



## PRESS RELEASE

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### CLOSING CEREMONY OF BRUNEI DARUSSALAM CONFERENCE ON BIODIVERSITY "BIODIVERSITY: NATURE'S BLUEPRINT FOR SUSTAINABILITY"

Bandar Seri Begawan,  
Thursday, 6 Zulhijjah 1445 / 13 June 2024

The Brunei Darussalam Conference on Biodiversity, which lasted for three days at the International Conference Center, Berakas, ended today.

The conference with the theme "Biodiversity: Nature's Blueprint for Sustainability" is a joint initiative between the Ministry of Primary Resources and Tourism (MPRT) through the Forestry Department and the Universiti Brunei Darussalam (UBD) in conjunction with the Brunei Mid-Year Conference and Exhibition 2024 (Brunei MYCE 2024).

Attending the closing ceremony was Yang Mulia Dayang Hajah Tutiatty binti Haji Abdul Wahab, Permanent Secretary, MPRT, as the guest of honour.

At the ceremony, the guest of honour and invited guests had the opportunity to listen to the Thematic Session Topic 7 - 'Scientific Expedition: Exploring Brunei Darussalam's Biodiversity'. This thematic session involves a total of eight presenters consisting of the heads of research groups who have followed the Scientific Expedition that was held on 30<sup>th</sup> May to 8<sup>th</sup> June 2024 in the Batu Apoi Forest Reserve, Temburong.

The summary of the conference was presented by Yang Mulia Dyg. Noralinda binti Haji Ibrahim, acting Deputy Permanent Secretary I, MPRT (***The summary of the conference to be attached***). The event ended with a closing speech by the guest of honor (***Closing remarks by the guest of honor to be attached***).

Also present at the closing ceremony were Yang Mulia Dr. Hussein bin Haji Taha, Director of the Institute for Biodiversity and Environmental Research (IBER), UBD; members of diplomatic corps, senior government officials of MPRT, UBD and also conference participants.

**-END-**

Prepared by:  
Forestry Department  
Ministry of Primary Resources and Tourism  
Brunei Darussalam

## **BRUNEI DARUSSALAM CONFERENCE ON BIODIVERSITY SUMMARY**

**– Dyg. Noralinda binti Haji Ibrahim**

**Bismillahir Rahmanir Raheem**

Your Excellencies;

Esteemed Guests;

Senior Government Officers;

Distinguished Speakers and Moderators;

Ladies and Gentlemen.

**Assalamualaikum Warramatullahi Wabarakatuh,**

**Salam Sejahtera and a Very Good Morning to all of you.**

1. I am pleased to share with you the summary of our Conference on Biodiversity. However, let me congratulate first everyone, especially our moderators and speakers, our participants, and all the support staff and sponsors for a job well done in making this Conference a success.
2. Before the official closing of this Conference, let me take you back on our journey during the past 3 days.

[DAY 1]

3. During the opening ceremony, our Conference was opened and graced by no other than the Minister of Primary Resources and Tourism - Yang Berhormat Datu Setia Dr. Haji Abdul Manaf bin Haji Metussin. In his remarks, the Minister highlights biodiversity's importance in line with our aggressive economic initiatives. He also reiterated our alignment with global commitments to ensure the sustainable management of our biodiversity.
4. The Minister reminded us that biodiversity management is not the sole responsibility of the government. He encouraged further collaborations and partnerships from all levels of society, from local communities to international partners. Toward the end of his remarks, he reiterated that the government to facilitate our full compliance with our national and international commitments on biodiversity and look forward to the output of this Conference as significant inputs in our biodiversity conservation initiatives.
5. The opening remark was followed by keynote presentations from Professor Watanabe Tetsuya of the Economic Research Institute of ASEAN and East Asia, Mr. Gerry Ong of ASEAN FLAG, and Dr. Deepthi Chimala of Arkadiah Technology.
6. The keynote presentations highlight the necessity of a collective effort to facilitate research, innovations, and evidence-based policymaking. The application of digital technologies in assessing resources is available and can provide up-to-date information that would guide planning processes and strategies. At the end, the session recommended the conduct of a detailed forest inventory of the Brunei peat swamp forests to facilitate development.
7. During the plenary session of Day 1, the Permanent Secretary of the Ministry of Primary Resources and Tourism presented the current situation and related Brunei on biodiversity. The Executive Director of the ASEAN Centre for Biodiversity - Dr. Mundita Lim provided a brief overview of the Biodiversity Plan and highlighted the key terms of the 23 biodiversity targets and their implications for the national target setting. Dr. Park Chongho of the Asian Forestry Cooperation highlighted the current thrust of the AFoCO towards biodiversity and climate-change adaptation. Dr Park also elaborated AFoCO's initiatives related to carbon and nature-based solutions.

8. We have three (3) thematic sessions on Day 1. The sessions discussed Ecosystem Services: The Lifeline of Biodiversity; Conservation Innovations: Restoring and Safeguarding Biodiversity; and Youth Engagement in Biodiversity: Empowering the Next Generation.
9. Thematic session 1 discussed the general concept of ecosystem services and its fundamental services that are crucial for human survival. These services include provision, support, regulation, and cultural services. The session further discussed the relationship of these ecosystem services to biodiversity and how these are being affected by human interventions.
10. During the discussion, the session acknowledged the crucial role of peat swamp forests in environmental stability, carbon sequestration and storage, flood mitigation, and other services. It was suggested to identify the ecosystem services (both above and below ground) of the degraded ecosystem and logged-over areas, so that restoration strategies will be more effective.
11. Likewise, the session also suggested the use of genetic markers to measure and estimate the diversity within species populations and spatial dynamics across landscapes. Such information will facilitate the formulation of more informed conservation and restoration strategies. Towards the end of the discussion, the concern regarding the proliferation of acacia trees was mentioned as among the issues needing effective management strategies.
12. Thematic session 2 emphasized the critical importance of leveraging technologies for ecosystem monitoring and understanding biodiversity. Community-based approaches and international collaborations were recognized as essential components in biodiversity preservation efforts. The speakers underscored the need for innovative solutions to combat biodiversity losses and address challenges such as deforestation and habitat degradation. Furthermore, they emphasized the significance of robust regulatory frameworks and strategic planning to effectively address identified challenges and restore the ecosystem for future generations. Overall, the session provided valuable insights into the multifaceted approaches required to safeguard biodiversity and promote environmental conservation on a global scale.

13. Thematic session 3 discussed the importance of youth engagement in biodiversity conservation and the need to empower the next generations. The session agreed that the ASEAN is predominantly made up of a young population of which 65% are under the age of 35.
14. As a result, the youth's participation in the formulation and implementation of biodiversity policies is critical to the country's biodiversity sustainability. The session also highlighted two crucial points: youth should initiate local and global action towards a sustainable biodiversity lifestyle, and youth should have a voice in decision-making and biodiversity policies.
15. The session also acknowledged the several platforms that were established in each region to prepare the youth to create an impact on biodiversity management. These include capacity building through programs, initiatives, workshops, and open access resources on the Convention on Biological Biodiversity (CBD) and youth participation as well as effective communication with decision-makers.

[DAY 2]

16. The day 2 started with a plenary session focusing on the related issues affecting the Brunei peat Swamp forests. The discussion includes the current initiatives on exploring the biodiversity and ecology of the Badas peat swamp, carbon sequestration in peatlands, and the peat swamp forest of the country, as a whole.
17. The session agreed that Brunei Darussalam's peat swamp forests play an important role in preserving biodiversity and ecological integrity. Its unique habitat, defined by wet soils rich in partially decomposed plant matter, has enormous ecological, economic, and cultural value.
18. The first plenary speaker - Dr. Rahayu Sukmaria Haji Sukri highlighted the comprehensive overview of Brunei's forests, focusing on peat swamp habitats and emphasizing their unique traits and ecological significance. She further discussed the importance of peat swamp forests as crucial habitats for numerous species and key contributors to environmental stability. Dr. Rahayu presented Brunei's largest peatland, the Badas Peat Dome, and its importance as a habitat for

the endangered *Shorea Albida* species. She also elaborated the ongoing projects like new carbon stock and flux monitoring technologies, as well as a replanting initiative in the damaged Kerapah forest. Despite the challenges, her research emphasizes the importance of collaborative efforts and more research in maintaining and preserving the biodiversity of peat swamp ecosystems, which is crucial to their long-term survival and resilience.

19. For the second plenary speaker - Dr. Alex Cobb introduced the significance of peatlands for carbon storage. He presented the process of quantifying carbon sequestration and strategies for reducing CO<sub>2</sub> emissions from peatlands thereby emphasizing the need for preservation and sustainable management practices. Dr. Alex presentation aims to promote awareness of the important role of peatlands in carbon sequestration and highlight the need for conservation efforts in these ecosystems.
20. For the third plenary speaker - Dr. Borhan Mohd shared his insights and preliminary findings from the ongoing National Forest Resources Inventory 2023-2025 project, which began in May 2023. The project is a critical statewide inventory survey designed to evaluate, measure, and document Brunei Darussalam's forest resources. In his presentation, he highlighted one of the project's main focuses on carbon stock in Peat Swamp Forests in response to global warming and carbon trading. He presented the methodology used in calculating carbon stocks, soil organic carbon content, peat depth, and peat soil physical and chemical properties. He also mentioned the use of technologies such as LiDAR, and hands-on field labor. At the end of his presentation, Dr. Borhan also emphasized further potential for research collaborations, which are critical in this ongoing study on Brunei Darussalam's forest resources.
21. In the afternoon of Day 2, we divided the Conference into three (3) thematic sessions: The Blue Biodiversity: Conserving Marine Life for a Resilient Ocean; Biodiversity's Role in Building Resilience to Climate Change; and the Biodiversity Contributions to Sustainable Economies.
22. Thematic Session 4 discussed the socio-economic and environmental importance of marine biodiversity. The session further discussed the importance of baseline research on wider taxonomic groups and

acknowledged the potential of using innovative modeling tools in managing and restoring marine biodiversity.

23. The session highlighted the following key messages:
  - a. Biological Diversity and Areas Beyond National Jurisdiction (BBNJ) Agreement as a comprehensive framework and conservation measures in protecting marine biodiversity areas and strengthening ocean resilience in addressing deep-sea challenges.
  - b. The exceptional biodiversity in the Brunei Darussalam and Borneo regions calls for the urgent need to develop a comprehensive marine biodiversity database to complement existing conservation efforts.
  - c. Extensive research has been conducted on fish and corals. However, there are still opportunities and potential in studying other marine taxonomic groups.
  - d. There are a lot of opportunities to enhance biodiversity through conservation, restoration, and sustainable management practices, which can lead to significant socio-economic benefits, such as improved fisheries, and marine tourism.
  - e. The population of tropical eels is declining due to overfishing and human construction in the water. A study should include DNA analysis as morphology alone has been shown to misidentify species.
  - f. Hydrodynamic modeling is one of the ecological tools that can be applied in biodiversity management and conservation.
  - g. The integration of blue carbon and marine biodiversity will help buffer the impacts of climate change and will improve the biodiversity of flora and fauna.
  - h. And lastly, the collaborative efforts of all parties (governments, research institutions, academe, etc) are crucial for effective marine biodiversity management and conservation.
  
24. Thematic session 5 discussed the importance of biodiversity in enhancing resilience to climate change by providing the ecosystems and local communities with the capacity to adapt and withstand environmental stresses. The concept encapsulates the notion of harnessing the inherent strength and resilience of biodiversity to enhance the robustness and vitality of natural environments, consequently, enabling them to better cope with environmental

stressors such as temperature changes, extreme weather events, and habitat degradation.

25. The session underscores the critical importance of biodiversity conservation and sustainable development across various regions. As such, the presentations highlighted Brunei's biodiversity significance and proposed innovative valuation methods. The session also acknowledged the urgency of conserving Indonesia's peat swamp forests and called for sustainable practices in Malaysia's peatlands. The session also discussed the financial challenges in global conservation and the potential of biodiversity credits. On the other hand, the session also emphasized the importance of UNESCO-designated sites in promoting conservation and sustainable development in Brunei.
26. At the end of the session, the participants collectively stressed the need for comprehensive conservation strategies, interdisciplinary collaboration, and community engagement to address environmental challenges and safeguard biodiversity for future generations.
27. The last thematic session of day 2 elaborated on how biodiversity contributes to sustainable economies. The discussion highlighted the following:
  - a. Biodiversity is an irreplaceable asset that contributes to huge economic benefits whilst maintaining natural ecosystem balance.
  - b. Sustainable bioeconomy also contributes to the reduction of Green House Gases emissions and supports global sustainable development goals.
  - c. Proper utilization of biodiversity supports various sectors, such as health, pharmaceuticals, nutraceuticals, cosmetics, herbal medicines, tourism, and food & beverages, which are valued at around US\$65 billion annually.
  - d. All bioprospecting initiatives can play a vital role in economic diversification, creating jobs and expanding scientific knowledge. However, these ventures require a wide collaboration between government agencies and stakeholders.
  - e. Everyone plays a role in enhancing the biodiversity of terrestrial and marine flora and fauna that eventually contributes to potential for economic diversification, and



- f. Community-based approach, equal access, and benefit sharing leads to sustainable economic growth.
28. And for our 3<sup>rd</sup> and last day of the Conference, we have heard the results of the 10-days scientific expedition in Batu Apoi Forest Reserve. The expedition gathered 31 researchers from Brunei, Singapore, and the United Kingdom and conducted 10 research projects.
  29. The scientific expedition team demonstrated their strict commitments and hard work to deliver the objectives of the activity. Although the result is still in a work-in-progress, our presenters this morning delivered a good preliminary findings pertaining to the topics on understory herbaceous flora; saproxylic insects of Batu Apoi; forest medicinal as potential biopesticide against houseflies; investigation of radon in Batu Apoi; the social aspect of scientific studies; the rapid biodiversity assessment of freshwater fish fauna; wildlife diversity; and the effect of Brunei selective felling system in the Batu Apoi forest reserve.
  30. For a quick summary, Dr Hughes presented his findings on the phylogenetic and taxonomic characteristics of Begonia species in Batu Apoi regarding Begonia species found in nearby countries. He used the Begonia species in modelling to define biodiversity.
  31. Mr. Calvin Leung on the other hand discussed his findings about Saproxylic insects. According to Mr. Leung, these insect groups are wood-based living on dead and/or dying wood. He stressed that Saproxylic insects can be an indicator of high diversity, contribute to nutrient cycling, and perform other ecosystem functions during their life cycle. In his study, he found out that some Saproxylic insects benefited from selective logging due to the availability of dead wood and the decline after logging.
  32. Dr. Syahirah Hj Shahlehi presented her current activities on the potential of forest medicinal plants as bioperticide against houseflies. Her study focuses on two (2) medicinal plants, namely: *Alpinia ligulate* (the ginger family) and *Piper porphyrophyllum* (black pepper famiy/tiger beetle). Unfortunately, Dr. Syahirah cannot share the result of the study as it needed some time to further test and analyze

the output. Nevertheless, we are anticipating the significant contribution of her study to biodiversity studies soon.

33. Dr. Stefan Godeke on the other hand investigated the presence of Radon in the surface water of the Batu Apoi forest reserve. He described Radon as a radioactive gas produced from the natural radioactive decay of uranium found in rocks and soils. His preliminary results suggested that Radon concentration in Batu Apoi River was generally low and it varied along a transect from the riverbank towards the center of the stream. Likewise, the groundwater concentrations of Radon are also low. Based on these initial observations, Dr. Stefan concluded that the water quality of the stream and groundwater of Batu Apoi remain pristine. Nevertheless, he also suggested the conduct of further studies focusing on the water of the forest reserve for human consumption.
34. The social aspect of the scientific studies in Brunei forests was discussed by Mr. Napak Serirak. The study focuses on the overlooked social aspects of the scientific expedition and observes the fieldworkers doing their work. Specifically, the study observed the workers of the tree diversity project, fresh-water fish project, and the mammal's project. The study focuses on the embodiment of capacities of awareness and response whilst walking through different terrains and topographies. The result of the study will be presented later as it needed more time for analysis.
35. Siti Rafidah presented the results of the rapid biodiversity assessment of freshwater fish fauna in intact and disturbed habitats. The study aims to assess the diversity of fish in areas affected by logging. The partial result of the study reported that unlogged forests have more records than logged forests. Likewise, the study also recorded the presence of interesting species that can be potential indicator species. The study needs further analysis to attain the appropriate conclusion.
36. Likewise, Dr. Siti Salwa Abdul Khalid explored the wildlife diversity at Batu Apoi Forest reserve. Specifically, the study aims to document and identify mammals and bird species in the study area and assess their threat status based on the IUCN list. The presentation showed several interesting mammals in the wild. At the end of the expedition, the study observed the presence of more bird species and mammals in the

unlogged forests compared to the logged areas. In general, the study observed that Batu Apoi remains intact and with diverse biodiversity.

37. And lastly, the effects of Brunei Selective Felling System on flora diversity and soil ecosystem in Batu Apoi was presented by Dr. Salwana Md. Jaafar. The study also conducted a rapid flora diversity survey in the area. Our initial output showed that there are more trees in the logged-over forests than in the unlogged forests, however, larger trees were recorded in the unlogged forests.
38. On tree diversity, there is not much difference between the logged (27 Families) and unlogged forests (29 Families). On ground herb diversity, more individuals were observed in the logged forests compared to the unlogged forests. Moving forward, the study team intends to conduct further studies to provide a better explanation and conclusion.

Distinguish guests, Ladies and Gentlemen

39. Again, I would like to congratulate our scientific expedition team and the rest of the speakers and moderators of this Conference, for a job well done. Three (3) days may not be enough to cover our topics, but with your professionalism, we were able to cover all the topics and achieve the objectives of this Conference.
40. Thank you, everyone, for listening and for your cooperation.

- End -





**CLOSING REMARKS**

**BY**

**YANG MULIA**

**DAYANG HAJAH TUTIATY BINTI HAJI ABDUL WAHAB**

**PERMANENT SECRETARY OF MINISTRY OF PRIMARY RESOURCES AND  
TOURISM**

**AT**

**BRUNEI DARUSSALAM CONFERENCE ON BIODIVERSITY**

**“Biodiversity: Nature’s Blueprint for Sustainability”**

Thursday, 13 June 2024 @ 12.30 pm  
Dewan Persidangan Utama, International Convention Centre (ICC)  
Bandar Seri Begawan, Brunei Darussalam

Bismillilahirahmanirahim,

Assalamualaikum warahmatullahi wabarakatuh,

A very Good Afternoon

**Your Excellencies,  
Distinguished Moderators, Speakers and All Participants,  
Ladies and Gentlemen.**

Assalamualaikum Warrahmattullahi Wabarakatuh, and a very good afternoon to all of you.

1. I would like to thank and congratulate everyone for the successful realization of the Brunei Darussalam Conference on Biodiversity. I am grateful to our keynote speakers, panelists, thematic speakers, and moderators for sharing your precious time in gracing this conference. Your contributions made this conference interesting and meaningful. I am sure that our participants will not be leaving this conference empty-handed, but with new and applicable knowledge that can be applied in their journey towards the conservation of our biodiversity. To our participants, thank you for your active support in this conference. I believe everyone have interacted well with our speakers and furthered your network in biodiversity management and conservation.
2. Over the past three days, we demonstrated a good collaboration that led us to the achievement of this conference's objectives. Our discussions reinforced our understanding of the intricate connections between ecosystems and human well-being and at the same time, highlighted the urgent need for integrated and innovative approaches to sustain our natural ecosystems. As such, the conference provided the venue for the alignment of our initiatives with global efforts and frameworks that seek to preserve these precious resources.
3. The thematic topics covered a wide range of concerns to include discussions on ecosystem services, innovations, youth engagements, marine ecosystems, climate change, sustainable economies, and the result of our recent scientific expedition on biodiversity. I am sure

that we have covered very comprehensive topics that touches our interests and expertise in biodiversity conservation.

Distinguished Guests, Ladies and Gentlemen,

4. We all realized that biodiversity conservation is not a sole responsibility of the government. We understand that every individual, community, and organization have a stake in safeguarding these vital ecosystems. By recognizing our shared responsibility, we can identify the appropriate courses of actions as we display our commitment toward preserving our natural ecosystems.
5. Just like in any initiatives, collaboration is essential. There is a need to forge partnerships that will bring together diverse stakeholders – including government bodies, private sectors, non-governmental organizations, and support groups. By pooling our resources, knowledge, and expertise, we can amplify our impact and provide solutions to the multifaceted challenges that we are facing in biodiversity conservation.
6. I believe that this conference provided us the venue of widening our networks. With this, I invite everyone to continue our discussions and exchange of information. This conference is just the beginning, and we still have a long way to go. Let us forge partnerships and further our accomplishments in attaining our common goals and objectives.
7. We should update our networks on our achievements and further learnings in future conferences like this. Let us showcase our successful stories and answers to biodiversity conservation challenges by highlighting how partnership and cooperation works.
8. As we end, I would like to congratulate the Scientific Expedition team on the result of their hard work deep inside the forests of Brunei Darussalam. The critical findings highlighted the vast richness and the essential role of biodiversity in sustaining the ecological balance within our forests. I would also like to emphasize that this exploration is an output of collaboration with the Forestry Department and the Universiti Brunei Darussalam. Perhaps in the future, we can hear from more partners in scientific expeditions like this. Our forests have so much to offer and there are always new findings from the field. We intend to continue this activity to

understand further our natural ecosystem and at the same time formulate appropriate strategies for its sustainable management.

Distinguished Guests, Ladies, and Gentlemen,

9. As we conclude this conference, I would like to extend our appreciation to our esteemed co-organizer, Universiti Brunei Darussalam. Their unwavering commitment, expertise, and collaborative spirit have been instrumental in shaping this event.
10. To the organizing committee, our generous sponsors, volunteers, and everyone who contributed to making this conference possible – thank you for your tireless efforts. Your contributions have not only ensured the smooth running of this conference but have also helped advance our mission to protect and preserve biodiversity.
11. In conclusion, I am officially closing the Brunei Darussalam Conference on Biodiversity. Thank you again, and to those who are traveling back to your home country, I wish you safe journeys and hope the knowledge gained here will contribute positively to your conservation efforts.

Wabillahitaufik walhidayah assalamualaikum warahmatullhi wabarakatuh.

Thank you.





# PHOTOS DURING THEMATIC SESSION TOPIC 7 - SCIENTIFIC EXPEDITION: EXPLORING BRUNEI DARUSSALAM'S BIODIVERSITY





Common name	Family name	No. of species
Carp & barbs	<b>Cyprinidae</b>	<b>13</b>
	Leptobarbidae	1
Catfishes	Bagridae	2
	Clariidae	1
	Siluridae	2
	Sisoridae	1
Eels	Anguillidae	1
Gobies	Gobiidae	4
Loaches	Cobitidae	2
Rasboras	Danionidae	3
Spiny eels	Mastacembelidae	2
Sucker fishes / torrent loaches	<b>Gastromyzontidae</b>	<b>11</b>
	Nemacheilidae	1

