

Global Supply Chain Broken Health & Safety Links

BY

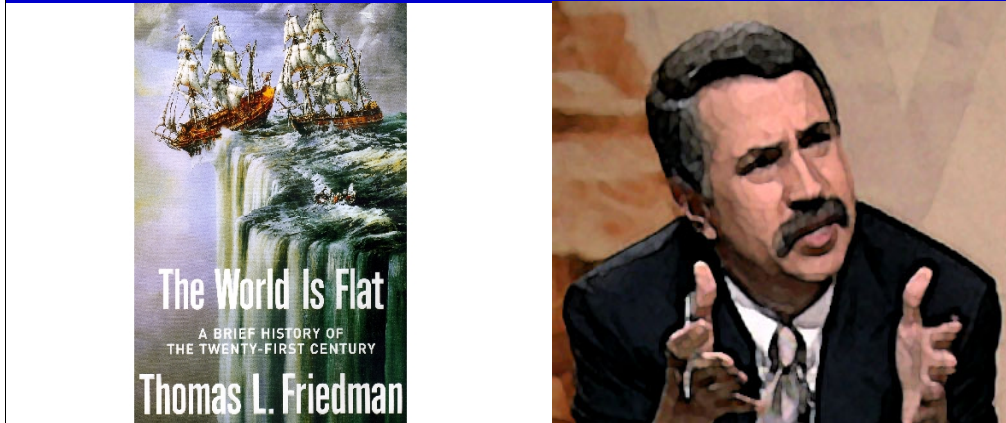
**Jas Singh PhD, CIH
Golder Associates Inc
Kamuela, Hawaii**

**Presented at the
Yuma Pacific annual 2008
conference**

Highlights

- **State of SE Asia H&S Workplace Issues**
- **Supply Chain H&S Issues**
- **International Driving Forces**
- **Maturity of H&S Profession**
- **Disasters and Opportunities**

Globalization of H & S in the Flat World



Good news—growth of Industrial Hygiene in India and China. **Bad news**—sudden availability of Industrial Hygiene information worldwide, with few resources to implement programs/processes.

Globalization

Information at fingertips
Communications affordable



Status (and maturity) of IH in several Asian countries (in light of the “flattening” of the world) means easy availability of information to anyone on the net.

Third Party Service Providers

Many hazardous tasks are performed by 3rd party local contractors whose H&S capabilities/programs fall far short of corporate (EHS) goals of a multinational organization

Electrical, welding, 3rd party service providers with little EH&S experience...cause more accidents. Perhaps biggest concern presently.

Third Party Service Providers

**Examples of Health & Safety practiced
by third party service providers to US
multinational companies**

Laying Carpet in Thailand (longest extension cord)



Personal Protective Equipment



PPE in Central China



Local Safety Mgr
With bamboo
Hard hat

Jas Singh

Lockout Tagout in China



Scotch tape to prevent someone inadvertently flipping a switch—a 3rd party provider. 220 volt, no ground fault circuit breakers, live wire exposed

Repair Work in Malaysia Frayed Cables



Ventilating Shoes in China



Solvents not vented, but shoes are.



Fixing
Lighting Fixture

Metal ladder in middle of water.



Fixing
Light Fixture

Supply Chain Issues



This is just a visual thing to show an agreement with the supplier of services or materials, sort of supply chain agreement

Global Supply Chain Broken Health & Safety Links

**“CHINESE WORKERS LOSE THEIR LIVES
PRODUCING GOODS FOR AMERICA”**

Loretta Tofani
Salk Lake Tribune

*Loretta Tofani will be the keynote speaker
at the 2008 PCIH in Tampa, Florida*



Supply Chain Broken Links



- Major brand name products sold in North America are produced in local shops where the level of worker H & S can be very basic and unsatisfactory
- Even for the products that are assembled/produced at the multinational corporation facilities and under care and supervision, many components or ingredients for the product are supplied by local companies whose H&S program may be rudimentary and no match to the goals and objectives of the multinational producer

Global Supply Chain Broken Links

'With each new report of lead detected on a made-in china toy, Americans express outrage: These toys could poison children. But Chinese workers making the toys and countless other products for America - touch and inhale toxic and carcinogenic materials every day all day long'

**Loretta Tofani
Salk Lake Tribune**

Global Supply Chain Broken Links

“New York Manhole Covers, Forged Barefoot in India”

“Eight Thousand miles from Manhattan, barefoot, shirtless, whip-thin men rippled with muscle were forging prosaic pieces of the urban jigsaw puzzle: manhole covers”

New York Times



Men not wear shirts for they catch fire.

Driving Forces

- **New Legislation**
- **Increased Awareness**
- **Learning from Disasters**
- **Impact of Multi-nationals**
- **Insurance Companies**
- **Risk Management**
- **ISO Certifications/OHSAS 18001**

Insurance—Travelers/Liberty Mutual, big impact in US. Travelers Insurance growing in SE Asia. More insurance companies offering loss control services.

ISO—14000; OHSAS—British, non-ISO

Corporate Social Responsibility A New Blueprint for Health and Safety

“Health and Safety has changed and started to embrace social issues. And while the public is very sensitive to traditional concepts of Health and Safety, the ongoing debate on corporate responsibility is Broadening THE DEFINITION OF Health and Safety beyond fatalities and lost time injuries”

**Karen Clark-Whistler
Golder Associates**

Debate on Corporate Responsibility

KC4

Societal Concerns

- global power
- business practices
- investment capital
- scarcity of resources
- social injustice
- accountability

Industry Response

- responsibility
- ethics
- profitability
- environmental stewardship
- benefit society
- reputation

The CSR debate has been spawned by the global spread of capitalism which has greatly increased the power and reach of business.

Of the biggest economies in the world, most are multi-national businesses.

Few effective regulatory mechanisms for dealing with international multi-national issues

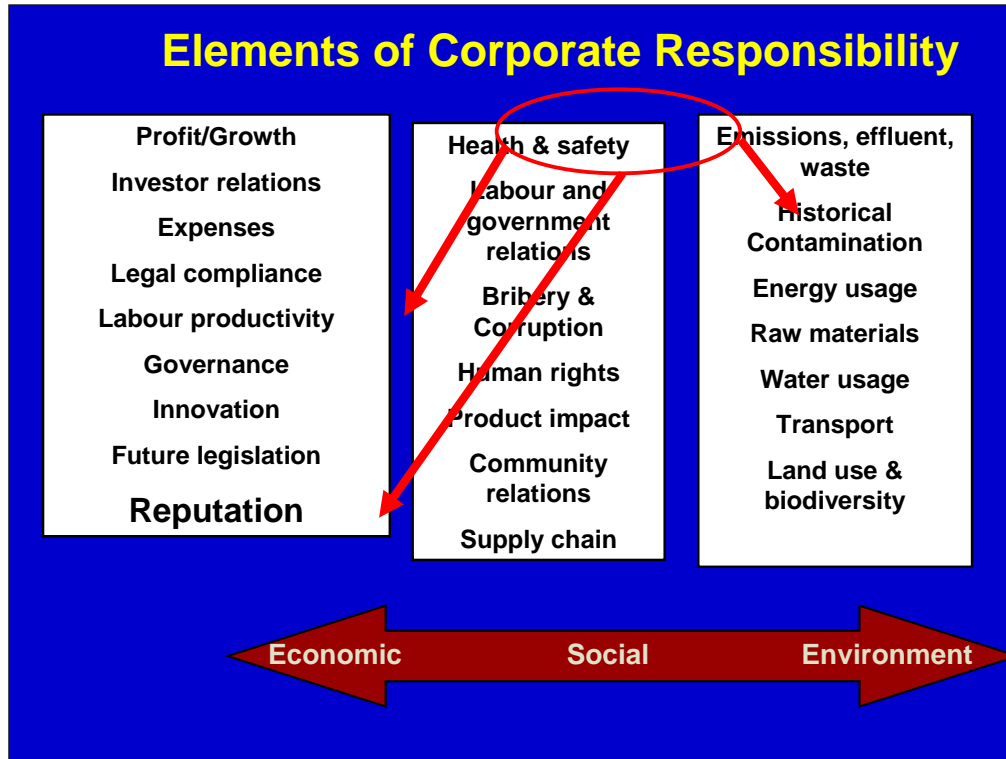
That leaves society and market forces to regulate business behaviour

Slide 22

KC4

animate so first left hand colour comes up
then right hand colour block comes up and left disappears (to illustrate context of cause-effect)

Karen Clarke-Whistler, 3/24/2004



In this slide, we argue that as the original CSR parameter, H&S should be at the core of CSR and key driver of CSR going forward

Global Supply Chain

Industrial Hygiene Disaster in the Making

The need for basic Industrial Hygiene skills in fast developing Asian economies far exceeds what is available.

At this pace of development, future Industrial Hygiene disasters in China & India will totally dwarf disasters such as Galley Tunnel seen in the US in the past

Growth of Industrial Hygiene In India



First Industrial Hygiene graduating class, MS degree programs. Since then, 7 classes have been conferred their MS degrees.

The Forbidden Land--Burma



Myanmar is a country next to Thailand, used to be called Burma during the British days. It is ruthless military dictatorship but even in Myanmar, I met physicians who want to be CIH's

Myanmar (Burma)

Physicians wanting to be CIH's



Offense to surf the internet absent permission from the government. No access to computers.

IH In Kuwait



28

Kuwait had a phenomenal ASSE meeting recently during which Jas Singh was able to present on “how to become a CIH”. Jas also proctored the CIH exam in Kuwait (2 candidates, one passed, sp 50 % pass rate, not bad compared to 39% pass rate in the US).

The Birth of a Profession

CIH REVIEW CLASS, MIHA PRESIDENT MUBARK & SECRETARY SABRINA MOHAMMAD



Industrial Hygiene is thriving, even boasting an annual IH conference. Sabrina, a CIH, and a founder of the Malaysian Industrial Hygiene Society, conducted their own 5 day CIH prep class.

CIH Exam Singapore Style

WELCOME SPEECHES, CATERED LUNCH & ALL THE CURRY PUFFS YOU COULD EAT



Moving over to Singapore, the costs to take the CIH exam are borne by the local safety engineers. Catered lunch. Tremendous desire in SE Asia for people to become certified. Opportunities for US based EH&S professionals to contribute to their growth.

IH Practice (Minimal to Advanced)

Country	No. of internet users (thousands)	Percent of Population using internet	GDP-PPP	IH practice (minimal to advanced)
Myanmar	64	0.1	1,700	Minimal
Vietnam	590	7.0	2,800	Basic
Philippines	780	8.7	5,100	Basic
India	51,000	4.6	3,300	Intermediate-COE
China	111,000	8.3	6,800	Intermediate-COE
Thailand	840	13	8,300	Intermediate-COE
Malaysia	10,000	42	12,100	Intermediate-COE
Singapore	2,400	53	28,100	Advanced
Taiwan	14,000	63	27,600	Advanced
USA	200,000	67	41,800	Advanced
Hong Kong	490	71	32,900	Advanced
Korea	34,000	71	20,400	Advanced

May be of some interest that the % of internet users correlates to the maturity of Industrial Hygiene.

GDP-PPP = Gross Domestic Product-at Purchasing Power Parity (value of all goods and services produced within a nation in a given year divided by the average population for the same year. Cite examples.

Observations

- **Middle income economies** fertile ground for training, educating and “evangelizing”. Highest demand for IH in teaching and collaborating
- Largest growth & demand for IH-- China and India
- Conversions from the “RUSSIAN SYSTEM”
- Insufficient trained occupational S & H persons. Likely to be insufficient trained persons for at least another decade, both for industry and for government



Russian System is the system still in much of Asia-- IH is considered part of the medical profession and not recognized as a discipline. The preventative aspect of IH are not recognized.

Specific Opportunities

- Technology transfer (Exposure assessment techniques, Control strategies)
- Health & Safety of third party contractors, supply chain partners
- Training (supervisory & managerial levels)
- Industrial ventilation
- Influencing legislation

Industrial Hygiene Disaster in the Making What Can Be Done?

**Corporate Social Responsibility. What can US
(and other western)Multinationals do?**

What can US IH professionals do?

What can the AIHA and the Academy do?

