

Lessons from Japanese earthquake , tsunami and Nuclear disaster-6

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Chernobyl

- Mikhail Gorbachev writes on the Chernobyl accident:
 - 135000 people were evacuated immediately and another 200,000 in the following months
 - Only a few hours after the accident, radiation alarms sounded off at Forsmark Nuclear power plant in Sweden over 700 miles away
 - 77,000 square miles of territory was contaminated with radio active fall out
 - Long term challenges for flora, fauna, water and human health
 - Tens of billions of dollars spent
 - New containment shell being constructed over the 1986 sarcophagus and what's left of the reactor.

Lessons from Chernobyl- 31

- Mikhail Gorbachev suggests:
 - Prevent a repetition of Chernobyl
 - Use renewable energy
 - Be transparent
 - Consider vulnerability to terrorism and violence
- Looks like the world did not learn the lessons from Chernobyl.

Atomic forensics

- A French energy company revealed far more about the condition of Fukushima reactors than Japanese.
- How?
- They use computerised atomic forensics to illuminate the hidden workings of nuclear power plants
- These were developed in 1979 after Three mile Island accident.
- The computers can develop simulations of what is happening inside and perform a variety of risk evaluations.
- Governments now possess dozens of independently developed computer programs called 'safety codes'
- These can be used to plan for a range of activities like evacuations when a disaster strikes.

Lesson 32

- Companies/industries need to develop programs similar to 'Atomic forensics' to simulate and see the outcome if risks become events.

Stuxnet a 21st century cyber weapon

- When first discovered in 2010, the Stuxnet computer worm posed a baffling puzzle.
- Beyond its unusually high level of sophistication loomed a more troubling mystery: its purpose.
- Ralph Langner and team helped crack the code that revealed this digital warhead's final target -- and its covert origins
- In a fascinating look inside cyber-forensics, he explains how.
- See ted.com video:
 - TEDTalks : Ralph Langner: Cracking Stuxnet, a 21st-century cyber weapon

Chain reaction due to Stuxnet

- Stuxnet was aimed at disabling Iranian Nuclear installations.
- Now an Iranian hacker is avenging Stuxnet by hacking Comodo.
- Comodo is very important in Internet security as it is one of those many companies that certify /guarantee authenticity of websites starting with 'https'.
- The hacker hacked an Italian computer reseller and used its access to Comodo's systems to automatically create certificates for web sites operated by Google, Yahoo. Microsoft etc
- With these certificates the hacker can set up servers that appear to work for those sites and try to view unscrambled mails of millions of people!

Lesson 33

- Cyber crimes involving nuclear and power plants may be the future Black swan events which will bring the world to a stand still.
- Such attacks will lead to counter attacks!
- We need to protect against these 'man made' attacks and counter attacks.

Lesson 34

- The protest against nuclear power may go up a lot due to the Japanese disaster and may push people towards 'green'.
- Crowds totaling 17,500 people rallied in Tokyo to demand the shutdown of nuclear power plants, on Apr 10th.
- "Japan's disaster has driven a lot of people to have a bit of a rethink on nuclear," said Robert Todd, director for renewable energy, resources and energy group, at HSBC Hong Kong.

Returning cash

- Japanese residents have turned in lost cash across the tsunami zone
- Japanese children, from a young age, are taught to turn in any lost items, including cash, to police stations.
- The cultural practice of returning lost items and never keeping what belongs to a stranger has meant police departments like Tokyo's Metropolitan have an entire warehouse filled with lost shoes, umbrellas and wallets

Lesson 35

- How many countries can claim such honest citizens?
- What are we teaching our kids?

Why was relief so slow in coming?

- For a super-organized, wealthy nation that made "just-in-time" delivery famous, the not-so-in-time response stunned many people and angered those in need.
- What happened?
- Some possible answers:
 - Tokyo was never prepared to help people hundreds of miles away.
 - Japanese are good at going by the textbook; But for a disaster like this, you have to be unbelievably flexible, make quick decisions and go.
 - They follow rules. Period.
 - One example: After a truck pulled in for transporting essentials to Sendai, the driver refused to accept the bags of diapers carefully tied together with string. They had to be put in boxes. "It's a rule," the driver said!

Lesson 36

- Too much of rules can make people zombies in a critical situation.

Sources for part 6

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