Houston Area Model United Nations

Standard Committee

DISEC

Chair | Grace Yetter

Topic A Background Guide

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Note to Delegates

Esteemed Delegates,

Welcome to the Disarmament and International Security Committee! My name is Grace Yetter, and I am your Chair. I am a sophomore at Rice University here in Houston, but I am originally from Maryland, near the Washington, DC area. I am double majoring in Political Science and History, and my particular interests include international politics, nuclear disarmament, the environment, and peace-building. At last year's HAMUN, I served as Vice Chair for DISEC, so I am incredibly excited to return this year as Chair.

As the First Committee of the United Nations General Assembly, charged with overseeing international security, DISEC serves a truly critical role in the world order at large. As such, the two topics I have chosen deal with some of the greatest existential threats faced by our species today: the weaponization of nuclear energy and the climate crisis. Though these topics are undeniably heavy, I have so much faith in the possibilities stemming from the collaborative, solution-oriented focus of Model UN. MUN offers an invaluable exercise in understanding global perspectives and motivations, which is of utmost importance when it comes to finding solutions to hard-hitting and far-reaching problems. That being said, I am so excited to work with you all and hear about the ideas and solutions you come up with regarding the topics. Until then, I wish you all the best!

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Topic A: Safeguarding Nuclear Power Plants From War and Terror Uses

Introduction

Early in 2022, Russian President Vladimir Putin launched his relentless invasion of Ukraine, sparking the largest military mobilization in Europe since World War II and sending shockwaves around the world. Framed in response to Ukraine's push to join the Western military alliance NATO, Russia's war has since exploded Cold War-era nuclear fears, while also introducing new concerns about the security of nuclear plants in times of war.

Beyond threatening the biggest nuclear stockpile in the world, Russia has turned nuclear power plants into pawns of war over the course of its invasion. Exemplifying this, only a few days in, Russian forces captured the Chernobyl Power Plant, trapping workers inside and preventing the entry of others (Radio Free Europe). As the site of the worst nuclear meltdown in history, Chornobyl requires highly attentive maintenance to manage its radiation levels and safety operations, making Russia's seizure of it highly concerning to leaders and analysts (ibid). In addition, shortly after capturing Chernobyl, Russian forces began shelling the Zaporizhzhia Power Plant, turning the largest nuclear plant in Europe into a warzone and inflicting severe damage to it, before gaining strategic control of the site in March (Siemaszko). More recently, a Russian missile hit the South Ukraine Power Plant in September, damaging its structures but leaving its reactors intact (ibid).

As noted in a Radio Free Europe article, Russia's blase and belligerent approach to nuclear power plants over the course of its invasion of Ukraine has been to "signal to NATO not to interfere militarily." The

International Atomic Energy Agency, an autonomous organization of the United Nations, has declared these actions "unprecedented," being "the first time a military conflict has occurred amid the facilities of a large established nuclear power program" (Siemaszko). Given the unprecedented nature of Russia's actions and the disastrous consequences they threaten, the UN First Committee must take urgent action to address the potential for nuclear power plants to become targets for war and terror.

History and Overview of Nuclear Energy in the World

Since "the atom" emerged in the 1940s, its lifetime has been complex and controversial. After nuclear bombs were used on Japan at the close of WWII, the global public looked on at nuclear energy with anxiety and skepticism. But in 1953, American President Dwight Eisenhower helped clear the way for the nuclear power industry when he delivered his so-called "Atoms for Peace" speech to the UN General Assembly (Varnum). In the pivotal speech, Eisenhower proposed that nuclear energy could become a point of international diplomacy rather than a point of antagonism if nations turned their attention away from weapons proliferation and instead focused on nuclear power (ibid). After all, nuclear energy is highly efficient, cheap, and domestically produced, making it a revolutionary option for a post-war world largely reliant on oil and coal. In the decades after Eisenhower's speech, the United States, the Soviet Union, and emerging nuclear powers like Britain and France would act on this initiative by sharing reactor technology with countries in their respective spheres of influence, giving way to the proliferation of nuclear power plants around the world (Varnum).

As of 2022, there are 32 countries in which nuclear power plants operate, though the share of the national energy generated by those plants differs dramatically by country. The United States produces the most nuclear energy in the world by far, generating nearly 31% of the world's supply (Statista). China and France follow, both producing around 13% of the global share (ibid). While the US and China both produce a large amount of nuclear energy given their large populations, the share of their national energy consumption that

comes from nuclear power is much lower when compared to Europe (ibid). In France, 70% of energy consumed comes from nuclear, followed by 55% in Ukraine, 52% in Slovakia, 51% in Belgium, 47% in Hungary, and 36% in Czechia (ibid). Finland comes in at 31%, Switzerland at 29%, Russia and Spain at 20%, the UK at 15%, and Germany at 12% (ibid). In East Asia, nuclear energy is somewhat less prevalent, with 28% of South Korea's energy coming from nuclear and 7% for Japan (ibid). Other nuclear-producing countries with low shares of production and consumption are Canada, South Africa, Mexico, India, and Iran (ibid).

Safety and Security of Nuclear Power Plants

Over the 20th and 21st centuries, nuclear energy's development has faced complications due to its reputation for safety, which was most notably tainted by events like the Chernobyl meltdown in the Soviet Union, the Three Mile Island accident in the US, and the Fukushima disaster in Japan. Because all these high-profile incidents were accidental, conversations about nuclear power's safety have previously been most focused on the possibility of a meltdown due to human error or natural disaster (Broad). But while Russia's recent acts against Ukrainian plants have since garnered international attention to the risks of nuclear power during wartime, they are not the first time in history that this risk has come about (ibid).

There are a number of past examples of lower-profile malicious acts against power plants, providing important historical context to Russia's current actions. The first time a nuclear power plant was maliciously targeted was in 1980, when Iranian forces bombed the unfinished Osirak nuclear reactor near Baghdad at the start of the Iran-Iraq War (Shelton; Broad). In 1981, the Israeli Air Force caused further damage to the same reactor in a much larger airstrike, which was widely condemned by the international community and the United Nations (ibid). Slovenia faced a similar threat in 1991 during its Ten Day War for independence, when its Krisko Power Plant was threatened by Yugoslavian air jets, forcing authorities to respond by shutting down the plant (Stritar et al). In the aftermath of 9/11, the potential for power plants to be targeted not only for war but also for terrorism was realized when an American

commission discovered al-Qaeda had considered targeting nuclear plants with passenger planes (Rabin).

There are a number of specific concerns when it comes to nuclear power plants being targeted for war or terror, as highlighted in a report by Paris' Polytechnic Institute. First, nuclear facilities contain spent fuel pools, which are the most radioactive part of plants, but are typically less sheltered than reactors (Herivou et al). If damaged by a missile or bomb, spent fuel pools pose a high risk of releasing radioactive materials (ibid). In addition, power plants require both energy and water to function, and without these, could experience a core meltdown (ibid). In times of war, damage to infrastructure is inevitable, while maintaining public works like energy and water systems is incredibly difficult for governments to do, drastically increasing the chances of a meltdown (ibid). Finally, nuclear plants rely on people to operate them and ensure they function safely (ibid). Turning plants into war zones inhibits personnel from doing their jobs, while the general stress of war dramatically increases the likelihood of human error in plant operations (ibid). While a meltdown during peacetime could potentially be contained and damage be kept to a minimum, war and violence pose an inevitable hindrance to clean-up operations, meaning that a radiological disaster under these circumstances could bear larger consequences to the world than any accident has.

Broader Discussion and Actions

Clearly, there are severe risks when it comes to nuclear power plants being turned into pawns of violence. Yet, there is no specific treaty addressing nuclear plants' susceptibility to war and terror targetting. According to the International Nuclear Safety Group, "the security regime [concerned with intentional acts] for nuclear power plants is far less developed than the safety regime [concerned with preventing accidents]." As such, the most far-reaching acknowledgment of the risk for nuclear power plants to be targeted is an amendment to Protocol I of the Geneva Convention, which notes "immunity from attack for installations," including power plants (Herivou et al). But this does not hold states and others actors nearly accountable enough when it comes to safeguarding plants (ibid). Ultimately, there is "no international

set of rules defining the criteria by which nuclear reactors in war zones should be shut down" (ibid).

During the Chernobyl disaster, a cloud of radioactive material contaminated nearly 150,000 square kilometers in Belarus, Russia, and Ukraine, continued to spread throughout Europe, and was eventually detected as far Canada (Cirjak). Nuclear fallout does not discriminate by country, and the fallout caused by violence toward a nuclear power plant would pose immeasurable consequences, not only to the nations directly involved, but to populations and environments in nations everywhere. The world has done little to acknowledge and prepare for the threat of malicious acts against nuclear plants, requiring urgent action to be taken by DISEC to come together to plan for this danger.

Questions to Consider

1. If your country has nuclear power plants, what is it doing specifically to keep them secure from malicious acts? How could these safeguards potentially be applied on an international scale?
2. In the last decades, non-state-sanctioned violence has emerged in phenomena like suicide attacks, mass shootings, and lone-wolf terrorism. How can power plants be protected not only from belligerent states but also from deranged and radicalized individuals?
3. In the 21st century, many have become distanced from the nuclear fears that defined the global zeitgeist of the Cold War, with new generations especially unaware of the havoc a radiological disaster can wreak on an environment and population. How can education and awareness be used to remind the contemporary world of nuclear risks?
4. While taking action to fend off states and other actors from targeting plants is crucial, it is also necessary to plan for the worst. How can countries prepare for a radiological disaster caused by violence against a plant? What plans can be laid out to ensure a swift and organized bilateral response?

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