

Department of Science and Technology - Philippine Council for Industry, Energy and Emerging Technology Research and Development (DOST - PCIEERD)

Physical Report of Accomplishments (as of 4th Quarter, FY 2018)

Program: National Industry, Energy and Emerging Technology Sectors R&D Program

Organizational Outcome: Increased benefits to Filipinos from scientific knowledge and technological innovations for productivity and competitiveness

| Output/Outcome Indicators | Targets | Accomplishments | Remarks |
|--|----------------|------------------------|---|
| Output Indicators | | | |
| Number of projects funded | 100 | 232 | The figure includes DOST and PCIEERD funded projects. PCIEERD – GIA – 177 DOST – GIA - 55 |
| Number of projects monitored | 330 | 297 | The accomplishment consists of projects handled by the Council with progress and financial reports submitted by the Implementing Agencies or with field evaluation report prepared by the Project Managers. |
| Percentage of projects completed which are published in peer-reviewed journals, presented in national and/or international conferences, or with IP filed or approved | 50% | 56% | Out of 307 completed projects from 2014 – 2017 there were 150 projects with publication in peer-reviewed journals, presented in national and/or international conferences, or with IP filed or approved technologies. |

| Output/Outcome Indicators | Targets | Accomplishments | Remarks |
|---|---------|-----------------|---|
| Outcome Indicators | | | |
| Percentage of priorities in the Harmonized National R&D agenda (HNRDA) addressed | 90% | 100% | All priorities of the Council under HNRDA have new/ongoing projects. |
| Number of partnerships with public and private stakeholders and international organizations | 20 | 98 | The figure comprise of 53 Higher Education Institutions (HEIs) and 45 local and international public and private companies and organizations. |

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**List of Funded Projects
(January – December 2018)**

| | Project Title | Implementing Agency |
|--|---|--|
| PCIEERD-GIA Projects | | |
| 1 | Geopolymerization and its Potential Application in Artisanal Gold Mine Tailings | Central Mindanao University (CMU) |
| 2 | Establishment of Common Service Facility (CSF) for Artisanal Small-Scale Gold Mining in Northern Mindanao | Mindanao State University -Iligan Institute of Technology (MSU-IIT) |
| 3 | Sustainable Wastewater Treatment Systems with Nutrient (SWAN) Recovery | De La Salle University (DLSU) |
| 4 | Development of Data Analytics-Ready Info Unified System (DARIUS) for Agile Delivery of Regional Services | DOST IV - A |
| 5 | Binary Gels- Rheology of Two-Component Biopolymer Hydrogels Investigated using Optical Tweezers and Non-Linear Rheometry | University of San Carlos (USC) |
| 6 | Improvement of Food Security on Poultry Products by Upgrading Farm Yield and Efficiency through the Introduction of Highly Tailored Farm-Specific Improvements | Farmwatch Solutions, Inc. |
| 7 | Development of an Enhanced Radio Frequency Mesh Network to Track and Monitor Boats at Sea Using Fume Transponder | Futuristic Aviation and Maritime Enterprise, Inc. |
| 8 | Human Resource Development Program (Financial Grants to: Visiting Professorship and Sandwich Programs, Attendance to Conferences, and the like related to the sectors of the Council) | Philippine Council for Industry, Energy and Emerging Technology Research and Development (PCIEERD) |
| 9 | Improvement of Gong Fabrication Processes Through S&T Intervention at Mankayan, Benguet | DOST Region CAR and Metals Industry Research and Development Center (MIRDC) |
| 10 | Package Development of Bakery Product and Field Testing of Ready-To-Eat (RTE) Smoked Fish Rice Meal and Sweet Potato as Disaster/Relief Food-Phase 2 | Industrial Technology Development Institute (ITDI) |
| 11 | Standards and Testing Automated Modular Platform (STAMP) | UP Diliman |
| 12 | Characterization of Tailings and Monitoring of the Integrated Gold-Copper Mineral Processing Pilot Plant in Benguet | DOST Region CAR |
| <i>Processing of Bio-based Polyols and Polyurethanes for Industrial Applications</i> | | |
| 13 | Project 1. Production of Bio-Based Polyols from Lignocellulosic Biomass | Mindanao State University -Iligan Institute of Technology (MSU-IIT) |
| 14 | Project 2. Development of Polyurethane -Based Packing Materials and Anti-Corrosive Coatings from Vegetable Oils | Mindanao State University -Iligan Institute of Technology (MSU-IIT) |
| 15 | Characterization and Separation of Heavy Minerals in the Alluvial and Beach Sands in San Vicente, Northwestern Palawan: Phase 1 | Philippine Nuclear Research Institute (PNRI) |
| 16 | Design and Development of an Automated Multi Commodity Heat Pump Dryer | Adventist University of the Philippines (AUP) |
| 17 | Techno-Economic Feasibility Study of Micro-Grid in A Remote Community | Mindanao State University -Iligan Institute of Technology (MSU-IIT) |

| | Project Title | Implementing Agency |
|----|--|---|
| 18 | Development of Philippine Structural Integrity Monitoring System for Critical Infrastructure in Metro Manila -Phase 1 | Mapua Institute of Technology (MIT) |
| | <i>Development of a Fixed-Wing Short Take Off and Landing(STOL) Unmanned Aerial Vehicle (UAV) With Cooperative Capability for DRRM</i> | |
| 19 | Project 1. Design and Fabrication of an Airframe for Medium-Range, Short Take-off and Landing UAV | FEATI University |
| 20 | Project 2. Development of a Flight Controller for A Modular UAV | De La Salle University (DLSU) |
| 21 | Project 3. Cooperative UAV-UGV Missions and Applications with Custom Communications and Imaging Capabilities | Ateneo de Manila University (ADMU) |
| | <i>High Throughput Processing of Functional Thin Films using Gaseous Discharges</i> | |
| 22 | Project 1. Development of Direct Current (DC) Plasma System for Ti-Al-C Thin Film Synthesis | Ateneo De Manila University (ADMU) |
| 23 | Project 2. Development of Radio Frequency (RF) Plasma System for Ti-Al-N Thin Film Synthesis | UP Diliman |
| 24 | Ionic Liquid Assisted Electrospinning of Conductive Nanofibers as Solid Polymer Electrolyte/Separator Membrane of Solid State Supercapacitor | UP Diliman |
| 25 | Generalized Automated Microfluids And Micro-Actuator Assembly (GAMMA) | UP Diliman |
| 26 | Filipinnovation Entrepreneurship Corps: Enabling Researchers to Assess Commercial and Societal Value of their Research | De La Salle University (DLSU) |
| 27 | Development and Social Media Reading Tool for Filipinos | Senti Techlabs Inc. |
| 28 | Beta Testing of Biotechnology Kits for Stem Education | Kinovette Scientific Solutions Co. |
| 29 | Design and Development of a PLC-based High Capacity Tissue Culture Growth Chamber | Cavite State University (CavSU) |
| 30 | BCDA | |
| 31 | Young Innovators Program (YIP) | Multi-Agency |
| 32 | Design, Prototyping of Salt Processing Equipment (Washer, Dryer, Iodizer, Crystallizing Pan, Furnace, Concentrator (Ion -Exchange Membrane) | Industrial Technology Development Institute (ITDI) |
| 33 | Performance Evaluation of Dipstick Assay Format for Detection of Salmonellae in Selected Food Matrices | UP Los Baños |
| 34 | Optimization of Ready-to-Drink Sweet Potato Leaf Extract (SPLE) Beverages through the UP-DOST Food Innovation Facility | UP Diliman |
| 35 | Cyber-Physical Transportation System | UP Diliman |
| 36 | Modification of Road Train Energy Storage System using Lithium Ion Battery | Metals Industry Research and Development Center (MIRDC) |
| 37 | Recycling and Recyclability Index for End-Of-Life Jeepneys | University of Asia and the Pacific |
| 38 | Development of a HFDR Ship Tracking Algorithm Software for Maritime Surveillance, Search and Rescue | Mapua Institute of Technology (MIT) |
| 39 | Ultrafast Mbe-Grown Terahertz Photoconductive Antenna Devices | UP Diliman |
| 40 | Development of a Passive Neutron Spectrometry System (PNSS) | Philippine Nuclear Research Institute (PNRI) |
| 41 | Uncooled Carbon Nanotube Microbolometers | UP Baguio |
| | <i>Smart Plant Production in Controlled Environments (SPICE)</i> | |

| | Project Title | Implementing Agency |
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| 42 | Project 1. Standalone Urban Farm | UP Diliman |
| 43 | Project 2. Sensor-Based Monitoring and Analytics for Smart Hydroponics (SMASH) | UP Diliman |
| 44 | Project 3. Establishment of Soilless Culture Technology for Urban Food Production) | UP Diliman |
| 45 | Project 4. Ex-Situ Conservation through Micropropagation Cryopreservation of Native Plant Species | UP Diliman |
| 46 | Embedding of Functional Materials onto Paper for Antimicrobial and Electromagnetic Shielding Applications | UP Los Baños |
| 47 | Pulp-To-Print: Development of Print-Ready Cellulose Composites from Paper Mulberry | UP Diliman |
| 48 | Angular Goos-Hanchen Shift: An Optical Phenomena for Ultra-Thin Film Thickness Measurement | UP Diliman |
| 49 | Development of a Raman Microscopy and Spectroscopy (RMS) Setup | UP Diliman |
| 50 | Fringe-Area Data Access by Transient Altitude Provision | De La Salle University (DLSU) |
| 51 | One Click: Android/Web-based Student Response and Understanding Visualizer | Mapua Institute of Technology (MIT) |
| 52 | Fabrication of Metal Oxide Thin Films for Optical Coatings with Plasma Assisted Deposition using a Plasma Enhanced Chemical Vapor Deposition (PECVD) System | Ateneo De Manila University (ADMU) |
| 53 | Flood Risk Assessment for Mitigation and Effective Response (FRAMER) of Riverine Towns in Selected River Basins in Cavite, Batangas and Quezon Provinces using Most Recent Lidar DEM | Mapua Institute of Technology (MIT) |
| 54 | Original Content Development Project | Toon City Academy |
| 55 | Development of Data Analytics, Big Data, and Artificial Intelligence to Build a Smart Restaurant Management Platform | Restograph Inc. |
| 56 | Production of Nanocellulose Crystals: Powder, Advanced and Derivative Products for Various Industry Applications | Nanotronics Inc. |
| 57 | Development of an Alternative Credit Scoring Model Applying Machine Learning in Financing Farmers | Cropital Enterprises Corporation |
| 58 | Capability Building on Energy Efficiency and Conservation (EE&C) for State Universities and Colleges of Six (6) Regions as Demonstration Sites | Industrial Technology Development Institute (ITDI) |
| | <i>Infrastructure Development Program (IDP)</i> | |
| 59 | Establishment of an Additive Manufacturing Research Laboratory | Bataan Peninsula State University |
| 60 | Establishment of A Wind Turbine Development and Testing Laboratory | Central Philippine University |
| 61 | Establishment of A Plasma Physics Laboratory for Materials Processing Applications | UP Baguio |
| 62 | Establishment of the University of San Carlos Center for Advanced Computational Modelling and Simulation (CACOMS) | University of San Carlos Center (USC) |
| 63 | Strategic Communication Approaches to Boost the Philippine Nuclear Research Institute (PNRI) Promotions | Philippine Nuclear Research Institute (PNRI) |
| 64 | DIWATA-2 Interactive Exhibit | Bonifacio Art Foundation, Inc. |
| | <i>Wastewater Treatment System Upgrading Program (WATSUP)</i> | |

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| 65 | Enhancing the Applicability of the Vertical Helophyte Filter Systems for Small Communities, Local MSMEs and Public Entities | DOST Region XI/University of the Immaculate Concepcion |
| 66 | Pilot Scale Production of Nickel Pig Iron from Low Grade Laterite Ore | Department of Environment and Natural Resources - Mines and Geosciences Bureau (DENR - MGB) |
| | <i>SCALE: Synergistic Capacity Advancement in the Management of Laguna Lake</i> | |
| 67 | Endocrine Disruptors, Antibiotics and Heavy Metals in Laguna Lake Water: Impacts on Food and Water Security | UP Diliman |
| 68 | Microbial Source Tracking in Selected Tributaries of Laguna de Bay | UP Diliman |
| 69 | Trace Organics and Metals in Commodity Fish: Method Optimization, Extent of Contamination and Health Risk due to Fish Intake | UP Diliman |
| 70 | Field-testing of the Integrated Gold-Copper Mineral Processing Pilot Plat in the Regions (Bicol) | DOST Region V/UP Diliman |
| 71 | Field-testing of the Integrated Gold-Copper Mineral Processing Pilot Plat in the Regions (Caraga) | DOST Region XIII/UP Diliman |
| 72 | Field-testing of the Integrated Gold-Copper Mineral Processing Pilot Plat in the Regions (Compostela Valley) | DOST Region XI/UP Diliman |
| 73 | How Do We Feed One Hundred Million IEMACHINEERING Systems for Food Security | UP Industrial Engineering Alumni Association Inc. |
| 74 | Establishment of the Asian Institute of Management-Dado Banatao Incubator | Asian Institute of Management, Inc. |
| 75 | Smart Vision: Artificial Intelligence-Guided Vision System for the Blind | Grayscale Marketing Consultancy |
| 76 | Assessment of DOST Technology Business Incubators and Road Mapping | TT12 Technology Forum Inc. |
| 77 | Design and Development of Processing Machineries for Honeybee and Intermediate Products | Don Mariano Marcos Memorial State University |
| | <i>Assessment of Metal Content of Food and Water Resources in Volcanic Impacted Areas</i> | |
| 78 | Project 2. Metal Content of Water Supplies in Volcanic Impacted Area and its Impact to Vegetations | Industrial Technology Development Institute (ITDI) |
| 79 | Project 3. Household and Community Based Filters for Metals in Water | Industrial Technology Development Institute (ITDI) |
| 80 | Support to the Rehabilitation of Boracay Island through the Upgrading of Material Recovery Facilities (MRFS) | DOST Region VI |
| | <i>Natural Dyes and Colorants R&D Program</i> | |
| 81 | Project 2. Development of Natural Colorants for Cosmetics | Industrial Technology Development Institute (ITDI) |
| 82 | Project 3. Extraction, Characterization, and Application of Natural Colorants in Nutritional Food Products | Food and Nutrition Research Institute (FNRI) |
| 83 | Project 4. Natural Food Colors from Local Sources as Food Additive | Industrial Technology Development Institute (ITDI) |
| 84 | Fire Check: Urban Fire Hazard Mapping and Fire Spread Modelling | UP Cebu |
| 85 | Specific Earthquake Ground-Motion to Help Enhance the Seismic Resiliency of Residential and Medium-to-High Rise Buildings in Metro Cebu and Metro Davao | Philippine Institute of Volcanology and Seismology (PHIVOLCS) |
| 86 | Development of Earthquake Intensity Monitoring System | Mapua Institute of Technology (MIT) |

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| 87 | Development of a Low-Energy Ion Source for the Synthesis of Diamond-Like Carbon Films | UP Diliman |
| 88 | Mobile Application Venture Capital Competition | DOST Region VII |
| 89 | Financial Assistance for the Conduct Of 44th FNRI Seminar Series | Food and Nutrition Research Institute (FNRI) |
| 90 | Extraction of Radionuclides, Rare Earths and other Valuable Industrial Elements from Phosphogypsum Tailings | Philippine Nuclear Research Institute (PNRI) |
| | <i>3R Approach to Sustainable Management of Nickel Laterite Ore Tailings: Reuse, Recycling and Reprocessing for Environmental Remediation and Material Valorization</i> | |
| 91 | Project 1. Utilization of Nickel Laterite Ore Rock (Low Grade) for Various Application: Acid Mine Drainage Treatment and Carbon Sequestration | De La Salle University (DLSU) |
| 92 | Project 2. Recycling and Reprocessing of Siltation Sediments from Selected Nickel Laterite Mining Areas in the Philippines as Raw Materials for the Synthesis of Iron- Based Novel Adsorbents | Central Mindanao University |
| 93 | Project 3. Recovery of Nanominerals from Silt for Various Ceramic Applications | Mindanao State University - Iligan Institute of Technology (MSU-IIT) |
| 94 | Project 4. Recycling of Silt and Spent Residue from Reprocessing as Raw Materials for Geopolymer | De La Salle University |
| 95 | Comparison of Different Enzyme Preparations for Productions of Oligofructose and Inulin from Sugarcane Juice | Cavite State University |
| 96 | Design and Development of UP Bike Share System | UP Diliman |
| 97 | Development of Information Gathering and Utilization Systems using Small Unmanned Airborne Vehicles (UAVs) for Disaster Risk Assessment, Monitoring and Response | Philippine Institute of Volcanology and Seismology (PHIVOLCS) |
| 98 | Fabrication of Highly C- Axis Oriented YBCO Superconducting Thin Films by Sedimentation Deposition | UP Diliman |
| | <i>μC-IC: Design of Microcontroller Integrated with Energy Harvesting and Power Management</i> | |
| 99 | Project 1. Development of Microprocessor for Wireless Sensor Network Applications | Mindanao State University - Iligan Institute of Technology (MSU-IIT) |
| 100 | Project 2. Power Management Unit Using Low Drop-Out Regulator and Switched Capacitor DC-DC Converters | Mindanao State University - Iligan Institute of Technology (MSU-IIT) |
| 101 | Project 3. Design of Indoor Light Energy Harvesting for Wireless Sensor Network Applications | Mindanao State University- Iligan Institute of Technology (MSU-IIT) |
| 102 | Up-Scaled Solution-Phase Synthesis of Metal Nanowires and its Application in Transparent Metal Nanowire Touch Panel | UP Diliman |
| | <i>Geo-SAFER Mindanao: Geo-informatics for the Systematic Assessment of Flood Effects and Risks for a Resilient Mindanao</i> | |
| 103 | Project 1. Geo-Safer Zambasulta: Systematic Assessment of Flood Effects and Risks in the Zamboanga Peninsula, Mindanao Philippines | Ateneo De Zamboanga University |
| 104 | Project 2. Geo-Safer Northern Mindanao/Cotabato: Systematic Assessment of Flood Effects and Risks in Northern Mindanao ad Cotabato, Philippines | Central Mindanao University |
| 105 | Project 3. Geo-Safer Agusan: Systematic Assessment of Flood Effects and Risks in the Agusan River Basin, Caraga Region, Mindanao, Philippines | Caraga State University |

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| 106 | Project 4. Geo-Safer Western Mindanao: Systematic Assessment of Flood Effects and Risks in the Western Mindanao, Mindanao Philippines | Mindanao State University - Iligan Institute of Technology (MSU-IIT) |
| 107 | Project 5. Geo-Safer Southeastern Mindanao: Systematic Assessment of Flood Effects and Risks in the Southeastern Mindanao, Philippines | UP Mindanao |
| 108 | Support to Regional Consortia | DOST Regional Offices and Member Universities |
| 109 | Polyhydroxyalkanoate (PHA) Production from Agricultural Residues | UP Los Baños |
| 110 | Development of Freeze-Dried Local Alternative Flavors for Ice Cream | Benguet State University |
| | <i>Assessment of Metal Content in Agricultural Products and Its Environment in Volcanic Impacted Areas</i> | |
| 111 | Project 1. Onelab Capability Assurance System for Metal Content Assessment in Agricultural Produce Water and Environmental Samples | Industrial Technology Development Institute (ITDI) |
| 112 | RCUK: Water - Energy - Nutrient Nexus in the Cities of the Future | De La Salle University |
| 113 | Development of Groundwater Resource Management Plan and Monitoring System for Zamboanga City and its Surrounding Areas | Ateneo de Manila University (ADMU) |
| 114 | Electrochemical and Quantum Mechanical Investigation of Various Small Molecule Organic Compounds as Corrosion Inhibitors in Mild Steel | De La Salle University (DLSU) |
| 115 | Establishment of the Technology Management System of the University of the Philippines Cebu | UP Cebu |
| 116 | Higher Education Institution Readiness for Innovation & Technopreneurship (HEIRIT) Development Program for Starting TBI's | UP Diliman |
| 117 | Enhancement of K-12 Grading System towards Intelligent Computing Environment through Wela School Innovation (Responsive Monitoring System for Educational Institution) | Wela Online Corp |
| 118 | Support for Information Dissemination Program | Multi Agency |
| 119 | Detection of Adulteration in Philippine Honey using Carbon-13 Isotope Analysis | Philippine Nuclear Research Institute (PNRI) |
| 120 | Development, Standardization, and Characterization Studies of Tupig, Bukayo, and Bibingka - Region 1 Native Delicacies | Pangasinan State University |
| 121 | Pilot-Scale Production of Spray-Dried Powder Dextran and High Fructose Syrup using Whole Cell (<i>Leuconostoc mesenteroides</i> isolates) ITDI Fermentation Technology | Industrial Technology Development Institute |
| 122 | Impact Assessment of Department of Science and Technology's Small Enterprise Technology Upgrading Program | Development Academy of the Philippines |
| 123 | Facility for Nanotechnology R&D in Central Luzon University | Central Luzon University |
| 124 | Development of Food Reference Materials for Nutrition Labeling for Use of Local Testing Laboratories Phase 2: Establishment of ISO 17034:2016 Quality Management System and Development of Fish Reference Materials for Proximate, Minerals and Cholesterol Analyses | Food and Nutrition Research Institute |

| | Project Title | Implementing Agency |
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| 125 | Field-Testing of the Integrated Gold-Copper Mineral Processing Pilot Plant in the Regions (Caraga) | UP Diliman |
| 126 | Field-Testing of the Integrated Gold-Copper Mineral Processing Pilot Plant in the Regions (Bicol) | UP Diliman |
| 127 | Field-Testing of the Integrated Gold-Copper Mineral Processing Pilot Plant in the Regions (Compostela Valley) | UP Diliman |
| 128 | Titan: Vision -Based Traffic Information & Analysis | De La Salle University (DLSU) |
| | <i>Geospatial Monitoring System for High Value Projects</i> | |
| 129 | Project 1. Geospatial Monitoring System for National Greening Program (NGP) | UP Diliman |
| 130 | Project 2. Geospatial Monitoring System for National and Communal Irrigation Systems (NCIS) | UP Diliman |
| 131 | Development of Error Resilient Joint Source-Channel Wireless Video Transmission System for High Efficiency Video Coding (HEVC) Standards Implemented in Field Programmable Gate Array (FPGA) | University of Santo Tomas |
| 132 | BRAVE: Bomb Removal Automated Vehicle | De La Salle University |
| 133 | Pilot Implementation of ITDI's Pre-Commercialization Tools/ Strategies for Effective Transfer and Commercialization of Generated Technologies and Intellectual Properties | Industrial Technology Development Institute |
| 134 | Charm - Charging in Minutes Spinoff Project - Technology Development for Manufacturability and Open Water Market Validation | UP Diliman |
| 135 | Product and Market Validation for A Semi-Automated Reef Fish Census System | UP Diliman |
| 136 | Catch-All: Vision-Based Artificial Intelligence Analytics Software Development for Traffic and Transport Applications | De La Salle University |
| 137 | Technology and Market Validation of Universal Structural Health Evaluation and Recording (USHER) System | Mapua Institute of Technology |
| 138 | Integration of Data Science and Scaling Up of Payruler, A Comprehensive Human Resource Management System (HRMS) | Genii Hut Technologies Corporation |
| | Natural Dyes and Colorants R&D Program | |
| 139 | Project 1. Commercial Scale Verification of Natural Dyes for Textiles | Philippine Textile Research Institute (PTRI) |
| 140 | Research and Development Project to Rehabilitate and Enhance Productivity in Lahar and Ash-Laden Areas in Central Luzon | Central Luzon State University (CLSU) |
| 141 | Collagen and Gelatin from By-products of Fish Processing Industry | Central Luzon State University (CLSU) |
| 142 | Fish Oil, Protease and Protein Hydrolysates from by-products of Fish Processing | Central Luzon State University (CLSU) |
| 143 | Catfish: A Modular Mini-Autonomous Underwater Vehicle (AUV) System | UP Diliman |
| 144 | Mapping of offshore active faults for resilient coasts | UP Diliman |
| 145 | Philippine Groundwater Outlook (PhiGO) | Ateneo De Manila University ¹ |
| 146 | Optical trap-mediated interaction between cancer cells and elucidated compounds from vegetable extracts in PEMF (Pulsed Electromagnetic Field) Background Energy | De La Salle University |

| | Project Title | Implementing Agency |
|-----|---|---|
| 147 | Enhancing Man-Machine Interaction through Intelligent Conversational Agents | De La Salle University |
| 148 | Enhancing Operational Capability of Bicol University Fabrication Laboratory | Bicol University |
| 149 | Development of Chitosan Film from Sardine Fish Scales | Western Mindanao State University (WMSU) |
| 150 | Development of Bottom Housing System for Abalone Farming | Western Philippines University (WPU) |
| 151 | Technology Promotion of Five-Coach Hybrid Electric Road Train (HERT) in General Santos City | Metals Industry Research and Development Center (MIRDC) |
| 152 | Quantitative Lahar Impact and Loss Assessment under Changing Land Use and Climate Scenarios | Philippine Institute of Volcanology and Seismology (PHIVOLCS) |
| 153 | Catchment Susceptibility to Hydrometeorological Events: Sediment Flux and Geomorphic Change as Drivers of Flood Risk in the Philippines | UP Diliman |
| 154 | Marine Transportation Information System (MARIS) | UP Diliman |
| 155 | Impact: Assistance in the Commercialization of DOST Funded Technologies in Caraga State University | Caraga State University |
| 156 | Fastrac: Commercial Development of Production, Application and Full Market Study of Monascus Red Colorant | UP Los Banos |
| 157 | Impact: Enhancement of Mapua's Technology Transfer Process and Structure | Mapua Institute of Technology |
| 158 | Impact: Assistance in the Commercialization of DOST Funded Technologies in De La Salle University | De La Salle University |
| 159 | Filipinnovation Entrepreneurship Corps (FEC) 2: Enabling Researchers to Assess Commercial and Societal Value of their Research | De La Salle University |
| 160 | DOST- FNRI Technology Marketing Package for Juan and Juana | Food and Nutrition Research Institute (FNRI) |
| 161 | Production of Ready-to-Buy (RTB) Natural Textiles and Dyes in Support of Increasing Utilization of Local and Indigenous Philippine Textile | Philippine Textile Research Institute (PTRI) |
| | <i>Upgrading the PNS for Virgin Coconut Oil (VCO) and the Philippine VCO Industry</i> | |
| 162 | Project 2. Investigation of the Microbiological Factors which Affect the Quality of VCO | Ateneo De Manila University (ADMU) |
| 163 | Project 4. Assessment of VCO Production: GMP and HACCP | Ateneo De Manila University (ADMU) |
| 164 | Project 5. Water Activity and Percent Moisture: Effect on VCO Stability | Ateneo De Manila University (ADMU) |
| 165 | Development and Application of Isotope- Based Methodologies for Authenticity Testing of Major Condiments (Vinegar, Soy Sauce and Catsup) in the Philippines | Philippine Nuclear Research Institute (PNRI) |
| 166 | Engineering the Public Utility Vehicle (PUV) Using an OEM Vehicle Platform | UP Diliman |
| 167 | Regional Disaster Science and Management S&T Capacity Development (Phase III) | Mariano Marcos State University (MMSU) |
| 168 | Metro Manila Transportation Network: Big Data Analytics and Applications (MMTN:BDAA) | De La Salle University (DLSU) |

| | Project Title | Implementing Agency |
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| 169 | Liquefaction Hazard Assessment for Resilient Schools in GMMA: A Liquefaction Probabilistic Model using Non-Invasive Geophysical Techniques and Limited Probe Hole | Philippine Institute of Volcanology and Seismology (PHIVOLCS) |
| 170 | Automated Real - Time Monitoring System for Magat Dam | Mapua Institute of Technology (MIT)/ Malayan Colleges, Inc. |
| 171 | Establishing an Environment-Friendly Chromium Plating Process using New Generation Ionic Liquids | UP Diliman |
| 172 | Remote Sensing and Data Science: DATOS Help Desk | Advanced Science and Technology Institute (ASTI) |
| 173 | Geospatial Assessment and Modelling of Urban Heat Islands in Philippine Cities (GUHEAT) | UP Diliman |
| 174 | Enhancement, Field Validation and Market Readiness of DNA-Based Nanobiosensor for the Detection of <i>E.Coli</i> , <i>E. Coli 0157:H7</i> and <i>Salmonella Enterica</i> in Food, Feed and Farm Produce | UP Los Baños |
| 175 | Innovation and Technopreneurship Hub (ITECH) | Caraga State University |
| 176 | FASTRAC: Product Testing and Market Validation of Marine Nanocoat for Anticorrosion, Antibarnacle, AntiUV Coating for Ship Vessel Applications | De La Salle University (DLSU) |
| 177 | Rurok Bikes: Variable Geometry and Efficient Suspension Pedaling Platform | Rurok Industries, Inc. |
| DOST-GIA Projects | | |
| <i>Electronics Product Development Center (EPDC) as Platform for Innovation and Collaboration (EPIC) Program</i> | | |
| 178 | Project 1. Electronics Product Development Center Upgrade and Operation | Electronic Industries Association of the Philippines, Inc. (EIAPI) |
| 179 | Project 2. Electronics Product Inclusive Innovation Center | Advanced Science and Technology Institute (ASTI) |
| <i>MECO-TECO: Improvement of Forecast Capability on Weather, Marine Meteorology and Short Range Climate</i> | | |
| 180 | Project 1. Typhoon Formation, Structure and Intensity Change in Western NP and Wave Observation and Modeling | Philippine Atmospheric Geophysical and Astronomical Services Administration (PAGASA) |
| 181 | Project 2. Heavy Rain Monitoring and Forecasting in the Mountainous Area and Early Warning Landslides | UP Los Baños |
| 182 | Project 3. Observations and Dynamical Down-scaling of Seasonal and Sub-seasonal Forecast | Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) |
| 183 | Effectiveness of 21 st Century Learning Environment Model as a Support System to Teaching and Learning of Science and Mathematics | DOST Region IV-A |
| 184 | Enhancing Onelab for Global Competitiveness | DOST Regional Offices |
| 185 | One Expert (1E): A One-Stop Portal for Science and Technology Consultancy and Technical Services | Technology Application and Promotion Institute (TAPI); National Research Council of the Philippines (NRCP); Science and Technology Information Institute (STII); DOST Region VI; DOST Region CAR; DOST Region NCR |

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|-----|---|---|
| 186 | Optimization of the Operational Capabilities of Hydromet Sensors in Line with International Standards (WMO Standards) for Effective Weather, Flood Warning (CBFEWS) and Application to Research | Philippine Atmospheric Geophysical and Astronomical Services Administration (PAGASA) |
| 187 | Development of novel materials as emitters and/or detectors for (sub)-terahertz time-domain spectroscopy carrier dynamic studies | UP Los Baños |
| 188 | NovaSAR Imaging Capacity Share Programme Synthetic Aperture Radar (SAR) and Automatic Identification System (AIS) for Innovative Terrestrial Monitoring and Maritime Surveillance | Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) |
| 189 | Environmental, Health and Safety Research in the Risk Assessment of Nanomaterials (Phase I) Establishment of a Nano Safety Program in the Philippine | Industrial Technology Development Institute (ITDI) |
| 190 | Utilization of Spent Tea Leaves and Tobacco Dust as Additives for Plywood adhesive | Forest Products Research and Development Institute (FPRDI) |
| 191 | Technology Innovation for Commercialization and Other Technology Transfer Program | Technology Application and Promotion Institute (TAPI)/DOST - Research and Development Institutes (RDIs) |
| 192 | AGT UP End of Project | Metals Industry Research and Development Institute (MIRDC) |
| 193 | The Fusion of Science and Arts: Philippine Biodiversity and Culture | National Research Council of the Philippines (NRCP) |
| 194 | DOST Technology Transfer Day | Technology Application and Promotion Institute (TAPI) |
| 195 | ITDI Participation to IFEX PHILIPPINE 2018 "The Best of the Seas" | Industrial Technology Development Institute (ITDI) |
| 196 | Processing and Utilization of Senile and Unproductive Rubberwoods (<i>Hevea brasiliensis</i>) Trees for the Production of High Value Furniture, Mouldings and Joineries | Forest Products Research and Development Institute (FPRDI) |
| 197 | Strengthening the DOST Regional Metrology Laboratory Services | DOST – Regional Offices (ROs) |
| 198 | Development of a Philippine Indigenous Instrument Sound Database | Advanced Science and Technology Institute (ASTI)/UP Diliman |
| 199 | Optimization of the Operational Capabilities of Hydromet Sensors in line with International Standards (WMO Standard) | DOST Regional Offices |
| 200 | Investigation and Numerical Modeling of Philippine Tsunamis based on Historical, Geomorphological and Geological Evidence of Past Earthquakes | UP Diliman/Philippine Institute of Volcanology and Seismology (PHIVOLCS) |
| 201 | Newton Fund Scholarship | Science Education Institute (SEI) |
| 202 | A Dispersive Long-Wave Model for Predicting Coastal Flooding Due to Storm and Surface Waves in Manila Bay | Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) |
| 203 | DOST-Phil-LIDAR 1 Program and DILG LiDAR-GIS and Flood Disaster Management Training for Local Government Units | UP Diliman |
| 204 | Support to the Commercialization of 500 DOST-Generated Technologies (Phase 2): Strengthening the Intellectual Property and Technology Portfolio of the DOST | Technology Application Promotion Institute (TAPI) |

| | Project Title | Implementing Agency |
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| 205 | Geospatial Information Management and Analysis for Risk Assessment and Hazards (Georisk PH) | Philippine Institute of Volcanology and Seismology (PHIVOLCS) |
| 206 | Tracing the Pathways of Mercury Concentration in Mined-Out Area | Philippine Nuclear Research Institute (PNRI) |
| 207 | Development of a Future Earth Philippines Program (FEPP) Phase I | National Research Council of the Philippines (NRCP) |
| 208 | Upgrading and Enhancing the Capacity of the Packaging Technology Division in Packaging Research and Innovation | Industrial Technology Development Institute (ITDI) |
| 209 | Genomics Junior Camp | Philippine Genome Center (PGC) |
| 210 | Philippine Participation in the China International Import Export (CITE) | Technology Application Promotion Institute (TAPI) |
| 211 | Enhancing the Interest of Students from Selected Geographically Isolated Depressed Areas (GIDA) | Philippine Foundation for Science and Technology (PFST) |
| | <i>Development of Philippine Scientific Earth Observation Microsatellite (PHL-MICROSAT)</i> | |
| 212 | Project 1. Microsatellite BUS Development for Philippine Microsat | UP Diliman |
| 213 | Project 5. Remote Sensing Product Development for Philippines Microsatellite | UP Diliman |
| 214 | Providing High Resolution 5km Climate Change Projections in the Philippines Using Weather Research and Forecasting (WRF) Model | Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) |
| 215 | Weather and Climate Science for Service Partnership for South East Asia: Building a Safer Community to Weather and Climate Variability through Science and Innovation | Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) |
| | <i>Bamboo Musical Instruments Innovation Research and Development Program</i> | |
| 216 | Project 4. Development of Prototype Designs of Musical Instruments Using Select Philippine Bamboo Species and Processing Technologies | UP Diliman |
| | <i>IntElect: INTELLIGENT ELECTRIC TRANSPORTATION NETWORK</i> | |
| 217 | Project 1. Advice: Ad-Hoc Vehicle-Infrastructure Cooperative Environment | UP Diliman |
| 218 | Project 2. Emocion: Electric Mobility and Charging Infrastructure Operating as a Network | UP Diliman |
| 219 | Project 3. ETRIKE - Deployment and Utilization Study | Cagayan State University (CSU) |
| 220 | NICER Program: Astronomical Near-Earth Observation Light Pollution (ANEOLiPo) | Rizal Technological University (RTU) |
| 221 | PISOLAR: Payment Innovation for SHS Ownership by Lay Away Routine under the Accelerated R&D Program for Capacity Building of Research and Development Institutions and Industrial Competitiveness (CRADLE) | University of Southeastern Philippines (USEP) |
| 222 | Project Marayum- A Community-Built Mobile Phone Based, Online Web Dictionary for Philippine Languages | UP Diliman |
| | <i>Sustained Support for Local Space Technology and Applications Mastery, Innovation and Advancement (STAMINA4Space)</i> | |
| 223 | Project 1. Optical Payload Technology In-depth Knowledge Acquisition and Localization (OPTIKAL) | UP Diliman |
| 224 | Project 2. Building PHL-50: Localizing the Diwata-1 and Diwata -2 Bus Systems as the Country's Space Heritage 50-kg Microsatellite Bus (LoKAL) | UP Diliman |

| | Project Title | Implementing Agency |
|--|---|---|
| 225 | Project 3. Space Science and Technology Proliferation through University Partnership (STEP-UP) | UP Diliman |
| 226 | CRADLE: Development of Chicken Egg White Powder and Granules from Low Value Edible Shell Eggs | UP Diliman |
| <i>Integrative Studies on the geodynamics of the Philippine and Taiwan ARC Systems</i> | | |
| 227 | Project 1. Investigating the Tectonic Evolution of Northern and Central Philippine Arcs through Geochemistry and Geophysics | UP Diliman |
| 228 | Project 2. Coastal Tectonics of Central Philippine Islands and Its Implications for Seismic Hazards | UP Diliman |
| 229 | Project 3. Geophysical Characterization of the Western Philippine Subduction Zones | UP Diliman |
| <i>Establishment of the Philippine Center for Additive Manufacturing (PhilCAM)</i> | | |
| 230 | Project 1. Development of Multiple Materials Platform for Additive Manufacturing (MATDEV) | Industrial Technology Development Institute (ITDI) |
| 231 | Project 2. Rapid and Advanced Prototyping for Product Innovation and Development Using Additive Manufacturing Technologies (RAPPID-ADMATEC) | Metals Industry Research and Development Center (MIRDC) |
| 232 | Project BUHA WI (Building a Universal-Mount for Heavy Barrel Automated Weapon Integration) | Metals Industry Research and Development Center (MIRDC) |

**List of Monitored Projects
(January – December 2018)**

| | Project Title | Implementing Agency |
|---|---|--|
| 1 | ADMATEL Expansion and Business Continuity | Industrial Technology Development Institute (ITDI) |
| 2 | Application of Predictive Data Analytics on Multivariate Analysis of Methamphetamine-HCl Chemical Fingerprints | Industrial Technology Development Institute (ITDI) |
| 3 | Fabrication of Metal Oxide Thin Films for Optical Coatings with Plasma Assisted Deposition Using a Plasma Enhanced Chemical Vapor Deposition (PECVD) System | UP Diliman |
| 4 | Embedding of Functional Materials onto Paper for Antimicrobial and Electromagnetic Shielding Applications | UP Los Baños |
| 5 | Pulp-to-Print: Development of Print-Ready Cellulose Composites from Paper Mulberry | UP Diliman |
| <i>Smart Plant Production in Controlled Environments (SPICE)</i> | | |
| 6 | Project 1. Standalone Urban Farm | UP Diliman |
| 7 | Project 2. Sensor-based Monitoring and Analytics for Smart Hydroponics (SMASH) | UP Diliman |
| 8 | Project 3. Establishment of Soilless Culture Technology for Urban Food Production | UP Diliman |
| 9 | Project 4. Ex-Situ Conservation through Micropropagation Cryopreservation of Native Plant Species | UP Diliman |
| 10 | Generalized Automated Microfluidics and Micro-actuator Assembly (GAMMA) | UP Diliman |
| 11 | Electrochemical and Quantum Mechanical Investigation of Various Small Molecule Organic Compounds as Corrosion Inhibitors in Mild Steel | De La Salle University (DLSU) |
| 12 | Environmental, Health and Safety Research in the Risk Assessment of Nanomaterials (Phase 1) | Industrial Technology Development Institute (ITDI) |
| 13 | Development of a Passive Neutron Spectroscopy System | Philippine Nuclear Research Institute (PNRI) |
| <i>EPDC as Platform for Innovation and Collaboration (EPIC)</i> | | |
| 14 | Project 1. Electronics Product Development Center Upgrade and Operation | Electronic Industries Association of the Philippines, Inc. (EIAPI) |
| 15 | Project 2. Electronics Product Inclusive Innovation Center (EPIIC) | Advanced Science and Technology Institute (ASTI) |
| 16 | Synthetic Aperture Radar (SAR) and Automatic Identification System (AIS) for Innovative Terrestrial Monitoring and Maritime Surveillance | Advanced Science and Technology Institute (ASTI) |
| 17 | Niche Center on Environmental Informatics in Central Visayas Program (NICER Program) | UP Cebu |
| 18 | Flood Risk Assessment for Mitigation and Effective Response (FRAMER) of Riverine Towns in Selected River Basins in Cavite, Batangas, and Quezon Provinces using Most Recent LiDAR DEM | Mapua Institute of Technology |

| | Project Title | Implementing Agency |
|--|--|--|
| 19 | Metro Manila Transportation Network: Big Data Analytics and Applications (MMTN:BDAA) | De La Salle University |
| 20 | Prototype Development of Severe Weather Amphibious Navigator Using Local Abaca Composites | Wesleyan University of the Philippines |
| 21 | Development of a hybrid trimaran fast craft passenger cargo vessel using multi engine and alternative energy source from ocean waves | Aklan State University (ASU) |
| 22 | Performance Testing and Evaluation of Protoype Trainset | Metals Industry Research and Development Center (MIRDC) |
| 23 | AGT UP End of Project | Metals Industry Research and Development Center (MIRDC) |
| 24 | Formulation of a Settlements Development Model in New Growth Areas in the Philippines | UP Diliman |
| 25 | A Dispersive Long-Wave Model for Predicting Coastal Flooding due to Storm Surges and Surface Waves in Manila Bay | Philippine Atmospheric Geophysical and Astronomical Services Administration (PAGASA) |
| 26 | Investigation and numerical modeling of Philippine tsunamis based on historical, geomorphological and geological evidence of past earthquakes | UP Diliman |
| 27 | Optimization of the Operational Capabilities Hydromet Sensors in Line with International Standards (WMO Standards) for Effective Weather, Flood Warning (CBFEWS) and Application to Research | Philippine Atmospheric Geophysical and Astronomical Services Administration (PAGASA) |
| <i>Analyzing CORDEX - SEA Regional Climate Simulations for Improved Climate Information over the Philippines: SST Influence, Variability and Extremes, Tropical Cyclone Activity</i> | | |
| 28 | Analysis of the Influence of Sea Surface Temperature Representation in Downscaled Regional Climate Using the SEACLID/CORDEX – Southeast Asia Simulations | Manila Observatory |
| 29 | Multi-temporal and Extremes Analysis of Modeled Climatology over the Philippines in the SEA CORDEX Domain | Manila Observatory |
| 30 | Detecting Tropical Cyclones in a Downscaled Regional Climate Model for CORDEX – SEA | Manila Observatory |
| 31 | Geospatial Information Management & Analysis Project for Hazards & Risk Assessment in the Philippines (GeoriskPH) | Philippine Institute of Volcanology and Seismology (PHIVOLCS) |
| 32 | Development of Earthquake Intensity Monitoring System | Mapua Institute of Technology |
| 33 | Micro Grid Solar PV System | Ateneo De Davao University (ADDU) |
| 34 | Techno – Economic Feasibility Study of Micro-Grid in a Remote Community | Mindanao State University - Iligan Institute of Technology |
| 35 | Establishing a 25-kW Waste-to-Energy Facility Using a Direct Combustion Process for Municipal Solid Waste: A Technical, Economic and Environmental Studies | UP Los Baños |
| 36 | Sustainable Wastewater Treatment Systems with Nutrient (SWAN) Recovery | De La Salle University |
| 37 | Characterization of Tailings and Monitoring of the Gold-Copper Pilot Plant in Benguet | DOST Region CAR |

| | Project Title | Implementing Agency |
|--|---|---|
| 38 | Development of Titanium Dioxide Films and its Derivatives for Semiconductor Mediated Photocatalytic Treatment of Water | UP Diliman |
| 39 | Multi-platform and Cross-Sensor Water Quality Monitoring | UP Diliman |
| 40 | Electromagnetic Radar Technique for Water Detection | Mindanao State University - Iligan Institute of Technology |
| <i>Master of Research and Development Management</i> | | |
| 41 | Project 1. Curriculum Development for the Master of Research and Development Management | UP Open University |
| 42 | Project 2. Course Material Development for the Master of Research and Development Management | UP Open University |
| 43 | Enhancing the Applicability of Vertical Helophyte Filter Systems for Small Communities, Local MSMEs and Public Entity | Department of Science and Technology Region XI |
| 44 | Support to the Rehabilitation of Boracay Island Through the Upgrading of Material Recovery Facilities (MRFs) - Phase I | Department of Science and Technology Region VI |
| <i>Food Manufacturing: Establishment of Halal Assurance Systems for Food</i> | | |
| 45 | Establishment of Halal Assurance System for Processing Selected Banana Products (Banana Chips, Banana Catsup, and Frozen "Saba" Banana) | Industrial Technology Development Institute (ITDI) |
| 46 | Establishment of Halal Assurance System for Bakery Products | Industrial Technology Development Institute (ITDI) |
| 47 | Establishment of Halal Assurance System for Muslim Delicacies and Processing Techniques | Sultan Kudarat State University (SKSU) |
| 48 | Development of Regional Halal Native Delicacies | Mindanao Autonomous College Foundation, Inc. (MACFI) |
| 49 | Technical Guidelines Development for Minimally Processed Halal Chicken and Chicken By – Products (Edible Giblets) | Industrial Technology Development Institute (ITDI) |
| 50 | Development of Emulsified Meat Products (Sausage, Nuggets, and Burgers) | Industrial Technology Development Institute (ITDI) with University of Southern Mindanao (USM) |
| 51 | Training Needs Assessment and Development and Deployment of Training Modules on Halal | DOST Region XI |
| 52 | Curriculum Development and Offering on Halal Science and Scholarship for SUC Faculty on Halal Science | University of Southern Mindanao (USM) with Sultan Kudarat State University (SKSU) and Central Mindanao University (CMU) |
| 53 | Establishment of Halal Assurance System for Production Method Development and Standardization of Cosmetics and Toiletries | Industrial Technology Development Institute (ITDI) |

| | Project Title | Implementing Agency |
|----|--|---|
| 54 | Operationalization of Halal Verification Laboratories (HVLs) of DOST Regions CALABARZON, 11, 12, and ARMM in Support to Halal Assurance Systems | DOST Region IV- A with DOST Regional Offices 11, 12, and ARMM |
| 55 | Design and Development of Gong Fabrication Processes through S&T Intervention | Metals Industry Research and Development Center (MIRDC) |
| 56 | Technical and Economic Feasibility Study to Determine the Most Suitable Ironmaking Technology for Value-Adding of Philippine Magnetite Resources | Metals Industry Research and Development Center (MIRDC) |
| 57 | Coal Ash as a Resource of Rare Earth and Strategic Elements in the Philippines: Amenability to Metallurgical Processing | Mindanao State University – Iligan Institute of Technology (MSU-IIT) |
| 58 | Geopolymerization and its Potential Application in Artisanal Gold Mine Tailings Stabilization | Central Mindanao University (CMU) |
| | <i>3R Approach to Sustainable Management of Nickel Laterite Ore Tailings: Reuse, Recycling and Reprocessing for Environmental Remediation and Material Valorization</i> | |
| 59 | Project 1. Utilization of Nickel Laterite Ore rock (low grade) for various applications: Acid Mine Drainage treatment and Carbon Sequestration | De La Salle University (DLSU) |
| 60 | Project 2. Recycling and reprocessing of siltation sediments from selected nickel laterite mining areas in the Philippines as raw materials for the synthesis of iron-based novel adsorbents | Central Mindanao University (CMU) |
| 61 | Project 3. Recovery of nanominerals from silt for various ceramic applications | Central Mindanao University (CMU) |
| 62 | Project 4. Recycling of silt and spent residue from reprocessing as raw materials for geopolymer composite | Central Mindanao University (CMU) |
| 63 | Pilot Scale Production of Nickel Pig Iron from Low Grade Laterite Ores | Department of Environment and Natural Resources – Mines and Geosciences Bureau (DENR-MGB) |
| 64 | Laboratory Scale Continuous Extraction System for the Recovery of Uranium from Philippine Wet Phosphoric Acid | Philippine Nuclear Research Institute (PNRI) |
| 65 | Extraction of Radionuclides, Rare Earths, and Other Valuable Industrial Elements from Phosphogypsum Tailings | Philippine Nuclear Research Institute (PNRI) |
| 66 | Establishment of the PTRI “Perfect Fit” Textile Product Development Center | Philippine Textile Research Institute (PTRI) |
| 67 | Establishment of Regional Yarn Production and Innovation Center | Philippine Textile Research Institute (PTRI) |
| 68 | Utilization of Spent Tea Leaves and Tobacco Dust as Additives for Plywood Adhesive | Forest Products Research and Development Institute (FPRDI) |
| 69 | Tabang MARAWI (Malnutrition Alleviation and Health Restoration through After-War Interventions) | Food and Nutrition Research Institute (FNRI) |
| | <i>Nutrition Intervention Model in Time of Man-Made Calamities – A Quick Response to Emergency</i> | |
| 70 | Project 1. Production of Nutritional Food Products for Conflict Stricken Areas | Food and Nutrition Research Institute (FNRI) |

| | Project Title | Implementing Agency |
|----|---|---|
| 71 | Project 2. Implementation of GarNESupp (Gardening, Nutrition Education, Supplementary Feeding (Model in Conflict-stricken area Marawi) | Food and Nutrition Research Institute (FNRI) |
| 72 | Enhancement, Field Validation and Market Readiness Detection of DNA-based Nanobiosensor for the E. coli, E. coli 0157:H7 and Salmonella enterica in Food, Feed and Farm Produce | National Institute of Molecular Biology and Biotechnology, UP Los Baños |
| 73 | Development of Data Analytics, Big Data and Artificial Intelligence to Build a Smart Restaurant Management Platform (STARTUP) | Restograph Inc. |
| 74 | Enhancement of Prototype and Assessment of Product Marketability of Machibox (a robotics kit for STEM-based learning) | MachiBox Inc. |
| 75 | CONDAMA & EEMA - Artificial Intelligence Vision System for Retail Analytics | UP Diliman |
| 76 | Rurok Bikes: Variable Geometry and Efficient Suspension Pedalling Platform | Rurok Industries |
| 77 | Prototype Development of Semi-Automated Foam Shredder Equipment (TECHNICOM) | Holy Angel University |
| 78 | Development of Data Analytics-Ready Info Unified System (DARIUS) for Agile Delivery of Regional Services | DOST CALABARZON |
| 79 | Beta Testing of Biotechnology Kits for STEM Education | Kinovette Scientific Solutions Co. |
| 80 | Filipinnovation Entrepreneurship Corps: Enabling Researchers to Assess Commercial and Societal Value of their Research | De La Salle University (DLSU) |
| 81 | Development of a Future Earth Philippines Program (FEPP) | National Research Council of the Philippines (NRCP) |
| 82 | Effectiveness of 21st Century Learning Environment Model as a Support System to Teaching and Learning of Science and Mathematics | DOST Region IV-A |
| 83 | Strategic Communication Approaches to Boost the Philippine Nuclear Research Institute Promotions | Philippine Nuclear Research Institute (PNRI) |
| 84 | Fringe-area Data Access by Transient Altitude Provision | De La Salle University (DLSU) |
| 85 | Impact Assessment of the Department of Science and Technology (DOST) Small Enterprise Technology Upgrading Program (SETUP) | Development Academy of the Philippines (DAP) |
| 86 | PHL-MICROSAT Project 5. Remote Sensing Product Development | UP Diliman |
| 87 | Industry Defined 2D Basic Animation Course | Toon City Academy |
| 88 | Development of a Low-Energy Ion Source System for the Synthesis of Diamond-like Carbon Films | UP Diliman |
| 89 | Angular Goos-Hänchen Shift: An Optical Phenomena for Ultra Thin Film Thickness Measurement | UP Diliman |
| 90 | Fabrication of Highly C-axis Oriented YBCO Superconducting Thin Films by Sedimentation Deposition | UP Diliman |

| | Project Title | Implementing Agency |
|-----|---|--|
| | <i>Hard Coating Thin Film Synthesis Using DC and RF Magnetron Sputtering via Gaseous Discharges</i> | |
| 91 | Project 1: Development of Direct Current (DC) Magnetron Plasma System for Ti-Al-C Thin Film Synthesis | Ateneo De Manila University (ADMU) |
| 92 | Project 2: Development of Radio Frequency (RF) Plasma System for Ti-Al-N Thin Film Synthesis | UP Diliman |
| 93 | Ultrafast MBE-grown Terahertz Photoconductive Antenna Devices | UP Diliman |
| 94 | Sonochemical Synthesis of Cobalt Oxide and Copper Oxide Nanostructures as Electrodes in Photoelectrochemical Water-Splitting Applications | Mapua Institute of Technology |
| 95 | Uncooled Carbon Nanotube Microbolometers | UP Baguio |
| 96 | Ionic Liquid Assisted Electrospinning of Conductive Nanofibers as Solid Polymer Electrolyte/ Separator Membrane of Solid State Supercapacitor | UP Diliman |
| 97 | Up-Scaled Solution-Phase Synthesis of Metal Nanowires and its Application in Transparent Metal Nanowire Touch Panel | UP Diliman |
| 98 | Green Synthesis of Carbon Quantum Dots from Biowaste for Biomedical and Industrial Applications | Materials Science Division, ITDI |
| 99 | Development of a Raman Microscopy and Spectroscopy (RMS) Setup | UP National Institute of Physics |
| 100 | Optical trap-mediated interaction between cancer cells and elucidated compounds from vegetable extracts in PEMF | De La Salle University |
| 101 | Binary Gels - Rheology of Two-component Biopolymer Hydrogels Investigated Using Optical Tweezers and Non-Linear Rheometry | University of San Carlos |
| | <i>μC-IC: Design of Microcontroller Integrated with Energy Harvesting and Power Management</i> | |
| 102 | Project 1. Development of Microprocessor for Wireless Sensor Network Application | Mindanao State University – Iligan Institute of Technology (MSU-IIT) |
| 103 | Project 2. Power Management Unit using Low Drop-out Regulator and Switched Capacitor DC-DC Converters | Mindanao State University – Iligan Institute of Technology (MSU-IIT) |
| 104 | Project 3. Indoor Light Energy Harvesting for Wireless Sensor Network Applications | Mindanao State University – Iligan Institute of Technology (MSU-IIT) |
| 105 | One Click: Android/Web-based Student Response and Understanding Visualizer | Mapua Institute of Technology |
| 106 | Remote Sensing and Data Science: DATOS Helpdesk | Advanced Science and Technology Institute (ASTI) |
| | <i>Integrated Assessment and Modelling of Blue Carbon Ecosystems for Conservation and Adaptive Management (IAMBlueCECAM)</i> | |
| 107 | Project 1. Mangrove Remote Sensing Using LiDAR, Multispectral, and Hyperspectral Data (MaRS) | UP Diliman |
| 108 | Project 2. LiDAR, Hyperspectral, and Sonar Remote Sensing of Seagrass Meadows (SeaRS) | UP Diliman |

| | Project Title | Implementing Agency |
|-----|--|--|
| 109 | Project 3. Geosimulation of Mangroves and Seagrass Vegetation Dynamics (GeoSiMAS) | UP Diliman |
| 110 | Project 4. Hydrodynamic Modelling for the Assessment of Protective Services of Mangroves and Seagrass (HMAPS-MS) | UP Diliman |
| 111 | Project 5. Modelling, Analysis and Simulation of Blue Carbon Cycle and Budgets (BlueCyMAS) | UP Diliman |
| 112 | Project 6. Suitability Models for Guiding Mangrove RePlanting Efforts (SuitMaPs) | UP Diliman |
| 113 | Project 7. Economic Valuation of Generated Blue Carbon Ecosystem Services (EconValBlue) | UP Diliman |
| 114 | Project 8. Multi-agent Systems for Simulating Policy Scenarios on Blue Carbon Ecosystems (BlueMASSPolIS) | UP Diliman |
| 115 | Project 9. WebGIS for Mapping, Supporting Decision-making, and Promoting Ecological Services of Blue Carbon Ecosystems (BlueWebMapS) | UP Diliman |
| 116 | Project 10. Geospatial Decision Support Systems and Capacity Building on Geomatics for Mangrove Seagrass Conservations (CapGeoDSS) | UP Diliman |
| | <i>GeoSafer Mindanao Program (ZAMBASULTA, Northern Mindanao/ Cotabato, Agusan, Western Mindanao and Southeastern Mindanao)</i> | |
| 117 | Project 1: Geo-SAFER Zamboanga Peninsula – Systematic Assessment of Flood Effects and Risks in Zamboanga Peninsula, Mindanao, Philippines | Ateneo de Zamboanga University |
| 118 | Project 2: Geo-SAFER Northern Mindanao/ Cotabato – Systematic Assessment of Flood Effects and Risks in Northern Mindanao and Cotabato, Philippines | Central Mindanao University |
| 119 | Project 3: Geo-SAFER Agusan – Systematic Assessment of Flood Effects and Risks in the Agusan River Basin, Caraga Region, Mindanao, Philippines | Caraga State University |
| 120 | Project 4: Geo-SAFER: Western Mindanao - Systematic Assessment of Flood Effects and Risks in Western Mindanao | Mindanao State University - Iligan Institute of Technology |
| 121 | Project 5: Geo-SAFER: Southeastern Mindanao - Systematic Assessment of Flood Effects and Risks in Southeastern Mindanao | UP Mindanao |
| 122 | Design and Development of UP Bike Share System | UP Diliman |
| 123 | A Vision-Based Vehicle Counter for Traffic Monitoring (VEMON) | De La Salle University |
| 124 | Engineering the Public Utility Vehicles (PUVs) Using an OEM Vehicle Platform | UP Diliman |
| 125 | Development of a Customized Local Traffic Simulator (LocalSim Phase 2) | UP Diliman |
| 126 | Recycling and Recyclability Index for End-of-Life Jeepneys | University of Asia and the Pacific (UA&P) |
| 127 | Development of a Local Automatic Identification System (AIS) for Ship Tracking and Monitoring | De La Salle University |
| 128 | Cyber-Physical Transportation System | UP Diliman |

| | Project Title | Implementing Agency |
|-----|---|---|
| 129 | Testing for Standardization and Optimization of five Coach Hybrid Road Train Phase III | Metals Industry Research and Development Center (MIRDC) |
| 130 | System Expansion of the 120-Passenger per Coach Capacity Automated Guide-way Transit System | Metals Industry Research and Development Center (MIRDC) |
| 131 | e-Asia: Development of Information Gathering and Utilization Systems using small Unmanned Airborne Vehicles (UAVs) for Disaster Risk Assessment, Monitoring and Response | Philippine Institute of Volcanology and Seismology (PHIVOLCS) |
| | <i>Development of a fixed wing short take-off and landing (STOL) unmanned aerial vehicle (UAV) for disaster risk reduction and management</i> | |
| 132 | Design and fabrication of an airframe for a medium-range, short take-off and landing UAV | FEATI University |
| 133 | Development of a Flight Controller for a Modular UAV System | De La Salle University (DLSU) |
| 134 | Cooperative UAV-UGV Missions and Applications with Custom Communications and Imaging Capabilities | Ateneo De Manila University |
| 135 | National Loss and Damage Registry: A Disaster Management Information System for the Office of the Civil Defense | De La Salle University (DLSU) |
| 136 | Fire Check: Urban Fire Hazard Mapping and Fire Spread Modeling | UP Cebu |
| 137 | The Use of Radon Technique in Mapping Geological Faults in the Philippines | Philippine Nuclear Research Institute (PNRI) |
| 138 | Mapping of offshore active faults for resilient coasts | UP Diliman |
| 139 | Automated Real-Time Monitoring System (ARMS) for Magat Dam | Mapua Institute of Technology |
| 140 | Development of Groundwater Resource Management Plan and Monitoring System for Zamboanga City and its Surrounding Areas | Ateneo de Manila University |
| 141 | Enhancing the Hydrometeorological Hazards Monitoring and Risk Assessment Capabilities of PAGASA through the Adoption and integration of NOAA Operating Systems | Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) |
| 142 | FEATURE: Feature-based Earthquake Analysis Toolset for Urban Response Estimation - Enhancing PHIVOLCS damage estimation capability using building-specific analysis aided by high resolution GiS data | Philippine Institute of Volcanology and Seismology (PHIVOLCS) |
| 143 | Specific Earthquake Ground-Motion to help enhance the seismic resiliency of residential and medium-to-high rise buildings in Metro Cebu and Metro Davao | Philippine Institute of Volcanology and Seismology (PHIVOLCS) |
| 144 | Automated Real-time Monitoring System for Ambuklao, Binga and San Roque Dams | Mapua Institute of Technology |
| 145 | Development of HFDR Ship Tracking Algorithm Software for Maritime Surveillance, Search and Rescue | Mapua University |
| 146 | Regional Disaster Science and Management S&T Capacity Development (Phase III) | Mariano Marcos State University |
| | <i>Improvement of Forecast Capability on Weather, Marine Meteorology and Short Range Climate</i> | |

| | Project Title | Implementing Agency |
|--|---|--|
| 147 | Project 1: Typhoon Formation, Structure and Intensity Change in Western NP and Wave Observation and Modeling | Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) |
| 148 | Project 2: Heavy Rain Monitoring and Forecasting in the Mountainous Area and Early Warning Landslides | UP Los Baños and Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) |
| 149 | Project 3: Observations and Dynamical Downscaling of Seasonal and Sub-seasonal Forecasts | Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) |
| <i>Integrative Studies on the geodynamics of the Philippine and Taiwan ARC Systems</i> | | |
| 150 | Project 1. Investigating the Tectonic Evolution of Northern and Central Philippine Arcs through Geochemistry and Geophysics | UP Diliman |
| 151 | Project 2: Coastal Tectonics of Central Philippine Islands and Its Implications for Seismic Hazards | UP Diliman |
| 152 | Project 3: Geophysical Characterization of the Western Philippine Subduction Zones | UP Diliman |
| 153 | Climate Change Adaptation and Disaster Resilience Cluster PH-US Joint Cooperation | PCIEERD |
| 154 | Setting Up a Concrete Petrography Laboratory for Quality Control of Construction Projects | UP Diliman |
| 155 | Development of a Functional and Durable Pervious Concrete Pavement for Local Roads and Parking Lots | Central Mindanao University |
| 156 | Upgrading of the PNRI Nuclear Training Center Laboratory Facility | Philippine Nuclear Research Institute (PNRI) |
| 157 | UP Cebu Cybersecurity Research and Extension Center | UP Cebu |
| <i>Field-testing of the Integrated Gold-Copper Mineral Processing Pilot Plant in the Regions</i> | | |
| 158 | Field-testing of the Integrated Gold-Copper Mineral Processing Pilot Plant in the Regions (CARAGA) | UP Diliman |
| 159 | Field-testing of the Integrated Gold-Copper Mineral Processing Pilot Plant in the Regions (Bicol) | UP Diliman |
| 160 | Field-testing of the Integrated Gold-Copper Mineral Processing Pilot Plant in the Regions (Compostela Valley) | UP Diliman |
| 161 | Field-testing of the Integrated Gold-Copper Mineral Processing Pilot Plant in the Regions (Benguet) | UP Diliman |
| 162 | Synergistic effect of Forward Osmosis and Capacitive De-Ionization for Water Purification and Recovery | Malayan Colleges Laguna |
| <i>Synergistic Capacity Advancement for the Management of Laguna Lake: SCALE</i> | | |
| 163 | Antibiotics, Endocrine Disruptors and Heavy Metals in Laguna Lake Water: Impacts on Food and Water Security | UP Diliman |
| 164 | Microbial Source Tracking in Selected Tributaries of Laguna de Bay | Natural Sciences Research Institute |

| | Project Title | Implementing Agency |
|-----|---|---|
| 165 | TRACe Fish – Trace oRganics and metAls in Commodity Fish: Method optimization, extent of contamination and health risk due to fish intake | UP Diliman |
| | <i>Molecular and Culture-based Characterization of Bacterial Community from Manleluag Alkaline Spring in Pangasinan - EIDR</i> | |
| 166 | Molecular characterization of bacterial community from Manleluag alkaline spring through next-generation sequencing of 16S rDNA | UP Los Banos |
| 167 | Isolation and screening of alkaliphilic bacteria from Manleluag alkaline spring producing an industrially important enzyme | UP Los Banos |
| | <i>Assessment of Metal Content in Agricultural Products and Its Environment in Volcanic Impacted Areas</i> | |
| 168 | Project 1. OneLab Capability Assurance System for Metal Content Assessment in Agricultural Produce, Water and Environmental Samples | Industrial Development Institute (ITDI) |
| 169 | Project 2. Metal Content of Water Supplies in Volcanic Impacted Area and its Impact to Vegetation | Industrial Development Institute (ITDI) |
| 170 | Project 3. Household and Community Based Filters for Metals in Water | Industrial Development Institute (ITDI) |
| 171 | Water - Energy - Nutrient Nexus in the Cities of the Future | De La Salle University |
| 172 | Forward Osmosis System using locally-made membrane from Nata-de-coco for the production of rehydration water and application for desalination | Malayan Colleges Laguna |
| 173 | Optimization of Ready-to-Drink Sweet Potato Leaf Extract (SPLE)-Tropical Fruit Juice Blends through the UP-DOST Food Innovation Facility | UP Diliman |
| 174 | Establishment of Shelf-Life of Vacuum Fried Okra developed by ITDI Main FIC | Industrial Technology Development Institute (ITDI) |
| 175 | Package Development of Bakery Product and Field Testing of Ready-to-Eat (RTE) Smoked Fish Rice Meal and Sweet Potato as Disaster/Relief Foods - Phase 2 | Industrial Technology Development Institute (ITDI) |
| | <i>Product Development and Utilization Program of Abalone in MIMAROPA</i> | |
| 176 | Development of bottom housing system for abalone farming | Western Philippines University |
| 177 | Development of Food and Non-Food Products from Abalone | Marinduque State College and Western Philippines University |
| 178 | Performance Evaluation of Dipstick Assay for the Detection of Salmonellae in Selected Food Matrices | National Institute of Molecular Biology and Biotechnology, UP Los Baños |
| 179 | Upgrading and Enhancing the Capacity of the Packaging Technology Division in Packaging Research and Innovation | Industrial Technology Development Institute (ITDI) |
| 180 | Development of Ready-to-Eat Corn Grit Meals | UP Diliman |
| 181 | Pilot-Scale Production of Spray-Dried Powder Dextran and High Fructose Syrup using Whole Cell (<i>Leuconostoc mesenteroides</i> isolates) ITDI Fermentation Technology | Industrial Technology Development Institute (ITDI) |

| | Project Title | Implementing Agency |
|---|---|--|
| 182 | Development of an Effective Distribution System for RTE Retort Foods (Chicken Arroz Caldo and Smoked Fish Rice Meal) to Mitigate the Magnitude of Distress for Calamity Survivors and Providers of Services | Industrial Technology Development Institute (ITDI) |
| 183 | Enhancing OneLab for Global Competitiveness | DOST Regional Office No. 9 Note: 16 ROs and 7 RDIs |
| <i>I-SALT: Improving Productivity and Efficiency of Local Salt Producers towards a Self-Reliant Philippines in 2020</i> | | |
| 184 | Project 1. Design, Prototyping of Salt Processing Equipment (Washer, Dryer, Iodizer, Crystallizing Pan, Furnace, Concentrator (Ion exchange membrane) | Industrial Technology Development Institute (ITDI) |
| 185 | Project 2. Development of Gourmet Salt Products and Micro-sized Salt in Laboratory Scale | Industrial Technology Development Institute (ITDI) |
| 186 | Design and Development of Processing Machineries for Honey Products and Intermediate Products | Don Mariano Marcos Memorial State University (DMMMSU) |
| 187 | Development of An Automated Multi-Commodity Heat Pump Dryer | Adventist University of the Philippines (AUP) |
| 188 | Strengthening of DOST Regional Metrology Laboratory Services - Phase II | DOST Regions from CAR to CARAGA |
| 189 | Characterization and Separation of Heavy Minerals in the Alluvial and Beach Sands in San Vicente, Northwestern Palawan | Philippine Nuclear Research Institute (PNRI) |
| 190 | Establishment of Common Service Facility (CSF) for Artisanal Small-Scale Gold Mining in Northern Mindanao | Mindanao State University – Iligan Institute of Technology (MSU-IIT) |
| <i>Enhancement of the Competence and Capability of the National Metrology Laboratory of the Philippines Metrology</i> | | |
| 191 | Project 1. Chemical Metrology for Organic Contaminants in Foods and Water | Industrial Technology Development Institute (ITDI) |
| 192 | Project 2. Chemical Metrology for Inorganic Toxic Elements in Food and Water | Industrial Technology Development Institute (ITDI) |
| 193 | Project 3. Biological Metrology for Microorganisms in Food | Industrial Technology Development Institute (ITDI) |
| 194 | Project 4. Strengthening the Physical Metrology Capabilities of the National Metrology Laboratory | Industrial Technology Development Institute (ITDI) |
| 195 | Modular Innovation Center for Oils, Blends, and Sauces | Industrial Technology Development Institute (ITDI) |
| <i>National R&D Program for Natural Rubber Processing and Rubber Products Manufacturing</i> | | |
| 196 | Project 6. Processing and Utilization of Senile and Unproductive Rubberwood (Hevea brasiliensis) Trees for High Value Furniture, Mouldings and Joinery Products | Forest Products Research and Development Institute (FPRDI) |
| <i>Natural Dyes and Colorants R&D Program</i> | | |
| 197 | Project 1. Commercial Scale Verification of Natural Dyes for Textiles | Philippine Textile Research Institute (PTRI) |
| 198 | Project 2. Development of Natural Colorants for Cosmetics | Industrial Technology Development Institute (ITDI) |

| | Project Title | Implementing Agency |
|-----|--|--|
| 199 | Project 3. Extraction, Characterization, and Application of Natural Colorants in Nutritional Food Products | Food and Nutrition Research Institute (FNRI) |
| 200 | Project 4. Natural Food Colors from Local Source as Food Additive | Industrial Technology Development Institute (ITDI) |
| 201 | Standards & Testing Automated Modular Platform (STAMP) | UP Diliman |
| --- | <i>Processing of Bio-based Polyols and Polyurethanes for Industrial Applications Program</i> | |
| 202 | Project 1. Production of Bio-based Polyols from Lignocellulosic Biomass | Mindanao State University – Iligan Institute of Technology (MSU-IIT) |
| 203 | Project 2. Development of Polyurethane-based Packing Materials and Anti-corrosive Coatings from Vegetable Oil | Mindanao State University – Iligan Institute of Technology (MSU-IIT) |
| 204 | Polyhydroxyalkanoate (PHA) Production from Agricultural Residues | UP Los Baños |
| 205 | Development of Design Prototypes for Government Agencies' Uniforms to Promote Mainstreaming of Natural Fibers and Local Weaves | Philippine Textile Research Institute (PTRI) |
| 206 | Comparison of Different Enzyme Preparations for the Production of Oligofructose and Inulin from Sugarcane Juice | Cavite State University |
| 207 | Design and Development of a PLC-Based High Capacity Tissue Culture Growth Chamber | Cavite State University |
| 208 | Quality Assurance of Lambanog and Nipanog for Consumer Safety and Sustainable Industry | UP Diliman |
| 209 | Development of a Shelf-Stable Fermented Heirloom Rice "Binubudan" | Benguet State University |
| 210 | Development of Freeze-Dried Local Alternative Flavors for Ice Cream | Benguet State University |
| 211 | Jolt: A Stackable Multi-Functional Battery Energy Storage for Household Solar and Emergency Applications | UP Diliman |
| 212 | Field and Market Testing of a Cost-effective Camera Rig System Biomass | UP Diliman |
| 213 | Enhancement of Prototype and Market Readiness of R-TAP (an advanced pressure management system for water utilities) | Hiraya Technology Solutions, Inc. |
| 214 | Prototype Development and Field Testing of Mosquito-Repellent Textile | Philippine Textile Research Institute (PTRI) |
| 215 | Enhancing Operational Capability of Bicol University Fabrication Laboratory (Fablab Bicol) | Bicol University |
| 216 | Establishment of the Technology Management System and Structure of the Ateneo de Manila University | Ateneo de Manila University (ADMU) |
| 217 | Geophysical Exploration Instruments with Micro-seismic Imaging and Tomography for Energy Exploration in the Philippines | Tekton Geometrix, Inc. |
| 218 | Technology Business Incubator (TBI) at DLSU-STC Campus | De La Salle University – STC Campus |

| | Project Title | Implementing Agency |
|-----|---|---|
| 219 | InteliSENSE: A Progress Monitoring Tool for Children with Special Needs | De La Salle University |
| 220 | Pilot Implementation of ITDI's Pre-Commercialization Tools/Strategies for Effective Transfer and Commercialization of Generated Technologies and Intellectual Properties | Industrial Technology Development Institute (ITDI) |
| 221 | Smart Vision: AI-Guided Vision System for the Blind | Grayscale Marketing Consultancy |
| 222 | One Expert (1E): A One-Stop Portal for Science and Technology Consultancy and Technical Services | DOST Regional Offices; Technology Application Promotion Institute (TAPI); National Research Council of the Philippines (NRCP) |
| 223 | Upgrading the PNRI Neutron Laboratory for Neutron Physics and Dosimetry Research | Philippine Nuclear Research Institute (PNRI) |
| 224 | PUP College of Engineering Sensors and Mechatronics Laboratory | Polytechnic University of the Philippines (PUP) |
| 225 | Strengthening SLSU's Capability in GIS Technologies in Support of Southern Leyte's Competitiveness and Development | Southern Luzon State University (SLSU) |
| | <i>Development of Philippine Scientific Earth Observation Microsatellite (PHL-MICROSAT)</i> | |
| 226 | Project 1. Microsatellite BUS Development for Philippine Microsat | UP Diliman |
| 227 | Project 3. Development of a Data Processing, Archiving and Distribution Sub-System for the Ground Receiving Station of the Philippines Scientific Earth Observation Micro-Satellite | UP Diliman |
| 228 | Project 5. Remote Sensing Product Development | UP Diliman |
| 229 | Establishment of Renewable Energy Laboratory and Demonstration Park | Isabela State University (ISU) |
| 230 | Development of Future Building Materials and Structures (FBMS) Laboratory | Northwest Samar State University (NwSSU) |
| 231 | Establishment of CvSU SiMM (Simulation, Modeling and Measurement) Laboratory | Cavite State University |
| 232 | Enhancing the Natural Science Research Center Laboratories of Central Mindanao University | Central Mindanao University (CMU) |
| 233 | PCIEERD NSRI Research Grant | UP Diliman |
| 234 | Establishment of the USJ-R Center for Energy Harvesting Materials Research | University of San Jose Recoletos (USJ-R) |
| 235 | Learning at Scale Vol. I Data Science Track | MOOCSX PH |
| 236 | Capability Building on Energy Efficiency and Conservation (EE&C) for State Universities and Colleges (SUCs) in Six (6) Regions as Demonstration Sites formerly Capability Building on Energy Efficiency and Conservation (EE&C) for State Universities and Colleges (SUCs) in Five (5) Regions as Demonstration Sites | Industrial Technology Development Institute (ITDI) |
| 237 | DOST - SEI - Newton Fund Scholarships | Science Education Institute (SEI) |

| | Project Title | Implementing Agency |
|-----|--|--|
| 238 | Development of Municipal e-Governance Systems through ICT | Camarines Sur Polytechnic Colleges (CSPC) |
| 239 | Establishment of QBO Innovation Hub | Ideaspace Foundation, Inc. |
| 240 | Support to the Commercialization of 500 DOST-Generated Technologies (Phase 2): Strengthening the Intellectual Property and Technology Portfolios of the DOST | Technology Application Promotion Institute (TAPI) |
| | 2017-2019 DOST Technology Transfer Day (TTD) | Technology Application Promotion Institute (TAPI) |
| 241 | <i>Communicating Science for the People</i> | |
| 242 | Leveraging the Power of Broadcast and Web Media to Promote Science for the People (DOSTv) | Science and Technology Information Institute (STII) |
| 243 | Content Development for S&T Academic and Research-based openly-operated Kiosks (STARBOOKS) | Science and Technology Information Institute (STII) |
| 244 | Doubling the Reach through Information, Education and Communication (IEC) Campaign | Science and Technology Information Institute (STII) |
| 245 | Enhanced S&T Experience using Leading-Edge Learning Additions and Realities (STELLAR) | Science and Technology Information Institute (STII) |
| 246 | Strengthening the Core | Science and Technology Information Institute (STII) |
| 247 | The DOST Media Awards | Science and Technology Information Institute (STII) |
| 248 | Diwata - 1: Interactive Exhibit at Museo Pambata | Museo Pambata |
| 249 | Intensified Promotion of FPRDI - developed Technologies and Service | Forest Products Research and Development Institute (FPRDI) |
| 250 | Development and Application of Isotope and Elemental Provenance-Based Methodologies for Authenticity Testing of Vinegar, Soy Sauce, and other Major Condiments in the Philippines | Philippine Nuclear Research Institute (PNRI) |
| 251 | Portable Potable Water Equipment During Emergencies (PWEDE) | UP Diliman |
| 252 | e-Asia JRP: Development of Functional Nanocarbon-Based Catalysts for Biomass Conversion Processes | De La Salle University |
| 253 | Development, Characterization and Performance Evaluation of Polymeric Separation Membrane for Industrial Applications using Local Materials (Phase 1) | Industrial Technology Development Institute (ITDI) |
| | <i>TiO₂ based Nanomaterials and Nanocomposites as Photoelectrocatalysts for the Removal and Sensing of Synergistic and Organic Pollutants</i> | |
| 254 | Project 1: Preparation of Imprinted poly(phenylenediamine)/poly(thiophene)-TiO ₂ Nanoparticle Functionalized Electrodes for the Photoelectrochemical Sensing of Organophosphorus Pesticides | UP Diliman |
| 255 | Project 2: Synthesis of TiO ₂ -Conducting Polymer Nanospheres for the Photocatalytic and Photoelectrocatalytic Degradation of Organic Pollutants | UP Diliman |
| 256 | Project 3: Preparation and Properties of Transition Metal- and Nitrogen-Doped Titania Photocatalysts by Hydrothermal Methods | UP Diliman |

| | Project Title | Implementing Agency |
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| 257 | Efficacy of copper-based hollow kapok fiber nanocomposite for environmental purification | UP Diliman |
| 258 | Production of Nanocellulose from Indigenous Natural Fibers and Agricultural Wastes | Ateneo De Manila University |
| 259 | ANEEME: Synthesizing and Sharing Animation Building Blocks for Rapid creation of 3D Motion Scenes | UP Diliman |
| 260 | Capability Building in Artificial Intelligence through Training and Acquisition of High Performance Computing Device | Philippine Council for Industry, Energy and Emerging Technology Research and Development (PCIEERD) |
| 261 | Development of Interactive Software and Teaching Guides for Grades 7-10 Mathematics | Ateneo De Manila University |
| 262 | Project Tick-Tock Tech Talk | UP Diliman |
| 263 | Cartography of Old Informs the New (COIN) | UP Diliman |
| 264 | PNRI Graduate Student Research Grant Program | Philippine Nuclear Research Institute (PNRI) |
| 265 | Detection and Identification of Legitimate Public Utility Vehicles (PUVs) Along various road netWorks (DILAW) | UP Diliman |
| 266 | Modification of Road Train Energy Storage System Using Lithium Ion Batteries | Metals Industry Research and Development Center (MIRDC) |
| 267 | Development of a Commercial Prototype Automated Guide-way Transit System in UP Diliman | Metals Industry Research and Development Center (MIRDC) |
| 268 | Development and Improvement of a Novel Rain Acoustic Sensor | Ateneo de Manila University |
| 269 | Regional Scales of Variability in Precipitation (RSVP) | UP Diliman |
| 270 | Utilization of Industrial By-product Currimao Steel Slag as Green Concrete - ICIEERD | Mariano Marcos State University (MMSU) |
| 271 | Development of a Compact Wastewater Treatment System Enhanced with Bio-augmentation Technology for Quick Service Restaurants (QSRs) | Industrial Development Institute (ITDI) |
| 272 | Tempo-spatial Distribution and Transboundary Transport of Atmospheric Fine Particles across Bashi Channel, Taiwan and South China Sea | UP Diliman |
| 273 | Field Testing of Eco-Friendly Septic System (Eco-Sep) for the Tourism Sector in Siargao Island, Surigao del Norte (Project FRESH) | DOST CARAGA |
| 274 | Tailings - Cement Bricks Reinforced with Coco Fiber - CSU | Surigao State College of Technology-Del Carmen |
| 275 | Product Development of Talisay Nut Delights | Surigao State College of Technology-Del Carmen |
| 276 | Archimedean Screw Micro Hydropower System for Small Scale Industry Application | Surigao State College of Technology-Del Carmen |

| | Project Title | Implementing Agency |
|-----|---|---|
| 277 | Radiation-induced Grafting of Non-woven Fabrics for Wastewater Treatment to Meet Class C Effluent Heavy Metal Standards | Industrial Development Institute (ITDI) and Manly Plastic Inc., |
| 278 | Dried Cassava Grates Processing and System Optimization | Visayas State University (VSU) |
| 279 | Harmonization of Food Safety Training Modules for Food Manufacturing | DOST Region IV-A |
| 280 | Design and Optimization of Austenitic Manganese Steel Liner for Philippine Aggregate and Mineral Processing | Metals Industry Research and Development Center (MIRDC) |
| 281 | Exploratory Characterization of Scandium and Rare Earth Elements in Palawan, Zambales and Surigao del Sur Nickeliferous Laterite Deposits | UP Diliman |
| 282 | Design, Fabrication and Performance Evaluation of Black Sand | Isabela State University (ISU) |
| 283 | Research and Development Project to Rehabilitate and Enhance Productivity in Lahar and Ash-Laden Areas in Central Luzon | Central Luzon State University (CLSU) |
| 284 | Pilot Testing and Technology Validation of NanoZeolite Processes | Industrial Development Institute (ITDI) |
| 285 | Establishment of BatStateU Center for Technopreneurship and Innovation (Technology Business Incubation) | Batangas State University (BatStateU) |
| 286 | Innovation Hub: Diliman | UP Diliman |
| 287 | Capacity Building, Community Outreach and Diffusion of DOST-PCIEERD Supported Food Technologies through ENTREPRENEURSHIP at the University of Caloocan City | University of Caloocan City |
| 288 | IP Management (From Disclosure to Strategy) of DOST-PCIEERD Projects | UP Diliman |
| 289 | Commercial Evaluation and Product Design of Eight nanotechnology Products of UPLB | UP Los Baños |
| 290 | Technology Piloting of the FPRDI Flattening Equipment | Forest Products Research and Development Institute (FPRDI) |
| 291 | Bio-Oil Production from Agricultural Waste | UP Los Baños |
| 292 | Science on the Move: A Travelling Science Centrum for Region XII and ARMM | Philippine Foundation for Science and Technology (PFST) |
| 293 | Mobile Application Venture Capital Competition | DOST Region VII |
| 294 | Monitoring and Evaluation of Batch II Complementary Food Technology Adaptors | Food and Nutrition Research Institute (FNRI) |
| 295 | Establishment of the AIM-Dado Banatao Incubator | Asian Institute of Management (AIM) |
| 296 | Development, Testing, and Market Validation of an Industrial Grade Prototype of Smart Surface | UP Diliman |
| 297 | Strategic Communication Approaches to Boost the Philippine Textile Research Institute Promotions | Philippine Textile Research Institute (PTRI) |

List of Projects Completed with Peer-reviewed journals, Presented in National and/or International Conferences

1. Design and Development of Aerial Mapping and Imaging Systems and Standards
2. Design, Fabrication, and Evaluation of Monitoring and Sampling Devices for Particulate Matter
3. Project e-Bayanihan: A Nationwide Web - Mobile Based System for Participatory Disaster Management
BAYANIHANETS: Building Robust and Sustainable Cooperative Community Networks
4. Project 1. Development of a Multipath Transport Protocol for Cooperative Community Networks
5. Project 2. ARC: An Application Framework for Robust Communications Transport over Community Networks
6. Project 3. Development of Routing Metrics for High Throughput and Congestion Free Routing over Wireless Community Mesh Networks
Chemical Sensors for Mine Site Monitoring
7. Project 1. Mapping of Heavy Metal Contamination in the Philippine Mining Soils Using Laser-induced Breakdown Spectroscopy (LIBS) Field Sensors
8. Project 2. Optical Sensors for the Determination of Zn and Cu in Ambient Water
9. Project 3. Gaseous Elemental Mercury Sensors for Atmospheric Monitoring
10. Project 4. Integrated Sensing System Using Mobile and Cloud Technologies for Mining and Nearby Communities
11. Project 5. Data Integration and Visualization of Sensor Output for Mine Site Monitoring
CRAVAT - Coral Reef Assessment and Visualization Advanced Tools
12. Project 1. FISHDROP 360: Development Tools for Improved Monitoring of Reef Fish Communities
13. Project 2. Teardrop Upgrade
14. Project 3. Integration of ARRAS and CRAVAT Tools
15. Developing Capabilities for Biophysics Research at the University of San Carlos
Development and Deployment of Early Warning System for Deep-Seated Catastrophic Landslides
16. SENSLOPE: Development and Deployment of Landslide Sensors and Data Communication System
Development of Nanosensors and Nanostructured Materials from Agricultural By-products for Enhancement of Food and Agricultural Productivity and for Environmental Sensing and Remediation
17. Project 1. Removal of Arsenic from Contaminated Water using Modified Biopolymer-Silica Nanocomposite Materials
18. Project 2. Detection and Analysis of Arsenic in Contaminated Water
19. Project 4. Development of a Zinc Oxide Thin Film for Gas Sensing
20. Project 5. Development of a Controlled Release Nanoencapsulated Plant Growth Regulators from Locally Isolated Plant Growth Promoting Bacteria (PGPB) for High Value Crops Production
21. Project 6. Optimization and Bench-scale Preparation of a hemicellulose-chitosan/tripolyphosphate (polyphosphate) Nanocomposite coating and its Use in the Post-Harvest life extension of papaya (*Carica papaya L.*) fruits
22. Project 7. Development of Pectin-collagen/nanocellulose Biocomposite coatings from mango peel and Nata De coco for the postharvest-life extension of mango (*Mangifera indica L. cv Carabao*) and bell pepper (*Capsicum annum*) fruits
23. Project 8. Nanotechnology for the Philippines forest products industry: Cellulosic Nanocrystals from selected Philippine bamboo species
24. Project 9. Characterization and performance analysis of nanosilica powder incorporated in biodegradable film based on cassava starch for food packaging applications
25. Pilot Scale Production of Nanoencapsulated Plant Growth Regulators for the Production of High Value Crops

Development of Nanosensors and Nanostructured Materials from Agricultural By-products for Enhancement of Food and Agricultural Productivity and for Environmental Sensing and Remediation – Phase 2

26. Project 3. Bench-scale Production of Hand-held Nanosensors for Methane Using Zinc Oxide Film
27. Project 4. Bench-Scaling of the Production of Cellulosic Nanocrystals from Kawayang-tinik (*Bambusa blumeana*) and Its Utilization for Renewable Nanomaterials
28. Project 5. Production of Nanosilica from Rice Hulls and Rice Hull Ash and Bench Scale Verification of the Production of Biodegradable Packaging Using Cassava Starch-RHA Nanosilica
29. Hemicellulose Extraction, Process Development and Toxicological Evaluation of a Hemicellulose-chitosan/tripolyphosphate (polyphosphate) Nanocomposite Coating for the Postharvest-life Extension of Papaya (*Carica papaya* L.) Fruits

Development of National Standards for Chemical Measurements

30. Project 1. Interlaboratory Comparisons of Additives and Contaminants in Foods
31. Project 2. Production of Secondary Certified Reference Materials and Provision of Proficiency Tests for Metals in Water (Elemental Water Solutions)

Development of Philippine Scientific Earth Observation Microsatellite (PHL-MICROSAT)

32. Project 4. Calibration and Validation of Remote Sensing Instruments for PHL.MICROSAT
33. Development of Plasma Technology for the Sterilization of Food Products, Packaging, and Contract Surfaces in Food Processing

DOST Nationwide Operational Assessment of Hazards

34. Disaster Management using Web-GIS
35. Enhancing Philippine Landslide hazard maps with LIDAR and High-resolution Imageries
36. System to identify, Quantify and Map the Storm Surge Threat to Philippine Coasts
37. Weather Information Integration for System Enhancement

Enhancement of Biotechnology Products and Services for Food, Feed and other Agro-Industrial Applications

38. Sub Program 2. Project 1. Development of Probiotic Starter Cultures and Adoption of Technology for Functional Food
39. Sub Program 3. Project 1. Improvement and Commercialization of Microbial-based Fertilizers and Plant Growth Promoters
40. Development of Oyster Powder for Use as Ingredient and Condiment

Fuel Ethanol Production from Lignocellulosic Feedstocks

41. Project 4. Optimization of Saccharification, Fermentation and Purification processes for Pilot Scale Ethanol Production from Lignocellulosic Materials
42. Program for Computer Literacy (ComLit)

Interdisciplinary Signal Processing for Pinoys (ISIP Program)

43. Project 6. Philippine Languages Database for Mother Tongue-Based Multilingual Education and Applications

Intelligent Transport Systems (ITS)

44. Contactless Apprehension of Traffic Violators on 24-Hour Basis and All-Vehicle Detection System (CATCH-ALL)
45. Advanced Traffic & Pollution Monitoring and Analysis System Based on GPS Trajectory Data, Air Quality Data and Engine Status Data collected from Taxis in Metro Manila (ATPMS)
46. Development of a Customized Local Traffic Simulator (LOCALSIM)
47. An Integrated and Optimal Scheduling of a Public Transport System in Metro Manila (PUBFix)
48. Prototyping of a Diesel-Electric Parallel-Series Hybrid Vehicle for Public Transportation
49. Production, Characterization and Application of Red Pigment Produced by *Monascus purpureus* M1018

Mineral Extraction with Responsibility for Sustainability (MinERS)

50. Project A. Non-Hazardous Methods of Gold Extraction for Philippine Small-Scale Mining Applications

51. Project C. Optimizing the Effectivity of Coco-peat Filter Bed in Field Applications
52. Project E. Nanofiber Membrane Adsorption for Third Level Waste Water Treatment Method for Small Scale Mining Operations
53. Project G. The Gold and Copper Chase: Life Cycle Analysis of Sustainable Small-Scale Production System
54. Development and Deployment of Adaptive, Interactive, SMS-Based Modules for English
55. Stealth Assessment of Student Conscientiousness, Cognitive-affective States, and Learning using and Educational Game for Physics
Nanostructured Solar Energy Devices
56. Project 3. GaAs-based Solar Cell Devices
57. Project 4. Modification of Graphene for Nanostructured Photovoltaic Cells
58. Experimental Studies on Thermophysical and Transport Properties Characterization of Industrially Important Solvent System and Process Simulation Studies of Post-Combustion Capture of CO₂ and H₂S using Aqueous Single and Blended Alkanolamine Solutions
National R&D Program for Natural Rubber Processing and Rubber Products Manufacturing
59. Project 2. Optimization and Improvement of Process in the Production of Technically Specified Rubber and Demonstration of Improved Facilities in Zamboanga Peninsula
60. Project 3. Enhancing and Increasing Local Content in Rubber for Motorcycle Tire Application
61. National Space Promotion, Advancement and Capability Expansion (SPACE) Development Program
Phil - LiDAR 1.2. LiDAR Data Processing and Validation by HEIs
62. Project 1.B.1 LIDAR Data Processing and Validation in Luzon: CAR and Selected Sites in Region 1
63. Project 1.B.2 LIDAR Data Processing and Validation in Luzon: Northeastern Luzon
64. Project 1.B.3 LIDAR Data Processing and Validation in Luzon: Region 3 and Pangasinan (Region 1)
65. Project 1.B.4 LIDAR Data Processing and Validation in Luzon: MIMAROPA and Laguna (Region 4)
66. Project 1.B.5 LIDAR Data Processing and Validation in Luzon: CABARZON (Region 4A except Laguna)
67. Project 1.B.6 LIDAR Data Processing and Validation in Luzon: Bicol (Region 5)
68. Project 1.B.7 LIDAR Data Processing and Validation in Visayas: Western Visayas (Region 6)
69. Project 1.B.8 LIDAR Data Processing and Validation in Visayas: Central Visayas (Region 7)
70. Project 1.B.11 LIDAR Data Processing and Validation in Mindanao: Regions 10, 12, and ARMM
71. Project 1.B.12 LIDAR Data Processing and Validation in Mindanao: Selected Sites in Northern Mindanao (Region 10) and 11
72. Project 1.B.13 LIDAR Data Processing and Validation in Mindanao: Davao Region / Southern Mindanao (Region 11)
73. Project 1.B.14 LIDAR Data Processing and Validation in Mindanao: CARAGA Region (Region 13)
PHIL LIDAR 2.1 Automation of Feature Extraction from LIDAR Data for the Nationwide Detailed Resources Assessment
74. Project 2.A.1 Agricultural Resources Extraction from LIDAR Surveys
75. Project 2.A.2 Aquatic Resources Extraction from LIDAR Surveys
76. Project 2.A.3 Forest Resource Extraction from LIDAR Surveys (FRExLS)
77. Project 2.A.4 Development of the Philippine Hydrologic Dataset (PHD) for Watersheds from LIDAR Surveys
78. Project 2.A.5 Philippine Renewable Energy Resources Mapping from LIDAR Surveys
PHIL LIDAR 2.2 LiDAR Data Processing, Modeling and Validation by HEIs for the Nationwide Detailed Resource Assessment
79. Project 2.B.1 LIDAR Data Processing, Modeling and Validation by HEIs for the Detailed Resource Assessment in Northern Luzon (Region 1)
80. Project 2.B.2 LIDAR Data Processing, Modeling and Validation by HEIs for the Detailed Resource Assessment in Luzon: Region 2 and Abulog River Basin in Region 1

81. Project 2.B.3 LIDAR Data Processing, Modeling and Validation by HEIs for the Detailed Resource Assessment in Luzon: Region 3 and Pangasinan
 82. Project 2.B.4 LIDAR Data Processing, Modeling and Validation by HEIs for the Detailed Resource Assessment in Luzon: MIMAROPA and Laguna (Region 4)
 83. Project 2.B.5 LIDAR Data Processing, Modeling and Validation by HEIs for the Detailed Resource Assessment in Luzon: CABARZON (Region 4A except Laguna)
 84. Project 2.B.6 LIDAR Data Processing, Modeling and Validation by HEIs for the Detailed Resource Assessment in Luzon: Bicol (Region 5)
 85. Project 2.B.7 LIDAR Data Processing, Modeling and Validation by HEIs for the Detailed Resource Assessment in Western Visayas (Region 6)
 86. Project 2.B.8 LIDAR Data Processing, Modeling and Validation by HEIs for the Detailed Resource Assessment in Central Visayas (Region 7)
 87. Project 2.B.9 LIDAR Data Processing, Modeling and Validation by HEIs for the Detailed Resource Assessment in Eastern Visayas (Region 8)
 88. Project 2.B.10 LIDAR Data Processing, Modeling and Validation by HEIs for the Detailed Resources Assessment in Zamboanga Peninsula (Region 9)
 89. Project 2.B.11 LIDAR Data Processing, Modeling and Validation by HEIs for the Detailed Resources Assessment in Northern Mindanao (Region 10)
 90. Project 2.B.12 LiDAR Data Processing, Modeling and Validation by HEIs for the Detailed Resource Assessment in Selected Sites in Region 10 and ARMM
 91. Project 2.B.13 LIDAR Data Processing, Modeling and Validation by HEIs for the Detailed Resource Assessment in Davao Region / Southern Mindanao (Region 11), South Cotabato and Sarangani
 92. Project 2.B.14 LIDAR Data Processing, Modeling and Validation by HEIs for the Detailed Resources Assessment in Mindanao: CARAGA Region (Region 13)
- Program for Rehabilitation and Restoration of Mined-Out Areas through Phytotechnologies*
93. Conservation of Native Metallophytes, Phytochemistry of Nickel Hyperaccumulators and Phytostabilization and Restoration of Mined-out Areas in Palawan, Surigao and Zambales
 94. Metal Bio-Indicator Plant Species of the Philippines
 95. Copper and Arsenic Recovery as a Post Mining Activity Using Indigenous Plant Hyperaccumulators
96. ROGER- Robust and Rapidly Deployable GSM Base Stations and Backhaul for Emergency Response
- Sensors for Agricultural and Fishery Ecosystems and Harvests Safety (SAFEHarvestS)*
97. Project 1. Development of Portable Surface Plasmon Resonance MIP-based Sensor for Detection of Histamine in Shrimps
 98. Project 3. Development of Potentiometric-MIP Test Kit for the Detection of Clenbuterol in Meat
 99. Project 4. Development of Electrochemical Sensor Platform for Meat and Fish Freshness Monitoring
 100. Project 6. Molecularly Imprinted Polymer Modified-Carbon Paste Electrodes (MIP-CPEs) as Multi-analyte Sensor for the Detection of Organophosphorus Pesticides Chlorpyrifos and Fenitrothion and Triazine Herbicide Atrazine
- Smart Grid Technology for Filipino Household*
101. Project 1. Design and Development of a Smart Home Platform
 102. Project 2. Design and Development of an Advanced Metering Infrastructure (AMI) Emulator Platform
 103. Project 3. Prepaid Metering and Smart Home System: Technology Acceptance and Technology Features Studies
- SmartWire Program*
104. Project 1. Energy Efficient Data Acquisition and Conditioning for the SmartWire Sensor Node Project
 105. Project 3. Energy Ultra-Low Power Computation and Communication for the SmartWire Sensor Node Project
 106. Project 4. Resilient Data Transport

107. Tactical Operative Amphibious Drive (T.O.A.D.)
108. Rainfall Spatial Analysis in Butuan City Using GIS
109. Design and Development of a Local Microwave Vacuum Dryer (MVD)
110. Simulation and Evaluation of an AGT System Passenger Stations - Phase 2
111. Performance Testing of Five-Coach Centrally Powered Hybrid Electric Road Trains for Local Applications - Phase 2
Technological Support for the Upgrading of the Local Cacao and Cocoa Industry
112. Project 1. Improving the Quality of Solid Cocoa Liquor Including Molded Cocoa Nibs and Developing the Capability of Small Scale Processors in the Manufacture of Intermediate Cocoa Products
113. Project 4. Design and Fabrication of Equipment for the Production of Local Cocoa Products
114. Voices of Yolanda: Narratives of Risk and Coping Among Survivors of Typhoon Yolanda in Tacloban City, Guiuan Eastern Samar and San Francisco, Cebu
115. 3-D Gestures on 2-D Screen for User Interface
116. A Graphene-Based Electrochemical Supercapacitor for Solar Cells
117. Black Sand Mineral Characterization
118. Deployment and Field Testing of Eco-friendly Septic System (Eco-Sep) in Boracay Island Phase II
119. Design and Implementation of a Power Distribution System for Data Centers
Program for Responsible Mining
120. Project 3. Alternative Technology for Processing of Chromite and Laterite Ores: Crude Fe-Ni-Cr Alloy Production
121. Project 5. ICT Support for Responsible Mining (Use of GIS, Data Mining and DSS for Analysis of Mining Areas in Mindanao)
122. Project 6. Rehabilitation of Areas Affected by Nickel Mining in Surigao Provinces Towards Eco-Restoration
123. Development of a Dipstick Assay Format for Detection of Salmonella in Food and Feeds
124. Development of Wireless Sensory Network System for Structural Integrity Monitoring of Bridges (SMART BRIDGE)
125. Drought and Crop Assessment and Forecasting (DCAF)
126. Establishment of Centralized Facility of Ultra High Temperature/High Temperature Short time Pasteurizer for Milk, Coconut Water and Other Juices
127. Fabrication of Supercapacitors Using Indigenous Textiles as Electrode Materials
128. Fabrication of a Solid-State Rechargeable Li-ion Battery Using Li₇La₃Zr₂O₁₂ as Solid Electrolyte for Energy Storage Applications
129. Geophysical characterization of an overriding plate: Arc-continent convergence and its implications for natural hazards and resource distribution in the Central Philippine
130. Gitara ni Juan: Development of Prototype Design and Standardization of the Guitar-making Process for Quality Classical Guitars Using selected Philippine Woods
131. Linking active margin tectonics and overriding plate dynamics: A look at the geochemical nature of the Central Philippines
132. Synthesis and Characterization of Novel Metal Nanoparticle-doped Electroactive Polymer Materials and Their Possible Application for Gas Sensing
133. Nanostructured Electrocatalyst Composites for Direct Ethanol Fuel Cell: Preparation, Characterization and Performance Evaluation
134. Nanostructured Electrocatalysts Based on Graphene-support Nanoparticles Towards Direct Ethanol Fuel Cell Application
135. Optimization, Bench-scale Preparation and Toxicological Evaluation of Pectin-Gelatin/Nanocellulose Biocomposite Coatings from Mango Peel and Nata de Coco for the Postharvest-Life Extension of Mango (*Mangifera indica* L. cv Carabao) and Bell Pepper (*Capsicum annum* L.) Fruits
136. Pilot Scale Standardization of Product and Processes using Drum Drying Technology on Selected Raw Materials (Mango, Banana and Makapuno)
137. Piloting and Market Validation of the UP Technologies on Rapid Electric Vehicle Charging or CharM (Charging in Minutes) in Cauayan City, Isabela for Progressive SMARTER City

138. Polymer Electrolyte Systems Based on Carrageenan for Solid State Dye Sensitized Solar Cell
139. Radiation-induced grafting of nonwoven fabrics for waste water treatment to meet Class C effluent heavy metal standards
140. Rapid Electric Vehicle Charging Station (CharM)
141. Retracing the Central Philippine Overriding plate motion
142. Field Deployment of Telemedicine Devices
143. Support to the Commercialization of 500 DOST-Generated Technologies (CYs 2015-2017):
Creation of an IP Database Management System and Provision of Initial Support to the Fairness Opinion Board for 12 DOST-Generated Technologies - Phase I
144. Synthesis and Application of Novel Nano-Scale Photocatalysts with Different Dopants for the Treatment of A) Dimethyl Sulfoxide, B) Chlorophenols in Aqueous Solutions and C) Gaseous Formaldehyde
145. Synthesis of Metal Nanowires and their Application in Foldable Transparent Conducting Electrode
146. Synthesis, Morphology and Chemical Modification of Fullerene-Based Nanomaterials for Nano-engineered Structural Materials and Optoelectronic Applications
147. Technology Generation for the Production of Multi-Nutrient Extruded Rice Kernel (MNERK) to Address Malnutrition
148. The Geology of an overriding plate: Constraints from field geology, sediment geochemistry and paleontology
149. Tidal Current Energy Integrated Resource Assessment and Spatial Planning Tool
150. Trace and Rare Earth Element Geochemistry of Selected Porphyry-Epithermal Cu-Au Deposits in the Philippines

PCIEERD Research Priorities in the Harmonized National R&D Agenda (HNRDA)

| | PCIEERD Research Areas | With New/Ongoing Projects |
|---|---|----------------------------------|
| 1 | Food and Nutrition Security | X |
| 2 | Countryside Development | X |
| 3 | Competitive Industries | X |
| 4 | Delivery of Social Services | X |
| 5 | Intelligent Transportation Solutions | X |
| 6 | Renewable Energy and Energy Storage Solutions | X |
| 7 | Human Security | X |

Partnerships with Public and Private Stakeholders and International Organizations

1. Adventist University of the Philippines (AUP)
2. Aklan State University (ASU)
3. Asian Institute of Management (AIM)
4. Ateneo de Davao University (ADDU)
5. Ateneo de Manila University (ADMU)
6. Ateneo de Zamboanga University (ADZU)
7. Bataan Peninsula State University (BPSU)
8. Batangas State University (BatStateU)
9. Bicol State University
10. Bicol University
11. Cagayan State University (CSU)
12. Camarines Sur Polytechnic Colleges (CSPC)
13. Caraga State University (CarSU)
14. Cavite State University (CavSU)
15. Central Luzon State University (CLSU)
16. Central Mindanao University (CMU)
17. Central Philippines University (CPU)
18. Cropital Enterprises Corporation
19. De La Salle University (DLSU)
20. De La Salle University (DLSU) - Science and Technology Complex (STC)
21. De La Salle Araneta University
22. Development Academy of the Philippines (DAP)
23. Don Mariano Marcos Memorial State University (DMMMSU)
24. FEATI University
25. Food Development Center – National Food Authority
26. Futuristic Aviation and Maritime Enterprise, Inc. (FAME)
27. Genii Hut Technologies Corporation
28. Grayscale Marketing Consultancy
29. Hiraya Technology Solutions, Inc.
30. Holy Angel University
31. Ideospace Foundation Inc.
32. Isabela State University (ISU)
33. Kinovette Scientific Solutions Co.
34. Machibox Inc.
35. Malayan Colleges Laguna (MCL)
36. Manila Observatory
37. Manly Plastics Inc.
38. Mapua Institute of Technology (MIT)
39. Mariano Marcos State University (MMSU)
40. Marinduque State College
41. MATA VR
42. Micabsystems Corp.
43. Mindanao Autonomous College Foundation, Inc. (MACFI)
44. Mindanao State University - Iligan Institute of Technology (MSU-IIT)
45. Department of Environment and Natural Resources - Mines and Geosciences Bureau (DENR - MGB)
46. MOOCSX PH
47. Museo Pambata
48. Northwest Samar State University (NwSSU)
49. Pampanga State Agricultural University (PSAU)
50. Pangasinan State University - Bayambang
51. Philippine Foundation for Science and Technology (PFST)
52. Polytechnic University of the Philippines (PUP)

53. RestoGraph, Inc.
54. Rurok Industries
55. Senti Techlabs Inc.
56. Southern Leyte State University (SLSU)
57. Sultan Kudarat State University (SKSU)
58. Surigao State College of Technology-Del Carmen
59. Tekno Logika Pilipinas, Inc.
60. Tekton Geometrix Inc.
61. ToonCity Academy
62. University of Asia and the Pacific (UA&P)
63. University of Caloocan City
64. University of Cordilleras
65. University of San Carlos (USC)
66. University of San Jose Recoletos (USJ-R)
67. University of Santo Tomas (UST)
68. University of Southern Mindanao (USM)
69. UP Baguio
70. UP Cebu
71. UP Diliman
72. UP Los Baños
73. UP Mindanao
74. UP Open University (UPOU)
75. Visayas State University
76. WattSmart Philippines Corp.
77. Wela School System
78. Wesleyan University of the Philippines
79. Western Mindanao State University (WMSU)
80. Western Philippines University (WPU)
81. Department of Energy (DOE)
82. Department of Public Works and Highway (DPWH)
83. Mindanao Development Authority (MinDA)
84. Maritime Industry Authority (MARINA)
85. Department of Budget and Management (DBM)
86. National Security Council (NSC)
87. National Water Resources Board (NWRB)
88. Department of National Defense (DND)
89. National Irrigation Administration (NIA)
90. Kyushu Institute of Technology (Kyutech)
91. Tohoku University
92. Hokkaido University
93. Revolution Precrafted
94. Newton Agham
95. Research Councils UK
96. e-Asia Program
97. Wave Computing
98. Philippine Advanced Technological Research and Development for Internet of Things (PATRIOT) Consortium