



UNIVERSITI PUTRA MALAYSIA

***INDEPENDENT OIL PALM SMALLHOLDERS' KNOWLEDGE AND
ATTITUDE ON BIODIVERSITY CONSERVATION AND THE
WILLINGNESS TO PARTICIPATE IN ENVIRONMENTALLY
CERTIFICATION SCHEMES IN KUALA LANGAT, SELANGOR.***

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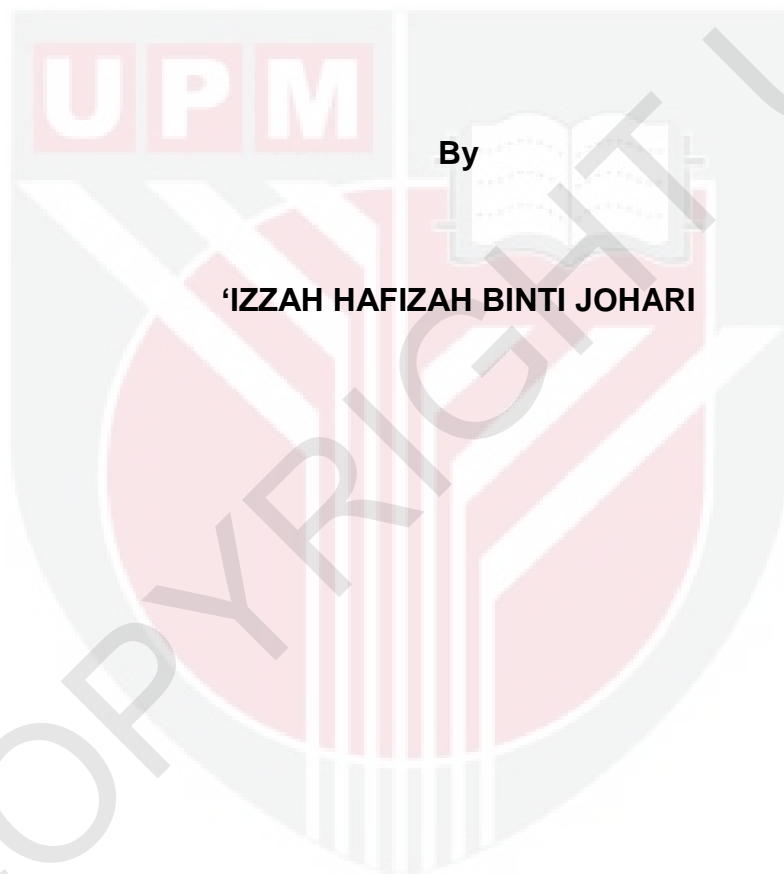


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**FACULTY OF FORESTRY
UNIVERSITI PUTRA MALAYSIA**

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ATTITUDE TOWARDS BIODIVERSITY CONSERVATION AND THE
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By

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**A Project Report Submitted in Partial Fulfilment of the Requirements for
the Degree of Bachelor of Forestry Science in the
Faculty of Forestry
Universiti Putra Malaysia**

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DEDICATION

This thesis specially dedicate

To my caring and loving mother, without her I am nothing,

Maimunah binti Samson

To my late father,

Johari bin Ladin

To my supportive and caring uncle,

Sabri bin Samson

To my beloved and supportive sister and brothers,

'Izzah Hazirah binti Johari and 'Iffat Hazim bin Johari

To the one that help me so much,

Muhammad Amsyar bin Nor Azlan

To all who have inspired me throughout my journey of study,

Whose affection, love, encouragement, and prays of days and night make
me able to get such success and honour.

This humble work is a sign of my love to you.

Conserving the unknown

Because we don't know what we are losing."

ABSTRACT

Oil palm plantation expanding has altered the natural landscape. Oil palm monocultures become a dominant landscape in Southeast Asia especially Malaysia. Oil palm plays an important role to Malaysian economy and has attracted the attention of local grower. Oil palm plantation in Malaysia can be divided into two types of cultivation namely estate plantation and smallholding. This study was done in Kuala Langat, Selangor. The main objective of this study was to determine smallholder's attitude and knowledge on farmland biodiversity and also to determine smallholder's willingness to participate in certification scheme and take action in biodiversity conservation. The study took about a month of interviewing 50 respondents around Kuala Langat among independent smallholders. The results of this study show that independent smallholder's knowledge about biodiversity was plentiful. Moreover, the types of wild animals found in their farmlands also abundant and some of it is a threatened and protected species. It is critically to note that the complexity of the independent smallholder's farmland is higher than large scale smallholdings have. Data analysing by using One Sample t-test to compared the net revenue of smallholders with other previous study show the insignificant result ($p=0.063$). Another One Sample t-test was done to compare the fees that independent smallholders willing to pay to participate with the annual fees of RSPO stated. It shows the result was significant ($p=0.001$). Thus, it can be conclude that due to the low price of palm oil in the market and an expensive annual fees of existed certificate such as RSPO, the smallholders can't afford to paid and joining the conservation schemes.

ABSTRAK

Pengembangan perladangan kelapa sawit telah mengubah landskap semulajadi. Perladangan kelapa sawit monokultur menjadi landskap yang utama di seluruh kawasan Asia Tenggara terutamanya Malaysia. Perladangan kelapa sawit memainkan peranan penting kepada ekonomi Malaysia. Perladangan kelapa sawit boleh dibahagikan kepada dua kategori, iaitu perladangan estet dan juga pekebun kecil. Kajian ini dijalankan di Kuala Langat, Selangor. Objektif utama kajian ini dijalankan adalah untuk menentukan tahap pengetahuan dan perilaku pekebun kecil terhadap kepelbagaian biologi dan juga menentukan kesanggupan pekebun kecil untuk menyertai persijilan mesra alam. Kajian ini dijalankan selama sebulan, dan menemuduga seramai 50 responden di seluruh Kuala Langat. Kajian ini menunjukkan keputusan di mana pengetahuan terhadap kepelbagaian biologi terutamanya hidupan liar adalah tinggi. Kedapatan hidupan liar di dalam kawasan kebun mereka juga tinggi dan pelbagai. Tetapi, perilaku dan kesanggupan pekebun kecil untuk menyertai persijilan mesra alam adalah rendah. Analisis data menggunakan One Sample t-test untuk membandingkan antara jumlah hasil pekebun kecil peroleh dengan jumlah hasil pekebun kecil peroleh dari kajian terdahulu menunjukkan keputusan tidak significant ($p=0.063$). Manakala data analisis One Sample t-test membandingkan antara jumlah yuran yang sanggup dibayar oleh pekebun kecil dengan jumlah yuran RSPO menunjukkan keputusan significant ($p=0.001$). Keseluruhan kajian ini boleh disimpulkan dengan di mana oleh kerana yuran skim pensijilan mesra alam adalah mahal, maka pekebun kecil tidak berkemampuan untuk menyertai dan sekaligus tidak terlibat dalam pemeliharaan dan pemuliharaan alam sekitar.

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APPROVAL SHEET

I certify that this research project entitled “Independent Oil Palm Smallholders’ Knowledge and Attitude towards Biodiversity Conservation and the Willingness to Participate in Environmentally Certification Schemes in Kuala Langat, Selangor” by ‘Izzah Hafizah binti Johari has been examined and approved as a partial fulfillment of the requirements for the degree of Bachelor of Forestry Science in the Faculty of Forestry, Universiti Putra Malaysia.

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LIST OF ABBREVIATIONS

CIFOR	Centre for International Forestry Research
CSPO	Certificate Sustainable Palm Oil
DSOM	Department Statistic of Malaysia
FAO	Food and Agriculture Organization
FELDA	Federal Land Development Authority
GAP	Good Agriculture Practices
HWC	Human Wildlife Conflicts
ISPO	Indonesia Sustainable Palm Oil
MPOB	Malaysian Palm Oil Board
MSPO	Malaysian Sustainable Palm Oil
NGO	Non-Government Organization
P&C	Principles and Criteria
RSPO	Roundtable Sustainable Palm Oil
WWF	World Wildlife Fund

CHAPTER ONE

INTRODUCTION

1.1 Background of study

Oil palm (*Elaeis guineensis*) was first introduced to Malaysia as an ornamental plant in 1870. In 1917 first commercial planting took place in Tennamaram Estate in Selangor. The crop was introduced to reduce the country's economic dependence on rubber and tin. Oil palm plantation has become the most important commodity and generate second biggest revenue for Malaysia. According to the United Nation Food and Agriculture Organization (U.N FAO), 62.3% or about 20,456,000 ha of Malaysia is forested. Of this 18.7% (3,820,000) is classified as primary forest, the most bio diverse and carbon-dense form of forest. Malaysia had 1,807,000 ha of planted forest.

Between 1990 and 2010, Malaysia lost an average of 96,000 ha or 0.43% per year. In total, between 1990 and 2010, Malaysia lost 8.6% of its forest cover, or around 1,920,000 ha. This massive of forest opening is due to the demand of agricultural sector, especially on oil palm plantation. This is because most of agricultural development, which is especially on oil palm smallholdings development depends on the forest clearance to expand planting areas. In addition, the expansion of the independent smallholders' land increased from 287,000 ha in 1999 to 320, 000 ha in 2000 (Ismail et al., 2003)

According Ismail et al. (2003), Malaysian oil palm smallholding sector can be broadly categorized into organized and independent smallholders. The organized smallholders in Malaysia for the oil palm smallholdings is assisted by the organization such as Federal Land Development Authority (FELDA), and for the independent smallholders is assisted by an organization such as Pertubuhan Peladang (PELADANG) and Persatuan Tunas Malaysia (TUNAS). Independent smallholders can be defined as an owner of a smallholdings that the farmland area is less than 40 ha.

Based on the Malaysian Palm Oil Board (MPOB), it is recorded that as in 2013, there were 192,198 of independent smallholders in Malaysia representing 748,292 ha. This amount represents 14.5% of the total planted area in Malaysia which equaled to 5.23 mil ha. The productivity of smallholder agriculture and its contribution to the economy, food security and poverty reduction depend on the services provided by well-functioning ecosystems. Smallholder farming practices, in turn, affect the condition of ecosystems. These impacts are not always negative, but due the economic pressure can drive smallholders to put pressure on ecosystems, for example due to the overprotection of the farmland, the smallholder trying to eliminate wildlife from entering the farmland. This due to their knowledge and attitude towards biodiversity.

The existed certification for the sustainable oil palm smallholdings in Malaysia such as Malaysian Sustainable Palm Oil (MSPO) and Roundtable Sustainable Palm Oil (RSPO) are giving an exposure to smallholders on biodiversity. But, due to the unaffordable fees and charges also lacking of knowledge,

independent smallholder is not interested to joining them. This study determined their knowledge and attitude towards biodiversity and their willingness to participate in sustainable palm oil certification that already existed.

1.2 Problem statement

According to Clay (2014), global palm oil production is increasing by 9% every year, prompted largely by expanding biofuel markets in the European Union and by food demand in Indonesia, India and China. The expanding demand of palm oil in world markets directly leads to the deforestation for the oil palm smallholdings opening. In Malaysia, oil palm smallholdings is now a dominant landscape.

Sadly, oil palm smallholdings area is higher and increasing yearly compare to other agricultural crops, and it is located close to a forest reserve boundary. Forest reserve such as Taman Negara Kubah in Kuching, Malaysia is known to have conflicts with the oil palm plantation expansion. Some of the boundary is being surrounded by oil palm smallholdings without a buffer zone. One of the wildlife behaviour is migrating and having their own range of territory. With the expansion of oil palm smallholdings, it is creating another conflict which is, wildlife from our forest reserve may enter and crossing oil palm smallholdings for foraging purposes, roaming around the area and migrating from another forest to other forest. Human may encounter wildlife and without knowledge

and awareness farmers response negatively to the wildlife that they found in their farmland.

According to Guillem & Barnes (2012), a uniform aged palm oil smallholdings has a low level of biodiversity and richness of species flora and fauna, but for independent smallholders, some researchers found out that on their farmland biodiversity is higher than the organized smallholders. This can be supporting the idea of integrated practices that independent smallholders practicing. Certification as strategy to transform palm oil industry to a sustainable agriculture industry – biodiversity-friendly, people-friendly and profitable. Palm oil certification is developed by government agencies or smallholdings companies and environmental NGOs without considering smallholders' views. To understand this, information comprising perception, knowledge and willingness should be gathered and findings be informed to palm oil stakeholders.

1.3 Objectives

This study aimed to understand what ordinary independent palm oil smallholders think about biodiversity conservation and eco-friendly palm oil certification schemes.

The objective of this survey are:

1. To determine smallholders attitude and knowledge on farmland biodiversity in Kuala Langat, Selangor.
2. To determine smallholders willingness to participate in certification scheme and take action in biodiversity conservation in Kuala Langat, Selangor.

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