



# 2017-2022

## Message




Research and Development (R&D) plays a critical role in driving economic growth. With this, I commend the Regional Research Committee 1 (RRC1) for your laudable efforts in recognizing the region's need to invest in R&D and increase its number and innovation activities, hence, coming up with the Harmonized Region 1 Research and Development Agenda (HRRDA) 2017-2022.

I take pride that our Region has complemented the efforts at the national level to create a research agenda that will respond to the development gaps in our priority

sectors through scientific and technological research.

We share the recognition that the country's R&D has reached a new turning point. Together, with the support of our stakeholders, we will continue our concerted efforts towards strengthening and expediting our technological development capabilities and research to support national and regional development.

  
**MAYOR JUAN CARLO S. MEDINA**  
RDC 1 Chairperson  
(Vigan City Mayor)

## Message

Research and development (R&D) is the cornerstone for innovation and innovation drives economic growth.



In the latest World Economic Forum's Global Competitiveness Report 2017-2018, the country ranked 83rd out of the 137 countries in the world for technological readiness and ranked 65th in innovation. This figure poses a challenge for the country to strive more to attain global competitiveness and reduce income inequality and poverty.

The country now pours greater funding support to R&D activities to foster innovation and thus crafted the National Harmonized Research and Development Agenda (NHRDA) 2017-2022 as the roadmap for scientific and technological research in the country.

In Region 1, the Regional Research Committee 1 (RRC 1) is proud to present the Harmonized Region 1 Research and Development Agenda (HRRDA) which complements the NHRDA at the national level. The HRRDA is a manifestation of our stakeholders' desire and oneness in the research sector to bring R&D into greater heights by preparing a comprehensive and multi-sectoral research agenda that will guide our research efforts for the next six years thus contributing to the attainment of our Long-Term Vision of a Matatag, Maginhawa at Panatag na Buhay.

Hence, in behalf of the RRC 1, I would like to commend all those who took time and effort in crafting the region's research agenda. I urge our researchers, teachers, students to use this document in their research endeavors.

Mabuhay!



**ARMANDO Q. GANAL**

RRC 1 Chairperson  
(DOST 1 Regional Director)

## Foreword

The Regional Research Committee 1 (RRC) of the Regional Development Council 1 (RDC 1) recognizes the importance of conducting researches to come-up with new knowledge, and provide solutions to multifaceted problems in regional and national development.

As the research coordinating arm of the RDC 1, the RRC 1 spearheaded the formulation of the Harmonized Region 1 Research and Development Agenda (HRRDA) in consideration of the National Harmonized Research and Development Agenda (NHRDA), the country's Long-Term Vision—Ambisyon Natin 2040 and the Ilocos Regional Development Plan (RDP) 2017-2022. The HRRDA hopes to provide an integrated direction for research endeavors of the region for the next 6 years.

The HRRDA was prepared through the conduct of Sectoral Technical Working Group (TWG) Workshops on October 16-17, 2017 to identify researchable areas and topics for the following priority sectors of Region 1: a) economic development, b) social development, c) infrastructure, d) governance, and e) environment and natural resources. In addition, the RRC 1 solicited the inputs of various agencies to ensure that the HRRDA is comprehensive. The researchable areas and topics are responsive to the emerging development concerns, and the challenges and strategies set in the plan. Thus, HRRDA research proposals can be funded by various funding agencies that support the NHRDA and the Ilocos RDP. The RDC 1 Full Council approved the HRRDA 2017-2022 along its Communication Plan (ComPlan) on December 4, 2017 through RDC 1 Resolution No. 82, s. 2017.

The HRRDA would have not been made possible without the support of our stakeholders throughout the formulation process. We would like to express our gratitude to the men and women of the RRC 1, and to those who participated in the workshops, as well as those who have contributed in the enrichment of this document.

  
NESTOR G. RILLON

RDC 1 Vice-Chairperson  
(NEDA RO1 Regional Director)



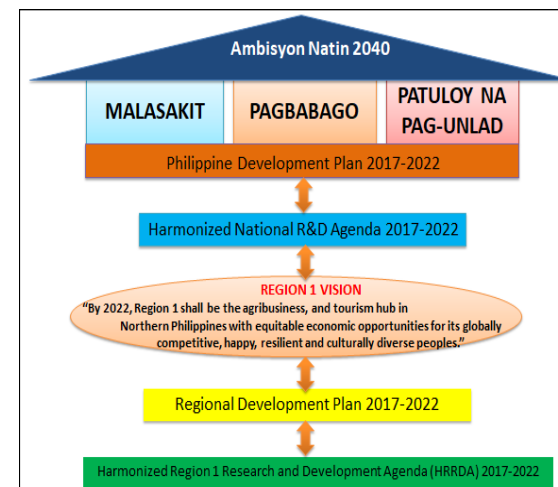
## I. HRRDA Frameworks

The RRC 1 formulated two frameworks that served as its guide in the formulation of the HRRDA 2017-2022.

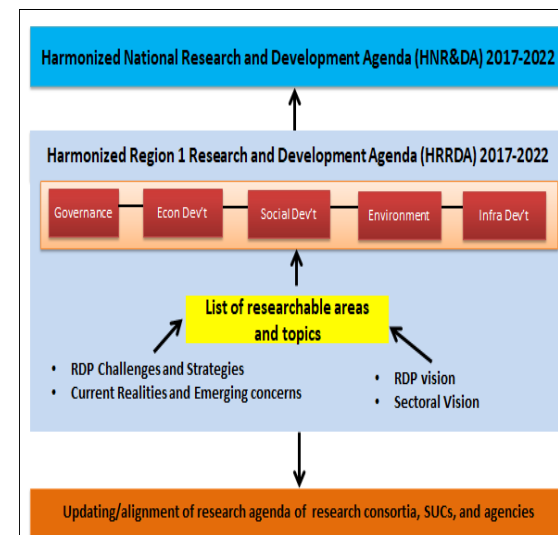
Figure 1 shows the alignment of the HRRDA to the regional and national thrusts and priorities. This is to ensure that a more comprehensive and holistic research agenda will be prepared to support the attainment of the region's vision and the country's long term vision. The HRRDA will drive the region's research efforts for the next six years especially for research institutions receiving funding support from the government.

Figure 2 on the other hand, illustrates how the HRRDA was formulated. Researchable areas and topics were identified for the region's five sectors to address the challenges and strategies in the RDP and to respond to the current realities and emerging concerns. The HRRDA is expected to influence the formulation or updating of the respective research agenda of various research institutions in the region.

**Figure 1. HRRDA Alignment Framework**



**Figure 2. HRRDA Formulation Framework**



## II. Research Priority Sectors, Areas and Topics

### ECONOMIC DEVELOPMENT



### Macroeconomy and Science and Technology Sub-Sector

#### A. Inequality, Poverty and Economic Growth

- Contribution of cooperatives in regional development
- Effectiveness of multi-cooperatives as business enterprise managers
- Impact assessment of key poverty reduction programs
- GRDP and its impact to poverty reduction in Region 1

#### B. Labor and Migration

- Contribution of OFW remittances to poverty alleviation and regional development
- Extent of job-skills mismatch in Region 1 and interventions to arrest job-mismatch
- Employability of youth and effectiveness of youth training and employment services
- Strengthening Public Local Employment Services
- Determinants of persistent long-term unemployment in Region 1

#### C. Competitiveness and Globalization

- Readiness of Region 1 to ASEAN integration
- Competitiveness of priority industries (agribusiness and tourism) in the region
- Identifying locational factors of medium and large industries in Region 1
- Identification of constraints in the Non-implementation of Local Investment and Incentives Code (LIIC)
- Policy study on the formulation

#### D. S&T Development and Adoption

- Assessment on the effectiveness of agency programs in advocating technologies among farmers and fisherfolks and MSMEs
- Design and production of new and low-cost technologies to improve productivity of farmers, fisherfolks and MSMEs
- Prolonging the shelf-life of local food products
- Development of intermediate food products and ingredients from local raw materials
- Development of innovative food products
- Attitudes and perceptions of farmers and fisherfolks on low-costs technology adoption
- S&T as tool in advancing business enterprises and cooperatives
- Inventory of research capacities along various fields and sciences
- Identification of constraints and interventions to strengthen research capacities
- Assessment of Techno Transfer Act of 2009 and strengthening collaborative mechanisms in technology transfer and technology business incubation
- Improvement of existing local food products and by-products
- Technological support for the upgrading of local cacao and cocoa industry
- Sensors and controls with applications in, but not limited to health and





## Agribusiness Sub-Sector

### A. Developing Partnerships in Agriculture

- Inventory of LGU-accredited farmers and fisherfolks organizations and problems encountered in the accreditation
- Assessment on the level of development of farmers and fisherfolks' organization

### B. Credit and Crop Insurance

- Policy review on effectiveness of the rural credit delivery system
- Attitudes and perceptions of farmers and fisherfolks on credit/insurance availment
- Assessment of loan availment of farmers/fisherfolk from financing institutions
- Feasibility on the provision of community seed banking for various crops as a form of risk mitigating measure
- Risk-taking abilities of farmers/fisherfolks for business ventures

### C. Organic Agriculture

- Status of organic agriculture and agrifishery in Region 1

### D. Economic Opportunities in Agriculture and Fisheries

- Level of adoption of Good Manufacturing (GMP) and Good Agricultural Practices (GAP) in Agribusiness
- Extent of implementation of clustering approach in agro-enterprise development
- Enhancing entrepreneurial capabilities of rural enterprises for agri-industrialization

### E. Gender Role in Agriculture

- Role of women in agrifishery sector

### F. Agri-fisheries

- Inventory and GIS mapping of aquatic resources in Region 1
- Ecological and biological assessment of various aquatic ecosystems
- Stock assessment of freshwater and marine organisms in Region 1
- Oceanographic/limnological studies
- Socio-economic impact and policy studies of the fishing industry in the region
- Fisheries Vulnerability Assessment
- Development of Regional Information System for aquaculture
- Fishing technology assessment and development
- Packaging and commercialization of matured and appropriate technologies
- Strengthening fisherfolks' involvement in managing resource and policy formulation

### G. High-Value Crops

- Germplasm collection/selection, purification and multiplication and varietal evaluation
- Adoption of rapid propagation techniques of quality planting materials for priority crops
- Development of rapid detection technique for emerging diseases on planting materials and development of crop varieties with enhanced resistance to major pest and diseases
- Prolonging the shelf-life of food and non-food products for priority crops
- Supply chain analysis for priority crops
- Improvement of cultural management practices and conservation and sustainable utilization of traditional varieties
- New technologies to continuing and emerging problems including climate change
- Season-long monitoring of emerging insect pests (population) and diseases
- Product development and processing of priority crops and its by-products
- Development of quality packaging materials
- Adaptation technology to drought or climate change and controlling soil erosion
- Development of dynamic weather cropping calendars and localizing the PAGASA weather forecast
- Vulnerability assessment of crops
- Development of new designs, construction protocols, post storage facilities, machines, tools and equipment
- Development of technology for pulping agricultural wastes and evaluation of other fibrous agricultural crops for pulp production



## H. Agricultural Ecosystem

- Extent of land conversion (agri to non-agri) in the region
- Soil analysis of agricultural lands
- Generation of GIS-based map of different ecosystems reflecting fertility, productivity and resources

## I. Promoting Animal Husbandry

- Genetic conservation and improvement of existing quality breeds for small and large ruminants, free range chicken and native pigs
- Identification, assessment of feeds and feeding practices for small and large ruminants, free range chicken and native pigs
- Improving health of small and large ruminants, free range chicken and native pigs and food safety
- Impact assessment of DA's key programs in Region I for small and large ruminants, free range chicken and native pigs
- Product development including shelf-life and packaging materials for SMEs in animal product processing

## Trade, Industry and Tourism Sub-Sector

### A. Data Analytics in Tourism Industry

- Best practices on management of data on tourist arrival for possible adoption in Region 1

### B. Agritourism

- Status and prospects of agritourism in Region 1
- Documentation of best practices of agritourism in Region 1

### C. Institutional Mechanisms, Policies and Regulations

- Extent of compliance of food manufacturers to LTO-FDA accreditation

### D. Economic Opportunities in Industry and Services

- Market matching and linking of farmers/fisherfolks products
- Efficiency and effectiveness of trade fairs (local and int'l) in enhancing competitiveness of SMEs
- Competitiveness of agri-fishery products
- Value chain analysis and competitiveness study of strategic priority commodities and HVCs of Region 1
- Assessment of the Region 1's performance in achieving its vision to be the agribusiness hub in Northern Philippines



## POSSIBLE FUNDING INSTITUTIONS & IMPLEMENTERS FOR ECONOMIC DEVELOPMENT SECTOR HRRDA

- National Research Council of the Philippines (NRCP)
- Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development (PCAARD)
- Department of Agriculture-Bureau of Agricultural Research (DA-BAR)
- Ilocos Agriculture Resources Research and Development Consortium (ILAARDEC)
- Ilocos Consortium for Industry and Energy Research and Development (ILAARDEC)
- National Economic and Development Authority (NEDA)
- State Universities and Colleges (SUCs)
- Higher Education Institutions (HEIs)



## ENVIRONMENT & NATURAL RESOURCES

### A. Sustainable and Resilient Communities

- Study on natural early warning signs of upcoming disasters
- Urban regeneration capacities of cities to improve community resiliency
- Technology development for monitoring of air quality
- Effectiveness of Smoke Emission Testing Centers
- Development of alternative household insecticides and pesticides
- Identification of most commonly used household products with hazardous chemicals
- Alternative technologies on solid waste management
- Factors affecting compliance to Section 16 of RA 9003
- Best practices of LGUs that can be replicated on maintenance of clean surroundings
- Policy review, formulation, amendment and harmonization of environmental laws and regulation
- Policy guidelines on the inventory/management of reclamation and accreted lands

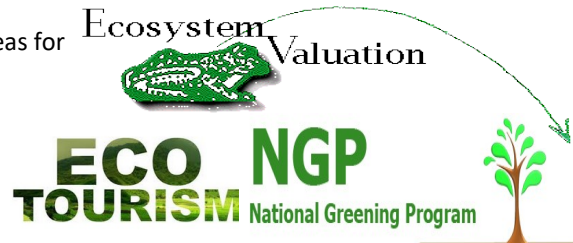
## Natural Resources Sub-Sector



### A. Vulnerable ecosystems

- Study on the factors/causes of the worsening water quality of the region's water systems

- Study on the contribution of informal settlement to the pollution of the river systems
- New alternative technologies on water treatment
- Study on the impact of salt water intrusion to vegetation including coping and mitigation measures
- Factors affecting compliance to water and air laws
- Carrying capacity models of ecosystems
- Economic valuation of ecosystems and cost-benefit analyses
- Study on the toxicity and pH variability of coastal waters
- Conduct of Soil analysis/Mapping of polluted lands and identification of possible crops for cultivation
- Management and Rehabilitation of polluted lands
- Effectiveness of the National Greening Program (NGP) in improving forest cover in the region
- Cost-Benefit Analysis on the implementation of the National Greening Program
- Study on the upland areas for potential eco-tourism
- Development of sustainable management practices for forest plantation



### POSSIBLE FUNDING INSTITUTIONS AND IMPLEMENTERS FOR ENVIRONMENT SECTOR HRRDA

- |          |   |
|----------|---|
| • NRCP   | • Philippine Council for Industry, Energy and |
| • PCAARD | Emerging Technology Research and              |
| • NEDA   | Development (PCIEERD)                         |
| • SUCs   | • Ilocos Consortium for Industry and          |
| • HEIs   | Energy Research and Development (ICIERD)      |

## INFRASTRUCTURE AND UTILITIES



### Transportation Sub-Sector

- Factors affecting the implementation of road projects
- Assessment on the enforcement of traffic rules and regulations
- Extent of implementation of Philippine Contractors Accreditation Board (PCAB) regulations
- Impact evaluation of DOT-DPWH Convergence Tourism Access Roads projects
- Economic viability of extending the express way to Ilocos Norte
- Viability of the revival of PNR operation
- Status of implementation of DPWH Dept. Order 73 s. 2014, "Prohibited Uses within the Road- Right-of-Way of National Roads"
- Feasibility and master plan study for an international port within the region
- Factors affecting the decline of shipcalls in the region and its effect to the region's productivity
- Viability of other airports in the region for commercial operation



### Communication Sub-Sector

#### A. Improving Infrastructure for communication

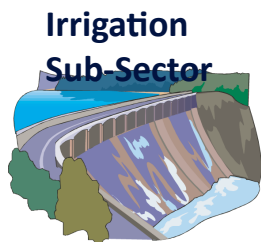
- Factors affecting the delayed implementation of infra-projects under the National Broadband Plan
- Study on alternative modes of data transmission technologies



### Energy Sub-Sector

#### A. Clean and Affordable Energy

- Development and viability of renewable energy facilities
- Cost-Competitive indigenous/alternative bio fuel sources



## Irrigation Sub-Sector

### A. Irrigation Systems and Flood Mitigation

- Identification of viable irrigable areas in the region
- Study on the efficiency of irrigation projects
- Development of Model Farms for High Value Crops using Drip Irrigation Technology

## Social Infrastructure Sub-Sector

### A. Reliability and Modernization of School Buildings

- Impact Assessment of the PSIP I & II Program
- Evaluation on the compliance of school infrastructure and facilities in the region to GAD, child-friendly school and IPED requirements
- Documentation of preservation efforts on DepEd Gabaldon buildings' structural and cultural integrity

### B. Reliability and Modernization of Health Facilities

- Effectiveness of the Health Facilities Enhancement Program

## Cross-cutting concerns in the Infrastructure System

### A. Productive infrastructure sector and disaster resilient structures

- Study on the factors affecting shortage of manpower in the construction industry
- Motivational factors of manpower in the construction industry
- Study on improving construction labor productivity

## POSSIBLE FUNDING INSTITUTIONS AND IMPLEMENTERS FOR INFRA SECTOR HRRDA

- |           |           |
|-----------|-----------|
| • NRCP    | • ICIEERD |
| • PCIEERD | • SUCs    |
| • PCAARRD | • HEIs    |
- Department of Education (DepEd)
  - Region 1 Health Research Development Consortium (R1HRDC)
  - Department of Health (DOH)



## GOVERNANCE



## Development Administration Sub-Sector

### A. Efficient and Effective Government Structure, Systems and Programs

- Study on the effectiveness of SGLG on the performance of LGUs
- Assessment on the effectiveness of the Business Permits and Licensing System (BPLS) Program
- Assessment of LGU capability building programs in improving LGU productivity
- Extent of compliance of LGUs in procurement of office supplies from the Procurement Service of the DBM
- Policy evaluation on streamlining the bureaucracy
- Effectiveness of regional and local development councils in fostering regional and local development including their role in the Federal Government

### B. DRR Response and Climate Change Adaptation

- Evaluation on the utilization of the DRRM fund and quick response fund
- Impact assessment on DRR programs

### C. Fiscal Administration

- Policy review to improve tax collection system (point of sale, cashless transactions)

### D. Justice Administration

- Study on the best practices on barangay complaint mechanism
- Evaluation of integration programs for offenders to society and former rebels

## Peace and Order and Security Sub-Sector

### A. Law Enforcement, Human and Information Security

- Factors affecting the presence of insurgency
- Extent and effectiveness of partnership among law enforcement entities, LCEs, CSOs, and community in peace and order
- Evaluation of programs for violence against women and children



- Development of new technologies and processes to aid law enforcement
- Assessment of capability of PDEA to implement war on drugs
- Effectiveness of anti-drug campaign strategies
- Effectiveness of training facilities and trainings provided to incoming police officers
- Capacity assessment on DRRM systems and procedures including functional security efforts in disasters
- Determining constraints and factors affecting information security



**CULTURE**  
Sub-Sector



### A. Cultural Resources and Identity

- Assessment of tangible and intangible cultural and historical resources
- Tracing the emerging identity of the people of Region 1 in the 21st century
- Defining cultural competency of organizations

### B. DRR+CCA in Culture

- Integration of cultural values to achieve key DRR and climate change adaptation goals
- Vulnerability study of tangible cultural assets in geographically isolated and depressed areas

### C. Cultural Promotion, Education and Assimilation

- Documentation of policies in the promotion of culture for regional development
- Policy study to strengthen institutional linkages and mechanisms to facilitate cultural promotion at the sub-national level
- Effectiveness of cultural activities in the promotion of culture
- Impact of quad media (broadcast, TV, print, blogs/travel writing) in the promotion of culture
- Impact of MTB-MLE/IPED/Muslim Education in the promotion of cultural education
- Assessment on the capability of IPED teachers

### D. Culture for Regional Development

- Extent of participation of marginalized groups in the development process and the assessment of LGU initiatives
- Challenges in operationalizing culture in local development

- Extent of participation of marginalized groups in the development process and the assessment of LGU initiatives
- Challenges in operationalizing culture in local development
- Policy studies on how heritage and culture can be integrated in urban and physical planning and in economic policies
- Development of indicators, measurements to evaluate contribution of culture in national and regional development
- Assessing the economic contribution of culture in Region 1

### POSSIBLE FUNDING INSTITUTIONS AND IMPLEMENTERS FOR GOVERNANCE SECTOR HRRDA

- NRCP • NEDA • SUCs • HEIs

## SOCIAL DEVELOPMENT

### Education Sub-Sector

#### I. Basic Education



#### A. K-12 Implementation

- Compliance in the implementation of the K-12 program for quality basic education
- Impact of K-12 free education in private schools
- Effects of the transfer of senior high school public students to private high school
- Effects of the mother tongue based multi-lingual education in the performance of learners
- Competencies of public and private junior and senior high school teachers and effectiveness of teachers' trainings for K-12

#### B. Pedagogies of education

- Integration of Sex, Anti-Drug Education and GAD concerns in the education curriculum
- Perceptions on drugs and sex education in high school curriculum
- Integration of education and health practices of the IPs in Region 1
- Development and validation of instructional materials for Senior HS
- Effects of social media/ICT in the academic performance of students

- Mapping of OSYs
- Assessment of the effectiveness of ALS program
- Extent of LGU support to ALS implementation
- Constraints in ALS implementation

### A. Quality of tech-voc education

- ### B. Manpower demand and supply

- Database of industry manpower demand and supply

- Tracer studies on TESDA graduates
- Self-employment ventures of graduates as alternative to wage-employment

### A. Access to higher education

- The Utilization of scholarship grants afforded to 4Ps beneficiaries
- Effectiveness of the implementation of CHED scholarship programs
- Factors affecting the decline of enrollees in agricultural and fishery courses
- Viability of new courses offerings (environmental engineering, masters in accountancy)
- Effects of social media/ICT in the academic performance of college students

## A. Health Governance

- Readiness of Region 1 Health and Education Facilities and Systems for ASEAN integration
- Impact of the different health programs in Region 1
- Compilation/mapping of LGU localized laws/ordinances related to health
- Profiling of Barangay Health Workers as basis for Continuing Education Program
- Scaling-up best practices of LGUs along inter-local health zone in health service delivery
- LGUs support in the enhancement of the capabilities of health social workers
- Areas of partnership/convergence in health programs of implementing agencies

- The support systems for pregnant mothers in GIDA Areas/IP areas
- Policy study on the effective delivery of nutrition programs
- Effectiveness of medical missions and supplemental feeding programs
- Factors affecting high obesity among children in Region 1
- Factors affecting the high incidence of child mortality and non-improvement in maternal health
- Effects of climate change to the health and wellness of the mother-children in Region 1

- Extent of PHIC utilization of women of reproductive years enrolled as 4Ps beneficiaries
- Review of costing of hospital expenses vis-à-vis-the current socio-economic status of the Region

- Causative factors on increasing cases of pre-teen and teen pregnancy in Region 1
- Factors affecting high HIV/AIDS cases in Region 1
- Effectiveness of Local AIDS Council
- Culture sensitivity of health workers in service delivery among IPs
- IP traditional beliefs in health vs. standards

- Development of biomedical devices
- Development of ICT enabled medical devices , software, and services
- Development of standardized herbal drugs
- Discovery of new drugs to communicable and non-communicable diseases

- Early detection, diagnosis and management of infections diseases and non-communicable diseases including mental health

- Pre hospital care in vehicular accidents
- Innovative emergency medical services for disaster preparedness
- Post disaster solutions to access health care services



## Social Protection Sub-Sector

### A. Social Protection Programs

- Impact evaluation of supplementary feeding program
- Impact evaluation of educational assistance under the SLP
- Impact evaluation of supplementary feeding program
- Impact evaluation of educational assistance under the SLP
- Impact study on SLP, 4Ps, KC-NCDDP, Social Pension for indigent SCs, AICS, ESCAP, CFW, and other social protection programs
- Effects of inflation to the adequacy of cash grants/social pension/cost of feeding program
- Effects of inflation to the Pantawid Program beneficiaries
- Impacts of social protection programs and poverty reduction efforts in Region 1

### B. Social Protection Services at the Local level

- Capacity assessment of the Social Welfare System at the local level

### D. DRR for Social Protection

- Mapping the vulnerable sectors in the region
- Study on the effectiveness of DRRM programs for the poor/marginalized/vulnerable group

## Housing Sub-Sector

### A. Housing Delivery at the local level

- Policy review on the effects of the 18% slope restriction (under PD 705) to housing delivery
- Assessment of the institutional capacity of LGUs to implement housing programs

### B. Housing Finance

- Effectiveness of NHAs' Resettlement Assistance Program (RAP) for the IPs
- Effectiveness of NHA's Resettlement Assistance Program (RAP) for LGUs
- Study on housing program for internally displaced individuals, vagrants, sama-bajaus and street families at the local level

## Population Development Sub-Sector

### A. Social Determinants of Population Health

- Studies on the effectiveness of the implementation of RPRH law
- Study on the effectiveness of teen pregnancy prevention programs
- Mapping of CSO partners in the implementation of RPRH Law
- Extent of acceptance of family planning in GIDA areas



## POSSIBLE FUNDING INSTITUTIONS & IMPLEMENTERS FOR SOCIAL DEVELOPMENT SECTOR HRRDA

- NRCP
- R1HRDC
- DepEd
- DOH
- SUCs
- HEIs
- Commission on Higher Education (CHED)
- Department of Social Welfare and Development (DSWD)
- Philippine Council for Health Research and Development (PCHRD)

## HOW TO ACCESS FUNDING SUPPORT AND TECHNICAL ASSISTANCE ON RESEARCH

Please get in touch with the focal persons of the following institutions to know more about the requirements to access research grants or request for technical assistance:

FUNDING AGENCY	CONTACT PERSONS	CONTACT NUMBER
1. BFAR	OIC ARD Rosario Segundina P. Gaerlan	072-242-1559
2. CHED	Dr. May Rose Quezon Education Supervisor II & Focal Person, Research	072-242-5017 chedro1@ched.gov.ph
3. DA	Dr. Jovita Datuin Chief, Research Division	072-242-1045
4. DA-BAR	Ms. Salvacion Ritual Chief, PMED & Focal Person, Research	02-928-8505
4. DepEd	Dr. Cecilia P. Rosido Chief, Policy, Planning and Research Division Yehlen I. Yangat Research Coordinator	072-607-8132 depedro1_rpu@yahoo.com
5. DOH	Dr. Amelia D. Dumaoang Medical Officer IV, PDOHO La Union	072-607-6413
6. DSWD	Ms. Lucila D. Galvez Planning Officer 1/Focal Person for Research Planning Division	072-687-8000 loc 221

## HOW TO ACCESS FUNDING SUPPORT AND TECHNICAL ASSISTANCE ON RESEARCH

FUNDING AGENCY	FOCAL PERSON	CONTACT NUMBER
<b>7. NEDA</b>	<b>Dr. Irene B. Ubungen,</b> Chief Dev't Research Division <b>Ms. Ma. Cristina G. Cariño</b> Focal Person for Research	072-888-5501 nedaregionaloffice1@gmail.com
<b>DOST Research Consortium in Region 1</b>		
<b>8. R1HRDC</b>	<b>Ms. Ana Gay Ranga</b> R1HRDC Secretariat c/o MMMHMC, Batac City, Ilocos Norte	077-658-8121 anagayranga@rocketmail.com
<b>9. ILAARRDEC</b>	<b>Prof. Love Grace Campano</b> ILAARRDEC Secretariat c/o MMSU, Batac City, Ilocos Norte	077-792-3420 077-792-3688 ilarrdec@yahoo.com
<b>10. ICIEERD</b>	<b>Ms. Sharmaine Patacsil</b> ICIEERD Secretariat c/o DOST Region 1, SFC, LU	072-888-3399
<b>For DOST Research Councils, please contact the following division in-charge</b>		
<b>11. NRCP</b>	Research and Development Management Division (RDMD)	Telephone number: +63 837 6142/02-837-0409 Email: nrinfo@yahoo.com Website: nr.dost.gov.ph
<b>12. PCHRD</b>	Research and Development Management Division (RDMD)	Telephone number: 02-837-7537 Email: info_pchrd@pchrd.dost.gov.ph Website: www.pchrd.dost.gov.ph
<b>13. PCIEERD</b>	Research Information & Technology Transfer Division (RITDD)	Trunk Line: 837-2071 to 82 Loc. 2102, 2109 Website: http://pcieerd.dost.gov.ph

FUNDING AGENCY	FOCAL PERSON	CONTACT NUMBER
<b>For PCAARD, please contact the following division in-charge based on the focus of your research.</b>		
<b>14. PCAARRD</b>	Forestry and Environment Research Division (FERD)	VoIP Trunklines: 049-536 0014; 536 1956; 536 2305 Email: pcaarrd@pcaarrd. dost.gov.ph
	Inland Aquatic Resources Research Division (IARRD)	
	Livestock Research Division (LRD)	
	Marine Resources Research Division (MRRD)	
	Socio-Economics Research Division (SERD)	
	Crops Research Division (CRD)	
	Agricultural Resources Management Research Division (ARMRD)	



## Annex 1 . RDC Resolution endorsing HRRDA 2017-2022



### REGIONAL DEVELOPMENT COUNCIL – ILOCOS REGION

C/O NEDA REGIONAL OFFICE 1

**EXCERPT FROM THE MINUTES OF THE 4<sup>TH</sup> REGULAR RDC-1 FULL COUNCIL  
MEETING HELD ON 7 DECEMBER 2017 AT SISON AUDITORIUM, LINGAYEN,  
PANGASINAN**

**RDC 1 Resolution No. 82, s. 2017**

**APPROVING THE HARMONIZED REGION 1 RESEARCH AND DEVELOPMENT  
AGENDA 2017-2022 (HRRDA) CY 2017-2022 AND ITS COMMUNICATION PLAN**

**WHEREAS**, the Regional Research Committee 1 (RRC) of the Regional Development Council 1 (RDC 1) recognizes the importance of conducting research in the various sectors of development to come-up with new knowledge and provide solutions to multifaceted problems in regional and national development;

**WHEREAS**, the RRC 1 coordinated the formulation of the HRRDA in consideration of the National Harmonized Research and Development Agenda (NHRDA), Ambisyon Natin 2040 and the Regional Development Plan (RDP) 2017-2022;

**WHEREAS**, the RRC1 conducted a Sectoral Technical Working Group (TWG) Workshop on October 16-17, 2017 for the following priority sectors of the RDC 1:

- a) economic development,
- b) social development,
- c) infrastructure,
- d) governance, and
- e) environment and natural resources;

**WHEREAS**, the RRC 1 also solicited the inputs of various agencies which did not attend the workshop and considered their submissions in the HRRDA;

**WHEREAS**, the researchable areas and topics of the HRRDA are aligned with the HNRDA 2017-2022, and are responsive to the emerging concerns of the sector and the challenges and strategies on the following Chapters of the RDP:

- Chapter 5: Ensuring People-Centered, Clean, and Efficient Governance
- Chapter 6: Pursuing Swift and Fair Administration of Justice
- Chapter 7: Promoting Philippine Culture and Values
- Chapter 8: Expanding Economic Opportunities in Agriculture, Forestry and Fisheries,
- Chapter 9: Expanding Economic Opportunities in Industry and Services through Trabaho and Negosyo
- Chapter 10: Accelerating Human Capital Development
- Chapter 11: Reducing Vulnerability of Individuals and Families
- Chapter 12: Building Safe and Secure Communities
- Chapter 13: Reaching for the Demographic Dividend
- Chapter 14: Vigorously Advancing Science, Technology and Innovation
- Chapter 15: Ensuring Sound Macroeconomic Policy
- Chapter 16: Leveling the Playing Field through a National Competition Policy;
- Chapter 17: Attaining Just and Lasting Peace
- Chapter 18: Ensuring Security, Public Order, and Safety
- Chapter 19: Accelerating Infrastructure Development
- Chapter 20: Ensuring Ecological Integrity, Clean and Healthy Environment

**WHEREAS**, the HRRDA also contains the research agenda of the 3 DOST research consortia of the region namely: a) Ilocos Agriculture Resources Research and Development Consortium (ILARRDEC), b) Region 1 Health Research and Development Consortium (R1HRDC) and c) Ilocos Consortium for Industry and Energy Research and Development (ICIIRD);

**WHEREAS**, the five Sectoral Committees of the RDC 1 endorsed their respective sectoral component of the HRRDA in their meetings as follows:

Secom	Date of Meeting	Endorsement
Economic Development SeCom	November 15, 2017	Econ Dev't secom No. 27, s. 2017
Environment and Natural Resources SeCom	November 22, 2017	ENR SeCom No. 21, s. 2017
Infrastructure SeCom	November 23, 2017	Infra SeCom No. 21, s. 2017
Governance SeCom	December 1, 2017	Gov SeCom No. 23, s. 2017
Social Development SeCom	December 1, 2017	Social Dev't SeCom No. 21, s. 2017

**WHEREAS**, the RRC 1 also formulated a communication plan (Complan) for the HRRDA which aims to influence research institutions to integrate the research and development agenda of the region in crafting and updating their own research agenda and to encourage researchers to conduct researches on the priority research areas and topics of the HRRDA;

**WHEREAS** the RRC 1 recommended the RDC 1 approval of the HRRDA 2017 and its communication plan in its 4<sup>th</sup> Regular Meeting on December 4, 2017 through RRC 1 Resolution No. 6 & 7 s. 2017 respectively;

**NOW THEREFORE, BE IT RESOLVED, AS IT IS HEREBY RESOLVED, ON A MOTION DULY SECONDED**, to approve the HRRDA CY 2017-2022 and its ComPlan;

**RESOLVED FURTHER**, for the RRC 1 to disseminate the HRRDA to various research institutions and monitor its implementation;

**RESOLVED FINALLY**, for the RRC 1 to monitor the implementation of the Complan on a semestral basis;

**APPROVED**, 7<sup>th</sup> day of December 2017, Lingayen, Pangasinan.

**CERTIFIED TRUE AND CORRECT:**

**DONALD JAMES D. GAWE**  
RDC 1 Secretary  
(NEDA RO1 Assistant Regional Director)

**ATTESTED BY:**

**NESTOR G. RILLON**  
RDC-1 Vice-Chairman  
(NEDA RO1 Regional Director)

**CONCURRED BY:**

**JUAN CARLO S. MEDINA**  
RDC-1 Chairman  
(Mayor, Vigan City, Ilocos Sur)

## Annex 2: RRC 1 Composition, CY 2017-2019

**Chairperson** Dir. Armando Q. Ganal, DOST

**Co-Chairperson** Dr. Aurora Samson-Reyna, Association of Private Schools and Colleges (APSCU)/University of Luzon

### Members

#### SUCs

Dr. Shirley C. Agrupis, MMSU  
Atty. Benjamin P. Sapitula, DMMMSU  
Dr. Francisco D. Lopez, ISPSC  
Dr. Gilbert Arce, UNP  
Dr. Elizabeth Gacusana, NLPSC  
Dr. Dexter R. Buted, PSU

#### Associations

Dr. Aurora Samson-Reyna, APSCU c/o UL  
Dr. Josephine Flores, PAGE c/o LUCNAS  
Dr. Elizabeth A. Montero, ALCU c/o UCU

### Regional Line Agencies

Dir. Cherrie Melanie A. Diego, CHED  
Dir. Nestor G. Rillon, NEDA

### Research Consortia Chairpersons

Atty. Benjamin P. Sapitula, ICIERD c/o DMMMSU  
Dr. Ma. Lourdes Otaiza, R1HRDC c/o MMHMC  
Dr. Epifania O. Agustin, ILARRDEC c/o MMSU

### Sectoral Committee Chairpersons

Dir. Alma Ruby C. Torio, Social Dev't c/o DepEd  
Dir. Ronnel M. Tan, Infrastructure c/o DPWH  
Dir. James F. Fadrilan, Governance c/o DILG  
Dir. Lucrecio R. Alviar, Jr., Econ. Dev't c/o DA  
Dir. Paquito T. Moreno, Jr., ENR c/o DENR

## Secretariat: NEDA & DOST

Dr. Irene B. Ubungen, NEDA 1  
Mr. Arnel Palabay, NEDA 1  
Ms. Ma. Cristina G. Cariño, NEDA 1  
Ms. Charmaine Yusongco, NEDA 1  
Ms. Dafnae Mariz Mendoza, NEDA 1  
Ms. Angel Lyn Ortiz, DOST 1  
Ms. Maureen Heidi Perez, DOST 1  
Ms. Carla Grace Pacheco, DOST 1

You can also visit the NEDA RO1 website to download a copy of this brochure at [ilocos.neda.gov.ph](http://ilocos.neda.gov.ph)

For queries on the HRRDA 2017-2022, please contact our focal person at 072-888-5501 c/o Ms. Ma. Cristina G. Cariño of the Development Research Division, NEDA 1, San Fernando City, La Union or send us an email at [nedaregionaloffice@gmail.com](mailto:nedaregionaloffice@gmail.com) copy furnished [tin\\_cari02@yahoo.com](mailto:tin_cari02@yahoo.com) and [drdregion1@gmail.com](mailto:drdregion1@gmail.com)

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