

# BOOK OF ABSTRACTS

## PALIWANAGAN SA UP DILIMAN



### About the Colloquium

*Paliwanagan sa UP Diliman*—OVCRD Colloquium 2013 is the third *Paliwanagan* event organized by the OVCRD. *Paliwanagan* is a biannual activity that aims to create greater public awareness and appreciation of R&D in UP Diliman. In the first two *Paliwanagan* events – held in January and September 2012, respectively – the Colloquium highlighted OVCRD-funded research and creative work projects. As a parallel activity during the January 2012 *Paliwanagan*, booths showcasing UP Diliman journals were set up. During the September 2012 *Paliwanagan*, the parallel event was a Fair featuring the UP Diliman exhibition for the 2012 National Science and Technology Week.

Inspired by the enthusiastic response of the UP Diliman community, the OVCRD is taking the R&D discourse (i.e. *paliwanagan*) several steps further by introducing several new elements in the *January 2013 Colloquium*. Foremost of these is the focus on institutional research and creative work initiatives, as against last year's events' spotlight on individual and team projects. Second is the conduct of an inventory of research, creative work and extension units in UP Diliman. Third is the presentation of the outputs of the inventory in a compilation, copies of which will be distributed during the event.

In general, *Paliwanagan sa UP Diliman* aims to:

- a) showcase UP Diliman R&D programs, projects and initiatives;
- b) acquaint UP Diliman constituents with the research and creative work initiatives of their colleagues in other UP Diliman units;
- c) discuss available institutional support for UP Diliman researchers and creative workers; and
- d) highlight the complete R&D cycle from proposal writing through intellectual property creation, dissemination, and utilization.

Aside from these objectives, the *January 2013 Colloquium* also aims to:

- a) increase public awareness and appreciation of the research and creative work initiatives of UP Diliman's centers and institutes; and
- b) increase cross-/multi-disciplinary collaborations among research centers/creative work centers and institutes, and between these centers/institutes and academic (teaching) units in UP Diliman.

Graphic arts by Gracezl Mark T. Manuel  
Logo design by Aleth A. Gayosa

# BOOK OF ABSTRACTS

OVCRD Colloquium 2013

21 January 2013  
National Institute of Physics  
National Science Complex



University of the Philippines  
OFFICE OF THE PRESIDENT  
Quezon City



This Book of Abstracts diligently prepared by UP Diliman's Office of the Vice-Chancellor for Research and Development under the leadership of Dr. Benito Pacheco is a most laudable effort.

The compilation provides a window to the research engagements of our faculty in Diliman. Representing various disciplines, the compilation also gives the public an idea of UP's pursuit of rigorous and relevant research, which firmly establishes its role both as a research university and a public service university.

It is the University's time-honored tradition to engage in research that seeks solutions to social and national problems. These abstracts demonstrate to all and sundry that the tradition lives on in the hearts and minds of our artists and scientists, embedded in our collective psyche as academicians of the national university.

Research, as these abstracts demonstrate, is not only nuanced and grounded in the state of the art of each discipline, reflecting creative applications in theory and method; it is also directed to specific threads of the social fabric, touching on varied dimensions of everyday life, seeking to solve problems or transform conditions.

Precisely the goal is to advance science and technology and stretch the limits of creativity to bring about a greater understanding of the world and uplift human conditions. Philippine society, facing a chronic social crisis, constantly looks to the University for sustained, much-needed interventions in public service.

The work of the OVCRD, indicated in this Book of Abstracts, fulfills its part in the vision of this administration to advance research in the service of the nation. It plays an important link in building OneUP – putting together our efforts across the UP System, under common standards of excellence, to strengthen research and deliver its output to the agencies and to the communities.

Congratulations to the OVCRD for creating another nexus between UP and the country through this Book of Abstracts generated from research exchanges like the *Paliwanagan*. May these efforts also foster greater collaboration among the units in pursuit of the highest standards of research for the highest interests of public service.

**ALFREDO E. PASCUAL**  
Pangulo



University of the Philippines Diliman  
OFFICE OF THE CHANCELLOR  
Quezon City



Congratulations to the organizers and participants of the 2013 OVCRD Colloquium *Palinawagan sa UP Diliman*. As the third of its kind, the *paliwanagan* continues to raise awareness of the exciting research and creative initiatives on campus. This year the spotlight is on the various UPD institutions participating in the development and promotion of a culture of ideas and scholarly vision for UP's stakeholders. Because this event targets the Diliman community of faculty members, research staff, and graduate students, we hope that by familiarizing yourselves both with the work being done by colleagues and with the research and development process in its entirety, you will be able to benefit more from existing institutional support and thus generate new scientific knowledge and creative work.

Uniquely, the paper presentations are composed not only of the different projects featured by respective units but also the research-related issues of mentoring, group formation, and extension service. As such, the Colloquium will surely serve as a venue to address questions as well as encourage better coordination and interaction between disciplines. With inter-institutional collaborations and the imaginative endeavors of trained minds, UP Diliman can function even more actively in the university's role as the country's leader in teaching, research, and public service. For our nation to achieve progress we must push ourselves into becoming more productive scholars and specialists. Participation in occasions like the *palinawagan* will help create a nurturing environment for younger generations of researchers as well. Thus, the fruits of our hard work are not constrained by the limitations of the present, and in fact open up the future to the possibilities of even greater accomplishments.

Again, congratulations to the OVCRD organizing committee and to all the participants of the third *Palinawagan sa UP Diliman*!

**Prof. CAESAR A. SALOMA, PhD**  
Chancellor  
UP Diliman



University of the Philippines Diliman  
OFFICE OF THE VICE-CHANCELLOR  
FOR RESEARCH AND DEVELOPMENT  
Quezon City



It is my great pleasure to welcome you all to the third *Paliwanagan sa UP Diliman*, the OVCRD Colloquium 2013. In the past two *Paliwanagan* events, we focused on the research and creative work outputs of individual faculty members and researchers in the campus. For the present *Paliwanagan*, we are highlighting UP Diliman centers for research, creative work and extension activities.

Centers, institutes, laboratories, studios and similar units are the hub of research, creative work and extension activities in the campus. Yet, their outputs and contributions tend to be overlooked. In the spirit of *paliwanagan* – discussion, engagement, and enlightenment – we are putting the spotlight on these units in the Colloquium. And we are doing so in several ways.

Fifteen (15) centers/institutes will talk about their recent projects. In two special sessions, concerns common to all units – but especially relevant to collaborative efforts – will be discussed: extension service and mentoring. And, to give everyone a clearer picture of the scale of collaborative work in the campus, we have undertaken an inventory of research, creative work, and extension units in UP Diliman. In this preliminary inventory, we are able to identify 104 such units. A compilation containing the profiles of these units will be distributed to the Colloquium attendees.

UP Diliman as a university has the biggest number of centers of excellence in the country. Several units in our campus are designated as national centers for research and development. Within our academic units are found laboratories, studios and other facilities that play a critical role in the fulfillment of the units' mandate. In this Colloquium, we invite you to get to know the centers and units better, and gain a deeper understanding of their crucial roles and contributions to the University and society.

We thank the units that participated in our inventory, and the Colloquium presenters, moderators, and participants for supporting *Paliwanagan*. We also extend our thanks and congratulations to the centers, institutes and other units for continuing the tradition of rigorous mentoring and exemplary service that are the hallmarks of our University.

**Prof. BENITO M. PACHECO, PhD**  
Vice-Chancellor for Research and Development  
UP Diliman

# PROGRAM

8:00 – 8:30 AM	Registration		
8:30 – 8:35 AM	National Anthem		
	Opening Remarks Prof. Benito M. Pacheco, PhD Vice-Chancellor for Research and Development, UP Diliman		
8:35 – 8:45 AM	Message Prof. Caesar A. Saloma, PhD Chancellor, UP Diliman		
8:45 – 10:10 AM	Session 1: <i>The University and the Government</i> Towards a strategic framework for management of the West Philippine Sea (WPS) <ul style="list-style-type: none"> <li>Aileen SP. Baviera, PhD Asian Center</li> </ul> Development of guidelines in establishment and designation of Tourism Enterprise Zones and the administration of incentives under RA 9593 (Tourism Act) <ul style="list-style-type: none"> <li>Miguel M. Mena, PhD Asian Institute of Tourism</li> </ul> The IGLR Code Revision projects <ul style="list-style-type: none"> <li>Emerson S. Bañez Institute of Government and Law Reform (IGLR) Law Center</li> </ul> Forensic DNA technology: A powerful tool for judicial reform <ul style="list-style-type: none"> <li>Maria Corazon A. de Ungria, PhD Natural Sciences Research Institute, College of Science</li> </ul>	12:20 – 1:30 PM	Lunch Break
	OPENFORUM Moderator: Julianne Thesa Baldo-Cubelo Department of Communication Research College of Mass Communication	1:30 – 2:55 PM	Session 3: <i>Understanding Fundamental Societal Issues: Micro Contexts</i> Dayalektolohiya ng Inonhan sa Isla de Carabao, Romblon <ul style="list-style-type: none"> <li>Jem R. Javier Sentro ng Wikang Filipino</li> </ul> Museum history is art history: The Vargas Museum in Manila <ul style="list-style-type: none"> <li>Patrick D. Flores, PhD Vargas Museum and Filipiniana Research Center</li> </ul> Transport and traffic management study for Olongapo City <ul style="list-style-type: none"> <li>Jose Regin F. Regidor, PhD National Center for Transportation Studies UP National Engineering Center</li> </ul> Saga of learning: The Bolinao Marine Laboratory mariculture experience <ul style="list-style-type: none"> <li>Laura T. David, PhD Marine Science Institute, College of Science</li> </ul>
10:10 – 10:25 AM	Coffee Break	2:55 – 3:25 PM	OPENFORUM <i>Special Session 2:</i> Scientific mentoring and research groups in UP Diliman <ul style="list-style-type: none"> <li>Percival F. Almoró, PhD National Institute of Physics, College of Science</li> </ul>
10:25 – 10:55 AM	<i>Special Session 1:</i> Survey of extension service practices in UP Diliman <ul style="list-style-type: none"> <li>Nestor O. Rañeses Chair, University Council Committee on Extension Services UP Diliman</li> </ul>		Moderator: Wilfreda J. Legaspi Department of Filipino and Philippine Literature College of Arts and Letters
10:55AM – 12:20 PM	Session 2: <i>The University and the Public</i> Regulatory policies in hospital licensing system <ul style="list-style-type: none"> <li>Dan A. Saguil Center for Policy and Executive Development National College of Public Administration and Governance</li> </ul> The Dictionary of Filipino Musical Terms <ul style="list-style-type: none"> <li>Grace Ann Buenaventura Center for Ethnomusicology</li> </ul> Using lesson study to promote teaching Mathematics through problem solving and teaching Science through inquiry <ul style="list-style-type: none"> <li>Soledad A. Ulep, PhD National Institute for Science and Mathematics Education Development, College of Education</li> </ul>	3:25 – 3:40 PM	Coffee Break
		3:40 – 4:50 PM	Session 4: <i>Understanding Fundamental Societal Issues: Macro Contexts</i> Development of vulnerability curves of key building types to different hazards in the Philippines <ul style="list-style-type: none"> <li>Jaime Y. Hernandez, PhD Institute of Civil Engineering, College of Engineering</li> </ul> Identifying and defining the working class in the Philippines <ul style="list-style-type: none"> <li>Jonathan P. Sale, PhD &amp; Melisa R. Serrano, PhD School of Labor and Industrial Relations</li> </ul> The Young Adult Fertility and Sexuality Study 4 (YAFS 4) <ul style="list-style-type: none"> <li>Josefina N. Natividad, ScD UP Population Institute College of Social Sciences and Philosophy</li> </ul>
		4:50 – 5:00 PM	OPENFORUM Moderator: Percival F. Almoró, PhD National Institute of Physics, College of Science
			Closing Remarks Prof. Benito M. Pacheco, PhD Vice-Chancellor for Research and Development

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# **TOWARDS A STRATEGIC FRAMEWORK FOR MANAGEMENT OF THE WEST PHILIPPINE SEA (WPS)**

*A White Paper by the WPS Informal Expert Group*

**Aileen SP. Baviera**

The Philippines has long-standing territorial and jurisdictional disputes with several states bordering the South China Sea, as well as underlimited maritime boundaries. These disputes affect the economic, national security, human security and environmental interests of the country, and moreover impact on regional stability in East and Southeast Asia.

Philippine policy in the West Philippine Sea (WPS) is driven by three imperatives: sustainably developing the marine economy and resources (including fisheries, hydrocarbons, and other minerals), promoting maritime security and defense, and the enforcement of laws to contribute to good order at sea. The pursuit of all three depends on the extent to which we can successfully assert sovereignty and territorial integrity, as well as exercise sovereign rights over the EEZ that are accorded to us under UNCLOS. It also requires the deployment of effective diplomacy, particularly with respect to ASEAN, China, the United States and the United Nations.

Ultimately, the resolution of the myriad issues and challenges in the WPS necessitates having effective institutions for policymaking and management of our maritime affairs, and inculcating in every Filipino a consciousness of the nation's archipelagic identity and our maritime heritage.

The White Paper seeks to draw the attention of all concerned Filipino stakeholders – particularly those in government - to the urgent need for a strategic framework for the management of our territorial, maritime jurisdiction, and resource disputes in the WPS. The paper is the outcome of a series of consultation-workshops organized by the authors together with some governmental stakeholders from April to July 2012. The workshops focused on: Marine Economy, Resources and the Environment of the WPS; Maritime Security, Defense and Law Enforcement; and Foreign Policy and Diplomacy.

This document focuses on situational analyses of the policy environment pertaining to varied Philippine interests in the WPS. It identifies critical areas for policy intervention and offers a set of guiding principles and general policy recommendations.

## **COLLOQUIUM SESSION 1**

### ***The University and the Government***

### **About the Presenter**

Dr. Aileen SP. Baviera is the Convenor and Co-Chair of the WPS Informal Expert Group. She is Professor of Asian Studies at the Asian Center, University of the Philippines, where she also served as Dean from 2003-2009. Her research interests include Contemporary China, ASEAN-China relations, regional integration, and Asia Pacific security with a focus on territorial and maritime disputes. She is currently editor-in-chief of the journal *Asian Politics & Policy* (Wiley-Blackwell). Before joining the Asian Center, she held positions as head of the Center for International Relations and Strategic Studies of the Philippine Foreign Service Institute, and executive director of the non-profit Philippines-China Development Resource Center.

### **The Members of the WPS Informal Expert Group**

Sen. Leticia Ramos-Shahani, PhD., Co-Chair of the Expert Group, is a former Senator of the Republic, well-known diplomat, legislator, and women's rights advocate.

Comodore Carlos L. Agustin (ret) is Chairman and President of the Maritime League and publisher of *The Maritime Review*.

Amb. Lauro Baja, Jr. (Ret.) was the Philippine Permanent Representative to the UN from 2003-2007 and twice president of the Security Council (2004 and 2005).

Dr. Guillermo R. Balce is a former Undersecretary of the Department of Energy. He also served as Executive Director of the ASEAN Centre for Energy from 1999 to 2004.

Jay L. Batongbacal, JS. D. is a Professor at the University of the Philippines College of Law. He has degrees in Master of Marine Management and Doctor in Jurisprudential Science from Dalhousie University in Canada.

Atty. Rodel Cruz served as Undersecretary in the Office of the Chief Presidential Legal Counsel in the Office of the President from 2001 to 2004. He is the Chairman of the Asia-Pacific Regional Security Forum.

Comodore Roland S. Recomono (Ret.) was the Assistant Chief of Naval Staff for Plans (N5) of the Philippine Navy (PN), Naval Attaché in Washington DC from 2006-2009.

VADM Eduardo Ma. R. Santos, AFP (Ret.), former Chief of Navy (1996-1999), is the President of the Maritime Academy of Asia and the Pacific.

Atty. Malcolm Sarmiento is a former Director (1999-2011) of the Bureau of Fisheries and Aquatic Resources (BFAR).

The Expert Group would like to acknowledge the assistance provided by Mr. Lucio Pitlo III (Researcher) and Ms. Sascha Gallardo (Admin. Assistant). Both are MA students of the Asian Center.

### **About the Asian Center**

The Asian Center is the University of the Philippines' only unit with a regional area of specialization. It offers graduate level multidisciplinary academic programs on Asian studies (including Philippine studies). Its faculty conduct research on a broad range of political, economic, social and cultural issues affecting Asia and the Pacific. The Asian Center's mandate is underpinned by law, Republic Act 5334.

Among the Asian Center's purposes are to develop closer and broader contact with Asian peoples in the field of learning and scholarship, and to attain knowledge of Filipino national identity in relation to other nations through studies on various aspects of Asia. The Asian Center thus promotes initiatives to understand the Philippines in its broader Asian context, and to understand Asia from the Philippine vantage point.

# DEVELOPMENT OF GUIDELINES IN ESTABLISHMENT AND DESIGNATION OF TOURISM ENTERPRISE ZONES AND THE ADMINISTRATION OF INCENTIVES UNDER R.A. 9593 (TOURISM ACT)

## Miguela M. Mena

The Tourism Infrastructure and Enterprise Zone Authority (TIEZA) and UP Diliman (UPD) signed a Memorandum of Agreement on 7 April 2011 formalizing a partnership between the Agency and the University. TIEZA needed the technical expertise of UPD in the implementation of the Implementing Rules and Regulations on the designation and identification of Tourism Enterprise Zones (TEZs) and the grant of incentives therein. The UPD, through the Asian Institute of Tourism, has formed a technical panel of experts who possess the necessary qualifications and expertise required by TIEZA. The Panel took charge of the following:

- a. Conduct training programs for TEZ Administrators to provide them with knowledge and skills in the operation and development of a TEZ;
- b. Formulate standards for the development, operation and maintenance of all facilities and structures to be built on all TEZs;
- c. Review the mechanism of the TEZ development plans and provide technical advice in the preparation of the Evaluation Report of applications for TEZ designation to be submitted to the TIEZA Board;
- d. Review the TEZ development plan submitted by applicants and proponents; and
- e. Conduct ocular inspections, together with TIEZA staff, of areas proposed to be designated as a TEZ.

### About the Presenter

Dr. Miguela M. Mena is the Project Leader of the UP-TIEZA Technical Panel. She is an Associate Professor, Dean of the University of the Philippines Asian Institute of Tourism, and Executive Director of the Tourism Foundation Inc. She obtained her PhD in Tourism Management at the Hong Kong Polytechnic University School of Hotel and Tourism Management, Master of Statistics and Bachelor of Science in Statistics at the University of the Philippines School of Statistics, and Diploma for

Tourism Management (Highest Distinction) from Schloss Klessheim Institute of Tourism and Hotel Management in Salzburg, Austria. Her main research interests focus on international tourism in developing countries, destination competitiveness, destination policy and planning, destination management and marketing, tourism entrepreneurship, migration and mobility, measurement of domestic tourism, and information communication technology applications in tourism.

### The Members of the UP-TIEZA Technical Panel of Experts

Dr. Marideth R. Bravo holds a PhD in Urban and Regional Planning from UP Diliman. She is an Associate Professor at UPD's School of Urban and Regional Planning. Her areas of expertise are economics, and financial and investment planning.

Reil G. Cruz is an Assistant Professor at the UP Asian Institute of Tourism (UP-AIT), where he is also currently serving as the Director of the Division of Research, Training and Extension Services. His areas of expertise are tourism marketing, tourism product development, and tourism impact planning.

Juline R. Dulnuan is an Assistant Professor at the UP-AIT. Her areas of expertise include social and cultural development, gender studies, and indigenous people studies.

Richard Philip A. Gonzalo is an Assistant Professor and currently Director of the Division of Academic Affairs of UP-AIT. Financial management, investment planning and analysis, operations management, and incentives administration are his areas of expertise.

Carlos Libosada, Jr. is a full-time faculty member of UP-AIT. His areas of expertise are ecotourism, special interest tourism, and tourism product development.

Dr. Cresencio M. Montalbo, Jr. is an Associate Professor at UPD's School of Urban and Regional Planning and an Affiliate Faculty of the National Center for Transportation Studies. His areas of expertise are transportation planning and infrastructure planning (power and communications).

Professor Evangeline M. Ortiz is a former Dean of the UP-AIT. Her areas of expertise are tourism policy and planning, cultural tourism development, and tourism and anthropology.

Dr. Maria Antonia Tanchuling is an Associate Professor at UPD's Institute of Civil Engineering. Her main area of expertise is environmental engineering.

Professor Gilda Uy is a former Dean of UPD's College of Human Kinetics. Sports science, leisure, recreation, and wellness are her areas of expertise.

Dr. Benjamin M. Vallejo, Jr. holds a PhD in Marine Biology from James Cook University, Australia. He is an Assistant Professor at UPD's Institute of Environmental Science and Meteorology.

Dr. David Leonides T. Yap, an Associate Professor at UPD's School of Urban and Regional Planning (SURP), holds a PhD in Art and Design (major in Housing and Urban Planning) from the University of Tsukuba, Japan. Dr. Yap is also currently the Director of SURP's Research and Publication Program.

Professor Elvira A. Zamora obtained her DBA degree from UP Diliman. Her fields of expertise include project management, institutional development, innovation management, and enterprise zone management. Prof. Zamora is currently the Vice-President for Development of the University of the Philippines.

#### **About the Asian Institute of Tourism**

The UP Asian Institute of Tourism (AIT) is the premier institution of tourism education in the Philippines. It is the first school in Southeast Asia to offer a four-year degree program leading to a Bachelor of Science in Tourism.

Its vision is to be a world-class provider of tourism education, research and extension services, and to lead human tourism capital development in the Philippines and the Southeast Asian Region and its mission is to develop innovative leaders in tourism development and to provide relevant education, research, extension services and serve the needs of our students, alumni, the tourism industry, government, local communities, and other stakeholders, in a manner that optimize resources.

Today, the AIT remains in the forefront of tourism education and training in the country. As tourism becomes a global strategic agenda, it continues its leading functions and actively maintains its links with the various sectors of society.

## **THE IGLR CODE REVISION PROJECTS**

### **Emerson S. Bañez**

Despite the slow and painful turns of the legislative process, laws are always evolving. The passage of key legislation last year, some with novel (if controversial) provisions is a waypoint to the long-term enterprise of expanding and improving our rule of law.

The crafting of laws can be a complex undertaking, especially when it involves novel issues. Besides the balancing act required to meet the various - possibly conflicting - interests of the stakeholders in an issue, laws need to be drafted with due regard to harmonization with the growing web of existing laws and administrative regulations, pronouncements of the Supreme Court, and the provisions of the 1987 Constitution.

Aware of the need for a permanent body to help navigate through the technical requirements of legislation, Congress formed the Code Commission. The Code Commission is primarily responsible for drafting the Philippine Civil Code, which still forms the backbone of private law in the country.

In a subsequent enactment, the functions of the Code Commission was transferred to the U.P. Law Complex, particularly, the Institute for Government and Law Reform (IGLR, or the "Institute"). Pursuant to this legal mandate, the Institute is currently engaged in several related projects aimed at revising the following laws:

1. The Family Code
2. The Revised Penal Code
3. The Election Code
4. The Labor Code
5. The Constitution

For each project, the Institute employs a panel of experts taken from the U.P. College of Law Faculty, as well as resource persons from relevant government agencies and private organizations. These panels meet regularly to discuss provisions of the above laws, to formulate proposed revisions (and, in the case of disagreement, several alternative proposals). Each panel is expected to submit a report on their deliberations as well as the proposed and alternative revisions.

## About the Presenter

Atty. Emerson S. Bañez is a Law Education Specialist at the Institute of Government and Law Reform. Before joining IGLR, he was a junior associate at the Castillo Laman Tan Pantaleon and San Jose Law Offices. He has engaged in volunteer work litigating cases for Kilosbayan and Bantay Katarungan, and has worked on the Philippine Report to the ASEAN Summit on Human Trafficking. He graduated with a degree in Communication Research from the University of the Philippines in 2002. He received his law degree from the UP College of Law in 2008, and was admitted to the Philippine bar in April 2009. He is currently a lecturer at the UP College of Mass Communication, where he teaches Computer Applications for Research, Communication Research, Communication Theory, and Mass Media Law.

## The IGLR Code Revision Projects Panel of Experts

Dean Danilo L. Concepcion – Ex-officio Chair of all Committees  
Prof. Florin T. Hilbay – Vice-Chair of all Committees

### *Constitutional Law Revision Committees*

- Bill of Rights – Dean Pacifico A. Agabin, Prof. Herminio Harry L. Roque, Jr., Dean Raul C. Pangalangan, Dean Merlin M. Magallona, Justice Vicente V. Mendoza, Dean Marvic M.V.F. Leonen, Prof. Carmelo V. Sison & Atty. Emerson S. Bañez (In charge)
- Government Structures – Dean Pacifico A. Agabin, Justice Vicente V. Mendoza, Dean Raul C. Pangalangan, Prof. Herminio Harry L. Roque, Jr., Dean Merlin M. Magallona, Dean Marvic M.V.F. Leonen, Prof. Carmelo V. Sison & Atty. Christine Urgello (In charge)
- Public Accountability – Dean Pacifico A. Agabin, Justice Vicente V. Mendoza, Dean Raul C. Pangalangan, Prof. Herminio Harry L. Roque, Jr., Dean Merlin M. Magallona, Prof. Carmelo V. Sison, Prof. Dante B. Gatmaytan & Atty. Michelle B. Dy (In charge)
- Natural Resources – Prof. Antonio A. Oposa, Jr., Prof. Antonio G.M. La Viña, Dr. Jay L. Batongbacal, Prof. Eduardo A. Labitag, Dean Merlin M. Magallona, Dean Marvic M.V.F. Leonen, Prof. Jose M. Layug, Jr. & Atty. Christine Urgello (In charge)

### *Revision of Code Committees*

- Election Code – Comm. Rene V. Sarmiento, Atty. Vincent Pepito F. Yambao, Jr., Dean Salvador T. Carlota, Prof. Gisella N. Dizon-Reyes & Atty. Christine Urgello (In charge)
- Family Code – Prof. Elizabeth A. Pangalangan, Prof. Araceli T. Baviera, Dean Danilo L. Concepcion, Prof. Eduardo A. Labitag, Prof. Ma. Carolina T. Legarda, Prof. Evalyn G. Ursua & Atty. Michelle B. Dy (In charge)
- Labor Code – Prof. Domingo D.P. Disini, Jr., Prof. Patricia Rosalind S. Daway, Prof. E. (LEO) D. Battad, Prof. Cezario S. Azucena, Prof. Francis B. Sobreviñas, Prof. Darlene Marie B. Berberabe, Dean Froilan M. Bacungan & Atty. Emerson S. Bañez (In charge)
- Revised Penal Code – Prof. Alberto T. Muyot, Prof. Ibarra M. Gutierrez III, Prof. Idefonso R. Jimenez, Prof. Arno V. Sanidad, Prof. Rowena V. Guanzon & Atty. Michelle B. Dy (In charge)

## About the Law Center Institute of Government and Law Reform (IGLR)

The Law Center's IGLR was established in 1989 and was tasked with the following functions:

1. Discharge the function of the defunct Code Commission;
2. Undertake technical studies and research in law, particularly on projects for reforms in the judiciary, public administration, civil rights protection, international relations, and law enforcement;
3. Undertake legal studies and research, particularly those concerned with law reform, upon request from various agencies of the government, including those from the committees on Revision of Laws of the House of Representatives and the Senate; and
4. Continue projects of popularizing the law by establishing linkages with other institutions for the teaching of elementary knowledge in law, and by translating legal materials into Filipino and other major dialects of the Philippines.

In performing these functions, the IGLR serves the general objectives envisioned for the UP Law Center, namely, "the advancement of legal scholarship, the protection of human rights with emphasis on the improvement of the legal system, and the administration of justice."

# FORENSIC DNA TECHNOLOGY: A POWERFUL TOOL FOR JUDICIAL REFORM

**Maria Corazon A. De Ungria**

DNA testing is the most powerful tool for human identification. Since its discovery in the mid-1980's, DNA profiling had caused a paradigm shift in the identification of victims, perpetrators and witnesses in numerous cases. The identification of genetic markers that are highly polymorphic in human populations is a major step towards the establishment of reference as well as criminal databases needed for statistical evaluation of matching DNA evidence, or identification of repeat offenders, respectively. In addition, the chemical stability of a DNA molecule against harsh environmental challenges such as extreme temperatures and high humidity makes it more suitable for criminal investigations which may take some time. Moreover, the fact that a person inherits one's DNA from one's parents, provides an investigator with substitute reference samples, when these are unavailable.

Recent advances in forensic DNA testing are now paving the way for reforming the manner by which cases are resolved in courts of law through the way suspected offenders are apprehended during a criminal investigation. Firstly, the availability of new markers, which are more polymorphic across different populations, adds to the increased power of discrimination once more genetic markers are used. The use of several dyes in a single multiplex system increases the genetic information that is obtained from the same amount of genetic material. More recent development involves the use of information derived from mutation rates of a group of genetic markers, known as short tandem repeats located on the Y-chromosome (YSTRs), enables us to differentiate from paternally-related male persons.

Secondly, the development of more robust reaction mixes coupled with shorter PCR products has also opened the possibility of re-testing old case samples which may have yielded negative results such as in cold cases; or in the re-opening of cases wherein prisoners continue to claim their innocence and relevant biological samples are still available (post-conviction DNA testing). The use of automated systems and expert systems for large-scale analysis has also been found to reduce manual errors and increase output per unit time.

Thirdly, the US FBI has recently reported the development of faster and portable DNA analytical systems that would allow investigators to generate DNA profiles

on site, thereby increasing the chances of apprehending the real perpetrator almost in real-time. The speed and accuracy of these portable DNA systems is crucial in criminal investigations.

This paper will discuss these recent developments in forensic DNA typing and its potential impact in the way criminal investigations are conducted and cases are litigated in Philippine courts.

## **About the Presenter**

Dr. Maria Corazon A. De Ungria currently heads the DNA Analysis Laboratory of the Natural Sciences Research Institute, UP Diliman. She finished her Doctor of Philosophy degree in Microbiology at the University of New South Wales also in Sydney, Australia. Dr. De Ungria assisted the Research Group of the Philippine Judicial Academy during the formulation of the Rule on DNA Evidence which was promulgated by the Supreme Court in 2007. For her efforts, Dr. De Ungria had been awarded several prestigious scientific awards such as the Outstanding Young Scientist awarded by the National Academy of Science and Technology in 2003, the UP Gawad Hall of Fame for Best REPS in Research in 2005, the Outstanding Young Scientist award by the Third World Academy of Science in 2006, as well as being named as the first Filipino regional fellow affiliate of the Academy of Science in the Developing World from 2007-2011. In 2009, Dr. De Ungria won the search for the Outstanding Woman Researcher in the Life Sciences organized by the Third World Organization of Women Scientists and Elsevier in Kuala Lumpur, Malaysia. In 2011, Dr. De Ungria was named as one of the first two National Fellows of the L'Oreal – UNESCO Women in Science Program. She is currently the Philippine representative to the DNA working group and the Quality Assurance and Standard Committee of the Asian Forensic Science Network (AFSN). Last year, 2012, Dr. De Ungria was once again recognized by the Department of Science and Technology (DOST) and the National Academy of Science and Technology (NAST) through her selection as the Julian Banzon awardee in Outstanding Research and Development for Applied Research for her advocacy towards the use of science at the service of society.

## **The DNA Analysis Laboratory Staff**

Senior Personnel: Gayvelline C. Calacal, Frederick C. Delfin, Jazelyn M. Salvador, Minerva S. Sagum & Miriam M. Dalet

Junior Personnel: Maria Lourdes Honrado & Paul Ryan Sales

### **About the DNA Analysis Laboratory**

The DNA Analysis Laboratory (DAL) of the UP Diliman Natural Sciences Research Institute, which was established in 1996, is mandated to develop the country's national capability to conduct DNA testing for forensic applications through research and to establish population databases for this purpose. The laboratory is also tasked to study human genetic variations in Philippine populations in order to better understand the genetics of the Filipino people.

## **SPECIAL SESSION 1**

# **SURVEY OF EXTENSION SERVICE PRACTICES IN UP DILIMAN**

**Nestor O. Rañeses**

The UP Diliman Faculty Manual defines “extension as the provision of service by an academic unit, faculty, staff and students (outside of course requirements), individually or as a group, to the people and other organizations that contributes to achieving excellence in social and public service”. The Faculty Manual further states that “extension generates, validates, and applies knowledge that can enrich instruction and research, and includes services utilizing expertise and talent related to one’s discipline, outside instruction and research”. To determine the actual nature and extent of extension services in UP Diliman, the University Council Committee on Extension Services conducted a survey on extension practices in 2012 with deans, associate deans, directors, and department chairs as respondents. The results of the survey are presented with insights and culling of extension best practices. Changes in extension service policies and improvement in implementation are proposed.

## **About the Presenter**

Nestor O. Rañeses is an Associate Professor in Industrial and Systems Engineering in the UP Diliman College of Engineering. He is concurrently the Assistant Vice-President for Administration of the University of the Philippines and the Director of its Institute for Small-Scale Industries. At present, he is also the Chair of the UP Diliman University Council Committee on Extension Services.

## **Members of the UP Diliman University Council Committee on Extension Services**

- Dr. Rosalina T. Bumatay- Cruz, Associate Professor, College of Arts and Letters
- Francisco N. De los Reyes, Assistant Professor, School of Statistics
- Dr. Antonette Bass Hernandez, Professor, College of Arts and Letters & Assistant Vice-President for Academic Affairs
- Gemma T Malicdem, Assistant Professor, College of Music
- Dr. Florinda D. F. Mateo, Professor, College of Mass Communication
- Mary Ann R. Tumanan, Assistant Professor, College of Home Economics
- Maureen C. Pagaduan, Associate Professor, College of Social Work and Development
- Dr. Christine Villagonzalo, Associate Professor, National Institute of Physics, College of Science & Director, Office of Extension Services Coordination

## **COLLOQUIUM SESSION 2**

### ***The University and the Public***

# POLICY REFORMS IN PHILIPPINE HOSPITAL LICENSING GOVERNANCE

## Center for Policy and Executive Development National College of Public Administration and Governance

Right to health is one of the basic human rights. In the Philippines, the state obligation to protect, promote and fulfill the right to health of every Filipino is mandated by the Department of Health (DOH) i.e. to integrate in all of its programs health consciousness in all political levels and social dimensions of development. This paper will therefore illustrate the general policy changes highlighting the hospital licensing reforms focusing on the assurance to access a quality and affordable health products, devices, facilities and services, especially those commonly used by the poor.

### About the Presenter

Dan A. Saguil is an Associate Professor at UP Diliman's National College of Public Administration and Governance (NCPAG) and the Director of its Center for Policy and Executive Development (CPED). He is also the Acting Director of the Supply and Property Management Office of UP Diliman. His areas of expertise are fiscal administration, organization and management, and policy analysis.

### Members of the Project Team

- Professor Oscar Ferrer, DPA, College of Social Work and Community Development
- Ms. Clarissa Sia, University Researcher IV, CPED-NCPAG
- Ms. Bernardita Briones, Development Management Officer IV, CPED-NCPAG
- Mr. Maynard Matammu, Development Management Officer III, CPED-NCPAG
- Ms. Frances Fatima Cabana, University Researcher II, CPED-NCPAG
- Ms. Corrina Frances Cabanilla, University Extension Specialist II, CPED-NCPAG
- Mr. Allan Grand Sobrepeña, University Research Assoc. II, CPED-NCPAG
- Ms. Heliza Gay Ariola, University Research Assoc. II, CPED-NCPAG

### About the Center for Policy and Executive Development (PED)

The CPED is a policy think tank, research and consulting arm of NCPAG. CPED has been extensively involved in capacity development initiatives and institution building programs in the country as well as among developing countries in the region. The Center provides public institutions, non-government organizations, public corporations, and other local institutions and international organizations with the necessary professional expertise in dealing with issues of public policy, executive and administrative development, and governance. CPED has designed and implemented training courses as well as developed instructional materials for national and local governments, non-government organizations and international government agencies. CPED provides research, training, and consultancy services to national and international government agencies, public enterprises, and other local and international organizations. It is the resource center on corporate governance, aid management, public policy studies and reform, and public finance.

## THE DICTIONARY OF FILIPINO MUSICAL TERMS UP Center for Ethnomusicology

The Dictionary of Filipino Musical Terms is a book of meanings that will serve as a guide for students, teachers, as well as other interested users in understanding musical words and concepts in Philippine musical life. Specifically, the project aims to:

1. Gather culture – specific musical terms that are used in musical production, performance, theory and education in the Philippines. Thus, the Dictionary will contain terms from the national language, vernacular languages, adopted and transformed terms in the course of musical practice.
2. Group these terms into categories and sub-categories as used by experts in the field of music and cultural production.
3. Define and describe the terms based on their linguistic, physical, cultural and other characteristics.
4. Compile and consolidate the terms to produce a publication that will contribute in the study of musics, musical traditions and the wider cultural studies.

The project is divided into five major phases:

- Phase 1. Collection and collation of dictionary terms;
- Phase 2. Categorization and sub-categorization of the collected terms;
- Phase 3. Writing and encoding of description and definition of terms;
- Phase 4. Collation of entries into manuscript form; and
- Phase 5. Editing, proofreading and lay-out of the final draft for submission.

The Editorial Board is now working with 10,000 words that are undergoing Phase 5. It is targeted for publication in 2013.

#### **About the Presenter**

Grace Ann Buenaventura graduated from the School of Library and Information Studies at the University of the Philippines, Diliman in 2010. She started working as an On-the-Job Trainee at the UP Center for Ethnomusicology in summer of 2009 as part of the requirements for her Bachelor's Degree. Not long after, she was officially hired by the UPCE as a Digitization Technician to assist in the Digitization of Photographs and Field Notes. Shortly after graduating, she was promoted as the Librarian of UPCE. Aside from her responsibility in the UPCE as the Librarian, she is also currently in charge of maintaining the UPCE website and its online database, as well as programming the Laon-Laon website. Beyond her responsibilities in the UPCE, Grace works as a freelance Researcher and Information Specialist for various library and museum-related projects.

#### **Members of the Dictionary Project Team**

- Editor-in-Chief: Dr. Ramon P. Santos, Professor Emeritus and Director, UP Center for Ethnomusicology
- Editorial Board Members:
  - Dr. Raul C. Navarro, Chair, Conducting and Choral Ensemble Department, College of Music
  - Dr. Pamela C. Constantino, Professor, Department of Filipino and Philippine Literature, College of Arts and Letters
  - Dr. Victor Emmanuel Carmelo D. Nadera, Jr., Associate Professor, Department of Filipino and Philippine Literature, College of Arts and Letters
  - Dr. Jesus Federico C. Hernandez, Assistant Professor, Department of Linguistics, College of Social Sciences and Philosophy
- Managing Editors:
  - Loen M. Vitto, Technical Assistant for Projects, UP Center for Ethnomusicology
  - Dayang MNT Yraola, Project Manager and Archivist, UP Center for Ethnomusicology

- Senior Researchers: Christine de Veyra, Gemma Gonzales, Mary Therese Pitogo, Mita Fernandez & Sol Maris Trinidad
- Junior Researchers: Froilan Canlas, Criselda Peren, Ana Achacoso, Patricia Rodriguez, Juro Kim Feliz, Feliz Macahis, Charisse Toledo, Ronicco Saliva, Roan Opiso & Mizpah Edillon

#### **About the UP Center for Ethnomusicology**

The UP Center for Ethnomusicology aims to serve as a leading research institution in the region, perpetuate and harness the Jose Maceda Collection and generate musical and music-related knowledge and materials from an interdisciplinary perspective for academic study, pedagogy, artistic production and other applications. The Center and its collection have been developed and established to assist scholars (representing disciplines in the humanities and social sciences), composers, and serious artists and pedagogues in music, who share the vision and goals of the Center.

The name UP Center for Ethnomusicology is an outcome of its former appellation, the UP Ethnomusicology Archives, established in 1997 by the U.P. Board of Regents in recognition of Professor Jose Maceda's visionary work and authorship of putting together an ethnomusicological collection of about 2500 hours of recorded music in open reel and cassette tapes, field notes, music transcriptions, song texts, photographs, music instruments, music compositions, personal files, about 2000 books and journals, all of which he personally initiated and developed as a unified institutional resource for music research.

# USING LESSON STUDY TO PROMOTE TEACHING MATHEMATICS THROUGH PROBLEM SOLVING AND TEACHING SCIENCE THROUGH INQUIRY

## Soledad A. Ulep

Through its Collaborative Lesson Research and Development Project (CLRD), the National Institute for Science and Mathematics Education Development (NISMED) has been working with teachers of different year/grade levels in three high schools and one elementary school in Metro Manila. The collaboration is aimed at promoting the learner-centred teaching approaches, *teaching mathematics through problem solving* and *teaching science through inquiry* using lesson study. These approaches provide plenty of opportunities for students to genuinely contribute to the development, application, and extension of mathematical and scientific ideas in the classroom.

Lesson study is a school-based and teacher-led continuing professional development model for teachers which originated in Japan. In lesson study, a group of teachers research their own practice in order to improve student learning. They go through a cycle of collaboratively planning, designing, implementing, reflecting on, and revising a lesson based on pieces of evidence about student thinking and learning gathered during the actual implementation of the lesson.

CLRD is part of NISMED's relentless effort to develop local models that support Filipino teachers' professional learning amidst constraints that challenge their teaching competence.

### About the Presenter

Dr. Soledad A. Ulep is the current Director of NISMED. In 2009, she received the Gawad Chanselor para sa Natatanging REPS. She is a PhD graduate of the University of Texas at Austin.

## About the NISMED

NISMED serves as the national center for the improvement and reform of science and mathematics education with the following functions:

- To serve as a research and development arm of the government in Science and Mathematics at the basic and teacher education levels;
- In collaboration with the Department of Education (DepED), Department of Science and Technology (DOST), and Commission on Higher Education (CHED), to develop curriculum materials and to recommend standards for Science and Mathematics at the basic and teacher education levels;
- To develop and implement programs for teachers and teacher educators in Science and Mathematics at the basic and teacher education levels;
- In coordination with other agencies of the government, to develop and implement programs that will promote science consciousness and the development of a science culture in the country.

## IMPACTS OF NATURAL HAZARDS IN THE PHILIPPINES AND THE LATEST GOVERNMENT INITIATIVE TO ADDRESS RECURRING DISASTERS

### Alfredo Mahar Francisco A. Lagmay

The Philippines, being a locus of typhoons, tsunamis, earthquakes and volcanic eruptions, is a hotbed of disasters. Natural hazards inflict loss of lives and costly damage to property. Last year (2012), the devastating impacts of Pedring, Quiel and Sendong resulted in a high number of fatalities with economic losses amounting to billions of pesos. Early this year a shallow focus 6.2 magnitude earthquake generated landslides that left 51 dead and 62 missing **with total damage amounting to PhP363.5 million**. Situated in a region where climate and geophysical tempest is common, the Philippines will inevitably suffer from calamities similar to those experienced recently. With continued development and population growth in hazard prone areas, it is expected that damage to infrastructure and human losses would persist and even rise unless appropriate measures are immediately implemented by government.

In response to President Aquino's instructions to put in place a responsive program for disaster prevention and mitigation, specifically, for the Philippines' warning agencies to be able to provide a 6 hour lead-time warning to vulnerable communities against impending floods and to use advanced technology to enhance current geo-hazard vulnerability maps, the Nationwide Operational Assessment of Hazards (NOAH) was launched by the Department of Science and Technology. NOAH's mission is to undertake disaster science research and development, advance the use of cutting edge technologies and recommend innovative information services in government's disaster prevention and mitigation efforts. Though the use of science and technology and in partnership with the academe and other stakeholders, the DOST through Program NOAH is taking a multi-disciplinary approach in developing systems, tools, and other technologies that could be operationalized by government to help prevent and mitigate disasters.

#### **About the Presenter**

Dr. Alfredo Mahar Francisco A. Lagmay is a Professor at the National Institute of Geological Sciences, University of the Philippines and currently the Executive Director of the DOST Nationwide Operational Assessment of Hazards or Project NOAH. He received his Bachelor's and Master's degrees from the University of the Philippines. He holds a Ph.D. degree in geology from the University of Cambridge (2001) and was a visiting scientist at the Geophysics Department of Stanford University from April 2006 to March 2007. His work is focused on volcano-tectonics, fluid dynamics of volcanic flows, remote sensing, and Permanent Scatterer Interferometry of faulted regions. A recipient of the 2008 Outstanding Research Award for advanced science and technology in the Philippines for his work on innovative applications of space technology on Philippine volcanoes, he continues his service to the Filipino people by conducting volunteer work in areas stricken by disaster. One of the most recent contributions of Dr. Lagmay to the country was to present on behalf of the Philippine delegation, the technical arguments to our claim in the Benham Rise region, sea bed territory equivalent to nearly half the size of our archipelago, to the commissioners in the United Nations Commission on the Law of the Sea.

#### **Project Leaders of Project NOAH**

- For the Strategic Communication Intervention Program: Director Raymund E. Liboro, Department of Science and Technology Science and Technology Information Institute (DOST-STII)
- For the FloodNet Flood Monitoring Program: Dr. Carlos Primo C. David, Associate Professor, National Institute of Geological Sciences, UP Diliman College of Science

- For the Hydromet Sensors Development Program: Engr. Denis F. Villoriente, Director, DOST-Advanced Science and Technology Institute (ASTI)
- For the Disaster Risk and Exposure Assessment for Mitigation Light Detection and Ranging ((DREAM LiDAR) Program: Dr. Enrico C. Paringit, Associate Professor, Department of Geodetic Engineering, UP Diliman College of Engineering

#### **About the National Institute of Geological Sciences**

The National Institute of Geological Sciences (NIGS) is a national center of excellence for the advancement, dissemination and application of geology through teaching, research and extension services.

NIGS offers a four-year undergraduate program leading to the degree of Bachelor of Science in Geology as well as two graduate programs leading to the degrees of Masters of Science in Geology and Doctor of Philosophy. The Institute also offers undergraduate and graduate courses in support of the General Education Program of the University. Other graduate programs of the University are also supported by NIGS through course instructions conducted by its faculty members. These programs include the Material Science Program, Environmental Science Program and Archaeological Studies Program.

Research in NIGS is carried out by the different research laboratories that were set up by the NIGS faculty. In most cases, earth science research will employ several analytical techniques and thus, more often than not, cross over to other fields in geology (and other natural sciences) to complete the study. The Institute likewise responds to issues of national concern and provides the necessary research to aid the government in understanding the problem that can be critical in decision-making and policy implications. Such concerns shift the research focus of the Institute. Examples of these are the landslide studies after Guinsaugon and the various flood research needed after Typhoon Sendong hit Mindanao.

## COLLOQUIUM SESSION 3

### *Understanding Fundamental Societal Issues: Micro Contexts*

## DAYALEKTOLOHIYA NG INONHAN SA ISLA DE CARABAO, ROMBLON

Jem R. Javier

Tatangkain ng pag-aaral na ito na palitawin ang mga dayalekto ng Inonhan sa Isla de Carabao, Romblon, bilang tugon sa obserbasyon ng mga tagaroon na mayroong pagkakaiba-iba sa “salita” ang bawat sitio sa nasabing isla. Bilang preliminaryong pag-aaral, gagamitin ang antas na lexicostatistic sa metodolohiya ng dialect geography upang mapalitaw ang mga dayalektal na katangian ng bawat sitio. Matapos makalap ang datos sa pormang wordlist at maiparaan sa mga pamamaraang idinidikta ng mga nabanggit na metodolohiya, lumitaw na (1) tunay na magkakalapit ang mga speech habit ng mga nakatira sa lahat ng sitio ng Isla de Carabao, base sa cognate percentage ng mga ito sa isa’t isa; at (2) may limang posibleng dayalekto ng Inonhan sa isla: Inonhan-Busay, Inonhan-Tinap-an, Inonhan-Pacul, Inonhan-Tan-agan, at Inonhan-Sa-id-Batacan, batay sa mga lexical feature na masasabing katangi-tangi sa mga sitiong ito. Gayumpaman, dahil sa napansing labis na nakakalat ang mga posibleng isogloss ng isla, malaki ang posibilidad na bukod sa limang dayalektong nabanggit, mayroong iba pang varieties ang Inonhan sa Isla de Carabao.

#### **Tungkol sa Pinuno ng Proyekto**

Si Jem R. Javier ay Instructor sa Departamento ng Linggwistiks, Kolehiyo ng Agham Panlipunan at Pilosopiya, Unibersidad ng Pilipinas Diliman. Siya ay nagtapos ng BA Linggwistiks at kasalukuyang tinatahak ang huling taon ng Master ng Arte major sa Linggwistiks sa parehong Departamento.

Siya ay nakapagsagawa ng mga pananaliksik sa larangan ng Theoretical Linguistics, Sociolinguistics, Ethnolinguistics, at Anthropology. Naging resource person din siya sa ilang palatuntunan sa telebisyon at sa iba’t ibang audience sa labas ng Unibersidad. Nakapagtanghal na rin siya ng mga papel-pananaliksik sa iba’t ibang kumperensya.

Bukod sa Isla de Carabao, si Jem ay nagsagawa ng fieldwork sa pamayanan ng mga Aeta Mag-antsi sa Porac, Pampanga at ng mga Muslim sa Quiapo, Maynila.

## **Tungkol sa Sentro ng Wikang Filipino**

Itinatag ang Sentro ng Wikang Filipino (SWF) noong 29 Mayo 1989 at itinalaga bilang opisinal na susubaybay sa Patakarang Pangwika sa Sistemang UP. Noong 17 Pebrero 2000 inilapat ang pamamahala ng SWF mula Sistemang UP tungong Diliman.

*Bisyon:* Itaguyod ang wikang Filipino bilang midyum ng pagtuturo, pananaliksik at publikasyon, at opisyal na komunikasyon sang-ayon sa probisyon sa wika ng Konstitusyong 1987.

*Misyon:* Tumulong sa implementasyon ng Patakarang Pangwika sa UP Diliman

*Tunguhin:*

1. Patatagin ang ugnayan sa iba't ibang institusyon sa loob at labas ng Unibersidad
2. Bigyan ng diin ang pananaliksik ukol sa wikang Filipino bilang tuntungan ng pagbubuo ng mga patakaran sa Filipino at advocacy
3. Pagsisinop sa mga nagawa nang proyekto at nabuong dokumento at pag-aaral ukol sa wika
4. Pagsasakatuparan ng mga proyektong pinag-iisipan, natatanaw ang kabuuan at may konsensus

## **MUSEUM HISTORY IS ART HISTORY: THE VARGAS MUSEUM IN MANILA**

**Patrick D. Flores**

This paper tries to argue that the institution of the museum participates in the construction of art history when it critically reflects on the history of the collection itself. How the collection has been assembled by the collector, who bears agency and history, is as important as the history that the collection narrates. To a significant extent then, the history of art through the discipline of art history is informed by the history of the museum through the discipline of museology (the theory of the museum) and the practice of museography (the aesthetic of the presentation). The Vargas Museum in Manila is foregrounded to represent this process.

### **About the Presenter**

Patrick D. Flores is a Professor of Art Studies at the Department of Art Studies at the University of the Philippines, which he chaired from 1997 to 2003, and Curator of the Vargas Museum in Manila. He is Adjunct Curator at the National Art Gallery, Singapore. He was one of the curators of *Under Construction: New Dimensions in Asian Art* in 2000 and the *Gwangju Biennale (Position Papers)* in 2008. He was a Visiting Fellow at the National Gallery of Art in Washington, D.C. in 1999 and an Asian Public Intellectuals Fellow in 2004. Among his publications are *Painting History: Revisions in Philippine Colonial Art* (1999); *Remarkable Collection: Art, History, and the National Museum* (2006); and *Past Peripheral: Curation in Southeast Asia* (2008). He was a grantee of the Asian Cultural Council (2010) and a member of the Advisory Board of the exhibition *The Global Contemporary: Art Worlds After 1989* (2011) organized by the Center for Art and Media in Karlsruhe and member of the Guggenheim Museum's Asian Art Council (2011). He co-edited the Southeast Asian issue with Joan Kee for *Third Text* (2011).

### **Team Members**

- Louise Anne Marcelino, Museum Researcher
- Jesusa Garcia, Museum Assistant
- Ryan Francis Reyes, Museum Assistant
- Maricel Raynera, Head Librarian

### **About the Jorge B. Vargas Museum and Filipiniana Research Center**

The Vargas Museum and Filipiniana Research Center aims to conserve the collection donated by Jorge B. Vargas and initiates researches, exhibitions, publications, and educational programs around the collection. It houses a museum, archives, and library devoted to Philippine history, art, and culture from the late 19th century until the post-war era. Its main beneficiaries are students, faculty, researchers and scholars of the Philippines and Asia.

## **TRANSPORT AND TRAFFIC MANAGEMENT STUDY FOR OLONGAPO CITY National Center for Transportation Studies**

Olongapo City is a highly urbanized city in the Province of Zambales that has been a model for its proactive approach in public governance and urban management. Consequent with urban growth and prosperity are challenges that when left alone may lead to the deterioration and blight of the city. Among these is traffic congestion, which compromises the city's productivity and efficiency. Another is the need for more environmentally sustainable approaches to transporting people and goods and addressing the growing problem of mismatch in public transport supply and demand.

The overall objective of the study is to prepare a comprehensive Transportation and Traffic Management Plan for Olongapo City. Specifically, the plan aims to:

1. assess the existing traffic conditions in the Study Area through compilation of primary and secondary data;
2. design an efficient traffic circulation plan to ensure smooth, safe, and environment-friendly vehicular and pedestrian flow;
3. identify traffic management measures and alternatives appropriate for the city to alleviate congestion;
4. identify options for intra-city and inter-area water-based public transportation for the city's residents as well as for workers of the nearby Subic Free Port Zone;

5. recommend policy directions to sustain programs for the short, medium, and long-term plans in consideration of the relevant plans of the nearby region;
6. identify the needed institutional structures and mechanisms that will ensure effective traffic management and enforcement through a review of national best practices and customizing these to suit local needs; and
7. draft a traffic code that will incorporate the policies and measures identified in the study.

The planning framework used in the study subscribes to the principles of environmentally sustainable transport (EST) which considers environmental protection as an equally important consideration in transportation planning and infrastructure development. The EST framework also promotes effective accessibility and efficient mobility for all by ensuring that infrastructure development is anchored on the needs of the community and not simply the results of technical evaluation. EST strategies include promotion of non-motorized transport (NMT), gender sensitive public transportation, PWD friendly transportation, and affordable transportation.

At the core of the Study is the recognition that the Plan that will be developed must look into the current transportation and traffic issues as gleaned from the technical evaluation of travel patterns and projection of future developments as well as the needs of the people of Olongapo City. Effective public consultation is considered vital to plan formulation, thus, a series of focus group discussions were held with private and public vehicle drivers, public transportation users, and representatives of the business community to solicit the community's views on what makes Olongapo City outstanding, pressing issues in transportation and traffic, and how to move forward in addressing these issues.

The output is a comprehensive transport and management plan with detailed recommendations that address issues on traffic circulation and management, traffic control devices, pedestrian facilities, parking, and public transport. The institutional aspect is also discussed, specifically on the organization for transportation planning and traffic management, and drafting a transport and traffic code. Finally, a communications plan is laid out in detail to ensure public support towards successful implementation.

### **About the Presenter**

Dr. Jose Regin F. Regidor is a Professor at the UP Diliman Institute of Civil Engineering. His field of specialization is transportation engineering, and his research areas of interest are traffic engineering, sustainable transport, and trip generation. Dr.

Regidor is the immediate past Director of the UP National Center for Transportation Studies (NCTS). He is the Project Team Leader / Transportation Planner of the Olongapo City Transport and Traffic Management Study.

### **Members of the Project Team**

#### *Key Personnel*

- Dr. Ricardo G. Sigua, Professor, UP Institute of Civil Engineering – Senior Traffic Engineer
- Dr. Cresencio M. Montalbo, Jr., Associate Professor, UP School of Urban and Regional Planning – Public Transport Specialist
- Romeo B. Ocampo, Professor, National College of Public Administration and Governance – Institutional Specialist
- Dr. Ma. Sheilah G. Napalang, Assistant Professor, UP School of Urban and Regional Planning – Transport Economist/Communication Specialist
- Dr. Hilario Sean O. Palmiano, Assistant Professor, UP Institute of Civil Engineering – Survey Specialist
- Engr. Aileen U. Mappala, University Extension Specialist, National Center for Transportation Studies (NCTS) – Junior Traffic Engineer
- Engr. Shiela Flor D. Javier, University Extension Specialist, NCTS – Junior Transport Planner
- Sahid A. Kamid, University Extension Specialist, NCTS – Software Specialist (GIS/Database)

#### *Support Staff*

- Research Assistants: Glenn Simon D. Latonero & Reigna Jewel Ritz M. Macababdad
- Administrative Assistants: Maria Remedios L. Angeles, Josephine A. Monzon, Michelle R. Deloria & Leo E. Luangco

### **About the National Center for Transportation Studies**

Established as the Transport Training Center (TTC) on 12 July 1976 when it was jointly operated by the then Department of Public Highways, the Department of Public Works, Transportation and Communications and the University of the Philippines, the center was restructured and renamed as the National Center for Transportation Studies (NCTS) in 03 November 1993.

The NCTS envisions itself to become an internationally recognized center of excellence in the field of transportation studies. It seeks to contribute to national growth and development by supporting academic instruction, conducting and promoting scholarly research, training, information and other extension services in the field of transportation. Its advocacies include: Sustainable Transport; Integrated Transport System; Road Safety; and Institutional Development. The NCTS conducts training and researches in the field of transportation and traffic planning, management and engineering.

## **THE SAGA OF LEARNING: THE BOLINAO MARICULTURE EXPERIENCE**

**Laura T. David, Davelyn Pastor-Rengel, Liana T. McManus, Evangeline Magdaong, Rose Salalila-Aruelo, Helen Grace Bangi, Maria Lourdes San Diego-McGlone, Cesar Villanoy, Kristina Cordero-Bailey**

The fish consumption per person has not significantly changed through the years but the increase in human population has created an ever increasing demand for food fish. In the Philippines, the BFAR has responded to the food fish shortage by promoting mariculture. We support this policy but advocate the need for strategic planning in the location and density of the fish cages/pens. The case of Bolinao-Anda, Pangasinan is presented in this paper to highlight the continuous multi-faceted process for a successful mariculture endeavor. In particular, we make use of remote sensing tools to show the on-the-ground response of the stakeholders to various local legislation, mariculture-induced disasters, and scientific recommendations. Using hydrodynamic models, we then assess the efficacy of the responses and pinpoint future adjustments necessary to alleviate the pressure on the system and make the Bolinao-Anda coastal waters productive once more.

### **About the Presenter**

Dr. Laura T. David is a Professor and Deputy Director for Instruction of the UP Diliman Marine Science Institute. She holds a PhD in Physical Oceanography from the University of South California. Dr. David's research focuses on the

advancement of Optical Oceanography in the Philippines. In recognition of her work, she was invited to be part of the global assessment of sites to be endorsed to the UNESCO World Heritage Sites. She was also nominated and appointed to be one of the 20-man international team comprising the IOC-GOOS (Intergovernmental Oceanographic Commission - Global Ocean Observing System) Coastal Ocean Observations Panel.

#### **Members of the Project Team**

Davelyn Pastor-Rengel, Conservation International Philippines  
Dr. Liana T. McManus, Marine Scientist Lecturer, Rosentiel School of Marine and Atmosphere Science, University of Miami, Florida  
Evangeline Magdaong, Hokkaido University, Japan  
Rose Salalila-Aruelo, Local Government Unit, Bolinao, Pangasinan  
Helen Grace P. Bangi, Cagayan State University, Aparri, Cagayan  
Dr. Maria Lourdes San Diego-McGlone, Professor, Marine Science Institute  
Dr. Cesar Villanoy, Professor, Marine Science Institute  
Kristina Cordero-Bailey, University Researcher II, Marine Science Institute

#### **About the Marine Science Institute**

The Marine Science Institute was established on 28 March 1974, as the Marine Science Center.

The vision of the Marine Science Institute (MSI) is to be the regional center of excellence in tropical marine science. In relation to this, the Institute seeks to fulfill the following objectives:

- to generate basic information necessary for optimal and sustained utilization, management, and conservation of the marine environment and its resources;
- to provide graduate level training and extension services to develop manpower requirements in the marine sciences; and
- to develop appropriate and environmentally sound marine-based technologies for industrial and economic development.

## **SPECIAL SESSION 2**

## RESEARCH GROUPS AND MENTORING

### Percival F. Almoro & Gisela P. Concepcion

A research group is a group dedicated to scientific excellence and innovations in solving various challenges in a particular field of study. The purpose of forming research groups is to attain a situation of collaborative learning where members learn or attempt to learn something together. Very many activities related to research (reviewing the literature, designing and performing experiments, discussion and analysis of results, etc.) are best carried out in a research group setting. Research group members capitalize on each other's knowledge and skills. Drawing from individual and collective knowledge, each group member contributes something (an insight or a technique) towards the attainment of the various pursuits of the whole group. During frequent group seminars, stimulating comments, intense discussions and as well as chance interactions between group members often provide inspirations for ideas for future research.

Mentoring in a scientific research setting is an extensive process of transferring knowledge from a person of great knowledge and experience (mentor) to a person who is perceived to have less (mentee). The relationship between mentor and mentee is developed over a long period of time through face to face communications and various levels of cooperative learning. As will be presented, the research group provides a means for mentoring to flourish an enabling environment for sustained success in research.

To illustrate further insights on the dynamics of research groups, analogies to animal herds, particularly elephants, are also presented. Animals form herds to protect their members (especially the young) and, in the process, life-long bonds are formed between its members. Figure 1 shows a matriarchal elephant herd which analogises to a research group. The matriarch (rightmost) leading the herd during its annual migration to more hospitable locations analogises to a research expert leading the group in achieving its research goals and objectives. The mother elephant (middle) guiding the calf to steer clear of the log in order to avoid getting injured analogises to a research mentor guiding a mentee in the conduct of a scientific inquiry and helping avoid some pitfalls in doing research. The other female elephant (leftmost) sharing in the supervisory responsibilities analogises to the other senior members of the group helping in the training of the apprentices.

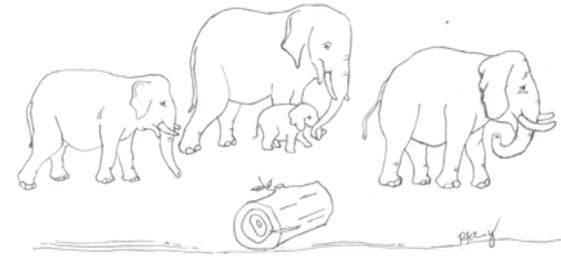


Figure 1. Diagram depicting members of an elephant herd

In this presentation, the dynamics, guiding principles (objectives, activities, and performance metrics) and best practices of a model research group will be elucidated.

#### About the Presenters

Dr. Percival F. Almoro is an Associate Professor at the UP Diliman National Institute of Physics (NIP). He obtained his Ph.D. Physics at the NIP in 2004 and carried out post-doctoral fellowships at the Institute of Applied Optics, Universität Stuttgart, Germany from 2005 until 2006 and at the Risø National Research Laboratory, Denmark from 2007 until 2009. He researched on the theory of coherent wavefront reconstruction. He developed various reconstruction techniques and applied them in the investigations of biological and technical samples. Coherent measurement techniques include digital holography, speckle interferometry, shearography, fringe processing, and phase retrieval. He is currently the NIP Deputy Director for Facilities and Resources and the Program Coordinator of the NIP-Photonics Research Group.

Dr. Gisela P. Concepcion is a Professor at the UP Diliman Marine Science Institute (MSI), teaches graduate courses on marine natural products and related biomedical research and marine biotechnology. She heads the Marine Natural Products Laboratory engaged in the discovery and characterization of bioactive marine compounds from sponges, venomous snails and their associated bacteria. She also runs a Techno Incubation Core Facility at the MSI consisting of instrumentation required for natural products and recombinant protein and biotechnology projects. Dr. Concepcion maintains the Star Science column in The Philippine Star. She is also co-editor of the online, free access, ISI-listed journal, Philippine Science Letters. Dr. Concepcion, currently the Vice-President for Academic Affairs of the UP System, holds key positions in scientific and academic institutions: Philippine National Academy of Science and Technology (NAST); Philippine American Academy of Science and Engineering (PAASE) and the UP Philippine Genome Center.

# DEVELOPMENT OF VULNERABILITY CURVES OF KEY BUILDING TYPES TO DIFFERENT HAZARDS IN THE PHILIPPINES

## UP Institute of Civil Engineering

The University of the Philippines Diliman (UPD) through the Institute of Civil Engineering (ICE) entered into a memorandum of agreement with the Philippine Atmospheric Geophysical & Astronomical Services Administration (PAGASA) and the Philippine Institute of Volcanology and Seismology (PHIVOLCS) to develop vulnerability curves of key building types in the Philippines to severe wind, flood, and earthquake hazards. This is part of a collaborative project between PAGASA, PHIVOLCS, and CSCAND (Collective Strengthening of Community Awareness for Natural Disasters) Agencies, with financial support from AusAID, called “Enhancing Risk Analysis Capacities for Flood, Tropical Cyclone Severe Wind and Earthquake for Greater Metro Manila Area or the Risk Analysis Project (GMMA-RAP)”. The presentation will discuss three different approaches in developing vulnerability curves used in the project: heuristic, empirical, and computational approach. In the computational approach, nonlinear analysis and modelling procedures were used: the Capacity Spectrum Method (CSM) for earthquake hazard, and Computational Fluid Dynamics (CFD) for severe wind. This allowed the researchers to consider different levels of earthquake and severe wind speeds in analysing their effects on structures. For flooding, the depth of inundation is the parameter used in the development of vulnerability curves. The vulnerability curves, together with exposure data and multi-hazard maps, can be used in loss estimation techniques to determine the damage risk to existing cities and communities in the Philippines due to the different hazards.

### About the Presenter

Dr. Jaime Y. Hernandez Jr. is an Associate Professor and Head of the Structural Engineering Group (SEG) at the Institute of Civil Engineering (ICE), University of the Philippines, Diliman. He received his BS in Civil Engineering degree from the UPD College of Engineering, his ME in Civil and Environmental Engineering from Saitama University in Japan, and his Ph.D. in Civil Engineering from the University of Tokyo. His specialization is on Structural Health Monitoring and his research interests include Risk Assessment due to Earthquake and Severe Wind Hazards, Retrofit of Structures, and Earthquake Monitoring. He has authored and co-authored

## COLLOQUIUM SESSION 4

### *Understanding Fundamental Societal Issues: Macro Contexts*

journal and conference papers on these topics, disseminating research work in domestic and international conferences. His active involvement in the academe includes teaching, research, administration and extension service.

### **Members of the Project Team**

- Dr. Benito M. Pacheco – Professor, UP Institute of Civil Engineering and UP Diliman Vice-Chancellor for Research and Development
- Dr. Eric Augustus J. Tingatinga – Assistant Professor, UP Institute of Civil Engineering
- Peter Paul M. Castro – Associate Professor, UP Institute of Civil Engineering
- Dr. Fernando J. Germar – Associate Professor, UP Institute of Civil Engineering
- Ulpiano P. Ignacio Jr. – Professor, UP Institute of Civil Engineering
- Raniel M. Suiza – Instructor, UP Institute of Civil Engineering
- Marie Claire L. Pascua – Instructor, UP Institute of Civil Engineering
- Liezl Raissa E. Tan – Instructor, UP Institute of Civil Engineering
- Romeo Eliezer U. Longalong – Instructor, UP Institute of Civil Engineering
- William L. Mata – Instructor, UP Institute of Civil Engineering
- Imee Bren O. Villalba – Instructor, UP Institute of Civil Engineering
- Diocel Harold M. Aquino – Instructor, UP Institute of Civil Engineering
- Richmark N. Macuha – Instructor, UP Institute of Civil Engineering
- Dr. Mark Albert H. Zarco – Professor, UP Institute of Civil Engineering

### **About the UP Institute of Civil Engineering**

In October 2008, the University of the Philippines Board of Regents approved the transformation of the Department of Civil Engineering to an Institute with the creation of the Institute of Civil Engineering (ICE) to address the growing need for a center of excellence in civil engineering and its specialized fields, with combined capabilities in instruction, research and extension service.

ICE is the first and only Institute of Civil Engineering in the Philippines. The curriculum offered when Engineering opened its doors in 1910 was Civil Engineering. Originally, it prescribed a 4-year course leading to a degree of Bachelor of Science; the degree of Civil Engineer was conferred after an additional year of study. Revision of the curriculum to a 4-year course leading to a Bachelor of Science in Civil Engineering was immediately made. The 4-year curriculum with occasional changes in the required courses stayed on until 1953 when the 5-year curriculum in the various engineering disciplines was adopted.

Research in the Institute is conducted in groups, as follows: Construction Engineering and Management Group, Structural Engineering Group, Geotechnical Engineering Group, Water Resources Engineering Group, Environment and Energy Engineering Group, and Transportation Engineering Group.

## **WORKING-CLASS STUDIES: IDENTIFYING AND DEFINING THE WORKING CLASS IN THE PHILIPPINES**

**Jonathan P. Sale & Melisa R. Serrano**

Who belongs to the working class in the Philippines? This paper delves into three basic issues: 1) how to identify the working class, 2) how to define the working class, and 3) what approaches (if any) can be used to identify and define the working class.

The paper explores class as a concept and the role of public policy and labor market governance. Some approaches that reflect the interdisciplinary character of studies about the working class will be broached, such as the working class in relation to other classes (Zweig 2005), and class as defined by occupation, education, income, level of comfort, self-identification, and cultural difference (Metzgar 2005). In the process, aggregate empirical data over time and across regions from the Bureau of Labor and Employment Statistics of the Department of Labor and Employment, among others, shall be discussed and analyzed.

### **About the Presenters**

Atty. Jonathan P. Sale, DPA is an Associate Professor and Dean of the UP Diliman School of Labor and Industrial Relations (SOLAIR). His areas of expertise are labor relations, labor law, collective bargaining, conflict management and resolution, decision theory, collaborative governance, and labor market governance.

Dr. Melisa R. Serrano is an Assistant Professor at the UP-SOLAIR. She obtained her PhD degree in Labour Studies from the University of Milan. Her areas of expertise are union renewal, alternatives to capitalism, trade unions and social movements, social security, agrarian reform, and ASEAN industrial relations.

## About the SOLAIR Center for Labor Justice

The Center for Labor Justice undertakes research and training programs in the areas of policy analysis in labor justice administration, raising workers' consciousness on labor rights and promotion of voluntary and peaceful modes of dispute settlement in accordance with the mandate of the Constitution.

# THE YOUNG ADULT FERTILITY AND SEXUALITY STUDY 4 (YAFS 4)

## UP Population Institute

The Young Adult Fertility and Sexuality Study 4 (YAFS 4) is the fourth round in the series of surveys on young adults aged 15-24 in the Philippines conducted by the UP Population Institute. YAFS 1 was conducted in 1982 with a nationally representative sample of young women aged 15-24. YAFS 2 was conducted in 1994 with a sample of both males and females 15-24 while YAFS 3 was done in 2002. YAFS 4 is projected to have a total sample of about 17,000 respondents, approximately 1000 per region.

YAFS is the only survey of young people in the Philippines that is nationally and regionally representative covering a wide range of topics of relevance to this significant segment of the population. Largely quoted for its findings on sexual and non-sexual risk behaviors and their determinants, the YAFS series actually covers other equally significant areas of interest such as education trajectories, labor force participation, family relationships, the role of parents and peers, attitudes and values, personal characteristics like self-esteem, and adverse conditions like suicidal ideation, experience of violence and depression symptoms. YAFS 4 contains a new section on health and lifestyle and an expanded section on media and communication to include the new forms of communications technology and cyberbullying.

Findings from the YAFS Series are widely used and extensively utilized in a broad range of fields but most significantly in health and education. The YAFS data files are public use files and have been used in numerous academic papers and student theses, both in the UPPI and outside it.

## About the Presenter

Dr. Josefina N. Natividad is a Professor of Demography at the UP Population Institute (UPPI), College of Social Sciences and Philosophy. She was formerly a faculty member in the Department of Sociology, CSSP, UP Diliman (1980 to 2005). She also served as Vice-Chancellor for Academic Affairs of the UP Open University (1997 to 2001) and Director of the Office of Institutional Linkages (1994 to 1997). Prof. Natividad holds a Doctor of Science degree, major in Population and International Health from Harvard University, a Master's degree in Demography from UPPI and a Bachelor of Arts degree from UP Baguio. Her research interests are population aging, adolescent risk and non-risk behaviors and evaluation research. She is the Project Coordinator of YAFS 4.

## Members of the Project Team

- Dr. Grace T. Cruz – Professor, UPPI
- Dr. Maria Midea M. Kabamalan – Associate Professor, UPPI
- Maria Paz N. Marquez – Assistant Professor, UPPI
- Dr. Nimfa B. Ogena – Professor, UPPI
- Dr. Arnisson Andre C. Ortega – Assistant Professor, UPPI
- Christian Joy P. Cruz – University Researcher, UPPI
- Armand Camhol – University Research Associate, UPPI

## About the UP Population Institute

In its 728th meeting on 20 November 1964, the Board of Regents (BOR) approved the establishment of a Population Institute (UPPI) as a separate unit of the University, headed by a Dean. The UPPI's original location was in the Padre Faura campus of the University, now UP Manila. In the 955th meeting on 25 November 1982, the BOR approved the transfer and attachment of the Population Institute to the College of Arts and Sciences in UP Diliman. Thereafter the Population Institute was headed by a Director. With the creation of the College of Social Sciences and Philosophy in 1983, UPPI became one of the units under the new college.

The UPPI is mandated to:

- Prepare students for professional careers as demographers in research and teaching posts;
- Pursue a program of research on population that gives emphasis both to emerging technical developments in Demography and to research areas related to population that are significant for planning and program management purposes; and
- Provide technical assistance to government organizations (primarily the Commission on Population, National Statistics Coordination Board, National Statistics Office) and NGOs working on population concerns.

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