

**HEALTH RESEARCH AGENDA OF NORTH LUZON:  
A ZONAL REPORT  
2006-2010**

**Leonardo N. Quito, Jr.  
Zonal Facilitator  
R1HRDC Chairperson**

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## **FOREWORD**

Broad-based consultations were conducted by Regions 1, 2 and CAR in the formulation of their respective Regional Health Research Agenda. The stakeholders concerned include public and private institutions such as hospitals, academe, health sector representatives, and civic groups involved in health research development. Regional priority areas were identified based on prevailing problems/issues and gaps that need to be addressed for a more equitable and quality health care.

The PCHRD assigned these three regions to form Zone 1 and integrate the regional outputs into the Zonal Health Research Agenda. This will guide efforts in addressing the disparities and closing the gaps to improve the health situation and set priorities that are attuned and responsive to the needs of the zone, and aligned to the MDG, MTPDP, Health Sector Reform Agenda, and other national initiatives. The various zonal outputs will become part of the Unified Health Research Agenda which will serve as the template for the country's research and development efforts for the next five years. They will likewise provide a platform to advocate for local, national and international support for health research and development.

The Zonal Health Research Agenda was prioritized based on the PCHRD criteria which include: 1) urgency/magnitude of the issue/problem or prevalence in the community; 2) feasibility/do-ability of the research based on existing capabilities; 3) impact of the R&D on a greater number of the population and on the health issues being addressed; and 4) research areas not well funded/least prioritized by other agencies. The list of priority health researches across the three regions were categorized into biomedical and policy research packages. The biomedical research package includes six sub-packages, namely: 1) Changing Patterns of Infectious Diseases in Northern Luzon (NL): Epidemiology and Management; 2) Emerging and Re-emerging Infections in NL; 3) Leading Lifestyle Related Disorders in NL; 4) Health Concerns of Special Populations in NL: Prevalence, Etiology and Profile; 5) Environmental Health Concerns in NL; and 6) Traditional and Alternative Health Modalities in NL. The policy research package includes the two sub-packages: 1) Hospital Management and 2) Local Public Health System.

The aforementioned packages will be the basis of collaborative R&D engagement. The lead region/institution for specific researches was identified to maximize institutional competencies. Developing the R&D Systems of the regions will require strengthening the R&D structure, sustaining its operations, technical assistance and technology transfer/enhancement through the big brother-small brother scheme on twinning arrangements and linking/collaborating between the developed and developing regions.

**LEONARDO N. QUITOS, JR.**  
Zonal Facilitator  
R1HRDC Chairperson

## **ACKNOWLEDGMENTS**

The **ZONAL HEALTH RESEARCH AGENDA FOR ZONE 1 (NORTH LUZON)** was developed and prepared through the concerted efforts of the participating agencies and institutions from Regions I and II and the Cordillera Administrative Region (CAR).

Invaluable thanks go to all the technical experts who include the designated regional facilitators and their staff, and various participating agencies who shared their time and contributed in terms of participation/inputs during workshops, comments and suggestions. Likewise, reports, data and other documents/materials used in this report culled from different sources were properly cited and identified.

The professional friendship that was forged among the three regions in the process of the preparation of the Zonal Health Research Agenda meant a great deal because it opened opportunities for sharing and collaboration with our neighboring regions, particularly on health research and development initiatives.

Our respective constituents served as our inspiration in crafting the Zonal Health Research Agenda in our quest to address their health problems, issues and concerns.

Special thanks are reserved for the Philippine Council for Health Research and Development (PCHRD) for having faith in us and for giving us the opportunity to undertake this work; and for providing financial and technical assistance throughout the progress of this report.

To future researchers and other stakeholders whom we have contemplated upon as end-users of this report, we hope and anticipate that they will find it useful and thus realize the very purpose of this work—that is, laying the groundwork in conducting health research, specifically in response to the health needs and priorities of the zone. Hence, the end result is to bridge the gap and inequities in health development and health research in order to improve the health situation in the three regions and the zone as a whole.

To our friends and colleagues in the field of health research, our mission begins ... we, therefore, invite everyone to consider this agenda as we embark on our health research and development efforts/initiatives.

**ZONAL HEALTH RESEARCH AGENDA FOR ZONE 1  
(NORTH LUZON)**

**LEONARDO N. QUITOS, JR.**  
Zonal Facilitator

**DR. ELIZABETH FE-DACANAY, MD**  
Regional Facilitator, Cordillera Administrative Region

**DR. SOCORRO ZARATE-ESCALANTE, MD**  
Regional Facilitator, Ilocos Region

**DR. RUSTICO SANTOS**  
Regional Facilitator, Cagayan Valley Region

**CONSULTANTS & ADVISERS**

**Dr. Alan Feranil, PCHR**  
**Ms. Teresita Laguimun, PCHR**  
**Ms. Anicia Catameo, PCHR**

**TECHNICAL COORDINATORS**

**Ms. Lucila D. Torio, NEDA Regional Office I**  
**Dr. Manuel Gabaon, NEDA Regional Office I**

## **PARTICIPANTS/CONTRIBUTORS**

### **REGION I**

**Dr. Ma. Lourdes Otayza**, MMMH&MC  
**Director Edgar F. Padilla**, DOST-1  
**Director Oscar Mabalot**, POPCOM - I  
**Dr. Romeo Miniano**, DOH-I  
**Dr. Joel Beleno**, ITRMC - I  
**Dr. Jose Ostrea**, PHO – La Union  
**Dr. Randy Manalo**, DOH – I  
**Dr. Hilarion Maramba**, R1MC  
**Dr. Estrella Calixto**, CHED Zonal Research  
**Dr. Erwin Cadorna**, UNP  
**Ms. Manolita Crisostomo**, MMSU  
**Ms. Evelyn Tarectecan**, PHO-Pangasinan  
**Dr. Adriano Esguerra**, DMMMSU  
**Ms. Marlyn Hufano**, POPCOM  
**Dr. Marlene Dulatre**, PHILHEALTH

### **REGION II**

**Ms. Nenita Collado**, DOST – II  
**Ms. Sandra Sangab**, DOH  
**Ms. Elsie de Yro**, DOH  
**Dr. Roderick Ian Reyes**, DOH – II  
**Dr. Roselyn Dadural**, DOH – II  
**Dr. Roberto Macatuggal**, University of La Salette  
**Ms. Laura Diciano**, DOLE

### **CORDILLERA ADMINISTRATIVE REGION**

**Dr. John Anthony Domantay**, SLU College of Medicine  
**Dr. Ana Marie Leong**, SLU College of Medicine  
**Dr. Osmund Belmonte**, DOST-CAR  
**Dr. Florida Faculo**, NEDA-CAR  
**Dr. Eve Dayot**, CONCAT/TI Philippines  
**Dr. Julius Cesar Alcala**, DOH-CAR

### **SECRETARIAT**

**Ms. Jocelyn O. Corpuz-Panlilio**, NEDA Regional Office I  
**Ms. Racquel Atawe**, NEDA Regional Office I  
**Ms. Myla Jucar**, NEDA Regional Office I  
**Mr. Alexander Malong**, NEDA Regional Office I  
**Mr. Marcelino Cabiladas**, NEDA Regional Office I  
**Mr. Rommel Sison**, NEDA Regional Office I  
**Mr. Ismael Jubilo**, NEDA Regional Office I

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## BRIEF SOCIO-ECONOMIC PROFILE/SITUATIONER

### Land Area

Zone 1 is composed of three(3) regions, namely: Region 1, Region 2, and CAR. The total land area is 63,744.4 sq. km., with Region 2 occupying about half (50 percent) and Region 1 having the smallest land area. In terms of topography or terrain, Region 2 and CAR are considered landlocked/upland areas, while Region 1 is basically coastal with some upland municipalities and barangays along the border of Region 2 and CAR.

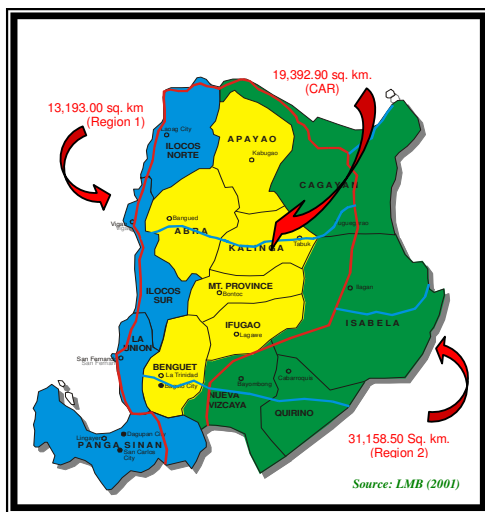


Figure 1: Land Area, Zone 1

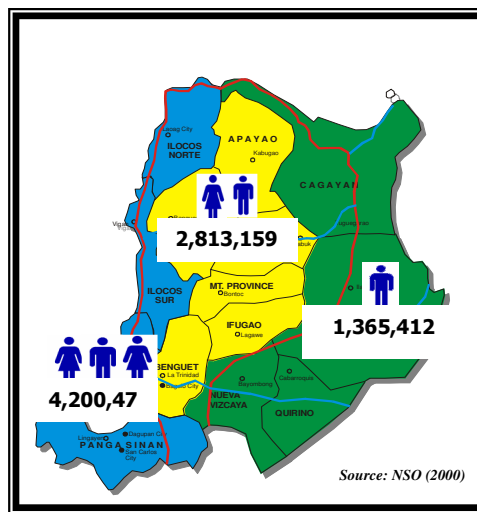


Figure 2: Population Size , Zone 1

### Demography

The total population of Zone 1 is 8,379,049 in year 2000 (NSO). Region I had the highest population size or 50% of the zonal population. Likewise, the population density in Region 1 is highest at 318 person/sq km. or about four times the number of people living per sq. km. of land area, even higher than the national average population density of 255.0. However, Region 2 had the highest population growth rate (PGR) at 2.25%, though this is lower than the national average PGR of 2.36%. This is followed by Region 1 at 2.15% and CAR with the lowest PGR at 1.82%.

Table 1: SELECTED POPULATION INDICATORS, ZONE 1

| Indicators             | Region I  | Region 2  | CAR       | Total/<br>Average | Philippines    |
|------------------------|-----------|-----------|-----------|-------------------|----------------|
| Population Size        | 4,200,478 | 1,365,412 | 2,813,159 | <b>8,379,049</b>  | <b>76498.7</b> |
| Population Growth Rate | 2.2       | 2.3       | 1.8       | <b>2.07</b>       | <b>2.36</b>    |
| Population Density     | 318.0     | 90.0      | 70.0      | <b>159.33</b>     | <b>255.0</b>   |
| Dependency Ratio       | 68.4      | 71.8      | 70.7      | <b>70.30</b>      | <b>69.0</b>    |

## Labor and Employment

The average Labor Force Participation Rate (LFPR) is 67.2%, which is almost similar for Region 2 and CAR at 68%. Region 1 had a 65% LFPR and Employment Rate below 90% (89.4%), which is similar to the national average, as compared to the zonal average of 91.7%.

Underemployment Rate, however, is lowest in CAR at 13.2%, which is below the zonal average of 16.1% and the National Average of 16.9%. Region 2 was highest in all the three indicators as compared to the other regions.

Figure 3: Selected Labor & Employment Indicators, Zone 1

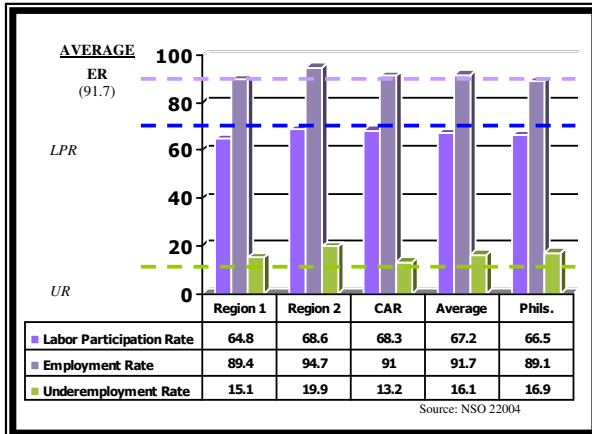
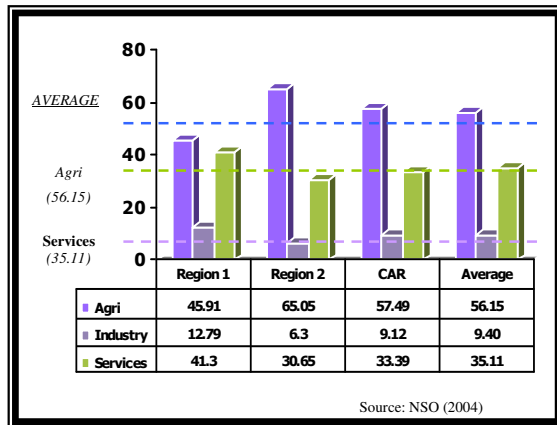


Figure 4: Percentage of Employed Persons by Sector, Zone 1



In terms of employed persons by sector, the agriculture sector absorbed the majority of the labor force with Region 2 registering the highest at 65%, followed by CAR at 57%. Region 1 had the lowest percentage (46%) of employed persons in the agriculture sector (46%) but it had the highest percentage for the services (41%) and industry sectors (12.79%). This reflects the configuration of the economy of each of the three regions.

## Poverty Incidence

The poverty incidence declined by 5-5.9% from CY 2000 to CY 2003 in the three regions, compared to a 2.8% average reduction for the country. The magnitude of poor families likewise declined. In contrast, the poverty threshold per capita increased due to, among others, inflation and cost of living in all areas. With the continuing decline in poverty incidence, the Millennium Development Goal (MDG) of reduction of extreme poverty and hunger have a high probability of being achieved if current efforts are intensified by all sectors, and the target groups/families affected are empowered.

Table 2: Poverty Indicators, By Region  
Zone 1: 2000 & 2003

| Indicators                    | Region 1 | Region 2 | CAR     | Average | Philippines |           |
|-------------------------------|----------|----------|---------|---------|-------------|-----------|
| Poverty Incidence of families | 2000     | 29.4     | 25.2    | 30.7    | 28.4        | 27.5      |
|                               | 2003     | 24.4     | 19.3    | 24.8    | 22.8        | 24.7      |
| Magnitude of Poor Families    | 2000     | 237,153  | 143,069 | 84,449  | 154,890     | 4,137,782 |
|                               | 2003     | 206,641  | 115,903 | 73,008  | 131,851     | 3,966,396 |
| Poverty Threshold Per Capita  | 2000     | 12,685   | 11,128  | 13,065  | 12,293      | 11,451    |
|                               | 2003     | 13,276   | 11,409  | 13,976  | 12,887      | 12,267    |

Source: NSCB Preliminary Estimates

## Education

In 2003, among the three regions, the simple and functional literacy rates are highest in Region 1 at 97.3% and 89.2% respectively, which is above the zonal average of 94% and 87.4%. The zonal simple literacy rate is comparable to the national rate, but the functional literacy rate is higher in Zone 1 than the national rate. Region 2 had a higher simple literacy rate than CAR but CAR had a higher functional literacy rate.

**Table 3: Selected Education Indicators, by Region  
Zone 1: SY 2001-2002 & 2003**

| Indicators                | Region 1 | Region 2 | CAR  | Average | Philippines |
|---------------------------|----------|----------|------|---------|-------------|
| <b>Literacy Rate</b>      |          |          |      |         |             |
| Simple                    | 97.3     | 93.5     | 91.1 | 94.0    | 93.4        |
| Functional                | 89.2     | 86.1     | 87.0 | 87.4    | 84.1        |
| <b>Participation Rate</b> |          |          |      |         |             |
| Elementary                | 97.9     | 96.1     | 92.5 | 96.4    | 97          |
| Secondary                 | 94.2     | 77.9     | 82.5 | 84.9    | 74          |
| <b>Completion Rate</b>    |          |          |      |         |             |
| Elementary                | 76.8     | 70.8     | 65.4 | 71.0    | 68          |
| Secondary                 | 76.4     | 76.5     | 72.7 | 75.2    | 49          |

Source: NSO & DEPED (2003)  
\*\* DEPED (SY 2001-2002)

In SY 2001-2002, the participation rate at the elementary level across the three regions was above 95 percent (95.2% - 97.9%), which is comparable to the national data. Completion rate was low at 65.4% in CAR as compared to 76.8% in Region 1. The zonal average is 71%, which is higher than the national completion rate. The MDG Target of achieving universal primary education may be difficult to attain if strategic interventions are not undertaken, particularly in CAR and other remote areas where there are hard-to-reach schools that may also lack facilities and teaching/learning materials.

At the secondary level, the participation rate is highest in Region 1 at 94.2% as compared to Region 2 which is the lowest at 77.9%. However, the completion rate is almost similar in the three regions at an average of 75.2%. This implies that there is a bigger problem with drop-outs in Region 1 considering the high participation rate as compared to Region 2 and CAR. However, Zone 1 is better off based on these indicators as compared to the national average participation and completion rates of 74.2% and 48.5%, respectively.

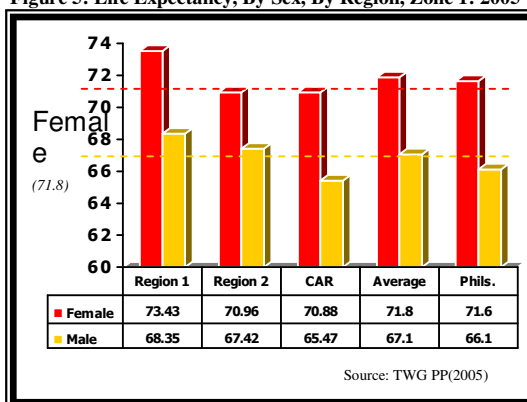
## OVERVIEW OF THE HEALTH SITUATION

The overview of the health situation in Zone 1 will be based on selected indicators that are comparable across the three regions and available for a specific time period from the same source. A trend analysis would have been possible for data that is available for various years, but this is not comparable across the three regions as shown in their reports.

- Life Expectancy**

The life expectancy (LE) for both male and female is highest in Region 1 at 73.4 years and 68.3 years, respectively. The zonal average LE is 71.8 years which is comparable to the national LE with Region 2 and CAR slightly below at 70.1 years. The difference of about five years is in favor of the female over the male population. With improving health and science technology, the LE will further

**Figure 5: Life Expectancy, By Sex, By Region, Zone 1: 2005**



increase, which should signal the development and formulation of appropriate programs/projects for the elderly population.

## Vital Health Indices

- **Births and Deaths**

In 2003, the average Crude Birth Rate (CBR) for zone 1 is 21.2 births per 1,000 population. CAR had the highest CBR of 22.4 births, which remained the same over a five-year period as indicated in its regional report. Region 1 and 2 are within the same level of CBR at 20.8 and 20.4 births, respectively. The zonal average for all vital health indices (Table 4) is lower than the national average which shows a relatively better health situation.

Table 4: Vital Health Indices by Region  
Zone 1: 2003

| Indicators                                       | Region 1 | Region 2 | CAR   | Average | Philippines |
|--|----------|----------|-------|---------|-------------|
| Crude Birth Rate*<br>(per 1,000 population)      | 20.85    | 20.48    | 22.46 | 21.26   | 25.2        |
| Crude Death Rate*<br>(per 1,000 population)      | 5.37     | 3.89     | 4.11  | 4.45    | 5.7         |
| Infant Mortality Rate*<br>(per 1,000 population) | 11.30    | 6.80     | 9.48  | 9.19    | 29          |
| Under 5 Mortality**                              | 39.00    | 35.00    | 34.00 | 36.00   | 42          |
| Child Mortality**                                | 11.00    | 8.00     | 20.00 | 13.00   |             |
| Maternal Mortality*<br>(per 1,000 live births)   | 0.37     | 0.49     | 0.68  | 0.51    | 1.08        |

Data Source: \* CHD (2003)  
\*\* TWGMCM, NSO (2003)

Region 1 and 2 are within the same level of CBR at 20.8 and 20.4 births, respectively. The zonal average for all vital health indices (Table 4) is lower than the national average which shows a relatively better health situation.

In terms of the Crude Death Rate (CDR), the average for Zone 1 is 4.45 deaths per 1,000 population. Region 1 had the highest CDR of 5.37, while Region 2 had the lowest CDR of 3.89. Table 4 also shows that Region 1 is consistently highest in Infant Mortality while Child Mortality is highest in CAR as well as Maternal Mortality. On the other hand, Region 2 had the lowest child mortality. The variations in the mortality of age groups affected in the three regions can be the basis for the prioritization of target groups and selection of appropriate and strategic programs to address their specific problems.

## Leading Causes of Morbidity and Mortality

The top causes of morbidity in Zone 1 are still communicable diseases, particularly for Region 2 and CAR. These are acute respiratory infection, influenza, bronchitis and pneumonias (Table 5). It should be noted even if these were not included in Region 1 as among the leading causes of morbidity. This could be attributed to the reporting of the various categories of notifiable diseases, although these diseases are all considered communicable in nature. The Communicable Disease Control Program and other preventive measures must therefore be intensified to reduce the prevalence of these diseases among the vulnerable population.

Table 5: Leading Causes of Morbidity, by Region  
Zone 1: 2004

| Indicators                                     | Region 1                  | Region 2 | CAR      | Rank (Zone 1) |
|--|---------------------------|----------|----------|---------------|
|  | Rate per 1,000 population |          |          |               |
| 1. Acute Respiratory Infection                 | 1,431.23                  | —        | 4,167.71 | 1             |
| 2. Influenza                                   | —                         | 1,484.06 | 1,512.19 | 3             |
| 3. Bronchitis                                  | —                         | 1,421.75 | 2,374.80 | 2             |
| 4. Pneumonias                                  | —                         | 499.67   | 2,089.79 | 6             |
| 5. Diarrheas                                   | 755.82                    | 811.15   | 1,592.19 | 4             |
| 6. Hypertension/Hypertensive Vascular Diseases | 681.15                    | 624.76   | 1,052.04 | 5             |
| 7. Chicken Pox                                 | 449.38                    | —        | —        | 10            |
| 8. Acute Tonsillitis Pharyngitis               | —                         | —        | 541.04   | 7             |
| 9. Skin Disorders                              | —                         | 451.80   | —        | 9             |
| 10. Parasitism                                 | —                         | —        | 494.59   | 8             |

Source: Health Research Agenda Reports of Region 1,2, CAR (2006)

Diarrhea is the fourth cause of morbidity in Zone 1 which is common in the three regions, with CAR having the highest morbidity rate of 1592.19 with 17,592 cases. However, Region 1 had the highest number of cases at 33,426 and it is also the tenth cause of mortality in this region. Since diarrhea is a water-borne disease, the Water and Environmental Sanitation and Diarrhea Control Program should be included among the

priority programs in affected areas of the region. Health Education, Personal Hygiene, and proper management of the diarrhea are also critical to prevent deaths.

Table 6: Leading Causes of Mortality, by Region  
Zone 1: 2004

| Indicators                               | Region I                  | Region 2 | CAR    | Rank (Zone 1) |
|--|---------------------------|----------|--------|---------------|
|  | Rate per 1,000 population |          |        |               |
| 1. Cardiovascular Diseases               | 88.71                     | 45.20    | 108.35 | 1             |
| Diseases of the Heart                    |                           | 31.10    |        |               |
| Coronary Artery Disease                  |                           | 26.20    |        |               |
| Cerebro Vascular Disease                 |                           | 20.00    |        |               |
| 2. Pneumonias                            | 76.29                     | 69.80    | 62.15  | 2             |
| 3. Cancer                                | 53.75                     |          | 39.61  | 3             |
| Neo-Plasms                               |                           | 36.80    |        |               |
| 4. Accidents                             | 25.01                     | 30.10    | 18.31  | 4             |
| 5. PTB                                   | 24.56                     | 15.10    | 11.24  | 5             |
| 6. Chronic Obstructive Pulmonary Disease | 13.43                     | 10.90    |        | 6             |
| 7. Kidney Diseases                       | 11.03                     |          | 6.45   | 8             |
| 8. Peptic Ulcer Disease                  |                           | 10.10    | 10.54  | 7             |
| 9. CVA                                   | 10.29                     |          |        | 10            |
| 10 Diabetes Mellitus                     | 9.52                      |          | 9.09   | 9             |

In Zone 1, non-communicable diseases or degenerative diseases such as cardiovascular diseases, cancer, COPD, kidney diseases, peptic ulcer, and diabetes outnumber infectious diseases as the leading causes of mortality (Table 6) Pneumonias and PTB are still the second and fifth causes of mortality, and existing programs must be intensified to reduce deaths.

The concern for degenerative diseases is likewise important, as these affect the economically productive age

groups, thus reducing their income-earning capacity due to sick leaves or absences from work. The cost of treatment is also expensive because of the severe and chronic nature of these diseases, and if not properly managed, the debilitating outcomes will have a negative impact on the health of the sick individual as well as the family members as their caregivers.

The prevention and management of degenerative diseases could be among the priority areas for research to reduce risks of developing or acquiring these diseases. Healthy lifestyle, proper nutrition, health education and other interventions are needed to improve the health situation.

## Regional Concerns

There are peculiarities in the health situation of each of the three regions as presented in the various indicators. Likewise, there are similar concerns of various intensities that affect them. Collaborative efforts and sharing of knowledge and practices/technology will facilitate improvement of the health situation in each region within Zone 1. The regional reports contain more detailed discussions of their respective health situation.

Pulmonary TB is a major infectious disease that affects all regions in the country. With the DOTS strategy, the cure rate is already high, but there is a need to increase the detection rate to prevent worsening and spread of TB in the family and the community. TB is one of the immunizable diseases and can be easily prevented through the Expanded Immunization Program of the Department of Health.

In Region I, leprosy remains a problem with a 66% prevalence rate. Another concern is the high incidence rate of rabies at 79.59% with a death rate of 0.36%. Efforts should be intensified and research can be conducted to reduce the incidence of these diseases including dengue, cholera, acute gastro-enteritis, and malaria. With many OFWs from Region 1, there are high risks of having HIV/AIDS cases, with 55 documented cases. The reduction of incidence of these diseases are included in the MDG targets by the region, which can be achieved at a faster rate through studies/researches along these areas of concern.

Region 2 and CAR share health problems that are typical in landlocked and upland areas, brought about by the ecology and environment as well as culture, tradition and health practices of the people in these areas. Peptic ulcer is among the top ten leading causes of mortality in the two regions, with homicide and senility identified as a cause of mortality in

CAR only. Parasitism is high in CAR with a 494.59 morbidity rate. It is recommended that sanitary health practices and cleanliness in the home and the environment be intensified. The use of organic fertilizers in vegetable farms and other factors can be studied to reduce the incidence and eradicate parasitism particularly among children, as these affect the body's absorption of nutrients and their health status, in general.

The top ten causes of morbidity in Region 2 include skin disorders, which is not prevalent in the other regions. Factors that have contributed to this problem could be studied to reduce the morbidity rate of 451.80 per 100,000 population.

## **Health Resources, Facilities and Health Research and Development Structure**

The three regions in Zone 1 each mobilize health resources and facilities as channels in the provision of health care services. These include health manpower, both government and private, as well as hospitals, health centers, clinics and barangay health stations, as well as the funds and medical supplies allocated to various programs and projects. The outputs and effects of these are reflected in the impact indicators on the health status of the population served in each of the regions.

In terms of health research and development, with the nurturing guidance and funding support of the PCHRD-DOST, the three regions organized their Regional Health Research and Development Committees with four Sub-Committees: 1) Research & Development; 2) Ethics; 3) Human Research & Development (renamed as Institutional R&D); and 4) RICU. However, the functionality of the three regional HR&D Committees are at different levels of development.

In developing the R&D systems of the regions, Director Quito, Jr., as Zonal Facilitator, presented the R & D Systems Continuum. While Region 1 was able to develop and strengthen the R1HRDC as the Health R&D structure, the lessons learned and practice of managing and making the Committee functional can be shared as a model in the other regions. This can be done through technical assistance and capacity building, linking/collaboration in R&D engagement, and enhancing technology transfer through twinning arrangements or big brother-small brother schemes.

Inventory of Health R&D Resources was also conducted to assess these in terms of adequacy, gaps, strengths and opportunities, and weaknesses and threats. These resources include those involved in Health R&D such as training hospitals and public and private medical centers, public and private higher education institutions, research agencies/institutes, and relevant NGO and GO partners.

## **ZONE I HEALTH RESEARCH AGENDA FORMULATION**

### **METHODOLOGY**

Zone I adopted the bottom up approach in research agenda setting proffered by the Philippine Council for Health Research and Development (PCHRD). This approach involves major stakeholders, both public and private institutions, and civil society. This group is expected to formulate the health research and development priority agenda to address health concerns and problems/issues, attuned and responsive to the local needs which must be aligned with the Millennium Development Goals, Medium-Term Development Plan, and national initiatives like Health Sector Reform, Gender and Development, Sustainable Development and Regional Development Plan.

To implement the bottom up approach, PCHRD divided the country into zones, and designated zonal facilitators and region-based experts to act as regional facilitators and conduct of a zonal assembly.

This approach entails three major strategies in the priority setting process that ensure that the consultation process was participatory, productive and empowering to the concerned regions/zones--that is, there was multi-sector and multi-disciplinary participation at all levels, regional and zonal autonomy in the consultation process, and logistic support and technical assistance.

As prescribed by PCHRD, the activities that were undertaken in the setting of health research agenda were as follows:

- Reviewing/assessing the zone's health situation/status;
- Assessing Health R&D resources (including researches);
- Identifying gaps, problems, and emerging concerns;
- Identifying zonal/regional priority research areas;
- Documenting techniques/strategies used in arriving at priorities; and
- Preparing zonal/regional reports

Likewise, Zone I adopted the following criteria for prioritization of R&D areas based on the suggested criteria of PCHRD:

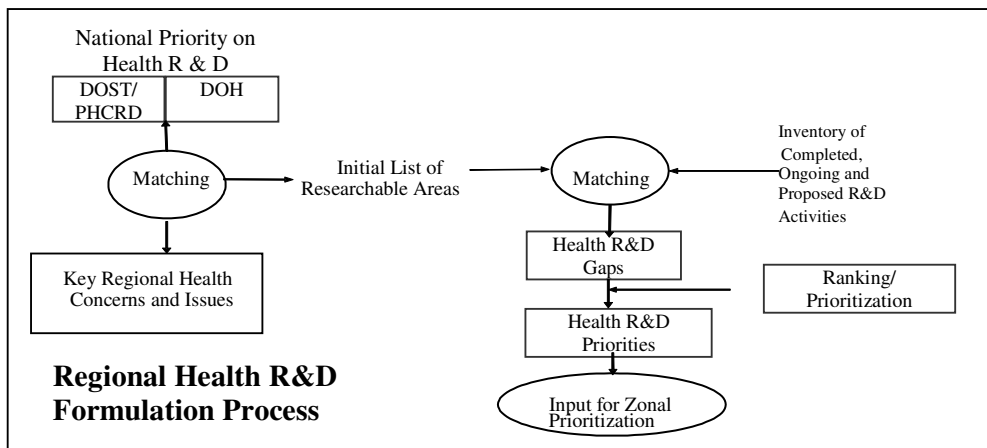
- urgency/magnitude of the issue/problem/prevalence (rank) of the disease/burden to the community
- feasibility/do-ability of the research based on existing capabilities
- impact of the R&D on a greater number of the population (in terms of mortality and morbidity, quality of life, social desirability; cost of health care, and in anticipating future health problems/issues;
- impact on the health issues being addressed; and
- area not well funded/neglected by other agencies

To address the disparities in health development and health research, Zone 1 adopted a mechanism to set a health research agenda to look into the broad array of health problems, underlying issues and assessment of the past strategies of the zone or region. These are subsumed in health research efforts as priority research areas and issues that, when responded to, may result in more effective and efficient health service delivery. This process requires wide consultation and consensus among decision/policy-makers, implementers, stakeholders, etc. who may come from government agencies/organizations, higher education institutions, research councils/funding donors of health research, civil society/private sector organizations, and many other concerned entities. As such, aside from playing a crucial role in the setting up of a health research agenda, their commitment, participation and contribution is influential in making progress towards the goals of equitable and quality health care/practice, and will advance efforts to develop initiatives and programs aimed at closing in the gaps as well as in improving the health status in the zone/regions.

Guided by the framework set by the PCHRD, the designated Zonal Facilitator called a Coordinators' Meeting on 13 October 2005 at the NEDA-CAR, Baguio City to discuss and agree on the Health Research and Development Formulation Process, the roles of key actors, expected inputs both for the regional and zonal workshops, and schedule of activities. Region I completed its Regional Health Research Agenda Formulation in 2004 and was scheduled to update it on 14 October 2005. Region II conducted its Health Research Agenda Formulation on 30 August 2005. Likewise, the Cordillera Administrative Region (CAR) was scheduled to formulate its Health Research Agenda on 27 October 2006.

It was agreed that the following *Health Research Agenda Formulation Framework* be adopted as presented by Zonal Facilitator Director Quitos:

**Figure 6: REGIONAL HEALTH R&D FORMULATION PROCESSES**



The above framework posits that the zone will match the National Priorities (i.e., DOST/PHCRD and DOH) on Health Research and Development (R & D) with that of the Key Regional Health Issues and Concerns to come up with the initial list of researchable areas. This list would then be further compared and contrasted with the Health R & D gaps and priorities as well as the inventory of completed, ongoing and proposed R & D activities, and thereupon, will be subjected to a ranking and prioritization process as the input for Zonal Prioritization.

On 11 November 2005, a Zonal Conference Workshop for the Formulation of Health Research Agenda (Phase 1) was conducted at the Baguio Palace Hotel, Baguio City. It was participated in by government agencies, higher education institutions, hospitals, private sector, health researchers/practitioners, etc. from Region 1, 2 and CAR.

Dr. Alan Feranil of the Philippine Council for Health Research and Development (PCHRD) provided the national milieu on health research, that is, the Philippine National Health Research System (PNHRS) and National Unified Health Research Agenda (NUHRA). He discussed extensively the PNHRS concept and its components, which include research management, ethics, capacity-building, research utilization, structure, organization and management, monitoring and evaluation, and resource generation. He said that during the 1<sup>st</sup> PNHRS Consultative Assembly, the formulation of a NUHRA was conceptualized.

The NUHRA will serve as the template for the country's research and development efforts for the next five years, and as a platform to advocate for local, national and international support for Health R & D.

To formulate the NUHRA, there is a need to conduct zonal consultations around the country. The country was divided into four zones where each zone is composed of two to four regions. Dr. Feranil reminded the group that the zonal health research priorities should be attuned and responsive to the needs of the zone. They should also be aligned with the Millennium Development Goals (MDG), Medium-Term Development Plan (MTPDP), National Science and Technology Plan, Fourmula One, Gender and Development, Sustainable Development, Regional Development Plans and other national initiatives.



Ms. Lucila D. Torio of NEDA Region I discussed the Millennium Development Goals (MDG), underscoring the eight goals with their corresponding targets. She also highlighted the MDG core strategies: a) MDG Reports, b) Millennium Project, c) Millennium Campaign, and d) Operational Support in achieving the MDG in 2015. In addition, she reported on Region I's efforts in localizing MDG.

Director Quitos apprised the group with the socio economic profile that contextualizes the health research and development of Regions 1, 2 and CAR. The presentation covered the land area, population, labor and employment situation, poverty situation, education sector, economic sector, as well as the health sector across regions and an aggregate picture of the whole zone.

Focusing on the health sector, Director Quitos expounded on vital indicators such as the mortality rate, life expectancy, death rates, and health facilities to include hospitals, rural health units, and barangay health stations, drawing comparisons for the three regions.

The three regional facilitators—Dr. Elizabeth Dacanay of SLU for CAR, Ms. Sandra Sangab of CHD-Cagayan Valley for Region 2, and Dr. Socorro Escalante of CHD-Ilocos for Region 1—shared their respective regional Health Research and Development (R & D). Their report covers the health situation and current health problems of their regions, the status of health researches and resources, as well as the methodologies, processes and criteria, employed in arriving at their health research priorities, and eventually, the regional health research priority areas.

Director Quitos came up with a comparative presentation of Health R & D Agendas Across Regions. It was observed that there was very little commonality of the health research priorities among the three regions. Nevertheless, he emphasized the importance of packaging these as a basis of collaborative Health Research and Development engagement for the zone, which is expected to be the output of the workshop.

Director Quitos explained the workshop objectives—that is, to package into a program level related R & D topics from the regions as a basis for collaborative R & D engagement. Specifically, the workshop aimed to put specific R & D topics into a broader program framework; to promote R & D efficiency and synergy by interlinking related R & D topics emanating from the regions; to promote R & D effectiveness by responding to differentiating R & D needs, even while contributing to the whole package/program; and to provide the basis for a collaborative R & D engagement. In addition, he gave an illustrative example to elucidate these objectives further.

The participants were grouped into two to address the two major concerns: biomedical and the policy/operations. Dr. Ma. Lourdes Otayza (MMMh & MC) acted as the resource person, while Dr. Socorro Escalante was designated as the facilitator for the biomedical group. For the policy group, on the other hand, Ms. Teresita Laguimun served as the resource person, and Dr. Manuel Gabaon (NEDA Region I) was the facilitator.

The two groups deliberated for three (3) hours, after which a plenary session was called for the presentation of outputs.

The health research priority areas for biomedical concerns, a cluster of six packages as follows, were presented by Dr. Joel Beleno (Ilocos Training and Regional Medical Center – ITRMC):

### **Health Research Priority Areas for Biomedical Concerns**

- Changing Patterns of Infectious Diseases in Northern Luzon: Epidemiology and Management
- Emerging and Re-Emerging Infections in Northern Luzon
- Leading Lifestyle Related Disorders in Northern Luzon
- Health Concerns of Special Populations in Northern Luzon: Prevalence, Etiology, and Profile
- Environmental Health Concerns in Northern Luzon
- Traditional and Alternative Health Modalities in Northern Luzon

On the other hand, Dr. Gabaon of the policy group presented their output, which was packaged into two as follows:

### **Health Research Priority Areas for Policy Concerns**

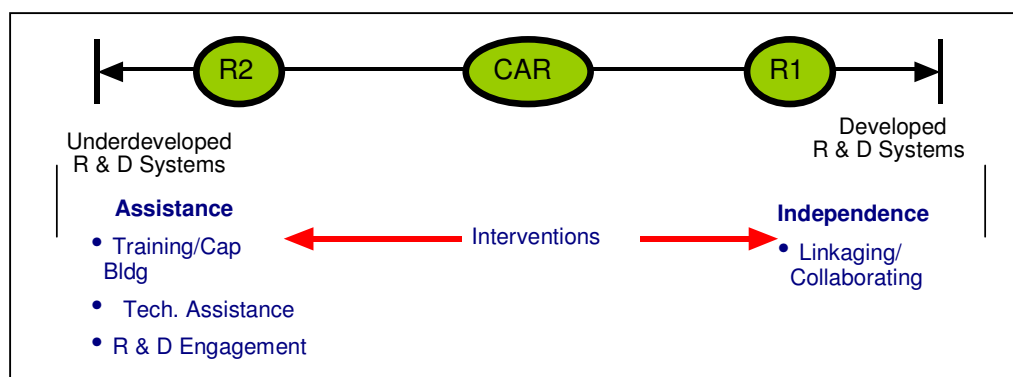
- Hospital Management
  - Hospital Resources
  - Performance/Program Assessment
  - Hospitals as Trainings Venues
- Local/Public Health System
  - LGU Health Resources
  - Health Promotion and Information System
  - Performance Assessment
  - Context of Local Health Systems
  - Focus on Rabies Management
  - Reproductive Health (including VAWC)

During the open forum, Dr. Feranil (PCHRD) and Director Quitos made the following comments:

- The packaging is good but could still be improved by clustering these into a program-level type of R&D.
- In the package made, some significant dimensions were removed, so there is a need to specify dimensions, location, and application of researchable areas.
- Small inter-regional group conferences can be conducted to substantiate the researchable areas.
- The regional outputs can be packaged into a broader format and made responsive to the identified research needs
- The components per package or cluster can be assigned per region.

As basis for future direction, Director Quitos presented the R & D Systems Continuum on developing the R & D systems of the regions. He said that while Region I was able to develop and strengthen its structure in Health R & D, the other two regions may still have to develop their structure through interventions such as capacity building, technical assistance, R & D engagement, and linking/collaborating.

**Figure 7: R&D SYSTEMS CONTINUUM**



In terms of implementation modalities, he said that a collaborative research can be undertaken to maximize institutional competencies. In addition, technology transfer could be enhanced through the big brother-small brother scheme, or the twinning arrangements between developed and less developed systems.

**Table 7: ZONAL MODALITIES FOR HEALTH R&D IMPLEMENTATION**

| Situation   | Suggested Modality   | Objective  |
|---|--|--|
| <ul style="list-style-type: none"> <li>Between/Among developed R&amp;D systems</li> <li>Between developed and less developed systems</li> </ul> | <ul style="list-style-type: none"> <li>Collaborative Research</li> <li>Big Brother-Small Brother</li> <li>Twinning Arrangements</li> </ul> | <ul style="list-style-type: none"> <li>Maximize institutional competencies</li> <li>Technology Transfer</li> </ul> |

The workshop outputs were sanitized and consolidated, which resulted in the following:

**Table 8: HEALTH RESEARCH AND DEVELOPMENT AGENDA FOR NORTH LUZON ZONE**

| BROAD R & D AREA   | SPECIFIC TOPICS FOR RESEARCH  |   |  |
|--|---|---|--|
|  | REGION 1  | REGION 2  | CAR  |
| <p><b>I. <u>OPERATIONAL/ SERVICE DELIVERY/POLICY CONCERN</u></b></p> <p>HEALTH CARE FINANCING AND HOSPITAL MANAGEMENT/ HEALTH REGULATION</p> | <ul style="list-style-type: none"> <li>o Effects of corporatization on the financial management of hospitals</li> <li>o Performance Assessment of:               <ul style="list-style-type: none"> <li>RHUs</li> <li>District Hospitals</li> <li>Provincial Hospitals</li> <li>Medical Centers</li> </ul> </li> <li>o An Assessment of the Adequacy of LGU Laws in Implementing Regulatory</li> <li>o Assessment of Sentrong Sigla Health Facilities</li> </ul>  | <ul style="list-style-type: none"> <li>o Quality of Health Service Delivery of a Government Hospital</li> <li>o Effectiveness of networking among the Government Hospital (20-30) bed hospital</li> <li>o Perception and satisfaction of stakeholders towards health regulation for sustainable health</li> </ul> | <ul style="list-style-type: none"> <li>o Factors affecting migration of Health Care Providers</li> <li>o Policy review</li> </ul>  |
| <p>LOCAL HEALTH SYSTEMS</p>  | <ul style="list-style-type: none"> <li>o Performance Assessment and Acceptability of BHWs and BHS in the Delivery of health</li> <li>o Assessment of the Inter-Zonal Health Delivery Systems in Pangasinan and Ilocos Sur</li> <li>o Community Participation and Empowerment in local health systems, including networking strategies</li> <li>o LGU allocation of health resources</li> <li>o Framework of improve local health systems and assessment of local health needs and</li> <li>o Survey of Local Health Legislation and Performance:</li> <li>o System of Drug Procurement and Distribution in Local Health</li> <li>o Community-based Health Information System</li> </ul> |   | <ul style="list-style-type: none"> <li>o Sustainability/ functionality of Inter-Local Health Zones</li> <li>o Effect of devolution on Health Care Delivery</li> <li>o Health Information System: Reporting, referral and networking of the Private and Public sectors</li> <li>o Survey/assessment of existing health</li> </ul> |

| BROAD R & D AREA      | SPECIFIC TOPICS FOR RESEARCH   |   |  |
|-----------------------|--|---|--|
|                       | REGION 1   | REGION 2  | CAR  |
| PUBLIC HEALTH SYSTEMS | <ul style="list-style-type: none"> <li>o Survey on Vaccinated Dogs and Cohort Studies on Rabies</li> <li>o Factors that contributed to the increasing population growth rate in Ilocos</li> <li>o Sufficiency of Medical Facilities, Equipments and Experts in the Detection of</li> <li>o Cost benefit studies on government hospitals</li> </ul> | <ul style="list-style-type: none"> <li>o KAP on Rabies</li> <li>o Assessment of the New on Ordinance on Rabies:</li> <li>o Utilization of income generated by hospitals</li> <li>o Incidence of vehicular accidents to substance abuse</li> <li>o Effectiveness of affiliating units &amp; training hospital in catering to the needs as affiliating schools</li> <li>o Effectiveness of service delivery of hospitals with affiliating schools</li> <li>o Quality of drinking water from the pipe &amp; deep well</li> <li>o KAB of husbands about RH : Symptoms &amp; complications of pregnancy, STD, STIs &amp; other related concerns</li> </ul> | <ul style="list-style-type: none"> <li>o Determinants/ Factors (economic, socio- cultural, political) that subject children and women to difficult circumstances/ situations</li> <li>o Extent of violence against women &amp; Reproductive Health</li> <li>o Teenage pregnancy and STDs: Causes and Effect</li> <li>o Assessment of Health Promotions Activities/ strategies</li> <li>o Impact study on the foreign funded health projects implemented in CAR since 1988- 2005 on the health</li> </ul> |

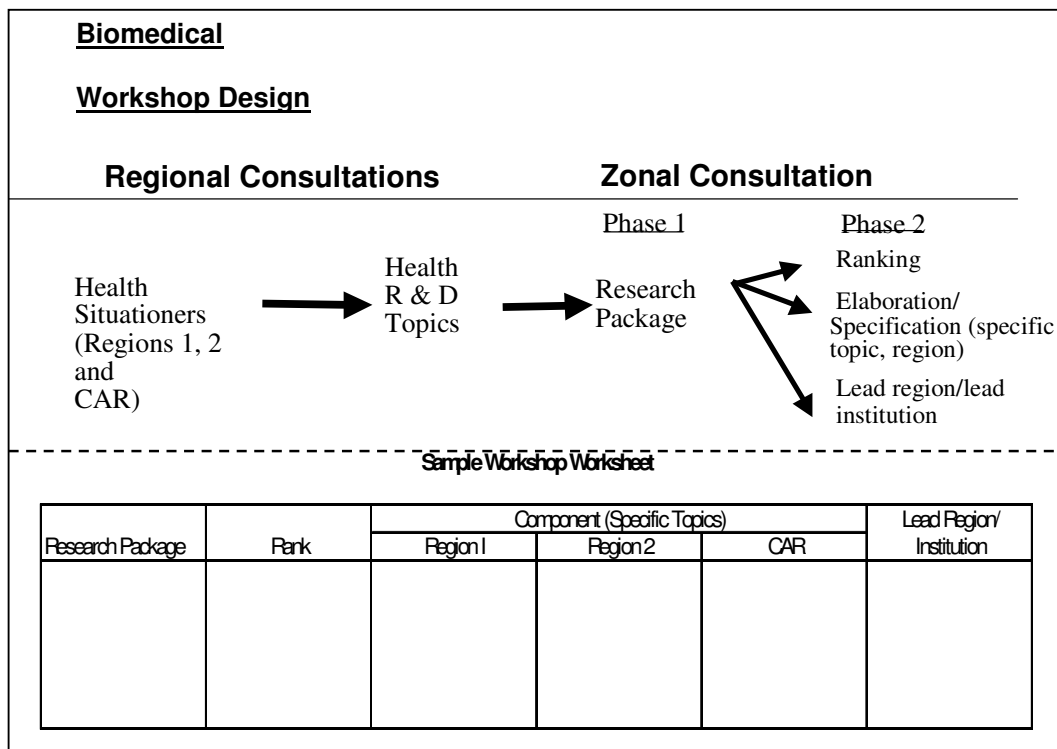
| BROAD R & D AREA              | SPECIFIC TOPICS FOR RESEARCH   |   |   |
|-------------------------------|--|---|---|
|                               | REGION 1   | REGION 2  | CAR   |
| <b>II. BIOMEDICAL CONCERN</b> | <ul style="list-style-type: none"> <li>o Impact study on the health effects of pollutants from the waste disposal system of hospitals</li> <li>o Clinical Practice Guidelines for ARI</li> <li>o Evaluation of Diagnostic criteria for ARI: Algorithm for ARI</li> <li>o New &amp; Improved Standards for treatment</li> <li>o Factors which influence compliance to treatment of Pneumonia</li> <li>o Development of Improved TB Vaccine</li> <li>o Development of anti TB drugs with shorter treatment duration</li> <li>o Reasons for low detection of TB</li> <li>o Feasibility of an alternative source of</li> <li>o Development of strategies for the control</li> <li>o Leprosy identification and management</li> <li>o Reasons for lack of awareness of etiology and prevention of lifestyle related disorders of Diabetes mellitus</li> <li>o Compliance in the management of</li> <li>o Impact of Clinical Practice Guidelines on Hypertension</li> <li>o Factors affecting Lifestyle and awareness of Cardiovascular Diseases</li> <li>o Continuation of the National Nephrology</li> <li>o Development of Appropriate and Effective Clinical Interventions</li> <li>o Nutritional Health Risks and Nutritional Disorders</li> <li>o Factors affecting Iron, Iodine, Calcium and Protein Deficiencies</li> <li>o Reasons for Poor Utilization of health services by women</li> <li>o Reasons for poor utilization of health services by adolescents</li> <li>o Reasons for poor utilization of health services by the elderly - Health/</li> <li>o Status of Networking of Health Research</li> <li>o Generation of appropriate data and</li> <li>o Assessment of Quality Assurance Practices and Client Satisfaction</li> <li>o Development of approaches to health care for minorities</li> <li>o Migrant Health</li> <li>o Dental Caries Management</li> </ul> | <ul style="list-style-type: none"> <li>o Emerging diseases in Region 02</li> <li>o Effectiveness of PPMD Strategy</li> <li>o Effects of stress on the lifestyle diseases</li> <li>o Child rearing, personal hygiene &amp; illnesses or ailments practiced by the Aetas and IPs</li> </ul> | <ul style="list-style-type: none"> <li>o Effects of environmental pollution to health.</li> <li>o Prevalence and profile of cases of lifestyle-related diseases</li> <li>o Public Health Issues: e.g. cardiovascular /kidney/ pulmonary related diseases – prevalence/ incidence</li> <li>o Alternative food supplement Relationship of eating organically grown food vis-à-vis increased body</li> </ul> |

In 11 January 2006, Director Quitos convened a Coordinators' Meeting and Focus Group Discussion (Phase 2) to finalize the Zonal Health Research Agenda at the Mountain Lodge and Restaurant, Baguio City. Selected representatives from the three (3) regions were invited.

As a backgrounder, Director Quitos revisited the framework of the regional health research and development formulation. Each region was able to prepare a list of researchable areas as a result of a matching of the national priority on Health R & D, and the key regional health concerns and issues. This was followed by comparing the initial list or researchable areas to the inventory of completed, ongoing, and proposed R&D activities. The result led to the Health R&D gaps and added to the Health R&D priorities as input to the Zonal Conference. This would later be subjected to the zonal prioritization of Health R&D.

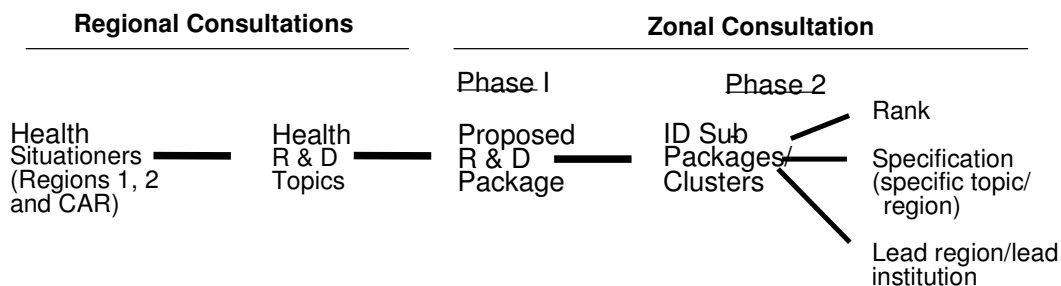
Director Quitos briefly presented the output of the first phase of the Zonal Conference Workshop. It was noted that there was no convergence of the research topics for both the biomedical and policy concerns.

After reviewing the output of the previous conference, the workshop objectives and mechanics were explained by Director Quitos. The second phase of the zonal consultation was the ranking of the major packages identified earlier in the first phase of the consultation. After ranking these research packages, the groups were expected to identify specific research components, indicating geographical/regional applications. This was to be followed by the identification of lead regions of research packages, including the lead institutions within the region. The two groups were given two hours to work on following their respective workshop designs and worksheets as follows:



## Policy Group

### Workshop Design



Sample Workshop Worksheet: Policy Group

| Research Package | Sub-Package | Rank | Components (Specific Topics) |          |     | Lead Region/<br>Institution |
|------------------|-------------|------|------------------------------|----------|-----|-----------------------------|
|                  |             |      | Region 1                     | Region 2 | CAR |                             |
|                  |             |      |                              |          |     |                             |

Director Quitos emphasized that the output of the second phase of the zonal consultation would still be subject to the acceptance of the identified lead institution, which would then again be subject to a review of their capacity to undertake, implement, and execute the research project.

At this juncture, Ms. Florida Faculo of NEDA-CAR inquired whether their group (that is, those who were involved in policy) would still have to rank the major packages as well as the sub-packages. Director Quitos replied that the ranking would be done for the sub-packages only. Related to this, Dr. Lauro Tacbas of the University of Northern Philippines asked if they would also rank the specific research components. Director Quitos explained that there was no need to rank the specific research components because these were already ranked in the regional consultations.

Director Edgar Padilla of DOST Region I inquired about the implication of the role of the regional committees with the emergence of zonal collaborating activities. Director Quitos agreed that there are indications that there would be a zonal structure, but the regional centers would remain to take care of the regional component of the zonal R&D agenda. He clarified that the zonal structure would have coordinative functions, but in terms of management, the regions would still manage their own centers. Dr. Ma. Lourdes Otayza of the Mariano Marcos Memorial Hospital and Medical Center (MMM&MC) commented that concentrating on funding the zonal priorities would work against the PCHRD because it wants to encourage small-time researches which are important for capability building.

During the plenary session, Dr. Ma. Lourdes Otayza presented the workshop output of the biomedical group. She explained that the group rated the packages according to their preference/choice from 1 to 6, with 1 being the highest. The package that got the lowest



number of votes was ranked first, while the package that got the highest votes was ranked sixth. The group clustered specific topics according to what was identified earlier at the regional level. While reviewing the list of specific topics, the group noticed that there were three topics (30, 31, and 32) that did not fall under any of the six packages. For this reason, they decided to include the seventh package on Health Care Delivery Systems and Procedures, which is concerned with networking, computer data information, and quality assurance of health care.

For the policy group, Dr. Manuel Gabaon presented the output. Ranks of the sub-packages were decided through an extensive discussion on the importance of each package. The group decided that the lead institutions would be decided on by the Health Research and Development Committee (HRDC) of the lead region. One issue raised by the group was the absence of HRDC in Regions 2 and CAR.

During the open forum, Director Quitos requested that Dr. Gabaon explain the vacant columns for the lead region on the specific topics of their research packages. Dr. Gabaon explained that the lead regions were already identified in the earlier output of the group during the first phase of the zonal consultation.

On the issue of the absence of the HRDC in Regions 2 and CAR, Director Quitos commented that making them the lead institutions in some of the sub-packages of the policy research packages could be a reason to set-up their own HRDCs.

To wrap-up the discussion, Director Quitos reverted to the R&D Continuum, which illustrates that Region 2 is found under the underdeveloped R&D Systems, while the Cordillera Region is in between the underdeveloped and developed R&D Systems and Region I is located very near the gauge of developed R&D Systems. Plotting the positions of the three regions in terms of the R&D Systems was deemed necessary to identify appropriate interventions. Director Quitos explained that the regions that have underdeveloped R&D Systems need capability building, technical assistance and engagement in R&D. The regions that have successfully developed their R&D Systems, meanwhile, could become interdependent and therefore engage in a collaboration or collaborating efforts to assist the less developed R&D Systems of the other regions.

In terms of funding, the centrally administered fund (that is, from PCHRD) could be used for zonal/collaborative Health R&D projects managed by the zonal structure. Meanwhile, the Regional Research Fund that was a conduit to DOST could be used for smaller research projects that would be managed by the HRDC of each region.

On the organizational structure, the regional Health R&D Committees of the three regions will manage their own regional committees, which would be in charge of conducting their own regionwide researches. On the one hand, the zonal Health R&D Council for North Luzon will be responsible for the management of inter-regional/collaborative Health R&D.

At this point, Dr. Tacbas inquired if the group could set-up an interim body for the zonal council, which could be headed by the Chairman of the R1HRDC so that there would be a stronger representation at the national conference. Director Quitos and the group seemed amenable to the idea of creating an interim body for the zone and therefore considered this as one agenda in succeeding meetings or discussion with PCHRD.

Below is the final health research agenda for the Biomedical and Policy concerns which were identified by Zone 1 – Regions 1, 2, and the Cordillera Administrative Region:

**Table 9: FINAL HEALTH R&D AGENDA FOR BIOMEDICAL AND POLICY CONCERNS**

**Health R&D Packages: Biomedical Group**

| Research Packages  | Rank | Components<br>(Specific Topics)  | Region   |                                 |           | Lead Region/<br>Institution |
|--|------|--|----------|---------------------------------|-----------|-----------------------------|
|  |      |  | Region 1 | Region 2                        | CAR       |                             |
| Leading Lifestyle Related Disorders in North Luzon           | 1    | - New & Improved Standards for treatment   | x        | x                               | x         | Region 1 (CHD)              |
|  |      | - Reasons for lack of awareness of etiology and prevention of lifestyle related disorders of Diabetes mellitus | x        |                                 |           |                             |
|  |      | - Effects of stress on the lifestyle diseases  |          | x                               |           |                             |
|  |      | - Prevalence and profile of cases of lifestyle-related diseases  | x        | x                               | x         |                             |
|  |      | - Compliance in the management of Diabetes mellitus  | x        | x                               | x         |                             |
|  |      | - Impact of Clinical Practice Guidelines on Hypertension   | x        |                                 |           |                             |
|  |      | - Factors affecting Lifestyle and awareness of Cardiovascular Diseases   | x        |                                 |           |                             |
|  |      | - Public Health Issues: e.g. cardiovascular/kidney/pulmonary related diseases - prevalence/incidence           |          |                                 | x         |                             |
|  |      | - Continuation of the National Nephrology Program  | x        |                                 |           |                             |
|  |      | - Development of Appropriate and Effective Clinical Interventions  | x        |                                 |           |                             |
|  |      | - Nutritional Health Risks and Nutritional Disorders   | x        |                                 |           |                             |
|  |      | - Alternative food supplement  |          |                                 | x         |                             |
|  |      | - Relationship of eating organically grown food vis-à-vis increased body resistance                            |          |                                 |           |                             |
|  |      | - Factors affecting Iron, Iodine, Calcium and Protein Deficiencies   | x        |                                 |           |                             |
|  |      | Emerging and Re-emerging Diseases in North Luzon   | 2        | - Emerging diseases in Region 2 | x         |                             |
| - Development of strategies for the control of DHF           | x    |  |          | x                               |           |                             |
| - Leprosy identification and management                      | x    |  |          |                                 |           |                             |
| Changing Pattern of Infectious Diseases in North Luzon       | 3    | - Clinical Practice Guidelines for ARI   | x        | x                               |           | Region 1 (ITRMC)            |
|  |      | - Evaluation of Diagnostic criteria for ARI: Algorithm for ARI   | x        |                                 | x         |                             |
|  |      | - Factors which influence compliance to treatment of Pneumonia   | x        |                                 |           |                             |
|  |      | - Development of Improved TB Vaccine   | x        |                                 |           |                             |
|  |      | - Effectiveness of PPMD Strategy on TB   |          | x                               |           |                             |
|  |      | - Development of anti TB drugs with shorter treatment duration   | x        |                                 |           |                             |
|  |      | - Reasons for low detection of TB  | x        |                                 |           |                             |
| Environmental Health Concerns in North Luzon                 | 4    | - Impact study on the health effects of pollutants from the waste disposal system of hospitals                 | x        | x                               | x         | CAR (CHD)                   |
|  |      | - Effects of environmental pollution to health   |          |                                 | x         |                             |
|  |      | - Feasibility of an alternative source of drinking water   | x        | x                               |           |                             |
| Health Concerns of Special Population in North Luzon         | 5    | - Reasons for poor utilization of health services by women   | x        | x                               | x         | Region 2 (CHD)              |
|  |      | - Reasons for poor utilization of health services by adolescents   | x        |                                 |           |                             |
|  |      | - Reasons for poor utilization of health services by the elderly - Health/Paramedical benefits                 | x        | x                               | x         |                             |
|  |      | - Development of approaches to health care for minorities  | x        |                                 | x         |                             |
|  |      | - Child rearing, personal hygiene and illnesses or ailments practiced by the Aetas and IPs                     |          | x                               |           |                             |
|  |      | - Migrant Health   | x        |                                 |           |                             |
|  |      | -  |          |                                 |           |                             |
| Traditional and Alternative Health Modalities in North Luzon | 6    |  | x        | x                               | CAR (SLU) |                             |
| Health Care Delivery Systems and Processes                   | 7    | - Status of Networking of Health Research Centers  | x        | x                               | x         | Region 1 (MMHC)             |
|  |      | - Generation of appropriate data and indicators  | x        |                                 |           |                             |
|  |      | - Assessment of Quality Assurance Practices and Client Satisfaction  | x        |                                 |           |                             |
|  |      | -  |          |                                 |           |                             |

## Health R&D Packages: Policy Group

| Research Packages          | Rank   | Components<br>(Specific Topics)   | Region   |          |                     | Lead Region/<br>Institution |
|----------------------------|--|---|----------|----------|---------------------|-----------------------------|
|                            |  |   | Region 1 | Region 2 | CAR                 |                             |
| Hospital Management        | 1  | - Performance Assessment of:<br>- RHUs<br>- District Hospitals<br>- Provincial Hospitals<br>- Medical Centers                     | x        |          |                     | Region 1 c/o HRDC I         |
|                            |  | - Assessment of Sentrong Sigla Health Facilities  | x        | x        | x                   |                             |
|                            |  | - Cost benefit studies on government hospitals  | x        |          |                     |                             |
|                            | 2  | - Effects of corporatization on the financial management of hospitals   | x        |          |                     | Region 1 c/o HRDC I         |
|                            |  | - Sufficiency of Medical Facilities, Equipment and Experts in the Detection of Cancer   | x        |          |                     |                             |
|                            |  | - Utilization of income generated by hospitals  |          | x        |                     |                             |
|                            | 3  | - Effectiveness of affiliating units and training hospitals in catering to the needs of affiliating schools                       | x        | x        |                     | Region 2 c/o HRDC2          |
|                            |  | - Effectiveness of service delivery of hospitals with affiliating schools   |          | x        | x                   |                             |
| Local/Public Health System | 1  | - LGU allocation of health resources  | x        | x        | x                   | Region 1 c/o HRDC I         |
|                            |  | - System of Drug Procurement and Distribution in Local Health Units   | x        |          |                     |                             |
|                            | 2  | - An assessment of the Adequacy of LGU Laws in Implementing Regulatory Functions  | x        |          |                     | Region 1 c/o HRDC I         |
|                            |  | - Perception and satisfaction of stakeholders towards health regulation for sustainable health care financing                     |          | x        |                     |                             |
|                            |  | - Factors affecting migration of Health Care Providers: Policy review   |          | x        |                     |                             |
|                            |  | - Framework of improved local health systems and assessment of local health needs and services                                    | x        |          |                     |                             |
|                            |  | - Survey of Local Health Legislation and Performance Before and After Devolution  | x        | x        | x                   |                             |
|                            |  | - Effects of devolution on Health Care Delivery   |          |          | x                   |                             |
|                            |  | - Quality of drinking water from the pipe and deep well (NAWASA/LUWA)   |          | x        |                     |                             |
|                            |  | - Determinants/Factors (economic, socio-cultural, political) that subject children and women to difficult circumstance/situations |          |          | x                   |                             |
|                            | 3  | - Performance Assessment and Acceptability of BHWs and BHS in the delivery of health services                                     | x        | x        | x                   | CAR c/o HRDC CAR            |
|                            |  | - Sustainability/functionality of Inter-Local Health Zones  |          |          | x                   |                             |
|                            |  | - Assessment of the Inter-Zonal Health Delivery Systems   | x        |          |                     |                             |
|                            |  | - Community Participation and Empowerment in local health systems, including networking strategies                                |          |          | x                   |                             |
|                            | - Impact study on the health situation of beneficiary provinces of the foreign funded health projects implemented in CAR since 1988-2005 |   |          |          |                     |                             |
| 4                          | - Community-based Health Information System  | x   |          |          | CAR c/o HRDC CAR    |                             |
|                            | - Health Information System:Reporting, referral and networking of the Private and Public sectors   |   |          | x        |                     |                             |
|                            | - Survey/assessment of existing health database  |   |          | x        |                     |                             |
|                            | - Assessment of Health Promotions Activities/ Strategies   |   |          | x        |                     |                             |
| 5                          | - KAP of husbands about RH:Symptoms and complications of pregnancy, STD, STIs and other related concerns                                 |   | x        |          | CAR c/o HRDC CAR    |                             |
|                            | - Extent of violence against women and children  |   |          | x        |                     |                             |
|                            | - Teenage pregnancy and STDs: Causes and Effects   |   |          | x        |                     |                             |
| 6                          | - Survey on Vaccinated Dogs and Cohort Studies on Rabies Cases   | x   |          |          | Region 2 c/o HRDC 2 |                             |
|                            | - KAP on Rabies  |   | x        |          |                     |                             |
|                            | - Assessment of Ordinances on Rabies: Responsible Pet Ownership  |   | x        |          |                     |                             |

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## ANNEX A

### LIST OF PARTICIPANTS ZONAL CONFERENCE WORKSHOP ON HEALTH RESEARCH AGENDA FORMULATION

| Agency                 | Name   | Phase I | Phase II |
|------------------------|--|---------|----------|
| <b><u>Region I</u></b> |  |         |          |
| NEDA I                 | <b>Dir. Leonardo N. Quitos, Jr</b><br>Zonal Convenor | ✓       | ✓        |
|                        | Dr. Manuel Gabaon                                    | ✓       | ✓        |
|                        | Ms. Lucila Torio                                     | ✓       | ✓        |
| DOH I                  | <b>Dr. Socorro Escalante</b><br>Regional Facilitator | ✓       | ✓        |
|                        | Dr. Romeo Miniano                                    | ✓       |          |
|                        | Dr. Randy Manalo                                     | ✓       | ✓        |
| DOST I                 | Dr. Edgar Padilla                                    | ✓       | ✓        |
| POPCOM I               | Dir. Oscar Mabalot                                   | ✓       |          |
|                        | Ms. Marlyn Hufano                                    | ✓       | ✓        |
| ITRMC I                | Dr. Joel Beleno                                      | ✓       | ✓        |
| PHO-La Union           | Dr. Jose Ostrea                                      | ✓       |          |
| R1MC                   | Dr. Hilarion Maramba                                 | ✓       |          |
| CHED Zonal Research    | Dr. Estrella Calixto                                 | ✓       |          |
| UNP                    | Dr. Lauro Tacbas                                     |         | ✓        |
|                        | Dr. Erwin Cadorna                                    | ✓       | ✓        |
| MMSU                   | Ms. Manolita Crisostomo                              | ✓       |          |
| PHO Pangasinan         | Ms. Evelyn Tarectecan                                | ✓       |          |
| DMMMSU                 | Dr. Adriano Esguerra                                 | ✓       |          |
| PhilHealth             | Dr. Marlene Dulatre                                  | ✓       |          |
| MMMh&MC                | Dr. Ma. Lourdes Otayza                               |         | ✓        |

|                            |  |   |   |
|----------------------------|--|---|---|
| <b><u>Region II</u></b>    |  |   |   |
| DOST II                    | <b>Dir. Rustico Santos</b><br>Regional Facilitator   | ✓ |   |
|                            | Ms. Nenita Collado                                   | ✓ |   |
| DOH II                     | Ms. Sandra Sangab                                    | ✓ | ✓ |
|                            | Ms. Elsie De Yro                                     | ✓ | ✓ |
|                            | Dr. Roderick Ian Reyes                               | ✓ |   |
|                            | Dr. Roselyn Dadural                                  | ✓ |   |
| Univ. of La Salette        | Dr. Roberto Macatunggal                              | ✓ |   |
| DOLE                       | Ms. Laura Diciano                                    | ✓ |   |
| <b><u>CAR</u></b>          |  |   |   |
| SLU College of<br>Medicine | <b>Dr. Elizabeth Dacanay</b><br>Regional Facilitator | ✓ |   |
|                            | Dr. John Anthony Domantay                            | ✓ |   |
|                            | Dr. Ana Marie Leong                                  | ✓ |   |
| DOST-CAR                   | Dr. Osmund Belmonte                                  | ✓ | ✓ |
| NEDA-CAR                   | Ms. Florida Faculo                                   | ✓ | ✓ |
| ConCat/TI Philippines      | Ms. Eve Dayot  | ✓ |   |
| DOH-CAR                    | Dr. Julius Cesar Alcala                              |   | ✓ |
| <b><u>PCHRD</u></b>        | Dr. Allan Feranil                                    | ✓ |   |
|                            | Ms. Tess Laguimun                                    | ✓ |   |
|                            | Ms. Annie Catameo                                    | ✓ |   |
| <b><u>Secretariat</u></b>  | Ms. Jocelyn Panlilio                                 | ✓ | ✓ |
|                            | Ms. Racquel Atawe                                    | ✓ | ✓ |
|                            | Mr. Marcelino Cabiladas                              | ✓ | ✓ |
|                            | Mr. Rommel Sison                                     | ✓ |   |
|                            | Mr. Ismael Jubilo                                    |   | ✓ |

## ANNEX B

### HEALTH RESEARCH PRIORITIES – REGION 1

#### WORKSHOP OUTPUT: BIOMEDICAL GROUP 19 HEALTH PRIORITY AREAS FOR RESEARCH IN THE REGION (Biomedical Group Composed of Physicians, Nurses, Researchers, PHO Personnel)

| <b>Question 1 - Broad</b>     | <b>Question 2 – Specifics</b>  | <b>Rank</b> |
|-------------------------------|--|-------------|
| Acute Respiratory Infections  | <ul style="list-style-type: none"><li>- Clinical Practice Guidelines for ARI</li><li>- Evaluation of Diagnostic Criteria for ARI: Algorithm for ARI</li></ul>  | 1           |
| Pneumonia                     | <ul style="list-style-type: none"><li>- New and Improved Standards for Treatment</li><li>- Factors that Influence Compliance with Treatment of Pneumonia</li></ul>   | 2           |
| Tuberculosis                  | <ul style="list-style-type: none"><li>- Development of Improved TB Vaccine</li><li>- Development of Anti TB Drugs with Shorter Treatment Duration</li><li>- Reasons for low detection of TB</li></ul>                      | 3           |
| Food and Water Borne Diseases | <ul style="list-style-type: none"><li>- Feasibility of an Alternative Source of Drinking Water</li></ul>   | 4           |
| Dengue Fever                  | <ul style="list-style-type: none"><li>- Development of Strategies for the Control of DHF</li><li>- Development of Biological/Vaccine against DF</li></ul>  | 5           |
| Other Infectious Diseases     | <ul style="list-style-type: none"><li>- Leprosy Identification and Management</li></ul>  | 6           |
| Diabetes                      | <ul style="list-style-type: none"><li>- Reasons for Lack of Awareness of Etiology and Prevention of Lifestyle Related Disorders of Diabetes Mellitus</li><li>- Compliance in the Management of Diabetes Mellitus</li></ul> | 7           |
| Hypertension and CVD          | <ul style="list-style-type: none"><li>- Impact of Clinical Practice Guidelines on Hypertension</li><li>- Factors Affecting Lifestyle and Awareness of Cardiovascular Diseases</li></ul>                                    | 8           |
| Kidney Diseases               | <ul style="list-style-type: none"><li>- Continuation of the National Nephrology Program</li></ul>  | 9           |
| COPD/Lung Diseases            | <ul style="list-style-type: none"><li>- Development of Appropriate and Effective Clinical Interventions</li></ul>  | 10          |

| <b>Question 1 - Broad</b>  | <b>Question 2 – Specifics</b>  | <b>Rank</b> |
|----------------------------|--|-------------|
| Healthy Lifestyle          | <ul style="list-style-type: none"> <li>- Nutritional Health Risks and Nutritional Disorders</li> <li>- Factors Affecting Iron, Iodine, Calcium and Protein Deficiencies</li> </ul> | 11          |
| Women and Child Protection | <ul style="list-style-type: none"> <li>- Reasons for Poor Utilization of Health Services by Women</li> </ul>   | 12          |
| Adolescent and Youth       | <ul style="list-style-type: none"> <li>- Reasons for Poor Utilization of Health Services by Adolescents</li> </ul>   | 13          |
| Geriatric Health           | <ul style="list-style-type: none"> <li>- Reasons for Poor Utilization of Health Services by the Elderly</li> <li>- Health/ Paramedical Benefits</li> </ul>                         | 14          |
| Health Information System  | <ul style="list-style-type: none"> <li>- Status of Networking of Health Research Centers</li> <li>- Generation of Appropriate Data and Indicators</li> </ul>                       | 15          |
| Quality Assurance Systems  | <ul style="list-style-type: none"> <li>- Assessment of Quality Assurance Practices and Client Satisfaction</li> </ul>  | 16          |
| Indigenous People          | <ul style="list-style-type: none"> <li>- Development of Approaches to Health Care for Minorities</li> </ul>  | 17          |
| Occupational Health        | <ul style="list-style-type: none"> <li>- Migrant Health</li> </ul>   | 18          |
| Others                     | <ul style="list-style-type: none"> <li>- Dental Caries Management</li> </ul>   | 19          |



**ANNEX C**

**HEALTH RESEARCH PRIORITIES – REGION 2**

| <b>Broad R &amp; D Area</b> | <b>Specific Topic</b>                         | <b>Rationale</b>   | <b>Objective/s</b>   | <b>Responsible Agency</b> | <b>Funding Agency</b> |
|-----------------------------|---|--|--|---------------------------|-----------------------|
| Schistosomiasis #1          | Emerging disease in Region 02                 | <ul style="list-style-type: none"> <li>• Health Worker not capable to handle disease because of lack of training</li> <li>• Animals can be source of disease</li> </ul>  | <ul style="list-style-type: none"> <li>• conduct explorative study on parasitic, animal, environmental problems and socio-cultural practices of the 6 municipalities of northeastern Cagayan in relation to Schistosomiasis</li> </ul>                                   | DOH, LGU Partner Agency   | Foreign/ Local        |
| Rabies #1A                  | KAP on Rabies Assessment of the New on Rabies | <ul style="list-style-type: none"> <li>• The incidence of Rabies in the region is high despite the presence of municipal ordinance on Responsible Pet Ownership</li> <li>• Reports submitted by animal bite treatment centers, reveal that there were 24 human rabies cases in 2004, majority of which are caused by dog bite</li> <li>• CV ranks 3rd in terms of cases next to Bicol &amp; Western Visayas</li> </ul> | <ul style="list-style-type: none"> <li>• Determine the Knowledge, Practice &amp; Attitudes of households on Rabies Control &amp; Prevention.</li> <li>• Assess the implementation of the ordinance on Responsible Pet Ownership thru multi-sectoral approach.</li> </ul> | DOH, LGU Partner Agency   | Foreign/ Local        |

| Broad R & D Area | Specific Topic                                      | Rationale   | Objective/s   | Responsible Agency | Funding Agency |
|------------------|---|---|---|--------------------|----------------|
| TB #1B           | Effectiveness of PPMD Strategy                      | <ul style="list-style-type: none"> <li>• Cagayan province has been consistently on top with a 5-year (1999-2003) due incidence of 16 deaths/year.</li> <li>• The National TB program has adopted the DOTS strategy which when effectively applied, results to 95% cure rate, prevents new infectious among children/adults &amp; prevents resistance &amp; is cost effective</li> <li>• However, a number of TB cases still need medical care from the private sector. Hence, the need to reach out to these patients &amp; private physicians.</li> <li>• With this, the NTP adopted the PPMD strategy and was implemented in 4 pilot areas in Region 02.</li> </ul> | <ul style="list-style-type: none"> <li>• To determine the effectiveness of the PPMD strategy of the NTP in Reg. 02</li> </ul> | DOH, LGU Partner   | Foreign/ Local |
| Accidents #1C    | Incidence of vehicular accidents to substance abuse | <ul style="list-style-type: none"> <li>• No program to address the public health problems.</li> <li>• Negligence by caregivers</li> <li>• Substance abuse, poor observance of traffic rules, poor road signs condition.</li> </ul>  | <ul style="list-style-type: none"> <li>• To determine the incidence of vehicular accidents.</li> </ul>                        | DOH, LGU Partner   | Foreign/ Local |

| Broad R & D Area   | Specific Topic   | Rationale   | Objective/s   | Responsible Agency | Funding Agency |
|--|--|---|---|--------------------|----------------|
| Healthy Lifestyle #3   | Effects of stress on the lifestyle diseases  | <ul style="list-style-type: none"> <li>• Increasing trend of lifestyle diseases</li> <li>• Effects of poverty</li> </ul>  | <ul style="list-style-type: none"> <li>• To determine the relationship of stress to lifestyle diseases.</li> </ul>  | DOH/LGU Partners   | Foreign/Local  |
| Reproductive Health #4A Health Care Practices among IPs in Region 02 | Child rearing, personal hygiene & illnesses or ailments practiced by the Aetas and IPs   | <ul style="list-style-type: none"> <li>• Health care &amp; practices have been found to be at its lowest among Aetas. The use of herbal medicines &amp; other practices is ideal avenue to gain insights</li> </ul>             | <ul style="list-style-type: none"> <li>• to gain insights on the health care &amp; practices among Aetas in terms of: <ul style="list-style-type: none"> <li>○ Child rearing</li> <li>○ Personal Hygiene</li> <li>○ Illness or ailments.</li> </ul> </li> <li>• To determine the current health status/practices of the Aetas.</li> </ul> | DOH/LGU Partners   | Foreign/Local  |
| #4B Knowledge, Attitudes & Behavior (KAB) of Husbands on RH          | KAB of husbands about RH on the ff: <ul style="list-style-type: none"> <li>• symptoms &amp; complications of pregnancy;</li> <li>• STD</li> <li>• STIs &amp; other related concerns</li> </ul> | <ul style="list-style-type: none"> <li>• The need to study due to low participation of males in RH</li> <li>• Seeming disparity in terms of practice relative to RH</li> <li>• Low level of knowledge of males in RH</li> </ul> | <ul style="list-style-type: none"> <li>• to determine husbands knowledge, attitudes &amp; behavior about RH.</li> <li>• to determine sexual attitudes &amp; behavior of husbands outside of marriage.</li> </ul>  | DOH/LGU Partners   | Foreign/Local  |

| Broad R & D Area   | Specific Topic   | Rationale  | Objective/s  | Responsible Agency          | Funding Agency    |
|--|--|--|--|-----------------------------|-------------------|
| Training & Affiliation of Students in Gov't Hospitals/Units #5 | <p>Effectiveness of affiliating units &amp; training hospital in catering to the needs as affiliating schools</p> <p>Effectiveness of service delivery of hospitals with affiliating schools</p> | <ul style="list-style-type: none"> <li>• Increase in number of Nursing Schools who are assigned in the hospital as base</li> <li>• Not clear guidelines of CHED &amp; DOH regarding the Affiliation of Students/base</li> <li>• Many schools have failed in pass board exams</li> <li>• Loose monitoring activities feedback</li> </ul>          | <ul style="list-style-type: none"> <li>• To determine the effect of the presence of affiliates in the health care delivery</li> <li>• To determine the effectiveness of affiliating units &amp; hospitals in catering to the needs of affiliating schools</li> <li>• To recommend appropriate guideline in improving hospital/CHED &amp; other governing units.</li> </ul> | DOH/LGU<br>Partner Agencies | Foreign and local |
| Health Care Financing & Regulation # 6                         | Perception and satisfaction of stakeholders towards health regulation for sustainable health care financing.   | <ul style="list-style-type: none"> <li>• Poor compliance of stakeholders to set standards in the different category of hospitals.</li> <li>• Fragmented quality of hospital services</li> <li>• Lack of information on availability/accessibility/device/technologies of this units</li> <li>• Problems on PHIC benefits requirements</li> </ul> | <ul style="list-style-type: none"> <li>• To determine the level of compliance of stakeholders based on standards</li> <li>• To determine the level of satisfaction of hospitals/members to reimbursements provided by PHIC</li> <li>• To identify issues &amp; concerns affecting health care regulation &amp; financing</li> </ul>  | PHIC<br>DOH<br>CVHRDC       | Local & Foreign   |

| Broad R & D Area   | Specific Topic  | Rationale  | Objective/s   | Responsible Agency     | Funding Agency                     |
|--|---|--|---|------------------------|------------------------------------|
| Water Quality of drinking or water in Metro Tuguegarao & Ilagan Isabela =2 | Quality of drinking water from the pipe & deep well (NAWASA/LUWA) | <ul style="list-style-type: none"> <li>• People complain of the presence of impurities from the existing water supply.</li> <li>• Buying mineral water is an additional strain to the budget</li> <li>• Diarrhea has been one of the top ten leading cause of morbidity for the past five years</li> </ul> | <ul style="list-style-type: none"> <li>• To determine the physical, chemical, &amp; biological quality of the water supply.</li> <li>• To produce a baseline information on water quality of drinking water for decision makers.</li> </ul> | ISU<br>DENR<br>DOH/LGU | NESWM                              |
| Financial Management #7  | Utilization of income generated by hospitals                      | <ul style="list-style-type: none"> <li>• Income of devolved hospitals are treated as general funds of the province making the hospitals in adequate or in sufficient of their resources</li> </ul>   | <ul style="list-style-type: none"> <li>• income of devolved hospitals are treated as general funds of the province making the hospitals in adequate or in sufficient of their resources</li> </ul>  | DOH LGU partners       | Local & Foreign                    |
| Hospital Service Delivery #8   | Quality of Health Service Delivery of a Government Hospital       | <ul style="list-style-type: none"> <li>• Management problems that affect the service delivery (All QA components)</li> <li>• Fragmented service delivery in the LGU hospitals</li> <li>• Loose funds appropriated for basic health services of the hospital.</li> </ul>                                    | <ul style="list-style-type: none"> <li>• Determine extent of Quality of Health Service Delivery in the government/LGU hospitals</li> </ul>  | Partner Agencies       | DOH-National<br>WHO<br>JICA<br>GTZ |

| <b>Broad R &amp; D Area</b> | <b>Specific Topic</b>  | <b>Rationale</b>   | <b>Objective/s</b>   | <b>Responsible Agency</b> | <b>Funding Agency</b> |
|-----------------------------|--|--|--|---------------------------|-----------------------|
| Linkaging                   | Effectiveness of networking among the Government Hospital (20-30) bed hospital | <ul style="list-style-type: none"> <li>• No system of referral networking among government hospital unit</li> <li>• Patients are not properly referred/documentated resulting to poor continuity of service</li> </ul> | <ul style="list-style-type: none"> <li>• to determine the effectiveness of activity among LGU hospitals/units</li> </ul> | Partner Agencies          | Local/Foreign Funding |

## ANNEX D

### HEALTH RESEARCH PRIORITIES – CORDILLERA AUTONOMOUS REGION

#### MATRIX FOR PRIORITY RESEARCH TOPICS OUTPUT OF FOCUS GROUP DISCUSSION HELD AT THE SLU COLLEGE OF MEDICINE ON JANUARY 13, 2006

| Column 1<br>Issue of Concern  | Column 2<br>Specific Research Topic   | Column 3<br>Rationale for the Research   | Column 4<br>General Objective of the Research Study  | Column 5<br>Agency Responsible for Implementation |
|---|---|--|--|---|
| <b>Ranked No. 1:</b><br>Local Health System   | Devolution: Attitudes of Implementors and End-Users of the Local Health Care System in Selected Municipalities of the Baguio-Benguet Area | Despite devolution of funds for health care, it has been observed that basic health care services remain unavailable to many people in the Cordilleras | To determine the attitudes towards devolution of implementors and end-users of the local health care system in selected municipalities of the Baguio-Benguet area. | To be determined by PCHRD                         |
| <b>Ranked No. 2:</b><br>Lifestyle Related Diseases                                  | Prevalence and Risk Factors for Hypertension Among Residents of Selected Municipalities in the Cordillera                                 | Hypertension and its associated diseases have overtaken infectious diseases as leading causes of morbidity and mortality in the Cordillera region      | To determine the prevalence and risk factors for hypertension among residents of selected municipalities in the Cordillera   | To be determined by PCHRD                         |
| <b>Ranked No. 3:</b><br>Women, Children, and Adolescents in Difficult Circumstances | Knowledge, Attitudes, and Practices of Cordillera Women Regarding Reproductive Health   | There are beliefs and practices concerning reproductive health which are unique to the culture of the Cordilleras                                      | To determine the knowledge, attitudes, and practices of Cordillera women regarding reproductive health   | To be determined by PCHRD                         |

| <b>Column 1</b>                                 | <b>Column 2</b>   | <b>Column 3</b>   | <b>Column 4</b>   | <b>Column 5</b>                              |
|---|---|---|---|--|
| <b>Issue of Concern</b>                         | <b>Specific Research Topic</b>  | <b>Rationale for the Research</b>   | <b>General Objective of the Research Study</b>  | <b>Agency Responsible for Implementation</b> |
| <b>Ranked No. 4:</b><br>Environmental Health    | Levels of Air Pollution in Various Areas of Baguio City from January to December 200_                                   | Baguio City is said to have the highest level of air pollution in the country, but there has been no study that measures air pollution in different areas of the city in all months of the year                       | To determine the levels of air pollution in various areas of Baguio City during different times of the year                           | To be determined by PCHRD                    |
| <b>Ranked No. 5:</b><br>Infectious Diseases (1) | Antibiotic Sensitivity Patterns of Mycobacterium Tuberculosis Isolates in Baguio City                                   | Tuberculosis remains an important cause of morbidity and mortality and is curable, but there has been no study of the antibiotic sensitivity patterns of Mycobacterium Tuberculosis Isolates in the Cordillera region | To determine the antibiotic sensitivity patterns of Isolates of Mycobacterium Tuberculosis in Baguio City                             | To be determined by PCHRD                    |
| Infectious Diseases (2)                         | Knowledge, Attitudes, and Practices Regarding Tuberculosis among Residents of Selected Municipalities in the Cordillera | There are beliefs and practices concerning Tuberculosis as a disease which are unique to the culture of the Cordilleras   | To determine the knowledge, attitudes, and practices of residents of selected municipalities in the Cordillera regarding Tuberculosis | To be determined by PCHRD                    |