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FUKUSHIMA'S THIRD ANNIVERSARY: JAPAN'S CONTINUING STRUGGLE

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A 9.0 magnitude earthquake, which has come to be known as the Great East Japan Earthquake, followed by a massive tsunami, had hit Japan on 11 March 2011. The year 2014 marked the third anniversary of the disaster in Japan. Although, it has been three years, Japanese authorities are still struggling to deal with the leak of contaminated water and troubles are far from over, with the latest news being that of a minor fire that broke out in an electrical transformer in the third unit of the Takahama plant on 5th March.ⁱ All of Japan's 50+ nuclear reactors were shutdown after the tsunami & earthquake devastation and have not yet been restarted, though the government intends to.

Fukushima, Miyagi and Iwate prefectures sustained the most severe damage from the earthquake-tsunami. The confirmed death toll of those who were killed as a direct result of the earthquake and tsunami is 15,884 [as of February 10, 2014].ⁱⁱ The incident witnessed mass exodus from the disaster hit Fukushima to safer parts of Japan. Recent studies have found out that more people have died, particularly in the Fukushima prefecture, due to the post-traumatic stress [PTSD] of the triple disaster. According to data compiled by the prefecture and local police, stress and other illnesses related to the 2011 quake and tsunami had killed 1,656 people in Fukushima Prefecture [as of 20 February 2014], surpassing the 1,607 whose deaths were directly related to disaster-caused injuries.ⁱⁱⁱ Around 136,000 people are still displaced in the prefecture.

While the government has made efforts, it is still struggling to control the radiation fallout from the crippled Daiichi plant. The various investigative agencies have not yet agreed on the time at which the Fukushima number 1 plant was struck by the tsunami. The government and Tokyo Electric Power Co., (TEPCO) operator of the stricken plant, maintain that the tsunami was solely to blame for the catastrophe. However, a Diet investigation panel raised the possibility that shocks from the 9.0 magnitude earthquake were also partly

responsible, an argument that could have serious implications on safety measures at nuclear plants and the extent of responsibility of TEPCO and the government.^{iv} As Japan is highly prone to high intensity earthquakes, the nuclear power plants are supposed to be earthquake resistant. Should the investigation conclude that the nuclear radiation leak was due to the earthquake, **before the tsunami hit the plant**, it would mean that safety measures of the plant were compromised.

The Nuclear Regulatory Authority (NRA) visited the site in May 2013 for initial investigation and concluded that the contaminated water did not leak from the damaged isolation condensers. The inspectors instead said the water probably seeped out of a spent fuel storage pool during the quake and entered a duct. TEPCO so far, has followed the same

theory. The NRA also surmised that the operator of Fukushima nuclear plant was careless in monitoring tanks storing dangerously radioactive water as no records of tanks inspection were kept.^v However, due to the diverging conclusion of Diet investigative team, no consensus has been reached on the matter. The Nuclear Regulation Authority and TEPCO are continuing with their respective investigations.

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The government will have to find a fix for the continuing nuclear problem because the absence of nuclear power plants, which are a source of electricity in Japan, has started showing its adverse effect on its economy too. Nuclear power hitherto constituted about 30% of Japan's total electricity generation and the government had plans to increase its share to 40% by 2017 and to about 50% by 2030. However, Japan's burgeoning trade deficit points to the fact that Japan is shelling out more money on oil and natural gas supplies due to forced import of about 84% of its basic energy requirements. In 2013, Japan posted a record trade deficit of \$112 billion which was 65 % higher than what it was in 2012. ^{vi} Increase in energy demands, along with the weaker Yen, has been noticed as the major cause in pushing the imports up. The government has made its intention of restarting the nuclear power plants known, but the dilemma is that they cannot do it unless they completely emerge out of the current muddle. The anti nuclear lobby is not going to make it easy for them to go ahead with the plan if the government fails to take people into confidence on the issue of the safety of the nuclear power plants and its criticality to Japan.

The manner in which the Japanese government resolves the Fukushima crisis would also be critical for expediting the Indo-Japanese nuclear deal. The talks that had virtually stalled after the Fukushima disaster, have resumed in last two months. However, the possibility of inking the deal would go up only when Japan extricates itself out of the ongoing nuclear plant related problem.

(Disclaimer: The views and opinions expressed in this article are those of the author and do not necessarily reflect the position of the Centre for Air Power Studies CAPS)

ⁱ "Minor fire at Japan n-plant", *The Hindu*, March 6, 2014, at <u>http://www.thehindu.com/todays-paper/tp-international/minor-fire-at-japan-nplant/article5755089.ece</u>

ⁱⁱ "Japan Earthquake-Tsunami fast facts", *CNN*, accessed on March 7, 2014 at <u>http://edition.cnn.com/2013/07/17/world/asia/japan-earthquake---tsunami-fast-facts/</u>

ⁱⁱⁱ "Fukushima stress deaths top 3/11 toll", *The Japan Times*, February 20, 2014 at <u>http://www.japantimes.co.jp/news/2014/02/20/national/post-quake-illnesses-kill-more-in-fukushima-than-2011-disaster/#.UxmLAT-1bGA</u>

^{iv} "THREE YEARS AFTER: Quake or tsunami? Panels at odds over cause of Fukushima nuclear disaster", *The Asahi Shimbun*, March 5, 2014 at <u>http://ajw.asahi.com/article/0311disaster/analysis/AJ201403050061</u>



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v "Fukushima inspectors 'careless', Japan agency says, as nuclear crisis grows", wn.com, August 23, 2013 at http://article.wn.com/view/WNATA1FC828776ECCF8E01AE2D97A27E0C6D/

^{vi} Per Liljas, "Japan Reports Record Trade Deficit in 2013", *Time*, January 27, 2014 at <u>http://business.time.com/2014/01/27/japan-reports-record-trade-deficit-in-2013/</u>