

# SUSTAINABLE FOREST MANAGEMENT: SARAWAK'S PERSPECTIVE

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## ABSTRACT

Sustainable Forest Management is generally understood as achieving a balance among three key pillars: environmental protection, economic viability, and socially acceptable practices. With growing concerns over prioritizing environmental protection and respecting the traditional rights of local communities, the governing authorities must adapt to these evolving demands while upholding the core principles of sustainability. Since 2019, Sarawak's forestry policies have undergone significant changes, emphasizing environmental protection and the sustainability of forest resources. Harvesting operations in Sarawak have decreased to around 2 million m<sup>3</sup> per year, accompanied by stringent requirements for forest management certification in both natural and planted forests. Currently, Sarawak has 26 certified natural forests covering over 2.3 million hectares, along with 8 certified forest plantations spanning approximately 122,000 hectares. In our efforts to restore the forests, more than 35 million trees have been planted under the Sarawak Greening Campaign. The amendment to the Forest Ordinance 2022 and the Sarawak Policy 2019 enables Sarawak to diversify its economy through forest carbon activities and payment for ecosystem services (PES). The PES has generated a total of RM 6,582,766.55 in revenue, which supports community development and education for our local communities. Meanwhile, forest carbon projects are expected to bring in an annual revenue in statutory charges of RM 20-25 million for every 500,000 hectares. The Sarawak Government has also invested about RM 8 million under the 11<sup>th</sup> and 12<sup>th</sup> Malaysia Plan for research and technology to improve forest management, conserve forest resources and strengthen the timber chain of custody.

**Keywords:** Sustainable Forest Management, revenue generation, Payment for Ecosystem Services, forest carbon activities

## 1 INTRODUCTION

Sustainable Forest Management (SFM) continues to be a key policy focus in Malaysia, aligning with the broader goals of sustainable development. SFM is generally defined as balancing three essential pillars: environmental protection, economic viability, and socially responsible practices. Effective SFM practices offer comprehensive benefits, from preserving local livelihoods and protecting forest biodiversity and ecosystems to reducing rural poverty and mitigating some of the impacts of climate change.

Sarawak occupies a land area of 12.4 million hectares, making it the largest region in Malaysia. Approximately 62% of its landmass is covered by forests, which serve as a valuable repository of biodiversity, economic resources, and cultural heritage for 27 primary ethnic communities in the region. The Sarawak Government has implemented a comprehensive approve by allocating specific areas for various purposes to ensure sustainable development and environmental conservation. This allocation under the Sarawak's land use policy includes 1 million hectares for conservation (TPAs), 6 million hectares of Permanent Forest Estates for sustainable forest management, and others for plantation, settlement, and miscellaneous development. It's crucial to note that except for titled lands (NCR, lease and land which have document of title), all these allocations are State Land.

Over the years, Sarawak has experienced a significant transformation in its forestry sector, evolving from small-scale barter trade in non-timber forest products like damar and cutch to commercial timber extraction. In its early stages, Sarawak's forestry activities were primarily centered on timber resources to drive economic development. Timber extraction emerged as one of the state's main sources of revenue, contributing to infrastructure development, creating jobs, and supporting overall economic development.

In recent years, growing awareness of environmental sustainability, global climate change, and the need to protect biodiversity has led to a strategic shift in Sarawak's forestry sector. The focus has broadened from solely extracting merchantable timber to prioritizing forest conservation, sustainable management, and rehabilitation efforts. This transition is driven by the recognition that forests offer more than timber; they are vital for carbon sequestration, water regulation, biodiversity preservation, and supporting the livelihoods of local communities that depend on forest resources.

This paper reflects the Sarawak Government's aspirations and dedication to SFM, demonstrating its commitment to maintaining a balance between economic growth and the long-term preservation of forest ecosystems. By prioritizing forest conservation, rehabilitation, and sustainable practices, the government aims to ensure that the benefits of Sarawak's forests are shared by future generations, contributing not only to local prosperity but also to global efforts to combat climate change and conserve biodiversity.

## **2. THE JOURNEY OF SUSTAINABLE FOREST MANAGEMENT IN SARAWAK**

The foundation of SFM in Sarawak is the Statement of Forest Policy 1954, which called for a balanced approach to managing forest resources to ensure their long-term sustainability for the benefit of the people of Sarawak. The Statement laid the groundwork for three key developments in the forestry sector during this period: (i) more efficient regulation of forests and planned utilization of forest resources, (ii) the establishment of a sufficient production forests- Permanent Forest Estate (PFE), now referred to as Permanent Forest, and (iii) the implementation of systematic forest management based on the principle of sustained yield.

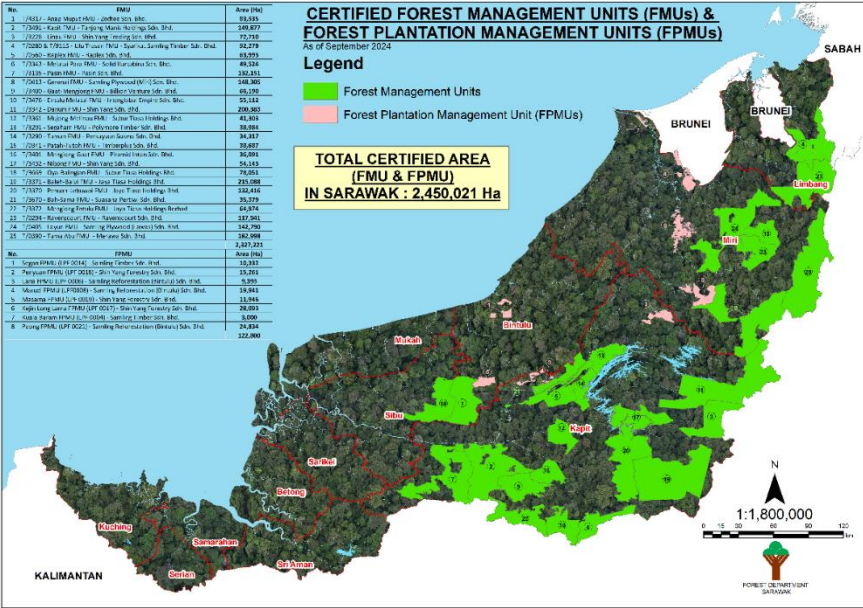
Forestry has remained under Sarawak's jurisdiction since it joined Malaysia in 1963, as stated in Article 74(2) of the Federal Constitution. During this period, multilateral development projects were established primarily to enhance SFM in the production forests. From 1969 to 1972, the Food and Agriculture Organization of United Nations (FAO) conducted a forest inventory in hill forests to assess timber stocks in hill dipterocarp forests. A key outcome of this study was the recommendation for selective and systematic harvesting in mixed-dipterocarp forests, a practice that continues to this day. Other notable collaborations over the years were with the International Tropical Timber Organization (ITTO), United Nations Development Programme (UNDP)-Global Environment Facility (GEF) and the Malaysian- German Technical Cooperation Project which made significant improvements in biodiversity conservation and local community participation, forest resource assessment, forest engineering, forest mapping and development of the Reduced Impact Logging (RIL).

During the peak of forest harvesting in Sarawak in the early 1990s, the ITTO conducted an independent assessment of SFM in the region, following concerns about deforestation. The mission commended Sarawak's forest management, describing it as "of a higher standard than in most other tropical timber-producing countries" while also providing several recommendations for improvement. One key recommendation was to reduce timber production to 9.2 million m<sup>3</sup> for production forests, a target that was strictly enforced and achieved with the cooperation of the timber industry.

The timber industry was the central focus of Sarawak's forestry sector until 2020, when the interest shifted towards environmental protection and the sustainability of forest resources. This transition marked a pivotal moment in Sarawak's approach to forestry, leading to major reforms that prioritized conservation and community engagement. Key changes including the revisions to the Sarawak Forest Policy 2019 and Forest Ordinance 2015, which placed greater emphasis on environmental conservation, sustainable forest management, and community development and participation, while maintaining the principles of SFM. In line with these reforms, the area designated as permanent forest was expanded to 3.96 million hectares, with 30% (or 1.3 million hectares) located within the Heart of Borneo (HoB) region, a critical area for biodiversity and conservation efforts.

Additionally, log production was reduced to around 2 million m<sup>3</sup> per year in both permanent and non-permanent forests, with strict requirements for forest management certification for both natural forests and eligible plantations. Currently, 25 certified natural forests cover over 2.3 million hectares, and 8 certified forest plantations span more than 120,000 hectares, aligning with Sarawak’s goal for a sustainable and green economy under the Post COVID-19 Development Strategy 2030 (PCDS 2030) (Fig.1).

Fig.1: Certified forests in Sarawak



The reformation also extended to the administration of the forestry sector. The restructuring of the Forest Department Sarawak (FDS) and the Sarawak Forestry Corporation (SFC) led to a more structured and focused approach to governance, jurisdiction, and forest management. The FDS now oversees forest management under the *Forest Ordinance 2015*, while the Sarawak Forestry Corporation is responsible for managing Totally Protected Areas (TPAs) under *Natural Parks and Nature Reserves Ordinance, 1998* and wildlife conservation under *Wild Life Protection Ordinance, 1998*.

To strengthen forest management, conserve forest resources and the timber chain of custody, the Sarawak Government has allocated approximately RM 8 million under the 11<sup>th</sup> and 12<sup>th</sup> Malaysia Plan (MP) in research and technology. This funding has supported the development of technological based projects such as the Continuous Monitoring and Surveillance (COMOS) system for forest monitoring and enforcement, the development of the Sarawak Logs Tracking & Forest Revenue System (REVLOG), Forest Licensee Portal and Enterprise Forest Information Management System (EFIMS). These tools are intended to support FDS in managing forests and monitoring logging activities, while also tracking log movements across the supply chain. They promote transparency and accountability, lower transaction costs, and reduce the risk of bribery by minimizing direct contact with timber administration. Additionally, they enhance the collection and monitoring of revenue charges and strengthen market trust in legality assurance.

The shifting of focus towards a green and sustainable economy is also reflected in the Sarawak’s initiative on Forest Landscape Restoration (FLR), which is align to the National’s Greening Malaysia Campaign to maintain the vitality of the forests and support its intricate ecosystems in fulfilling their natural functions. Currently, Sarawak leads among Malaysian states in tree planting efforts, with over 39 million trees planted.

Community engagement and development are an essential aspects of sustainable forest management (SFM). In 2020, the population in Sarawak has recorded a growth rate of 1.4% reaching a total of 2,509,500 people. The increasing competition for land and forest resources poses a significant threat to forest sustainability, as various

stakeholders vie for access to these valuable natural assets. The FDS has been working closely with Forest Timber Licence holders and other stakeholders to promote community engagement and continue consultation through the Forest Management Certification initiative. Over the years, the FDS has implemented numerous community development initiatives throughout Sarawak such upgrading of basic facilities, the provision of opportunities for local entrepreneurs (NTFP carnival) and the facilitation of handicraft training.

The 2022 amendments to the Forest Ordinance 2015 represent a significant advancement in enhancing capital generation from existing forests while also promoting conservation to support Sarawak's socio-economic development. These amendments introduce amenity forests, which encourage local community involvement in eco-tourism and promote research and education in production forests. In addition to amenity forests, the revision includes provisions for implementing forest carbon activities, including its trading.

The primary drivers of these changes are attributed to the strong political will and commitment of Sarawak's leaders in sustainable forest management and community development.

### **3. TRANSITIONING TOWARD A GREEN ECONOMY IN SARAWAK**

While SFM is traditionally be linked with a business which profits from forest produce mainly on timbers, Sarawak have started slowly transitioning towards a green economy. The revision of the Forest Ordinance in 2015 marks the initial step toward fostering a green economy in Sarawak through the incentive-based environmental intervention- the Payment of Ecosystem Services (PES). The incorporation of PES into the Forest Ordinance 2015 is viewed as the Government's way of acknowledging the value of ecosystem services and ensuring that their benefits are preserved for future generations.

A significant portion of Sarawak's population remains rural and in need of basic infrastructure development (Access roads, water and electricity supply), which necessitate the expense of certain areas of permanent forest to support local community development. While the permanent forests are designated for sustainable timber production, they play a crucial role in maintaining the ecosystem by protecting watersheds, ensuring clean water, and mitigating climate change. Consequently, PES offers an effective solution for sustainable financing, benefiting rural communities while preserving the ecosystem and restoring forests in Sarawak.

PES is imposed on developers or project proponents, including those involved with building telecommunications towers and transmission lines within Permanent Forests. So far, RM 6,582,776.55 has been generated from PES to support community development, education and forest rehabilitation efforts across Sarawak under "*NO LOSS OF BIODIVERSITY CONCEPT*".

Nature based solution projects have substantial potential to generate new revenue streams and boost rural economy by providing more employment for the local communities. Verified Carbon Unit has increase substantially and still continue in an upward trend that can bring in foreign investment at the same time preserve or restore forest areas in Sarawak. With the amendment of the Forest Ordinance in 2015 and the approval of the Forests (Forest Carbon Activity) Rules in 2022, Sarawak is a pioneer from other regions in Malaysia in developing its own forest carbon trading policies and regulations. The Forest Carbon Activity is one of the Government's strategies aimed to diversify into a greener economy while addressing climate change, sustaining forest resources through conservation and rehabilitation efforts and promote social inclusivity by involving the rural communities. The forest carbon is expected to generate an annual revenue in statutory charges of RM 20-25 million for every 500,000 hectares.

To harness the carbon potential of the forests, the Sarawak Government has allocated more than RM 2 million under the 12<sup>th</sup> Malaysia Plan for a comprehensive forest carbon assessment to evaluate and update the current status of carbon stocks. This funding enables the mapping of aboveground carbon stocks in mixed-dipterocarp, peat swamp, and mangrove forests using a combination of airborne and ground-based Light Detection and Ranging (LiDAR) technology, alongside satellite imagery and geospatial data collection.

This initiative is also part of the strategy to achieve net-zero emissions in Sarawak by 2050.

#### **4. SARAWAK VIEW ON GLOBAL PERSPECTIVE ON SFM**

Sarawak is open to embracing recommendations or constructive comments from different perspectives that can help to improve the forest management in Sarawak, thus aligning with global best practices and standards in sustainable forestry. This is evident based on the past experience from international projects and missions notably from ITTO, FAO, WWF and many others.

The recent European Union Deforestation Regulation (EUDR) has sparked significant discussion among global producer nations, including Sarawak. While some elements of the regulation may not fully align with the Government's current policies, considering that Sarawak is still a developing region where rural communities need infrastructure and socio-economic development. The regulation's restriction on land conversion prior to 2020 impacts traditional practices, particularly for communities that still rely on shifting agriculture and forest resources for their livelihoods. Limiting access to forest resources not only undermines SFM principles but could also trigger a domino effect, leading to socio-economic challenges. Despite this, the FDS remains focused on leveraging the positive aspects of the EUDR, especially in strengthening the chain of custody (COC) for timber resources.

Forest Management Certification (FMC) is widely regarded as a critical tool to ensure SFM. It sets a standard for responsible forest stewardship, promoting biodiversity conservation, the well-being of local communities, and the sustainable production of forest products. However, the process of obtaining and maintaining FMC is financially demanding. This includes costs related to rigorous audits, compliance with international standards, continuous monitoring, and the implementation of corrective measures when necessary. For many producer countries, especially those in developing regions, these costs can be a significant burden.

Given that the benefits of SFM, such as biodiversity conservation, climate change mitigation, and carbon sequestration extend far beyond national borders and contribute to global environmental stability. It is increasingly important that these costs are not shouldered solely by producer countries. The forests being conserved and sustainably managed play a crucial role in regulating the global climate, maintaining water cycles, and protecting endangered species, all of which are global public goods.

This raises the argument for more equitable cost-sharing mechanisms, where consumer countries, particularly those with high demand for timber and forest products, should contribute financially to support FMC. In the broader context, cost-sharing for FMC represents a step toward a more just and collaborative global framework, ensuring that the financial burden is distributed fairly across all nations that benefit from sustainable forestry practices.

#### **5. CONCLUSION**

A complete shift from traditional revenue-generating logging of merchantable timber to carbon trading may not be a suitable approach at this time, as Sarawak still relies on timber resources for socio-economic development. Given the uncertainties surrounding financial returns from the carbon market and fluctuating prices, carbon activities should be viewed not as a replacement for timber revenue but as a way to diversify and complement income streams; a balanced approach is necessary to effectively leverage the resources from our forests.

Strengthening research and development in SFM is crucial for establishing effective oversight and accountability in policy formulation and implementation. It helps assess policy effectiveness and ensures alignment with environmental goals and community needs. Most importantly, the commitment of all stakeholders, especially strong political will, is essential for sustaining forest resources to benefit everyone, especially the people of Sarawak. The forestry profession is far from obsolete; rather, it plays a crucial role in the survival of humanity.

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