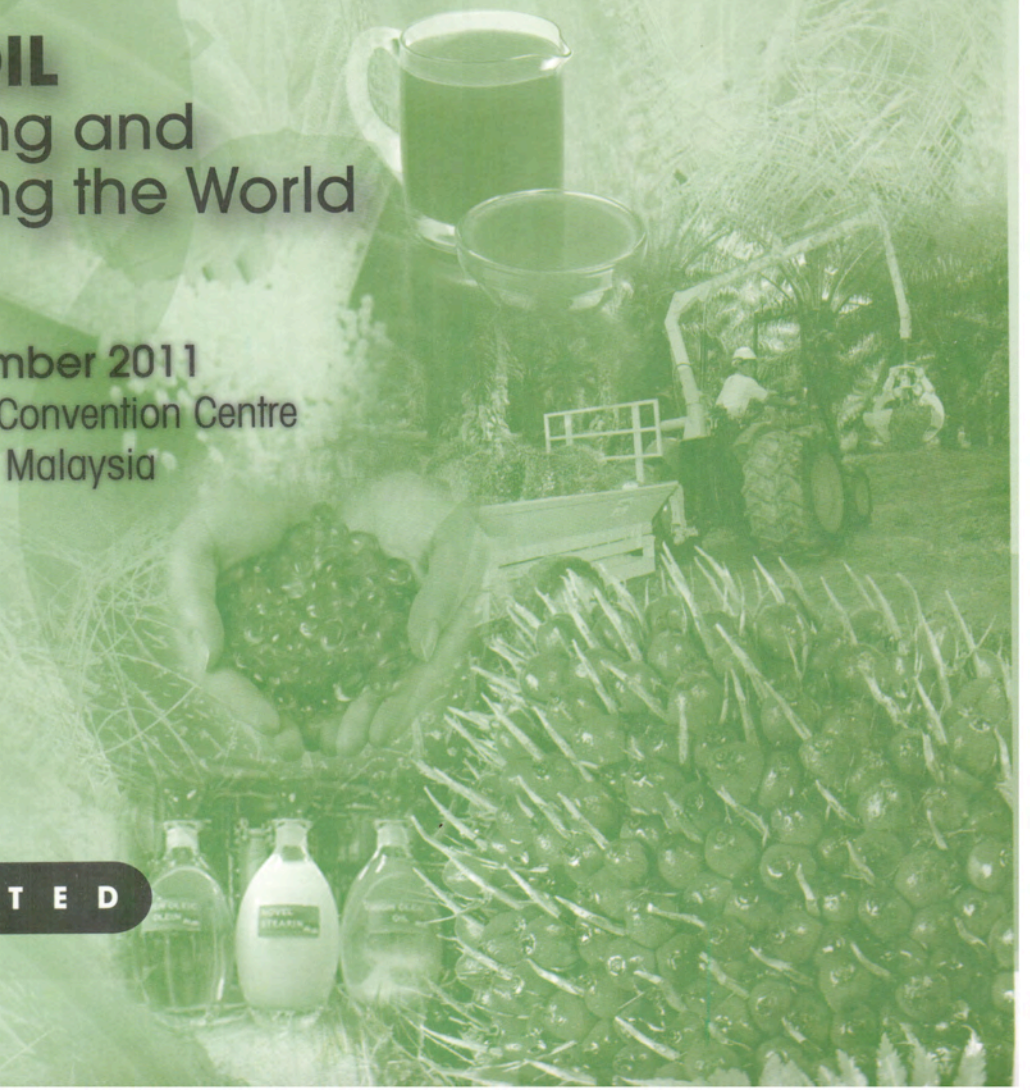
INTERNATIONAL PIPOC 2011 PALM OIL CONGRESS

PIPOC 2011

Proceedings of
Agriculture, Biotechnology & Sustainability Conference

PALM OIL
- Fortifying and Energizing the World

15 -17 November 2011
Kuala Lumpur Convention Centre
Kuala Lumpur, Malaysia



UNEDITED

PROCEEDINGS OF THE PIPOC 2011 INTERNATIONAL PALM OIL CONGRESS

"Palm Oil: Fortifying and Energizing the World"

AGRICULTURE, BIOTECHNOLOGY AND SUSTAINABILITY CONFERENCE

MALAYSIAN PALM OIL BOARD
MINISTRY OF PLANTATION INDUSTRIES AND COMMODITIES, MALAYSIA
P.O.Box 10620, 50720 Kuala Lumpur, Malaysia
Tel: 03-8769 4400 Fax: 03-8925 9446
www.mpob.gov.my

Abbre. Title:
PIPOC 2011 Int. P. O. Cong.-Agric., Biotech. & Sustainability Conf.

This unedited proceedings consist of two components:

a) Formatted Copy

b) Direct Copy

The papers in this unedited proceedings are not arranged according to sequence.

Please check in each section in relation to the programme.

Published in 2011 by the Malaysian Palm Oil Board.

A26

INVESTIGATION ON FAUNA DIVERSITY IN DIFFERENT PEATLAND ECOSYSTEMS IN SARAWAK

Khalid Haron[1], Andrew Alek Tuen[2], Mohd Tajuddin Abdullah[2], Mustafa Abdul Rahman[2], Charlie J. Laman[2], Indraneil Das[2], Bettycopa Amit[1] and Ella Michael Dosi[1]

[1]Malaysian Palm Oil Board, P.O. Box 50720, Kuala Lumpur, Malaysia
[2]Institute of Biodiversity and Environment Conservation, University Malaysia Sarawak, 94300 Kota Samarahan, Sarawak.

ABSTRACT

Oil palm is one of the world's most rapidly expanding crops mainly planted in Indonesia and Malaysia which are located in Southeast Asia, a region with numerous endemic and forest-dwelling species. As such, the potential impact of oil palm expansion on tropical forests and biodiversity in the region is a major conservation concern.

A survey was conducted to study the scenarios of fauna biodiversity in four different peatland ecosystems in Betong Division of Sarawak, namely undisturbed peat swamp forest of Maludam National Park (MNP), degraded peat swamp forest, logged-over peat swamp forest, and mature oil palm plantation.

The results indicated that the relatively undisturbed ecosystem of MNP had the highest species richness in terrestrial fauna (111 species) as compared to disturbed forest site of Kampong Tanjung Baru (102 species), the logged-over forest of Cermat Ceria (95 species) and Durafarm oil palm plantation (53 species). The number of terrestrial species inhabiting a site is a reflection of the positive and negative factors that influence survival, reproduction, mortality, and emigration and immigration rates. Such factors include food availability, protection against inclement weather and predators. The high diversity for MNP might be due to the availability of food resources and fewer disturbances compared to the other three ecosystems.

Potential management practices and salient strategies that contribute to the maintenance, conservation and enhancement of biological diversity in oil palm ecosystems need to be adopted by plantation companies for sustainability of the industry.

INTRODUCTION

The rapid expansion of oil palm cultivation in Southeast Asia, particularly in Malaysia and Indonesia has raised serious concerns about its potential impact on the region's biodiversity (Koh and Wilcove, 2007). This is because Malaysia and Indonesia are located in the world's 34 biodiversity hotspots – Sundaland and Wallacca, which contain exceptionally high concentrations of endemic species and are undergoing widespread deforestation (Sodhi *et al.*, 2004; Koh, 2007 and Myers *et al*, 2000). Regional peat swamp forests are the last refuge for many endangered species from other lowland forests, which are even greater pressures from logging, hunting and development (Sodhi *et al.*, 2010).

In Malaysia, the development of new oil palm plantations includes peat swamp forests such as in Sarawak. The conversion of peat swamp forests to other land uses such as oil palm planting, involve gross disruptions of soil and natural vegetation of peat swamps. The extents to which these practices result in reduction of fauna diversity affecting the peat ecosystems, depends upon the severity of disturbance caused by land use change and the degree to which the ecosystem has been disturbed prior to conversion into plantation. It also depends on the control of areas which have not been planted with oil palm, such as riverbanks and certain areas which are not suitable for oil palm planting.

This paper discusses various scenarios of fauna biodiversity of the survey conducted in four peat land ecosystems in Betong Division of Sarawak, namely undisturbed peat swamp forest, disturbed peat