

buletin **seadpri**

institut kajian bencana asia tenggara
southeast asia disaster prevention research institute

NEWSLETTER
JUNE 2013

THE FIRST **5** YEARS

SOUTHEAST ASIA DISASTER PREVENTION RESEARCH INSTITUTE
UNIVERSITI KEBANGSAAN MALAYSIA (SEADPRI-UKM)





Foreword by the Vice-Chancellor of UKM



Since the 1970s, natural disasters such as floods and landslides have been increasing in Malaysia. Floods and flash floods displace people from their homes and paralyze urban services, while in some cases landslides have caused deaths. Malaysia is also exposed to storms and typhoons however earthquake related tsunami is rare but is of major concern regionally. When the mega-tsunami hit Southeast Asia in December 2004, the world including Malaysia was astounded and many were caught off-guard in responding to such a disaster that traversed countries and caused the death of 230,000 people. The need for a specialized entity to establish a systematic inventory, conduct research and build capacity to reduce disasters due to natural hazards was articulated not only globally but also in Malaysia.

Science, technology and innovation play an important role in disaster prevention particularly in ensuring that vulnerabilities are diminished and risk prone communities become more resilient. The establishment of the Southeast Asia Disaster Prevention Research Institute (SEADPRI-UKM) on 1 June 2008 at Universiti Kebangsaan Malaysia was a response to mainstream disaster risk reduction at all levels in the country. The role of SEADPRI-UKM has been to channel scientific and technical support to the National Security Council in addressing disaster risk reduction. Regionally, SEADPRI also supports government efforts at the global platform in reducing disasters, particularly with respect to the United Nations Hyogo Framework for Action (2005-2015). Since the inauguration of SEADPRI-UKM, periodic reports have been submitted to the National Security Council as inputs to the Global Platform and Regional Meetings on disaster risk reduction.

SEADPRI-UKM conducts holistic disaster related research at various scales to support government decision making on climatic, geological and technological hazards as well as enhance human capital and capacity at local, state, national and international levels, particularly in Southeast Asia. A landmark study on Policy and Planning Responses for Earthquake and Tsunami Hazards conducted by SEADPRI-UKM with the Academy of Sciences Malaysia provided inputs to government agencies on how to respond to the many low tremors of earthquakes and aftershocks from neighbouring countries since major tectonic events in 2004, 2008, 2009 and 2010. SEADPRI-UKM is now supporting the National Security Council in developing a National Platform and Action Plan for Disaster Risk Reduction for Malaysia.

I have very confidence that SEADPRI-UKM will rise to the challenges ahead and intensify its efforts to make a positive difference in preventing future disasters both in the country and the region.

Thank you.

PROF. TAN SRI DATO' SERI DR. SHARIFAH HAPSAH SYED HASAN SHAHABUDIN
Vice-Chancellor
Universiti Kebangsaan Malaysia

Preface by Secretary of the National Security Council

The National Security Council of the Prime Minister's Department of Malaysia coordinates all initiatives on disaster management in the country. The National Security Council also serves as the Focal Point for the ASEAN Committee on Disaster Management (ACDM) and the United Nations Hyogo Framework for Action (2005-2015), an action plan to reduce the risk of disasters adopted by the country in 2005.

In 2008, the National Security Council supported the establishment of the Southeast Asia Disaster Prevention Research Institute of Universiti Kebangsaan Malaysia (SEADPRI-UKM) to enhance efforts on disaster risk reduction in Malaysia and the region. The establishment of SEADPRI-UKM by the Ministry of Higher Education was officially announced on 2 December 2008 by the Hon. Dato' Sri Najib Tun Abdul Razak at the 3rd Asian Ministerial Conference on Disaster Risk Reduction held in Kuala Lumpur. The Ministerial Conference was informed that SEADPRI-UKM has been tasked to address knowledge gaps and education as well as promote policy-relevant solutions to reduce underlying risk factors at all levels of planning.

SEADPRI-UKM played a significant role in assisting the Government of Malaysia in formulating the Kuala Lumpur Declaration on Disaster Risk Reduction in Asia (2008) and the Melaka Disaster Risk Reduction in Malaysia (2011). The Melaka Declaration calls for the establishment of a national platform and comprehensive legal framework for risk and disaster management in Malaysia, as well as initiatives to increase awareness and capacity of climate change among disaster risk reduction practitioners. The National Security Council is expected to launch the National Platform on Disaster Risk Reduction in 2013. The formulation of the Action Plan for Disaster Risk Reduction for Malaysia has also commenced and a series of stakeholder consultation initiatives is now in progress. In line with its role as the National Focal Point, the Council is also participating in the extension of the United Nations Hyogo Framework for Action beyond 2015. In the context of this advancement, we have requested SEADPRI-UKM as well as other relevant agencies in the country, to document their achievements, to be presented at the Global Platform in 2013 and the Asian Ministerial Conference in 2014.

On behalf of the National Security Council, I would like to express my appreciation to the Vice Chancellor of Universiti Kebangsaan Malaysia, Y. Bhg. Prof. Tan Sri Dato' Seri Dr. Sharifah Hapsah Syed Hasan Shahabudin, for permitting and facilitating the collaboration of SEADPRI-UKM in providing technical support for developing the National Platform and Action Plan for Disaster Risk Reduction for Malaysia. I also look forward to the continued support of SEADPRI-UKM in supporting the National Security Council in implementing the National Action Plan and fulfilling the country's obligations under the Hyogo Framework for Action, beyond 2015.

DATUK MOHAMED THAJUDEEN ABDUL WAHAB

Secretary
National Security Council
Prime Minister's Department



About SEADPRI-UKM

RESEARCHERS

- Emeritus Prof. Dato' Dr. Ibrahim Komoo
- Prof. Dr. Mazlin bin Mokhtar
- Prof. Dr. Joy Jacqueline Pereira
- Prof. Dr. Lee Yook Heng
- Prof. Dr. Mohd Shafeea Leman
- Assoc. Prof. Dr. Tajul Anuar Jamaluddin
- Assoc. Prof. Dr. Rawshan Ara Begum
- Dr. Sarah Aziz Abdul Ghani Aziz
- Dr. Tanot Anak Unjah
- Dr. Mohammad Imam Hasan Reza
- Dr. Sharifah Munirah Syed Hussein Alatas
- Lim Choun Sian
- Tan Ching Tiong
- Siti Khadijah Satari
- Koh Fui Pin
- Mohd Khairul Zain Ismail
- Mohd Faizol Markom

ADMINISTRATION

- Jumriah Nunurung
- Siti Marwany Abdul
- Noor Shafirah Ramli
- Mastura Ahmad @ Zakaria

Vision

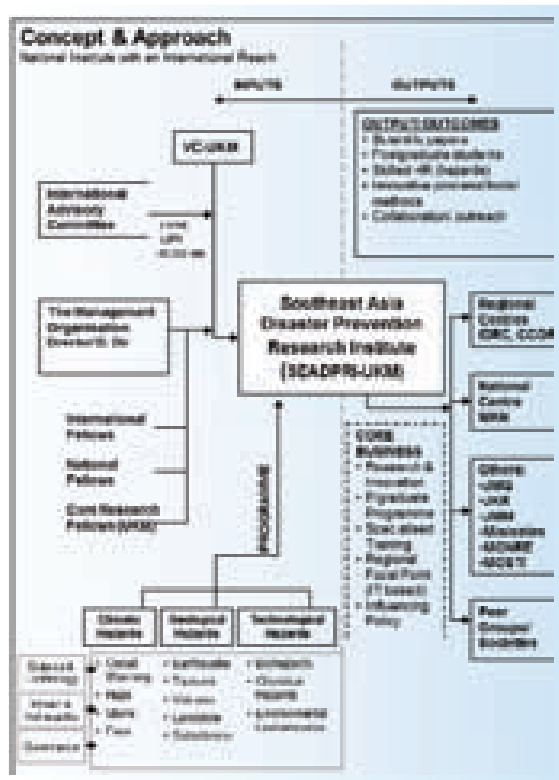
Leader in Innovative Research and Knowledge Sharing on Holistic Disaster Prevention

Mission

1. Conduct holistic research on hazards and disasters at national and regional levels
2. Enhance human capital and capacity at national and regional levels, particularly in Southeast Asia
3. Support knowledge-based decision making on climatic, geological and technological hazards

Objectives

1. Explore and expand knowledge in the fields of climatic, geological and technological hazards
2. Conduct multidisciplinary research programmes on disaster prevention and risk reduction
3. Develop trained human capital in addressing disaster issues for knowledge-based decision making through post-graduate programmes
4. Serve as a focal point on issues related to science and governance for disaster risk reduction in Southeast Asia



The concept and approach of SEADPRI-UKM as an academic institute approved by the Senate of UKM and the Ministry of Higher Education in 2008, guides its activities.

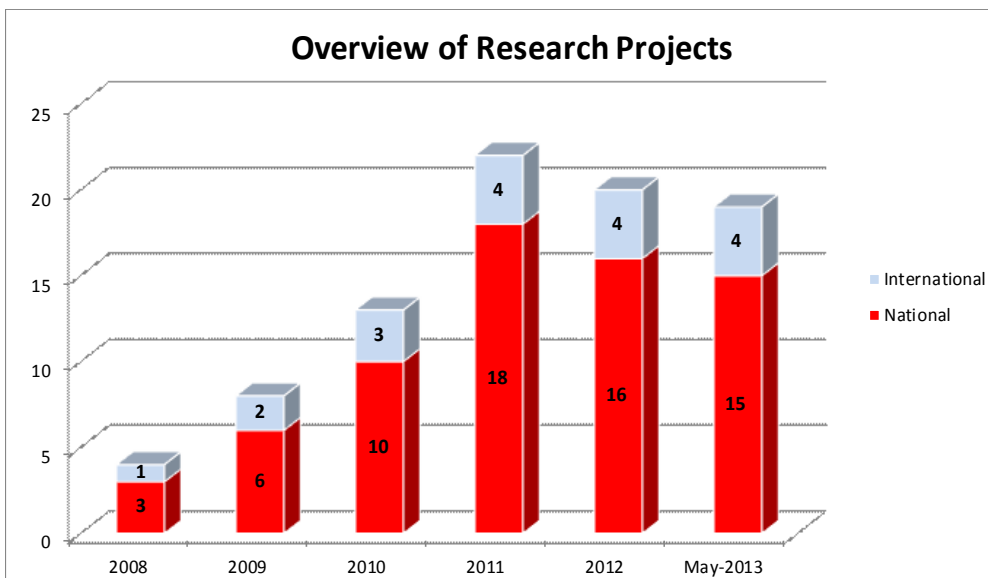
SEADPRI-UKM in the Campus

Meeting the Aspirations of UKM as a Research University

SEADPRI-UKM conducts research, education, training and provides advisory services. SEADPRI-UKM receives national and international funding to conduct its research on disaster prevention.

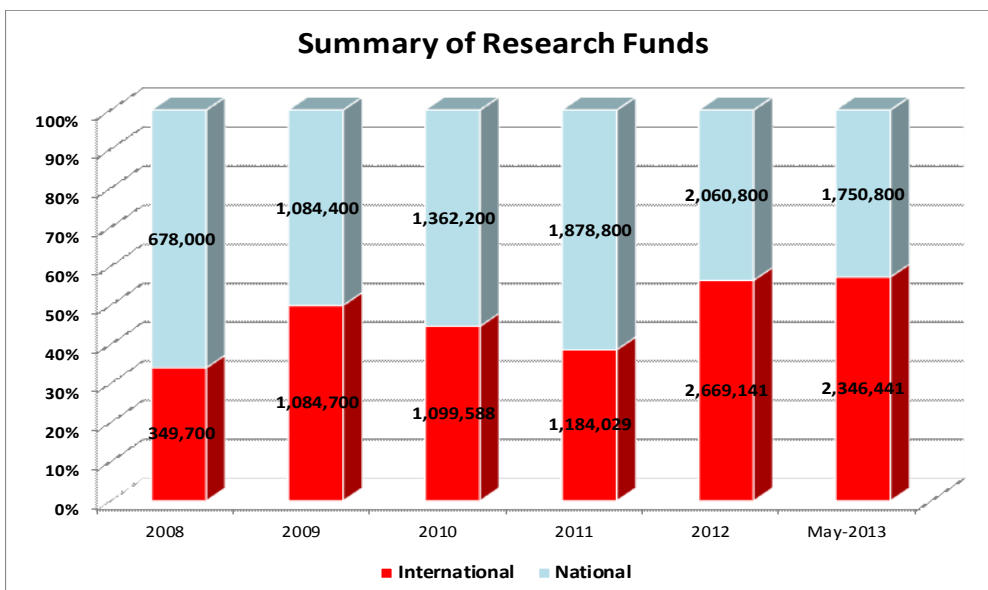
The number of projects in SEADPRI-UKM has increased from three national and one international projects in 2008 to 16 national and four international projects in 2012. As of May 2013, there are 15 national and four international projects ongoing in SEADPRI-UKM.

Overview of Research Projects



The number of research projects in SEADPRI-UKM, particularly international projects has been increasing since 2008.

Summary of Research Funds



The amount of funding for national and international research projects in SEADPRI-UKM ranges between RM 2 - RM 3 million annually.

INTERNATIONAL FELLOWS

Emeritus Prof. Lord Julian Hunt
University of Cambridge

Prof. Dr. Masahiro Chigira
Kyoto University, Japan

Prof. Dr. Dwikorita Karnawati
University Gadjah Mada, Indonesia

Prof. Dr. Yonglong Lu
Chinese Academy of Science

Dr. Philipp Schmidt-Thomè
Geological Survey of Finland

NATIONAL FELLOWS

Prof. Ir. Dr. Zainab Mohamed
Universiti Teknologi Mara, UiTM

Prof. Dr. Felix Tongkul
Universiti Malaysia Sabah, UMS

Prof. Dr. Marcos Jopony
Universiti Malaysia Sabah, UMS

Assoc. Prof. Dr. Edy Tonnizam Mohamad
Universiti Teknologi Malaysia, UTM

HONORARY FELLOWS

YM Raja Datuk Zaharatun Raja Zainal Abidin
Former Director General, Economic Planning Unit

Datuk Che Moin Umar
Former Deputy Secretary, National Security Council, Prime Minister's Department

Dato' Dr. Yap Kok Seng
Former Director General, Malaysian Meteorological Department

Mr. Chen Shick Pei
Former Director, CCOP Technical Secretariat

Ir. Hj. Ahmad Jamalluddin Shaaban
Director General, National Hydraulic Research Institute Malaysia, NAHRIM

SEADPRI–UKM Outreach Activities

SEADPRI-UKM FLAGSHIP

ANNUAL FORUMS

SEADPRI-UKM Forum 1

Hospitals Save from Disasters held on 6 April 2009 and led by Prof. Ted Herbosa of the Philippines, who was then Adjunct Professor at the Department of Emergency Medicine of the UKM Medical Centre. The event was co-organised with Mercy Malaysia and UKM Medical Centre.

SEADPRI-UKM Forum 2

Climate Change Adaptation and Spatial Planning held on 5 Jan 2010 and led by Dr. Philipp Schmidt-Thomé of the Geological Survey of Finland. Co-organisers included the Geological Society of Malaysia and Minerals and Geosciences Department of Malaysia.

SEADPRI-UKM Forum 3

Climate, Environment and Development in Southeast Asia: Priorities and Challenges, held on 29 September 2011 conducted by Dr. Raman Letchumanan, Head of the Environment Division at the ASEAN Secretariat. This was jointly organised with the Ministry of Natural Resources and Environment (NRE) and Institute for Environment and Development (LESTARI-UKM).

SEADPRI-UKM Forum 4

Advancing Disaster Prevention: Climate Change, Science and Policies, held on 14 May 2012 and led by Prof. Lord Julian Hunt, an Emeritus Professor of Climate Modeling in the Department of Earth Sciences, and Honorary Professor of Mathematics at University College London and Department of Applied Mathematics and Theoretical Physics, University of Cambridge.

SEADPRI-UKM Forum 5

Disaster Prevention and ISO 31000:2009 Risk Management, held on 15 March 2013 conducted by Prof. Dr. Hj. Mohd Rasid Hussin, a Professor of Risk Management in the School of Economics, Finance and Banking, Universiti Utara Malaysia (UUM) College of Business. This was jointly organised with the Office of Risk Management, UKM, and Sustainable Campus Committee, UKM - OUP Kampus Lestari Cluster.

Education & Training

Since its establishment in 2008, a total of 12 postgraduate candidates have been enrolled with SEADPRI-UKM to further their studies in areas of science, technology and management for disaster prevention, especially for climatic hazards, geological hazards and technological hazards. A majority of the students are Malaysian.

For the purpose of capacity building, training courses are organised periodically on specialised subjects pertaining to the science and technology of disaster risk reduction.

Workshop on the Practice of Knowledge Management for Enhanced Performance, 10 June 2009, UKM Bangi

Seminar on Preparing and Giving Scientific Presentations, 22 December 2009, UKM Bangi

Seminar and Workshop on the Development of Rock Mass Classification in Wet Tropical Regions, 12 November 2011, UNITEN Bangi

Short-course on Engineering Geology of Rock Slope, 20-21 December 2011, UKM Bangi

Technical Talk 1: Shallow Landslides, Soil Production, and Sediment Yield in Mountainous Watersheds – Multi-approach for Comprehensive Understanding of Hillslope Denudation Processes with Varying Time-scales, 30 January 2012, UKM Bangi

Technical Talk 2: Environmental Mineralogy for Management of Hazardous Inorganic Anions – Lesson Learnt, 19 March 2012, UKM Bangi

Training is periodically organised for the professional stakeholders of SEADPRI-UKM. About 300 participants have been trained since 2008.

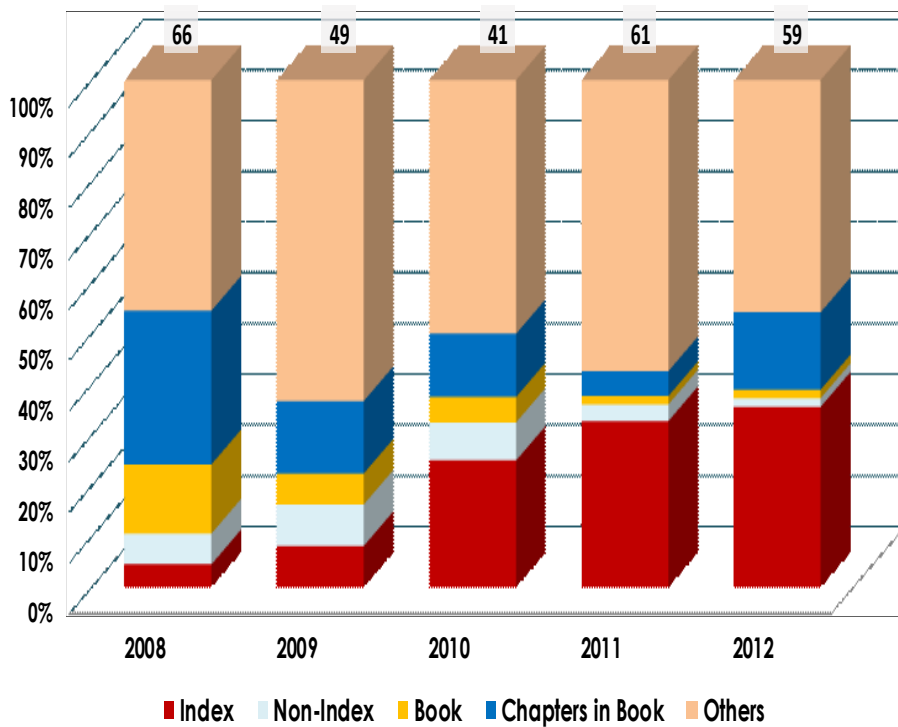


SEADPRI-UKM Publications

Dissemination of Research Findings

Research results are disseminated through different types of publications. These include books, journals, newsletter and brochures, among others. Efforts are being made to increase publication of indexed journals.

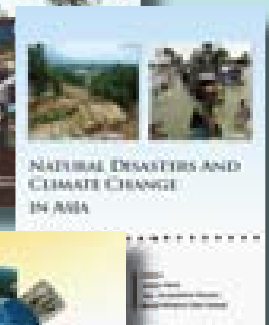
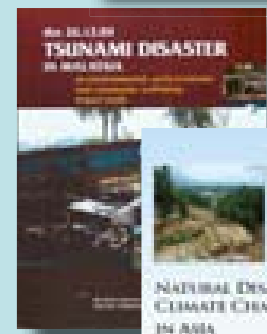
Overview of Publications from 2008 - 2012



Publications of SEADPRI-UKM has improved from 3 indexed journals in 2008 to 21 indexed journals in 2012. Other publications have consistently increased over this period.

SEADPRI-UKM FLAGSHIP

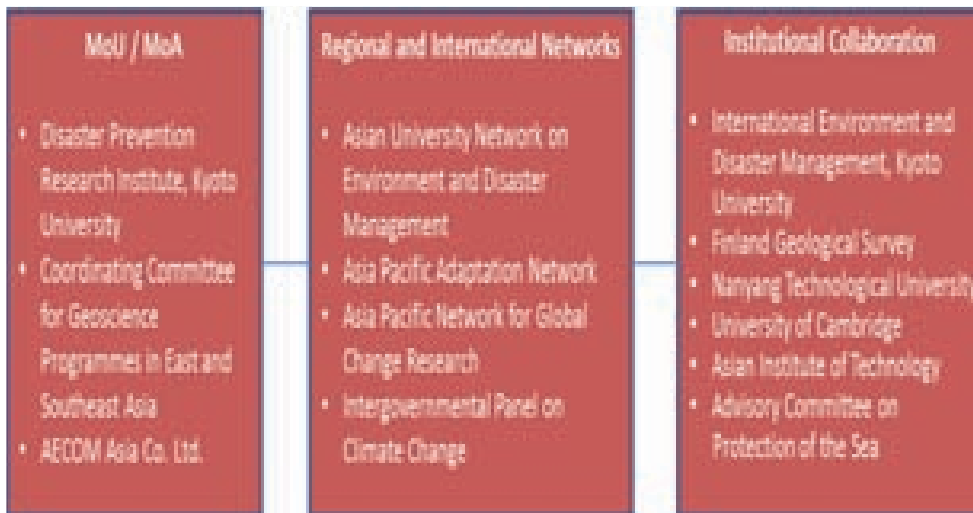
PUBLICATIONS OF SEADPRI-UKM



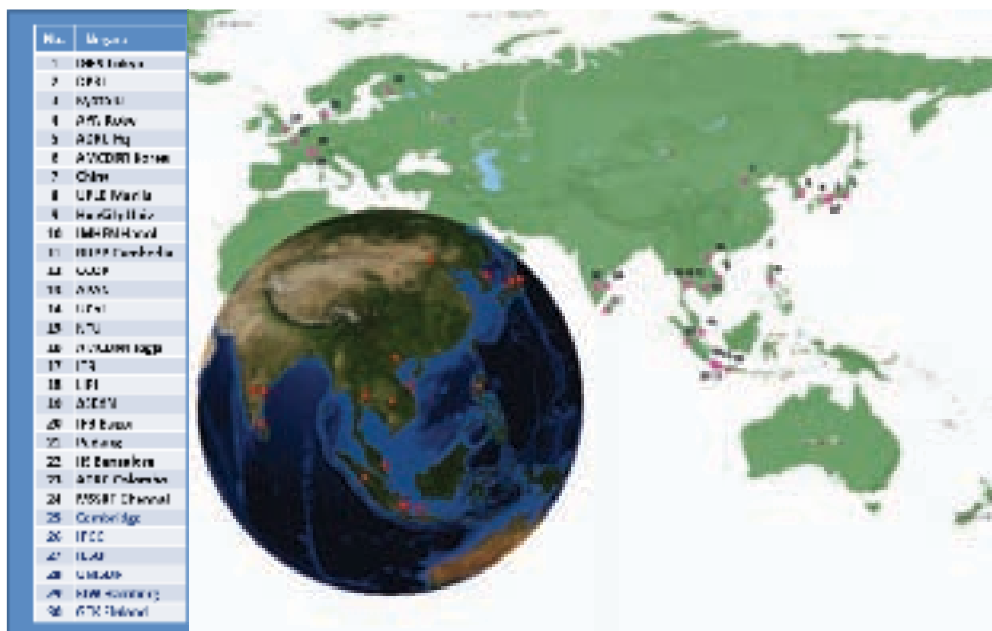
SEADPRI-UKM at the International Level

Building Capacity and Promoting **Iconic Linkages**

SEADPRI-UKM has established linkages with several active networks that operate and have ongoing work on disaster prevention at the regional level. The linkages are important entry points for collaboration in a number of regional activities.



SEADPRI-UKM collaborations at the international level.



SEADPRI-UKM serves as a hub for International Networks that are being established in the region.

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EVENTS ABROAD

Workshop on VietADAPT Project 4-6 January 2011, Vung Tau, Vietnam

The Workshop was jointly with the Institute of Hydrology, Environment and Meteorology Vietnam and Finland Geological Survey to outline the development and implementation of climate change adaptation strategies in coastal areas in Vietnam (VietADAPT). SEADPRI-UKM shared experiences of the institute with its regional partners to benefit the VietADAPT Project.

Expert Workshop on the State of Adaptation Practice in Lower Mekong River Basin, 2-3 February 2012, Singapore

The expert workshop was conducted under the Mekong River Basin Initiative that was jointly undertaken by the Earth Observatory Singapore of Nanyang Technological University and SEADPRI-UKM. The workshop brought together project managers from six projects in Mekong River Basin and adaptation experts and practitioners from the region to deliberate on the selection the final list of "successful" adaptation projects in the Lower Mekong Basin.

Asia-Pacific Climate Change Adaptation Forum, 18-20 March 2013, Incheon, Republic of Korea

SEADPRI-UKM jointly organised a parallel session on "Linking Research and Policy: Advancing Local Adaptation for Disaster Prevention" with the Asia Pacific Adaptation Network, Asian University Network for Environment and Disaster Management and Asia Pacific Network for Global Change Research. The outcomes of several local level initiatives were presented in the session with a view to provide insights on issues pertaining to adaptation for facilitating policy making for disaster prevention.

Research Meeting on DRR & CCA under the ASEAN and AUEDM Framework, 9-13 April 2013, Kyoto University, Japan

The Research Meeting was held with the International Environment and Disaster Management Laboratory of Kyoto University. The objective was to discuss collaborative research on disaster risk reduction and climate change adaptation under the ASEAN and Asian University Network for Environment and Disaster Management (AUEDM) framework.

SEADPRI–UKM High Impact Projects

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Early Warning Tools for Biohazards

Biohazards such as pathogenic and genetic modified organisms are increasingly threatening the health of Malaysians. Ongoing research on biohazards at SEADPRI-UKM is funded by the National Biotechnology Directorate (NBD), National Nanotechnology Directorate (NND) and Ministry of Science, Technology and Innovation Malaysia. The aim is to create an innovative platform technology combining biotechnology and nanotechnology, to develop early warning tools where biosensor devices serve as a rapid, in-situ and direct method of biohazard detection. The long term aspiration is to produce useful tools for disaster prevention.



PROJECT TITLE	FUNDING	AMOUNT	PROJECT LEADER
Climate Resilient Development - Linking Science and Governance for Sustainability	Research University Grant - UKM	RM 290,000.00	Prof. Dr. Joy Jacqueline Pereira
Geological and Palaeo-tsunami Studies	Department of Irrigation & Drainage, & UTM	RM 131,400.00	Assoc. Prof. Dr. Tajul Anuar Jamaluddin
Feasibility Study of Networking of Geoscience and Petroleum Institutes and Organisations in the CCOP Member Countries	Coordinating Committee of Geoscience Programme in East and Southeast Asia (CCOP)	RM 349,700.00	Assoc. Prof. Dr. Rawshan Ara Begum
Adaptation Roadmap for Malaysia	Universiti Tenaga Nasional (UNITEN) / NRE	RM 400,000.00	Prof. Dr. Joy Jacqueline Pereira
Disaster Risk Reduction and Climate Change Adaption	Industry & Community Partnership Grant, UKM	RM 25,000.00	Prof. Dr. Joy Jacqueline Pereira
Development of Indicator on Climatic Hazard and National Security for Malaysia	Ministry of Higher Education Malaysia	RM 72,800.00	Prof. Dr. Joy Jacqueline Pereira
Performance Enhancement of Chemical Sensor and Biosensor Devices for Targeted Market Applications and Commercialisation	Industry & Community Partnership Grant, UKM	RM 32,000.00	Prof. Dr. Lee Yook Heng
Chemical/Biosensors for Rapid Analysis of Food and Carrageenan from Seaweeds and Related Products	Ministry of Science, Technology & Innovation	RM 120,000.00	Prof. Dr. Lee Yook Heng
Contaminations of Petroleum Chemicals and Disaster Risk Evaluation of Selected Recreational Islands at the West Coast of Malaysia	Ministry of Higher Education Malaysia	RM 89,000.00	Prof. Dr. Lee Yook Heng
Human Security Engineering in Asian Megacities	Kyoto University, Japan	RM 14,888.30	Dr. Sharifah Munirah Alatas
Pembangunan Landskap Geologi untuk Pendidikan, Pemuliharaan dan Pelancongan	Ministry of Higher Education Malaysia	RM 253,000.00	Emeritus Prof. Dato' Dr. Ibrahim Komoo
Identification and Characterisation of Elements of Geohazard Preparedness and Response to Strengthen Legislative Measures in Malaysia	ERGS - Ministry of Higher Education Malaysia	RM 50,000.00	Dr. Sarah Aziz Abdul Ghani Aziz
Economic Approaches for Linking Disaster Risk Management and Climate Change Adaptation	ERGS - Ministry of Higher Education Malaysia	RM 50,000.00	Assoc. Prof. Dr. Rawshan Ara Begum
Cirian dan Mekanisme Gelinciran Tanah Tabii dan Buatan Manusia	Research University Grant - UKM	RM 30,000.00	Emeritus Prof. Dato' Dr. Ibrahim Komoo
Mechanics of Debris Flows in Hilly Terrains of Peninsular Malaysia	Ministry of Higher Education Malaysia	RM 30,000.00	Assoc. Prof. Dr. Tajul Anuar Jamaluddin
Investigation of Organic Quantum Cells Automata (QCA) Transduction for Multiple Biohazards Detection Based on Novel DNA Biosensors	Ministry of Higher Education Malaysia	RM 30,000.00	Prof. Dr. Lee Yook Heng
Assessment of Climatic Hazards	Ministry of Higher Education Malaysia	RM 30,000.00	Prof. Dr. Joy Jacqueline Pereira
Creating Silicon Nanostructure Platforms Pntegrated with Nano-biosensors for the Rapid Determination of Biohazards to Ensure Flood Safety	Ministry of Science, Technology & Innovation	RM 355,000.00	Prof. Dr. Lee Yook Heng
Mainstreaming Climate Change into Water Resources Planning and Management in the Citarum River Basin, Indonesia	AECOM Asia Co. Ltd.	RM 84,440.98	Mr. Tan Ching Tiong
Kajian Saintifik Permatang Kuartza Genting Kelang	Economic Planning Unit, Selangor	RM150,000.00	Prof. Dr. Mohd Shafeea Leman
Assessment of Climatic Hazards for Adaptation Response at the Local Level in Peninsular Malaysia	ERGS - Ministry of Higher Education Malaysia	RM 100,000.00	Prof. Dr. Joy Jacqueline Pereira
Cadangan Penubuhan Platform Kebangsaan dan Penghasilan Pelan Tindakan Pengurangan Risiko Bencana	Research University Grant - UKM & National Security Council (MKN)	RM 48,000.00	Prof. Dr. Joy Jacqueline Pereira
A DNA Biosensor with Dry-reagent for Rapid Detection of Biohazards Vibrio Cholera in Flood Disaster Zones	Sciencefund - Ministry of Science, Technology & Innovation	RM 265,000.00	Prof. Dr. Lee Yook Heng
Promoting Community Involvement in Disaster Management System	Industry & Community Partnership Grant, UKM	RM 20,000.00	Dr. Mohammad Imam Hasan Reza
New DNA Techniques for Rapid and On-site Strain Determination of Juvenile Asia Arowana (scleropages fonomus)	Institut Penyelidikan Perikanan (IPP) Penang	RM 90,000.00	Prof. Dr. Lee Yook Heng
Pembangunan Pendekatan Bersepadu untuk Pengurangan 'Risiko Asas' Bencana	Research University Grant - UKM	RM 45,000.00	Prof. Dr. Joy Jacqueline Pereira
Politics, Governance, Experiences and Responses to Flooding from the Locals and Migrants Perspective in ASEAN	Rockefeller Foundation	RM 27,000.00	Dr. Mohammad Imam Hasan Reza
Pencegahan Bencana Melalui Adaptasi -Hubungkait Sains dan Pengurusan	Research University Grant - UKM	RM 60,000.00	Prof. Dr. Joy Jacqueline Pereira

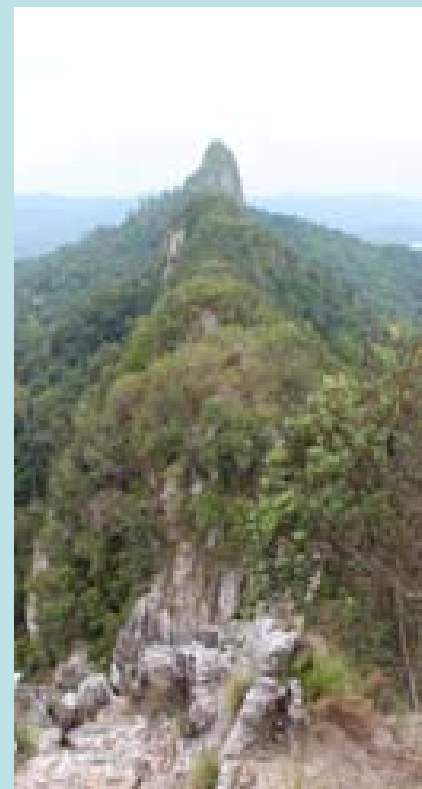
SEADPRI–UKM Key Publications

- Elmira Shamsiry, Behzad Nadi, Mazlin bin Mokhtar, Ibrahim Komoo, Halimaton Saadiah Hashim & Nadzri Yahaya, 2012. Impact of landfill leachate on water quality in Langkawi Island using management of environmental system. *Asian Journal of Chemistry*. 24(5), pp 1919-1923. ISSN: 09707077.
- Din, H.M., Toriman, M.E., Mokhtar, M., Elfithri, R., Aziz, N.A.A., Abdullah, N.M., Kamarudin, M.K.A., 2012. Loading concentrations of pollutant in Alur Ilmu at UKM Bangi campus: Event mean concentration (EMC) approach. *Malaysian Journal of Analytical Sciences* 16 (3) , pp. 353-365.
- Mokhtar, M.B., Praveena, S.M., Aris, A.Z., Yong, O. C., Lim, A.P., 2012. Trace metal (Cd, Cu, Fe, Mn, Ni and Zn) accumulation in Scleractinian corals: A record for Sabah, Borneo. *Marine Pollution Bulletin* 64 (11) , pp. 2556-2563.
- Razman, M.R., Jahi, J.M., Mokhtar, M.B., Arifin, K., Aiyub, K., Awang, A., 2012. Regulatory framework for municipal management on inland water resources toward sustainable development. *Journal of Food, Agriculture and Environment* 10 (2) , pp. 1069-1071.
- Razman, M.R., Jahi, J.M., Mokhtar, M.B., Ramli, N.A., Arifin, K., Azlan, A., Ngah, M.S.Y.C., Awang, A., 2012. The application of the law in Malaysia towards safety on drinking water: Study on law of tort focusing on private nuisance. *Journal of Food, Agriculture and Environment* 10 (2) , pp. 1072-1075.
- Gasim, M.B., Mokhtar, M., Surif, S., Toriman, M.E., Rahim, S.A., Lun, P.I., 2012. Analysis of thirty years recurrent floods of the Pahang River, Malaysia. *Asian Journal of Earth Sciences* 5 (1) , pp. 25-35.
- Norzaini Azman, Ibrahim Komoo & Sharina Abdul Halim, 2012. Academic Managers or Leaders? Developing a New Paradigm of Academic Leadership for University Organisation. *The International Journal of Knowledge, Culture, and Change Management*. 11(3), pp 71-83. ISSN: 1447-9524.
- Md. Azizul Bari, Pereira, J.J., Rawshan Ara Begum, Raja Datuk Zaharaton Raja Zainal Abidin & Abdul Hamid Jaafar, 2012. The Role of CO2 Emission in Energy Demand and Supply. *American Journal of Applied Sciences*. 9 (5): 641-646. ISSN 1546-9239.
- Md. Shahin Mia, Rawshan Ara Begum, Ah-Choy Er, Raja Datuk Zaharaton Raja Zainal Abidin & Pereira, J.J., 2012. Burden of Malaria at Household Level: A Baseline Review in the Advent of Climate Change. *Journal of Environmental Science and Technology*. 5(1): 1-15. ISSN 1994-7887.
- Md. Sujahangir Kabir Sarkar, Rawshan Ara Begum, Pereira, J.J., and Abdul Hamid Jaafar, 2012. Review of Costs and Methods for Climate Change Adaptation. *Journal of Environmental Science and Technology*. 5(6): 397-406. ISSN 1994-7887.
- Rawshan ara Begum & Pereira, J.J., 2012. Holistic Ecological Footprint for Malaysia. *Journal of Applied Sciences Research*. 8(9): 4783-4787. ISSN 1819-544X.
- Rawshan Ara Begum, Ibrahim Komoo & Pereira, J.J., 2012. Linking Green Technology and Disaster Risk Reduction. *Advances in Natural and Applied Sciences*, 6(8): 1296-1301, 2012. ISSN 1995-0772.
- Rezayi, M., Heng, L.Y., Kassim, A., Ahmadzadeh, S., Abdollahi, Y., Jahangirian, H. 2012. Immobilization of ionophore and surface characterization studies of the titanium(III) ion in a PVC-membrane sensor 12 (7) , pp. 8806-8814, *Sensors* (Switzerland).
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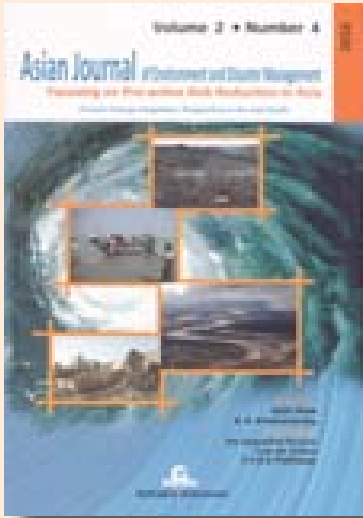
Geohazards and Heritage Conservation

SEADPRI-UKM is studying the 14-km-long Klang Gates Quart Ridge that traverses the eastern part of Kuala Lumpur and Selangor, to assess the various hazards to which this area is exposed. SEADPRI collaborates with the Department of Minerals and Geoscience Malaysia (JMG) in this initiative, which is funded by Town and Country Planning Department (JPBD) Selangor. The findings will be used to support the nomination of the Klang Gates Quart Ridge as a National Heritage Site and subsequently earn it a listing as a UNESCO World Heritage Site.



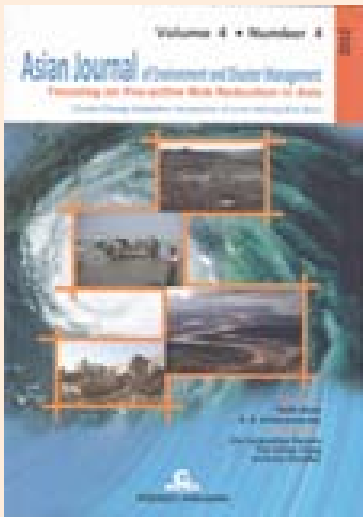
by Lim Choun Sian, Lee Yook Heng,
Jumrah Nunurung & Mohd Khairul Zain

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Volume 2, Issue 4 of the Asian Journal of Environment and Disaster Management is the first collection of 10 peer-reviewed papers from the two workshops organised in Malaysia by the Southeast Asia Disaster Prevention Research Institute (SEADPRI-UKM) of Universiti Kebangsaan Malaysia in 2009 and 2010, in collaboration with principle linkages - the Asian University Network on Environment and Disaster Management (AUEDM) and ORBICOM, the Network of UNESCO Chairs in Communication - as well as national partners. It presents findings of the project, documenting climate change adaptation perspectives in the Asia Pacific, and country experiences in the water and agriculture sectors.



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Volume 4, Issue 4 of the Asian Journal of Environment and Disaster Management summarises the research result of the Mekong River Basin Initiative. The Mekong River Basin Initiative is conducted by the Earth Observatory of Singapore, Nanyang Technological University in Singapore, in collaboration with the Southeast Asia Disaster Prevention Research Institute (SEADPRI-UKM) of Universiti Kebangsaan Malaysia and the Asian University Network on Environment and Disaster Management (AUEDM). It is a research initiative to identify successful climate change adaptation projects and transboundary issues in the Lower Mekong River Basin. The Initiatives seeks to identify success factors and models for learning as well gaps and issues arising from the transboundary nature of the region that would result in a set of capacity building measures.

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