

NATIONAL RESEARCH COUNCIL OF THE PHILIPPINES

CY 2015

Major Programs and Projects Categorized in Accordance with the Five Key Results Areas Under E.O. No. 43, s. 2011

Item No.	Project Title	Brief Description/Objectives	Beneficiaries	Implementing Agency	Project Duration		Actual 2015 Budget Released	Status	KRA
					Start	End			
Biological Transformations, and Green Technology for Industrial Processes									
1	Euphorbia tithymaloides: Propagation in Mined Areas and Utilization of the Plant Extracts as Wood Preservative by Dr. Erlinda Mari	The project intends to propagate the plant species Euphorbia tithymaloides (E. tithymaloides) to revegetate and rehabilitate an abandoned mine site. The plant's extract shall then be analyzed and used in controlling wood decay organisms (termites and fungi).	Communities in mined-affected areas, LGUs policy makers, wood industry	DOST-FPRDI	01-Jun-14	30-May-17	462,200.00	Ongoing	Integrity of the environment and climate change adaptation and mitigation
2	Bioremediation Strategies for Rehabilitation of Abandoned Mine Tailing Area in Itogon, Benguet/Dr. Nelly S. Aggangan/UPLB	The project will collect rhizosphere soil and root samples of healthy plants thriving in mine tailing sites in Itogon, Benguet where, mycorrhizal fungi and nitrogen fixing bacteria will be isolated, cultivated in aseptic culture, screened for their effectiveness in promoting plant growth in mine tailing soil collected from Itogon, Benguet. The experiments will be conducted under greenhouse and field conditions with or without compost. The isolated microbes will also be screened for their heavy metals degrading capabilities. The plant growth promoting capabilities of the new isolates will be compared with those by MYCOVAM and BIO-N (with nitrogen fixing bacteria).	Foresters, Nursery Men, Farmers, Local residents/communities, private and government agencies.	UPLB BIOTECH	16-Dec-15	16-Dec-15	858,735.00	New	Integrity of the environment and climate change adaptation and mitigation
Comprehensive Studies on Lake Lanao for Sustainable Development									
3	Physical and Chemical Characterization of Lake Lanao by Dr. Carmelita G. Hansel	The conduct of this study will generate data and information on the current status of the physical and chemical properties of Lake Lanao as well as data and information on the degree of chemical and pesticide pollution in Lake Lanao.	LGUs (provincial, municipal, barangay) and local communities, Legislators and policy-makers, Scientific community	MSU-Marawi, Lanao del Sur			850,000.00	New	Integrity of the environment and climate change adaptation and mitigation

4	Lake Lanao Fishery Resource Assessment: Population Survey, Reproductive and Morphometric Characterization of Endemic and Introduced Fishes of Lake Lanao and Immediate Aquatic Environs by Dr. Sherwin S. Nacua	The output of this study would help in formulating guidelines for the management and conservation of the native fish species as well as preservation of the remaining endemic species of Lake Lanao. These results will ultimately be of concern to man's effort to conserve biodiversity in the area.	Government as well as non-government organizations interested in biodiversity conservation of Lake Lanao, lake Lanao communities	MSU-Marawi, Lanao del Sur			750,000.00	New	Integrity of the environment and climate change adaptation and mitigation
5	Socio-economic and Political Dimensions of Lake Lanao by Dr. Sukarno Tanggol	People are integral elements of the ecosystem. Sustainability of the country's environmental resources necessitates a comprehensive understanding of the interrelationship between the biophysical and anthropogenic activities. A balanced development requires a healthy and harmonious interplay between the natural and human resources involving ecology, economy, and social desirability. Carrying capacity as a concept is embedded in this framework. Balancing populations are said to be closely related to this concept where the area's resources can support the long term without significantly depleting or degrading those resources in the physical, cultural and social environments.	Local government officials and Government Agencies (DENR, BFAR, DA, DOH, DSWD, DOE, DipEd, DILG), policy-makers, researchers and development practitioners, and most especially the lakeshore residents	MSU-IIT Lanao del Norte	1-Aug-15	31-Jul-17	1,003,893.31	New	Integrity of the environment and climate change adaptation and mitigation
6	Preliminary Inventory and Diversity of Ciliated Protozoans in Lake Lanao: Its Spatial and Temporal Variations and Its Bio-indication on Lake's Water Quality by Dr. Fema M. Abamo	The baseline data on ciliate species composition, diversity, frequency, and abundance, would be vital micro-faunal component of Lake's biodiversity and taxonomic studies later. Ciliates are also cheaper alternative in toxicity bioassays and in environmental bio-indication studies since they can easily be cultured in hay infusion medium. They have shorter generation time hence studies using ciliates yield and indicate fast, reliable results. The culture collection of ciliates the proponent plans to maintain will be useful for basic instruction and laboratory exercises, and for researchers, teachers and students.	Data generated from this project will directly benefit the teachers, students, researchers, biologists, taxonomists, ecologist, microbiologist, cell and molecular biologists and scientists.	MSU-Marawi, Lanao del Sur			900,000.00	New	Integrity of the environment and climate change adaptation and mitigation

7	Endemic and Invasive Mollusks and Crustaceans: Their Impact in Lake Lanao Ecosystem by Prof. Monera Salic-Hairulla, MSU-IIT	The main purpose of this study is to assess the indigenous, endemic mollusks and crustaceans; investigate the presence of introduced exotic (invasive) species in Lake Lanao and to evaluate their abundance, productivity and distribution. Importantly the study will try to assess the impacts of the introduced species (crustaceans and mollusks) in Lake ecosystem. The study hopes to furnish basic information regarding introduced species in the lake and to provide basis for policy formulation and appropriate actions to be implemented in order to protect the endemic/indigenous species of Lake Lanao.	Meranao people living around the lake;provincial, municipal and barangay government for creating a policy how to sustain and conserve the Lake Lanao ecosystem, and the scientific community (scientists, researchers, and teachers) and students	MSU-IIT Lanao del Norte			700,000.00	New	Integrity of the environment and climate change adaptation and mitigation
8	Bacterial and Fungal Populations in Water and Surface Sediments of Lake Lanao by Dr. Beverly B. Amparado, MSU-Marawi	Knowledge about the bacterial and fungal populations as decomposers is of great ecological significance. Understanding the role of microorganisms fills the gap in the holistic approach in the study of Lake Lanao ecosystem.	The people around the Lake understand the importance of the lake and help the policy makers in conceptualizing better management of the Lake and its watershed.	MSU-Marawi, Lanao del Sur			820,000.00	New	Integrity of the environment and climate change adaptation and mitigation
ICT Impacts on Quality of Life and Equity									
9	Uses and Users of ICT: Impact on Education and Health by Dr. Irene Villasenor	The study supports the Smarter Philippines Program of DOST which aims to use ICT in urban (smarter cities) and rural (smarter countryside) communities to improve their quality of life and to ensure inclusive growth and development for the Philippines. The government has provided or will provide the necessary physical & digital ICT infrastructure to focus on the uses (social resources) and users (human resources) of ICT in the education and health sectors and ICT's impact on quality of life and equity.	LGUs and their constituents, members of the community, education and health sectors	UP Diliman	1-Jul-15	30-Jun-17	969,146.00	New	Rapid, inclusive, and sustained economic growth
Holistic Approaches for Diagnosis, Treatment, Prevention and Control of Pests and Animal Diseases Program									
10	Isolation and characterization of locally isolated Actinomycetes from rare environments for the production of secondary metabolites against Methicillin-resistant <i>Staphylococcus aureus</i> from livestock by Dr. Teofila O. Zulaybar	This project aims to isolate compounds effective against locally isolated methicillin-resistant <i>Staphylococcus aureus</i> (MRSA) isolated from carabao or cattle suffering from mastitis. This preliminary study against local MRSA isolate will be very helpful for the production of local antibiotics against MRSA for livestock.	Farmers , fresh milk producing industries and pharmaceutical industries	UPLB	16-Apr-15	15-Apr-17	790,425.90	New	Poverty reduction and empowerment of the poor and the vulnerable, Rapid and Sustained Economic Growth




11	Development of organically acceptable antiparasiticide preparations from herbal plants for the control of external parasites of chickens and livestock and gastrointestinal helminths of native chickens by Dr. Billy P. Divina	The project is about developing natural preparations from locally available herbal plants against parasites of chickens and livestock that have applications for organic animal production and suitable for individual and mass treatment.	The beneficiaries will be animal raisers especially smallhold farmers and organic animal producers, veterinary practitioners, entrepreneurs and researchers involved in herbal medicines.	UPLB	16-Apr-15	15-Apr-17	1,101,500.27	New	Poverty reduction and empowerment of the poor and the vulnerable, Rapid and Sustained Economic Growth
12	Production of Polyvalent Vaccine Against Economically Important Bacterial Diseases of Cattle by Dr. Helen A. Molina	The project will develop a four- in-one bacterial vaccine for ruminants that will be locally available commercially.	Livestock growers/ farmers, local government units (LGUs), academe, regional agricultural offices, BAI.	UPLB	16-Apr-15	15-Apr-17	1,121,381.62	New	Poverty reduction and empowerment of the poor and the vulnerable
Establishment, Dissemination, and Impact Assessment of an AKBAY Technology Package (ATP) for Poverty Alleviation and Inclusive Development Program									
13	Addressing Rural Energy and Soil Degradation Problems Through the Production and Application of Biochars by Dr. Gina V. Pangga	Biochars have been attracting interest due to its possible potential as soil amendments at the same time maintaining the integrity of the environment. Summarizing, there are two pillars of biochar properties, the nutrient affinity and persistence. Nutrient affinity means that all organic matter added to soil significantly improves various soil functions (i.e. retention of several essential nutrients to plant growth). The second pillar of biochar properties which is persistence means that biochar is more persistent than any other form of organic matter being applied in the soil. Hence, biochar has a longer term effect with its benefits in the retention of nutrients and soil fertility as against to other nutrient strategies. In addition to that, biochar can also be used for mitigating climate change as a potential sink of carbon dioxide from the atmosphere (Lehmann, 2007).	Households, agriculture sector, fertilizer manufacturer industry and animal industry	UPLB	1-Jun-15	31-May-17	992,868.79	New	Poverty reduction and empowerment of the poor and the vulnerable, and Integrity of the environment and climate change adaptation and mitigation

14	Documentation and Assessment of Organic Rice Farming in Selected Indigenous Communities in the Philippines: Focus on Women's Knowledge and Practice by Dr. Helen Dayo	Consideration of gender and the need to understand the elements of organic agriculture practices in indigenous communities is a fundamental component of the research. The efforts of many organic movements worldwide has led to setting up of international standards by which certification organizations may evaluate agricultural products as organic, following a set of standards defined therein. The purpose of the study is to identify a set of basic elements that will characterize traditional farming practices of the indigenous groups to be studied. These elements will be specified, in accordance with the official definition of organic agriculture under the Organic Agriculture Act of the Philippines and from other international organic agriculture movements.	Indigenous communities, policy makers	UPLB			1,018,386.21	New	Poverty reduction and empowerment of the poor and the vulnerable
Education Models for Inclusive Development and Innovation towards Social Transformation									
15	Development of a Pedagogy Model for Poor Students by Dr. Wilma S. Reyes	The project intends to develop pedagogies for the poor grounded on Freire's education empowerment model. Engaging teachers into practice of critically reflecting on what strategies worked & what did not work with students from poor families will provide experiences & will eventually be translated into pedagogies of teaching & be bases for development of materials that would fit the learning needs of poor students.	Poor education students in the country, their families involved in the study, faculty of PNU, curriculum experts and other stakeholders.	PNU	1-Sep-15	28-Feb-15	852,786.90	New	Poverty reduction and empowerment of the poor and the vulnerable,
16	Development and Validation of Word Lists for the Top 7 Languages used in the K-3 Curriculum by Dr. Heidei B. Macahilig	Readability describes how easy a document can be read and understood. Readability statistics does not only provide information about the level of difficulty of particular documents but it also helps in guiding writers to ensure that their target audience will understand their writing.	DepEd, educational leaders, curriculum planners, primary school teachers & reading specialists, instructional material writers, and publishers.	PNU	1-Sep-15	28-Feb-16	790,489.40	New	Poverty reduction and empowerment of the poor and the vulnerable,

17	Creating Wealth: The Role of the University in Enterprise Development and Innovation by Dr. Rowena DT. Baconguis	The project seeks to document extension activities of 5 government universities in Region IV-A, namely: Cavite State University, University of the Philippines Los Baños, Batangas State University, University of Rizal System, and South Luzon State University in Quezon, representing various provinces of CALABARZON, that supported the development of enterprises. It seeks to evaluate the challenges and constraints faced by the extension system of universities in supporting the development of various enterprises in the past 10 years by documenting university activities related to entrepreneurship.	The university and community members.	UPLB	1-Sep-15	30-Aug-16	529,686.90	New	Poverty reduction and empowerment of the poor and the vulnerable,
18	Cultural Metaphors of Poverty, Innovation and Development by Dr. Zenaida Q. Reyes, PNU	The study posits that poverty is a state of the mind. To prove this, the study plans to look into the mindsets, ideas, and concepts of the poorer sector of the economy about poverty and development. Mindsets will be explored through mindsets of the poor.	Policy makers, teachers and educational leaders, students, poorer sector of society	PNU	1-Sep-15	30-Aug-16	497,750.00	New	Integrity of the environment and climate change adaptation and mitigation
Nanomaterials for Biology, industry and Research Applications									
19	ZnO/Laser-Scribed Graphene (LSG) Nanostructures as Flexible Photoelectrodes for Dye-Sensitized Solar Cells (DSSC)/Ilan Jasper A. Agulo/	The idea is to use a cost-effective method of fabricating ZnO oxide nanostructures deposited on laser-scribed graphene (LSG). ZnO is deposited via chemical vapor deposition, while graphene is synthesized via laser-scribing using a commercially available LightScribe DVD writer. The resulting ZnO/LSG nanostructure is then evaluated for its potential use as a photoelectrode for dye-sensitized solar cells (DSSC).	Undergraduate BS Physics students', UP Baguio and Community, Researchers	University of the Philippines Baguio	7-Sep-15	6-Sep-16	630,736.00	New	Rapid and Sustained Economic Growth
20	Investigation on Crystal Defects of Carbothermally Grown Zinc Oxide Nanostructure by Dr. Roland V. Sarmago	Zinc Oxide (ZnO) nanostructures are extensively studied due to its unique electrical and optical properties with application on optoelectronics like lasers, light emitting diodes (LED) and UV scintillators. Research on fast, low-cost and effective synthesis of ZnO nanostructures must be employed. Carbothermal reduction method are proven to be simple and effective deposition method of ZnO crystal, but due to non-equilibrium environment during this method, the grown crystal are prone to crystal defects such as planar dislocations, defects and lattice mismatch which affects directly the optical quality of the grown crystals.		UP Diliman	16-Jun-17	15-Jun-15	532,770.00	New	Rapid and Sustained Economic Growth

21	Comprehensive Extraction of Uranium, REE and Other Valuable Resources from Wet Phosphoric Acid by Dr. Rolando Reyes	The overall project scope and objective is to extract uranium, rare earth metal elements and other valuable resources from the Philippine Phosphate Fertilizer Corporation (Philphos) wet phosphoric acid fertilizer plant. Specificall it aims to: 1) characterize the feed ore, process solids, and liquids of a fertilizer plant at various stages applying core nuclear techniques for optimization and maximum recovery, 2) to determine uranium, thorium, rare earth, and other valuable elements from wet phosphoric acid using analytical equipment such as ICP-MS, XRF and Flourimeter; and 3) to develop an optimal process of recovering uranium, thorium, rare earth, and other valuable elements from wet phosphoric acid on a laboratory scale.	Fertilizer, mining and mineral and extractive industries,	DOST-PNRI	3-Nov-14	2-Nov-16	721,444.00	Ongoing	Rapid and Sustained Economic Growth
Comprehensive Program on Innovation and National Competitiveness: Filipinnovation Through the Performing Arts, Literature, and the Visual Arts /									
22	"Resilient Music at the Margins: Traditionl Music of Mindanao, Sulu, and Palawan" by Dr. Jose S. Buenconsejo, Dean, College of Music, UP, Diliman, Quezon City	The project invests in knowing and remembering one's heritage and using this as a resource for representing and constructing a Filipino identity.	The ordinary musicians from various walks of life, the UP College of Music.	UP Dlliman	16-Dec-15	15-Dec-20	1,246,436.90	New	
23	Policy Forum, RDMD & FAD	The project aims to formulate policies from the generated results of research undertakings for recommendation to policy makers in order to bring improvement to the <u>sector concerned</u> .	Policy makers, researchers, scientists, academe, S&T community	NRCP	1-Jan-13	31-Dec-17	431,231.00	Ongoing	Rapid and Sustained Economic Growth
24	Support to Quality Project Management (Monitoring & Evaluation), RDMD	To measure changes from baseline conditions to desired output and outcome. It focuses on the measurement of the output of processes, activities and input. Monitoring serves to alert the Project Management Office to problems in performance, provides option for connective actions, and helps demonstrate accountability	The NRCP, the government, the taxpayers, the general public	NRCP Secretariat	1-Jan-13	31-Dec-17	612,266.00	Ongoing	Rapid and Sustained Economic Growth

Legend:

	Beneficiaries
	Project Status
	Pinoy Key Result Area