



REPUBLIC OF THE PHILIPPINES
REGIONAL DEVELOPMENT COUNCIL

Western Visayas Region (Region VI)

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RRDIC-VI Memorandum No. 2023-002

For : RDC-VI Chairperson and the Full Council

Subject : **APPROVAL OF THE FRAMEWORK OF THE 2023-2028 HARMONIZED REGIONAL RESEARCH, DEVELOPMENT, AND INNOVATION AGENDA (HRRDIA)**

Date : 4 December 2023

Action Desired

For approval

Background Information

The Regional Research, Development, and Innovation Committee (RRDIC) of the Regional Development Council (RDC) Western Visayas has been entrusted with the responsibility of spearheading the advancement of Science, Technology, and Innovation in the region. Among its designated functions is the formulation of the Harmonized Regional Research, Development, and Innovation Agenda (HRRDIA), aligning with the developmental needs of Western Visayas.

The 2023 to 2028 cycle of the HRRDIA has been meticulously crafted in accordance with the national government's strategic focus on cultivating an efficient system of knowledge creation and technology generation. The HRRDIA serves as a compilation of identified Research and Development (R&D) needs from various government agencies, State Universities and Colleges (SUCs), Higher Education Institutions (HEIs), and private institutions. Its formulation involved several Focus Group Discussions (FGDs) and consultation meetings conducted in 2023 under the guidance of the RRDIC. The gathered list of R&D needs underwent thorough review to create a comprehensive HRRDIA.

The HRRDIA of Western Visayas does not only concentrate on R&D priority areas related to Science and Technology (S&T) but also encompass research needs across other crucial domains essential to regional development. Additionally, the HRRDIA incorporates the Regional Unified Health Research Agenda (RUHRA) by the Western Visayas Health Research and Development Consortium (WVHRDC), the Regional R&D Agenda of the Western Visayas Consortium for Industry, Energy, and Other Emerging Technology Research and Development (WVCIEERD), and the R&D Agenda of the Western Visayas Agriculture, Aquaculture, Fisheries, and Natural Resources Research and Development Consortium (WESVAARRDEC).

The 2023-2028 HRRDIA is organized into four distinct sections. Three of these sections align with the primary sectors in the region, namely Agriculture, Aquatic and Natural Resources (AANR); Health; and Industry, Energy, and Emerging Technologies (IEET). Additionally, a dedicated section on Basic Research was incorporated, emphasizing its crucial role in uncovering fundamental principles and mechanisms that form the bedrock for scientific and technological advancements. Each major section is further divided into subsections, delineating priority topics and agendas within each thematic area.

The framework of the 2023-2028 HRRDIA is as follows:

I. AGRICULTURE, AQUATIC AND NATURAL RESOURCES

A. Food Security

- a. Fisheries
- b. Crops
- c. Livestock and Poultry
- d. Salt Production

B. Water Security

- a. Water Treatment
- b. Water Conservation Measures
- c. Irrigation Systems
- d. Water Pumping Systems

C. Natural Fibers

D. Food Safety

- a. Food Standardization
- b. Prevention Strategies to Enhance Food Safety
- c. Good Handling Practice

E. Resource Conservation

- a. Resource Assessment
- b. Resource Management and Monitoring

F. Climate-resiliency of Crops, Livestock and Fisheries

G. Growth Development in Agri-fisheries

- a. Development of Low-cost Fertilizers
- b. Feed Management
- c. Development of Low-cost Feeds
- d. Soil Health and Nutrient Management

H. Biosecurity

- a. Emerging Animal Diseases
- b. Vaccine Development in Agri-fisheries
- c. Biocontrol of Pests
- d. Development of Pest and Disease Detector

I. Post-Harvest Technologies

- a. Utilization of Agriculture and Aquaculture Waste Products in Crops, Livestock and Fisheries

J. Agri-business

- a. Value Chain of Agri-fisheries Commodities

K. Development of Agri-fisheries Technologies

- a. Smart Agriculture and Aquaculture
- b. Farm Mechanization
- c. Scaling of Diversified and Integrated Crop-based Farming Technologies
- d. Development and Scaling of Location-specific Crop Varieties
- e. Development of Agricultural Post-harvest Machineries

II. HEALTH

A. Maternal and Child Health

B. Natural Drug Discovery

- a. Development of Pharmaceutical Products

C. Mental Health, Disorder, and Diseases

- a. Neurological Disorder and Diseases
- b. Mental Health

D. Malnutrition

E. Nutraceuticals

F. Immunization and Vaccination

G. Communicable and Non-communicable Diseases

H. Re-emerging and Emerging Diseases

- a. Pandemic and Epidemic Preparedness

I. Local Health Systems

- a. Universal Healthcare Implementation
- b. Health Care Financing

J. ICT for Health

- a. Healthcare Resource Management
- b. Health Information Systems and Data Interoperability
- c. Syndromic Surveillance Systems
- d. Telehealth

K. Healthcare Access for Underserved Communities

- a. Indigenous Communities
- b. Rural/Urban Low-Income Communities

L. Gender and Health

M. Environmental Health

- a. Climate Change and Disaster Risk Reduction Management
- b. Indoor Air Pollution

N. Bioethics

O. Precision Medicine

- a. Genomic Bio-surveillance
- b. Production of Bio-therapeutics
- c. Cancer Genotyping

P. Food Safety

Q. Impacts of GMOs on Health

R. Evaluation of Access to HIV and TB treatment and services

III. INDUSTRY, ENERGY, AND EMERGING TECHNOLOGIES

A. Natural Fiber

- a. Abaca
- b. Bamboo
- c. Pineapple
- d. Silk
- e. Maguey

B. Green Technologies

- a. Renewable Energy
- b. Energy- and Water-efficient Infrastructures
- c. Development of Bioplastics

C. Marine Transportation

- a. Ship Building
- b. Modernization of Sea Vessels
- c. Improvement of Marine Communication
- d. Seaport Designs

D. E-Services

- a. E-Governance
- b. E-Commerce

E. Artificial Intelligence

F. Food Safety

- a. Smart Food Packaging Development
- b. Development of Safe Food Storage and Processing Plants

G. Infrastructure

- a. Water Security
 - i. Seawater Desalination
 - ii. Water Supply Industries
- b. Energy and Power
- c. Telecommunication

IV. BASIC RESEARCH

A. Social and Economic Research

- a. Poverty
- b. Corruption
- c. Crime
 - i. Human Trafficking
 - ii. Child Abuse
 - iii. Domestic Violence
 - iv. Cyber Risks and Opportunities
- d. Terrorism
- e. Social Impacts of Urbanization
- f. Poor, Marginalized and Vulnerable Sectors

B. Education

- a. Literacy and Numeracy of Children
- b. K-12 Program Assessment
- c. Inclusive Education
- d. Readiness of Learners for the 4th and 5th Industrial Revolution

C. Traditional Knowledge, Culture and Practices

- a. Traditional Healing Practices
- b. Indigenous Knowledge, Systems, and Practices (IKSPs)
 - i. Indigenous Political System
 - ii. Indigenous Arts and Literature
 - iii. Indigenous Recipes and Cuisines
 - iv. Disaster Risk Mitigation Practices of IP Communities

D. Human Capital Flight

- a. Fisheries Sector
- b. Agriculture Sector
- c. Health Sector

E. Hospitality Industry

F. Digital Voting Risks and Rewards

G. Creative Industries

- a. Development of Shell Crafts
- b. Pottery/Clay


Ms. Ma. Luisa C. Segovia, Member of the Iloilo Business Club (IBC), moved for the approval of the memorandum, seconded by Dr. Pastor Jones T. Denusta, Executive Director of WESVAARRDEC.

Certified Correct:



KEITHLYN SARAH B. BERNARDINO
Secretariat

Concurred:



ENGR. ROWEN R. GELONGA, CESO II
Regional Director, DOST VI
Chairperson, RDC-RRDIC VI