



September 2012



Thinking Aloud

A Dangerous World - **Jay**

Podium

Interview with **Col. (Dr.) Ram Athavale**, Retired army officer, key adviser to Govt. of India on CBRN Security and Incident Management

We Recommend

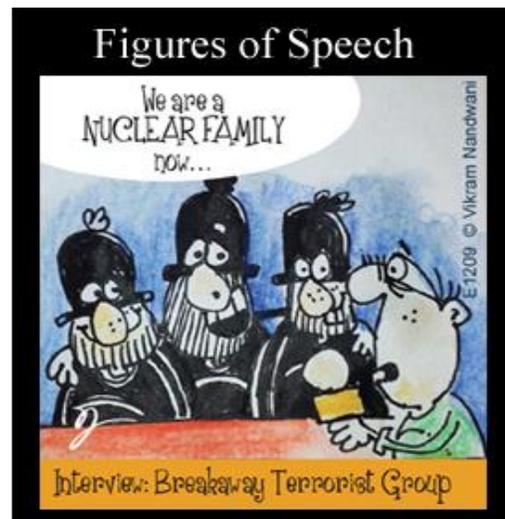
Movies recommended by Prasad Deshpande

Standing Ovation

Udaan India Foundation, Mumbai

Dear Reader,

This month we have chosen a topic which may not at first sight appear to be a business theme, but it is more than just tangentially connected to the business world. We are talking about Chemical, Biological, Radiological and Nuclear (CBRN) Warfare. I know, you must be wondering why this topic? But let me tell you that neither is CBRN a figment of science fiction nor is it a rarity in the real world. The CBR danger emanates not only from terror acts, but also from things nearer to everyday life such as industrial chemical tragedies, unethical waste disposal methods or simply, ignorance. This is why we decided to touch upon this niche topic and play a role in spreading awareness about it. I hope you find it to be an 'explosive' reading!



Thinking Aloud this month features Jay writing about the 'dangerous world' that we are living in. He says that the world has not been the same since the quest to unearth Weapons of Mass Destruction (WMD) was undertaken. But more than WMDs, we also have perils that are much closer to us than we can imagine. He says that there are no clear answers to the causes of the bird flu or the H1N1 epidemics, but they certainly altered financial valuations for many industries. He also states that medical and biological wastes are another source of potential danger and concerned stakeholders need to be more responsible and vigilant. But the only practically feasible solution to face such problems is to be aware about them.

On the **Podium** this month we have **Col. (Dr.) Ram Athavale** who is a retired Army officer and a key adviser to the Govt. of India on CBRN Security and Incident Management. He tells us exactly what CBRN Warfare is and how state level usage has been minimized due to the signing of pacts and treaties. He shares with us how CBR dangers can

pop up in the industrial scenario and lists down some of the ways of avoiding untoward incidences. He opines that response to CBR events cannot and should not be left for the army or the specialists alone. In fact he urges that the general public be educated so that appropriate preventive actions can be taken to limit the losses.

In **We Recommend** this month, Prasad Deshpande, Director with ELS and a Senior Coach and Consultant shares with us his favorite list of movies that inspire management lessons. You can be assured that these movies will be an interesting watch!

Standing Ovation this month features Udaan India Foundation, a Mumbai based organisation which strives to provide education to the underprivileged children. The aim is to prepare the children for better employment opportunities and help them lead a life of respect and dignity. It runs various programs including the foundation program, remedial program, library service and other benign activities. For its purpose and its activities, Udaan deserves a Standing Ovation!

In **Figures of Speech**, Vikram defines a 'Nuclear Family'!

As always, we value your opinion, so do let us know how you liked this issue. To visit our previous issues you can visit the Resources section on the website or simply [Click Here](#). You can also follow us on [Facebook](#), [Twitter](#), [Linked In](#) & [Google+](#).



Thinking Aloud

A Dangerous World - Jay

The term WMD came into common lexicon thanks to an unfortunate turn of history: the Iraq war. When George W. Bush unleashed the second Gulf war, the ostensible reason was that he was after Saddam Hussein's Weapons of Mass Destruction (WMD). While nothing of this nature was found (just as the UN Inspectors had predicted), the world has changed forever.

However, often we forget that WMD is not just about the more dreaded nuclear weapons but also the more ubiquitous chemicals that are widely available in certain industries, all over the world. This fact is brought starkly to our notice when we have industrial accidents, or tanker leakages on highways, etc. Strange as it may sound, it appears that the danger is not so much from the hard-boiled terrorist with a death wish but the follies of blundering industrial workers and penny-pinching managements who refuse to build a culture of safety in everything they do.

The picture is bleaker when one considers the potential for disaster through the diseases caused from unknown sources. The last few years have seen multiple scares, each of which threatened to take global proportions. Who can forget the Bird Flu panic of a decade ago? Or, the more recent, H1N1 pandemic (more well known as Swine flu)? What caused them? Nature playing truant or was it the mischievous work of malevolent elements or worse, some biological experiments of rogue scientists gone wrong? Conspiracy theorists had a field day building

doomsday scenarios but the world has survived, hasn't it, lurching from one disaster to the next? That we have survived is true but the cost incurred is not just in innumerable loss of lives but also a high economic price due to unforeseen losses for business overall. While nations with a heavy dependence on Tourism (like many South-East Asian countries) felt an immediate and huge negative impact of these biological episodes, and airline and retail stocks tanked, there were stock market beneficiaries too (in the pharmaceutical and healthcare industries).

The impact of medical and biological wastes (known technically as biohazards) is another case in point. While the larger and more established hospitals tend to take necessary precautions in waste disposal, this is not the case in general. A government study showed that an alarming 45% of bio-medical waste is not collected, segregated and treated as per the Bio-Medical Waste Management Rules. With our callous and fool-hardy approach, it is not unusual to find regular press reports of untreated medical waste being found in dumps, with potentially serious fallouts, not just for the rag-pickers who scavenge there but also with unfortunate consequences to all others who come in contact with them later. Contagion scenarios like this are not just horror situations in movies but have truly happened. A similar and equally tragic case in point is the event at Mayapuri in Delhi in 2010 (what is known in CBRN circles as the Mayapuri Radiation case), when a scrap dealer and his employees fell victims to what the press euphemistically called a 'mysterious shining object' which they had procured from a hospital. Atomic Energy Board experts were then called in and took steps to defuse the panic caused as the object turned out to be radioactive Cobalt-60 isotope. Their ignorance and the insensitive and criminal action of the hospital officials had created new victims.

It is easy to underplay these issues as pollution related matters. But the recent spate of protests from citizens over safety concerns emerging from establishing nuclear power plants, etc., cannot be ignored or dismissed as Luddites gone wild. It is not my case that nuclear power projects are not required (despite Fukushima, only Germany has decided to close its Nuclear power plants) but a recent disclosure under a Right to Information (RTI) application that there is a lack of clear steps to prepare communities around nuclear power plants for emergencies, is extremely worrisome.

This brings us to the counter-argument to all the doomsday prophets. The rank optimists have continued to hold, that despite all the mishaps along the way, human beings have survived and will continue to do so. Their central thesis is that, in fact, contrary to all predictions of the end-of-the-world, human ingenuity will somehow bring us back from the brink of every disaster and we will survive and, nay even thrive, albeit with a few millions less on the planet (which may not be too bad a thing really). Fatalistic as this sounds, what it reeks of more is naiveté that presumes that we have a supra-natural right of life in this planet, conveniently overlooking the scientific fact that the planet has witnessed major disasters in the past that not only wiped out human civilizations but also arguably some powerful living species as well.

What can one do in the face of such catastrophe scenarios? A good start would be to create awareness in society. Just as it is said, that war is too serious a matter to entrust to military men, likewise, issues concerning WMD are not a matter to be left to politicians or defense chiefs alone. With the increase in industrialisation, and the lack of preparedness to tackle the negative fallout, only general awareness on this subject can eliminate or even reduce collateral damage when accidents happen.

Thereafter, a healthier debate on the subject can hopefully lead to better preparedness in our society for it is not weapons alone that can create mass destruction.

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Podium

Col. (Dr.) Ram Athavle, Retired army officer, key adviser to Govt. of India on CBRN Security and Incident Management



Col. (Dr.) Ram Athavale (Retd.) is a 1981 batch Army officer. Alumni of the National Defence Academy, Indian Military Academy, Defence Services Staff Course and Army War College, he has commanded an Armoured Regiment in the Western sector. He has held numerous General Staff appointments at various Headquarters and has served in Intense Counter Insurgency areas as well as at the Unified Tri-Service Andaman Nicobar Command. He retired from active service in 2012.

In addition to the three decades of military experience, Col. Athavale has experience in CBRN policy formulation for Homeland Security. He has been a Key Advisor to the Govt. of India on CBRN Security and Incident Management issues. He is a domain specialist in critical Infrastructure protection and large event security against CBRN Threats. Col. Athavale is a prolific writer and a CBRN subject speaker and panellist in international seminars and conferences.

Amongst the numerous military qualifications to his credit, the notable ones are the Nuclear, Biological and Chemical Staff Officers' Course, the Advanced Tank Technology Course, the Defence Services Staff Course and the Senior Command Course. Apart from a Masters in Defence and Strategic Studies and a Post Graduate Diploma in Business Administration (HR), Col. Ram is a Certificate holder in Disaster Management. He has also done a Fellowship in, 'Consequence Management of WMD Disasters: The Indian Need', prior to being awarded the PhD for his Doctoral Research on 'CBRN Terrorism: A Crisis and Consequence Management Model for India' from the Department of Defence and Strategic Studies, University of Pune.

ET: What is CBRN warfare and how does it impact us in Industry?

Col. RA: CBRN is an acronym for Chemical, Biological, Radiological and Nuclear, CBRN Warfare is the offensive use of CBRN material in warfare. This could be in the form of Atomic weapons and/or Chemical and Biological Warfare agent dispersal by munitions, rockets and bombs. CBRN Warfare has been practised in various forms since the Mahabharata (5,000 BC). Evidence has been found of radiological damage and nuclear devastation in the sites of Mohenjo-Daro and Harappa. Radioactivity in the skeletal remains found was 50 times greater than normal.

CBRN Warfare was extensively practised during the World Wars and even by the Iraqi Army against Kurdish tribesmen in North West Iraq. The only use of atomic (nuclear) weapons was during the World War II by the US against Japan at Hiroshima and Nagasaki on 06 and 09 Aug 1945. Radiological weapons or 'dirty bombs', as they are commonly called are explosive devices packed with radiation emitting substances in powder form. This

radioactive powder is dispersed by the explosion and each particle is a radiation emitter.

However, today CBRN Warfare by State Actors is more or less negated by enacting Conventions, Confidence Building Measures (CBM), Pacts and Treaties. Hence CBRN Warfare has taken a different form. It manifests in the form of use of such material by terrorists and Non-State Actors. Since the last couple of decades, terrorist organisations across the globe have been experimenting and trying out terrorist acts using CBR material. It is but a matter of time when this threat begins to manifest in India. Coupled with this is the rapid industrialisation, increased (and mostly uncontrolled) use of chemicals and radiological substances, bio-engineering and genetic research, disregard to waste disposal norms (industrial and medical) and gross public and administration apathy to rising threats.

Industry: Industries, especially Chemical, Petrochemical, Paint, Fertilizer and Pesticide industry, use highly toxic chemicals which can by themselves be used or can form precursors to lethal Chemical Warfare agents. It is therefore incumbent on such industry to be their own police and ensure (for the good of mankind) that chemicals being used have the necessary clearances from the authorities, proper secure storage is catered for and waste material is disposed off as per environmental norms under proper supervision. Pilferages, accidents and spillages/overruns must be reported and investigated. Necessary safety equipment, response plans and medical aid must be catered for. It is a great CSR issue that must be followed.

ET: Is it true that the world has come close to disaster through weapons of mass destruction (WMD) or is this in the arena of science fiction?

Col. RA: Use of WMD by state actors is a dying notion. Most states have signed Conventions, Confidence Building Measures (CBM), Pacts and Treaties to help curb the use of such weapons. A number of states have also formalised bilateral pacts and treaties against the use of WMDs. So, it is less likely that State Parties would use WMD in armed conflicts. However, there are some 'rouge' states that have not signed or enacted such pacts or treaties. They remain potent threats to the rest of the world and especially to their adversaries. Use of WMD by Non-State actors aided or abetted by State Parties is the more likely scenario. We have already seen 'Proxy Wars' and Cross Border Terrorism incidents. It is just the choice of weapon which could turn any of these into CBRN or WMD incidents. Ease of manufacture, freely available literature on how to make or construct such weapons (aka internet knowledge) and wide choice of off the shelf precursor material has made it simpler for rouge elements, trained militants and global terrorist organisations to acquire WMD.

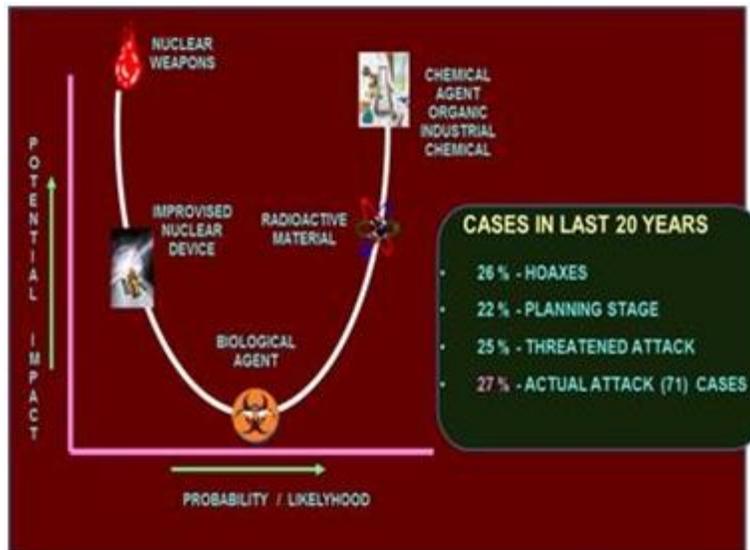


Fig : Probability Vs Impact of CBRN Weapons

ET: How can we raise awareness amongst citizens that CBRN issues are not esoteric matters left to national policy makers alone? Is there a role that ordinary citizens can play in this matter?

Col. RA: Until the US 9/11 attacks and closer home the 26/11 Mumbai attacks, CBRN was a closed subject in the domain of military. But, the world has now woken up to the threat of CBRN weapons against common public via the terrorism route. Homeland Security has gained prominence and Home Ministries, Police Forces and Paramilitary Organisations are getting increasingly sensitised to CBRN threats. It is time the common public took notice of this looming threat. Unfortunately, poverty levels and illiteracy force majority of the Indian population to focus their worries on basic survival due to hunger. Then there is gross public apathy against anything wrong happening around them. We are a nation where a few hundred less (read dead) is almost a welcome state. Corruption and scams have degraded Administration response to grave threats. Just generating awareness on CBRN threats is a huge (and seemingly insurmountable) issue.

CBRN Incidents demand immediate response to save lives. Casualties can manifest within minutes. There is the 'Golden Hour', or the first hour which is most critical for administering treatment (antidotes) to save lives. With the given size of our nation and the meagre resources (trained response forces and equipment), it is nearly impossible to react with the requisite trained responders to CBRN incidents in most parts of the country. It thus becomes incumbent on the available 'First Responders', the common man on the street or the local beat policeman to respond to CBRN situations. These are the people we need to train, to be made aware and to be capable to respond to CBRN incidents.

There are various methods to enhance awareness levels for responders and general public. Some of these are listed below:

- Lectures, workshops and talks in colleges and high school for the youth
- Special classes and workshops for District Administration personnel
- Training and awareness workshops for Police and Paramilitary personnel
- Corporate workshops and mock drills to display required skills and standard operating procedures in CBRN incidents

- Collective mock drills to practise and hone response skills by response personnel
- Creation and maintenance of resource Database at State and District level
- Creation of Citizen Emergency Response Teams (CERTs) in colleges, corporate offices, residential societies, factories and such institutions
- Special training to Civic Bodies, NGOs Medics and Paramedics to handle CBRN casualties

Apart from raising awareness levels, it is very important to adequately equip the response forces with state of the art CBRN protective equipment. Similarly, citizens have a responsibility to aid in vigilance and reporting of unnatural circumstances, unaccompanied packages/bags, suspicious persons and occurrence of unusual events. For this, there is a need to display and provide contact details of key functionaries, help lines of emergency services and circulate Do's and Don'ts to the public.

Industry has a major role to play in prevention of CBRN Incidents. Some of these are listed below:

- Ensuring only the required raw material/chemicals are procured and stored as per safety norms
- Prevent pilferages and thefts. Report any to authorities immediately on occurrence
- Maintain machines, pipelines and systems in proper condition to avoid accidents, explosions, spills, fires and vapour leaks
- Train and maintain an onsite response team adequately equipped to deal with CBRN incidents
- Upgrade and check equipment and expertise of Response team periodically so as to maintain optimum response capability at all times
- Devise and implement Standard Operating Procedures for CBRN Incident Management. Practise these as mock drills at random times
- Ensure strict measures for waste disposal (liquid, solid and gaseous) as per laid down environmental norms
- Procure specialist equipment for CBRN Incident Management, Personnel Protection and Waste Disposal
- Periodically carry out surprise checks to ensure SOPs are being followed
- Generate awareness and follow guidelines for effective CSR by industry. This will lead to the staff carrying the message to their social environments and spreading awareness and best practices to other areas.

ET: You are a specialized security consultant in a niche area. What challenges do you face in raising the profile of your specialised function?

Col. RA: CBRN Security is indeed a niche area. Very few people are qualified in this field. Most of them are (or were) in the Armed Forces. The Civil Administration is practically unaware of the nuances of CBRN Security and Incident Response. So the first challenge is to generate awareness amongst the official responders. A beginning has been made by the National Disaster Management Authority (NDMA) by forming the National Disaster Response Force (NDRF). There are 10 such battalions in India and are trying to reach out to the key personnel and likely responders, to train them in CBRN incident response. However awareness woes and apathy degrade such efforts. Fortunately, India has not seen a CBRN incident of large magnitude in the recent years. The Bhopal Gas Tragedy is forgotten by all, except by the victims and a handful of activists. It therefore becomes difficult to make people understand the frightful impact of BRN incidents.

The second challenge is the lack of market. As such incidents are rare, there is practically no industry and market for CBRN equipment in India. Most companies engaged in producing CBRN equipment are doing so for the Armed Forces. The civil domain for CBRN equipment is still latent. As a result, there are really no jobs for CBRN specialists in India. In the US and EU, CBRN industry is a major part of the defence and Homeland Security industry. Indian administration, and more importantly the industry, is yet to fully understand the need for detection devices, protective

equipment, decontamination (or detoxification) and specialised casualty management measures post a CBRN incident.

ET: What else would you like to share with our readers about this little known area which has the potential to change the world around us?

Col. RA: CBRN threats are a reality and already looming large on us. We need to wake up to this potent life threatening issue and empower ourselves with knowledge, expertise and response measures. It is not only the concern of the polity or the administration. It is every citizen's concern and the sooner we understand this and make ourselves capable to respond to CBRN threats, the better will be our resilience and surer will be our survival.

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We Recommend

Movies by Prasad Deshpande.

This month, Prasad Deshpande, Director at ELS and a Senior Coach and Consultant (and an avid movie buff) shares with us his list of favorite movies to draw management lessons from. Movies on the list are classics and a 'Must Watch'!



Wall Street: This is a timeless story that explores the ethical dilemma that presents itself when there is opportunity to make lots of money. How far are you prepared to go to make money and how much is enough? Gordon Gekko the ruthless trader immortalised the phrase 'Greed is Good'. The story is about how Charlie Sheen almost forgets the values that his father cherished and then redeems himself.



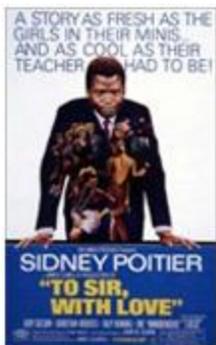
Patton: A profile of the most aggressive American General in World War 2. George Scott pulls off a virtuoso performance as a maniacal but brilliant general whose drive and strategic ingenuity achieved remarkable results on the battlefield, but his ego and callousness towards his soldiers demonstrated a strong narcissistic streak. These flaws are fatal flaws and can derail the most promising of leaders, regardless of ability.



Godfather: This routinely ranks among the greatest movies ever made. A story of one of the old Mafioso families, the movie is about the choices that people make and how these choices which may appear 'smart' in the short term, come with a price tag in the long term that can be very heavy to pay.



The Legend of Bagger Vance: A disillusioned war veteran, Captain Ranulph Junah, reluctantly agrees to play a game of golf. He finds the game futile until his caddy, Bagger Vance, teaches him the secret of the authentic golf stroke which turns out also to be the secret to mastering any challenge and finding meaning in life. Based on the Bhagavad Gita, Junah is actually Arjuna.



To Sir, with Love: Set in England of the 60's , this is a heartwarming story of how a West Indian engineer, arrives at a working class East End school where students are unruly and undisciplined. Still hoping for a good engineering job, he's hopeful that he won't be there long. He starts implementing his own brand of classroom discipline: pupils to treat each other with respect. This is a movie with sensitive performances and movingly describes how prejudices can be overcome using tough love.

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Standing Ovation

Udaan India Foundation



Udaan India Foundation (UIF) is a Mumbai based non-profit organisation that is committed to the cause of educating underprivileged children. Founded by Mamta Rangan in 2004, Udaan was incepted with an aim to help the less privileged children enroll in schools in their neighborhood. Starting with 26 children as an informal initiative, Udaan today is a registered Trust with over 425 students under its wings. It has 14 full time teachers and over 20 volunteers, conducting classes up to grade 8. Udaan's primary aim is to ensure that every child of school going age is in school and is gaining a strong educational foundation that will prepare him/her for better employment opportunities and the right to lead life with dignity and self-respect.

Through its work, Udaan hopes to see perceptible changes by way of:

- Increased enrolments in school
- Decrease in school drop-out rates
- Better job opportunities for the underprivileged

Most Udaan children come from families where there has been little or no formal education ever, where education is not a priority and it is commonplace for children to drop out of school in order to contribute to the family income. With a mission to 'Empower through Education' Udaan has under its wings a range of teaching- learning spaces which include:

- **The UIF Learning Center:** Over 375 non-school going children and children from municipal schools attend the Learning Center everyday. Through the Kindergarten, Foundation and Remedial programs, the focus is on holistic development addressing academic needs as well as providing exposure to extra-curricular activities like sports, dance, art, drama etc. Children are provided with nutritious snack every day and also given stationery, books, notebooks, uniforms and sandals to supplement their needs.
- **Hamaari Udaan Library:** The community library follows the GROWBY reading program and is run in collaboration with Hippocampus Reading Foundation, a Bangalore based non-profit organisation. The library with over 2,000 books in English, Hindi and bi-lingual languages aims to counter the reading disability of children in municipal schools and open the world of books to children who cannot afford to buy books.
- **The UIF Computer Center:** The computer center aims to address the ever growing need of a computer literate work force. Through a structured course, students from grade 8 and above undergo training in basic computer skills and software packages.
- **UIF Scholarship Program:** Supports meritorious children to pursue their studies beyond grade 10 who

would otherwise be unable to continue their education due to financial constraints.

In addition to the above programs, Udaan lays emphasis on Health and Nutrition and arranges for a medical check up for its students every year. Recently Udaan has received permission from the education department of the MCGM to start their programs at two municipal schools.

For the noble cause and its efforts, Udaan deserves a ***Standing Ovation!***

If you want to get more information and support Udaan, you can visit the website <http://www.udaanindiafoundation.org> or write an email at udaanindia1@gmail.com.

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