



Taking action on climate change

In light of recent extreme weather events affecting cities and regions around the world, businesses need to step up to tackle climate change. Malaysian companies are no exception

THIS year, the World Economic Forum's *Global Risk Report* placed climate risk as topmost among risks with the greatest potential impact. The survey, which is published annually, found that out of 29 separate global risks, failure of climate change mitigation and adaptation was number one.

It outnumbers that of weapons of mass destruction, water crises, large-scale involuntary migration and the severe energy price shock. This is the first time since 2006 that environmental risk has topped the ranking.

And in this regard, Malaysia is no stranger to natural disasters induced by climate change.

In late December 2014, flood waters rose in several states along the East Coast and northern region of Peninsular Malaysia, killing several and forcing thousands more to evacuate their homes.

In the aftermath, the estimated cost of rescue operations and temporary housing borne by these affected states was immense.

Kelantan had reportedly sustained damage worth an estimated RM200 mil due to the floods. Terengganu, estimated its damage at RM107 mil. Another RM26 mil was needed to repair federal and state roads.

The onus isn't on governments alone to tackle the accompanying climate change

risks. Businesses should also be concerned with the harmful effects of changing weather conditions.

CSR slant towards climate change

This harks back to the idea of corporate social responsibility (CSR), or the concept of businesses using part of their profits for social good.

Now, with climate change becoming an increasingly pressing issue, many companies around the world are starting to focus on environment and sustainability as part of their CSR strategies.

But philanthropic motives aside, there are several reasons why companies should care about climate change.

Firstly, companies are closely intertwined with the cities they inhabit. Thus, whenever natural disaster strikes, the city's health plunges and businesses take a hit. Infrastructural damage, for instance, is a clear example.

In 2011, Honda lost more than US\$250 mil (RM1.1 bil), when car assembly plants in Thailand flooded during an especially heavy monsoon season.

Extreme weather can also cripple transport systems. Whether it be airlines and shipping, or on-shore vehicles like buses and vans – all are highly vulnerable to weather-related events which in turn pose a risk to companies that depend on them.

Last but not least, climate change impacts people. Whether as customers for goods and services, or as members of the workforce, people are the lifeblood of a business. A deterioration in health caused by extreme weather will certainly affect the bottom line.

Are companies proactively tackling climate change?

Last year, global risk analytics company, Verisk Maplecroft, released its Heat Stress (Future Climate) Index as part of a wider climate change and environmental risk analytics report.

The index ranked Malaysia second among Southeast Asian countries that are worst affected by heat stress caused by incremental rises in global temperature and humidity. The same report predicted that Malaysia would see a 24% decrease in current labour capacity over the next three decades.

Rising temperatures are one of the most obvious examples of climate change affecting businesses in Malaysia. In fact, it could well be considered a principal risk.

Overwhelming heat can cause workers to suffer dizziness, fatigue, nausea and even

death, which in turn leads to productivity losses.

Outdoor-based businesses like manufacturing and construction are particularly vulnerable. But are they taking proactive action to manage such risks?

Two weeks ago, *FocusM* contacted the Federation of Malaysian Manufacturers (FMM) on how manufacturing companies are working to mitigate climate change risks in their operations.

The FMM was also asked for information on how much companies were allocating for climate change risk management in their annual budgets.

A representative told *FocusM* that the federation did not have much knowledge on this particular issue and advised that we approach individual companies instead.



by Lim Su Lin

The release of nitrous oxide, methane gas and other greenhouse gases (GHG) in the production and processing of palm oil contributes largely to global warming. Producers must act to reduce climate change risk within their operations



Elaine Chan, manager in the Sustainability & Climate Change practice for PricewaterhouseCoopers (PwC) Southeast Asian consulting service

Climate change not a main focus

Elaine Chan, manager in the Sustainability & Climate Change practice for PricewaterhouseCoopers' (PwC) Southeast Asian consulting service says few companies in Malaysia have focussed on climate change adaptation measures.

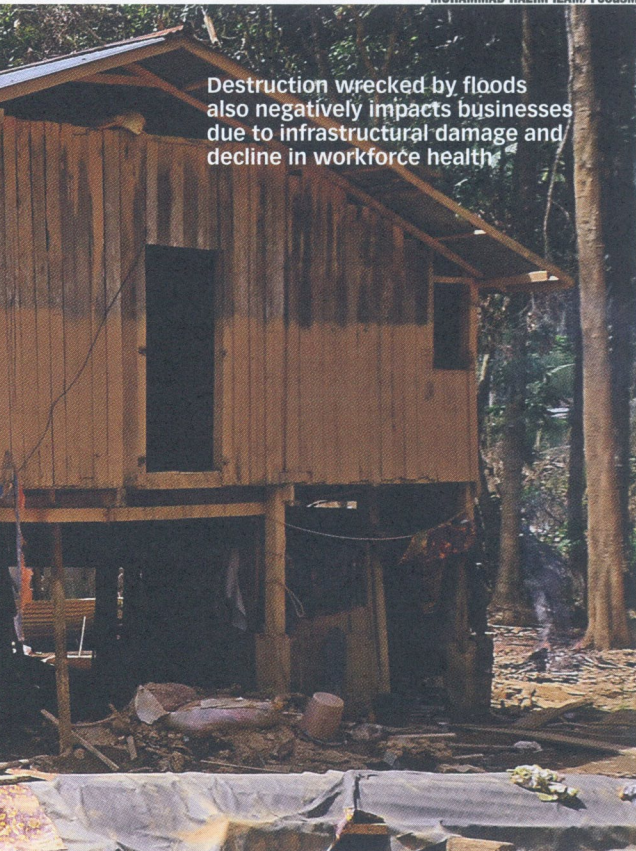
Though a handful of companies like Sime Darby Berhad and Khazanah Nasional Berhad have begun to do so (see sidebar), organisations like them are a minority.

"You don't see many local companies actively pinpointing climate change. If anything, they would identify it as part of their across the board risk.

"They might look at rising sea levels or flooding as risk indicators under their overall enterprise risk management, but they might



MUHAMMAD HAZIM IZAM/FocusM



Challenges of sustainable plantation

ONE of the biggest contributors to climate change and rising global temperatures is the ongoing build-up of greenhouse gases (GHG) in the atmosphere due to human activity.

Nitrous oxide (N₂O) is one of the most potent of these gases. According to the United States Environmental Protection Agency, its molecules are capable of remaining in the atmosphere for an average of 114 years before being removed or be destroyed through chemical reactions.

One of the biggest sources of N₂O comes from the usage of nitrogen-based fertilisers in the plantation sector. When these fertilisers are applied to the land, microbes in the soil are stimulated to convert nitrogen to N₂O at a faster rate than normal.

For plantation companies, this means there is a big climate change risk within their operations. The more fertiliser used, the more the company contributes to global warming.

"N₂O is 241 times more aggressive than carbon dioxide as a greenhouse gas," says Dr Simon Lord, group chief sustainability officer at Sime Darby Berhad, a Malaysia-based multinational conglomerate that has large stakes in oil palm plantations.

As one of the largest global palm oil producers, with numerous mills in Malaysia, Indonesia, Liberia and Papua New Guinea, Sime Darby is aware of the risk to climate change posed by its plantations.

The group has been tracking climate change sustainability performance in its internal operations for many years. In 2014, the group conducted a study looking at sources of GHG emissions in its plantations, and methods to reduce it.

One way, says Lord, is to work out exact quantities of fertiliser to apply to plants, a strategy he terms "smart precision agriculture".

"Smart precision agriculture is a way of making sure you deliver just the sufficient quantity of fertiliser that the palm requires, no more, no less. If you deliver an excess of fertiliser, it will find its way into the environment. On the other hand, if you give (the plants) less, you're not going to get an optimum yield," he says.

The group's research facility is currently conducting studies into this. It is also cultivating plants that can absorb fertiliser at optimum levels.

Another major source of GHG emissions on Sime Darby's plantations come from palm oil mill effluent (POME), a by-product of the milling process.

POME is a polluting wastewater due to its high



Dr Simon Lord, group chief sustainability officer at Sime Darby Berhad

chemical oxygen demand and biochemical oxygen demand. As such, instead of releasing it into rivers, POME is usually treated by anaerobic digestion in specially designed lagoons. This process generates a huge amount of methane, another harmful GHG gas.

To tackle this, Sime Darby has looked into installing biogas power plants that capture methane and convert it into electricity. Apart from cutting emissions, the production of electricity brings massive benefits.

With over 400 palm oil mills in operation in Malaysia (there were 426 mills in 2011, according to the Malaysia Palm Oil Board data), a significant proportion of the population's electricity needs could be met if every single one of these mills were turned into renewable green energy plants. For rural dwellers, this could make a huge difference.

According to Lord, two mills in Papua New Guinea have been equipped with green technology but progress in Malaysia has been slow. This is partly because building infrastructure to convert the mills is very expensive.

"At current palm oil prices, it's very hard to make the investment to convert existing mills. Especially the remote areas, where you get the biggest marginal utilities return, you're looking at higher costs.

"We paid US\$18 mil (RM79 mil) a few years ago to convert the mills in Papua New Guinea," says Lord.

He believes the government has a role to play in assisting companies to incorporate green technology in mills, and for that matter, to reduce carbon emissions.

"There are three ways to change agricultural practice – legislating, incentivising and enabling. Governments can do all three.

"If Malaysia wants to really achieve significant (carbon emission) reductions in its plantation sector, I'm sure mill operators would welcome some kind of tax break incentive," he says.

not categorise them as a specific climate risk," she says.

PwC UK had developed a climate change risk tool to help companies address such matters within their operations.

The tool provides companies with an analytical framework to identify the types of climate change risks in certain geographies and their likely impact on business. Companies are then advised on the options to adopt.

So far, demand for the tool has been strong in developed countries, particularly those that are more vulnerable to changing climate conditions. For example, Hong Kong, a territory made up of islands and the Kowloon peninsula, has been particularly receptive as it is more exposed to the risk of rising sea levels.

However, Chan says not many companies in Malaysia have registered interest. "For the most part, local companies emphasise less on climate risks because they may not think their businesses are vulnerable to its effects and impact," she says.

Collaboration important

Companies should stop being laid-back about climate change knowing the extent of damage that extreme weather can have on cities, and the consequent effects on business operations.

Even if they have not officially listed climate change in their risk reports, companies need not wait to put policies into force before taking action.

The National Green Technology and Climate Change Council (NGTCCC) is one example of a platform that unites the government and private sector to tackle climate change.

Set up by the government in 2010, the NGTCCC coordinates various ministries, agencies and private sector stakeholders.

From time to time, it appoints industry players and various SMEs to a working group for discussions on projects related to climate change and sustainability.

On their own initiative, company leaders themselves can approach city councils and look for ways to collaborate.

Since they operate within the city itself, they can identify climate change risks specific to the region as well as think of effective adaptation and mitigation actions.

Chan says so far, there has not been much collaboration between cities and business leaders. Nevertheless, she feels both parties would benefit from such collaboration to improve climate resilience.



A compost plant. One way of reducing carbon emissions on plantations is to work out exact quantities of fertiliser to apply to plants, a strategy known as 'smart precision agriculture'

"It's important to have collaboration between cities and companies. Cities can provide the framework but businesses also need to proactively engage them as they

have knowledge and expertise to provide risk information that can lead to innovative solutions.

"If cities can prosper, businesses will also thrive. It's a win-win for both," she says.

Be proactive in tackling climate change

As climate change is very real and has devastating consequences ranging from human casualties, damage to buildings and infrastructure, to financial losses, companies must proactively address it.

By keeping track of climate risks within their own operations, companies can identify salient issues and quickly act upon them.

That apart, engaging more widely with governments and local councils, can contribute knowledge and solutions to help cushion the effects of climate change. These measures will help protect the bottom line.

But above and beyond this, the drive for companies to focus on sustainability and climate change should stem from the fact that it affects not only the health and vitality of the business, but also of society and the planet.

FocusM