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DISEC

Topic Research Report

Topic: Working towards a no combat zone around the nuclear power plant in Ukraine
(Zaporizhzhia)



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Introduction:

This report will explore the Russian - Ukrainian war with its origins, as well as the Zaporizhzhia power plant and its invasion by Russia, and the consequences. The report will also explore the major countries and organizations involved in this issue, the previous attempts to solve this issue and the possible solutions to this conflict.

When the nuclear power plant in Zaporizhzhia was initially invaded it sustained significant damage, loss of power supply to the nuclear reactors, and due to the upgrades Ukraine had made during its independence, it made it impossible for the Russian engineers to run the plant properly. There are opposing views to how dangerous the plant could be, some believe that due to the thick perimeter of the reactors it would take a large amount of damage to cause actual damage to the inner workings of the plant and cause a large nuclear meltdown. Others believe that the generators that the plant is currently running on, are not a long term solution and nuclear fuel could begin to melt and cause a release of radioactive material. Some believe that it wouldn't be as massive as Chernobyl but could still lead to a large release of radioactivity, which could vary which country it impacts based on the wind¹.

The IAEA has been the most active actor in trying to establish a no-combat zone surrounding the Zaporizhzhia nuclear power plant. It has been the only mediator so far in talks for a no-combat zone, and has been an effective mediator in getting Russia and Ukraine together to discuss this possible zone. While there are some other possible solutions to this situation other than a no-combat zone, these would-be solutions are highly controversial and are unlikely to be accepted by all parties to the conflict.

Definition of Key Terms:

NATO - North Atlantic Treaty Organization, an organization among the allied powers, including many European countries as well as the United Kingdom and the United States. Their goal is to guarantee free and security for its members through political and military means².

Reactor — A device which utilizes the energy released from a nuclear fission reaction to turn water into steam and then electricity with the help of a turbine³.

Nuclear Power Plant — A complex consisting of nuclear reactor(s) and its surrounding facilities required for the safe commercial operation of the reactor.

¹ Kirby 2022.

² NATO n.d.

³ International Atomic Energy Agency 2016.

IAEA - The International Atomic Energy Agency is an intergovernmental organization that seeks to promote the peaceful use of nuclear energy and to inhibit its use for any military purpose, including nuclear weapons.

Background Information:

The Soviet Union collapsed in the early 1990s, this separated many countries and allowed for NATO to expand further and take in many of the countries that had been in the Soviet Union, like Lithuania, Latvia, Estonia. Since NATO had expanded further it left them bordering directly with Russia⁴.

Vladimir Putin has been the president of Russia since 2012, he was also the president between 2000- 2008⁵. Putin has described the fall of the Soviet Union as one of the greatest catastrophes of the 20th century and claims that it robbed Russia of its place among the world's great powers. Putin finds the expansion of NATO threatening and sees Ukraine requesting to join as a major threat to Russia. Putin has also repeatedly insisted that Ukraine is a part of Russia, culturally and historically⁶.

On February 24th 2022, Russian forces attacked the Ukrainian capital, Kyiv, in an attempt to overthrow the current President's government, President Volodymyr Zelensky. The Russian forces far outweighed the Ukrainian forces and many expected a swift successful attack, however after a few weeks of fighting, the Russians retreated. This marks the beginning of the Russian-Ukraine war, which continues to this day⁷.

The construction of the Zaporizhzhia nuclear power plant began in 1980 and its sixth reactor was connected to the grid in 1995. The Zaporizhzhia power plant consists of six reactors and is the biggest nuclear facility in Europe, it also contains stores of used nuclear fuel and radioactive materials. Russians captured the station on March 4th, and began to use it as an army base. Russian engineers were unable to operate the station since the power plant had been upgraded significantly with western nuclear safety technology, during Ukraines independence. Russian officials had planned to disconnect the power plant from Ukraine's power grid and connect it to the Russian one, however this plan failed. In the Russian occupation of the power plant, emergency protocols and response mechanisms have broken as well as communication possibilities. If there were an accident at the power plant, it would be impossible to take all the proper precautions to prevent the spread of radiation and damage to the region surrounding it. On

⁴ History.com Editors 2022.

⁵ Britannica 2022.

⁶ Bilefsky, Pérez-Peña, and Nagourney 2022.

⁷ Bigg 2022.

September 11, the power plant stopped operating and was switched to a ‘cold shutdown mode’ for safety reasons, however this does not fully eliminate the risk of a nuclear accident⁸.

Major Countries and Organizations Involved:

Russia - Although Russia has secured a form of base around the power plant, further fighting at the power plant could cause an accident to occur which would impact their military as well as the radiation could spread into Russia. Russia would currently like to work towards a no combat zone around Zaporizhzhia, however is strongly against the Russians leaving the plant.

Ukraine - Ukraine is concerned about the plant as an accident there could lead to radiation exposure to a large portion of their country. Ukraine would currently like to work towards a no combat zone.

United States - The United States is providing Ukraine with a significant amount of resources in the war with Russia, especially military aid. The United States also provided the Zaporizhzhia plant with some of its security protocols. The United States would currently like to see a no combat zone around the nuclear power plant.

Poland - Poland borders Ukraine and is deeply concerned regarding the unstable power plant due to the radiation released, if the plant were to have a meltdown, could be harmful and have an impact on them. Poland would currently like to see a no combat zone around the power plant.

The International Atomic Energy Agency — The IAEA is an intergovernmental organization established by the United Nations with the purpose of monitoring and promoting nuclear technology for peaceful endeavors around the world. Since the beginning of the invasion, the IAEA has been active in trying to diffuse the situation around the plant and in trying to ensure the plant’s security. The IAEA hopes for a demilitarized zone surrounding the plant.

Relevant UN Resolutions:

With the permanent five members of the Security Council being unable to reach unanimity, the Security Council decided to call an eleventh emergency special session of the General Assembly regarding the situation in Ukraine through passing the procedural resolution S/RES/2623. The second resolution passed in the emergency special session, A/RES/ES-11/2, included a clause which expresses concern regarding the bombing of Ukrainian nuclear facilities⁹.

⁸ Prokip 2022.

⁹ United Nations General Assembly 2022.

Previous Attempts to Solve the Issue:

The International Atomic Energy Agency has been at the forefront of trying to negotiate a solution to the precarious situation at the Zaporizhzhia nuclear power plant. Its efforts have included the continued negotiations of a no-combat zone surrounding the plant and the monitoring of critical systems, both on and off site. At previously held IAEA's conferences, both Russia and Ukraine have agreed on IAEA resolutions prohibiting the attack of nuclear installations devoted to peaceful purposes¹⁰.

Turkey has offered to act as a mediator in negotiations of establishing a no-combat zone at the nuclear plant. Turkey has previously helped mediate a successful grain deal between Russia and Ukraine regarding grain exports, proving itself to be a successful mediator in the conflict. However, Turkey's mediation offer has not been pursued by either party¹¹.

Ukraine and its nuclear agency has decided to put the reactors into a state of hibernation, where only the cooling mechanisms of the reactors are active. This approach lessens the potential damages caused by a strike on the reactors. While this is a mitigating solution, a potential accident is still possible as the safety systems still require power to cool down the reactors¹².

Possible Solutions:

The general consensus on the situation at the Zaporizhzhia nuclear power plant is that a no-combat zone should be established surrounding the plant. The main point of contention is that the Russian side wants controls and a monitoring scheme in place in order to prevent Ukrainian shelling of the power plant. Thus, a no-combat zone is a very feasible solution in mitigating the potential dangers surrounding the situation¹³.

One contended solution for the crisis at the plant would be for Ukraine to completely relinquish its control over the plant and hand it over to the Russians. While Russia controls the power plant and its territory, it is however not the sole operator of the plant given that Ukraine still remotely controls the plant's network system¹⁴. If Ukraine would give over all the controls to the Russians, the Russians might be able to more safely operate the plant. This solution however would face steep opposition from Ukraine, given that Zaporizhzhia is their nuclear power plant and it sits on territory which Russia illegally annexed.

¹⁰ International Atomic Energy Agency 2022b.

¹¹ Kucukgocmen 2022.

¹² Murphy 2022.

¹³ Teslova 2022.

¹⁴ International Atomic Energy Agency 2022a.

Russia could withdraw from the nuclear power plant and its surrounding territory, but this would be highly unlikely. Given that Russia annexed Zaporizhzhia oblast, it is highly unlikely that Russia would willingly give up something that it legally views as being an integral part of the Russian Federation. Putin also signed a presidential decree declaring that the nuclear plant itself is Russian federal property, solidifying their view that the nuclear power plant is Russian rather than Ukrainian, making a withdrawal highly improbable¹⁵.

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¹⁵ Deutsche Welle 2022.

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