

2007

May

## Hazards and Risk Assessments in Oil Palm Plantations using the Life Cycle Thinking Concept

GAN LIAN TIONG

Kuala Lumpur Kepong Berhad, Wisma Taiko, No. 1, Jalan S.P. Seenivasagam, 31400 Ipoh,  
Malaysia

Perak Darul Ridzuan,

*The life cycle thinking approach in evaluating hazards and risks at every stage of the plantation operations from nursery practices to despatch of crude palm oil is a useful management tool in self-assessing the potential environmental impacts in oil palm operations. This approach was tested and adopted in the self-assessment of the Principles and Criteria of the Roundtable on Sustainable Palm Oil (RSPO P&C) in two estates and two palm oil mills in Sabah, East Malaysia. The life cycle thinking approach enables the management team to think through the process flow and examine the input and output of each activity at every stage of the plantation process. Potential hazards associated with each activity are identified through a simple scoring protocol to quantify the risks. This approach also enables the management team in reviewing the cause and effect of each activity across the whole process flow in a holistic manner. This methodology provides a systematic and organised way for identifying mitigation and corrective actions both in the short- and long-term where the activity has high probability of causing quality problems, negative environmental impacts or occupational safety and health risks. This approach has served as useful methodology in developing a set of master verifiers to lend support to the requirements of Principles 4,5 and 8 of the RSPO P&C. The results of the potential environmental impacts are reported in this paper as an illustration on how the life cycle thinking model can be used.*

**Keywords:** Life cycle thinking, hazard and risk assessments, RSPO P&C verifiers

