



MyBIS - Malaysia Biodiversity Information System

Malaysia's Clearing House Mechanism
www.mybis.gov.my

Forest Research Institute Malaysia



Abd Latif Mohmod
Nurfarhana Hizan Hijas
Tan Kok Kiat
Hamidah Mamat



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Forest Research Institute Malaysia
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FOREWORD



Malaysia is a country with high abundance of species, ranks as one of the 17 mega-biodiversity countries in the world. To date, there are more than 15,000 species of vascular plants, 307 species of mammals, more than 785 species of birds, 567 species of reptiles, 242 species of amphibians, more than 449 species of freshwater fishes and more than 150,000 estimated species of invertebrates that have been identified to inhabit various types of ecosystem. This amount will increase because many still are yet to be discovered.

According to the Target 16 of the National Policy on Biological Diversity (NPBD) in Action 16.2, every country that ratified the Convention on Biological Diversity (CBD) has to establish comprehensive biodiversity databases and monitoring programmes on the country's biodiversity for better planning and management purpose. Documentation of the Malaysian flora and fauna in a database system is time-consuming but it is important to recognise the assets that we have in Malaysia. Considering its importance, Malaysia Biodiversity Information System (MyBIS) database was created to serve as a one-stop repository for all biodiversity information gathered from various agencies. It will also provide results of statistical analysis of existing data to be reported to relevant parties. Without this documentation, we may lose the most valuable information on biodiversity and Malaysians would not be able to know and appreciate the natural beauty of our country.

This book is the first publication that highlights the history, journey, activities and achievements of the MyBIS project from the early establishment of a website and a database of Flora of Peninsular Malaysia (FPMO) until the rebranding to MyBIS system. When this project started, it was just documenting the flora in Malaysia. Then, the Forest Research Institute Malaysia (FRIM) started to include the documentation of fauna and fungi. This information helps many botanists, experts, policymakers and public to learn more on biodiversity in Malaysia, which will help in raising public awareness and shaping the sustainable management of forest in Malaysia.

DATUK DR. ABD LATIF B. MOHMOD
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PREFACE

This book provides the history of the development of Malaysia's Clearing House Mechanism, now known as Malaysia Biodiversity Information System (MyBIS). FRIM has developed the database for indigenous flora, which was eventually incorporated into Malaysia's Clearing House Mechanism with the aim to fulfil one of the obligations to the Convention on Biological Diversity (CBD). This effort is one of the many designed to achieve the Aichi Biodiversity Targets and the goals outlined in Malaysia's National Policy on Biological Diversity (NPBD) 2016–2025. For the Aichi Biodiversity Targets, there are five strategic goals and twenty targets. One of the goals is to address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society, whereby Target 1 states that by 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use the resources sustainably. In the NPBD 2016–2025, Target 16 states that by 2025, knowledge and the science base relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are significantly improved and applied. The willingness of agencies to share information and data on biodiversity indicates their commitment for the greater protection of the country's biodiversity. The Government is providing support to establish this system in order to increase public awareness and mainstreaming biodiversity.

The authors would like to thank Dr. Saw Leng Guan, former director of the Forest Biodiversity Division FRIM and currently Penang Botanic Garden curator, Dr. I.M. Turner, British botanist, and Dr. Gary Theseira, Special Functions Officer to the Ministry and Forest Research Institute Malaysia (FRIM) officer, for their expertise and pioneering efforts to establish the flora databases; Mr. Khairudin Baharum, Ms. Aslina Baharum and Mr. Yasser Mohamed Arifin of Forest Research Institute Malaysia (FRIM) for their technical expertise and support; other FRIM staff who had contributed their research output during the development of the databases; biodiversity experts from the various government agencies and representatives from the Forestry Department Peninsular Malaysia (JPSM), Department of Wildlife and National Parks (PERHILITAN), Institute for Medical Research (IMR), Department of Marine Park Malaysia (JTLM) and FRI; universities such as National University of Malaysia (UKM), University of Malaya (UM), Universiti Malaysia Terengganu (UMT), Universiti Putra Malaysia (UPM), Universiti Sains Malaysia (USM) and University of Malaysia Sabah (UMS); and Non-governmental Organisations (NGOs) such as Bird, Nature and Us (BNU), Turtle Conservation Society (TCS) and Malaysian Society on Toxinology (MST) for taking part in the development of MyBIS and playing a role in building a more effective knowledge sharing platform.

The authors would also like to thank many individuals who have helped and supported in numerous ways, our humble effort in rebranding and restructuring the website into MyBIS. We would like to express and extend our gratitude to our Ministry of Energy and Natural Resources (KeTSA), and also the Government of Malaysia for its continuous funding support without which the project could not have progressed. This reflects the country's level of commitment toward meeting its obligations under CBD.

Thanks are also due to the CBD Secretariat and its informal advisory committee on the clearing-house mechanism (CHM-IAC) for facilitating and providing guidelines via their central Clearing House Mechanism (CHM) network and for organising training workshops on the establishment of CHM and dissemination of information. The decision in 2016 to grant awards to participating countries further encourages Parties to continuously commit and improve their CHM. Winning the Award reinforces that Malaysia's efforts are in line with the obligations under CBD.

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ABBREVIATIONS

BNU	Bird, Nature & Us
CBD	Convention on Biological Diversity
CHM	Clearing House Mechanism
CIS	Centre for Insect Systematics
DBKL	Dewan Bandaraya Kuala Lumpur
FRI	Fisheries Research Institute Malaysia
FRIM	Forest Research Institute Malaysia
FPMO	Flora of Peninsular Malaysia Online
IMR	Institute for Medical Research
JPSM	Forestry Department Peninsular Malaysia
JTLM	Department of Marine Park Malaysia
KATS	Ministry of Water, Land and Natural Resources
MEME	Management & Ecology of Malaysian Elephants
MST	Malaysian Society on Toxinology
MyCHM	Malaysia Clearing House Mechanism
NHM	Natural History Museum
NPBD	National Policy on Biological Diversity
NRE	Ministry of Natural Resources and Environment
PERHILITAN	Department of Wildlife & National Parks
PPJ	Perbadanan Putrajaya
RECS	Remote Envenomation Consultancy Services (Malaysia)
TCS	Turtle Conservation Society
UKM	Universiti Kebangsaan Malaysia/ National University of Malaysia
UM	University of Malaya
UMS	University of Malaysia Sabah

UMT	Universiti Malaysia Terengganu
UPM	Universiti Putra Malaysia
USM	Universiti Sains Malaysia

INTRODUCTION

In 1992, the Government of Malaysia adopted the Convention on Biological Diversity (CBD) as a framework for action to conserve the country's immensely rich biodiversity. This decision was made based on the importance of biodiversity in our lives and the requirements to alleviate and manage the adverse impacts of human activities on biodiversity. In 1994, the Government became the 64th nation to ratify the Convention and has since remained committed to her obligations to the Convention.

Biological diversity is the variety of life on Earth, from the simplest bacterial gene to the vast, complex rainforests. Human beings are an integral part of this diversity, as is the food, medicine, clothing and other biological resources that sustain us.

It was clear that scientific knowledge and technology would play a vital role in the implementation of the Convention. Recognising that the capacity to manage information and technology development varies from country to country, the Convention established a Clearing-House Mechanism (CHM) to facilitate Parties' access to the information and technologies that they require for their work on biodiversity conservation.

What is a clearing-house?

The term "clearing-house" originally refers to a financial establishment where checks and bills are exchanged among member banks so that only net balances need to be settled in cash. Today, the meaning is extended to include any agency that brings together seekers and providers of goods, services or information, thus matching demand with supply.

Article 18.3 on the Technical and Scientific Cooperation of the Convention states that the first meeting of the Conference of the Parties (CoP) shall determine how to establish CHM in order to promote and facilitate technical and scientific cooperation. During its tenth meeting held in Nagoya, Japan on October 2010, the Parties reiterated the importance of CHM in supporting the implementation of the Strategic Plan for Biodiversity 2011-2020, as well as the implementation of national biodiversity strategies and action plans.

CLEARING-HOUSE MECHANISM

The mission of the CHM is to contribute significantly to the implementation of CBD and its Strategic Plan for Biodiversity 2011–2020, through effective information services and other appropriate means in order to promote and facilitate scientific and technical cooperation, knowledge sharing, and information exchange, and to establish a fully operational network of Parties and partners.

This mission is articulated around three major goals:

1. **The central clearing-house mechanism provides effective global information services to facilitate the implementation of the Strategic Plan for Biodiversity 2011–2020.**

- 1.1. The CBD Secretariat has the capacity to sustain an effective central CHM;
- 1.2. A high-quality CBD website is available in all United Nations languages;
- 1.3. Effective information exchange services are fully operational;
- 1.4. The CBD Secretariat facilitates the development of a network of experts and practitioners among Parties and partners; and
- 1.5. Guidance is available for Parties and partners to exchange information through the clearing-house mechanism network.

What is a National CHM?

A National CHM is a website established by a particular country that provides relevant information on CBD.

2. **National CHM provide effective information services to facilitate the implementation of the national biodiversity strategies and action plans.**

- 2.1. All Parties have the capacity to sustain effective national CHM;
- 2.2. High-quality national clearing-house mechanism websites are available;
- 2.3. National information is exchanged through the CHM network;
- 2.4. Parties collaborate and share knowledge through the CHM network; and
- 2.5. Partners and the CBD Secretariat have contributed to the development of national CHM.

3. Partners significantly expand the CHM network and services.

- 3.1. Partners can sustain their participation in the clearing-house mechanism;
- 3.2. High-quality regional and thematic clearing-house mechanism websites are available;
- 3.3. Partner information is exchanged through the clearing-house mechanism network; and
- 3.4. Partners collaborate and share knowledge through the clearing-house mechanism network.

THE EVOLUTION OF MALAYSIA CLEARING-HOUSE MECHANISM

Early Phase

Malaysia Clearing House Mechanism (MyCHM) began with a humble effort to develop a website and an interactive database of the flora of Peninsular Malaysia. Datuk Dr. Abd Latif Mohmod, the Director-General of FRIM, was instrumental in obtaining the funding for the Flora Malaysiana Centre (FMC) project of which one of its sub activities was to develop a website and database for the Flora of Peninsular Malaysia. Financed by the Timber Levy Fund of the then Ministry of Plantation Industries and Commodities, FRIM developed an online flora database to disseminate information on plants that occur in Peninsular Malaysia and Singapore. This portal was known as the FPMO and was accessible via www.tfbc.frim.gov.my. The FPMO was launched on 28 June 2005 by YBhg. Dato' Sazmi bin Miah, the Parliamentary Secretary of the Ministry of Natural Resources and Environment (NRE) during the Seminar on the Status of Biological Diversity in Malaysia and the Workshop on Threat Assessment of Plant Species in Malaysia.

The FPMO portal encompasses the flora data collected since 1995. In 1995, the first complete plant checklist of Malaya entitled "A Catalogue of the Vascular Plants of Malaya" was published in the Singapore Gardens' Bulletin. Based on the examination of over 700 botanical references, this two-volume set lists all native and naturalised plant species that occur in Peninsular Malaysia and Singapore. With the approval from the author and publisher, the 8,893 records contained in the original publication were converted into an electronic database. The records were revised by the former director of the Forest Biodiversity Division FRIM, Dr. Saw Leng Guan and uploaded into the FPMO portal. Since then it has been periodically updated to reflect taxonomic changes that were made by taxonomists, botanists and other researchers.



Figure 1. Flora of Peninsular Malaysia Online (FPMO).

The Flora of Peninsular Malaysia Online (FPMO) contains a checklist of vascular plants in Peninsular Malaysia accompanied with descriptions on species taxonomy, plant habit, habitat and geographical distribution in the peninsula, endemism and IUCN conservation status. By 2009, FPMO had accumulated, in addition to the checklist, photographs of 1,780 flora species, registered 770 members and published 37 newsletters. Recognised as a comprehensive resource for plant diversity in the peninsula, FPMO was regularly visited by plant enthusiasts, researchers, students, policymakers and business communities. With FPMO, Malaysia is one-step closer to meeting her goals of CBD's CHM.

Recognising that FRIM is already equipped with a comprehensive flora database and is staffed by several biodiversity experts, it was natural that the former ministry appointed the Director of Forest Biodiversity Division, FRIM to undertake the role of Clearing-House Mechanism National Focal Point (CHM-NFP). During its early phase, the website had only basic infrastructure, acted as a directory, was linked to FPMO but in itself did not host other biodiversity databases. Access to MyCHM and FPMO was initially limited to registered users but this later became access free. From the CHM website, users could also access other websites containing biodiversity information in Malaysia, photographs and newsletters, as well as related multilateral agreements of which Malaysia is a party. The merger of FPMO into MyCHM took effect in 2010 and the website was renamed as MyCHM and was accessed via www.chm.frim.gov.my. The merger finally allowed MyCHM to become a fully functional one-stop repository for Malaysia's biodiversity data and information.



Figure 2. The website of Malaysian Biodiversity CHM.



CBD FOCAL POINT:
MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT MALAYSIA
MALAYSIAN BIODIVERSITY CLEARING HOUSE MECHANISM

Friday, 20 Nov 2009

Home | Contact Us | FAQ | Links | Publications | What's New

Google Search

Search the Malaysia CHM Website

Biodiversity Malaysia

- Background
- Policy & Legislation
- Related Research-Organisms
- Non-Government Organizations
- Related State Agencies
- Periodic Assessment Document
- Publications

Checklists (Login Required)

- Database-Researcher Login
- Database-Researcher and Admin Login

Multilateral Agreements

- CBD
- JPO/ACC
- Ramsar/4E
- OTES

Other Links

- Biodiversity Management
- Threats to Biodiversity
- Biodiversity Conservation
- Harmonising biodiversity in development (National Physical Plan 2005)

MAIN MENU

- FRIM
- Conservation News
- Bio-Diversity Clearing House Mechanism for Malaysia
- Newsletter Archive

Welcome to the Biological Diversity Clearing House Mechanism (CHM), Malaysia, Webpage.

Malaysia is a party to the UN Convention on Biological Diversity (CBD): [View about the Convention on Biological Diversity](#)

Conserving the Floristic Heritage of Malaysia..

About TFBC | Background | Flora of Peninsular Malaysia | Contact Us | Back to TFBC

October 19

In 1998, the Ministry of Science, Technology and the Environment launched the National Policy on Biological Diversity (NPBD). It contains 15 strategies for the effective management of biological diversity. The 15 strategies provide a holistic account of what ought to be done in Malaysia for the wise management of all biological resources. In each of the strategy of the Policy, checklist of action plans are provided describing in more tangible terms what activities are needed to achieve that strategy.

For plant biodiversity, there has not been any concerted effort to deal with its management holistically from both utilisation and conservation perspectives. This is due mainly to the sectoral approach towards its management. The forest where almost all of the indigenous plant resources exist falls within the jurisdiction of a number of stakeholders. The Forest Department manages the forests mainly for timber production, the Game and Wildlife Department (PERHILITAN) manages the protected areas mainly for animal conservation, state governments which are the custodian of the forest land views the forest as asset that could be used. Finally, while the management of the forest resources fall under the state and the Ministry of Primary Industries (the forest department and Forest Research Institute Malaysia are both under this ministry), the protection and the conservation of plants fall under the purview of the Ministry of Science, Technology and the Environment. As a result particularly in Peninsular Malaysia, there has been a lack of leadership to deal with conservation issues for plants.

Tropical Forest Biodiversity Centre that was recently set up in FRIM to act as the plant diversity centre for Malaysia can now take to task the role to fulfil the gaps in Malaysia for plant conservation and study. Using the 15 strategies as the basis, TFBC has been set-up to develop a programme to deal with botanical needs for Malaysia.

The Flora of Peninsular Malaysia Online is a checklist of vascular plants of Peninsular Malaysia. This checklist comprising 8,893 taxonomic names include short descriptions, habitat where they are found, distribution in Peninsular Malaysia, endemism to Peninsular Malaysia and conservation status (IUCN categories used) will be initially provided. Search the The




LOGIN | REGISTER | ENTER | Forgot password? | Register

Malaysia Peninsular, 20 March 2010, 08:00:00 AM

BIODIVERSITY CLEARING HOUSE MECHANISM

HOME | ABOUT US | WHAT'S NEW | FAQ | RESOURCES | GALLERY | CONTACT US | STORE | BIODIVERSITY DATABASES

Malaysian Flora Photo Hub

About CHM

- Introduction
- Useful Links to Biodiversity
- CBD CHM Website
- CBD Thematic Issues
- CBD Crisis Calling Issues

Biodiversity Databases

- Malaysia

Useful Links

- Bilateral Environment Agreements
- Working Agreements and Instruments
- Universities
- Research Institute
- Non-Government Organizations

What's New

- Marasmiaceae - *Agaricales* ascomycete Hymen., Nov 23, 2010
- Hamamelidaceae - *Eurhynchium* populus (L.) B. ex Griseb. W. Brown, Nov 23, 2010
- Conservation Malaysia Bulletin, Issue No. 22, Nov 24, 2010
- Conservation Malaysia Bulletin, Issue No. 21, Nov 23, 2010
- Conservation Malaysia Bulletin, Issue No. 20, Nov 22, 2010

MyCHM i-Now available now on Apple's iBookstore

For New Apple iBookstore creations visit: download MyCHM i-Bookstore and install normally via iTunes. Learn More

CHM NEWS

Sign up for our monthly newsletter

Name:

Email:

Welcome to the Malaysian Biological Diversity Clearing House Mechanism (MyCHM) Webpage

Malaysia is a party to the UN Convention on Biological Diversity (CBD). More about the Convention on Biological Diversity

Malaysia's Clearing House Mechanism

Figure 3. MyCHM webpage.

The new and improved national CHM

Apart from providing an easy access to biodiversity information, MyCHM had also incorporated smart search features that ease database maintenance, facilitate the updating of data, and enhance search engines to improve user access and experiences. During this phase, MyCHM focused on enriching the scientific content on Malaysian biodiversity by incorporating fauna and fungi databases and information of plant species from Sabah and Sarawak. Diagnostic characteristics, modern and traditional uses of plants, and common names of important timber species were also added. MyCHM regularly updated the photo library of species contributed by collaborators and archived images from films and slides. Several new modules were also introduced such as the Taxon Data Information Sheet (TDIS), spatial data for Malaysia Protected Areas and a resource center that contained newsletters, publications and e-References. Links to Malaysia's multilateral agreements and other websites hosting Malaysian biodiversity content were added.

The screenshot displays the MyCHM website interface. At the top, there is a navigation bar with a search box and a 'GO' button. Below the navigation bar, the main header features the logos of the Malaysia Government and CHM, followed by the text 'BIOLOGICAL DIVERSITY CLEARING HOUSE MECHANISM'. A search bar is positioned to the right of the header. The main content area is divided into a left sidebar and a central gallery. The sidebar contains a 'About CHM' section with links to 'Introduction', 'Useful Links to Biodiversity', 'CBD-CHM Website', 'CBD Thematic Issues', and 'CBD Cross Cutting Issues'. Below this is a 'Biodiversity Databases' section with a 'Malaysia' sub-section and a 'Useful Links' section containing dropdown menus for 'Multilateral Environmental Agreements', 'Ministries, Agencies and Departments', 'Universities', 'Research Institutes', and 'Non-Governmental Organizations'. The central gallery is titled 'Gallery' and features a grid of 15 images of various plants and animals. A search bar is located above the gallery, and a pagination bar is at the bottom of the gallery. The footer of the website includes the 'myBioD' logo, a disclaimer, and visitor statistics.

The Launching of MyCHM



Figure 5. From left: Dr. Abdul Rahim, Dr. Saw, YB Dato Sri Uggah and FRIM Deputy Director General (Research) Dr. Mohamed Nor Mohd Yusoff during the opening ceremony.

On 15 May 2012, MyCHM web portal was officially launched by the former Minister Dato Sri Douglas Uggah Embas during the opening ceremony of the National Biodiversity Centre Stakeholder Consultation Workshop. This event was jointly organised by NRE and FRIM and was held at the Pan Pacific Hotel, Sepang.



Figure 6. The NRE Biodiversity and Forestry Division Deputy Under Secretary, K. Nagulendran, summing up the discussion at the closing of the Workshop.



Figure 7. Dr. Abdul Rahim presenting the keynote address.



Figure 8. Participants ranking the functions of the national biodiversity centre.

By May 2015, MyCHM had already contained 9,269 flora records, 5,532 fauna records and 4,009 fungi records. MyCHM also provided smart search functions using stratified sorting and allowed the download of search results in Excel format. There were also 7,932 images of selected species available for free download. Selected plants were highlighted in its monthly newsletters. A total of 144 newsletters had been published as of May 2015. Registration was required for subscription of the newsletters.

First iBook on Biodiversity in Malaysia



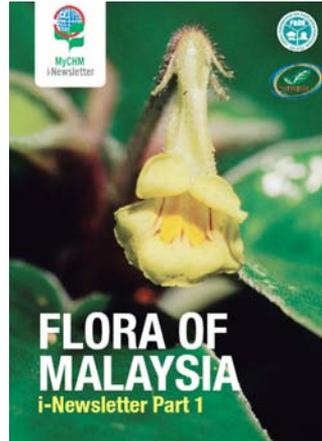
Figure 9. YB Dato Sri Uggah speaking at the official opening ceremony of the seminar on 18 December.

Malaysia's first iBook on biodiversity entitled Flora of Malaysia i-Newsletter was later published by FRIM. With the aim of sharing information on local biodiversity and raising public awareness on the importance and conservation of our precious floristic diversity heritage, flora e-books were produced and made freely available to the public. The first e-book of this series was launched as a mobile application known as "MyCHM i-Newsletter" on 18 December 2012.

It was launched by the former Minister Dato Sri Douglas Uggah Embas in conjunction with the opening of the Third Seminar on Biodiversity (MyBioD Seminar 2012) in Kuala Lumpur. To date, three e-books on the Flora of Malaysia have been published. These e-books are free and can be downloaded in pdf format from the current MyBIS platform.



Figure 10. The Minister launching the first iBook on Biodiversity, MyCHM i-Newsletter and the iBook app, at the opening ceremony of MyBioD Seminar.



Within three years since its first launch, the e-book has been downloaded by readers from 22 countries including China, Taiwan, German, United Kingdom, Singapore, Turkey, Spain, France, Italy, Japan, Australia, United States of America, and Brazil, among others. The download count was encouraging and indicated that there was international interest in the local flora. This in turn encouraged other agencies, research institutes and universities to develop similar series on species biodiversity in Malaysia.



Figure 11 Three interfaces of eBook showing through desktop, tablet and mobile displays.

THE REBRANDING OF MALAYSIA CLEARING HOUSE MECHANISM

Noting that MyCHM was limited to flora, fauna and fungi diversity and only covered a portion of the rich Malaysian biodiversity, a makeover was required to enable the web to effectively function as a platform for biodiversity repository. This makeover was financed by NRE and in 2014, MyCHM was restructured and rebranded into Malaysia Biodiversity Information System (MyBIS). In 2018, improvements were made by introducing new modules and telegram autobot smart search features. Having MyCHM as a fundamental framework for MyBIS, MyBIS was set to becoming a one-stop Malaysian repository for biodiversity information. MyBIS is accessed through three interfaces, i.e., desktop, tablet and mobile displays.



The restructuring of MyBIS introduced four main modules namely Discover, Explore, Analysis and Reference. MyBIS now provides more than 47,000 species of plants, animals and fungi with more than 10,000 photos, 168 monthly newsletters, 3,600 references and literature records and has a registered number of 553 biodiversity-related experts. In early 2016, MyBIS embarked on the data integration of collections of specimens into a single national biodiversity collection database. To date, eighteen Specimen Collection Centres are registered with MyBIS and use MyBIS as the online system to manage specimen records. These centres includes FRIM, PERHILITAN, IMR, PPj, DBKL, Johor National Park, UKM, UM, UMT, USM, UMS and NHM (Table 1). Currently, the number of specimen records has surpassed 112,000. Several capacity building workshops were conducted to train users on the tools and methods of data input.

No	Agency/University/Institute	Title of Collection Centre
1	Department of Wildlife and National Parks (PERHILITAN)	PERHILITAN Wildlife Collection
2	Forest Research Institute Malaysia (FRIM)	FRIM Entomological Reference Collection
		Wood Collection
3	Institute Medical Research (IMR)	IMR Collection
4	Natural History Museum	Muzium Alam Semula Jadi Collection
5	University of Malaya	Herbarium Collection
		Zoological Collection
6	National University of Malaysia (UKM)	Centre for Insect Systematics
7	University Malaysia Terengganu	Marine Collection
8	University Sains Malaysia (began in October 2017)	USM Herbarium Collection
		USM Zoological Collection
		USM Marine Collection
9	Perbadanan Putrajaya (began in April 2018)	Koleksi Tumbuhan Taman Botani Putrajaya
10	Universiti Malaysia Sabah (UMS) (began in April 2019)	Marine Reference Collection
		BORNEENSIS Institute for Tropical Biology & Conservation
11	Natural History Museum London (began in January 2019)	Malaysia Iconic Wallace Species
		Malaysian Collection
12	Johor National Park Corporation (began in January 2020)	Johor National Park
13	Dewan Bandaraya Kuala Lumpur (began in April 2020)	Koleksi Tumbuhan Taman Botani Perdana Kuala Lumpur

Table 1: List of agencies involved in MyBIS specimen module.



From 2014 onwards, continuous transfer of data from MyCHM and other resources to MyBIS was undertaken. The data include scientific names of species, author names, synonyms, common names, species taxonomy, species images, species distribution, references and conservation status. The MyBIS website is continuously being updated and improved with features such as advance search, statistical analyses and interactive modules. The MyBIS website went online in April 2016 with the following link, www.mybis.gov.my.

Managing national biodiversity databases requires time and significant input especially with regards to taxonomy and nomenclature to ensure that the information is up-to-date. MyBIS also requires data owners and stakeholders to constantly update and provide constructive feedback to improve the web system. Capacity building activities are periodically required and the involvement of biodiversity experts is crucial in making the web an effective platform. Access to regular updates and up-to-date information are required to increase public awareness on the importance of biodiversity and thus contribute to the implementation of the national strategies and action plans.

LAUNCHING OF NRE INTERACTIVE GALLERY, MyBIS AND BIRD OF MALAYSIA BOOK

On 21 September 2017, the MyBIS website was launched together with NRE's Interactive Gallery and the book on the Birds of Malaysia by NRE's Minister YB Dato Sri Dr Wan Junaidi bin Tuanku Jaafar. The event was organised by the former ministry, NRE and JPSM where it held at the Eco-Rimba Park in Bukit Nanas, Kuala Lumpur.

The Interactive Gallery was established to realise the aspiration of the Minister in having a physical Natural History Centre (NHC). The Gallery uses the innovative Augmented Reality (AR), Quick Response (QR) code and holograms, enabling visitors to obtain information effectively through a fun and interactive experience.

The book on Birds of Malaysia was published as a result of a collective effort of the National University of Malaysia (UKM), Birds, Nature and Us (BNU), Birdgroup Taman Negara, PERHILITAN, NRE's National Biodiversity Centre and FRIM's MyBIS team. This book is listed as one of fifty Best Malaysian Titles for International Rights 2017/18 by the National Book Council of Malaysia.





Figure 12. YB Dato Sri Dr. Haji Wan Junaidi using the gallery application which linked its information in MyBIS.



Figure 13. YB Dato Sri Dr. Haji Wan Junaidi signing the Gallery's visitor book during the launch.



Figure 14. Ribbon-cutting ceremony to commemorate the launching of NRE Interactive Gallery, MyBIS and Birds of Malaysia book by the Minister of NRE, YB Dato Sri Dr. Haji Wan Junaidi bin Tuanku Jaafar.



Figure 15. YB Dato Sri Dr. Haji Wan Junaidi experiencing the interactive features of the gallery which provided informative videos.



Figure 16. Explanation on the use of Augmented Reality (AR).



Figure 17. Introducing MyBIS and its progress to YB Dato Sri Dr. Haji Wan Junaidi Tuanku Jaafar and VIPs .



Figure 18. Testing MyBIS live at the kiosk.



Figure 19. YB Dato Sri Dr. Haji Wan Junaidi appreciating the beauty of a bird painting produced by a member of Bird, Nature and Us (BNU) (left).



Figure 20. Scanning the QR code of the specimen will provide species information to visitors.



Figure 21. YB Dato Sri Dr. Haji Wan Junaidi bin Tuanku Jaafar at his opening speech on the day of launch.



Figure 22. Flipping through the Birds of Malaysia book.



Figure 23. YB Dato Sri Dr. Haji Wan Junaidi signing the plaque in the NRE Interactive Gallery.



Figure 24. YB Dato Sri Dr. Haji Wan Junaidi officially launched MyBIS and Birds of Malaysia book by showing montage and a page of an owl, a symbolic bird of wisdom.



Figure 25. MyBIS team with FRIM Director-General, Datuk Dr Abd Latif Mohmod after a successful day at the NRE Interactive Gallery.

CHM AWARD

On 9 December 2016, Malaysia received the CHM Gold Award at the Thirteenth Meeting of the CoP to CBD (COP13) held in Cancun, Mexico. The award was presented by the Secretary of Environment and Natural Resources for Mexico, Rafael Pacchiano Alamán at the CHM Award Ceremony. It was a very proud moment for Malaysia, in recognition of its efforts towards making significant progress in the development of its national CHM. In making this achievement progressive, continued support from all participating agencies, partners and the Ministry is critical.

At CBD, entries to the CHM Award category were scrutinized by the informal advisory committee to the Clearing-House Mechanism (CHM-IAC), comprising Prof. Jae Chun Choe (Republic of Korea; Chair), Dr. Eduardo Dalcin (Brazil), Dr. Jan Pleznik (Czech Republic), Mr. Jean-Patrick Le Duc (France), Dr. Mostafa Madbouhi (Morocco), Mr. John Tayleur (UNEP-WCMC) and Mr. Olivier de Munck (CBD Secretariat; ex-officio member).¹

CHM Award Winners at COP 13

<u>Existing National CHM Category</u>		<u>New National CHM Category</u>	
	Mexico - Gold Award		Malaysia - Gold Award
	Australia - Silver Award		Guatemala - Silver Award
	Belgium - Bronze Award		Kenya - Bronze Award

¹ <https://www.cbd.int/chm/award/default.shtml>



Figure 26. (i) The trophy and Gold award certificate received by the Government of Malaysia.



Figure 26. (ii) Pictured above is the Malaysian delegation with Rafael Pacchiano (centre in white), Dr Lillian Chua (holding the trophy and framed award certificate) and Dato' Azmi Nordin (far right), the Director of Silviculture and Forest Biodiversity Conservation from Forestry Department Peninsular Malaysia (FDPM) after a plenary session.



In conjunction with the Gold Award for MyCHM, FRIM received a special appreciation from NRE on 10 December 2017. The trophy was presented by the Minister Dato Sri Dr Wan Junaidi Tuanku Jaafar.



Figure 26. (iii) Datuk Dr. Abd Latif Mohmod and Dr Lillian Chua with the trophy and certificate.

As recognition to the efforts and progress thus made, the MyBIS team received two awards for the MyCHM Project during the 2017 FRIM Awards Day Ceremony. The team received Anugerah Perkhidmatan Cemerlang in the group category and was also awarded the “Insentif Pengiktirafan Agensi bagi *Biodiversity Clearing House Mechanism*”.



Figure 27. MyBIS team has received two awards in FRIM Awards Day Ceremony at Dewan Alwy on 27 April 2017.

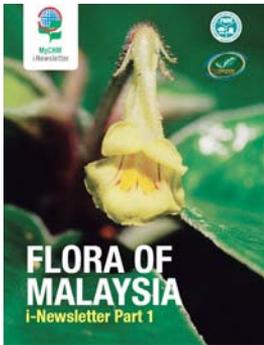
In 2018, MyBIS successfully maintained the system and awarded for the Certificated of Achievement for the existing CHM during COP14 in Sharm El Sheikh, Egypt, which has held from 17 to 29 November 2018.



Figure 28. Certificated of Achievement for the existing CHM during COP14 in Sharm El Sheikh, Egypt.

PUBLICATIONS

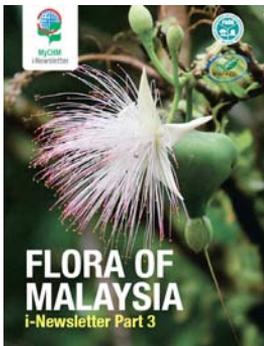
The e-Book series presented 128 species from 54 plant families comprising among others orchids, gingers, ferns and begonias. The series also contained more than 220 images, of which 16 species are accompanied with explanatory videos. Several species have spatial distribution maps and botanical illustrations. Readers are also tested on their understanding of the content of the e-book. These e-Books are available for free download. Scan the QR code below for download link or visit <https://www.mybis.gov.my/one/publication.php?reset=1>



Flora of Malaysia i-Newsletter Part 1
(December 2012)

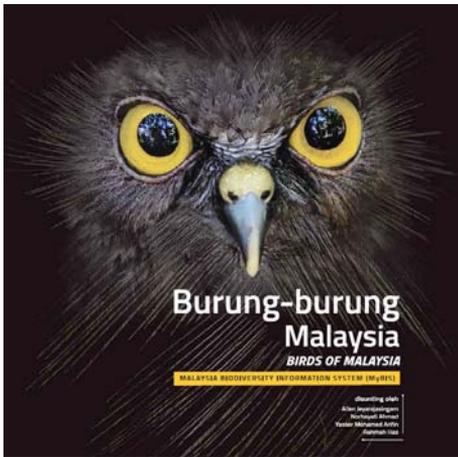


Flora of Malaysia i-Newsletter Part 2
(October 2013)

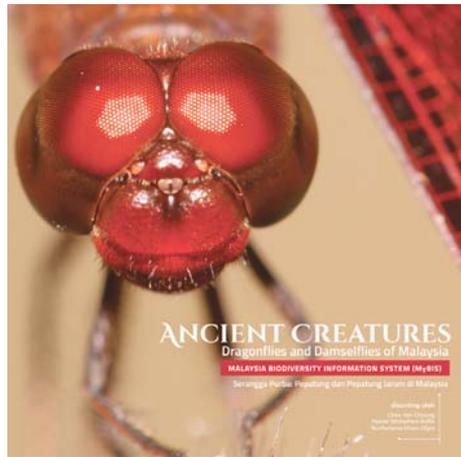


Flora of Malaysia i-Newsletter Part 3
(October 2013)





Birds of Malaysia:
Malaysia Biodiversity
Information System
(MyBIS)



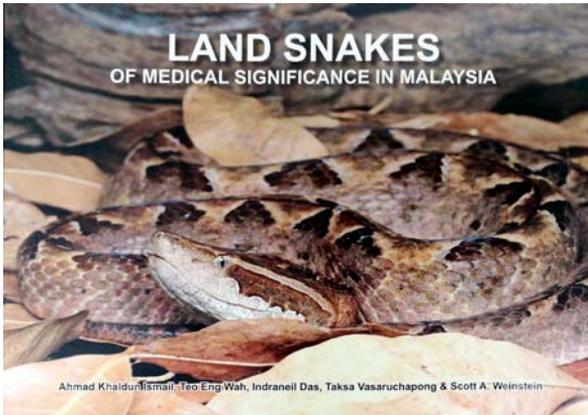
Ancient Creatures:
Dragonflies and
Damselflies
of Malaysia



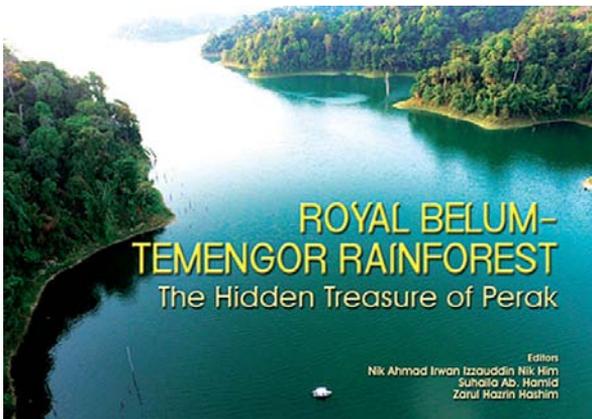
Mangrove Flora of
Malaysia: Malaysia
Biodiversity Information
System (MyBIS)



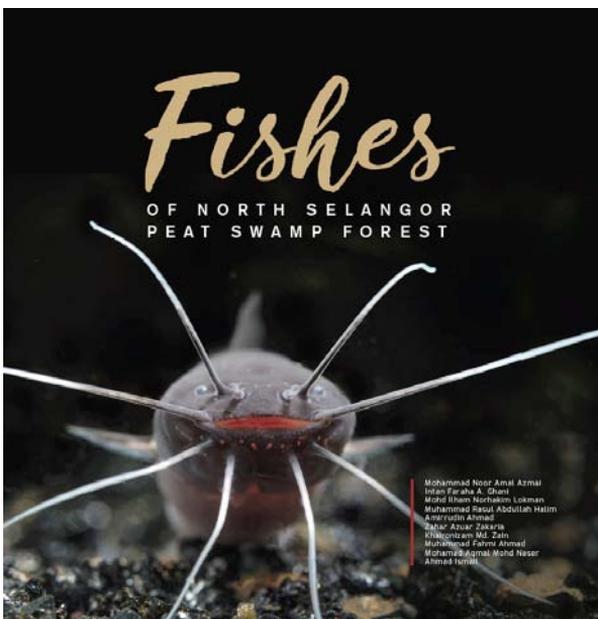
Frogs and Toads of
Malaysia: Malaysia
Biodiversity Information
System (MyBIS)



Land Snakes of Medical Significance in Malaysia



Royal Belum-Temengor Rainforest: The Hidden Treasure of Perak



Fishes of North Selangor Peat Swamp



CAPACITY BUILDING ACTIVITIES

28 October 2015 – MyBIS Workshop

The first MyBIS Workshop, organised by FRIM Forest Biodiversity Division, was held in FRIM and involved stakeholders from various agencies such as PERHILITAN, NRE, Ministry of Agriculture and Agro Based Industry (MOA) and local universities. This workshop was aimed at giving an early exposure to the MyBIS system which operates as a national one-stop repository of Malaysia's biodiversity.



Figure 29. Brief introduction to MyBIS by Hamidah Mamat.



Figure 30. Participants giving full attention during the workshop.



Figure 31. Participants of the workshop.

10–11 March 2016 – Consultation on the implementation of National Biodiversity Specimen Inventory Collections in MyBIS

NRE's Biodiversity and Forestry Management Division and FRIM conducted a consultation session with representatives from Kepong Herbarium (FRIM), Biomedical Museum, IMR, Centre for Insect Systematic, UKM, Herbarium and Zoological Collection, UM and Muzium Alam Semula Jadi Collection, NHM. The session took place at Perdana Leadership Foundation in Putrajaya. Arising from this, the Specimen Module was developed and incorporated into MyBIS. This module encompasses the ID number for every specimen, the category of the specimen, the date of collection, the specimen's scientific name and the origin of the specimen where it was found. The Specimen module can be found in this link: <https://www.mybis.gov.my/one/specimen.php>. Every collection centers were given one unique link to link their specimen. In order to achieve its aim to become a national online platform for specimen databases, MyBIS continues to assist in entering specimen records from their collection centres.



Figure 32. FRIM presenting the metadata proposal for Specimen Module in MyBIS.



Figure 33. Discussion among resource persons.



Figure 34. Participants of the workshop.

25 April 2016 – MyBIS Specimen Module Workshop

In collaboration with NRE's National Biodiversity Centre Core Team and FRIM, a MyBIS Specimen Module Workshop was held at the ministry in Wisma Sumber Asli in Putrajaya involving stakeholders from FRIM, IMR, UKM, UM and NHM. This workshop covered a briefing on the newly developed MyBIS Specimen Module and practical sessions on data entry into the system.



Figure 35. Briefing on MyBIS.



Figure 36. Data entry into MyBIS.



Figure 37. Participants giving full attention during the tutorial.

19 July 2016 – MyBIS Workshop at University of Malaya

A training session focusing on data entry using the Specimen Module in MyBIS was held at University of Malaya. The participants included staff, students and lecturers who are directly involved with the curation of specimen collections. Specimen collection centres registered by UM are the Herbarium Collection and Zoological Collection of the Institute of Biological Science, Faculty of Science.



Figure 38. Explanation on MyBIS.



Figure 39. Participants key-in data and exploring MyBIS.



Figure 40. One of the participants is giving feedback on the Specimen Module.

21–23 July 2016 – MyBIS Data Verification Workshop

This workshop was held at the Biodiversity Institute (IBD), Department of Wildlife and National Parks (PERHILITAN), Lanchang, Pahang. The participants were from NRE, FRIM and bird experts from PERHILITAN, UKM, Birdgroup Taman Negara as well as Birds, Nature and Us (BNU). The objective of the workshop was to provide technical assistance on the MyBIS system so that data of species in MyBIS specifically birds, can be verified by the experts.



Figure 41. Bird experts discussing on the identification of birds.



Figure 42. Photograph session with participants.



Figure 43. Bird experts demonstrating bird photography using cameras equipped with specialised lens.

2–3 August 2016 – MyBIS Workshop and Training Session

This workshop cum training session was conducted at UMT for students and lecturers of the Institute Oceanography and Environment (INOS), UMT. INOS is the leading research institute in Malaysia focusing on oceanography and marine science. Participants were briefed on the purposes and functions of MyBIS and how to use MyBIS as a platform for managing specimen collections. Use of the Specimen Module and data input were taught. During the workshop, the MyBIS team visited the specimen collection centre to find out more about the types of specimen stored and current practices on specimen management.



Figure 44. Participants listening attentively to the explanation on the Specimen Module.



Figure 45. Visit to UMT specimen room.



Figure 46. Photograph session with participants.

25–27 August 2016 – Consultation with Stakeholders and Guidelines on the Management of Scientific Collection in Langkawi, Kedah

Organised by NRE, the participants included representatives from specimen collection centres such as Entomology and Xylarium of FRIM, IBD of PERHILITAN, Natural History Museum, INOS of UMT, IMR and CIS of UKM. This workshop was aimed at finalising the MyCollection Guidelines drafted in collaboration with participating agencies to centralise specimen collection documentation using the Specimen Module in MyBIS. The participants also shared the methods used for managing specimens.



Figure 47. Representative from FRIM Entomology unit explaining the management of insect collection.



Figure 48. Sharing session with Institute Oceanography and Environment (INOS) from UMT.



Figure 49. Collection of live specimen from the trap set up the night before.

8 September 2016 – MyBIS Workshop

This workshop was organised for the Technical Working Group on Biodiversity Intactness Index (BII) & Biological Studies under the project “Improving Connectivity in the Central Forest Spine Landscape (IC-CFS)”. Staff from PERHILITAN and State Forest Departments across the country took part in this workshop. The participants were introduced to MyBIS and how each module in the system functions. This would enable them to key project data directly into MyBIS.



Figure 50. Participants listening to the explanation on MyBIS and the functions of its modules.



Figure 51. Participants testing out the system by using the prepared data for key-in testing.



Figure 52. Photography session with participants.

26–28 September 2016 – 2nd National Protected Area Managers’ Conference in Georgetown, Penang

This conference was organised by the Protected Area (PA) Financing Project, a national project that was implemented by PERHILITAN. The conference provided the opportunity for PA managers from diverse agencies to gather and discuss issues of shared concern, including avenues to strengthen PA management nationwide. An introduction to MyBIS was given by Dr Khairul Naim Adham, Head of Unit for the National Biodiversity Centre, NRE and Mr Yasser Mohamed Arifin, IT officer, Forest Biodiversity Division of FRIM.



Figure 53. Dr Rahim Sulaiman, Deputy Director (Planning) of Sabah Forestry Department speaking on his topic titled 'Managing Protected Forest Areas: Experiences from Sabah'.



Figure 54. Dr Khairul Naim Adham, giving his talk on using mybis.gov.my to enhance access to information.



Figure 55. From left, Surin Sukswan (SEA Regional Director of Proforest), Dr Rahim Sulaiman, Alison Pritchard (Managing Director of Borneo Ethical Adventures), Dr Khairul Naim and Yasser Arifin.

6 September 2017 – Educational visit by Monash University students to Forest Biodiversity Division, FRIM

Representatives from the FRIM gave a short talk on MyBIS and 'Conservation of Threatened Plants' during the visit. Apart from the brief explanation on the functions of MyBIS, students were given a demo on how they can use MyBIS as a source of information and references on biodiversity.



Figure 56. The MyBIS project representative explaining the function of MyBIS and how students can use MyBIS as a source of information on Malaysian biodiversity.



Figure 57. Dr Robyn Wilson, Senior Lecturer from the Monash University giving additional opinion on the conservation of flora and fauna.

12–13 October 2017 – MyBIS Workshop at USM, Penang

This workshop was targeted for the staff and students who are involved in the management and handling of specimens in USM's specimen collection centres, which include the Herbarium, Zoological and Marine. This workshop was aimed to provide exposure on the MyBIS system and conduct tutorials focusing on the Specimen Module.



Figure 58. Opening of the workshop by USM representative.



Figure 59. Participants listening to the tutorials and exploring MyBIS.



Figure 60. Mr. Shunmugam from USM explaining the handling of dry specimens in the Herbarium.

24 April 2018 - MyBIS Workshop at Putrajaya Botanical Garden

Organized by PPj at Putrajaya Botanical Garden, this workshop was participated by the staff from PPj and UKM including postgraduate and practical students. This workshop provided exposure on how to use MyBIS in particular the Specimen Module. For better understanding, a practical session on specimen data entry was conducted at the end of the session.



Figure 61. Participants listening to the explanation on MyBIS and the functions of its modules delivered by FRIM officer.



Figure 62. MyBIS Team member shows the specimen module to the PPj staff.



Figure 63. Participants are focus on specimen data entry in MyBIS system.

29–31 March 2019 – Nature Photography Workshop at Fraser’s Hill

This workshop was the first photography workshop organized by the MyBIS team. Twenty two participants attended this workshop including lecturers and staff from UKM, UM and officers from KATS. The workshop was divided into sessions that focused on ‘Basics of DSLR photography for Birds and Wildlife’. The photographer Al-Zahri explained the functions of the camera, how to edit pictures and using Adobe Lightroom for post processing. During practical sessions, participants were given the opportunity to take pictures using the methods taught.



Figure 64. Participants focusing during Photography talk by the expert.



Figure 65. The participant was taking pictures of insects during the practical session.



Figure 66. Photograph session with participants.

15–18 April 2019 – MyBIS Workshop at UMS

A workshop was conducted at the Borneo Marine Research Institute and Institute for Tropical Biology and Conservation, UMS. The lecturers and students were taught on how to use the MyBIS Content Management System to key-in the data of species, specimen and references. Practical sessions were done to enhance their understanding of the system. At the end of the workshop, we were given a tour to their specimen collections, taxidermy and collection status.



Figure 67. Participants listening to the explanation on MyBIS and the functions of its modules.



Figure 68. One of MyBIS team member give tutorial to the UMS staff.



Figure 69. Participants focusing on data entry.

11 September 2019 – MyBIS “Pocket Talk: Malaysia Biodiversity” and Exhibition at Eco-Rimba Park, Bukit Nanas Forest Reserve, Kuala Lumpur

This program, organised by KATS, JPMS and FRIM, was held in conjunction with the exhibition on “Hutan Kita” at KL Tower. During the opening ceremony, Deputy Minister, YBM Tengku Zulpuri Shah Raja Puji launched the book on “Royal Belum-Temengor Rainforest: The Hidden Treasure of Perak”.

Findings of the Malaysia biodiversity studies were presented by researchers from FRIM, USM, UiTM, UKM, Hospital Raja Permaisuri Bainun Ipoh (HRPB) and UPM. Exhibition booths by MNS, MEME, UKM, Ecocentric Transitions and MyBIS were present.



Figure 70. The book was launched by YBM Tengku Zulpuri Shah, Deputy Minister of KATS.



Figure 71. Representative from MyBIS Team brief about the publication books to the VIPs.



Figure 72. A lecturer from USM, Dr Zarul delivered a talk with title ‘Royal Belum-Temengor Rainforest: The Hidden Treasure of Perak’.

16–17 December 2019 – National Biodiversity Database Strengthening Workshop (MyBIS) at IRDA Office, Danga Bay, Johor

The workshop was attended by staff from Johor National Parks and Kelab Alami Mukim Tanjung Kupang and focused on data entry using the Specimen Module. Each agency and club was requested to deliver a short presentation on the management of their specimen collection.



Figure 73. Officer from KATS briefing on MyBIS function to participants.

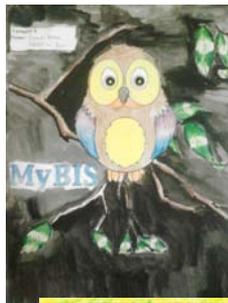


Figure 74. Participants focusing on MyBIS explanation during practical session.

CEPA ACTIVITIES

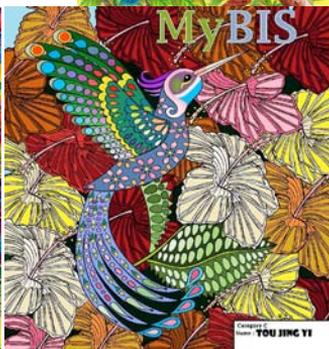
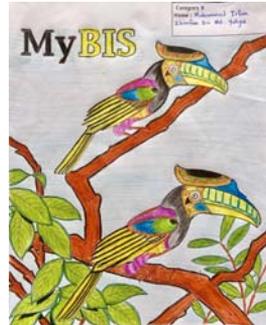
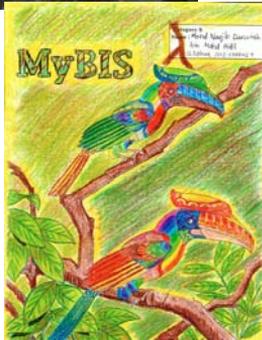
December 2016–January 2017 – MyBIS Colouring Contest

MyBIS first ever online colouring contest was open to all Malaysians aged 5 years old and above. Using its official Facebook page as the platform, five winners from each category were selected based on the highest number of 'Likes'. This contest was divided into three age groups and winners received the 'Birds of Malaysia' book and other MyBIS merchandise. The objective of this contest was to promote MyBIS and increase public engagement in biodiversity-related information.



Group A (5–12 years old) Coloured by Lee Yung Yau from Negeri Sembilan (left) and Khairun Amna Nafeesa Binti Rosli from Perak (right).

Group B (13–18 years old) Coloured by Mohd Naqib Darwish (left) and Muhammad Irfan Zharfan both from Selangor.



Group C (19 years old and above). From left, coloured by Norshila Binti Osman from Perak, Tou Jing Yee from Perak and Marty from Selangor.

30–31 August 2016 – Overnight Programme at the Natural History Museum (NHM) in Putrajaya

This event was organised by NHM in conjunction with Malaysia’s National Day. The MyBIS team was invited to talk on biodiversity and promote MyBIS through Explorace activities. The event promoted information transfer in a fun and interactive manner.



Figure 75. Hamidah Mamat from FRIM giving a short talk on biodiversity and introduction to MyBIS.



Figure 76. Students listening attentively to the information given.



Figure 77. Students participating in the game.

6 October 2016 – Talk and Exhibition on Nature Awareness in SMK Kepong

Co-organised by FRIM's Environmental Education Branch and Conservation and Biodiversity Informatics Branch, this program was held in conjunction with the World Habitat Day, World Wildlife Day and FRIM's 31st Anniversary. The event was launched by the principal of SMK Kepong, Dr Sarojini Devi Alagretnam and was aimed at raising awareness among fellow students on the importance of biodiversity and the environment. There were also specimen exhibitions and various other activities during the event.



Figure 78. Hamidah Mamat explaining about the biodiversity and introducing the MyBIS database.



Figure 79. Students checking out the MyBIS web at the kiosk.



Figure 80. Students taking part in games while learning the various functions of the ecosystem.

4–6 November 2016 – Kuala Lumpur Engineering Science Fair (KLESF)

The MyBIS team was invited by NRE to hold an exhibition on MyBIS at the KLESF event which was held at The Mines. This annual public event is an effort to promote children's interests in Science, Technology, Engineering and Mathematics (STEM) subjects, to train the educators and to raise public awareness on the importance of STEM in socio-economic, well-being and sustainable development. Because of a large crowd, this event was a great opportunity to promote MyBIS and its functions while raising awareness on the importance of biodiversity. At the MyBIS booth, visitors explored the MyBIS web online and checked out interesting specimen collections shared by FRIM Entomology Unit and Natural History Museum.



Figure 81. The MyBIS booth was well received by the public during the 3-day event.



Figure 82. Various specimen collections such as insects, birds, seashells, and fungi sparked interest of the public.

8 November 2016 – MyBIS Biodiversity Explorace

Co-organised by FRIM's Biodiversity Informatics Branch and NHM, the Explorace was held at NHM in Putrajaya, targeting primary school students. This particular event involved Year 6 students from Sekolah Kebangsaan Bandar Tun Hussein Onn 2 as one of their post-exam activities. The explorace encouraged learning among the students as they played using the MyBIS web as a guide. The NHM provided ample materials for use in the Explorace. The students were divided into groups and competed among themselves to complete each mission in a given time.



Figure 83. Students working together to complete mission at each station.



Figure 84. Photograph session with NHM staff and teacher and students from S.K. Bandar Tun Hussein Onn 2.

15 March 2017 – MyBIS Exhibition during the Science and Mathematics Carnival in SMK Jalan Bukit, Kajang

Together with FRIM's Corporate Communication Unit and the Environmental Education Branch, the MyBIS team held an exhibition at SMK Jalan Bukit in Kajang during their Science and Mathematics Carnival. The purpose of this carnival was to increase the interest and awareness on the subjects of science and mathematics. FRIM staff highlighted the research and development efforts by FRIM in conserving forest biodiversity and explained the function of the MyBIS web. There were also other interactive activities conducted by Universiti Kuala Lumpur (UniKL) and National Science Centre to increase awareness on the importance of protecting the environment. The school also invited the national astronaut, Dato' Dr Sheikh Muszaphar Shukor to deliver a motivational talk to the students.



Figure 85. Students completing quizzes on MyBIS for a chance to win prizes.



Figure 86. Explaining the functions of MyBIS to the students.



Figure 87. Students posing with Malaysia's first astronaut.

25 March 2017 – MyBIS Exhibition held in conjunction with the International Day of Forests at FRIM

The International Day of Forest is an annual event, which was celebrated worldwide on 21 March with 'Forest & Energy' as its theme for the year 2017. In conjunction with this annual event, FRIM had organised a one-day event to celebrate this day. FRIM chose 'Energise with Love' as its theme for this annual event, plenty of fun activities took place such as MyBIS and photo exhibitions, commemorative tree planting, tree identification activities and making accessories using materials from nature. This event was held to instill the value of love and gratitude towards forests in our surroundings. The exhibition focused on introducing the MyBIS web and its biodiversity databases on flora and fauna in Malaysia as a source of information to the public.



Figure 88. Dr. Ismail along with the MyBIS team explaining MyBIS as a one-stop repository.



Figure 89. Young visitors peering over the photographs of various species available on MyBIS.



Figure 90. Demonstration on how to search for information in MyBIS.

20 May 2017 – MyBIS Exhibition held in conjunction with the International Day on Biological Diversity

This event involved government agencies under NRE such as JTLM, PERHILITAN, FRIM and was launched by YB Datuk Ir. Dr. Haji Hamim bin Samuri. This event took place at Taman Gelora, Kuantan, Pahang. Many interesting activities for public participation were held that included aerobics, MNS Nature Run, MNS Green Talk and games.



Figure 91. YB Datuk Ir. Dr. Haji Hamim bin Samuri during the signing event to commemorate the celebration day.



Figure 92. Students wearing masks of endangered species such as pangolin, sunbear, and Malayan tiger.



Figure 93. Visitors exploring the MyBIS web.

26–28 July 2017 – MyBIS Exhibition held in conjunction with “The 20th Meeting of the Asean Senior Officials on Forestry (ASOF) and its Related Meetings” and National Central Forest Spine Seminar

NRE, with cooperation from FRIM, Forestry Department Peninsular Malaysia and the ASEAN Secretariat, hosted the 18th International Seminar on Forestry Issues Affecting Forestry and Forest Products in Putrajaya. This seminar, themed Forest Landscape Management, was officially launched by the Minister Dato Sri Dr Wan Junaidi Tuanku Jaafar, who also officiated the 20th Meeting of the ASEAN Senior Officials on Forestry (ASOF). The aim of the seminar was to discuss issues on ecological linkages, forest landscape restoration as well as providing a platform for sharing experiences in the implementation of Forest Landscape Management among the ASEAN Member States (AMS). The seminar was attended by over 200 participants including AMS delegates, government officers, academicians and representatives from the non-governmental organisations (NGOs). Other activities on that day included exhibitions by various agencies including FRIM, MEME, Tourism Malaysia and Sabah Forestry Department.



Figure 94. Using the iPad to demonstrate MyBIS.



Figure 95. Foreign visitors browsing FRIM's publications.



Figure 96. YB Dato Sri Dr Wan Junaidi Tuanku Jaafar visiting FRIM booth.

25–29 October 2017 – MyBIS Exhibition held in conjunction with the 10th International Kuala Lumpur Eco Film Festival (KLEFF) in Publika, Solaris Dutamas

The KLEFF was organized by the non-profit environmental organization EcoKnights and the event offered Malaysians a wide selection of activities and programs to encourage the public to embrace sustainable living. Apart from the screening of selected environmental-related films, the public was also given the chance to enjoy a wide spectrum of educational, informative and hands-on activities that promote sustainable living. This event also featured nature-themed creative and visual art exhibitions including MyBIS.



Figure 97. Visitors visiting the MyBIS booth.

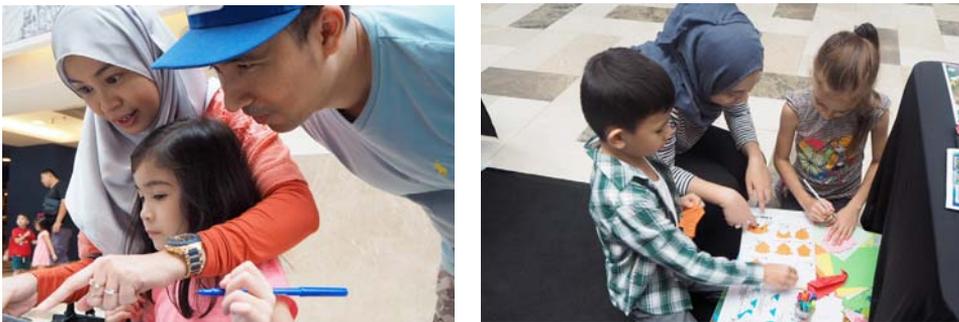


Figure 98. Activities and games that attracted visitors to the booth included colouring, puzzle solving, origami and finding hidden images.

16 April 2018 – MyBIS Exhibition held in conjunction with ‘Biodiversity Talk: Conservation of Mammals of Malaysia’ at Auditorium, FRIM Kepong

A biodiversity talk on the ‘Conservation of Mammals in Malaysia’ was held in FRIM. This event was organized by the Zoological Branch of FRIM Forest Biodiversity Division and launched by FRIM’s Deputy Director-General (Operations) Dr. Khali Aziz bin Hamzah. The talk was given by two very well-known fauna experts, Dr. Lim Boo Liat and Prof. Dato’ Dr. Mohd Tajuddin bin Abdullah from UMT. The main objective of this program was to discuss issues involving mammals conservation in Malaysia, including land use change, invasive species and zoonotic diseases. There was also a MyBIS mini-exhibition held outside the Auditorium. This program was attended by 109 participants from 22 institutions, which included NRE, Forestry Department of Peninsular Malaysia, Department of Wildlife and National Parks Peninsular Malaysia (PERHILITAN), Federal Department of Town and Country Planning (PLANMalaysia), local universities, NGOs, and the public.



Figure 99. Visitors listening to the biodiversity talk.



Figure 100. Visitors listening about MyBIS and its functions.



Figure 101. Dr. Lim giving talks on the mammal issues.

22 April 2018 – MyBIS Exhibition in conjunction with Earth Day celebration at Kampung Pulau Penarek, Tangkak Johor

Together with FRIM's Corporate Communication Unit, the MyBIS Team held an exhibition to celebrate Earth Day at Kampung Pulau Penarek, Tangkak, Johor with the theme 'End Plastic Pollution'. MyBIS exhibited biodiversity posters, books and mini-games. PERHILITAN featured elephants to attract people. Various activities were held during the exhibition such as design competitions from recycled materials, children's coloring activities and competition on canoe polo.



Figure 102. Students and adults were given exposure on MyBIS website, books and posters.

24 April 2018 – MyBIS Exhibition in conjunction with Book Day celebration at the National Library, Kuala Lumpur

The MyBIS Team, together with FRIM's Corporate Communication Unit participated in an exhibition in conjunction with the Book Day celebration 'Let's Read in 10 Minutes' at the National Library. Various activities were held such as book reading. Students and teachers from several schools were present to cheer on the program.



Figure 103. The director Information and Knowledge Infrastructure Division of National Library, Mr. Abd Rahman Sudin listening the briefing on MyBIS.



Figure 104. Students were given exposure on MyBIS website, books and posters as well as receiving endangered animal mask.



Figure 105. Students reading books for 10 minutes at the National Library.

7 May 2018 – MyBIS exhibition in conjunction of Back2School Program: *Pelestarian Kebun* at SK Sungai Nipah, Bagan Datuk, Perak

FRIM's Corporate Communication Unit, together with MyBIS Team was involved in the exhibition. This program was officiated by the Deputy Prime Minister, Dato' Seri Dr Ahmad Zahid Hamidi at SK Sungai Nipah, Bagan Datuk, Perak. The Back2School Program: *Pelestarian Kebun* was part of the activities under the Project Mangrove Forest Germplasm National Heritage which has 10 components that need to be implemented within two years. Seven (7) components involved research that is being conducted by FRIM, Yayasan Kemanusiaan Muslim Aid Malaysia (YKMAM) and Malaysian Nature Society (MNS). One of the objectives of the program is to produce a generation of environmentally conscious people who are concerned about the environment. Nearly 1000 people participated in the program including 500 children, teachers, researchers and local residents. There were robotic exhibitions, Go-Kart activities and colouring competitions.



Figure 106. Students and teachers were exploring MyBIS website and excited about the books publications.



Figure 107. Teachers in every school receiving a book and poster as gift from MyBIS to put at their school library.

27–28 September 2018 – MyBIS Exhibition in conjunction of ‘The 12th Heart of Borneo (HoB) Trilateral Meeting’ at Miri, Sarawak

MyBIS took part in the exhibition held in conjunction with the 12th Heart of Borneo (HoB) Trilateral Meeting held in Miri, Sarawak. The HoB refers to the main part of the island where forests remain intact. It involves three countries, which is Brunei Darussalam, Indonesia and Malaysia. It is one of the largest transboundary rainforests remaining in the world. The aim of the HoB is to conserve the biodiversity for the benefit of the people who rely upon it through a network of protected areas, sustainable management of forests and other sustainable land uses. The team highlighted the role, function and the variety of information available in MyBIS. The application of MyBIS QR codes on materials such as the MyBIS book series enables users to get more information from the website. Users can also use the mobile app ‘Telegram’ to do species search by entering the related keyword on the MyBISbot.

Co-organised by the Ministry of Water, Land and Natural Resources (KATS) and Forest Department Sarawak, the event was officiated by the KATS Minister YB Dr. Xavier Jayakumar. The opening ceremony was also attended by KATS Secretary-general, Dato’ Dr. Tan Yew Chong, Sarawak State Legislative Assembly deputy speaker Dato Gerawat Gala and Assistant Minister of Urban Development, Land Administration and Environment, YB Datu Haji Len Talif Salleh, Sarawak Forest Director, Hamden Mohammad, participants and delegates from the governments of Brunei, Indonesia and Malaysia.



Figure 108. Dr. Xavier listening to the MyBIS briefing by FRIM officer and MyBIS team leader.



Figure 109. Staff from Forest Department Sarawak reading books published by FRIM and MyBIS.



Figure 110. Group photo for participants attending ‘The 12th Heart of Borneo Trilateral Meeting’.

22 October 2018 – MyBIS Exhibition in conjunction with the “Symposium on increasing the understanding of the NPBD (2016–2025) and its relation to the CBD” at Perdana Leadership Foundation, Putrajaya

This symposium was attended by government agencies such as PERHILITAN, JPSM, JTLM and Non-Government Organisations including WWF, MYCAT, GEF and Sime Darby Plantations in order to increase the understanding of the NPBD 2016-2022 policy among government agencies and selected NGOs, who are the key stakeholders in the implementation of the policy. There were four sessions; Session 1 discussed on Protected Areas, Wildlife and Marine Biodiversity, Session 2: Synthetic Biology and Living Modified Organisms (Cartagena Protocol)/ Access to Benefit Sharing and Digital Sequence Information (Nagoya Protocol), Session 3: Mainstreaming and Financing Biodiversity Across Sectors and Session 4: Involvement of civil society, private sector, and local communities in biodiversity conservation. The final slot was filled with sixteen short presentations on biodiversity values and current issues. A small exhibition on MyBIS was also held during the symposium.



Figure 111. Participants asking about MyBIS and listening to the explanation.



Figure 112. Dialogue session between experts on the topic “Mainstreaming and Financing Biodiversity Across Sectors”.

25 October 2018 – MyBIS Exhibition in conjunction of Pemasyhuran Geopark Lembah Kinta at Gunung Lang Recreational Park, Ipoh, Perak.

MyBIS Team and Communication Corporate Unit, FRIM participated in the above exhibition. His Royal Highness, Sultan of Perak, Sultan Nazrin Muizzuddin Shah officially declared the Lembah Kinta as a National Geopark site. Lembah Kinta has a network of limestone hills with a rich history in mining and is known to be a habitat for many endemic species of flora and fauna. It also has natural landscapes which are suitable for tourism.

Gracing the event were the Queen of Perak, Tuanku Zara Salim, Raja Muda, Raja Jaafar Raja Muda Musa; Raja Dihilir, Raja Iskandar Dzulkarnain Sultan Idris Shah and Raja Puan Muda, Tuanku Soraya Sultan Abdul Halim. Also present were Water, Land and Natural Resources Minister, Dr Xavier Jayakumar and secretary-general, Datuk Dr Tan Yew Chong, State Secretary Zainal Azman Abu Seman and State Tourism, Arts and Culture chairman, Tan Kar Hing.

During the event, posters and publications on the flora and fauna in Malaysia were displayed to provide information and awareness to visitors on the importance of protecting and conserving endangered species, particularly in limestone areas. The event received overwhelming response from government agencies, private sector and the public.



Figure 113. Signing ceremony of His Royal Highness, Sultan of Perak, Sultan Nazrin Muizzuddin Shah to declare Lembah Kinta as a National Geopark geology site.



Figure 114. His Royal Highness, Sultan of Perak, Sultan Nazrin Muizzuddin Shah and the Queen of Perak, Tuanku Zara Salim are listening to the briefing by FRIM officer and MyBIS team leader.

10 November 2018 – MyBIS Exhibition held at S.K. Intan Baiduri, Kepong Selangor

MyBIS Team, together with Environment Education Branch, FRIM was involved in the Science Carnival held at S.K. Intan Baiduri Kepong. The carnival was organized by the school and was officiated by its principal.

MyBIS displayed various informative publications on biodiversity to enhance knowledge. Interactive mini-games were organised. A set of MyBIS books was donated to the school library in the hope that these will be used as reference materials. Apart from the exhibition, other activities held included food truck sales, designing contests and robot competitions.



Figure 115. Students were briefing on MyBIS and enjoying the interactive games on biodiversity.

22–25 November 2018 – MyBIS Exhibition during MAHA at MAEPS, Serdang, Selangor.

The Malaysia Agriculture, Holticulture and Agrotourism (MAHA) 2018 exhibition was held at the Malaysia Agro Exposition Park Malaysia (MAEPS), Serdang, from 22 November to 2 December. The event was organized by MOA and launched by our former Prime Minister, Tun Dr. Mahathir Mohamad. 'Our Food Our Future' was chosen as the theme with a target audience of 3.5 million people. This event focused on agrotourism, agro trade and agro lifestyle, along with the latest innovations and technological advancements. Many Government agencies, Non-Government Organisations and the private sector were involved in the exhibition including MARDI, Malaysian Pineapple Industry Board, Department of Fisheries Malaysia and others.

MyBIS team participated for four days from 22 to 25 November 2018. MyBIS was introduced to visitors as a national biodiversity database in Malaysia. Informative materials such as bookmarks, brochures, FRIM and MyBIS books were offered, some of which can be downloaded for free from the MyBIS website. Visitors also had the opportunity to explore the system function using the kiosk provided.



Figure 116. Team MyBIS were giving explanation about MyBIS and its functions to the visitors.

27 November 2018 – MyBIS Exhibition in conjunction of FRIM Technology Talk in Ipoh, Perak.

FRIM had organized a Technology Talk with the theme “Sustainable Forestry: Innovation and Solutions” at the Kinta Riverfront Hotel, Ipoh, Perak. This program was officiated by Datuk Dr Abd Latif Mohmod, Director-General of FRIM.

This first in a series of technology talks held in the peninsula targeted the northern zone, covering Perlis, Kedah, Penang and Perak. The program highlighted the results and output of research and development (R&D) projects to meet the needs of stakeholders in the field of forestry. There were over 100 participants comprising representatives from government and private agencies; local authorities; housing developers; forest plantation and herbal entrepreneurs; landscape managers as well as interested individuals. Exhibitions from FRIM’s R&D divisions (forestry and the environment; natural products; forest biotechnology; forest products and forest biodiversity including MyBIS) were held to introduce and promote FRIM’s services. At the end of the program, a business-matching session was held to encourage further discussions between participants and FRIM experts.



Figure 117. MyBIS team leader were giving some briefing to DG FRIM, Datuk Dr. Abd Latif and his deputies.



Figure 118. Team MyBIS were giving explanation about MyBIS and its functions to the visitors.



Figure 119. MyBIS team leader, Ajla Rafidah was giving a talk about MyBIS to the participants.

16 January 2019 – MyBIS Exhibition during the working visit of the Minister of KATS

The Minister of KATS, Dr. Xavier Jayakumar, conducted his first working visit to FRIM. The Director General, Datuk Dr. Abd Latif briefed him on FRIM's background, scope of research and the importance of its research contribution to the country. The Minister also visited exhibitions showcasing research findings, products and services provided by FRIM, including MyBIS exhibition booth.



Figure 120. Dr. Xaxier listening to explanation from Director of Forest Biodiversity Division, Dr. Lillian, FRIM zoologist Shahfiz Azman and FRIM officer, Aja Rafidah on the exhibition booth.



Figure 121. Dr. Gan listening to the MyBIS poster explanation by the MyBIS team leader.

30 January 2019 – MyBIS Exhibition in conjunction to Jentar Closing Event ‘Plant A Tree’ Project at Jentar Estate, Temerloh, Pahang

FRIM welcomes private sector involvement in forest restoration and biodiversity conservation in the country. In the collaborative project, Sime Darby Plantation collaborates with FRIM to plant endangered, rare and threatened plant species for the purpose of conservation. FRIM had contributed 188 seedlings from 20 Dipterocarpaceae species for planting including six Critically Endangered (CR), four Endangered (EN), five Vulnerable (VU) and one Rare (RA) species. The MyBIS and Zoological exhibitions displayed books and posters on biodiversity.



Figure 122. The Yayasan Sime Darby Governing Council Member, Caroline Christine Russell, Sime Darby Plantation’s Upstream Chief Operating Officer, Mohamad Helmy and Dr. Lillian launching the ‘Plant-A-Tree’ book.



Figure 123. FRIM zoologist, Shahfiz and FRIM Kepong Botanical Garden head program & Research officer, Suhaida help in explaining MyBIS.



Figure 124. FRIM officer, Aja Rafidah shows MyBIS through publication book and website.

10 February 2019 – MyBIS Exhibition for the Month of Fauna Speech Programme in conjunction with Putrajaya Park’s Day in Padang Semarak, Putrajaya Wetland Park

The team was involved in the exhibition of the Month of Fauna Speech Programme in Padang Semarak, Putrajaya Wetland Park. This programme was organised by Putrajaya Corporation. Exhibition booths and various activities such as Fun Run, Talk and Farm in the City were carried out. The talk on bats was delivered by Dr. Juliana from UKM and the one on birds was given by Mr. Sulaiman Salikan from NEST.



Figure 125. MyBIS team member giving some explanation on the function of MyBIS and giving bookmarks to the visitors.

17 March 2019 – MyBIS Exhibition in conjunction with World Wildlife Day 2019 in MyTown, Cheras

The 2019 World Wildlife Day and the Pre-Launching of “Save the Malaya Tiger” Campaign 2019-2020 in MyTown, Cochrane Road, Kuala Lumpur was organised by KATS. The focus of the event was on the conservation of Malayan Tiger with the involvement of all parties in an effort to increase the population of the endangered Malayan Tiger. PERHILITAN, Forestry Department of Peninsular Malaysia, Malaysia Armed Forces and many other NGOs were involved in this event. The campaign will run throughout 2019 and 2020 through a variety of programmes, which includes conservation and enforcement, public awareness, fund raising and Corporate Social Responsibility (CSR). MyBIS was involved to increase the public awareness; several visitors were interviewed with the aim to know their level of awareness on biodiversity.



Figure 126. MyBIS publication at the exhibition booth.



Figure 127. Children playing MyBIS puzzle game.



Figure 128. Visitors were seeing some of MyBIS publication and algae specimens provided by UM.

29 March–7 April 2019 – MyBIS exhibition in conjunction with Kuala Lumpur International Book Fair in PWTC, Kuala Lumpur

Kuala Lumpur International Book Fair was organised by National Book Council of Malaysia, Ministry of Education in collaboration with the book industry association. The aim was to increase the public’s interest on reading. MyBIS was invited to showcase her books. During the fair, the book on the “Mangrove Flora of Malaysia” won a Country Book Award in Best Luxury Books category.



Figure 129. Visitors were given opportunity to explore MyBIS website and read MyBIS publication during the Kuala Lumpur International Book Fair.

25 April 2019 – MyBIS Exhibition for the “Seminar on Energizing Sustainable Development Goals (SESDG2019): For People, Ecosystem & Planet” at The Cube, Academy of Islamic Studies UM (APIUM)

This seminar was organized by UM Eco-Campus Secretariat & UM Living Labs with other partners. It was officiated by YB Datuk Seri Saifuddin Nasution Ismail, Minister of Domestic Trade and Consumer Affairs with a keynote address by Professor Dr. Phang Siew Mooi, Honorary Advisor of IOES UM. This seminar was held in conjunction with the 2019 World Earth Day with the theme: “Protecting Our Species”. There were expert forum and exhibition related to the environment, marine conservation and waste management. MyBIS was invited to participate.



Figure 130. MyBIS team members were giving some briefing about MyBIS and its functions during the seminar in APIUM, UM.

29 April 2019 – MyBIS Exhibition in conjunction with “Biodiversity Talk: Conservation on Avifauna in Malaysia” Programme in FRIM

Organised by FRIM, this biodiversity talk was held in conjunction with Earth Day. The event was launched by the General-Director of FRIM, Datuk Dr. Abd Latif Mohmod. The aim was to increase the awareness on avifauna conservation and it provided a constructive platform for sharing information and discussion on related avifauna issues in Malaysia. The four invited speakers were Mr. Ismail Mamat (PERHILITAN), Mrs. Azlina (Urban Planning Department), Mr. Yeap Chin Aik (MNS) and Mr. Shahfiz Azman (FRIM).

This programme was attended by 120 participants from 37 agencies that included government agencies, Non-government Organizations, and the academia such as KATS, PERHILITAN, state forestry departments, National Wildlife Rescue Centre, MNS, WWF-Malaysia, Global Environment Centre (GEC), Wildlife Conservation Society (WCS Malaysia), Sime Darby, UKM, USM, UPM and UM.



Figure 131. MyBIS Team leader, Aja Rafidah and other MyBIS team were explaining about MyBIS and showing some publications during the Biodiversity Talk.



Figure 132. Opening session by FRIM DG, Datuk Dr Abd Latif Mohmod on Biodiversity Talk.

22–23 June 2019 – MyBIS Exhibition for the International Bird Race in Fraser’s Hill

In conjunction with the 32nd International Bird Race, MyBIS was invited to join the exhibition at Fraser’s Hill. The International Bird Race is a yearly event and is a tourism activity for the state of Pahang. The event was participated by more than 97 people from various countries, which included Taiwan, Myanmar, Korea, Philippines and Malaysia.

The Race was launched by YH. Dato’ Ishak b. Mokhtar, the General Manager of Tourism Pahang. The aim of the event was to preserve nature and to nurture the people on the importance of Fraser’s Hill as a bird sanctuary.

In this event, FRIM and MyBIS explained the role of FRIM in conservation and research. Papercraft activities were organised for the children.



Figure 133. Visitors reading MyBIS book and listening information on MyBIS.



Figure 134. Opening session by the organizer, Allen Jeyarajasingam on 32nd Fraser's Hill International Bird Race.

26 June 2019 – MyBIS Exhibition in conjunction with FRIM Technology Talk in UCSI Hotel Kuching, Sarawak

FRIM in collaboration with Sarawak Forestry Department had organised a Technology Talk in Kuching. Over 100 participants involving representatives from various government and private agencies, logging concession operators, wood-based companies such as sawmills, plywood, wood drying and furniture, local authorities, state park management, resort operators and forest plantation managers attended the programme. The Talk was officiated by the Sarawak Permanent Secretary, Ministry of Urban Development and Natural Resources, Datu Dr. Wan Lizozman Wan Omar. Also present were FDS Acting Deputy Director Abang Ahmad Abang Morni who represented his Director Hamden Mohammad, FRIM Deputy Director General (DDG)(Operations) Dr. Khali Aziz Hamzah and FRIM DDG (Research) Dr. Samsudin Musa. MyBIS team took this opportunity to exhibit the website, telegram, posters and publications. Other booths showcased FRIM's products derived from forest and biotechnology.



Figure 135. Opening session by the Datu Dr. Wan Lizozwan Wan Omar, Permanent Secretary, Ministry of Urban Development and Natural Resources (MUENR).



Figure 136. FRIM Forest Plantation Programme Head Dr. Wan Rasidah Wan Ab Kadir giving a talk on forestry biotechnology R&D activities.



Figure 137. MyBIS team member giving explanation about MyBIS and its publication.

6 July 2019 – MyBIS Exhibition in conjunction with ‘World Firefly Day’ in FRIM, Kepong

This programme, organised by FRIM’s Entomology Branch, was participated by 14 adults and 12 children. The celebration of World Firefly Day (Wffd) themed, “Fireflies need dark nights”, was aimed at creating awareness on the importance of reducing light pollution to ensure fireflies continue to thrive in their natural habitats. The programme began with talks on fireflies by FRIM researchers, Veronica Khoo and Dr. Nada Badruddin. A mini exhibition showcased MyBIS and the two different types of fireflies, i.e. aggregated and solitary. Solitary fireflies were introduced to the public to create awareness of their existence and dependence on the diverse niches within the tropical forest.



Figure 138. MyBIS team leader explaining the information on pamphlet.



Figure 139. FRIM research assistant showing and explaining about fireflies.



Figure 140. Group photo with the participants during the World Firefly Day Awareness Day in FRIM.

23 August –22 September 2019 – MyBIS Exhibition in conjunction with Hutan Kita exhibition in KL Tower

A 1-month exhibition with the theme “Hutan Kita: Journey through Our Rainforest” was held at KL Tower. On 23 August 2019, the exhibition was officiated by our Prime Minister, YAB Tun Mahathir Mohamad with the launching of Malacca Teak (*Intsia palembanica*) as the nation’s national tree. Malacca Teak, locally known as Merbau, was selected as a symbol of the integrity of the nation’s forests as a result of sustainable management and conservation to preserve Malaysia’s biodiversity. Merbau is an important timber species in the country’s wood industry. MyBIS team took part in the exhibition displaying and sharing publications and provided free bookmarks and masks of threatened animals to visitors. Other activities included the QR code animal virtual reality, 3D view of the forests and exhibitions set up by government agencies.



Figure 141. Team MyBIS showing publications and giving animal masks that attracted visitors to the booth.

4–6 October 2019 – MyBIS Exhibition during Putrajaya Open Day in Putrajaya Square, Precinct 3, Putrajaya

The Putrajaya Open Day is officially launched by YBhg. Tan Sri Dr. Ismail bin Hj. Bakar, Chief Secretary to the Government of Malaysia. This Open Day was held for three days and was organised by KATS in collaboration with Putrajaya Corporation, National University of Malaysia (UKM) and FRIM. There were various activities organised by 23 ministries and 101 agencies. MyBIS exhibited the result of Urban Biodiversity Study in Putrajaya, posters and books related to biodiversity, social media quiz and others. More than 1000 visitors attended this event.



Figure 142. MyBIS booth during Putrajaya Open Day.



Figure 143. Dr. Juliana from UKM explaining the wildlife roadkill in Putrajaya.



Figure 144. Winners showing their prizes after answering the social media quiz.

30–31 October 2019 – MyBIS Exhibition in conjunction with National Symposium on National Heritage Reference Management Transformations 2019 at Hotel Mudzaffar, Ayer Keroh, Malacca

FRIM has organised the National Symposium on National Heritage Reference Management Transformations 2019 at Hotel Mudzaffar Ayer Keroh, Malacca. The Symposium was officiated by YB Datuk Tey Kok Kiew, EXCO Housing, Local Government and Environment, State of Malacca. About 100 participants from various government agencies, ministries and institutes of higher education attended. There were 23 exhibition booths, three poster booths and eleven oral presentations. It was held to foster and inspire a creative and innovative culture in the management of reference materials related to research and development, selection and evaluation, procurement, documentation, services, maintenance, security, storage, preservation and conservation as well as dissemination.



Figure 145. Group photo with Dr. Richard during National Symposium.



Figure 146. Dr. Richard giving talk during the National Symposium.



Figure 147. A representative from MyBIS team member explaining to Datuk Tey Kok Kiew, Exco of Housing, Local Government, Environment and Green Technology of Malacca State about MyBIS .

16 November 2019 – MyBIS exhibition in conjunction with Biodiversity Awareness Programme in UiTM Raub, Pahang

A Biodiversity Awareness Programme was organized by KATS in collaboration with UiTM Raub, Pahang. The aim was to raise awareness and instilling the understanding the values of our national biodiversity among students of higher education. FRIM and MyBIS participated in the exhibition to provide exposure to Malaysia's biodiversity and promote the system as a national biodiversity repository.

The programme was officiated by YBM Tengku Zulpuri Shah, Deputy Minister of KATS and attended by UiTM Deputy Vice Chancellor, JPSM, PERHILITAN, Pahang Forest Department and FRIM, amongst others. A talk on “Butterfly Biodiversity in Peninsular Malaysia with the focus on Rajah Brooke’s Birdwing” was given by Dr. Phon Chooi Khim of FRIM followed by a lecture on “Exotic Pets” by Mr. Faizal I’zham bin Pikri of PERHILITAN. Other activities included tree planting, debate competition and presentations by undergraduates of UiTM Raub Campus, and exhibitions held by various departments and clubs. YB Deputy Minister offered a contribution to the Kelab Gerakan Sukarelawan Mahasiswa (GESUMA), UiTM Raub Campus to encourage volunteer activities on environmental preservation and conservation. The programme, attended by about 1,000 participants, was well-received.



Figure 148. UiTM students listening tentatively about the talks given by invited speakers.



Figure 149. Tree planting activities by YB Deputy Minister of KATS outside UiTM.

Figure 150. Team MyBIS showing MyBIS website to the visitors through kiosk.



16 November 2019 – MyBIS Exhibition in conjunction with Putrajaya Bird Race in Putrajaya Wetland Park, Precinct 13, Putrajaya

The first ever Putrajaya Bird Race was officially launched by YBhg. Datuk LAr. Baharudin Aziz, the vice president of Putrajaya Corporation, and Tengku Aina binti YTM Tengku Ismail Shah, Director of Communication Corporate Unit, Putrajaya Corporation in Putrajaya Wetland Park, Precinct 13, Putrajaya. This event was organised by Putrajaya Corporation (PPJ) and Nature Educational Society (NEST). It was started from 15 to 17 Nov 2019. There are various activities held here like the colouring contest, bird race, archery and many more. Team MyBIS has exhibited MyBIS books and Putrajaya books as well as poster related to Biodiversity. Adults and children have the chance to see the beauty of nature through MyBIS books and telegram MyBIS bot. Around 450 people including Bird Race participants have participated this event. At the same time, we have given books to the winner as prizes for Crossword Puzzle Quiz.



Figure 151. Visitors looking for species information in MyBIS book.

10 December 2019 – MyBIS Exhibition during the Preparation of Firefly Action Plan in Selangor River Workshop in De Palma Eco Resort Kuala Selangor

FRIM Entomology Branch organized the Workshop for the Preparation of a Firefly Action Plan for the Selangor River (2021–2030). The aim of the workshop was to gather feedback and input from stakeholders and local communities on the draft Action Plan.

A total of 61 people attended the workshop, which included MRS Inspire Professional Services, Selangor State Forest Department, Selangor Public Works Department and its Headquarters, Department of Irrigation and Drainage, Kumpulan Semesta Sdn. Bhd., MNS, PERHILITAN Selangor and its headquarters, UiTM, Selangor's Economic Planning Unit, Selangor Tourism, Forest Department of Peninsular Malaysia, Department of Agriculture Sungai Burung, Kuala Selangor District and Land Office Complex as well as representatives from local communities such as the Penghulu Mukim Pasangan of Bukit Belimbing Village, Sepakat Village, Tanjung Siam Village, *Persatuan Pendayung, Inspirasi Kawa Kelab Generasi Warisan Seri Asahan* and Asahan Village.



Figure 152. Team MyBIS and FRIM officer showing some publications and insect specimens to the visitors.

NEWSPAPER CLIPPINGS

Sinar Harian

8th January 2013

Maklumat biodiversiti di medium mudah alih

INSTITUT Penyelidikan Perhutanan Malaysia (Frim) berjaya melancarkan sebuah aplikasi mudah alih yang dikenali sebagai "MyCHM i-Newsletter" dengan sokongan pembiayaan daripada Kementerian Sumber Asli dan Alam Sekitar (NRE).

Aplikasi ini adalah "iBook" berkenaan biodiversiti pertama di Malaysia dan boleh didapati percuma dengan muat turun daripada "iBook Store" atau secara terus dengan mengunjungi laman sesawang MyCHM di www.chm.frim.gov.my

Aplikasi inovatif baru ini membolehkan biodiversiti dikenali masyarakat umum dengan cara lebih menarik melalui perantara terkini dan menyebarkan informasi saintifik yang dihuraikan dengan cara mudah difahami.

MyCHM i-Newsletter ini dijangka dapat mewujudkan kesedaran dan penghargaan terhadap kekayaan biodiversiti Malaysia.

Aplikasi ini telah dirasmikan oleh Menteri Sumber dan Alam Sekitar, Datuk Seri Douglas Uggah Embas, bersempena Majlis Perasmian Seminar Biodiversiti (Seminar MyBioD 2012) ketiga yang diadakan di Kuala Lumpur, baru-baru ini.

Seminar selama dua hari ini dihadiri oleh seramai 150 peserta yang mewakili beberapa akademi, agensi kerajaan, badan bukan kerajaan (NGO) dan sektor swasta termasuk Sekretariat Konvensyen Kepelbagaian Biologi (CBD).

Ia merupakan langkah pertama dalam proses mengaji semula Dasar Kepelbagaian Biologi Kebangsaan yang dibangunkan pada 1998 bagi memenuhi Strategi Kepelbagaian Biologi Global 2011-2020 serta 20 Sasaran Kepelbagaian Biologi Aichi.

Kedua-dua perkara itu telah diguna pakai oleh negara ahli CBD dengan mengambil kira kepentingan serta perkembangan baru dalam hala tuju pengurusan biodiversiti negara.

Acara ini mula dianjurkan oleh NRE buat kali pertama pada tahun 2010 dengan sokongan daripada Program Pembangunan Pertubuhan Bangsa-Bangsa Bersatu (UNDP) dan pihak berkepentingan ke arah meningkatkan kesedaran mengenai biodiversiti.

• SUMBER PORTAL FRIM



Kemudahan disediakan ini membolehkan orang ramai mendapatkan maklumat berkenaan biodiversiti.

Oriental Daily News

28th February 2017

35%受威胁 4种高等植物灭绝

甲洞27日讯 | 根据马来西亚森林研究院针对马来西亚半岛的1132种高等植物 (Vascular Plant) 的物种保育状况评估调查显示, 其中有35%物种已被列为受威胁类别及4种物种已经绝种。

4个绝种物种分别是, Crispatula属类 (Oreogrammitis crispatales)、Kunstleri蕨类 (Oreogrammitis kunstleri)、龙胆香科态麻树 (Shorea kuantanensis) 和秋海棠属 (Begonia elronensis)。

马来西亚森林研究院总长拿督阿都拉迪夫表示, 森林研究院历时5年, 并经过一系列国际自然保护联盟 (IUCN) 的评估和鉴定步骤, 而作出上述结果。

「这需要各国的合作, 包括州政府与森林局等。政府也将在下一次的国会中辩论有关资源获取与共享 (ABS) 的法案。」

阿都拉迪夫今日召开新闻发布会时, 如是指出。其他出席者包括马来西亚森林研究院森林生物多样性部主任慕永隆。

森林研究院在去年12月4日

17日, 在墨西哥坎昆举行的生物多样性公约缔约方大会第13届会议, 荣获金奖, 该奖项是表扬我国自2008年以来, 不断努力改进, 更新和维持我国的「信息交换系统」(CHM) 网站的贡献。

森林研究院获金奖

大马是其中一个联合国「生物多样性公约」(CBD) 的签署国之一, 依据条例, 大马需建立一个国家「信息交换系统」(CHM), 森林研究院自2014年起设立称为「生物多样性信息管理系统」(MyBIS) 网站 (www.mybis.gov.my)。

阿都拉迪夫表示, 森林研究院是全世界首个获得此金奖的单位, 惟这是一个长远旅程的开始, 目前我国的生物科技无法与



由马来西亚森林研究院主导的「马来西亚生物多样性信息交换机制」, 荣获生物多样性信息 (CHM) 金奖。左起为阿都拉迪夫和慕永隆。

欧美国家媲美, 如今仅能记录国内环有的植物物种。

慕永隆说, 该网站存有超过4万个物种的记录、超过6000张图片、超过1000篇参考文献以及99本刊物。「该网站可供大众, 甚至是决策者作为一个参考有关植物和动物群开卷。」

「生物多样性信息系统」作为一站式存储库, 设有关于植物和动物群的综合数据, 包括物种和分类信息、图片、参考资料、保育状况、保护区和标本, 并了解我国濒危物种的资讯, 如保育状况、物种概况、图片、分布地点和文献等。(407)

保育記錄自然資源受肯定

FRIM MyBIS海外奪金獎

報 道

攝 影 廖 德 來

(吉隆坡27日訊)由馬來西亞森林研究院(FRIM)開的生物多樣性信息系統(MyBIS)，在去年12月於墨西哥坎昆舉行的第13屆生物多樣性公約締約方大會(COP 13)上，榮獲“信息交換所機制類別”金獎，表揚我國近10年不斷努力改進、更新和維持該網站的貢獻。

該院總監拿督阿都拉提夫博士表示，此殊榮證明該院對保育與記錄我國自然資源的認真與承諾，該院將繼續加強政府機構和環境愛好者間的合作，繼續努力整合我國的生物多樣性信息，以讓後代能繼承這獨有的自然遺產。

他說，該系統的前身是馬來西亞信息交換所機制(MyCHM)，並在2008年由天然資源及環境部長主持推介下正式營運，後來在2014年進行重組為現在的MyBIS。

他強調，物種的保育刻不容緩，在西馬半島約有8800種物種，而該院已為其中的1000種物種進行保育狀態評估，發現有35%物種屬於受威脅組別，以及兩種蕨類科、龍腦香科樹類和秋海棠科的植物已絕跡。

蔡水蓮： 提升對生物多樣性認識

該院森林生物多樣性部主任蔡水蓮博士表示，獲獎是一個肯定，也是一個開

始，該院將持續記錄全國物種的工作，並希望有更多人能對生物多樣性信息有更多的醒覺與認識，一起協助完成這項長遠的工作。

她說，MyBIS作為我國生物多樣性信息一站式儲存庫，旨在收集與整理相關的物種信息、保育狀態、照片、標本、參考資料和出版品，並定期更新資訊及提供快速管道，讓民眾免費登錄閱讀，提升人們對生物多樣性的認識，並掌握我國瀕危物種的訊息，這對實施國家生物多樣性策略和行動計劃，以及制定瀕危動植物保育戰略非常有效。

她表示，目前該網站有超過4萬物種記錄，超過6043張照片，1062個植物的保育狀況，每月有106則通訊更新，超過1000篇參考文獻及99本出版物。截至今年1月，約有超過100萬瀏覽人次，528本電子書籍下載，及480名專家成為用戶。

“MyBIS也與各單位合作，如和馬來西亞野生動物保護及國家公園局、醫葯研究院、國民大學昆蟲系統學中心、馬大植物標本館、登嘉樓大學南中國海資源庫和參考中心、自然歷史博物館等單位合作，管理多達9萬個標本與數據。”

她鼓勵各界人士包括自然愛好者、學生及民眾善用這個網站，只要稍懂一些植物的名稱和基本分類，就可通過手機或電腦進行查詢。欲知詳情，可瀏覽 www.mybis.gov.my。



由馬來西亞森林研究局主導的「馬來西亞生物多樣性信息交換機制」，榮獲生物多樣性信息(CHM)金獎。左起為阿都拉迪夫和蔡水蓮。

35%受威脅 4種高等植物滅絕

甲洞28日訊 | 根據馬來西亞森林研究院針對馬來西亞半島的1132種高等植物(Vascular Plant)的物種保育狀況評估調查顯示，其中有35%物種已被列為受威脅類別及4種物種已經絕跡。

4種絕跡的物種分別是，Crispatula蕨類(Oreogrammitis crispatula)、Kunstleri蕨類(Oreogrammitis kunstleri)、龍腦香科芭麻樹(Shorea kuantanensis)和秋海棠類(Begonia eiroensis)。

馬來西亞森林研究院總監拿督阿都拉迪夫表示，森林研究局歷時5年，並經過一系列國際自然保護聯盟(IUCN)的評估和鑑定步驟，而輸出上述結果。

「這需要各造的合作，包括州政府和森林局等。政府也將在下一屆的國會中討論有關資源的獲取與共享(ABS)的法令。」

阿都拉迪夫昨日召開新聞發布會時，如是指出。其他出席者包括馬來西亞森林研究院森林生物多樣性部主任蔡水蓮。

森林研究院在去年12月4至17日，在墨西哥坎昆舉行的生物多樣性公約締約方大會第13屆會議上，榮獲金獎，該獎項是表揚我國自2008年以來，不斷努力改進，更新和維持我國

的「信息交換所機制」(CHM)網站的貢獻。

森林研究院獲金獎

大馬是其中一個聯合國「生物多樣性公約」(CBD)的簽署國之一，依據條例，大馬需建立一個國家「信息交換所機制」(CHM)，森林研究院自2014年起設立為「生物多樣性信息系統」(MyBIS)網站(www.mybis.gov.my)。

阿都拉迪夫表示，森林研究院是全世界首個獲得此金獎的單位，惟這是一個長遠議程的開始，目前我國的生物科技無法與歐美國家媲美，如今僅能記錄國內所有的植物物種。

蔡水蓮說，該網站存有超過4萬個物種的記錄、超過6000張圖片、超過1009篇參考文獻記錄及99本處刊物。「該網站可供大眾，甚至是決策者作為一個參考有關植物和動物群詳情。」

「生物多樣性信息系統」作為一站式儲存庫，設有关于植物和動物群的综合數據，包括物種和分類信息、照片、參考資料、保育狀況、保護區和標本，並了解我國瀕危物種的資訊，如保育狀況、物種概況、照片、分布地點和文獻等。

KONGSI MAKLUMAT BIODIVERSITI MALAYSIA

MyBIS terkenal empat modul utama
iaitu penemuan, pencarian, analisis dan
rujukan serta submodul

Muhammad Husain
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Institut Penyelidikan Perhutanan Malaysia (FRIM) mewujudkan laman web Malaysia Biodiversiti Information System (MyBIS) sebagai alat penyebaran dan perkongsian maklumat biodiversiti Malaysia.

Sebelum ini, MyBIS dikenali sebagai Malaysian Biological Diversity Clearing House Mechanism (MyCHM) yang dilancarkan pada 2008. Ia menyediakan data flora dan fauna Malaysia dengan gambar berserta surat berita di dalam laman web.

Laman web ini juga menyediakan pautan kepada pelbagai perjanjian berkaitan dengan biodiversiti Malaysia dan laman lain yang mengandungi maklumat biodiversiti negara.

Pada 2014, MyCHM dijenamakan semula kepada MyBIS. FRIM bekerjasama rapat dengan Kementerian Sumber Asli dan Alam Sekitar Malaysia (NRE) untuk menjadikan MyBIS sebagai pusat pangkalan data maklumat biodiversiti di Malaysia.

MyBIS memperkenalkan empat modul utama iaitu penemuan, pencarian, analisis dan rujukan serta terdapat sub modul seperti perlindungan, pakar, spesimen dan gambar.

Ketua Pengarah FRIM Datuk Dr Abd Latif Mohmod berkata, MyBIS menyediakan platform untuk pengumpulan data

berkaitan biodiversiti termasuk maklumat spesies, gambar, rujukan, surat berita dan penerbitan dari pelbagai agensi dan organisasi.

Beliau berkata, MyBIS mengandungi data komprehensif mengenai flora dan fauna termasuk spesies dan maklumat taksonomi, gambar, surat berita dan rujukan, pakar biodiversiti, status pemuliharaan, kawasan perlindungan dan spesimen.

"Maklumat terkini mengenai biodiversiti Malaysia boleh diakses dengan mudah dalam talian. Kemudahan ini boleh membantu meningkatkan kesedaran dan mendidik orang ramai mengenai kepentingan biodiversiti."

"Ia juga menyumbang ke arah pelaksanaan strategi pemuliharaan dan petan tindakan biodiversiti negara. MyBIS membantu menyediakan akses mudah dan percuma kepada maklumat mengenai spesies terancam yang sentiasa dikemas kini."

"Status pemuliharaan, profil spesies, gambar, lokasi dan rujukan kepada spesies terancam adalah antara maklumat yang boleh didapati di MyBIS," katanya pada sidang media di FRIM, Kepong, baru-baru ini.

Turun hadir, Pengarah Biodiversiti Hutan FRIM

Dr Lillian Chua dan Ketua Projek MyBIS FRIM Hamidah Mamat.

"Buat masa ini, terdapat lebih 49,000 rekod spesies, lebih 6,000 gambar, 106 surat berita yang dikemas kini setiap bulan, lebih 1,000 bahan rujukan dan kajian literatur, serta 99 penerbitan di laman web ini."

"MyBIS juga berfungsi sebagai direktori kebangsaan bagi pakar biodiversiti Malaysia dan kini terdapat 481 pakar berkaitan biodiversiti yang berdaftar dengan MyBIS."

"Di samping itu, MyBIS juga menyediakan sistem berpusat untuk menguruskan data spesimen daripada pelbagai pusat koleksi spesimen di negara ini."

"Pangkalan data ini dibangunkan FRIM kerana kami bertanggungjawab menyimpan spesimen serta pangkalan data bagi flora, kulat, entomologi dan zoologi. Penyelidik FRIM juga diiktiraf sebagai pakar biodiversiti dalam botani, entomologi dan zoologi," katanya.

Menurutnya, pengguna dari dalam dan luar Malaysia boleh mencari maklumat mengenai biodiversiti Malaysia dengan mudah melalui MyBIS (<http://www.mybis.gov.my>) yang boleh diakses melalui komputer, tablet mahupun telefon mudah alih.



Buat masa ini, terdapat lebih 40,000 rekod spesies, lebih 6,000 gambar, 106 surat berita yang dikemas kini setiap bulan, lebih 1,000 bahan rujukan dan kajian literatur serta 99 penerbitan di laman web ini

DR ABD LATIF



PEGAWAI FRIM mengenal pasti spesies tumbuhan dengan membuat perbandingan dengan spesimen sedia ada di Herbarium FRIM.



Abd Latif and Chua with the Gold Award that FRIM won for its MyBIS website at COP13 in Cancun, Mexico. — MUHAMMAD SHAHRIL ROSLI/The Star



Asam batu or *Begonia herveyana*, a critically endangered species currently found only in Malacca and Johor. — FRIM

Malaysia wins gold award at biodiversity meet

By WONG LI ZA
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WE have lost four species of plants for good, and almost 37% are at risk of being extinct for now.

Malaysia is one of 17 mega biodiversity countries in the world, along with countries like Brazil, Indonesia, India and China.

There are over 8,800 vascular plant species (including tree and non-tree species) in Peninsular Malaysia; 15,000 in Malaysia.

Over a period of seven years beginning 2006, the Forest Research Institute Malaysia's (FRIM) biodiversity team assessed 1,132 species of vascular plants in Peninsular Malaysia and discovered the above statistics of the threatened plants.

The four species gone forever in Peninsular Malaysia are the herbaceous plant known as asam batu (scientific name: *Begonia eivomischia*); the timber species called damar hitam (*Shorea kuantanensis*) and the ferns *Oreogrammitis crispata* and *Oreogrammitis kantsleri*.

"There are two main reasons for extinction: one, a species is endemic to the area and once it's gone, it's gone forever; two, the species is only found in small quantities," said FRIM director-general Datuk Dr Abd Latif Mohmod. He was speaking at a recent press conference to announce Malaysia's winning of the Gold Award under the new CHM (Clearing-House Mechanism) category at COP13 (the 13th Meeting of the Conference of the Parties to the Convention on Biological Diversity) held in Cancun, Mexico.

Abd Latif added that another problem is when land is cleared for plantations, there is no check done to find out what species grow there.

Among the conservation actions taken by FRIM to date are the setting up of a Botanical Research and Herbarium Management System, and the publication of a book, *Malaysia Plant Red List* (2010), which lists out the threatened

Dipterocarpaceae plant species in the country from the 1,132 species analysed so far.

"That's just the beginning, the work is ongoing as FRIM needs to list out and go through all the 15,000 species," said FRIM Forest Biodiversity Division director Dr Lillian Chua, who was also present at the press conference.

In 2008, FRIM also launched its Malaysia Biological Diversity Clearing House Mechanism

(MyCHM) website, which evolved from FRIM's earlier initiative to establish a website focusing on flora information.

In 2010, MyCHM was enhanced to facilitate easier public access to biodiversity data, in line with the Natural Resources and Environment Ministry's aspiration of turning the website into a one-stop repository for Malaysia's biodiversity information.

The newer version incorporated, among other things, smart search features.

With the increase in biodiversity data and the need to introduce data analysis, a new MyCHM website was developed in 2014 and rebranded as the Malaysia Biodiversity Information System (MyBIS).

In December last year, Malaysia beat 104 countries to win the Gold Award under the new CHM category at COP13.

The award was accorded to Malaysia for making the most progress in the development of its national biodiversity CHM.

(A Clearing-House Mechanism serves to promote and facilitate technical and scientific cooperation within and between countries and act as a global mechanism for exchanging and integrating information on biodiversity).

"MyBIS is driven by the collection of specimens and by research. It is not a static system but a dynamic one. The amount of data will keep increasing with more partners being involved," said Chua.

To date, the database records information on nearly 39,000

species of flora and fauna. It includes over 2,500 pictures, conservation status of 1,062 plants, 480 biodiversity experts, and 1,069 publications.

"The latest version of the website allows for data analysis which is very important to us to assist in decision-making. It's useful for the public too, as they can find out, for example, what species (of plants and also animals) are endemic to say, Pahang," said Chua.

The development of the current system is in line with Malaysia's National Policy on Biological Diversity. It is also part of the country's commitments under the United Nations Convention on Biological Diversity to facilitate reporting and the transfer of biodiversity and conservation-related information both nationally and internationally.

MyBIS is accessible at
www.mybis.gov.my



White Heron's trees forming a canopy at the Forest Research Institute Herbarium. — FRIM



Keruing lavang, or *Dipterocarpus sarawakensis*, another critically endangered species, is endemic to Permanent Forest Reserves in Jerangau, Terengganu, and Sarawak. — FRIM



Haplo subulata (Merawan kanching) is critically endangered and endemic to the Kanching Forest Reserve, Selangor. — FRIM



MyBIS pangkalan data biodiversiti

MALAYSIA antara negara di dunia yang tersenarai sebagai memiliki kekayaan khazanah alam semula jadi, kerana liputan hutan yang masih luas. Sebagai sebuah negara yang tersenarai dalam antara 12 negara di dunia yang mempunyai kepelbagaian biologi, maka sewajarnya kekayaan tersebut dijaga dan dipelihara untuk diwarisi kepada generasi akan datang.

Kekayaan tersebut tentulah tidak dapat dinilai dengan wang ringgit tetapi adakah kita menghargainya?

Aset semula jadi ini perlu dikekalkan.



KERJA KAJI pengumpulan data dilakukan di kawasan asal di hutan.

Oleh **LAUPA JUNUS**
laupajunus@hotmail.com

tanggungjawab Kementerian Sumber Asli dan Alam Sekitar (NRE) dan satu daripada agensinya yang terlibat dalam penjagaan hutan adalah Institut Penyelidikan Perhutanan Malaysia (FRIM).

Malaysia adalah ahli Konvensyen Pertubuhan Bangsa-Bangsa Bersatu mengenai Kepelembagaan Biologi (CBD). Justeru, setiap ahli di bawah konvensyen tersebut perlu menubuhkan satu mekanisme penyebaran maklumat atau

Charing

Mechanism kebangsaan serta laman web CHM untuk menyediakan perkhidmatan penyebaran atau perkongsian maklumat biodiversiti.

Pada tahun 2014, MyCHM telah disusun semula dan dinamakan kepada MyBIS.

Penubuhannya bertujuan memudahkan pelaksanaan strategi dan pelan tindakan biodiversiti negara. Bagi Malaysia, laman sesawang ini kini dikenali sebagai *Malaysia Biodiversiti Information System (MyBIS)* dan boleh diakses melalui www.mybis.gov.my.

Menurut Ketua Pengarah FRIM, **Datuk Dr. Abdul Latif Mohamad** sejak penubuhannya, MyCHM telah menyediakan data flora dan fauna Malaysia dengan gambar-gambar beserta surat berita dalam laman sesawang.

"Laman sesawang ini juga menyediakan pautan kepada pelbagai perijinan berkaitan dengan biodiversiti Malaysia dan laman lain yang mengandungi maklumat berkenaan bidang tersebut," ujarnya.

Beliau menyatakan demikian pada sidang akhbar mengumumkan perubahan laman sesawang berkenaan di Kepong baru-baru ini yang turut dihadiri Ketua Projek MyBIS, **Hamidah Mamat** dan pegawai penyelidikannya, **Ajla Rafidah Bahrom**.

Berkongsi lebih lanjut tentang objektif utama pembangunan MyBIS adalah sebagai pusat repositori untuk maklumat biodiversiti di negara ini.

Katanya, MyBIS menyediakan platform untuk pengumpulan data berkaitan biodiversiti termasuk maklumat spesies, gambar, rujukan, surat berita dan penbitan dari pelbagai agensi dan organisasi.

FRIM juga bekerjasama dengan NRE dengan aspirasi yang sama iaitu untuk menjadikan MyBIS sebagai pusat repositori atau pangkalan data maklumat biodiversiti di Malaysia.

Justeru sebagai pusat repositori, MyBIS mengandungi data komprehensif mengenai flora dan fauna termasuk spesies dan maklumat taksonomi, gambar, surat berita dan rujukan, pakar biodiversiti, status pemuliharaan, kawasan perlindungan dan spesimen.

Maklumat terkini mengenai biodiversiti Malaysia boleh diakses dengan mudah dalam talian.

Dengan adanya kemudahan tersebut, ia boleh membantu meningkatkan kesedaran dan mendidik orang ramai mengenai kepentingan biodiversiti serta menyumbang ke arah pelaksanaan strategi pemuliharaan dan pelan tindakan biodiversiti negara.

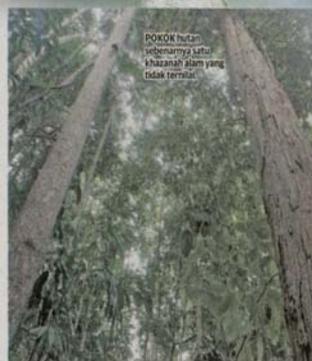
Dengan adanya MyBIS, usaha pemuliharaan dilaksanakan dengan menyediakan akses mudah dan percuma kepada maklumat mengenai spesies terancam yang sentiasa dikemas kini.

Status pemuliharaan, profil spesies, gambar, lokasi dan rujukan kepada spesies terancam adalah antara maklumat yang boleh didapati dalam MyBIS.

Maklumat ini sangat berguna untuk pembangunan strategi bagi pemuliharaan flora dan fauna terancam di Malaysia.

Bagi menilai status pemuliharaan tumbuhan di negara ini, modul Lembaran Maklumat Data Taksonomi (TDS) dibangunkan dalam CHM.

Status penilaian bagi tumbuhan ini boleh didapati di MyBIS bagi memberikan input untuk kesedaran orang ramai



POKOK hutan sebegini merupakan khazanah alam yang tidak ternilai.

dan membantu mengenal pasti spesies terancam.

"Tiada kumpulan sasaran tertentu untuk laman sesawang ini. Kebanyakan pengguna MyBIS terdiri daripada penyelidik, pencinta alam, kakak-kakak sekolah dan orang awam yang ingin mencari maklumat mengenai biodiversiti negara," ujarnya.

MyBIS menyediakan maklumat seperti taksonomi, gambar dan rujukan dalam talian yang boleh membantu mengenal pasti sesuatu spesies.

Walaupun bagaimanapun, pengguna perlu tahu beberapa maklumat asas mengenai kumpulan tumbuhan seperti palma, orkid dan halia supaya carian boleh dijalankan di dalam MyBIS.

Menurusi sistem tersebut, pengguna boleh menyemak

daftar profil spesies serta melihat koleksi gambar untuk membantu pengenalpastian tersebut.

Sementara itu menurut Pegawai Penyelidik Kanan (Konservasi Biologi), Jabatan Biodiversiti Hutan (FRIM), **Lillian Chua**, pangkalan data tersebut dibangunkan sebagai memenuhi bertanggungjawab FRIM yang menyimpan spesimen serta pangkalan data bagi flora, kulat, entomologi dan zoologi.

Penyelidik FRIM juga diiktiraf sebagai pakar biodiversiti dalam botani, entomologi dan zoologi.

Penambahan kepada laman sesawang ini dibuat secara berterusan berdasarkan maklum balas yang diterima untuk menyokong semua aspek biodiversiti Malaysia.

MyBIS juga berfungsi sebagai direktori kebangsaan bagi pakar biodiversiti Malaysia.

APA ITU MYBIS?

MyBIS yang sebelum ini dikenali sebagai *Malaysian Biological Diversity Clearing House Mechanism (MyCHM)* dengan akses melalui www.chm.frim.gov.my telah dibangunkan dan diselenggara oleh Institut Penyelidikan Perhutanan Malaysia (FRIM).

Dilancarkan pada tahun 2008 oleh Menteri Sumber Asli dan Alam Sekitar Malaysia (NRE).

MyBIS memperkenalkan empat modul utama iaitu:

- Penemuan
- Pencarian
- Analisis
- Rujukan

Terdapat submodul-submodul lain seperti:

- Spesies
- Kawasan Perlindungan
- Pakar
- Spesimen
- Gambar



Malaysia terima Anugerah Emas

MALAYSIA menerima Anugerah Emas bawah kategori CHM yang baru dibangunkan ketika Mesyuarat Ketiga Besar Persidangan Pihak-Pihak kepada Konvensyen Kepelbagaian Biologi (COP 13) yang diadakan di Cancun, Mexico dari pada Disember tahun lepas.

Menurut Datuk Dr. Abd Latif Mohmod, anugerah tersebut adalah pengiktirafan atas usaha berterusan dalam meningkatkan, mengemas kini dan mengekalkan CHM untuk Malaysia sejak tahun 2008.

Ini menunjukkan MyBIS diiktiraf pada peringkat antarabangsa sebagai pusat pangkalan data biodiversiti untuk Malaysia.

"Anugerah ini membuktikan bahawa hala tuju MyBIS adalah selaras dengan Konvensyen Kepelbagaian Biologi serta



KOLEKSI ekstrak piala antara khazanah alam yang wajar direkod dan disimpan.

menyokong Dasar Kepelbagaian Biologi Kebangsaan dan ke arah mencapai Sasaran Aichi pada tahun 2020.

"Pengiktirafan ini adalah bukti kesungguhan dan komitmen FRIM ke arah pemuliharaan dan dokumentasi sumber semula jadi negara untuk warisan generasi akan datang.

"Terdapat keperluan untuk meningkatkan kerjasama dalam kalangan agensi kerajaan dan pencinta alam untuk menyumbangkan data kepada MyBIS sebagai sebahagian daripada usaha negara untuk

mengumpul maklumat biodiversiti bagi Malaysia," ujarnya.

Anugerah tersebut diperkenal untuk mengiktiraf negara dengan peningkatan kemajuan yang paling signifikan dalam penubuhan atau pembangunan CHM kebangsaan mereka.

Anugerah CHM juga mengetengahkan usaha yang dibuat setakat ini oleh negara-negara yang mengambil bahagian serta menggalakkan mekanisme penyebaran maklumat biodiversiti negara ahli terus dimajukan. Semua ahli Konvensyen

Anugerah tersebut adalah pengiktirafan atas usaha berterusan dalam meningkatkan, mengemas kini dan mengekalkan CHM untuk Malaysia sejak tahun 2008.

Ini menunjukkan MyBIS diiktiraf pada peringkat antarabangsa sebagai pusat pangkalan data biodiversiti untuk Malaysia."

mengenal Kepelbagaian Biologi (CBD) digalakkan untuk menubuhkan satu mekanisme penyebaran maklumat biodiversiti (CHM) kebangsaan.

Walaupun bagaimanapun, terdapat beberapa negara membangun yang masih belum menubuhkan sistem tersebut.



DR. ABD. LATIF MOHMOD dan Dr. Lilian Chua menunjukkan anugerah MyCHM yang diterima pada tahun lepas.

Four M'sian plant species gone forever

KUALA LUMPUR: Malaysia has permanently lost four species of plants, and almost 37pc are at risk of being extinct.

Malaysia is one of 17 mega biodiverse countries in the world, along with countries like Brazil, Indonesia, India and China.



Abdul Latif

There are over 8,800 vascular plant species (including tree and non-tree species) in Peninsular Malaysia; 15,000 in Malaysia.

Over a period of seven years beginning 2006, the Forest Research Institute Malaysia's (FRIM) biodiversity team assessed 1,132 species of vascular plants in Peninsular Malaysia and discovered the above statistics of the threatened plants.

The four species gone forever in Peninsular Malaysia are the herbaceous plant known as asam batu (scientific name: *Begonia eiromischa*); the timber species called damar hitam (*Shorea kuantanensis*) and the ferns *Oreogrammitis crispata* and *Oreogrammitis kunstleri*.

"There are two main reasons for extinction: one, a species is endemic to the area and once it's gone, it's gone forever; two, the species is only found in small quantities," said FRIM director-general Datuk Dr Abd Latif Mohmod.

Abd Latif added that another problem is when land is cleared for plantations, there is no check done to find out what

species grow there.

Among the conservation actions taken by FRIM to-date are the setting up of a Botanical Research and Herbarium Management System, and the publication of a book, Malaysia Plant Red List (2010), which lists out the threatened Dipterocarpaceae plant species in the country from the 1,132 species analysed so far.

"That's just the beginning; the work is ongoing as FRIM needs to list out and go through all the 15,000 species," said FRIM Forest Biodiversity Division director Dr Lilian Chua, who was also present at the press conference.

In 2008, FRIM also launched its Malaysia Biological Diversity Clearing House Mechanism (MyCHM) website, which evolved from FRIM's earlier initiative to establish a website focusing on flora information.

In 2010, MyCHM was enhanced to facilitate easier public access to biodiversity data, in line with the Natural Resources and Environment Ministry's aspiration of turning the website into a one-stop repository for Malaysia's biodiversity information.

The newer version incorporated, among other things, smart search features.

With the increase in biodiversity data and the need to introduce data analysis, a new MyCHM website was developed in 2014 and rebranded as the Malaysia Biodiversity Information System (MyBIS).

In December last year, Malaysia beat 104 countries to win the Gold Award under the new CHM category at COP13 13th

meeting of the Conference of the Parties to the Convention on Biological Diversity held in Cancun, Mexico.

The award was accorded to Malaysia for making the most progress in the development of its national biodiversity CHM.

(A Clearing-House Mechanism serves to promote and facilitate technical and scientific cooperation within and between countries and act as a global mechanism for exchanging and integrating information on biodiversity).

"MyBIS is driven by the collection of specimens and by research. It is not a static system but a dynamic one. The amount of data will keep increasing with more partners being involved," said Chua.

To date, the database records information on nearly 39,000 species of flora and fauna. It includes over 2,500 pictures, conservation status of 1,062 plants, 480 biodiversity experts, and 1,069 publications.

"The latest version of the website allows for data analysis which is very important to us to assist in decision-making. It's useful for the public too, as they can find out, for example, what species (of plants and also animals) are endemic to say, Pahang," said Chua.

The development of the current system is in line with Malaysia's National Policy on Biological Diversity. It is also part of the country's commitments under the United Nations Convention on Biological Diversity to facilitate reporting and the transfer of biodiversity and conservation-related information both nationally and interna-



Merawan Kanching or *Hopsea subulata*



Asam batu or *Begonia herveyana*.



Shorea White Merawan

Lili Kanching Hopsea subulata Begonia herveyana



MyBIS - Malaysia Biodiversity Information System

This book highlights the history, journey, activities and achievements of the MyBIS project from the early establishment of a website and a database of Flora of Peninsular Malaysia (FPMO) until the rebranding to MyBIS. This project started with the documentation of flora in Malaysia. Then, the Forest Research Institute Malaysia (FRIM) started to collaborate with other agencies to include the documentation of fauna and fungi. This information helps many botanists, experts, policymakers and the public to learn more about biodiversity in Malaysia, which will help in raising public awareness and shaping the sustainable management of forest in Malaysia.



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