

i-FoRST

Info from Faculty of Resource Science and Technology



OCW
AWARD IN
NATIONAL
UNIVERSITY
E-LEARNING
CARNIVAL
2014

The Aquatic Science Colloquium (AQUAColl 2014)



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Message from the Dean



Congratulations to the editorial board for the continuing publication of i-FoRST.

In 2015, the faculty hopes to continue the excellent work in academic and research. All these require commitment and support from all parties especially lecturers and support staff. Although there are many challenges still lie ahead, I am confident that by working together we can deliver our shared goal.

Earlier this year, FRST's strategic plan has been drafted to provide direction to faculty in strengthening and improving the performance of each strategic objective aligned with university and ministry blueprint. Our goal is to equip our students holistically to allow them to succeed in all of the opportunities available and challenges they face.

Let us take this exciting and challenging journey together.

- Assoc. Prof. Dr. Othman Bojo

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Best Open Courseware (OCW) Award through Animal Physiology Course

Dr Chong Yee Ling and Mr. Badiozaman Sulaiman from the Faculty of Resource Science and Technology, Universiti Malaysia Sarawak (UNIMAS) won the Best Open Courseware (OCW) Award through Animal Physiology Course STH 2203 in National University Carnival on E-Learning recently. They took home a cash prize of RM1000.00, a trophy and certificate of participation.

This carnival was held from 14th to 15th November 2014 which was organized by the Council of Heads of E-Learning Coordinator, Malaysian Public Universities (MEIPTA), Universiti Teknologi Mara (UiTM) and the Ministry of Education (MOE) in Shah Alam Convention Centre (SACC), Shah Alam.

This course covers the core knowledge on animal physiological adaptation to environmental challenges and highlight the basic physical and chemical principles that underlie these physiological processes. Some selected biological systems are also emphasized, including the



respiratory, and circulatory systems, thermoregulation, endocrine and nervous systems.

This is the first course offered in OCW in Malaysia. The content and delivery methods in this course has been adapted to be easily understood by the general public but the important concepts learned in animal physiology are applicable at the university level. To facilitate the understanding of the readers, the comparative learning approach using relevant examples are also included. Various types of self-reflection activities such as quizzes, mind maps and critical thinking questions are included to allow the readers to reassess the level of understanding after attending this course. In addition, the variety of teaching-and-learning delivery approaches that include video, animations, and puzzles have been incorporated in this course to make the learning process fun and attractive.

The Aquatic Science Colloquium (AQUAColl 2014) – Experience Sharing In Aquatic Research III: Pulau Sampadi Marine Life Expedition, 16th October 2014.

The department of Aquatic Sciences has successfully organized its 3rd Aquatic Science Colloquium on the 16th of October 2014. The colloquium was also co-organized by Sarawak Forestry Corporation. The theme for the symposium was “Experience Sharing in Aquatic Science Research III: Pulau Sampadi Marine Life Expedition” which focused and discussed on the research activities conducted at the Sampadi Island on 16th - 20th July 2012. Data obtained from the expedition were hope to strengthen and justify the promotion and gazettelement of Pulau Sampadi as a Marine National Park. Participants from Sarawak Biodiversity Center, Fishery Department, Sarawak Forestry Corporation as well as postgraduate students took part in presenting papers in this colloquium. The organizing committee was really honored and thankful to have Yang Berbahagia Datu Haji Ali Yusop (CEO-Sarawak Forestry Corporation) to officiate the opening of AQUAColl 2014.



Group photo of the organising committee together with the co-organiser, Sarawak Forestry Corporation as well as other participants from Fishery Department, Sarawak Biodiversity Center and UNIMAS postgraduate students.



The VIPS. From left, Assoc. Prof. Dr. Norhadi Ismail (Chairperson, AQUACOLL2014-UNIMAS), Assoc. Prof. Dr. Mohd Hasnain Md Hussain (Dean, FRST-UNIMAS), Datu Haji Ali Yusop (CEO-Sarawak Forestry Corporation), Prof Dr. Kopli Bujang (Deputy Vice-Chancellor- UNIMAS) and Mr Francis Gombek (Manager, Totally Protected Areas and Biodiversity Conservation Unit- Sarawak Forestry Corporation).



Registration counter. Participants, presenters and general attendees were asked to register for future collaborations and networking.

Have you ever thought for a second before throwing things into your bin? Your trash could be someone else's treasure. Keep reading this article to find out why thinking before you throw is always a wise decision for you and future generations.

Malaysians throw out about 22,000 tonnes of solid waste per day and the number is getting higher each year. The number includes domestic waste (from homes), construction waste, municipal cleaning waste and others. More than often, per capita generation of solid waste in the urban area is much higher (1.5 kg/capita/day) as compared to the rural area (an average of 0.8 kg/capita/day), mostly due to higher standards of living in urban area.

The ever-increasing trend of solid waste creates collection, transport and disposal problem. The landfill way of managing the solid waste will never be sufficient because the solid waste keeps on increasing, and the landfill area is limited.

About 50% of the total solid waste in Malaysia consists of food waste. The remaining percentages come from plastics, glasses, papers and others. Since 30-50% of solid waste in Malaysia are recyclable materials, we all can make a difference to the environment and our future generations by doing simple things at home.

Let's start by reducing waste and recycling at home. To reduce waste, never buy something you do not need. If you must buy take away food, use your own trendy and colourful food containers. Bring reusable bags when you go shopping to reduce plastic bag usage. Reduce your paper usage by unsubscribing to unimportant mails. You can also opt for electronic bills and newspapers whenever possible.

Recycling at home can be done by separating your domestic waste. It's easy, you just have to put away food waste into separate bin. Get yourself three recycle bins for papers, cans/glasses, and plastics. You can use any appropriate material at home as recycle bins – boxes, baskets or pails. Ensure that all your recycle bins are clean and dry. Before you place any recyclable material into the bins, make sure it is free from insect and rodent attracting ingredients.

You may be surprised by the amount of papers, cans, plastics and bottles you have at home only after a month of consistent recycling. Now what do you do when your bins are all filled up? You can send them to your local recycling centers or mobile recyclers when they drop by your residential area. If you could not find time to do that, you can always put the recycle bins separately nearby your waste bin for collection by the garbage collecting operators. Maybe it is your trash, but it is someone else's treasure!

What is right is right, even if you are the only one doing it. You can make a difference to our environment.

Waste Reduction and Recycling at Home



A typical overflowed landfill in Malaysia. You can choose not to dump everything into the landfill



There is something stylish in practicing recycling at home

FRST Postgraduate research awarded as Top 3 winners for the Postgraduate Food Safety Research Award Competition at National Level



This year, the Malaysian Institute of Food Technology (MIFT) in collaboration with Mead Johnson Nutrition (MJN) has organised its first Postgraduate Food Safety Research Award Competition. Its main objective is to honour and recognise food safety research among postgraduate researchers with potential industrial and public application. A team consisted of lecturers (Dr Lesley Maurice Bilung, Prof Dr Kasing Apun, Dr Samuel Lihan and Dr Micky Vincent) and postgraduate student (Ms Velnetti Linang) from the Department of Molecular Biology has submitted a research paper on “Application of SYBR Green based Real - Time Polymerase Chain Reaction (Real - Time PCR) assay for specific detection and quantification of *Vibrio parahaemolyticus* from environmental samples and seafood”. This project was awarded as the Top 3 Winners. She received were awarded with a certificate, a plaque and cash prize of RM2000. The award ceremony attended by Miss Velnetti Linang was held on 4th September 2014 at Holiday Villa, Subang, Selangor. At the ceremony, Miss Velnetti Linang was also invited to present their findings at the 2-days Seminar on Food Safety Management Systems (FSMS) organized by MIFT-MJN.

- Velnetti Linang



Photo by MJFT Secretariat

Do you know what h-index is? Some refer to it as Harzing Index while others joked about it – calling it the “Happy Index” or “Horrible Index” depending how it affects them. Are you aware of how it affects you as an academic?

Based on Wikipedia resource (https://en.wikipedia.org/wiki/H_Index), h-index is created by a theoretical physicist, Jorge E. Hirsch, and hence, h-index is actually “Hirsch index”. It is a way of measuring the quality (productivity and impact) of the work published by researchers by taking into account a researcher’s most cited papers and the frequency of citations from the publications of that researcher. This means that if a researcher’s h-index is 5, he/she has published 5 papers of which each have been cited not less than 5 times. The merits of applying h-index is that it measures the quality of our publication by not merely and solely relying on journal impact factor. We can obtain our h-index using the Harzing’s Publish or Perish programme or the Google Scholar Citation platform.

Now, what about journal impact factor (IF)? Journal IF was created by Dr Eugene Garfield (founder of the Institute of Scientific Information, ISI; now known as Thomson Reuters) and Irving Sher in the mid-70s with the purpose of providing a quantitative metric to compare and rank journals (from Thomson Reuters, 2008: <http://community.thomsonreuters.com/t5/Citation-Impact-Center/Preserving-the-Integrity-of-The-Journal-Impact-Factor-Guidelines/ba-p/1218>). To obtain a two-year IF of a particular journal, the calculation is based on adding the numbers of citation from articles published by that journal in the preceding two years, and dividing it with the number of same two years. Therefore, if the Journal ABC in 2010 and 2011 is published in the two years is 500, then the IF of Journal ABC in 2012 is 2.

Once we fully understand we will begin to appreciate its gauging quality research among still perceived them as unfair performance, and criticise it say that it favours those from hemisphere, especially those disciplines. Understandably, measurement have limitations. the different citation culture For example, in the arts and findings may not be as prevalent those in the hard sciences. At the those in biomedicine to cite from to those in philosophy or history. when used to compare the quality the same field. In fact, journals with and in many journals for the Arts and Humanities also. So, the claim that IF is a number’s game is actually untrue.

h-index and Impact Factor: What are these?

how h-index and journal IF work, objectiveness and reliability in researchers. Nonetheless, many discriminatory metric for evaluating as a “numbers’ game”. Some famous universities in the Western in the bioscience and medical these two forms of quality In using them, one has to consider among the different disciplines. humanities citing the latest published among researchers compared to same time, it is not common for old academic books, as compared Hence, journal IF is more relevant of published work among those of IF exist for a wide range of disciplines,

One of the reasons why IF and h-index are feared is the fact that top management of reputable universities often use them to evaluate staff performance. A 2010 report* in Nature, critically questioned the fact that careers of researchers can be sum up by mere numbers derived from IF and h-index. It revealed that 63% of survey respondents oppose the use of these metrics in academic promotion, and argued for the consideration of other qualities or factors aside from publication metrics as criteria for academic quality. Indeed, h-index and IF do not accurately indicate the quality of an academic, but they do provide reliable measurement of publication quality. It is this understanding of h-index and journal IF that should form the basis for university administrators and academics to use them fairly and effectively.

Preserve the Mangroves: Eco-Bako Project at Kuching Wetland National Park

About 150 people comprising students, and staffs from the Department of Zoology, FRST, UNIMAS together with staff of PETRONAS and Sarawak Forest Department (SFD) trudged around the muddy Kuching Wetland National Park (KWNP) happily as they did their part for the future generation through mangrove conservation. The activity which was held on 18th October 2014 as part of Eco-Bako project, a joint initiative between PETRONAS Sarawak Regional Office and SFD to rehabilitate and conserve the mangrove forest.

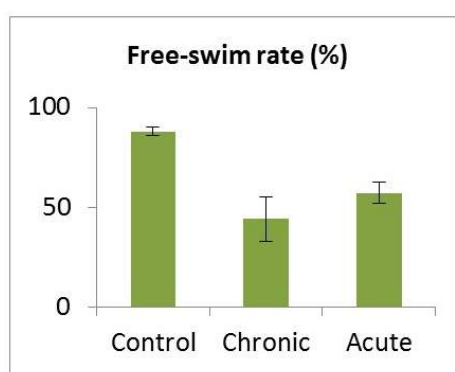
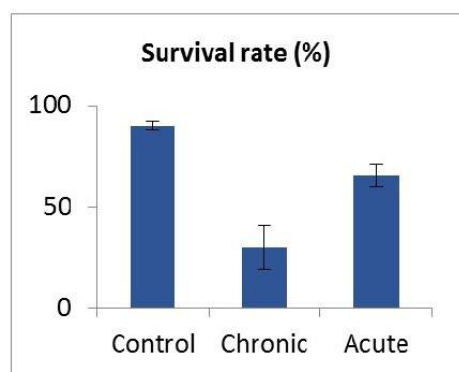
Eco-Bako is a combination of the words ecology and 'Bakau' which pronounced as 'Bako', meaning mangrove in Sarawak-Malay. During this activity, approximately 1,000 mangrove seedlings of Bakau Kurap (*Rhizophora mucronata*) were planted in a five-hectare plot along Sungai Lemidin, a designated site for PETRONAS' corporate social responsibility programme.

KWNP was gazetted in 1992 and covered an area of 66.1 km² on the estuarine reaches of the Sibulaut and Sungai Salak rivers. The predominantly saline and deltaic mangrove system includes an extensive network of marine waterways and tidal creeks, formed by the interconnecting rivers of Sungai Sibulaut, Batang Salak and Sungai Santubong that serve as the boundary of the park. Some small patches of heath forest are found within the park. KWNP was support listed as the 5th RAMSAR site in Malaysia on 8th November 2005. KWNP covers a mixed of coastal, marine and freshwater ecosystems which act as the habitat for over 100 species of birds, including the Lesser Adjutant Stork (*Leptoptilos javanicus*) which is listed in The International Union for Conservation of Nature (IUCN) Red List of Threatened Species 2014 as Vulnerable. There are also eight species of mammals, of which six are categorised as high conservation value species, examples include the Proboscis monkey (*Nasalis larvatus*) and the Silvered Leaf monkey (*Trachypithecus cristatus*). Another interesting mammal which can be found around the area is the Irrawaddy Dolphin (*Orcaella brevirostris*). Other than that, KWNP supports at least 121 species of fishes from 78 genera and 44 families.

- Wan Nurainie Wan Ismail, Ratnawati Hazali & Yee Ling Chong



Subtle Threat of the Household Surfactant to Aquatic Fauna



Effect of SLS exposure on post-hatching survival rate and free swim rate of zebrafish larvae. Chronic = 168 hours exposure period, acute = 24 hours exposure period

Sodium lauryl sulphate (SLS) is an ionic surfactant that commonly found in household items such as shampoo, soap and laundry detergent. Despite huge daily consumption and potential release to freshwater ecosystem, the threat caused by SLS on aquatic fauna has often been overshadowed by some of the more popular pollutant like heavy metal.

Our preliminary study of SLS toxicity on zebrafish (*Danio rerio*) larvae development has elucidated some adverse effect caused by SLS exposure. Beside the reduction in post-hatching survival, and vitality (marked by free swim) rates of larvae, exposure of SLS in embryonic stage has also caused some teratogenic effects. At sub-lethal exposure of 0.000004% (w/v), SLS was observed to induce yolk-sac edema, pericardial edema and vertebrate bent.

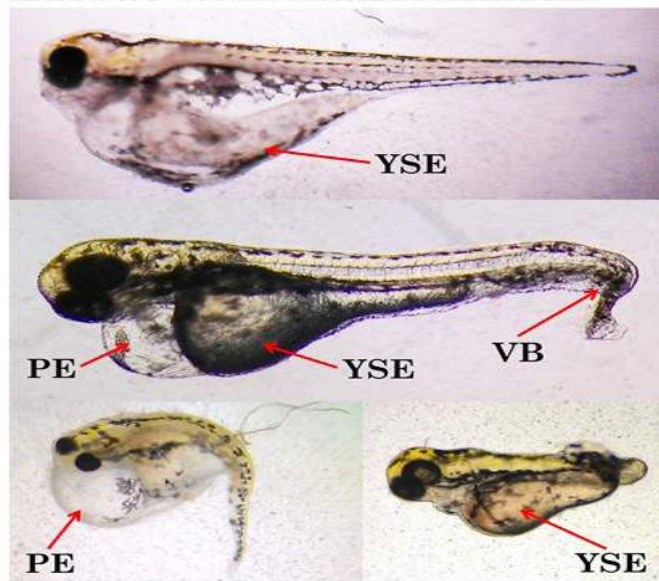
At the moment, it is still unclear whether this malformation is due to interruption in certain development process or the effect of SLS on membrane function. The occurrence of pericardial and yolk-sac edema which resemble the characteristics of blue sac disease supported the later explanation. This disease is caused by failure of membrane barrier to maintain osmotic balance in freshwater fish, hence allowing water from hypoosmotic environment to enter the fish body excessively. Replacing the SLS media with control media after 24 hours of exposure also did not eliminate malformation at later stages of larvae development. This indicates that SLS can cause prolonged adverse effect albeit at a short, sub-lethal exposure level. Although the finding presented offer very limited insight on possible risk of SLS waste to aquatic fauna, it should be clear enough that the next time we want to pour in detergent to the washing machine, it is best to keep it minimal.

- Nur Farhana Mohamad Yusuf, Muhammad Khairulnizam Zakaria, Badiozaman Sulaiman

Normal larvae



Larvae with malformation



Malformation caused by SDS exposure. YSE = yolk-sac edema, PE = pericardial edema, VB = vertebrate bent.

Study Program on Education for Sustainable Development (ESD) Implementation Project in Japan

Our staff, Prof. Dr Hamsawi Sani and a postgraduate student, Ms. Zatil Aisyah Zainudin, from the Department of Plant Science & Environmental Ecology were invited to participate in a study program on Education for Sustainable Development (ESD)

Implementation Project in Japan from 19th to 25th October 2014 organised by the Japan-Malaysia Association. The study program was initiated in conjunction with joint research projects between Japan-Malaysia Association (JMA) and researchers in the department since the year 2010. During the visit, the participants visited several places which had implemented ESD; among them were Tokyo Chichibu Experimental Forest Station, Morimate Forest, Otake, Hiroshima and Satoyama Trust's Forest Conservation Area. The participants were also invited to give a talk during the knowledge sharing sessions on their teaching and learning experiences in UNIMAS during their visit to the University of Kitakyushu and Nihon University.



Career Talk by Genting Plantations Berhad

On 18th December 2014, the Department of Plant Science and Environmental Ecology welcomed a visit by two representatives from Genting Plantations Berhad, Mr. Lai Chin Hor (Head, Training and Staff Development) and Mr. Lee Teck Fah (Head, Research and Development Unit) for a career talk at the Faculty of Resource Science and Technology. Forty-five Final Year undergraduate students majoring in Plant Resource Science and Management Programme as well as the alumni attended the talk on the career prospects and opportunities in plantation management in Malaysia. At the end of the talk, the representatives from Genting Plantations conducted a Walk-In-Interview for the alumni from the department to recruit staff for their company.



Working Visit by Quality Control Section, Sarawak Timber Industry Development Corporation (STIDC)



The department had welcomed a team from the Quality Control Section, Sarawak Timber Industry Development Corporation (STIDC), to the Faculty of Resource Science & Technology on 20th January 2015. Led by Mr. Awang Mentali Awang Mohamed Sulaiman (Manager, Quality Control Section), 14 delegates from STIDC were present during the working visit to discuss potential collaboration such as industrial relationship and student's internship programme. Feedbacks and suggestions for improvement from experts on their newly established STIDC Timber Portal were also discussed. It is hoped that through this working visit the relationship between STIDC and FRST will be strengthened for mutual benefit.



STA and Daiken Awards



SITI RASILA AINAA
BINTI
MOHD RASLI

Hard work and commitment to strive for excellence has paid off for Ms. Siti Rasila Ainaa bt Mohd Rasli and Ms. Fatin Husna Zulikram from the Department of Plant Science & Environmental Ecology. Ms. Siti Rasila Ainaa from Wakaf Bharu, Kelantan, received the Best Graduating Student Award. Ms. Fatin Husna who worked on her final year research project entitled "Soil of restored tropical mangrove area under artificial planting of coastal mangrove species in Selabat, Sarawak, Malaysia" which is related to forestry and timber industry has been awarded the Best Final Year Research Project for the academic session 2014. Since the initiation of the co-operation in the year 2005, STA along with DAIKEN Sarawak Sdn. Bhd. had provided academic awards and scholarships to the students pursuing Bachelor of Science in Plant Resource Science and Management. It is hoped that such co-operation will continue to strengthen the relationship between our institution and different stakeholders in realising our nation's aspirations in developing human capital.

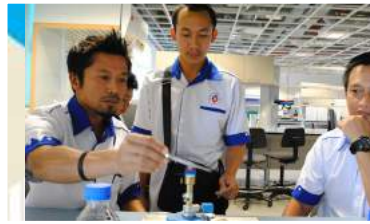


FATIN HUSNA BINTI
ZULIKRAM

BENGKEL CENDAWAN

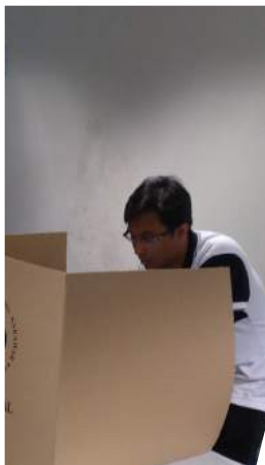
24-25 SEPTEMBER 2014

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E-VOTING 2014

10 DECEMBER 2014



HARI BERSAMA PELANGGAN 2014

(12 NOVEMBER 2014)



FRST TEAMBUILDING

2014

(12 DECEMBER 2014)



UNIMAS INNOVATION DAY

11 DECEMBER 2014



FRST DEAN CUP 2014

16 - 28 FEBRUARY 2015



UNTMAS Excellent Award Ceremony MAGU 2015 31 March 2015

Excellent Service Award



Prof. Dr. Cheksum



Prof. Dr. Fatimah



Prof. Dr. Andrew
Alek Tuen



Dr. Aazani Mujahid



Dr. Chong Yee Ling



Dr. Tay Meng Guan



Dr. Micky



Norhayati



Affizzah



Kamaliawati



Sekudan



Mohamad Jalani



Petranilla



Syaifudin

Loyal Service Award



Prof. Dr. Fasihuddin
bin
Badruddin Ahmad



Assoc. Prof. Dr. Ramlah
Binti
Zainudin



Sh Mariawati
Binti
Wan Kassim

Congratulations

FRST congratulates Prof. Dr. Fatimah bt Abang who has been bestowed the honoured Johan Bintang Kenyalang (JBK). The investiture was hosted by His Excellency (HE) Tun Pehin Sri Haji Abdul Taib Mahmud at Astana Negeri on March 18th 2015.



New Appointment



- Assoc. Prof. Dr. Norhadi Ismail -
Deputy Dean (Undergraduate and
Student Development)



- Assoc. Prof. Dr. Othman Bojo -
(Dean)



- Assoc. Prof. Dr. Edmund Sim Vi Hang -
Deputy Dean (Research and Postgraduate)



- Dr. Ho Wei Seng -
Programme Coordinators, Resource
Biotechnology



- Dr. Micky Vincent -
Head of Department,
Department of Molecular
Biology

Staff Transfer

- 1) Suryanimaslin Shezali TO (Transferred to Faculty of
Medicine & Health Science)
- 2) Azhar Bujang Masli TO (Transferred to Development
Office)
- 3) Harry Ibrahim TO (Transferred to Human Capital
Development Division)
- 4) Norlia Ismail TO (Transferred to Bursary Office)
- 5) Nora Enggu FROM (Transferred from Faculty of
Medicine & Health Science)
- 6) Ratina Hassan FROM (Transferred from Faculty of
Cognitive Sciences & Human Development)
- 7) Fatimah Sani FROM (Transferred from General
Administration Division)
- 8) Norashikin Fauzi FROM (Transferred from Bursary
Office)

New lectures

- Dr. Elexson Nillian
(Department of Molecular)

Staff With Newborn

Mustafa Kamal b Mohd Faizal
Zulkifli b Ahmad
Dahlan b Rambli
Isa b Sait
Norhayati bt Bujang

S
T
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F
F
N
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i-FORST FRST COLLECTION



BJRST FRST COLLECTION

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