

## **Hazonomics: Facing the Fire**

*By Joseph Cherian (July 2013)*

Let's suppose you have a chain-smoking neighbour who happens to watch late-night TV with a lit cigarette in hand. You have repeatedly prevailed upon this person not to do so, given the fire risk – but to deaf ears. Sure enough, one night, a huge fire did break out at his home. It spreads to nearby homes, including yours. What would your reaction have been? To just point a finger at the puffer and blame him for not heeding your advice? Or – as soon as you have spotted the blaze – to immediately summon the fire brigade? The choice seems clear: Call the fire fighters.

We are faced with a similar scenario with the recent haze, except that it's transboundary in nature, and there is no regional fire brigade to summon. Maybe it is time to have an ASEAN fire brigade.

### **1. Douse the Fire; Ask Questions Later!**

Whatever the culpability of the planters, plantations or governments, the first priority of the day should obviously be to put the fire out and ask questions later. I am not a wildfire or haze expert, but became a back-seat one out of necessity. Just for comparison, it costs the U.S. about S\$20M of firefighting equipment, resources, and professionals to fight a 3,000 hectare wildfire. It also takes between 9 – 14 days to put out. The Bengkalis Regency blaze in Riau, which is causing the haze in Singapore and Malaysia, is about 3,000 hectares. The US experience also involves thousands of support professionals (such as smokejumpers and firefighters), sensor-equipped early-warning aircraft directing the aerial and ground-based firefighting efforts, and air tankers ranging in size that can unleash a deluge of water and fire retardants. These firefighting air tankers include larger 78,000 liter 747 and DC-10 “super heavys”, medium-sized Bombardier 415 “superscoopers” with a 6,140 liter capacity, or much smaller scooper helicopters.

If ASEAN doesn't have these critically needed assets to fight our perennial wildfires, its three most affected members should start acquiring them. If costs are a concern, instead of an outright purchase, perhaps leasing options from countries such as the US may be explored. The training, staffing and maintenance of the brigade would be shared by the multiple agencies involved in fighting fires in these countries. Assistance could also be

provided by wealthy donor countries and organizations interested in protecting the environment. It must be noted that any tri-country firefighting exercise will need both Singapore's and Malaysia's resources and support, along with Indonesia's consent; the good news is that this has been done before. Operation Haze in September 1997 was the biggest cross-border firefighting mission in history. It involved teams of Malaysian and Indonesian firefighters battling haze-causing fires in Sumatra and Kalimantan. It was viewed as a cross-border cooperation and coordination event of such importance that the History Channel made a television documentary about it.

There have also been numerous good suggestions made by various experts. Apart from the aforementioned firefighting equipment and fire brigade, it would take a combination of enforceable legislation, economic cost/benefit tradeoff analysis, carrots (whistleblower scheme), boycotts and goodwill. Let us view these in some detail.

## 2. Extraterritorial Legislation

As Professor Ivan Png pointed out in an October 2012 Straits Times opinion article and Professor Tommy Koh in a more recent one in the same paper, international law has provisions for transboundary environmental and criminal liability. Indeed, it may only require minor amendments to extant Singaporean and Malaysian environmental laws to pursue extraterritorial legislative reach. One issue here is legislative reach in relation to foreign plantation owners – a case of “practising what we preach at home first”. For that, we can always turn to the Grand Master of extraterritorial taxation and legislation for ideas: the U.S. has the Foreign Corrupt Practices Act (FCPA). The FCPA applies to any U.S. business, national, citizen or resident acting in furtherance of a corrupt practice in a foreign country ***whether or not they are physically present in the United States***. Malaysia and Singapore could similarly legislate to prosecute their plantation owners who, say, commit arson in Riau.

If we are really bold, we can go a step further. They might even want to take the cue from extant EU-wide legislation, by mooted a common set of ASEAN laws and regulations that address our common interests, which certainly include the environment and general well-being. Violators could be referred to an EU-style ***ASEAN Court of Justice***. Lastly, a whistleblower programme with an attached reward and “witness protection” scheme, as Prof Png points out, might see plantation employees prepared to “spill the beans” without fear of reprisals from their bosses.

### **3. Economics – Cost/Benefit Analysis**

Professor Euston Quah in a recent Straits Times opinion article encourages ASEAN to apply dollars and sense to the haze situation. Singapore is now a S\$1 billion per working day economy, of which tourism is about 4 percent (S\$40 million). If tourism alone sees a haze “haircut” of 10 percent, that’s S\$4 million per day. As stated, it will cost approximately S\$20 million of able tri-country aerial firefighting and ground support to fight the 3,000 hectares of wildfires in Riau. This cost translates roughly to S\$6,700 per hectare. (On the other hand, it just takes a few dollars per hectare to start a plantation fire.)

To put this in economic cost/benefit tradeoff terms, the firefighting cost has a payback of about 5 days based on Singapore’s tourism receipts alone. But wouldn’t it be even better if plantation owners clear forests the non-incendiary way in the first place, as Professor Helena Varrkey of Malaysia has pointed out? She has been publishing research papers on the ASEAN transboundary haze problem since 2008. According to her research, using machines to clear the land would cost plantation owners about S\$240 per hectare.

### **4. Collective Responsibility**

Taking a leaf from the successful experience of the oil industry, Mr. Kyle Lee, a retired partner of PricewaterhouseCoopers, has suggested the formation of a plantation equivalent to the Oil Spill Response Limited (OSRL) agency, whose responsibility it would be to respond effectively to wildfires on plantation land wherever they may occur. This way, the various regional government agencies and industry players, such as this plantation-owned firefighting cooperative, can form a transboundary force to fight plantation fires. Professor Varrkey argues that most commercial plantations, despite their denials, prefer to use fire (“slash and burn”) for cost-related reasons. They are just better at avoiding apprehension. A mandated industry-owned cooperative to fight plantation fires is hence highly warranted. The three governments will need to join hands to ensure this outcome. Since the ASEAN Secretariat’s stated mission is to “initiate, facilitate and coordinate ASEAN stakeholder collaboration”, it is the natural choice for commanding the brigade.

While the brigade can have its assets placed in various countries, Singapore with its superior technology in the air and on the ground, advantageous location, and lack of forest fires, would be a natural site for the brigade’s headquarters. On a positive note, the

Malaysian Maritime Enforcement Agency already has two Bombardier 415 “superscooper” aircraft; their service was recently offered to Indonesia, along with firefighting personnel.

Arising from these expert opinions and information, it is clear that – to address the haze and haze problem – we need to disabuse ourselves of the belief that garden hoses, cloud-seeding and a couple of light scooper helicopters with buckets can fight the peat fires of the magnitude experienced. The acquisition or leasing of firefighting air tankers, coupled with the efficient deployment of extensive material and human firefighting assets, comprehensive and enforceable legislation, close regional diplomatic cooperation, appropriate financial incentives, political will and finally, common sense, will help the region get through this and future fires. The outlook isn’t hazy.

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