UP RESEARCHES ON DISASTER RISK REDUCTION AND MANAGEMENT, 2008-2011

COMPILED BY THE

OFFICE OF THE VICE-CHANCELLOR FOR RESEARCH AND DEVELOPMENT

UP DILIMAN

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This compilation is a **preliminary inventory** of all researches on disaster risk management and climate change that have been, or are being, conducted in the University of the Philippines System from 2008 until January 2012. These researches include bo th University- and externally-funded projects. The inventory, therefore, covers UP-funded, UP-managed, and UP-led researches. In all, 328 such researches are listed in this inventory; however, the list is by no means comprehensive yet.

The inventory is organized around the disaster risk management framework of the National Disaster Risk Reduction and Management Council (NDRRMC), which identifies four aspects of disaster risk reduction and management (DRRM): 1) Prevention and Mitigation, 2) Preparedness, 3) Response, and 4) Rehabilitation and Recovery. (Please click here to read about the National Disaster Risk Reduction and Management Framework.) The researches are, therefore, grouped according to which aspect/s of DRRM they address.

In several instances, the classification of the researches according to the DRRM aspect/s they address was based solely on January 30 Symposium, it was not possible to retrieve copies of the proposals (for ongoing researches) or full reports (for completed researchers). The UPD-OVCRD therefore invites the researchers listed herein to submit corrections on the entries, as well as send other feedback that would help improve the inventory. Researchers, if they so wish, could also send copies of the full research report to the UPD-OVCRD.

The data for this inventory came from the lists submitted by the constituent units to, and collated by, the UP-CIDS. As such, those researches that were not submitted are understandably not included in this inventory yet. Since this inventory is still **a work in progress,** researchers who are not yet in the inventory are invited to submit their list of research projects for 2008-2012 to the UP-OVCRD together with a brief description of each one and, if possible, a copy of the full research report and/or publication.

Please address all communication to the UPD-OVCRD's Research Dissemination and Utilization Office at rduo.ovcrd@up.edu.ph.

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218. SANTOS Primitivo Jose. Promoting SNAP Hydroponics as a Sustainable Food Production System for Urban Areas
219. SEVILLA Cesar. Assessment of the Direct and Indirect Effects of Climatic Changes in Local Dairy Production
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221. SIASON Ida, SUBADE Rodelio. Ecosystem Services for Poverty Alleviation: Marine and Coastal Situational Analysis
222. SINOGAYA J.R., GALAPATE R.P. Assessment of Air Quality as Initiative for Climate Change Mitigation in Metro Cebu
223. SIRINGAN Fernando, DAVID Laura, ALAMPAY Alyssa. Ecology and Oceanography of Harmful Algal Blooms in the Philippines Project 5: Eutrophication, Climate, and Algal Blooms (HABS Phase III)
224. SUBADE Rodelio, Jianjun Jin, Anabeth Indab, Orapan Nabangchang, Truong Dang Thuy, Dieldre Harder. Valuing Marine Turtle Conservation: A Cross-country Study in Asian Cities

225. SUBADE Rodelio. Fishers Participation in Environmental Monitoring: The Case of Coral Reef Monitoring in Tingloy, Batangas.
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228. TABIOS Guillermo III. Assessment of Flood Forecasting and Warning System for Tropical Regions (Philippines Country Study)
229. TABIOS Guillermo III. Enhancement, Incorporation of Optimization Module and Calibration of MWSI Water Distribution Network Model
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231. TABIOS Guillermo III. Two-dimensional Hydraulic Model with Mobile Bed for Dam-break Problems
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239. TINGATINGA Eric Augustus. Three-Dimensional Seismic Collapse Analysis if Wooden Houses Using Rigid Body-Spring Method
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246. VALDEZ Adrian Roy, BASILLA Julius, SORIANO Jaymar. Flood Simulator for the Philippines
247. VILLANOY Cesar. Modelling for Prediction and Mitigation of Specific Harmful Algal Bloom
248. VILLANOY Cesar. Hydrodynamic Characterization and Oil Spill Dispersal Patterns in Guimaras Strait and Panay Gulf
249. VILLANOY Cesar. Physical Oceanography of the Straits of the Philippine Archipelago
250. VILLANOY Cesar, SIRINGAN Fernando. Assessment of Coastal Dynamics in the Pamalican Island: Towards an Informed Action to Address Erosion and Coral Rehabilitation
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253. VISCO Roberto. Scaling up Organic Farming in Agroforestry: Climate Change Adaptation Strategies
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255. WAMIL Romano Antonio. Decentralizing Early Warning Information: Capacity of Horizontal Social Formations in Disaster Risk Communication
256. WAMIL Romano Antonio. Decentralizing Disaster Information: Reflections on the BRB2 Project
257. YAP Maria Helena. Conserving Biodiversity and Restoring Damaged Reefs through Community Involvement
258. YÑIGUEZ Aletta, VILLANOY Cesar, SIRINGAN Fernando, DAVID Laura. Ecology and Oceanography of Harmful Algal Blooms in the Philippines Project 7: Stratification and Algal Blooms in the Tropics
259. ZARCO Mark Albert. Continuum-Based Analysis of Failure and Deformation Slopes: A Tool for Predicting Massive Landslides
260. ZARCO Mark Albert. Regional Capacity Enhancement for Landslide Impact Mitigation (RECLAIM) Project in Baguio
261. ZARCO Mark Albert. The February 17, 2006 Ginsaugon Rockslide-Debris avalanche at Southern Leyte, Philippines Deposit Characteristics and Failure Mechanism
262. ZARCO Mark Albert. The February 17, 2006 Rock Slide-Debris Avalanche at Guinsaugon, Philippines: A Synthesis
263. ZARCO Mark Albert. Natural Hazards and Disaster Mitigation
264. ZARCO Mark Albert. Public Awareness Initiatives on Natural Disasters and the Environment through Public Lectures, Photo Archives and Various Media
265. ZARCO Mark Albert. Effects of Bentonite Slurry on the Skin Friction Capacity of Bored Piles
266. ZARCO Mark Albert. Analysis of the Bearing Capacity of Strip Footings on Horizontally Layered Clay Soils Using FLAC
267. ZARCO Mark Albert. Initial Investigation of the Manaol Rock Slide, Moises Padilla, Negros Occidental
268. ZARCO Mark Albert. Unconfined Compressive Strengths of Guinsaugon Rocks Based on Field and Laboratory Measurements
269. ZARCO Mark Albert. Mineralogical Characteristics of the Guinsaugon Landslide Gouge and Its Implications on the Failure Mechanism
270. ZARCO Mark Albert. Reconstruction and Analysis of the 17 February 2006 Guinsaugon Landslide Event Based on Geologic Evidence and Eyewitness Accounts
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272. ZARCO Mark Albert. Updated Analysis of Failure Mechanism of 17 February 2006 Rockslide-Debris
273. ZARCO Mark Albert, CATANE Sandra. DYNASLOPE: Development of Dynamical Models for Forecasting Slope Failures, Landslides and Debris Flows
274. ZARCO Mark Albert, PECKLEY Daniel, Jr., TAN Sunshine Petal. Guidelines of the Swedish Weight Sounding Test (SWST) in the Philippine Setting

PREPAREDNESS

1. ALBACEA Zita, COLLADILLA Jesusita . Design and Development of Vulnerability Assessment Tools combining scientific and indigenous knowledge for the Agricultural sector of Benguet and Ifugao; Capacity Building on the Developed Vulnerability Assessment Tool
2. ALBURO Kaira. Documenting Climate Smart Disaster Risk Management Uptake in San Francisco, Camotes
3. ALBURO Kaira. Strengthening Climate Resilience Initiatives with the Institute of Development Studies
4. ALIÑO Porfirio. Implementation of the Philippine Environmental Governance Phase II (ECOGOV2)
5. BAGADION Benjamin Jr. Forms of Private-Public Partnership for Environmental Protection in Mindanao
6. BAWAGAN Aleli. Reflections on Building Disaster Resilient Communities among the Urban Poor in Cebu City
7. CABRIDO Candido Jr. Disaster Risk Reduction: City-to-City Sharing Initiative for Developing Countries
8. CABRIDO Candido Jr. National Assessment on the State of Disaster Risk Management in the Philippines
9. CAMACHO Sofronio. Transforming Marginal Uplands into Productive Areas through Planting of Non-traditional Indigenous Biofuel and Fast-growing Species
10. CANSECO Roy Vincent, AQUINO Diocel Harold, ARANAS Romer Kristi, CABARLE Francis, GASPAY Sandy Mae, MACABABBAD Reigna Jewel Ritz, MATEO Cherry May, TANYAG Ruzette, TOLOD Kristine, VIRTUCIO Kenan Biel BAYAN-e-HAN: An Integrated Online Social Collaboration System for Disaster Risk Management Using SMS, Social Media, Geomapping Tools, and Grass Roots Involvement
11. CANUDAY Jose Jowel. Stakeholder Analysis on Diwalwal Mining Activities in Compostela Valley Province
12. CATANE Sandra. Development of an Early Warning System for Rainfall-Induced Landslides Using Sensors and Slope Models
13. CATANE Sandra. Disaster Risk Management Using Sensor Networks and Computing: Early Warning System for Landslides, Slope Failures and Debris Flows
14. DATUIN Flaudette May. Nature and Visayas-Based Artists
15. DATUIN Flaudette May. For the Birds
16. DAVID Carlos Primo. Estimating Actual Rainfall from Satellite-Based Imagery
17. DAVID Carlos Primo. Quantified Flood Forecasting through Rain Rate Estimation Using Satellite Imagery and Generalized Watershed Runoff Calculation
18. DAVID Laura. Training/Workshop on Coastal Climate Adaptation: From Vulnerability Assessment to Economic Valuation
19. DELA CRUZ Lenore, FERRER Elmer. Our Journey: Towards Building Disaster-Resilient Communities
20. DELA PAZ Cecilia. Religions Icons, Rituals, Festivals: Exploring the Cultural Dimension of Disasters in Philippine Localities
21. DELA PAZ Cecilia, DATUIN Flaudette May. Human Ecological Balance in Asia: Focus on Batanes
22. ESPALDON Ma. Victoria. Developing Spatially Explicit Tool for Monitoring and Communicating Environmental Risks around Mt. Makiling Forest Reserve
23. ESPALDON Ma. Victoria. Intervulnerability Assessment: Shifting Foci from Generic Indices to Adaptive Agents in Assessing Vulnerability to Global Environmental change 9 A Pilot Project in the Philippines)
24. ESPALDON Ma. Victoria. Development of Sectoral Climate Change Vulnerability and Impact Assessment at the Macro Level, Development of Climate Change Monitoring and Evaluation Framework/System, and Compendium of Good and Innovative Climate Change Adaptation Practices
25. ESPALDON Ma. Victoria. Assessing Vulnerabilities of Communities and Understanding Policy Implications of Adaptation Responses to Flood-related Landslides in Asia
26. ESPINA Mary Ann A. Green Walls + Green Roof: Vegetating the Building Envelope
27. FERRER Elmer. Community-Based Disaster Risk Reduction Program: The Case of San Mateo Village, Rizal, Philippines

28. FLORECE Leonardo. Assessment and Development of Marginal Lands/Grasslands for Expansion of Food Production Using Lesser-known Fruit Tree Species
29. FORMILLEZA Sammie. BDRC: Reflections on BDRC Case Study in Marinduque
30. GOMEZ Edgardo. Coral Reef Targeted Research and Capacity Building for Management
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32. LANSIGAN Felino. Environment and Climate Change: The Role of the Youth
33. LAWAS T.P., REBANCOS Carmelita, ESPALDON Ma. Victoria, MACANDOG D.M., SOBREMISANA M.J. Empowering LGUs in Disaster: Case Study of Barangay Bagong Silang, Los Baños, Laguna
34. LU Jinky. Basics of Occupational Safety and Health
35. LUNA Emmanuel. Community Education for Disaster Risk Reduction: Framework and Cases from the Philippines
36. LUNA Emmanuel. Community-Based Disaster Risk Management Program
37. LUNA Emmanuel. Community Self-Help and Partnership
38. LUNA Emmanuel. Increasing the Resilience of Communities to Hydro-Meteorological Hazards
39. LUNA Emmanuel. Participatory Capacity and Vulnerability Assessment in Rizal and Laguna Provinces
40. LUNA Emmanuel. Research on Accountability for Disaster Risk Reduction: Pathways, Tools and the Role of CSOs
41. LUNA Emmanuel. Towards Building Disaster-Resilient Communities: A Documentation of the Community-Based Early Warning System in Infanta, Quezon
42. LUNA Emmanuel. Disaster Risk Reduction in Education and Education for DRR
43. LUNA Emmanuel. Warning: Take Heed, Early Warning System Being Installed
44. MAGCURO Thelma Reflections on the Sitio Gumang Experience of Building Disaster-Resilient Communities
45. MANALILI Angelito. Journeying with SAM Ipil to Salinding: A Collective Learning Experience in Community Development
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48. PACHECO Benito. The Newly Proposed RISK MAPR2 Framework of Natural Disaster Risk Management.
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51. PAGADUAN Maureen. We Can Be Better Prepared: Individuals and Communities Practicing DRR
52. PECKLEY Daniel Jr. Development of a Non-Expert Tool for Site-Specific Evaluation of Rain-Induced Landslide Susceptibility
53. PECKLEY Daniel Jr. Practical Engineering Inputs for Community-Based Disaster Management
54. PECKLEY Daniel Jr. Enabling Communities to Become Disaster-Resilient: A DOST Initiative
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58. PEÑALBA Linda. Analysis of the Climate Change Adaptation Behavior of Households, Communities and Institutions to a Typhoon Event :the Case of Juan and Talisay, Batangas, Philippines
59. PEÑALBA Linda. Enhancing the climate change adaptation capability of local government units and scientists in the Philippines
60. PULHIN Florencia. Capacity Building on Climate Change Adaptation through Agroforestry in the Philippines
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62. PULHIN Juan. Capacity Development on Integration of Science and Local Knowledge for Climate Change Impacts and Vulnerability Assessments
63. QUICOY Cesar. Assessment of the Effects of Climate Change on Farmers and their Farming Activities in Selected Areas, Philippines
64. REBANCOS Carmelita. Framework for Assessing Climate Change Vulnerability and Adaptation of Philippine Indigenous People: The Case Alangan-Mangyans in Boco, Oriental Mindoro, Philippines
65. ROLA Agnes. Exploring Application of Rainfall-based Crop Insurance in the Philippines: A Pilot Study in Two Communities
66. SANTOS Romeo. Micro-economic and Social Constructs: Environmentally Responsible Behavior, Adaptation and Survival in Isolated Island Communities Affected by Climate Change in Manila Bay, 2011
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70. TAN Ma. Corazon. Organizational Development of Farmers' Organizations Promoting Sustainable Agriculture and Resiliency to Climate Change
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72. TOJOS Leticia. A Study on the Institutionalization of People's Involvement in Disaster Management by Local Government Units in Two Barangays in Metro Manila
73. TORRES Cleofe. Communication Strategy for Climate Change Adaptation
74. VISCO Roberto. Scaling up Organic Farming in Agroforestry: Climate Change Adaptation Strategies
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79. ZAMORA Oscar. Documentation of Indigenous Knowledge for Climate Change Adaptation
80. ZARCO Mark Albert. Regional Capacity Enhancement for Landslide Impact Mitigation (RECLAIM) Project in Baguio
81. ZARCO Mark Albert. Public Awareness Initiatives on Natural Disasters and the Environment through Public Lectures, Photo Archives and Various Media

RESPONSE

1. ABILA Sanley. The Documentation of the Aid Programs and the Aid Extended by NGOs and the Private Corporations to the Selected Municipalities of the Province of Guimaras Affected by the M/T Solar 1 Oil Spill
2. ARCALA-HALL R. Civil-Military Cooperation in International Disaster Response: The Japanese Self Defense Deployment in Aceh, Indonesia
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6. CAMPOS Maribel. Adaptation of Fishing Communities in the Philippines to the Impact of Climate Change
7. CAMPOS Maribel. Community Based Adaptation of Farmers in the Philippines to Climate Change.
8. DELA CRUZ Lenore. Participatory Review of Typhoon Parma Humanitarian Response in Cagayan, Pangasinan, Benguet, Mountain Province, Bulacan and Cavite Provinces in the Philippines
9. DOLORES Lolita. Enhancing Research Utilization of Sweet Potato Livelihood Development in Disaster-prone Communities: Project 1. Developing Capabilities of Local Institutions for Addressing Sweet Potato Production and Marketing Constraints Faced by Resource-poor Farmers in Albay and Tarlac
10. FESTIN Susan. Trust Management for Spatio-Temporal Data
11. HALL Rosalie, CULAR Anita. Civil-Military Relations in Disaster Rescue and Relief Activities: The Case of Barangay Guinsaugon, St. Bernard, Leyte
12. HALL Rosalie, LOOT Joseph Anthony, QUINTILLA Leo. Communicating Disaster Management: Documentation, Assessment of Good Practices and Reform Initiatives by Stakeholders in the Solar 1 Oil Spill in Guimaras
13. HALL Rosalie. Governance during Disasters: Intra-governmental and Non-governmental Coordination in the 2006 Guimaras Oil Spill
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19. LUNA Emmanuel. Status Report of the Leyte Landslide
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21. MARCIANO Joel Joseph. Building Cellular-Sites-on-Wheels for Rapidly Deployable and Restorable Communication Systems in Emergencies and Disasters
22. MOSCOSO Alan Dino. Oil Sensitivity Mapping of the Province of Guimaras
23. NANTES Doracie, MARTINEZ Ma. Simeona, DE VERA Rocelyn, CAPARAS Paulo, GERONIA Mart Cyrel, ILAGAN Marie Joyce, TINGIN Neil. Chronicling and Mapping the Physical and Social Components of Flood Experiences and Initiatives on Disaster Risk Reduction Management in Four Communities Affected by Tropical Storm Ondoy in 2009
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30. SABULARSE Veronica. Development of a Solid Support from Lahar for Enzyme Immobilization (High Value Solid Supports from Locally-available Materials for Enzyme Immobilization)
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REHABILITATION AND RECOVERY

1. ABILA Sanley. The Documentation of the Aid Programs and the Aid Extended by NGOs and the Private Corporations to the Selected Municipalities of the Province of Guimaras Affected by the M/T Solar 1 Oil Spill
2. BAWAGAN Aleli. Communities Rising from the Mud and Landslides
3. CABRIDO Candido Jr. National Assessment on the State of Disaster Risk Management in the Philippines
4. DELA CRUZ Lenore. Participatory Review of Typhoon Parma Humanitarian Response in Cagayan, Pangasinan, Benguet, Mountain Province, Bulacan and Cavite Provinces in the Philippines
5. DIMZON Francis, YUNGUE Nestor, AGUILAR Glenn. Critical Catalytic Activities and Services to Support Mitigation, Assessment and Research towards Sustainable and Effective Restoration of the Damaged Marine Environment
6. DOLORES Lolita. Enhancing research utilization of sweet potato livelihood development in disaster-prone communities: Proj. 1. Developing capabilities of local institutions for addressing sweet potato production and marketing constraints faced by resource-poor farmers in Albay and Tarlac
7. GABO Leocito. Participation in a Research on Flood Affecting Lives of Communities in CAMANAVA
8. HALL Rosalie, LOOT Joseph Anthony, QUINTILLA Leo. Communicating Disaster Management: Documentation, Assessment of Good Practices and Reform Initiatives by Stakeholders in the Solar 1 Oil Spill in Guimaras
9. HALL Rosalie. Governance during disasters: Intra-governmental and non-governmental coordination in the 2006 Guimaras oil spill
10. LIZADA Joy. Livelihood Initiatives in Response to Disasters: The Case of M/T Solar 1 Oil Spill in Guimaras (Phases 1 and 2)
11. LUNA Emmanuel. Capability Building Project for Two Communities Affected by Typhoon Ondoy in San Mateo, Rizal
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13. LUNA Emmanuel. Community Development as an Approach to Reducing Risks among Flashflood-Affected Families in Albay
14. LUNA Emmanuel. Community-Based Approach in Building Social Resilience and Post-Disaster Recovery
15. LUNA Emmanuel. Community-Based Disaster Risk Management Program
16. NANTES Doracie, MARTINEZ Ma. Simeona, DE VERA Rocelyn, CAPARAS Paulo, GERONIA Mart Cyrel, ILAGAN Marie Joyce, TINGIN Neil. Chronicling and Mapping the Physical and Social Components of Flood Experiences and Initiatives on Disaster Risk Reduction Management in Four Communities Affected by Tropical Storm Ondoy in 2009
17. NELSON Gloria. Population Displacement and Resettlement of Communities Affected by Natural Disaster
18. NELSON Gloria. Housing the Homeless: Resettlement of Natural Disaster Victims
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25. SUBADE Rodelio. Socio-Economic Monitoring of the Resiliency and Recovery of Fishers and Fishing Communities of Southern Guimaras
26. VILLANCIO Virgilio. Developing and testing a modality for rehabilitation of calamity-stricken areas

Researcher/s	ABILA Sanley
Affiliation	University of the Philippines Visayas
Title of research	The Documentation of the Aid Programs and the Aid Extended by NGOs and the Private Corporations to the Selected Municipalities of the Province of Guimaras Affected by the M/T Solar 1 Oil Spill
Brief description	This research is one of the studies under the *Monitoring and Rehabilitation Program of the UPV-Marine Biological Station,* a five-year research that looks into the impact of the oil spill that hit Guimaras in 2006 on said province's habitats and environment, aquatic organisms, fisheries and resources, livelihood and enterprises, social and health conditions, and institutional support services. The research program is a component of the UPV Oil Spill Response Program established by the UPV Office of the Chancellor in 2006.
DRRM Keyword/s	Response; Rehabilitation and Recovery
Topics	Oil spill; Disaster aid
Funding source	National government through the NDCC and its regional counterpart
Publication information	No information

Researcher/s	ALBACEA Zita, COLLADILLA Jesusita
Affiliation	University of the Philippines Los Baños
Title of research	Design and Development of Vulnerability Assessment Tools Combining Scientific and indigenous knowledge for the Agricultural Sector of Benguet and Ifugao; Capacity Building on the Developed Vulnerability Assessment Tool
Brief description	This project seeks to: (a) identify and verify local knowledge and indigenous vulnerability assessment tools for the agricultural sectors in Benguet and Ifugao; (b) design and develop a simplified science-based indigenous vulnerability assessment tool for the agricultural sectors of Benguet and Ifugao including the integration of the hazard assessment tools; (c) validate, verify, and update the DA crop loss and damage assessment procedure for the area; and (d) conduct capacity building on vulnerability assessment tools in agricultural production and some science-based strategies for climate change adaptation in Benguet and Ifugao
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Disasters in general; Technologies and tools
Funding source	FAO
Publication information	No information

Researcher/s	ALBURO Kaira
Affiliation	University of the Philippines Cebu College
Title of research	Documenting Climate Smart Disaster Risk Management Uptake in San Francisco, Camotes
Brief description	This project examines the extent to which the Disaster Risk Management program of the municipality of San Francisco is "climate smart". The study's guiding framework is the Climate Smart Disaster Risk Management (CSDRRM) approach, which "aims to simultaneously tackle changing disaster risks, enhance adaptive capacity, address poverty, exposure, vulnerability and their structural causes and promote environmentally sustainable development in a changing climate" (Mitchell & Ibrahim, 2010).
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Climate change; Program evaluation
Funding source	Plan International
Publication information	No information

Researcher/s	ALBURO Kaira
Affiliation	University of the Philippines Cebu College
Title of research	Strengthening Climate Resilience
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Climate change; Management
Funding source	No information
Publication information	No information

Researcher/s	ALIÑO Porfirio
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Promoting Good Practices in Marine Protected Areas (MPA): Mainstreaming of Climate Change Adaptive Management
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Management
Funding source	Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ)
Publication information	No information

Researcher/s	ALIÑO Porfirio
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Implementation of the Philippine Environmental Governance Phase II (ECOGOV2)
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Environmental concerns; Management
Funding source	USAID
Publication information	No information

Researcher/s	ALIÑO Porfirio, SIRINGAN Fernando
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Remote Sensing Information for Living Environments and Nationwide Tools for Sentinel Ecosystems in our Archipelagic Seas (RESILIENT SEAS) Project 8: Research and Development of Adaptive Management and Feedback Monitoring (ADAPT)
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Coastal/fishery/marine resources; Management
Funding source	DOST-PCAMRD
Publication information	No information

Researcher/s	ALIÑO Porfirio, BARIA Vanessa, DIZON Emerlinda
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Reversing Environmental Degradation in the South China Sea and the Gulf of Thailand
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Coastal/fishery/marine resources; Management
Funding source	UNEP-GEF
Publication information	None during the period 2008-2012

Researcher/s	ARCALA-HALL R.
Affiliation	University of the Philippines Visayas
Title of research	Civil military cooperation in international disaster response: the Japanese Self defense deployment in Aceh, Indonesia
Brief description	No information
DRRM Keyword/s	Response
Topics	Hydrological hazards; Stakeholder relations
Funding source	No information
Publication information	Arcala-Hall, R. (2008). Civil military cooperation in international disaster response: the Japanese Self defense deployment in Aceh, Indonesia. *Korean J. Defense Analysis*, 20(4): 383-400.

Researcher/s	ARCO Susan
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Synthesis of Ionophores with Amide, Imine and Oxa-za Moieties as Sensing Materials for Metal Ion Detection
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Chemical contaminants; Technologies and tools
Funding source	UP Diliman-NSRI
Publication information	No information

Researcher/s	AURELIO Mario
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Site Selection and Characterization of a Near-Surface Repository for Low- and Intermediate-Level Radioactive Waste in the Philippines: Constraints from Tectonics and Geologic Hazards
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Radioactive waste; Technologies and tools
Funding source	Philippine Nuclear Research Institute; IAEA
Publication information	No information

Researcher/s	AUSTRIA Benjamin
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Lessons in Sustainable Earth Resource Development
Brief description	This research aims to 1) review the energy security outlook, and responses to energy security issues, in the Philippines and 2) identify measures for coping with energy security challenges facing the country.
DRRM Keyword/s	Prevention and Mitigation
Topics	Energy security; Policy formulation
Funding source	No information
Publication information	No information

Researcher/s	AUSTRIA Jose Angelo, BUNAGAN Aldrich, MORALEJA Lemuel, TALAMPAS Marc, HERNANDEZ Jaime Jr.
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	VIBES: A Vibration-based Data Acquisition System for Structural Health Monitoring
Brief description	The main objective of the project is to design and implement a system that is capable of measuring the vibration of structures. The system comprises of an analog or digital accelerometer, a microcontroller for signal conditioning, and a graphic user interface data (GUI) for data analysis on a host computer.
DRRM Keyword/s	Prevention and Mitigation
Topics	Structural conditions; Technologies and tools
Funding source	No information
Publication information	Austria, J.A.C. et al. (2010). VIBES: A Vibration-based Data Acquisition System for Structural Health Monitoring. Proceedings of the 5th ERDT Conference: Philippine Competitiveness through ERDT, ISSN 2094-2516, September 10, 2010, Sofitel Philippine Plaza, Manila.

Researcher/s	AZANZA Rhodora, LLUISMA Arturo
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Ecology and Oceanography of Harmful Algal Blooms in the Philippines Project 2: Microbial Community (HAB Species and Associated Bacteria) Composition and Succession
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Pollution/Pollutants; Benchmarking/Profiling
Funding source	DOST-PCAMRD
Publication information	No information

Researcher/s	BAGADION Benjamin Jr.
Affiliation	University of the Philippines Mindanao
Title of research	Forms of Private-Public Partnership for Environmental Protection in Mindanao
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Environmental issues; Stakeholder relations
Funding source	No information
Publication information	No information

Researcher/s	BAGTASA Gerry
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Wavelet De-noising Applied to Cloud Height Determination from Portable Automated Lidar Data
Brief description	The portable automated lidar is a continuously operated compact Mie lidar system developed by the Center for Environmental Remote Sensing of Chiba University and Hamamatsu Photonics. Long term full-time all-weather operations allows for observation of cloud and aerosol dynamics in high spatial and temporal resolution.
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Technologies and tools
Funding source	UPD-NSRI
Publication information	Tasuo Shiina, Toshio Honda, Nobuo Takeuchi, Gerry Bagtasa, Hiroaki Kuze, Akihiro Sone & Hirofumi Kan. 2009. Temporal and spatial variation of cloud measured with a portable automated lidar. *Advances in Geosciences 10*: 19-26. Nobuo Takeuchi, Gerry Bagtasa, Nofel Lagrosas, Hiroaki Kuze, Suekazu Naito, Makoto Wada, Akihiro Sone, Hirofumi Kan & Tatsuo Shiina. 2009. Boundary layer phenomena observed by continuously operated, temporary high-resolution lidar. *Advances in Geosciences 10*: 99-114.

Researcher/s	BAGUINON Nestor
Affiliation	University of the Philippines Los Baños
Title of research	Collaborative Studies on Tropical Asian Dendrochronology: Addressing Climatology and Forest Ecology
Brief description	To develop dendrochronology lab, investigate and document tree species with annual rings, and analyze the data generated from the project to provide a better understanding of the variability and dynamic of climate across the Asian tropic.
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Technologies and tools
Funding source	No information
Publication information	No information

Researcher/s	BANTAYAN Nathaniel
Affiliation	University of the Philippines Los Baños
Title of research	Development of a Web-Enabled Environmental Geo-Information Database for Hazards Management
Brief description	This research is one of the projects under the program *Intelligent Decision Support System for Environmental Hazards Management Using GIS and Remote Sensing*, whose main objective is "to provide adequate preventive and control measures against environmental hazards" (Santos-Abon, 2009). In particular, this project is designed to make available the technologies developed for fire and land capability evaluation within a user-friendly interface through the Web. In addition, the interface will provide users with GIS thematic maps and the corresponding spatial database. Thus, queries that relate to spatial distribution, hazard-prone areas under specific conditions, mitigating measures, among others can be generated on-line. (From the Project Terminal Report)
DRRM Keyword/s	Prevention and Mitigation
Topics	Environmental hazards; Technologies and tools
Funding source	DOST-PCARRD
Publication information	Project Terminal Report submitted to funding agency

Researcher/s	BATICADOS, Abigail
Affiliation	University of the Philippines Los Baños
Title of research	Comparison of Polymerase Chain Reaction (PCR) Assay and Clinico-pathological Examination in the Diagnosis of Ehrlichia sp Infection in Canines
Brief description	A total of 125 canine samples from 18 rndomly selected municipalities of Makati City Philippines were processed for complete blood ccounts, parasite examination (BFE) and polymerase chain reaction (PCR) assay. Complete history signalment asa well as presenting signs were also determined during field collection.
DRRM Keyword/s	Prevention and Mitigation
Topics	Canine infection; Benchmarking/Profiling
Funding source	No information
Publication information	No information

Researcher/s	BAWAGAN Aleli
Affiliation	University of the Philippines Diliman – CSWCD
Title of research	Communities Rising from the Mud and Landslides
Brief description	The paper documents the efforts of residents in Gen. Nakar, Quezon to rebuild their communities after they were hit by flooding and landslides in 2004. The documentation highlights "the effects and lessons learned from a stronger cooperation established among the community people, local officials, local non-government organizations as well as international organizations in addressing needs of rebuilding communities after a disaster" (Bawagan, n.d.).
DRRM Keyword/s	Response; Rehabilitation and Recovery
Topics	Landslides; Stakeholder relations
Funding source	No information
Publication information	Bawagan, A.B. (2010). Communities Rising from the Mud and Landslides. Presented at the 2nd Asia-Pacific Regional Conference on Community Development, Oct. 20 – 22, 2010 held in SEARCA, UPLB. (Conference proceedings released in 2011)

Researcher/s	BAWAGAN Aleli
Affiliation	University of the Philippines Diliman – CSWCD
Title of research	Reflections on Building Disaster Resilient Communities among the Urban Poor in Cebu City
Brief description	This paper is one of the chapters in *Building Disaster-Resilient Communities: Stories and Lessons from the Philippines*. In this paper, the author reflects on the NGO FORGE's efforts at putting in place a participatory barangay development planning process towards building disaster-resilient communities.
DRRM Keyword/s	Preparedness
Topics	Hydro-metereological hazards; Stakeholder relations
Funding source	DFID; Christian Aid
Publication information	Bawagan, A.B. (2010). Reflections on building disaster resilient communities among the urban poor in Cebu City. In dela Cruz, L.P., Ferrer, E.M. and Pagaduan, M.C. (Eds.). *Building Disaster-Resilient Communities: Stories and Lessons from the Philippines* (pp. 120-128). Quezon City: CSWCD-UP.

Researcher/s	BLANCO Ariel
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	A Geospatial Approach to the Assessment of Terrestrial Loadings to Coastal and Lacustrine Environments: Historical and Projected Response to Climate Change
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Tools and technologies
Funding source	No information
Publication information	No information

Researcher/s	BONGOLAN Vena Pearl
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Modeling Landslide Vulnerability in the Philippines
Brief description	After unsuccessful attempts of different hazard maps to identify landslide-prone areas in the Philippines, this project aims to identify new parameters in modeling landslides in different islands of the archipelago, and test how these parameters fare in simulating the landslides that happened in the recent past.
DRRM Keyword/s	Prevention and Mitigation
Topics	Landslides; Tools and technologies
Funding source	No information
Publication information	No information

Researcher/s	BONITO Sheila
Affiliation	University of the Philippines Open University
Title of research	Emergencies and Disasters: International Perspectives
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Human health; Country experiences
Funding source	No information
Publication information	Conference/forum/workshop paper presentation

Researcher/s	BUERANO Corazon
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Serotyping of Dengue Viruses in the Philippines
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Human health/Epidemiology; Technologies and tools
Funding source	St. Luke's Medical Center
Publication information	Tan, I., M.P.S. Dimamay, C.C. Buerano, J.A.R. Alfon, C.Z. Tanig, R.R. Matias & F.F. Natividad, 2010. Development and evaluation of a fluorogenic real-time RT-PCR for the detection of dengue-3 virus. *J.Med. Virol. 82:* 2053-2063. Baclig, M.O., Gervacio, L.T.S, L.A.C. Suarez, C.C. Buerano, R.R. Matias, A. Kumatori, S. Inoue, Morita K, F.F. Natividad & F. Hasebe. 2010. Flow cytometric analysis of dengue virus-infected cells in peripheral blood. *Southeast Asian J. Trop. Med. Public Health 41*(6): 1352-1358. Tan, I., M.P.S. Dimamay, C.C. Buerano, J.A.R. Alfon, C.Z. Tanig, R.R. Matias & F.F. Natividad. 2009. Development of a Sybr green I-based real-time reverse transcriptase-PCR for dengue virus. *UPV J. Nat. Sci. 14*(1): 3-12. Buerano, C.C., F.F. Natividad, R.C. Contreras, I.N. Ibrahim, M.N. Mangada, F. Hasebe, S. Inoue, R.R. Matias & A. Igarashi. 2008. Antigen sandwich ELISA predicts RT-PCR detection of dengue virus genome in infected culture fluids of *Aedes albopictus* C6/36 cells. *Southeast Asian J. Trop. Med. Public Health 39*(5): 817-821. Daroy, M.L.G., C.A. Mapua, G.J. Akiat, L.A. Suarez, M.J. Gregorio, M.P.S. Dimamay, C.C. Buerano, R.R. Matias & F.F. Natividad. Nucleic acid-based detection of dengue is superior to antibody and protein antigen detection methods. Oral presentation at the XV International Congress of Virology held in Sapporo, Japan. Buerano, C.C., M.A. Kiocho, L.A. Suarez, C.A. Mapua, UPD-HS Dengue Study Group, R.R. Matias & F.F. Natividad. 2009. Serotyping of dengue virus from patients seen in the University Health Service at the University of the Philippines. Poster presentation at the 4th Asian Dengue Research Network held in Singapore. Matias, R.R., C.C. Buerano, M.L.G. Daroy, J.A.R. Alfon, J.D. Reyes, C.Z. Tania, M.T.G. Alonzo, L.A. Suarez & F.F. Natividad. 2009. Prevalence of dengue serotypes from the St. Luke Medical Center's dengue serum bank. Poster presentation at the 2nd Regional Dengue Research Network Meeting held in Singapore.

Researcher/s	BUOT Inocencio
Affiliation	University of the Philippines Open University
Title of research	Land Use Type Pattern and Woody Species Composition Near Human Disturbed Landscapes on Mount Makiling, Luzon Island
Brief description	In this field study, 40 permanent plots of 10x10m were established from the undisturbed forests of Mount Makiling to the agricultural farms. Analysis showed moderate to strong linear correlations between environmental conditions and the type of woody species present in the area. More significantly, original species have been replaced by other species. This new forest dynamics need to be studied because understanding them is crucial to "the development of appropriate forest management strategy" (Buot & Osumi, 2011).
DRRM Keyword/s	Prevention and Mitigation
Topics	Anthropogenic disturbance; Benchmarking
Funding source	Japan Society for the Promotion of Science
Publication information	Buot, I.E. & Osumi, K. (2011). Land Use Type Pattern and Woody Species Composition Near Human Disturbed Landscapes on Mount Makiling, Luzon Island. *American Journal of Environmental Sciences 7*(4), pp. 306-315. thescipub.com/pdf/10.3844/ajessp.2011.306.315

Researcher/s	BUOT Inocencio
Affiliation	University of the Philippines Open University
Title of research	Status, Issues and Concerns of Philippine Mangrove Diversity: Rethinking the Role of UPLB in Crafting a Sustainable Management and Conservation Strategy
Brief description	This study examines the factors that have led to the decline of mangrove forests in the Philippines and notes that the versatility of the mangrove ecosystem prompted its overutilization and consequent decline. The author proposes the establishment of the UPLB Estuary Research and Training Center that will spearhead the formulation of a sustainable management and conservation strategy for the country's mangrove ecosystems.
DRRM Keyword/s	Prevention and Mitigation
Topics	Mangrove ecosystems; Conservation program
Funding source	University of the Philippines (UPLB Centennial Professorial Chair)
Publication information	Professorial chair lecture delivered in October 2010

Researcher/s	CABRIDO Candido Jr.
Affiliation	University of the Philippines Diliman – SURP
Title of research	Disaster Risk Reduction: City-to-City Sharing Initiative for Developing Countries
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Disasters in general; Stakeholder relations
Funding source	No information
Publication information	No information

Researcher/s	CABRIDO Candido Jr.
Affiliation	University of the Philippines Diliman – SURP
Title of research	Water-Related Disaster Management Policy in the Philippines
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Water-related disaster; Policy formulation
Funding source	UP-CIDS
Publication information	*Water-Related Disaster Management Policy in the Philippines*. University of the Philippines, Center for Integrative Development Studies (UP-CIDS). 2008. (with G. Tabios & A. Oposa)

Researcher/s	CABRIDO Candido Jr.
Affiliation	University of the Philippines Diliman – SURP
Title of research	National Assessment on the State of Disaster Risk Management in the Philippines
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation; Preparedness; Response; Rehabilitation and Recovery
Topics	Disasters in general; Policy formulation
Funding source	UNDP; ADB
Publication information	National Assessment on the State of Disaster Risk Management in the Philippines. UNDP, ADB and Office of Civil Defense. September 2008

Researcher/s	CABRIDO Candido Jr.
Affiliation	University of the Philippines Diliman – SURP
Title of research	Impacts of Climate Change on Agriculture and Biodiversity and Potential Mitigation and Adaptation Measures
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Programs/Policies
Funding source	No information
Publication information	Impacts of Climate Change on Agriculture and Biodiversity and Potential Mitigation and Adaptation Measures. 3rd National Conference on Human Ecology "Promoting Sustainable Towns and Cities Amidst Global Climate Change" 25-26 November 2008. 20pp.

Researcher/s	CABRIDO Candido Jr.
Affiliation	University of the Philippines Diliman – SURP
Title of research	Climate Change Adaptation Strategies: Biodiversity Sector
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Programs/Policies
Funding source	PAWB; GTZ
Publication information	Climate Change Adaptation Strategies: Biodiversity Sector. Protected Areas and Wildlife Bureau (PAWB) and German Agency for Technical Cooperation (GTZ). 2009a

Researcher/s	CABRIDO Candido Jr.
Affiliation	University of the Philippines Diliman – SURP
Title of research	Environmental Assessment of Proposed Adaptation and Mitigation Subprojects
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Programs/Policies
Funding source	DENR; World Bank
Publication information	Environmental Assessment of Proposed Adaptation and Mitigation Subprojects. Philippine Climate Change Adaptation – Phase 1(PhilCCAP1). Final Report. DENR and the World Bank.

Researcher/s	CABRIDO Candido Jr.
Affiliation	University of the Philippines Diliman – SURP
Title of research	Mainstreaming Vulnerability and Impact Assessment of Climate Change and Risk Reduction and Adaptation Measures in the Updated ENR Framework Plan
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Technologies and tools
Funding source	No information
Publication information	No information

Researcher/s	CABRIDO Candido Jr.
Affiliation	University of the Philippines Diliman – SURP
Title of research	Study on Climate Change Issues and Financing Needs in the Philippines
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Programs/Policies
Funding source	French Agency for Development
Publication information	Climate Changes Issues, Adaptation Measures and Financing Needs. French Agency for Development. Project Study Report. July 2010

Researcher/s	CABRIDO Candido Jr.
Affiliation	University of the Philippines Diliman – SURP
Title of research	Philippines Climate Change Adaptation Program Phase I
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Programs/Policies
Funding source	No information
Publication information	No information

Researcher/s	CABRIDO Candido Jr., DELOS REYES Mario
Affiliation	University of the Philippines Diliman – SURP
Title of research	Mainstreaming Climate Change Vulnerability and Impact Assessment Tools for Coastal, Health, Agriculture, Water and Forestry into the Provincial Physical Development and Framework Plan (PPDFP)
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Programs/Policies
Funding source	No information
Publication information	No information

Researcher/s	CABRIDO Candido Jr., CASTRO Jun, MORALES Mark
Affiliation	University of the Philippines Diliman – SURP
Title of research	Multi-Hazard Risk Assessment Index for Metro Manila
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Disasters in general; Benchmarking
Funding source	No information
Publication information	No information

Researcher/s	CABRIDO Candido Jr., DELOS REYES Mario, MONTALBO Cresencio Jr., CASTRO Jun, MORALES Mark
Affiliation	University of the Philippines Diliman – SURP
Title of research	Spatial Development Master Plan for Laguna de Bay Basin: Land and Water Use Physical Development Plan
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Land and water use; Policy formulation
Funding source	No information
Publication information	No information

Researcher/s	CALAG Vicente, LOPEZ Mitchiko, NAVARETTE Norberto Jr., NALANGAN Li-Ann, MIRO John Vincent
Affiliation	University of the Philippines Mindanao
Title of research	Digital Mapping and Land Use Cover/Change Analysis of Agricultural and Forest Land in the 3rd District of Davao City Using Geographic Information System (GIS) and Remote Sensing Technologies
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Land use; Technologies and tools
Funding source	No information
Publication information	No information

Researcher/s	CALUMPANG Susan May
Affiliation	University of the Philippines Los Baños
Title of research	Impact of Climate Change on Insect Pest and Plant Disease Management
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Management
Funding source	No information
Publication information	Paper presented at the March 2009/ Phil RONPAKU Fellows Workshop, De La Salle Univ.

Researcher/s	CAMACHO Sofronio
Affiliation	University of the Philippines Los Baños
Title of research	Transforming Marginal Uplands into Productive Areas through Planting of Non-traditional Indigenous Biofuel and Fast-growing Species
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Bio-resources; Community involvement
Funding source	NEDA
Publication information	No information

Researcher/s	CAMPOS Maribel
Affiliation	University of the Philippines Los Baños
Title of research	Responses of Farmers in the Philippines to Climate Change
Brief description	No information
DRRM Keyword/s	Response
Topics	Climate change; Community involvement
Funding source	No information
Publication information	Responses of Farmers in the Philippines to Climate Change. 28th Annual Meeting of the Association of Systematic Biologists of the Philippines (ASBP). May 22 – 23, 2010/ UPLB

Researcher/s	CAMPOS Maribel
Affiliation	University of the Philippines Los Baños
Title of research	Adaptation of Fishing Communities in the Philippines to the Impact of Climate Change
Brief description	No information
DRRM Keyword/s	Response
Topics	Climate change; Community involvement
Funding source	No information
Publication information	Adaptation of Fishing Communities in the Philippines to the Impact of Climate Change. 15th International Biennial Conference of the IIFET. July 13 – 16, 2010/ Montepellier, france

Researcher/s	CAMPOS Maribel
Affiliation	University of the Philippines Los Baños
Title of research	Community Based Adaptation of Farmers in the Philippines to Climate Change.
Brief description	No information
DRRM Keyword/s	Response
Topics	Climate change; Community involvement
Funding source	No information
Publication information	Community Based Adaptation of Farmers in the Philippines to Climate Change. 4th International Conference on Community Based Adaptation to Climate Change. February 21 –27, 2010/ Salaam, Tanzania

Researcher/s	CAMPOS Wilfredo, CABANSAG Jerome, SOLIMAN Victor, ALINO Porfiro
Affiliation	University of the Philippines Visayas
Title of research	Fisheries Ecosystem Connectivity and Monitoring (Fish EConnect)
Brief description	This project is one of the components of the program *Remote Sensing Information for Living Enviroments and Nationwide Tools for Sentinel Ecosystems in Our Archipelagic Seas (RESILIENT SEAS) for Climate Change* (formerly known as the Integrated Coastal Enhancement: Coastal Research, Evaluation and Adaptive Management or ICE-CREAM). RESILIENT SEAS features a multi-disciplinary approach to the investigation of the impacts of climate change on the coastal environment. Results of the research will be used in formulating strategies that will increase the resilience of the country's coastal ecosystems.
DRRM Keyword/s	Prevention and Mitigation
Topics	Coastal ecosystems and climate change; Management
Funding source	DOST-PCAMRD
Publication information	No recent publications

Researcher/s	CAMPOS Wilfredo, PRIMAVERA Carlo, ARBOLEDA Mark Dondi, AÑASCO Nathaniel, TRAIFALGAR REX
Affiliation	University of the Philippines Visayas
Title of research	Exploration, Development and Management of Marine Bioresources in the Philippines
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Marine resources; Management
Funding source	No information
Publication information	No information

Researcher/s	CANUDAY Jose Jowel
Affiliation	University of the Philippines Mindanao
Title of research	Stakeholder Analysis on Diwalwal Mining Activities in Compostela Valley Province
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Mining; Stakeholder relations
Funding source	No information
Publication information	No information

Researcher/s	CANSECO Roy Vincent, AQUINO Diocel Harold, ARANAS Romer Kristi, CABARLE Francis, GASPAY Sandy Mae, MACABABBAD Reigna Jewel Ritz, MATEO Cherry May, TANYAG Ruzette, TOLOD Kristine, VIRTUCIO Kenan Biel
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	BAYAN-e-HAN: An Integrated Online Social Collaboration System for Disaster Risk Management Using SMS, Social Media, Geomapping Tools, and Grass Roots Involvement
Brief description	This project aims to enhance "currently deployed Disaster Risk Management Systems (DRRMS) by focusing on communication, collaboration, information gathering, and feedback. It introduces the Bayan-e-han DRRMS, which combines institutional data relay and crowdsourcing for a more efficient disaster data collection. It also utilizes online mapping tools which, coupled with proven web technologies and immediate action through an automatic alert system via SMS, improves communication efficiency" (Canseco et al., n.d.)
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Disaster management; Tools and technologies
Funding source	No information
Publication information	Canseco et al. (2010). BAYAN-e-HAN: An Integrated Online Social Collaboration System for Disaster Risk Management Using SMS, Social Media, Geomapping Tools, and Grass Roots Involvement. Proceedings of the 5th ERDT Conference, Manila

Researcher/s	CASTAÑEDA D.C., CRUZ Eric
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Study on the Applicability of a Marine Concrete Maintenance System to Reinforced Concrete Structures in the Philippines
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Infrastructure; Technologies and tools
Funding source	No information
Publication information	Castaneda, D.C.S. & Cruz, E.C. (2009). Study on the applicability of a marine concrete maintenance system to reinforced concrete structures in the Philippines, Proceedings, 15th Asian-Pacific Corrosion Control Conference, p. 165 (poster paper)

Researcher/s	CASTAÑEDA D.C., CRUZ Eric
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Study on the Applicability of Foreign Marine Concrete Maintenance Systems to the Local Philippine Setting
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Infrastructure; Technologies and tools
Funding source	No information
Publication information	Castaneda, D.C.S. and Cruz, E.C. (2009). Study on the applicability of foreign marine concrete maintenance systems to the local Philippine setting, Proceedings, 3rd International Symposium on Environmental Engineering, Quezon City, Philippines, pp. 230-231

Researcher/s	CASTILLO Arturo
Affiliation	University of the Philippines Los Baños
Title of research	Enhancing Rubber-based Agroforestry System towards Sustainable Livelihood and Climate Change Adaptation Strategy
Brief description	This DA BAR-funded project aims to evaluate the effectiveness of the typologies of rubber-based agroforestry systems vis-à-vis productivity and as rehabilitation climate change adaptation strategy.
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Programs/Policies
Funding source	DA-BAR
Publication information	No information

Researcher/s	CASTRO Jun, DELOS REYES Mario
Affiliation	University of the Philippines Diliman – SURP
Title of research	Traffic and Emissions Scenarios for Freight Vehicles in Metro Manila
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Benchmarking/Profiling
Funding source	No information
Publication information	Estimating Traffic and Emissions for Various Scenarios of Freight Vehicle Restrictions in Metro Manila, *Asian Transport Studies*, Volume 1, Issue 1 (2010), 4-17

Researcher/s	CATANE Sandra
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Development of an Early Warning System for Rainfall-Induced Landslides Using Sensors and Slope Models
Brief description	This research is a component of a larger program aimed at reducing the impact of landslides
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Landslides; Technologies and tools
Funding source	UP Diliman-NIGS
Publication information	No information

Researcher/s	CATANE Sandra
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Disaster Risk Management Using Sensor Networks and Computing: Early Warning System for Landslides, Slope Failures and Debris Flows
Brief description	The program aims to develop dynamical models to understand the initiation of landslides and the development of a cost-effective instrumentation and sensor networks for monitoring and predicting landslides.
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Landslides; Technologies and tools
Funding source	DOST; UP System
Publication information	No information

Researcher/s	CATANE Sandra
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Hazard Analysis of the Cherry Hills (Antipolo, Rizal) and Guinsaugon (St. Bernard, Southern Leyte) Post-Failure Slopes Using Engineering Geologic Method
Brief description	The main objective of this study is to assess the stability of recent landslide sites using engineering geologic method.
DRRM Keyword/s	Prevention and Mitigation
Topics	Landslides; Technologies and tools
Funding source	UP Diliman – OVCRD
Publication information	No information

Researcher/s	CEBALLO Flor, WALTER Gimme, ROCHESTER Wayne
Affiliation	University of the Philippines Los Baños
Title of research	The Impact of Climate on the Biological Control of Citrus Mealybug [Planococcus citri (Rissol)] by the Parasitoid Coccidoxenoides perminutus Girault as Predicted by the Climate-Matching Program CLIMEX
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Benchmarking/Profiling
Funding source	No information
Publication information	No information

Researcher/s	CERVANCIA C.R.
Affiliation	University of the Philippines Los Baños
Title of research	Bees and Climate Change
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Benchmarking/Profiling
Funding source	No information
Publication information	Presented at the PMCP Baguio City 5/05/09

Researcher/s	COLADILLA Jesusita
Affiliation	University of the Philippines Los Baños
Title of research	Incorporating Climate Risk information to comprehensive agricultural land use planning using system approach
Brief description	This project aims to pilot test the integration of disaster risk reduction and management in the preparation of agricultural land use planning for the municipality using system analysis tools and methods.
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Management
Funding source	No information
Publication information	No information

Researcher/s	CRUZ Eric
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Development of Methodology for Seaport Siting and Hazard Assessment
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Seaport; Technologies and tools
Funding source	UP Professioral Chair Award
Publication information	No information

Researcher/s	CRUZ Eric
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Modeling of cross-shore wave propagation with moving shoreline
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Seaport; Technologies and tools
Funding source	UP Professioral Chair Award
Publication information	Cruz, E.C. (2009). Modeling of cross-shore wave propagation with moving shoreline, *Philippine Engineering Journal*, Vol. 28, No. 1, June 2007 (Accepted December 18, 2009)

Researcher/s	CRUZ Eric
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Engineering Study of Coastal Erosion in an Embayment Shore and Its Mitigation
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Coastal erosion; Benchmarking
Funding source	No information
Publication information	Cruz, E.C. (2009). Engineering study of coastal erosion in an embayment shore and its mitigation, Proceedings, 3rd International Symposium on Environmental Engineering, Quezon City, Philippines, pp. 1-13.

Researcher/s	CRUZ Eric
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Hydraulic Siting of Seaport along a Length-Limited Foreshore
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Seaport; Technologies and tools
Funding source	UP Professioral Chair Award
Publication information	No information

Researcher/s	CRUZ Eric
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Hydraulic computations for flood routing of a modular urban stormwater drainage system
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Floods; Technologies and tools
Funding source	No information
Publication information	Cruz, E.C. (2009). Hydraulic computations for flood routing of a modular urban stormwater drainage system, *Philippine Engineering Journal*, Vol. 28, No. 2, December 2007 (Accepted December 17, 2009)

Researcher/s	CRUZ Eric
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Computational Analysis of Hydrodynamic Stability of a Sandy Beach
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Hydrological hazards; Technologies and tools
Funding source	No information
Publication information	Cruz, E.C. (2008). Computational analysis of hydrodynamic stability of a sandy beach, Proceedings, 2008 Philippine Institute of Civil Engineers (PICE) National Midyear Convention, Clark Freeport Zone, Pampanga, WRE 1-10.

Researcher/s	CRUZ Eric
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Methodology for Estimation of Tsunami Runup on Natural Slopes
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Tsunami; Technologies and tools
Funding source	UPERDFI Faculty Research and Incentives Award
Publication information	No information

Researcher/s	CRUZ Eric
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Effectiveness of engineering intervention for stabilization and protection of storm-exposed coastal beaches
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Water-related hazards; Technologies and tools
Funding source	No information
Publication information	Cruz, E.C. (2009). Effectiveness of engineering intervention for stabilization and protection of storm-exposed coastal beaches, 3rd Engineering Research and Development for Technology (ERDT) Conference, pp. 74-81.

Researcher/s	CRUZ Eric
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Quantification of Potential Tsunami Penetration onto Coastal Areas
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Tsunami; Technologies and tools
Funding source	No information
Publication information	Cruz, E.C. (2008). Quantification of potential tsunami penetration onto coastal areas. Proceedings, Rediscovering the Philippines: Meteorology, Mineralization and Tectonics Symposium, Oct. 2008, Quezon City, Philippines (CD-ROM)

Researcher/s	CRUZ Eric
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Seaport Site Selection Based on Coastal Engineering Analyses
Brief description	A methodology for the selection of the most suitable port site from several prospective sites is presented. After various technical factors of seaport-hosting requirements are discussed, an application to an actual project is presented to concretize the quantitative approach of the methodology. The methodology bases the selection of the most suitable site on an overall suitability matrix of each prospective site, incorporating both subjective weighting of the various criteria and the technically objective issues into the selection process.
DRRM Keyword/s	Prevention and Mitigation
Topics	Seaports; Technologies and tools
Funding source	No information
Publication information	Cruz, E.C. (2009). Seaport site selection based on coastal engineering analyses, Proceedings, 6th Regional Symposium on Infrastructure Development, Jan. 2009, Bangkok, Thailand, WRE-04 (CD-ROM).

Researcher/s	CRUZ Eric
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Stability Analysis of Beaches on Coral-Reef Flats
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Hydrological hazards; Technologies and tools
Funding source	No information
Publication information	Cruz, E.C. (2009). Stability analysis of beaches on coral-reef flats, Proceedings, 6th Regional Symposium on Infrastructure Development, Jan. 2009, Bangkok, Thailand, WRE-03 (CD-ROM).

Researcher/s	CRUZ Eric
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Wave Climate Studies in Coastal Harbors
Brief description	The study focuses on the application of wave theories and numerical modeling to carry out studies of the wave field in coastal harbors, and shows the significance of these to actual port projects. It is argued that wave climate studies required for various phases of port development can be undertaken more realistically and accurately using wave models that are capable of incorporating the important physical processes involved.
DRRM Keyword/s	Prevention and Mitigation
Topics	Wave climate; Benchmarking
Funding source	UP Professorial Chair Award
Publication information	No recent publication

Researcher/s	CRUZ Eric
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Numerical analysis of engineering suitability of prospective seaport sites
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Seaports; Benchmarking
Funding source	No information
Publication information	Cruz, E.C. (2009). Numerical analysis of engineering suitability of prospective seaport sites, 3rd Engineering Research and Development for Technology (ERDT) Conference, pp. 216-218.

Researcher/s	CRUZ Eric, KASILAG E. II
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Hydraulic Analyses for Seaport Siting and Engineering Design
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Seaports; Technologies and tools
Funding source	No information
Publication information	Cruz, E.C. and Kasilag, E.P. II (2009). Hydraulic analyses for seaport siting and engineering design. Proceedings, Philippine Institute of Civil Engineers (PICE) National Midyear Convention, Bacolod City, Negros Occ., WRE 1-8

Researcher/s	CRUZ Eric, KASILAG E. II
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Hydraulic Analyses for Siting and Design of a Seaport with Limited Coastline and Backshore
Brief description	A methodology for the siting of a seaport along a shore-limited coastline is presented. Hydraulic analyses of the prevailing wave climate and storm-induced wave fields are carried out by applying a wave model. Accounting for tsunami hazard is also discussed. The quantitative analyses are used to establish a site's port-hosting suitability rating and to carry out a hydraulic design of the pier dock. It is concluded that the pre-engineering siting of a port along a limited coastline can be undertaken quantitatively.
DRRM Keyword/s	Prevention and Mitigation
Topics	Seaports; Technologies and tools
Funding source	No information
Publication information	Cruz, E.C. and Kasilag II, E.P. (2009). Hydraulic analyses for siting and design of a seaport with limited coastline and backshore, Proceedings, First International Conference on Sustainable Infrastructure and Built Environment in Developing Countries (SIBE 2009), Bandung, Indonesia; 46-51/E.

Researcher/s	CRUZ Eric, SANTOS J.C.E., DIOLA Nathaniel
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Hydraulic Design and Analysis of a Tidal Pool for a Beach Resort
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Hydrological hazards; Technologies and tools
Funding source	No information
Publication information	Cruz, E.C., Santos, J.C.E.L. and N.B. Diola. (2009). Hydraulic design and analysis of a tidal pool for a beach resort, First International Conference on Sustainable Infrastructure and Built Environment in Developing Countries (SIBE 2009), Bandung, Indonesia; 104-109/E.

Researcher/s	CRUZ Lourdes, JIMENEZ Elsie
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Ecology and Oceanography of Harmful Algal Blooms in the Philippines Project 3: Toxinology and Toxicology of Philippine HAB Species
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Pollutants/Pollution; Benchmarking/Profiling
Funding source	DOST-PCAMRD
Publication information	No information

Researcher/s	CRUZ Rex Victor
Affiliation	University of the Philippines Los Baños
Title of research	Development of a Watershed Land Capability Evaluator
Brief description	This research is one of the projects under the program *Intelligent Decision Support System for Environmental Hazards Management Using GIS and Remote Sensing*, whose main objective is "to provide adequate preventive and control measures against environmental hazards" (Santos-Abon, 2009).
DRRM Keyword/s	Prevention and Mitigation
Topics	Watersheds; Technologies and tools
Funding source	DOST-PCARRD
Publication information	Project Terminal Report submitted to funding agency

Researcher/s	DATUIN Flaudette May
Affiliation	University of the Philippines Diliman – College of Arts and Letters
Title of research	Nature and Visayas-based Artists
Brief description	This paper delves into the imagery of nature in the contemporary visual arts of the Visayas
DRRM Keyword/s	Preparedness
Topics	Environmental crises/hazards; Cultural dimension of disasters
Funding source	No information
Publication information	Paper delivered at the First Visayas Biennial Conference held in Cebu City in November 2010

Researcher/s	DATUIN Flaudette May
Affiliation	University of the Philippines Diliman – College of Arts and Letters
Title of research	For the Birds
Brief description	This paper deals with the valuation of nature as it manifests in cultural beliefs and concepts of sites and spaces.
DRRM Keyword/s	Preparedness
Topics	Natural resources; Cultural dimension of disasters
Funding source	No information
Publication information	Published as an article in *The River Project*, a publication of the Campbell Arts Centre, New South Wales, Australia (pp. 26-41)

Researcher/s	DAVID Carlos Primo
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Estimating Actual Rainfall from Satellite-Based Imagery
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Floods; Technologies and tools
Funding source	UP Diliman – NIGS
Publication information	No information

Researcher/s	DAVID Carlos Primo
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Quantified Flood Forecasting through Rain Rate Estimation Using Satellite Imagery and Generalized Watershed Runoff Calculation
Brief description	The main objective of this project is to build and strengthen human resource, institutional capacity, tools and approaches towards a sound flood forecasting and early warning system in the Marikina River Basin. Its specific objectives are to: 1) calibrate spectral values of selected satellite imagery with ground data, 2) establish flood threshold values in the Marikina River Basin, 3) examine the accuracy of rain/flood forecast generated by the analysis, 4) develop flood hazard protocols for the Marikina River Basin, and 5) replicate and expand the methodology to other flood-prone areas in the country.
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Floods; Technologies and tools
Funding source	DOST
Publication information	No information

Researcher/s	DAVID Carlos Primo
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Establishment of the National Flood Forecasting, Monitoring and Mitigation (NF2M2) Program
Brief description	The NF2M2 Program is created to initially address the problem of generating scientific information that will form as a basis for issuing early warning for floods. It also aims to create a platform for quick and continuous information dissemination to give enough time for LGUs to prepare for an impending flood event
DRRM Keyword/s	Prevention and Mitigation
Topics	Floods; Programs/Policies
Funding source	DOST
Publication information	None yet

Researcher/s	DAVID Carlos Primo
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Pollution Load Calculation for Metro Manila and Bulacan
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Pollution; Benchmarking/Profiling
Funding source	World Bank
Publication information	None yet

Researcher/s	DAVID Carlos Primo
Affiliation	University of the Philippines Diliman – College of Science
Title of research	MDGF IGSG: Strengthening the Philippines' Institutional Capacity to Adapt to Climate Change: Outcome I (Water Resources) conduct of Climate Change V&A, M&E Compendium of CCA Best Practices
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Management
Funding source	No information
Publication information	None

Researcher/s	DAVID Laura
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Identification of Productive Zones in Philippine Waters
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Coastal/fishery/marine resources; Benchmarking/Profiling
Funding source	UP
Publication information	No information

Researcher/s	DAVID Laura
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Coral Reef Targetted Research – Remote Sensing Working Group
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Coastal/fishery/marine resources; Technologies and Tools
Funding source	World Bank – GEF
Publication information	No information

Researcher/s	DAVID Laura
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Remote Sensing Information for Living Environments and Nationwide Tools for Sentinel Ecosystems in our Archipelagic Seas (RESILIENT SEAS) Project 1: The Climate Change and the Coast: Vulnerability of Bentho-Pelagic Productivity (CCC-BP)
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Benchmarking/Profiling
Funding source	DOST-PCAMRD
Publication information	No information

Researcher/s	DAVID Laura
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Training/Workshop on Coastal Climate Adaptation: From Vulnerability Assessment to Economic Valuation
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Climate change; Programs/Policies
Funding source	IDRC
Publication information	No information

Researcher/s	DEL MUNDO Florian
Affiliation	University of the Philippines Diliman – College of Science
Title of research	The Development of Electrochemical SPR Sensing Using Electropolymerized MIPs and Nanomaterials for Detecting EDCs and Chemical Contaminants
Brief description	This research addresses the need for a cost-effective and robust detection system for chemical contaminants in consumer products. It is expected that the developed sensing method will find wide applications in human health, environmental monitoring, and database development.
DRRM Keyword/s	Prevention and Mitigation
Topics	Chemical contaminants; Technologies and tools
Funding source	DOST
Publication information	No information

Researcher/s	DELA CRUZ Lenore
Affiliation	University of the Philippines Diliman – CSWCD
Title of research	Participatory Review of Typhoon Parma Humanitarian Response in Cagayan, Pangasinan, Benguet, Mountain Province, Bulacan and Cavite Provinces in the Philippines
Brief description	No information
DRRM Keyword/s	Response; Rehabilitation and Recovery
Topics	Typhoons; Community-based initiatives
Funding source	Oxfam Hong Kong
Publication information	No information

Researcher/s	DELA CRUZ Lenore, FERRER Elmer
Affiliation	University of the Philippines Diliman – CSWCD
Title of research	Our Journey: Towards Building Disaster-Resilient Communities
Brief description	This paper is one of the chapters in *Building Disaster-Resilient Communities: Stories and Lessons from the Philippines*. As the overview chapter for the book, this paper focuses on the importance of developing the disaster resiliency of communities and discusses the different dimensions of community disaster resiliency.
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Disasters in general; Community-based initiatives
Funding source	DFID; Christian Aid
Publication information	dela Cruz, L.P. & Ferrer, E.M. (2010). Our journey: towards building disaster-resilient communities. In dela Cruz, L.P., Ferrer, E.M. and Pagaduan, M.C. (Eds.). *Building Disaster-Resilient Communities: Stories and Lessons from the Philippines* (pp. 1-8). Quezon City: CSWCD-UP.

Researcher/s	DELA PAZ Cecilia
Affiliation	University of the Philippines Diliman – College of Arts and Letters
Title of research	Religious Icons, Rituals, Festivals: Exploring the Cultural Dimension of Disasters in Philippine Localities
Brief description	This research looks into the relationship of cultural beliefs and practices with the experience of disasters in Philippine localities
DRRM Keyword/s	Preparedness
Topics	Disasters in general; Cultural dimension of disasters
Funding source	2009 Michigan Professorial Chair Award
Publication information	Paper delivered on 21 July 2010 at the International Conference on Post-Colonial Praxis held in UP Diliman

Researcher/s	DELA PAZ Cecilia, DATUIN Flaudette May
Affiliation	University of the Philippines Diliman – College of Arts and Letters
Title of research	Human Ecological Balance in Asia: Focus on Batanes
Brief description	This is a three-year research project that examines the common thread in the Asian experience in dealing with issues of human ecological balance
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Environmental crises/hazards; Country experiences
Funding source	Nippon Foundation thru the Asian Public Intellectuals Regional Project
Publication information	Video documentary (2011) directed by Nick Deocampo International workshop (2012) in Thailand Book (forthcoming, 2012) edited by Arnold Azurin

Researcher/s	DELOS REYES Mario, ASPIRA Kristine
Affiliation	University of the Philippines Diliman – SURP
Title of research	Integrated Sustainable Solid Waste Management for Asia
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Programs/Policies
Funding source	No information
Publication information	From Tragedy to Opportunity: A Case Study Assessment on the Controlled Disposal Facility at Payatas, Quezon City, Philippines (for submission to Waste Management & Research Journal)

Researcher/s	DIAZ Crispin Emmanuel, JAVIER Sheila Flor
Affiliation	University of the Philippines Diliman – SURP
Title of research	A Comparison of CO2 Emission of Motorized Public Transport Modes in the Philippines and the Implication to Funding the Switch to Better Modes
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Technologies and tools
Funding source	No information
Publication information	No information

Researcher/s	DIMALANTA Carla
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Arc-Continent Collision in West Central Philippines: Implications on Natural Hazards
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Geological hazards; Benchmarking
Funding source	DOST
Publication information	No information

Researcher/s	DIMALANTA Carla
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Integrative Data Archiving for Disaster Risk Management
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Disasters in general; Technologies and tools
Funding source	DOST
Publication information	No information

Researcher/s	DIMZON Francis, YUNGUE Nestor, AGUILAR Glenn
Affiliation	University of the Philippines Visayas
Title of research	Critical Catalytic Activities and Services to Support Mitigation, Assessment and Research towards Sustainable and Effective Restoration of the Damaged Marine Environment
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation; Rehabilitation and Recovery
Topics	Marine resources; Policy formulation
Funding source	No information
Publication information	No information

Researcher/s	DIOLA Nathaniel
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Performance-Based Maintenance System (PBMS) toward Disaster-Resilient Infrastructure
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Infrastructure; Technologies and tools
Funding source	No information
Publication information	Diola, N.B. “Performance-Based Maintenance System (PBMS) Towards Disaster Resilient Infrastructure”, Plenary Presentation, National Science and Technology Week Scientific Forum, Manila Hotel, 20 July 2010.

Researcher/s	DIOLA Nathaniel, AGUSTIN Joanne, OCENAR Danica, VICTORINO Roland, GAOAT Paula Jane, MABILANGAN John Nazenborg, ABAD Raphael Franco, PANGAN Karl Antonio, ALVERRO Alvertte
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Durability Evaluation of Building Sealants on Various Substrates: Effects of Accelerated Weathering and Mechanical Cycling
Brief description	This research involved accelerated laboratory ageing experiments of sealants through the effects of heat alone, heat and moisture, and accelerated weathering apparatus. A combination of accelerated weathering and mechanical cycling was also examined. Results showed that polyurethane sealant performed best on all substrates, followed by silicone and polychloropene rubber. The acrylic sealant performed the weakest.
DRRM Keyword/s	Prevention and Mitigation
Topics	Construction sealants; Benchmarking
Funding source	No information
Publication information	Diola, Agustin, Ocenar, Victorino, Gaoat, Mabilangan, Abad, Pangan, and Alverro, "Durability Evaluation of Building Sealants on Various Substrates: Effects of Accelerated Weathering and Mechanical Cycling", 5th ERDT Conference, Sofitel Philippine Plaza Manila, 10 September 2010.

Researcher/s	DIOLA Nathaniel, BATIN Karl Genesis, OROZCO Christian, PEREZ Risa
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Correlating Non-Destructive Test Results to the Compressive Strength of Concrete
Brief description	This study is a component of the Marine Concrete Maintenance Program, which looked into the problem of deterioration of marine structures due to corrosion of reinforced concrete. Using multiple nonlinear regression analysis, the study investigated the overall strength profile of in-service reinforced concrete using numerous NDT data and limited core samples.
DRRM Keyword/s	Prevention and Mitigation
Topics	Structural conditions; Benchmarking
Funding source	DOST
Publication information	Diola, Batin, Orozco, and Perez, "Correlating Non-Destructive Test Results to the Compressive Strength of Concrete", 5th ERDT Conference, Sofitel Philippine Plaza Manila, 10 September 2010.

Researcher/s	DIZON Cornelio
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	ARMA Modeling of a Stochastic Process Appropriate for the Angat Reservoir
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Technologies and tools
Funding source	No information
Publication information	Dizon, C. Q. (2010). ARMA Modeling of a Stochastic Process Appropriate for the Angat Reservoir, *Philippine Engineering Journal* Volume XXVIII, Number 1, June 2007.

Researcher/s	DIZON Cornelio
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Validating the Autoregressive Model of the Angat Reservoir Monthly Inflows
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Technologies and tools
Funding source	No information
Publication information	Dizon, C. Q. (2009). Validating the autoregressive model of the Angat Reservoir monthly inflows, Alternative Peer Review System for Engineers in Academe, Proceedings of the 35th Philippine Institute of Civil Engineers (PICE) 35th National Convention, Baguio City, November 26-27, 2009.

Researcher/s	DOLORES Lolita
Affiliation	University of the Philippines Los Baños
Title of research	Enhancing Research Utilization of Sweet Potato Livelihood Development in Disaster-prone Communities: Project 1. Developing Capabilities of Local Institutions for Addressing Sweet Potato Production and Marketing Constraints Faced by Resource-poor Farmers in Albay and Tarlac
Brief description	Virus indexing of sweet potato planting materials in Tarlac - A total of 14 sweetpotato farms producing CPM sweet potato, from 5 barangays in Mayantoc were indexed for viruses. None of the planting materials evaluated showed positive to any of the ten viruses namely, SPFMV, SPCSV, SPCFV, CMV, SPLV, SPMSV, SP CaV, SP C6V, and SPVG.
DRRM Keyword/s	Response; Rehabilitation and Recovery
Topics	Natural resources; Technologies and tools
Funding source	No information
Publication information	No information

Researcher/s	DONOSO L.A.
Affiliation	University of the Philippines Los Baños
Title of research	Policy Analysis on the Use of Exotic and Potentially Bioinvasive Alien Tree Species for Reforestation in the Philippines
Brief description	The Philippines has been exposed to exotic and potentially invasive species to improve its economic and reforestation activities. Through international agreements and treaties, the spread of potentially invasive species in various countries are being safeguarded. The study reviewed some international agreement and national policies and programs relevant to the use of exotics and potentially invasive tree species in reforestation.
DRRM Keyword/s	Prevention and Mitigation
Topics	Plant species; Policies
Funding source	No information
Publication information	No information

Researcher/s	ESELLA , MLD-Sese, ISMAIL A.M.
Affiliation	University of the Philippines Los Baños
Title of research	Management strategies for improved germination and seedling survival in rice during early flooding.
Brief description	No Information
DRRM Keyword/s	Prevention and Mitigation
Topics	Floods; Management
Funding source	No information
Publication information	Presented at the 77th NRCP General Membership Assembly "Facing the Challenges of Climate Change through Science and Technology". March 10, 2010 Manila Hotel, Manila

Researcher/s	ESPALDON Ma. Victoria
Affiliation	University of the Philippines Los Baños
Title of research	Developing Spatially Explicit Tool for Monitoring and Communicating Environmental Risks around Mt. Makiling Forest Reserve
Brief description	The aim of the project is to develop a protocol that will guide residents in monitoring and communicating environmental risks…. The project proponents' realization that explicit monitoring and communication strategies that could unify and integrate scientific and indigenous knowledge are lacking in previous initiatives on disaster management paved the way to concretize the study. (Taken from the *PCARRD Monitor*, April-June 2010, pp. 8-9)
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Disasters in general; Information dissemination
Funding source	PCARRD
Publication information	No publication yet

Researcher/s	ESPALDON Ma. Victoria
Affiliation	University of the Philippines Los Baños
Title of research	Intervulnerability Assessment: Shifting Foci from Generic Indices to Adaptive Agents in Assessing Vulnerability to Global Environmental change 9 A Pilot Project in the Philippines)
Brief description	The project is a response to the 2nd and 3rd components of the READY project: community-based disaster preparedness and integration of risk reduction into the local development planning process.
DRRM Keyword/s	Preparedness
Topics	Disasters in general; Community involvement
Funding source	No information
Publication information	No information

Researcher/s	ESPALDON Ma. Victoria
Affiliation	University of the Philippines Los Baños
Title of research	Development of Sectoral Climate Change Vulnerability and Impact Assessment at the Macro Level, Development of Climate Change Monitoring and Evaluation Framework/System, and Compendium of Good and Innovative Climate Change Adaptation Practices
Brief description	This project aims to support NEDA in delivering the technical requirements of the UNDP and Spanish Government Joint Programme on Strengthening the Philippines' Institutional Capacity to Adapt to Climate Change
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Climate change; Technologies and tools
Funding source	UNDP
Publication information	No information

Researcher/s	ESPALDON Ma. Victoria
Affiliation	University of the Philippines Los Baños
Title of research	The UPLB interdisciplinary program on climate change
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Programs/Policies
Funding source	No information
Publication information	No information

Researcher/s	ESPALDON Ma. Victoria
Affiliation	University of the Philippines Los Baños
Title of research	Assessing Vulnerabilities of Communities and Understanding Policy Implications of Adaptation Responses to Flood-related Landslides in Asia
Brief description	The project identified landslide prone areas in selected countries in Aasia including China, Nepal, Vietnam and the Philippines and assessed their vulnerability to flood-related landslide events by applying an agent-based modelling framework. It compared the adaptive behavior of vulnerable people and their disaster experiences within each study site.
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Landslides; Technologies and tools
Funding source	No information
Publication information	No information

Researcher/s	ESPECTATO Liberty, SEROFIA Genna, NAPATA Ruby
Affiliation	University of the Philippines Visayas
Title of research	Policy Review of the Municipal Fishery Ordinances (MFOs) of Southern Iloilo Coastal Resource Management Council (SICRMC) Member-LGUs
Brief description	The purpose of the policy review is to find if, and to what extent, the fishery ordinances of five municipalities in Iloilo province are harmonized. The study seeks to: "1) identify the policy gaps, overlaps, conflicting, and common provisions of the ordinances; and 2) formulate a possible unified fishery ordinance (UFO) for better management of the coastal waters of Southern Iloilo" (Taken from the project proposal).
DRRM Keyword/s	Prevention and Mitigation
Topics	Fishery resources; Policy formulation
Funding source	UP Visayas
Publication information	No information

Researcher/s	ESPINA Mary Ann
Affiliation	University of the Philippines Diliman – College of Architecture
Title of research	Green Walls + Green Roof: Vegetating the Building Envelope
Brief description	No information
DRRM Keyword/s	Preparedness
Topics	Infrastructure/Structural conditions; Technologies and tools
Funding source	No information
Publication information	No information

Researcher/s	ESPINO Ma. Pythias
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Brominated Flame Retardants Exposure in the Workplace
Brief description	The aim of this study was to determine the occurrence of PBDEs in indoor environments in the Philippines where electronic and electrical equipment, both functioning and not, are found. In line with this aim, an alternative analytical method was developed for PBDEs in indoor dust using small sample size, reduced volume of solvent for extraction, and minimal sample preparation (Espino & Leon, 2010).
DRRM Keyword/s	Prevention and Mitigation
Topics	e-wastes; Technologies and tools
Funding source	UP Diliman – OVCRD
Publication information	No information

Researcher/s	ESPINO Ma. Pythias
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Assessing Water Quality Issues in the Philippines: A Study of Bromate and Priority Organic Contaminants in the Local Water Supply
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	e-wastes; Technologies and tools
Funding source	UP Diliman – OVCRD
Publication information	No information

Researcher/s	FERRER Alice Joan, ARCENAS Agustin, CAPUNO Joseph
Affiliation	University of the Philippines Visayas
Title of research	Coastal and Marine Resource Management in the Philippines: An Analysis of the Political Economy of Selected LGU Initiatives
Brief description	This project documents how two groups of LGUs in Iloilo formed voluntary alliances to meet the challenges of efficient and effective management of natural resources, particularly the problem of "the tragedy of the commons" that besets many communities. Specifically, the study looks at 1) the factors that facilitated the formation and sustainability of inter-LGU collaborations in coastal/marine resource management and 2) the policy instruments that can be used to replicate, strengthen, or promote inter-LGU collaborations.
DRRM Keyword/s	Prevention and Mitigation
Topics	Coastal and marine resources; Policy formulation
Funding source	SEARCA
Publication information	No information

Researcher/s	FERRER Alice Joan
Affiliation	University of the Philippines Visayas
Title of research	Economic Evaluation of Banning Commercial Fishing from Visayan Sea, Philippines: The Case of Northern Iloilo
Brief description	This research is part of the bigger study on *Evaluation of Fisheries Management Options for the Visayan Sea, Philippines: The Case of Northern Iloilo* that "assesses a number of potential management options that could help protect biodiversity in the Visayan Sea and help its fishing community to earn a better living" (Ferrer, 2009). It concludes that the best fisheries management approach should use a combination of options that include the establishment of marine protected areas, the implementation of fishing bans, and the creation of a special management unit.
DRRM Keyword/s	Prevention and Mitigation
Topics	Fishery resources; Policy formulation
Funding source	Economy and Environment Program for Southeast Asia (EEPSEA)
Publication information	Ferrer, A.J.G. (2009). Evaluation of fisheries management options for Visayan Sea, Philippines: The case of Northern Iloilo. EEPSEA Research Report No. 2009-RR5

Researcher/s	FERRER Alice Joan
Affiliation	University of the Philippines Visayas
Title of research	Evaluation of Marine Protected Area Management Effectiveness in Sipalay and Cauayan in Negros Occidental
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Marine resources; Policy formulation
Funding source	No information
Publication information	No information

Researcher/s	FERRER Alice Joan
Affiliation	University of the Philippines Visayas
Title of research	Evaluation of Reversion of Disused Fishpond Lease Agreement Areas to Mangrove Forests in Region VI, Philippines
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Mangroves; Policy formulation
Funding source	No information
Publication information	No information

Researcher/s	FERRER Elmer
Affiliation	University of the Philippines Diliman – CSWCD
Title of research	Community-Based Disaster Risk Reduction Program: The Case of San Mateo Village, Rizal, Philippines
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Landslide; Community-based
Funding source	No information
Publication information	Ferrer, E.M. (2010). Community-based Disaster Risk Reduction Program: The Case of San Mateo Village, Rizal, Philippines. Presented at the 42nd International Conference on Community Development, held July 25 – 28, 2010 at New Orleans, Louisiana, USA

Researcher/s	FESTIN Cedric Angelo
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Disconnected Distributed Networks
Brief description	The study proposes the adaptation and adoption of replication and recovery algorithms to allow networked nodes to continue some functions even when disconnected from the cloud and then re-sync when connection becomes available.
DRRM Keyword/s	Prevention and Mitigation
Topics	Disasters in general; Technologies and tools
Funding source	No information
Publication information	No information

Researcher/s	FESTIN Susan
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Trust Management for Spatio-Temporal Data
Brief description	After recent disastrous floods in the Philippines, a web-based interactive map showing flood levels was developed; however, the map lacked the ability to attach well-defined data points. This study proposes the enhancement by adding a trust management module that will allow for a) collecting more specific data points, b) providing different trust values for reported data, and c) providing for validation of reported data.
DRRM Keyword/s	Response
Topics	Floods; Technologies and tools
Funding source	No information
Publication information	No information

Researcher/s	FLORECE Leonardo
Affiliation	University of the Philippines Los Baños
Title of research	Assessment and Development of Marginal Lands/Grasslands for Expansion of Food Production Using Lesser-known Fruit Tree Species
Brief description	An action research and development project that aims to develop strategies by involving the local community in a participatory process. Initial assessment revealed the suitability of some areas in Nueva Ecija for the planting of lesser fruit trees such as cashew, duhat and bignay including other fruit trees such as mango and guyabano. Perennial fruit trees are better than annuals in climate variability. They also sequester much larger carbon than annuals.
DRRM Keyword/s	Preparedness
Topics	Land use; Community involvement
Funding source	No information
Publication information	No information

Researcher/s	FORMILLEZA Sammie
Affiliation	University of the Philippines Diliman – CSWCD
Title of research	BDRC: Reflections on BDRC Case Study in Marinduque
Brief description	This study is one of the chapters in *Building Disaster-Resilient Communities: Stories and Lessons from the Philippines*. In this chapter, the author presents the insights gained from the BDRC pilot project in Marinduque regarding "effective ways and methods if working with LGUs, CSOs, and POs and communities" (Formilleza, 2010).
DRRM Keyword/s	Preparedness
Topics	Disasters in general; Stakeholder relations
Funding source	DFID; Christian Aid
Publication information	Formilleza, S.P. (2010). Reflections on BDRC case study in Marinduque. In dela Cruz, L.P., Ferrer, E.M. and Pagaduan, M.C. (Eds.). *Building Disaster-Resilient Communities: Stories and Lessons from the Philippines* (pp. 92-96). Quezon City: CSWCD-UP.

Researcher/s	FORTES Miguel
Affiliation	University of the Philippines Diliman – College of Science
Title of research	SeagrassNet: Assessment and Monitoring of Seagrass in Puerto Galera and Bolinao
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Coastal/fishery/marine resources; Benchmarking/Profiling
Funding source	Packard Foundation
Publication information	No information

Researcher/s	FUNDADOR Noreen Grace
Affiliation	University of the Philippines Mindanao
Title of research	Biodegradable Plastics with Sago Starch
Brief description	This research is a component of the project titled *Conservation and Sustainable Utilization of Selected Bio-Resources in Mindanao* that was launched in 2007 by the UP Mindanao Biotechnology Research Program. The program focuses primarily on the sago palm, and includes studies on its conservation, ecology, micro-propagation, molecular profiling, and possible uses for the development of products such as lactic acid, ethanol, and biodegradable plastics.
DRRM Keyword/s	Prevention and Mitigation
Topics	Bio-resources; Technologies and tools
Funding source	DOST
Publication information	No information

Researcher/s	GABO Leocito
Affiliation	University of the Philippines Diliman – CSWCD
Title of research	Participation in a Research on Flood Affecting Lives of Communities in CAMANAVA
Brief description	No information
DRRM Keyword/s	Rehabilitation and Recovery
Topics	Floods; Community-based initiatives
Funding source	No information
Publication information	No information

Researcher/s	GOMEZ Aurelia Luzviminda
Affiliation	University of the Philippines Mindanao
Title of research	Potential of Payment for Environmental Services (PES) for Natural Resources Conservation and Management in Mindanao, Philippines
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Natural resources; Policy formulation
Funding source	No information
Publication information	PhD Dissertation, 2008

Researcher/s	GOMEZ Aurelia Luzviminda
Affiliation	University of the Philippines Mindanao
Title of research	Socio-Economic Benchmark Profiling for Eastern Mindanao Biodiversity Corridor
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Biodiversity corridor; Benchmarking
Funding source	No information
Publication information	No information

Researcher/s	GOMEZ Aurelia Luzviminda
Affiliation	University of the Philippines Mindanao
Title of research	Social and Economic Aspects of the Agusan Marsh Key Biodiversity Area
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Biodiversity; Benchmarking
Funding source	No information
Publication information	Bracamonte, N.L., Roxas, A.T., Poblete, T.O., Gomez, A.L.V. & Serony, R. (2008). Social and Economic Aspects of the Agusan Marsh Key Biodiversity Area. Proceedings of the 1st Scientific Conference of the Agusan Marsh Published by UNESCO, Jakarta. May 21-23, 2007.

Researcher/s	GOMEZ Edgardo
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Coral Reef Targeted Research and Capacity Building for Management
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Coastal/fishery/marine resources; Management
Funding source	World Bank – GEF
Publication information	No information

Researcher/s	GOMEZ Edgardo
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Coral Reef Adaptation in the Face of Climate Change
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Benchmarking/Profiling
Funding source	No information
Publication information	O.Hoergh-Gulberg, O. Mumby, P.J. Hooten, A.J. Steneck, R.S. Greenfield, E.D. Gomez. 2008. A response to "Coral adaptation in the face of climate change," by A. Baird and J.A. Maynard. *Science* 320 (6874) pp. 315-316

Researcher/s	HALL Rosalie, CULAR Anita
Affiliation	University of the Philippines Visayas
Title of research	Civil-Military Relations in Disaster Rescue and Relief Activities: The Case of Barangay Guinsaugon, St. Bernard, Leyte
Brief description	The study examined the collaboration and coordination among local, national and international actors (civil servants, Philippines security forces, and US military personnel, respectively) during the disaster response operations in Guinsaugon, one of the villages buried by a mudslide that hit Leyte in 2006. The study found that there was limited engagement between the civil servants and the military "owing to the separation of tasks and area of activities" (Hall & Cular, 2010). It calls for a review of the guidelines regarding local government hosting of multiple actors undertaking relief operations, especially because the country's current disaster coordination framework does not specify how LGUs should deal with foreign collaborators.
DRRM Keyword/s	Response
Topics	Landslide; Stakeholder relations
Funding source	UP System Creative Writing and Research Grant
Publication information	An article based on this research was published in *Scientia Militaria, South African Journal of Military Studies 38*(2), 2010

Researcher/s	HALL Rosalie, LOOT Joseph Anthony, QUINTILLA Leo
Affiliation	University of the Philippines Visayas
Title of research	Communicating Disaster Management: Documentation, Assessment of Good Practices and Reform Initiatives by Stakeholders in the Solar 1 Oil Spill in Guimaras
Brief description	This research is one of the studies under the *Monitoring and Rehabilitation Program of the UPV-Marine Biological Station,* a five-year research that looks into the impact of the oil spill that hit Guimaras in 2006 on said province's habitats and environment, aquatic organisms, fisheries and resources, livelihood and enterprises, social and health conditions, and institutional support services. The research program is a component of the UPV Oil Spill Response Program established by the UPV Office of the Chancellor in 2006.
DRRM Keyword/s	Response; Rehabilitation and Recovery
Topics	Oil spill; Information dissemination
Funding source	National government through the NDCC and its regional counterpart
Publication information	No information

Researcher/s	HALL Rosalie
Affiliation	University of the Philippines Visayas
Title of research	Governance during Disasters: Intra-governmental and Non-governmental Coordination in the 2006 Guimaras Oil Spill
Brief description	No information
DRRM Keyword/s	Response; Rehabilitation and Recovery
Topics	Oil spill; Stakeholder relations
Funding source	No information
Publication information	Hall, R. A. (2010). Governance during Disasters: Intra-governmental and Non-governmental Coordination in the 2006 Guimaras Oil Spill. *Philippine Political Science Journal 31*(54), 117-152.

Researcher/s	HERNANDEZ Jaime Jr.
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Development of a Tri-Axial Measurement System for Vibration-Based Damage Detection and Its Application to Civil Infrastructures in Metro Manila
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Structural conditions; Technologies and tools
Funding source	UP Diliman – OVCRD (PhD Incentive Award)
Publication information	No information

Researcher/s	HERNANDEZ Jaime Jr.
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Vibration of RC viaducts under high-speed train passage: measurement and prediction including train-viaduct interaction
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Structural conditions; Technologies and tools
Funding source	No information
Publication information	Su, D., Fujino, Y., Nagayama, T., Hernandez, J., and Seki, M. (2009) Vibration of RC viaducts under high-speed train passage: measurement and prediction including train-viaduct interaction. *Structure and Infrastructure Engineering Journal*, Special Issue, June 1, 2009.

Researcher/s	HERNANDEZ Jaime Jr.
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Development of a Wireless Sensor Network for Vibration-Based Damage Detection and Its Application to Civil Infrastructures in Metro Manila
Brief description	The project aims to improve the existing vibration measurement system by incorporating wireless technology. The wireless sensor network will be tested with different types of structures, measuring different types of vibrations.
DRRM Keyword/s	Prevention and Mitigation
Topics	Structural conditions; Technologies and tools
Funding source	UP Diliman – OVCRD
Publication information	No information

Researcher/s	HERNANDEZ Jaime Jr.
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	RC Railway Viaduct Column RMS Accelerations Caused by High-Speed Trains for Damage Detection
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Structural conditions; Benchmarking
Funding source	No information
Publication information	Hernandez, J.Y., Fujino, Y. (2008). RC railway viaduct column RMS accelerations caused by high-speed trains for damage detection, Proceedings of the 2nd Asia-Pacific Conference in Structural Health Monitoring, December 2-4, 2008, Melbourne, Australia

Researcher/s	HERNANDEZ Jaime Jr., TALAMPAS Marc
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Inexpensive Sensor System for Vibration-Based Health Monitoring of Civil Structures in Developing Countries
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Structural conditions; Technologies and tools
Funding source	No information
Publication information	Hernandez, J.Y., Talampas, M.C. (2010). Inexpensive Sensor System for Vibration-based Health Monitoring of Civil Structures in Developing Countries. Proceedings of the 2nd ASEAN Civil Engineering Conference, March 11-12, 2010, Vientiane, LA.

Researcher/s	HERNANDEZ Jaime Jr., TALAMPAS Marc, TINGATINGA Eric Augustus, BLANCO A., MORALEJA A., AUSTRIA J., BUNAGAN A., TAN L.R., NO C., BALANAY J.M., BATICULON S., SAMSON M.S.
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	System for Managing Risk thru Technology: City
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Disasters in general; Technologies and tools
Funding source	No information
Publication information	Hernandez, J. Y. et al. (2010). System for Managing Risk thru Technology: City. Proceedings of the 3rd ASEAN Civil Engineering Conference, November 11-12, 2010, Manila, Philippines.

Researcher/s	HERRERA Ma. Victoria
Affiliation	University of the Philippines Diliman – College of Arts and Letters
Title of research	Collections Management and Disaster Risks
Brief description	This paper discusses approaches for risk management for art collections
DRRM Keyword/s	Preparedness
Topics	Disasters in general; Management
Funding source	No information
Publication information	Lectures delivered as part of a series on Collections Management Seminar organized by the Yuchengco Museum and Lopez Museum

Researcher/s	JACINTO Gil
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Pacific Seaboard R&D Program: Phase II Project 1 – Upwelling Variability and Intrusion into Coastal Water
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Water dynamics; Benchmarking/Profiling
Funding source	DOST-PCAMRD
Publication information	No information

Researcher/s	JACINTO Gil, McGLONE Ma. Lourdes, VILLANOY Cesar
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Mitigating Impact from Aquaculture in the Philippines (PHILMINAQ)
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Coastal/fishery/marine resources; Management
Funding source	European Commission
Publication information	No information

Researcher/s	JACINTO Gil, McGLONE Ma. Lourdes
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Ecology and Oceanography of Harmful Algal Blooms in the Philippines Project 4: Fish Kills, Algal Blooms and Eutrophication in the Tropics
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Coastal/fishery/marine resources; Benchmarking/Profiling
Funding source	DOST-PCAMRD
Publication information	No information

Researcher/s	JAVIER Dymphna, TENGONCIANG Arlene
Affiliation	University of the Philippines Baguio
Title of research	Geo-Hazards in Baguio City
Brief description	This study examines the geology of Baguio City vis-à-vis its susceptibility to landslides, and the regional seismicity of the city and its environs.
DRRM Keyword/s	Prevention and Mitigation
Topics	Geological hazards; Benchmarking
Funding source	No information
Publication information	No information

Researcher/s	JUANICO Dranreb Earl
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Crossover Behavior of a Finitely-Driven Non-Conservative Olami-Feder-Christensen (OFC) Model for Landslide Processes
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Landslide; Technologies and tools
Funding source	No information
Publication information	No information

Researcher/s	LAGMAY Alfredo Mahar Francisco
Affiliation	University of the Philippines Diliman – College of Science
Title of research	PSInSAR Detection of Ground Subsidence and Fault Movement in Muntinlupa City, MM and Biñan, Laguna
Brief description	This study focuses on detecting the amount and rate of ground movement in Muntinlupa and Biñan using a radar processing method for quantitative, high-precision, multi-scale monitoring of land deformation.
DRRM Keyword/s	Prevention and Mitigation
Topics	Land deformation; Technologies and tools
Funding source	UP Diliman – NIGS
Publication information	No information

Researcher/s	LAGMAY Alfredo Mahar Francisco
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Satellite and Field Detection and Analysis of Ground Subsidence in CAMANAVA and Metro Manila
Brief description	This study aims to assess the extent to which over-extraction of water and compaction or tectonic movement contributes to the ground subsidence problem in CAMANAVA and Metro Manila, using the PSInSAR technology.
DRRM Keyword/s	Prevention and Mitigation
Topics	Ground subsidence; Benchmarking
Funding source	DOST
Publication information	No information

Researcher/s	LAGMAY Alfredo Mahar Francisco
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Updated Assessment of Volcanic- and Earthquake-Related Hazards of the Bataan Nuclear Power Plant Site
Brief description	This study investigates the volcanic hazards of the BNPP site using the criteria set by the IAEA, as outlined in the document *Volcanoes and Associated Topics in Relation to Nuclear Power Plant Siting*, which is part of Provisional Safety Standards set by the said organization.
DRRM Keyword/s	Prevention and Mitigation
Topics	Nuclear power plants; Benchmarking
Funding source	UP Diliman – NIGS
Publication information	No information

Researcher/s	LALICAN Danilo
Affiliation	University of the Philippines Los Baños
Title of research	Development of Rice Cultivars for Rainfed-Lowland Drought-prone Environment
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Drought; Technologies and tools
Funding source	No information
Publication information	No information

Researcher/s	LANSIGAN Felino
Affiliation	University of the Philippines Los Baños
Title of research	Managing climate risk to enhance crop productivity for food security
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Technologies and tools
Funding source	No information
Publication information	No information

Researcher/s	LANSIGAN Felino
Affiliation	University of the Philippines Los Baños
Title of research	Vulnerability and adaptation to climate change in Agriculture
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Benchmarking/Profiling
Funding source	No information
Publication information	No information

Researcher/s	LANSIGAN Felino
Affiliation	University of the Philippines Los Baños
Title of research	Environment and Climate Change: The Role of Youth
Brief description	No information
DRRM Keyword/s	Preparedness
Topics	Climate change; Community involvement
Funding source	No information
Publication information	No information

Researcher/s	LANSIGAN Felino
Affiliation	University of the Philippines Los Baños
Title of research	Determining the seasonal climate-based optimal planting dates for rainfed rice in selected locations in the Philippines
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Technologies and tools
Funding source	No information
Publication information	No information

Researcher/s	LAPITAN Portia
Affiliation	University of the Philippines Los Baños
Title of research	Towards the Adoption of Tissue Culture as a Strategy for the Propagation of Premium Industrial Plantation Trees
Brief description	This two-year research project is a continuation of previous efforts at developing an alternative method of propagation of quality planting materials of premium industrial plantation trees. This move was carried out to address the ever-increasing demand for these planting materials. Protocols for tissue culture of Acacia mangium, Paraserianthes falcataria and Gmelina arborea have been developed for tissues from seeds but the success of this technology is limited by the success so far attained in outplanting the plantlets. Protocols for tissue culture, on the other hand, for dipterocarps Shorea astylosa, S. contorta and Parashorea malaanonan have yet to be developed.
DRRM Keyword/s	Prevention and Mitigation
Topics	Plantation trees; Technologies and tools
Funding source	No information
Publication information	No information

Researcher/s	LAWAS T.P., REBANCOS Carmelita, ESPALDON Ma. Victoria, MACANDOG D.M., SOBREMISANA M.J.
Affiliation	University of the Philippines Los Baños
Title of research	Empowering LGUs in Disaster: Case Study of Barangay Bagong Silang, Los Banos, Laguna
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Disasters in general; Management
Funding source	No information
Publication information	No information

Researcher/s	LIM May
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Traffic Flow: Group Movement, Staggered Releases, and Other Interventions
Brief description	This project analyzes the correlation of traffic density with herding and order parameters, the combination of the said two parameters, and the extent to which they are found in natural settings.
DRRM Keyword/s	Prevention and Mitigation
Topics	Traffic dynamics; Technologies and tools
Funding source	None
Publication information	No information

Researcher/s	LIZADA Joy
Affiliation	University of the Philippines Visayas
Title of research	Livelihood Initiatives in Response to Disasters: The Case of M/T Solar 1 Oil Spill in Guimaras (Phases 1 and 2)
Brief description	This research is one of the studies under the *Monitoring and Rehabilitation Program of the UPV-Marine Biological Station,* a five-year research that looks into the impact of the oil spill that hit Guimaras in 2006 on said province's habitats and environment, aquatic organisms, fisheries and resources, livelihood and enterprises, social and health conditions, and institutional support services. The research program is a component of the UPV Oil Spill Response Program established by the UPV Office of the Chancellor in 2006.
DRRM Keyword/s	Response; Rehabilitation and Recovery
Topics	Oil spill; Community-based initiatives
Funding source	National government through the NDCC and its regional counterpart
Publication information	No information

Researcher/s	LLUISMA Arturo
Affiliation	University of the Philippines Diliman – College of Science
Title of research	ASEAN-ROK Cooperative Programme on Industrial Use of Marine Biological Resources: Assessment of the State of the Art of Marine Biotechnology in the Philippines
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Coastal/fishery/marine resources; Technologies and tools
Funding source	DOST-PCAMRD
Publication information	No information

Researcher/s	LLUISMA Arturo
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Ecology and Oceanography of Harmful Algal Blooms in the Philippines Project 1: Biodiversity/Genetic Diversity of Selected HAB-forming Species in the Philippines
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Benchmarking/Profiling
Funding source	DOST-PCAMRD
Publication information	No information

Researcher/s	LU Jinky
Affiliation	University of the Philippines Manila
Title of research	Basics of Occupational Safety and Health
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Occupational safety; Management
Funding source	No information
Publication information	No information

Researcher/s	LUNA Emmanuel
Affiliation	University of the Philippines Diliman – CSWCD
Title of research	Capability Building Project for Two Communities Affected by Typhoon Ondoy in San Mateo, Rizal
Brief description	No information
DRRM Keyword/s	Rehabilitation and Recovery
Topics	Typhoons; Community-based initiatives
Funding source	No information
Publication information	No information

Researcher/s	LUNA Emmanuel
Affiliation	University of the Philippines Diliman – CSWCD
Title of research	Community Development Approach in the Recovery of Selected Communities Affected by the Flood in the Philippines
Brief description	This research "presents a framework and experiences in adopting community development in the rebuilding of communities affected by the flood. Two cases of communities, one that was relocated and one that stayed in the vulnerable community, are presented. The outcome shows that the community that remained in the same area had a higher level of recovery compared to those in the relocation area. The residents in this community had greater experiences in community education, organizing, resources and disaster risk management processes" (Luna, 2010).
DRRM Keyword/s	Response; Rehabilitation and Recovery
Topics	Floods; Community-based initiatives
Funding source	No information
Publication information	Conference/forum/workshop paper presentation

Researcher/s	LUNA Emmanuel
Affiliation	University of the Philippines Diliman – CSWCD
Title of research	Community Development as an Approach to Reducing Risks among Flashflood-Affected Families in Albay
Brief description	This study documents how a local NGO used community development perspectives and processes in working with disaster survivors who were resettled in a land provided by the government. This program "shows that the reduction of further risks among those who have been affected by disasters could be effectively done through a community development self-help approach, in collaboration with external support organizations that could bring in resources that are beyond the community's capacity to produce" (Luna, 2009).
DRRM Keyword/s	Response; Rehabilitation and Recovery
Topics	Floods; Community-based initiatives
Funding source	No information
Publication information	Luna, E. M. (2009). Community Development as an Approach to Reducing Risks Among Flashflood-Affected Families in Albay. Disaster Studies Working Paper 24. Aon Benfield UCL Hazards Research Center. University College London. www.abuhrc.org.

Researcher/s	LUNA Emmanuel
Affiliation	University of the Philippines Diliman – CSWCD
Title of research	Community Education for Disaster Risk Reduction: Framework and Cases from the Philippines
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Disasters in general; Information dissemination
Funding source	No information
Publication information	Conference/forum/workshop paper presentation

Researcher/s	LUNA Emmanuel
Affiliation	University of the Philippines Diliman – CSWCD
Title of research	Community-Based Approach in Building Social Resilience and Post-Disaster Recovery
Brief description	No information
DRRM Keyword/s	Rehabilitation and Recovery
Topics	Disasters in general; Community-based initiatives
Funding source	No information
Publication information	Luna, E. (2011). Community-Based Approach in Building Social Resilience and Post Disaster Recovery. Presented at the 2011 APEC Typhoon Symposium. APEC Research Center for Typhoon and Society. Taipei, Taiwan, April 11-13, 2011

Researcher/s	LUNA Emmanuel
Affiliation	University of the Philippines Diliman – CSWCD
Title of research	Community-Based Disaster Risk Management Program
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation; Preparedness; Response; Rehabilitation and Recovery
Topics	Disasters in general; Community-based initiatives
Funding source	No information
Publication information	No information

Researcher/s	LUNA Emmanuel
Affiliation	University of the Philippines Diliman – CSWCD
Title of research	Community Self Help and Partnership
Brief description	No information
DRRM Keyword/s	Preparedness
Topics	Disasters in general; Community-based initiatives
Funding source	No information
Publication information	Luna, E. M. (Forthcoming in 2011). Community Self Help and Partnership. In Ben Wisner and Alejandro Lopez-Carresi, Eds. *Disaster Management in the 21st Century: Achievements and Challenges*. USA: Stadium Press LLC and India: Research Books and Periodicals Pvt.Ltd.

Researcher/s	LUNA Emmanuel
Affiliation	University of the Philippines Diliman – CSWCD
Title of research	Emergency Public Health Support to Select Sites in Rizal Province Heavily Affected by Tropical Storm Ondoy
Brief description	No information
DRRM Keyword/s	Response
Topics	Typhoons; Disaster aid
Funding source	UP-CSWCD; Oxfam
Publication information	No information

Researcher/s	LUNA Emmanuel
Affiliation	University of the Philippines Diliman – CSWCD
Title of research	Increasing the Resilience of Communities to Hydro-Meteorological Hazards
Brief description	No information
DRRM Keyword/s	Preparedness
Topics	Hydro-meteorological hazards; Community-based initiatives
Funding source	No information
Publication information	Luna, E. (2011). Increasing the Resilience of Communities to Hydro Meteorological Hazards. Paper presented at the Regional Workshop on Hydro-meteorological Disaster Risk Reduction and Climate Change Adaptation for Coastal and Small Island Communities. UNESCO and Japan Funds-In-Trust. Jakarta, Indonesia. March 1-3, 2011

Researcher/s	LUNA Emmanuel
Affiliation	University of the Philippines Diliman – CSWCD
Title of research	Participatory Capacity and Vulnerability Assessment in Rizal and Laguna Provinces
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Disasters in general; Benchmarking
Funding source	Oxfam
Publication information	No information

Researcher/s	LUNA Emmanuel
Affiliation	University of the Philippines Diliman – CSWCD
Title of research	Research on Accountability for Disaster Risk Reduction: Pathways, Tools and the Role of CSOs
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Disasters in general; Technologies and tools
Funding source	Institute of Development Studies, UK
Publication information	No information

Researcher/s	LUNA Emmanuel
Affiliation	University of the Philippines Diliman – CSWCD
Title of research	Status Report of the Leyte Landslide
Brief description	No information
DRRM Keyword/s	Response
Topics	Landslides; Benchmarking
Funding source	International Recovery Platform; Center for Disaster Preparedness
Publication information	Luna, E., Luna, G., Molina, G. & Molina, F. (Forthcoming, 2011). Status Report of the Leyte Landslide, December 2010. Kobe, Japan: International Recovery Platform

Researcher/s	LUNA Emmanuel
Affiliation	University of the Philippines Diliman – CSWCD
Title of research	Towards Building Disaster-Resilient Communities: A Documentation of the Community-Based Early Warning System in Infanta, Quezon
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Disasters in general; Technologies and tools
Funding source	Christian Aid
Publication information	No information

Researcher/s	LUNA Emmanuel
Affiliation	University of the Philippines Diliman – CSWCD
Title of research	Disaster Risk Reduction in Education and Education for DRR
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Disasters in general; Information dissemination
Funding source	No information
Publication information	Luna, E. M. (Forthcoming, 2011). Disaster Risk Reduction in Education and Education for DRR. In Ben Wisner, Ilan Kelman and JC. Gaillard, Eds. *Handbook of Hazards and Disasters*. USA: Routledge

Researcher/s	LUNA Emmanuel
Affiliation	University of the Philippines Diliman – CSWCD
Title of research	The Institutionalization of Disaster Risk Reduction in Community Development Education: The U.P. CSWCD Experience
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Disasters in general; Information dissemination
Funding source	No information
Publication information	Luna, E. M. (2009). The Institutionalization of Disaster Risk Reduction in Community Development Education: The U.P. CSWCD Experience. QC: Center for Disaster Preparedness. Also published in Proceedings of the First Asia-Pacific Regional Conference on Community Development: Community Development as an Academic Discipline and Profession: Renewing Committed Service for Social Transformation. Quezon City: College of Social Work and Community Development. Pp. 256-265.

Researcher/s	LUNA Emmanuel
Affiliation	University of the Philippines Diliman – CSWCD
Title of research	Warning: Take Heed, Early Warning System Being Installed
Brief description	This paper is one of the chapters in *Building Disaster-Resilient Communities: Stories and Lessons from the Philippines*. It has two thrusts: 1) to identify ways to improve the community early warning system to ensure its effectiveness and sustainability and 2) to foreground practical lessons and suggestions that would make early warning systems more useful to the people.
DRRM Keyword/s	Preparedness
Topics	Disasters in general; Technologies and tools
Funding source	DFID; Christian Aid
Publication information	Luna, E.M. (2010). Warning: Take heed, early warning system being installed. In delaCruz, L.P., Ferrer, E.M. and Pagaduan, M.C. (Eds.). *Building Disaster-Resilient Communities: Stories and Lessons from the Philippines* (pp. 23-32). Quezon City: CSWCD-UP.

Researcher/s	LUNA Emmanuel
Affiliation	University of the Philippines Diliman – CSWCD
Title of research	Hydro-meteorological Disaster Risk Reduction and Climate Change Adaptation for Coastal and small Island Communities
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Programs/Policies
Funding source	Center for Disaster Preparedness; UNESCO-Jakarta
Publication information	Final output was the National Framework on Climate Change published by GTZ`and DENR, 2010.

Researcher/s	LUNA R., BUENSUCESO Benjamin Jr.
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Geotechnical and Seismic Considerations in the Design of Highway Embankments
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Geological hazards; Benchmarking
Funding source	No information
Publication information	Luna, R. and Buensuceso, B. (2010). Geotechnical and seismic considerations in the design of highway embankments, Proceedings of the 2010 PICE National Convention, 25 to 27 November 2010, Cebu International Convention Center, Cebu City.

Researcher/s	MAGCURO Thelma
Affiliation	University of the Philippines Diliman – CSWCD
Title of research	Reflections on the Sitio Gumang Experience of Building Disaster-Resilient Communities
Brief description	This paper is one of the chapters in *Building Disaster-Resilient Communities: Stories and Lessons from the Philippines*. In this paper, the author discusses the strategies adopted by a local NGO for enhancing disaster resiliency, of which the core components are capacity building of partner communities and local policy development on the use and conservation of coastal resources.
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Coastal resources; Community-based initiatives
Funding source	DFID; Christian Aid
Publication information	Magcuro, T. (2010). Reflections on the Sitio Gumang Experience of Building Disaster-Resilient Communities. In dela Cruz, L.P., Ferrer, E.M. and Pagaduan, M.C. (Eds.). *Building Disaster-Resilient Communities: Stories and Lessons from the Philippines*. Quezon City: CSWCD-UP.

Researcher/s	MAGDALUYO Eduardo Jr., ARANAS Clodualdo Jr., NASIGLAT Jovilyn
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Influence of Castor Oil-Based Polyurethane on Physico-Chemical Properties of Calcium Silicate Cement
Brief description	Results of the investigation revealed that "[i]ncreasing the amount of castor-oil based polyurethane when incorporated in the calcium silicate cement was effective in increasing the compressive strength and bulk density of the polymer-reinforced composite material…. [It] is possible to tailor the properties of the polymer-modified cement by changing the amount of cement and molar ratio of NCO/OH in order to attain specific applications as lightweight structural and non-structural materials" (Magdaluyo et al., 2011).
DRRM Keyword/s	Prevention and Mitigation
Topics	Structural conditions; Technologies and tools
Funding source	UP Diliman – UP ERDFI Faculty Research Incentive Award
Publication information	Results published in *Philippine Journal of Science 140*(1), 2011

Researcher/s	MAGPANTAY Veneranda
Affiliation	University of the Philippines Los Baños
Title of research	Vulnerability of Philippine Mallard Duck (Anas platyrhynchos) Production to Changing Climatic Conditions
Brief description	The project is about genetic characterization of Mallard ducks intended to classify their homogeneity and diversity, assessment of duck-egg production in Laguna and Pampanga for the establishment of vitellogenin assay protocol, and development of protocol for screening of Persistent Organic Pollutants using in-ovo technique.
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Technologies and tools
Funding source	No information
Publication information	No information

Researcher/s	MANALILI Angelito
Affiliation	University of the Philippines Diliman – CSWCD
Title of research	Journeying with SAM Ipil to Salinding: A Collective Learning Experience in Community Development
Brief description	This paper is one of the chapters in *Building Disaster-Resilient Communities: Stories and Lessons from the Philippines*. In this paper, the author emphasizes the importance of community empowerment and self-reliance in building a disaster-resilient community.
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Floods; Community-based initiatives
Funding source	DFID; Christian Aid
Publication information	Manalili, A. (2010). Journeying with SAM Ipil to Salinding: A Collective Learning Experience in Community Development. In dela Cruz, L.P., Ferrer, E.M. and Pagaduan, M.C. (Eds.). *Building Disaster-Resilient Communities: Stories and Lessons from the Philippines*. Quezon City: CSWCD-UP.

Researcher/s	MAÑALAC Sharon
Affiliation	University of the Philippines Diliman Extension Program in Pampanga/Olongapo
Title of research	Managing Climate Impacts on Health in Water and Agriculture Sectors and Disaster Risk Reduction
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Management
Funding source	Asian Development Bank
Publication information	Contributor, *Accounting for Health Impacts of Climate Change.* ADB. 2011.

Researcher/s	MAÑALAC Sharon
Affiliation	University of the Philippines Diliman Extension Program in Pampanga/Olongapo
Title of research	Carbon Footprint Inventory for the World Health Organization Western Pacific Regional Office (WHO-WPRO)
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Benchmarking/Profiling
Funding source	WHO-WPRO
Publication information	No information

Researcher/s	MAÑALAC Sharon
Affiliation	University of the Philippines Diliman Extension Program in Pampanga/Olongapo
Title of research	Effect of Climate Change on Rice Production
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Benchmarking/Profiling
Funding source	No information
Publication information	Effect of climate on rice production in Central Luzon, Philippines. In Proceedings of the 2011 World Climate Research Programme Open Science Conference – Climate Research in Service to Society, 24-28 October 2011, Denver, CO, USA.

Researcher/s	MARCIANO Joel Joseph
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Technical Feasibility of Using Broadband Wireless Technologies for Public Safety and Emergency Response Applications in the Philippines
Brief description	No information
DRRM Keyword/s	Response
Topics	Disasters in general; Technologies and tools
Funding source	No information
Publication information	J.S. Marciano Jr., "On the Technical Feasibility of Using Broadband Wireless Technologies for Public Safety and Emergency Response Applications in the Philippines," FINAL REPORT" to the International Telecommunications Union (ITU) and the Department of Transportation and Communications and the Proceedings of the Sub-Regional Workshop on ICT for Disaster Prevention and Management for ASEAN, September 30-October 2, 2008, Manila, Philippines.

Researcher/s	MARCIANO Joel Joseph
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Building Cellular-Sites-on-Wheels for Rapidly Deployable and Restorable Communication Systems in Emergencies and Disasters
Brief description	No information
DRRM Keyword/s	Response
Topics	Disasters in general; Technologies and tools
Funding source	No information
Publication information	None

Researcher/s	MARCIANO Joel Joseph, ZARCO Mark Albert, CATANE Sandra, TALAMPAS Marc Caesar
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Disaster Risk Management Using Sensors, Networks and Computing - Cost-Effective Instrumentation for Landslides, Slope Failures and Debris Flows (2008-2012)
Brief description	Much of the existing technology for reducing landslide risk is applicable only to small landslides affecting affluent communities. In the case of massive landslides, no effective yet economically viable structural mitigation measure or early warning system has yet been developed. This program addresses this need in order to provide marginalized communities with landslide early warning system that is accurate yet cost-effective.
DRRM Keyword/s	Prevention and Mitigation
Topics	Landslides; Technologies and tools
Funding source	DOST; UP Diliman
Publication information	F.R. JC de Dios, J. Enriquez, F.G. Victorino, E.A. Mendoza, M.C. Talampas, and J.S. Marciano Jr., "A Tilt, Soil Moisture, and Pore Water Pressure Sensor System for Slope Monitoring Applications," *Science Diliman*, Vol. 21, No. 1. J.S. Marciano Jr., M.A.H. Zarco, M.C.R. Talampas, S.G. Catane, C.G. Hilario, M.A.B. Zabanal, C.R.C. Carreon, E.A. Mendoza, R.N. Kaimo and C.N. Cordero, "Real-World Deployment of a Locally-Developed Tilt and Moisture Sensor for Landslide Monitoring in the Philippines," Proc. 2011 IEEE Global Humanitarian Technology Conference (IEEE GHTC 2011), Oct. 31-Nov. 2, 2011. Seattle, WA, USA. M. Purisima, J.S. Marciano Jr., R. de Joya Jr., P. Mogatas and C. Salazar, "FPGA Implementation of a Time Domain Reflectometry (TDR) System for Slope Monitoring Applications," Proc. 2010 IEEE Region 10 Conference (IEEE TENCON 2010), Nov. 21-24, 2010, Fukuoka, Japan. F.R. JC de Dios, J. Enriquez, F.G. Victorino, E.A. Mendoza, M.C. Talampas, and J.S. Marciano Jr., "Design, Development, and Evaluation of a Tilt and Soil Moisture Sensor Network for Slope Monitoring Applications,"Proc. 2009 IEEE Region 10 Conference (IEEE TENCON 2009), November 23-26, 2009, Singapore.

Researcher/s	McGLONE Maria Lourdes
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Monitoring of Water Quality and Assessment of Sediment Quality in a Mariculture Area in Bolinao
Brief description	The purpose of this study is to continue monitoring the water quality in Bolinao to keep track of the long-term changes in water quality conditions over time. Moreover, sediment quality will be assessed to evaluate the extent of waste feed input in the benthic environment.
DRRM Keyword/s	Prevention and Mitigation
Topics	Coastal/fishery/marine resources; Benchmarking/Profiling
Funding source	UP
Publication information	Tentia, M.C. & M.L. San Diego-McGlone, 2008. Organic matter distribution in the sediments of fishfarm areas in Bolinao, Pangasinan. *UPV Journal of Natural Sciences 13* Suppl: 108-115. San Diego-McGlone, M.L. R.V. Azanza, C.L. Villanoy & G.S. Jacinto. 2008. Eutrophic waters, algal bloom and fish kill in fish farming areas in Bolinao, Pangasinan, Philippines. *Marine Pollution Bulletin 57*: 295-301. San Diego-McGlone, M.L., G.S. Jacinto, D.O. Padayao & I.B. Velasquez. 2008. Eutrophication and its cause/consequences: The case of the Philippines. In *Asia-Pacific Coasts and Their Management: States of Environment.* Springer.

Researcher/s	McGLONE Maria Lourdes, VILLANOY Cesar, ALIÑO Porfirio, DAVID Laura, YÑIGUEZ Aletta
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Climate Adaptation Challenges in Coastal and Marine Areas
Brief description	The project objectives were to identify the specific vulnerabilities of the coastal and marine environment and recommend adaptation measures to mitigate these vulnerabilities. Specifically, climate change exposure factors and the sensitivities of local communities, habitats, and coastal fisheries to these exposure factors were determined. A suite of adaptation measures were identified and a strategy for prioritization was recommended.
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Management
Funding source	NEDA; DENR
Publication information	None yet

Researcher/s	McGLONE Maria Lourdes, AZANZA Rhodora
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Ecology and Oceanography of Harmful Algal Blooms in the Philippines Project 8: Harmful Algal Bloom Mitigation in the Tropics
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Benchmarking/Profiling
Funding source	DOST-PCAMRD
Publication information	No information

Researcher/s	McGLONE Maria Lourdes, JACINTO Gil, REICHARDT Wolfgang, SIRINGAN Fernando, LICUANAN Wilfredo, PANTE Ma. Josefa, MEÑEZ Marie Antonette, AZANZA Rhodora, LICUANAN Suzanne, YÑIGUEZ Aletta, FORTES Edna, FORTES Miguel
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Coastal Environment Responses to Natural and Anthropogenic Stresses: The Bolinao Research Program
Brief description	The primary goal of the program is to design and establish a coastal environment monitoring program for Bolinao, which can serve as prototype for the establishment of additional monitoring stations throughout the country.
DRRM Keyword/s	Prevention and Mitigation
Topics	Coastal/fishery/marine resources; Programs/Policies
Funding source	CHED
Publication information	None yet

Researcher/s	MONTEROLA Christopher
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Analyzing the Stability of Granular Pile in the Presence of Water and the Convection Dynamics of Water in the Presence of Granular Matter
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Water dynamics; Technologies and tools
Funding source	No information
Publication information	No information

Researcher/s	MONTEROLA Christopher
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Stability and Statistical Properties of Tabletop Granular Set-Up
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Water dynamics; Benchmarking
Funding source	No information
Publication information	No information

Researcher/s	MONTEROLA Christopher
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Spatio-Temporal Deviations in Fluid Flow Resulting from Particle-Fluid Interactions
Brief description	The researchers characterize the influence of the presence of suspended particles on a fluid undergoing convection and find that it leads to deviations in both the fluid speed and temperature. The spatio-temporal deviations of the profiles for both fields are persistent in several well-defined regions of the fluid. These variations are robust and exhibited by different temperature profiles, although the strength of the deviations depends on the amount of time required by the suspension to reach a steady state. The primary effect of the presence of the particles is to weaken the fluid convective strength and heat flux, as well as to change the convection's spatial characteristics. The results quantify the degree to which the physical presence and motion of particles in a suspension affect its flow dynamics, a case that is typically neglected in most modeling protocols. (From the Abstract)
DRRM Keyword/s	Prevention and Mitigation
Topics	Fluid dynamics; Benchmarking
Funding source	No information
Publication information	J.F. Valenzuela & C. Monterola (2011). Spatio-temporal deviations in fluid flow resulting from particle-fluid interactions. *Journal of Statistical Mechanics: Theory and Experiment* PO2038, (2011). DOI No. 10.1088/1742-5468/2011/02/PO2038

Researcher/s	MOSCOSO Alan Dino
Affiliation	University of the Philippines Visayas
Title of research	Oil Sensitivity Mapping of the Province of Guimaras
Brief description	This research is one of the studies under the *Monitoring and Rehabilitation Program of the UPV-Marine Biological Station,* a five-year research that looks into the impact of the oil spill that hit Guimaras in 2006 on said province's habitats and environment, aquatic organisms, fisheries and resources, livelihood and enterprises, social and health conditions, and institutional support services. The research program is a component of the UPV Oil Spill Response Program established by the UPV Office of the Chancellor in 2006.
DRRM Keyword/s	Response
Topics	Oil spill; Benchmarking
Funding source	National government through the NDCC and its regional counterpart
Publication information	No information

Researcher/s	MOYA Tolentino
Affiliation	University of the Philippines Diliman – College of Science
Title of research	GIS and Remote Sensing Techniques to Estimate Stormwater Pollutant Loadings
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Pollution; Technologies and tools
Funding source	UPD-NSRI
Publication information	No information

Researcher/s	MOYA Tolentino
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Human-Climate Interactions around Water Security in Selected Philippine Communities
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Benchmarking/Profiling
Funding source	UPD-NSRI
Publication information	No information

Researcher/s	NANTES Doracie, MARTINEZ Ma. Simeona, DE VERA Rocelyn, CAPARAS Paulo, GERONIA Mart Cyrel, ILAGAN Marie Joyce, TINGIN Neil
Affiliation	University of the Philippines Diliman – CSSP
Title of research	Chronicling and Mapping the Physical and Social Components of Flood Experiences and Initiatives on Disaster Risk Reduction Management in Four Communities Affected by Tropical Storm Ondoy in 2009
Brief description	The project looks into the physical changes that have taken place in the river systems of Metro Manila. This includes the morphology and mapping of different land uses that are found on a number of select river banks. The social component aims to understand the impacts of flood disasters on women, with a focus on their dynamic roles and behaviors during the onset and after the occurrences of floods.
DRRM Keyword/s	Response; Rehabilitation and Recovery
Topics	Typhoons; Management
Funding source	Christian Aid and Manila Observatory
Publication information	No information

Researcher/s	NAÑOLA Cleto Jr.
Affiliation	University of the Philippines Mindanao
Title of research	An Evaluation of the Ecological and Economic Impacts of Two Marine Protected Areas (MPAs) in the Island Garden City of Samal
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Marine resources; Benchmarking
Funding source	No information
Publication information	No information

Researcher/s	NAÑOLA Cleto Jr.
Affiliation	University of the Philippines Mindanao
Title of research	Exploring the Connectivity of Reef Fish Populations in Three Adjacent Bays along the Southeastern Coasts of Mindanao Using Molecular Techniques
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Fishery resources; Technologies and tools
Funding source	No information
Publication information	No information

Researcher/s	NAÑOLA Cleto Jr.
Affiliation	University of the Philippines Mindanao
Title of research	Maloong Canal Shoal Marine Protected Area, Lamitan City, Basilan
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Marine protected areas; Benchmarking
Funding source	No information
Publication information	Nañola, C.L. Jr. & Baird, M.R. 2008. Maloong Canal Shoal Marine Protected Area, Lamitan City, Basilan. Proceedings of the National Conference on Reef Through Time Initiating the State of the Coast Reports, pp. 122-130.

Researcher/s	NAÑOLA Cleto Jr.
Affiliation	University of the Philippines Mindanao
Title of research	MPA Management and State of the Coast in Zamboanga Sibugay Province
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Marine protected areas; Benchmarking
Funding source	No information
Publication information	Nañola, C.L. Jr. & Baird, M.R. 2008. MPA Management and State of the Coast in Zamboanga Sibugay Province. Proceedings of the National Conference on Reef Through Time Initiating the State of the Coast Reports, pp. 131-135
Researcher/s	NAÑOLA Cleto Jr.
Affiliation	University of the Philippines Mindanao
Title of research	Exploitation-Related Reef Fish Species Richness Depletion in the Epicenter of Marine Biodiversity
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Fishery resources; Benchmarking
Funding source	No information
Publication information	Nañola, C.L. Jr., Aliño, P.M. & Carpenter, K.E. (2010). Exploitation-Related Reef Fish Species Richness Depletion in the Epicenter of Marine Biodiversity. *Environmental Biology of Fishes*, in press

Researcher/s	NAPATA Ruby, ESPECTATO Liberty, SEROFIA Genna
Affiliation	University of the Philippines Visayas
Title of research	Evaluation of the Fisheries Registration and Licensing System in Selected Municipalities of Panay Island
Brief description	The study takes off from the premise that the licensing system is potentially one of the viable strategies for fisheries management. The study has three objectives: 1) To describe the existing registration and licensing system for fisherfolks, fishing vessels and fishing gears in selected towns in Panay; 2) To evaluate the effectiveness of this system; and 3) To formulate recommendations for the improvement of the system.
DRRM Keyword/s	Prevention and Mitigation
Topics	Fishery resources; Policy formulation
Funding source	UP Visayas
Publication information	No information

Researcher/s	NELSON Gloria
Affiliation	University of the Philippines Los Baños
Title of research	Population Displacement and Resettlement of Communities Affected by Natural Disaster
Brief description	No information
DRRM Keyword/s	Rehabilitation and Recovery
Topics	Disasters in general; Disaster aid
Funding source	No information
Publication information	Presented at the International Sociological Association XVII World Congress of Sociology July 11-17, 2010, Gotthenburg, Sweden

Researcher/s	NELSON Gloria
Affiliation	University of the Philippines Los Baños
Title of research	Housing the Homeless: Resettlement of Natural Disaster Victims
Brief description	No information
DRRM Keyword/s	Rehabilitation and Recovery
Topics	Disasters in general; Disaster aid
Funding source	No information
Publication information	Presented at the International Sociological Association XVII World Congress of Sociology July 11-17, 2010, Gotthenburg, Sweden

Researcher/s	OFRENEO Rosalinda
Affiliation	University of the Philippines Diliman – CSWCD
Title of research	Addressing Social Dimensions of Climate Change through Adaptive Social Protection,
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Programs/Policies
Funding source	DSWD
Publication information	Think Paper soon to be published in the DSWD Journal People's Social Protection Agenda: Towards Social Protection for All, booklet produced and published May 2010 by ACIW and Homenet Southeast Asia, with the cooperation of the UPCSWCD Social Protection Cluster

Researcher/s	PACHECO Benito
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Fire Hazard Mitigation Measures in Clustered Housing
Brief description	This research is one of the projects under the *Green Affordable Shelter Systems* (GRASS) program. The study aims to identify the key points and factors in fire safety that need to be given attention in order to reduce fire incidences and casualties. Specifically, the study is developing a system for testing the fire-resistive properties and combustibility of construction materials and building assemblies. Based on the findings of the test and on the review of existing building and fire codes, the study will then identify measures for decreasing annual fire incidences and casualties, particularly in clustered areas.
DRRM Keyword/s	Prevention and Mitigation
Topics	Fire hazards; Policy formulation
Funding source	DOST
Publication information	No information

Researcher/s	PACHECO Benito
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Disaster risk management background of DMAPS for infrastructure
Brief description	The first part of this paper is a situationer for the Philippines in the 2009 UN global assessment report. Second is an introduction of DMAPS for Infrastructure, a new public-private partnership agreement for disaster mitigation, adaptation, and preparedness strategies for infrastructure, involving scientists and engineers in the Philippines. Third and main part is a framework of concepts and terminologies that the author proposes for engineers and scientists to harmonize among themselves and with professionals in finance, medicine, and other disciplines.
DRRM Keyword/s	Prevention and Mitigation
Topics	Infrastructure; Policy formulation
Funding source	No information
Publication information	Pacheco, B. M. (2009). Disaster risk management background of DMAPS for infrastructure, *Philippine Engineering Journal*, Vol. 28, No. 2, 2009.

Researcher/s	PACHECO Benito
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Mainstreaming of Disaster Risk Management into the Infrastructure Life Cycle
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation; Preparedness; Response; Rehabilitation and Recovery
Topics	Disasters in general; Policy formulation
Funding source	No information
Publication information	No information

Researcher/s	PACHECO Benito
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Seismic retrofitting technologies for structures (Retrofitting Technologies for Bridges in the Philippines, Japan and Other Seismic Countries)
Brief description	For background, the paper discusses the main rationale for retrofitting: an iterative effort to redesign and reconstruct the structure in order for the existing bridge to fit with, or to meet, more recent and more stringent specifications that have been made on account of more recent lessons from earthquake damage. It is clarified that seismic retrofitting may or may not be feasible for all bridges; retrofit may or may not be practical to combine with repair of non-earthquake related damage. The examples of seismic retrofitting technologies that are cited in the paper include: a) retrofit of foundations, b) retrofit of columns and piers, and c) retrofit of bearings and superstructure.
DRRM Keyword/s	Prevention and Mitigation
Topics	Structural conditions; Technologies and tools
Funding source	No information
Publication information	Pacheco, B.M. (2009). Seismic retrofitting technologies for structures, In *Sustainable Civil Engineering: Harmonizing Infrastructure Development with the Environment*, Kusakabe, O. et al. (eds). The University of the Philippines Press and Japan Society for the Promotion of Science, pp. 88-96.

Researcher/s	PACHECO Benito
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Multi-Hazard, Multi-Sector, Multi-Discipline Approach to Disaster Risk Management: Examples in the Philippines
Brief description	This paper presents a framework of concepts and methodologies that the author proposes for engineers and scientists to harmonize. Central to the multi-hazard, multi-sector, multi-discipline approach is the recognition of the three generic risk objects of Life, Property, and Way of Life, and the three generic risk factors Hazards, Exposure, and Vulnerability. The proposed framework has four generic steps of risk management, easily remembered as R-I-S-K: Recognize, Impute and estimate, Survey over time, and Keep within tolerance range.
DRRM Keyword/s	Prevention and Mitigation; Preparedness; Response; Rehabilitation and Recovery
Topics	Disasters in general; Policy formulation
Funding source	No information
Publication information	Pacheco, B. M. (2010). Multi-Hazard, Multi-Sector, Multi-Discipline Approach to Disaster Risk Management: Examples in the Philippines, Proc. Intl. Symposium and 2nd AUN/SEED-Net Regional Conference on Geo-Disaster Mitigation in ASEAN, Bali, 25-26 February 2010

Researcher/s	PACHECO Benito
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	The Newly Proposed RISK MAPR2 Framework of Natural Disaster Risk Management
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation; Preparedness; Response; Rehabilitation and Recovery
Topics	Disasters in general; Policy formulation
Funding source	No information
Publication information	Pacheco, B.M. (2010) The Newly Proposed RISK MAPR2 Framework of Natural Disaster Risk Management, Proc. 36th PICE National Convention, Cebu City, November 2010

Researcher/s	PACHECO Benito
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Qualitative and Quantitative Attributes of Risk Factors in Disaster Risk Management
Brief description	This paper examines the evolution of hazard exposure and vulnerability as three generic risk factors that conveniently capture the major aspects of natural disaster risks including earthquake, windstorm, flood, landslide and the like. In the analysis, both the qualitative and quantitative attributes of each risk factor are examined. The use of these risk factors is illustrated with the author's proposed RISK MAPR2 framework of action in DRM.
DRRM Keyword/s	Prevention and Mitigation; Preparedness; Response; Rehabilitation and Recovery
Topics	Disasters in general; Policy formulation
Funding source	No information
Publication information	Pacheco, B. M. (2011). Qualitative and quantitative attributes of risk factors in disaster risk management. Proceedings of the 2011 UP College of Engineering Professorial Chair Colloquium

Researcher/s	PACHECO Benito
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Updating of the National and Local Building Codes
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Infrastructure; Policy formulation
Funding source	No information
Publication information	No information

Researcher/s	PACHECO Benito, AQUINO R. E.
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Recent Wind Engineering Activities in the Philippines
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Structural conditions; Technologies and tools
Funding source	No information
Publication information	Pacheco, B.M. & Aquino R.E.R. (2009) Recent Wind Engineering Activities in the Philippines, Proc. 7th Asia-Pacific Conference on Wind Engineering (APCWE7), Taipei, November 2009

Researcher/s	PACHECO Benito
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Vulnerability of Key Building Types in the Philippines to Earthquake, Severe Wind and/or Flood
Brief description	This project has the following objectives: 1) to propose a building typological system that is potentially applicable in the entire Philippines, 2) to perform systematic review of available reports on damages due to severe wind, flood and earthquake, 3) to conduct vulnerability development workshops with key stakeholders, 4) to perform structural computations and develop vulnerability curves for selected building types, 5) to conduct building evaluation surveys, and 6) to develop or enhance methodologies for damage assessment.
DRRM Keyword/s	Prevention and Mitigation
Topics	Infrastructure; Technologies and tools
Funding source	AusAID thru PAGASA and PHIVOLCS
Publication information	No information

Researcher/s	PACHECO Benito
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Disaster Risk Management Philosophies in Coping with Earthquakes and Floods
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation; Preparedness; Response; Rehabilitation and Recovery
Topics	Disasters in general; Management
Funding source	No information
Publication information	Pacheco, B. M. (2009). Disaster Risk Management Philosophies in Coping with Earthquakes and Floods, Proc. 3rd WFEO-JFES-JSCE Joint International Symposium on Disaster Risk Management, Fukuoka, September 2009

Researcher/s	PAELMO Roselyn
Affiliation	University of the Philippines Los Baños
Title of research	Assessing Carbon Sequestration Potential of Rubber-based Production Systems: Its Implication as Climate Change Adaptation Strategy
Brief description	The project seeks to assess the carbon sequestration potential of rubber-based production systems in different age classes across agroecological zones and its implication as an adaptation strategy to climate change.
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Technologies and tools
Funding source	DA-BAR
Publication information	No information

Researcher/s	PAGADUAN Maureen
Affiliation	University of the Philippines Diliman – CSWCD
Title of research	We Can Be Better Prepared: Individuals and Communities Practicing DRR
Brief description	This paper is one of the chapters in *Building Disaster-Resilient Communities: Stories and Lessons from the Philippines*. This chapter is the author's "own narrative, a reflexive action on experiences in DRR and Community Development (CD)" (Pagaduan, 2010).
DRRM Keyword/s	Preparedness
Topics	Disasters in general; Community-based initiatives
Funding source	DFID; Christian Aid
Publication information	Pagaduan, M. (2010). We Can Be Better Prepared: Individuals and Communities Practicing DRR. In dela Cruz, L.P., Ferrer, E.M. and Pagaduan, M.C. (Eds.). *Building Disaster-Resilient Communities: Stories and Lessons from the Philippines*. Quezon City: CSWCD-UP.

Researcher/s	PALLER Vachel Gay
Affiliation	University of the Philippines Los Baños
Title of research	Soil Contamination by Toxocara Eggs (nematoda) from Selected Urban and Rural Towns in Laguna
Brief description	Soil samples collected from the Tranca, San Isidro and Tagumpay Barangays of Bay, Laguna were already collected and processed for examination of Toxocara eggs. The 3 barangays wer found to be positive for Toxocara eggs.
DRRM Keyword/s	Prevention and Mitigation
Topics	Human health/Epidemiology; Benchmarking/Profiling
Funding source	No information
Publication information	No information

Researcher/s	PECKLEY Daniel Jr.
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Development of a Non-Expert Tool for Site-Specific Evaluation of Rain-Induced Landslide Susceptibility
Brief description	The main objective of the study is to bring technology – i.e. rain-induced landslide susceptibility assessment – to the grassroots. As such, communities, LGUs and other local institutions were involved in the geotechnical surveys; moreover, the assessment procedure was pilot-tested with the communities.
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Landslides; Technologies and tools
Funding source	DOST
Publication information	No information

Researcher/s	PECKLEY Daniel Jr.
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Practical Engineering Inputs for Community-Based Disaster Management
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Disasters in general; Technologies and tools
Funding source	No information
Publication information	No information

Researcher/s	PECKLEY Daniel Jr.
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Enabling Communities to Become Disaster-Resilient: A DOST Initiative
Brief description	No information
DRRM Keyword/s	Preparedness
Topics	Disasters in general; Community-based initiatives
Funding source	No information
Publication information	Peckley, D.C. (2010) Enabling Communities to Become Landslide-Disaster Resilient: A DOST Initiative, Proc. 2nd Asia Heads of Research Councils (ASIAHORCS) Joint Symposium, 1-2 November 2010, ISBN 978-967-0167-01-5.

Researcher/s	PECKLEY Daniel Jr.
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Strength and Deformation of Soft Rocks under Cyclic Loading Considering Loading Period Effects
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Structural conditions; Benchmarking
Funding source	No information
Publication information	Peckley, D. C. and Uchimura, T. (2009): 'Strength and Deformation of Soft Rocks under Cyclic Loading Considering Loading Period Effects,' Soils and Foundations, JGS.

Researcher/s	PECKLEY Daniel Jr.
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	The P2S Effect on the Accumulation of Residual Strains Due to Irregular Cyclic Loading
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Structural conditions; Benchmarking
Funding source	No information
Publication information	Peckley, D. C. and Uchimura, T. (2009): 'The P2S effect on the Accumulation of Residual Strains due to Irregular Cyclic Loading,' Soils and Foundations, JGS.

Researcher/s	PECKLEY Daniel Jr.
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Community-Assisted Hydrologic Monitoring: A Kalinga Experience
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Hydrological hazards; Community-based initiatives
Funding source	No information
Publication information	Peckley, D. C., Baddongon F. A. and Bagtang, E. T. (2009) Community-Assisted Hydrologic Monitoring: A Kalinga Experience, Proc. 5th "Hydro Power Today" Forum. International Center for Small Hydropower, Hangzhou, China, May 11-12, 2009

Researcher/s	PECKLEY Daniel Jr.
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Applications of the Swedish Weight Sounding Test to Geohazard Risk Assessment
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Geological hazards; Technologies and tools
Funding source	No information
Publication information	Peckley, D.C., Zarco, M. H., and Tan, S.P. (2009). Applications of the Swedish Weight Sounding Test to geohazard risk assessment, Earth Sciences International Conference AUN/SEED-Net Regional Conference, Manila, Philippines, August 27-28, 2009

Researcher/s	PECKLEY Daniel Jr.
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Rain-Induced, Shallow-Depth Landslide Susceptibility – A Guidebook for Communities and Non-Experts
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Landslides; Technologies and tools
Funding source	DOST
Publication information	Peckley, D. C. and Bagtang, E. T. (2010), Rain-Induced, Shallow-depth Landslide Susceptibility – A Guidebook for Communities and Non-experts, ISBN 978-971-93921-1-8. Department of Science and Technology. (Electronic copy under peer-review for inclusion in and publication by the (DRH) Disaster Reduction Hyperbase (http://drh.edm.bosai.go.jp/).

Researcher/s	PECKLEY Daniel Jr. , BAGTANG E.T., ZARCO Mark Albert
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Development of a Non-Expert Tool for Site Specific Evaluation of Landslide Susceptibility
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Landslides; Technologies and tools
Funding source	No information
Publication information	Peckley, D.C., Bagtang, E.T., and Zarco, M. H. (2010). Development of a non-expert tool for site specific evaluation of landslide susceptibility, International Symposium and The 2nd AUN/SEED-Net Regional Conference on Geo-Disaster Mitigation in ASEAN, JICA - AUN/SEED-Net, Bali, Indonesia, February 25-26, 2010.

Researcher/s	PEÑALBA Linda
Affiliation	University of the Philippines Los Baños
Title of research	Analysis of the Climate Change Adaptation Behavior of Households, Communities and Institutions to a Typhoon Event :the Case of Juan and Talisay, Batangas, Philippines
Brief description	The overall objective of the project is to examine the adaptation behavior of households, communities, and institutions in Batangas towards a major typhoon event (Typhoon Milenyo) and recommend feasible adaptation options to minimize risks, improve resilience, and enhance adaptive capacity.
DRRM Keyword/s	Preparedness
Topics	Climate change; Community involvement
Funding source	IDRC
Publication information	Research report published by funding agency

Researcher/s	PEÑALBA Linda
Affiliation	University of the Philippines Los Baños
Title of research	Enhancing the Climate Change Adaptation Capability of Local Government Units and Scientists in the Philippines
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Climate change; Management
Funding source	Asia Pacific Network
Publication information	Research report published by funding agency

Researcher/s	PIPER Philip
Affiliation	University of the Philippines Diliman – Archeological Studies Program
Title of research	Islands in Transition: An Examination of the Impacts of Climate, Environmental and Human Activity on the Vertebrate Communities of the Philippines
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Benchmarking/Profiling
Funding source	No information
Publication information	No information

Researcher/s	PULHIN Florencia
Affiliation	University of the Philippines Los Baños
Title of research	Capacity Building on Climate Change Adaptation through Agroforestry in the Philippines
Brief description	Aside from promoting agroforestry in the Philippines, this German Technical Cooperation (GTZ)-funded project was design to support interested parties in tapping emerging opportunities from carbon finance from forestry project, particularly upland farmers in diversifying their income and enhancing their farming systems resilience. To date, carbon finance opportunities have not been taken full advantage of in the Philippines. One of the barriers is the lack of information on the location of areas that are suitable for carbon projects.
DRRM Keyword/s	Preparedness
Topics	Climate change; Technologies and tools
Funding source	GTZ
Publication information	No information

Researcher/s	PULHIN Juan
Affiliation	University of the Philippines Los Baños
Title of research	Community-based Adaptation: Enhancing Climate Change Resilience of Communities and Ecosystems through Participatory Watershed Management
Brief description	A research that focuses on building community and ecosystem resiliency at the watershed level. The main outputs of this research would include watershed management protocols, land use options and knowledge products.
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Climate change; Technologies and tools
Funding source	No information
Publication information	No information

Researcher/s	PULHIN Juan
Affiliation	University of the Philippines Los Baños
Title of research	Capacity Development on Integration of Science and Local Knowledge for Climate Change Impacts and Vulnerability Assessments
Brief description	The project aims to build the capacity of local government officials and researchers, and the provincial government of Albay, as a whole, in assessing the impacts of and their vulnerability to climate change with the use of computer model system and complimented by the local knowledge of the people in the province.
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Climate change; Technologies and tools
Funding source	Asia Pacific Network
Publication information	No information

Researcher/s	PULHIN Juan
Affiliation	University of the Philippines Los Baños
Title of research	Climate Change Adaptation and Disaster Risk Reduction
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Management
Funding source	No information
Publication information	No information

Researcher/s	QUICOY Cesar
Affiliation	University of the Philippines Los Baños
Title of research	Assessment of the Effects of Climate Change on Farmers and their Farming Activities in Selected Areas, Philippines
Brief description	The general objective of the project is to assess the effects of climate change on farmers and their farming activities in selected areas of the Philippines,
DRRM Keyword/s	Preparedness
Topics	Climate change; Management
Funding source	DA-BAR
Publication information	No information

Researcher/s	QUILOP Raymund Jose
Affiliation	University of the Philippines Diliman - CSSP
Title of research	Latest Balikatan Exercise Focuses on Disaster Relief Operations
Brief description	No information
DRRM Keyword/s	Response
Topics	Disasters in general; Disaster aid
Funding source	None
Publication information	Raymund Jose G. Quilop, "Latest Balikatan Exercise Focuses on Disaster Relief Operations", *Janes Defense Weekly*, February 27, 2008 found @ www.janes.com

Researcher/s	RAMOS Henry
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Plasma Irradiation of Wood
Brief description	The study compares the efficacy of chemical and plasma treatments with phosphate and boric compounds, and nitrogen as flame retardants on wood. Initial data indicate that plasma-treated samples exhibit superior thermal stability.
DRRM Keyword/s	Prevention and Mitigation
Topics	Fire retardants; Tools and technologies
Funding source	No information
Publication information	No information

Researcher/s	RAYMUNDO Asuncion
Affiliation	University of the Philippines Los Baños
Title of research	Risks of Rice Tungro Epidemics under Climate Change in the Philippines
Brief description	This project aims to survey current rice tungro virus disease occurrence in the Philippines. It also aims to map the current geographical distribution of rice tungro virus disease in the Philippines and the potential geographical distribution of rice tungro virus epidemics in the Philippines under climate change. It also seeks to develop a prototype rice tungro virus simulation model.
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Benchmarking/Profiling
Funding source	DA-BAR
Publication information	No information

Researcher/s	RAYMUNDO Asuncion
Affiliation	University of the Philippines Los Baños
Title of research	Modeling Climate Change Effects on Abaca Bunchy Top
Brief description	Major Objectives/ Significance: a. To develop a bunchy-top forecasting model, based on changing climate b. To utilize this model in supporting a continuing eradication drive in different abaca growing areas in the Philippines c. To institutionalize the use of forecasting in disease management
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Technologies and tools
Funding source	Fiber Industry Development Authority
Publication information	No information

Researcher/s	RAYMUNDO Avelino, GENERALAO L.C.
Affiliation	University of the Philippines Los Baños
Title of research	Plant Disease Epidemics and Management in a Changing Environment
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Management
Funding source	No information
Publication information	Presented at the SMARDEC Forum on Climate Change and Other Issues Affecting Agriculture, Forestry and Natural Resources Aug. 14, 2009/ Univ. of Southeastern Phils. Social Hall, Obrero, Davao City

Researcher/s	RAYMUNDO Ma. Eliza
Affiliation	University of the Philippines Manila
Title of research	The Feast of the Black Nazarene: A Small-Scale Annual Disaster with a Potential for Large-Scale Mass Destruction
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Customs and traditions; Benchmarking
Funding source	No information
Publication information	No information

Researcher/s	RAZAL Ramon
Affiliation	University of the Philippines Los Baños
Title of research	Extraction, Characterization, and Utilization of Biodiesel from Bani (Pongamia pinnata (L.) Pierre)
Brief description	A study was performed to determine the size distribution of seeds that collected and used in all previously performed solvent extractions. Through random sampling, it was determined that majority of seeds used as small, i.e. with < 2 cm length, representing 77% of the samples. Micro soxhlet extraction using petroleum ether for two groups of seeds (small and big) was performed and results showed significant difference in oil yield. As per recommendation of the evauators, mechanical extractions were done using the mechanical expeller for Jatropha at CEAT.
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Technologies and tools
Funding source	UPLB
Publication information	No information

Researcher/s	REAÑO Consorcia
Affiliation	University of the Philippines Los Baños
Title of research	Integrated R&D Program on Fuels: Subprogram on Utilization of Sweet Sorghum and Cassava as Feedstocks for Ethanol Production (Project 2.2 Performance Evaluation of Sweet Sorghum Vines for Bio-ethanol and Grains under Different Ecological Zones)
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Bio-resources; Technologies and tools
Funding source	DOST-PCARRD
Publication information	No information

Researcher/s	REBANCOS Carmelita
Affiliation	University of the Philippines Los Baños
Title of research	Framework for Assessing Climate Change Vulnerability and Adaptation of Philippine Indigenous People: The Case Alangan-Mangyans in Boco, Oriental Mindoro, Philippines
Brief description	With the limited studies exploring climate change impacts to indigenous peoples particularly in Asia and the Philippines, this study analyzes climate change vulnerability of the coupled socio-ecological systems of an Alangan-Mangyan indigenous community living at the foothold of Mt. Halconin at the municipality of Baco province of Mindoro Oriental, Philippines, while also aiming to provide bases for specific policy options to enhance indigenous community's capability in dealing with climate change.
DRRM Keyword/s	Preparedness
Topics	Climate change; Community involvement
Funding source	No information
Publication information	No information

Researcher/s	RESURRECCION Augustus
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Extending the Database of Soil-Gas Transport Parameters for Philippine Soils and Set-Up of New "Soils and Sediments" Laboratory of the UP College of Engineering
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Soils and sediments; Technologies and tools
Funding source	No information
Publication information	No information

Researcher/s	RESURRECCION Augustus
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Measurement of Soil-Gas Diffusion Coefficient and Air Permeability of Mt. Pinatubo Volcanic Ash Sand
Brief description	This study takes off from the premise that to obtain reliable numerical simulation of the fate and transport of gaseous phase chemicals in soil, knowledge of the variation of the transport parameters associated with soil-gas diffusion and soil-gas convection as function of the soil moisture condition in terms of soil-air content are needed.
DRRM Keyword/s	Prevention and Mitigation
Topics	Volcanic eruptions; Technologies and tools
Funding source	UP Diliman – OVCRD (PhD Incentive Award)
Publication information	No information

Researcher/s	RESURRECCION Augustus
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Hierarchical, Bimodal Model for Gas Diffusivity in Aggregated, Unsaturated Soils
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Soils; Technologies and tools
Funding source	No information
Publication information	"Hierarchical, Bimodal Model for Gas Diffusivity in Aggregated, Unsaturated Soils" in SSSAJ, Vol. 74 No. 2, Mar-Apr 2010, pp. 481-491 (co-author)

Researcher/s	RINGOR Cherry
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Retrospective Analyses of Climate Change from Coastal Erosion Trend and Uplifted Coral Reef Assemblages
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Benchmarking/Profiling
Funding source	DOST
Publication information	No information

Researcher/s	ROLA Agnes
Affiliation	University of the Philippines Los Baños
Title of research	Managing Climate Risks in the Context of Angat Reservoir, Philippines
Brief description	This study highlights the institutional and policy context for climate risk management (CRM) in the case of Angat Reservoir in Bulacan province of the Philippines. The management of Angat Reservoir is a unique case in the Philippines. Water allocation is approved by the National Water Resources Board to three competing sectors. Seasonal climate variability and extreme climate events affect levels of streamflow to the reservoir, and thus its capacity to deliver water to the various users that includes Metro Manila area for domestic, industrial, commercial, and other uses, the Bulacan and Pampanga areas for irrigation requirements, and the National Power Corporation for hydropower generation. The degree of impacts depends on the response mechanisms already in place.
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Programs/Policies
Funding source	No information
Publication information	No information

Researcher/s	ROLA Agnes
Affiliation	University of the Philippines Los Baños
Title of research	Exploring Application of Rainfall-based Crop Insurance in the Philippines: A Pilot Study in Two Communities
Brief description	No information
DRRM Keyword/s	Preparedness
Topics	Climate change; Programs/Policies
Funding source	No information
Publication information	No information

Researcher/s	ROLLON Rene
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Resilient SEAS (formerly ICE CREAM)
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Coastal/fishery/marine resources; Management
Funding source	DOST
Publication information	No information

Researcher/s	ROLLON Rene
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Integrated Coastal Enhancement: Coastal Research Evaluation and Adaptive Management (ICE-CREAM) Project 1: Climate Change and the Coast Vulnerability of Bontho-Pelagic Productivity
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Benchmarking/Profiling
Funding source	DOST-PCAMRD
Publication information	No information

Researcher/s	ROVILLOS Raymundo, PEÑALBA Maileenita, MUNI Reuben Andres
Affiliation	University of the Philippines Baguio
Title of research	Resource-based Conflicts in the time of Climate Change: The Problem of Water and Waste Management in the BLISTT Area
Brief description	The project of the Climate Change Program of the Cordillera Studies Center, University of the Philippines Baguio on "Resource-Based Conflicts in the Time of Climate Change: The Problem of Water and Waste Management in the BLISTT Area" was conceived in March 2010 and concluded in June 2011. The project aimed to identify areas of conflicts or potential conflicts within the BLISTT (Baguio, La Trinidad, Itogon, Sablan, Tublay and Tuba) regarding issues of water and waste management. One of the key findings of the study was the presence of transboundary conflict between the local governments of Baguio City and La Trinidad arising from the persistent pollution of the Balili River.
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Stakeholder relations
Funding source	Office of the Presidential Adviser on the Peace Process (OPAPP)
Publication information	No information

Researcher/s	SABULARSE Veronica
Affiliation	University of the Philippines Los Baños
Title of research	Development of a Solid Support from Lahar for Enzyme Immobilization (High Value Solid Supports from Locally-available Materials for Enzyme Immobilization)
Brief description	Lahar samples were pretreated by washing, igniting in a furnace to remove any oxides and treating with concentrated HCL to remove any organic material that may still be present. Upon treatment with HCl the lahar samples separated into its black and white components. The white layer being found on the top layer and the black lahar layer on the bottom. These components were subjected to SEM analysis. White lahar was observed to have more porous particles than black lahar particles making white lahar more suitable for use as solid support.
DRRM Keyword/s	Response
Topics	Lahar; Technologies and tools
Funding source	UPLB
Publication information	No information

Researcher/s	SADABA Resurreccion
Affiliation	University of the Philippines Visayas
Title of research	Reduction of Negative Impacts on Fisheries Resources in Southeast Asia
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Fishery resources; Management
Funding source	No information
Publication information	No information

Researcher/s	SALAZAR Artemio
Affiliation	University of the Philippines Los Baños
Title of research	Integrated R&D Program on Biofuels: Subprogram on Utilization of Sweet Sorghum and Cassava as Feedstocks for Ethanol Production: Project 2.1. Sweet Sorghum Germplasm Improvement
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Bio-resources; Technologies and tools
Funding source	DOST-PCARD
Publication information	No information

Researcher/s	SANTOS Primitivo Jose
Affiliation	University of the Philippines Los Baños
Title of research	Promoting SNAP Hydroponics as a Sustainable Food Production System for Urban Areas
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Food production; Technologies and tools
Funding source	No information
Publication information	No information

Researcher/s	SANTOS Romeo
Affiliation	University of the Philippines Diliman – College of Architecture
Title of research	The Academe vis the Disaster Risk Management and Gender Issues – What Can It Do?
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Gender and disaster management; Policy formulation
Funding source	No information
Publication information	Conference/forum/workshop paper presentation

Researcher/s	SANTOS Romeo
Affiliation	University of the Philippines Diliman – College of Architecture
Title of research	Hurricane Resilient Features of Tropical vernacular houses in the Philippines, and South Florida." Florida Atlantic University, 2009
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Technologies and tools
Funding source	No information
Publication information	'Stand up to Katrina!' Learning from hurricane resilient features of tropical vernacular houses in the Philippines and South Florida. Paper for International Training for Typhoon and Flood Disaster Reduction, Taiwan, 2008.

Researcher/s	SANTOS Romeo
Affiliation	University of the Philippines Diliman – College of Architecture
Title of research	Micro-Economic and Social Constructs: Environmentally Responsible Behavior, Adaptation, and Survival in Isolated Island Communities Affected by Climate Change in Manila Bay, 2011
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation; Preparedness; Rehabilitation and Recovery
Topics	Climate change; Community involvement
Funding source	No information
Publication information	No information

Researcher/s	SEVILLA Cesar
Affiliation	University of the Philippines Los Baños
Title of research	Assessment of the Direct and Indirect Effects of Climatic Changes in Local Dairy Production
Brief description	The project seeks to assess the direct and indirect effects of temperature, humidity, and rainfall on milk yield of dairy cows and quality of forage.
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Benchmarking/Profiling
Funding source	DA-BAR
Publication information	No information

Researcher/s	SIASON Ida
Affiliation	University of the Philippines Visayas
Title of research	Crisis in Fisheries Development: Views from the Social Sciences
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Fishery resources; Policy formulation
Funding source	No information
Publication information	No information

Researcher/s	SIASON Ida, SUBADE Rodelio
Affiliation	University of the Philippines Visayas
Title of research	Ecosystem Services for Poverty Alleviation: Marine and Coastal Situational Analysis
Brief description	This report assesses “the state and trends in ecosystem services associated with marine and coastal systems; driven factors; how they support the livelihoods and well-being of human societies and particularly poor communities in the Philippines. It also identifies the key challenges for research, as well as current gaps in knowledge and capacity in order to inform the development of a research strategy to support the maintenance of ecosystem services explicitly for poverty alleviation” (Siason et al., 2008). This study forms part of the global analysis of the status of research linking ecosystem services and poverty alleviation.
DRRM Keyword/s	Prevention and Mitigation
Topics	Ecosystem services and poverty alleviation; Benchmarking
Funding source	UK Department for International Development
Publication information	No information

Researcher/s	SINOGAYA J.R., GALAPATE R.P.
Affiliation	University of the Philippines Visayas
Title of research	Assessment of Air Quality as Initiative for Climate Change Mitigation in Metro Cebu
Brief description	The present air quality in Metro Cebu was assessed by monitoring the ambient air pollution levels. Ambient NO2 and SO2 concentrations were monitored using diffusion tube sampling technique while nitrate and sulfate in rainwater samples were determined using atomic absorbance spectrophotometry and turbidimetry, respectively.
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Benchmarking/Profiling
Funding source	No information
Publication information	Assessment of air quality as initiative for climate change mitigation in Metro Cebu, Philippines. Proceedings of the 5th Better Air Quality Workshop-Conference, November 12-14, 2008, Bangkok, Thailand., 2008

Researcher/s	SIRINGAN Fernando, DAVID Laura, ALAMPAY Alyssa
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Ecology and Oceanography of Harmful Algal Blooms in the Philippines Project 5: Eutrophication, Climate, and Algal Blooms (HABS Phase III)
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Benchmarking/Profiling
Funding source	DOST-PCAMRD
Publication information	No information

Researcher/s	SUBADE Rodelio
Affiliation	University of the Philippines Visayas
Title of research	Socio-Economic Monitoring of the Resiliency and Recovery of Fishers and Fishing Communities of Southern Guimaras
Brief description	This research is one of the studies under the *Monitoring and Rehabilitation Program of the UPV-Marine Biological Station,* a five-year research that looks into the impact of the oil spill that hit Guimaras in 2006 on said province's habitats and environment, aquatic organisms, fisheries and resources, livelihood and enterprises, social and health conditions, and institutional support services. The research program is a component of the UPV Oil Spill Response Program established by the UPV Office of the Chancellor in 2006.
DRRM Keyword/s	Rehabilitation and Recovery
Topics	Oil spill; Community-based initiatives
Funding source	National government through the NDCC and its regional counterpart
Publication information	No information

Researcher/s	SUBADE Rodelio
Affiliation	University of the Philippines Visayas
Title of research	Valuing Marine Turtle Conservation: A Cross-Country Study in Asian Cities
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Marine turtle; Conservation program
Funding source	No information
Publication information	Jin, J., A. Indab, O. Nabangchang, DT. Troung, D. Harder & R.F. Subade. (2010). Valuing Marine Turtle Conservation: A Cross-Country Study in Asian Cities. *Ecological Economics 2010*, pp. 2020-2026.

Researcher/s	SUBADE Rodelio
Affiliation	University of the Philippines Visayas
Title of research	Fishers Participation in Environmental Monitoring: The Case of Coral Reef Monitoring in Tingloy, Batangas
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Coral reefs; Community-based initiatives
Funding source	No information
Publication information	Subade, A., Subade, R.F., & Catalan, Z. (2009). Fishers Participation in Environmental Monitoring: The Case of Coral Reef Monitoring in Tingloy, Batangas. *Asian Fisheries Science 22*(1), 169-184

Researcher/s	TABIOS Guillermo III
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Ambuklao and Binga Reservoir Rehabilitation Project: Sedimentation and Reservoir Operation Studies
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Dams; Benchmarking
Funding source	S/N Aboitiz
Publication information	No information

Researcher/s	TABIOS Guillermo III
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Angat Dam Safety Project: Preliminary Dam-Break Modeling and Flood Inundation Studies for Development of Emergency Preparedness Plans
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Dams; Technologies and tools
Funding source	MWSI
Publication information	No information

Researcher/s	TABIOS Guillermo III
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Assessment of Flood Forecasting and Warning System for Tropical Regions (Philippines Country Study)
Brief description	This research is one of the four country studies undertaken to assess and improve the system for flood forecasting and management in Southeast Asia. The research program is part of a larger effort towards "establishing strategic partnership to work on flood disaster reduction technology and management between a multi-disciplinary research team consisted with natural scientists, engineers, and social scientists" (UNITEN, 2010).
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Floods; Management
Funding source	IHP-UNESCO
Publication information	No information

Researcher/s	TABIOS Guillermo III
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Enhancement, Incorporation of Optimization Module and Calibration of MWSI Water Distribution Network Model
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Water distribution; Technologies and tools
Funding source	MWSI
Publication information	No information

Researcher/s	TABIOS Guillermo III
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Rainfall Intensity Duration Frequency (IDF) Analysis for the Asia-Pacific Region
Brief description	This publication presents the different methods of analysis for their rainfall intensity-duration-frequency (RIDF) curves, to learn from the various participating countries how their RIDF analyses are conducted. Extreme rainfall data from their participating countries is provided in the publication so that comparison of the various methods used in RIDF analysis and subsequently estimating design rainfalls could be made. (From the UNESCO Web site)
DRRM Keyword/s	Prevention and Mitigation
Topics	Rainfall analysis; Country experiences
Funding source	IHP-UNESCO
Publication information	Asian Pacific FRIEND: Rainfall Intensity Duration Frequency (IDF) Analysis for the Asia Pacific Region. Edited by T. Daniell & G. Tabios III. http://unesdoc.unesco.org/images/0018/001802/180223E.pdf

Researcher/s	TABIOS Guillermo III
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Two-dimensional hydraulic model with mobile bed for dam-break problems
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Dams; Technologies and tools
Funding source	No information
Publication information	Tabios, G.Q. III (2008). Two-dimensional hydraulic model with mobile bed for dam-break problems, *Journal of Hydrologic Environment*, IHES, Vol. 4, no.1, December, Vol. 4 (1), pp. 17-25.

Researcher/s	TABIOS Guillermo III
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Recent water-related disasters in the Philippines
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Water-related disasters; Benchmarking
Funding source	No information
Publication information	Tabios, G.Q. III (2008). Recent water-related disaster in the Philippines, Proceedings of 2008 International Symposium on Hydrological Environment, International Hydrologic Environment Society, Daegu, Korea, December 14-15.

Researcher/s	TABIOS Guillermo III
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Climate Change Scenarios, Design Parameters and Water-Related Studies
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Technologies and Tools
Funding source	No information
Publication information	Tabios, G.Q. III (2009). Climate change scenarios, design parameters and water-related studies, 5th National Meteorological-Hydrological Convention, Understanding the Climate Change Issues: A Key to a Better Planning and Investment, Philippine Meteorological Society, University Hotel, UP Diliman, November 19-20.

Researcher/s	TABIOS Guillermo III
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Optimization-Simulation Modeling of the Multi-Purpose Angat Reservoir for Monthly Water Allocation
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Technologies and Tools
Funding source	UP Diliman College of Engineering
Publication information	Tabios, G.Q. III (2009) Angat Reservoir monthly allocation with an optimization-simulation model and autoregressive model to forecast inflows, Proceedings of the 3rd Engineering Research and Development Technology (ERDT) Conference, EDSA Shangri-La Hotel, Manila, September 20, 2009.

Researcher/s	TAN Ma. Corazon
Affiliation	University of the Philippines Diliman – CSWCD
Title of research	Organizing Communities for Social Protection, Sustainable Livelihoods and Disaster Preparedness: Reflections on the COPE-Bikol BDRC Pilot Project
Brief description	This paper is one of the chapters in *Building Disaster-Resilient Communities: Stories and Lessons from the Philippines*. In this chapter, the author reflects on the key lessons she learned about the theory and practice of disaster risk reduction from doing a case study on the COPE-Bikol project.
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Disasters in general; Community-based initiatives
Funding source	DFID; Christian Aid
Publication information	Tan, M. C. (2010). Organizing Communities for Social Protection, Sustainable Livelihoods and Disaster Preparedness: Reflections on the COPE-Bikol BDRC Pilot Project. In dela Cruz, L.P., Ferrer, E.M. and Pagaduan, M.C. (Eds.). *Building Disaster-Resilient Communities: Stories and Lessons from the Philippines*. Quezon City: CSWCD-UP.

Researcher/s	TAN Ma. Corazon
Affiliation	University of the Philippines Diliman – CSWCD
Title of research	Organizational Development of Farmers' Organizations Promoting Sustainable Agriculture and Resiliency to Climate Change
Brief description	No information
DRRM Keyword/s	Preparedness
Topics	Disasters in general; Community-based initiatives
Funding source	Climate change; Community involvement
Publication information	Organizational development of farmer's organizations promoting sustainable agriculture and resiliency to climate change"; Paper Presented at the 2010 Intl Conf of the Intl Consortium for Social Development – Asia Pacific Branch, held Nov. 10-13, 2010 at Seoul National Univ, Korea;

Researcher/s	TANCHULING Ma. Linnea
Affiliation	University of the Philippines Diliman – CSWCD
Title of research	Of Livelihoods, Food Security, People's Participation and Disaster Risk Resiliency: Reflecting on PRDCI's BDRC Experience
Brief description	This study is one of the chapters in *Building Disaster-Resilient Communities: Stories and Lessons from the Philippines*. This chapter discusses the experience of the Panay Rural Development Center Inc. (PRDCI) in "building a disaster resilient community through three interlocking approaches: 1. linking disaster risk resilient measures to livelihoods; 2. ensuring food-self sufficiency of the community; and 3. enabling processes and mechanisms for the community residents to fully participate in community-based disaster risk reduction (DRR) planning and implementation processes.
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Disasters in general; Community-based initiatives
Funding source	DFID; Christian Aid
Publication information	Tanchuling, M. L. (2010). Of Livelihoods, Food Security, People's Participation and Disaster Risk Resiliency: Reflecting on PRDCI's BDRC Experience. In dela Cruz, L.P., Ferrer, E.M. and Pagaduan, M.C. (Eds.). *Building Disaster-Resilient Communities: Stories and Lessons from the Philippines*. Quezon City: CSWCD-UP.

Researcher/s	TINGATINGA Eric Augustus
Affiliation	University of the Philippines Diliman - Engg
Title of research	Development of an Efficient Numerical Method for Seismic Performance Assessment of of Civil Engineering Students
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Geological hazards; Technologies and tools
Funding source	UP Diliman – OVCRD (PhD Incentive Award)
Publication information	No information

Researcher/s	TINGATINGA Eric Augustus
Affiliation	University of the Philippines Diliman - Engg
Title of research	Gravity Effects on Earthquake Response of a Flexure Building: A Shear Building Comparison
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Structural conditions; Technologies and tools
Funding source	No information
Publication information	E.A. Tingatinga, H. Kawakami, & H. Mogi (2010). Gravity effects on earthquake response of a flexure building: a shear building comparison, *International Journal of Structural Stability and Dynamics*, World Scientific Publishing, Vol. 10, No. 1, pp. 1-17, 2010.

Researcher/s	TINGATINGA Eric Augustus
Affiliation	University of the Philippines Diliman - Engg
Title of research	Three-Dimensional Seismic Collapse Analysis of Wooden Houses Using Rigid Body-Spring Method
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Structural conditions; Technologies and tools
Funding source	No information
Publication information	Tingatinga, E.A., H. Kawakami, & S.M. Shrestha (2008). Three-dimensional seismic collapse analysis of wooden houses using rigid body-spring method, *The Open Construction and Building Technology Journal*, Vol. 2, pp. 116-123, ISSN 1874-8368, Bentham Science Publishers.

Researcher/s	TINGATINGA Eric Augustus
Affiliation	University of the Philippines Diliman - Engg
Title of research	Seismic Collapse Analysis of Wooden Houses in Japan Using Nonlinear Rigid Body-Spring Method
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Structural conditions; Technologies and tools
Funding source	No information
Publication information	H. Kawakami and E.A. Tingatinga. (2008). Seismic collapse analysis of wooden houses in Japan using nonlinear rigid body-spring method, 14th World Conference on Earthquake Engineering, Beijing China, Oct. 2008.

Researcher/s	TINGATINGA Eric Augustus
Affiliation	University of the Philippines Diliman - Engg
Title of research	Nonlinear Effects of Gravity on Earthquake Response of an Elastic Shear-Flexural Building
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Structural conditions; Technologies and tools
Funding source	No information
Publication information	E.A. Tingatinga and H. Kawakami (2009). Nonlinear effects of gravity on earthquake response of an elastic shear-flexural building, Alternative Peer Review System for Engineers in Academe, Proceedings of the 35th Philippine Institute of Civil Engineers (PICE) 35th National Convention, Baguio City, November 26-27, 2009.

Researcher/s	TINGATINGA Eric Augustus
Affiliation	University of the Philippines Diliman - Engg
Title of research	Innovative Retrofitting Method for Earthquake Disaster Mitigation
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Infrastructure; Technologies and tools
Funding source	No information
Publication information	Tingatinga E.A., Innovative Retrofitting Method for Earthquake Disaster Mitigation, Proceedings of the Second Asian Heads of Research Council Symposium (ASIAHORCS) , Kuala Lumpur, Malaysia, Nov. 1-2 , 2010.

Researcher/s	TINGATINGA Eric Augustus
Affiliation	University of the Philippines Diliman - Engg
Title of research	Gravity Effects on Earthquake Response of an Elastic Shear-Flexural Building
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Structural conditions; Technologies and tools
Funding source	No information
Publication information	Tingatinga E.A., Gravity Effects on Earthquake Response of an Elastic Shear-Flexural Building, Proceedings of the 14th European Conference in Earthquake Engineering, Macedonia, Aug. 30-Sept 3, 2010.

Researcher/s	TINGATINGA Eric Augustus
Affiliation	University of the Philippines Diliman - Engg
Title of research	Earthquake Disaster Mitigation Using Innovative Retrofitting Method
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Infrastructure; Technologies and tools
Funding source	No information
Publication information	Tingatinga E.A. & H. Kawakami, Earthquake Disaster Mitigation Using Innovative Retrofitting Method, Proceedings of the International Symposium and the 2nd AUN/Seed Net Regional Conference on Geo-Disaster Mitigation in ASEAN, Bali Indonesia, Feb. 25-26, 2010.

Researcher/s	TOJOS Leticia
Affiliation	University of the Philippines Diliman – CSWCD
Title of research	A Study on the Institutionalization of People's Involvement in Disaster Management by Local Government Units in Two Barangays in Metro Manila
Brief description	The study aims to look into the practices of Local Government Units in institutionalizing people's involvement in disaster management. The results will hopefully strengthen the sustained involvement of the community in reducing the ill effects of calamities by coming up with preventive and adaptation measures drawn from the insights and learning from the respondents.
DRRM Keyword/s	Preparedness
Topics	Disasters in general; Community involvement
Funding source	No information
Publication information	No information

Researcher/s	TOLENTINO Enrique Jr.
Affiliation	University of the Philippines Los Baños
Title of research	Forest Fire Hazard Assessment and Risk Reduction Using GIS
Brief description	This research is one of the projects under the program *Intelligent Decision Support System for Environmental Hazards Management Using GIS and Remote Sensing*, whose main objective is "to provide adequate preventive and control measures against environmental hazards" (Santos-Abon, 2009). The study developed a forest fire hazard and behavior forecasting and risk reduction system using GIS. Specifically, the Behave Plus (version 5.0) Fire Behavior software was tested. Trial runs showed that the software with reliable environmental data could be utilized to simulate and predict fire behavior in the project sites.
DRRM Keyword/s	Prevention and Mitigation
Topics	Forest fires; Technologies and tools
Funding source	DOST-PCARRD
Publication information	No information

Researcher/s	TORRES Cleofe
Affiliation	University of the Philippines Los Baños
Title of research	Communication strategy for climate change adaptation
Brief description	No information
DRRM Keyword/s	Preparedness
Topics	Climate change; Information dissemination
Funding source	No information
Publication information	No information

Researcher/s	VALDEZ Adrian Roy, BASILLA Julius, SORIANO Jaymar
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Flood Simulator for the Philippines
Brief description	This project aims to model rainfall runoffs for the different regions in the Philippines. The model is hoped to predict areas prone to flood during rainy season, which could lead to the creation of an early warning device to be used when there are typhoons. It is also hoped that the model would help identify the optimal locations of possible catch basins.
DRRM Keyword/s	Prevention and Mitigation
Topics	Floods; Technologies and tools
Funding source	None
Publication information	A.R.L. Valdez, A.P. Mendoza, C.P. Arceo. 2011. Global boundary controllability of de St. Venant equations between unsteady supercritical states. Proceedings of the International Conference on Computer Modelling and Simulation. A.P. Mendoza, A.R.L. Valdez, C.P. Arceo. 2011. Numerical solution of the de St. Venant equations with controlled global boundaries between unsteady subcritical states. A.R.L. Valdez. 2009. Diffusion influence on propagation speed for a class of KPP-type problems. Proceedings of the 5th Asian Mathematical Conference.

Researcher/s	VILLANCIO Virgilio
Affiliation	University of the Philippines Los Baños
Title of research	Developing and Testing a Modality for Rehabilitation of Calamity-stricken Areas
Brief description	There are vast areas affected by soil deposition from landslides that occurred due to typhoon on November 2004 in the Municipalities of Real, Infanta, General Nakar in Quezon. These not only affected the productivity of the land but significantly affected the lives of people in those areas. With this, the Social Action center of the Prelature of Infanta, PCARRD, CHED, UPLB through the Agricultural Systems Cluster, Local Government Units, other concerned agencies and the target communities forged a multi-stakeholder partnership in the rehabilitation of the area through a project “Developing a Modality for Rehabilitation of Calamity-stricken Areas”. The partnership focused in planning and implementing people-centered rehabilitation and restoration of damaged ecosystems and traumatized communities based on results of scientific knowledge and strategic alliances.
DRRM Keyword/s	Response; Rehabilitation and Recovery
Topics	Landslide; Stakeholder relations
Funding source	No information
Publication information	No information

Researcher/s	VILLANOY Cesar
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Modelling for Prediction and Mitigation of Specific Harmful Algal Bloom
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Climate change; Benchmarking/Profiling
Funding source	DOST-PCAMRD
Publication information	No information

Researcher/s	VILLANOY Cesar
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Hydrodynamic Characterization and Oil Spill Dispersal Patterns in Guimaras Strait and Panay Gulf
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Oil spill; Benchmarking/Profiling
Funding source	UP Visayas
Publication information	No information

Researcher/s	VILLANOY Cesar
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Physical Oceanography of the Straits of Philippine Archipelago
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Oceanography; Benchmarking/Profiling
Funding source	PHILEX/University of Hawaii
Publication information	No information

Researcher/s	VILLANOY Cesar, SIRINGAN Fernando
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Assessment of Coastal Dynamics in the Pamalican Island: Towards an Informed Action to Address Erosion and Coral Rehabilitation
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Coastal/fishery/marine resources; Benchmarking/Profiling
Funding source	Amanpulo-Seven Seas Resorts and Leisure
Publication information	No information

Researcher/s	VILLANOY Cesar, SIRINGAN Fernando
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Characterizing Tidal Flow and Coastal Integrity along the Boracay Caticlan Channel
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Water dynamics; Benchmarking/Profiling
Funding source	Boracay Chamber of Commerce
Publication information	No information

Researcher/s	VILLANUEVA Ronald
Affiliation	University of the Philippines Diliman – College of Science
Title of research	BARC Health: Long-term Monitoring Program of the Health of the Bolinao-Anda Reef Complex
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Coastal/fishery/marine resources; Programs/Policies
Funding source	UP
Publication information	No information

Researcher/s	VISCO Roberto
Affiliation	University of the Philippines Los Baños
Title of research	Scaling up Organic Farming in Agroforestry: Climate Change Adaptation Strategies
Brief description	The general objective of this program is to develop sustainable farming practices as an adaptation strategy to climate change.
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Climate change; Technologies and tools
Funding source	DA-BAR
Publication information	No information

Researcher/s	WAGAN Amparo
Affiliation	University of the Philippines Los Baños
Title of research	Capability Enhancement for the Local Experts from State Universities and Colleges in Assessing Climate Change Vulnerability and Adaptive Capacity of Different Crop-based Farming Systems
Brief description	The project aims to provide a venue where agricultural experts from state universities and colleges, national and international climate change experts, farming community, local planners/policy makers may interact to come up with a community-based vulnerability and adaptive assessment tool which result can serve as basis for developing and prioritizing site-specific and appropriate adaptation measures.
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Climate change; Programs/Policies
Funding source	Asia Pacific Network for Global Change Research
Publication information	No information

Researcher/s	WAMIL Romano Antonio
Affiliation	University of the Philippines Diliman – CSWCD
Title of research	Decentralizing Early Warning Information: Capacity of Horizontal Social Formations in Disaster Risk Communication
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Disasters in general; Technologies and tools
Funding source	No information
Publication information	Conference/forum/workshop paper presentation

Researcher/s	WAMIL Romano Antonio
Affiliation	University of the Philippines Diliman – CSWCD
Title of research	Decentralizing Disaster Information: Reflections on the BRB2 Project
Brief description	This paper is one of the chapters in *Building Disaster-Resilient Communities: Stories and Lessons from the Philippines*. The paper takes "the description of what took place vis-à-vis strategies and approaches of BRB2 to a more discursive level. Viewing the experience from a social science and Community Development paradigm, this paper also reflects on how home-based early warning systems decentralize disaster information and communication for disaster preparedness" (Wamil, 2010).
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Disasters in general; Information dissemination
Funding source	DFID; Christian Aid
Publication information	Wamil, R.A.V. (2010). Decentralizing disaster information: Reflections on the BRB2 project. In dela Cruz, L.P., Ferrer, E.M. and Pagaduan, M.C. (Eds.), *Building Disaster-Resilient Communities: Stories and Lessons from the Philippines* (pp. 58-66). Quezon City: CSWCD-UP.

Researcher/s	YAP Maria Helena
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Conserving Biodiversity and Restoring Damaged Reefs through Community Involvement
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Coastal/fishery/marine resources; Community involvement
Funding source	DOST-PCAMRD
Publication information	No information

Researcher/s	YÑIGUEZ Aletta, VILLANOY Cesar, SIRINGAN Fernando, DAVID Laura
Affiliation	University of the Philippines Diliman – College of Science
Title of research	Ecology and Oceanography of Harmful Algal Blooms in the Philippines Project 7: Stratification and Algal Blooms in the Tropics
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Pollutants/Polllution; Benchmaring/Profiling
Funding source	DOST-PCAMRD
Publication information	No information

Researcher/s	ZAMORA Oscar
Affiliation	University of the Philippines Los Baños
Title of research	Documentation of Indigenous Knowledge for Climate Change Adaptation
Brief description	This project, funded seeks to document and communicate the indigenous knowledge for climate change adaptation from different areas of the country. Literature review of indigenous knowledge for climate change adaptation, documentation and validation of IK practices for climate change adaptation; production and dissemination of extension materials on coping mechanisms of farmers; and policy formulation and effective delivery of support services to affected communities are the project activities being conducted to achieve the over-all objective of this research endeavor.
DRRM Keyword/s	Preparedness
Topics	Climate change; Information dissemination
Funding source	DA-BAR
Publication information	No information

Researcher/s	ZARCO Mark Albert
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Continuum-Based Analysis of Failure and Deformation Slopes: A Tool for Predicting Massive Landslides
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Landslides; Technologies and tools
Funding source	CHED ZRC-NCR
Publication information	No information

Researcher/s	ZARCO Mark Albert
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Regional Capacity Enhancement for Landslide Impact Mitigation (RECLAIM) Project in Baguio
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Landslides; Policy formulation
Funding source	Asian Disaster Preparedness Council; NGI
Publication information	No information

Researcher/s	ZARCO Mark Albert
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	The February 17, 2006 Ginsaugon Rockslide-Debris avalanche at Southern Leyte, Philippines Deposit Characteristics and Failure Mechanism
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Landslides; Benchmarking
Funding source	No information
Publication information	Catane, S. G., H. B. Cabria, M. A. H. Zarco, Saturay, R. M., A. A. Mirasol-Roberts (2008). The February 17, 2006 Ginsaugon rockslide-debris avalanche at Southern Leyte, Philippines deposit characteristics and failure mechanism. *Bulletin of Engineering Geology and Environment*, 67:305-320, Springer-Verlag, May 2008

Researcher/s	ZARCO Mark Albert
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	The February 17, 2006 Rock Slide-Debris Avalanche at Guinsaugon, Philippines: A Synthesis
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Landslides; Benchmarking
Funding source	No information
Publication information	Guthrie, R. H., S. G. Evans, S. G. Catane, M. A. H. Zarco, R. M. Saturay Jr. (2009) The February 17, 2006 rock slide-debris avalanche at Guinsaugon, Philippines: a synthesis. *Bulletin of Engineering Geology and Environment*, DOI 10.1007/s10064-009-0205, Springer-Verlag, February 2009.

Researcher/s	ZARCO Mark Albert
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Natural Hazards and Disaster Mitigation in Sustainable Civil Engineering: Harmonizing Infrastructure Development with the Environment
Brief description	This project compiles lessons learned from natural disaster in Asia, as well as examples of civil engineering solutions for mitigating natural disasters.
DRRM Keyword/s	Prevention and Mitigation
Topics	Natural hazards; Management
Funding source	Japan Society for the Promotion of Science
Publication information	Ohta, H. M. A. Adajar, J. Kuwano, W. Mairaing, M. A. Zarco, K. Kawashima & B. M Pacheco (2009). "Natural Hazards and Disaster Mitigation" In *Sustainable Civil Engineering: Harmonizing Infrastructure Development with the Environment*, The University of the Philippines Press and Japan Society for the Promotion of Science.

Researcher/s	ZARCO Mark Albert
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Public Awareness Initiatives on Natural Disasters and the Environment through Public Lectures, Photo Archives and Various Media
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation; Preparedness
Topics	Natural hazards; Information dissemination
Funding source	No information
Publication information	Ohta, H., A. W. Oreta, & M. A. Zarco (2009). Public Awareness Initiatives on Natural Disasters and the Environment through Public Lectures, photo archives and various media. In *Sustainable Civil Engineering: Harmonizing Infrastructure Development with the Environment*, The University of the Philippines Press and Japan Society for the Promotion of Science.

Researcher/s	ZARCO Mark Albert
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Effects of Bentonite Slurry on the Skin Friction Capacity of Bored Piles
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Structural conditions; Technologies and tools
Funding source	No information
Publication information	Zarco, M. A. H. & Gravador A. G. N. (2008). Effects of bentonite slurry on the skin friction capacity of bored piles. Proceedings of the 2008 PICE Mid Year Convention, June 26-28, 2008. Clark, Pampanga.

Researcher/s	ZARCO Mark Albert
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Analysis of the Bearing Capacity of Strip Footings on Horizontally Layered Clay Soils Using FLAC
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Structural conditions; Benchmarking
Funding source	No information
Publication information	Zarco M. A. H., D. C. S. Castaneda, M. R. G. Perdiguerra & M. U. V. Sargado (2009). Analysis of the bearing capacity of strip footings on horizontally layered clay soils using FLAC, Proceedings of the Philippine Institute of Civil Engineers 2009 Annual Convention, Bacolod City, Negros Occidental.

Researcher/s	ZARCO Mark Albert
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Initial Investigation of the Manaol Rock Slide, Moises Padilla, Negros Occidental
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Landslides; Benchmarking
Funding source	No information
Publication information	Zarco M. A. H. (2009). Initial investigation of the Manaol rock slide, Moises Padilla, Negros Occidental. Proceedings of the Philippine Institute of Civil Engineers 2009 Annual Convention: PICE Leading the Way to Green Building and Infrastructure, Camp John Hay, Baguio City.

Researcher/s	ZARCO Mark Albert
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Unconfined Compressive Strengths of Guinsaugon Rocks Based on Field and Laboratory Measurements
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Geological hazards; Benchmarking
Funding source	No information
Publication information	Amora, M., Villaflor, E., Futalan, K., Fabian, J. K., Mijares, H. K., Villacorta, C. C., Biscaro, J. R., Saturay, R. M. Catane, S. G., & Zarco, M. A. (2008). Unconfined compressive strengths of Guinsaugon rocks based on field and laboratory measurements, Proceeding of Guinsaugon 2008: International Conference on the 17 February 2006 Guinsaugon Landslide, April 28-May 2, 2008 Tacloban, Leyte.

Researcher/s	ZARCO Mark Albert
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Mineralogical Characteristics of the Guinsaugon Landslide Gouge and Its Implications on the Failure Mechanism
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Landslides; Benchmarking
Funding source	No information
Publication information	Chelo S. Pascua. C. S., Catane S. G., Zarco, M. A. H., Cabria, H. B., & M. Saturay, R. M. Jr. (2008). Mineralogical characteristics of the Guinsaugon landslide gouge and its implications on the failure mechanism, Proceeding of Guinsaugon 2008: International Conference on the 17 February 2006 Guinsaugon Landslide, April 28-May 2, 2008 Tacloban, Leyte.

Researcher/s	ZARCO Mark Albert
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Reconstruction and Analysis of the 17 February 2006 Guinsaugon Landslide Event Based on Geologic Evidence and Eyewitness Accounts
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Landslides; Benchmarking
Funding source	No information
Publication information	Catane, S. G., Cabria, H. B., Zarco, M. A. H., Saturay, R. M. Jr. & Mirasol-Robert, A. S. (2008). Reconstruction and analysis of the 17 February 2006 Guinsaugon landslide event based on geologic evidence and eyewitness accounts. Proceeding of Guinsaugon 2008: International Conference on the 17 February 2006 Guinsaugon Landslide, April 28-May 2, 2008 Tacloban, Leyte

Researcher/s	ZARCO Mark Albert
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	State of the Practice in Slope Mitigation Measures: Focus on the Philippines
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Geological hazards; Benchmarking
Funding source	No information
Publication information	Zarco, M. A. H., Catane, S. G. & Gonzalez, R. M. (2008). State of the practice in slope mitigation measures: focus on the Philippines. Proceeding of Guinsaugon 2008: International Conference on the 17 February 2006 Guinsaugon Landslide, April 28-May 2, 2008 Tacloban, Leyte.

Researcher/s	ZARCO Mark Albert
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Updated Analysis of Failure Mechanism of 17 February 2006 Rockslide-Debris Avalanche, Guinsaugon, St. Bernard, Southern Leyte, Philippines.
Brief description	No information
DRRM Keyword/s	Prevention and Mitigation
Topics	Landslides; Benchmarking
Funding source	No information
Publication information	Zarco, M. A. H., Catane, S. G., Cabria, H. B., Saturay, R. M. Jr. & Mirasol-Robert, A. S. (2008). Updated analysis of failure mechanism of 17 February 2006 rockslide-debris Avalanche, Guinsaugon, St. Bernard, Southern Leyte, Philippines. Proceeding of Guinsaugon 2008: International Conference on the 17 February 2006 Guinsaugon Landslide, April 28-May 2, 2008 Tacloban, Leyte.

Researcher/s	ZARCO Mark Albert, CATANE Sandra
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	DYNASLOPE: Development of Dynamical Models for Forecasting Slope Failures, Landslides and Debris Flows
Brief description	The project deals with the development of numerical and quantitative models for monitoring slope deformation and pore water pressures through wireless sensor networks, and forecasting slope failure based on the measured deformation and pore pressures.
DRRM Keyword/s	Prevention and Mitigation
Topics	Landslides; Technologies and tools
Funding source	DOST-PCIERD; UP Diliman
Publication information	Catane, S.G., Zarco, M.A.H., Cordero, C.J.N., Kaimo, R.A.N. & Saturay, R.M. Jr. (2010) Development of an early warning system for landslide using physical models and sensors. In Proceedings of the International Symposium and the 2nd SUN/Seed-Net Regional Conference on Geo-disaster Mitigation in ASEAN. February 24-26, 2010, Bali, Indonesia, pp. 165-172. Zarco, M. A. (2010) Numerical Simulation of Instrumented Experiments on Steady-state Seepage Induced Landslide. In Proceedings of International Symposium and the 2nd SUN/Seed-Net Regional Conference on Geo-Disaster Mitigation in ASEAN. February 24-26, 2010, Bali, Indonesia, pp. 165-172. Catane, S.G., Zarco, M.A.H., Cordero, C.J.N., Kaimo, R.A.N. & Saturay, R.M. Jr. (2011) Laboratory experiments on steady-state seepage induced landslide using slope models and sensors. *Science Diliman 23*(1): 17-30.

Researcher/s	ZARCO Mark Albert, PECKLEY Daniel, Jr., TAN Sunshine Petal
Affiliation	University of the Philippines Diliman – College of Engineering
Title of research	Guidelines of the Swedish Weight Sounding Test (SWST) in the Philippine Setting
Brief description	The project involves the calibration of the Swedish Weight Sounding Test with the Standard Penetration Test. Test results indicate that existing correlations developed by Nanda can be used for Philippine conditions
DRRM Keyword/s	Prevention and Mitigation
Topics	Geological hazards; Technologies and tools
Funding source	Advanced Geotechnical Engineering Services
Publication information	Zarco, M.A.H., Peckley, D.C. Jr. & Tan, S.P.V. (2010) Guidelines of the Swedish Weight Sounding Test (SWST) in the Philippine setting. In Proceedings of the International Symposium on a Robust and Resilient Society against Natural Hazards and Environmental Disaster and the 3rd AUN/SEED-NET Regional Conference on Geo-Disaster Mitigation, August 24-26, 2010, Kyoto University, Japan, pp. 392-400. Tan, S.P.V., Zarco, M.A.H. & Peckley, D.C. Jr. (2009) Applications of the Swedish Weight Sounding Test (SWST) in the Philippines. In Proceedings of the 1st Earth Science International Conference and Workshop and the 2nd AUN/SEED-NET Regional Conference on Geo-Disaster Mitigation, August 27-30, Heritage Hotel, Manila, p. 209. Tan, S.P.V. (2010) Guidelines of the Swedish Weight Sounding Test (SWST). BSCE undergraduate thesis, UP Diliman.

National Disaster Risk Reduction and Management Framework
NDRRMF

BACKGROUND go to page 2

Being one of the most disaster-prone countries in the world, the Philippines have long experiences in dealing with, responding to and managing disasters. Since the 1970s the country has shifted its approach from disaster preparedness and response to disaster management in the 1980s to disaster risk management in the 1990s and disaster risk reduction in the years 2005 and beyond. This evolution paved the way to the paradigm shift in the way people, communities and governments think, act and respond to the current and emerging risks that continually face them.

In 1978, the National Disaster Coordinating Council (NDCC) was established through ***Presidential Decree (PD) 1566 as*** the highest policy making body and the focal organization for disaster management in the country. This law also provided for the establishment of regional, provincial, city, municipal and barangay disaster coordinating councils. These DCCs were formed primarily to advice the President and/or the local chief executive on all natural disaster preparedness and management plans; recommend the declaration of state of calamity and the release of calamity funds for relief and rescue operations, among others.

In 2005, the President approved the implementation of the ***NDCC Four Point Plan of Action for Preparedness (4PPAP)*** which aims to increase public awareness and involvement in measures put in place by the government to minimize the impact of disasters in the future.

In the years that followed, several parallel discussions with various stakeholders in disaster risk reduction and disaster risk management happened which produced key policy documents. One was the ***"Preliminary Assessment on the State of Disaster Risk Management in the Philippines"*** completed in 2008 which formulated a DRM framework to assess the situation in the country and recommend an agenda for action that would strategically address the constraints and limitations in the current efforts in reducing disaster risks. "The study assessed the state of DRM in the Philippines, serving as a benchmark on current status; identify the gaps, issues and opportunities that need to be addressed strategically to improve DRM governance; and develop an agenda for action which includes strategic interventions that would require attention and substantial resource investments to reduce the impacts of natural disasters." The paper identified the various efforts on DRM undertaken by the key stakeholders and groups in DRM, headed by the NDCC, as well as different gaps and issues in DRM, to wit:

Existing Efforts on DRM

- Improving coordination among DRM agencies, LGUs, civil society groups, and international organizations;
- Streamlining the operations of OCD and DCCs;
- Strengthening early warning and preparedness system, including risk assessment and hazard/vulnerability mapping;
- Increasing cooperation and joint projects with international organizations;
- Mainstreaming DRM in local development plans and sectoral development plans;
- Preparation of the national strategic plan on DRM and formulation of proposed bill strengthening DRM administration;

- Building the capacity of LGUs and DCCs on DRM, particularly prevention and mitigation measures;
- Training and assisting BDCCs in the preparation of Contingeny Plans;
- Improving data base and information networking;
- Introducing DRM in the curricula of secondary and tertiary levels of education; and
- Construction of hazard resilient schools

Gaps and Issues on DRM

- Ineffective vertical and horizontal coordination among its member agencies;
- Existing DRM efforts of government and partner organizations are still limited in coverage due to limited resources available;
- Ineffective institutional capacities of LGUs such as managerial and technical competencies;
- Limited funds, equipment and facilities for monitoring and early warning;
- Insufficient hazard and disaster risk data and information;
- Inadequate mainstreaming of DRM in development planning and implementation;
- Poor enforcement of environmental management laws and regulations, and other relevant regulations; and
- Inadequate socio-economic and environmental management programs to reduce vulnerability of marginalized communities

After which, the paper established a DRM state index which served as a benchmark and basis for charting the level of change in the implementation of DRM in the country that is applicable at the regional, provincial, city/municipal and barangay levels. Based on the consolidated sectoral ratings, the overall state of ***DRM in the country is 2.27 which is classified as low to very low in the ladder of accomplishments and progress in implementing DRM***.

Further, a set of actions were recommended by the paper for immediate implementation of DRM agencies and their partner organizations to reduce risk and minimize the impacts of disasters in the areas of (1) policy development; (2) institutional capacity development; (3) resource mobilization, fund generation and management; (4) information, education and communication; (5) planning and programming; (6) knowledge base and technological development; (7) community mobilization and public-private partnership; (8) vulnerability reduction and environmental management; (9) research and development agenda; (10) monitoring and evaluation .

On June 7, 2010, the ***or Executive Order Number 888*** was signed by then President Gloria Macapagal Arroyo adopting the landmark plan on DRR of the country titled ***"Strengthening Disaster Risk Reduction in the Philippines: Strategic National Action Plan (SNAP) 2009-2019"***. The SNAP is the country's road map for disaster risk reduction, indicating the vision and strategic objectives for the next 10 years. The SNAP was based on the assessment of the disaster risk, vulnerability and capacity; gap analysis that identified and mapped out significant ongoing initiatives; and DRR activities based on the HFA that were considered by stakeholders as achieveable priorities for the country, with adequate relevant resources, and capacity for implementation over the next three to 10 years.

Consistent with the global commitment to disaster risk reduction embodied in the Hyogo Framework for Action (HFA), the SNAP aims to build the resilience of communities to disasters and reduce disaster losses in livesand in the social, economic and environmental assets of communities and countries. It provides support to strengthen cooperation and coordination mechanisms among various sectors and stakeholders and will sustain DRR initiatives in the country, promote good practices of individuals, organizations, LGUs and the private sector. The SNAP converges the country's disaster management

efforts to reducing disaster risks by intensifying the mainstreaming of DRR in plans and policies of national government agencies and local government units, communities and other sectors.

The SNAP recognized the paradigm shift from a mostly reactive disaster response approach to a proactive DRR orientation and the need for an enabling law which will help the country effectively implement the plan. It is an integral part of the nation's commitment to the HFA and other relevant international agreements. , Two principles guided the development of the SNAP: (1) DRR is directly linked to poverty alleviation and sustainable development; and (2) DRR entails the participation of various stakeholders in order to mainstream DRR in relevant sectors in the society.

Although the SNAP was approved by the President in June 2010, the process of drafting the SNAP can be traced by reviewing the joint initiatives taken by the government and other stakeholders which started as early as 2007. The finalization of theSNAP occurred side-by-side with the deliberations on a proposed DRR law in the country, which was timely asthe latter is number one on the list of priority actions identified in the SNAP.

On May 27, 2010, Republic Act 10121 or the Philippine DRRM Act was passed into law and paved the way for the need to ***"adopt a disaster risk reduction and management approach that is holistic, comprehensive, integrated, and proactive in lessening the socio-economic and environmental impacts of disasters including climate change, and promote the involvement and participation of all sectors and all stakeholders concerned, at all levels, especially the local community."*** The Act provides for the development of policies and plans and the implementation of actions and measures pertaining to all aspects of disaster risk reduction and management, including good governance, risk assessment and early warning, knowledge building and awareness raising, reducing underlying risk factors, and preparedness for effective response and early recovery.

It is to this end that the NDRRMC, through its executive arm and secretariat, the Office of Civil Defense, in partnership with key stakeholders, conducted a series of consultative meetings all over the country to review the existing disaster management framework and revise it to align with the DRRM principles and policies stated in the DRRM Act.

NEED FOR A DRRM FRAMEWORK

Guide to national and local efforts on DRR

The DRRM framework aims to raise awareness and understanding among governments and people on the country's DRRM goal . A national framework for DRRM, which shows the overall direction, set of priorities and which delineates the fundamental elements and components of disaster risk reduction and disaster risk management in the country, is necessary to guide national and local efforts in DRRM. The DRRM framework will provide a common direction towards addressing underlying causes of vulnerability to help reduce and manage the risks to disasters. The DRRM framework will also show that DRR and DRM efforts are not isolated activities but are inevitably linked to the development process and should converge and contribute towards attaining sustainable development.

Develop a common understanding of DRRM

A national DRRM framework will help us develop a common understanding of the different aspects of DRRM and related elements and/or factors which need to be considered in developing national and local plans and programs. Through the framework, we hope to have the same levels of understanding that DRRM is (a) about lessening the vulnerability and increasing capacities of men and women in communities and governments; (b) about mainstreaming efforts in national and local development plans; (c) achieved through multistakeholder partnerships; and (d) linked to climate change adaptation. In the context of post-disaster recovery process, building back better using a DRRM perspective can be achieved if the processes are improved, stakeholders learn from good practices and building institutional capacities is continually done.

Criteria for Benchmarking and Tool for Evaluating Progress

The NDRRM Framework will both serve as a set of criteria for benchmarking the effectiveness of disaster risk reduction measures and as a tool for monitoring and evaluating the progress. In particular, the Framework serves to provide a basis for political advocacy as well as practical action and implementation. It also highlights the areas where capacities need to be developed and provide a basis for setting goals, objectives, and targets adapted to various circumstances, against which progress can be measured and gaps identified.

DISASTER RISK PROFILE

Over the past decades, the Philippines have been labeled as one of the most disaster-prone countries in the world mainly because of its geographic and geologic location and physical characteristics. The country lies along several active fault lines and have active, inactive and potentially active volcanoes all over the country. We record an average of 20 earthquakes per day and around 100-150 earthquakes felt per year. Also, the country lies within the Western Pacific Basin (a generator of climatic conditions such as monsoons, thunderstorms, inter-tropical convergence zone (ITCZ), typhoons, among others) making it a path of an average of 20 tropical cyclones annually, nine of which makes a landfall. Climate risks bring with it exposure to super typhoons, El Niño-related droughts, projected rainfall change and projected temperature increase. In addition, flooding is another hazard facing the country due to rains brought about by typhoons and the monsoon.

Aside from natural disasters, the Philippines also experiences human-induced disasters. These are brought about by hazards that are of political and socio-economic origins and inappropriate and ill-applied technologies. Many are forced to evacuate during times of conflict, for instance.

Hazards become disasters only if vulnerable people and resources are affected by them. People who live in poverty and adverse socio-economic conditions are highly vulnerable to disasters. The most vulnerable sectors include the poor, the sick, people with disabilities, older persons, women and children. Although many people may be affected, these sectors will have the least capacity to recovery from the impact of disasters.

The risks induced by these hazards have big effects on the country's economic development targets and programming as well as in the overall welfare of the people and their properties, especially on the poor and most vulnerable groups. The Philippines, based on the 2009 Official Poverty Statistics reported a

26.5% poverty incidence among population -- from 24.9 in 2003 and 26.4 in 2006. With various natural hazards present in the country and 11 out of the 17 regions classified as being poor, risks of men and women to disasters remain high.

In this context, it is important for society to strengthen its capacities, especially of the most vulnerable sectors. In doing so, these sectors will cease to be victims of disasters and become agents of change for the development of their communities.

DEVELOPMENT CONTEXT

Disasters and Development Link

According to the State of DRM in the Philippines report of 2008, statistical records show that from 1997 to 2007, total cost of damages brought about by various types of disasters that hit the country amounted to approximately PhP 176.733 billion per year. About 85 percent of the total number of disasters that struck the country during the same period caused tropical cyclones aggravated by four calamitous floods and landslides which increased the death toll and caused more economic losses due to damage to properties, infrastructure and agriculture that reached PhP 158 billion.

In addition, it has been reported that on the average, annual direct damages of disasters cause as much as PhP 15-billion and that typhoons alone affect our GDP by 0.5% annually. In 2009 alone, Pepeng and Ondoy caused a total of PhP 38 billion worth of damages in 9 regions while Ramil contributed PhP 87-million affecting 3 regions. Thus, it is really imperative for the country to take hazards into consideration hazards and how their related risks affect vulnerable communities in our national and local development programming, policies and strategies.

These and other related data show that disasters set back development by destroying years of development gains. Through the years, disasters have caused substantial damage and losses to the economy and have impeded efforts towards progress and development. Disasters have also strained the national budget, e.g. funds intended for development projects are rechanneled to post-disaster reconstruction and rehabilitation efforts, increasing the country's debt burden by getting loans to to finance the recovery process, among others.

Relatedly, development programs can also increase an area's susceptibility to disasters. Some well-meaning development efforts, especially those that did not consider environmental factors, may increase the vulnerability to natural disasters and can even have disastrous consequences for the people. Projects designed to increase employment opportunities, and thus income, usually lead to increased migration and higher population and population growth rate. Because of this, some may have to seek housing disaster-prone areas such as hillsides or floodplains. The costs of relief assistance after a landslide or flood can easily outweigh the benefits to the economy of more jobs.

On the other hand, rebuilding after a disaster also provides significant opportunities to initiate development programs with a building back better theme. Disasters often create a political and economic atmosphere wherein extensive changes can be made more rapidly than under normal circumstances. A clear example would be the aftermath of Typhoons Ondoy and Pepeng typhoons, wherein opportunities have been created for more targeted interventions such as improving and making houses more typhoon-resilient, among others.

Disasters can also highlight high-risk areas where action must be taken before another disaster strikes. The realization of vulnerability can motivate policy-makers and the public to participate in mitigation activities.

Given all these, in order for us to really achieve safer communities and lessen our vulnerability to disasters, we need to consider disaster risk as an integral part of the development process.There is undoubtedly a direct correlation between disaster-related economic losses and the limited investment in DRR and DRM, particularly at the local level. More often than not, local chief executives think about early warning systems and disaster preparedness and response but not really addressingthe underlying risk factors such as unplanned urbanization, ecosystem degradation and vulnerable livelihoods as well as critical issues such as public awareness or gender.We need to balance things out so that the scale of public investment also takes into consideration investments in disaster risk management. And a good starting point is to mainstream DRRM into national and local plans.

Mainstreaming DRRM into national and local plans

To ensure that DRRM is mainstreamed into our national policies and plans, in the development of the Philippine Development Plan (PDP), disaster risk reduction and climate change adaptation have now become a cross-cutting theme and its concerns are mainstreamed and incorporated in various parts of the plan, i.e., social development, agriculture, environment and natural resources, and infrastructure. The environment chapter in particular, contains an assessment of the country's vulnerability to natural hazards and climate change. The PDP also includes strategies for improving the quality of the environment, protecting and conserving natural resource, enhancing the resilience of natural systems, and improving the adaptive capacities of communities to cope with environmental hazards including disaster and climate-related risks.

The Philippine Development Plan (PDP) recognizes the key role of DRRM and climate change adaptation in safeguarding hard-won development gains and in accelerating progress in achieving the Millennium Development Goals. It includes key strategies that will increase the country’s resiliency to disasters:

Agriculture and Fisheries

- reduce climate change risks and vulnerability of natural ecosystems and biodiversity through ecosystem-based management approaches, conservation efforts, and sustainable ENR-based economic endeavors such as agri-ecotourism;
- increase the resilience of agriculture communities through the development of climate change-sensitive technologies, establishment of climate-resilient agricultural infrastructure and climate-responsive food production systems, and provision of support services to the most vulnerable communities;
- strengthen the agriculture and fisheries insurance system as an important risk sharing mechanism; and
- strengthen the capacities of communities in safely and effectively responding to climate risks and natural hazards

Infrastructure

- adapt to climate change and mitigate the impacts of natural disasters;
- reduce adverse effects of flooding occurrences by maintaining watersheds and providing efficient and adequate infrastructure; and
- use new and alternative technologies in housing construction

Social Development

- promoting the use of "green technology and material" in constructing houses; and
- build "disaster-resilient homes" for housing beneficiaries

The National/Regional/Provincial Physical Framework Plans and the Comprehensive Land Use Plans guide the utilization, and development of the country's land and other physical resources. Mainstreaming DRR in these plans will result to enhanced understanding of the planning environment; more realistic allocation of land uses; potential damages and casualties are considered in the development goals and targets; risk reduction measures are prioritized; DRR programs and projects are eventually provided with budgetary resources and implemented; risks are considered in the project design and monitoring indicators; and risk estimates serve as benchmark for evaluating DRR.
The current National Physical Framework Plan includes several DRRM policies and interventions directed at (a) identifying and demarcating boundaries of hazard-prone areas; (b) giving priority in resolving land use conflicts on areas that pose extreme and frequent danger to people; (c) establishing and disseminating standard parameters and databases to aid the identification and management of high-risk, hazard-prone areas; (d) identifying and implementing appropriate physical planning measures as part of the comprehensive disaster mitigation plans for hazard-prone areas; (e) increasing public awareness on the value of disaster preparedness; and (f) increasing public participation in conservation and disaster mitigation efforts within their communities.

POLICY CONTEXT

Philippine Constitution (1987)

Preamble:
"We, the sovereign Filipino people, imploring the aid of Almighty God, in order to build a just and humane society, and establish a Government that shall embody our ideals and aspirations, promote the common good, conserve and develop our patrimony, and secure to ourselves and our posterity, the blessings of independence and democracy under the rule of law and a regime of truth, justice, freedom, love, equality, and peace, do ordain and promulgate this Constitution."

Philippine Agenda 21 (1996)

PA 21 was adopted on September 26, 1996 with the issuance of Memorandum Order No 399 by then President Ramos, which identified the roles of the Philippine Council for Sustainable Development (PCSD) and eahc sector in the operationaliztion of PA 21. It is the nation's blueprint for sustainable development which is grounded on respect and active advocacy for the empowerment of the various social groupings of society to manage the economy, critical resources, society and culture, politics and governance and in the are of foreign relations.

PA 21 advocates a fundamental shift in development thinking and approach that promotes harmony and sustainability by making people and integrity of nature at the center of development initiatives. This implies the strangthening of roles, relationships, and interactions between and among stakeholders in government, civil society, labor and business and emphasizes the important role of basic sectors in achieving equity and managing the ecosystems that sustain life.

PA 21 envisions a better quality of life for all Filipinos, through the development of a just, moral and creative spiritual, economically vibrant, caring, diverse yet cohesive society characterized by appropriate productivity, participatory and democratic processes, and living in harmony and within the limits of the carrying capacity of nature and the integrity of creation. As such, PA 21 contitues to be a dynamic document that evolves as new challenges and opportunities emerge, such as disaster risk reduction and climate change adaptation.

Republic Act 9729 (Climate Change Act of 2009)

Since 2007, there has been a significant rise in interest on climate change issues. However, the country's attempt to address climate change begun in the early 1990s with the creation of the Inter-Agency Committee on Climate Change (IACCC). The IACCC was tasked to coordinate various climate change-related activities, propose climate change policies and prepare the Philippine position to the United Nations Framework Convention on Climate Change (UNFCCC) negotiations. Prior to that was the formulation of the Philippine Strategy for Sustainable Development (PSSD) which led to the formulation of the Philippine Agenda 21 and the creation of the Philippine Council for Sustainable Development in 1992. The country signed in June 1992 the UNFCCC and ratified it on 2 August 1994. The Philippines also signed the Kyoto Protocol on 15 April 1998 and ratified the same on 20 November 2003 in order to participate in the Clean Development Mechanism (CDM).

With the passage of RA 9729, Presidential Task Force on Climate Change (PTFCC) created on 20 February 2007, was abolished and its powers and functions were absorbed by the Climate Change Commission (CCC). The CCC is mandated to formulate the Philippines' framework strategy, program and action plan on climate change, among others.

Both RA 9729 and 10121 redefined the institutional framework for jointly addressing climate change impacts and disasters. These legislations mark a significant progress aimed at reducing the losses of lives and assets caused by natural hazards and take action to reduce greenhouse gas emissions and adjust to the expected effects of rising global temperatures.As 90% of the damages caused by extreme natural events are climate-sensitive there is an obvious need to address DRR and Climate Change Adaptation (CCA) together.These policy measures call for a holistic, comprehensive and integrated approach in addressing impacts of disasters and climate change incorporated in the development plan at various levels of government and mainstreamed in development processes.

Republic Act 10121

Republic Act 10121 provides for the bases for the development of a new national DRRM Framework as well as the guiding principles and policies, to wit:

> Section 6A
> "Develop a NDRRMF which shall provide for a *comprehensive, all-hazards, multi-sectoral, inter-agency and community-based approach to disaster risk reduction and management*. The Framework shall serve as the principal guide to disaster risk reduction and management efforts in the country and shall be reviewed on a five (5) year interval or as may be deemed necessary, in order to ensure its relevance to the times."

Section 6N

"In coordination with the Climate Change Commission, formulate and implement a framework for climate change adaptation and disaster risk reduction and management from which all policies, programs and projects shall be based."

Relatedly, various parts in Section 2 of the law provides for policies and guiding principles which sets the general tone of the national DRRM framework, to wit:

- Uphold the people's constitutional rights to life and property, by addressing the root causes of vulnerabilities to disasters, strengthening the country's institutional capacity for DRRM and building the resilience of local communities to disasters, including climate change impacts (Section 2a);
- Adhere to and adopt the universal norms, principles, and standards (Section 2b);
- Adopt a DRRM approach that is holistic, comprehensive, integrated and proactive in lessing the socioeconomic and environmental impacts of disasters, including climate change, and promote the involvemnet and participation of all sectors and all stakeholders concerned at all levels, especially the local community (Section 2d);
- Strengthen the capacity of national and local government units, together with partner stakeholders, to build the disaster resilience of communities, and to institutionalize arrangements and measures for reducing disaster risks, including projected climate risks and enhancing disaster preparedness and response capabilities at all levels (Section 2e);
- Adopt and implement a cohorent, comprehensive, integrated, efficient and repsonsive DRR program incorporated in the development plan at various levels of government adhering to the principles of good governance (Section 2f);
- Mainstream DRR and CC in development processes (Section 2g);
- Institutionalize policies and structures, coordination mechanisms and programs from nation down to local levels (Section 2h);
- Mainstream DRR into the peace process and conflict resolution approaches (Section 2i);
- Ensure that DRR and CC measures are gender responsive, sensitive to indigenous knowledge systems and rights-based (Section 2j);
- Recognize local risk patters across teh country and strengthen LGU capacity (Section 2k);
- Engage the participation of CSOs, private sectio and volunteers in DRR programs (Section 2m);
- Develop and strengthen the capacities of vulnerable and marginalized groups (Section 2n);

In addition, RA 10121 defined under Section 3 (N) and (O), what DRR and DRRM means, to wit:

***Disaster Risk Reduction (DRR)**:* The concept and practices of reducing disaster risks through systematic efforts to analyze and manage the causal factors of disasters, including through reduced exposures to hazards, lessened vulnerability of people and property, wise management of land and the environment, and imrpoved preparedness for adverse events.

Disaster Risk Reduction and Management (DRRM or Disaster Risk Reduction and Disaster Risk Management): The systematic process of using administrative directives, organizations and operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster. Prospective DRRM refers to risk reduction and management activities that address and seek to avoid the development of new or increased disaster risks, especially if risk reduction policies are not put in place

In summary, both definitions capture the following principles:

DRR and DRRM are combination of practices and processes to lessen vulnerability of people and properties and lessen the adverse impacts of hazards and the possibility of disasters by...

a. Systematic assessment and management of the causal factors
b. Reducing the vulnerability of people and their properties
c. Wise use of land and environment
d. Increasing preparedness for future adverse events
e. Using administrative directives, organizations and operational skills and capacities to implement strategies, policies; and
f. Hazard reduction and prevention (in the case of man-made disasters)

INTERNATIONAL COMMITMENTS

Millennium Development Goals

As part of the country's commitment toward achieving the Millennium Development Goals (MDGs), the Philippines has recognized the fact that disaster risk reduction is an integral part of sustainable development and therefore an important element for achieving the MDG targets in a sustainable manner. This recognition and commitment can be seen in various efforts to mainstream DRR into national and local development planning processes.

The loss of lives and productive assets due to both major catastrophes and the more frequent small and medium disasters demonstrate what happens when development investments are not sufficiently disaster resilient. A clear example is the 2.7% decrease in the country's GDP because of tropical strom Ondoy and typhoon Pepeng in 2009.

With only four years left until the 2015 deadline to achieve the Millennium Development Goals (MDGs), the same report identified several inter-related activities to ensure that the targets are met by 2015. These include having a sustained economic growth; better population management; greater focus on underserved areas; adequate safety nets; improved governance and transparency; improved peace and security; equitable and efficient use of resources; greater advocacy and localization; and strengthen public-private partnerships.

Hyogo Framework for Action

When the Philippines expressed its commitment to and signed the Hyogo Framework for Action, it also made a promise to promote and institutionalize risk reduction efforts within the context of sustainable development. The HFA gave us the "menu" of things we can do, at the national, local and community levels but more importantly, it gave us an array of options which are mutually reinforcing and complement each other in order for us to reduce the losses of lives and livelihoods, with the end in view of building resilient communities and contributing to the MDGs.

However, although it embraces the global effort on risk reduction, it can be observed that the new Philippine Disaster Risk Reduction and Management Act did not make any explicit reference to the aims and objectives of the United Nations International Strategy on Disaster Reduction (UNISDR) or to the Hyogo Framework for Action (HFA). Nevertheless, both the new law and HFA have the same bottom

lines: "the need to reduce disaster risks more deliberately and systematically through their integration into policies, plans and programs for sustainable development and poverty reduction, supported by bilateral, regional and international cooperation."

ASEAN Agreement on Disaster Management and Emergency Response (AADMER)

The ASEAN Agreement on Disaster Management and Emergency Response or AADMER was ratified by the ten ASEAN Member States and entered into force on 24 December 2009. The AADMER is a proactive regional framework for cooperation, coordination, technical assistance, and resource mobilization in all aspects of disaster management. It also affirms ASEAN's commitment to the Hyogo Framework of Action and is the first legally-binding HFA-related instrument in the world. To concretize this commitment and operationalize AADMER, the AADMER Work Programme for the period 2010 to 2015 has been developed and adopted by the ASEAN Committee on Disaster Management and is designed to support the national agenda and complement capacities of individual Member States in the different aspects of disaster management to attain the vision of disaster-resilient nations and safer communities within the region by 2015.

International Disaster Response Law (IDRL)

Created in 2001, the International Disaster Response Laws, Rules and Principles (IDRL) seeks to reduce human vulnerability and suffering of people affected by natural and technological disasters by raising awareness, promoting the implementation and encouraging the progressive development of laws, rules and principles that ensure a timely, adequate and efficient internaitonal response to disasters, where international involvement is needed. The IDRL pursues this goal in consultation with major stakeholders, namely, national societies, governments, international NGOs, NGOs and academics.

The need for appropriate legal frameworks and policies is also linked to the DRR, including relief, recovery and rehabilitation and development by anchoring disaster response into local capacity building and building safer communities. In the absence of these laws, challenges consistently arise which cause delays, add costs and decrease the efficiency of international response.

In partnership with the Philippine Red Cross and the International Conference of the Red Cross and the Red Crescent, the government continue to work together to facilitate international disaster relief and initial recovery assistance in the country.

Kyoto Protocol

On April 16, 1998, the Philippines signed the Kyoto Protocol to the United National Framework Convention on Climate Change aimed at fighting global warming. The UNFCC is an international environmental treaty with the end in view of achieving the "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."

Other international commitments

Republic Act 10121also underscored the importance of being consistent with global agreements and declarations. Also, it supported compliance with international commitments relating to climate change adaptation. The said law promotes adherence to universal norms, principles and standards on

humanitarian assistance such as the Universal Declaration of Human Rights, United Nations Guiding Principles and Guidelines on Internal Displacement and Durable Solutions, Convention on the Elimination of Discrimination against Women and Convention on the Rights of the Child.

THE PARADIGM SHIFT

Disaster management in the Philippines has started from a purely disaster response approach by focusing on the provision of assistance or intervention during or immediately after a disaster. Within the same perspective, geophysical approaches prevailed that relied on physical and engineering means such as dams, levees, channel improvements and river training. This has been the practice till the 20th century.

On the other hand, scientific studies have started which focused on prediction and modeling of natural hazards such as earthquakes and floods. Such continued to flourish. With science and technology applied to reduce the impact of hazard on human, this has gradually changed some views and perspectives in addressing disasters. Around the same period, international disaster agencies channeled lots of their resources on humanitarian assistance, disaster aid, and relief operations. The way of thinking about solutions was that, it is within the domain of public policy applications of essentially geophysical and engineering knowledge.

In such development process, disaster perspective has shifted from reactive to more proactive framework. The humanitarian, relief and response approach in which the intervention was provided only during or immediately after a disaster has gradually shifted to a developmental approach. Within the developmental approach, disasters are seen in a growing manner as a development concern and may arise as a result of unsustainable development practices.

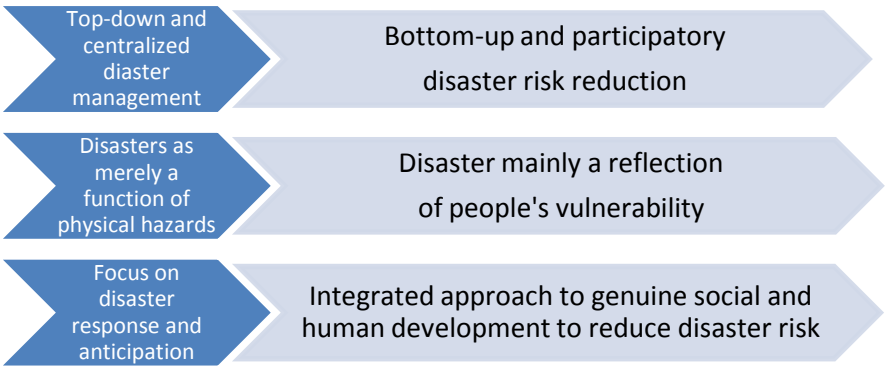
The previously technical approach using engineering and technological solutions including prediction and modeling of natural hazards and modifying hazards were transformed into promoting non-structural and non-engineering measures such as community-based disaster preparedness and early warning, indigenous knowledge, and land use planning, which emphasize the need to modify vulnerabilities (and capacities) instead of hazards.

The practice of single hazard approach in the past has switched to multi or all-hazards approach. The sectoral focus has become inter-sectoral, inter-agency, and an all-government effort. And the public sector led management of disaster became an all-society approach which is participatory, inclusive, transparent, and gender fair.

Such paradigm shift gave equal emphasis to vulnerabilities and capacities aside from hazard. It provided opportunities for land use planning to be promoted as a tool for disaster risk reduction. The shift in focus from hazards to vulnerabilities had emphasized the varying exposure of population groups living in the city, the poorly constructed buildings, the informal settlements, incorrectly sited developments, and the inadequacy of open spaces, among others, as well as capacities of people and institutions to cope with and adapt to natural hazards.

This paradigm shift likewise involved the promotion of non-structural and non-engineering measures such as community-based disaster preparedness and early warning, the use of indigenous knowledge,

and land use planning, therefore, encouraging the application of land use policies and land use planning in disaster risk management.



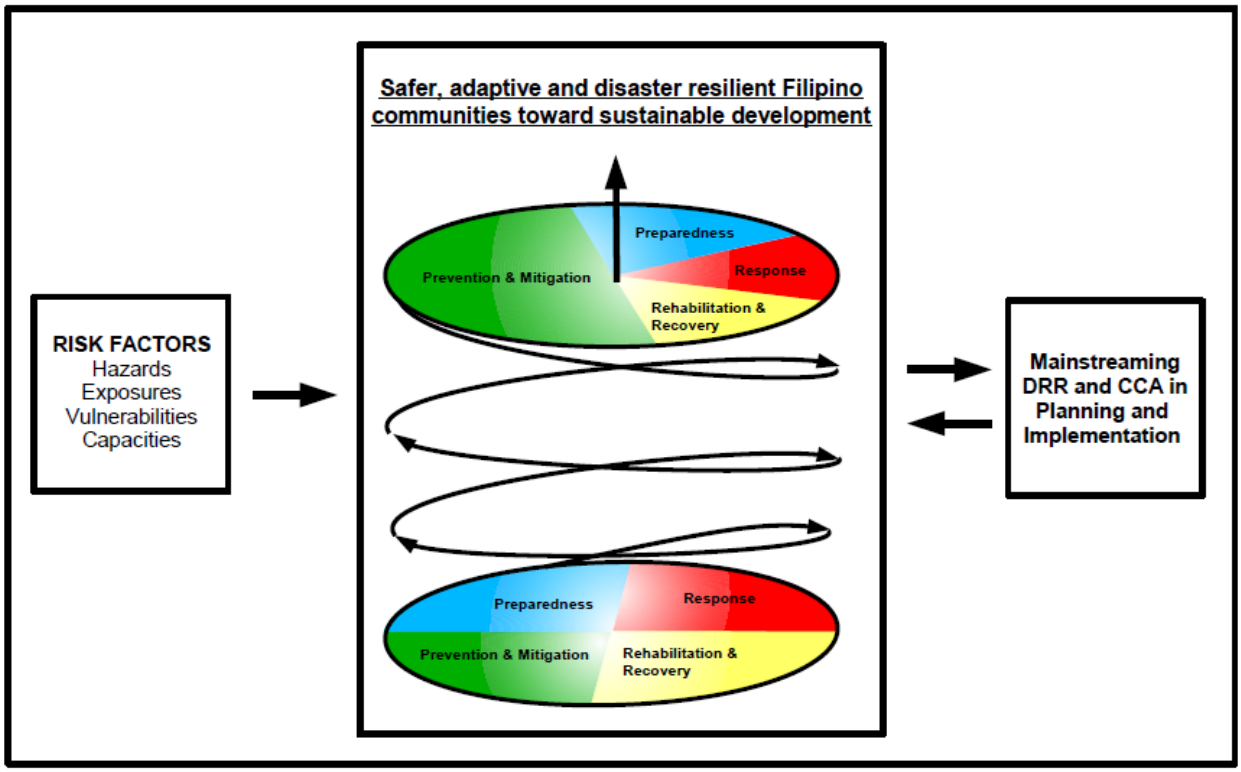
The NATIONAL DRRM FRAMEWORK

The Philippine National DRRM Framework is not only an essential part of our development process but is also an important component to ensure the country's sustainable development. Its effectiveness relies heavily on strongly supported national ownership and leadership of the DRR process.

This national framework is based on the following principles on disaster risk reduction and disaster risk management or DRRM:

- It is about addressing the underlying causes of vulnerability;
- It is a national responsibility within a sustainable development approach;
- It stresses the need for community empowerment and shared responsibilities;
- It is about good responsive governance and mutually reinforcing partnerships;
- It needs strong and responsive political will, commitment and leadership; and
- It is best done through local and customized adoption (and adaptation)

National Disaster Risk Reduction and Management Framework



The country is challenged by increasing disaster and climate risks caused by dynamic combinations of natural and human-induced hazards, exposure, and people's vulnerabilities and capacities. There is an urgent need for the country to work together through multi-stakeholder partnerships and robust institutional mechanisms and processes so that Filipinos will be able to live in safer, adaptive and disaster resilient communities on the path to developing sustainably.

This DRRM framework indicates the paradigm shift towards a proactive and preventive approach to disaster management. This conceptual representation emphasizes that resources invested in disaster prevention, mitigation, preparedness and climate change adaptation will be more effective towards attaining the goal of adaptive, disaster resilient communities and sustainable development. The Framework shows that mitigating the potential impacts of existing disaster and climate risks, preventing hazards and small emergencies from becoming disasters, and being prepared for disasters, will substantially reduce loss of life and damage to social, economic and environmental assets. It also highlights the need for effective and coordinated humanitarian assistance and disaster response to save lives and protect the more vulnerable groups during and immediately after a disaster. Further, building back better after a disaster will lead to sustainable development after the recovery and reconstruction process.

The upward motion indicated by the spiraling arrows represents a bottom-up participatory process, enhanced level of awareness, strengthened multi-stakeholder partnerships, and pooling of resources. These positive changes will be realized through the mainstreaming of DRR and CCA into national and local plans which help us refocus our development goals, objectives and targets to be able to adequately

respond to as well as identify and implement appropriate interventions to address the impacts of disaster risks.

Mainstreaming DRR is a means towards (a) refocusing the development goals, objectives and targets to be able to adequately respond to disaster risks; and (b) identifying and implementing appropriate interventions to address the impacts of disaster risks. Mainstreaming DRR is an important step towards avoiding huge losses from disasters. Resources invested in risk reduction are justified because these could prevent or at least minimize enormous costs of post-disaster recovery, repair and reconstruction works.

In the end, these processes will synergize efforts and create rippling positive changes toward addressing the underlying causes of vulnerabilities and mainstreaming DRRM in national and local policy-making, planning, investment programming and in the policy/plan implementation.

Vision

Safer, adaptive and disaster-resilient Filipino communities toward sustainable development

Terminology	*Explanation*
Safer	Men and women have increased awareness and understanding on DRRM and are now more prepared and away from harm when disaster strikes.
Adaptive	Emphasis are on risk reduction and adaptation to show the convergence of DRR and CCA and that both contribute to increasing people's resilience and decreasing their vulnerabilities. Our aim is to empowe communities and develop the "right" mindset and positive behavioral changes towards reducing and managing risks and lessening the effects of disasters. This term is about building back better or building on from our learnings, good practices, research and experiences, helping us address the underlying causes of our vulnerbility and increasing our ability to adjust to the situation before us. By being adaptive, we learn to innovate and go to the next level.
Disaster-resilient	The risk reduction efforts have been successful and made the people stronger (in a positive way and not just in terms of their coping mechanism), increasing their ability to bounce back after a disaster. We want to instill the culture of safety by increasing people's capacity to bounce back and decrease disaster losses and impact;
Filipino communities	These are the Filipino men and women of different ages, coming from the different sectors and different geographically defined areas. The term also reinforces that the overall approach in DRRM which is community-based or according to the strengths, cultural and/or local contexts of the people.
Sustainable	This ties everything and puts into proper context all our DRR and CCA efforts

Terminology	*Explanation*
development	henceforth. Building back better can only be done if sustainable development is mainstreamed.

DRRM Aspects, Expected Outcomes and KRAs

Using the previous Philippine DRM framework as a starting point, the new NDRRMF will have 4 quadrants representing the 4 DRRM aspects, led by each of the 4 vice chairpersons identified in RA 10121, namely disaster (1) Prevention and Mitigation; (2) Preparedness; (3) Response; and (4) Rehabilitation and Recovery. The boundaries of these quadrants are not well defined to show that seamless transitions from one point to another are important in DRRM.

The colors of each quadrant have the following meaning:

- Prevention and Mitigation – Green to show care for the environment
- Preparedness – Blue to show alertness and readiness
- Response – Red to show emergency status and immediate response to the needs of the affected population
- Rehabilitation and Recovery – Yellow to show hope

Each DRRM aspect also represents an expected outcome and several key result areas. The expected outcome states the end result or final state once the KRAs are completed through the various strategies of each of the DRRM aspect. The key result areas, on the other hand, identify the coverage and primary area of responsibilities the list of accountabilities under each specific DRRM aspect.

DRRM Aspect	Expected Outcome	Key Result Areas
Prevention and Mitigation	Avoided hazards and mitigated their potential impacts by reducing vulnerabilities and exposure and enhancing capacities of communities	1. Mainstreamed and integrated DRR & CCA in national, sectoral, regional and local development, policies, plans and budget. 2. DRRM/CCA sensitive environmental management. 3. Increased disaster resiliency of infrastructure systems. 4. Community based and scientific DRR/CCA assessment, mapping, analysis and monitoring. 5. Risk transfer mechanisms
Preparedness	Established and strengthened capacities of communities to anticipate, cope and recover from the negative impacts of emergency occurrences & disasters	1. Community Awareness and understanding of the Risk Factors 2. Contingency Planning at the local level (to include Incident Command System, Early Warning Systems, Pre-emptive evacuation, stockpiling and equipping) 3. Local drills and simulation exercises 4. National disaster response planning
Response	Provided life preservation and met the basic subsistence needs of affected population	1. DANA as a generic activity *(NDRRMC DANA methodology was adopted from ADPC)* 2. Relief Operations

DRRM Aspect	Expected Outcome	Key Result Areas
	based on acceptable standards during or immediately after a disaster	3. Search, Rescue, Retrieval 4. Dissemination/Information sharing of disaster-related information 5. WATSAN and Health 6. Development/provision of temporary shelter 7. Psycho social support 8. Early Recovery Mechanism 9. Management of Dead and Missing 10. Evacuation Management 11. Social Protection Intervention 12. Civil and uniformed services coordination
Rehabilitation and Recovery	Restored and improved facilities, livelihood and living conditions and organizational capacities of affected communities, and reduced disaster risks in accordance with the "building back better" principle	1. Livelihood (1st priority) 2. Shelter (2nd priority) 3. Infrastructure (3rd priority)

Cross-Cutting Concerns

The cross-cuting concerns are those which should be taken into consideration in each of the 4 DRRM aspects. They are a combination of issues and approaches that crosses over each of the four aspects in disaster risk reduction and management, as espoused in the new law.

Health — These are disasters caused by epidemic, pandemics and related hazards.

Human-induced disasters — These are disasters more commonly associated with armed conflict, terrorism and war.

Gender mainstreaming — Recognition, acceptance and identification the different roles, needs, capacities and vulnerabilities of men and women are considered and addressed properly

Environmental protection — Care for the environment and making sure that current activities do not create stress on our natural resources should be considered in all the four aspects of DRRM

Cultural sensitivity/indigenous practices — Being sensitive to the indigenous practices, local knowledge should be ensured in doing work under each of the four aspects.

Rights-based	DRRM is our country's priority because people have the right to live, safety, information, education, cultural beliefs and right to better lives

Strategies

The following strategies will be emplolyed in order to achieve the desired key result areas under each DRRM aspect and relatedly, their respective outcomes as well:

1. Advocacy and Information, Education and Communication (IEC)	Mobilize and harness the print and broadcast media to regularly communicate, warn and educate people nationwide about DRRM. Evidence-based advocacy is key for effective information sharing and making people understand DRRM.
2. Competency-based capability building	Customized training programs should be developed to ensure that people are trained based on the needed skills in the different DRRM aspects.
3. Contingency Planning	More commonly useed before as only part of disaster preparedness activities, contingency planning is now a living document which is updated and used in all the different aspects of DRRM
4. Education on DRRM and CCA for ALL	Education through the integration of DRR concepts in the curriculum (i.e., basic education, NSTP, bachelors' degree) and for the public sector employees
5. Institutionalization of DRRMCs and LDRRMOs	Creation of permanent local DRRM offices and functioning councils at the local level are some of the ways to ensure that all DRRM-related activities, plans and prograsm will be implemented and sustained.
6. Mainstreaming of DRR in ALL plans	In all 4 aspects, we need to ensure that DRRM (and CCA) is mainstreamed in the various programs, plans, projects of either national or local government units, including the private sector groups and other members of the community.
7. Research, Technology Development and Knowledge Management	With the changes in the climate and technological advances, we need research to help us innovate, adapt and maximize the use of our resources to help our people reduce and manage the risks to disasters. This also include database development and the documenation, replication and recognition of good practices
8. Monitoring, evaluation and learning	Feedback mechanisms are important aspects of gauging performance targets and learning from our experiences on the ground

9.	**Networking and partnership building between and among stakeholders, media and tiers of government**	Building effective and mutually reinforcing parterships and evolving networks ensure the multi-stakeholder and multi-sectoral participation of the different players in DRRM