

EXPERT'S PROFILE

Name of Grantee : **Dr. Jorge Agustin O. Emmanuel**
Area of Expertise : environmental hazard, energy innovation, public health & chem eng
Inclusive Date of Contract as BSP Awardee : Short-Term Program
: 25 July - 24 October 2016 (90 days)
Host Institution : Siliman University
E-mail Address : jemmanuel@mindspring.com



EDUCATIONAL BACKGROUND

- Professional Certificate in Energy Innovation & Emerging Technologies, 2013, Stanford University, USA
- Certification in Project Mgt, 2009, New York, USA
- Certificate in Public Health, 2006, University of Iowa, USA
- Certificate in Hazardous Materials Management, 1993, University of California at Berkeley, USA
- **PhD Chemical Engineering**, 1988, University of Michigan, USA
- **MS Chemical Engineering**, 1978, North Carolina State University, USA
- **BS Chemistry**, 1976, North Carolina State University, USA

WORK EXPERIENCES

- 1991 – present **Environmental & Engineering Research Group, El Cerrito, California, USA**
President
- 2014 - 2015 **Ebola Emergency Response Program, UNDP, New York, USA**
Medical Waste Expert
- 2011 - 2012 **UNEP International Environment Technology, Osaka, Japan**
Healthcare Waste Technologies Consultant
- 2002 - 2006 **UNIDO Non-combustion Technology Project, Vienna, Switzerland**
Consultant
- 1988 - 1991 **Environment & Safety Program, Emeryville, California, USA**
Manager
- 1981-1984 **University of Michigan, USA**
Research Fellow in Chemical Engineering
- 1978-1981 **General Electric Corporate R&D Center, New York, USA**
Research Engineer
- 1977-1978 **North Carolina State University, USA**
Chemical Engineering Researcher
- 1973-1974 **Electrochemical Plant, Perry Electronics, Raleigh, North Carolina, USA**
Plant Supervisor & Process Engineer
- 1977 – 2015 25 United Nations related projects conducted in Argentina, Australia, Armenia, Austria, Botswana, Brazil, Cambodia, Canada, Cuba, Egypt, Ethiopia, Ghana, Grenada, Guinea, Honduras, India, Japan, Jordan, Kenya, Kyrgyzstan, Latvia, Lebanon, Liberia, Mexico, Namibia, Philippines, Senegal, Sierra Leone, Slovakia, Slovenia, South Africa, St. Kitts & Nevis, St. Lucia, Switzerland, Tanzania, Thailand, Uganda, United States, Vietnam, and other countries.

To be Accomplished as a BSP Awardee

1. Three sets of solar energy tools to facilitate design and installation of small- to medium-scale residential and commercial solar power systems
2. Compile and review existing vulnerability and impact assessment tools and frameworks

3. Analyze existing vulnerability and impact assessment tools and frameworks in relation to their applicability in different scenarios
4. Lecture series/seminars on:
 - o Solar energy design and tools
 - o Vulnerability and impact assessment tools and frameworks
 - o Disaster risk reduction planning and options
 - o Environmental management
 - o Global climate change: mitigation and adaptation options for the Philippines
 - o Potential research topics in climate mitigation and adaptation
5. Provide guidance to graduate and advanced undergraduate students
6. Packaged proposals on :
 - o Resource assessment of hydrokinetic energy potential from near shore wave, river current, and tidal power; testing and evaluation of a picoturbine in a river or irrigation canal application
 - o Use of low-cost micro-UAVs with photogrammetry and GIS for multi-hazard assessment and climate change adaptation in Negros
 - o Development of an interdisciplinary, crosssectoral and participatory approach to disaster risk reduction and management in the Negros Island Region (final revision of proposal to OML Center)
 - o Proposal for the regional consortium on coastal resource management
 - o Design and testing of solar and wind power systems at SPUD Calo Farms
7. Provide consultancy services to Environment Sector of the Industry Technology Development Division (ITDD) – PCIEERD's S&T Water Environment Roadmap