Feature Article

Risk and Crisis Management

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ABSTRACT

Palm oil is a prime industry in Malaysia. In the year 2010, 17.56 million tonnes of crude palm oil were produced from 4.69 million hectares of oil palm planted area in Malaysia. Export earnings of oil palm products were worth RM 49.6 billion. Thus, risk and crisis management are vital to minimise the loss affecting society, community, environment, water and the organisation in the event of an unexpected catastrophe.

INTRODUCTION

Risk management involves assessing potential threats and finding the best ways to avoid those threats whereas crisis management is a discipline within the broader context of management that involves dealing with threats after they have occurred and cope with a serious situation especially from the moment it first occurs to the point recovery procedures start. It is probably untrue to say that crisis management represents a failure of risk management since it will never be possible to totally mitigate the chances of catastrophes occurring.

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RISK MANAGEMENT

Risk is defined as uncertainty as to loss or poses a problem to individuals or organisations. All people try to avoid risk as much as possible or at least to reduce its negative consequences. Thus, the specific nature of the different types of risk needs to be identified and find ways to minimise its adverse effects even though not all of them can be avoided. There are three common ways to classify them.

The first classification of risk involves the concepts of pure and speculation risks. Pure risk exists when there is uncertainty as to whether loss will occur with no possibility of gain is presented. Speculative risk exists when there is uncertainty about an event that could produce either a profit or a loss.

The second classification of risk involves the extent to which uncertainty change over time. Static risk stems from an unchanging society that is in stable equilibrium. Dynamic risks are produced because of changes in society. Greater dynamic risk may increase some types of static risks because they are not independent.

The third classification of risk is whether it is objective or subjective. Subjective risk is essentially the psychological uncertainty

that refers to the individual or organisation mental attitude and state of mind of the organisation regarding the outcome of a given event. Objective risk is the probable variation of actual from expected experience which could be observed and precisely measured. A risk averter perceives a higher degree of risk in a given situation and behaving more conservatively compared to a risk taker.

Once risk sources have been identified, it is often helpful to measure the extent of the risk that exists. The chance of loss due to peril is dependent on the physical hazard, morale hazard and moral hazard of the given situation. The degree of risk is the range of variability around the expected losses which are calculated using the chance of loss concept as shown in equation (1).

$$\text{Degree of risk} = \frac{\text{Probable variation of actual from expected losses}}{\text{Expected losses}} \quad (1)$$

The degree of objective risk diminishes as the number of exposure units increases because the law of large numbers states that as the number of exposure units increases, the more certain it is that actual loss experience will equal probable loss experience.

Decision need to be made as to how the risk should be handled after sources of risk are identified and measured. Risk management is the process that involves the executive function of planning, organising, leading and controlling used to systematically manage pure risk exposures to efficiently minimise the adverse impact of losses on the achievement of goals as shown in *Figure 1*.

It is impossible to consciously choose appropriate and efficient methods for dealing with risk losses unless the sources of risks are recognised. Thus, risk identification and evaluation are the most important elements of the risk management process. Loss exposure check-list specifies numerous po-

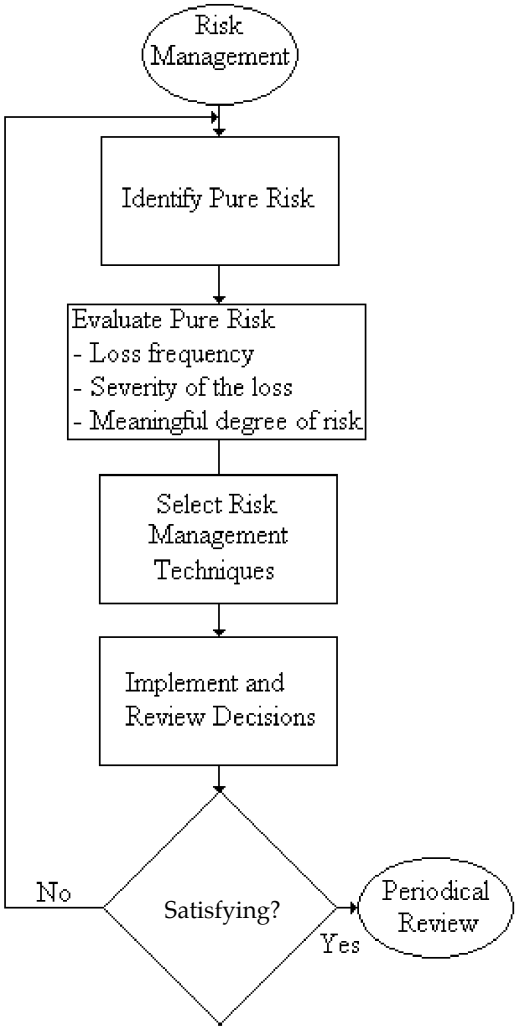


Figure 1. Risk management process flow chart.

tential sources of loss from the destruction of physical and intangible assets and from legal liability to reduce the likelihood of overlooking important sources of loss. The financial statement method analyses probable risks for each item on the balance sheet and income statement of an organisation. The flow chart method is very helpful to identify sources of risk in the production processes.

The severity and frequency of every identified exposures need to be estimated. Losses that are small in value with frequent occurrences should be dealt differently from losses that are relatively costly but rarely occur. One complicating factor in evaluating exposures is that many losses do not always result in complete destruction of

the asset involved. Thus, recent appraisals of property values and records associated with past losses enable the severity of losses resulting from a particular peril to be estimated accurately.

There are four basic methods in risk management techniques. Risk avoidance is a conscious decision not to expose to a particular risk widely used particularly by risk averters. Loss control may require technical knowledge of the exposure in order to reduce the frequency or severity or both of losses associated with risk effectively. Risk retention involves the assumption of risk and set up adequate reserve funds to pay for losses arising out of the recognised risks. Risk transfer involves payment by transfer or to transferee who agrees to assume a risk that the transferor wishes to escape due to favourable position to use the law of large number to reduce the degree of risk thus generate profit.

The selection of appropriate risk management techniques is a dynamic problem because of frequent changes of relevant factors. Some risks will still be present even if substantial funds are spent to reduce loss frequency and severity. Risk tolerance must be established on an individual basis where concepts such as total assets, net worth and expected future income are all relevant. However, some general guide-lines do exit for selecting among available risk management techniques for a given situation. Avoid risks if possible without an adverse effect on the goals. Costs and benefits of loss control alternatives should be analysed and considered for inevitable risks. Risk retention is optimal for losses that have a low expected severity whereas risk transfer often is the option for losses that have a high potential severity. Statistical analysis of past losses is not the only relevant considerations in deciding between risk retention and risk transfer because the appropriate mix between retention and transfer is not an exact science but an individual philosophy capable of influencing decision.

The final step in the risk management process is the implementation and review of decisions periodically to assure continued appropriateness in relation to overall goals and current conditions due to its dynamic nature (Greence *et al.*, 1992).

CRISIS MANAGEMENT

The common elements to most definitions of crisis are a threat to the organisation, the element of surprise, a short decision time (Seeger *et al.*, 1988) and the need for change because the old system can no longer be maintained (Venette, 2003). If change is not needed, the event could more accurately be described as a failure or incident. Potential crises are enormous, but crises can be clustered. Lerbinger (1997) categorised seven types of crises.

Natural crises, typically natural disasters considered as 'acts of God,' are such environmental phenomena as earthquakes, volcanic eruptions, tornadoes and hurricanes, floods, landslides, tidal waves, storms and droughts that threaten life, property and the environment itself.

Technological crises are caused by human application of science and technology. Technological accidents inevitably occur when a complex technology and coupled with a system malfunction as a whole end up as technological breakdowns. Some technological crises occur when human error causes disruptions. In such cases, people tend to assign the blame to technological disaster because technology is subject to human manipulation whereas they do not hold anyone responsible for natural disaster. When an accident creates significant environmental damage, the crisis is categorised as mega damage.

Confrontation crises such as boycotts, picketing, sit-ins, ultimatums to those in authority, blockade or occupation of buildings, and resisting or disobeying police occur when discontented individuals

or groups fight against businesses, government and various interest groups to win acceptance of their demands and expectations.

Crisis of malevolence occurs when opponents or miscreant individuals use criminal means or other extreme tactics for the purpose of expressing hostility or anger towards, or seeking gain from a company, country or economic system, perhaps with the aim of destabilising or destroying it. Work-place violence crises occur when an employee or former employee commits violence against other employees on organisational grounds.

Crises of organisational misdeeds occur when management takes actions it knows will harm or place stakeholders at risk from harm without adequate precautions (Coombs, 1999). Lerbinger (1997) specified three different types of crises of organisational misdeeds. Crises of skewed management values are caused when managers favour short-term economic gain and neglect broader social values and stakeholders other than investors. This state of lopsided values is rooted in the classical business creed that focuses on the interests of stockholders and tends to view the interests of its other stakeholders such as customers, employees and the community. Crises of deception occur when management conceals or misrepresents information about itself and its products in its dealing with consumers and others. Crises of management misconduct are due to deliberate immorality and illegality.

Rumours are false information about an organisation or its products that could create crises hurting the organisation's reputation.

Organisational crisis is defined as any emotionally charged situation that once it becomes public, invites negative stakeholder reaction and thereby has the potential to threaten the financial well-being, reputation or survival of the firm or some portion thereof. Two primary types of organisational crisis have been identified (James, 2007). Sudden crises are circumstances that occur without warning and beyond an institution's control. Consequently, sudden crises are most often situations for which the institution and its leadership are not blamed. Smoldering crises begin as minor internal issues then develop to crisis status due to negligence. The leaders are blamed for the crisis and its subsequent effect on the institution in question.

Crisis management is the process by which an organisation deals with a major unpredictable event that threatens to harm the organisation, its stakeholders, or the general public. It consists of:

- methods used to respond to both the reality and perception of crises;
- establishing metrics to define what scenarios constitute a crisis and should consequently trigger the necessary response mechanisms;
- communication that occurs within the response phase of emergency management scenarios; and
- crisis management plan deals with providing the best response to a crisis.

The credibility and reputation of organisations is heavily influenced by the perception of their responses during crisis situations. The organisation and communication involved in responding to a crisis in a timely fashion constitute a challenge in businesses. There must be open and consistent communication throughout the hierarchy to contribute to a successful crisis communication process. Preparing contingency plans in advance that help decision-makers to consider the short-term consequences and the long-term effects of every decision as part of a crisis management plan is the first step to ensuring that an organisation is appropriately prepared for a crisis. The plan should clearly stipulate that the only people to speak publicly about the crisis are the

designated persons such as the company spokesperson or crisis team members and should indicate how quickly each function should be performed. Working with speed and efficiency is important because the first hour after a crisis breaks out is the most crucial. When preparing to offer a statement externally as well as internally, information should be accurate. Providing incorrect or manipulated information has a tendency to backfire and will greatly exacerbate the situation.

Structural functional systems theory addresses the intricacies of information networks and levels of command making up organisational communication. Diffusion of innovation theory describes how innovation is disseminated and communicated through certain channels over a period of time. Diffusion of innovation in communication occurs when an individual communicates a new idea to one or several others. At its most elementary form, the process involves an innovation, an individual or other unit of adoption that has knowledge of or experience with using the innovation, another individual or other unit that does not yet have knowledge of the innovation, and a communication channel by which messages get from one individual to another connecting the two units.

Successfully defusing a crisis requires an understanding of how to handle a crisis before it occurs. The art is to define what the crisis specifically is and what has caused it. There are five phases of crisis and each phase contains an obstacle that must be overcome which require specific crisis leadership competencies of integrity, positive intent, capability, mutual respect and transparency to improve the trust-building process of the organisation structure and operations (James, 2007).

Signal detection is the stage in a crisis in which leaders should sense early warning signals that suggest the possibility of a crisis via sense-making and perspective-taking point of views.

Preparation and prevention stage is when crisis handlers begin preparing for or averting the crisis that had been foreshadowed in the signal detection stage.

Containment and damage control stage is usually the most vivid to limit the reputational, financial, safety and other threats to firm survival. Crisis handlers work diligently during this stage to bring the crisis to an end as quickly as possible to limit the negative publicity to the organisation, and move into the business recovery phase. Four rules need to be obeyed which are act quickly and decisively to avoid worsening the situation, put people first because the lives of customers and employees cannot be recouped, show indication that crisis is taken seriously and communicate liberally to counter rumours and speculation (Rahimah Yeop, 2010).

Business recovery stage is when crisis handlers engage in continuity planning and actively pursue organisational resilience so that it enable organisations to carry on with their business in the midst of the crisis while simultaneously planning on how to recover from the damage the crisis had caused.

Institutional memory creates a record for the future. Organisational decision-makers could adopt a learning orientation and use prior experience to develop new routines and behaviour that ultimately change the way the organisation operates in the wake of a crisis.

CASE STUDY – THE PALM OIL INDUSTRY

In the year 2010, 16 993 717 t of crude palm oil has been produced from 4 846 822 ha of oil palm planted area in Malaysia. Export earnings of oil palm products were worth RM 59.77 billion (MPOB statistics). If the palm oil industry is subjected to any risks, it will directly or indirectly affect the livelihood of a large number of workers and stakeholders.

DISCUSSION AND CONCLUSION

The process flow diagram shows that risk of equipment break down exist and will disrupt the milling process anytime when that occurs. The frequency of occurrence of such risk is higher in old mills compared to new mills and when the cost of repair is relatively small. Thus, risk retention is used by most of the palm oil mill management. Routine maintenance is being practiced to reduce the frequency of the risk occurrence.

The mill building exposes to the fire, lightning and other risks. The mill workers expose themselves to all kinds of accidents in their work-place. These risks seldom occur but may be very costly once it happens. Thus, risk transfer is the appropriate option by subscribing fire and lightning insurance, workers' compensation insurance from Social Security Organisation, PERKESO *etc.* Some of these are made compulsory by legalisation such as the motor vehicle accident insurance applied to those lorries transporting fresh fruit bunches from plantations to the mills and crude palm oil from the mills to refineries (*Figure 2*).

The palm oil mill effluent (POME) usually has biological oxygen demand (BOD) of 30 000 ppm and need to be treated to 100 ppm with a proposal for further reduction to 20 ppm before it is allowed to discharge into water source. The risks of treatment system failure exist which will pollute and contaminate the environment. Thus, risk avoidance has been practiced by limiting the mill locations via legalisation.

Figure 3 shows the CPO market price profile. It was never predicted before that CPO price will drop drastically to about RM 600 t^{-1} with high stockpile 10 years ago. The palm oil industry was facing serious storage problem while suffering painful loss. Thus, a crisis was triggered that needed to be addressed as soon as possible.

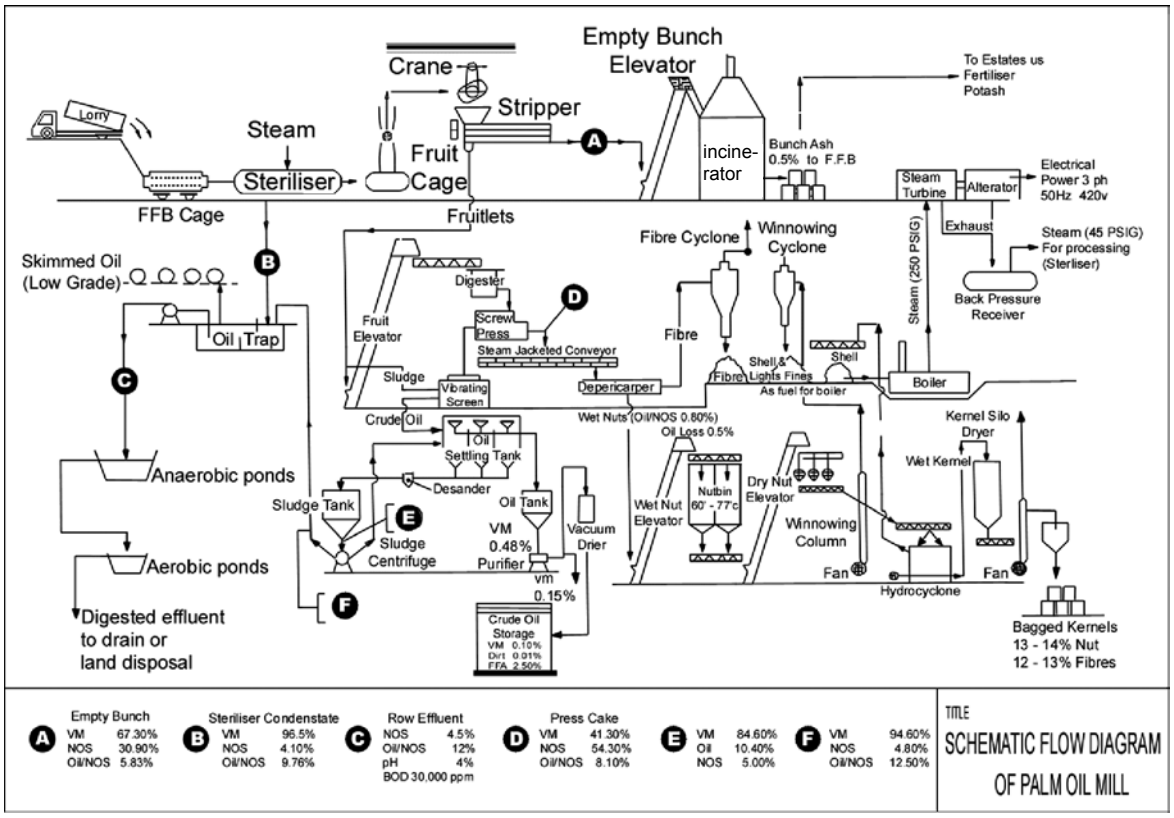
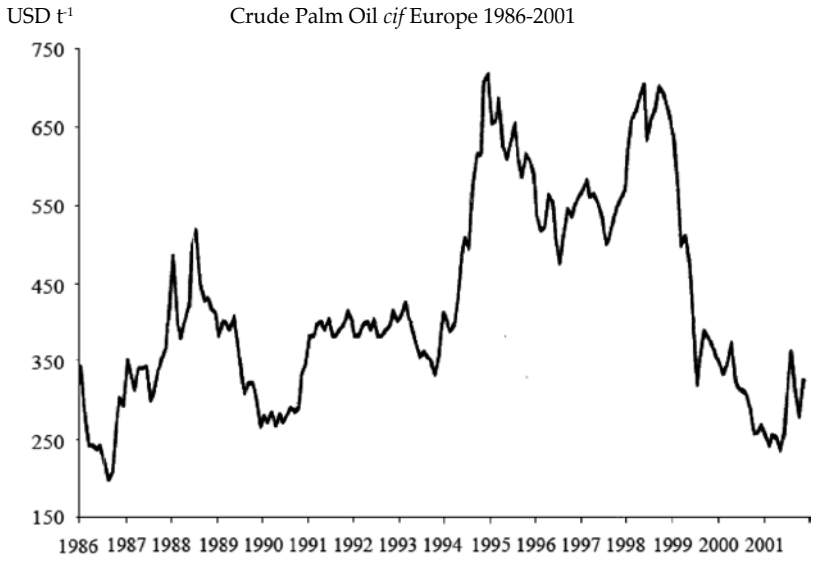


Figure 2. Palm oil mill process flow schematic diagram.



Source: *Oil World.*

Figure 3. Crude palm oil price.

The first action was to reduce the palm oil stockpile by burning CPO in the boiler to generate electricity, and at the same time replanting palms which were more than 25 years old.

The second strategy was to find new uses of palm oil. The biodiesel project was identified as a feasible project. At the same time, work has been going on for diesel blending as part of our commitment for the promotion of renewable energy which is a popular topic at that moment.

The efforts stated have helped the CPO price to go up to a profitable level after a brief spell of the crisis. The resolution of the crisis provided a crisis management plan so that if such risk occurs again in future, appropriate remedy actions are ready in place.

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