



Mission Viejo High School MUN
34th Annual Conference
Vox Populi



IAEA: Fukushima Nuclear Accident

Hello delegates! My name is Kevin Champlin, and I will be your head chair for the MVHS MUN 2017 conference. This is my third year in the MUN program. I am also involved in the MVHS Mock Trial team and I am on the baseball team here at MVHS. If you have any question, feel free to email me at noviceiaea@gmail.com

I. Background

A powerful 6.9 magnitude earthquake struck off the coast of Japan on Tuesday, November 22nd, triggering tsunami waves and warnings along the coast, near the Fukushima Daiichi nuclear power plant. Although nuclear disaster concerns were raised as a cooling system in one reactor of a nearby plant (Fukushima Daini) shut down, they were eased when cooling was restored without incident.

All this hearkens back to the Fukushima Daiichi nuclear disaster, a nuclear accident caused by the tsunami following the powerful 9.1 magnitude Tohoku earthquake off the coast of Japan that occurred on Friday, March 11, 2011. It was the most powerful earthquake ever recorded in Japan, and the fourth most powerful earthquake recorded since records began in 1900. The 40.5 meter Tsunami that was created by the quake caused level 7 nuclear meltdowns at three reactors in the Fukushima Daiichi Nuclear Power Plant. At least three reactors exploded due to hydrogen gas buildup when the cooling systems failed due to the loss of electrical power. The number of confirmed deaths stands at 15,894 people from the earthquake and tsunami itself, with more than 2500 reported still missing. The damages are estimated to be above \$300 billion dollars. The casualties from the nuclear cooling system failure are still being measured. Although no deaths have been reported directly from the exposure, low levels of radioactive chemicals have been detected as far away as the coast of North America. Trace amounts radioactive isotopes were found in seawater collected in 2015 in California and Canada. On a local level, even with the immediate evacuation of 150,000 people from Fukushima and nearby cities (Many of them won't be able to return to their homes, which are now in the exclusion zone surrounding the ruined power plant), The World Health Organization (WHO) indicates that residents were still exposed to low amounts of radiation. The release of radiation and waste from Fukushima has caused worldwide concern over the safety of Japanese food products.

The disaster at the Fukushima may have been triggered by a tsunami, but it was human error that made it into one of the worst-ever nuclear accidents in human history. The Fukushima Nuclear Accident Independent Investigation Commission found it was "a profoundly man-made disaster" which was "the result of collusion between the government, the regulators and the plant's owner/operator, Tokyo Electric Power TEPCO, and the lack of governance." The blame should be put on systemic faults that "supported faulty rationales for decisions and actions, rather than issues relating to the competency of any specific individual."



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In 2015, though, things began to change again. Japan's new governing body called nuclear power "the country's most important power source" and said it would begin reopening nuclear power plants to provide realistic and balanced energy structure. Two nuclear reactors were brought online in 2015 and the country hopes to produce 20% of its electricity by nuclear power by 2030. Despite the Fukushima Daiichi nuclear power plant disaster, Japan has essentially concluded that nuclear power is a viable and long term solution for the island again.

II. UN Involvement

The United Nations involvement after the Fukushima Daiichi nuclear power plant disaster started in May 2011 when the United Nations Scientific Committee on the Effect of Atomic Radiation (UNSCEAR) began a two-year assessment of the levels and effects of radiation exposure from the accident. It reported its findings to the General Assembly in October 2013. The committee found "Radiation exposure following the nuclear accident at Fukushima-Daiichi didn't cause any immediate health effects. It is unlikely to be able to attribute any health effects in the future among the general public and the vast majority of workers". However, they also found that "the risk of leukemia increased by 7 per cent for males exposed as infants, and for infant females there is a six per cent higher risk of contracting breast cancer. The report also notes that one third of the emergency workers who were inside the Fukushima nuclear power plant have an increased risk of cancer,"(UN News Center) and they scheduled a four day workshop in Fukushima on strengthening the emergency nuclear response plans. This committee and workshop has been the limit of the United Nations involvement thus far.

III. Possible Solutions

Some possible solutions to bring to the table consist mostly of nuclear energy emergency preparedness. Many may suggest that the plants should have more barriers and ways to cool the uranium and nuclear substances, but they also should have more protection from the tsunamis, especially when located where earthquakes and tsunami warnings are a reoccurrence(like in November 2016).

Country Bloc Positions:

30 countries worldwide are operating 450 nuclear reactors for electricity generation. Over 45 more countries are actively considering embarking upon nuclear power programs.

Western Bloc: Western nations mainly support nuclear programs and the use of nuclear energy sources. Turkey's plans for nuclear power are a key aspect of the country's aim for economic growth. Russia, France, China and Japan are in process of financing and building plants there.



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Middle Eastern Bloc: In the Middle East, nations have started developing nuclear energy but are limited due to their advocacy of nuclear weapons. Saudi Arabia for instance plans to construct 16 nuclear power reactors over the next 20 years at a cost of more than \$80 billion

African Bloc: Most African nations do not have the money for nuclear energy, however, the government of Nigeria recently announced it is ready to commence the production of nuclear energy.

Latin American Bloc: Nuclear power isn't used to the greatest capacity in Latin America. Only three countries in Latin America have functional nuclear reactor power plants, Argentina, Brazil, and Mexico.

Asian Bloc: The Asian bloc is mainly pro nuclear energy. Some Asian countries, such as China, have benefited financially from assisting Middle Eastern nuclear programs. A 10 MWe experimental nuclear power reactor is even planned to be built at Serpong, Indonesia.

V. Questions to Consider

Is your country in favor of nuclear programs? Why or why not?

Some believe the accident at Fukushima could have been averted if the plant had been run by the country of Japan. What are your country's views on the privatization of nuclear energy?

Should the United Nations or International Atomic Energy Agency (IAEA) take a more direct control of monitoring and safety systems of nuclear power plants?

Should incentives be implemented to encourage countries to build renewable energy systems over nuclear power plants?

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