



MALAYSIAN SOCIETY OF SOIL SCIENCE (MSSS)

NEWSLETTER

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The MSSS Management Committee would like to extend their heartfelt
Happy New Year 2015 greetings.

REFLECTIONS ON WORLD SOIL DAY (5 DEC)

The World Soil Day which falls on 5th December every year, is a day dedicated to soil. The World Soil Day is supported by FAO and is officially adopted by the United Nations. The dedication compels us to reflect on the current state of the soil resources in Malaysia, and to continuously promote education on soil resources, awareness of soil degradation and campaigning to secure healthy soils at all levels. Soil degradation can take place naturally (the flood faced presently) and worse still, accelerated by man (logging of forest, etc.). Soil erosion, a form of degradation has garnered public outcry such as the recent landslides in the Cameron Highlands that has affected infrastructure and caused loss of lives. Landslides are due to instability of slopes and are influenced by geological, morphological, physical and human factors. The main trigger of landslides is heavy or prolonged rainfall, that drives an increase in pore water pressures within the soil. When the soil is saturated, the fluid pressure provides the soil block of the slope with buoyancy, inducing movement or sliding of the soil block. Most erosion prone areas are mountainous, steeply sloping and covered with rainforest. Forests regulate runoffs and therefore important for flood and erosion control. Great care is required in managing the development of all areas with severe erosion risk. These lands should not be exploited or should be left untouched. However, if development is necessary, the very best conservation practices must be adopted. Although the Agriculture Department insist farmers adopt good agriculture practices (GAP), guidelines such as no farming above 25° of slopes are not adhered too. Thus, there is an urgent need to increase the awareness of all relevant parties or stakeholders, and to promote sustainability of our limited soil resources using the best available scientific information and building on all dimensions of sustainable development. *Photos and text provided by Prof. Dr. Che Fauziah Ishak, MSSS Vice President (Pen. Malaysia)*



IN MEMORY OF TAN SRI ANI AROPE



Photo source: Berita Harian

The MSSS would like to extend our deepest condolences to the kin of the late Tan Sri Ani Arope, who passed away on December 19, 2014 at the age of 82 due to prostate cancer. Born on May 17, 1932 in Sungai Bakap, Se-

berang Prai, Penang, Ani is survived by his wife, Puan Sri Saenah Ahmad and three children besides several adopted children. In earlier days, Ani studied in St Xavier's Institution in Penang and left to New Zealand as a Colombo Plan Scholar in 1956 and graduated with Bachelor of Agricultural Science through Lincoln College in 1960. Ani was also the first Malaysian to get a Fulbright scholarship in 1966, where he completed his MSc. in the University of Vermont, US. **The late Tan Sri was a prominent scientist as well a MSSS Honorary member who was elected in 1991.** He was the executive chairman of TNB from 1990 to 1996 and previously served in the Rubber Research Institute Malaysia (RRIM) and in Guthrie Bhd. In RRIM, he was the distinguished recipient of the Chevalier Order des Palmes Academiques Award in 1982 by the French government in recognition of his contribution in promoting science and education and ensuring the exchange of scientists between the RRIM and French universities. In a citation for his honorary doctorate of laws in Indianapolis University in 1995, the Indianapolis University- Purdue University Indianapolis School of Engineering and Technology, dean Alfred R. Potvin said this of Ani, "**He himself embodies the best result of a liberal education – a skilled generalist, a truly modern-day Renaissance man.**" Tan Sri Ani Arope released his long-awaited book 'Memoirs of Tan Sri Ani Arope' in October 2013. The Malaysian Society of Soil Science will remember his lifelong contributions in science.

Text by Jeyanny Vijayanathan

AT A GLANCE : KUALA TATAU, BINTULU

A brief educational trip was organized by the UPM Bintulu campus, to the coastal area of Kuala Tatau, Bintulu, Sarawak to assess the agricultural activities among local farmers. The area is mostly populated by the Iban and



Mr. Ugak & Mr. Tawi

Melanau Bai community involved in fishing and farming as their main socio-economic activities. Although, oil palm cultivation is slowly creeping into this area, few areas are still planted with paddy and vegetables. Our interview with Encik Tawi Anak Mesa and his elder brother, Mr. Ugak revealed that paddy cultivation normally takes place from October to March, during the monsoon season. **Common rice varieties which are utilized are Bario, Lemak, Paku** or other local varieties due to local demand. The paddy field yields close to 3 tonne ha⁻¹ per season, where 70% of the yield are sold at the Bintulu Market at the price of RM25-30/bushel. According to the farming brothers, paddy cultivation in peat area is manageable except during the interference of rats and sparrow. During dry season (April - September), the area will be cultivated with vegetables such as corn, ladies fingers, and pumpkin. The purpose of the educational trip was to observe the differences of agricultural activities and land management strategies undertaken in these areas. *Photos and text by Dr. Wan Asrina W. Yahya & Ami Japar, Faculty of Agriculture & Food Sciences, UPM Bintulu Campus.*



Paddy fields at Kuala Tatau, Bintulu

PUBLIC LECTURE : SPECIAL REPORT

Photos and text by Mohd. Rizal Ariffin



In conjunction with the World Soil Day 2014, Malaysian Society of Soil Science (MSSS) and Universiti Putra Malaysia (UPM) jointly organized a Public Lecture by Dr. Paramanathan Selliah. The public lecture which was held at the main hall, Faculty of Agriculture on Friday, 5th of December 2014 (8.30 am to 12.00 pm) witnessed an overwhelming response from various agriculture related institutions with a total of 128 participants. Dr. Param, Managing Director of Param Agricultural Soil Surveys (M) Sdn. Bhd is involved in soil survey and soil science for more than 50 years. He graduated with Bachelor of Science (Honours) Geology from the University of Malaya in 1965 and joined the Soil Survey Division of the Department of Agriculture in 1966. He received his PhD from University of Ghent, Belgium in 1977. Dr. Param fascinated the audience with two lectures entitled “The History and Progress of the Soil Surveys in Malaysia” and “Sustainable Land and Water Management”. The first presentation focused on soil survey techniques and its evolution in Malaysia. The second presentation discussed issues related to limited natural resources such as soil and water, rapid urbanization, productivity levels and the survival of mankind in the modern era. The public lecture was well received by attendees and is a crucial avenue to promote the importance of soil science research and development. It was also a formidable platform for networking among soil scientists, research officers, agricultural officers, lecturers and students. The MSSS will continue to organize soil science related topics in near future for common benefit.

JOURNAL REVIEW

Title: Selected Papers On Soil Science Problem Soils
Publisher: Agricultural Crop Trust (ACT) and Param Agricultural Surveys (PASS)
Author: S. Paramanathan ISBN: 978-983-43384-3-5

Dr.S.Paramanathan is well known as a distinguished soil scientist in tropical regions. He has worked many years on problem

soils such as tropical peat, acid sulfate and sandy soils. Based on his experience of conducting soil survey and mapping for almost 1.5 million ha in Asia, his sharing of experience and knowledge through this book is timely. The book basically provides an insight to sustainable land and water management which is key to the survival of mankind in the light of global increase in world population and demand for food. Problem soils such as peat, acid sulfate and sandy soils can be managed to meet the current demand for food and growing population. The book also reviews the extent of tropical peatland in Malaysia and Indonesia and the understanding of the structure, ecology and its characteristics. His work highlights the misconception on subsidence and over estimation of carbon stock and carbon loss during development. There is a greater call for research and development in tropical peatland and the achievement of a National Peatland Policy. Dr. Paramanathan also described the characteristics and management of sandy soils mainly for oil palm plantation. He also pointed out the current discrepancies on acid sulphate soil classifications in Peninsular Malaysia, Sabah and Sarawak and the need for a unified classification system. He further discussed its limitations and management strategies in this book. This book will be a handy manual for planters and agriculturist in managing problem soils and achieving its site yield potential. *Reviewed by Mr. Ramesh Veloo, Head of Advisory (Oil Palm & Rubber), Tradewinds Plantation*



Soil Science Conference of Malaysia 2015



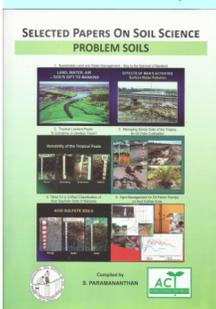
“Soil Security for Sustainable Food Production”



7th – 9th April 2015
 The Everly Hotel, Putrajaya



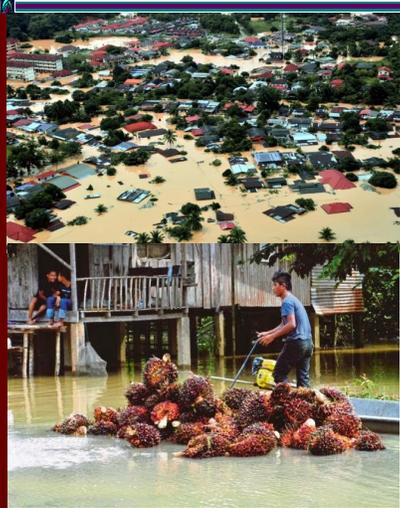
Jointly Organized by
 MSSS and Universiti Putra Malaysia



SOIL CORRELATION REPORT 2014

Photos and text by Dr. Rosazlin Abdullah.

The DOA-MSSS Soil Correlation 2014 (Cherating-Kuantan-Temerloh Route, Pahang) was jointly organized by the Department of Agriculture (DOA) and Malaysian Society of Soil Science (MSSS). It was held from 19th-20th August 2014 and was successfully moderated by Mr. As'ari Hassan and his staffs who were responsible for site preparation and facilitation of the correlation. The purpose of the soil correlation was i) to disseminate information on recent developments on soil mapping and classification ; ii) to stimulate and encourage exchange of knowledge and experience on the classification and utilisation of soils and iii) to promote judicious use of land in line with the principle of sustainable development and good agriculture practices. A total of 30 participants from 13 different agencies comprising agronomists, planters, academicians and researchers attended this event. The soil correlation tour was well organized and provided hands-on training to participants who are new to soil science. It also encouraged knowledge sharing and technical discussions among the participants who came from diverse scientific disciplines. A total of nine soil pedons were examined within 2 days where the first stop commenced on the 19th August 2014 near the Kuantan-Kemaman Road, Baging, North of Kuantan. Two BRIS (Beach Ridges Interspersed with Swales) pedons derived from the Baging and Jambu soil series were observed and discussed. The participants had the opportunity to examine the soil profile and classify the soils in groups. The second stop was located around Beserah and Kuantan area where 3 soil pedons (Kuantan, Beserah and Rengam soil series) originating from igneous rocks such as basalt and granite were observed. On the 2nd day (20th August 2014), participants were given the opportunity to examine 2 soil pedons (Serdang and Segamat soil series) along the Kuantan-Temerloh route which was developed from shale and andesite. Following suit, 2 more soil pedons at the river banks of Pahang, Temerloh were observed. This area was at the Pusat Pertanian Buntut Pulau, Temerloh which had the Kerayong soil series. The tour was designed to educate participants in detailing soil profile descriptions, identifying soil types and its development, properties and classification. Information provided by soil profiles will stimulate participants to predict how soils may perform under specific nutrient management conditions. The MSSS would like to record their sincere appreciation to DOA, working committee and the sponsors for their timeless efforts in coordination, pit excavations, facilitation and providing handbook materials for the tour.



MSSS helps!

The recent flood episode in Malaysia has damaged many infrastructures, vehicles and the livelihood of our Malaysian farmers. MSSS has pledged to contribute RM 1000 via the Balai Ikhtisas Malaysia (BIM) as a helping hand. Besides monetary assistance, it is time to **rethink** how our **soil scientists** can assist agricultural farms and plantations which were submerged underwater for prolonged periods in order to revive their crops. How do we provide aeration for the damaged roots? How can we amend the soil which was recently flooded? Can future crops be genetically modified to withstand flooding effects? How can we reduce the effects of metal sulphides? It's time to strategize for these unforeseen circumstances now and for the future! ***

2015

International Year of Soils



ORGANIC FARMING TECHNOLOGY

Photos and text by Norziana, Z.Z, Theeba, M., Haryati, M., and Illani, Z.I.



Discussion with farmers

In enhancing the organic farming research, MARDI has done a lot of research in diverse aspects of the process to develop technology for organic farming use. However, the impact of technology gaps among researchers and farmers has not been addressed, thus resulting under utilization of technologies. A benchmarking study on the technology gap in organic farming has been designed in order to pinpoint a specific problem that breaks the chain of technology transfer. A strategic survey has been done in most of the organic farms in Malaysia and it needs to be compared with other countries. Japan was chosen to be compared due to its leading advancements in organic certification and farming. Its valuable technologies should be studied and if appropriate, may be adopted and applied in this country to improve the current organic production system. With this aim, MARDI has organized a technical visit to Japan's established organic farms and discussion with their authorities of organic associations. A total number of four research officers from MARDI have visited Chiba, Japan from 3rd until 7th July 2014, to acquire knowledge and exposure on organic farming technologies and discover the technology gaps which could be applied here. The agenda of the visit includes meeting with local organic rice growers and entrepreneurs, organic farm tours, visit to organic white and brown rice processing mills which is located in Sakae. Apart from the visits, MARDI team had a fruitful discussion with private entrepreneurs of organic vegetables in Sanbu, Chiba in order to understand the marketing of organic product in the Japan. They also had a discussion with the government representatives from the Policy Research Institute of Ministry Agriculture, Forestry and Fisheries of Japan (PRIMAFF), Center of Japan Organic Farmers Group (CJOFG), International Foundation for Organic Agriculture Movements (IFOAM), Chiba University and Rikkyo University in understanding the Japan organic certification processes. Both countries had presented the scenario of organic agriculture and technology used respectively. The significant outcomes acquired from this visit were the knowledge on improving efficiency and productivity of organic farming technologies and establishing organic industry as an important socio-economic strategies in the country. This may also further assist on establishment and improvement of existing organic agriculture policies and strategies in Malaysia.



The Malaysian & Japanese delegates

CHAT WITH OUR SOIL EXPERT- *Dr. S. Paramanathan*

1. What interest you to study soil science? *A: I studied Geology during my undergraduate but picked up on soil science when I started working in Soil Survey Division, Department of Agriculture.*
2. Who would be the best soil science mentor in your experience? *A: The late Dr. Hari Eswaran. He got me interested in USDA's Soil Taxonomy which showed me the relationships between different groups of soils and their uses.*
3. What do you find most exciting about soil science? *A: Every soil is a challenge, to understand how it was formed (genesis) and to classify it. We need to know what crops suits the soil and its management too.*
4. How would you stimulate the younger generation to study soil science? *A: Look at soils as a living medium. Try to find relationships between soils to understand its genesis. Try to relate soil properties and understand how the soil properties affect the crop and its management.*
5. What is the future of soil science in your perspective? *Soils is the basis for sustainable food production for mankind. Thus, soil science is a long term requirement for us to feed the increasing world population. We also need to retain the biodiversity in our country, for our future generations. Look at soil science as keeping mankind well fed and alive - This is a challenge.*

IUSS ALERTS

- The IUSS has published the latest newsletter online. Find out more about the global soil research and developments in this issue! Its available at <http://www.iuss.org/images/stories/newsletters/DIVISION%204%20Newsletter%20ISSUE%201.pdf>
- A NEW IUSS Secretariat has been established permanently in Vienna, Austria to manage IUSS activities closely with the President and President Elect.
- A new soil themed coloring book has been released by the Soil Science Society of America. Find out [more!](#)
- Infographic '[Healthy soils for a healthy life](#)' released by FAO to commemorate International Year of Soils 2015.
- More IUSS alerts [here](#)



MEMBERSHIP

MSSS Membership is open to all professionals and graduate students, within and outside Malaysia. Please visit our website <http://msss.com.my/apply.htm>.

FEES : RM50.00 per year for ordinary membership, or RM400.00 for life membership

ON SALE!

Please contact us for enquiries or purchase of MSSS publications (Proceedings, Journals, and Books). Please visit our website <http://www.msss.com.my/publications.htm>



MJSS Volume 18 (December 2014) is out!

MJSS - CALL FOR PAPERS



The Malaysian Journal of Soil Science (MJSS) is a scientific journal published by the Malaysian Society of Soil Science. It contains research papers in English on matters related to soil and soil-plant interactions. The journal welcomes original research works not previously or simultaneously published in any other scientific or technical journal from MSSS members as well as other scientists in Malaysia and abroad. The aim of the journal is to promote the development of soil science

in Malaysia, other tropical and subtropical regions. MJSS is a peer-reviewed, fully open access journal, is now indexed by Scopus and published annually. Instruction for authors and other details are available on our website <http://www.msss.com.my/mjss/index.htm>

Announcements!

- [SOILS](#), Putrajaya, Malaysia, 7-9 April
- [3rd Global Soil Week](#), Berlin, Germany April 19-23
- [Int. Conf. on Soil](#), Tirana, Albania, 4-7 May
- [Digital soil morphometrics](#), Madison, USA, 1-2 Jun
- [Global Soil Security Symposium](#), May 19-21, Texas.
- [International Soil Conference on Sustainable Uses of Soil in Harmony with Food Security](#), August 17-20, Phetchaburi, Thailand



Earthworm tunnels increase water filtration into soil by 4– 10x



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