2016 ANNUAL REPORT

Republic of the Philippines
Department of Environment and Natural Resources
MINES AND GEOSCIENCES BUREAU
Regional Office No. 1
San Fernando City, La Union
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Prepared by:
CHRISTINE MAE M. TUNGPALAN
Planning Officer II

Noted by:
CARLOS A. TAYAG
OIC, Regional Director
Region I, otherwise known as the Ilocos Region, is composed of four (4) provinces – Ilocos Norte, Ilocos Sur, La Union and Pangasinan – and nine (9) cities – Laoag, Batac, Candon, Vigan, San Fernando, Dagupan, San Carlos, Alaminos, and Urdaneta. The provinces have a combined number of one hundred twenty five (125) cities and municipalities and three thousand two hundred sixty five (3,265) barangays.

Region I is situated in the northwestern part of Luzon with its provinces stretching along the blue waters of West Philippine Sea. Bounded on the North by the Babuyan Islands, on the East by the Cordillera Provinces, on the west by the West Philippine Sea, and on the south by the provinces of Tarlac, Nueva Ecija and Zambales. It falls within 15°00'40" to 18°00'40" North Latitude and 119°00'45" to 120°00'55" East Longitude.

The region’s territorial jurisdiction occupies an aggregate area of 1,284,019 hectares with the Province of Pangasinan having the largest land area of 536,818 hectares followed by the Province of Ilocos Norte with 339,934 hectares, the Province of Ilocos Sur with 257,958 hectares and the Province of La Union with 149,309 hectares.

Region 1 being geographically situated along the coastal stretch of the West Philippine Sea and the Caraballo Mountain Ranges is endowed with rich mineral resources. Over the decades, the development and utilization of this God-given wealth had brought significant economic upturn in our society.
Hereunder is the table of Mineral Deposits found in the region:

<table>
<thead>
<tr>
<th>Provinces</th>
<th>Mineral Deposits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ilocos Norte</td>
<td>Gold, Magnetite sand, Copper, Shale, Marbleized Limestone, Red Clay, Limestone, Pebbles, Sand &amp; Gravel, Feldspar, Iron Ore</td>
</tr>
<tr>
<td>Ilocos Sur</td>
<td>Magnetite sand, Red clay, Gold, Sandstone, Limestone, Pebbles, Sand &amp; Gravel, Marble</td>
</tr>
<tr>
<td>La Union</td>
<td>Magnetite sand, Red clay, Shale, Gold, Limestone, Pebbles, Sand &amp; Gravel</td>
</tr>
<tr>
<td>Pangasinan</td>
<td>Gold, Chromite, Copper, Manganese, Zeolite, Bentonite, Shale, Limestone</td>
</tr>
</tbody>
</table>
There are two (2) cement plants operating in the region. These are the Holcim Philippines, Inc. – La Union Plant situated in Brgy. Quirino, Bacnotan, La Union and the Northern Cement Corporation located in Brgy. Labayug, Sison, Pangasinan

Among the metallic minerals found in the region is the copper ore. The commodity is found in Pangasinan and Ilocos Norte.

Construction sand and gravel are exported in Japan and Singapore; the Luna pebbles and decorative stones in South Korea, Malaysia, USA/Hawaii, France, and Kingdom of Saudi Arabia while Zeolite and Bentonite are supplied in Japan.

Serving as conduits for the commercial disposal of high-value multicoloured pebble deposits to neighbouring Asian countries are duly accredited dealers by the MGB.
ASSESSMENT
ASSESSMENT OF PHYSICAL VIS-À-VIS FINANCIAL PERFORMANCE AND ORGANIZATIONAL ISSUES AND CONCERNS

The year 2016 was indeed a challenging and fulfilling year for the Mines and Geosciences Bureau-Regional Office No. I with the increase of targets and due to the election period that influenced the accomplishment of some of the targeted activities of the office.

For the year, a total of Php 27,362,000.00 was allotted for MOOE. Php 2,509,000 for General Administrative and Support Services, Php 18,999,000.00 for MFO 1 Mineral Resource Development Services, Php 5,854,000.00 for MFO 2 Mining Regulation Services.

With a total of Php 1, 306,000.00 allotment for communication plan for minerals development all programmed activities were accomplished. Eleven (11) dialogues and committee hearings have been conducted with Sangguniang Panlalawigan and Bayan, members of the Academe, Civil Society Organizations and Media. Likewise, the 15th leg of the Regional Mining Summit (RMS) was held on April 6 - 8, 2016 at Hotel Luna, Vigan City, Ilocos Sur. The event served as a venue for mining stakeholders to share and exchange ideas, best practices and relevant initiatives on environmental protection, social development and mineral development and utilization as well as policy updates.

In the application of Geosciences, one of the flagship programs of the bureau, has also made a great difference for making people aware of the different geohazards and its effects to lives and properties. With an allotment of Php 17,693,000.00, the Office intensified its geohazard survey and assessment program wherein a Vulnerability Risk Assessment was conducted intwelve (12) municipalities/cities in the region with the updating of 1:10,000 scale Geohazard map of the City of Candon, Ilocos Sur. In compliance to the Special Order No. 2016-49 dated May 20, 2016, personnel from Geosciences Division also conducted the Karst Subsidence Hazard Assessment and Ground Penetrating Radar (GPR) Survey in the Municipality of Corella, Province of Bohol.

As part of our assistance to LGUs to address their water needs and problems on finding viable water sources and deteriorating water quality, groundwater resource and vulnerability assessment have been completed for the whole Province of La Union. Information, Education and Communication
Campaign (IEC) on geohazard and VRA maps to LGU’s was also intensified and conducted to a total of 1,300 barangays in the province.

For the Mineral Lands Administration, for the year, the Office had monitored seventy nine (79) Permit Holders and Contractors to verify their compliance with the terms and conditions stipulated in the mining permits/contracts and work programs. Likewise, seventy eight (78) mining permits were monitored under the Integrated Safety, Health, Environment and Social Programs (I-SHES). Companies and Proponents who had violations for non compliance in the implementation of these programs were issued show cause letters and penalized.

Various mining related complaints/cases/conflicts were acted upon and investigated in response to complaints/cases/conflicts filed in the Office.
ASSESSMENT OF STAKEHOLDERS’ RESPONSES: PARTICIPATION, COMPLIANCE, APPLICATION OR UTILIZATION OF OUTPUTS PROVIDED.

The Mines and Geosciences Bureau is the primary Government agency for the conservation, management, development and proper use of the State’s mineral resources including those in reservations, watershed areas and lands of public domain.

Aside from its primary mandate, the MGB also plays a significant role in the application of Geosciences aimed at making communities safer, more particularly during times of natural calamities. Along this line, related programs are implemented to sustain economic growth in the locale. Some of these activities are done in collaboration and partnership with other government agencies to make the implementation process more efficient.

In the pursuit of its mandate, the MGB-R.O. Ihas become a “generator” of various data and related information which are made accessible to various customers including economic planning and development government agencies, the Local Government Units, the private sector and the academe.

Holders of various mining permits in the region have been very cooperative and compliant in the submission of the required monthly reports on production, sales and inventory of mineral commodities.

The volume and value of the minerals utilized and indicated in the said reports are used by the National Economic and Development Authority, Regional Office No. I (NEDA ROI) in determining and measuring the level of economic performance of the region. For one, the minerals industry is under the economic sector.

The Bureau of Internal Revenue (BIR) also uses the aforesaid data as one of the inputs in determining the tax dues or liability(ies) of those engaged in the commercial natural resource development and utilization.

The Local Government Units is another “user” in many ways. Firstly, the mineral maps generated which indicate these productive mining areas enable it to update its Comprehensive Land Use Plan (CLUP), making it more responsive.
The productive areas are factored in during the review process of the CLUPs thereby making it more meaningful taking into consideration the demands and calling of the present times. Secondly, the names of the various permit holders/operators/contractors are used as inputs in their database for registration and issuance of Mayor’s Permit/Clearances. The net effect could be gleaned from a faster and more efficient processing time.

On the other hand, the application of Geosciences yielded the generation of high resolution Geohazard Maps which had been used extensively in the promulgation of plans and programs aimed at mitigating the adverse impacts of natural calamities.

The Office of Civil Defense is the primary user of the Geohazard Maps in terms of promulgating plans and activities purposely to mitigate the adverse impacts of natural calamities. The identification of Evacuation Sites or Center which is one of the focus of said activity is of prime consideration.

The Department of Public Works rely much on the results of the Geohazard Mapping in making major road networks free from landslides or any kind of mass movements which impacts on the movement of good and services in the locale.

The CLUPs of the LGUs undergo several updating with the Geohazard Maps as a primary input.

The data on groundwater resource survey and assessment guides the LGUs in its urban planning initiatives taking into consideration groundwater reserves and utilization.

On the part of other concerned national government agencies such as the Department of Agriculture, the National Irrigation Authority, etc. use the afore said data in crafting programs aimed at converting unproductive and open lands to productive lots. Said initiative being a part of the Rice Sufficiency Program of the government.

The Mines and Geosciences Bureau- Regional Office No. I, in the pursuit of its mandate, continue to generate the various data which are factored - in as the Local Government Units, the concerned government agencies and other
stakeholders craft their respective plans and programs aimed at uplifting the socio-economic condition of every Filipino!
NARRATIVE REPORT OF ACCOMPLISHMENT
NARRATIVE REPORT OF ACCOMPLISHMENT

The Mines and Geosciences Bureau – Regional Office No. I humbly presents the 2016 Annual Accomplishment Report. It is a manifestation of our continuing commitment in the promotion of Responsible Mining towards poverty alleviation, environmental protection and economic recovery; and Geosciences Applications for risk reduction and safety of the people.

GENERAL ADMINISTRATION AND SUPPORT SERVICES

GENERAL MANAGEMENT AND SUPERVISION

Management and Administrative Support Services

Activities programmed for the year were all satisfactorily completed which are all demand driven. Maintenance and inventory of vehicles and equipment, buildings, records management, among others, are all 100% accomplished.

Transfer to the new MGB Regional Office Building located at Government Center, Sevilla, City of San Fernando, La Union was completed on March 15, 2016.

The Region has fully complied with all the requirements of the conditions of Good Governance by posting the Transparency Seal on the Regional Website which consists of the mandate and function of the Office, list of personnel, approved work and financial plan, annual procurement plan and PHILGEPS certification; the Citizens’ Charter was also posted in a conspicuous area in the office; and Thirty eight
(38) employees submitted their respective Statement of Assets, Liabilities and Networth (SALN) for CY 2015 in compliance to Section 8 of Republic Act No. 6713 otherwise known as “Code of Conduct and Ethical Standards for Public Officials and Employees.”

Motor vehicle operation and maintenance, procurement of supplies and materials and records management were all 100% completed.

The Office hired fourteen (14) contractual employees under Job Order to supplement the lacking manpower of the Office.

Citizens Charter posted in the Office
**Housekeeping, Building and Ground Improvement Services**

Relative to this activity, certain MGB Personnel has been designated as Housekeeping, Building and Ground Improvement Officer. She is in charge in monitoring and submitting reports.

**Human Resource Management and Development Service**

The Human Resource Development Service aims to provide responsive and excellent service in the development and administration of effective human resource management. Various trainings were coordinated, attended/conducted for bettering the performance, gaining more knowledge of individuals and sharpening their skills. In line with this, a 2016 Mid-year Performance Review, Year-end Assessment and team building were conducted. *(Please see Annexes for list of trainings attended/conducted)*

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*Presentation of MGB-I Physical and Financial Performance for the 1st semester 2016*

*RD Carlos A. Tayag commending the efforts of MGB-I personnel for a job well done for 2016 during the MGB-I Year End Assessment on December 14, 2016*
Solidwaste Management Service
The Office strictly implements waste segregation in collaboration with Mines and Geosciences Bureau Employees Association Region I Chapter.

FINANCIAL MANAGEMENT SERVICES

The Department of Budget and Management (DBM), through the General Appropriations Act (GAA) has released P45,113,158 budget for CY 2016, P17,751,000 for Personnel Services (PS) and P27,362,000 for Maintenance and Other Operating Expenses (MOOE). Additional P5,279,611.37 was released by MGB Central Office, P4,832,611.37, 257,000 and P190,000 for PS, MOOE and CO, respectively. Thus, total allotment for the year amounted to P50,392,769.37.

As of November 30, 2016, Budget Utilization Rate (BUR) 1 (obligation/allotment) and BUR 2 (disbursement/obligation) for MOOE have reached 90% while BUR 1 and 2 for CO have reached 95% and 100%, respectively.

All advances to special disbursing officers and employees were liquidated as of November 15, 2016 and aging of cash advances was verified by Commission on Audit (COA).

Budget and Financial Accountability Reports (BFARs) were submitted accurately and timely to MGB Central Office, COA and DBM.
Disallowances for PS were settled through monthly salary deduction with approval of COA Central Office while for MOOE, immediate settlement is required.

The Government Accounting Manual (GAM), DBM guidelines and COA circulars were used as primary references for processing of payments to employees and creditors.

**PLANNING AND POLICY FORMULATION**

Monthly Accomplishment Reports, Performance Information Report and Fund Utilization Reports were submitted.

To improve the reporting of accomplishments of every Division as well as records filing and keeping, planning coordinators were designated in the respective divisions to effectively coordinate with the planning officer for the timely submission of reports.

Periodic assessment of accomplishments vis-à-vis target is conducted and timely feedbacks are provided to the division concern for immediate and appropriate course of action.

On December 8-10, Engr. Glenn Marcelo C. Noble, Chief, Planning, Policy International Affairs Division (PPIAD) and Ms. Shanel T. de Chavez conducted the validation of the 2015 accomplishments. The objective of the activity is to validate the reported 2015 accomplishments; to determine actions taken on the recommendations of the validation of 2014 accomplishments; and to determine other concerns in the implementation of plans and programs.
Reconciliation of Physical Accomplishment with the Regional Planning Officer.

Courtesy Call with Regional Director & Staff
A.03.a.1 Communication Plan for Minerals Development

**Awareness and Advocacy on Mineral Resources and Geosciences (MRGS)**

For the year, various presentations/ dialogues and forums were conducted to the different sectors of society to promote awareness and advocacy of the thrusts and programs of the bureau and to address mining-related activities of the region. Hereunder are the activities undertaken for the period, to wit:

| a. Consultation with Sangguniang Bayan of Mangaldan, Pangasinan; |
| b. Dialogue with Sangguniang Panlalawigan of Ilocos Sur; |
| c. Dialogue with Sangguniang Bayan Tuba, Benguet; |
| d. Dialogue with Sangguniang Bayan Sudipen, La Union; |
| e. Dialogue with Brgy. Anonang, San Fabian, Pangasinan; |
| f. DENR-MGB-CBFM/NGP Beneficiaries Dialogue at DENR-CENRO Dagupan City; |
| g. Dialogue with Defend Ilocos; and |
| h. Meeting with ENR Sectoral Committee. |
| i. Dialogue with the Provincial Governor of La union |
| j. Engagement with SPIC |
| k. Dialogue with Mamamahayag, Pamunuang Bayan at lipunan |
| l. Dialogue with the Provincial Governor of Pangasinan |
| m. Lecture on Mineral Laws, rules and Regulations in SB Sulongan. Pasuquin, Ilocos Norte |
n. 3rd Industry Research and Development Conference
o. Dialogue with Brgy. Say-oan, Bacnotan, La Union
p. Dialogue with Brgy Salincob

Engr. Carlos A. Tayag together with Gov. Ryan Singson during the dialogue with SP Ilocos Sur

Engr. Carlos A. Tayag interviewed by Mr. Absalom Flores of BomboRadyo
Capacity Building on MRGS laws, rules and regulations

The 15th leg of the Regional Mining Summit (RMS) with the theme "Raising up the Standards of Mining with Continuous Learning and Innovation" was held on April 6 - 8, 2016 at Hotel Luna, Vigan City, Ilocos Sur.

This year's summit brought together representatives from across the Region in the arena of innovation and excellent discussions and dialogues. The event served as a venue for mining stakeholders to share and exchange ideas, best practices and relevant initiatives on environmental protection, social development and mineral development and utilization as well as policy updates.
Seven (7) Trainings/Convention were attended/conducted by MGB-I personnel namely:

1. Learning Event on Administrative Reforms and Anti-Corruption Module 3 and 4 for Division Chiefs on February 1-5, 2016 in Carranglan, Nueva Ecija;
2. 1st National MSESDD Forum on March 14-18, 2016;
5. ENRO/MGB coordination meeting on devolved functions on July 19, 2016;
6. Seminar on the implementation of SHES functions for LGU-issued permits;
7. Seminar on HMDC: Sustainable Mining
Generation/Publication/Dissemination of Information and IEC Materials:

a. MGB-1 Website [www.region1.mgb.gov.ph](http://www.region1.mgb.gov.ph) is being maintained by the Office for better and easier access of clients to the services being offered by the Office.

b. Thirty Five (35) articles posted on the Website.

c. Fortyfour (44) Statistical Reports were prepared.

d. Twenty Four (24) updating of tenement maps which is done on a bi-monthly basis.

e. Three (3) IEC materials were produced and one hundred (100) were reproduced and distributed during fora, conferences, dialogues and meetings. Some were requested by walk-in clients.

f. Thirty Five (35) MRGS reports were prepared. These are the databases of the Mining Tenement Statistics Report, SHES Database Management, Mining Tenement Database, Mine Rehabilitation Fund Report.
**National Linkages**

Sixteen (16) Linkages were coordinated for the reporting period, namely:

| 1. Deliberation on the Comprehensive Development and Management Plan of Ilocos Norte; |
| 2. ICIEERD Management Council Meeting; |
| 3. Budget Forum on the FY 2016 Budget Execution and FY 2017 Budget Preparation; |
| 4. ASEAN Economic Community Regional Workshop; |
| 5. Regional Disaster Management Plan (RDRP) 1.0 Earthquake; |
| 6. Joint MGB-DA validation of Strategic Agriculture Fisheries Development Zones (SAFDZ) |
| 7. Regional Development Plan; |
| 8. Regional Budget Review and Consultation |
| 10. ICIEERD Meeting |
| 11. Provincial Planning Workshop on Mainstreaming CCA and Disaster Risk Reduction in the CDP |
| 12. Agno River Basin Development Project |
| 13. 1st 2017-2022 Philippine Development Plan |
| 14. 2nd 2017-2022 Philippine Development Plan |
| 15. Presentation of RDMMC1 EOC Standard Operating Procedures and Guidelines |
| 16. DENR/MGB/EMB/ LGU Ilocos People's Caravan |
Engr. Carlos A. Tayag presenting the status of implementation of MGB-I Programs/projects/activities during the Budget Review and Consultation.

A meeting was held at the Department of Agriculture (DA) Regional Office No. 1 on May 11, 2016 concerning the conduct of joint DA-MGB validation of Strategic Agriculture and Fisheries Development Zones (SAFDZ) that are overlapped by mining applications.

Engr. Roel A. Collado together with Gov. Francisco “Pacoy” Ortega and members of ICIEERD during the 3rd Industry and Energy R & D Symposium at Sapilang, Bacnotan, La Union.
VULNERABILITY AND RISK ASSESSMENT (VRA) is in line with the government’s efforts aimed at determining the potential of a municipality to suffer harm or loss; and also its capacity to anticipate, cope with, resist and recover from the impacts of hazards. It also aims to understand the types or different dimensions of vulnerability to wit; physical, social, economic and environmental as well as the elements at risk (e.g. all objects, building facilities, population/people, animals, economic activities, public services, environment and cultural heritage and processes that may be adversely affected by hazardous phenomena (disaster) in a particular area either directly or indirectly and reducing if not totally mitigating the destructive effects and impacts of natural hazards on the populace.

To develop geohazard risk maps by evaluating existing conditions of vulnerability that could potentially harm exposed elements such as people and critical infrastructures. These maps should contain information that could be of help to the Local Government Unit (LGU) and to the national disaster coordinating agencies during disaster-related activities. The field checking was carried out by making use of field data sheets and/or interview questionnaires. Previous 1:10,000 scale geohazard maps were also used as basis for further detailed survey of geohazard prone areas in the City/Municipality.

The Mines and Geosciences Regional Office 1 headed by Ms. Vilma A. Vecino together with Ms. Hazel C. Tuprio, Ms. Joan F. Moreno and Mr. Lester T. Valdez, conducted a Vulnerability and Risk Assessment for the following twelve (12) municipalities from Region I and Region VI as part of the target for CY 2016. These include the following:

<table>
<thead>
<tr>
<th>NO.</th>
<th>MUNICIPALITIES</th>
<th>DATE CONDUCTED</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CANDON CITY, ILOCOS SUR</td>
<td>February 8-March 6, 2016</td>
</tr>
<tr>
<td>2</td>
<td>URDANETA CITY, PANGASINAN</td>
<td>April 4- May 3, 2016</td>
</tr>
<tr>
<td>3</td>
<td>VILLASIS, PANGASINAN</td>
<td>April 4- May 3, 2016</td>
</tr>
<tr>
<td>No.</td>
<td>Location</td>
<td>Dates</td>
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</tr>
<tr>
<td>4</td>
<td>SANTA, ILOCOS SUR</td>
<td>June 7-30, 2016</td>
</tr>
<tr>
<td>5</td>
<td>VIGAN CITY, ILOCOS SUR</td>
<td>June 7-30, 2016</td>
</tr>
<tr>
<td>6</td>
<td>SANTA MARIA, PANGASINAN</td>
<td>June 7-30, 2016</td>
</tr>
<tr>
<td>7</td>
<td>SAN NICOLAS, PANGASINAN</td>
<td>June 7-30, 2016</td>
</tr>
<tr>
<td>8</td>
<td>PILAR, CAPIZ</td>
<td>August 1-24, 2016</td>
</tr>
<tr>
<td>9</td>
<td>PRESIDENT ROXAS, CAPIZ</td>
<td>August 1-24, 2016</td>
</tr>
<tr>
<td>10</td>
<td>CITY OF SAN FERNANDO, LA UNION</td>
<td>Sept. 8 - October 3, 2016</td>
</tr>
<tr>
<td>11</td>
<td>MANGALDAN, PANGASINAN</td>
<td>Sept. 8 - October 3, 2016</td>
</tr>
<tr>
<td>12</td>
<td>ALAMINOS CITY, PANGASINAN</td>
<td>November 14-30, 2016</td>
</tr>
</tbody>
</table>

Mr. Leopoldo P. Bacalangco, staff in the Municipality of Pilar and Mr. Arnel Alforque, Barangay Official in Barangay Tabun-acan, points out a 1m. flood height in Sitio Graciosa, where six households were directly affected by floodwaters during intense rainfall and strong typhoons.

**COASTAL GEOHAZARD MAPPING AND ASSESSMENT:**

For the Calendar Year 2016, the Mines and Geosciences Bureau-Regional Office No.1 was tasked to conduct its Coastal Geohazard Mapping and Assessment within the Province of Bohol. This is in response to the Special Order No. 2016-58, of the MGB Central Office, with the subject: AUTHORIZING THE CONDUCT OF COASTAL GEOHAZARD ASSESSMENT BY CERTAIN PERSONNEL OF THE MINES AND GEOSCIENCE BUREAU REGIONAL OFFICES.
The accomplished eight (8) municipalities located in the northern and eastern Bohol are as follows: Talibon, Bien Unido, Ubay, President Garcia, Mabini, Candijay, Anda and Guindulman. One (1) municipality in the Region was also accomplished, Bacnotan, La Union.

Three methods were applied during the fieldwork – shoreline mapping, beach profiling and gathering of anecdotal accounts. Shoreline mapping was done using the hand-held Global Positioning System (GPS) to determine the long-term shoreline trend. The newly acquired GPS data were compared with those from the old NAMRIA topographic map, which were gathered during the 1950’s. Beach profiling was undertaken to determine the morphology of the beaches or coastlines and compare those in different locations. Historical data gathering (anecdotal accounts) involve interview with the locals on the matters of coastal flooding, coastal erosion and accretion, and coastal geohazard occurrences in the area, such as tsunami or storm surges.

The Coastal Geohazard Mapping and Assessment team conducted shoreline mapping, beach profiling and gathering of anecdotal accounts within the assigned eight (8) municipalities in the Province of Bohol.

The Coastal Geohazard Mapping and Assessment Program was undertaken to be able to assess the hazards present on the coastal community, as well as to provide and recommend appropriate mitigating measures to address the problem. This will provide the public with the information on the susceptibility of their coastal areas to erosion or accretion. This program aims to deliver significant information to the policy makers and the public regarding the
risks their community faces. Thus, helping the community enhance their preparedness, response, resilience and to minimize the adverse impacts of these events. The output of this fieldwork may be incorporated in the creation of land use and development plans of the affected communities.
**Sub-surface Assessment**

Due to sinkhole collapse in areas of the country that are characterized by karst topography, the Bureau has expanded its geohazard mapping and assessment program to include subsidence hazard. In compliance to the Special Order No. 2016-49 dated May 20, 2016, the sinkhole assessment team from the region conducted the Karst Subsidence Hazard Assessment and Ground Penetrating Radar (GPR) Survey in the Municipality of Corella, Province of Bohol.

The objectives of this assessment are the following: a.) To identify the existing sinkholes in order to produce sinkhole inventory and karst subsidence susceptibility map as well as delineate areas where future sinkholes are likely to occur using geologic and geomorphologic information combined with accounts from local people and the GPR; b.) To determine the subsidence susceptibility of the study areas due to sinkhole and/or cave collapse particularly in selected government
infrastructures, such as, schools, roads, evacuation centers and other priority areas identified by concerned Local Government Units (LGUs); and c.) To conduct awareness campaign on sinkholes and other karst features, and issuance of threat advisories to LGUs relative to the hazards of subsidence due to sinkholes/caves collapse.

In pursuing the objectives of the assessment, a team composed of Geologists and GIS analysts, from MGB ROI conducted detailed karst subsidence hazard mapping (1:10,000 scale), geological/geomorphological study and sinkhole inventory in all puroks of the 8 barangays of Corella. Specific methodologies were employed during the period May 26 to June 26, 2016. These include the gathering of anecdotal accounts, interpretation of satellite data from the Interferometric Synthetic Aperture Radar (IfSAR) 2013 of NAMRIA, geologic/geomorphic study, Ground Penetrating Radar (GPR) surveys of selected areas, Information, Education and Communication (IEC) Campaign and issuance of “Threat Advisories” to all barangay chairpersons in the Municipality of Corella.

Training on Karst Subsidence Hazzard Assessment and Mapping was also attended by MGB-I personnel on June 23-26, 2016 in Bohol.
Geohazard IEC Materials Dissemination

IEC materials like maps (2,754), posters (1,970), VCD (126), and pamphlets/flyers (2,010) were also distributed. Likewise, geohazard maps with a scale of 1:10,000 were uploaded in the website. Two (2) signages/billboards were also installed in Burgos and San Gabriel, La Union. Re-issuance of advisories was also made to municipalities and cities in the region.

Various IEC Materials Disseminated

Series of lectures were also presented/conducted, namely:

- **Sanitary Landfill consultation with the local officials and residents of Barangay Lubing, San Juan, La Union;**
- **IEC on the topic "Understanding Hazard & Vulnerability" held in Pangasinan Regency Hotel Calasiao, Pangasinan on January 21, 2016;**
- **IEC on the topic "Understanding Hazard and Vulnerability" for Civil Society Organizations (CSOs) of Urdaneta City, Pangasinan held in Baguio City as**
per invitation of DILG on June 16-17, 2016;

IEC on the topic "Understanding Hazard and Vulnerability for CSOs of Bangar, La Union held in Silvana Hotel, Baguio City as per invitation of DILG on June 27-28, 2016;

IEC on the topic "Understanding Geohazard And Vulnerability and Risk Assessment held in the Municipality of Sarrat, Ilocos Norte on March 17, 2016;

IEC on the topic "Geohazard Map Reading" in the Province of Ilocos Sur on March 18, 2016;

IEC on the topic "Understanding Hazard and Vulnerability for CSOs Capability Building Program Particularly Governance and Disaster Risk Reduction Management Training" held in the Municipality of Bolinao, Pangasinan on May 18-20, 2016.

Lecture on Geological Assessment, Slope Stability Investigation/ Analysis and Desirable Geological and Hydrological conditions of SWIP in Baguio City

Lecture on Landslide prone areas in region 1

Lecture on Geohazard Identification at PNP RO I on September 20, 2016

Understanding Geohazard Map on November 16-18, 2016 at Kahuna Beach Resort, San Juan, La Union
Conduct of IEC to LGUs

The Office conducted a seminar on the results of its geohazard mapping and assessment to a total of one thousand three hundred (1,300) barangays in the region. It is in line with the National Geohazard Mapping and Assessment Program (GMAP) of the Mines and Geosciences Bureau, a banner program of the government aimed to identify areas in the country which are susceptible or prone to geologic hazard. The seminar intends to equip the various stakeholders with vital information in order to lessen or mitigate the adverse impacts of calamities.

The exercise specifically focused on (1) familiarization and orientation of participants to different hazards such as landslides, flood and coastal geohazards affecting their areas, (2) understanding the basics of geohazard map reading. They were also encouraged to participate in the activities that would help mitigate the impacts of these hazards.
RD Carlos A. Tayag and Mr. Socrates G. Gaerlan giving a lecture on how to read/interpret Geohazard Maps and its importance to the community.

Participants during the Seminar Workshop on the Results of Geohazard Mapping and Assessment in the Province of La Union
Geohazard Maps (1:10,000 scale) were distributed to the Barangay Captains.

Ms. Vilma A. Vecino, Supervising Geologist delivering her lecture on Landslide Hazards during the IEC conducted in the Province of Ilocos Norte.
B. 2 Geologic Mapping

In line with priority programs of the Mines and Geosciences Bureau (MGB), a special order was issued on March 10, 2016 authorizing all regions to conduct Geologic Quadrangle Mapping for the purpose of the completion of the Geologic Maps of Region III as target for 2016. The mapping team from MGB-Region 1 was assigned in Gerona Quadrangle in Tarlac and Carranglan, Nueva Ecija.

The main objective of the project is to update and gather geologic data and produce 1:50,000 geologic maps, final reports and formal publications, in digital and/or hard copy. Field procedures include field verification of the unpublished geologic map; rock outcrop, geologic structure mapping, rock sampling and identification. There are a total of five (5) rock samples collected during the course of field survey and a total of 54 observation and station points.

Photo of exposed agglomerates along barangay San Carlos, Paniqui, Tarlac. It is generally matrix-supported with pebble to cobble size of sub-rounded clast. The composition is of volcanic origin, and is generally tuffaceous.
Locating the exposed layer of rippable sandstone and siltstone along the ricefield in Mabini, Gerona, Tarlac, dipping SW.

Interbedded layer of sandstone and siltstone characterized by its tuffaceous composition with dip trending SE was observed and mapped in barangay San Carlos, Paniqui, Tarlac.
B.3 Groundwater Resources and Vulnerability Assessment

HYDROGEOLOGICAL ASSESSMENT: PROVINCE OF LA UNION

The Hydrogeological Survey Team of the Mines and Geosciences Bureau – Regional Office No.1 completed the provincial wide hydrogeological survey of La Union. The accomplished twenty (20) municipalities are as follows: Luna (Feb 2016), Bangar (Feb 2016), Sudipen (March 2016), Balaoan (March 2016), Bacnotan (April 2016), San Gabriel (April 2016), Santol (April 2016), San Juan (May 2016), San Fernando (May 2016), Naguilian (June 2016), Burgos (June 2016), Bagulin (June 2016), Bauang (August 2016), Caba (August 2016), Aringay (August 2016), Agoo (September 2016), Sto. Tomas (September 2016), Rosario (September 2016), Tubao (November 2016), and Pugo (November 2016).

The fieldwork is in line with the program of the Bureau to assess the groundwater resource potential of the whole province of La Union, as well as to assist the local government units within each municipality in locating areas feasible for groundwater resource development.

The survey conducted consists of geological mapping and water level measurements of pumps or dug wells within the area. The depth to groundwater of each surveyed well is measured using a battery-operated water level indicator. This, in turn, will be used to compute for the Static Water Level of the surveyed well. The static water level of each well is used to generate a piezometric map by means of a software called Surfer. This map will show the delineated areas with groundwater resource potential.

The products of this survey includes three maps: Geologic Map, Piezometric Map and Potential Areas for Groundwater development Map. The Geologic Map shows the geology of the area covered during the fieldwork. The Piezometric Map shows the local direction of flow of the groundwater. And the last map shows the potential areas viable for the development of groundwater. The final map produced is a provincial map showing the hydrogeological units in the whole province.
Photos showing MGB-I personnel surveying a dug well and a pump well. (A) MGB-I personnel measuring the depth to groundwater after dismantling a pump well (Naguilian, La Union). (B) The depth to groundwater of a well is measured from the ground surface to the water level of the well.

Photos showing MGB-I personnel examining an outcrop of tilted bedded sandstone located along the riverbanks of Ambangonan River within the Municipality of Pugo, La Union (A) and Cabassitan River within the Municipality of San Gabriel, La Union (B). Photo C shows MGB-I personnel determining the trend of a tilted sandstone bed located along a barangay road within the Municipality of Bagulin.
### B.4 Miscellaneous Geological Services

A total of Fourteen (14) Geological Investigations were conducted by the Office for the 1st semester for various purposes:

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Geological Assessment on proposed Sanitary Landfill in Barangay Acao, Municipality of Bauang, La Union;</td>
</tr>
<tr>
<td>2.</td>
<td>Geological Assessment on the Proposed Sanitary Landfill in Barangay Lubing, Municipality of San Juan, La Union;</td>
</tr>
<tr>
<td>3.</td>
<td>Geological Assessment on the Proposed Sanitary Landfill in Urbiztondo, Pangasinan;</td>
</tr>
<tr>
<td>4.</td>
<td>Geologic Investigation on the Five (5) Hectares Siliceous Quarry Application at Barangay Pongpong, Municipality of Sto. Tomas, La Union conducted last January 19-20, 2016 for Ms. Elena O. Songcuan, Quarry Proponent;</td>
</tr>
<tr>
<td>6.</td>
<td>EGGAR on Housing Project located in Barangay Papagueyen, Lingayen, Pangasinan on February 17-21, 2016;</td>
</tr>
<tr>
<td>8.</td>
<td>Geohazard Assessment on the proposed Housing Subdivision in Barangay Labit West, Urdaneta City, Pangasinan on March 2, 2016;</td>
</tr>
<tr>
<td>9.</td>
<td>Geohazard Identification Survey on the Proposed subdivision/housing project of Dr. Voltaire P. Arzadon located at Bonuan Binloc, Dagupan City, Pangasinan on March 21-23, 2016;</td>
</tr>
</tbody>
</table>
10. Geological Assessment on the proposed ECOTOURISM facilities located at Barangay Sta. Rita, Agoo, La Union on March 22-23, 2016;

11. Geohazard Identification Survey on the Proposed subdivision/housing project of Dr. Voltaire P. Arzadon located at Bonuan Boquig, Dagupan City, Pangasinan on March 28-30, 2016;


13. Geologic Analysis and to determine the main cause of the massive landslide and soil erosion that occurred within the area of Northern Luzon Heroes Hill National Park in Santa, Ilocos Sur on May 10-11, 2016;

Geologists operating Georesistivity meter to determine the extent of Salt water intrusion in Lingayen, Pangasinan
NATIONAL MINERAL RESERVATION PROGRAM

The mineral reservation is indicated as one of the program by the Mines and Geosciences Bureau Regional Office No.1. Specifically, this program is managed by the Geosciences Division. In view of this, one of its targets was implanted in the Municipalities of Carasi and Piddig, Province of Ilocos Norte. The geological survey conducted last October 6-31, 2016. Follow up of the reconnaissance geological mapping was conducted last December 5-23, 2016 in the Municipality of Carasi, Ilocos Norte.

This was program conducted relative to the mineral reservation project in Region I particularly the segregation and identification of Mineral Reservation and the identification of other high value mineral commodities. This program aims to locate, identify and determine the available and extent of mineral resources/mineral deposit inside the proposed mineral reservation area and to know the economic importance of it.

The survey consists mainly of geological mapping and delineation of mineral potential. The field party was headed by Mr. Socrates G. Gaerlan, Mr. Mario A. Pamitan, Mr. Randie Ceasar A. Apilado, Ms. Mariel B. Tuonan, and Elvin B. De leon; Chief Geologist, Cartographer II Engineer II, Contractual Geologist, and Assistant Contractual Geologist.
Accomplishments were tabulated below:

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Hectares</th>
<th>Accomplishments</th>
<th>Percentage</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carasi</td>
<td>12,610.90</td>
<td>12,610.90</td>
<td>20.6%</td>
<td>Finished</td>
</tr>
<tr>
<td>Nueva Era</td>
<td>20,908.38</td>
<td>20,908.38</td>
<td>34.2%</td>
<td>Finished</td>
</tr>
<tr>
<td>Piddig</td>
<td>3,551.93</td>
<td>3,551.93</td>
<td>5.8%</td>
<td>Finished</td>
</tr>
<tr>
<td>Solsona</td>
<td>4,825.07</td>
<td>4,825.07</td>
<td>7.9%</td>
<td>Finished</td>
</tr>
</tbody>
</table>
Photo showing the activities during the field. Photo A is the crossing in the ridge of the mountain of the survey team. Photos B and C is the plotting of the coordinates in the topographic map (base map) to locate the exact location of the deposit in the proposed study area.
Photos showing the exposed outcrop of iron and manganese along the Cura River in the municipality of Carasi with geographical coordinates of 18° 11' 10" north latitude and 120° 52' 40" east longitude.
A view of Lamin Iron deposit with the geographical coordinates of 18° 14' 53" north latitude and 120° 52' 57" east longitude it is located in the west of the provincial boundary of Ilocos Norte and Apayao, some magnetite ore is located between the municipalities of Piddig and Carasi, Ilocos Norte.
MINING REGULATION SERVICES
MINERAL LANDS ADMINISTRATION

A.1 Mineral Investment Promotion Program

Issuance of Permits/Contracts

The Office issued one hundred thirty four (134) Ore Transport Permits, eleven (11) Certificates of Accreditations, thirty two (32) Certificate of Environmental Management and Community Relations Record and Certificate of Exemption and two hundred twenty eight (228) Mineral Ore Export Permits (MOEP). (Please see Performance Information Report for the list)

“Use It, Lose It” Policy

In compliance to the Department Memorandum Order No. 2010-04 “Reforms in the Department Mining Tenement System”, which directs the Bureau to expedite the grant of mining contracts and permits, cleanse and process all pending mining applications and strengthen all compliance requirements, the Office have endorsed/approved two (2) permits and cancelled/denied five (5) permits namely:

<table>
<thead>
<tr>
<th>Tenement ID</th>
<th>Tenement Holder</th>
<th>Date Approved</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP No. 16-001 (IPA-320)</td>
<td>Nelson C. Chan</td>
<td>07-05-16</td>
</tr>
<tr>
<td>252-2007-V-Ammended I (ExPA 000106)</td>
<td>Investwell Resources, Inc</td>
<td>06-27-16 – ORDER relating to area expansion involving MPSA No. 252-2007-V.</td>
</tr>
</tbody>
</table>
**Permits Denied/ Cancelled**

<table>
<thead>
<tr>
<th>Tenement ID</th>
<th>Tenement Holder</th>
<th>Date Denied/Cancelled</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPSA No. 127-1998 (APSA 000143)</td>
<td>GML Corp.</td>
<td>04-13-16 - Cancelled</td>
</tr>
<tr>
<td>ExPA 000096</td>
<td>Malibato Mining Co., Inc.</td>
<td>02-19-16 - Denied</td>
</tr>
<tr>
<td>ISAGPA 000287</td>
<td>Agno Rock Aggregates Corp.</td>
<td>06-28-16 - Denied</td>
</tr>
<tr>
<td>ISAGPA 000290</td>
<td>Saturnino L de Guzman</td>
<td>06-28-16 - Denied</td>
</tr>
<tr>
<td>ISAGPA 000289</td>
<td>Anacleto Aldea, Jr.</td>
<td>06-28-16 - Denied</td>
</tr>
</tbody>
</table>

Seventy-nine (79) Mining Contracts/Permits were likewise reviewed.
Approval of SHES Program

For the year, seventy (70) Annual EPEPs and seventy one (71) Annual SHPs were evaluated and subsequently issued Certificates of Approval; and two (2) 5-year Social Development Management Programs (SDMPs) and sixty (60) Annual SDMPs were approved. Four (4) Quarterly Monitoring Reports for National Greening Program were submitted to Central Office.

The region issued eleven (11) “show cause” letters to Mining Proponents for their non-submission of Annual SDMPs.

Mullberry plantation at MPSA 295-2009 located in Brgy. Namatucan, Agno, Pangasinan

Bamboo propagules were nurtured and stored for the company’s reforestation activities.
Assistance to P/CMRB/LGUs and Stakeholders

The Provincial Mining Regulatory Boards of all the four provinces in the region are fully operationalized. A total of twenty four (24) regular Provincial Mining Regulatory Board meetings were attended/conducted by the office for the period in review. This is to monitor the compliance of Quarry and Commercial Sand and Gravel Permit Holders in their applied areas and to address issues and concerns arising in the operations of PMRB. Likewise, four (4) PSSM/Quarry Sites were inventoried and this activity is conducted in a quarterly basis.

PMRB Ilocos Sur meeting with Engr. Carlos A. Tayag presiding

Verification of applied areas for Quarry Permit Application of Mr. Ronald de Vera situated at Alaminos, Pangasinan.
One (1) Minahang Bayan site located at Brgy. Sulongan, Pasuquin, Ilocos Norte was identified and endorsed to MGB-Central office covering a total area of about 121.83654 hectares.

The outcrop of the feldspar deposit located inside the petitioned minahangbayan site with geographical coordinates 18°23'39.7" N Latitude and 120°37'27.5" E Longitude.

The outcrop of the quartz deposit located inside the petitioned Minahang Bayan site with geographical coordinates 18°23'37.0" N Latitude and 120°37'23.0" E Longitude.
To harmonize courses of actions relating the acceptance, processing and endorsement/approval of applications for mining permit; to have a common stand on issues relating the commercial development and utilization of mineral resources; and to strengthen linkages and coordination to effect good governance, transparency and accountability, PMRB Summit was held on November 29, 2016 at Villa Marand Resort and Spa, Baccuit, Bauang, Ia Union attended by the four PMRBs of the Region.

Engr. Edward M. Henry, Head – Technical Secretariat of PMRB Ilocos Sur and Ilocos Norte presenting the proposed policies to address issues and concerns brought out by the different PMRBS.
A.2 Mineral Industry Development Program

Monitor/Audit of Approved Mining Contracts/Permits and SHES Programs

The Monitoring and Technical Services Section is responsible for overseeing all the mining operations in Region I, particularly, the implementation of the approved work program of every mining permit/contract.

The Work Program refers to a document which presents the plan of major mining operations and the corresponding expenditures of the Contractor in its Contract Area during a given period of time, including the plan and expenditures for development of host and neighboring communities and of local geosciences and mining technology, as submitted and approved in accordance with the implementing rules and regulations of the Act.

This year the MTSS has monitored a total of seventy nine (79) mining permit/contract. This includes the following:

- Mineral Production Sharing Agreement (MPSA) Thirteen (13)
- Financial or Technical Assistance Agreement (FTAA) One (1)
- Exploration Permit (EP) One (1)
- Industrial Sand and Gravel (IP) Sixty two (62)
- Mineral Processing Permit (MPP) Two (2)

In monitoring an Approved Work Program there are parameters set to be met per permit/contract. For Mineral Production Sharing Agreement (MPSA), Financial or Technical Assistance Agreement (FTAA) and Exploration Permit (EP), there are three (3) parameters: (1) implementation of the approved Three-Year Development and Utilization Work Program/Two-Year Exploration Work
Program; (2) submission of reportorial requirements; and (3) payment of occupation fees.

The Industrial Sand and Gravel permit (IP) has also three (3) monitoring parameters: (1) implementation of the approved Five-Year Work Program, (2) submission of reportorial requirement, and (3) payment of extraction fee.

The Mineral Processing Permit (MPP) has two (2) monitoring parameters: (1) implementation of the approved Five-Year Work Program, and (2) submission of reportorial requirement. (Please see Performance Information Report for the list).

The MTSS team monitored and evaluated all permitted mining operations within Region I. Each permit/contract is monitored according to the Approved Work-Program.
Integrated Social, Health, Environment and Safety (SHES) Monitoring

With respect to the monitoring of permit/contract areas/projects in the implementation of AEPEP, SHP, EWP, SDMP among others, seventy eight (78) permits were monitored (Please see Performance Information Rating for the list). The Office found out that some companies had not implemented some of their approved programs/activities. As a result, companies were penalized accordingly.

Photos showing the SDMP Projects of Currimao Construction Supply Corp. with the provision of materials for the fence and beautification of Parang Elementary School
Monitoring Report on Mining Forest Program

In line with the implementation of DAO No. 22, Series of 1989, two (2) accomplishment reports on Mining Forest Program of the mining companies were validated and subsequently submitted to MGB Central Office. Among the activities which were violated are the seedling propagation, reforestation works, care and maintenance of nurseries and previously planted seedlings.
Strengthen Multi-Partite Monitoring System

A total of eleven (11) Multi-Partite Monitoring Teams with corresponding MRFCs in the region under MGB issued permits and five (5) (MMTs/MRFs) under LGU issued permits are fully operationalized to check the performances and compliances with the approved EPEP/AEPEP of mining/quarry projects, to wit:

<table>
<thead>
<tr>
<th>COMPANY/TENEMENT NAME</th>
<th>DATE OF MMT MONITORING</th>
<th>DATE OF MRFC MEETING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holcim, Philippines</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Bacnotan, La Union</td>
<td>February 15-19, 2016</td>
<td>March 8, 2016</td>
</tr>
<tr>
<td></td>
<td>May 16-20, 2016</td>
<td>June 14, 2016</td>
</tr>
<tr>
<td></td>
<td>August 15-19, 2016</td>
<td></td>
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<tr>
<td></td>
<td>November 21-25, 2016</td>
<td></td>
</tr>
<tr>
<td>- Poro La Union</td>
<td>February 24-26</td>
<td>September 13, 2016</td>
</tr>
<tr>
<td></td>
<td>May 24-17, 2016</td>
<td></td>
</tr>
<tr>
<td></td>
<td>August 24-26, 2016</td>
<td></td>
</tr>
<tr>
<td></td>
<td>November 15-16, 2016</td>
<td></td>
</tr>
</tbody>
</table>

Photos showing the Mining Forest Program (MFP) plantation area (left) and overgrown bamboo propagules ready for planting. (right)
<table>
<thead>
<tr>
<th>Enterprise Description</th>
<th>Dates</th>
<th>Dates</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISAG Permittees</td>
<td>Date Range</td>
<td>Date Range</td>
<td></td>
</tr>
<tr>
<td>-----------------</td>
<td>------------------</td>
<td>------------------</td>
<td></td>
</tr>
<tr>
<td><strong>ISAG La Union</strong></td>
<td>March 1-4, 2016&lt;br&gt;June 21-23, 2016&lt;br&gt;September 6-9, 2016&lt;br&gt;November 7-11, 2016</td>
<td>March 22, 2016&lt;br&gt;June 28, 2016&lt;br&gt;September 22, 2016&lt;br&gt;December 7, 2016</td>
<td></td>
</tr>
<tr>
<td><strong>ISAG Ilocos Sur</strong></td>
<td>February 15-19, 2016&lt;br&gt;May 10-14, 2016&lt;br&gt;August 9-13, 2016&lt;br&gt;November 7-11, 2016</td>
<td>February 23, 2016&lt;br&gt;May 24, 2016&lt;br&gt;August 30, 2016&lt;br&gt;November 23, 2016</td>
<td></td>
</tr>
</tbody>
</table>
Investigation of Complaints/Cases/Conflicts

Twenty (20) complaints for alleged illegal and indiscriminate quarrying were promptly investigated by the office, to wit:

1. Alleged Existence of Sand and Gravel Quarry within the vicinity of National Grid Corporation's Tower 174 in Sta. Cruz, Ilocos Sur

Traces of Sand and Gravel Quarrying where observed within the vicinity of tower 174
2. Alleged Illegal Black Sand Mining in the Coastal Area of Lingayen, Pangasinan

3. Alleged Illegal Extraction of Beach Sand Along the Shoreline of Brgy. Taboc, San Juan, La Union

4. Alleged Illegal extraction of Sand and Gravel in Baraoas, Naguilian, La Union reported by a certain Johnny Bamba

5. Alleged Illegal extraction of sand and gravel by a certain Roland Taggaoa at Dolo River in Brgy. Lanao, Bangui, Ilocos Norte

6. Alleged illegal quarrying operations in Sudipen, La Union

7. Alleged illegal quarrying operations in Dagupan, Pangasinan

8. Alleged Illegal quarrying and excavation activities in Carmay, bauang, La Union

9. Reported extraction of Magnetite Sand (Black Sand) in Pangasinan

10. Alleged Illegal dredging along Abra River in Caoayan, Ilocos Sur

11. Alleged in action on Illegal Operation of MCG Crushing Plant in Dungon, Sison, Pangasinan

12. Alleged Illegal Quarrying along Bayyating River in Ribsuan, Naguilian, La Union

13. Alleged Illegal quarrying inside ISAg permit of Destiny Mighty Rock Corporation in Camp One, Rosario, La Union

14. Alleged Illegal Black Sand Mining in Candon City

15. Transport of Illegally-sourced Minerals/Mineral products


17. Alleged Illegal Sand and Gravel Quarrying in Brgy. Ballay, Baunag, La Union

18. Alleged Illegal Mining in Brgy. Say-oan, Bacnotan, La Union
19. Alleged Illegal Mining in Sitio Cantingan, Quinavite, Bauang, La Union
20. Illegal Sand and Gravel Processing

Under the Panel of Arbitrators, three (3) cases were investigated.

The complaint of Multicon Metals Inc. stemmed from the refusal of Montague Resources Philippines Corp., holder of Exploration Permit No. EP 05-001 (the area is located in the Municipalities of Mabini and Barlo, Pangasinan) to issue its consent to the former.

Multicon Metals, Inc. is an applicant of a Mineral Processing Permit (MPP). However, the processing of said application is held in abeyance pending the submission of consent from the EP holder.

Dispute involving rights to Mining Areas – Isla Verde Mining Development Corporation vs. Discovery Mines and Dispute involving owners, occupants, claim holders concessionaries vs. Heirs of Elias Olegario.

The Office also issued one (1) Cease and Desist Order to Ms. Rizalina Costales, having found extracting sand, gravel and other loose and other unconsolidated materials outside the area covered by her Commercial Sand and Gravel (CSAG) Permit.

On September 1, 2016 MGB Personnel seized twelve (12) units of ten-wheeler dump trucks believed to be loaded with mineral ores.
Apprehension, Confiscation And Seizure Of 12 Units Of Ten-Wheeler Trucks Found Transporting Illegally-Sourced Minerals In Barangay Poblacion, Dasol, Pangasinan

Twelve (12) Units Of Ten-Wheeler Dump Trucks found transporting Illegally-Sourced Minerals were Apprehended And Siezed On 01 September 2016.

Based on Computation the Trucks contain 201 Cu. M. Of Copper-Gold Ores claimed to have been sourced from Brgy. Anong, Cordon City, Isabela.
The apprehension and seizure of the trucks went smoothly.

Rd Carlos Tayag (Rightmost) in discussion with P/Si Dennis Cabigat, Chief of Police, Dasol Municipal Police Station, Pangasinan Police Provincial Office (Leftmost); Atty. Hipolito Salatan, Atty. Iv, DenrRi, (2nd from left) and For. Melchor Gonzales, DmoIv, Denr – Cenro Alaminos City.

Engrs. Romualdo P. Rosario (Leftmost) and Renato A.D. Rimando (Center) subscribing and affirming the statements in their joint affidavit before P/Si Dennis Cabigat, Chief of Police, Dasol Municipal Police Station, Dasol, Pangasinan.
Confiscation Hearing was held on 05 September 2016 at the new Denr Bldg., Government Center, Sevilla, La Union. It was Presided by Atty. Hipolito Salatan of the Denr, RI.

The owners of the trucks failed to present proofs on the legality of the transport of the Gold-Copper Ores, thus the Trucks, their Loads and other Tools used were eventually confiscated by way of a Confiscation Order dated 16 September 2016 signed by Rd Carlos Tayag.
On September 29, 2016, all the Trucks were Pulled-Out From Dasol, Pangasinan and Parked/Deposited at the compound of Philex Mining Corporation – PhilexPoro Installation, Poro, San Fernando City, La Union.

On 03 November 2016 A Case was filed against the President And Board Of Directors Of Golden Summit Mining Corporation and The Drivers Of The Dump Trucks for violation of the Provisions Of R.A. 7942 Or "The Philippine Mining Act Of 1995" filed at the Office of the Provincial Prosecutor, Burgos Branch, Burgos, Pangasinan.
GENDER AND DEVELOPMENT
For CY 2016, budget for Gender and Development (GAD) amounted to P1,380,000 which was 5% of the total MOOE budget with reference to Section 33 of the 2016 GAA.

The Agency reconstituted the members of GAD through a special order dated August 8, 2016 with Ms. Haydee A. Ofiaza as the Chairman and all division chiefs as members namely Engr. Carlos A. Tayag, Engr. Renato Apolinario D. Rimando, Engr. John Ymson and Mr. Socrates G. Gaerlan. Ms. Gemmalyn S. Dyquiangco was the former GAD focal person.

The agency participated in the Women’s Month Celebration for this year. A tarpaulin containing the theme “Kapakananni Juana, Isamasa Agenda” was posted in the façade of the DENR building.

On March 16, 2016, the employees joined the fun walk and zumba at Don Mariano Marcos Memorial State University - Mid-La Union Campus, City of San Fernando, La Union as organized by the regional advocates for gender equality to promote healthy lifestyle.
A livelihood program was conducted on May 30, 2016, in coordination with the Office of the Provincial Agriculture (OPAG), Provincial Government of La Union (PGLU). The program intends to teach employees on how to make atchara and siomai as an alternative source of income.

MGB employees in action during the Livelihood Program.

Siomai and Atcharang Papaya as the finished product during the Livelihood Program.
The Agency actively participated in the Environment Month Celebration for CY 2016. On June 1, 2016, employees joined in the Mangrove Tree Planting at Brgy. Casantaan, Sto. Tomas, La Union wherein two hundred (200) mangrove propagules were planted and on June 25, 2016, they joined in the Arbor Day at Sta. Rita, Agoo, La Union.

On November 7, 2016, the Agency, in coordination with Erasto Films, conducted a film showing entitled “Boses” directed by Ellen Ongkeko-Marfil which was highly endorsed by the Philippine Commission on Women. The movie was about a young boy (Estong) who suffered physical and emotional abuse from his father. He was rescued by the DSWD and trained to be a violinist by a man (Ariel). The movie promotes children’s rights and the power of film and music as tools for education, healing and social transformation. The activity was participated by all employees as part of their Gender and Development (GAD) program for supporting the campaign to end violence against women and children under RA 9262.
The Agency conducted Gender Sensitivity Training at La Union Country Resort Hotel. They invited Ms. Leduina S. CO, PENRO of Pangasinan who orient the employees on main gender issues and concepts.

Awarding of Certificate of Appreciation to PENRO Leduina S. CO who served as Resource Speaker during the Gender Sensitivity Training.
PROGRAM FOR SENIOR CITIZENS AND DIFFERENTLY-ABLED PERSONS

The Mines and Geosciences Bureau Regional Office No. I, in coordination with Department of Education Region I, conducted the Art Workshop of differently-abled students for three (3) consecutive Saturdays (November 19, 26 and December 3, 2016) held at San Fernando City SPED High School, with the theme “Promoting Environment and Responsible Mining through Arts” which greatly helped in developing the innate talents of the students.

The agency distributed art materials, backpacks and snacks to thirty five (35) students, mostly deaf-mutes and slow learners. The activity was conducted in accordance with Section 24 of the General Appropriations Act stating that all agencies of the government shall formulate plans, programs and projects intended to address the concerns of senior citizens and differently-abled persons.

Luigi, a student with cerebral palsy enjoying the workshop.

Students proudly showing their artworks during the Culminating Program.
The Agency also integrated in their regular activities the priority lane for senior citizens, pregnant women and differently abled persons. Gang chairs and wheelchair were purchased exclusively for them.

For 2016, All the major programmed activities were accomplished with the unwavering dedication and commitment of the men and women of MGB-RO I with the assistance of fourteen (14) hardworking personnel hired under contract of service in support to the thrusts and programs of the government to improve the quality of lives of people and to uplift the socio-economic condition of the country.
CHALLENGES FOR 2017
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The year 2016 can be considered as a “very productive” year for the minerals industry in the region, the sand and gravel mineral commodities in particular.

We witness an increase in the volume and value of said aggregates primarily because of the implementation of various infrastructure projects. From a macro-perspective, we can assess that the robust economy is the culprit.

However, the bullish demand of aggregates had greatly paved the way for the proliferation of illegal sand and gravel quarrying in certain parts of the region.

Economic deposits of river aggregates abound in the different river systems cross-cutting the flood plains of the region, readily accessible for commercial development and utilization without the need of high capital investment.

As a result, the situation deprives the government of its fair share in the commercial development and utilization of these deposits, in terms of taxes and other fees. It also contributes, to a certain scale, pollution of waterways. Jeopardizing the stability of public structure, putting into harms way lives and properties, is another. Aside from the issue on failing to create productive employment opportunities in the area, said illegal activity further deprives the affected community of the social development programs intended to uplift the well-being of the residents.

To be “present” in the subject area, doing monitoring, is the immediate solution. Hence, there is a need to strengthen linkages and networking with local leaders in the affected communities and other stakeholders.

The conduct of intensive Information, Education and Communication (IEC) campaign involving all the stakeholders is another.

Based on experience, an empowered community is the best defense against the proliferation of illegal mining activities. Broadening and increasing
the participation of the LGUs in the mineral development and utilization spectrum - not only in the collection of fees, but also in the granting of permits - is a scheme which provides a strong connection between the MGB and the concerned LGU. The creation and operationalization of the various Provincial Mining Regulatory Boards in the region is a “sure fire” in building productive partnerships with LGUs.

The creation and organization of a highly-mobile quick response team, tasked to investigate claims of illegal mining activity and to file proper charges before the court provides a solid bedrock in curbing illegal mining. Surely, it will send a strong message that the government does not condone such illegal activities.

The negative perception of some Local Government Units (LGUs) towards the minerals industry is still evident. One proof is the enactment of Ordinances banning mining within their areas of operations.

However, with the appropriate intervention, said perception could be rectified or addressed properly thru the conduct of continuous dialogues with them. There are indications that subject LGUs are ready and willing to embrace some changes within their sphere of influence. And their willingness to accept such changes could be further reinforced by enhancing their knowledge and understanding on the dynamics of the minerals industry as well as on the provisions of the law relating to it.

It is worthy to note that the concept of productive and collaborative partnership and the idea of convergence are now slowly gaining grounds. What is just needed is to translate these initiatives in the mineral development undertaking.

The appreciation and understanding on the significance of the Geohazard Maps need to be further enhanced. Local leaders, who are in the frontline every time natural calamities strike, must have to be subjected to undergo continuous learning process on its basic uses and interpretation to make it more useful. The conduct of dialogues and education and information campaign is an avenue where the learnings and expertise of concerned technical personnel of the MGB is downloaded to them.
With the change in the administration more challenges are expected for the Year 2017. However, with the resilience of the MGB and with the support and cooperation of all our partners we will surely surpass them.
PERFORMANCE
INFORMATION REPORT
PHYSICAL ACCOMPLISHMENT VIS-À-VIS FUND UTILIZATION REPORT
**Mission**

The Mines and Geosciences Bureau, as steward of the country's mineral resources, is committed to the promotion of sustainable mineral resources development, aware of its contribution to national economic growth and countryside community development. It fully recognizes that the development of a responsive policy framework in partnership with stakeholders to govern mineral exploration, mining and investment decisions and an effective institutional structure, are fundamental requisites for the sustainable utilization of the country's mineral resources. It is adherent to the promotion of geological studies as an integral element of socio-economic development, environmental protection and human safety. Yet, it is sensitive to the known environmental impacts of mining and the need for restoration and rehabilitation of mining-affected areas and the development and adoption of environmental and geoscientific technologies.

**Vision**

The Mines and Geosciences Bureau envisions a minerals industry that is not only prosperous but also socially, economically and environmentally sustainable, with broad community and political support while positively and progressively assisting in government’s program on poverty alleviation and contributing to the general economic well being of the nation.

MGB also aims to be the leading geoscience and georesources serving the public and nation with scientific reliability.

**Thrust**

To realize its vision for the industry, MGB subscribes to the core requirements of Sustainable Development as applied to mining and geoscience:

- Protection and rehabilitation of the environment;
- Promotion of social and community stability;
- Preservation of options for future generations; and
- Competitive and prosperous mining industry.