

13-15 JULY
2026

KUCHING, SARAWAK



21st MALAYSIAN FORESTRY CONFERENCE (MFC) 2026

FORESTS AS CATALYST
FOR A GREEN ECONOMY



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INTRODUCTION



Malaysian Forestry Conference (MFC) is a platform to exchange thoughts, and information and share experiences related to the administration, management, planning, and development of the forestry sector in Malaysia. The

MFC started in 1966 and was held every two (2) years in rotation between the Forestry Department of Peninsular Malaysia (JPSM), Sabah Forestry Department (SFD), and Forest Department Sarawak (FDS).

OBJECTIVES

 To provide a platform for discussing and resolving problems collectively, pertaining to the aspects of forest development;

 To establish closer working relationship and understanding between the officers from the three States; and

 To coordinate the planned management of the resources and its utilisation seeking means and methods leading to the development and diversification of the forest industries with the aim of maximising its contribution to the social economic development and timber utilisation;

 To generate public consciousness through publicity and education on the importance of forestry as an integral element in the national economy

CHRONOLOGY OF MALAYSIAN FORESTRY CONFERENCE

01

10-17th
September 1966
Kepong, Selangor

02

10-18th
August 1968
Sandakan, Sabah
Silviculture & Management
Problem

03

10-18th
August 1970
Kuching, Sarawak
The Forest Resources
of Malaysia
& Their Future
Utilization

06

11-17th
October 1976
Kuching, Sarawak
Forestry in Socio-Economic
Development

05

21-28th
August 1974
Kota Kinabalu, Sabah
Forest Resources
Development Strategy

04

7-14th
August 1972
Kuala Lumpur
Forest & Forest Industry in
National Development

07

10-18th
August 1979
Pulau Pinang
Sustainable Management
on National Forest

08

02-08th
August 1982
Sandakan, Sabah
Forest Development in 80's

09

13-20th
October 1985
Kuching, Sarawak
Forest Our National Heritage

12

20-26th
November 1995
Miri, Sarawak
Sustainable Forest
Management
& Biodiversity Conservation
Challenges Ahead

11

27th July - 02nd
August 1992
Kota Kinabalu, Sabah
Sustainable Forestry
Development Toward 2020

10

24-29th
July 1989
Kuantan, Pahang
Forest Management &
Environment Conservation

CHRONOLOGY OF MALAYSIAN FORESTRY CONFERENCE

13

20-25th
August 2001
Johor Bahru, Johor

Managing Forest in
the New Millennium

14

12-16th
September 2005
Kota Kinabalu, Sabah

Forestry in Malaysia:
Re-inventing Human-Nature
Relationships

15

20-24th
October 2008
Kuching, Sarawak

Addressing Global Demands
& Expectations in Forestry

18

31st July-02nd
August 2018
Kuching, Sarawak

Advancing Sustainable
Forestry Through
Digitalization and
Technology

17

11-12th
November 2014
Kota Kinabalu, Sabah

A Century of Forest
Management: Lesson Learnt
& The Way Forward

16

05-09th
December 2011
Melaka

Forest for
Community Livelihood

19

12-15th
June 2022
Kuantan, Pahang

Adapting Forestry
to New Reality

20

28-30th
October 2024
Kota Kinabalu, Sabah

Harmonizing Forestry
Towards Sustainability

21

13-15th
July 2026
Kuching, Sarawak

Forests as Catalyst for
a Green Economy

MESSAGE

BY CHAIRMAN



On behalf of Forest Department Sarawak, I warmly welcome all distinguished guests, speakers, delegates, participants, stakeholders, and members of the forestry community to the 21st Malaysian Forestry Conference.

Sarawak is honoured to host the 21st edition of this prestigious conference. The conference brings together experts, policymakers, researchers, practitioners and stakeholders to exchange knowledge and experiences. This conference also serves as an important platform for dialogue, collaboration, and shaping our future for forests.

The theme, "Forest as Catalyst for a Green Economy," emphasises the important role of forests in protecting the environment and serving as key assets for green growth, carbon sequestration, sustainable livelihoods, nature-based economic opportunities, and the well-being of local communities. It reflects Sarawak's vision of balancing progress and development with environmental sustainability.

The conference addresses six sub-themes: policy and governance; nature-based adaptation and solutions (NbS); partnership and collaboration; biodiversity research and conservation; forest plantation and restoration; and social forestry and ecotourism. These sub-themes provide a comprehensive platform to discuss policies, strategies, innovations, and collaboration that strengthen sustainable forest management and support the growth of the green economy.

The Forest Department Sarawak is dedicated to supporting Sarawak's aspirations to become a modern, progressive, and sustainable state by emphasising environmental sustainability as the core of the state's development through sustainable forest management, biodiversity conservation, forest restoration, climate action, and nature-based solutions. Through this conference, we aim to foster meaningful discussions, practical solutions and resolutions for the sustainable use and protection of our forest resources.

I hope this 21st Malaysian Forestry Conference will strengthen collaboration, inspire innovation, and encourage collective action for a green economy that benefits both people and nature. May our discussions and resolutions enhance forests' role in sustainable growth and help protect our natural heritage for current and future generations. I wish all participants a productive and successful conference. I also encourage you to experience the warmth and beauty of Sarawak.

Thank you!

Datu Haji Hamden bin Haji Mohammad
Director of Forests
Forest Department Sarawak

CONFERENCE PROGRAMME



21st MALAYSIAN FORESTRY CONFERENCE (MFC) 2026

EXECUTIVE ITINERARY: (12-13 JULY 2026)

SUNDAY 12 JULY 2026

0800-
1600

Arrival and Registration

19:00-
22:00

- Heads of Departments Dinner
- Resolution Committee Meeting

DAY 1: MONDAY, 13 JULY 2026

PLENARY SESSION: KEYNOTE AND MAIN WORKING PAPERS

0700-0800  Registration

0815-1015

- Closed Session (For members only)
- ✓ Appointment of the Conference's Chairman
- ✓ Introduction Remarks by Respective Heads of Department
- ✓ Appointment of the Conference's Officials
- ✓ Reporting of 20th Malaysian Forestry Conference Resolutions
- ✓ Amendment to the Standing Orders of Malaysian Forestry Conference, if any.

1015-1030  Refreshments

1030-1100

 **Keynote address: Protected Areas, Eco-Forest Parks, and Geoparks: Drivers of Green Economy and Sustainability in Malaysian Forestry**
Ibrahim Komoo & Norhayati Ahmad
(Universiti Kebangsaan Malaysia)

1100-1130

 **Main Working Paper 1:** Sabah Forestry Department

1130-1200

 **Main Working Paper 2:** Forestry Department of Peninsular Malaysia

1200-1230

 **Main Working Paper 3:** Forest Department Sarawak

1230-1400  Lunch

SUBTHEME 1: POLICY AND GOVERNANCE

SESSION CHAIRPERSON

Tuan Haji Happysupina Bin Sait
[Forest Department Sarawak]

1345  Session Commencement

1400-1420

Paper 1: Digital Governance in Forestry: Enhancing STLVS Integrity and Revenue Efficiency as a Catalyst for Sarawak's Green Economy (Sarawak Experienced)
Hasanaliza B. A. et al. (Forest Department Sarawak)

1420-1440

Paper 2: Unlocking Natural Capital: Sabah's Policy Framework for a Forest-based Green Economy
Indra P. H. et al. (Sabah Forestry Department)

1440-1500

Paper 3: Penetapan Pendengaran Awam (Public Hearing) bagi Pewartaan Keluar Hutan Simpan Kekal (HSK) di Semenanjung Malaysia
Zarin R. et al. (Forestry Department of Peninsular Malaysia)

1500-1520

Paper 4: Science-based Forest Policy in Action: Integrating Dipterocarp Population Assessment into Sarawak's Efforts on CITES and the Sustainable Timber Framework
Vilma Bodos et al. (Forest Department Sarawak)

1520-1530  Q & A Session

1530-1600  Refreshments & End of Day 1

OPENING CEREMONY & WELCOMING DINNER

1

1900

Arrival of Invited Guests

2

1930

Arrival of Honourable
Ministers and
Distinguished Guests

3

2000

Arrival of the Right Honourable,
Datuk Patinggi Tan Sri (Dr) Abang Haji Abdul Rahman Zohari Bin Tun
Datuk Abang Haji Openg, Premier of Sarawak

4

2010

- National and State Anthem
- Choir by FORESSA
- Welcoming Performance
- Doa Recital
- Welcoming Address by YBhg Datu Haji Hamden bin Haji Mohammad,
Director of Forests Sarawak
- MFC Video Presentation
- Officiating Address by the Right Honourable Datuk Patinggi Tan Sri (Dr)
Abang Haji Abdul Rahman Zohari Bin Tun Datuk Abang Haji Openg,
Premier of Sarawak
- Official Launch of the 21st Malaysian Forestry Conference
- Exchange of Memorandum of Understanding (MoU)
- Presentation of Souvenirs
- Cultural Performance
- Photo Session

5

2200

End

DAY 1:

13 July 2026, MONDAY

Pullman Hotel

DAY 2:

14 July 2026
TUESDAY

Subtheme 2: Nature-based Adaptation and Solution

Session Chairperson	Tuan Haji Mohd. Ridzuwan Bin Endot (Forestry Department of Peninsular Malaysia)
0830	Session Commencement
0840-0900	Paper 5: Pengalaman dan Cabaran Pengurusan Kebakaran Hutan Paya Gambut di Selangor Azhar Ahmad et al. (Forestry Department of Peninsular Malaysia)
0900-0920	Paper 6: Estimating Aboveground Forest Carbon Density through LiDAR and Geospatial Remote Sensing in Sarawak Malcom Demies et al. (Forest Department Sarawak)
0920-0940	Paper 7: Ecological Dynamics of Tropical Highland Peat Ecosystems Zainuddin Jamaluddin et al. (Forestry Department of Peninsular Malaysia)
0940-1000	Paper 8: Nature, Climate and Economy: Sabah's Pathway through Nature-based Solutions Rosila Anthony et al. (Sabah Forestry Department)
1000-1010	Q & A Session
1010-1025	Refreshments

Subtheme 3: Partnership and Collaboration

Session Chairperson	Dr. Aldrich Richard (Forestry Department of Peninsular Malaysia)
1030	Session Commencement
1040-1100	Paper 9: Sabah Timber Legality Assurance System Plus (TLAS+): Advancing Timber Legality through International Collaboration Mijol R. M. et al. (Sabah Forestry Department)
1100-1120	Paper 10: Operasi Penguatkuasaan Bersepadu Jabatan Perhutanan Semenanjung Malaysia Gana R. K. et al. (Forestry Department of Peninsular Malaysia)
1120-1140	Paper 11: Digitalizing Conservation Governance: [HOBS] A Cross-Agency Project Management System for the Heart of Borneo in Sarawak Meliza, M. R. et al. (Forest Department Sarawak)
1140-1200	Paper 12: Small Mammal Diversity in Borneo: Insights from Historical Records and Collaborative Biodiversity Assessments Faisal Ali Anwarali Khan et al. (UNIMAS)
1200-1210	Q & A Session
1210-1330	Lunch

DAY 2:

14 July 2026
TUESDAY

Subtheme 4: Biodiversity, Research and Conservation

Session Chairperson	Dr. Arthur Chung Yaw Chyang (Sabah Forestry Department)
1330	Session Commencement
1340-1400	Paper 13: Ekspedisi Saintifik Kepelbagaian Biologi Hutan: Pencapaian dan Hala Tuju Siti Khatijah Othman et al. (Forestry Department of Peninsular Malaysia)
1400-1420	Paper 14: Developing a Forest Reference Level Monitoring System in Sabah: Integrating Field Biometrics and Remote Sensing for Biodiversity Conservation and Sustainable Forest Management Reuben Nilus et al. (Sabah Forestry Department)
1420-1440	Paper 15: The Use of UAV-based LiDAR for Forest Volume Modeling in Sarawak Bibian Diway et al. (Forest Department Sarawak)
1440-1500	Paper 16: An Overview of Orangutan Conservation in Sarawak for the Next Decade Aliana Binti Affendi et al. (Sarawak Forestry Corporation)
1500-1520	Paper 17: Vascular Plant Diversity and Conservation Importance of the Ultramafic Forests of Meliau Range, Vascular Plant Diversity and Conservation Importance of the Ultramafic Forests of Meliau Range, Central Sabah Jonathan J. et al. (Sabah Forestry Department)
1520-1530	Q & A Session
1530-1540	Refreshments

Subtheme 5: Forest Plantation and Restoration

Session Chairperson	Dr. Affendi Bin Suhaili (Forest Department Sarawak)
1540	Session Commencement
1600-1620	Paper 18: Forest Restoration and Rehabilitation: Experiences and Insights Zarina, S. et al. (Forest Department Sarawak)
1620-1640	Paper 19: Forest Landscape Restoration Approaches to Strengthen Forest Sustainability In Peninsular Malaysia M. Hafni et al. (Forestry Department of Peninsular Malaysia)
1640-1700	Paper 20: Shifting Dependency on Natural Forests to Forest Plantations in Support of Forest Landscape Sustainability Heidi Henry William et al. (Sabah Forestry Department)
1700-1720	Paper 21: Transforming Industrial Forest Plantations through R&D and Certification: Samling's Experience In Sarawak, Malaysia Roger Tami et al. (Samling Reforestation (Bintulu) Sdn. Bhd.)
1720-1730	Q & A Session
1730	End of Day 2

DAY 3:

15 July 2026
WEDNESDAY

Subtheme 6: Social Forestry and Ecotourism

Session Chairperson	Tuan Indra Purwandita bin Herry Sunjoto (Sabah Forestry Department)
0830	Session Commencement
0840-0900	Paper 22: Social Forestry in Sarawak: An Update Suliman Haji Jamahari et al. (Forest Department Sarawak)
0900-0920	Paper 23: Beyond Conservation: Community Participation as a Driver of Green Economy in Sabah's Forest Landscapes E.B. Johnlee et al. (Sabah Forestry Department)
0920-0940	Paper 24: Pengurusan Kawasan Pendakian Di Dalam Hutan Simpanan Kekal Di Semenanjung Malaysia Nor Zaidi Jusoh et al. (Forestry Department of Peninsular Malaysia)
0940-1000	Paper 25: Community-based Tourism and its Contribution to Local Economies: Insights from Peros Madeline George Pau et al.(Forest Department Sarawak)
1000-1010	Q & A Session
1010-1025	Refreshments
Closed Session (For Members Only)	
1055	Session Commencement
1100	Presentation and adoption of 21st MFC Conference resolution draft
	► Remarks by Director of Forests Sarawak and Chief Conservator of Forests, Sabah Forestry Department
	► Handover of gavel from Director of Forests Sarawak to Head of Delegation, Forestry Department of Peninsular Malaysia, witnessed by Chief Conservator of Forests, Sabah Forestry Department
	► Remarks by Head of Delegation, Forestry Department of Peninsular Malaysia
	► Exchange of souvenirs

CLOSING CEREMONY

DAY 3: 15 July 2026
WEDNESDAY

1 1230 - 1330

- Arrival of YBhg. Datu Haji Abdullah Bin Julaihi, Permanent Secretary, Ministry of Natural Resources and Urban Development (MUDeNR)
- Negaraku and Ibu Pertiwiku
- Recital of Doa
- Remarks by YBhg. Datu Haji Hamden Bin Haji Mohammad, Director of Forests Sarawak
- Closing Address by Permanent Secretary of MUDeNR
- Presentation of Souvenir
- Photo session

2 1330 - 1430

Lunch and End of Conference

CLOSING DINNER OF THE 21ST MALAYSIAN FORESTRY CONFERENCE

3 1900

Arrival of Guests

4 1930

Arrival of Distinguished Guests

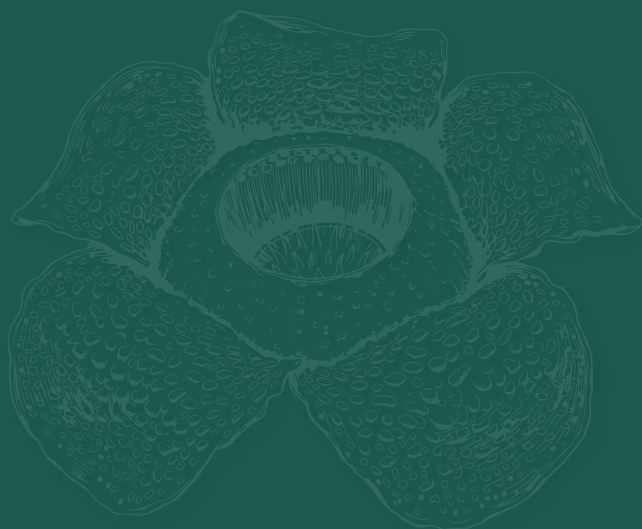
5 1945

- Farewell Remarks by Director of Forests Sarawak
- Performance by FORESSA band
- Battle of the Bands
- Highlight Performance
- Prize Presentation to the Winner of "Battle of the Bands" and "Best Appearance of the Night"

6 2230

End

LIST OF POSTERS



LIST OF POSTERS : FOREST DEPARTMENT SARAWAK

No	Title	Author
1	Thermal Imaging and Advanced Visual Camera Drone Technology Used to Determine the Population Density and Group Demographics of the Critically Endangered Tri-Colored Langur (<i>Presbytis chrysomelas cruciger</i>) in the Jemoreng Protected Peat Swamp Forest, Matu, Sarawak, Borneo.	Dayang Nuriza Abang Abdillah, Hamden Mohammad, Happysupina Sait, Azahari Omar, Traeltholt C., Shukor M. N., Syafiani O., Roger R. J. A., Bilhan D., Ampeng A., Dahlen B.
2	Short-term impact on Special License operations to collect Driftwood in the Batang Rajang River, Sarawak.	Ahmad Ashrin bin Mohamad Bohari, Arifin bin Awang Zulkifli, Earl Roscoe Justin Ruda, Nixon Girang anak Mang, Abdul Rahman bin Nona, Gloria Nathania anak Mendarrick
3	Artificial Intelligence (AI) and Timber Identification for Forest Protection.	Siti Hanim Sahari, Teng Xin Yao, Nungah anak Liang, Mohd Zainuddin bin Mohd Kameri, Melvin Brown, Evita Grace Simon, Ronaldo anak Odan
4	Establishing Gunung Pueh as Sarawak's First UNESCO Biosphere Reserve: A Strategic Feasibility Assessment.	Mohizah binti Mohamad, Irmadiana Ardi, Shazali Johari, Shilya Zulaikha Zamani
5	Management of Sungai Menyang Conservation Area for Orang Utan Protection and Uplifting Community Livelihood, Sarawak, Malaysia.	Kishen Bunya, Jos Jawa, Marchella Wilma Welino, Nur Aizatul Izzati Tukiman, Flora Dian
6	Multi-Site Progeny Trials of <i>Acacia crassicarpa</i> : Advancing Tree Improvement for Sustainable Forestry.	Cedric Paul anak Bond, Pang Shek Ling, Mohd Zaki bin Haji Abdullah
7	Ambrosia Beetles Diversity and Host Association in Industrial Forest Plantation of Sarawak.	Erica Medina Abdullah, Jossy Jeson, Lily Encharang, Fatin Nurhuda

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No	Title	Author
8	Stem Canker Disease in Eucalyptus Plantations in Sarawak: Management Options.	Annya anak Ambrose, Shaneesa Ally Magdeline, Razak Terhem
9	Wildlife Diversity as an Eco-Tourism Attraction in Silentek Permanent Forest Reserve, Sri Aman, Sarawak.	Syafiani binti Osman, Hamden Mohammad, Azahari Omar, Andy Russel, Dayang Nuriza binti Abang Abdillah, Roger Richard, John Apiu, Bilhan Deli, Hazeri Yahya, Ahmad Ampeng
10	Mobile Digital Forensic Approach for Timber Legality Verification Using DART-MS: A Conceptual Study in Sarawak.	Affendi Suhaili, Salfa Katira Abdul Kadir, Jayneeca Lawen, Md Khairul Asri, Khadeeja Abdul Wahab, Nur Hanisah Basuan, Nizle Junep, Ajmal Asraff, Muhammad Hafeez Syakireen

LIST OF POSTERS : SABAH FORESTRY DEPARTMENT

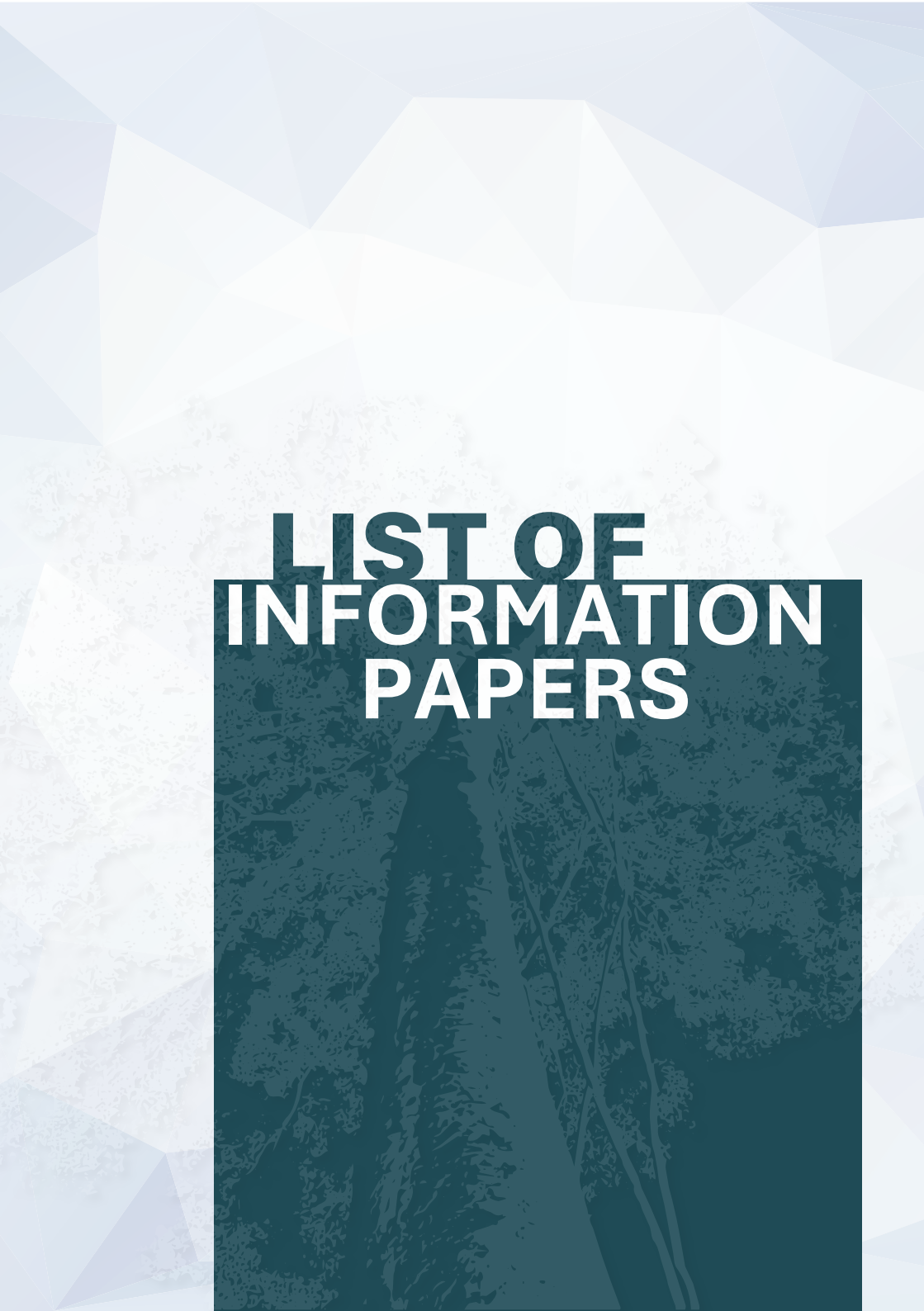
No	Title	Author
1	Partnership for Forest Restoration: A Collaborative Tree Planting Initiative in Kungkular Forest Reserve, Sabah.	Indro P.H. Sunjoto, Rosila Anthony, Bellinda D. Raymond, Alexander
2	Nocturnal Ecology and Behaviour of Red Giant Flying Squirrel (<i>Petaurista petaurista</i>) at RDC, Sepilok Sabah.	P.M.S Salam, P Miard, Bernard H, Parulin J., Samor S., Hildebrandt, M & Marianus M
3	Exploring the Diversity of Earth Figs in Sabah.	Suzana Sabran, E.M. Gardner, P.Yan Qiong, Y.Y. Ho, K.K. Pham, S.Liou, D.K.R. Matusin & Joan T. Pereira
4	Baseline Assessment of Soil Carbon Density: A Case Study at Marudu Bay, Sabah.	Esther Dyi Ka Mei, Marrynah Matami & Joseph Tangah
5	Forest Ecosystem Services Supporting Community Food Security in Bukit Monkobo and Bukit Mentapok Forest Reserves, Sabah.	Jesselyn Kijin, Elne Betrece Johnlee, Dessy ljes, Nurul Shabariah Abu Bakar, Jeddy Jerpyan Jakiwa, Alfred Bisuk
6	Harvesting <i>Eucalyptus pellita</i> : Operational, Economic and Management Lessons- Insights from a 7-Year-old Harvesting.	Eyen Khoo, Ng Shi Teng, & Ty Kui Foh
7	Rapid Assessment of Insect Diversity in Meliau Range Forest Reserve, Beluran, Sabah.	Razi Japir, Dayang Fazrinah Awg Damit, Cyril Ann Daniel, John Lee Yukang, Herwin Andrian Monis Noni, & Arthur Chung
8	Vascular Plant Diversity and Conservation Importance of the Ultramafic Forests of Meliau, Telupid, Sabah.	Jonathan J. Lucas, John T. Pereira, Alviana Damit, Suzana Sabran & John B. Sugau
9	Strengthening Genetic Resource Management in Sabah's Plantation Forestry Using Candidate Plus Tree.	Richard Majapun, Kuina Kimjus, Chong Fun Yun, Eyen Khoo & Maria Ajik
10	KitMAPS: Memperkasa Penglibatan Masyarakat dalam Perhutanan di Sabah.	Elne Betrece Johnlee, Mohd Daniel Aiman Mutasil, Ricky Alisky Martin
11	Integrated Landscape Management for Sustainable Food Systems, Land Use and Restoration (MY-FOLUR) Project.	Indra P. H. Sunjoto, Rosila Anthony, Dr Gerald Jetony, Michelle Yap

LIST OF POSTERS : FORESTRY DEPARTMENT OF PENINSULAR MALAYSIA

No.	Title	Author
1.	Assessment of Forest Roads Using UAV-Based Photogrammetric Techniques in Berkelah Forest Reserve, Kuantan, Pahang, Malaysia	Gs. Michael Maijohn, Mohd Hasmadi Ismail & Azita Ahmad Zawawi
2.	Pembangunan Kerangka Pemantauan Bersepadu Bagi Rangkaian Ekologi J-Pl1 Dalam <i>Central Forest Spine</i> (CFS), Johor	Mohd Ridzuwan Endot, Abd Ramlizauyahhudin Mahli, Noor Azrien Zainon, Gs. Michael Maijohn, Mohd Syahrir Azrin Bin Salleh, Muhammad Abdul Latiff Abu Bakar, Nor Atiqah Norazlimi, Aqilah Awg Abdul Rahman, Salasiah Mohamad, Arney Sapaat & Yap Jing Wei
3.	Morfologi Genus <i>Plectocomiopsis</i> Antara Populasi di Selangor dan Sarawak	Juliana binti Yahya, Azizul bin Razali, Mohd Syafiq Syazwan bin Rosli, Edevaldo J Yapp, Mohd Nor Firdaus bin Rahim, Siti Khatijah binti Othman & Dr. Aldrich Richard
4.	Penilaian Awal Populasi Spesies Terjadual Akta 686 Dan CITES (Orkid Liar Dan Periuk Kera) Di Hutan Simpanan Kekal Di Semenanjung Malaysia	Profesor Dr. Mohd. Nazre bin Saleh, Dr. Edward Entalai Anak Besi, Dr. Mohd Norfaizal bin Ghazalli, Kamarulizwan bin Kamaruddin, Dr. Aldrich Richard, Mohd. Shahril bin Abdul Rashid, Helmy Tariq bin Othman
5.	The Socio-Economic Impacts of The Forestry Mountain Guide Programme As A Catalyst For A Sustainable Green Economy	Nor Zaidi Jusoh, Mohammad Ifratshim Muhamad Sa'ed, Reanee Lee, Muhamat Azman Yahya, Abu Bakar Rapae, Nurfarhana Ahmad & Zulkurnain Zakaria
6.	Ulu Muda State Park: Beneath The Canopy	Othman Deris, Rosaizan Haryani Rosli, Jamal Shuhaily Shahr, Mohd Hafiz Samsudin, Fatin Afiqah Roslan, Nor Shahrini Nordin Ahmad & Noor Akmal Jamil

**LIST OF POSTERS :
FORESTRY DEPARTMENT OF PENINSULAR MALAYSIA**

No .	Title	Author
7.	Public Funding As A Catalyst For Restoration, Rehabilitation and Reclamation (Soc 4 3R): A Case Study of The Chini Forest Reserve, Pahang	Dato' Zainuddin Jamaluddin, Dr. Grippin Anak Akeng, Harry Yong, Iqtie Qamar Laila Mohd Gani, Mohd Saman Mohd Sanget, Nasrina Anis Mohd Nasir & Mizanul Hasanah Sobri
8.	Forest Reserves in Terengganu: A Green Economy Catalyst	Ramli Mat, Radhuan Ramli, Marlina Omar, Mohd Asri Yussof & Mohamad Faisal Nasaruddin
9.	The Emerald of Kenyir: A Multidimensional Approach For Sustainable Forest Management In Terengganu	Ramli Mat, Radhuan Ramli, Mohd Asri Yussof, Marlina Omar, Mohamad Faisal Nasaruddin & Mohd Hafiz Hamzah



LIST OF INFORMATION PAPERS

LIST OF INFORMATION PAPERS: FOREST DEPARTMENT SARAWAK

No	Title	Author
1	Diversity of Fungi Forming Litter-Trapping Systems in the Tropical Rainforests of Sarawak, Malaysia.	Shirley anak Chip, Takao Ichioka, Satoshi Yamashita, Mizuno Takafumi, Hirotoishi Sato, Nishikawa Kanto, Noorhana Mohd. Sapawi, Paulus anak Meleng
2	Diversity and Ethnomycological Uses of Wild Fungi in the Kelabit Highlands, Sarawak's Heart of Borneo.	Noorhana, M.S., Habibah, S. , Abdul Ghani, Y., Sharifah Rohaidah, W.A., Abu Serah, A., Junes, B., Mohamad Hasnul, B., Shirley, C.
3	When the Lab Fails but Nature Succeeds: Germination of Endospermum diadenum (Terbulan) Seeds from Our Experience.	Sabrina Aslan Joe, Gloria Puyang Bernard, Mas Dora Tumbing , Jonnidi Subieb
4	Integrating Forestry Expertise into High Conservation Value Assessment: Identifying Threatened and Endemic Flora and Fauna in Grand Mutual Oil Palm Estate, Sarawak, Malaysia.	Vilma Bodos, Joanes Unggang, Army Kapi, Moses Tarang, Kinsy Sekina, Alex Jukie
5	Forest Structural Condition Assessment for Green Economy Planning in Sarawak: A Review of Remote Sensing, Carbon Storage and Biodiversity Conservation Linkages.	Mohammad Nor Firdaus Haji Sariee Hamdan Omar, Noor Haliza Hassan, Muhammad Syafiq Yahya
6	Survival And Mortality of Indigenous Tree Seedlings in Restoration Plantings At Bakam Forest Reserve, Miri, Sarawak	Liam Anak Dibor & Tina Kim Sem

LIST OF INFORMATION PAPERS: SABAH FORESTRY DEPARTMENT

No	Title	Author
1	Growth Performance and Survival of <i>Falcataria falcata</i> , <i>Neolamarckia cadamba</i> , and <i>Terminalia copelandii</i> in a Nine-Year-Old Demonstration Plots in Sabah, Malaysia.	Veronica Samion Guanih, Kat Nyen Kelvin Pang, Chong Fung Yun, Flement Janain, Adrian Damsha Sufri, Ian Brandon John, Nasrah Yusof
2	Evaluating Six-Year Growth Performance of Selected Species in Lungmanis Forest Reserve, Sabah.	Kat Nyen Kelvin Pang, Veronica Samion Guanih, Chong Fung Yun, Flement Janain, Adrian Damsha Sufri, Ian Brandon John, Nasrah Yusof
3	Turning Policy into Action: Sabah's Journey in Achieving 30% Totally Protected Areas by 2025.	Rosila Anthony, Siti Zubaidah S. Abdullah, Mohamad Hafizan Addli bin Lamin
4	Strengthening Forest Enactment Through Strategic Collaboration: Catalysing Sabah's Green Economy Transformation.	Peter Jack Empah, Zulkifli Bin Suara, Donatus Loisang, Muhamad Izzuddin Bin Idris, Immanuel Sibot Ongkudon
5	Sustaining Sabah's Forest Resources Through Smart Partnerships – The SFMLA System.	Hamidah Bujing, Sitti Khadizah Abd Kadir & Daim Balingi
6	Evaluation of Sustainability Community-based Ecotourism in Sabah.	Abdul Hamid Mohd. Ali
7	A Plot-to-Map Approach for Biodiversity and Ecosystem Health Monitoring to Support Sustainable Forest Management in Deramakot Forest Reserve, Sabah.	Julsun Sikui, Reuben Nilus, Esther Dyi Ka Mei, Sarah J Mianus, Charissa J. Wong, Jonathan J. Lucas
8	A Spatial Framework for Ecosystem Services Mapping to Support Forest Biodiversity Monitoring in Sabah.	Julsun Sikui, Reuben Nilus, Elne Betrece Johnlee, Sarah J Mianus, Sandy Tsen Tze Lui, Esther Dyi Ka Mei, Charissa J Wong, Pg. Sahlan Salam, Razy Japir, Hubert Petol, Noor Azmizah Andaman, Jonathan J. Lucas, Adrienne L Geoffrey

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ABSTRACTS FOR ORAL PAPER

Keynote Address

Protected Areas, Eco-Forest Parks, and Geoparks: Drivers of Green Economy and Sustainability in Malaysian Forestry

Ibrahim Komoo & Norhayati Ahmad

Abstract

Forest reserves and protected areas are fundamental to Malaysia's sustainable development strategy, serving as natural capital for climate change mitigation, biodiversity conservation, and green economic growth. In alignment with the 21st Malaysian Forestry Conference theme "Forest as a Catalyst for a Green Economy," This keynote positions UNESCO Global Geoparks (UGGPs) as a strategic priority and the latest development in Malaysia's forestry-led conservation landscape, demonstrating how their integration alongside forest reserves, protected areas, and Eco-Forest Parks strengthens national commitments under the Kyoto Protocol, Paris Agreement, SDGs, and UNFCCC. Sustainable Forest Management (SFM) practices maintain forest cover, enhance carbon sequestration, and build ecological resilience while supporting local livelihoods. Within this broader framework, Malaysia's four UGGPs (Langkawi, Kinabalu, Lenggong, Sarawak Delta) exemplify integrated heritage conservation, where forest reserves cover 35–78% of geopark areas. Eco-Forest Parks in these geoparks host significant geological heritage sites, ideal for geotrails that fuse geotourism with environmental education. Key roles of protected forests include: (a) conserving biological and geoheritage; (b) providing aesthetic and recreational value; (c) maintaining ecological corridors; and (d) supporting UNESCO certification through verifiable conservation outcomes. Challenges such as post-2015 earthquake impacts in Kinabalu and development pressure on Langkawi's forest edges require adaptive management integrating biological, geological, and social sciences. By linking SFM, climate action, and green economy principles, Malaysia's protected areas—from Eco-Forest Parks to national parks—demonstrate a replicable pathway from natural capital to green prosperity, with geoparks serving as powerful case studies within a national conservation landscape.

Digital Governance in Forestry: Enhancing STLVS Integrity and Revenue Efficiency as a Catalyst for Sarawak's Green Economy (Sarawak experienced)

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ABSTRACT

The transition toward a green economy requires stronger governance frameworks and in the forestry sector this depends on effective timber legality verification and robust revenue administration to protect forest resources and sustain confidence in international timber markets. This paper examines the contribution of digital governance to strengthening timber legality assurance and improving forest revenue management in Sarawak through the implementation of the Sarawak Timber Legality Verification System (STLVS) and the Sarawak Logs Tracking and Forest Revenue System (REVLOG). STLVS provides a regulatory framework for verifying compliance with forestry laws across timber harvesting operations and supply chains, while REVLOG introduces digital functions such as log tracking, real-time monitoring of production declarations and automated royalty assessment. Using a case study approach based on STLVS Principles 1 to 4 and relevant administrative and institutional data, this paper evaluates how digital systems enhance traceability, improve data accuracy and strengthen monitoring capacity. The findings suggest that digital governance can significantly improve legality compliance, increase transparency in forest revenue administration and strengthen institutional accountability. Recent enhancements to REVLOG, including geo-location and species-level information, further support these outcomes. It is recommended that the inter-agency systems within Sarawak to be further enhanced and integrated, enabling consistent compliance standards and stronger collaboration that position Sarawak to respond effectively to emerging international regulatory requirements while reinforcing the role of forestry governance in supporting a sustainable green economy.

Keywords: digital forest governance, forest revenue management, green economy, REVLOG, STLVS

Unlocking Natural Capital: Sabah's Policy Frameworks for a Forest-Based Green Economy

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ABSTRACT

Policy direction plays a critical role in ensuring effective forest preservation, while enabling forests to contribute meaningfully to sustainable economic development. In forest-rich regions such as Sabah in Malaysia, forests represent significant natural capital that supports biodiversity conservation, climate regulation, and socio-economic development. This paper examines the importance of clear policy direction and governance frameworks in strengthening forest protection and positioning forests as a catalyst for a green economy.

Using several policies in Sabah towards acceleration of green economy, this paper highlights how strategic policy commitments such as maintaining long-term forest cover, expanding Protected Areas (PA), and promoting sustainable forest management could provide the foundation for balancing conservation objectives with economic opportunities. Strong policy direction enables the establishment of regulatory mechanisms, institutional coordination, and long-term planning that safeguard forest ecosystems while encouraging sustainable investments.

This paper further explores how protected and sustainably managed forests can support emerging green economy sectors, including nature-based recreation, ecosystem services, forest restoration, and climate-related initiatives. By protecting natural ecosystems and enhancing ecosystem resilience, forests generate environmental and economic benefits that contribute to inclusive and sustainable growth.

The findings demonstrate that a robust policy framework, supported by effective governance and stakeholder collaboration, is essential for transforming forest resources into strategic assets for green economic development. The experience of Sabah provides important insights into how clear policy direction can strengthen forest protection while enabling forests to act as a key driver of a green and sustainable economy.

Keywords: Forest Policy and Governance, Green Economy, Sustainable Development

Penetapan Pendengaran Awam (Public Hearing) bagi Pewartaan Keluar Hutan Simpanan Kekal (HSK) di Semenanjung Malaysia

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ABSTRAK

Pendengaran awam (public hearing) kini merupakan keperluan undang-undang di bawah pindaan Akta Perhutanan Negara 2022 [Akta A1667] sebelum mana-mana kawasan Hutan Simpanan Kekal (HSK) diwarta keluar, bertujuan untuk meningkatkan ketelusan dan membolehkan penyertaan awam. Ia mewajibkan penggantian kawasan hutan dan siasatan awam untuk mendengar maklum balas rakyat. Pendengaran Awam (*Public Hearing*) sebelum pewartaan keluar Hutan Simpanan Kekal (HSK) ialah mekanisme ketelusan di bawah Akta Perhutanan Negara 1984 (Pindaan 2011/2022) untuk membolehkan masyarakat, NGO, dan pihak berkepentingan menyuarakan pandangan atau bantahan terhadap penyahwartaan hutan selain memastikan ketelusan dengan memberi ruang kepada pihak yang berkepentingan. Ia bertujuan menjamin pengurusan hutan mampan, mengelakkan kemusnahan ekosistem, dan memastikan keputusan kerajaan adalah telus serta mengambil kira kepentingan awam. Pelaksanaan Sesi Pendengaran Awam merupakan langkah proaktif dalam memperkukuh tadbir urus sektor perhutanan negara. Ia bukan sahaja meningkatkan ketelusan dan kepercayaan awam, malah menyumbang kepada kelestarian sumber hutan untuk generasi akan datang.

Kata kunci: Pendengaran Awam, Hutan Simpanan Kekal, Pembalakan Haram

Science-Based Forest Policy in Action: Integrating Dipterocarp Population Assessment into Sarawak's Efforts on CITES and the Sustainable Timber Framework

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Abstract

The incorporation of scientific evidence into forest governance is vital to ensure that biodiversity conservation and timber trade objectives are mutually aligned. Dipterocarpaceae dominate both forest ecosystems and commercial timber production, making their sustainable management fundamental to Sarawak's policy credibility and international compliance. Recent proposals to include selected dipterocarp taxa under Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) require robust Non-Detriment Findings (NDFs) supported by empirical population data. This paper synthesises conservation status assessments, population structure analyses, regeneration trends, and existing regulatory measures for 60 dipterocarp species occurring in Sarawak. Approximately 39% of assessed species are classified as threatened at the state level. Diameter-class distributions and long-term monitoring indicate that several species show a stable regeneration and post-harvest recovery under regulated forest management. In contrast, others exhibit limited recruitment or localised distributions, which require enhanced safeguards. This paper shares how scientific population assessment is operationalised within Sarawak's legal, policy, and certification framework to support evidence-based CITES implementation.

Keywords: biodiversity, certification, CITES, conservation, timber

Pengalaman dan Cabaran Pengurusan Kebakaran Hutan Paya Gambut di Selangor

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ABSTRAK

Hutan paya gambut di negeri Selangor meliputi keluasan 83,147.99 hektar yang merangkumi dua landskap utama iaitu hutan paya gambut Selangor Utara dan Selangor Selatan. Hutan ini merupakan ekosistem yang unik berdasarkan peranannya dalam melindungi kepelbagaian biologi, penyimpanan karbon dan pengekalan sumber air di negeri ini. Isu utama yang sering dihadapi dalam pengurusan hutan paya gambut adalah menangani dan mengatasi kejadian kebakaran hutan. Kebakaran hutan lazimnya berpunca daripada aktiviti guna tanah yang tidak terancang, pencerobohan dan penerokaan hutan. Kebakaran hutan gambut amat sukar untuk dipadamkan kerana memerlukan tenaga kerja yang ramai, masa yang panjang, kos operasi yang tinggi dan keperluan logistik yang mencukupi. Jabatan Perhutanan Negeri Selangor sentiasa mengambil inisiatif bagi menangani isu ini seperti menguruskan sistem hidrologi yang teratur dan seimbang, memantapkan aktiviti pemantauan dan penguatkuasaan hutan, kesiapsiagaan pasukan pemadaman kebakaran hutan, restorasi kawasan terosot akibat kebakaran, penggunaan teknologi terkini (IoT) dan kerjasama dengan agensi kerajaan, Institut Pengajian Tinggi Awam (IPTA), NGO serta masyarakat setempat. Pemantapan modal insan kakitangan jabatan turut ditingkatkan melalui latihan secara praktikal di lapangan berkenaan teknik pemadaman api serta kaedah yang sesuai dalam operasi pemadaman. Di samping itu, program kesedaran awam bersama agensi kerajaan dan swasta, IPTA/IPTS, NGO serta masyarakat setempat turut dilaksanakan oleh pihak jabatan berhubung kepentingan pengurusan dan pemeliharaan hutan paya gambut di negeri Selangor.

Kata kunci: Selangor, hutan paya gambut, pengurusan, pemuliharaan, kebakaran, hidrologi, restorasi, modal insan, kesedaran, ekosistem

Estimating Aboveground Forest Carbon Density through LiDAR and Geospatial Remote Sensing in Sarawak

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Abstract

Integrating high-density LiDAR with satellite remote sensing datasets enables precise and efficient estimation of forest structure and biomass, establishing a reliable benchmark for carbon stock quantification. This initiative developed a rapid, accurate methodology for assessing forest biomass and carbon stocks across Sarawak by fusing multi-platform LiDAR data—terrestrial, mobile, and UAV-borne—with satellite imagery and artificial intelligence (AI)-driven geospatial modeling. The methodology encompassed estimation of key forest inventory parameters, rigorous validation against field measurements, application of appropriate allometric equations, generation of an IPCC-compliant report, and knowledge transfer to local stakeholders. Ultra-dense LiDAR point clouds, surpassing 30,000 points per square meter, facilitated exacting tree measurements, corroborated by manual field surveys. Multi-source LiDAR integration targeted diverse Sarawak forest ecosystems: Lambir Hills National Park (Pristine Mixed Dipterocarp Forest), Anap Muput, Bintulu (Degraded Mixed Dipterocarp Forest), Sebuyau (Degraded Peat Swamp Forest), and Lundu (Degraded Mangrove Forest). These metrics informed per-tree aboveground biomass and carbon estimates (kg/tree). Machine learning algorithms then scaled Aboveground Carbon Density (ACD) from plot-level to regional extents, leveraging satellite-derived predictors from UAV LiDAR, Sentinel-1, and Sentinel-2. Relative to conventional field surveys, LiDAR methods drastically curtail time and labour for tree-level data acquisition. LiDAR achieves diameter at breast height (DBH) accuracy within 3 cm, though discrepancies may stem from field measurement variability. Models were trained on 46 satellite-derived predictor variables, yielding robust performance; each forest type was optimally modeled using a tailored subset of variables. This approach advances REDD+ monitoring, enhancing carbon accounting precision and supporting sustainable forest management in Sarawak.

Keywords: Geospatial, LiDAR, forest carbon density, remote sensing, Sarawak

A Review: Ecological Dynamics of Tropical Highland Peat Ecosystems

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ABSTRACT

Tropical highland peat ecosystems represent a rare and understudied component of global peatland systems, occurring primarily within montane and cloud forest environments characterized by persistent mist, high humidity, and low temperatures. These conditions slow organic matter decomposition and facilitate the gradual accumulation of peat, forming unique soil and hydrological systems distinct from their lowland counterparts. This review synthesizes current knowledge on the ecological dynamics of tropical highland peat ecosystems, with a focus on their formation processes, vegetation structure, hydrological regulation, and biogeochemical functions.

The review highlights the critical role of climatic factors—particularly cloud immersion and precipitation—in maintaining saturated conditions that drive peat development. Vegetation communities, dominated by mosses, epiphytes, and stunted montane forest species, contribute to organic matter input and influence nutrient cycling within these nutrient-poor, acidic environments. Highland peat systems are also increasingly recognized as important, albeit spatially limited, carbon reservoirs with significant implications for climate regulation.

Despite their ecological importance, tropical highland peatlands remain highly vulnerable to anthropogenic disturbances, including land-use change, agricultural expansion, infrastructure development, and climate variability. Such pressures can disrupt hydrological balance, accelerate peat oxidation, and lead to irreversible ecosystem degradation. However, compared to lowland peatlands, scientific understanding of highland peat dynamics remains limited, with substantial gaps in data on distribution, carbon stocks, and long-term ecosystem responses.

This review identifies key research gaps and emphasizes the need for integrated, multidisciplinary approaches to better understand and manage these fragile ecosystems. Strengthening conservation strategies, improving mapping and monitoring, and incorporating local and regional management frameworks are essential to safeguard the ecological integrity and ecosystem services of tropical highland peatlands in the face of ongoing environmental change.

NATURE, CLIMATE, AND ECONOMY: SABAH'S PATHWAY THROUGH NATURE-BASED SOLUTIONS

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ABSTRACT

Sabah's rich natural ecosystems, including tropical rainforests, mangroves, and peatlands, play a critical role in climate regulation, biodiversity conservation, and sustainable economic development. In the face of accelerating climate change and growing demands for sustainable resource management, Nature-Based Solutions (NbS) offer an integrated approach that harnesses the capacity of natural ecosystems to address environmental challenges while generating socio-economic benefits. This paper examines Sabah's Conservation-Next agenda towards aligning nature conservation, climate action, and economic development through the implementation of NbS.

Drawing on initiatives led by the Sabah Forestry Department and its strategic partners, the paper highlights key interventions including sustainable forest management, mangrove conservation, peatland ecosystem restoration, and forest carbon initiatives. These initiatives contribute to carbon sequestration, climate resilience, biodiversity protection, and the creation of green economic opportunities for local communities. Sabah's extensive mangrove ecosystems and forest landscapes provide significant potential for nature-based climate solutions that support both mitigation and adaptation objectives.

The paper also examines the evolving policy and governance frameworks that enable the scaling up of NbS, including emerging forest carbon mechanisms and cross-sectoral partnerships. Aligned with the global NbS framework promoted by the International Union for Conservation of Nature and the United Nations Sustainable Development Goals, particularly SDG 13 Climate Action, Sabah demonstrates how natural capital can be leveraged to support a resilient and inclusive green economy.

Keywords: Nature-based Solutions (NbS), Climate Change, SDG

Sabah Timber Legality Assurance System Plus (Sabah TLAS+): Advancing Timber Legality Through International Collaboration

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ABSTRACT

Growing global demand for legally sourced, deforestation-free, and traceable forest products has significantly reshaped regulatory expectations in international timber markets, where legality alone is not enough. In response, the Sabah Forestry Department has strengthened the existing timber legality framework into what we now call Sabah Timber Legality Assurance System Plus (Sabah TLAS+), an enhanced system designed to align with emerging international regulatory requirements, particularly the European Union Deforestation Regulation (EUDR) and the EU Corporate Sustainability Due Diligence Directive (CS3D). Sabah first established the Sabah Timber Legality Assurance System (TLAS) in 2009 following Malaysia's engagement with the European Union's Forest Law Enforcement, Governance and Trade (FLEGT) initiative. The system, which verifies legality across upstream and downstream timber supply chains through independent third-party audits, has since been mandatory for timber production and trade within Sabah. In June 2024, the Sabah Forestry Department entered into a strategic collaboration with the EU–Malaysia Cooperation Facility to further strengthen the system and ensure alignment with evolving international standards. The Sabah TLAS+ retains the original six legality principles while introducing two additional principles addressing deforestation-free compliance and corporate sustainability due diligence. The framework integrates compliance with 21 state legislations, 27 federal legislations, and 33 international agreements, ensuring a comprehensive and auditable legality system. It also integrates strengthened traceability mechanisms, improved monitoring and verification procedures, and enhanced social and labour safeguards throughout the timber value chain. Through international collaboration and regulatory alignment, Sabah TLAS+ demonstrate a forward-looking governance framework that can contribute to global efforts in promoting legal, sustainable and responsible timber supply chains while improving market readiness for Sabah's timber sector.

Keywords: Sabah Timber Legality Assurance System Plus (Sabah TLAS+); Forest governance and Policy; Timber legality verification; Sustainable forest management; Supply chain traceability; European Union Deforestation Regulation (EUDR); Corporate Sustainability Due Diligence Directive (CS3D); Timber trade compliance; Market readiness.

Operasi Penguatkuasaan Bersepadu Jabatan Perhutanan Semenanjung Malaysia

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ABSTRAK

Kerjasama strategik antara Jabatan Perhutanan Semenanjung Malaysia (JPSM), Jabatan Kimia Malaysia dan Agensi Angkasa Malaysia (MYSA) memainkan peranan penting dalam memperkukuh penguatkuasaan serta pemantauan sumber hutan negara secara bersepadu. Kerjasama ini menggabungkan kepakaran analisis forensik dan kimia oleh Jabatan Kimia Malaysia dengan keupayaan teknologi penderiaan jauh, imejan satelit dan analisis geospasial oleh MYSA bagi menyokong tindakan penguatkuasaan JPSM. Melalui perkongsian data, teknologi dan kepakaran teknikal, kerjasama ini membolehkan pengesanan awal aktiviti pembalakan haram, pengesahan bukti saintifik serta pemantauan perubahan litupan hutan secara lebih cekap dan berkesan. Pendekatan bersepadu ini bukan sahaja meningkatkan keupayaan tadbir urus hutan, malah menyokong pemeliharaan biodiversiti dan kelestarian alam sekitar selaras dengan komitmen negara terhadap pengurusan hutan secara mampan. Secara keseluruhannya, kerjasama antara ketiga-tiga agensi ini bukan sahaja meningkatkan keberkesanan penguatkuasaan undang-undang perhutanan, malah menyumbang kepada usaha pemeliharaan biodiversiti, mitigasi perubahan iklim serta pemantapan pengurusan hutan secara mampan di Malaysia. Ini mencerminkan komitmen kerajaan dalam mengadaptasi pendekatan teknologi dan saintifik bagi memastikan kelestarian sumber hutan negara terus terpelihara untuk generasi akan datang.

Kata kunci: Penguatkuasaan, Hutan Simpanan Kekal, Forensik Perhutanan, Imej Satelit

Digitalizing Conservation Governance: [HOBS] A Cross-Agency Project Management System for the Heart of Borneo in Sarawak

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ABSTRACT

The Heart of Borneo (HoB) Initiative represents a trilateral commitment between Malaysia, Brunei, and Indonesia to safeguard Borneo's ecological integrity through five strategic pillars: sustainable forest management, ecotourism, biodiversity conservation, sustainable agriculture, and community-based rural poverty alleviation. In Sarawak, the implementation of these pillars involves collaboration among multiple government agencies, each responsible for programs aligned with their respective mandates. However, the current practice for monitoring project implementation and development progress relies heavily on manual reporting systems and inter-agency meetings. While these mechanisms have served their purpose, they often result in fragmented information flow, delayed reporting, and limited integration of project data across institutions. To address these challenges, the Forest Department Sarawak has initiated the development of a centralized Heart of Borneo project management system aimed at strengthening coordination among participating agencies. This digital platform provides a structured mechanism for documenting, monitoring, and reporting conservation and development initiatives within HoB areas. The system integrates a public portal that provides access to information related to land use, biodiversity, ecotourism, and community-based programs, alongside a back-office platform that supports role-based workflows for participating agencies. Data input and updates are coordinated through the Technical Working Group (TWG), where focal persons from agencies associated with the five HoB pillars contribute verified information. This governance structure enhances transparency, improves inter-agency coordination, and facilitates more efficient information sharing. Through an integrated overview of past and ongoing initiatives, the system enables stakeholders to identify conservation gaps and priority areas, thereby supporting more coordinated implementation of the Heart of Borneo Initiative. As the first centralized digital system developed for HoB project monitoring in Sarawak, the platform is currently in its early stage of implementation and will continue to evolve as feedback from stakeholders is incorporated to enhance its functionality and effectiveness.

Keywords: Heart of Borneo, Conservation Governance, Project Management System, Multi-Agency Coordination.

Small Mammal Diversity in Borneo: Insights from Historical Records and Collaborative Biodiversity Assessments

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ABSTRACT

Small mammals are key components of tropical forest ecosystems in Borneo, contributing to ecological processes such as seed dispersal, invertebrate regulation and forest regeneration. Understanding their diversity and conservation status requires the integration of information that is often dispersed across specimen collections, academic literature and continuous field surveys. This study highlights historical records and ongoing biodiversity assessments generated through collaborative efforts between multiple organisations and agencies to examine patterns of small mammal diversity across Borneo, with emphasis on forest reserves and protected forest landscapes. Research on Bornean small mammals has developed over more than a century, beginning with early taxonomic documentation based on museum specimens, progressing through long-term faunal surveys and advancing to modern ecological and molecular studies. These developments, supported by collaborations between academic institutions such as Universiti Malaysia Sarawak (UNIMAS), alongside forestry authorities including the Forest Department Sarawak, Sarawak Forestry Corporation, Sabah Forestry Department, Sabah Parks as well as other related organizations, expanded species inventories and improved understanding of small mammal conservation in Borneo. Forest reserves continue to function as crucial refuges for small mammal diversity, with joint field expeditions and biodiversity assessments conducted through collaborative efforts becoming increasingly important in strengthening baseline knowledge and long-term monitoring. While most small mammal species are currently classified as Least Concern under the IUCN Red List, a substantial proportion remains Data Deficient, highlighting persistent gaps in ecological and conservation knowledge. The integration of historical datasets with collaboratively generated biodiversity data demonstrates the value of sustained partnerships between academic, governmental and forestry stakeholders. Strengthening such collaborative frameworks through coordinated forest reserve surveys and shared biodiversity databases will be essential for improving biodiversity assessments and supporting evidence-based forest management and conservation planning in Borneo.

Keywords: Chiroptera, conservation, forest reserves, Rodentia, Sarawak

Ekspedisi Saintifik Kepelbagaian Biologi Hutan : Pencapaian Dan Hala Tuju

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ABSTRAK

Pengurusan sumber kepelbagaian biologi hutan adalah selaras dengan amalan pengurusan hutan secara lestari di bawah perundangan Jabatan Perhutanan Semenanjung Malaysia (JPSM). Malaysia diiktiraf sebagai 12 negara mega kepelbagaian biologi yang kaya dengan kepelbagaian biologi hutan. Justeru itu, JPSM memberi tumpuan terhadap usaha memelihara dan memulihara kepelbagaian biologi hutan bagi mengelakkan kemerosotan ekosistem, kepupusan spesies dan kehilangan sumber genetik. Semenjak tahun 1999, JPSM aktif melaksanakan ekspedisi saintifik kepelbagaian biologi hutan sebagai inisiatif utama dalam usaha mengenal pasti dan mendokumentasikan kekayaan biodiversiti dalam Hutan Simpanan Kekal (HSK). Ekspedisi ini bertujuan untuk mengumpul maklumat saintifik berkaitan flora, fauna, ekologi, sosial ekonomi dan pengurusan hutan bagi menyokong aktiviti penyelidikan, memperkukuh pangkalan data biodiversiti serta menyumbang ke arah penambahbaikan pengurusan sumber semula jadi secara menyeluruh. Sepanjang 25 tahun pelaksanaannya, sebanyak 50 ekspedisi saintifik telah dijalankan menghasilkan pelbagai penemuan signifikan termasuk spesies baharu, endemik dan unik. Hasil penyelidikan ini turut dikongsikan melalui penganjuran 38 seminar dan penerbitan 31 prosiding dalam Siri Kepelbagaian Biologi Hutan yang menjadi sumber rujukan dan panduan penting dalam kajian biodiversiti negara. Secara keseluruhannya, ekspedisi saintifik telah merekodkan sebanyak 23,147 spesies flora dan 10,097 spesies fauna, membuktikan kekayaan kepelbagaian biologi hutan negara. Penyelidikan melalui aktiviti ekspedisi saintifik yang berterusan pada masa akan datang dapat membantu jabatan dalam merangka perancangan hala tuju pemeliharaan dan pemuliharaan sumber kepelbagaian biologi hutan bagi memastikan kelestarian ekosistem hutan terus terjamin. Bagi memperkukuh hala tuju pengurusan biodiversiti, JPSM turut menumpukan kepada penubuhan petak kajian kekal sebagai platform pemantauan jangka masa panjang terhadap dinamik ekosistem hutan. Selain itu, pembangunan Sistem Maklumat Biodiversiti Hutan bersepadu diberi keutamaan bagi mengintegrasikan data ekspedisi, inventori dan pemantauan lapangan secara sistematik yang dapat meningkatkan keupayaan jabatan dalam menganalisis, menyediakan laporan dan membuat keputusan berasaskan bukti, seterusnya memastikan kelestarian ekosistem hutan negara terus terjamin.

Kata kunci: Ekspedisi Saintifik, Hutan Simpanan Kekal, Pengurusan Hutan Secara Lestari, Pemeliharaan Biodiversiti, Sistem Maklumat Biodiversiti Hutan

Developing a Forest Reference Level Monitoring System in Sabah: Integrating Field Biometrics and Remote Sensing for Biodiversity Conservation and Sustainable Forest Management

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ABSTRACT

The development of a robust Forest Reference Level (FRL) monitoring system is vital for supporting sustainable forest management, climate reporting, and evidence-based land-use planning. In Sabah, the Land Use Biometric Development and Forest Conservation Programme, carried out under the 12th and 13th Malaysia Plans (2024–2028), aims to establish an integrated monitoring framework linking land-use change, forest structure, and key biometric indicators. This programme strives to improve scientific understanding of forest dynamics across Sabah's diverse ecosystems, which are rich in biodiversity of high conservation value and contribute to climate change mitigation through carbon sequestration, while protecting essential ecosystem services such as watershed regulation, soil stability, and climate regulation. The initiative focuses on developing a comprehensive biometric and geomatic information system that combines field-based forest inventory data, geospatial technologies, and emerging analytical tools. It involves a two-phase forest inventory approach: first, LiDAR-based Forest Structural Mapping estimates forest attributes over large areas; second, field measurements gather detailed ground data for calibration and accuracy enhancement. Selected forest reserve complexes, including Ulu Segama, Danum Valley, Ulu Tungud, Milian, and Sapulut, have been prioritised for geospatial data collection. To date, 77 of the targeted 367 permanent reference centres have been surveyed, with 59 centres, comprising 236 permanent sampling plots, successfully established. These reference centres function as long-term monitoring sites for gathering data on forest structure, tree growth, biomass productivity, biodiversity indicators, and soil carbon. Complementary remote sensing technologies are also being implemented to support large-scale monitoring of forest cover changes. The programme also promotes digitalisation and the creation of an integrated forest biometric database supported by advanced geospatial analytics. The output of the Forest Reference Level monitoring system is expected to enhance transparency, strengthen forest governance, and support Sabah's contribution to national and international climate mitigation frameworks. Ultimately, this initiative provides a scientific foundation for sustainable forest management, biodiversity conservation, and green economic development in Sabah.

Keywords: Forest Reference Level (FRL), Forest Monitoring System, Forest Biometrics, LiDAR-based Forest Structural Mapping, Remote Sensing, Sustainable Forest Management, Ecosystem Services, Carbon Accounting

The Use of UAV-based LiDAR for Forest Volume Modelling in Sarawak.

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Abstract

Effective management of forest resources with high biodiversity and biomass requires accurate and comprehensive evaluation of resource availability and biodiversity conditions. The collaborative research between Forest Department Sarawak and the National Institute for Environmental Studies, Japan has utilized UAV-mounted optical and lidar sensors for acquiring forest structural data, developing a forest structure model and establishing analytical models for estimating parameters used in timber volume models. The UAV-based survey was conducted at Anap Muput Forest Management Unit over the Permanent Sample Plots. The Optical sensor and Laser scanner were used to obtain high-resolution aerial imagery and three-dimensional point cloud. Laser and scanner data were processed using DJI-Terra software and point cloud data was generated representing layers of canopy structure. Using the point cloud data, a digital canopy height model (DCHM) for all plots were created. By integrating UAV-derived canopy height data, field-measured diameter data, and taxonomic information, we developed genus-specific Height-Diameter models and applied to estimate above-ground biomass. These results were extended to construct a volume projection model. However, the models require additional validation to ensure robustness and enable accurate estimation of tree volume and biomass over large and heterogenous landscapes for evaluating sustainability in timber resources.

Keywords: 3D forest structure model, HD model, above ground biomass, Anap Muput FMU, sustainable timber resources

An Overview of Orangutan Conservation in Sarawak for the Next Decade

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ABSTRACT

In Borneo, there are three subspecies of orangutan: the Northwest Bornean Orangutan (*Pongo pygmaeus pygmaeus*), the Northeast Bornean Orangutan (*P. p. morio*), and the Central Bornean Orangutan (*P. p. wurmbii*). All subspecies are listed as Critically Endangered under the IUCN Red List of Threatened Species, with the Northwest Bornean subspecies considered the most threatened. In Sarawak, continued economic development, including infrastructure growth and agricultural expansion, presents ongoing conservation challenges as these activities can fragment habitat, disrupt migratory corridors, reduce resource availability, and intensify human-wildlife conflict. Recognizing these challenges, the Sarawak Forestry Corporation (SFC) has taken proactive steps to strengthen its conservation response through a coherent, long-term strategic framework. This paper presents the *Orangutan Species Conservation Action Plan* (OUSCAP) 2026–2035, a decade-long strategic framework established by SFC in 2025 to safeguard orangutan populations in Sarawak. The OUSCAP was developed through a multi-stakeholder consultative process involving 17 Government agencies and non-governmental organisations. It is aligned with the State's Post-COVID Development Strategy (PCDS) 2030, integrating wildlife protection into broader state and regional development goals. The plan is structured around four core strategies: (a) habitat protection, (b) habitat management, (c) stakeholder engagement and involvement, and (d) biological research and monitoring. It aims to secure a long-term viable orangutan population at carrying capacity across priority conservation areas, while simultaneously fostering sustainable livelihoods for communities within these landscapes. The OUSCAP offers a replicable model for range-state conservation planning and contributes directly to Malaysia's commitments under the Kunming-Montreal Global Biodiversity Framework.

Keywords: Bornean orangutans, habitat management, Sarawak, sustainable livelihoods, wildlife conservation.

Vascular Plant Diversity and Conservation Importance of the Ultramafic Forests of Meliau Range, Telupid, Sabah

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ABSTRACT

Meliau Range Forest Reserve (MRFR), a Class I Protection Forest in central Sabah is recognised for its high plant diversity and the presence of rare and endemic species associated with its largely intact forest ecosystems and ultramafic substrates. Baseline botanical surveys on vascular plants were first conducted in August 2003 in the eastern sector of the reserve, followed by a second expedition in August 2004 in the western sector. These studies aimed to document plant diversity and identify endemic, rare, and threatened species considered as High Conservation Value (HCV) taxa. Collectively, the earlier surveys recorded nearly 700 plant taxa, including 50 species endemic to Borneo and 16 species endemic to Sabah, highlighting the reserve's conservation significance. Notable species recorded include *Borneodendron aenigmaticum* (Euphorbiaceae), *Payena khoomengiana* (Sapotaceae), *Lithocarpus tawaiensis* (Fagaceae), and *Magnolia candollii* (Magnoliaceae), which were selected as key conservation targets for biodiversity monitoring in the reserve. To update the floristic baseline and expand botanical records, a follow-up survey on vascular plants was conducted in April 2025 as part of the Heart of Borneo initiative in the northern sector of MRFR. The survey involved botanical sampling through permanent plot data, voucher specimens, and general botanical collections to document species diversity and assess the occurrence of HCV taxa. Preliminary findings indicate additional plant records, including species of conservation importance associated with the reserve's ultramafic habitats. Taxonomic verification and conservation assessments are currently ongoing. This study aims to provide updated information on the diversity and conservation status of vascular plants in MRFR. Improved knowledge of plant diversity in MRFR is essential for strengthening biodiversity monitoring and supporting the development of an effective management plan for the reserve.

Keywords: biodiversity; flora; conservation status; high conservation value species; ultramafic forests; Meliau Range Forest Reserve; Sabah

Forest Restoration and Rehabilitation: Experiences and Insights

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ABSTRACT

Forest Landscape Restoration (FLR) has been widely recognised as a holistic approach to addressing forest degradation and loss, while simultaneously enhancing ecological integrity, biodiversity conservation, and socio-economic benefits. In Sarawak, FLR has been adopted as a state priority since 2019, reflecting a strong commitment to addressing forest degradation through integrated and landscape-scale interventions. Under this FLR framework, the Forest Department Sarawak (FDS) implements both restoration and rehabilitation activities across various ecosystems, complemented by community participation and cross-sectoral collaboration to ensure that degraded forest landscapes are restored not only in terms of tree cover, but also in ecological function, resilience, and socio-economic value. This presentation provides an overview of Sarawak's experiences in implementing forest restoration and rehabilitation under the FLR approach. It highlights key initiatives, practical insights, achievements, challenges, and lessons learned from field implementation. The discussion also emphasises the importance of aligning restoration and rehabilitation strategies within the broader FLR framework to achieve long-term landscape recovery and sustainability in Sarawak.

Keywords: Forest landscape restoration (FLR), restoration, rehabilitation

Forest Landscape Restoration Approaches to Strengthen Forest Sustainability in Peninsular Malaysia

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ABSTRACT

Forests in Peninsular Malaysia play a crucial role in maintaining ecosystem balance, conserving biodiversity, and supporting the socio-economic well-being of local communities. However, pressures from development, land-use changes, and anthropogenic disturbances have led to the degradation of certain forest areas and the loss of their ecological functions. In response, the implementation of forest landscape restoration approaches has become an important strategy in efforts to rehabilitate affected areas and strengthen the sustainability of the nation's forest resources. These efforts also support the country's commitment to maintain at least 50 percent of its total land area under forest and trees cover. This paper presents a sharing of initiatives and efforts undertaken by the Forestry Department of Peninsular Malaysia (FDPM) in implementing forest landscape restoration activities across Peninsular Malaysia. Among the approaches implemented are the replanting of native species in degraded forest areas and the implementation of silvicultural treatments. The restoration programmes are carried out through collaborative efforts involving various stakeholders, including government agencies, local communities, the private sector, and non-governmental organizations, to ensure effective implementation and the long-term sustainability of restoration outcomes. After almost a decade of implementing forest landscape restoration, Guidelines for the Silvicultural Regime of Degraded Land Forests in Peninsular Malaysia was released in 2025. This paper is expected to provide an overview of the continuous efforts undertaken to restore the ecological functions of forest landscapes that support sustainable forest management in Peninsular Malaysia.

Keywords: Forest landscape restoration, native species, Silvicultural Regime

Shifting Dependency on Natural Forests to Forest Plantation in Sabah in Support of Forest Landscape Sustainability

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ABSTRACT

Sabah has subscribed to the principles of Sustainable Forest Management since 1997, to manage forests that delivers economic, social, and environmental benefits for the State, in a balanced manner. The Sabah Forest Policy 2018 pledges to maintain at least 50% of Sabah's land under forest reserves and tree cover, whilst approximately 20% (1.50 million hectares) has been allocated for production purposes under the Sustainable Forest Management License Agreement (SFMLA). Subsequently, the Action Plan on Forest Plantation Development (2022-2036) had been formulated in line with Thrust 4: Economic Well-Being of the Sabah Forest Policy 2018, which is to ensure the sustainability and viability of the wood-based industry. At present, the State Government still relies heavily on Natural Forest Management (NFM) production. Based on statistics, timber production from NFM from 2021 to 2025 averaged at about 830,000 m³. Meanwhile, timber production from plantations in forest reserves averaged at about 79,000 m³ over the same period. Forest plantation is not only expensive, but also faces other challenges such as volatile timber market, labor shortages, competition with other land uses, pests & diseases, and in recent years, forest certification and non-tariff barriers such as the EUDR. To date, approximately 183,634 hectares of forest plantations have been established. The remaining 200,000 hectares of undeveloped ITP areas remained at risk of being uncertifiable under any current forest management certification schemes. Without the assurance that plantation timber produced after the cut-off date will be relevant in the future, SFM Licensees are faced with more challenges moving forward. Recognizing best forest plantation management practices, regardless of the cut-off date may further enhance economic viability while also being in line with Sabah's Sustainable Forest Management goals. In addition to that, forest plantations should be prioritized as renewable resources over conventional practice. Ultimately, a transition from natural forest dependence to plantation forests, albeit an uphill one, is possible, and must ensure ecological integrity, economic competitiveness, and social inclusion to secure the long-term sustainability of Sabah's forestry sector.

Keywords: Forest plantation, renewable resources, best management practices, sustainability

Transforming Industrial Forest Plantations Through R&D and Certification: Samling Experience in Sarawak, Malaysia

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ABSTRACT

Industrial forest plantations are increasingly expected to deliver reliable timber supply while meeting higher expectations for climate resilience, biodiversity protection, responsible investment and social accountability. This paper presents the Samling experience in Sarawak, Malaysia, where plantation Research and Development (R&D) and industrial forest certification are being integrated as complementary platforms for sustainable forest plantation development. The Samling R&D programme has progressively shifted plantation establishment from conventional seed-based materials towards improved genetic resources, including selected *Eucalyptus hybrids* (SL09), *Eucalyptus pellita*, *Acacia species* and other fast-growing plantation materials. Key technical components include clonal screening, clone-site matching, multi-location field trials, nursery propagation systems, soil and site evaluation, growth and yield monitoring, pest and disease surveillance, and operational silviculture refinement. These activities generate practical evidence for deployment decisions, including species and clone selection, planting material quality control, fertilizer regimes, establishment standards and early risk mitigation under variable soil, rainfall and microclimatic conditions. Industrial forest certification, particularly MTCS/PEFC-aligned management, provides the governance framework to ensure that plantation intensification remains environmentally responsible, socially acceptable and auditable. Certification strengthens documentation control, chemical approval procedures, environmental impact mitigation, biodiversity conservation, occupational safety, community engagement and continuous improvement across plantation operations. The Samling case demonstrates that R&D and certification should not function as separate workstreams. R&D improves biological productivity and operational precision, while certification converts good practices into verifiable management systems. Their integration supports sustainable timber production, restoration objectives and green economy outcomes, and provides a practical model for strengthening industrial forest plantation management in Sarawak and the wider tropical region.

Keywords: certification, clonal forestry, forest plantation, green economy, plantation R&D, restoration

Social Forestry in Sarawak: An Update

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ABSTRACT

Social forestry has emerged as an important approach in Sarawak to promote sustainable forest management while enhancing the socio-economic well-being of local and indigenous communities. This paper provides an update on the development of social forestry initiatives implemented by the Forest Department Sarawak in line with the Post-COVID-19 Development Strategy (PCDS) 2030 and the Sustainable Development Goals (SDGs). Current approaches encompass Communication, Education, and Public Awareness (CEPA), human capital development, community empowerment, agroforestry, and livelihood enhancement through sustainable utilization of forest resources. Recent initiatives have strengthened partnerships among government agencies, private sectors, research institutions, and local communities, leading to improved income opportunities, capacity building, infrastructure development and greater community participation in forest stewardship. In addition, the integration of ecosystem restoration, biodiversity conservation, and climate change mitigation has further reinforced the role of social forestry in supporting Sarawak's green economy agenda. Despite challenges related to market access, resource management, and community capacity, continued collaboration and adaptive management are expected to enhance the effectiveness and long-term sustainability of social forestry programmes in Sarawak. These efforts demonstrate that social forestry remains a vital mechanism for balancing conservation objectives with inclusive rural development and community resilience.

Keywords: Social forestry in Sarawak, community development, agroforestry, sustainable forest management, indigenous communities, rural livelihoods, education and public awareness

Beyond Conservation: Community Participation as a Driver of Green Economy in Sabah's Forest Landscape

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ABSTRACT

Forests are increasingly recognised as strategic natural assets that support the transition towards a green economy through the provision of ecosystem services, sustainable livelihoods, and nature-based economic opportunities. It also contributes significantly to local economies by supporting community-based enterprises, forest recreation activities, and nature-based tourism initiatives. In Sabah, forest landscapes play a vital role in sustaining local communities while contributing to biodiversity conservation and sustainable forest management. Community participation is therefore essential in ensuring that forest resources generate both ecological and socio-economic benefits while strengthening local stewardship of forest resources. This paper explores the role of community participation in supporting green economy opportunities within selected forest landscapes in Sabah. Drawing on socio-economic research involving household surveys, focus group discussions, and community engagement conducted in forest-adjacent areas, the study examines how local communities participate in forest-related livelihood activities such as nature-based tourism, forest recreation services, and small-scale forest-based enterprises. The analysis highlights how participatory approaches in forest management can enhance local livelihoods while promoting the sustainable use of forest resources. The findings indicate that community participation enhances the sustainability of forest management while generating income opportunities that contribute to local economic development and livelihood diversification. However, challenges related to capacity development, institutional support, and access to markets remain important considerations in strengthening community-based forest initiatives. The study highlights that strengthening participatory approaches, institutional support, and collaborative governance can further enhance the potential of forest landscapes as drivers of green economy development in Sabah.

Keywords: Community Participation, Forest Landscapes, Green Economy, Nature-Based Tourism, Sustainable Livelihoods.

Pengurusan Pendakian di Dalam Hutan Simpanan Kekal (HSK) Di Semenanjung Malaysia

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ABSTRAK

Pengurusan Pendakian dalam Hutan Simpanan Kekal (HSK) di Semenanjung Malaysia merupakan aspek kritikal dalam memastikan keseimbangan antara pemeliharaan sumber hutan dan pembangunan ekopelancongan yang lestari. Peningkatan ketara jumlah pengunjung yang mencecah 4,403,562 orang pada tahun 2025, iaitu peningkatan sebanyak 9.29% berbanding tahun sebelumnya, telah memberi tekanan kepada ekosistem hutan serta meningkatkan pendedahan terhadap pelbagai risiko keselamatan seperti kecederaan, kes sesat, kemalangan, kejadian pokok tumbang dan bencana alam termasuk kepala air serta tanah runtuh. Laporan Jabatan Bomba dan Penyelamat Malaysia (JBPM) yang merekodkan 168 kes kemalangan berkaitan pendakian pada tahun 2025 (data sehingga September 2025) turut memperlihatkan keperluan kepada pendekatan pengurusan yang lebih sistematik dan berkesan. Sehubungan itu, Jabatan Perhutanan Semenanjung Malaysia (JPSM) telah memperkenalkan Malim Gunung Perhutanan (MGP) sebagai jurupandu arah bertauliah bagi memperkukuh aspek keselamatan, pengurusan kecemasan dan profesionalisme dalam aktiviti pendakian dalam HSK. Sehingga kini, JPSM telah mengenal pasti sebanyak 189 daripada 260 kawasan pendakian yang memerlukan penggunaan perkhidmatan MGP, khususnya di laluan yang dikategorikan berisiko tinggi. Dalam usaha memperkukuh kapasiti sumber manusia, seramai 2,322 orang komuniti setempat termasuk Orang Asli telah ditauliahkan sebagai ahli MGP melalui Program Pembangunan Kemahiran Malim Gunung Perhutanan. Selain itu, pelbagai inisiatif telah dilaksanakan termasuk pembangunan Garis Panduan Pengurusan Risiko Pendakian dalam HSK, penyediaan Panduan Strategi Pengurangan Risiko Bencana dalam HSK, pelaksanaan kajian had daya tampung kawasan pendakian, pelaksanaan sistem permohonan dan bayaran permit secara dalam talian serta penggunaan aplikasi teknologi digital penjejak pendaki dan pengukuhan program pendidikan dan kesedaran awam. Kerjasama strategik antara agensi kerajaan, komuniti setempat dan pihak berkepentingan turut diperkukuhkan bagi meningkatkan keberkesanan pengurusan. Secara keseluruhannya, pengurusan pendakian yang terancang, sistematik dan bersepadu adalah amat penting bagi memastikan kelestarian HSK di samping menjamin keselamatan serta kualiti pengalaman pengunjung dalam jangka masa panjang.

Kata kunci: Pengurusan Pendakian, Malim Gunung Perhutanan, Kajian Had Daya Tampung, Hutan Simpanan Kekal

Community-Based Tourism and Its Contribution To Local Economies: Insights From Peros

Madeline George Pau, Irmadiana Ardi and Lelawati Othman

Forest Department Sarawak

ABSTRACT

Community-based tourism (CBT) has emerged as an effective approach to promote sustainable development while enhancing the socio-economic well-being of local communities. Within the geopark framework, CBT plays a crucial role in linking conservation, education, and tourism with community empowerment. This paper examines the contribution of community-based tourism to local economies, with a focus on a case study of Kampung Peros. The study highlights how collaborative efforts among higher learning institutions, geopark management, and the local community have facilitated the development of tourism initiatives in the village. Through capacity building, knowledge transfer, and participatory planning, the community has successfully transformed local natural and cultural assets into viable tourism products. The impact of these efforts is reflected in the rise of visitor numbers, clearly demonstrates how strategic and creative partnerships have contributed to raising the visibility of Kampung Peros and enhancing public interest in its cultural and natural landscape. Beyond economic gains, the initiative has strengthened community identity and contributed to the preservation of local heritage. The paper concludes that community-based tourism, when supported by strong institutional collaboration and effective governance, can serve as a sustainable model for local economic development within geopark settings. The lessons from Kampung Peros provide valuable insights for similar rural communities seeking to leverage tourism for inclusive growth.

Keywords: capacity building, community-based tourism, geopark, partnership, sustainable development

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Forest Department of Sarawak is committed to collaborating with stakeholders to advance innovative, inclusive, and sustainable initiatives that protect our natural heritage and benefit current and future generations.