development framework (Figure 1). The economic transformation currently being experienced as indicated by the increasing share of Services to total domestic output should also be looked into, particularly its implications to agriculture where the bulk of the region's labor force is employed.

Poverty incidence expected to continually decline. The next round of Family Income and Expenditure Survey (FIES) wherein poverty incidence and Gini coefficient are being determined will still be conducted in 2018. Based on the latest available data, poverty incidence among population was 15.8 percent and Gini coefficient was 0.4065 in 2015. The region had a significant achievement in reducing the magnitude of the poor and the gap between the rich and the poor as compared with the 2012 levels at 22.1 percent and 0.4096, respectively. This trend is expected to continue within the Plan period.

Inflation rate slightly up. One of the major factors that influenced poverty targets is the general movement of prices. This year, inflation rate (2012=100) registered at 2.5 percent was up by 0.8 percentage points as compared to 1.7 percent in 2016. This inflation rate is still within the government's target range of 2-4 percent. However, close monitoring should be done especially with the new tax reform and other possible market forces (i.e., increase in international fuel prices, strong US economy, weakening peso, and tight supply especially of food commodities) that may add more pressure on the prices of commodities.

Unemployment and underemployment rates slightly increased. The region registered 500 more unemployed persons (or an unemployment rate of 3.2%) and 8,000 additional underemployed persons (or an underemployment rate of 13.6%) in 2017. This may be due to the additional 32 thousand persons who became active to search for work. As a response, the region needs to intensify efforts to create more quality jobs especially that by 2022, the region's target for underemployment rate is within the range of 9-11 percent and underemployment rate within 1-3 percent.

Table 1 shows the summary of the accomplishment with respect to the target while Figure 1 presents the overall development framework, with each thematic target individually discussed in the subsequent chapters.

Table 1. Macroeconomic Accomplishments Versus Targets, Region 02, CY 2017

Objectives/ Results	Indicator	Baseline*		2017 Target	2017 Actual	Accomplishment
		Year	Value			
Societal Goal: Foundation for inclusive growth, a high-trust and resilient society and a globally competitive knowledge economy	Gross Regional Domestic Product increased (at 2000 constant prices, in %)	2016	3.8	6.5-7.5	7.2	within the target bounds
	Unemployment rate decreased (in %)	2016	3.1	1-3	3.2	not attained
	Underemployment rate decreased (in %)	2016	12.7	9-11	13.6	not attained
	Poverty incidence among population reduced (in %)	2015	15.8	8.2	no data	n/a
	Subsistence incidence among population decreased (in %)	2015	1.8	Decreasing	no data	n/a
	Stable headline inflation (in %, 2012=100)	2016	1.7	2-4	2.5	within the target bounds

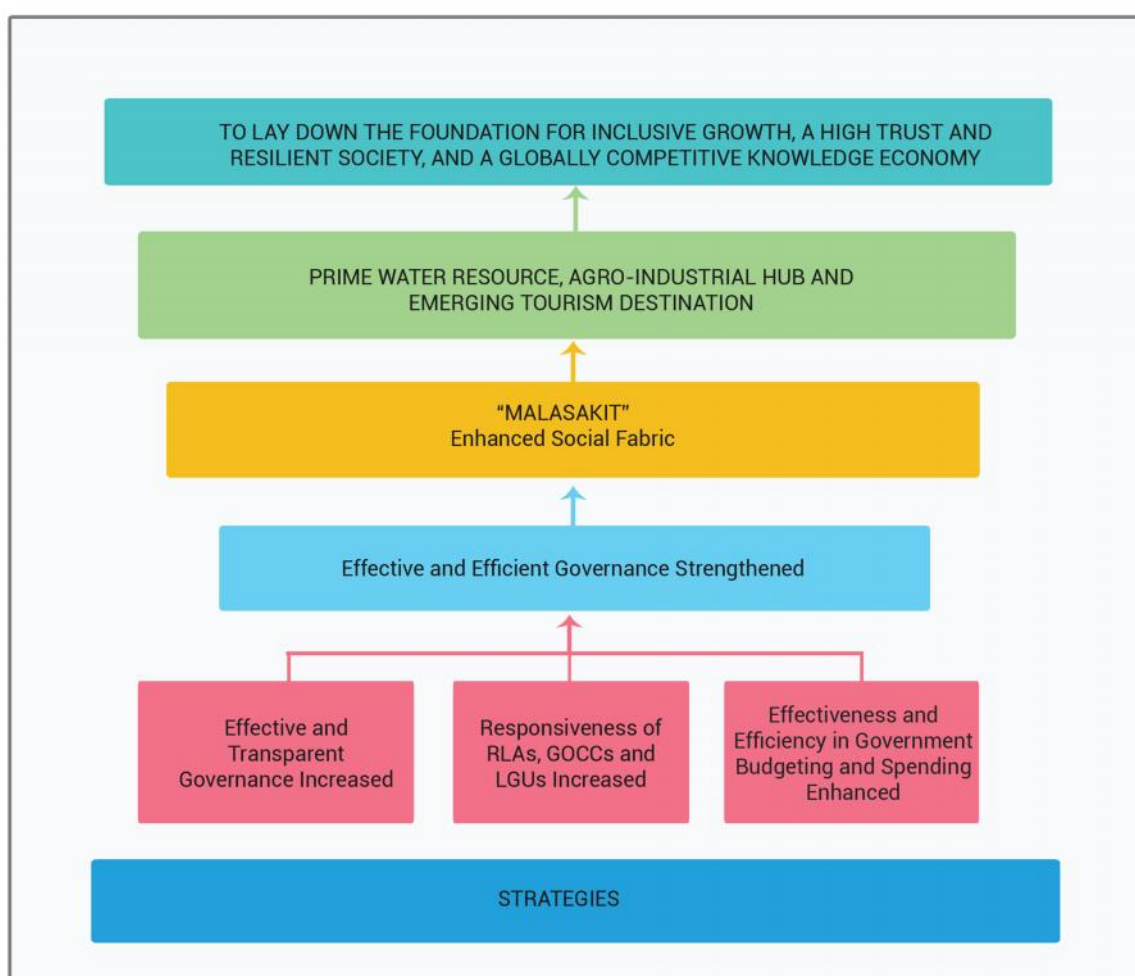
Reporting Entity/Data Source: PSA RO2

I. "MALASAKIT": ENHANCING THE SOCIAL FABRIC

PEOPLE-CENTERED, CLEAN, AND EFFICIENT GOVERNANCE

Local governance must be further strengthened to enhance the social fabric of the country, attain inclusive growth, and build a high trust society. Indicators on good governance reflect a good start for the Sector with most of the targets attained in 2017. By 2022, three intermediate outcomes shall be achieved namely: a) more effective and transparent local governance; b) increased responsiveness of RLAs, SUCs, GOCCs, and LGUs, and; c) improved efficiency in government budgeting and spending.

Figure 2. Strategic Framework to Ensure People-Centered, Clean, Efficient and Effective Governance by 2022



Accomplishments

Efficient and transparent governance increased

In 2017, local governments continuously pursued efficiency and transparency in their transactions and local governance. The Local Government Units (LGUs) remained committed to the full disclosure policy (FDP) of government with only one partially compliant LGU recorded during the year. With LGU's compliance to FDP, the stakeholders and the general public are informed of how the LGU's budget is managed and used.

Likewise, the Commission on Audit (COA) has consistently performed audits to government agencies particularly on their transactions and fiscal operations including the posting of budgetary documents online, conspicuous places and bulletin boards. COA also promoted citizen participation in auditing the efficiency and effectiveness of government projects through the conduct of the annual Citizen Participation Audit. For this year, the audit's goal was to determine the extent of compliance of the LGU on the minimum requirements of the Department of Health (DOH), sufficiency of funding for the operation of the Barangay Health Stations (BHS), among others.

However, competitiveness of LGUs needs to be enhanced as four cities in the region attained lower scorecards in terms of Government Efficiency in the Competitiveness Index of Cities and Municipalities (CICM) Report of the National Competitiveness Council (NCC). The Government Efficiency index assesses the "quality and reliability of government services and government support for effective and sustainable productive expansion (NCC)." Santiago City obtained 37th overall ranking out of 145 cities, the highest rank among the cities in the region. On the other hand, Tumauni ranked 19th out of the 1,342 municipalities (1st – 6th class) in the country.

Table 2. Performance Indicators on Transparent Governance, Region 02, CY 2017
(CVRDP 2017-2022 Results Matrix)

Indicator	Baseline		2017 Target	2017 Actual	Accomplishment (%)
	Year	Value			
Percentage of P/C/Ms fully compliant to the Full Disclosure Policy (FDP) (%)	2016	98.98	100	98.98	short of 1.02 percentage points (pp)
Number of P/C/Ms with the required NGO representation in the Local Development Council increased (cumulative)	2017	-	45	No data submitted	n/a

Indicator	Baseline		2017 Target	2017 Actual	Accomplish ment (%)
	Year	Value			
Scorecard of cities on Government Efficiency Index Improved (CICM)					
Tuguegarao City	2016	14.97	increasing	10.39	Desired trend not achieved
Ilagan City	2016	15.47	increasing	11.25	
Cauayan City	2016	13.79	increasing	10.70	
Santiago City	2016	14.75	increasing	11.69	
Proportion of women in managerial positions (CESO) (%)	2016	32	increasing	No data	n/a
Aggregate Output					
Citizen Participation in Auditing conducted	2016	1	1	1	100.00

Reporting Entity/ Data Source: DILG, NCC Website, CSC, COA

Responsiveness of RLAs, SUCs, GOCCs, and LGUs increased

For this year, the Anti-Red Tape Act - Report Card Survey (ARTA-RCS) was administered to agencies, service offices and LGUs concerned with facilitating the ease of doing business. Based from the results, 98 percent of the institutions assessed passed the ARTA-RCS, this surpassing the 80 percent target.

On the other hand, 28 LGUs were conferred with the Seal of Good Local Governance (SGLG) in 2017. The Provinces of Isabela and Quirino, and the cities of Cauayan, Ilagan and Santiago were among the awardees along with one municipality in Batanes, six municipalities in Cagayan, 12 in Isabela and two each in Nueva Vizcaya and Quirino. The SGLG is being continuously enhanced every year by raising the overall assessment criteria. For 2018, the DILG added Peace and Order to the original core areas on Financial Administration, Disaster Preparedness, and Social Protection, thus, the principle from “3+1” to “4+1”.

On improving competitiveness of the LGUs, 85.71 percent of the LGUs passed the SGLG essential area on business-friendly and competitiveness. Similarly, 55 LGUs were compliant with the streamlining of Business Permit and Licensing System (BPLS) than the initial target of 20 LGUs. The Department of Interior and Local Governance (DILG) and Department of Information and Communication Technology (DICT) initiated a coaching and mentoring session to LGUs on the BPLS Automation or e-BPLS on November 27-30, 2017 at Baguio City.

Towards strengthening the civil service, the Civil Service Commission (CSC) monitored the compliance of agencies and LGUs to Strategic Performance Management System (SPMS). In 2017, all agencies, GOCCs and LGUs monitored were found compliant to the requirements of the SPMS.

The improvement of the government's human resource was also assessed through the implementation of the Program to Institutionalize Meritocracy and Excellence in Human Resource Management or PRIME-HRM. This integrates core areas on HRM which aims to empower government agencies to develop their human resource management, competencies, systems and practices to excellence. This 2017, three agencies assessed were found to have complied with the PRIME Maturity Levels.

Table 3. Performance Indicators on Responsiveness of Agencies, Local Government Units and Other Government Institutions, Region 02, CY 2017
(CVRDP 2017-2022 Results Matrix)

Indicator	Baseline		2017 Target	2017 Actual	Accomplishment (%)
	Year	Value			
Proportion of agencies with a passing rate in the ARTA Report Card Survey (%)	2017	-	80	98	18 pp higher
Percentage of P/C/M LGUs conferred with the SGLG increasing (%)	2016	22	24	28.57	Up by 4.57
Aggregate Outputs					
Number of LGUs which passed the SGLG essential area on business-friendly and competitiveness increased (cumulative)	2016	53	55	84	152.72
Number of Cities and Municipalities with streamlined Business Permit and Licensing System (BPLS) (cumulative)	2017	-	20	55	275.00
Percentage of Agencies/LGUs with functional SPMS increased					
RLAs	2016	100.00	increasing	100.00	100.00
Provincial LGUs	2016	100.00	increasing	100.00	100.00
City LGUs	2016	100.00	increasing	100.00	100.00
Municipal LGUs	2016	100.00	increasing	100.00	100.00
Percentage of agencies assisted compliant to PRIME-HRM Maturity Levels increased	2016	51	increasing	3	Desired trend not achieved

Reporting Entity/ Data Source: DILG, CSC

Effectiveness and efficiency in government budgeting and spending enhanced

The zero disallowance target was not met during the period. The COA rendered two adverse opinions to the local government sector, none were given to the National Government Sector and two Corporate Government Sector institutions were rendered with adverse opinion. Moreover, there were 50 LGUs which have no independent auditor's report due to incomplete and/or non-submission of financial reports. The results of COA audit were used by the DILG as one of the criteria in the SGLG assessment.

Table 4. Performance Indicators on Effectiveness and Efficiency in Government Budgeting and Spending Enhanced, Region 02, CY 2017
(CVRDP 2017-2022 Results Matrix)

Indicator	Baseline		2017 Target	2017 Actual	Accomplish ment
	Year	Value			
Aggregate Outputs					
Number of LGUs with adverse/disclaimer COA findings					
Adverse	2015	2	none	2	desired target not achieved
Disclaimer	2015	1	none	0	desired target achieved

Reporting Entity/ Data Source: DILG, CSC

Moving Forward

Overall, the region has to increase its efforts in achieving seamless service delivery, improving the local government's competitiveness, attainment of government efficiency, and ensuring clean and transparent governance. To attain these, the following are recommended:

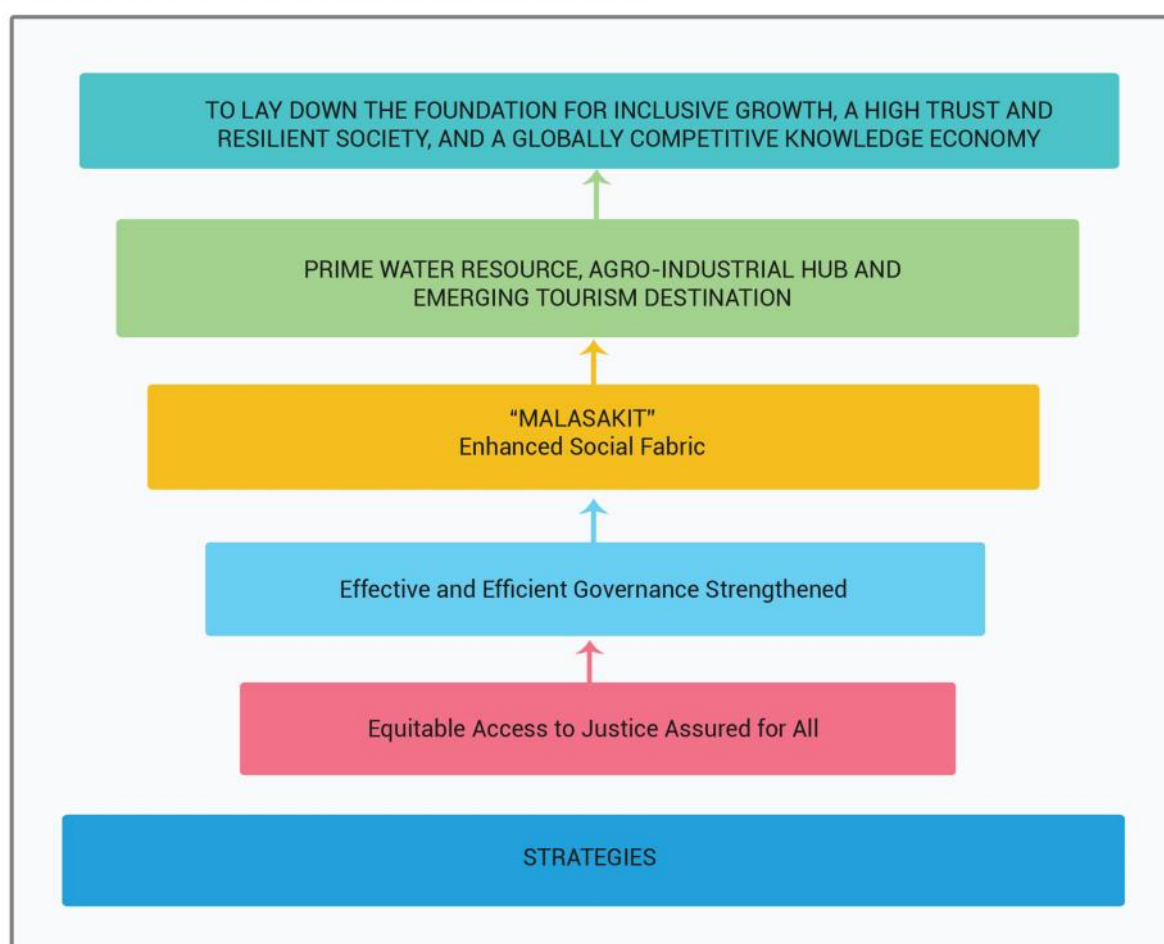
- Strengthen LGU institutional and technical capacities. Inefficiencies and budget leakages should be addressed by strengthening the institutional and technical capacities of local governments. Upgrading of ICT infrastructure shall help ensure efficient, timely, and transparent transactions. Continuous capacity development and technical assistance shall enhance local processes such as planning, investment programming, budgeting, procurement and program/project implementation;
- Further streamlining of government transactions and processes must be prioritized by reviewing and assessing existing regulations and processes, improving new mechanisms to include seamless agency-to-agency transactions, and strict observance of accounting rules and regulations as well as procurement reforms by all government institutions;
- Establishment of Internal Audit Service (IAS) in all LGUs and RLAs to achieve zero adverse and disclaimer COA findings. A case monitoring tool should also be developed in order for legal officers to be guided properly in monitoring the status of the cases endorsed to concerned agencies;
- Develop participatory or feedback mechanisms not only to empower citizen participation but to ensure shared responsibility and informed decision-making between the public sector and the citizenry; and
- Intensify the full implementation of the following programs and reforms by 2019 to enhance the local governance as pursued at the national: (a) National Identification (ID) system, (b) National Government Portal, (c) Ease of Doing Business Act and, (d) Budget Reform Act.

Pursuing Swift and Fair Administration of Justice

The delivery of swift and fair justice is one of the strongholds of a high-trust society. It is also an essential part of development towards the realization of a comfortable and secure life for the Filipino people.

To enhance the social fabric, the region ensures equitable access to justice through speedy resolution of cases, intensifies efforts to reduce human rights violations and crimes against children and women, and improves delivery of agrarian justice to the farmers. The region showed strong performance in this sector as most of the commitments for the year were attained.

Figure 3. Strategic Framework to Pursue Swift and Fair Administration of Justice by 2022



Accomplishments

Equitable access to justice assured for all

Efforts to attain speedy resolution of human rights-related cases were strengthened during the period. The Commission on Human Rights (CHR) resolved all cases monitored within the prescribed period, higher than the target by 17 percentage points. Likewise, target on the percentage of resolved cases on human rights violation resulting in access to remedy was also met.

There was also a significant reduction in the number of complaints on women, children and lesbian, gay, bisexual, transgender, and intersex (LGBTI) investigated by the CHR. On one hand, the recorded number of incidents from Women and Children Protection Desk (WCPD) of the PNP was lower than the previous year: 710 cases involved children as victims while 739 involved women. A total of 236 cases were also related to children in conflict with the law. Most of the cases of WCPD were registered in the provinces of Nueva Vizcaya at 503 cases and Cagayan at 500 cases.

Efforts to increase access to agrarian justice and uphold the legal rights of farmers were strengthened at the start of the Plan, exhibiting notable accomplishments for the year. The target on the number of resolved cases on agrarian law implementation (ALI) was achieved and recorded more than the expected number of cases by 155.22 percent or a total of 3,642 cases. The remarkable performance is attributed to the 10,024 mediation activities conducted by DAR ensuring that all legal issues were resolved before it shall be elevated to judicial or quasi-judicial proceedings. Other strategies undertaken include in-house fast tracking of ALI case resolution, strengthening of the task forces in problematic landholdings at the provincial offices, and conduct of regular dialogues with the stakeholders.

On the other hand, the case resolution of the DAR-Adjudication Board performed notably, surpassing the target by more than 26.82 percent or a total of 2,180 resolved cases. Most of the cases were filed during the second semester of the year. To respond to the influx of petitions, the DAR-Adjudication Board initiated the Agrarian Reform Justice on Wheels (ARJOW) in municipalities to ensure speedy resolution of cases. Technical assistance provided includes mobilization of regional adjudicators in provincial offices to address influx of cases especially during the second semester and the inadequate manpower at the provincial and municipal offices.

Table 5. Performance Indicators on Assuring Equitable Justice for All, Region 02, CY 2017
(CVRDP 2017-2022 Results Matrix)

Indicator	Baseline		2017 Target	2017 Actual	Accomplish ment
	Year	Value			
Percentage of cases resolved in 15 working days (prescribed period) increased (%)	2016	80.00	83.00	100.00	Exceeded target by 17 percent

Indicator	Baseline		2017 Target	2017 Actual	Accomplishment
	Year	Value			
Percentage of resolved humanrights violation cases resulting in access to remedies sustained (%)	2016	85.00	85.00	100.00	Exceeded target by 15 percent
Aggregate Outputs					
Number of complaints on Women, Children and LGBTI investigated	2016	56	60	38	63.33
Reported Cases of Violence Against Women	2016	955	decreasing	739	Desired trend achieved
Reported Crimes Committed Against Children	2016	822	decreasing	710	Desired trend achieved
Number of adjudication of agrarian cases resolved (incremental)	2016	1,365	1,719	2,180	Exceeded target by 126.82 percent
Number of Agrarian Law Implementation cases resolved (incremental)	2016	1,314	1,427	3,642	Exceeded target by 255.22 percent

Reporting Entity/ Data Source: CHR, PNP, DAR

Moving Forward

The initiatives to deliver swift and fair justice in the region must be sustained and further enhanced to ensure that human rights and agrarian justice are rightly upheld and immediately accessed by the populace.

Specifically, the following strategies are identified:

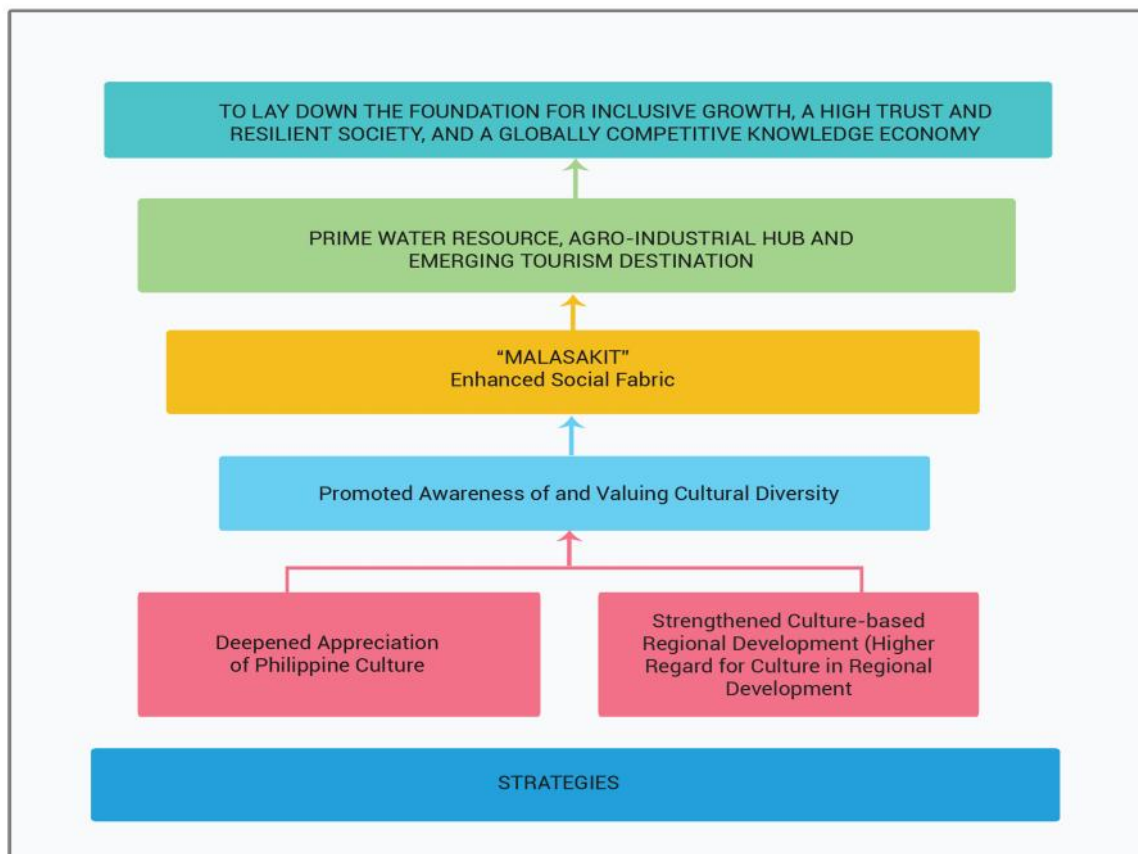
- Crimes committed against women and children in the region are still high. There is a need to strengthen efforts to reduce violence against women and children;
- Intensify activities and initiatives of the Violence Against Women and Children (VAWC) and PAWCD;
- Sustain agrarian mediation activities at the grassroots to ensure that all agrarian conflicts are immediately responded to and resolved at the ground level. Provincial adjudicators should be continuously capacitated to enable quality and fair delivery of justice; and
- Streamline procedures and revise rules to simplify processes, guidelines and requirements to speed up adjudication and ensure better handling of agrarian cases.

Promoting Philippine Culture and Values

Following the PDP framework's "Malasakit" pillar, the Regional Development Plan (CVRDP 2017-2022) promotes awareness of Philippine culture and values as it helps people distinguish the different beliefs and traditions based on origins, thereby building better relationships in a diverse environment.

This Chapter presents the critical role of culture in enhancing the social fabric and regaining people's trust through "Malasakit". For 2017, focus is on consolidating data and initiatives on culture development and promotion. These initial activities serve as building blocks for the implementation of the sector's major strategies in the succeeding years of Plan implementation.

Figure 4. Strategic Framework to Promote Philippine Culture and Values by 2022



Accomplishments

Valuing our diverse cultures

Preservation of intangible cultural heritage. As part of culture awareness at the local level, a joint celebration to create tourism and culture awareness to both locals and visitors was conducted to strengthen the performing arts of the Ivatans in Batanes. There was also an inter-agency chorale competition for the singing of an Ivatan inspirational song “Laji”. Ivatan artistry was also showcased by the “Yaru nu Artes” through the painting of the “234th Batanes Day” letterings that were displayed at the Basco Oval.

The province of Cagayan, on the other hand, has established a Cagayan Registry of Cultural Properties whereby all municipalities with trained cultural mappers are required to submit to the Provincial Cagayan Museum all their respective mapped cultural properties.

Also for 2017, the Santiago Living Traditions Foundation, Inc. implemented “Tilamsikan 2017: The Northern Luzon Culture and Arts Festival” in Santiago City. This was done in collaboration with the National Commission for Culture and Arts (NCCA) through the National Endowment Fund for Culture and the Arts (NEFCA). This is a culture and arts festival for practitioners from 5 municipalities of the Provinces of Quirino and Isabela. Activities include Ybanag epic dance drama called Moro-Moro de Nabuan, woodcarving and crafts, painting, folk dances, folk music and performance art. Several artists with ethno-linguistic roots such as Bugkalot, Gaddang, Ibanag, Yogad and Ilocano participated in the event. Another activity implemented was the conduct of a cultural show featuring the La Jota Isabela, an Ilocano Dance originating in Cauayan, Isabela. This was undertaken by the Department of Education of Santiago City

Also, the NCCA has approved for implementation the “TAOID Kabataan: Summer Youth Heritage Camp” of the Philippine Information Agency (PIA-RO2). The project is a four-day camp for the youth in Luzon on how to come up with programs in their localities for the preservation of tangible and intangible cultural treasures, with scheduled tour to the heritage sites in the area.

Improving public access to cultural resources. To further improve access to the region's cultural resources, public museums were improved through their modernization, expansion of facilities and upgrading of collections. Entrance fees were likewise waived which encouraged more visitors, thus, broadening the public's awareness on the region's rich cultural heritage. The move to make museums more visible and accessible to the public was highlighted by the re-launching of the Provincial Museum as cultural hub in the province of Cagayan and the North Luzon Indigenous and Cultural Hub in the province of Isabela.

Advancing "Pagkamalikhain"

Documentation and promotion of indigenous creativity. Documentation of cultural heritage is being undertaken to preserve important information and materials for the benefit of present and future generations. The effort includes documentation of knowledge systems and practices as well as language revitalization of different cultural communities in Cagayan Valley. This includes a video documentary of the history of Diocesan Shrine of Our Lady of the Miraculous Medal in Itbud, highlighting the Ivatan intangible heritage of the province of Batanes. For the province of Cagayan, it has documented in photo and video the Pasion in Ybanag during Holy week; Traditional shell Gathering; and the Banda Dulo (Bamboo Saxophone) making and playing.

Competitions in arts such as poster making, slogan-making, poetry writing and reading, and creation of murals have been conducted for pupils and students. Introduction of Film Development in Education in cooperation with the Film Development Council of the Philippines has also been conducted.

Higher Education Institutions (HEIs) in the region promoted awareness of local culture and values through the seven approved grants awarded to HEIs under the SALIKHA CHED-NCCA Grants for Creative Projects of the CHED K-to-12 Transition Program. These approved research grants include: (1) Documentation of Built Heritage in Cagayan Valley (CSU-Carig); (2) Traditional House Construction Methods, Practices, and Beliefs of the Indigenous People (IPs) of Cagayan (CSU-Carig); (3) KatuYaw: Digitization of Philippine Ethnic Dance Utilizing Human Kinematics of Indigenous People (ISU-Cabagan); (4) Danum Water Dance Festival: Celebration of Water through Movement and Connectivity Advocating Environmental Awareness in the Grassroots (SMU-Bayombong); (5) Knowledge by Systems and Practices of Agta Communities in Cagayan Valley Region towards the Establishment of Agta Community Heritage Center (USL-Tuguegarao); (6) Preservation and Promotion of Ybanag Cultural Resources through Cultural Mapping (USL-Tuguegarao); and (7) The Malaueg Language Corpus and Folk Literature of Rizal, Cagayan (USL-Tuguegarao). These seven research grants implemented exceeded the target of two for 2017.

Inculcating values for the common good

Restoration of cultural values. The Civil Service Commission launched the implementation of Values Restoration Program (VRP) through Announcement No. 40, s. 2017. The VRP aims to transform the Filipino public servant and the government leadership to subscribe to the code of ethics and values that shall provide the country with righteous, incorruptible, and sincere service towards a graft-free society. Personnel trained on VRP started conducting regular orientations in their respective offices based on the training modules provided.

Cagayan has also encouraged and supported the establishment of the Cagayan Heritage Conservation Society, a private-led organization which aims to spread awareness about Cagayan's historical and cultural treasures, and ensures its proper documentation and preservation.

Strengthening culture-sensitive governance and development

Several measures were undertaken to institutionalize culture-sensitive governance. "Tourism, Culture and the Arts" was included as a new essential area in the 2017 Guidelines for the Seal of Good Local Governance of the Department of the Interior and Local Government (DILG). This complements the capacity-building efforts of LGUs to promote, protect, and enrich culture and heritage. The proposed legislation for the creation of the Department of Culture at both Houses of Congress and also within the Executive Branch shall strengthen the public's level of understanding and respect of our cultural diversity.

In adhering to the call to strengthen culture and values in the region, the Social Development Committee of the RDC 2 endorsed the creation of a Sub-committee on Culture during the year. The SDC Sub-Committee on Culture shall serve as a mechanism to oversee the implementation of the Regional Development Plan (CVRDP 2017-2022) strategies on the promotion of Philippine culture and values. The Department of Education (DepEd) shall serve as Chair, Department of Tourism (DOT) as Co-chair, and DILG as Vice-Chair. The Sub-Committee is composed of the DepEd, CHED, DILG, PIA, NCIP, NCCA, Department of Tourism (DOT), Department of Trade and Industry (DTI), National Economic and Development Authority (NEDA), the five provinces, five State Universities and Colleges (SUCs), five private HEIs, and two civil society organizations.

As a result of the DILG Memorandum Circular (MC) 2017-133 on the creation of Culture and Arts Council, the Sangguniang Panlalawigan of the provinces of Cagayan and Quirino enacted an ordinance creating their respective Provincial Council for Culture and the Arts. The creation aims to ensure the protection, enrichment, and promotion of culture and the arts to advocate national legacy and pride. It shall conduct periodic consultations to identify grassroot-based cultural concerns, issues and agenda and coordinate with existing local councils concerning culture and arts. With the DILG MC, the DILG shall provide technical assistance to LGUs which have not created yet their Council on Culture and Arts. For other LGUs, culture and arts was lodged with the tourism office of the local governments.

Moving Forward

The sub-sector still has a long way to go in pursuing an inclusive development inclined towards the dynamics of culture and values. In the coming years, a stronger partnership and coordinating mechanism between and among cultural agencies, other concerned agencies, civil society organizations and the private sector is necessary, particularly in the realization of the following recommended interventions:

- Support to national initiatives, legislations and policies promoting Philippine culture and values such as:
 - ✓ The creation of a Department of Culture. The creation of the Department ensures implementation and monitoring of culture and arts programs at the local level as it will provide for the institutionalization of NCCA regional offices and culture offices at the local government units.
 - ✓ The Development of the Philippine Dimensional Model for Culture. The goal of this project is to address an issue identified in the PDP 2017-2022, i.e., the need for inculcating values for the common good among Filipinos.
 - ✓ The implementation of Philippine Cultural Education Program per DepEd Memo No. 16, series of 2018. The NCCA, in partnership with the DepEd will be implementing several programs such as Graduate Diploma in Cultural Education and Teaching Arts; IEC for Teachers; International Research Conference on Culture-Based Education; and Advocacy on Philippine Culture and Arts Resources. For Region 2, the Isabela State University (ISU) is one among the Higher Education Institutions that will be offering the said graduate programs.
- Creation of Culture and Art Council at the provincial level pursuant to DILG Memorandum Circular (MC) 2017-133. This shall strengthen the local governments as cultural institutions and will pave the way for the inclusion of cultural agenda in development planning;
- Operationalization of the RDC2 SDC Sub-Committee on Culture;
- Establishment of a database to store information on cultural statistics and comprehensive data on local cultural heritage including cultural documentation, promotion and protection;
- Development and promotion of culture of eco-tourism in the region should be both a conservation strategy for the environment and promotion of local culture and values; and
- Establishment offices for culture and arts in LGUs, with a mandate to protect and promote local cultural heritage and arts.

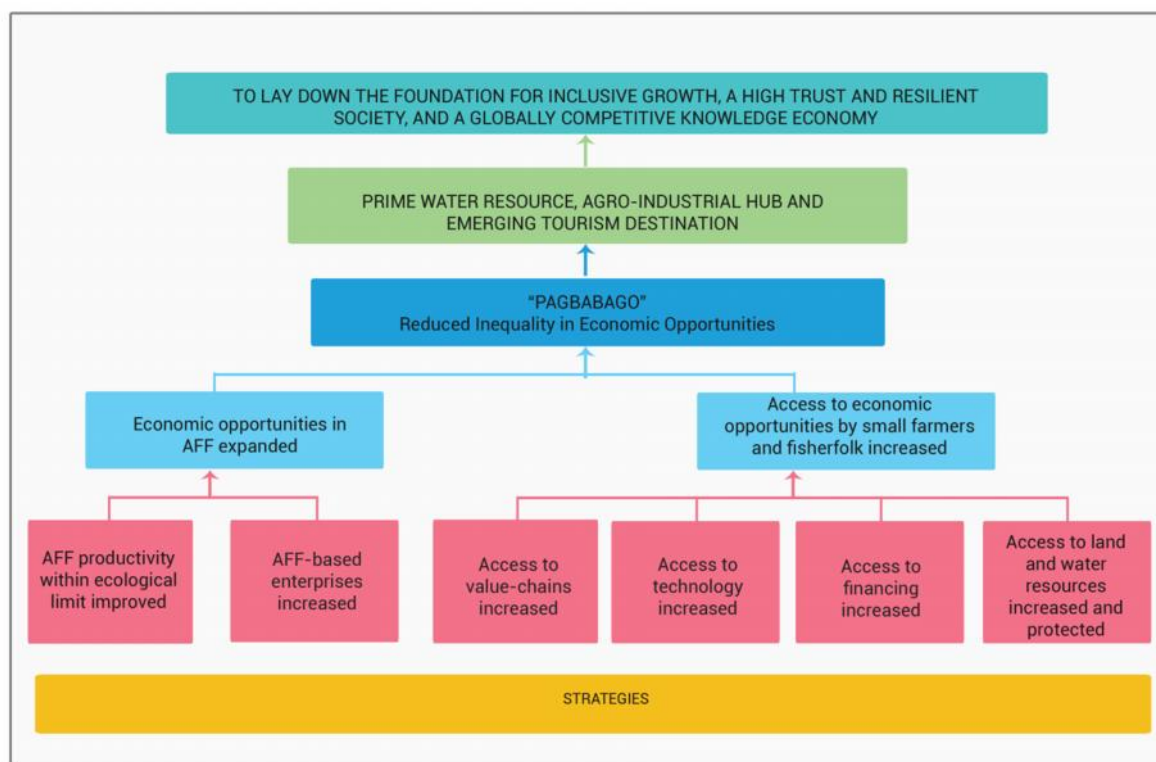
II. "PAGBABAGO": INEQUALITY-REDUCING TRANSFORMATION

Expanding Economic Opportunities in Agriculture, Forestry and Fisheries

The region's agriculture sector gross output contribution has contracted over the recent years (i.e., in 2013-2017, average sector share was at 36%). The sector also posted negative growth rates in the past two years due to damages caused by strong typhoons (i.e., -0.4% in 2015 and -3.0% in 2016). It however recovered in 2017, posting a growth rate of 6.2 percent. In terms of employment generation, the sector has been consistently absorbing the bulk of the region's labor force.

Expected to contribute to the *Pagbabago* pillar or reducing inequality, economic opportunities within the sector need to be expanded and its access by small farmers and fisherfolk need to be increased as well. The desired development for the sector is presented in Figure 5.

Figure 5. Strategic Framework for Expanding Economic Opportunities in Agriculture, Forestry and Fisheries by 2022



Accomplishments

Expanding economic opportunities in AFF

The economy of the region was driven by the AFF sector's performance as depicted by the generally positive accomplishments in the sectoral outcome targets presented in Table 6. Support services provided by government to the different subsectors contributed to this positive performance.

Gross Value Added in AFF recovered. The agricultures sector's Gross Value Added growth rate of 6.2 percent in 2017 outpaced the 3.6-4.6 percent target for the year. This year's performance was a recovery from the contraction in 2016 and 2015 at -3.0 percent and -0.4 percent, respectively. However, with the economic structural transformation continuously occurring where Service industries are becoming more dominant, the share of AFF sector to total domestic output was down to 33.7 percent. The recorded growth rate of value of production in agriculture (at constant prices) was at 6.12 percent in 2017, an improvement from its performance of negative 3.35 percent the previous year. Cagayan Valley contributed 6.97 percent to the national value of production, the seventh (7th) highest among the regions of the country.

Value of production in crops improved. Among subsectors, only the crops subsector had accelerated growth from last year's value of production. Crops accounted for about 77 percent of the total value of production in agriculture. It grew by 8.65 percent as compared to its negative 4.93 percent the previous year. The region contributed 10.34 percent of the national value of production in crops next to Northern Mindanao.

Most of the crops enrolled in the sector's Results Matrix reached their target yields and production volumes. The recorded increase in the volume of palay and corn production in 2017 as compared to the previous year (for palay, from -6.31% to 13.9% and for corn, from -6.79% to 9.45%) translated to the improved growths of value of production in palay and corn at 13.9 percent (from -6.31%) and 9.45 percent (from -6.79%), respectively. Harvest area for these crops generally increased and respective targets for the year were 100 percent met. Minimal gains were recorded for pineapple, coffee, and cassava while production declines were recorded in other major crops like coconut, sugarcane, banana and mango. Besides weather condition, the regular support services of the DA RFO 02 and other agencies contributed to the improved performance of the subsector.

Livestock subsector grew at a slower pace while poultry subsector posted production decline. The livestock subsector achieved its target for the year of increasing the value production. It slightly grew by 0.3 percent in 2017 from 4.5 percent growth in 2016. This was solely contributed to by the increase in the volume of hog production, which constitutes more than 70 percent of the total livestock production. In terms of large (i.e., cattle) and small ruminants (i.e., goat and sheep), production

targets were not met for cattle and goat in 2017. The number of heads of said livestock was also lower compared to the previous year.

On the other hand, value of production in the poultry subsector decreased by 1.54 percent, contributed mainly by the 3.0 percent decrease in chicken production. The chicken industry contributed about 80 percent share to total poultry production.

Fisheries continuously suffer from diminishing production. The fisheries subsector continued to experience downtrend in both value and volume of production with a negative 4.57 percent growth in 2017. Commercial and municipal fisheries posted negative production growths at 18.19 percent and 2.27 percent, respectively. In contrast, aquaculture grew at 1.82 percent in the same year. The declining contribution of the fisheries to the performance of the agriculture sector as a whole has been due to weather disturbances, high cost of fuel, and lack of fishing facilities and infrastructures.

As shown in Table 6, white shrimp and seaweeds have not met targets for the year. For white shrimps, the decline in production was noted due to less natural entry during the second half of 2017. Also, production of white shrimps went down in Cagayan because of abrupt changes in water temperature during the second half of 2017 that resulted to smaller sizes of species harvested. For seaweeds, the sudden change in temperature resulted to reduced area harvested and lesser harvests.

Forest production increased but contribution to total sector output is minimal. Total area of tree plantation and non-timber forest products within the production forest increased as compared to the baseline values in 2016. Targets set for the year were likewise met. Target for the total area of non-timber products (i.e., bamboo, rattan, fruit trees, coffee, cacao, mangrove, and fuelwood) were 100 percent met at 8,445 hectares or more than quadrupled the 2016 level. Similarly, tree plantation increased by 65 percent from its level in 2016 and the target set for 2017 was also attained. Continuous efforts by the Department of the Environment and Natural Resources Regional Office 2 (DENR RO 2) in cooperation with the People's Organizations (PO) and local government units (LGU) to maintain and protect the established plantations contributed to the positive results achieved for the year.

The AFF sector remains to be the region's major source of employment. Forty-five (45%) of the total employed persons in the region in 2017 depend on agriculture as source of income. About 74 percent of these employed are males. This huge number of people that depend on agriculture calls for an immediate action to implement interventions that will improve labor productivity of farmers and fisherfolk in the region.

Table 6. Performance Indicators on Expanding Economic Opportunities in Agriculture, Forestry and Fisheries, Region 02, CY 2017
(CVRDP 2017-2022 Results Matrix)

Objectives/ Results	Indicator	Baseline*		2017 Target	2017 Actual	Accomplishment (%)
		Year	Value			
Economic opportunit ies in AFF expanded	Gross Value Added in Agriculture, Hunting, Forestry and Fishing					
	·Level (PhP million at 2000 constant prices)	2016	47,472	Incr.	50,415	6.2% increase from baseline
	·Growth Rate (%)		-0.4	3.6-4.6	6.2	1.6 pp higher than the upper bound of the target growth rate
	Gross Value of Production in AFF increased (% in real terms)	2016	-3.35	Incr.	6.12	9.47 pp increase from baseline
	·Crops	2016	-4.93	Incr.	8.65	13.58 pp increase from baseline
	·Livestock		4.5	Incr.	0.3	4.2 pp decrease from baseline
	·Poultry		1.9	Incr.	-1.54	3.44 pp decrease from baseline
	·Fisheries		-5.15	Incr.	-4.23	0.92 pp increase from baseline
	Employment generated by the agriculture increased ('000s)	2016	759	Incr.	657.7	13% increase from baseline
Sub-Chapter Outcome 1.1: AFF productivity within ecological limit improved						
	Yield of Major commodities increased / sustained (Mt / ha.)					
	Palay	2016	4.19	4.25	4.52	106
	Corn	2016	4.05	4.48	4.42	99
	White	2016	2.32	2.42	2.85	118
	Yellow	2016	4.12	4.50	4.47	99
	Banana	2016	13.63	14.00	12.08	86
	Pineapple	2016	25.46	25.00	25.43	102
	Mango	2016	5.84	5.00	4.74	95
	Sugarcane	2016	35.85	37.07	33.94	92
	Cassava	2016	16.36	19.00	14.74	78
	Coffee	2016	0.22	0.29	0.42	145
	Cacao	2016	0.22	0.18	0.11	61
	Volume of production increase (in heads, cumulative)					
	Cattle	2016	184,173	185,831	181,435	98
	Goat	2016	155,533	116,573	108,511	93
	Sheep	2016	9,864	12,134	11,640	96

Objectives/ Results	Indicator	Baseline*		2017 Target	2017 Actual	Accomplishment (%)	
		Year	Value				
Aggregate Output							
	Volume of production increase (‘000 MT, cumulative)						
	Hog	2016	71.63	68.85	72.86	106	
	Chicken	2016	60.64	59.35	58.78	99	
	Vegetables	2016	-	152.73	134.36	88	
	Tilapia	2016	12,322.17	12,568	12,812.57	102	
	Bangus	2016	491.53	501.36	536.61	107	
	Seaweeds	2015	393.78	283	163.18	58	
	Tiger prawns	2016	37.5	38.2	40.15	105	
	White Shrimp	2016	1,512	1,542	1,379	89	
	Oyster	2016	1,286	1,311	1,377	105	
	Nipa Shingles (in ‘000 pc)	2016	570	570	208	36	
	Postharvest losses of key agricultural commodities reduced (% , cumulative)						
	Rice	2016	4.26	n/a	n/a	n/a	
	Corn	2016	2	n/a	n/a	n/a	
	Program harvest area for staple crops provided with technical support services increased (ha) g						
	Palay	2016	556,884	587,097	587,097	100	
	Yellow Corn	2016	398,023	403,247	403,247	100	
	White Corn	2016	16,426	13,257	11,546	87	
	Number of fisherfolk provided with production support increased	2016	8,911	9,794	9,794	100	
	Number of group beneficiaries provided with agricultural and fishery machineries and equipment increased	2016	232	301	301	100	
	Area within the production forest for tree plantation and non-timber forest products increased (ha, cumulative)						
	Tree plantation	2016	9,770	16,121	16121	100	
	Non-Timber Forest Products	2016	1,808	8,445	8445	100	
	Sub-Chapter Outcome 1.2 : Agriculture, forestry and fishery-based enterprises increased						
	Aggregate Output						
		Number of AFF-enterprises with technical support increased	2016	--	-	-	

Reporting Entity/ Data Source: PSA RO2, DA RFO2, DENR RO 2, BFAR RO2

Increasing access to economic opportunities by small farmers and fisherfolk

In CY 2017, the region continuously implemented programs that sought to reduce inequality in economic opportunities by increasing access of the small farmers and fisherfolk along the different stages of the value-chain to new technology, financing, and resources (i.e., land and water). Thus, targets set as presented in Table 6 were generally attained.

Labor productivity in AFF grew by 21.7 percent. From a one (1) percent growth rate in labor productivity last year, this grew by 21.7 percent in 2017. While an increase in labor productivity signifies a strong performance of the sector, the decline in employment within the sector during the needs further study as it may be an indication of limited economic opportunities for farmers and fisherfolk.

Several efforts to increase access to technology were implemented. To increase access to technology by small farmers and fisherfolk, several efforts presented as aggregate output indicators achieved positive results. All targets set for the year in terms of the AFF researches conducted (83), new technologies developed (10) and technology forum conducted (5) were 100 percent attained.

Conducive financing facilitated performance in AFF. The number of small farmers and fisher folk provided with agricultural insurance increased by about 25 percent from its level in 2016. About 166,664 insured enrollees were recorded for the year reaching a total amount of Php6.184 million. Most of the insured farmers and fisher folk were recipients of subsidized insurance programs including Registry System for Basic Sectors in Agriculture (RSBSA), a program that provides full premium subsidy for subsistence farmers and fisherfolk. The LGUs were important partners of the Philippine Crop Insurance Corporation Regional Office 02 (PCIC RO2) in their expanding their insurance coverage. This year, 104 LGUs or 100 percent of the target were involved in the implementation of agricultural insurance.

This performance is attributed to the efforts of PCIC RO2 in marketing insurance programs and the continued allocation of social insurance funds in a number of government programs.

Redistribution of land continued to face several issues. One of the major factors that would broaden economic opportunities is through increased access of small farmers and fisherfolk to land and water resources. Back in 1972, the Department of Agrarian Reform (DAR) started the implementation of the Comprehensive Agrarian Reform Program (CARP). For the region, CARP coverage is more than 400 thousand hectares of which about 88 percent or 366 thousand hectares were distributed from 1972-2016. This year, the target of 3,590 hectares for distribution was unmet registering only 25 percent accomplishment rate. The DAR RO 2 has continuously faced several challenges such as resistance of

the landowners, tedious activities in land surveys (i.e., difficulty in complying with the DENR's e-survey processes) and problems in the Land Registration Authority-Registry of Deeds (LRA-RoD) system of registration of titles or the Philippine Land Registration and Information System (PHILARIS). Also, the apparent conflict of landholding categories and difficulties in validating the landholdings and identified ARBs were experienced.

Meanwhile, the target for cumulative share of registered small fisherfolk with preferential access to municipal waters over the total number of registered small fisherfolk was attained. Likewise, registered fisherfolk provided with livelihood projects reached 10,085 in 2017 a vis a vis a target of 9,794.

Table 7. Performance Indicators on Increasing Access to Economic Opportunities by Small Farmers and Fisherfolk, Region 02, CY 2017
(CVRDP 2017-2022 Results Matrix)

Objectives/ Results	Indicator	Baseline*		2017 Target	2017 Actual	Accomplishment (%)
		Year	Value			
Access to economic opportunities by small farmers and fisherfolk increased	Growth in labor productivity of farmers and fisherfolk increased (% in real terms)	2016	1	Incr.	21.7	20.7 pp increase from baseline
Sub-Chapter Outcome 2.1 : Access to value-chains increased						
<i>Aggregate Output</i>						
	Number of commodity promotion and investment forum conducted	2016	-	-	-	-
Sub-Chapter Outcome 2.2 : Access to technology increased						
	Adoption rate by small farmers to new technologies increased (% cumulative)	2016	-	n/a	n/a	n/a
	Adoption rate by small fisherfolk to new technologies increased (% cumulative)	2016	-	n/a	n/a	n/a
<i>Aggregate Outputs</i>						
	Number of AFF researches conducted increased	2016	75	83	83	100

Objectives/ Results	Indicator	Baseline*		2017 Target	2017 Actual	Accomplishment (%)
		Year	Value			
	Number of new technologies increased	2016	5	10	10	100
	Number of technology forum increased	2016	5	5	5	100
	Number of beneficiaries provided with extension services increasedg	2016	-	n/a	n/a	n/a
Sub-Chapter Outcome 2.3 : Access to innovative financing increased						
	Share of small farmers and fisherfolk with agricultural insurance to total number of farmers and fisherfolk increased (% cumulative)	2016	-	10.3	-	-
Aggregate Outputs						
	Agricultural loan amount provided by government banks increased (in Million PhP)	2016	3.5	0.89	-	-
	Number of LGUs with established partnerships for the implementation of agricultural insurance to the total number of LGUs increased	2016	104	104	104	100
	Amount of insurance coverage increased (in Million Php)	2016	1,482	2079.2	2502.38	121
	Number of farmers and fisherfolk insured increased	2016	133,442	139,833	166,664	119
Sub-Chapter Outcome 4 : Access to land and water resources increased and protected						
	Share of actual Agrarian Reform Beneficiaries (ARBs) with emancipation patent (EP)/ certificate of land ownership award (CLOA) to total	2016	-	4.55	-	-

Objectives/ Results	Indicator	Baseline*		2017 Target	2017 Actual	Accomplishment (%)
		Year	Value			
	potential ARBs increased (% cumulative)					
	Share of registered small fisherfolk with preferential access to municipal waters over the total number of registered small fisherfolk increased (% cumulative)	2016	23.03	23	23.13	100.6
Aggregate Outputs						
	Area distributed under CARP increased (ha, cumulative)	2016	-	3590	901	25
	Number of ARBs with EP/CLOAs increased (cumulative)	2016	-	3462	555	16
	Area of collective CLOAs subdivided increased (ha, cumulative)	2016	-	1672	727	43
	Number of ARBOs assisted increased	2016	-	238	237	100
	Number of ARBs provided with credit increased (cumulative)	2016	-	3520	6250	178
	Number of registered fisherfolk provided with livelihood projects	2016	8911	9794	10,085	103

Reporting Entity/ Data Source: PSA RO2, DA RFO2, DENR RO 2, BFAR RO2, PCIC RO2, DAR RO2

Moving Forward

In next two to three years, the government should focus its efforts in institutionalizing policy reforms and implementing programs to attain an expanded and increased access on economic opportunities by small farmers and fisher folk in the region, to wit:

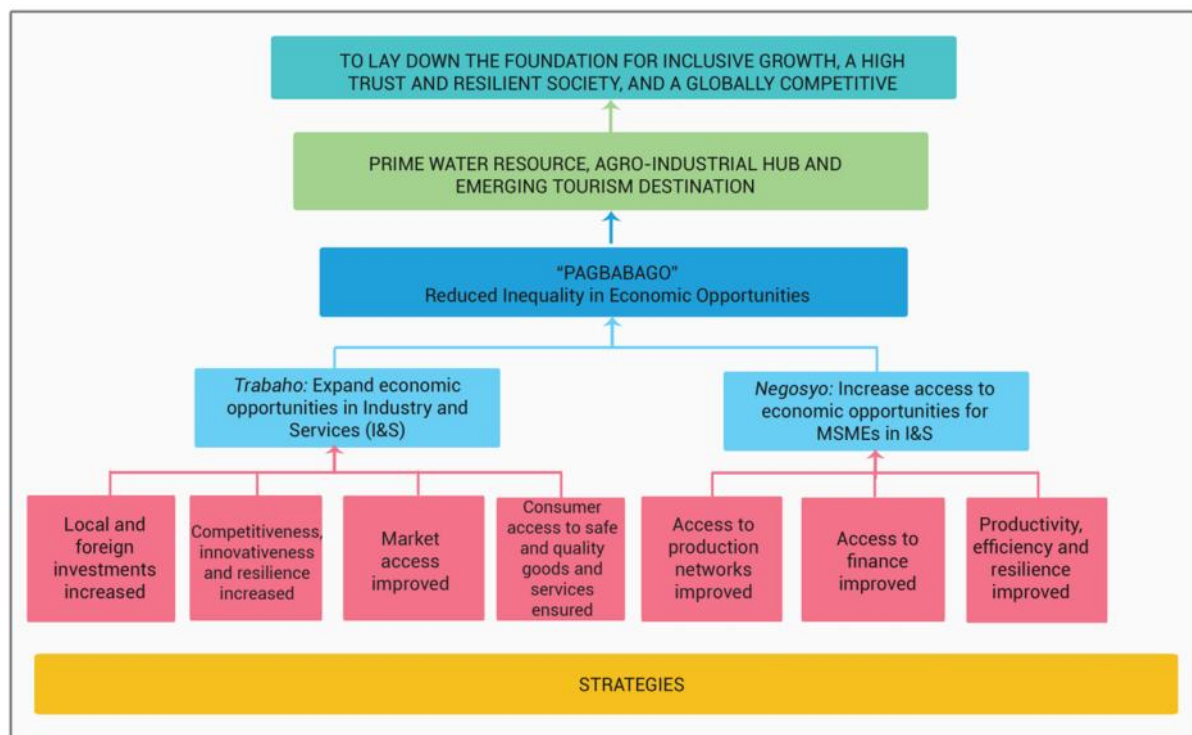
- Continue to support the passage/enactment of the legislative agenda identified in Philippine Development Plan (PDP) 2017-2022 such as but not limited to:
 - ✓ Amendment of the Agricultural Tariffication Act of 1996 or RA8178 or decoupling the regulatory and proprietary function of the National Food Authority (NFA) so that its role will now focus on rice buffer stocking for food security;
 - ✓ Amendment of the Revised Charter of the PCIC Act of 1995 or RA 8175 as well as other relevant laws to push for the reorganization of the PCIC and increase its authorized capital stock; and
 - ✓ Amendment or repeal of Presidential Decree No. 4 of 1972 as well as other relevant laws which will replace quantitative restrictions on rice with tariffs, wherein tariff proceeds shall be used to support the rice sector.
- Intensive capacity building of farmers and fisherfolk on value-adding activities or commodity diversification, adoption of climate-responsive technologies, innovations and standards, orientation on the credit, insurance and other financial education and business plan preparation;
- Continue to campaign for the implementation of sustainable fisheries management;
- Simplify processes and requirements in land acquisition and distribution to fast-track land reform as envisioned through the CARP;
- Strategically provide rural infrastructures that are disaster and climate-resilient - roads, bridges, tramlines, irrigation systems/facilities and other related facilities;
- Create new markets and develop new products by providing a cohesive and easier access to necessary agricultural marketing information (e.g. price, volumes, supply, demand, buyers, etc.);
- Intensify capacity building and business advisory services to agrarian reform beneficiary organizations (ARBOs), cooperatives, community organizations and associations that operate or intend to engage in agri-enterprises;
- Strengthen linkage with agro-processing industry through contract farming, agri-tourism, and other forms of entrepreneurial activities; and
- Expansion of insurance programs of PCIC in partnership with LGUs, lending institutions, cooperatives, rural banks and government agencies.

Expanding Economic Opportunities in Industry and Services through *Trabaho at Negosyo*

Together, the industry and services sectors comprise 66 percent of the total economic output in the past two years. The increasing share of these sectors is a manifestation of a gradual structural transformation of the region's economy. Theoretically, overall productivity and incomes tend to expand as labor and other resources move from agriculture into modern economic activities. The challenge, therefore, remains on how the region can optimize the benefits of the structural transformation so that it will translate to more jobs and enhancement in productivity towards an inclusive and sustainable growth.

This section discusses the performance of the industry and service sectors particularly on how this help achieve the desired outcome of reducing inequality through: *Trabaho*, that is expanding economic opportunities in the sector; and *Negosyo* or increasing access to economic opportunities by micro, small and medium enterprises (MSMEs), cooperatives and Overseas Filipinos (OFs).

Figure 6. Strategic Framework for Expanding Economic Opportunities in Industry and Services through *Trabaho at Negosyo* by 2022



Accomplishments

“Trabaho”: Expanding economic opportunities in I&S

Industry sector contributed 15.5 percent to the total economic output of the region. The industry sector shared 15.5 percent to the total Gross Regional Domestic Product (GRDP) at 2000 constant prices in 2017. This was an increase from its GRDP share in the previous year. The sector also consistently grew at faster rate. In 2017, it registered a growth rate of 13.9 or about 7.4 percentage points higher than the upper bound of the growth target for the year.

From among the sub-industries under the Industry sector, only manufacturing slowed down from 17 percent growth in 2016 to 3.9 percent in 2017. Likewise, the proportion of manufacturing GVA to GRDP declined slightly from 1.6 percent to 1.5 percent. For a structural transformation to become growth enhancing, manufacturing needs to further expand since it can be the main engine for accelerating regional economic growth. However, the region has more work to do in order improve its ranking in terms of its share to the national manufacturing GVA. The region has consistently ranked 2nd lowest next to ARMM with a share of 0.11 percent.

Other sub-industries such as mining and quarrying, construction, and electricity, gas and water supply posted accelerated growth in 2017 at 14.0 percent, 10.7 percent and 29.5 percent, respectively. These three sectors contribute 90 percent of the total Industry GVA.

In terms of employment, the Industry sector generated about one-tenth of the total employed persons in the region or 179 thousand employed persons, mostly male employees (93%). This level was 20 percent higher than the 149 thousand employed persons in 2016. Out of the total employed in the sector, manufacturing generated 60 thousand employed, next to construction with 112 thousand persons. The employment level in the manufacturing industry was equivalent to 4.1 percent of the total employment, or 1.3 percentage points higher than its proportion in 2016 with an employment level of 42 thousand persons.

While the Industry sector employment increased over the recent years, this movement of labor from agriculture to the Industry sector was not translated to expansion in productivity. Labor productivity in 2017 further decelerated to a negative 5.2 percent growth from its 10.2 percent negative growth in the previous year.

Among the three major productive sectors of the economy, the Industry sector has the highest productivity value and thus, the more that government should strengthen the manufacturing industry especially along agri-industry.

More than half of the region's GRDP came from the Services. For the year, the Services sector comprised 51 percent of the region's GRDP. Its 6.0 percent growth was within the lower bound of the 6 – 7 percent growth target for the year, and slower than the 6.6 percent growth attained in the previous year. However, all sub-industries under the Services sector accelerated with other services registering the highest growth at 7.8 percent.

About two-fifth of the total employed persons in the region or 616 thousand employees were engaged in the Services sector, 52 percent of whom were females. Employment level in the sector increased by 6 percent from its level of 579 thousand employed persons in the previous year. Among the top three industries in terms of employment were wholesale and retail trade, repair of motor vehicles at 36 percent; public administration and defense, and compulsory social security at 16 percent, and transportation and storage at 15 percent of total employed within the sector. The number of employed persons engaged in the Services sector increased over the recent years and was successfully translated to expansion in Services GVA as well as labor productivity. While in 2017, labor productivity has slightly slowed down by 0.4 percent, coming from a high growth of 5.9 percent last year, the average growth rate recorded still stood at 3.2 percent from 2013 to 2017. The challenge therefore is on how to translate the increase in labor to expansion in output of the Sector in the succeeding years.

Targets on visitor arrivals attained. The tourism industry attained its targets for the year as shown in Table 8. From the total of 2.54 million visitor arrivals in 2017, 90 percent were domestic and the remainder from foreign countries. Forty-two percent (42%) of this total were overnight tourists and the rest were same-day visitors.

In both categories (overnight and same-day), targets set for the year were all attained. Number of domestic overnight tourists reached 776,369 while foreign overnight tourists at 293,775. Similarly, same-day visitors' performance achieved 103 percent and 100 percent accomplishment rates for domestic and foreign same-day visitors, respectively. Visitor spending is translated to receipts, thus, an increase in the number of visitor arrivals in the region translates to increased opportunities to expand output, employment and increase in income. Development and promotion of tourism destinations should however consider the carrying capacity of the potential tourism sites.

Investments in the economic zones revealed modest gains. Indicators of increased investments in the region are the Cagayan Economic Zone Authority (CEZA) capital investments including number of locators; and, DTI RO 2's programs such as the Business Name (BN) Registration and assistance to MSMEs, exporters and investors in the region.

For CEZA's capital investments and number of locators, accomplishment rates achieved were 125 percent (Php 8.75 Billion) and 148 percent (92 locators), respectively. Despite the positive performance vis a vis targets, these figures were actually declines from their actual accomplishments in 2016 – lower by 37.6 percent in terms of capital investments and lower by 55.6 percent considering

the number of locators. Main reason for the decreased accomplishment for the year and rescaled targets by CEZA was Executive Order 13 which transferred online gaming industry under the jurisdiction of the Philippine Amusement and Gaming Corporation.

For local investors, Business Name (BN) Registration achieved its set target with an estimated total investment of Php4.64 Billion. The number of MSMEs assisted in the priority industries was also met, registering an accomplishment rate of 122 percent or about 1,680 MSMEs assisted. The number of exporters assisted for the year stood at 42, registering an accomplishment rate of 105 percent.

In CY 2017, activities like the orientation on the enhanced business permits and licensing system (BPLS) standards and the 1st Regional Meeting of the Business Permits and Licensing Officers (BPLOs) were conducted. The 1st Rural Impact Sourcing (RIS) Forum was also held which aimed to promote various digital opportunities. These helped in facilitating the generation and establishment of new investments regionwide.

Competitiveness of all provinces in the region improved. The Cities and Municipalities Competitiveness Index (CMCI) is an annual ranking of Philippine cities and municipalities developed by the National Competitiveness Council. In 2017, scores of all provinces increased, though in terms of standing, Isabela moved down from its rank in the previous year (from 22nd to 30th). Ranking of PLGUs was based on population and weighted income average of the overall scores of cities and municipalities under a province. Batanes achieved the biggest improvement in terms of score while Quirino had the biggest leap in terms of its ranking from 54th in 2016 to 16th rank this year.

Among the aggregate outputs contributing to the region's competitiveness, innovativeness and resiliency, targets on the provision of assistance to MSMEs were met particularly on the number of MSMEs assisted; number of mentees capacitated; number of MSMEs doing e-commerce; number of accreditation applications acted upon; and number of products developed and product partners engaged (Table 8).

Consumer access to safe and quality goods and services ensured. In 2017, targets for the intermediate outcome indicators enrolled to measure access of consumers to safe and quality goods and services were met. These include targets on percentage of violating firms penalized and percentage of compliant firms which were exceeded by 111 percent and 118 percent, respectively.

Targets for aggregate output indicators were also met such as number of firms monitored (price trending) and number of processed applications for permits, accreditations, licenses, or authorities. Activities such as the conduct of business education and advocacy, sustained enforcement of fair trade laws and on the spot inspection of products and services by the DTI R02 facilitated the attainment of the set performance indicators.

Table 8. Performance Indicators on Expanding Economic Opportunities in Industry and Services through Trabaho at Negosyo, Region 02, CY 2017
(CVRDP 2017-2022 Results Matrix)

Objectives/ Results	Indicator	Baseline*		2017 Target	2017 Actual	Accomplish- ment (%)
		Year	Value			
“Trabaho” Economic opportunities in I&S expanded	Gross Value Added (GVA) growth rate in the industry sector improved (% in real terms)e					
	·Level (PhP million at 2000 constant prices)	2016	19,990	-	22,767	13.9% increase from baseline
	·Growth Rate (%)		11.9	5.5-6.5	13.9	7.4 pp higher than the upper bound of the target growth rate
	Manufacturing GVA as a proportion of GRDP increased (%)	2016	1.6	Incr.	1.5	0.1 pp lower than the
	GVA growth rate in the services sector improved (% in real terms)e	2016	6.6	6.0-7.0	6	Within range
	Employment generated by the industry increased ('000s)	2016	149	Incr.	178.7	20% increase from baseline
	Manufacturing employment as a proportion to total employment increased (%)	2016	2.8	Incr.	4.1	1.3 pp increase from baseline
	Employment generated from the services sector increased ('000s)f	2016	579	Incr.	615.6	6% increase from baseline
Aggregate Output						
	Visitor Arrivals increased					
	Tourist					
	Domestic	2016	569,445	774,171	776,369	100
	Foreign	2016	263,391	293,426	293,775	100
	Same Day Visitor					
	Domestic	2016	1,800,169	1,425,798	1464377	103
	Foreign	2016	10,563	4,499	4,499	100
Intermediate Outcome 1.1: Local and foreign investments increased						
Aggregate Output						
	Capital investments in CEZA increased (in Million Php)	2016	14,030	7,015	8,753	125
	Number of CEZA locators increased (cumulative)	2016	207	62	92	148
	Business Name Registration investments increased (in	2016	4,523	4642	4642	100

Objectives/ Results	Indicator	Baseline*		2017 Target	2017 Actual	Accomplish- ment (%)
		Year	Value			
	MillionPhp)					
	Number of MSMEs assisted in the priority industries increased (cumulative)	2016	-	1,380	1,680	122
	Number of investors assisted increased (cumulative)	2016	1,065	955	90	9
	Number of exporters assisted increased (cumulative)	2016	38	40	42	105
Intermediate Outcome 1.2: Competitiveness, innovativeness and resilience increased						
	Score of provinces in Region 02 out of the total number of participating provinces improved					
	Batanes	2016	15.55 (72)	Incr.	27.1 (68)	174% higher than in 2016
	Cagayan	2016	23.08 (46)	Incr.	33.79 (33)	146% higher than in 2016
	Isabela	2016	25.9 (22)	Incr.	33.92 (30)	131% higher than in 2016
	Nueva Vizcaya	2016	19.84 (65)	Incr.	33.31 (38)	168% higher than in 2016
	Quirino	2016	22.02 (54)	Incr.	35.56 (16)	161% higher than in 2016
Aggregate Output						
	Number of MSMEs assisted increased (cumulative)	2016	10,486	10,450	11,356	109
	Number of mentees capacitated increased (cumulative)	2016	-	200	200	100
	Number of MSMEs doing e-commerce increased (cumulative)	2016	-	25	37	148
	Number of technical assistance provided to stakeholders/LGUs on tourism industry development increased (cumulative)	2016	5	5	37	740
	Number of inspection on tourism enterprises conducted increased (cumulative)	2016	300	463	362	78
	Number of accreditation applications acted upon increased (cumulative)	2016	300	463	362	78
	Number of products developed and product partners engaged increased (incremental)	2016	5	5	8	160

Objectives/ Results	Indicator	Baseline*		2017 Target	2017 Actual	Accomplish- ment (%)
		Year	Value			
<i>Intermediate Outcome 1.3: Market access improved (see Section on Support to National Policy, Sub-sector Outcome on "Strategic external trade policy regime achieved")</i>						
<i>Intermediate Outcome 1.4: Consumer access to safe and quality goods and services ensured</i>						
	Percentage of violating firmspenalized and compliant increased (%)	2016	90	90	100	111
	Consumer complaints resolution rate increased (%)	2016	85	85	100	118
<i>Aggregate Output</i>						
	Number of firms monitored (Price Trending) increased	2016	120	120	120	100
	Number of processed applications for permits, accreditations, licenses, or authorities increased	2016	90	90	100	111

Reporting Entity/ Data Source: PSA RO2, DTI RO 2, CEZA, DOT RO 2

"Negosyo": Increasing access to economic opportunities for MSMEs

MSMEs access to production networks improved. Programs to improve access of MSMEs to production networks were sustained as evidenced by the 156 percent accomplishment rate in terms of the number of the trade fairs (total firms) conducted/participated and a 100 percent accomplishment in the number of established Go Negosyo centers. Promotional activities of the DTI RO2 including OTOP (One-Town, One Product) shows, Go Lokal! retail store concept in major malls, and the internationally-recognized FAME exhibits helped linked MSMEs to big companies or to government so that these institutions are supplied with MSME products on a continued basis. In MODELS OF NEGOSYO, DTI gave different business ideas to help MSMEs get into business, from traditional enterprises to direct selling and franchising.

Access to finance by MSMEs made easy. The DTI RO2 during the year also conducted financing forum cum matching to create awareness on the different financing windows offered by government financing institutions and the private sector. Facilitation of MSME loan applications was also provided. Series of orientation was also conducted on the financing program of the Duterte Administration – the *PondoparasaPagbabago at Pag-asenso* or P3. The P3 program is a microfinance program in cooperation with Small Business Corporation. It supports micro entrepreneurs for them to expand and/or purchase additional supplies for their businesses.

Productivity, efficiency, and resilience improved. Targets for the aggregate output indicators to measure productivity, efficiency and reliance of MSMEs were impressive during the year. The target of 90 shared service facilities in operation was attained and the number of prototypes developed reached up to 134 as compared to its target of only five (See Section on Vigorously Advancing Science, Technology and Innovation for other indicators).

Table 9. Performance Indicators on Increasing Access to Economic Opportunities for MSMEs, Region 02, CY 2017 (CVRDP 2017-2022 Results Matrix)

Objectives/ Results	Indicator	Baseline*		2017 Target	2017 Actual	Accomplish- ment (%)
		Year	Value			
Increased access to economic opportunities in I&S for micro, small and medium enterprises (MSMEs), cooperatives and Overseas Filipinos						
Intermediate Outcome 2.1: Access to production networks improved						
Aggregate Output						
	Number of trade fairs (total firms) conducted/participated increased (cumulative)	2016	25	25	35	140
	Number of Go Negosyo centers	2016	40	56	56	100
	Established	2016	-	8	8	100
	Maintained	2016	-	48	48	100
	Number of trade development/ trade support activities conducted/ participated increased	2016	-	35	41	117
Intermediate Outcome 2.2: Access to finance improved						
	Prescribed percent of allocation for micro and small enterprises to total bank loan portfolio attained (%)	2016	-	-	-	-
	Prescribed percent of allocation for medium enterprises attained (%)	2016	-	-	-	-
Intermediate Outcome 2.3: Productivity, efficiency and resilience improved						
	MSMEs sales increased (Million PhP	2016	-	-	-	-
Aggregate Output						
	Number of shared service facilities in operation increased	2016	90	90	90	100
	Number of prototypes developed Increased (cumulative)	2016	-	5	134	2680
	Number of Small Enterprise Technology Upgrading Program beneficiaries increased	2016	-	-	-	-
	Number testing and calibration services rendered increased	2016	3,394	-	-	-

Reporting Entity/ Data Source: PSA RO2, DTI RO 2, CEZA, DOT RO 2

Moving Forward

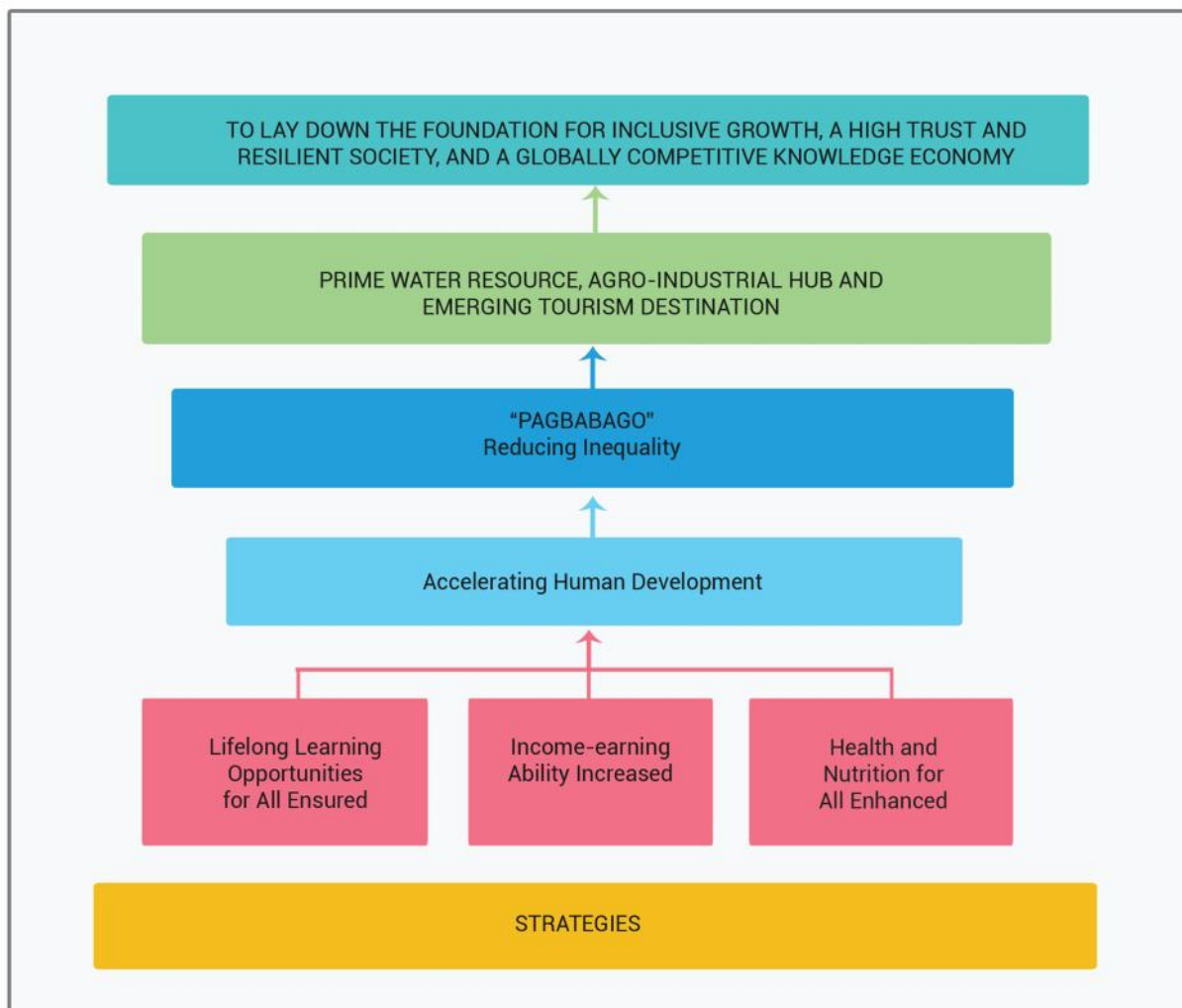
In the next two to three years, the region should focus its efforts on implementing programs to attain an expanded and increased access to economic opportunities by MSMEs, cooperatives and overseas Filipinos through the following:

- Focused implementation of the DTI's 7Ms (mindset change, mastery, mentoring, money, machine, market access, models of *negosyo*) in industries where the region has a comparative advantage. The 7Ms is a strategy to help promote inclusive growth and addressing income inequality in the sector. It seeks to help MSMEs set up their own business and become smarter entrepreneurs;
- Continuous conduct of activities that would address the problems identified in each segment of the value chain especially of those commodities/industries that have already well documented value chain studies;
- Accelerate provision and improvement of infrastructure support system including soft and hard infrastructure (transport, power, logistics, ICT) to ease cost in business operations as well as to attract more investors;
- Continuous social preparation activities to LGUs with potential ecotourism sites to be able to effectively develop and manage tourism products within their ecological limits;
- Encourage application of permits and licensing of businesses through streamlined and harmonized procedures in business registration and licensing, entry and exit, payment of taxes, access to finance and issuance of building permits; and
- Encourage farmers and fisherfolk to enroll in TESDA courses that would open non-farm income opportunities (i.e., carpentry) especially during lean months in agriculture.

Accelerating Human Capital Development

A well-educated, healthy and highly skilled labor force is important to support the desired development direction of Cagayan Valley region from being a purely agriculture-based economy to an agro-industrial hub and major tourism destination of the country. This section will discuss how far the region's investments in human capital development has improved the education and skills level of its people, their health and nutrition as well as their productivity and earning ability.

Figure 7. Strategic Framework to Accelerate Human Capital Development by 2022



Accomplishments

Enhancing health and nutrition for all

Life expectancy at birth increased. Projected life expectancy at birth is 74.46 years for females and 69.51 years for males for 2015-2020 ¹. Based on the 2010-2015 Census of Population, Region 2 posted a life expectancy of 73.3 and 68.3 years for females and males respectively, an increase from that recorded during the 2005-2010 Census ². The actual and latest life expectancy data is also within the projected figures for the region until the year 2020.

Fertility rate slightly decreased. There has been a slight decline in fertility rates in the region from 3 births per woman in the 2013 to 2.7 births per woman in 2017. Much is yet to be done to reach the desired level of 2 births per woman at the end of the Plan period.

Maternal mortality remained high but within the target. Maternal mortality, though within the target, was still high at 50.56 deaths per 100,000 live births in 2017. A review of maternal deaths conducted at the provincial level revealed that most deaths were due to lack of information and awareness on the standard health services for pregnant women. This lack of information is greatly influenced by cultural beliefs and negative attitude towards maternal health care. Other factors leading to maternal deaths include poor referral system and lack or non-adherence of health workers in primary health facilities and referral hospitals to clinical practice guidelines. Maternal deaths directly related to pregnancy and childbirth was at a relatively higher rate in the provinces of Cagayan and Quirino and in Santiago City.

Child mortality slightly decreased. Child mortality though short on target have slightly decreased. Neonatal deaths were recorded at 5 per 10,000 live births while infant deaths at 46 deaths per 1,000 live births. Under-5 mortality rate was lower at 6.07 in 2017 compared to the baseline value of 6.78 percent in 2016.

Nutrition among children significantly improved. Stunted children significantly decreased to 6.5 percent from 29 percent in the previous year. Wasting among children and those that are overweight also decreased in their percentage levels compared to the previous year. This notable performance was made possible through the conduct of “Breastfriends”, Family Planning Summits, Nutrition Caravans, provision of training support to infirmity health facilities and orientation for heads of government agencies on the importance of breastfeeding for working breastfeeding mothers. Intensive monitoring of overweight, wasted and stunted children was also undertaken through the Regional Health Sector Performance Monitoring Unit.

Epidemics of HIV, malaria and tuberculosis decreased. Malaria mortality and the prevalence of malaria in the region were sustained at zero level. Tuberculosis (TB) incidence decreased to 310 cases

¹2017 Regional Social and Economic Trends, Region 2

²2000 Census-Based National and Regional Population Projections, Volume II

per 100,000 population from the previous year's 322 TB cases per 100,000 population. The prevalence of HIV decreased at less than one percent compared to the 2.5 percent prevalence rate in CY 2016. However, the number of newly diagnosed cases increased in CY 2017 for both the national and regional level. There were 11,103 new HIV antibody seropositive individuals reported to the HIV/AIDS & ART Registry of the Philippine of which 1 percent or about 1,000 individuals came from Region 2.³

Functional service delivery networks ensured. About 97 percent of births in CY 2017 were attended by skilled health personnel compared to 96 percent in CY 2016. Health personnel include doctors, nurses or midwives. There was also a decline in unmet need for modern Family Planning, from 15.6 percent in 2013 to 14.4 percent in 2017. Region 02 had the highest contraceptive prevalence rate among all regions during the year. Of all age groups, the women of younger reproductive age (ages 15-19) have the highest value of unmet need with 28 percent compared to around 13-18 percent for other age groups.

Ensuring lifelong learning opportunities for all

Access to basic education improved but quality needs to be enhanced. Enrolment in the Elementary and Junior High School exceeded the CY 2017 target rates by three percent and 11 percent respectively. However, kindergarten enrolment fell short by 21 percent of the target enrolment rate for the year. The decrease in enrolment in the Kindergarten was due to the implementation of DepEd Department Order 47 series of 2016, which prescribed that only learners that meet the age requirement of 5 years old will be allowed to register. In terms of completion rate, target for the elementary level was achieved but that of Junior High School was not attained

The mean percentage score of the National Achievement Test for Grade 6 was 39.98percent and 42.96 percent for Grade 10. The results were below the region's target for both grade levels and were also lower from their CY 2016 results.

Mean years of schooling or the average years of prior education received by adults ages 25 and older was highest in the province of Batanes followed by the province of Nueva Vizcaya. Based on latest available data⁴, the average years of schooling in both provinces is 10.1 and 9.3, respectively. The region's functional literacy rate increased to 97.2 percent compared to 86.1 percent in 2008. The female group had a higher rate at 98 percent than that of the males with 96.4percent⁵.

Table 10. Basic Education Net Enrolment and Completion Rate, SY 2016-2017, Region 02

Indicator	Baseline		2017 Target	2017 Actual	Accomplishment (%)
	Year	Value			
Net enrolment rate					
Kinder	2016	85.8	86.46	68.64	79
Elementary	2016	96.31	96.97	100.26	103

³https://www.doh.gov.ph/sites/default/files/statistics/EB_HIV_December_AIDSreg2017.pdf

⁴https://psa.gov.ph/sites/default/files/HDI%20Tables%2C%20final%2015jan16_0_0.pdf

⁵PSA: 2013 Functional Literacy, Education and Mass Media Survey

Indicator	Baseline		2017 Target	2017 Actual	Accomplishment (%)
	Year	Value			
Junior HS	2016	70.21	70.87	78.97	111
Completion rate					
Elementary	2016	88.31	91.29	95.01	104
Junior HS	2016	81.99	82.53	81.46	98.7

Source: DepEd RO2

Investments in research barely moved. Government expenditure for higher education research, development and innovation for HEIs in the region amounted to Php31 Million, lower than the 61.7 Million in CY 2016. The grants include four projects under the Institutional Development and Innovation Grant and one from the 2nd cycle of DARE TO⁶ Research Grant.

Increasing income-earning ability

Youths placed in education increased. The 2018 Gender Statistics on Labor and Employment registered a total of 23,000 unemployed youths ages 15-24 in CY 2017 for Region 2. Thirty-six thousand children ages 5-14 years old are not currently attending school, of which around 4,000 are already working. There are 35,000 youth ages 15-17 years old who are not currently attending school and 18,000 of which are already working.

To assist those who are interested and deserving of a higher level of education, a total of 20,043 students were awarded scholarships and other financial assistance by the Commission on Higher Education (CHED) compared to only 5,355 students in CY 2016. The Private Education Student Financial Assistance (PESFA) Program and Training for Work Scholarship Program (TWSP) of the Technical Education and Skills Development Authority (TESDA) supported a total of 481 students pursue higher education and another 4,582 students undertook specialized training. In SY 2017-2018, the Expanded Students' Grant-in-Aid Program for Poverty Alleviation (ESGPPA) increased its beneficiaries to 1,247 from 1,229 the previous year. The PAMANA was reduced to only 2 from last year's 4 grantees since the other 4 already graduated and no new slots were allotted. Under the sugar industry worker grants, additional 2 slots were granted during the year.

Tertiary graduates in science, engineering, manufacturing and construction comprised 30.2 percent of the total level graduates from 30.68 percent in CY 2016. Graduates under the Expanded Tertiary Education Equivalency and Accreditation Program decreased to 205 graduates from 231 in CY 2016. Post baccalaureate graduates engaged in original research of creative work increased to 910 from last year's 320 graduates. Seventy-three percent were females while twenty-seven percent or 245 were males. The overwhelming increase was due to the required master's degree teaching qualification in higher education and the graduate program scholarship opportunity given to faculty members of HEIs under

⁶DARE TO (Discovery-Applied Research and Extension for Trans/Inter-disciplinary Opportunities) Research Grant is a competitive enabler seed grant amounting to a maximum of Php15M for 2 years per project. It aims to stimulate strong collaborative research and innovation ventures and sustainable partnerships for extension activities during the K to 12 transition.

the K-to-12 Transition Program of CHED. Certification rate of Technical and Vocational Education and Training (TVET) graduates increased to 92 percent in CY 2017 from the previous year's 85 percent. The increase was brought about by the heightened information and advocacy on the Competency assessment and certification.

The DSWD's targeted participants for the Employment Facilitation (EF) track of its Sustainable Livelihood Project were from the LISTAHANAN-identified poor households, particularly Pantawid Pamilya beneficiaries. They are not limited to the youth, but must be at least 18 years old at the start of the project to participate in the EF track. The actual accomplishment is 3,626 households for CY 2017.

The Department of Labor and Employment (DOLE) reported a total of 17,986 youths employed in CY 2017 compared to the previous year's 19,932 youths exposed under the Special Program for Employment of Students, Government Internship Program and Jobstart.

Moving Forward

For the following year until the end of the Plan period, the following are among the region's strategic interventions to fulfill the desired outcome of accelerating human capital development

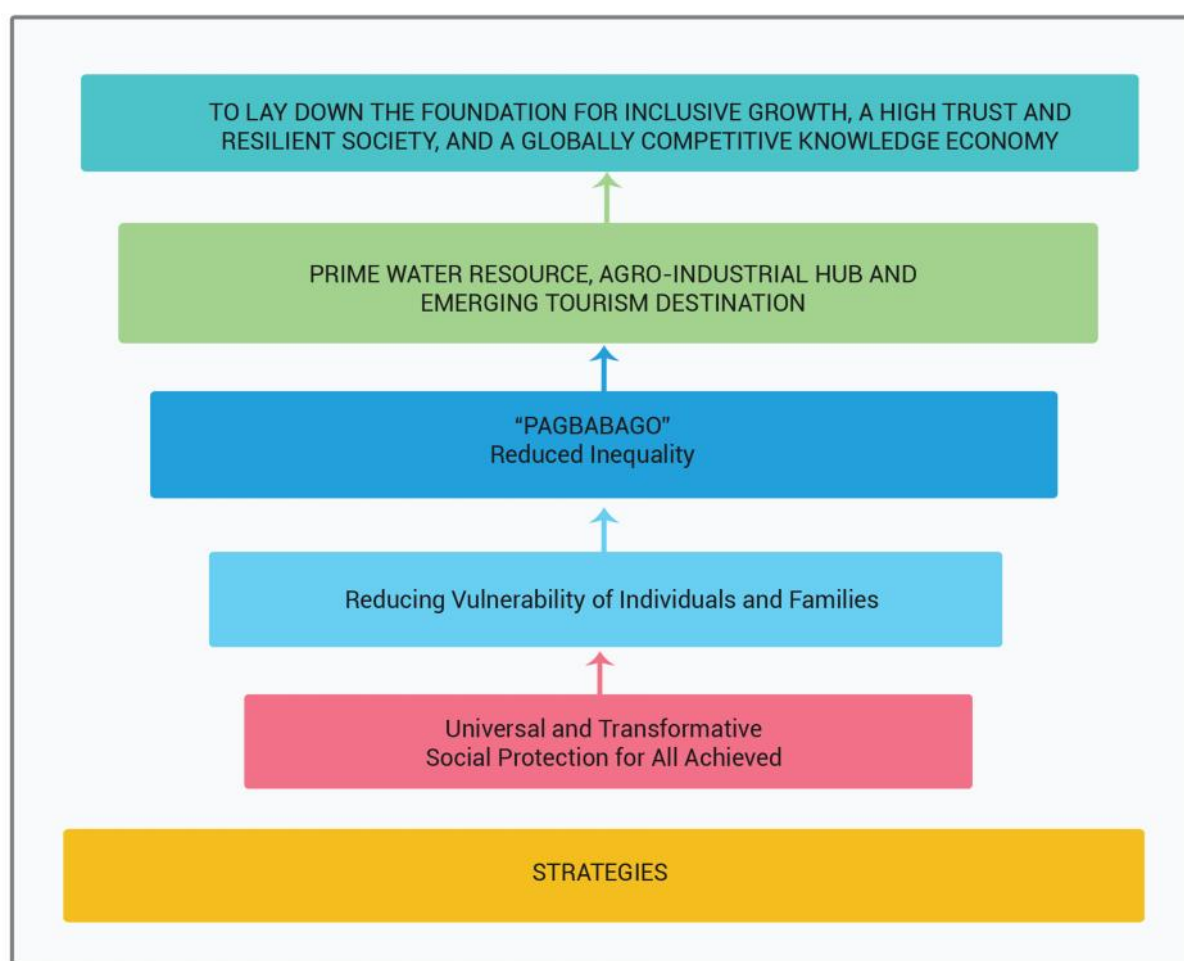
- Provision of comprehensive health care during the first 1000 days of life of newborn and children;
- Strengthen advocacy campaigns on healthy diet and lifestyle;
- Provision of adolescent health services including sexual and reproductive health care;
- Provision of health services for older persons;
- Full implementation of the Reproductive Health Law particularly family planning;
- Prevention and treatment of non-communicable and lifestyle diseases;
- Setting-up and mobilization of service delivery networks for health care;
- Construction/Upgrading and equipping health facilities;
- Improve human resources for health;
- Full implementation of the K to 12 educational reform through timely delivery of adequate education inputs such as school infrastructure and quality learning materials; Continuing hiring and capacity building of teachers; and effective and transparent monitoring and evaluation system including database to track learners among marginalized sectors;
- Integrate programs to keep children in school by assessing the effectiveness of current alternative delivery modes, designing an alternative learning system (ALS) program for senior high school (SHS) dropouts and devising a certification mechanism that will allow completers to obtain a high school diploma;
- Improved access of marginalized sectors to educational services;
- Improve access to quality, relevant and globally-competitive TVET programs;

- Expand access to higher education through the Unified Financial Assistance System for Tertiary Education; Expanded Tertiary Education Equivalency and Accreditation Program; Ladderized Education Program and Distance Education Program; and integration of 21 century competencies in higher educational curriculum;
- Improve employability of the young labor force through the provision of continuing skills enhancement and retooling for the labor force especially among the youth who have no education;
- Strengthen employment facilitation services by providing assistance to new entrants to the labor force through coaching, career advocacy, and counseling;
- Setting-up of online services for overseas Filipinos; strengthening the PESO program of LGUs and Setting-up of accessible public system for job search, matching, and job referral portals; and
- Strengthen and expand internship, apprenticeship, and dual-training programs that facilitate school-to-work transition.

Reducing Vulnerability of Individuals and Families

The reduction of vulnerabilities of persons and families is the primary concern of this chapter. As the region endeavours to achieve universal coverage of social protection programs, all individuals and families are expected to be able to deal and cope with hazards and risks during their life cycles.

Figure 8. Strategic Framework to Reduce Vulnerability of Individuals and Families by 2022



Accomplishments

Achieving universal and transformative social protection for all

Social protection increased for the vulnerable. The total population covered by Philippine health insurance increased by 1 percent in CY 2017 or a total of 3.2 Million of the region's population. This covers 92 percent of the total projected population of 3.5 Million. The number of senior citizens granted with social pension increased to 217,693 from 80,634 of the previous year. This is 23 percent more than the CY 2017 target of 176,346. There were 103,817 households provided with cash grants under the conditional cash transfer program or 0.6 percent higher than the CY 2016 performance.

Overseas Workers Welfare Administration (OWWA) reported 340,440 members as of December 31, 2017, of which 136,772 are new registrants and 203,668 overseas workers with renewed membership. Transportation assistance was given to 19 OFWs in distress. There were 4,015 OFWs and their dependents provided with trainings on values formation, financial literacy and entrepreneurial development. Cash relief assistance was granted to 22,006 OFWs affected by Super Typhoon Lawin. Under the reintegration program, 374 OFW beneficiaries were provided livelihood start-up capital while 33 returning OFWs affected by the financial crisis in the Kingdom of Saudi Arabia received their repatriation assistance to at least cushion the impact of employment and income displacement.

Livelihood assistance in the form of starter kits worth Php10,000.00 each was provided to 174 families with identified child laborers and children at risk to enable the parents earn income and free their children from child labor.

Immediate assistance extended to victims of natural calamities. The Disaster Risk Reduction Management Program focused on the provision of emergency shelter cash assistance to 120,238 families affected by Super Typhoon Lawin. Aside from the shelter assistance, 98 percent of these families were provided with support services through the food-for-work and cash-for-work programs. In exchange of the support services granted, the typhoon victims rendered 80-hour community service for a period of 10 days in their own localities

Food packs were given to 2,383 affected families during the onslaught of Typhoon Jolina, Isang, Kiko and the Northeast Monsoon. Also, DSWD provided augmentation support to the 350 families of Baggao in their attendance to a Flood Drill. Fifty two families with damaged houses were provided Emergency Shelter Assistance chargeable against the Quick Relief Fund. These families were endorsed by LGUs whose houses were totally damaged by fire in the provinces of Cagayan and Isabela.

Assistance to farmers and fisherfolk. The government through the Department of Agriculture (DA) provided subsidy amounting to Php166.17 Million for rice farmers and Php107.03 Million for corn farmers in 2017 under the Philippine Crop Insurance Corporation's (PCIC) registry system for basic sector in agriculture. The insurance coverage amounted to Php1.89 Billion for rice and Php1.05 Billion for corn which included marginal fishers and voluntary paying farmers with landholdings exceeding 3

hectares. The provinces also augmented the program of DA and PCIC with its Bro Program or Pananim. Extreme weather conditions highlighted the value of crop insurance with the spike in the number of farmers availing of the PCIC services.

Table 11. Farmers and Fisherfolk under the Registry System for Basic Sectors in Agriculture (RSBSA), Region 02. CY 2017

Provinces	No. Farmers and Fisherfolk
Batanes	5,376
Cagayan	234,748
Isabela	311,975
Nueva Vizcaya	94,295
Quirino	45,711
Region (Total)	692,105

Source: PCIC website (original source-DBM)

Moving Forward

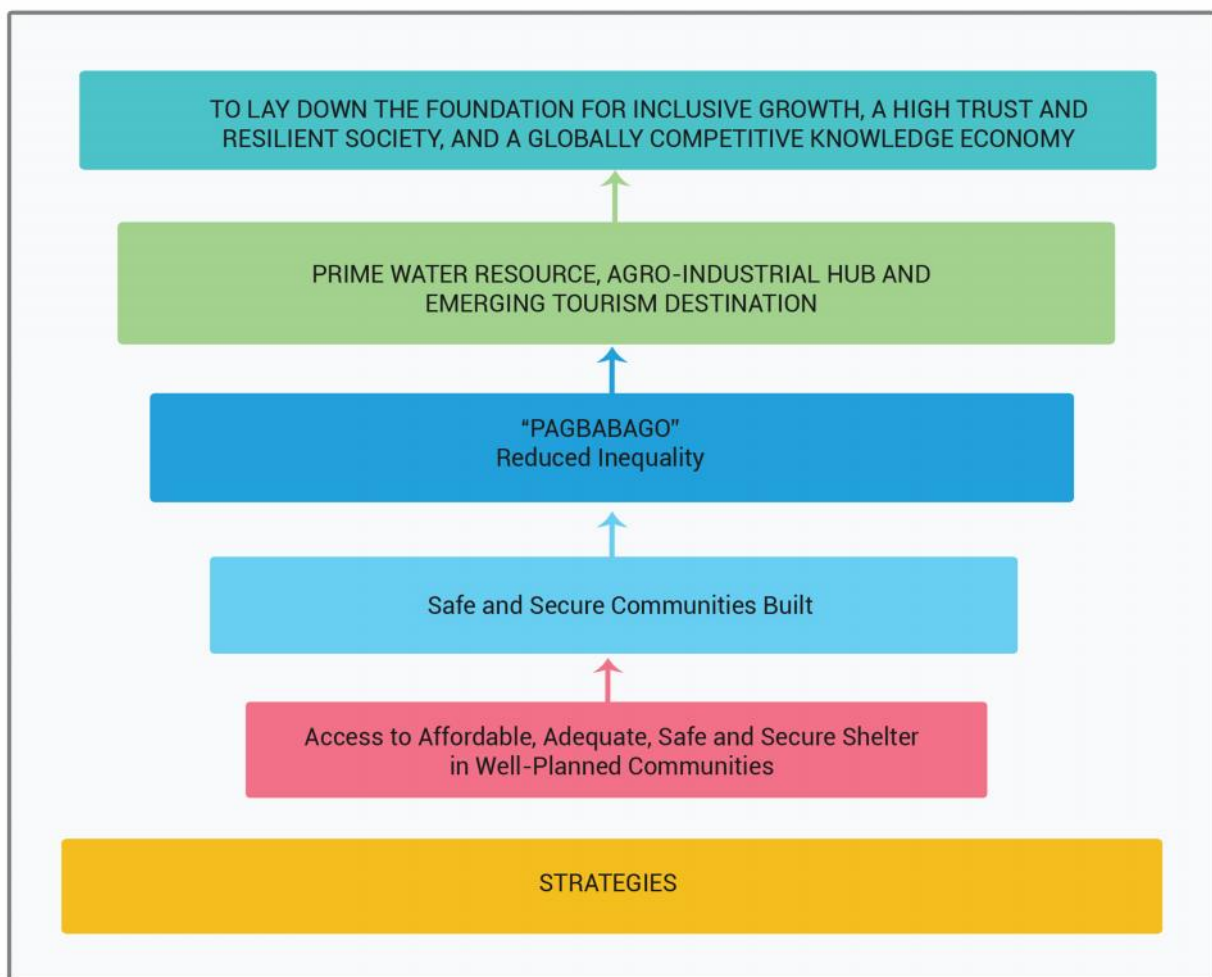
After the first year of implementation of the Cagayan Valley Regional Development Plan 2017-2022, the achievement of a universal and transformative social protection for all Filipinos should focus on an inclusive and convergent social protection programs for the vulnerable groups. The following strategies should be given priority:

- Implement a convergence approach in the delivery of social protection programs to help the poor and vulnerable become self-sufficient and self-reliant;
- Redefine the criteria for the Social Pension for Indigent Senior Citizens to cover all poor senior citizens, not just indigent senior citizens;
- Expand the coverage of the Conditional Cash Transfer Program to accommodate newly identified poor households and near-poor households based on Listahanan;
- Strictly implement the No Balance Billing Policy of the Philhealth;
- Strategically implement health care services that minimize or eliminate high out-of-pocket expenses and expand primary care benefit packages; and
- Improve social protection services for Overseas Workers particularly repatriation-related and re-integration-related services.

Building Safe and Secure Communities

Guided by the regional development framework, the region aims to build safe and secure communities by ensuring access to affordable, adequate, safe and secure shelter for the region's populace. It is also envisioned that the communities where people live in are well-planned and built with due consideration given to ease of access to livelihood opportunities, comfort, security and disaster resiliency. For the initial year of Plan implementation, the performance targets of the sector include provision of housing assistance particularly for informal settlers and those belonging to the lower income bracket.

Figure 9. Strategic Framework to Build Safe and Secure Communities by 2022



Accomplishments

Expanding access to affordable, adequate, safe and secure shelter in well-planned communities

Informal settlements or inadequate housing decreased. During the Census year 2010, the Cagayan Valley region had a total of 713,274 occupied housing units inhabited by 727,327 households. The ratio of household population per housing unit was 5:1 in the same year. About 97 percent of the total households lived in a single house-type structure while the remaining 3 percent lived either in duplex, multi-unit residential, commercial and other types of housing units.

The proportion of informal settlements or those with inadequate housing has decreased, from about 10 percent of total housing units in 2016 to 8.39 percent in 2017. Access to affordable, safe and secure shelter is starting to be realized, particularly for those belonging to the lower income groups, either through their own efforts and initiatives or through the assistance local governments and government housing agencies. Table 12 shows the number of units delivered for socialized and low-cost housing by the Housing and Urban Development Coordinating Council (HUDCC).

Table 12. Socialized and Low-cost Housing Targets and Accomplishment, Region 02, 2017

Program	Baseline (2016)	2017 Target	2017 Actual	Accomplishment (%)
Socialized Housing	658	839	839	100
Low-cost Housing	718	647	647	100

Source: HUDCC North Luzon

More LGUs have engaged in the formulation of their Comprehensive Land Use Plan (CLUP). There was an increased number of local governments that have committed to undertake the completion or updating of their Comprehensive Land Use Plans (CLUPs). A total of 46 LGUs conducted CLUP-related trainings compared to the 12 recorded in CY 2016. These 46 LGUs were provided technical support on land use planning by the Housing and Land Use Regulatory Board (HLURB) and other agencies.

Housing backlog continually being assessed. As of November 2017, a total of 85 LGUs out of the total of 93 cities and municipalities have been assessed of their housing needs. This is an improvement from the 73 LGUs covered as of 2016. From the 2017 assessment, the region had a total housing backlog of 93,104 housing units of which the bulk, or about 62,644, are displaced housing units (Table 13). Displaced houses are those houses are situated in danger areas, along riverbanks and affected by road-right-of-way. The figure was generated by the HUDCC during the conduct of technical assistance to LGUs on Local Shelter Plan formulation.

Table 13. Summary of Housing Need Per Province, Region 02, as of November 2017

No. of Cities/Municipalities	Province	Housing Backlog			Total Housing Need
		Doubled-up household	Displaced household	Homeless	
6/6	QUIRINO	639	1,226	0	1,865
14/15	N.VIZCAYA	5,775	12,203	342	18,320
36/37	ISABELA	14,216	30,345	1,858	46,419
29/29	CAGAYAN	7,543	18,870	87	26,500
0/6	BATANES				
Total(85/93)		28,173	62,644	2,287	93,104

Source: HUDCC North Luzon

Moving Forward

To address the concerns on housing and shelter, the following major strategies should be taken into consideration:

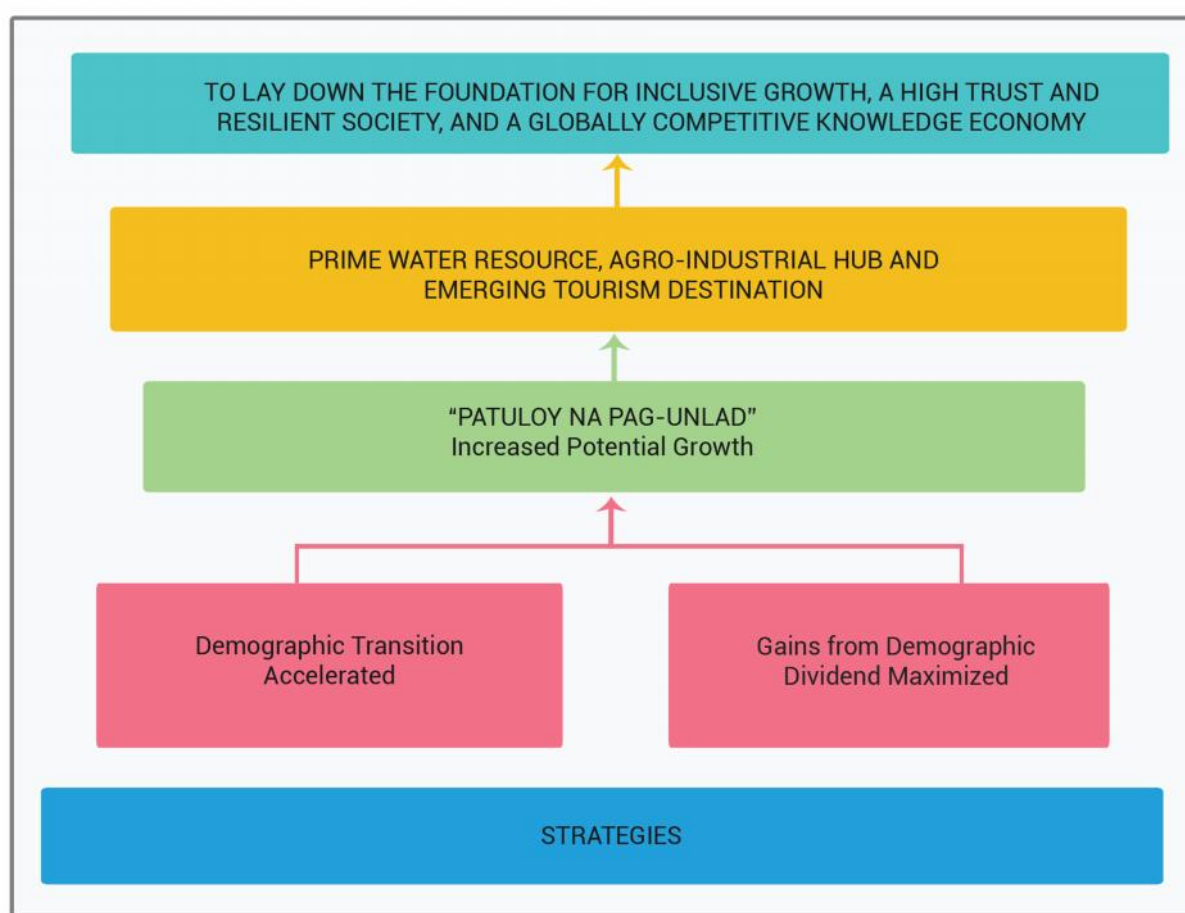
- Encourage the support of the Local Chief Executives in the Local Shelter Plan formulation;
- Local Government Units should prioritize the identification of sites for socialized and low-cost housing;
- Identification of resettlement areas in municipalities that are highly vulnerable to flooding and other natural calamities should be a primary concern of the LGUs;
- Expedite land conversion and land titling for socialized and low-cost housing;
- The government should allocate adequate funds for housing and shelter; and
- Expedite land titling and land conversion of sites identified for resettlement areas and sites for socialized and low-cost housing.

III. PATULOY NA PAG-UNLAD: INCREASE POTENTIAL GROWTH

Reaching for the Demographic Dividend

Reaching for the demographic dividend is a conscious endeavour across sectors. The region is currently in the demographic transition as it exerts all efforts to achieve low fertility and mortality while working on the enhancing the skills, health and productivity of its labor force. With an employment rate that is highest among regions at 96.8 percent and better than the country's employment rate of 94.3 percent, the challenge is to address underemployment and youth unemployment to enable our working age group earn and save for their retirement years. The growing number of those entering the labor market will be an advantage for the region only if they are gainfully employed.

Figure 10. Strategic Framework to Reaching for the Demographic Dividend by 2022



Accomplishments

Accelerating demographic transition

The contribution of a population economic growth varies depending on the age bracket because people earn and consume at different levels over their lifetime. Hence, the age structure of the region's population matters in demographic transition. The region's population below 15 years of age accounts for 30.68 percent of its total population based on 2015 Population Census and lower by 1.06 percent compared to the 2010 Census of Population. Those aged 65 years and above comprise 5.18 percent of the total population versus 4.78 percent in the previous censal year. Dependency ratio declined by 1.62 percent from 57.52 percent in 2010 to 55.9 percent in 2015. There are more young dependents than the old-aged group.

There was a slight decline in fertility rate from 3 births per woman in the 2013 National Demographic and Health Survey (NDHS) to 2.7 births per woman in the NDHS 2017. The region's total demand for family planning¹ among currently married women and sexually active unmarried women² posted the highest among regions at 77 percent. About 57 percent of this demand is met through modern methods of family planning, 5.6 percent through natural method and with only 14.4 percent still unmet. Younger women, age 15-19, have the highest percentage of unmet family planning need of all age groups at 27.9 percent compared to other age groups which ranged from 13 to 18 percent. The 2017 NDHS also reported that 5.4 percent of women age 15-19 experienced giving birth and 2.3 percent were pregnant with their first child at the time of survey. This translates to an adolescent birth rate of 7.8 percent, an increase of 2.4 percentage points compared to the 2013 NDHS result of 5.4 percent. This will be pursued by improving the quality of human capital, both in terms of health and education outcomes and reduction in youth unemployment rates.

Maximizing the gains from our demographic dividend

Maximizing the demographic dividend shall be pursued by improving the quality of human capital, both in terms of health and education outcomes and reduction in youth unemployment rates.

In terms of health outcomes, indicators which showed improvements in the overall health status of the region's population include reduction in child mortality rate, decrease tuberculosis incidence, better nutritional status and zero malaria mortality. The region's maternal mortality was within the target during the period although it is still considered high given national standards. Improvements were likewise noted in access to quality education with the increased participation rates in elementary and junior high school participation rates. More scholarships, grants and trainings were likewise made

¹ Total demand is the sum of unmet need and met need

² Women who have had sexual intercourse within 30 days preceding the 2017 NDHS

available during the year under review for tertiary as well as technical and vocational education. (see Chapter 10).

However, providing adequate quality employment especially to the region's young population remains a challenge in the succeeding years of Plan implementation. The number of unemployed persons ages 15-30 years old increased from 30,000 in CY 2016 to 34,000 in CY 2017. Unemployment among the female youth is higher at 9.6 percent than in the males with 6 percent. Although there was a decrease in underemployment rates among the youth from the previous year, the aggregate underemployment rate of 10.9 percent is still considered high. Majority of the unemployed are Junior High school graduates, and this emphasizes the importance of having a higher level of education in ensuring that the youth become productive members of the labor force. (Table 14).

Table 14. Youth Unemployment & Underemployment, Region 02, 2016 & 2017

Particulars	2016		2017	
	Number (in thousand)	Rate (%)	Number (in thousand)	Rate (%)
Unemployment				
Total	30	6.0	34	6.9
Male	16	4.6	20	6.0
Female	14	9.2	15	9.6
Underemployment				
Total	58	12.3	50	10.9
Male	45	13.4	39	12.4
Female	13	9.4	11	7.7

Source : 2018 Gender Statistics on Labor and Employment, PSA

Details may not add up to total due to rounding

Moving Forward

Demographic dividend is not automatic. It can only be reached when all aspects of human capital development is improved. In correlation with the strategies identified in chapter 10, the following strategies should be undertaken by all stakeholders concerned:

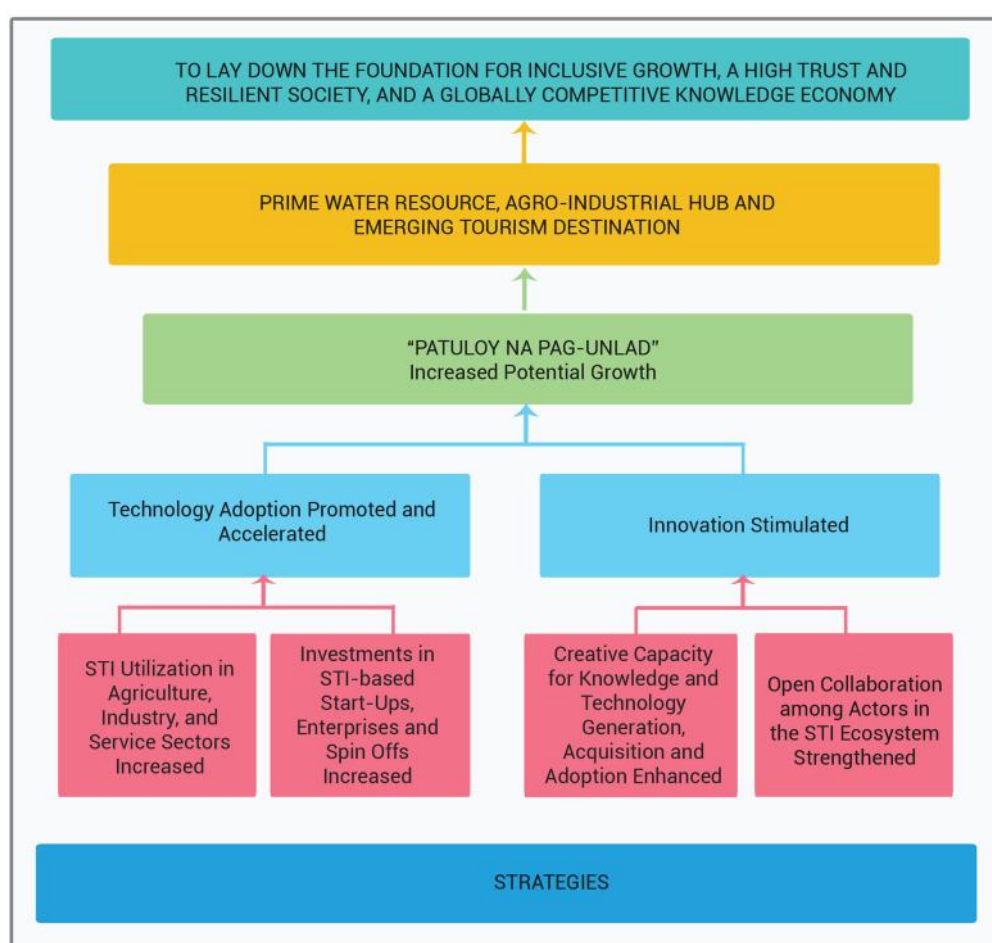
- Lower the fertility rate to create a demographic window of opportunity with emphasis on the need to speed up voluntary reduction in fertility rates, reduce teenage pregnancy and eliminate repeated pregnancies among minors;
- Expand PhilHealth coverage for reproductive health services;
- Intensify the promotion of Contraceptive Self-Reliance among LGUs and establish a monitoring mechanism to ensure its sustainability;
- Improve service delivery networks to attain the desired child and maternal mortality rates; and
- Address job-skills mismatch especially among the youth by reinforcing the technical and vocational courses.

Vigorously Advancing Science, Technology and Innovation

The chapter of the CVRDP 2017-2022 on Science, Technology and Innovation (STI) is expected to contribute to achieving “*Patuloy na Pag-unlad*” or to increase the growth potential of the region. The Department of Science and Technology (DOST) is the key agency in providing central direction, leadership and coordination of scientific and technological efforts in the country. The agency explicitly defined their directions for 2017-2022 in their plan dubbed as “Science for the People” from which all DOST Regional Offices should align their programs, projects and activities.

In 2017, achievements were noted in terms of programs, projects, and activities that would foster and accelerate technology adoption as well as to stimulate innovations among industry players in the region. These were evident in the accomplishments vis a vis the targets set in the Results Matrix of the Chapter (see Tables 15 and 16).

Figure 11. Strategic Framework for Vigorously Advancing Science, Technology and Innovation by 2022



Accomplishments

Technology adoption promoted and accelerated

Technology upgrade for small enterprises accelerated. This year, the two performance indicators under Small Enterprises Technology Upgrading Project (SETUP) posted remarkable achievements. Specifically, technology interventions under SETUP (395 actual, 80 target, 50 in 2016) and number of trainings conducted for both SETUP and non-SETUP (249 actual, 100 target, 50 in 2016) were significantly higher compared to the levels the previous year and with respect to their targets during the year. This achievement was contributed to by the 38 percent increase in fund allocation for the SETUP during the year, with 81 new projects implemented amounting to about Php 84.7 Million.

STI utilization facilitated through intensified research and development. The DOST 02 also intensified its partnership with SUCs in the region through its various projects in the field of research. In 2017, the four S&T networks in the region attained their target number of DOST funded researches. The Cagayan Valley Health Research and Development Consortium (CVHRDC) and the Cagayan Valley Industry, Energy and Emerging Technologies Research and Development Consortium (CVIERDEC) met their target of three (3) researches each while the Cagayan Valley Agriculture and Resources Research and Development Consortium (CVARRD) and Equipment Manufacturing Cluster Region 02 (EMC-RO2) conducted seven researches each. Likewise, a total of 20 new Intellectual Property (IP) applications were facilitated for State Universities and Colleges (SUCs) and Higher Education Institutions (HEIs) during the year or about 100 percent accomplishment rate.

The three existing R&D Centers continued their respective research and development undertakings during the year. These institutions are Metals and Engineering Innovation Center in CSU Carig, Citrus R&D Center in Quirino State University, and the Climate Change R&D Center in ISU Cauayan City Campus.

Investments in STI-based start-ups, enterprises and spin-offs increased. During the year, the target of 40 new MSMEs enrolled in SETUP was doubled. Similarly, the 185 number of households empowered thru Community Empowerment Thru S&T (CEST) was twice as much as the target for the year.

On the one hand, the target of establishing the Food Innovation Center (FIC) in Cagayan province was achieved. The FIC located at Cagayan State University (CSU) helps locals in the region in developing their processed food products. In CY 2017, it developed 50 prototypes of food products. The Center, one of the firsts in the country, conducted the first ever awarding of Licensing Agreements to 12 business firms in the region in 2017 which generated about Php440,000 income. The Center received multiple national awards during the Search for Most Innovative Products, making it the number one Food Innovator in the Philippines. It is also the first FIC in the country with License to Operate (LTO) Accreditation.

**Table 15. Performance Indicators on Promoting and Accelerating Technology Adoption, Region 2, CY 2017
(CVRDP 2017-2022 Results Matrix)**

Objectives/ Results	Indicator	Baseline*		2017 Target	2017 Actual	Accomplish ment (%)
		Year	Value			
Technology adoption promoted and accelerated						
Aggregate Outputs						
	No. of technology interventions under SETUP increased (cumulative)	2016	50	80	395	494
	No. of trainings conducted (SETUP and Non-SETUP) increased (cumulative)	2016	50	100	249	249
Intermediate Outcome 1.1: STI (science, technology and innovation) utilization in agriculture, industry and services sectors increased						
Aggregate Outputs						
	Number of DOST funded researches conducted by the different S&T Consortia increased (incremental)					
	CVHRDC	2016	2	3	3	100
	CVARRD	2016	2	3	7	233
	CVIERDC	2016	2	3	3	100
	EMC	2016	2	3	7	23
	Number of new Intellectual Property facilitated for SUCs and HEIs increased	2016		20	20	100
Intermediate Outcome 1.2: Investments in STI-based start-ups, enterprises and spin-offs increased						
Aggregate Outputs						
	Number of new MSMEs enrolled in SETUP increased (incremental)	2016	30	40	80	200
	Number of households empowered thru Community Empowerment Thru S&T increased (incremental)	2016	50	60	185	208
	Number of Innovation Hubs established increased	2016	1 (EMC - Isabela	1 (FIC- Cagayan	1 (FIC- Cagaya n	done

Reporting Entity/ Data Source: DOST RO2

Innovation stimulated

S&T promotional activities escalated. To stimulate innovation in the region, several activities were undertaken by the DOST RO2 with key partners like LGUs, SUCs, HEIs, and individual stakeholders. The agency surpassed its target of 100 S&T promotional activities for the year with an actual accomplishment of 136 various activities that include S&T fairs, caravans, Centrum, technology clinics

and investor's for a. In addition, five (5) press conferences on STI were held during the year. Evaluated investigatory projects increased to 150 or more than thrice as much in 2016 and twice as much of the target for the year.

Creative capacity for technology acquisition and adoption enhanced. As targeted, three seminar-workshops on Harmonized National R&D Agenda were conducted during the year. On the other hand, two ICT systems supporting STI were developed/maintained as compared to its target of one (1) while one emerging technology was adopted for the year.

For academic year 2016-2017, DOST maintained 258 undergraduate scholarships coming from the different schools in the region. About 91 Junior Level Science Scholarships (JLSS) were new scholars and 39 were DOST graduate scholars. Other scholars were part of the Invent School Program (ISP) for high school and college students, and out-of-school youth together with inventor groups, LGUs, and NGOs.

The DOST RO2 also conducted 6,986 laboratory tests in 2017 through its Regional Standards and Testing Laboratory (RSTL). This is 16 percent higher than the target for the year and 18 percent increase from 2016. The DOST-RSTL 02, offers tests (e.g., proximate analysis of food, physicochemical test of water and phytochemical screening of plant extracts, coliform count etc.) under its chemical laboratory and microbiological laboratory. There were also 10 samples that were referred to RSTL under the One-Stop Shop Laboratory for Global Competitiveness (OneLab).

The DOST 02 also created One Expert, an interactive web-based nationwide pool of S&T experts. In 2017, One Expert maintained 72 experts, which was ten times higher than the target during the year. The Department also introduced in 2017 the One Expert for smartphone users, an application that allows its users to interact with experts using their mobile devices.

Moreover, the performance in terms of the number of products uploaded through the One Store was remarkable in 2017. As compared to the target of 100 products and 50 products last year, the region through the DOST 02 uploaded 955 products uploaded coming from about 500 SMEs and 16 existing oneStore Hubs nationwide. OneStore generated total sales of about Php59.9 Million equivalent to 657 transactions. It also gained more than 10 thousand hits online, visited by 120,298 unique visitors, and created three (3) new OneStore hubs.

The DOST-Region 02 being the pilot region for the OneStoreProject, launched the OneStore version 3.0, the latest and best OneStore version to date and the oneStore Exchange, an e-commerce platform which caters to B2B transactions. Backhauling as a mode of shipping (normally costs 30%-40% of the regular rate) was also introduced by OneStore in 2017.

Open collaboration among actors in STI ecosystem continued to strengthen. Accomplishments with respect to the activities to ensure open collaboration among actors in STI ecosystem were also promising during the year. Six (6) new R&D thru consortia was conducted as compared to the target of 5; the target of 2 Balik Scientists was achieved; 2 International Seminars on STI were attended and re-echoed; and another 2 STI seminars were conducted for SUCs in 2017.

DOST- RO 02 also helped empower local researchers and inventors by establishing local chapters suited to their field of expertise (i.e., National Research Council of the Philippines (NRCP) Cagayan Valley Chapter and Filipino Inventors Society Producer Cooperative (FISPC) Regional Chapter). In 2017, the Department hosted the first regional celebration of the FISPC's National Inventors Week which created new partnerships and opportunities with the private sectors like Air21, 2Go, ShoPinas and DOS1.

Table 16. Performance Indicators on Stimulating Innovation, Region 2, CY 2017
(CVRDP 2017-2022 Results Matrix)

Objectives/ Results	Indicator	Baseline*		2017 Target	2017 Actual	Accomplish ment (%)
		Year	Value			
Innovation stimulated						
Aggregate Outputs						
	No. S&T Promotion Activities conducted (S&T Fairs, Caravan, Centrum, Fora etc.) increased (incremental)	2016	50	100	136	136
	No. of Investigatory Projects evaluated increased (incremental)	2016	50	100	150	150
	No. of Press Conferences on STI Increased (incremental)	2016		5	5	100
Intermediate Outcome 2.1: Creative capacity for technology acquisition and adoption with global standard enhanced						
Aggregate Outputs						
	R&D expenditure as a proportion of GDP increased (in %, cumulative)f	2013	0.05	TBD	-	-
	Number of researchers increased (cumulative)f	2013	654	TBD	20	-
	No. of seminar-workshops on Harmonized National R&D Agenda increased (incremental)	2016	-	3	3	100
	No. of ICT systems developed supporting STI maintained (incremental)	2016	-	1	2	200
	No. of emerging technologies adopted (ICT, biotech, nanotech etc.) increased (incremental)	2016	-	1	1	100
	No. of S&T scholarships maintained (incremental)	2016	-	TBD	258	-
	No. of lab tests conducted	2016	5,900	6,000	6,986	116
	No. of samples referred (OneLab)	2016	9	10	10	100
	No. of S&T experts deployed thru OneExper maintained (incremental)	2016	-	10	72	720

Objectives/ Results	Indicator	Baseline*		2017 Target	2017 Actual	Accomplish ment (%)
		Year	Value			
	No. of products uploaded thru OneSTore increased (incremental)	2016	50	100	955	955
Intermediate Outcome 2.2: Open collaboration among actors in STI ecosystem strengthened						
Aggregate Outputs						
	No. of new R&D conducted thru consortia increased	2016	5	5	6	120
	No. of new Balik Scientists deployed (incremental)	2016	-	2	2	100
	No. of International Seminars on STI attended (incremental)	2016	-	1	2	200
	No. of International Seminars on STI re-echoed (incremental)	2016	-	1	2	200
	No. of STI seminars for SUCs (incremental)	2016	-	2	2	100

Reporting Entity/ Data Source: DOST RO2

Moving Forward

In the next two to three years, the government should focus its efforts on the following strategies to vigorously advance science, technology and innovation in the region.

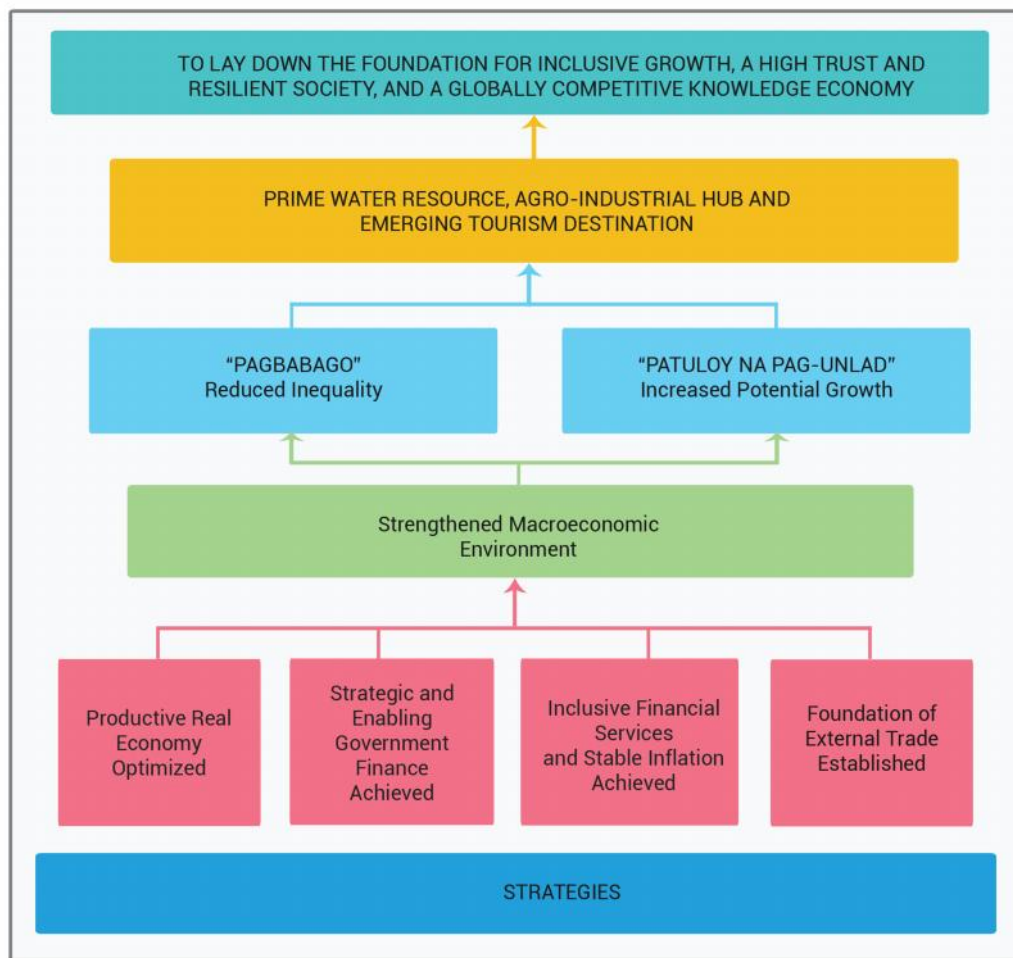
- Aggressively conduct extensive promotion, marketing and commercialization of STI outputs especially from generators in the region that feature local technologies;
- Strengthen support for the start-ups and MSMEs by utilizing the existing services and programs offered by DOST like SETUP, OneSTore, OneLab, OneExpert, laboratories, among others;
- Fast-track the establishment of more innovation hubs in the region that will serve as one-stop-shop food research and development centers so that the region's local food products can reach a sizeable share of the local and national markets;
- Increase investments for STI infrastructures and upgrade research facilities to accommodate R&D activities by SUCs, HEIs, government agencies, and other stakeholders; and
- Expand provision of S&T scholarships to produce and develop more S&T professionals who can take the lead in STI activities that will benefit the region and the country.

IV. ENABLING AND SUPPORTIVE ECONOMIC ENVIRONMENT

Ensuring Sound Macroeconomic Policy

Ensuring stable macroeconomic fundamentals is a vital responsibility of government. It is a necessary condition for the country to attain a dynamic and sustainable economic growth and reduce poverty at the long-term. Appropriate government policies, and administrative reforms would bring in an enabling environment for inclusive financial services, optimized economy and broad-based growth. This report shows the performance of the Region for the first year of the Plan period 2017-2022.

Figure 12. Strategic Framework to Ensure Sound Macroeconomic Policy by 2022



Accomplishments

Productive regional economy optimized

The Cagayan Valley Region surpassed its target of 5.1-6.1 percent for the Gross Regional Domestic Product (GRDP) for the year 2017. This sets a good start in laying down the foundation for an inclusive growth and a globally competitive knowledge economy.

The GRDP growth of 7.2percent is due to the recovery of the Agriculture Sector and the continuous growth of the Industry Sector. On the other hand, the Services Sector recorded a slower growth for the year from 6.6 percent to 6.0 percent.

In terms of percentage distribution, the regional economy is still driven by the Services Sector with a share of 51.7 percent, followed by the Agriculture, Hunting, Forestry and Fishing (AHFF) with 33.7 percent, and Industry Sector at 15.2 percent share.

On the creation of quality job, underemployment rate was higher compared to its level the previous year. The total number of persons who expressed desire for more hours of work increased to 197 thousand from last year's 189 thousand. Unemployment rate was 3.2 percent, slightly higher than last year's 3.1 percent.

**Table 17. Performance Indicators on Optimizing a Productive Regional Economy,
Region 02, CY 2017(CVRDP 2017-2022 Results Matrix)**

Indicator	Baseline		2017 Target	2017 Actual	Accomplish ment (%)
	Year	Value			
GRDP Growth improved (at constant prices, (%))	2016	3.3	5.1-6.1	7.2	above target 1.1 pp (max)
Aggregate Outputs					
Share of Industry GVA to Total GRDP increased (%)	2016	14.5	Increasing	15.2	2.0pp
Underemployment rate reduced (%)	2016	12.7	decreasing	13.6	0.9pp

Reporting Entity/ Data Source:PSA RO2

Strategic and enabling government finance achieved

Revenue collection efficiency was high as reported by the Bureau of Internal Revenue (BIR) and Bureau of Local Government Finance (BLGF). The target 10 percent increase in revenue collections was achieved with a total collection amounting to Php 9.96B for the year, 17.97 percent higher than in 2016. The biggest source of the collection came from income taxes contributing 68.97 percent to the total collection with the remaining coming from value added tax and other taxes.

Local revenue collection increased to PhP 3.92B, almost 10 percent higher than the previous year's PhP 3.57B. The LGUs were also less dependent on Internal Revenue Allotment (IRA) with only the City of Ilagan posting higher ratio for the year from 88 percent to 90 percent.

To improve government finance, DBM conducted trainings on the Government Procurement Reform Act (GPRA). A total of 17 trainings were conducted which is more than the target of 14.

Table 18. Performance Indicators on Achieving Strategic and Enabling Government Finance, Region 02, CY 2017 (CVRDP 2017-2022 Results Matrix)

Indicator	Baseline		2017 Target	2017 Actual	Accomplish ment (%)
	Year	Value			
Revenue collections by agency improved (in Million PhP)					
BIR	2016	8,446.52	10,438.10	9,964.95	95.47
LTO	2015	12.7	No data submitted	No data submitted	No data submitted
Local revenue collection efficiency improved (regional total)	2016	3,572.23	increasing	3,929.45	109.80
Aggregate Outputs					
IRA-Dependency Ratio of Provinces and Cities improved (%)					
Batanes	2016	97	decreasing	96	Desired trend achieved except for Ilagan City
Cagayan	2016	92	decreasing	89	
Isabela	2016	84	decreasing	84	
Nueva Vizcaya	2016	80	decreasing	79	
Quirino	2016	78	decreasing	77	
Cauayan City	2016	74	decreasing	71	
Ilagan City	2016	88	decreasing	90	
Santiago City	2016	86	decreasing	82	
Tuguegarao City	2016	60	decreasing	59	
Number of training activities conducted on Government Procurement Reform Act (RA 9184) and its revised implementing rules and regulations (IRR) increased	2016	13	14	17	121.42

Reporting Entity/ Data Source: BIR, LTO, BLGF

Inclusive financial services and stable inflation achieved

Headline inflation rate for the year 2017 was at the high end government's target of 2.0-4.0 percent. There was a higher inflation compared to the previous year due to price increases in several food commodities (e.g., rice, corn, bread and cereals, etc.), tobacco, electricity, gas and other fuels, and education. There was a higher rate of price increase for food items such as rice, corn, meat, fish and fruits due to the increased demand during the holiday season. The price index of tobacco also rose from 9.8 percent to 16.2 percent due to the implementation of additional tax for cigarettes at the start of the year. For the year 2017, the region experienced a remarkable increase on electricity, gas and other fuels from negative 4.0 percent to 7.3 percent due to the price adjustments in the world market for petroleum products.

On financial services, the banking industry remained strong as more savings and loans were recorded for the year. This is attributed to the continuous campaigns conducted by the Bangko Sentral ng Pilipinas (BSP) to strengthen financial inclusion and increase financial awareness to all. The BSP is also bridging the gap on access to financial products to attain inclusivity for the agriculture sector and other underserved markets. As of 2017, there are 63 more banks established from 325 banks in 2016. There are a total of 131 universal and commercial banks, 83 thrift banks, and 174 rural and cooperative banks in the region. The increase in the latter would cater to the growing need for borrowing and savings in the countryside.

Table 19. Performance Indicators on Achieving Inclusive Financial Services and Stable Inflation, Region 02, CY 2017(CVRDP 2017-2022 Results Matrix)

Indicator	Baseline		2017 Target	2017 Actual	Accomplishment (%)
	Year	Value			
Low and stable inflation rate achieved	2016	3.0	2.0-4.0	3.5	within target
Financial system's total savings portfolio increased (in Billion PhP)	2016	113.99	increasing	128.29	desired trend achieved
Financial system's total loans portfolio increased (in Billion PhP)	2016	49.02	Increasing	55.65	desired trend achieved
Aggregate Output					
Number of banking institutions within the region increased	2016	325	increasing	388	desired trend achieved

Reporting Entity/ Data Source: PSA, BSP Website

Foundations for external trade established

External trade remains one of the development strategies being pushed forward given the region's strategic location and resource potential. For this year, the Department of Trade and Industry (DTI) continuously assisted exporters and MSMEs in priority export industries. DTI also took advantage of the growing role of the digital market in increasing opportunities for the industry.

The agency conducted the first ever Rural Impact Sourcing (RIS) Forum aimed to promote various digital opportunities. Likewise, it also reached out to 37 MSMEs for a wider market through e-commerce (see also Section 9 on Expanding Economic Opportunities in Industry and Services through *Trabaho at Negosyo*). Other initiatives during the year also include the endorsement of the Regional Development Council 02 on the proposed establishment of the Philippine Corn Research Institute in the Valley to take advantage of the region's primacy in the production of crops.

Table 20. Performance Indicators on Establishing Foundations for External Trade, Region 02, CY 2017 (CVRDP 2017-2022 Results Matrix)

Indicator	Baseline		2017 Target	2017 Actual	Accomplish ment (%)
	Year	Value			
Aggregate Outputs					
Number of exporters assisted increased (cumulative)	2016	38	40	42	105.00
Number of MSMEs with e-commerce increased (cumulative)	2016	-	25	37	148.00

Reporting Entity/ Data Source: DTI 02

Moving Forward

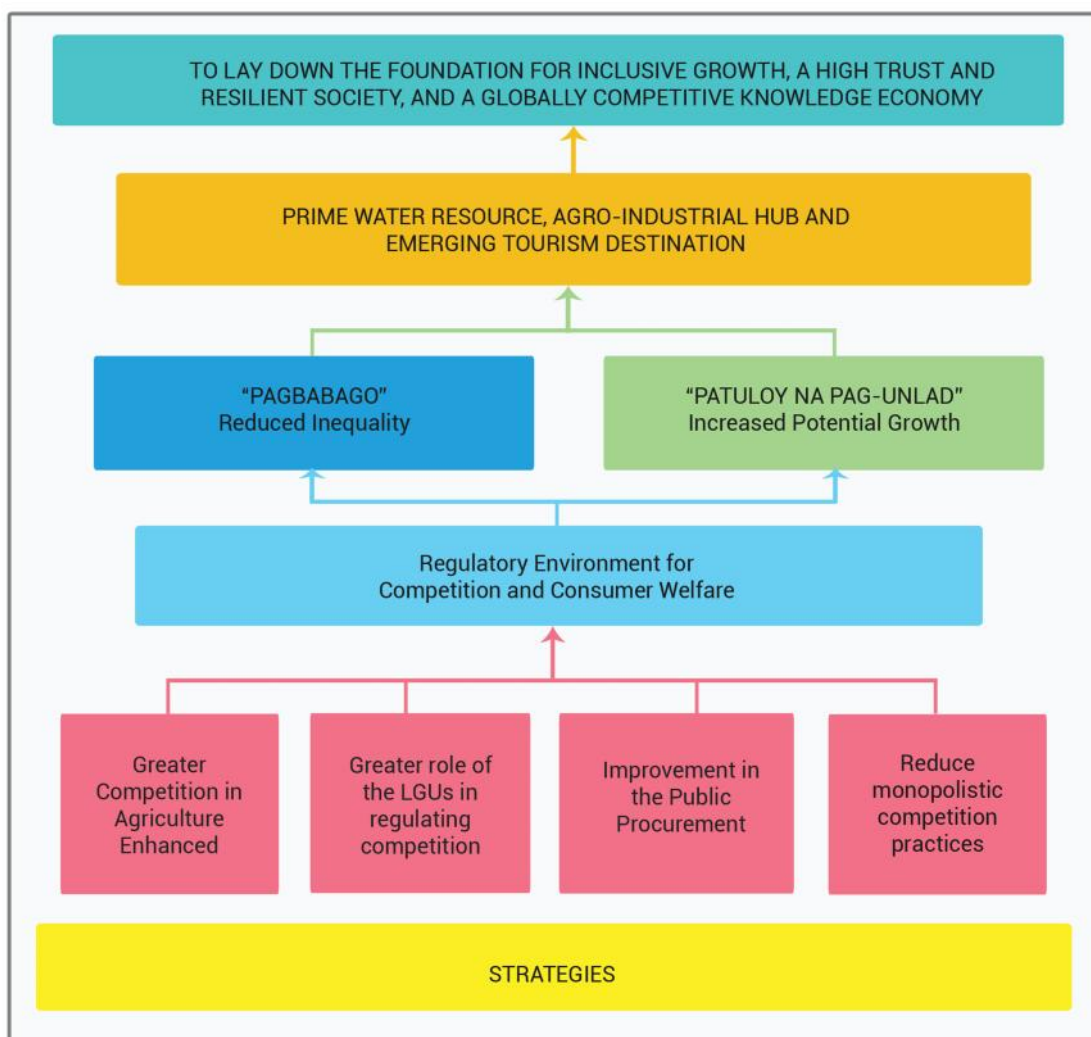
For the next years, the government should focus on sustaining the positive growth trajectory registered during the year, on further improving generation of revenues, enhancing capability of LGUs to generate their own local revenues and exploring mechanisms and innovative programs to establish the export potential of the region. Specific measures that need to be pursued are as follows:

- Strengthen resiliency of agricultural producers to uncertainties in the sector by developing programs and projects that would manage risks and vulnerabilities from natural hazards. Promotion of climate-smart technologies and practices should also be intensified to ensure resiliency of crops, increased productivity and growth and sufficiency in production (see also Section on Expanding Economic Opportunities in Agriculture, Forestry and Fisheries). The younger generation should also be encouraged to engage in agriculture to address the aging population of farmers and fisherfolks;
- Expand revenue-generating efforts and intensify implementation of tax administration reforms such as capacitation of LGUs to strengthen generation of local taxes, digitization and upgrading of systems for simplified and fast revenue collection and compliance monitoring;
- Revisit existing LGU revenue management regulations and policies including the updating of the Local Revenue Code (LRC) and Local Investments and Incentives Code (LIIC) of all LGUs;
- Intensify efforts to assist LGUs on the development of Local Economic Enterprises aimed to minimize dependency to IRA and attain a self-sustaining governance;
- Continue advocacy on financial literacy especially in the accumulation of savings among the working age population in order to gain the benefits of demographic dividend in the country at the long-term (see also Section on Reaching for the Demographic Dividend); and
- Explore and upgrade technologies, adapt to market trends, engage in various market platforms and enhance product packaging and marketing to maximize the opportunities on local produce or OTOP products in order to gain recognition at the local and international markets.

Support to the National Competition Policy

Seeing the need to prioritize improvement of competitiveness in the public and private sectors to measure up to global market competition, the government pursued a National Competition Policy to address competition issues, and promote consumer welfare. In the region, four intermediate outcomes were identified in support to the national target of leveling the playing field, namely: (a) greater competition in agriculture, (b) greater role of the LGUs in regulating competition, (c) improvement in public procurement, and (d) reduced monopolistic competition practices. Outcomes 1 and 3 were already discussed under section on Expanding Economic Opportunities in Industry and Services through *Trabaho at Negosyo*.

Figure 13. Strategic Framework to Support the National Competition Policy by 2022



Accomplishments

Greater Role of the LGUs in Regulating Competition

The Competitiveness Index of the region improved during the year with most of the provinces garnering a higher rank in 2017 as against the previous year. The province of Quirino displayed the highest improvement from 54th to 16th rank out of the 145 provinces assessed, earning a place in Top 20 among provinces nationwide. The province of Nueva Vizcaya also displayed an impressive jump from 65th to 38th rank, almost cutting its rank by half. Only the Isabela province went down in ranking from 22nd to 30th. On the other hand, the municipalities of Peñablanca and Nagtipunan ranked 14th and 17th in the list of most improved under the category first to second class municipalities.

In terms of ranking on economic dynamism, the municipality of Bayombong in Nueva Vizcaya ranked the highest in the region at 28th, followed by Solano, also in Nueva Vizcaya, at 30th rank. This indicator covered the municipality's size and growth of the local economy measured through business registrations, capital, revenue and permits, capacity to generate employment, cost of living, cost of doing business, financial deepening, productivity, and presence of business and professional organizations.

On government efficiency which looks into the ability to protect and enforce contracts, apply moderate and reasonable taxation and regulate proactively, the City of Santiago obtained the highest rank among the cities in the region, coming out at 37th rank out of 145 cities. The municipality of Tumauni came in first from among the municipalities in the region at 19th rank for 1st to 6th class municipalities category (see Chapter also 5).

Table 21. Performance Indicators on Improving the Role of LGUs in Regulating Competition, Region 02, CY 2017(CVRDP 2017-2022 Results Matrix)

Indicator	Baseline		2017 Target	2017 Actual	Accomplish ment (%)
	Year	Value			
Competitiveness Ranking of Provinces improved					
Batanes	2016	72	Improved ranking	68	rank improved (up by 4)
Cagayan	2016	46		33	rank improved (up by 13)
Isabela	2016	22		30	rank down by 8
Nueva Vizcaya	2016	65		38	rank improved (up by 27)
Quirino	2016	54		16	rank improved (up by 38)

Reporting Entity/ Data Source: NCC Website

Reduced Monopolistic Competition Practices

For this year, the Department of Trade and Industry (DTI) continued to intensify its role in monitoring unfair practices in the local market as well as in the promoting consumer protection. On consumer complaints received by the agency, all cases reported were resolved exceeding the target of 85 percent.

Meanwhile, on the number of Negosyo Centers established and maintained, actual accomplishment was short of target by 14.29 percent. Only 48 centers were recoded this year as against the target of 56 Centers established and maintained.

Table 22. Performance Indicators on Reducing Monopolistic Competition Practices, Region 02, CY 2017(CVRDP 2017-2022 Results Matrix)

Indicator	Baseline		2017 Target	2017 Actual	Accomplishment (%)
	Year	Value			
Consumer complaints resolution rate increased (%)	2016	-	85.00	100.00	Exceeded target by 15.0 pp
Aggregate Outputs					
Number of Negosyo Centers established and maintained increased	2016	40	56	48	85.71
Number of advocacy activities on Consumer Protection Services conducted increased	2016	-	530	No data	

Reporting Entity/ Data Source: DTI 02

The RDC 02 passed Resolution No. 02-31-2017 on September 15, 2017 supporting and endorsing the CY 2018 Convergence Program of the Department of Trade and Industry and the Department of Public Works and Highways. The said program is tagged as Roads Leveraging Linkages of Industry and Trade (ROLL IT). A total of 14 projects were proposed amounting to Php 511 million. The ROLL IT Program aims for a more coordinated effort between the two Departments in the identification, prioritization and implementation of roads leading to industries and economic zones.

Moving Forward

At the End-of-Plan period 2017-2022, the region aims to have contributed to the implementation of the National Competition Policy and in the improvement of the country's competitiveness. For remaining Plan period, the following strategies are recommended:

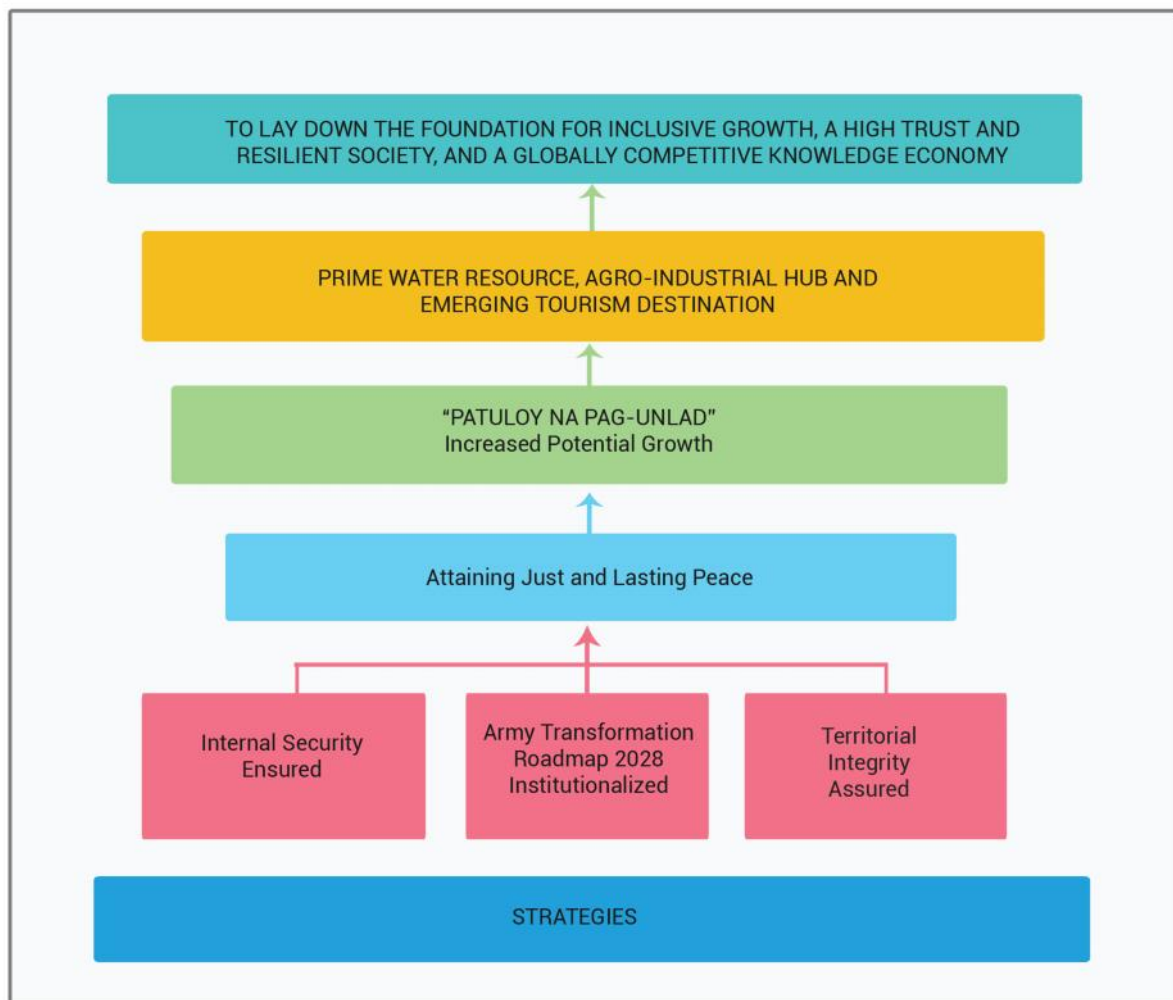
- Engage more academic institutions to intensify validation, analysis and review of Cities and Municipalities Competitiveness Index (CMCI) and other competitiveness reports and surveys
- Enhance capabilities of the LGUs in terms of streamlining business processes, revenue generation, strengthening delivery of services and infrastructure facilities, and in increasing their resiliency;
- LGUs to update the Comprehensive Development Plans (CDPs), Investment and Incentives Code, and Revenue Code to attract more investors in their localities;
- Sustain efforts on the resolution of cases on consumer complaints and ensure consumer welfare; and
- Develop a price monitoring system for basic commodities and agricultural products that is open to the public to avoid unfair pricing especially during the occurrence of calamities where prices skyrocket.

V. ENABLING AND SUPPORTIVE ECONOMIC ENVIRONMENT

Attaining Just and Lasting Peace

The attainment of a just and lasting peace is an inherent goal of every country. Without it, socio-economic development would not progress and inequality may widen. This report shows regional efforts to attain lasting peace and territorial integrity. At the end of the Plan period, the identified strategies are expected to ensure internal security, institutionalize the Army Transformation Roadmap 2028 and attain territorial integrity.

Figure 14. Strategic Framework to Attain Just and Lasting Peace by 2022



Accomplishment

Internal security assured

In 2017, the Northern Luzon Command (NOLCOM) organized the Joint Task Force “TALA” with 5th Infantry Division of the Philippine Army as its core. The Brigade then formulated the IMPLAN “KAPAYAPAAN-LIBERATOR” covering the provinces of Cagayan, Isabela, Quirino and six northern municipalities of Nueva Vizcaya and five lower municipalities of Apayao.

On February 2017, President Duterte terminated the ceasefire with New People’s Army, which led to the TRIAD operations of the Brigade. This resulted to nine government-initiated tactical engagements and recovery of three high powered and seven low powered firearms. Several enemy personalities were neutralized, nine were captured while 31 voluntarily surrendered. A total of 10 enemy encampments were also seized wherein various IEDs, explosives, subversive documents with high intelligence value and communication equipment were recovered. Alongside the military operations were 4,132 civil affairs activities conducted throughout the year through the Civil Military Operations (CMOS).

Table 23. Performance Indicators on Internal Security, Region 02, CY 2017
(CVRDP 2017-2022 Results Matrix)

Indicator	Baseline		2017 Target	2017 Actual	Accomplishment (%)
	Year	Value			
Number of barangays in Geographically Isolated and Disadvantaged areas (GIDAs) and in Conflict Affected Areas (ConAAs) provided with community Service Program (CSP)	2016	-	increasing	No data submitted	c/o AFP
Percentage of LGUs with Peace and Order and Public Safety Plan (POPS PLAN)	2017		100	100	100
Aggregate Outputs					
Number of CAA Patrol Bases supported by LGUs	2016	-	increasing	No data submitted	c/o AFP
Percentage of command and control (C2) activities successfully undertaken	2016	-	90	No data submitted	c/o AFP

Reporting Entity/ Data Source: AFP, DILG

Territorial integrity assured

To secure the region's maritime waters, the Philippine Coastguard (PCG) conducted a total of 209 seaborne patrols which is significantly higher than the previous year. There were also more coastal patrols conducted in 2017 compared to the previous year. The continuous provision of safety issuances to all ships (local and foreign) were also done to ensure that the vessels comply with the maritime laws and standards. However, actual accomplishment was short of the desired target in terms of the issuance of Pre-Departure Inspection and Port State Control. According to PCG, this is dependent on the number of foreign vessels sailing within the area of responsibility, emergency port calls, and the weather experienced during the period.

Table 24. Performance Indicators on Territorial Integrity, Region 02, CY 2017
(CVRDP 2017-2022 Results Matrix)

Indicator	Baseline		2017 Target	2017 Actual	Accomplish ment (%)
	Year	Value			
Number of maritime security and law enforcement activities increased					
Seaborne Patrol					
<input type="checkbox"/> PCG	2016	89	increasing	209	Desired trend achieve
<input type="checkbox"/> BFAR	2016	100	100	No data	c/o BFAR
Shore/ Coastal Patrol					
<input type="checkbox"/> PCG	2016	4,672	increasing	4,969	Desired trend achieve
<input type="checkbox"/> BFAR	2016	100	100	No data	c/o BFAR
Percentage of poaching cases resolved against cases filed (%)	2016	-	-	-	c/o BFAR
Aggregate Outputs					
Pre-Departure Inspection (PDI) (domestic vessel/ motor/ banca)	2016	5,315	increasing	4,471	Desired trend not achieved
Port State Control (PSC) (foreign vessel)	2016	8	increasing	5	Desired trend not achieved

Reporting Entity/ Data Source: BFAR, PCG Northeastern Luzon District

Moving Forward

To sustain the efforts in this Sector and as well as to address gaps on external and maritime security, the following are recommended:

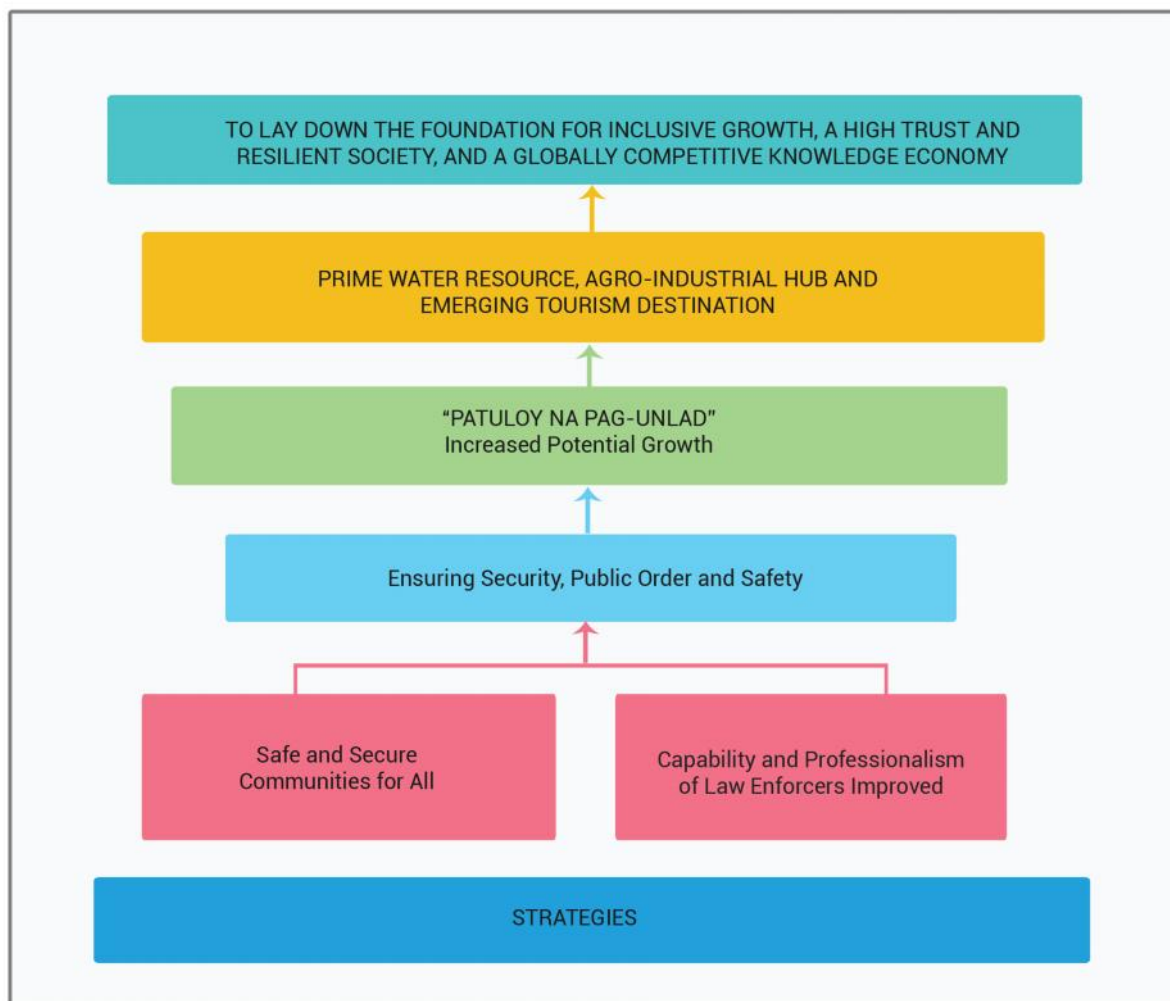
- Ensure implementation and monitoring of the ARMY Transformation Roadmap 2030 for the Philippine Army continually improves its capabilities and its systems;
- Strengthen efforts on improving discipline and professionalism in all levels of the Philippine Army, ensure strict implementation of command responsibility and accountability, and promote culture of excellence and national pride in the performance of duties.
- Enhance the capability of the coast guard and BFAR 02by increasing their manpower and modernization of maritime patrol equipment and facilities in order to strengthen coordination and conduct of monitoring activities and rescue operations and in the sea; and
- Strict enforcement of fishery laws.

Ensuring Security, Public Order, and Safety

Ensuring public order, security and safety is one of the priority thrusts for this Plan period pursuant to the 0 to 10 Socio-economic agenda of the current administration. Heightened efforts and strengthened cooperation between and among the law enforcement agencies and other institutions were expected as the goal for a reduced crime rate is being pursued across the country.

In the region, strategies were identified to ensure security, public order and safety of the regional populace. The accomplishments and milestones achieved in 2017 and the recommended actions as key actors move forward to ensure peace and order in Cagayan Valley are presented in this chapter.

Figure 15. Strategic Framework to Ensure Security, Public Order and Safety by 2022



Accomplishments

Safe and secure communities

The region's crime volume was 18.81 percent lower compared to its level during the previous year. Index crimes was lower by 25.16 percent due to the intensified crime prevention activities such as increasing police visibility and strong coordination of PNP with the local government units, other law enforcers and the general public. On the other hand, the target trend for non-index crimes was not met. Non-index crimes include those incidences related to vehicular incidents and violation of special laws. On the arrest of perpetrators or suspects, both crime clearance efficiency and crime solution efficiency significantly improved during the period. Three of the most wanted persons were also arrested by the PNP during the year.

In 2016, there were already 2,021 barangays with organized *Mamamayang Ayaw sa Anomalya, Mamamayang Ayaw sa Illigal na Droga* (MASA MASID) Team. At the end of 2017, all barangays have already established their MASA MASID Teams and the program was fully implemented throughout the year. One of the major deliverables of the Program is the Community Based Rehabilitation Program (CBRP) which aims to bring new hope and opportunities to drug surrenderees. Another milestone for the sector is the organization of the Regional Inter-Agency Committee on Anti-Illegal Drugs (ICAD) as provided under EO No. 15, s. 2017. The following responsibilities are provided under ICAD: PDEA shall lead the enforcement of the law, DOJ for justice, DILG on advocacy activities, and DOH on rehabilitation of users.

The efforts of several agencies have been complemented with the participation of barangays in the campaign against drug abuse through the formulation of their Barangay Anti-Drug Plan of Action. For this period, there are already 2,189 barangays with the said Plan of Action.

The number of fire incidents in the region decreased during the year. This is due to the heightened advocacy on fire prevention which led to an increased proportion of establishments complying with the Fire Code. The BFP also responded efficiently during emergency situations. Out of the 179 fire incidents, 75.97 percent were responded within 7 minutes. More response time was needed in some cases due to factors such as terrain, road condition and distance travelled from the station. The amount of damages amounted to PhP 100.75 million based on the submitted affidavits of losses.

**Table 25. Performance Indicators on Ensuring Safe and Secure Communities,
Region 02, CY 2017(CVRDP 2017-2022 Results Matrix)**

Indicator	Baseline		2017 Target	2017 Actual	Accomplish ment (%)
	Year	Value			
Crime Situation					
Total crime volume reduced	2016	17,476	Decreasing	14,188	Desired trend achieved
Crime Clearance Efficiency improved	2016	74.82	76.82	81.17	Up by 4.35 pp
Crime Solution Efficiency improved (%)	2016	63.48	67.48	67.52	Up by 0.04 pp
Drug Situation					
Percentage of Watch Listed Drug Personalities (HVT and SLT) cleared	2016	1,706	139	No data submitted	c/o PDEA
Percentage of barangays declared “drug cleared”	2016	1,075	50%	No data submitted	c/o PDEA
Number of cases filed against the arrested personalities decreased	2016	1,288	decreasing	No data submitted	c/o PDEA
Public Safety					
Fire incidents decreased	2016	228	decreasing	179	desired trend achieved
Proportion of inspected buildings and establishments complying with the Fire Code increased	2016	88.30	increasing	90.76	desired trend achieved
Aggregate Outputs					
Crime Situation					
Number of index crimes decreased	2016	4,308	decreasing	3,224	desired trend achieved
Number of non-index crimes decreased	2016	13,168	increasing	10,964	desired trend not achieved
Number of physical injuries due to road traffic/accidents decreased	2016	7,311	decreasing	6,463	desired trend achieved
Most Wanted Persons Arrested (Regional, Provincial, Municipal) (incremental)	2016	2	3	3	100
Drug Situation					
Number of anti-drug operations conducted decreased	2016	834	40%	No data submitted	c/o PDEA

Number of drug personalities arrested decreasing	2016	1,075	40%	No data submitted	c/o PDEA
Number of drug users decreased	2016	22,589	decreasing	No data submitted	c/o PDEA
Number of conducted anti-drug advocacy increased	2012	1,580	increasing	No data submitted	c/o PDEA
Number of barangays with MASA MASID Team organized	2016	2,021	290	290	100
Public Safety					
Percentage of fire calls responded within seven (7) minutes	2016	131	increasing	136	103.82

Reporting Entity/ Data Source: PNP, PDEA, BFP, DILG

Capability and professionalism of law enforcers improved

The ratio of police to citizen improved during the period due to the continuous filling-up of vacant positions. The police force was also continuously capacitated on human rights, gender awareness development as well as on women and children advocacies. A total of 90percent of the police force passed the post training test conducted by the Commission on Human Rights (CHR).

On the other hand, firemen to population ratio was maintained at 1:2000. Various training and workshop activities were also conducted by the BFP especially in stations with only two or three trained safety inspectors. Campaigns on fire safety and fire drill were intensified to educate and prepare the general public in times of fire incidents in their localities.

In2017, NAPOLCOM had 39 cases for disposition, 26 of these were carry over from 2016 and 13were new cases. On the adjudication of Summary Dismissal Cases (SDC), 29 or 74.4 percent were disposed involving 39 respondents. The remaining 25 cases are pending for disposition. By classification of offense, 85 percent were grave misconduct, followed by conduct unbecoming of a police officer at 9 percent, and serious irregularities in the performance of duty at 4.69 percent. Most of the respondents were PO III (23.44%), PO II (17.19%), PO I (14.06%), SPO I (12.5%), SPO IV (7.81%), P/Sr. Inspector II (7.81%), and P/CHIEF INSP (6.25%).

On Pre-Charge Evaluation of complaints against erring PNP members, there were 18 complaints for disposition during the period. Seven complaints were referred for Summary Dismissal Cases (SDC), six were forwarded to the RIAS while five were dropped/ dismissed or withdrawn by the complainants. Out of the administrative and criminal cases involving 172 police officers, a total of15 Police Commissioned Officers (PCOs) and 111 Police Non-Commissioned Officers (PNCOs) were penalized.

**Table 26. Performance Indicators on Improved Capability of Law Enforcers,
Region 02, CY 2017(CVRDP 2017-2022 Results Matrix)**

Indicator	Baseline		2017 Target	2017 Actual	Accomplish ment
	Year	Value			
Police to Citizen Ratio improved	2016	1:600	1:534	1:534	Ratio achieved
Firemen to Population Ratio improved	2016	1:2000	1:2000	1:2000	Ratio achieved
Proportion of participants (AFP/PNP) who passed the post training tests (%)	2016	85	85	90	Up by 5 pp
Proportion of cases disposed over the total number of cases filed (rate of disposition of cases)	2016	27	75	74.4	short of 0.6 pp
Aggregate Outputs					
Number of law enforcers trained with Gender Awareness Development increased (cumulative)	2016	1,845	increasing	19,912	desired trend achieved
Number of law enforcers trained of human rights increased (incremental)	2016	2,476	2,526	4,129	163.46
Number of human rights violation cases against law enforcers expeditiously investigated (incremental)	2016	20	22	12	54.54

Reporting Entity/ Data Source: PNP, BFP, NAPOLCOM, CHR

Moving Forward

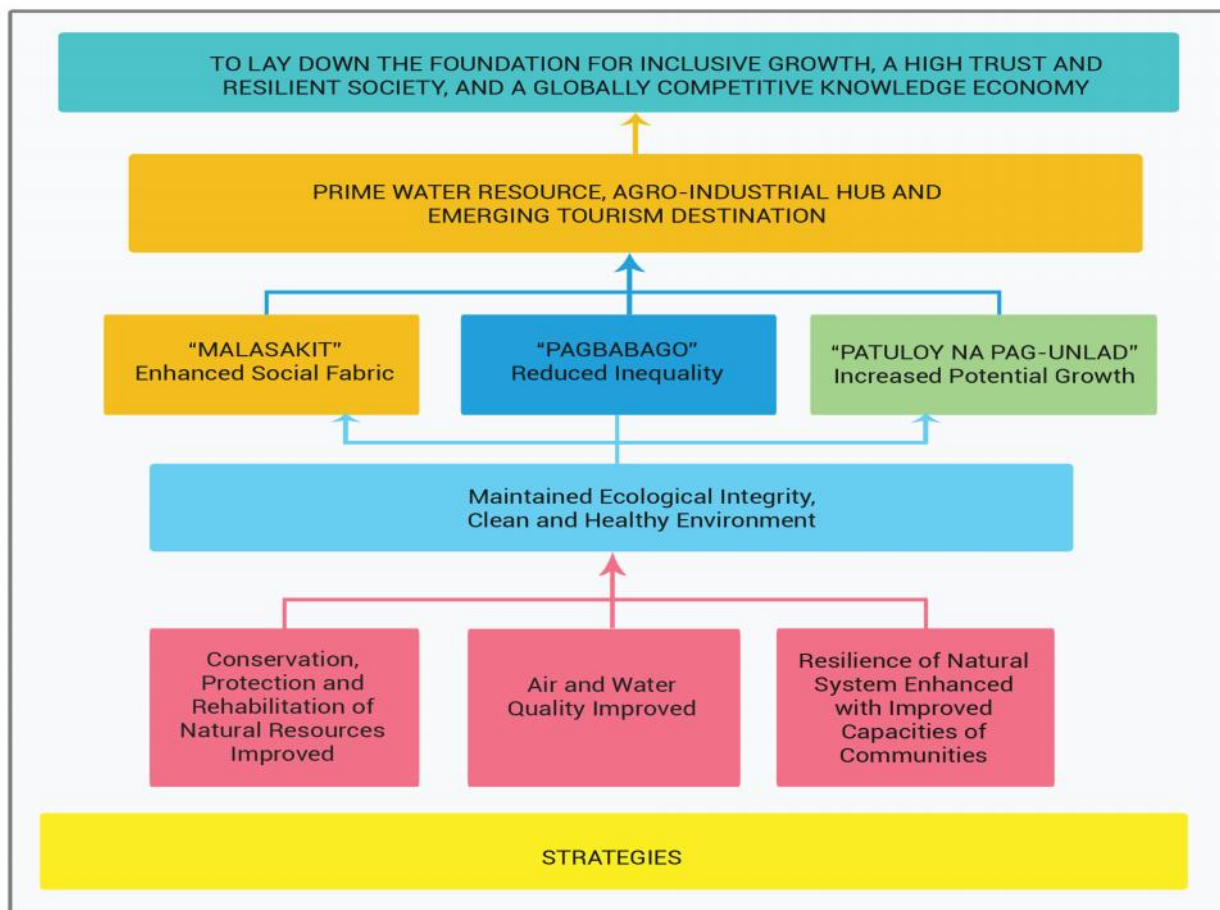
The following are recommended for the succeeding years in order to sustain public order, security and safety:

- Increase manpower of law enforcement agencies including the Fire Bureau in order to ensure security, public order and safety within the locality;
- Continuous enhancement of the Move, Shoot, Communicate and Investigate capability of the police;
- Sustained deployment of the police force in the community for greater police visibility;
- Ensure strong partnership and coordination with other law enforcement agencies in undertaking law enforcement operations;
- Continue education and training programs to sustain discipline professionalism and effectiveness among law enforcement agencies;
- Strict implementation of command responsibility and accountability;
- Promotion of culture of excellence in the performance of duties; and
- Broaden and intensify citizen empowerment and engagement in curbing criminality and promoting peace in their communities.

Ensuring Ecological Integrity, Clean and Healthy Environment

This chapter highlights the major programs, projects and activities implemented to achieve the targets set for 2017. Interventions focused on mainstreaming the conservation, protection and rehabilitation of natural resources along with ensuring improvements in air and water quality. These shall be attained by building the capacities of communities for them to become active stakeholders in ensuring ecological integrity, clean and healthy environment.

Figure 16. Strategic Framework to Ensure Ecological Integrity, Clean and Healthy Environment by 2022



Accomplishments

Improving conservation, protection and rehabilitation of natural resources

Forest management and rehabilitation intensified. From 2011 onwards, the National Greening Program (NGP) provided a significant stride in the region's reforestation efforts. For 2017, about 16 million fruit and forest trees were planted representing 95.7% accomplishment for the year. The DENR Region 2 has already reforested about 93,047 hectares from 2011 to 2017.

Progressive rehabilitation was also done in the three Big Scale Mining sites, namely: the OceanaGold Philippines Inc. (OGPI), the Dinapigue Mining Corporation (formerly Geogen) and the FCF Minerals Corporation. A total of 45 hectares were rehabilitated in 2017 making the cumulative total of mining areas rehabilitated at 804 hectares.

Table 27. Performance Indicators on Forests, Watersheds and Coastal Resources, Region 2, CY 2017
(CVRDP 2017-2022 Results Matrix)

Indicators	2016 Baseline Value	2017 Target	2017 Actual	Accomplishment (%)
Area for reforestation and rehabilitation increased (hectare)	10,120	16,121	16,121	100
No. of seedlings planted	16,812,449	17,470,695	16,723,800	95.7
Forest area maintained increased (hectares)	40,925	43,203	44,697	103
Coastal Areas managed and protected (hectares)	1,650	1,619		
<i>Coral reefs</i>	1000	627	968	154
<i>Mangroves</i>	-	785	797	101
Ecotourism Sites maintained		5	5	100
Reforestation area in mining sites increased	647	804	804	100
Mineral production increased				
o Metallic (in MT (by wt))	86,860	86,000	67,468	78.45
o Non-metallic (in cu-m (by vol))	2,067,145	2,663,167	2,663,167	100
Revenue generated on mineral production increased	14.0 B	15.4 B	15.7B	102

Data Source: DENR RO 2, MGB RO 2

In securing and maintaining the existing 93,047.78 hectares of plantation, management and supervision have been strengthened through the participation of Community-Based Forest Management (CBFM) beneficiaries and DENR personnel; greater involvement of women; continuing support from mining companies; constant IEC; appointment of extension officers; procurement of drone for regular monitoring; conduct of regular foot patrolling and other activities related to maintenance and protection. With the extension of the NGP per Executive Order No. 193, series of

2015, other remaining unproductive and degraded areas will be reforested, thus, an increased forest cover is expected by 2028.

Coastal and marine ecosystems management improved. The Coastal and Marine Ecosystems Management Program (CMEMP) was sustained with the continuing implementation of the Batanes Protected Landscape and Seascape, Palau Protected Landscape and Seascape in Cagayan and the Northern Sierra Madre Natural Park in Isabela.

The region also addressed concerns on low biodiversity and low coastal protection in Protected Areas (PAs). This was done through a more aggressive coastal resources management particularly in coral reef ecosystems through the combined initiatives of regional agencies and concerned local government units.

For coral reefs, around 968 hectares in three provinces was assessed reflecting a 154 percent accomplishment. Also, a total of 797 hectares of mangrove within the provinces of Cagayan and Isabela was assessed surpassing the 785 hectares target or 101 percent accomplishment.

Mineral resource management strengthened. The maintenance of ecological integrity and sustainable resource covers areas devoted to mineral development and management. Evaluation and monitoring of mining rights was conducted regularly in seventeen mining right holders, namely: 8 Industrial Sand and Gravel Permits (ISAGPs), 1 Mineral Processing Permits (MPP), six (6) Mineral Production Sharing Agreement (MPSAs) and 2 Financial and Technical Assistance Agreement (FTAAs).

The MGB has put premium on the monitoring of the approved mining contracts/permits as to their compliance to the implementation of the Integrated Safety and Health, Environment and Social Development (ISHES) standards. With this, 12 Contractors and mining right holders were monitored, of which 7 are classified as operating while 5 contractors are under exploration. To ensure compliance to safety rules, regular safety inspections were likewise conducted. Per MGB assessment, there were no safety-related incidents that occurred in the mining sites.

On Mineral Production, about 2.6 million cubic meters of non-metallic minerals was produced surpassing the target for the year. The attainment of such is due to the increased quantity on production of Sand and Gravel, Pure Sand, Boulders and Mountain Soil. The region produced a total of 67,468 MT of metallic minerals which is 22.23% lower than the target. The decline was attributed to the copper concentrate production of OceanaGold Philippines Inc. (OGPI) with the open pit mine which was completed and mined out in May 2017 and the transition period for the company's shift to underground mining method.

Improving environmental quality

Air quality monitoring needs to be enhanced. The government program on air quality management involves regular monitoring of ambient air quality. Two (2) Real-time monitoring stations for PM2.5 concentrations had been installed within Tuguegarao City to monitor ambient air quality. However, both real-time monitoring stations were declared unserviceable since 2016 due to damages incurred from Typhoon Lawin. As such, there is no data recorded for PM2.5 concentrations in the region.

However, for PM10, the geometric mean of 35.51µg/Nm³ and 5.77µg/Nm³ of Tuguegarao City and Santiago City stations respectively, reveal that ambient air quality falls within “GOOD” level (0-54 µg/Nm³) per the national ambient air quality guidelines. However, three samples registered “FAIR” due to activities like drying of palay and corn, continuous building construction and vehicles plying the area.

Table 28. Performance Indicators on Improving Environmental (Air) Quality, Region 02, CY 2017 (CVRDP 2017-2022 Results Matrix)

Indicators	2016 Baseline Value	2017 Targets	2017 Accomp.	% accomp.
PM10 concentrations in the region and other major urban centers are within the Annual PM10 Average Guideline value of 60 microgram per Normal cubic meter (µg/Ncm)	15.64 µg/Ncm	0-54 µg/Ncm		
○ Tuguegarao City Station			35.51 µg/Ncm	Good
○ Santiago City Station			5.77 µg/Ncm	Good
Monitoring of Private Emission Testing Centers (PETCs) – No. of PETCs monitored	40	40	45	113%

Data Source: EMB-RO 2

Water quality maintained. The Cagayan River and its tributaries has been the focus of regular monitoring for its water quality. The five (5) monitoring/sampling stations located in Aparri and Alcala in Cagayan; Tumauni and Echague in Isabela; and Nagtipunan in Quirino, provides on-site data on water quality on a quarterly basis. The water samples collected undergo laboratory analysis for Biochemical Oxygen Demand (BOD) and Total Suspended Solid (TSS).

Per result of analysis, the BOD stands at 1.7 mg/liter of water which means that the river is still within the standard of Water Classes A, B, and C. Such water classes mean that the river system can still be utilized according to its beneficial uses like source of water supply, bathing, swimming; production of fish and other aquatic resources; agriculture and livestock production; and other recreation purposes. In some parts of the whole stretch, it can be a source of water supply system for the community but with the necessary complete treatment process.

Further, the water quality of the Pinacanauan de Tuguegarao has improved. There was an observed reduction in the concentration of pollutants particularly fecal coliform and Total Suspended Solids (TSS). This improvement is attributed to the interventions made through the Water Quality Management Area (WQMA), an interagency body tasked to monitor and ensure the environmental integrity of the area.

With the implementation of the program involving coastal clean-up and other water quality improvement initiatives, the adopted esteros/waterways was gradually rehabilitated. As of 2017, a total of 24 esteros/water bodies were adopted by 124 partner LGUs and private partner adopters. Majority of the adopted esteros are located within Tuguegarao City (6), Santiago City (5), Cauayan City (4) and Ilagan City (2), while 7 are located in Cabagan, Isabela and Solana, Penablanca, Gattaran and Alcala, Cagayan. These esteros are regularly cleaned-up by the Barangay LGU Adoptors at certain frequencies to clear waterways.

Also, as part of the basin wide initiatives, the region initiated the institutionalization of the Addalam Sub-river Basin Management Committee through a MOA under the umbrella organization of the Cagayan River Basin Management Council (CRBMC) at the sub-river basin level.

Waste Management improved. The compliance of Municipal LGUs on various components of Ecological Solid Waste Management was closely monitored by the Environmental Management Bureau (EMB RO2). Majority of the LGUs have already formulated their 10-year Solid Waste Management Plan. A total of 57 municipalities have endorsed their SWM Plan and were subsequently approved by the NSWC. It is worthy to note that there is a greater commitment among LGUs in the implementation of their 10-year Solid Waste Management Plan in support to the Republic Act No. 9003.

On Sanitary Landfill Facility (SLF), 14 LGUs have an operational SLF, to include operational Residual Containment Areas (5 LGUs in Cagayan, 1 in Isabela, 7 in Nueva Vizcaya, and 1 in Quirino). Around 26 LGUs or 32% were subjected to rehabilitation, while the rest were on the process of site identification or currently on-going construction of their SLF. Close monitoring of municipalities needing technical assistance is needed in order to increase the number of compliant LGUs.

On Geological assessment of proposed SLF sites, five (5) sites were assessed as geologically compliant. The overall improvement in solid waste management was a result of sustained technical assistance to local governments on the preparation of SWM Plans, seminars, financial assistance for safe closure and rehabilitation of open dumpsite or controlled dump facility, and close monitoring of compliance of LGUs by the EMB RO2 in collaboration with concerned stakeholders.

**Table 29. Performance Indicators on Improving Environmental Quality
(Waste Management), Region 2, CY 2017
(CVRDP 2017-2022 Results Matrix)**

Indicators	2016 Baseline Value	2017 Targets	2017 Accomp	% accomp.
No. of LGUs (Prov, Cities, Mun) compliant with proper Ecological Solid Waste Management System (ESWM)				
No. of Solid Waste Management Plan (i.e 10 year) reviewed/evaluated	11	11	12	109%
Provision of Technical Assistance for the Establishment of Sanitary Landfill	1	1	1	100%
Compliance Monitoring of Toxic and Hazardous Waste Management Facilities (Generators) conducted	150	150	347	231%
Geological assessment of proposed Sanitary Land fill sites	6	6	5	83%

Data Source: EMB-RO 2 and MGB RO 2

Increasing adaptive capacity and resilience of ecosystems

LGUs with institutionalized and fully operational DRRM Office. The Office of Civil Defense, in collaboration the DILG, DSWD, DOST and NEDA, and other stakeholders, continuously and vigorously carried out its mandate under RA 10121 by administering a comprehensive national civil defense and disaster risk reduction and management program.

For 2017, several activities were undertaken such as: conduct of meetings of Regional/Municipal/Barangay Disaster Risk Reduction and Management Council Meetings; Gawad KALASAG Annual Search, which aims to recognize outstanding performance of Local Disaster Risk Reduction and Management Councils; promotion of DRRM programs and Projects; and strengthening of external linkages.

On capacity building, skills training programs were organized such as Basic DRRM, Incident Command System (ICS); Contingency Plan Workshop (CP); Rapid Damage Assessment and Needs Analysis (RDANA); Rapid Emergency Telecommunication Training (RETT); Post Disaster Needs Assessment (PDNA); Water Search and Rescue Training (WASAR); Mountain Search and Rescue Training (MOSAR); Community-based Disaster Risk Reduction and Management (CBDRRM) for 87 LGUs.

In connection with disaster risk reduction, geo-hazard survey and mapping were conducted in twelve (12) municipalities namely: San Pablo, Cabagan, Tumauni, Sta. Maria and Palanan in the province of Isabela; and Mahatao, Uyugan & Uvana in Batanes province, with a map scale of 1:10,000.

Table 30. Performance Indicators on Increasing Adaptive Capacity and Resilience of Ecosystem for CY 2017 (CVRDP 2017-2022 Results Matrix)

Indicators	2016 Baseline Value	2017 Targets	2017 Actual	Accomplishment
No. of LGUs (Prov, Cities, Mun. barangays) trained/capacitated on DRRM/CCA increased	9	40	87	217%
Number of LGUs (Prov, Cities, Mun. Brgys.) with functional DRRM office and operation Centers increased	9	40	93	232%
No. of municipality with updated Geo-hazard maps (1:10,000) used in risk reduction planning increased	7	7	12	171%

Data Source: OCD RO2, DILG RO2 and MGB RO 2

Moving Forward

More initiatives have to be done to further improve on outcome indicators along environment and natural resources sector. To supplement and address the gaps on ensuring ecological integrity, clean and healthy environment, the following strategies are recommended for implementation of the concerned agencies and LGUs:

- Enactment of the National Land Use Act (NaLUA). Enactment of this law is also important to address deforestation activities and other ENR activities. The overlapping and conflicting national laws on land uses (such as prime agricultural land, agrarian reform, protected areas, ancestral domain, fisheries, forestry, mining and housing) that are sector specific, results in the competing uses of forest resources without regulation;
- Support legislative measures that would protect and develop the forestry sector particularly on sustainable forest management, tree planting, and mangrove forest protection and preservation;
- Complement reforestation programs with sufficient and strict monitoring aside from adequate financial and manpower resources. Such strategy is imperative to assess whether the program components and activities are effective or not, and if necessary, implement changes and employ measures to sustain their effectivity;
- Capacitate LGUs for long-term planning in addressing the four DRRM thematic areas;
- Pursue studies on GHG reduction such as the “Greenhouse Gas (GHG) Inventory for Local Climate Change Mitigation and Low Carbon Development in Cagayan Valley Region”.

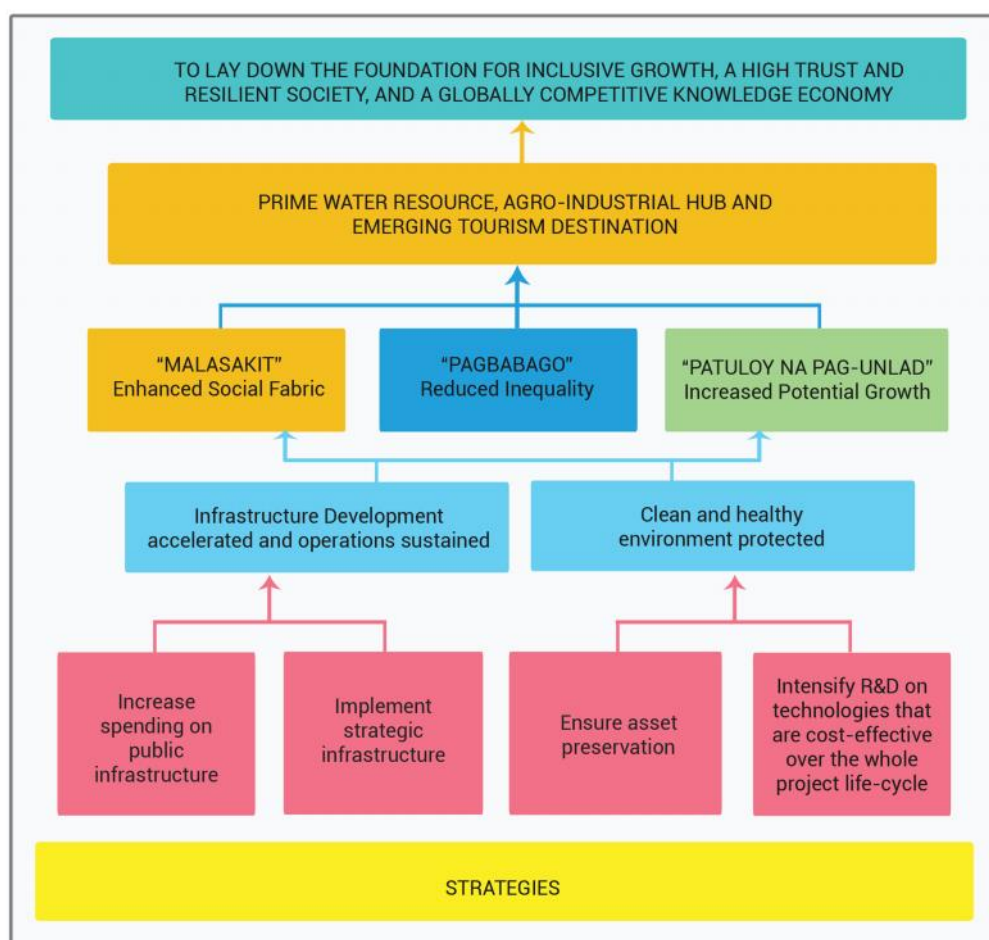
- Review, codify, and streamline existing ENR policies, rules, and regulations. Existing ENR laws and policies, including governance arrangements, should be assessed and reviewed in terms of overlapping and conflicting provisions to improve compliance, transparency, and accountability across all levels. This should include revisiting the Local Government Code to strengthen the LGUs and its relevant ENR devolved functions. Recurrent governance issues such as lack of or limited funding, weak coordination, and poor implementation and monitoring need to be addressed to continuously improve the state of the ENR.
- Increase utilization of the PSF. The PSF is a fund that will finance adaptation programs and projects that are directly supportive of the objectives enumerated in the local climate change action plans (LCCAP) of LGUs and communities. To enhance LGUs' access to PSF, the following should be undertaken: (a) roll-out a nationwide marketing strategy to inform LGUs and key stakeholders on eligibility requirements; (b) streamline the process for project development, appraisal, approval, negotiation, obligation/fund release, implementation, and monitoring and evaluation; and (c) provide capacity- building activities on project proposal development for LGUs and training on review and evaluation of proposals for the PSF Secretariat.
- Support the creation of plantilla position for ENR enforcers. With the continuous degradation of forest and other natural resources, the LGUs should initiate steps in partnership with DENR and other stakeholders to stop forest resources degradation and implement activities to restore or rehabilitate degraded areas through the creation of a Municipal Environment and Natural Resources Office. Likewise, continuing assistance to LGUs on the organization of permanent Local Disaster Risk Reduction and Management Officers (LDRRMOs), disaster operations centers, and emergency response teams should be undertaken.
- Creation of Department of Disaster Resiliency that will consolidate several government functions and integrate new policies on disaster mitigation/prevention, preparedness, response, and rehabilitation/recovery to address existing implementing gaps and challenges.
- Establishment of required number of air and water quality monitoring stations to adequately capture the ambient air quality of the region.
- Strengthening established Water Quality Management Areas (WQMAs) and establishment of new WQMAs for improved water quality.

ACCELERATING INFRASTRUCTURE DEVELOPMENT

Accelerating infrastructure is one of the medium-term development foundations for the region and the country. It has a reciprocal relationship to macroeconomic development through the multiplier effect. Better infrastructure gives rise to economic expansion which in turn require the need to improve existing infrastructures because of larger volume of services, goods and people that travel across the economy.

As stated in the CVRDP 2017-2022, access and connectivity serve as the most crucial factors in development. With adequate and proper infrastructure, the region's goal of becoming an agro-industrial hub and the next tourism destination of the country becomes more probable within the Plan period. In this Report, the region's accomplishment on accelerating infrastructure development is highlighted by developments along transportation, communication, irrigation and power.

Figure 17. Strategic Framework to Accelerate Infrastructure Development by 2022



Accomplishments

Spending in public infrastructure increased

The “Build, Build, Build” is the centerpiece program of the current administration on accelerating infrastructure development nationwide. It seeks to improve infrastructure support in order to develop industries in more areas of the country, attain robust growth and uplift the lives particularly those living in poverty. Of the 75 flagship projects identified under the “Build, Build, Build”, three projects are located in the region with an estimated cost of PhP 10.7 billion. These projects shall improve the region’s connectivity to Metro Manila and Region III, provide alternative source of power and enhance irrigation service and coverage to boost agriculture production and productivity. The projects are shown in detail below:

**Table 31. “BUILD BUILD, BUILD” Program Flagship Projects
Cagayan Valley Region**

Project Title	Implementing Agency	Total Project Cost (in PhP million)	Status
1. Dalton Pass East Alignment Alternative Road Project (East Dalton Bypass Project)	DPWH	4,018.00	Feasibility Study ongoing
2. Chico River Pump Irrigation Project	NIA	2,696.00	NEDA Board approved. The ICC has confirmed the proposed change in financing of the Project from GAA to ODA.
3. Tumauini River Multipurpose Project	NIA	4,003.30	Updating of FS ongoing

Source: NEDA RO 2

For regular infrastructure spending, the bulk remains lodged with the Department of Public Works and Highways amounting to P14.6 Billion, a reduction by 1.7% from its 2016 level. The region is 3rd lowest in terms of infrastructure budget during the year.

The completed projects include: 278.24 kilometers of national, secondary and tertiary roads, 33 flood control projects, construction of tourism roads, farm-to-market roads and bridges along local roads from its regular infrastructure fund, and 574 other infrastructure projects involving school buildings, national buildings, multi-purpose buildings and water systems funded by other government agencies. Major completed projects are the PHP73.6-million Gattaran Flood Control, PHP52.2-million Sisim

Bridge, PHP34.9-million road upgrading in Vayang Rolling Hills, and the PHP631.9-million replacement of Lucban Bridge.

For social infrastructure, some of the significant completed projects included 99 school buildings for a total of 1,023 classrooms needed for the elementary, secondary, and senior high school students under the Department of Education's (DepEd) Basic Education Facilities Fund (BEFF) worth a total of PHP1.7 billion; 61.75 kilometers of farm-to-market roads under the Department of Agriculture amounting to PHP518.5-million; and 13.21 kilometers of road leading to tourism destinations with a value of PHP175.10 million.

Table 32. DPWH Infrastructure Programmed Amount by Region 2016 and 2017

Region	2016 (in Million PhP)	2017 (in Million PhP)	Increase/ Decrease (in Million PhP)	Percentage Change
Davao Region	19,972	43,768	23,796	119.14
SOCCSKSARGEN	13,585	18,038	4,453	32.78
CARAGA	16,575	21,490	4,915	29.65
Western Visayas	18,883	23,308	4,425	23.43
Northern Mindanao	30,226	36,499	6,273	20.75
MIMAROPA	16,753	20,135	3,382	20.18
BICOL Region	21,394	24,368	2,974	13.90
Eastern Visayas	20,822	23,504	2,682	12.88
Central Luzon	21,262	25,094	3,832	18.02
CALABARZON	23,952	27,699	3,747	15.64
NCR	18,987	20,446	1,459	7.68
CAR	12,625	13,518	893	7.07
Ilocos Region	17,157	18,173	1,015	5.92
Central Visayas	14,936	14,999	63	0.42
Cagayan Valley	14,873	14,608	-266	(1.7)
Zamboanga Peninsula	18,395	14,827	-3,568	(19.4)
ARMM	No data available	No data available		

Source: DPWH Website

The per capita infrastructure spending of PhP4,232.40 ranks the region at 8th compared to other regions, higher than the PhP 3,708 national average per capita spending (See Table below).

Table 33. Infrastructure Spending per Capita by Region, CY 2017

Region	Infrastructure Programmed Amount for CY 2017 (in Million PhP)	Population (2015 Census, in '000)	Estimate Infra Spending per Capita (in PhP)
Davao Region	43,768	4,893	8,944.52
CARAGA	21,490	2,597	8,275.68
CAR	13,518	1,722	7,850.40
Northern Mindanao	36,499	4,689	7,783.55
MIMAROPA	20,135	2,963	6,794.65
Eastern Visayas	23,504	4,440	5,293.54
Western Visayas	23,308	4,477	5,205.95
Cagayan Valley	14,608	3,451	4,232.40
BICOL Region	24,368	5,797	4,203.57
Zamboanga Peninsula	14,827	3,630	4,084.81
SOCCSKSARGEN	18,038	4,545	3,968.46
Ilocos Region	18,173	5,026	3,615.66
Central Visayas	14,999	6,042	2,482.43
Central Luzon	25,094	11,218	2,236.88
CALABARZON	27,699	14,415	1,921.58
NCR	20,446	12,877	1,587.74
ARMM	No data available	3,781	Incomplete data
GRAND TOTAL	360,474	100,981	3,708.57

Source: DPWH Website

Strategic infrastructure implemented

Road condition improved slightly in 2017 with an average international road roughness (IRI) index of 4.54 for national road network in the region, better than the 4.88 index in 2016. The region's average IRI is lower than the average national IRI. Other neighboring regions, except for CAR, recorded better IRI. The national road network is still classified as "fair" per international standard.

In terms of road density, the region registered the lowest density among regions at 6.54 km/sq.km. This is even with an improvement of 1.71 percent from its level in 2016. The three neighboring regions reflected higher road density levels within a range of 10 to 15 kilometers per sq.km. The region's road density is lower than the national average.

Table 34. Infrastructure Spending per Capita, by Region, CY 2017

REGION	AVERAGE
CAR	5.84
NCR	4.75
I	3.52
II	4.54
III	3.48
IV-A	3.35
V	3.13
VI	5.21
VII	4.22
VIII	4.08
IX	4.39
X	4.42
XI	4.36
XII	4.34
XIII	3.73
Nationwide Average	4.12

Segments of the roads with an average IRI of 1-3 are in “good” condition, >3-5 in “fair” condition, >5-7 in “poor” condition and > 7 in “bad” condition.

Source: DPWH Website

Table 35. National Road Density (km/sq.km.), By Regions, 2013-2017

REGION	2013	2014	2015	2016	2017
CAR	11.02	11.14	11.25	11.84	11.39
NCR	184.15	185.16	185.63	187.08	187.50
NIR	0.00	0.00	12.32	12.34	0.00
I	12.77	12.83	12.84	12.86	12.86
II	6.33	6.41	6.40	6.43	6.54
III	10.70	10.70	10.70	10.70	10.70
IV-A	14.85	15.13	15.13	15.19	15.34
IV-B	7.72	7.76	7.76	7.76	7.76
V	12.94	12.94	12.96	13.17	13.17
VI	14.39	14.46	14.97	15.10	14.58
VII	14.45	14.49	16.62	16.68	14.52
VIII	10.81	10.90	10.89	10.92	11.02
IX	9.27	9.59	9.73	9.77	9.77
X	9.28	9.40	9.58	9.59	9.58
XI	8.14	8.16	8.24	8.25	8.25
XII	6.68	6.76	6.76	6.79	6.79
XIII	7.00	7.17	7.20	7.20	7.20
Nationwide	10.36	10.46	10.49	10.54	10.57

Source: DPWH Website

As of December 2017, the total length of classified national roads was recorded at 1,951.44 kilometers, an increase of 3.04 percent based from the 2016 baseline data or an additional of 56.47 kilometers. Breakdown per condition and surface type are presented in the table below.

Table 36. 2017 National Road Total (in km), Region 02, per Condition and Surface Type

REGION/ SURFACE TYPE	CONDITION RATING					Grand Total
	Good	Fair	Poor	Bad	No Assessment	
Region II	631.96	565.53	452.13	200.03	101.80	1,951.44
Concrete	494.19	406.68	334.61	115.28	56.84	1,407.60
Asphalt	137.77	152.31	89.86	79.27	17.08	476.31
Gravel	-	6.53	27.66	5.47	26.39	66.05
Earth	-	-	-	-	1.48	1.48

Source: DPWH Website

For the power sector, the provision of electricity significantly improved in 2017 with all barangays provided with the needed services from the region's seven electric cooperatives. System losses reflected an average of 10.8 percent across electric cooperatives. This is an improvement from the average of 12.8 percent the previous year, keeping the region on track on its target of single digit system loss by the end of the plan period (see Table below).

Table 37. 2017 Summary of Accomplishment for Electric Cooperative in Region 02

	BATANELCO	CAGELCO1	CAGELCO 2	ISELCO 1	ISELCO 2	NUVELCO	QUIRELCO
Potential Connections	6,700	151,100	138,100	215,200	168,300	110,900	54,000
Served	6,153	145,255	125,319	210,546	138,478	98,066	52,034
% Accomplished	92%	96%	91%	98%	82%	88%	96%
Total Barangays	29	376	510	484	545	275	150
Energized	29	376	510	484	545	275	150
Unenergized	-	-	-	-	-	-	-
Ave. Systems Rate (Php/kWh)	10.49	11.48	10.90	9.36	10.24	5.81	9.62
Ave. Power Rate (Php/kWh)	5.93	8.02	7.77	6.64	6.81	3.80	5.56
Net Margin/(Loss) (in '000)	(1,138	4,712	-11,315	-4,393	-30,123	12,924	-2,578
kWh Purchased (in '000)	1,731	-	31,846	95,936	49,531	64,606	9,586
kWh Sold (in '000)	1,626	50,390	28,363	84,866	42,949	60,103	8,021
System Loss	5.86%	12.17%	10.23%	11.35%	12.72%	6.97%	16.33%
Peak Load (kw)	1,577	50,336	30,736	82,485	42,079	25,728	7,995
Load Factor	50.11%	52.17%	47.31%	53.11%	53.75%	39.70%	54.75%
Ave. Residential Sales in kWh	69	56	48	62	60	62	34

Source: NEA

For power generation, the region provided hydro-electric power through Magat Dam of SN Aboitiz Power, Inc. with 360 MW dependable capacity, MARIS 1 Main Canal also managed by SN Aboitiz with dependable capacity of 8 MW, and NIA-Baligatan managed by NIA with 6 MW dependable capacity. For Biomass power, Green Future in San Mariano, Isabela provided a dependable capacity of 12.2 MW and IBEC in Alicia, Isabela also committed 18.3 MW. The Green Future and IBEC are independent power producers, and one of the few bagasse-fired and rice-husked-fired cogeneration plants operating in Luzon.

On communication, the region relies on the services provided by the PLDT for landline communication and SMART and Globe for wireless communication. The number of cell sites remained the same but the services for wireless communication was expanded to further cater to the improvement of data transfer. Competition is more evident on wireless communication with the two players improving their services for better internet connectivity through transitioning to 4G. Nonetheless, based on the assessment of Open Signal, an independent assessor for mobile experience worldwide, download speed is still relatively low in the Philippines, much more for the region with its low coverage of cell sites. With more people having preference for mobile data, it necessitates the need for better communication infrastructure.

On social infrastructure, the DPWH built a total of 243 additional school buildings that now serve thousands of students. The additional 1,164 classrooms for public schools region-wide were sourced out of the Basic Educational Facilities Fund (BEFF) from the previous year's General Appropriations Act (GAA) intended to address classroom shortage and assist the implementation of Department of Education's K to 12 Program.

Asset preservation ensured

The protection of the region's assets from natural and man-made hazards remains one of the priorities within the medium term. Flood control topped the list among the critical public infrastructures that was given appropriate attention. Retrofitting of national bridges and public buildings came second and third, respectively. For private buildings, the LGUs were in the better position to coordinate, monitor and manage compliance through the strict implementation of zoning and building code. While the standards of Building Code requires review, the LGUs through their Engineering Departments and in consultation with appropriate agencies, may come up with location specific standards based on actual experience or situation to improve the structural integrity of buildings within their jurisdiction.

On flood control as a preservation/intervention measure, the P2-Billion flood control project along the 3.31-kilometer riverbanks of Cagayan River in Tuguegarao City and Enrile reported almost 50 percent accomplishment by the end of 2017. Other major flood control projects that were completed during the year include the PhP102 Million flood control in the province of Nueva Vizcaya; Barangay Lamo in the municipality of Dupax del Norte; Barangay Gabut in the municipality of Dupax del Sur and the P73 million allocated to complete the Gattaran Flood Control project.

R&D on cost-effective technologies intensified

Learning from the damages caused by Typhoon Lawin in 2016, the region has to intensify the assessment of structural integrity as well as revisit the design of public infrastructure. In aligning R&D efforts with the CVRDP, the Regional Research and Development Agenda (RRDA) 2017-2022 was crafted to identify and prioritize researchable areas in the different sectors. Six research areas covering the infrastructure sector were identified in as shown in Table 38.

Table 38. Research Areas for Infrastructure Sector, Region 02, 2017-2022

Research Area	Proponent	Sectoral Rank	Regional Rank
Upgraded Drainage System in Tuguegarao City	DPWH	1	4
Updated Centralized Straight Line Diagram of the National Road Network	DPWH	2	10
Modeling of Artificial Intelligence-Controlled Traffic Lights for Tuguegarao City	CSU	3	13
Development of Automated Control System for Energy Management in School Buildings	CSU	4	17
Improvement of Infrastructure Support (Transportation, power, communication and all-weather port in Basco)	PLGU Batanes	5	21
Climate Proofing of Infrastructures for Natural Disasters (Typhoon, Flood, Landslide/ Erosion)	ISU	6	23

Source: RRDA 2017-2022

The region also participated in the crafting of two national studies, namely: the Philippine Transport Master Plan and the Philippine Water Supply and Sanitation Master Plan. The studies assessed the transport and water supply and sanitation situation in the region and identified areas for priority intervention.

Moving Forward

Efforts along infrastructure development need to be further intensified. The region's decision-makers, program and policy advocates and implementers should be more vigilant in identifying and pushing for more project proposals given the current thrust on "Build, Build, Build". Among the recommendations for the region to cope up with its infrastructure needs are the following:

- Negotiate for an increase in the share of the infrastructure budget to improve on the standing of the region in terms of road density, irrigation coverage, among others;
- Ensure the immediate restoration of government facilities damaged during calamities;
- Initiate gradual shift towards public transport with emphasis on mass transport to ensure availability, affordability, convenience, and reliability of the regional transportation system;
- Expand the deployment of ICT infrastructure and address the gaps in digital connectivity;
- Improve energy efficiency through the Energy Efficiency Conservation (EEC) program;
- Prioritize the provision of electricity services to the remaining off-grid areas, islands and remote communities to achieve total household electrification;
- Design flood control, drainage and other public infra to be more disaster-resilient;
- Construct or rehabilitate vital infrastructures such as roads, bridges, evacuation centers (gender sensitive), and schools to be resistant to extreme weather conditions.
- Develop database and information system for proper and efficient asset management; and
- Pursue completion of mitigation and preparedness plans of LGUs.



CAGAYAN VALLEY REGIONAL DEVELOPMENT REPORT CY 2017

Published by:

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Regional Office 02**

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ISSN: