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Sarawak Heart of Borneo Initiative

PROJECT IMPLEMENTATION FRAMEWORK

2026-2035



Sarawak Mangrove FR, Kuching Division

FOREST DEPARTMENT SARAWAK

SARAWAK HEART OF BORNEO INITIATIVE

PROJECT IMPLEMENTATION FRAMEWORK 2026-2035

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FOREWORD BY DIRECTOR OF FORESTS



The Heart of Borneo (HoB) Initiative stands as a powerful testament to Sarawak's unwavering commitment, in close collaboration with Sabah, Brunei Darussalam, and Indonesia, to a unified vision of conserving and sustainably managing the last remaining expanse of contiguous tropical rainforest on the island of Borneo. This trilateral initiative, grounded in the principles of sustainable development, prioritises biodiversity conservation, climate regulation, ecosystem services, and the well-being of indigenous and local communities whose livelihoods are deeply intertwined with the forest.

Over the past two decades, the Sarawak Government has diligently undertaken numerous initiatives under the Heart of Borneo banner. These efforts have been strategically guided by the Heart of Borneo Project Implementation Framework (PIF), established in 2009. Recognising the need to adapt to evolving challenges and opportunities, a comprehensive review of the PIF 2009 was conducted on 10th–11th July 2019 in Kuching. The review served as a critical stocktake of achievements, examined the ongoing relevance of key initiatives, and ensured strategic alignment with Sarawak's long-term development priorities.

This revised framework also aligns with the Post COVID-19 Development Strategy (PCDS) 2030, which aims to transform Sarawak into a high-income, inclusive, and environmentally sustainable state by 2030. By synergising the aspirations of PCDS 2030 with the HoB vision, the State has identified forty forward-looking project ideas that span climate action, forest landscape restoration, nature-based enterprises, green investments, capacity-building, and community empowerment.

This updated PIF 2024–2036 serves not as a replacement, but as a strategic enhancement of the 2009 framework. It outlines a coherent roadmap for stakeholders across sectors—government, civil society, indigenous communities, research institutions, and the private sector—to work together in safeguarding Sarawak's forest heritage while unlocking its green economic potential. In particular, emphasis is placed on harnessing nature-based solutions (NbS) to address the dual crises of biodiversity loss and climate change.

I would like to convey my heartfelt appreciation to all parties involved in this revision process—government agencies, non-governmental organisations, academia, community representatives, and industry partners. Your active participation and invaluable input have greatly enriched this updated framework.

Special thanks are also extended to the International Affairs Division (IAD) of the Forest Department Sarawak for their tireless efforts in coordinating the review process and compiling this publication. Your dedication has been instrumental in bringing this strategic document to fruition.

As we move forward, I urge all stakeholders to adopt this framework as a practical guide and source of inspiration in advancing the Heart of Borneo vision—towards a future where conservation and development walk hand in hand, ensuring that the forests of Borneo continue to thrive for generations to come.

Datu Haji Hamden bin Haji Mohammad
Director of Forests
SARAWAK

EXECUTIVE SUMMARY

The Heart of Borneo Initiative has provided Sarawak with a framework for state-wide sustainable development and conservation plan in a more holistic approach. The Heart of Borneo is a transboundary collaboration between Brunei, Indonesia and Malaysia that seek to effectively manage and conserve Borneo's huge equatorial rainforests within each nation's boundaries for the benefit of the people and nature.

The Sarawak Heart of Borneo Project Implementation Framework was produced in 2009 and designed to be a roadmap for the state's participation to accomplish the overall HoB vision.

A decade on, Sarawak Heart of Borneo has its fair share of challenges and achievements, such as the expansion on its land areas, increased forest certification, increased Totally Protected Areas, numerous discoveries and new records of biological diversity within its deep, unexplored forests.

The Sarawak Heart of Borneo has since undergone an expansion, now encompassing an area of 2.69 million hectares, up from its original 2.1 million hectares. This expansion includes the western region of Sarawak, presenting a more complex challenge for the Sarawak Heart of Borneo initiative in reconciling its aspirations for sustainable development with the imperative for conservation efforts. This expanded area now constitutes nearly 21% of Sarawak's total land mass.

The State's strong policy on the need for production forests operators to achieve sustainable forests management certification has been a major success in the Heart of Borneo.

The number of totally protected areas has seen an increase, further contributing to the safeguarding of Sarawak's endangered wildlife and their vital habitats. However, effectively and efficiently managing these areas, situated in remote and rugged rural terrains, presents yet another challenge for the relevant authorities.

The State's recent policy shift towards Forest Landscape Restoration introduces a new, adventurous, and demanding endeavour, which will significantly influence the role of Sarawak Heart of Borneo. Over the past decade, the Sarawak Heart of Borneo has witnessed dynamic landscape transformations within and beyond its borders. The implementation of new state policies and legislation will profoundly impact the management strategies within the Sarawak Heart of Borneo, presenting both fresh opportunities and meaningful challenges.

Sarawak is actively advancing its digital economy, propelled by a focus on data and innovation, positioning it as a key priority on its policy agenda. With aspirations to achieve developed state status in Malaysia by 2030 under the guidance of the PCDS 2030, Sarawak is committed to this digital transformation.

Efforts are underway to extend digital coverage to rural areas, with a targeted reach of 90%. This expansion promises to ignite new enthusiasm among local communities, propelling their socio-economic transformation to unprecedented levels.

Therefore, the imperative to revisit the Project Implementation Framework 2009 document through multi-stakeholder consultations cannot be overstated. It is crucial and timely to identify and evaluate gaps, enabling the formulation of new project ideas that align with recent developments. This proactive approach is essential as Sarawak endeavours to capitalise on global mega-trends and pursue a comprehensive transformation. The goal is clear: to emerge as a thriving society and achieve developed state status by 2030.

A preliminary step towards this occurred in 2016, when the original 32 project ideas outlined in the Project Implementation Framework 2009 were thoroughly examined and discussed during a workshop involving state agencies in Kuching. However, the significant progress came in 2019, with a major workshop held on 10th-11th July, which saw extensive participation from relevant government agencies, non-governmental organisations, and private sectors. Through intense deliberations, 34 project ideas emerged, carefully considering the state's new development and conservation agenda towards 2030.

This document represents an updated edition of the Sarawak Heart of Borneo Project Implementation Framework 2009, intended to guide the prioritisation and execution of programs and activities within the Heart of Borneo region up to 2036. It is important to note that this updated version does not replace the original Sarawak Heart of Borneo Project Implementation Framework 2009, which holds official status as a document deposited within Malaysia's roadmap for the implementation of the Heart of Borneo initiative. Instead, this updated version serves as supplementary material, incorporating new project ideas generated during the 2019 workshop while remaining aligned with the overarching goals outlined in the original framework.

TABLE OF CONTENT

FOREWORD BY DIRECTOR OF FORESTS i

EXECUTIVE SUMMARY ii

CHAPTER 1 INTRODUCTION 1

1.1 GLOBAL FORESTS PERSPECTIVE 3

1.2 MALAYSIA FORESTS PERSPECTIVE 5

1.3 SARAWAK FORESTS PERSPECTIVE 6

1.4 SARAWAK FORESTS AND LAND USE POLICIES 9

1.5 SARAWAK FOREST POLICY 10

1.6 SARAWAK LAND USE POLICY 10

CHAPTER 2 HEART OF BORNEO INITIATIVE 11

2.1 HEART OF BORNEO INTIATIVE 13

2.2 LAND USE 16

2.3 AGRICULTURE 16

2.4 FOREST RESOURCES 19

2.5 BIODIVERSITY 21

2.6 LOCAL COMMUNITIES 23

2.7 ECOTOURISM 31

2.8 MAJOR OUTCOMES OF THE SARAWAK HEART OF BORNEO 2009 – 2024 34

2.9 ISSUES AND CHALLENGES FOR SARAWAK HEART OF BORNEO 2009 – 2024 35

CHAPTER 3 SARAWAK'S HEART OF BORNEO PROGRAM 37

3.1 HEART OF BORNEO TRILATERAL MEETINGS 41

3.2 MALAYSIA HEART OF BORNEO EXPERT WORKING GROUP 43

3.3 SARAWAK STATE STEERING COMMITTEE 43

3.4 TECHNICAL WORKING GROUP 44

TABLE OF CONTENT

3.4.1 WORKING GROUP 1 – SUSTAINABLE FOREST MANAGEMENT 44

3.4.2 WORKING GROUP 2 – ECOTOURISM BASED ON CULTURE, ADVENTURE AND NATURE (CAN) 45

3.4.3 WORKING GROUP 3 – CONSERVATION OF BIOLOGICAL RESOURCES 45

3.4.4 WORKING GROUP 4 – SUSTAINABLE LAND USE AND AGRICULTURE 46

3.4.5 WORKING GROUP 5 – COMMUNITY BASED/RURAL POVERTY ALLEVIATION PROGRAM 46

3.5 SARAWAK HEART OF BORNEO ACTIVITIES 47

3.5.1 PILLAR 1 SUSTAINABLE FOREST MANAGEMENT 47

3.5.2 PILLAR 2 ECOTOURISM BASED ON CULTURE, ADVENTURE AND NATURE 48

3.5.3 PILLAR 3 CONSERVATION OF BIOLOGICAL DIVERSITY 50

3.5.4 PILLAR 4 SUSTAINABLE LAND USE/ AGRICULTURE 55

3.5.5 PILLAR 5 COMMUNITY-BASED/RURAL POVERTY ALLEVIATION PROGRAM 57

CHAPTER 4 STRATEGIC ACTION PLANS 59

PILLAR 1 SUSTAINABLE FOREST MANAGEMENT 61

Project 1.1 Capacity building in Sustainable Forest Management 63

Project 1.2 RIL assessment on implementation of RIL Guidelines 2021 63

Project 1.3 Strengthen spatial forest planning and monitoring in Sarawak Heart of Borneo areas 64

Project 1.4 Application of technology for Sustainable Forest Management 64

Project 1.5 Knowledge sharing and awareness programs on Sustainable Forest Management 65

Project 1.6 Restoration programs in degraded/logged over areas within Sarawak Heart of Borneo 65

Project 1.7 Preventive and Enforcement 66

TABLE OF CONTENT

Project 1.8	Community-based development activities in community used areas in Forest Management Units	67
Project 1.9	Conservation and management of wildlife corridors across production forest	67
Project 1.10	Feasibility Studies on Non-Timber Forests Produce for commercialisation	68
Project 1.11	Promoting forest products from certified forests within Sarawak Heart of Borneo	68
Project 1.12	Strengthening infrastructure to support the development of HOBIS system	69
Project 1.13	Sarawak Heart of Borneo status to be integrated in Sarawak Land Use Masterplan Study	69
PILLAR 2	**ECOTOURISM BASED ON CULTURE, ADVENTURE AND NATURE (CAN)**	**71**
Project 2.1	Ecotourism development and activities	73
Project 2.2	Research and Development	73
Project 2.3	Management of ecotourism activities across international borders	74
Project 2.4	Community empowerment in ecotourism management	74
Project 2.5	Sarawak's Heart of Borneo branding and marketing	74
PILLAR 3	**CONSERVATION OF BIOLOGICAL RESOURCES**	**76**
Project 3.1	Research and Development for flora and fauna	78
Project 3.2	Implementation of various conservation masterplan and studies	78
Project 3.3	Heart of Borneo Corridor Project Initiative	79
Project 3.4	Traditional Knowledge Documentation	79
Project 3.5	Conservation of wildlife habitat within the Permanent Forest Estate	80
PILLAR 4	**SUSTAINABLE LAND USE AND AGRICULTURE**	**81**
Project 4.1	Sustainability of organic valley pond towards the establishment of Agrotourism	83

Project 4.2 Research and Development on highland crops in Sarawak's Heart of Borneo 83
Project 4.3 Alternative tar sealed road for community 83
Project 4.4 Continuous maintenance of infrastructure 84
Project 4.5 Integration Data System on agriculture activities for Sarawak's Heart of Borneo 84
Project 4.6 Branding of agriculture products using the Heart of Borneo brand 85
Project 4.7 Rehabilitation of buffer zone for Tagang areas 85
Project 4.8 Collection, Processing and Packaging Centre 85
Project 4.9 Intensive awareness programs on good agriculture practices and management 86

PILLAR 5 COMMUNITY BASED /RURAL POVERTY ALLEVIATION PROGRAM 87

Project 5.1 Community empowerment in Heart of Borneo (HoB) 89
Project 5.2 Community-based Ecotourism (CBET) in Heart of Borneo (HoB) 91

REFERENCES 93

APPENDIX 94

TABLE OF CONTENT





CHAPTER 1

INTRODUCTION

CHAPTER 1 INTRODUCTION

1.1 GLOBAL FORESTS PERSPECTIVE

The Food and Agricultural Organization (FAO) of the United Nations in its 2020 State of the World Forest Report indicated that forests currently cover about 4.06 billion hectares, about 31 percent of the earth's land surface but they are not equally distributed around the globe.

Approximately half of the world's forest areas remain relatively intact, with more than one-third classified as primary forest. Over half of the planet's forests are concentrated in just five countries: Brazil, Canada, China, the Russian Federation, and the United States of America. Specifically, nearly 49 percent of the global forest area remains relatively intact, while about 9 percent exists in fragmented portions with limited connectivity.

More than one-third of the world's forests are primary forests, defined as naturally regenerated forests of native tree species, where there are no clear indications of human activities, and the ecological processes are not significantly disturbed.

The state of the world's forests, which have shrunk from some six billion hectares from the pre-industrial era to the current 4.0 billion hectares, confronts humankind with growing evidence of dire consequences to human survival and well-being. Global warming, loss of biodiversity, and the erosion of environmental values are intricately interconnected with the intangible yet crucial values of forests. These values have far-reaching impacts on agricultural productivity, human health, access to clean water, and ultimately, the very foundation of the world's support system for human survival.

These forests areas have been providing approximately 1.6 billion people with food, medicines, fuel and other necessities. More than two thirds of known land-based species live in forests. All people rely on forests and their biodiversity to varying degrees, with some populations depending more heavily on these resources than others.

Forests provide more than 86 million green jobs and support the livelihoods of many more people. It is estimated that around 880 million people globally engage in activities such as collecting fuelwood or producing charcoal, with a significant portion of these individuals being women.

Forest products make a direct significant contribution to the shelter of at least 1.3 billion people, or 18 per cent of the world's population. The recorded number of people living in homes where forest products are the main materials used for walls, roofs or floors is about 1 billion in Asia alone.

Forests also provide employment and livelihood for a large proportion of the population – especially in developing countries – and often act as an economic safety net for most in times of need.

The state of the forests globally is equally important for the conservation of biodiversity. The conservation of the world's biodiversity is utterly dependent on the way in which we interact with and use the world's forests.

Forests provide habitats for 80 percent of amphibian species, 75 percent of bird species and 68 percent of mammal species. About 60 percent of all vascular plants are found in tropical forests. Mangroves provide breeding grounds and nurseries for numerous species of fish and shellfish and help trap sediments that might otherwise adversely affect seagrass beds and coral reefs, which are habitats for many more marine species.

In the FAO report, it was also reported that deforestation and forest degradation continue to take place at alarming rates, which contributes significantly to the ongoing loss of biodiversity.

Agricultural expansion continues to be the main driver of deforestation and forest fragmentation and the associated loss of forest biodiversity.

Since 1990, it is estimated that some 400 million hectares of forest have been lost through conversion to other land uses. The area of primary forest worldwide has decreased by over 80 million hectares since 1990.

From 2002 to 2020, a total of 64.7 million hectares of humid primary forest was lost globally, making up 16% of its total tree cover loss in the same period. Total area of humid primary forest decreased globally by 6.3% in this period. Today, with only 4 billion hectares left, the world has lost one-third of its forest – an area twice the size of the United States.

The rate of deforestation seemed to have decreased over the past three decades. Between 2015 and 2020, the rate of deforestation was estimated at 10 million hectares per year, down from 16 million hectares per year in the 1990s. New forests are being established through natural expansion or deliberate efforts in others. As a result, the net loss of forest area is less than the rate of deforestation.

Actions to combat deforestation and illegal logging have gathered pace over the past decade as have international agreements and results-based payments. So far, 16 countries have reported reduced deforestation to the United Nations Framework Convention on Climate Change (UNFCCC) and countries are now

accessing payments based on reducing emissions from deforestation and forest degradation from the Green Climate Fund and similar financing mechanisms.

Efforts to address illegal logging are spearheaded by trade regulations in consumer countries that require importers to demonstrate that timber has been harvested legally. Many tropical timber-producing countries are making corresponding efforts to strengthen legal compliance and verification. Fifteen of them are developing national systems to assure legality of timber operations under the EU Forest Law Enforcement, Governance and Trade mechanism. As part of this mechanism, countries are required to also implement measures to prevent illegal hunting.

The Aichi Biodiversity Target 11 (to protect at least 17 percent of terrestrial area by 2020) has been exceeded for forest ecosystems. Large-scale forest restoration is pursued to meet the Sustainable Development Goals (SDG) and to prevent, halt and reverse the loss of biodiversity.

74 countries have, together, pledged to restore 210 million hectares of degraded forest lands under the Bonn Challenge. Forest restoration, when implemented appropriately, helps restore habitats and ecosystems, create jobs and income and is an effective nature-based solution to climate change.

The United Nations Decade on Ecosystem Restoration 2021–2030, announced in March 2019, aims to accelerate ecosystem restoration action worldwide.

Forests are increasingly acknowledged for their pivotal role as a nature-based solution to numerous sustainable development challenges. This recognition is reflected in bolstered political determination and a series of commitments aimed at reducing rates of deforestation and restoring degraded forest ecosystems.

1.2 MALAYSIA FORESTS PERSPECTIVE

Malaysia is situated in Southeast Asia, with its territory and territorial waters spanning between 0º 51′ N and 7º 33′ N latitude, and 98º 01′ E and 119º 30′ E longitude. Malaysia consists of 13 states and three Federal Territories. Within Peninsular Malaysia, eleven states and two Federal Territories (Kuala Lumpur and Putrajaya) are situated. These are separated by the South China Sea from the states of Sabah and Sarawak, located on the island of Borneo. Additionally, the Federal Territory of Labuan, comprising the island of Labuan, lies off the coast of western Sabah.

Malaysia has a land area of approximately 33,024,000 hectares with about 8,840 km of coastline and over 879 islands. The country is also well-endowed with forest resources. which make vital socio-economic contributions to the nation's growth and development. Equally significant are the intangible benefits derived from forests, such as biodiversity and environmental values, which encompass critical aspects like soil and water conservation. Malaysia, alongside Indonesia, stands as

one of the twelve mega-biodiversity countries globally. Particularly in Sabah and Sarawak, local communities continue to rely on forests and forest-related resources for their livelihoods and subsistence needs.

Malaysian forests, with their complex ecosystems and richness in species of both flora and fauna, is considered one of the world's megadiverse countries. There are approximately 15,000 species of vascular plants, more than 306 species of wild mammals, more than 742 species of birds, 567 species of reptiles, 242 species of amphibians, approximately 1,619 species of marine fish, more than 449 species of freshwater fish, 612 species of hard coral and over 150,000 species of invertebrates.

Malaysia's terrestrial biodiversity is primarily concentrated within its tropical rainforests that extends from coastal plains to mountainous areas, including inland waters such as lakes and rivers. The major forest types found in Malaysia are the lowland dipterocarp forests, hill dipterocarp forests, upper hill dipterocarp forests, montane ericaceous forests, peat swamp forests and mangrove forests. In this regard, in Sabah and Sarawak, the lowland and hill dipterocarp forests are often known as mixed dipterocarp forest.

According to the same United Nation FAO report mentioned above, 62.3% or about 20,456,000 ha of Malaysia is forested. Of this 18.7% or about 3.82 million hectares is classified as primary forest, the most biodiverse and carbon-dense form of forest. Malaysia has the world's fifth largest mangrove area, which totals over a half a million hectares.

These huge expanses of forests have been classified under various land use categories such Permanent Forests Estates for sustainable forests management, national parks and wildlife sanctuaries for biodiversity conservation and recreation use and others uses.

The tropical forests in Malaysia are important national treasures and will continue to play important roles in ensuring the stability of the ecosystem and are closely linked to the socioeconomic development of the country and the wellbeing of the people.

These natural treasures, undoubtedly, need to be properly managed in perpetuity to ensure that the forest ecosystem can continue to function in terms of tangible and intangible benefits such as timber, clean water supply, fresh air, biodiversity, storehouse of genetic materials, maintaining a sizable carbon stock, and providing critical function in stabilizing the world's climate.

1.3 SARAWAK FORESTS PERSPECTIVE

Sarawak, located on the captivating island of Borneo, boasts a significant landmass covering 12.4 million hectares, second only to Peninsular Malaysia. Despite its relatively modest population of 2.47 million in 2022 (Sarawak Facts and Figures,

2023), the region's expansive territory is rich in biodiversity, particularly within its diverse forest landscapes.

These forests encompass a variety of distinct vegetation types, including Hill Mixed Dipterocarp Forest, Peat Swamp Forest, Mangrove Forest, and others such as Kerangas Forest, Montane Forest, and Limestone Forest. Among these, the Hill Mixed Dipterocarp Forest stands out as the most prevalent, constituting 58% of Sarawak's total forest area and representing a complex ecosystem unique to the region.

Even with ongoing development, Sarawak remains blessed with abundant forest cover, with approximately 62% or around 7.64 million hectares of the state's landmass still under forest canopy. This data, derived from satellite imagery conducted by the Forest Department Sarawak in 2022, underscores the region's commitment to preserving its natural heritage amidst modernisation efforts.

Forest land in Sarawak is classified into three main categories: Permanent Forest Estates, Totally Protected Areas (including National Parks, Wildlife Sanctuaries, and Nature Reserves), and State land Forest. The management of forest land in Sarawak is legally constituted under the Permanent Forest Estate, which includes Protected Forests, Forest Reserves, and Communal Forests. As of the latest data, 3.9 million hectares of land remain within the Permanent Forest Estates. Additionally, 0.8 million hectares are designated as Totally Protected Areas.

The Sarawak Government has designated approximately 6 million hectares of forest areas as Permanent Forest for sustainable forest management, with an additional 1 million hectares designated as Totally Protected Areas.

These forests provide a habitat for Sarawak's rich biodiversity. With diverse habitats, Sarawak's natural forests host approximately 3,000 known tree species, with 40% of the plant species endemic to Borneo. The state is home to about 185 mammal species, 530 bird species, 166 snake species, 104 lizard species, and 113 amphibian species. A significant portion of Sarawak's wildlife is exclusive to Borneo and is not found in mainland Southeast Asia.

Sarawak now boasts 67 totally protected areas covering 872,404.53 hectares of both land and water bodies. These protected areas fulfil various functions and purposes. They serve as vital tools for safeguarding biodiversity globally, contributing to conservation efforts, preserving genetic material, providing essential ecosystem services, and promoting sustainable development.

In the PCDS 2030, environmental sustainability is one of the core pillars selected by the Sarawak Government to achieve its vision of becoming a developed state by 2030. Sarawak aims to balance economic growth with a responsible approach towards utilisation of natural resources and integration of climate adaptation and mitigation plans.

Sustainable Forest Management (SFM) remains the common policy thrust in Malaysia, in line with sustainable development goals. Over the years, SFM has

evolved into one that is socially acceptable, environmentally sound and economically viable.

Sarawak is also serious in its new policy direction on forest management certification to strengthen its determination to manage the forest in a sustainable manner. Forest Management Certification is mandatory for all long-term timber licenses in Sarawak. The State target is to have all the long-term timber licenses to obtain their certification by 2022.

The forest management certification process includes an elaborate auditing process by a third party based on the Malaysian Criteria and Indicator under the Malaysian Timber Certification Scheme (MTCS), which has been endorsed by the Programme for the Endorsement of Forest Certification (PEFC) or other equivalent certification schemes, such as Forest Stewardship Council (FSC).

Forest Management Certification is essential to safeguard the state's forests with sustainable management and to provide a vast international market for these timber products. Sarawak is also committed to ensure that all Long-Term Forest Timber Licenses (F30) will achieve forest management certification by the year 2022 and 2025 for forest plantations. As of February 2024, Sarawak's certified forests cover a total area of 2,299,002.35 hectares consisting of 25 Forest Management Units (Natural Forests) with a total of 2,201,036 hectares and 7 Forest Plantation Management Unit (Forest Plantations) with a total of approximately 97,000 hectares.

In recent years, Sarawak has embarked on a noble and bold state level journey of restoring Sarawak's degraded forests through its statewide Forest Landscape Restoration project. The state government, through Forest Department Sarawak has intensified the FLR program, with aim to enrich degraded forest areas with high value timber species. It seeks to restore a forested ecosystem, especially degraded Permanent Forest Estates, alleviate livelihood of forest-dependent communities as well as reduce pressure on natural Forest Landscape Restoration forests by shifting timber production towards plantations of indigenous fast-growing species.

Sarawak aims to plant 35 million trees from the year 2021 to 2025 throughout the State with average of 7 million trees per year. This tree planting effort is also in line with the national campaign 'Greening Malaysia: 100 million Tree Planting', as initiated by the Ministry of Energy and Natural Resources. The program will be implemented through various planting programs covering logging areas, forest plantations, forest reserve areas, fully protected areas, native customary rights (NCR) land and privately-owned land.

This effort will balance out and reduce the negative impacts from the exploration of forest for development projects and help tackle the global climate crisis.

Participatory Forestry and Strategic Partnerships has been embraced by Sarawak in its way forward both in sustaining our forest resources and enhancing our

protection of forest. Globally now, there is a thrust towards community based and non-government organisation involvement in forestry. With a sense of ownership comes a greater responsibility to protect and conserve.

Sarawak has also formed strategic partnership with countless stakeholders. Various strategic conservation partnerships on a government-to-government basis with Japan, Netherlands, German, Denmark, USA, Australia, New Zealand, India and China have been forged to provide technology transfer, funding and expertise.

Joint scientific research and programs have also been developed with academic institutions such as Salford University, Lincoln University, University of Malaysia Sarawak, University Putra Malaysia and University of Malaysia Terengganu.

These collaborative efforts will promote greater cooperation and sharing of scientific information in sustaining Sarawak valuable forests.

1.4 SARAWAK FORESTS AND LAND USE POLICIES

The management of all types of forest is enshrined in the National Forestry Policy 1978 (revised 1992) (NFP) for Peninsular Malaysia, Sabah Forest Policy 2018 for Sabah and Sarawak's Forest Policy 2019 for Sarawak respectively.

This commitment is duly recognised and given specific attention by the National Forestry Act 1984 (revised 1993) in Peninsular Malaysia. In Sabah, the necessary legal provisions are provided by the Sabah Forest Enactment 1968 while in Sarawak, the Forests Ordinance, 2015 [Cap. 71] provides the necessary legal framework.

These policies provided for greater uniformity in the implementation of strategies for the achievement of forest conservation, management as well as social and educational needs.

It represents an important policy framework, which is unequivocal in maintaining that forest management must fulfil environmental and conservational needs besides meeting rational socio-economic goals. It provides guidelines and strong emphasis on the necessity for sound management, conservation, utilisation, development and protection of these forests.

Sarawak is blessed in which its sustainable forestry and development policies has been enshrined in the state governance and rule of laws by its past British colonial masters. The earliest policy and legal statute on forests is translated through its Forest Policy of Sarawak 1954 and the Forests Ordinance, 1958. Both has since been repealed and replaced by the Sarawak Forest Policy 2019 and the latest Forests Ordinance, 2015 in which includes all amendments up until 30th June 2023.

1.5 SARAWAK FOREST POLICY

Sarawak realised that it needs to think and operate outside of the forest box. Policies on forest management must explicitly address forest roles in providing food, energy and shelter.

Sarawak has developed its first Forest Policy in 1954. It is a policy that has withstood the test of time for five decades. But now Sarawak recognises the need to look beyond the trees and embrace a more holistic landscape approach.

A new and vibrant Sarawak Forest Policy 2019 was developed and put in force to provide a more holistic guidance in managing Sarawak's forests.

The Sarawak Forest Policy recognises sustainable forestry emphasising on three major aspects: socially compatible, ecologically sound and economically viable. Consequently, a balance needs to be achieved between various ecological needs, the rights and interests of local communities.

The Sarawak Forest Policy has set itself 13 new policy objectives, covering specific elements and incorporating latest developments, changes and requirements under the forestry sector. Overall, 29 strategies and 109 action plans were formulated to achieve the specified goals and objectives of this policy.

1.6 SARAWAK LAND USE POLICY

The Sarawak Land Use Policy has now been developed to provide a more holistic and comprehensive approach on land use. The policy's main objectives are to optimise land use for sustaining economy, global competitiveness, to mitigate land use conflicts apart from maintaining environmental integrity and biodiversity.

The Land Use Policy has set 6.0 million hectares for Sarawak's Permanent Forests Estates (timber production forests), 1.0 million hectares as Totally Protected Areas (which is the national parks, nature reserves and wildlife sanctuaries), 4.0 million hectares for agricultural purposes while the remaining 1.4 million hectares are for settlements and others.

The Land Use Policy reinforced Sarawak's strategic directions to ensure sustainability of its production forests, rich biodiversity, protecting valuable water catchments, water resources and enhancing community benefits of the forests.





CHAPTER 2

HEART OF BORNEO INITIATIVE

CHAPTER 2 HEART OF BORNEO INITIATIVE

Sarawak realised that being part of the majestic Borneo Island, the third largest island in the world, it could not adopt a stand-alone approach in managing its forests. Critical issues on forestry and conservation are common grounds affecting all and these are borderless. Sarawak also needs to move forward as a region.

The Heart of Borneo Initiative and other regional cooperation have shown that this is possible. There is now a greater synergy among Malaysia, Brunei, Indonesia and others, in respect to the sharing of experiences, research and general information. Based on the homogeneity of the region, each country can benefit from the lessons learnt from its neighbours. These synergies must exist not only at the level of governments but also at the academic and institutional levels.

2.1 HEART OF BORNEO INITIATIVE

The Heart of Borneo Initiative is a voluntary transboundary cooperation between Brunei, Indonesia and Malaysia aiming at conserving and managing the transboundary highlands of Borneo and parts of the adjacent foothills and lowlands, which straddle the borders of Brunei Darussalam, Indonesia and Malaysia. The HoB approximately covers 200,000 km2 of ecologically inter-connected rainforest in the island of Borneo.

The State Government of Sabah and Sarawak has identified areas of approximately 3.9 million hectares and 2.1 million hectares respectively for Heart of Borneo, which approximately covers 60,000 km^2. In 2018, Heart of Borneo areas in Sarawak was expanded to 2.69 million hectares.

The Heart of Borneo Initiative is a voluntary transboundary cooperation between three ASEAN nations and was officially launched in Brazil on 27 March 2006.

On 12 February 2007, the Minister of Natural Resources and Environment of Malaysia, the Minister of Forestry of the Republic of Indonesia and the Minister of Industry and Primary Resources of Brunei Darussalam, signed and jointly issued a Declaration in Bali, Indonesia.

In view of the global concerns and controversy about the tropical forest development, the long-term objective of the Heart of Borneo Initiative, as enshrined in the Bali Declaration is as follows:

"With one conservation vision and with a view to promote peoples' welfare, we will cooperate in ensuring the effective management of forest resources and conservation of a network of protected areas, productive forests and other sustainable uses".

The objectives of the Heart of Borneo Initiative are to conserve the last expanse of contiguous forests in Borneo through maximising transboundary linkages, promoting expansion of protected areas network, maintaining forest connectivity and ensuring sustainable land use practices.

To lend clarity and focus on its implementation of the long-term objective of the Heart of Borneo initiative, Sarawak has concise its programs and activities into five key focal areas or pillars: -

i) **Pillar 1 - Sustainable Forest Management**
Focusing on maintaining the balance between forest used and environmental protection.

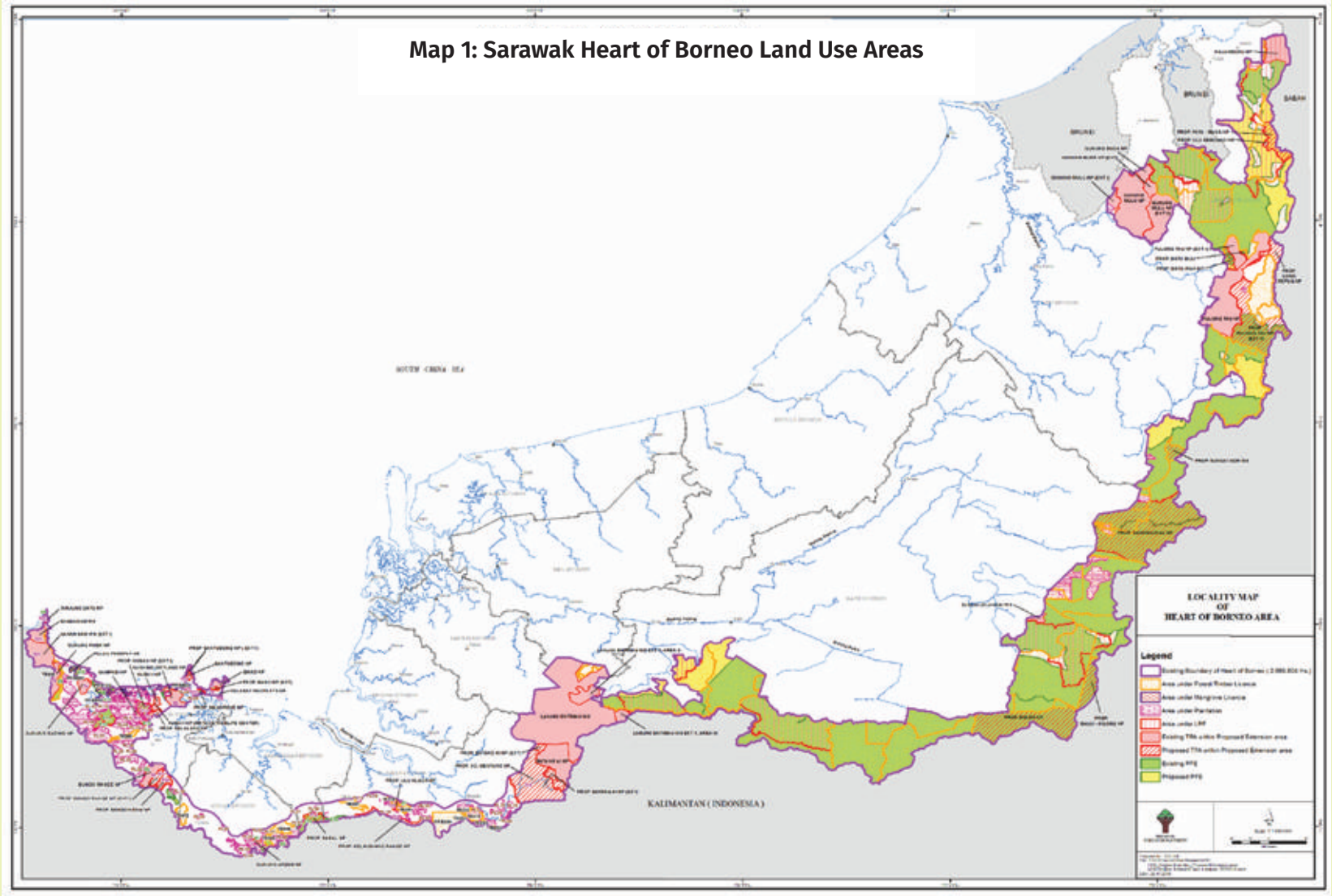
ii) **Pillar 2 - Ecotourism Based on Culture, Adventure and Nature (CAN)**
Focusing on developing the ecotourism involving the local communities to promote conservation and enhance socio-economic well-being.

iii) **Pillar 3 - Conservation of Biological Diversity**
Focusing on the implementation of Conservation and Biological Diversity initiatives within the HoB areas.

iv) **Pillar 4 - Sustainable Land use/ Agriculture**
Focusing on sustainable development of rural communities through wise management of natural resources and agriculture.

v) **Pillar 5 - Community-Based/Rural Poverty Alleviation Program**
Focusing on the welfare of rural communities through effective management of Totally Protected Areas, production forests and agriculture.

Map 1: Sarawak Heart of Borneo Land Use Areas



2.2 LAND USE

The Heart of Borneo Sarawak has initially included a total area of 2.1 million hectares and is divided into three regions, namely the Northern Region covering the Miri and Limbang Divisions; Central Region covering the Kapit and Belaga Districts of the Kapit Division; and Southern Region covering Sri Aman, Sarikei and Sibu Divisions, as well as the Song District of the Kapit Division.

In 2018, HoB Sarawak was extended to 2.69 mil hectares and was approved by the Sarawak State Government. The expansion involves the area from Batang Ai to the western region of Sarawak.

A sizeable number of totally protected areas has also been included in this new extension such as Gunung Apeng National Park, Bungo Range National Park, Gunong Pueh National Park, Kubah National Park, Gunung Gading National Park, Samunsam Wildlife Sanctuary, Matang Wildlife Centre, Kuching Wetland National Park, Bako National Park, Sampadi National Park, Santubong National Park and Tanjung Datu National Park.

Table 1: Land Use in the Heart of Borneo Sarawak

No.	Landuse	Area (Ha)
1	Permanent Forest Estate (PFE)	1,308,269
2	Totally Protected Area (TPA)	556,393
3	State land Forest	696,045
4	Plantation	89,206
5	Settlement	25,738
6	Waterbody/Reservoir	14,153
	TOTAL	**2,689,804**

Source: Forest Technology and Geospatial Division, Forest Department Sarawak.

2.3 AGRICULTURE

At both the national and state levels, the importance of agriculture in terms of its contribution to the Gross Domestic Product and its level of employment is indisputable. Over the years, the agriculture sector has steadily become an important contributor to Malaysia's gross domestic product (GDP), employment, export revenue as well as economic and rural development.

Since the First Malaysian Plan (1965-1970), agriculture has always featured prominently in the development plans. Under the Ninth Malaysian Plan, agriculture has been termed the third engine of growth after the manufacturing and service sectors.

Excluding industrial crops such as oil palm and rubber, the agriculture sector contributed RM20 billion, or four per cent, of Malaysia's Gross National Income GNI in 2009. As Malaysia moves towards becoming a high-income nation in 2020, the target is set for RM49 billion.

While traditionally labelled as the poor man's sector, the face of agriculture is slowly changing as entrepreneurs in diverse businesses like swiftlet nest-ranching and large-scale paddy (rice) farmers can now move up to Malaysia's high-income group.

Recognising the crucial role that agriculture can play in a nation's economy, the government aim to transform agriculture into agribusiness, moving towards a model that is anchored on market-centricity and economies of scale. The government realised that to ensure sustainability, the industry needed to be invigorated.

Sarawak's agriculture sector too has remained resilient as an important contributor to the state's Gross Domestic Product (GDP), contributing 12.1 percent consistently over the years.

The Sarawak government has allocated RM797 million to develop the agriculture sector by 2020. The allocation was for the implementation of various programs and activities as well as mobilising agricultural policies to drive the state's agricultural development in line with its target to becoming a major exporter by 2030.

By achieving the target of being a major exporter by 2030, it will be able to achieve two strategic objectives of the agriculture sector, namely alleviating poverty in Sarawak and bridging rural-urban income gap.

In the context of Sarawak Heart of Borneo, where the initial areas are located at the heart of the rural hinterland, where the bulk of the people are farmers, agriculture provides the main livelihood for the people.

Agriculture in such areas consists predominantly of smallholder farms. The production of food crops (consisting mainly of hill paddy and wet paddy, and to a smaller extent, fruits and vegetables) in smallholder agriculture is traditionally subsistence activities.

Agriculture development in the Heart of Borneo area is limited due to the mountainous terrain and inaccessibility. The steep terrain and associated shallow soils and serious erosion hazards limit the availability of suitable land or soil for agricultural development.

But within the new extension areas of Sarawak Heart of Borneo, these expanses of areas are in Lundu and Sematan, which are closer to the coast and are well-populated.

The population of Lundu District, according to the 2022 statistic, is 33,800 people (Sarawak Facts and Figures, 2023) comprising the Bidayuh (Jagoi, Selako and Lara), Chinese, Malay, Iban and others, where the majority are Bidayuh. Population density are 17.6 people per square kilometre.

Almost 80% of the people in Lundu District are engaged in agriculture, most of them consisting of cocoa, black pepper, rice, fruit and oil palm. Coastal areas consist mostly of fishermen. The development of the agricultural sector is much supported by the government and private agencies such as the Department of Agriculture, FELDA, SALCRA, farmers' association, SEDC, PELITA, FELCRA and others.

In addition, logging activities, boards, silk preservation, crab catching, tiger shrimp, freshwater fish and silica sand extraction are also being implemented as one of the economic resources for the people around here.

In the Northern Region of Sarawak Heart of Borneo areas, the settlements are widely spread out, reaching up to the international border with Kalimantan, Indonesia. The main population centres are located along the upper reaches of Batang Baram and Batang Trusan, particularly in the Maligan and Kelabit Highlands.

The main crops currently being cultivated are wet paddy, pineapple and vegetables. In addition, buffalo rearing is an important economic activity.

Bario rice is well-known quality rice that fetches a premium price in the local markets. Apart from their own consumption, farmers in the Kelabit and Maligan Highlands grow rice as a cash crop. It is mainly grown in the valleys and riparian areas with poorly drained alluvial soils.

Pineapple has also been cultivated in Bario and in contrast to the lowland where it is mainly grown on peat soils, pineapple here is cultivated on slopes around the settlements. The fruit is very juicy and sweet and is in good demand.

Buffalo is the main livestock kept by the highlanders, apart from backyard pig and poultry. It is used as the draught animal for ploughing the field and pulling carts.

Agriculture in Ba'Kelalan and Long Semadoh areas practised mixed agriculture system, consisting of wet paddy cultivation and buffalo rearing, similar to that in the Bario Highland. Buffalo rearing is particularly important to the Lun Bawang.

At the central region, most of the inhabitants of Kapit Division are involved in agriculture and agriculture-related activities for their subsistence need. Kapit Division is one of the areas in Sarawak, which produces potentially lucrative local fruits such as dabai, issau and durian. The division is also famous as the source of several indigenous inland fish species such as Empurau, Tengadak dan Semah.

Kapit Division, formed in 1973, is one of the twelve administrative divisions in Sarawak, Malaysia. It has a total area of 38,689 square kilometres and is the largest of the administrative divisions of Sarawak. Its population, according to the year 2022 census, was 79,200 inhabitants (Sarawak Facts and Figures, 2023).

Some 86% of the land area is held in forest reserve. The economy is largely agricultural, based on forestry, oil palm, paddy, rubber, banana, and pepper. Other natural resources include coal. The Bakun Dam is based partly in Kapit Division.

Sri Aman Division partly lies in the Heart of Borneo Sarawak areas. Major activities carried out by the farming population in Sri Aman includes rubber, pepper, oil palm, paddy and livestock farming. Sri Aman is also being focused by major entrepreneurs for commercial oil palm plantation.

2.4 FOREST RESOURCES

Over the years, Sarawak has achieved excellence in the management and conservation of tropical forests. Through various initiatives, it manages and develops forest resources for social-economic and environmental responsibility.

Sarawak has a total landmass of 12.4 million hectares, with 62 percent of it under forest cover, and significant efforts are being made to safeguard the state's valuable natural resources. In managing such resources poses numerous challenges because of the geographical factors as mountainous terrains, numerous rivers and tributaries.

The Heart of Borneo Initiative emphasises balance in conservation and development, through sustainable resource management and utilization, to generate socio-economic benefits for local communities living in and around the area.

Forestry is the main socio-economic activity that has brought about a dramatic change in the rural physical, biological and socio-economic environments and lives of the local people for at least two decades.

Sarawak's natural forests consist of hill mixed dipterocarp forest (58.8%), peat swamp forest (2.6 %), mangrove forests (0.6%) and others, which include kerangas and montane forests (38.5%). Sarawak's forests are very rich and high in diversity, from its riparian forests at riverbanks to the high montane forests in the interiors.

Within the context of Sarawak Heart of Borneo, a huge proportion of its forested areas or 1,308,269 hectares lies within Permanent Forest Estates, which are mostly natural forests for timber production, 554,218.8 hectares are in Totally Protected Areas (made up of national parks, nature reserves and wildlife sanctuaries) and 680,552.5 hectares remains as State land forests.

Permanent Forest Estate (PFE) is established to ensure sustainable supply of timber from natural productive forests. The two categories of PFE are Protected Forests (PF) and Forest Reserves (FR).

33% of the Permanent Forest Estates and 50% of the totally protected areas in Sarawak lies in the Heart of Borneo Sarawak. As of 2020, a total of 117 PFEs which constitute of 44 Protected Forests, 42 Forest Reserves, 29 Communal Forests and 2 Government Reserves with the area of 3,947,346 hectares had been gazetted as PFs (Forest Department Sarawak, 2020).

In view of Forest Management Certification, High Conservation Value (HCV) is a requirement under principle 9 of the Malaysian Criteria and Indicators (MC & I) and all Forest Management Units (FMUs) are required to assess, demarcate, monitor and manage High Conservation Value within their respective areas.

High Conservation Value Forests are those areas of forest that need to be appropriately managed to maintain or enhance the identified High Conservation Values. A High Conservation Value Forest may be a small part of a larger forest, for example a riparian zone protecting a stream that is the sole supply of drinking water to a community or a small patch of a rare ecosystem.

In other cases, the High Conservation Value Forest may be the whole of a forest management unit, for example when the forest contains several threatened or endangered species that range throughout the forest. Any forest type – boreal, temperate or tropical, natural or plantation can potentially be a High Conservation Value Forest, because the High Conservation Value Forest designation relies solely on the presence of one or more high conservation value.

The Forest Management Units, supported by the State's Forest Department, assessed and mapped HCVs in their respective area, which later compiled by Forest Department as part of the effort in mapping out the wildlife connectivity network for areas outside TPAs.

Sarawak has enforced a new policy direction on forest management certification to strengthen its determination to manage the forest in a sustainable manner. Forest Management Certification is mandatory for all long-term timber licenses in Sarawak.

The State target is to have all the long-term timber licenses obtain their certification by 2022. Presently, 25 FMUs had been certified covering a total area of 2,201,036 hectares as of January 2024.

2.5 BIODIVERSITY

Borneo is the third largest island in the world and thus, one of the most important centres of tropical biodiversity. The island covers more than 200 million hectares of equatorial rainforest and is home to 10 primate species, over 350 bird species, including eight hornbill species, more than 150 species of reptiles and amphibians and more than 15,000 known species of plants.

Borneo is one of the only two places on earth (the other being Sumatra), where the orangutan, Asian elephant and Sumatran rhinoceros still co-exist and where forests are currently large enough to maintain viable populations of these iconic mammals.

The forests of the Heart of Borneo are some of the most biologically diverse in the world, possessing a high number of endemic species across all groups of plants and animals.

Sarawak has a remarkable diversity of natural landscapes and rich biological resources, and it has some of the iconic mammal species such as the orangutan, proboscis monkey, hornbill, rafflesia, slipper orchid and others.

The key focus of the Sarawak government since independence is the protection of these valuable biological resources through habitat protection via its legally constituted national parks, nature reserves and wildlife sanctuaries.

The state government had expanded its Heart of Borneo area from 2.1 million hectares to 2.7 million hectares while remaining committed to gazetting at least 1 million hectares of Totally Protected Areas by 2020. 554,218.8 hectares of the total protected areas in Sarawak lies in its Heart of Borneo. This huge protection areas house an incredible diversity of Sarawak's biodiversity.

These areas include the four largest Totally Protected Areas namely, Lanjak Entimau Wildlife Sanctuary, Batang Ai National Park, Gunung Mulu National Park and Pulong Tau National Park.

Nearly all of Sarawak's inland forest types may be found in the Gunung Mulu, while Pulong Tau National Park and Lanjak Entimau Wildlife Sanctuary are equally rich and diverse. Lanjak Entimau together with the Batang Ai National Park next to it, is also home to Sarawak's 1,400 orangutan population, as well as a host of other rare and threatened animal species like Bornean gibbon, two species of langur, and seven species of hornbill.

The four largest Totally Protected Areas play a vital role in the conservation of biodiversity in its pristine state. Lanjak Entimau and Pulong Tau have also formed partnerships with national parks in Kalimantan, Indonesia to promote transboundary biodiversity conservation. The first transboundary biodiversity conservation area (TBCA), between Lanjak Entimau Wildlife Sanctuary, Batang

Ai National Park and Betung Kerihun National Park was officially launched on 7 October 1994. Collaboration between Pulong Tau National Park and Kayan Mentarang National Park was initiated in 2005. Although much basic research has been conducted in recent years, large areas of the TPAs and TBCAs still remain unexplored, and numerous species of plants and animals still await documentation and scientific discovery.

In addition to securing the protection of many of the key habitats and species biodiversity in the State, the national parks, wildlife sanctuaries and nature reserves also promote research, nature education, ecotourism and socio-economic development; and in doing so generate employment and provide an important source of income to the government and the people.

From the numerous research studies done at Lanjak Entimau Wildlife Sanctuary under the International Tropical Timber Organisation (ITTO) program indicated an incredibly rich biodiversity. The iconic species is Orangutan (sub-species *Pongo pygmaeus pygmaeus*) that has an estimated population of over 1,000 individuals, in addition to other primates such as Bornean Gibbons (*Hylobates muelleri*), White-fronted Langur (*Presbytis frontata*) and Red Langur (*P. rubicunda*). Other primates that occur here are Pig-tailed and Long-tailed Macaques, Western Tarsier (*Tarsius bancanus*) and Slow Loris (*Nycticebus coucang*). Small mammals are well represented by the Common Tree Shrew (*Tupaia glis*) and many species of squirrels. Carnivores such as sun bear, martens, otters, civet cats and clouded leopards are also present.

Of the 235 species of birds, 10 are migrants and 13 are Bornean endemics. Seven species of hornbills occur here, including the most well-known Rhinoceros Hornbills (*Buceros rhinoceros*), Bushy-crested Hornbills (*Anorrhinus galeritus*) and Wrinkled Hornbills (*Aceros corrugatus*). The Great Argus Pheasant (*Argusianus argus*) and the Bulwers's Pheasant (*Lophura bulweri*) also occur, along with other smaller birds such as the cuckoos, nightjars, swifts, trogons, kingfishers and bulbuls.

Lanjak Entimau also has a remarkably high diversity of reptiles and amphibians with 77 species, of which 26 are endemic to Borneo (Table 5.2). There are 13 species of snakes, 12 species of lizards and 52 species of frogs. The rivers and streams have a variety of fishes which form the main components of the diet of the local communities.

There have been nine scientific expeditions into Sarawak's pristine jungles since 2008, exploring their exceptionally rich biodiversity of flora and fauna. These expeditions were conducted at Lanjak Entimau Wildlife Sanctuary in 2008, Paya Maga in 2010, Ulu Mentawai in 2012, Upper Baleh in 2015, Long Banga 2016, Tama Abu 2017, Kelingkang Range 2019, Gunong Pueh Forest Reserve 2020 and recently at Gerenai-Long Mekaba in 2022.

The expeditions were aimed at documenting the wildlife as well as flora and

fauna in the Heart of Borneo area to assess future needs for conservation there. They are also targeted at creating awareness on conservation, inspiring local participation in flora and fauna conservation, studying the effects of tourism on the HoB area, and boosting the conservation value of the area.

The expeditions also include systematic studies on the sociology and anthropology of local tribes. The expeditions took place in areas with challenging terrains that demanded both physical and mental durability. These international expeditions have been conducted with various stakeholders including local government institutions, universities, NGOs and international bodies.

The various scientific expeditions that had been carried out at the Sarawak Heart of Borneo yield interesting findings. These expeditions include the Upper Baleh Scientific Expedition done in 2015 by Forest Department Sarawak in collaboration with University of Malaysia Sarawak (UNIMAS), WWF-Malaysia and Sarawak Energy. The expedition was aimed at gathering baseline data to document the diversity of the flora and fauna of Upper Baleh and to support the gazetting of the proposed Baleh National Park and the conservation and development of a catchment management plan.

Discovery of new records, rare and new species have been documented from these expeditions. Among the new species of plants discovered were Mapania sapuaniana, Alpinia epiphytica and Hellenia borneensis.

The legal framework for the protection of biodiversity in Sarawak is well-established with its National Parks and Nature Reserves Ordinance (1998), Wildlife Protection Ordinance (1998) and various Rules to provide the legal arm in biodiversity protection in Sarawak.

A Master Plan for Wildlife was developed in 1996 as the State policy as a long -term strategy for wildlife conservation and management on wildlife conservation. Under the Plan, commercial hunting and sale of wild meat including wild boar are banned. Sale of cartridges is also controlled.

2.6 LOCAL COMMUNITIES

The local communities residing in Sarawak Heart of Borneo is very diverse in races, ethnic groups and origins. The major settlements in Sarawak Heart of Borneo include Ba'Kelalan, Bario, Kapit, Belaga, Lundu, Sematan and others. Numerous small settlements are also located within the timber production forests and at the periphery of the totally protected areas.

There is still a need to map out these numerous towns, settlements and hamlets. These demographic data is crucial to help the community's development and livelihood activities for the local communities in the Heart of Borneo.

Sarawak may be broadly divided into three different regions, namely, the coastal region, inland flat & hilly region, and riverine, upriver and mountainous region. Each of these regions has its own socio-economic characteristics with different levels of development.

The Sarawak Heart of Borneo area is centrally located within parts of the second and third regions, which comprise mainly of undulating hills and mountainous slopes. The main socio-economic activities are commercial logging and cultivation of wet and hill paddy. In the recent extension areas, which lies in the coastal regions, cash crops like rubber, cocoa, pepper, fruit trees and oil palm are done by the farming community.

The last count of settlements in the earlier Heart of Borneo areas indicated that there are a total of 101 settlements spread across the HoB area, comprising 7 ethnic groups, namely, Iban, Kenyah, Punan Vuhang, Kelabit, Lun Bawang, Penan, and Sa'ban. These 101 settlements make up a total of 2,089 households with a population of 12,841 people.

There is still also a need to obtain comprehensive data of the local communities in the recently extended areas of Sarawak Heart of Borneo. According to Efims Sarawak 2023, approximately a total 456 settlements inside the current HoB areas.

The Iban communities in the Sarawak Heart of Borneo was based on the earlier study (Jiram, 1994) in which it was reported that about 102 Iban longhouses were found to be located within the peripheries of the Sanctuary and Batang Ai National Park. These longhouse communities are clustered around the Batang Ai National Park in Lubok Antu District, in the Upper Sungai Katibas in Song District, and in Upper Sungai Kanowit in Julau District.

Based on their present locations, there are six Iban settlements with a total of 134 households and a population of 1,050 people - 4 in Song District, and one each in Julau District and Lubok Antu District.

The major economic activities of the Iban community in the Sarawak Heart of Borneo are hill paddy farming, utilisation of forest resources and other agricultural activities.

Hill paddy is mostly for community's sustenance and perennial cash crops like rubber, pepper and cocoa have been incorporated into the farming system. Hunting, fishing and collection of jungle produce like rattan, belian wood and vegetables. Cage culture of red tilapia fish in the Batang Ai area is also being done by some families from the area.

Generally, socio-economic development in the region has been rather slow resulting in a relatively high incidence of poverty and other related problems among the rural communities.

There are two highland areas in northern Sarawak - the Maligan Highland located along the border with Sabah in the north, and the Kelabit Highland located along the border with East Kalimantan in the east. The Gunung Mulu National Park and Pulong Tau National Park are in the region, cutting the divisional boundaries of Miri and Limbang Divisions. Pulong Tau is situated close to the Sarawak-East Kalimantan border. These highlands are a part of the HoB and home to many human settlements belonging to the ethnic communities of Kelabit, Lun Bawang, Penan, Punan, Kenyah and Sa'ban.

As for the Kenyah community, there are three Kenyah settlements with a total of 143 households and a population of 1,494 people. Two of these are Kenyah Badeng, located respectively at Lio Mato in Baram District and Long Busang in Belaga District. The other is a Kenyah Bakong settlement, located at Long Singut in the headwater of the Baleh in Kapit District. They are spread far from each other in the most interior of the three districts. The two Kenyah Badeng settlements are each provided with a full primary school and a rural health clinic.

There are only two Punan Vuhang settlements located in the most interior of Belaga District, and far apart from each other. The one at Long Lidem is situated in the headwater of the Kajang, a tributary of the Linau, which in turn is a tributary of the Balui, and consists of 20 households with 78 people. The Long Unai settlement is situated in the headwater of the Balui and has 16 households and 83 people.

Traditionally nomadic, they began to live a settled way of life in the 1960s. They now cultivate hill rice, but occasionally go back to the forest to process wild sago when rice is insufficient. Hunting is an important activity to provide protein. They are fine weavers of rattan mats and baskets that are their main source of cash income.

There is no school or rural clinic in either settlement. These facilities are available at the Kenyah Badeng settlement at Long Busang, located not far downriver from Long Unai and at Lusong Laku, a Penan settlement in the Linau River, which can be reached by a day's journey by outboard motor downriver from Long Lidem.

The Kelabit settlements in the HoB area can be divided into two clusters: the Kelabit Highland Proper around Bario area and outside the Kelabit Highland proper. The two clusters comprise 23 settlements, 496 households and a population of 3,125 people.

The Kelabit highland itself has 14 settlements with 286 households and a population of 1,677 people. Bario serves as the centre and is accessible by air (19-seater light aircraft) from Miri and Marudi daily. Logging roads have reached the southern villages of Ramudu, Pa Mada (Arur Dalan) and Pa' Dalih and will soon reach Bario.

For the outer Kelabit Highland, there are 9 settlements comprising 210 households and a population of 1,448 people, including the Sa'ban village at Long Banga, a minority group that is linguistically and culturally related to the Kelabit and Lun Dayeh of East Kalimantan. The settlements can be reached by logging roads and by once-a-week flight each to Long Seridan and Long Banga from Miri and Marudi. The only Kelabit village of Long Napir in Limbang District is accessible from Limbang Town by logging road and outboard motor.

Meanwhile the Sa'ban community comprises a single community at Long Banga in the upper Baram. Linguistically and culturally related to the Kelabit, they are considered as Kelabit.

The Kelabit are rice or paddy cultivators, planting both hill and wet paddy, mainly for home consumption, with surplus sold in Miri. Hill rice is inter-cropped with other crops such as maize and various types of vegetables. They also raise buffaloes which are used to work the fields and fertilize the soil, as a beast of burden, or sold for cash. Another source of income is selling of mineral salt obtained from underground salt mines.

The cool highland climate makes it suitable for growing sub-temperate crops, such as longan, lychee, sweet orange, but only pineapple has gained prominence and is widely planted in the area.

Hunting is still an important activity in the highland and surrounding areas. The preferred game includes wild boar and deer. Various jungle products are collected for domestic needs, like firewood, bamboo, rattan cane, palm shoots, wild fruits, edible leaves, fungi, tubers, and other uncultivated foodstuffs.

The Lun Bawang settlements can be grouped into 3 clusters, located respectively at Ba' Kelalan, Long Semado, and Long Sukang-Pa Berayong. These clusters have a total of 30 settlements, with 562 households and a combined population of 3,642.

The Lun Bawang Ba'Kelalan Settlement is located along the Sarawak-East Kalimantan border. There are 10 villages with 162 households and a population of 1,022 people. Buduk Nur (made up of the villages of Punang Kelalan, Long Muda and Long Kumap) is a couple of hours on foot from Long Midang - a Lun Dayeh village in the Krayan District of East Kalimantan. Ba'Kelalan is accessible by air from Lawas and Miri three days week, and by logging road from Lawas (5 hours if the road is in good condition).

The Long Semado Settlement is located along the Sarawak-Sabah border and has a cluster of 12 villages comprising 243 households and a population of 1,840 people. It is accessible by logging road from Lawas, taking 3 to 4 hours by 4WD. Long Semado is about one day's walk from the Lun Dayeh village of Long Pasia in Sabah.

The Long Sukang-Pa Berayong Settlement has 8 villages in the Long Sukang-Pa Berayong Cluster, comprising 117 households and a total population of 1,029 people. The 8 villages are in three general areas, namely, Pa Puti, Long Sukang and Pa Berayong. Pa Puti is located at the foot of the Meligan, about one hour by logging road from Lawas Town. Long Sukang is located south of Pa Puti, two hours by logging road from Lawas. There are four villages in the Long Sukang area. Pa Berayoung is located east of Long Sukang, two and half hours by logging road from Lawas. There are three villages in the Pa Berayong area. There is a footpath linking Long Sukang to Long Pasia, with a two-day walk distance.

The Lun Bawang practises a mixed agriculture system with paddy as the principal crop. It is grown on dry hilly land or on irrigated flat land along narrow valleys.

Surplus harvest of the adan variety ('Bario' rice) is sold in the market in Lawas, Kota Kinabalu, Brunei and Miri. Fish thrives in the wet rice fields and is an important source of protein. Like the Kelabit, the Lun Bawang raises buffaloes that are used mainly to maintain fertility of the rice fields and as beasts of burden, and sometimes sold for cash.

Farmers in Long Sukang-Pa Berayong cluster are largely hill paddy cultivators. The advantage of this system is that the paddy can be intercropped with other crops such as maize, millet and various kinds of vegetables, which can be sold in the market in Lawas. Its disadvantage is that it is a rotational system, requiring a new field for the next farming session. When there is a population increase, land for such a rotation becomes insufficient.

Freshwater fish in the rivers and streams used to be plentiful, but this resource has largely been depleted since the 1980s by logging operations, either through over-fishing by the influx of timber workers, or siltation of rivers and streams. Long Tuyo has a tagang system in operation and is reported to be quite successful. The village of Long Kerabangan in the Long Semado cluster is planning to adopt the system.

Hunting is still an important activity for rural communities. The preferred game includes wild boar and deer. The forest is the source of firewood, bamboo, cane, palm shoots, wild fruits, edible leaves, fungi, tubers, etc. Production of handicrafts such as weaving of rattan mats and baskets is a sunset activity as raw materials from the forest are fast depleting, largely caused by logging operations. Rattan mats and baskets are normally purchased from their Lun Dayeh cousins across the international border.

Meanwhile, the Penan settlements in the HoB area can be grouped into seven clusters: Kuba'an, Tutoh, Magoh, Silat, Upper Limbang, and Adang. The first five settlement clusters are in the Baram District, and the last two in the Limbang District.

The seven clusters consist of 37 Penan settlements with 759 households and a population of 3,362 people. Twenty-seven settlements are settled with 670 households and a population of 2,987 individuals. Three groups are semi-settled, comprising 35 households and a population of 134. Six groups with a population of 241 people are nomadic; they live in 53 households. The Penan settlement of Long Malim in Belaga District is not included, as it is located far from any of the clusters.

The Kuba'an Cluster is a relatively small cluster with 5 settlements – three settled and two semi-settled – comprising 52 households and 205 people. These settlements can be reached by two days of walking from Bario, or one day by driving on logging road from the town of Long Lama, but one needs to walk for two hours from the end of the logging road to the village of Long Lobang. It is possible that the timber road to Kuba'an may be closed soon. Footpaths link the Kuba'an area to the Penan village of Long Sabai in the south, and other Penan groups on the Tutoh and Magoh in the east.

The Tutoh Cluster of eight settlements are locavted along the Tutoh River, comprising 146 households and a population of 605 people. These settlements are Long Sabai, Long Taha, Ba Tepen, Long Siang, Ba Puak, Long Kawah, Long Iman, and Batu Bungan.

The Magoh Cluster consists of six settlements with a population of 401 people. To reach these villages, one needs to take a small plane from Marudi to the Kelabit settlement of Long Seridan and from there walk on foot. The walking time takes from half a day to about a day depending on the distances. These settlements are linked to other Penan settlements on the Tutoh and Kuba'an by several footpaths.

The Upper Baram Cluster comprises three settlements in the upper Baram with a population of 880 people. The settlements can be reached by logging road from Long Lapok on the Tinjar in one day. One can also take a small plane from Marudi to the Sa'ban settlement of Long Banga, and from there walk to the settlements. There is also a footpath linking these settlements to Bario in the north and Lio Mato down the Baram River.

The Silat Cluster are the Western Penan settlements located in the Silat River, comprising 179 households and a population of 752 people. They can be reached by logging road from Long Lapok in one day. They are linked to several Kenyah settlements in the Baram by river. There is also a traditional footpath linking them to other Western Penan villages in the Belaga District, especially those in the Plieran and Danum rivers.

The Long Napir Cluster is one of the smallest clusters with 291 people. The settlements are accessible by longboat and by logging road from the small town of Nanga Medamit on the Limbang within half a day.

The Adang Cluster has 5 settlements comprising 43 households and a population of 175 people. They can be reached in one day by logging road from the town of Lawas. There are also various footpaths linking these Penan settlements groups on the Adang and Magoh rivers.

The livelihood of the Penan can be generally categorised from the nomadic, semi nomadic and the settled Penan perspective. The nomadic Penan are hunters and gatherers and depend solely on the forest for their livelihoods. Their staple food is wild sago (Eugeissona utilis) supplemented by meat, especially wild boar and fish, and wild vegetables including shoots of bamboo and various types of wild palms. They also eat a lot of wild fruits. The fruit season is a period of abundance in food resource as this is the time when game animals, especially wild boars are plentiful.

Logging has affected the volume of food resources in the forest, making it difficult for them to obtain food. The exact impact of logging on the livelihoods of the people is difficult to determine as there are no studies done to address the issue.

Rattan is an important resource for weaving into mats and baskets for domestic use and for sale. These are their main source of cash income. The forest is virtually their home; it is where they build their camp huts, look for food and all other resources that they need. As more forest areas are open for major economic activities like logging and plantation development, survival of the Penan people in the area will be further affected.

The semi-settled Penan has a population of 134 people living in 35 households. Two villages are found in the Kuba'an adjacent to the Pulong Tau National Park, and one in the Tutoh just below the mouth of the Kuba'an. Apart from having established a more permanent place to live and starting to cultivate paddy and cassava, their way of life is much like that of the nomadic group. Being newly settled, many are handicapped by the lack of knowledge and skill in crop cultivation.

All the settled Penan have adopted cultivation of mainly hill paddy. Their success in adapting to their new life depends on several factors like length of settlement, relationship with neighbouring settled communities, such as Kayan, Kenyah, Kelabit, etc, and cohesiveness of the communities.

Most of the earlier settlers in the 1950s and 1960s are self-sufficient in rice; many households have started wet paddy cultivation due to influence by their Kelabit and Sa'ban neighbours. Those that do not produce enough rice supplement their diet with cassava and wild sago.

Groups that settled in the 1980s and 1990s are still in the process of learning the technique of hill paddy cultivation. Presently, they rotate their diet on rice, cassava and sago.

The settled Penan in the Heart of Borneo area have not started cultivation of cash crops. Their source of cash income comes from the sale of rattan mats and baskets, and gaharu whenever this is available, and now the resource is fast depleting. They earn their cash income by making and selling parang (bush knives) besides rattan mats and baskets. They are perhaps the best weavers in the whole island of Borneo.

The local communities residing in Sarawak Heart of Borneo seemed to show high dependency of forest resources. Hunting and fishing are also important activities that provide food and help to generate cash incomes. Among the most frequently hunted game animals are the wild boar (Sus barbatus), rusa (Cervus unicolor), kijang (Muntiacus munjak), and other smaller animals. Wild boar is the most common and popular species. The Kelabits and Lun Bawang mostly hunt with shot guns while the Penan normally use blowpipes with the help of hunting dogs, or by traps or snares.

Another important activity that helps to supplement household cash income and food supply is the collection of other non-timber forest products like rattan for making mats, baskets and handicrafts, wild vegetables, indigenous fruits, medicinal plants and others. They have an intimate knowledge of the forests, and know exactly the types of ferns, gingers, bamboo shoots, palm shoots, fungi and numerous other plants that can be eaten or used as medicine.

The local communities require timber for building houses and collect firewood for cooking. Most obtain their building materials from nearby forests. Fuelwood is important for all the rural communities.

The problems faced by the local communities in these areas are lack of infrastructure, increasing scarcity of wild protein, clean water resources, limited suitable land for farming and basic amenities.

Promoting community welfare is an important agenda of the HoB Initiative and needs to be enhanced more in future.

2.7 ECOTOURISM

The Sarawak Heart of Borneo has all the attractions of natural landscapes, pristine environment, diverse ethnic populations, unique cultures and traditions that are all important ingredients for ecotourism. The only effort is to take advantage of its potentials and prepare a comprehensive and holistic program for planning and development. A Sarawak Heart of Borneo Ecotourism Masterplan could be developed in the near future.

Then, marketing and promotion will be the next logical step to take, by selling the products through various tour packages or marketing tools. This can be carried out by government agencies or tour operators themselves. The contents of the tour packages, especially the itineraries, must be flexible to cater to the needs of tourists from different regions and markets. This also applies to the duration of travel. For the preparation of tour packages, it is necessary to undertake market research, and to understand and know the profiles of each country in the different marketplaces. For example, what is good for the European may not be good for the Chinese and vice-versa. The principle of 'matching the right products for the right markets' must be recognised during promotion and marketing.

Ecotourism's lifespan depends very much on the intrinsic and aesthetic values as well as the health of the environment in situ. There are a few areas which need to be investigated in detail in future planning and development. As mentioned earlier, the HoB area has all the potential factors to become an important site for this green and environmentally friendly special niche tourism.

To realise these potentials, efforts must be focused on key areas for regional ecotourism plan studies. This is to take stock of the existing infrastructure and facilities, human capital requirement, the local capacity to handle tourists, and participation in the business activities. Any recommendations from the studies in future should be implemented properly and effectively, and should not be compromised, lest the benefits of ecotourism would not be fully realised. Proper understanding of the principles of ecotourism and its effects on the rural population is of paramount importance. There must be an understanding on profit sharing of economic benefits among all partners, but not at the expense of the environment.

The Sarawak Heart of Borneo project is a long-term conservation initiative that will contribute to the protection of the physical environment and rich biodiversity's of central Borneo. The initiative will serve to enhance the conservation of one of the oldest tropical rainforests on earth. Sarawak has large areas of land under various types of forest and the greatest number of Totally Protected Areas (TPAs) in Malaysia.

The national parks and nature reserves are sites for passive and active nature-based

recreation or ecotourism, conservation and research. Wildlife sanctuaries are primarily for conservation and research, but limited ecotourism may be permitted. Since the late 1960s, tourism has been part of the Sarawak landscape. It started with rural tourism based mainly on native cultures and longhouses. This concept was later expanded to encompass culture, adventure and nature or CAN. The CAN tourism is also known as ecotourism as it fulfils and meets all the requirements of the ecotourism concept.

The tourism industry is considered as one of the major and important industry for Malaysia. In Sarawak, it is still considered as a young and small industry of great potentials. Good and suitable facilities and greater accessibility, especially air-linkages from various destinations (local and international), are necessary to further develop or boost the industry. Lack of good infrastructure poses a hindrance to promoting ecotourism in the remote rural areas.

Over the past decade, there has been a marked increase in the number of tourists into Sarawak. In 2023, based on the Ministry of Tourism, Creative Industry and Performing Arts' data, Sarawak received RM8.7bil from tourism and recorded more than 3.9 million tourists. The increase in the number, especially among foreign tourists (who normally have a higher purchasing power), has generated higher revenue and larger multiplier effects, while helping to create more business and a myriad of job opportunities. It has also uplifted the income level of those who are directly or indirectly involved in the industry, in the urban and rural areas.

To maintain the socio-economic function of the industry in the State's economy, it is important to ensure that 'sustainable tourism' is practised across the board by all stakeholders.

Although foreign visitors' arrival has been on the increase, only a small percentage has ventured into the rural areas, to visit the many national parks and longhouses.

Sarawak has been marketed as a premier destination for culture, adventure and nature (CAN). The State has the largest forested area, with a spectacular spectrum of national parks and nature reserves, and large rivers and scenic highlands that are suitable for culture, adventure and nature (CAN) to flourish and grow. In particular, the totally protected national parks and nature reserves, with their unspoiled and pristine environment, are great ecotourism assets that can be aggressively promoted. Local community participation has also been increasingly recognised as an essential element in ecotourism, especially in the rural areas.

There is immense potential for ecotourism in Sarawak's Heart of Borneo area because it contains some of the largest and most important national parks in the State. These are the Batang Ai National Park and Lanjak Entimau Wildlife Sanctuary (LEWS) in the south; Gunung Mulu National Park., Gunung Buda National Park and Pulong Tau National Park in the northern highlands in Ulu Baram.

Together with the permanent forest estate (PFE) and other forested lands, the area is also extremely high in biodiversity. Lanjak Entimau Wildlife Sanctuary and Batang Ai National Park in the south are home to the rare and endangered orangutan, and the Hose's langur, maroon langur and white-fronted langur that are among the rarest in the world. The conservation value of the Totally Protected Areas is therefore enormous and ecotourism, which is a tool for conservation, is the most appropriate type of tourism in the Heart of Borneo.

The north-eastern portion of the HoB is also unique in its geological formations, and comprises Sarawak's two highest mountains namely, Gunung Murud (2,424 m) and Gunung Mulu (2,317 m). The Maligan Highland and Kelabit Highland – collectively called the Northern Highlands - are located here. The national parks and their ecotourism potentials are described below.

With some of the best national parks in the State, the Heart of Borneo area has immense potential for development. The Batang Ai National Park, Gunung Mulu National Park or Pulong Tau National Park offer a complete package of experience that centres on nature, culture and adventure that is unique, but with more specific differences in the cultural element - with Batang Ai focusing on Iban community; Mulu on Penan and Berawan communities; and Pulong Tau on the Kelabit, Lun Bawang and Penan communities.

Another project of no less importance is handicrafts and there must be sufficient local supplies of raw materials for weaving and so forth. Such supply of raw materials can be produced by embarking on specific agro-forestry projects. The local communities should be encouraged to assist in organic food production and planting of bamboo and rattan. The latter is for the purpose of providing adequate raw materials for weaving and related handicrafts.

Since culture is part of ecotourism, it is also important and desirable to preserve the various ethnic cultures of the area. The new world order brought about by modernisation has affected the way of life of the locals too. This inevitable change can affect their traditions and cultures. There must be effort to keep interests in local dances, and the new generations must be taught the art of cultural dancing inherited from their forefathers. The younger generations must be encouraged to be proud of their heritage.

Availability of human resource is an important factor to consider if ecotourism is to develop further and succeed in the rural areas. There must be enough incentive to retain or encourage the young, literate and able bodies to stay put in the longhouses or villages. The industry should boost the interest of local people to make tourism a profession which is rewarding.

While there's growing enthusiasm for ecotourism in the State, a comprehensive plan from the government is still missing. Without clear direction, the industry risks becoming ad hoc and veering towards mass tourism. It's crucial to educate

stakeholders on the principles of ecotourism to preserve the environment while maximizing its economic potential.

Sarawak has now also expanded its tourism niche beyond ecotourism. Food and festivals have made their marks as another major tourism attraction. Pesta Nukenen Bario or Bario Food Festival initiated in 2005 has been a major success in drawing tourists to the highlands. The festival highlights Sarawak's unique ethnic food and culture, with three days of feasting in a celebration of local heritage for both tourists and locals. Sarawak Heart of Borneo has enormous potentials to tap into these tourism niche apart from the ecotourism attraction.

2.8 MAJOR OUTCOMES OF THE SARAWAK HEART OF BORNEO: 2009 -2024

The Sarawak Heart of Borneo has reached a few major milestones in its journey of more than a decade. Among the major outcomes achieved include: -

1) Promoting sustainable forests management through forest management certification,
2) Implementation of key game changing activities based on its 5 pillars,
3) Enhanced commitment in conservation agenda,
4) International and local collaboration with international and local organisations, and
5) Expansion of the Sarawak Heart of Borneo area.

The major outcome or achievement of Sarawak Heart of Borneo over the last decade is a strong and committed policy change by government in having a mandatory Forest Management Certification for all long-term forest timber licences within the Heart of Borneo areas. This is crucial to ensure that the huge Permanent Forest Estate is sustainably managed and environmental integrity is in place.

This will also ensure that Sarawak's economic earnings from its forest resources is on a sustainable basis in line with the Global Forests Goal 2 under the United Nation Forum on Forests (UNFF) to enhanced forest-based economic, social and environmental benefits.

Sarawak has made it mandatory for all long-term forest timber licence to obtain forest management certification by 2022. There are 25 Forest Management Units with a total area of 2,201,036 hectares had obtained certification under the Malaysian Timber Certification Scheme and the effort in FMC is continuing. Twelve of these Forest Management Units lies within the Heart of Borneo.

Over the last decade, the Sarawak Heart of Borneo has witnessed tremendous positive changes in its landscape due to conservation initiatives. The area designated as totally protected has markedly increased from 2009 to 2023,

encompassing 63.5% or 554,218.80 hectares of Sarawak's Totally Protected Areas within the Heart of Borneo. Numerous scientific expeditions have been conducted in these areas over the past decade, resulting in the documentation of new discoveries within these vast expanses of rich biodiversity in the Sarawak Heart of Borneo.

The allure of Heart of Borneo has also seen an increase in international collaboration with international organizations. Among these collaborations include the Copenhagen Zoo Asia Pacific Network, WWF, FAO United Nations, ITTO and others.

Various impactful activities based on the five pillars of the Sarawak Heart of Borneo were also successfully done. These include salt making facilities at Ba'Kelalan, Ulu Sungai Menyang gaharu tea project, wild cats surveys and others.

The most major outcome or achievement within the past decade of the implementation of Sarawak Heart of Borneo is the expansion of the Heart of Borneo Sarawak in 2018. These expansion areas are huge, increasing the total Heart of Borneo areas to 2.69 million hectares.

2.9 ISSUES AND CHALLENGES FOR SARAWAK HEART OF BORNEO: 2009-2024

The Heart of Borneo long term objectives as given under the Bali Declaration are one conservation vision and with a view to promote the people's welfare, and cooperation to ensure effective management of forest resources and conservation of a network of protected areas, productive forests and other sustainable land use.

The issues and challenges faced by the State in implementing the Sarawak Heart of Borneo voluntary international commitment are few but heavy.

Among the challenges faced are balancing economic growth and environmental sustainability as stated in Sarawak's PCDS 2030. This includes meeting the needs of biodiversity conservation and the development aspirations of both the State and its populace. The need for economic growth and development by the local communities within the huge 2.69 million hectares of the Heart of Borneo is critical.

But biodiversity conservation is also a valuable state asset that needs to be protected. From the numerous scientific expeditions conducted over the years, more new species and records were discovered. The immediate step would be to legally protect these key habitat areas as totally protected areas.

These balancing and delicate act of either sustaining the use of the areas for logging, major development or for biodiversity protection is a challenge for the State. Also, taking into consideration that the local communities need the areas as

future settlements expansion or for agricultural activities, this challenge needs to be threaded with a pragmatic and wise use approach.

Another issue and challenge that the Sarawak Heart of Borneo faced is enhancing community engagement and participation. It has a pillar enshrined to improve community livelihood, alleviate rural poverty and welfare of the community being addressed.

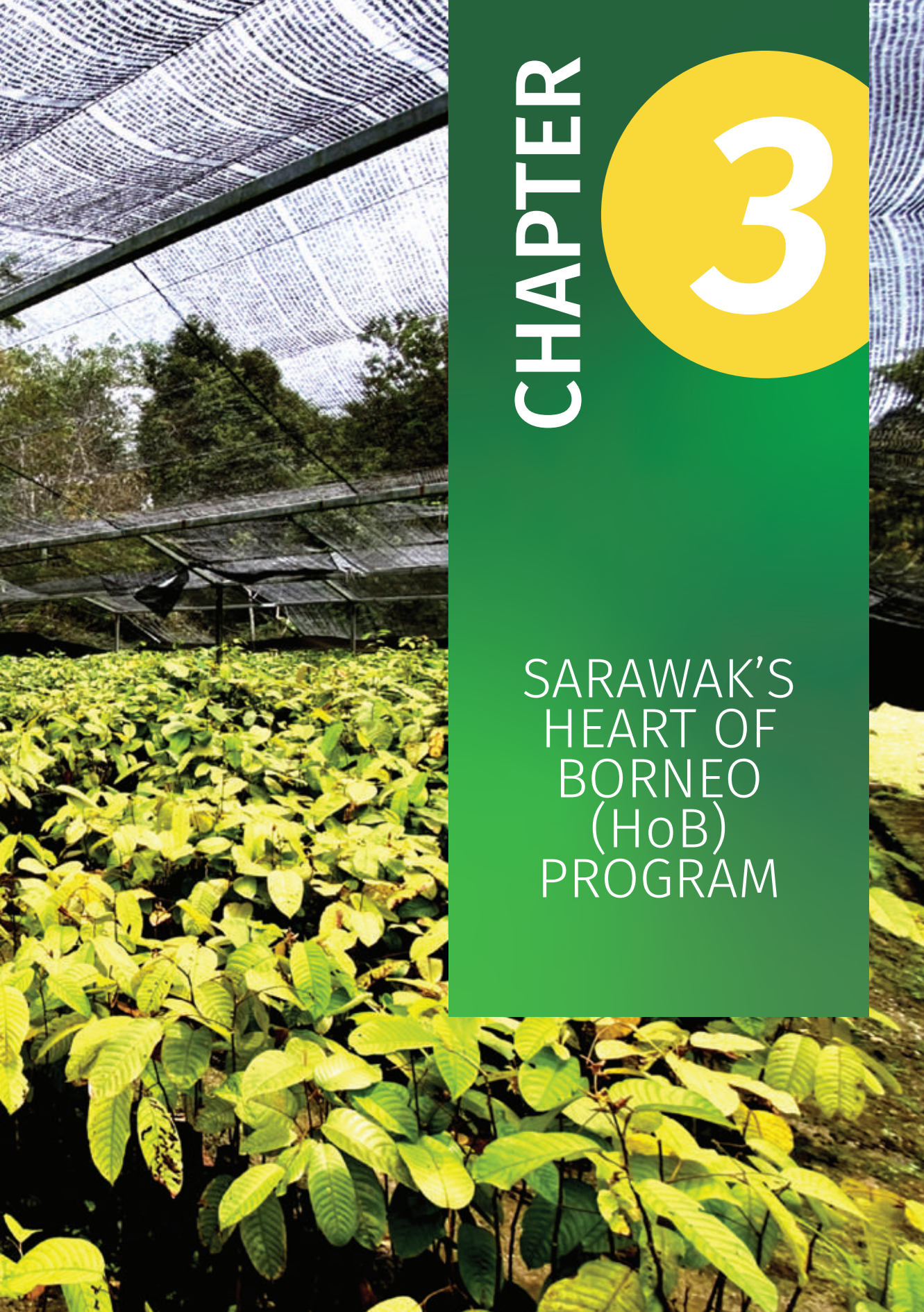
Though a comprehensive and holistic local community participatory plan could be designed, but what remains is how to successfully rope in the various local communities within the Sarawak Heart of Borneo.

Rural development is a key focus for the government, particularly in education and agriculture. One notable initiative is the Acropolis project, approved to transform the Maligan Highland and Kelabit Highland into hubs for halal meat and agricultural production, while also promoting them as ecotourism destinations.

One ongoing challenge with international commitments is the persistent lack of funding to achieve broad global goals. While organizations like the Asia Pacific Forests Network of the FAO United Nations and ITTO have supported programs in Sarawak's Heart of Borneo, there remains a need for additional external funding to fully realize objectives.

Malaysia has shown significant financial commitment, allocating approximately RM50 million through its 9th to the current 12th Malaysian Development Plans for programs within the Heart of Borneo. Despite this, Sarawak must still explore alternative revenue streams such as carbon trading, green economy initiatives, and ecotourism to sustain ongoing programs and activities in the region.





CHAPTER 3

SARAWAK'S HEART OF BORNEO (HoB) PROGRAM

CHAPTER 3 SARAWAK'S HEART OF BORNEO PROGRAM

Sarawak's Heart of Borneo covers an area of 2.69 million hectares over a contiguous block along Sarawak's boundaries with Kalimantan, Sabah and Brunei. The original size was 2.1 million hectares and was expanded in 2018.

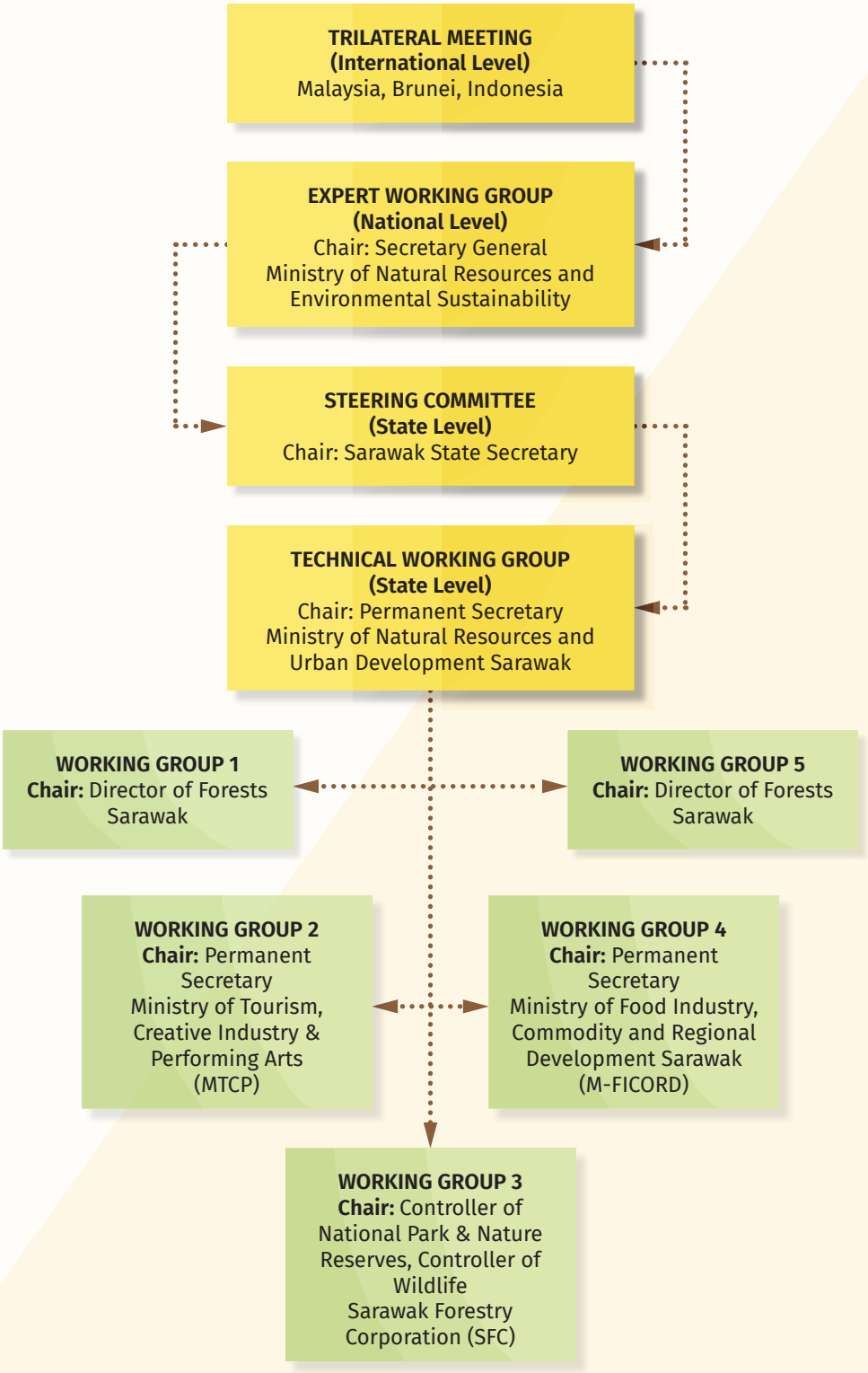
This is a massive area to be regulated and managed by Forest Department Sarawak alone and an inter-agencies collaboration is very much needed to ensure the vision of the Heart of Borneo is realized.

Sarawak's Heart of Borneo program energizes itself throughout the decade by aligning it as a state endeavor. The Heart of Borneo is also strongly supported under the key regional and international agreements such as ASEAN, BIMP-EAGA and others.

The foundation, as laid right from the start, reflected a strong inter-agencies cooperation guided by an operational institutional framework.

The state government's inter-agencies efforts, supported strongly by non-governmental organizations, private sectors and the academic institutions lay out their action plans and roadmaps through a very clear hierarchical committee.

These committees in terms of hierarchy are reflected as in Figure 1.


TRILATERAL MEETING
(International Level)
Malaysia, Brunei, Indonesia
EXPERT WORKING GROUP
(National Level)
Chair: Secretary General
Ministry of Natural Resources and
Environmental Sustainability
STEERING COMMITTEE
(State Level)
Chair: Sarawak State Secretary
TECHNICAL WORKING GROUP
(State Level)
Chair: Permanent Secretary
Ministry of Natural Resources and
Urban Development Sarawak
WORKING GROUP 1
Chair: Director of Forests
Sarawak
WORKING GROUP 5
Chair: Director of Forests
Sarawak
WORKING GROUP 2
Chair: Permanent
Secretary
Ministry of Tourism,
Creative Industry &
Performing Arts
(MTCP)
WORKING GROUP 4
Chair: Permanent
Secretary
Ministry of Food Industry,
Commodity and Regional
Development Sarawak
(M-FICORD)
WORKING GROUP 3
Chair: Controller of
National Park & Nature
Reserves, Controller of
Wildlife
Sarawak Forestry
Corporation (SFC)

3.1 HEART OF BORNEO TRILATERAL MEETINGS

An Institutional Arrangement and Modalities is established as a mechanism to coordinate, implement, and monitor the joint Heart of Borneo programs, projects and activities as provided for by the "Strategic Plan of Action" of the Heart of Borneo Initiative. This Institutional Arrangement and Modalities is operationalised through the establishment of Trilateral Meetings.

The trilateral meetings served as the governing body of the Heart of Borneo and the forum for several agendas to be deliberated regarding the Heart of Borneo. These trilateral meetings are participated by government officials from member countries and led by Senior Official level.

Among the agendas and issues that are brought up at the Trilateral Meetings: -

i) deliberation on possible areas of cooperation on policy and program,
ii) presentation of country report on the progress of implementation of Heart of Borneo projects/activities,
iii) discussion on common position and the future collaboration,
iv) consideration on the recommendations of the Technical Committee, and
v) may call for a Special High-level Ministerial Meeting to discuss contentious issues which require political commitment, as and when necessary.

A Technical Committee is also established and responsible to evaluate and consider any proposed joint programs/projects/activities from the Members and other stakeholders for the consideration and approval at the Trilateral Meeting.

Each member country is given the authority either individually or in cooperation with third party to propose a joint program/project/activity for the implementation of HoB initiative at Trilateral Meetings.

Upon approval by the Members, the Trilateral Meeting could endorse the commencement of projects. The implementation of such a project is guided by the respective national project document and specific guidelines. External funding could then be channeled through the respective Members.

The Heart of Borneo trilateral meetings is held annually and brought together representatives from the three Bornean countries; Brunei Darussalam, Indonesia and Malaysia. The meeting is also attended by representatives of Bornean communities as well as some partners and observers from the non-governmental organizations.

The representatives from the three member countries review progress to date and commit to several new initiatives. All three member countries also present country reports on the development and progress that has been made in the Heart of Borneo in their respective countries.

The 1st Trilateral Meeting was held on the 18-20 July 2007 in Brunei Darussalam. This marked the start of an eventful journey across the decade, strengthening the international cooperation between the three nations in Borneo.

Since then, it grew in strength and there have been thirteen trilateral meetings held among the three member countries.

The last Trilateral Meeting was held in 2019 at Brunei Darussalam and one of the key projects discussed was the Heart of Borneo Corridor Project Implementation linking conservation areas between the three countries.

Sarawak was honoured to have hosted two Heart of Borneo Trilateral Meetings, which was the 6th Heart of Borneo Trilateral Meeting in 2012 and the 12th Heart of Borneo Trilateral Meeting in 2018.

Table 2: Heart of Borneo Trilateral Meetings

Date	Meetings
18-20 July 2007	HoB First Tri-Lateral Meeting in Brunei
4-6 April 2008	2nd Trilateral Meeting in Pontianak Indonesia
5-6 October 2009	3rd Trilateral Meeting in Kota Kinabalu, Sabah
20-22 April 2010	4th Trilateral Meeting in Bandar Seri Begawan, Brunei Darussalam
21-22 September 2011	5th Heart of Borneo Trilateral Meeting in Novotel Hotel, Balikpapan, Indonesia
24-26 September 2012	6th HoB Trilateral Meeting in Pullman, Kuching
September 2013	7th Trilateral Meeting, Brunei Darussalam
December 2014	8th Heart of Borneo Annual Trilateral Meeting (T8) at Palangka Raya in Central Kalimantan
11-12 August 2015	9th Heart of Borneo Annual Trilateral Meeting in Sandakan
5-7 September 2016	10th Heart of Borneo Annual Trilateral Meeting in Brunei Darussalam
11-12 October 2017	11th Trilateral Meeting in Tarakan, North Kalimantan, Indonesia
27-29 September 2018	12th HoB Trilateral Meeting, Miri Marriott Resort and SPA, Miri
24-26 September 2019	13th Heart of Borneo Trilateral Meeting in Brunei Darussalam

3.2 MALAYSIA HEART OF BORNEO EXPERT WORKING GROUP

At the national level for Malaysia, an Expert Working Group chaired by the Secretary-General of the Ministry of Natural Resources and Environmental Sustainability provide guidance and advice on the implementation of the Malaysia's Heart of Borneo national program. The Ministry of Natural Resources and Environmental Sustainability is the Heart of Borneo Malaysia secretariat.

The National Expert Working Group members comprised of relevant federal and state government agencies.

A Federal budget for the 9th, 10th, 11th and 12th Malaysian Plan of RM5,826,800, RM3,500,000, RM26,240,000 and RM15,000,000 has been allocated respectively for the Heart of Borneo program in Sarawak.

3.3 SARAWAK STATE STEERING COMMITTEE

At the state level, the Sarawak Steering Committee, chaired by the State Secretary, provide the Sarawak's Heart of Borneo direction on its implementation.

The members of the Steering Committee comprised of several key state ministries such as the Ministry of Natural Resources and Urban Development, Ministry of Tourism, Creative Industry and Performing Arts Sarawak, Ministry of Food Industry, Commodity and Regional Development (M-FICORD), Ministry of Public Health, Housing and Local Government.

These ministries are competently supported by the relevant government agencies such as the Sarawak State Attorney-General Chambers, Economic Planning Unit Sarawak, Natural Resources and Environment Board, Department of Agriculture Sarawak, Land and Survey Department, Sarawak River Board, Council for Native Customs and Traditions, Sarawak Timber Industry Development Corporation, Sarawak Biodiversity Centre, Sarawak Forestry Corporation, Mineral and Geoscience Department and the Resident offices.

These government agencies implemented numerous activities under the Heart of Borneo pillars under the guidance of the State Steering Committee.

Forest Department Sarawak serves as the secretariat for the Heart of Borneo Sarawak.

The Terms of Reference for the Steering Committee was to set directions of the Sarawak Heart of Borneo initiative to meet the requirements of the State Government's overall development agenda in tandem with its land use policy, legislation and institutional framework.

It also serves to endorse and approve project proposals submitted by Technical Working Group before they can be forwarded to the Federal Authority.

3.4 TECHNICAL WORKING GROUP

The Technical Working Group chaired by the Permanent Secretary of the Ministry of Natural Resources and Urban Development Sarawak monitor and report the activities done by various government agencies and non-governmental organizations to the State Steering Committee.

At the Technical Working Group meetings, the members present their reports on their activities within the Heart of Borneo Sarawak. The agencies are encouraged to submit their Heart of Borneo proposals through their respective ministries.

As for any initiatives relevant to conservation, the members are also encouraged to request funding from the National Conservation Trust Fund (NCTF) under Ministry of Natural Resources and Environmental Sustainability.

The members of the Technical Working Group are the Ministry of Natural Resources and Urban Development , Ministry of Tourism, Creative Industry and Performing Arts Sarawak, Ministry of Food Industry, Commodity and Regional Development (M-FICORD) , Department of Agriculture Sarawak, Forest Department Sarawak, Sarawak Economic Planning Unit, Sarawak Timber Industry Development Corporation, Sarawak Forestry Corporation, Sarawak Biodiversity Center, Council for Native Customs and Traditions, and Natural Resources and Environment Board.

Forest Department Sarawak act as the secretariat for the Technical Working Group Committee. Under the HoB TWG, five (5) working group was formed under each pillar to facilitate the implementation of HoB initiatives.

3.4.1 WORKING GROUP 1 – SUSTAINABLE FOREST MANAGEMENT

Sustainable forest management (SFM) is one of the core functions of the Forest Department of Sarawak, in which FDS is the main agency to ensure implementation of SFM particularly in all Permanent Forests Estates, which includes the HoB area.

Sarawak believes that Forest Management Certification (FMC) is an important tool to ensure that SFM is being applied on the ground. The availability of consultation frameworks where committees are being established at different levels to discuss and reflect on SFM, FMC, and especially forest activities in Sarawak further strengthens the aspect of SFM through FMC.

The consultation framework consists of 4 stages:

- Stage 1: Community Representative Committee (CRC) and Forest Management Unit Representative Committee (FMURC). This involved the establishment of a committee on the ground by the local community (CRC) and by the Forest Management Unit holders (FMU).

- Stage 2: Forest Management Certification Liaison Committee (FMCLC). Chaired by the Regional Forest Officer and established for every Forest Management Unit (FMU) with members including the government agencies such as Forest Department Sarawak, Land and Survey Department, Resident and District offices, Sarawak Forest Corporation (SFC), Natural Resources and Environment Board (NREB), the CRC and FMURC, the concerned Non-Governmental Organizations (NGOs) such as WWF Malaysia, Sarawak Biodiversity Centre and more.

- Stage 3: Forest Management Certification Technical Committee (FMCTC). Chaired by the Director of Forests to discuss the technical matters on forest operations which include the three important elements of forest management that is economy, environment and social.

- Stage 4: Forest Management Certification Steering Committee (FMCSC) which is the highest stage, established at the Ministry level and chaired by the Permanent Secretary of Ministry of Natural Resources and Urban Development. This committee discusses and deliberates on the policy and matters related to forest management in the entire Sarawak and the members include the head of FDS, Land Survey Department, NREB, SFC, STIDC and the Department of Agriculture.

The Forest Department will report any matters regarding SFM such as FMC, land matters, forest operations etc. in the TWG as such matters have already been discussed in the FMCLC, FMCTC and FMCSC.

3.4.2 WORKING GROUP 2 – ECOTOURISM BASED ON CULTURE, ADVENTURE AND NATURE (CAN)

The Working Group 2, chaired by the Permanent Secretary Ministry of Tourism, Creative Industry & Performing Arts (MTCP) Sarawak, was formed to facilitate the implementation of the HoB initiative focusing on developing the ecotourism involving the local communities to promote conservation and enhance socio-economic well-being.

The members of Working Group 2 are Ministry of Food Industry, Commodity and Regional Development (M-FICORD), Ministry of Tourism, Arts and Culture (MOTAC - Sarawak Office), Sarawak Tourism Board (STB), Resident Offices, Local councils, Sarawak Forestry Corporation (SFC), Forest Department Sarawak (FDS), Sarawak Tourism Federation (STF), Sarawak Tourist Guide Association (SkTGA), Sarawak Craft Council, Majlis Seni Sarawak and Tourism Malaysia (Sarawak Office).

3.4.3 WORKING GROUP 3 – CONSERVATION OF BIOLOGICAL RESOURCES

The Working Group 3, chaired by the Controller of Sarawak Forestry Corporation (SFC), was formed to facilitate the implementation of Conservation and Biological Diversity initiatives within the HoB areas.

The members of Working Group 3 are Sarawak Biodiversity Centre, Forest Department Sarawak, Economic Planning Unit, Land & Survey Department, Department of Agriculture, Natural Resources & Environmental Board (NREB), *Unit Keselamatan dan Penguatkuasaan Sarawak* (UKPS) and Institute of Biodiversity and Environmental Conservation (IBEC, UNIMAS).

3.4.4 WORKING GROUP 4 – SUSTAINABLE LAND USE AND AGRICULTURE

The Working Group 4, chaired by the Permanent Secretary Ministry of Food Industry, Commodity and Regional Development (M-FICORD), was formed to facilitate the implementation of the HoB initiative focusing on sustainable development of rural communities through wise management of natural resources and agriculture.

The members of Working Group 4 are Department of Agriculture Sarawak (DOA) as secretariat, Forest Department Sarawak, Department of Veterinary Services (DVS), Land Custody and Development Authority (LCDA), Sarawak Land Consolidation and Rehabilitation Authority (SALCRA), Sarawak Land Development Board (SLDB), *Lembaga Getah Malaysia Sarawak*, Malaysian Palm Oil Board (MPOB) Sarawak, RISDA Sarawak, Malaysian Cocoa Board Sarawak, Council for Native Customs & Tradition Sarawak, Malaysian Palm Oil Certification Council (MPOCC), *Lembaga Perindustrian Nanas Malaysia* (LPNM), Natural Resources and Environment Board Sarawak (NREB), and Sarawak Biodiversity Centre (SBC).

3.4.5 WORKING GROUP 5 – COMMUNITY BASED/RURAL POVERTY ALLEVIATION PROGRAM

The Working Group 5, chaired by the Director of Forests Sarawak, was formed to facilitate the implementation of the HoB initiative focusing on the welfare of rural communities through effective management of Totally Protected Areas, production forests and agriculture.

The members of Working Group 5 are Forest Department Sarawak, Department of Agriculture (DOA), Social Welfare Department of Sarawak, Economic Planning Unit, Sarawak Forestry Corporation (SFC), Sarawak Biodiversity Centre, Ministry of Tourism, Creative Industry and Performing Arts (MTCP), Ministry of Food Industry, Commodity and Regional Development Sarawak (M-FICORD), Sarawak Timber Industry Development Corporation (STIDC), Council for Native Customs & Tradition Sarawak, Economic Planning Unit, *Kementerian Pembangunan Wanita, Kanak-Kanak & Kesejahteraan Komuniti* (KPWK), Natural Resources & Environmental Board (NREB) and Ministry of International Trade, Industry and Investment (MINTRED)

3.5 SARAWAK HEART OF BORNEO ACTIVITIES

The inter-agencies collaboration activities are guided by the five pillars of Sarawak Heart of Borneo. These five pillars lend clarity to relevant agencies activities within the Heart of Borneo based on their areas of jurisdiction.

3.5.1 PILLAR 1 SUSTAINABLE FOREST MANAGEMENT

The activities under this pillar are primarily conducted by Forest Department Sarawak and supported by relevant stakeholders.

The activities that had been done include the Sustainable Forest Management and Forest Management Certification capacity building, communities' awareness program at various localities of the Forest Management Units and the completion of the Revised Reduced Impact Logging (RIL) Guidelines for Sarawak.

Up till August 2024, there are currently thirteen Forest Management Units which lies within the Heart of Borneo Sarawak with an area of 1,048,545 hectares that have been awarded with Certificates for Management of Natural Forest under Malaysian Timber Certification Scheme, which is recognized by Programs for Endorsement of Forest Certification.

There have also been various awareness activities done within the Forest Management Units within Sarawak's Heart of Borneo areas.

This includes awareness road shows to enhance communities' knowledge on Sustainable Forest Management and Forest Management Certification at Ravenscourt FMU and Ulu Trusan FMU in Lawas District, Kapit FMU, Gaat-Mengiong FMU, Mengiong-Gaat FMU, Baleh Balui FMU in Kapit District, Pasin FMU in Song District and Danum FMU and Linau FMU in Belaga District.

A major policy reform on forestry in Sarawak which plays a major role in conserving Sarawak's Heart of Borneo areas in Sarawak is the decision by the State that there will be no issuance of new timber license in the State land and Permanent Forest Estate.

The issuance of license is only under very special circumstances involving development of verified Native Customary Right (NCR) or alienated land. There will also be no issuance of provisional leases for new palm oil plantation except for Native Customary Right (NCR) land.

Another major supporting program that helps Sarawak on its road towards sustainable forest management is the FAO-EU Forest Law Enforcement, Governance and Trade (FLEGT) program initiated in 2019 over a one-year period.

The program sets its objective as to carry out a gap assessment of the newly Harmonized Reduced Impact (RIL) Logging Guidelines for Sarawak against international best practice and through multi-stakeholders' consultation.

The program has delivered three key outcomes: firstly, a comprehensive gap assessment and technical review of the Harmonized RIL Guidelines for Sarawak; secondly, the subjecting of these guidelines to multi-stakeholder consultation and scrutiny; and thirdly, the development of a robust monitoring, evaluation, and visibility framework for the Revised RIL Guidelines.

There are also other initiatives done within the Sarawak Heart of Borneo such as the initial gazettement of the proposed Mujong Melinau Forest Reserve.

The boundary demarcation for existing Permanent Forest Estates such as the Sarawak Mangrove Forest Reserve, Bako Communal Forest, Sampadi Forest Reserve and Silantek Protected Forest has also been carried out.

The Natural Resources and Environment Board has also initiated a pilot project for Environmental Compliance Audit (ECA) within the Sarawak Heart of Borneo at Linau Forest Management Unit in Ulu Baram.

This is to support the timber licensee of Linau Forest Management Unit in its migration from Environmental Monitoring Report (EMR) to Environmental Compliance Audit (ECA) and is still in progress from 2018.

A few licenced areas apart from Linau Forest Management Unit have also initiated this migration from EMR to ECA such as Kapit Forest Management Unit, Entulu-Melatai Forest Management Unit and Ravenscourt Forest Management Unit.

3.5.2 PILLAR 2 ECOTOURISM BASED ON CULTURE, ADVENTURE AND NATURE

Pillar 2 revolves around ecotourism activities and entails strong participation from the local community. Research and development efforts in this field are highly dynamic and innovative. Ecotourism products are developed based on criteria such as marketability, community benefit, and adherence to global ecotourism guidelines.

Community homestay is constantly being developed with the strong support by the relevant government agencies and community empowerment in ecotourism management is being progressively implemented.

The Ministry of Tourism, Arts and Culture Malaysia has implemented about forty-five homestay clusters through the "Program Homestay Malaysia" which employs 642 operators with a total of 934 rooms throughout Sarawak. Nine clusters with 129 operators and 261 rooms are under the Sarawak's Heart of Borneo areas.

These include homestays at Kampung Long Sukau, Long Langai, Kampung Long Semadoh in Lawas, Homestay Mulu, Long Iman at Mulu, Long Banga at Ulu Baram, Kampung Lobang Batu in Serian and the famous and popular Kampung Annah Rais in Padawan.

Ecotourism products thrive on branding and marketing, and the Sia Sitok Sarawak Campaign has also assisted in promoting the Heart of Borneo activities on ecotourism. Promotion is also done through films such as the filming of Natgeo Vignette Sarawak, Mulu National Park, Miri, Sarawak and video production for Cuti Cuti Malaysia X 5 Senses Travelogue with its first episode covering Kuching at Kampung Sting, Susung Waterfalls & Pean Waterfalls, Bengoh Dam, Padawan.

Ecotourism within the Sarawak Heart of Borneo is also boosted through various ecotourism events such as Pesta Beras Adan Homestay, Pesta Buah Kaber Kampung Puneng Trusan, Long Samadoh and the highly awaited annual Pesta Nukenen at Bario.

The Mulu Eco Challenge Sarawak Adventure Challenge at Kampung Lobang Batu, Serian Padawan Raft Safari at Anna Rais, Temurang, Danu and Git areas also boosted the ecotourism activities within the Heart of Borneo Sarawak.

The facilities within the Sarawak's Heart of Borneo are also being developed to support ecotourism projects within these areas. This includes the various interpretation centres and park facilities at the national parks.

There are also various ecotourism infrastructure and logistic support projects that had been funded by the Ministry of Tourism, Arts and Culture Malaysia.

These projects include the Lobang Batu Serian upgrading of its Tourist Information Centre, the Tourist Counter and public toilets at Anna Rais Padawan, improvement of the community halls at Long Samadoh and Buduk Nur, Ba' Kelalan, maintenance of the Cultural Hall at Long Sukang, maintenance of the Eco Camp at Kampung Puneng Trusan and the upgrading of the Botanical Garden facility at Ba'Kelalan. The jetty for community and tourist uses at Long Langai, Ba'Kelalan has also been completed.

An Urban Forest Park has also been completed in the Heart of Borneo Interpretation Centre at Kayangeran in Lawas. This was done through the federal funding allocated under the Ministry of Natural Resources and Environmental Sustainability.

The construction of a community jetty, floating pontoon at Ulu Sungai Menyang Conservation Area, Batang Ai has been completed with various stakeholders' support, especially the Sri Aman Resident Office and the local community of the area.

The construction of a suspension bridge at Lubok Pantu Ulu Engkari, Batang Ai in Sri Aman provides logistic support for ecotourism activities in this area.

Forest Department Sarawak has also started working on its state-of-the-art Forest Resources One-Stop Digital and Visual Gallery at its Forest Research Centre. This gallery will showcase the various unique forests biodiversity discovered within the Sarawak's Heart of Borneo and other parts of Sarawak.

At the newly extended southern Heart of Borneo areas, the construction of Ribu'an Nowang Jungle Trail, Bung Bratak Heritage Centre is being implemented.

The community soft skills are also being consistently reskilled and upskilled through training, courses and briefings.

These include a briefing session on Reskill Upskill Courses on Eco-Tourism, Sarawak at Rumah Selepong Berangan, Klingkang Range, Sri Aman and the Community Training Program: Eco-Tourism Based Skill Enhancement at Rumah Tinggau, Lubok Antu, Ulu Engkari, Sri Aman.

Ecotourism course such as the 'Local Host Guide' was also done at Long Samadoh and the Handicraft Workshop at Homestay Ba' Kelalan.

There are also various trainings done by other government agencies such as the Basic Public Speaking and Guide Course in Kuching for the local communities from Ulu Sungai Menyang, Batang Ai and homestay management visits to Sungai Asap, Belaga for the local communities from Long Napir and Kampung Bahagia, Ulu Limbang.

On the way forward, the Ministry of Tourism, Arts and Culture will enhance its focus and increase efforts on the development of ecotourism sites managed by the locals. One of the potential pilot projects for Community Based Ecotourism is Gua Silabur in Serian, a thriving ecotourism site managed by the locals.

Malaysia has completed its reviewed of its National Ecotourism Plan and this will provide guidance to the Sarawak's Heart of Borneo program on how to improve the ecotourism activities and sites to attract more visitors.

The utilisation of the Heart of Borneo brand will be amplified to promote tourism in Sarawak, particularly focusing on community-based tourism. Two specific areas where the Heart of Borneo brand can enhance tourism in Sarawak are the Ba' Kelalan–Bario initiative by WWF-Malaysia and the Rumah Manggat project in Batang Ai coordinated by the Forest Department Sarawak.

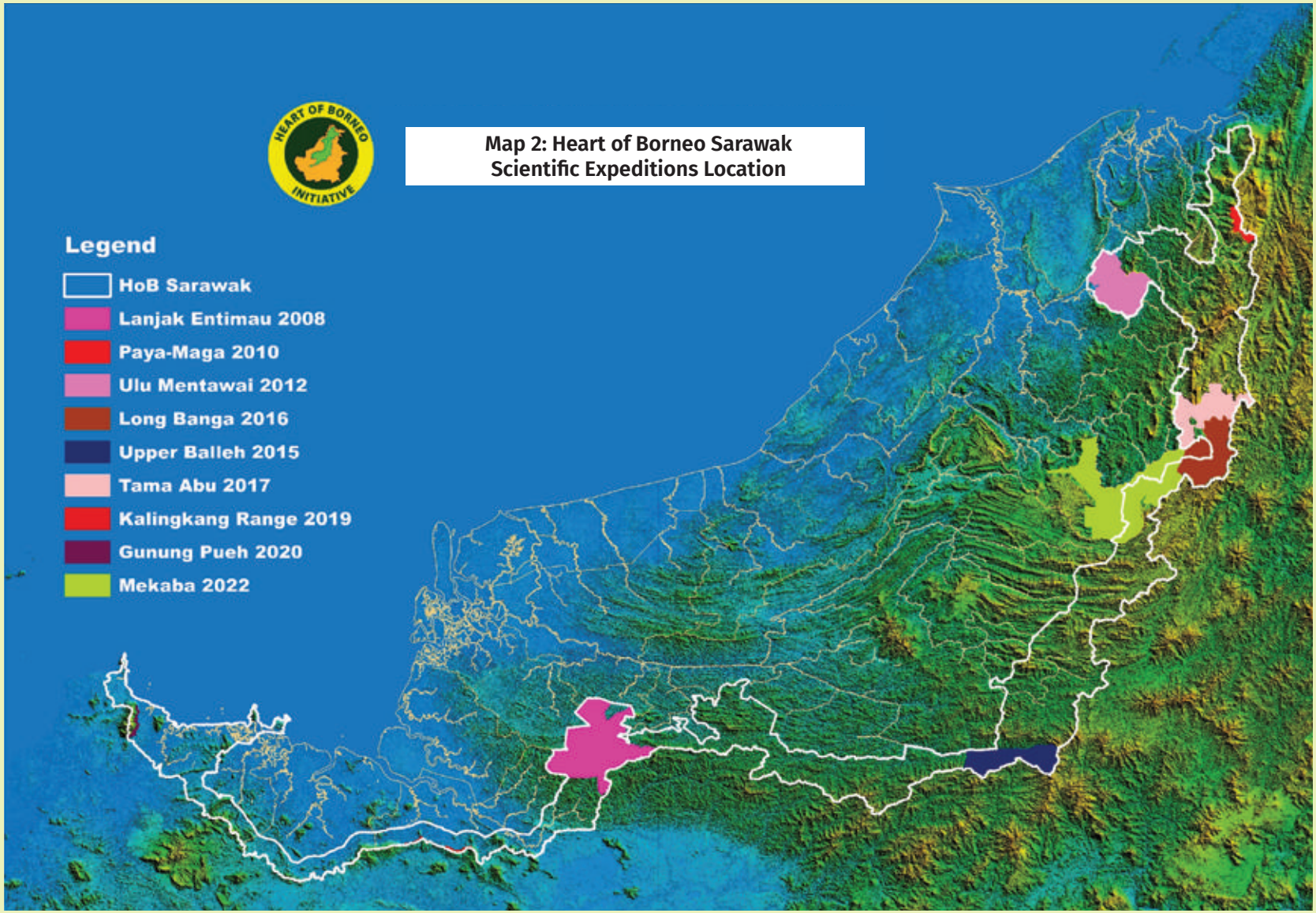
3.5.3 PILLAR 3 CONSERVATION OF BIOLOGICAL DIVERSITY

The conservation of biological diversity plays an important role in achieving the common vision shared by the three countries on the Heart of Borneo initiative.

Sarawak's Heart of Borneo is still very largely forested with its natural forests and various biological habitats.

The arduous task of documenting the numerous species of biological diversity with the Sarawak's Heart of Borneo lies under the responsibility of the Forest Department Sarawak supported by other organisations through numerous scientific expeditions that Forest Department Sarawak has organised over the years.

These scientific expeditions include the Lanjak Entimau Wildlife Santuary in 2008, Paya Maga in 2010, Ulu Mentawai in 2012, Upper Balleh in 2015, Long Banga in 2016, Tama Abu in 2017, Kelingkang Range in 2019, Gunong Pueh Forest Reserve in 2020 and recently at Gerenai FMU Long Mekaba, Ulu Baram in 2022 as shown in Map 2.


HEART OF BORNEO INITIATIVE
Map 2: Heart of Borneo Sarawak
Scientific Expeditions Location
Legend
HoB Sarawak
Lanjak Entimau 2008
Paya-Maga 2010
Ulu Mentawai 2012
Long Banga 2016
Upper Balleh 2015
Tama Abu 2017
Kalingkang Range 2019
Gunung Pueh 2020
Mekaba 2022

Eighteen families of trees have been recorded and the major family Dipterocarpaceae registered a species count of 76 with 7 species endemics to Sarawak and 44 endemics to Borneo.

A High Conservation Value Forests Assessment within Sarawak's Heart of Borneo Area has also been done at Ulu Trusan Forest Management Unit Sarawak in 2017. The High Conservation Value assessment objectives were to identify the attributes and develop appropriate recommendations for management and monitoring.

The study of mineral contains by Forest Department Sarawak at various salt licks found within the Heart of Borneo areas is also another interesting aspect of the biological conservation for the Sarawak's Heart of Borneo.

This study sets its objectives as to determine mineral's type and its concentration in salt licks and to compare mineral composition of salt licks at different locality and weather condition. The findings indicated that seven minerals were detected and showed different concentration variation between study locations and varies during the dry and rainy seasons.

Species-specific studies were also done such as the diversity of birds' species at Gunung Pueh Forest Reserve, conservation and management of Proboscis Monkey (Nasalis larvatus) within Permanent Forest Estates (PFEs) in Sarawak and the study on biodiversity and ethnobotany of the monocotyledonous plants in Kuching, Serian and Kota Samarahan.

A few key studies have also been conducted within the vast Sarawak's Heart of Borneo, which include various studies at Kuching Wetland National Park, which has been designated as a RAMSAR site. Among the key studies done at this RAMSAR site include Multi-temporal Analysis of Mangrove Restoration Site Sungai Lemidin, Kuching Wetland National Park; Spatial Variations of Disturbed Soil in Mangroves Ecosystem Based on Their Physical and Chemical Properties, Kuching Wetland National Park (RAMSAR).

An estimation of above ground biomass in restored juvenile mangrove stands, Muara Tebas, Kuching has also been conducted in line with the State carbon credit vision.

An exceptionally comprehensive and innovative endeavor within Sarawak's Heart of Borneo for biological conservation is the Wildlife Corridor/Connectivity project in Upper Baleh within the Baleh Permanent Forests. This initiative is carried out through a collaboration between WWF-Malaysia, the Forest Department Sarawak, Sarawak Energy Berhad, and UNIMAS.

Another significant study, conducted on a broader scale encompassing the watershed, is the Integrated Watershed Management project in the Baleh Watershed, covering areas in Song, Kapit, and Baleh. This initiative is spearheaded by WWF-Malaysia.

The findings and insights from various studies within Sarawak's Heart of Borneo are disseminated through knowledge-sharing seminars organized by the Forest Department Sarawak, as illustrated in Table 2 below.

Table 3: List of seminars and publications

Seminar	Publication
Lanjak Entimau Scientific Expedition Seminar, 2009	Heart of Borneo Series 1: Lanjak Entimau Wildlife Sanctuary - Sarawak's Hidden Jewel Heart of Borneo Series 6: Checklist of Plants of Lanjak Entimau Wildlife Sanctuary
-	Heart of Borneo Series 2: Paya Maga - Sarawak's Pristine Highland Forest Heart of Borneo Series 9: Payeh Maga – Sarawak's Pristine Highland Forest (New Addition)
* Heart of Borneo Seminar 2013 was conducted	Heart of Borneo Series: Mentawai - The Lush Rainforest of Northern Mulu
Heart of Borneo Scientific Expedition to Upper Baleh, Kapit Seminar 2016	Conserving the Gems of Upper Baleh, Kapit *Not a part of the HoB Series, published and copyright by UNIMAS
Heart of Borneo Sarawak Scientific Expedition, Long Banga Seminar 2017	Heart of Borneo Series 4: Long Banga – "Where the Beat Goes On" Heart of Borneo Series 8: Monograph of Expeditions Long Banga & Adjacent Areas
Heart of Borneo Scientific Expedition, Tama Abu Seminar 2018	Heart of Borneo Series 5: Proceedings of Seminar Tama Abu Heart of Borneo Series 7: Tama Abu "Where the Beat becomes Rhythm"
Heart of Borneo Scientific Expedition, Kelingkang Range Seminar	Research paper published in Sarawakensis – Sarawak Forest Research Bulletin, Issue 3, 2020
Heart of Borneo Scientific Expedition Gunong Pueh Seminar 2022, at UCSI Hotel	The Heart of Borneo Series 21: Proceedings for the Heart of Borneo (HoB) Seminar 2022: Gunong Pueh Forest Reserve Scientific Expedition
Heart of Borneo Scientific Expedition, Gerenai-Long Mekaba Seminar 2023, at the Waterfront Hotel	-

The most recent Sarawak's Heart of Borneo Seminar was held in 2023, organized by Forest Department Sarawak at the Waterfront Hotel, Kuching. The seminar was conducted to share findings, exchange ideas and identify issues from scientific expedition conducted in Gerenai-Long Mekaba, Ulu Baram, Miri in 2022 with about two hundred participants from various department agencies, NGOs and communities in Malaysia, where sixteen papers were presented.

This seminar served as a platform to share valuable experiences and findings and to compile and gather information for the Heart of Borneo Initiative after a decade of implementation.

The Ulu Sungai Menyang Orangutan Strategic Action Plan, initiated by the Wildlife Conservation Society, underwent its first mid-term review in 2019. The review was attended by forty-eight participants from fifteen state agencies.

In 2020, the second review was conducted to finalise the implementation plan for the Ulu Sungai Menyang Orangutan Strategic Action Plan. This review aimed to establish the relevant implementing agencies, define timelines, and propose budgets under the 12th Malaysia Plan. During this follow-up workshop, the four strategies identified in the initial workshop were revisited for tentative implementation between 2021 and 2025.

The Sarawak Forestry Corporation has been instrumental in conserving Sarawak's Heart of Borneo through its innovative project, 'Research for Intensified Management of Bio-Rich Areas of Sarawak' (RIMBA). RIMBA aims to foster international and regional collaborations with renowned universities and institutions in the field of research and development on Sarawak's biodiversity.

Eighteen Memorandums of Understanding and international collaborations have been established with various international organizations to conduct biological diversity studies in Sarawak. Additionally, Sarawak Forestry Corporation has published forty-four publications on biological diversity and conducted eleven talks and one seminar specifically focused on RIMBA.

In recent years, Sarawak has prioritized Forest Landscape Restoration efforts across the region. Various degraded areas within Sarawak's Heart of Borneo, such as those in the Samunsam Wildlife Sanctuary, Sampadi Forest Reserve, Kuching Wetlands National Park, Suling Selaan, Sabal Forest Reserve, and Gunong Apeng National Park, have been gradually restored. Additionally, the construction of a nursery to supply seedlings for restoration programs, particularly involving local communities, has been completed at the Bung Bratak Heritage Centre.

3.5.4 PILLAR 4 SUSTAINABLE LANDUSE/ AGRICULTURE

Sarawak's Heart of Borneo sits on the vast highlands of Borneo, which is a very ecologically sensitive area. Sustainable land use is a very critical factor in ensuring the environmental integrity of these ecologically sensitive areas is not compromised.

The Green Economy Project initiated by the WWF-Malaysia at Song-Kapit-Baleh areas showcased the Community Pepper Project, the Community Gaharu Project and the Tagang project, involving Rumah Engsong & Rumah Gare in Kain River.

WWF-Malaysia has undertaken several community-based initiatives as part of its Sarawak Conservation Strategy program. These include the implementation of the Jagoi Community Conservation Area within the Ulu Ai-Sedilu Landscape, the Rajang Basin Freshwater Protection Landscape, and the Northern Connectivity areas, all of which are progressing well.

Furthermore, WWF-Malaysia has introduced the Sustainable Rice Project, focusing on System for Rice Intensification (SRI) farming methods, in the Ulu Ai-Sedilu Landscape, Rajang Basin Freshwater Protection Landscape, and the Northern Connectivity Landscape.

Moreover, WWF-Malaysia has undertaken the Riverbank Restoration Project in collaboration with communities within the Ulu Ai-Sedilu Landscape, Rajang Basin Freshwater Protection Landscape, and the Northern Connectivity areas.

Under the Ministry of Food Industry, Commodity, and Regional Development (M-FICORD) Sarawak, various agricultural schemes and activities have been implemented within Sarawak's Heart of Borneo, spanning areas such as Bau, Lundu, Kuching, Sri Aman, Lawas, and Limbang.

In Bau, initiatives include the cultivation of various vegetables, rubber, coconuts, oil palms, and other crops. Additionally, a smallholders' fertilisers program involving 221 participants across various smallholders' farms has been conducted.

Furthermore, an open farming system covering approximately 0.5 hectares in the Bau area, falling within the Sarawak Heart of Borneo region, has engaged farmers in Bijuray, Skibang, Stenggang, Sepadah, and Tringgus areas. These initiatives incorporate the Tagang system as part of sustainable agriculture practices. In Pejiru, another program involves the implementation of a permanent farming system as a Tanam Kekal Pengeluaran Makanan (TKPM) production area.

A comparable sustainable agriculture program is being executed in Lundu, where the smallholders' fertilizers program engaged 317 participants involved in oil palm and pepper farming across various smallholders' farms. Additionally, a paddy development program was implemented at Tanjung Purun, involving 96 participants.

Similar sustainable agriculture programs are also underway in Kuching, Sri Aman, Limbang, and Lawas. In Long Napir, a secluded village in the hinterland of Ulu Limbang, an agro-food program focusing on tapioca cultivation has been implemented under Projek Mesra Tani.

In Lawas, several agricultural agro-food projects have been implemented, including those in Long Sukang, Merapok-Munchu-Pengalih, Long Semadoh, and Ba'Kelalan. The mushroom project at Long Sukang has been successfully completed, while at Long Semadoh, initiatives involving pineapple and lemongrass juice production have been initiated.

Moreover, the Tagang projects are being implemented in Bau, Serian and Limbang to ensure the sustainability of fisheries resources at the project sites.

3.5.5 PILLAR 5 COMMUNITY-BASED/RURAL POVERTY ALLEVIATION PROGRAM

There is a sizeable population of indigenous people living within the long stretch of Sarawak's Heart of Borneo. Poverty alleviation for the population has always been the State's priority even before the inception of the Heart of Borneo.

In the Sarawak Heart of Borneo region, various community-based activities undertaken by relevant state agencies and non-governmental organizations are aimed at uplifting the socio-economic status of local communities in the long run.

These activities encompass initiatives such as the planting of bemban in Nanga Kota, Julau, and Sabong, a locally sourced jungle produce at Rumah Nyalong, Sungai Sekera. Additionally, a Taman Herba has been established at Sekolah Kebangsaan Nanga Kota to further promote sustainable practices and community engagement in the region.

The Tagang system, is voluntary fisheries management system to ensure the fish stock of the river are not depleted is also being implemented at Sungai Ipoh and Nanga Sekera and at Rumah George, Nanga Delok, Batang Ai, Lubok Antu.

These community-based activities are diverse and mostly tailored towards the local community and situation needs.

Poultry raising project has been initiated for commercial purpose at Rumah Saban. The planting of 480 belian and engkabang jantong was also done at Rumah Nyalong and Rumah Saban.

Another landscape-based project within the Sarawak's Heart of Borneo done by WWF-Malaysia is the inclusive Bengoh Project, involving the local communities and various stakeholders of the project area.

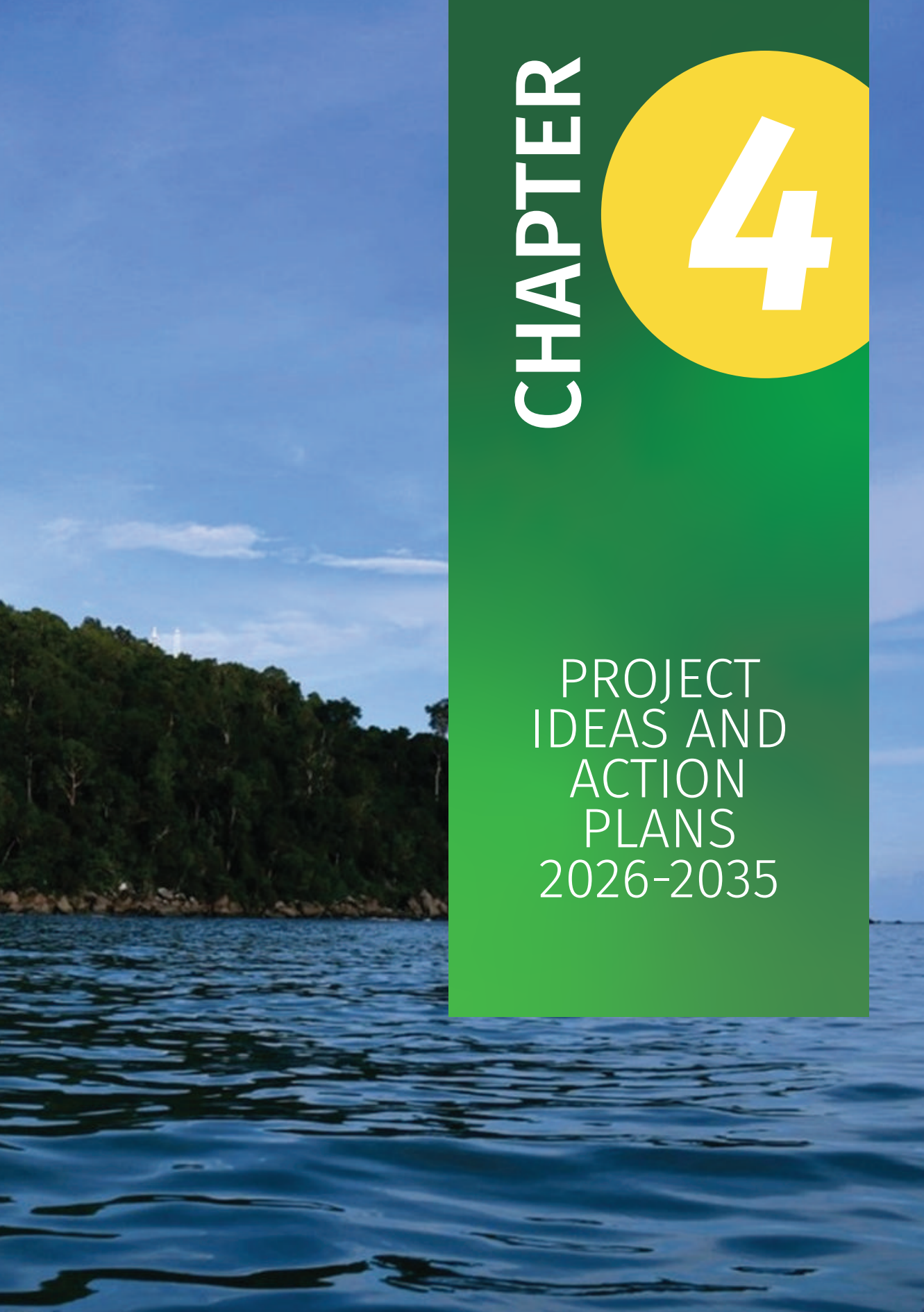
WWF-Malaysia has also conducted the Sustainable Forest Management and Income generation from natural resources activity for the Penan and indigenous communities at Kubaan-Puak, Long Semadoh, and Ba'Kelalan areas.

A bioengineering structure for a riverbank at Puneng Trusan, Long Semadoh has been successfully completed.

Forest Department Sarawak aids the local community by providing 1,000 seedlings of rotan to Rh Nanga Talong and 500 seedlings of Engkabang and other Meranti to the local communities at Rh Tinggau, Lubok Antu, Ulu Engkari.

Local communities support includes the transportation of 50 set of Aquaculture Cages & Net for Tagang System, Rumah Menyang, Menyang Taih, Ulu Menyang Conservation Area and the construction of hanging bridge at Sungai Engkari, Rumah Tinggau, Lubok Pantu, Ulu Engkari.





CHAPTER 4

PROJECT IDEAS AND ACTION PLANS 2026-2035





SECTION 1

SUSTAINABLE FOREST MANAGEMENT

CHAPTER 4 STRATEGIC ACTION PLANS
PILLAR 1 SUSTAINABLE FOREST MANAGEMENT

Project 1.1 **Capacity building in Sustainable Forest Management**
Duration : 2025-2030
Resource Needed : Fund, technical expertise, management support
Budget : RM 3 million (Federal, State funding and others)
Implementing agency: Forest Department Sarawak

Justification and implementing strategy:

There is a critical need for continuous training in Reduced Impact Logging practices, HCV and Social Impact Assessments, establishment, enumeration and data analysis of Permanent Sampling Plot including carbon assessment, and audits on forest management certification to enhance the capacity of the forest department's officers and industry players to strengthen the implementation of Sustainable Forest Management in Sarawak. The resource needed to implement this project include funding, technical expertise and management support.

The proposed implementation of these activities is from 2025 to 2030 with a budget of RM3 million, sourcing from federal and state fundings or any other collaborators.

Project 1.2 **RIL assessment on implementation of revised RIL Guidelines 2021**
Duration : 2026-2030
Resource Needed : Fund, technical expertise, additional manpower
Budget : RM 2 million (Federal, State funding and others)
Implementing agency: Forest Department Sarawak

Justification and implementing strategy

The RIL Guidelines for ground-based timber harvesting was revised in 2021 and came into force in 2023. There is a need to assess the effectiveness of the requirements in the guideline to ensure its practicality on the ground.

The study will assess the requirements outlined in the RIL guidelines, as well as its impact on forest growth and yield. In addition, the study will address the practicality of EUDR requirements in Sarawak particularly in the chain of custody process.

The proposed budget required for this study is RM 2 million for a duration of 5 years.

Project 1.3	**Strengthen spatial forest planning and monitoring in Sarawak Heart of Borneo areas**
Duration	: 2026 -2035
Resource Needed	: Fund, technical expertise, additional manpower
Budget	: RM 6 million (Federal, State funding and others)
Implementing agency	: Forest Department Sarawak, State Economic Planning Unit, Land & Survey Department Sarawak, State Multimedia Authority, State Service Modernisation Unit from the Office of the Premier of Sarawak, Ministry of Natural Resources and Urban Development, Sarawak Forestry Corporation

Justification and implementing strategy

The State has developed quite an extensive spatial forest database in the past through international support such as from Germany in the Forest Management Information System Sarawak (FOMISS) Project.

But the challenge in sustaining and making the system relevant for forest management and planning is that the data need to be updated and analysed. The need for detailed data or substantive content of data is deemed necessary for future planning. However, acquiring the necessary data is a multifaceted process, as it involves multiple layers of information and is overseen by various state agencies who act as custodians of this data.

Within these state agencies, challenges exist in data sharing due to certain information being highly restricted, such as details regarding license area owners. Additionally, standardization of base maps among these agencies is lacking. Furthermore, there is a need for capacity building in utilizing state-of-the-art technology, posing another challenge for these agencies.

The implementing strategy needed is to strengthen spatial forest planning and monitoring in Sarawak Heart of Borneo areas. There is also a dire need to upgrade equipment (hardware & software), human capital, update database and enhance monitoring system.

Project 1.4	**Application of technology for Sustainable Forest Management**
Duration	: 2026 -2035
Resource Needed	: Fund and technical expertise
Budget	: RM 10 million (Federal, State funding and Official Development Assistance)
Implementing agency	: Forest Department Sarawak

Justification and implementing strategy

One of the critical gaps identified in this project is the imperative to fully integrate advanced technology for Sustainable Forest Management practices. Presently, the technology applied for forest management is using LiDAR system and drones. Forest research and management must be conducted using suitable and state-of-the-art technology to ensure effectiveness and efficiency.

The challenge lies in keeping pace with rapidly evolving technology, which can be costly and requires technical expertise for operation. However, integrating technology into Sustainable Forest Management is indispensable for managing the vast forested Heart of Borneo. The implementing strategy necessitates acquiring equipment for remote sensing, conducting comprehensive data analysis, ground truthing, and establishing monitoring systems for various environmental factors such as floods, fires, and climate change impacts.

Project 1.5	**Knowledge sharing and awareness programs on Sustainable Forest Management**
Duration	: 2026 -2035
Resource Needed	: Funding and technical expertise
Budget	: RM 5 million (Federal, State funding)
Implementing agency	: Forest Department Sarawak

Justification and implementing strategy

To strengthen SFM, continuous dissemination of information to the relevant stakeholders through awareness and knowledge sharing seminars are required.

The proposed seminar will involve relevant stakeholders such as the FMU holders, government agencies and NGOs. For awareness programmes, it is targeted to the affected local communities and the public.

Project 1.6	**Restoration programs in degraded/logged over areas within Sarawak Heart of Borneo**
Duration	: 2026 -2035
Resource Needed	: Fund, technical expertise, management support, additional manpower
Budget	: RM 20 million (Federal, State, Private Companies, Licensees & non-government organisations)
Implementing agency	: Forest Department Sarawak

Justification and implementing strategy

The Forest Landscape Restoration Policy is in place but currently there is an inadequate guideline for restoration or enrichment planting program in degraded and logged over forests. Restoration or enrichment planting is also deemed an expensive project.

There is also the issue of availability of quality planting material. These degraded areas in logged over forests are also very far and accessibility to those areas are quite difficult. There is also a lack of knowledge and guidelines for restoration.

The action plan for this project requires the implementation of a restoration/ enrichment planting program in degraded/logged over forests within Sarawak Heart of Borneo areas.

Research and development efforts need to be undertaken, particularly focusing on on-site species matching. This involves extensive groundwork, including the selection and identification of sites, establishment of nurseries, and collaborative engagement with local communities, licensees, and international donors. Additionally, acquiring equipment is essential to support these activities and should be carefully considered.

Project 1.7 **Preventive and Enforcement**
Duration : 2026 -2035
Resource Needed : Fund, additional manpower
Budget : RM 16 million (Federal and State funding)
Implementing agency: Forest Department Sarawak and Sarawak Forestry Corporation

Justification and implementing strategy

The preventive and enforcement efforts need to be intensified within the Sarawak Heart of Borneo areas to prevent activities such as illegal hunting of wildlife, illegal logging and others.

But there is a lack of manpower, awareness, equipment and vehicles. These illegal activities are difficult to curb due to the inaccessibility of these areas at high terrains and deep thick forests.

The project lists out preventive and enforcement awareness, monitoring compliance, Investigation Paper training, and Honorary Wildlife Rangers as its action plan activities.

Project 1.8 **Community-based development activities in community used areas in Forest Management Units**

Duration : 2026 -2035
Resource Needed : Funding, manpower
Budget : RM 10 million (Federal, State funding and others)
Implementing agency: Forest Department Sarawak

Justification and implementing strategy

Currently, community development activities are underway in the Sarawak Heart of Borneo areas. However, there is a pressing need to enhance and intensify these efforts, particularly in production forests, for the benefit of local communities. The primary obstacle to this endeavour has been the lack of funding, compounded by the high logistical costs associated with development in rural areas. Addressing this challenge requires additional manpower and the integration of community development activities across various agencies.

The proposed action plan for this project is to strengthen community development activities in areas within the Forest Management Units that are utilised by local communities. Initiatives such as agroforestry (including tagang, gaharu, and Non-Timber Forest Produce) and Forest Landscape Restoration can be implemented within these areas to support community development efforts.

Project 1.9 **Conservation and management of wildlife corridors across production forest**

Duration : 2026 -2035
Resource Needed : Funding, technical expertise and manpower
Budget : RM 10 million (Federal, State, NGOs & Licensees)
Implementing agency: Forest Department Sarawak and Sarawak Forestry Corporation

Justification and implementing strategy

Currently, no strategic plan exists for the implementation of wildlife corridors in the Sarawak Heart of Borneo, and wildlife research is conducted independently. However, initiating this action plan presents several challenges, including the need for technical expertise, sufficient manpower, and substantial funding. Unfortunately, funding for such a massive undertaking is lacking both at the state and federal levels.

The proposed action plan entails the conservation and management of wildlife corridors across production forests. This involves identifying protection areas within Forest Management Units (FMUs), such as Totally Protected Areas (T.P), High Conservation Value (HCV) areas, buffer zones, and salt licks, which link Transboundary Protected Areas (TPAs) in the Sarawak Heart of Borneo. Additionally, there is a need to consolidate and intensify research efforts in these areas to support effective conservation and management practices.

Project 1.10	**Feasibility Studies on Non-Timber Forests Produce for commercialisation**
Duration	: 2026 -2028
Resource Needed	: Funding and technical expertise
Budget	: RM 5 million (Federal, State funding and others)
Implementing agency	: Forest Department Sarawak, Sarawak Timber Industrial Development Corporation and Sarawak Timber Association

Justification and implementing strategy

The potential on non-timber forest products (NTFP) with the Sarawak Heart of Borneo as a commercial entity has not been fully explored by the State. There are initiatives by individual entrepreneurs in Kubaan Puak region, Bario, Long Napir in marketing and commercialising these NTFP but a blueprint on how to tap into this potential for the Sarawak Heart of Borneo needs to be undertaken by the authorities.

There is also a lack of research on market value and NTFP plantation that could be initiated in order to lend supply to the global demands.

The action plan rolled out the need to conduct feasibility study on NTFP for commercialisation, identify the potential NTFP for commercialisation and conduct market assessment.

Project 1.11	**Promoting forest products from certified forests within Sarawak Heart of Borneo**
Duration	: 2026 -2035
Resource Needed	: Funding and technical expertise
Budget	: RM 8 million (Federal and State funding)
Implementing agency	: Forest Department Sarawak, Sarawak Timber Industrial Development Corporation and Sarawak Timber Association

Justification and implementing strategy

There is lament from stakeholders that the development of products from the certified forests has been inadequately promoted. By having these production forests certified should add value to their products. It is noted that there is a lack of funding for product development, while intensive and time-consuming research is also needed.

This action plan initiates the promotion of forest products from certified forests within Sarawak Heart of Borneo. Product development and market assessment are also being pursued under this action plan.

Project 1.12	**Strengthening infrastructure to support the development of HOBIS system**
Duration	: 2026-2035
Resource Needed	: Funding
Budget	: RM1.56 million (Federal, State funding and private sectors)
Implementing agency	: Forest Department Sarawak
Collaborating agency	: Land and Survey Department, Department of Agriculture, Economic Planning Unit Sarawak, Ministry of Tourism, Creative Industry & Performing Arts, Sarawak Forestry Corporation, Regional Corridor Development Authority, Sarawak Rural Water Supply Department, Public Works Department, Resident and District Offices, Sarawak Biodiversity Centre, Sarawak Health Department, NGOs, GLCs, industry companies, universities, Malaysia Mineral and Geoscience Department, Sarawak Museum Department, Department of Irrigation and Drainage, Natural Resources and Environmental Board, Sarawak Multimedia Authority, Social Welfare Department, Council for Native Customs & Traditions and State Monitor Implementation and Monitoring Unit, Sarawak Premier Department.

Justification and implementing strategy

Two action plans or implementing strategies are spelt out to achieve the successful output of this project: -

1) Three series of workshops or labs are needed to be done to strengthen the system at an estimated budget of RM60,000.

2) The next step is to enhance the system including capacity building, website and others at an estimated budget of RM800,000.

3) The annual maintenance will further require a budget of RM100,000.

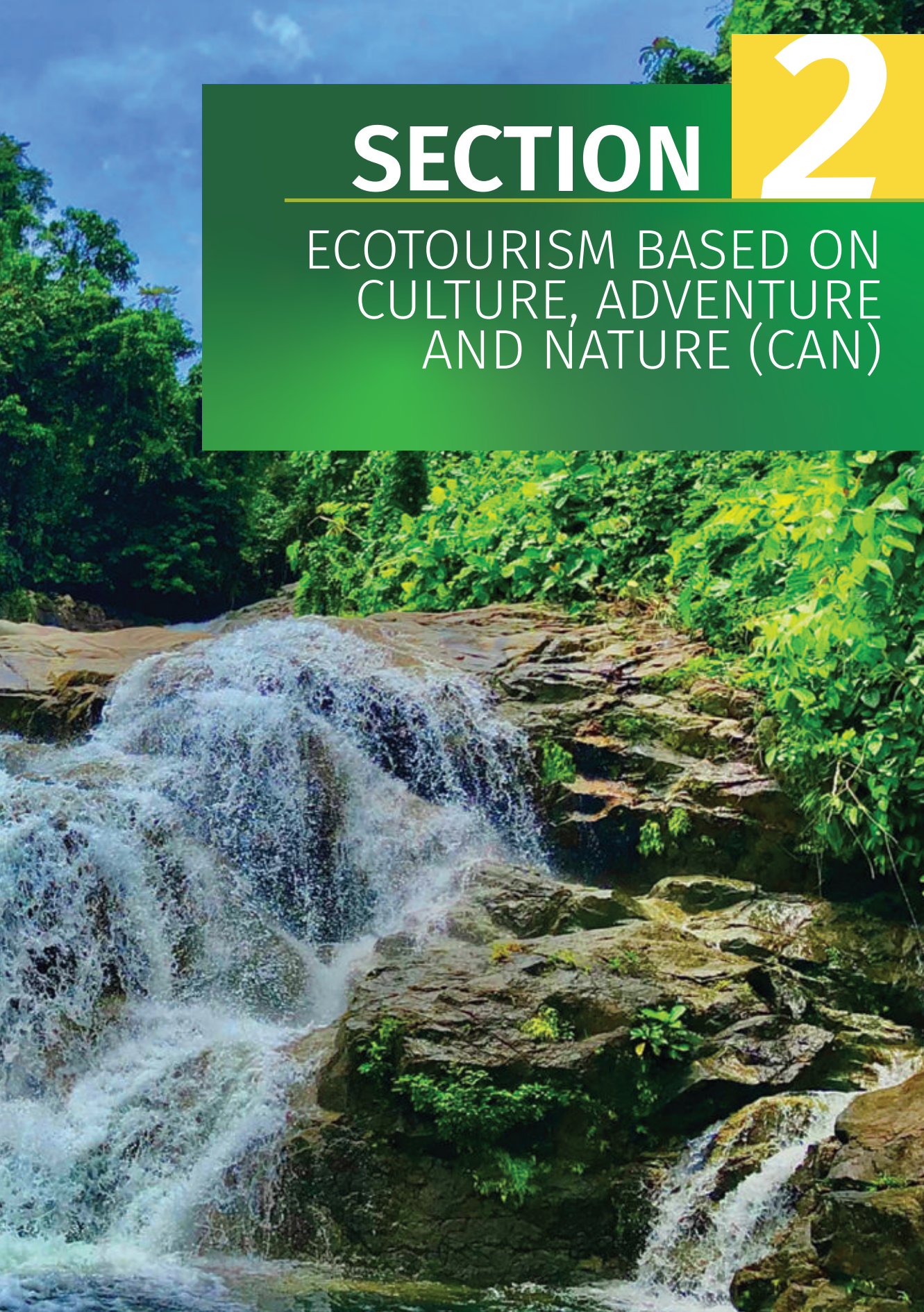
Project 1.13	**Sarawak Heart of Borneo status to be integrated in Sarawak Land Use Masterplan Study**
Duration	: 2026 -2028
Resource Needed	: Funding and dedicated officers
Budget	: RM 1 million (Federal and State funding)
Implementing agency	: Ministry of Natural Resources and Urban Development

Collaborating agency : Forest Department Sarawak, Land and Survey Department, Department of Agriculture, Economic Planning Unit Sarawak, Ministry of Tourism, Creative Industry & Performing Arts, Sarawak Forestry Corporation, Regional Corridor Development Authority, Sarawak Rural Water Supply Department, JKR, Resident and District Offices, Sarawak Biodiversity Centre, Sarawak Health Department, NGOs, GLCs, industry companies, universities, Department of Mineral & Geoscience Malaysia, Museum Department, Department of Irrigation and Drainage, Natural Resources and Environmental Board.

Justification and implementing strategy

The State is currently conducting a holistic and comprehensive Sarawak Land Use Master Plan Study. This plan will become an overarching document, which will drive sustainable development and land use in the State in line with the PCDS 2030. An intensive engagement with the Economic Planning Unit Sarawak is needed to integrate Sarawak Heart of Borneo's status in the main frame of the State Land Use Master Plan Study.





SECTION 2

ECOTOURISM BASED ON CULTURE, ADVENTURE AND NATURE (CAN)

PILLAR 2 ECOTOURISM BASED ON CULTURE, ADVENTURE AND NATURE (CAN)

Project 2.1	**Ecotourism development and activities**
Duration	: 2026 -2035
Resource Needed	: Funding
Budget	: RM 8 million (Federal and State funding)
Implementing agency	: Forest Department Sarawak, Ministry of Tourism, Creative Industry & Performing Arts, Sarawak Tourism Board, Resident & District Offices

Justification and implementing strategy

The implementing strategies needed include workshop, events and festivals to create awareness about the Sarawak Heart of Borneo's assets on culture, adventure and nature attractions.

Awareness among various stakeholders is also necessary, which can be achieved through the development of an ecotourism platform or section within Forest Department Sarawak to engage other agencies, NGOs and educational institutions, travel operators, politicians & community leaders.

Project 2.2	**Research and Development**
Duration	: 2026 -2028 (1-2 years)
Resource Needed	: Funding
Budget	: RM 2 million (Federal and State funding)
Implementing agency	: Forest Department Sarawak, Ministry of Food Industry, Commodity and Regional Development (M-FICORD), Ministry of Tourism, Creative Industry & Performing Arts Sarawak, Sarawak Tourism Board, World Wildlife Fund, District Offices and Sarawak Multimedia Authority

Justification and implementing strategy

The implementing strategies posed is to explore agrotourism and sports tourism in Sarawak Heart of Borneo areas. There is also a need to participate and evaluate existing Heart of Borneo related tourism activities, events & festivals. The sharing of information and data from previous research and expedition findings is also critical in this action plan on research and development.

Project 2.3 **Management of ecotourism activities across international borders**

Duration : 2026-2028

Resource Needed : Funding

Budget : RM 5 million (Federal, State funding)

Implementing agency: Resident & District offices, Forest Department Sarawak, Immigration, Customs, Quarantine and Security (ICQS), Sarawak Tourism Board, Ministry of Tourism, Creative Industry & Performing Arts, Economic Planning Unit Sarawak and National Security Council (MKN)

Justification and implementing strategy

The strategy required for managing ecotourism activities across international borders involves developing Terms of Reference for trans-border permits in coordination with immigration and customs authorities.

Project 2.4 **Community empowerment in ecotourism management**

Duration : 2026-2035

Resource Needed : Funding and technical expertise

Budget : RM 3.5 million (Federal, State funding and others)

Implementing agency: Forest Department Sarawak, Ministry of Tourism, Creative Industry & Performing Arts, Sarawak Tourism Board and Ministry of Domestic Trade and Consumer Affairs

Justification and implementing strategy

The implementing strategies for Sarawak's Heart of Borneo community empowerment in ecotourism require the establishment of a cooperative (Koperasi) for the local community and capacity building in terms of both soft and hard skills. Additionally, it is crucial to involve the younger generation, who are more digitally and internet savvy, in the tourism industry within the Sarawak Heart of Borneo.

Project 2.5 **Sarawak's Heart of Borneo branding and marketing**

Duration : 2026 -2035

Resource Needed : Funding

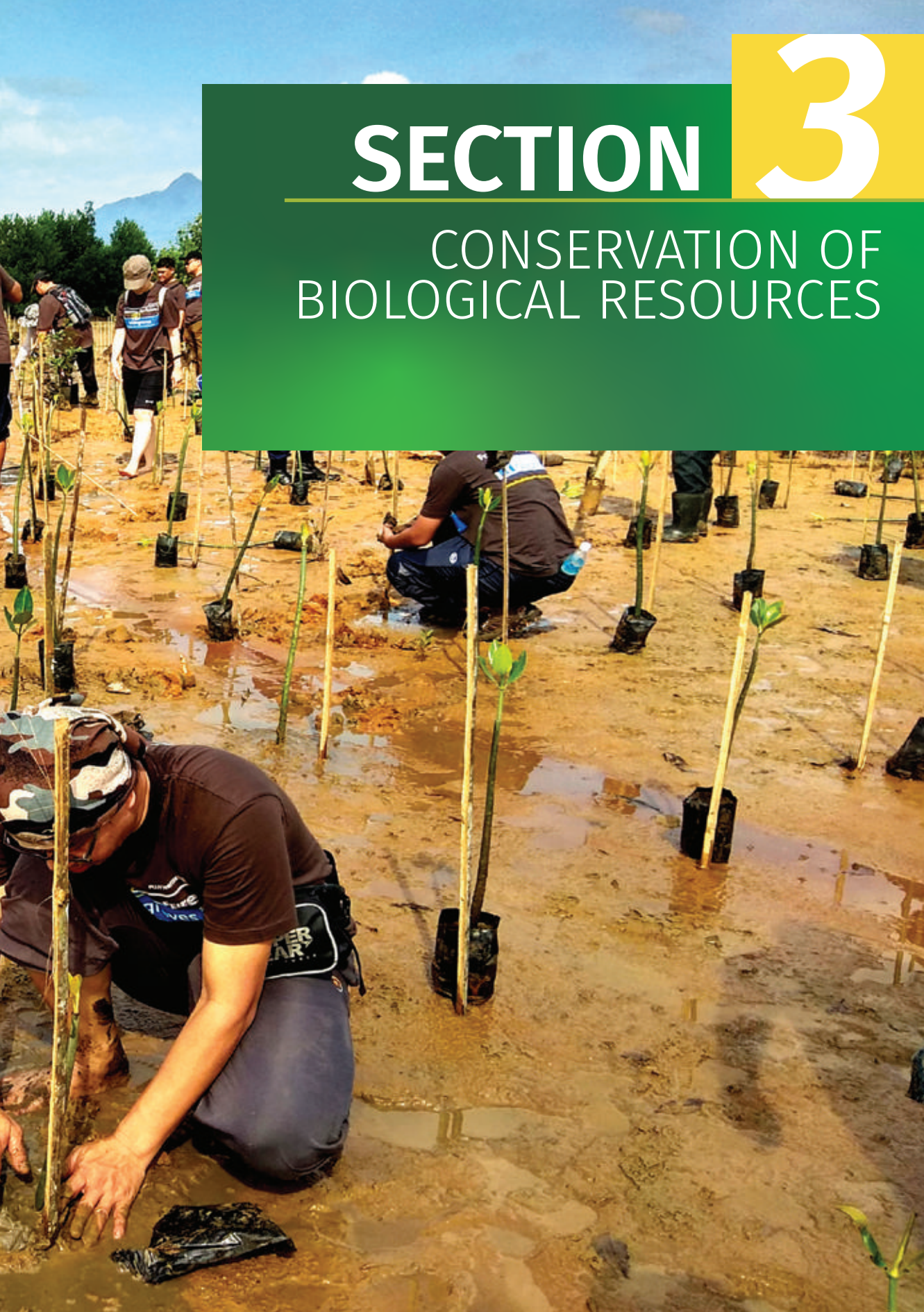
Budget : RM 3.5 million (Federal and State funding)

Implementing agency: Forest Department Sarawak, Ministry of Tourism, Creative Industry & Performing Arts and Sarawak Tourism Board

Justification and implementing strategy

The integration of the Sarawak Heart of Borneo brand into all tourism-related packages is necessary to enhance the branding and marketing of the Heart of Borneo region. Additionally, there is a need to develop or adopt ecotourism packages within Sarawak's Heart of Borneo, catering to both leisure and research interests. Participation in international travel and trade fairs also serves as a valuable means to promote the brand.





SECTION 3

CONSERVATION OF BIOLOGICAL RESOURCES

PILLAR 3 CONSERVATION OF BIOLOGICAL RESOURCES

Project 3.1 **Research and Development for flora and fauna**
Duration : 2026-2035
Resource Needed : Funding
Budget : RM 28 million (Federal and State funding)
Implementing agency: Forest Department Sarawak, Sarawak Forestry Corporation, Sarawak Biodiversity Centre

Justification and implementing strategy

Significant efforts are required to strengthen the research and development component within the Sarawak Heart of Borneo areas. Firstly, it is essential to identify, analyse, and map the gaps outlined in published reports within these regions. This task is by no means easy, and the subsequent step involves prioritizing areas of focus to address these gaps. Enhanced international collaboration, particularly with renowned research institutions, is crucial for achieving these objectives.

There is also a need to review published articles from the Heart of Borneo areas in indexed journals. The scientific expeditions conducted consistently over the last decade have yielded valuable discoveries and findings. It is crucial to continue these efforts by organising, coordinating, and promoting scientific research within the Heart of Borneo areas. Fully encouraging these activities is essential. Administratively setting up a platform for discussing research within the Heart of Borneo among relevant stakeholders should be considered. This can be achieved through meetings and scientific workshops.

Project 3.2 **Implementation of various conservation master plan and studies**
Duration : 2026 -2035
Resource Needed : Funding
Budget : RM 5 million (Federal and State funding)
Implementing agency: Forest Department Sarawak, Sarawak Forestry Corporation, Wildlife Conservation Society, Economic Planning Unit Sarawak, World Wildlife Fund and Malaysia Palm Oil Board

Justification and implementing strategy

There is a need for continued monitoring of the management plan for orangutans in Borneo. Additional areas that require study include Sebuyau, Sedilu, Gunong Lesong, Bungo Range, and Kelingkang Range. The state should conduct surveys within these areas and compile available information on orangutans. This data should be shared and implemented through incorporation into the Heart of Borneo initiatives. All the latest data and information must be critically reviewed and assessed.

Evaluation of the management plan's implementation is also critical, along with proposing new orangutan wild population areas as Heart of Borneo areas. These implementing strategies could be facilitated through organizing and capacity building between Sarawak and Kalimantan. Pursuing Lanjak Entimau - Betung Kerihun as a joint world heritage site is also recommended.

Project 3.3 **Heart of Borneo Corridor Project Initiative**
Duration : 2026 -2035
Resource Needed : Funding
Budget : RM 5 million (Federal and State funding)
Implementing agency: Forest Department Sarawak, Ministry of Natural Resources & Urban Development and Sarawak Forestry Corporation

Justification and implementing strategy

The Heart of Borneo Corridor Project Initiative has been discussed over the years in the Trilateral Meeting of the Heart of Borneo. It is necessary to obtain the details of the outcomes from these meetings. Instead of conducting joint expeditions, which can be costly, the sharing of information is encouraged. This can be facilitated through workshops between Sarawak and Brunei.

Project 3.4 **Traditional Knowledge Documentation**
Duration : 2026 -2035
Resource Needed : Funding
Budget : RM 4 million (Federal and State funding)
Implementing agency: Sarawak Biodiversity Centre

Justification and implementing strategy

The plants documented within the Sarawak Heart of Borneo region require a value-added approach concerning royalties, intellectual property rights (IPR), or other monetary incentives derived from traditional knowledge documentation on community usage. Research and development regarding community usage documentation of plants within their areas could also be pursued through collaborations with various organisations.

Project 3.5	**Conservation of wildlife habitat within the Permanent Forest Estates**
Duration	: 2026 -2035
Resource Needed	: Funding
Budget	: RM 8 million (Federal and State funding)
Implementing agency	: Forest Department Sarawak, Ministry of Natural Resources and Urban Development, Sarawak Forestry Corporation, World Wildlife Fund and Sarawak Timber Association

Justification and implementing strategy

This action plan's activities will serve to advocate for the certification of Forest Management Units (FMUs) within the Sarawak Heart of Borneo areas. Proposed activities include capacity building, meetings, dialogues, and awareness programs involving authorities, stakeholders, local communities, and the FMUs. A comprehensive study on the impact of logging on wildlife habitat and biodiversity is crucial and necessary.





SECTION 4

SUSTAINABLE LAND USE AND AGRICULTURE

PILLAR 4 SUSTAINABLE LAND USE AND AGRICULTURE

Project 4.1	**Sustainability of organic valley pond towards the establishment of agrotourism**
Duration	: 2026 -2035
Resource Needed	: Funding
Budget	: RM 5 million (Federal, State funding and private sectors)
Implementing agency	: Department of Agriculture, World Wildlife Fund, Ministry of Tourism, Creative Industry & Performing Arts, and Land and Survey Department

Justification and implementing strategy

The action plan activities aimed at sustaining the organic valley ponds include, firstly, improving irrigation facilities for rice farming. Additionally, exploring an organic certification process and introducing new planting systems to enhance production are essential. Furthermore, the government and related stakeholders must collaborate closely to promote agrotourism activities.

Project 4.2	**Research and Development on highland crops in Sarawak's Heart of Borneo**
Duration	: 2026 -2035
Resource Needed	: Funding
Budget	: RM 10 million (Federal, State funding and private sectors)
Implementing agency	: Department of Agriculture Sarawak

Justification and implementing strategy

The implementing strategy requires the state to enhance infrastructure and facilities at the Department of Agriculture's Research and Development Station in the highlands, as well as to strengthen capacity building for research activities.

Project 4.3	**Alternative tar sealed road for community**
Duration	: 2026 -2035
Resource Needed	: Funding
Budget	: RM 50 million (Federal, State funding and private sectors)
Implementing agency	: Public Works Department Sarawak and Land and Survey Department

Justification and implementing strategy

This is a straightforward activity within the project, as it only requires intervention from the relevant authorities to upgrade the existing logging road. However, although it may seem simplistic in action, the planning stage is critical as it requires intensive consultation with various stakeholders. Additionally, as logging roads are involved, compliance with safety standards for public use needs to be scrutinised. Lastly, being in the interior, a considerable amount of funding is required.

Project 4.4	**Continuous maintenance of infrastructure**
Duration	: 2026 -2035
Resource Needed	: Funding
Budget	: RM 30 million (Federal, State funding and private sectors)
Implementing agency	: Public Works Department Sarawak, Department of Irrigation and Drainage Sarawak, Department of Agriculture Sarawak and timber companies

Justification and implementing strategy

The various state agencies need to utilise the Sarawak Heart of Borneo platform, which is a national commitment, to apply for maintenance budget.

Project 4.5	**Integration Data System on agriculture activities for Sarawak's Heart of Borneo**
Duration	: 2026 -2035
Resource Needed	: Funding
Budget	: RM 5 million (Federal, State funding and private sectors)
Implementing agency	: Department of Agriculture, Forest Department Sarawak, Ministry of Food Industry, Commodity and Regional Development (M-FICORD), Integrated Agricultural Development Authority, Land and Survey Department Sarawak and Sarawak Multimedia Authority

Justification and implementing strategy

This project requires a concerted effort by relevant state agencies to update agriculture data for Sarawak Heart of Borneo areas.

Project 4.6	**Branding of agriculture products using the Heart of Borneo brand**
Duration	: 2026 -2035
Resource Needed	: Funding
Budget	: RM 3.5 million (Federal, State funding and private sectors)
Implementing agency	: Department of Agriculture, Sarawak Land Consolidation and Rehabilitation Authority and Malaysian Palm Oil Board

Justification and implementing strategy

The idea of branding agricultural products using the Heart of Borneo brand is an innovative approach to increase the value of products from these areas, such as bee honey and others. A certification system with the required processes will need to be developed, and products that meet these requirements will be endorsed with a Heart of Borneo certificate.

Project 4.7	**Rehabilitation of buffer zone for Tagang areas**
Duration	: 2026 -2035
Resource Needed	: Funding
Budget	: RM 3.5 million (Federal, State funding and private sectors)
Implementing agency	: Department of Agriculture, Forest Department Sarawak, Sarawak Land Consolidation and Rehabilitation Authority, Sarawak Energy Berhad, Land and Survey Department Sarawak

Justification and implementing strategy

To rehabilitate the buffer zones for the Tagang areas within the Sarawak Heart of Borneo areas, the activity needed is to plant Engkabang, Ensurai, *Ficus* spp., Bamboo, *Sandorium* sp., *Bellucia* sp., *Syzygium* spp., *Psidium* spp., and other suitable species.

Project 4.8	**Collection, Processing and Packaging Centre**
Duration	: 2026 -2035
Resource Needed	: Funding
Budget	: RM 1 million (Federal, State funding and private sectors)
Implementing agency	: Department of Agriculture, Regional Corridor Development Authority, Ministry of Food Industry, Commodity and Regional Development (M-FICORD)

Justification and implementing strategy

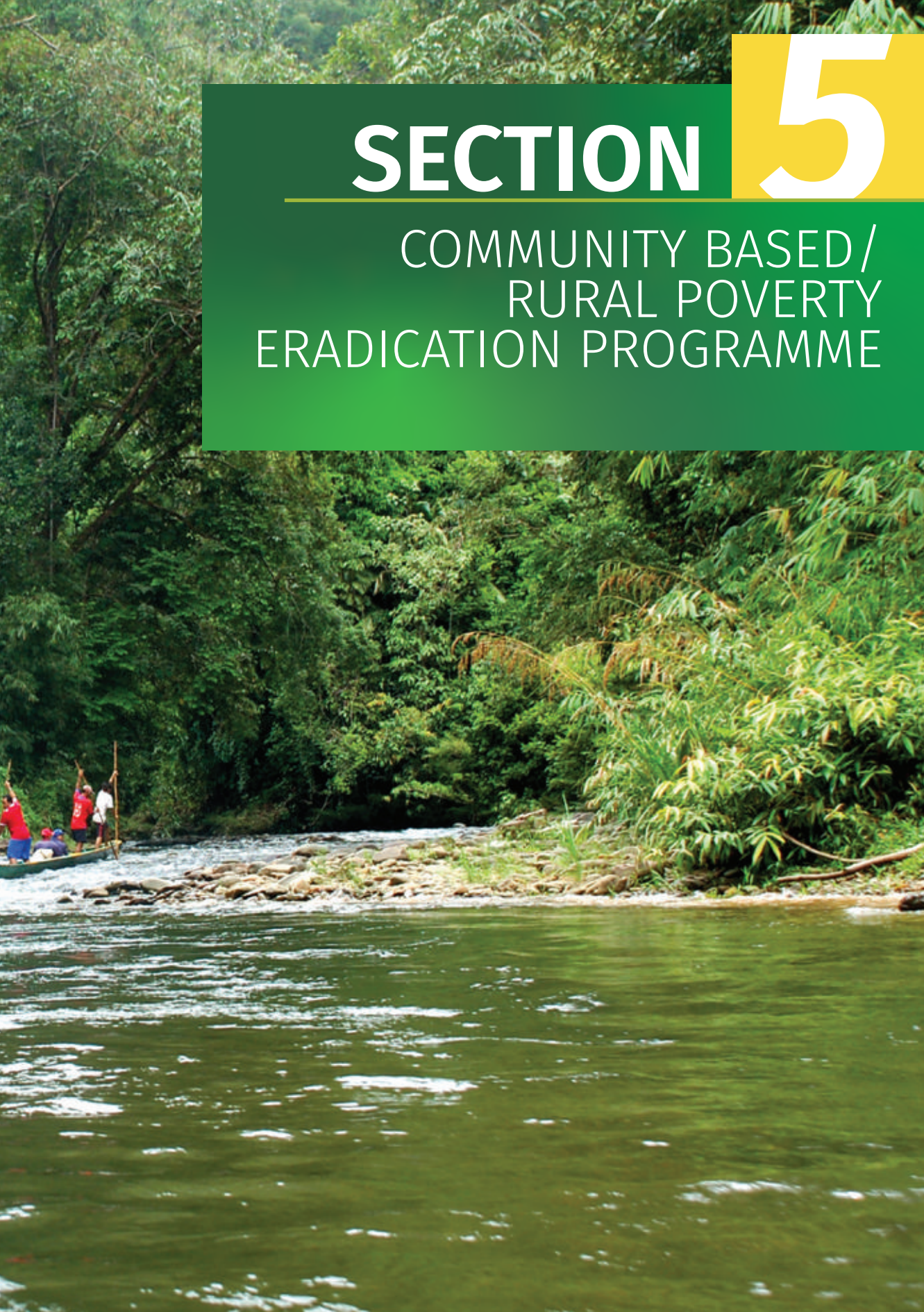
The implementing strategy to establish the Sarawak Heart of Borneo Collection, Processing, and Packaging Centres involves identifying strategic locations for these centres. Several critical factors or criteria, such as the proximity of product source points to the centres and transportation routes from the centres to the markets, need to be considered.

Project 4.9	**Intensive awareness programs on good agriculture practices and management**
Duration	: 2026 -2035
Resource Needed	: Funding
Budget	: RM 2 million (Federal, State funding and private sectors)
Implementing agency	: Department of Agriculture, Ministry of Food Industry, Commodity and Regional Development (M-FICORD), Forest Department Sarawak, Sarawak Land Consolidation and Rehabilitation Authority and NGOs

Justification and implementing strategy

Good agricultural practices are considered critical for ensuring food safety and environmental integrity. Awareness programs on these practices are necessary to enhance their implementation among farmers in the Sarawak Heart of Borneo region. This could be achieved through road tours and promotion via various media channels.





SECTION 5

COMMUNITY BASED/ RURAL POVERTY ERADICATION PROGRAMME

PILLAR 5 COMMUNITY BASED /RURAL POVERTY ALLEVIATION PROGRAM

Project 5.1	**Community empowerment in Heart of Borneo (HoB)**
Duration	: 2026 -2035
Resource Needed	: Funding and expertise
Budget	: RM 10 million (Federal, State, and other funding)
Implementing agency	: Forest Department Sarawak (FDS), Social Welfare Department of Sarawak, Ministry of Tourism, Creative Industry & Performing Arts, Ministry of Women, Family and Community Development

Justification and implementing strategy

Addressing economic disparities, preserving cultural heritage, ensuring environmental sustainability, and promoting social inclusion among Sarawak's diverse and frequently marginalized communities are the foundations of the justification. These programs are designed to promote equitable development, strengthen resilience, and bridge the divide between urban and rural areas.

The proposed implementing strategy is a comprehensive approach that involves undertaking needs assessments and engaging communities through participatory methods to customize interventions to local contexts. Education and capacity-building initiatives emphasize the development of sustainable practices, financial management, and leadership abilities. Microfinance and cooperative models are utilized to facilitate economic development through sustainable agriculture, eco-tourism, and small-scale industries.

The development of community centers, as well as infrastructure enhancements and improved access to essential services, are essential components. The strategy prioritizes collaborations with government agencies, NGOs, academic institutions, and the private sector to capitalize on resources and expertise. Advocacy initiatives are designed to facilitate the development of policies that foster an enabling environment, while robust monitoring and evaluation frameworks guarantee the continuous assessment and improvement of programs. These are the key proposed action plans to be implemented in HoB area:

1. Livelihood Diversification:
    - **Support non-farm activities:** Provide training and resources for rural communities to engage in alternative income-generating activities like handicrafts, food processing and small-scale manufacturing.
2. Education and Skill Development:
    - **Adult literacy and continuing education:** Implement adult literacy programs and provide vocational training to enhance employability.
    - **Technical and vocational education:** Establish training centers focused on skills relevant to the local economy such as carpentry, tailoring and basic IT.

3. Infrastructure Development:
    - **Ensure access to clean water and sanitation:** Implement projects to provide clean drinking water and sanitation facilities, improving health outcomes.
    - **Rural electrification:** Expand access to electricity, including renewable energy solutions like solar power, to enchance productivity and quality of life.
4. Health and Nutrition Improvement:
    - **Nutrition programs:** Implement supplemental feeding programs for vulnerable populations, along with education on balanced diets and nutrition.
    - **Health education and awareness:** Conduct campaigns to promote hygiene, disease prevention, and healthy living practices.
5. Market Access and Value Chain Development:
    - **Develop local markets:** create or improve market facilities where rural producers can sell their goods directly to consumers.
    - **Stregthen value chains:** Facilitate the development of value chains for local products, from production to processing and marketing.
6. Social Protection and Safety Nets:
    - **Develop community insurance schemes:** Create community-based insurance programs to protect against risks such as crop failure, illness, or natural disasters.
7. Enviromental Sustainability:
    - **Promote sustainable agriculture:** Encourage practices like organic farming, agroforestry, and soil conservation to ensure long-term productivity and environmental health.
    - **Implement reforestation projects:** Engage communities in tree planting and forest management to restore degraded lands and protect watersheds.
    - **Water resource management:** Develop and maintain systems for sustainable water use, including rainwater harvesting and irrigation projects.
8. Community Empoverment and Participation:
    - **Strengthen Local Governance:** Build the capacity of local councils and community organizations to lead development efforts and manage resources.
    - **Participatory Planning and Budgeting:** Involve community members in decision-making processes regarding development priorities and resource allocation.
    - **Leadership Training:** Provide leadership training for community leaders, youth, and women to ensure inclusive and effective governance.
9. Cultural and Social Development:
    - **Preserve and Promote Indigenous Knowledge:** Document and support traditional practices, crafts, and knowledge systems that contribute to cultural identity and economic resilience.

- **Support Community-Based Tourism:** Develop tourism projects that showcase local culture and natural resources, providing income while preserving cultural heritage.
- **Organize Cultural Events and Festivals:** Facilitate cultural events that strengthen community bonds, attract visitors, and generate income.

Community empowerment programs in Sarawak can accomplish sustainable and inclusive development by implementing these strategies, thereby improving the quality of life for all community members and preserving the state's rich cultural and natural heritage.

Project 5.2	**Community-based Ecotourism (CBET) in Heart of Borneo (HoB)**
Duration	: 2026 -2035
Resource Needed	: Funding and expertise
Budget	: RM 7 million (Federal, State, and other funding)
Implementing agency	: Forest Department Sarawak (FDS), Ministry of Tourism, Creative Industry & Performing Arts, Sarawak Forestry Coorporation (SFC), Sarawak Tourism Board (STB)

Justification and implementing strategy

Community-based ecotourism (CBET) has emerged as a potent instrument for rural development, as the global demand for responsible and authentic travel experiences continues to increase. CBET prioritizes communities as the focal point of the tourism experience, in contrast to mass tourism, which frequently results in cultural commodification and environmental degradation. By incorporating local residents into the planning, administration, and operation of ecotourism ventures, CBET guarantees that economic benefits are distributed equitably and that tourism activities contribute to the preservation of Sarawak's natural and cultural heritage.

CBET offers a viable path to socio-economic development in the context of Sarawak, where numerous indigenous communities encounter obstacles such as destitution, limited access to education and healthcare, and threats to their traditional lands. It fosters pride in cultural identity and promotes environmental stewardship, while also enabling communities to take custody of their resources, develop skills, and generate income.

Implementing Strategy:

1. **Community Engagement:** Involve local communities in the planning and management of ecotourism initiatives, ensuring they have ownership and control over tourism activities.

2. **Capacity Building:** Provide training in hospitality, guiding, business management, and environmental conservation to equip community members with the necessary skills.
3. **Participatory Planning:** Use participatory processes to identify ecotourism sites, develop tourism products, and create management plans that align with community values and goals.
4. **Partnerships:** Collaborate with government agencies, NGOs, and the private sector to secure technical support, marketing assistance, and funding.
5. **Sustainable Practices:** Implement eco-friendly infrastructure and promote low-impact tourism activities that protect the environment.
6. **Marketing:** Develop targeted marketing strategies to attract responsible travelers, using online platforms and partnerships to reach a broader audience.
7. **Monitoring and Evaluation:** Establish systems to monitor the environmental, economic, and social impacts of tourism, allowing for adaptive management and continuous improvement.

Through CBET, Sarawak can chart a course toward a more sustainable and inclusive future, where economic growth is harmonized with the preservation of its unique natural and cultural heritage.

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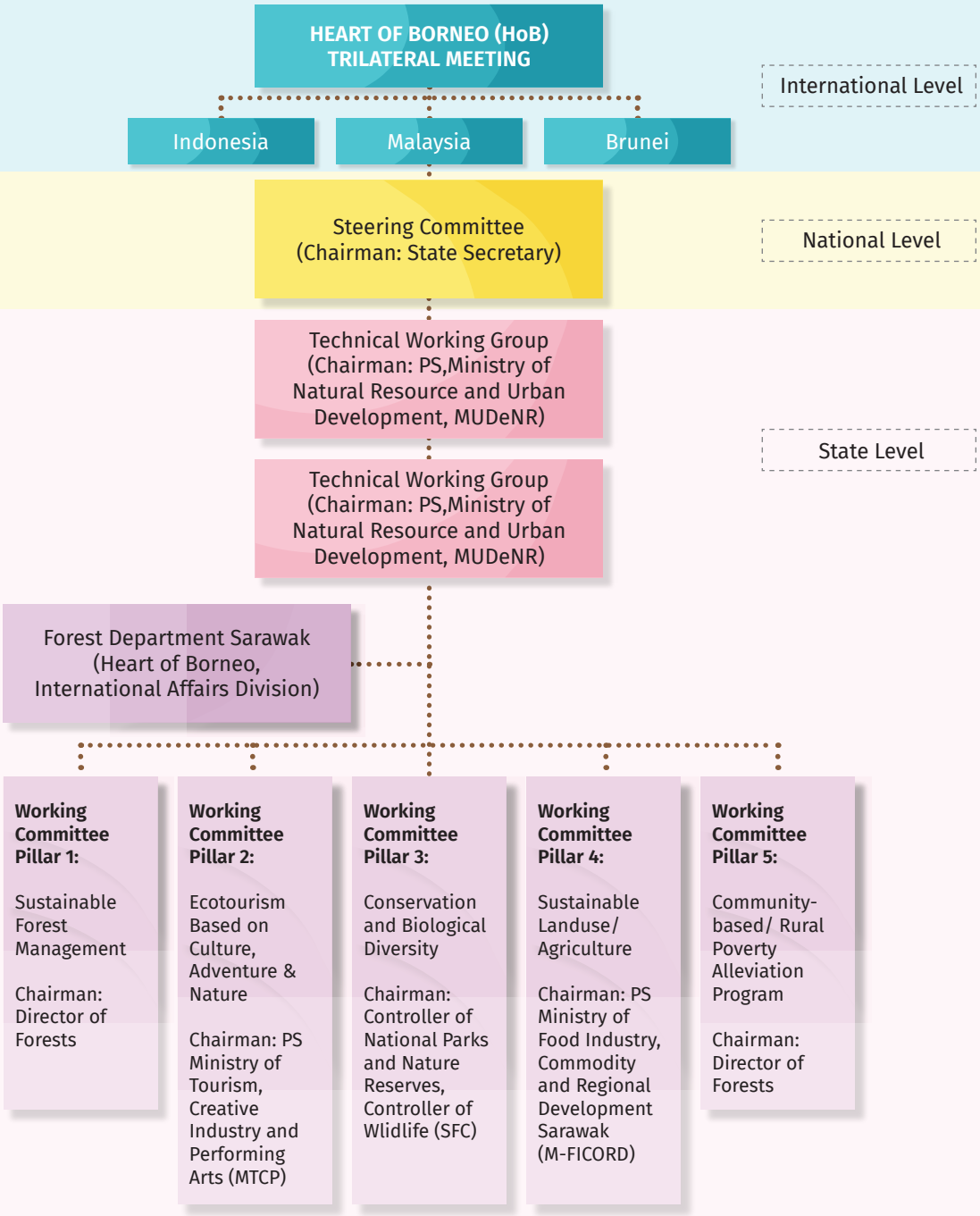
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APPENDIX

TERMS OF REFERENCES TECHNICAL WORKING GROUP HEART OF BORNEO

ORGANISATION FOR SARAWAK HEART OF BORNEO (HoB)



HEART OF BORNEO TECHNICAL WORKING GROUP

PILLAR 1: SUSTAINABLE FOREST MANAGEMENT

1.0 INTRODUCTION

1.1 Heart of Borneo (HoB) Initiative is a voluntary transboundary cooperation between 3 countries Brunei, Indonesia and Malaysia with aims at conserving and managing the contiguous tropical forest in the island of Borneo while enhancing sustainable development that improves the welfare of those living on the island.

1.2 In Sarawak, the HoB covers 2.689 million ha over a contiguous block along Sarawak's boundaries with Kalimantan and with Sabah and Brunei guided by five (5) pillars. The Heart of Borneo institutional framework provides clarity and strong guidance for each member countries on how to regulate and operationalized the activities within the huge Heart of Borneo areas.

1.3 At the international level, a Trilateral Meeting between Brunei, Malaysia and Indonesia is held every year to discuss on new transboundary programs, activities and updates member countries on the progress of existing action plans. Since the Heart of Borneo Declaration was signed in 2007, there has been thirteen Trilateral Meetings held among the three member countries. At the national level for Malaysia, an Expert Working Group chaired by the Secretary -General of the Ministry of Natural Resources and Environmental Sustainability provide guidance and advise on the implementation of the Malaysia's Heart of Borneo component. The Expert Working Group members comprised of relevant federal and state government agencies. At the state level, the Sarawak Steering Committee chaired by the State Secretary and the Technical Working Group chaired by the Permanent Secretary of Ministry of Urban Development and Natural Resources provide the Sarawak Heart of Borneo direction on its implementation. Under the HoB TWG, five (5) Working Group (WG) was formed to facilitate the implementation.

1.4 The objectives of HOB Initiative is to conserve the last expanse of contiguous forest in Borneo to:-

i. Maximize Transboundary Linkages
ii. Promote Expansion of Protected Area Networks
iii. Maintain Forest Connectivity
iv. Ensure Sustainable Land Use Practices

1.5 **Working Committee Pillar 1 - Sustainable Forest Management:** Sustainable Forest Management (SFM) is one of the core functions of the Forest Department of Sarawak, in which FDS is the main agency to ensure implementation of SFM particularly in all Permanent Forests Estates, which includes the HoB area.

Therefore, the activities under this pillar are primarily conducted by Forest Department Sarawak and supported by relevant stakeholders. Sarawak embraced SFM through the implementation of the Forest Management Certification policy, expansion and maintenance of Permanent Forests Estates (PFEs), leveraging of technology, forest landscape restoration, continuous research, strengthening of laws and regulations, capacity buildings and community development initiatives.

Besides, in enhancing operational efficiency and economic viability, Sarawak has introduced the harmonized Reduced-Impact Logging Guidelines for ground-based timber harvesting in 2021, which is in-line with global sustainable practices.

Sarawak believes that Forest Management Certification (FMC) is an important tool to ensure that SFM is being applied on the ground. The availability of consultation frameworks where committees are being established at different levels to discuss and reflect on SFM, FMC, and especially forest activities in Sarawak further strengthens the aspect of SFM through FMC.

The consultation framework consists of 4 stages:

Stage 1: **Community Representative Committee (CRC) and Forest Management Unit Representative Committee (FMURC)**
This involved the establishment of committee on the ground by the local community (CRC) and by the Forest Management Unit holders (FMU) (FMURC). The TOR is prepared and followed by the CRC and FMURC themselves.

Stage 2: **Forest Management Certification Liaison Committee (FMCLC)**
Chaired by the Regional Forest Officer and established for every Forest Management Unit (FMU) with members including the government agencies such as Forest Department Sarawak, Land and Survey Department, Resident and District offices, Sarawak Forest Corporation (SFC), Natural Resources and Environment Board (NREB), the CRC and FMURC, the concerned Non-Governmental Organizations (NGOs) such as WWF Malaysia, Sarawak Biodiversity Centre and more. This committee will be meeting at least once a year for every certified FMU.

Stage 3: **Forest Management Certification Technical Committee (FMCTC)**
Chaired by the Director of Forests to discuss the technical matters on forest operations which include the three important elements of forest management that is economy, environment and social. This committee will be conducted at least once a year or whenever necessary.

Stage 4: **Forest Management Certification Steering Committee (FMCSC)**
The highest stage, established at the Ministry level and chaired by the Permanent Secretary of Ministry of Natural Resources and Urban Development. This committee discusses and deliberates on the policy and matters related to forest management in the entire Sarawak and the members include the head of FDS, Land Survey Department, NREB, SFC, STIDC and the Department of Agriculture. This meeting is conducted at least once a year.

In terms of preventive and enforcement against the illegal logging activities related to timber and forests in Sarawak, Illegal Logging Action Committee (ILAC) chaired by the Permanent Secretary for Ministry for Natural Resources and Urban Development is in place involving various enforcement agencies including Unit Penguatkuasaan dan Keselamatan Negeri under the Sarawak's Premier Office.

2.0 OBJECTIVES/PURPOSE

To ensure the forest management within the Heart of Borneo, Sarawak is in line with the global sustainable practices by balancing the environmental protection, economic viability and social needs.

3.0 MEMBERSHIP/ WORKING COMMITTEE

Chairman : Director of Forests
Vice Chairman : Deputy Director of Forests (Forest Management)
Secretary : Senior Assistant Director, Planning and Management Division, Forest Department Sarawak
Members : Divisions in FDS HQ and Regional Forest Offices
Ad-hoc members:

i. Ministry of Natural Resources and Urban Development
ii. Land and Surveys Department
iii. Natural Resources and Environment Board
iv. Unit Penguatkuasaan dan Keselamatan, Sarawak Premier Office
v. Polis DiRaja Malaysia
vi. Residents and District Offices (Sibu, Kapit, Bintulu, Miri & Limbang)
vii. Sarawak Forestry Corporation

viii. Department of Agriculture
ix. Sarawak Timber Association (STA)
x. Sarawak Timber Industry and Development Corporation
xi. Sarawak Rivers Board
xii. Department of Labour (Regional)
xiii. Community Representative Committee (CRC)/ Local communities
xiv. Non-governmental organizations
xv. Forest Management Units
xvi. Any other ministries, departments, agencies, and NGOs shall be called on an ad-hoc basis; when and where necessary.

4.0 FUNCTION/ROLES

(i) To discuss, propose, plan, and report any SFM related activities within the Heart of Borneo area.

(ii) To liaise with relevant government agencies, enforcement agencies, technical experts and FMU holders

(iii) To facilitate communication between stakeholders of forest management throughout Sarawak

5.0 MEETING/REPORTING

i. The Working Committee shall meet at least twice (2) a year or whenever necessary.

ii. The chair shall convene the meetings accordingly. If the designated chair is not available, the chair shall appoint his/her representative to convene the meeting and to inform the salient points/decisions raised or agreed to at that meeting.

iii. The secretariat shall notify working committee seven (7) days before every meeting.

iv. The secretariat shall record minutes of meetings and distribute to members within fourteen (14) working days.

v. A quorum consisting 2/3 of the members is necessary to conduct the meeting.

vi. The Forest Department Sarawak will report the progress of Forest Management Certification and any capacity buildings, research, awareness programs related to SFM in HoB area during the TWG meeting.

vii. Other technical and arising matters related to forest management, land matters, forest operations et cetera for Sarawak is to be discussed in the existing platforms such as the FMCLC, FMCTC and FMCSC.

viii. For enforcement, the ILAC led by MUDeNR will table the enforcement activities and information during the State Task Force on Illegal Logging (STFIL) meetings.

HEART OF BORNEO TECHNICAL WORKING GROUP

PILLAR 2: ECOTOURISM BASED ON CULTURE, ADVENTURE AND NATURE (CAN)

1.0 INTRODUCTION

1.1 Heart of Borneo (HoB) Initiative is a voluntary transboundary cooperation between 3 countries Brunei, Indonesia and Malaysia with aims at conserving and managing the contiguous tropical forest in the island of Borneo while enhancing sustainable development that improves the welfare of those living on the island.

1.2 In Sarawak, the HoB covers 2.689 million ha over a contiguous block along Sarawak's boundaries with Kalimantan and with Sabah and Brunei guided by five (5) pillars. The Heart of Borneo institutional framework provides clarity and strong guidance for each member countries on how to regulate and operationalized the activities within the huge Heart of Borneo areas.

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1.4 The objectives of HOB Initiative is to conserve the last expanse of contiguous forest in Borneo to:-

i. Maximize Transboundary Linkages
ii. Promote Expansion of Protected Area Networks
iii. Maintain Forest Connectivity
iv. Ensure Sustainable Land Use Practice

1.5 **Working Committee Pillar 2 - Ecotourism Based on Culture, Adventure and Nature:**
This committee is to develop community-based ecotourism including registration of homestays located within HOB area, develop, package and promote ecotourism products and services and provide relevant support for local communities and industry players.

2.0 OBJECTIVES/PURPOSE

The Working Committee (WC) for Pillar 2 of HOB Initiatives is established to coordinate and accelerate the processes of initiatives in developing the ecotourism involving the local communities to promote conservation and enhance their socio-economic well-being.

3.0 MEMBERSHIP/ WORKING COMMITTEE

Chairman	Permanent Secretary of Ministry of Tourism, Creative Industry and Performing Arts, Sarawak (MTCP).	
Secretariat	Ecotourism and CBT Section, MTCP	
Members	**Agency**	**Roles**
	i. Ministry of Food Industry, Commodity and Regional Development Sarawak	Linking Agrotourism Development into Ecotourism
	ii. Ministry of Natural Resources and Urban Development Sarawak	Landuse development for CBT
	iii. Ministry of Tourism, Arts and Culture Malaysia (Sarawak)	Licensing, CBT and Homestay Development & Capacity Building
	iv. Sarawak Tourism Board (STB)	Tourism product development & Capacity Building
	iv. Resident Offices • Kuching • Sri Aman • Sibu • Miri • Limbang • Sarikei • Kapit • Samarahan • Serian	Administrative support from DTTG. Local community engagement

	vi. Forest Department Sarawak	Conservation and landuse development and technical support
	vii. Sarawak Forestry Corporation	CBT development, capacity building and technical support
	viii. Sarawak Craft Council	Capacity building on craft
	ix. Majlis Seni Sarawak	Capacity building on arts and culture
	x. Tourism Malaysia, Sarawak Office	Strategic marketing of CBT products
	xi. Sarawak Tourism Federation (STF)	Provision of tourism services and supply chain
	xii. Sarawak Tourist Guide Association (SkTGA)	Capacity building and provision of quality tour guiding services

Ad-hoc member: Any other ministries, departments, agencies, and NGOs shall be called on an ad-hoc basis; when and where necessary.

4.0 FUNCTION/ROLES

(i) Engage with stakeholders, industry players and product owners on the inventory and development of ecotourism products and services in community settings;

(ii) To undertake market research and take a broad view of the market and recognise different segments.

(iii) Strengthen the involvement of local and indigenous communities in ecotourism product development, and the benefits they gain from it.

(iv) Address the quality, authenticity and security of the tourism products and destinations.

(v) Generate more conservation benefits from ecotourism product development and marketing.

(vi) Strengthen the application of web-based marketing tools in promoting the products.

(vii) Give top priority to the interpretation of nature and culture of ecotourism sites.

(viii) Raise the profile of community-based ecotourism and the principles it embodies, through a promotional campaign at an international level.

5.0 MEETING/REPORTING

i. The Working Committee shall meet at least twice (2) a year or whenever necessary.
ii. The chair shall convene the meetings accordingly. If the designated chair is not available, the chair shall appoint his/her representative to convene the meeting and to inform the salient points/decisions raised or agreed to at that meeting.
iii. The secretariat shall notify working committee seven (7) days before every meeting.
iv. The secretariat shall record minutes of meetings and distribute to members within fourteen (14) working days.
v. A quorum consisting 2/3 of the members is necessary to conduct the meeting.

HEART OF BORNEO TECHNICAL WORKING GROUP

PILLAR 3: CONSERVATION OF BIOLOGICAL DIVERSITY

1.0 INTRODUCTION

1.1 Heart of Borneo (HoB) Initiative is a voluntary transboundary cooperation between 3 countries Brunei, Indonesia and Malaysia with aims at conserving and managing the contiguous tropical forest in the island of Borneo while enhancing sustainable development that improves the welfare of those living on the island.

1.2 In Sarawak, the HoB covers 2.689 million ha over a contiguous block along Sarawak's boundaries with Kalimantan and with Sabah and Brunei guided by five (5) pillars. The Heart of Borneo institutional framework provides clarity and strong guidance for each member countries on how to regulate and operationalized the activities within the huge Heart of Borneo areas.

1.3 At the international level, a Trilateral Meeting between Brunei, Malaysia and Indonesia is held every year to discuss on new transboundary programs, activities and updates member countries on the progress of existing action plans. Since the Heart of Borneo Declaration was signed in 2007, there has been thirteen Trilateral Meetings held among the three member countries. At the national level for Malaysia, an Expert Working Group chaired by the Secretary -General of the Ministry of Natural Resource and Environmental Sustainability provide guidance and advise on the implementation of the Malaysia's Heart of Borneo component. The Expert Working Group members comprised of relevant federal and state government agencies. At the state level, the Sarawak Steering Committee chaired by the State Secretary and the Technical Working Group chaired by the Permanent Secretary of Ministry of Urban Development and Natural Resources provide the Sarawak Heart of Borneo direction on its implementation. Under the HoB TWG, five (5) Working Group (WG) was formed to facilitate the implementation.

1.4 The objectives of HOB Initiative is to conserve the last expanse of contiguous forest in Borneo to:-

v. Maximize Transboundary Linkages
vi. Promote Expansion of Protected Area Networks
vii. Maintain Forest Connectivity
viii. Ensure Sustainable Land Use Practice

1.5 **Working Committee Pillar 3 - Conservation And Biological Diversity:** The Working Committee Pillar 3 will focus on the implementation of Conservation and Biological Diversity initiatives within the HoB areas. WC-3 will play important roles in ensuring the conservation and protection of the biological diversity inside the HoB area are managed and conserved in the most sustainable ways in line with Sustainable Development Goals (SDGs), National Policy on Biological Diversity 2016-2025, and Sarawak's Post Covid-19 Development Strategies (PCDS) 2030.

WC-3 is headed by the Controller of National Parks and Nature Reserves/Controller of Wildlife as the Chairman and with 10 members, consists of several government agencies including higher institutions. WC-3 will encourage the participation of Indigenous People and Local Community (IPLC) and NGOs during the decision-making of initiatives under Pillar 3.

2.0 OBJECTIVES/PURPOSE

The main objective of this TWG is to support the implementation of HoB initiatives through the implementation, supervision, and monitoring of the biodiversity conservation project within the HoB area.

3.0 MEMBERSHIP/ WORKING COMMITTEE

Chairman	Controller	
Secretariat	Strategic Planning & International Engagement Section, SFC	
Members (the head or the appointed senior officer from the identified agencies)	**Agency**	**Roles**
	i. SFC (x1)	To provide updates on activities conducted in TPAs and wildlife.
	ii. Sarawak Biodiversity Centre (SBC) (x1)	To provide inputs and updates on research & other related activities.
	iii. Forest Department Sarawak (FDS) (x1)	To provide inputs and an update on research/ conservation activities conducted in FMU, LPF, and PFE within the HoB areas.
	iv. Economic Planning Unit (EPU) (x1)	To provides inputs and advice on government's project planning within HoB area.

	v. Land & Survey Department (L&S)(x1)	To provide inputs and information regarding land use.
	vi. Department of Agriculture (DOA) (x1)	To provide input and updates on research and other related activities within HoB.
	vii. Unit Keselamatan dan Penguatkuasaan (UKPS) (x1)	To provide inputs and advice related to international border matters.
	viii. Natural Resources & Environmental Board (NREB) (x1)	To provide inputs and updates on environment and conservation activities/programs conducted.
	viii. UNIMAS (Institute of Biodiversity and Environmental Conservation (IBEC)) (x1)	To provide scientific inputs and an update on research/ conservation activities conducted within the HoB area.

Co-opt. member: Any other ministries, departments, agencies, and NGOs shall be called on an ad-hoc basis; when and where necessary.

4.0 FUNCTIONS/ROLES

i. To prepare and implement the Strategic Action Plan in regards to research, survey programs, protection and conservation of habitat/ important areas for wildlife (i.e. TPA, wildlife corridor, refugia, ranging area, etc.);

ii. To ensure that all biodiversity conservation programs, activities conducted, monitored, recorded, and reported within the stipulated time given;

iii. Stakeholders and community engagements (i.e. Community Patrol, Wildlife Guardian Ranger, Turtle Ranger and etc.);

iv. International engagement through project implementations;

v. Source for alternative project implementation funding;

vi. To convene meeting according to the TOR;

vii. To discuss and find favourable solutions to address issues raised by the members related to the implementation of projects;

viii. To escalate any issues that are beyond the jurisdictions of the working committee to TWG;

ix. To provide guidelines and advice to other working committees related to biodiversity conservation when and where necessary.

5.0 MEETING/REPORTING

i. The Working Committee shall meet at least twice (2) a year or whenever necessary.
ii. The chair shall convene the meetings accordingly. If the designated chair is not available, the chair shall appoint his/her representative; the Deputy Controller to convene the meeting and to inform the salient points/decisions raised or agreed to at that meeting.
iii. The secretariat shall notify working committee seven (7) days before every meeting.
iv. The secretariat shall record minutes of meetings and distribute to members within fourteen (14) working days.
v. A quorum consisting 2/3 of the members is necessary to conduct the meeting.

HEART OF BORNEO TECHNICAL WORKING GROUP

PILLAR 4: SUSTAINABLE LAND USE / AGRICULTURE

1.0 INTRODUCTION

1.1 Heart of Borneo (HoB) Initiative is a voluntary transboundary cooperation between 3 countries Brunei, Indonesia and Malaysia with aims at conserving and managing the contiguous tropical forest in the island of Borneo while enhancing sustainable development that improves the welfare of those living on the island.

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1.5 **The Working Committee Pillar 4 - Sustainable Land Use / Agriculture:** The committee was formed to facilitate the implementation of the HoB initiative focusing on sustainable development of agriculture and land use activities through wise management of natural resources and good agriculture practices.

2.0 OBJECTIVES/PURPOSE

The main objective of this working group is to review, identify, coordinate, promote, monitor and report on sustainable agriculture activities, programs and projects implemented within the HoB Area.

3.0 MEMBERSHIP/ WORKING COMMITTEE

Chairman	M-FICORD	
Secretariat	Department of Agriculture Sarawak (DOA)	
Members	**Agency**	**Roles**
	i. Forest Department Sarawak (FDS)	Member
	ii. Department of Veterinary Services (DVSS)	Member
	iii. Land Custody and Development Authority (LCDA)	Member
	iv. Sarawak Land Consolidation and Rehabilitation Authority (SALCRA)	Member
	v. Sarawak Land Development Board (SLDB)	Member
	vi. Lembaga Getah Malaysia Wilayah Sarawak	Member
	vii. Malaysian Palm Oil Board (MPOB) Wilayah Sarawak	Member
	viii. Lembaga Lada Malaysia	Member
	ix. RISDA Sarawak	Member
	x. Lembaga Koko Malaysia (Sarawak)	Member
	xi. Malaysian Sustainable Palm Oil (MSPO)	Member
	xii. Lembaga Perindustrian Nanas Malaysia (LPNM)	Member
	xiii. Sarawak Timber Industry Development Corporation (STIDC)	Member
	xiv. Sarawak Rubber Industry Board (SARIB)	Member
	xv. Sago and Nipah Development Board (SNDB)	Member
	xvi. Majlis Adat Istiadat Sarawak (MAIS)	Member

	Ad hoc members:	
	xii. Natural Resources and Environment Board Sarawak (NREB)	Member
	xviii. Sarawak Biodiversity Centre (SBC)	Member

Ad-hoc member: Any other ministries, departments, agencies, and NGOs shall be called on an ad-hoc basis; when and where necessary.

4.0 FUNCTION/ROLES

i. To study and identify boundaries and land use (agricultural activities) included in the HoB Area;

ii. To review, identify and coordinate sustainable agriculture activities, programs and projects within the HoB Area;

iii. To promote activities, programs and projects aimed at sustainable agriculture;

iv. To monitor the implementation of sustainable agriculture activities, programs and projects within the HoB Area (i.e. MSPO, MyGAP, GAP, My Organic); and

v. To provide reports, information and input to TWG HoB.

5.0 MEETING/REPORTING

i. The Working Committee shall meet at least twice (2) a year or whenever necessary.

ii. The chair shall convene the meetings accordingly. If the designated chair is not available, the chair shall appoint his/her representative to convene the meeting and to inform the salient points/decisions raised or agreed to at that meeting.

iii. The secretariat shall notify working committee seven (7) days before every meeting.

iv. The secretariat shall record minutes of meetings and distribute to members within fourteen (14) working days.

v. A quorum consisting 2/3 of the members is necessary to conduct the meeting.

HEART OF BORNEO TECHNICAL WORKING GROUP

PILLAR 2: ECOTOURISM BASED ON CULTURE, ADVENTURE AND NATURE (CAN)

1.0 INTRODUCTION

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1.5 **Working Committee Pillar 5 – Community-based / Rural Poverty Alleviation Program:**

The Working Committee Pillar 5 plays an important role to carry out initiatives and projects that aim to address poverty at the grassroots level in rural communities within Heart of Borneo. These programs often focus on sustainable development, capacity building, and empowerment of community members to improve their economic livelihoods and overall well-being in line with Sustainable Development Goals (SDGs), Social Forestry Strategic Plan of Malaysia 2021-2025 and Sarawak Post Covid-19 Development Strategies (PCDS) 2030.

Such initiatives will include skills training, non-timber forest products development, infrastructure improvements, environment awareness, and educational opportunities tailored to the specific needs of the community. By engaging with and involving community members in decision-making processes, these programs seek to create long-term and impactful changes that help lift HoB's community out of poverty.

The chairman for The Working Committee Pillar 5 is the Director of Forests, Forest Department Sarawak with several government agencies and government link companies as well as local community as committee members.

2.0 OBJECTIVES/PURPOSE

The main objective of this TWG is to identify, propose, implement, monitor and report initiatives / projects aiming to uplift livelihood and alleviate income through active participation of the community within the HoB area.

3.0 MEMBERSHIP/ WORKING COMMITTEE

Chairman	Director of Forests, Forest Department Sarawak (FDS)	
Secretariat	Social Forestry Division, Forest Department Sarawak (FDS)	
Members (Head of Department or relevant officer appointed from each agency)	**Agency**	**Roles**
	i. Forest Department Sarawak (FDS)	To provide inputs and updates on initiatives / projects related to community development being conducted in the HoB area.
	ii. Sarawak Forestry Corporation (SFC)	To provide inputs and updates on initiatives / projects been conducted related to community within TPAs

	iii. Land & Survey Department	To provide inputs and updates on initiatives / projects related to community development being conducted in the HoB area.
	iv. Sarawak Biodiversity Centre (SBC)	To provide inputs and updates on initiatives / projects / research related to community development being conducted in the HoB area.
	v. Ministry of Tourism, Creative Industry & Performing Arts Sarawak (MTCP)	To provide inputs and updates on initiatives / projects related to community development being conducted in the HoB area.
	vi. Ministry of Food Industry, Commodity and Regional Development Sarawak (M-FICORD)	To provide inputs and updates on initiatives / projects related to community development being conducted in the HoB area.
	vii. Sarawak Timber Industry Development Corporation (STIDC)	To provide inputs and updates on initiatives / projects related to community development being conducted in the HoB area.
	viii. Council for Native Customs & Traditions Sarawak	To provide inputs and updates on initiatives / projects related to community development being conducted in the HoB area.
	ix. Economic Planning Unit (EPU)	To provide inputs and updates on initiatives / projects related to community development being conducted in the HoB area.
	x. Kementerian Pembangunan Wanita, Kanak-kanak & Kesejahteraan Komuniti (KPWK)	To provide inputs and updates on initiatives / projects related to community development being conducted in the HoB area.
	xi. Natural Resources & Environmental Board (NREB)	To provide inputs and updates on initiatives / projects related to community development being conducted in the HoB area.
	xii. Ministry of International Trade, Industry and Investment (MINTRED)	To provide inputs and updates on initiatives / projects related to community development being conducted in the HoB area.

Ad-hoc member: Any other ministries, departments, agencies, and NGOs shall be called on an ad-hoc basis; when and where necessary.

4.0 FUNCTIONS / ROLES

i. To monitor and report on progress of projects implemented;

ii. To facilitate discussion to assess and review progress of project;

iii. To provide oversight of implementation and address issues raised by members;

iv. To ensure all projects been implemented within the HoB area;

v. To convene meeting according to the TOR;

5.0 MEETING / REPORTING

i. The Working Committee shall meet at least twice (2) a year or whenever necessary.

ii. The chair shall convene the meetings accordingly. If the designated chair is not available, the chair shall appoint his/her representative to convene the meeting and to inform the salient points/decisions raised or agreed to at that meeting.

iii. The secretariat shall notify working committee seven (7) days before every meeting.

iv. The secretariat shall record minutes of meetings and distribute to members within fourteen (14) working days.

v. A quorum consisting 2/3 of the members is necessary to conduct the meeting.





FOREST DEPARTMENT SARAWAK

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