

**IAEA**

**International Atomic Energy Agency**

*Atoms for Peace and Development*

Study Guide for the International Atomic Energy Agency – Vienna  
International Model United Nations

Topic: Radioactive Waste and Spent Fuel Management

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*Our greatest glory is not in never falling, but in  
rising every time we fall.*

– Confucius

## **Honourable Delegates,**

first of all, your Chairmanship would like to extend their sincere apologies regarding the lateness of this Study Guide. While it will reach you on very short notice, we hope it may still be of some assistance for you in your research.

The general purpose of this paper is to give delegates a broad knowledge of the topic, some guidance in the drafting of their position papers, an introduction into the most important rules and procedures, as well as some useful tips for your final preparation for VIMUN 2018.

We deeply encourage you to have also a look at the last point "Links for further research" where we put some links from the Guardian and the New York Times. You can find article about the contemporary position of the United States concerning the atomic deal.

## General Information:

The operation and decommissioning of nuclear facilities and activities using radioisotopes in science, industry and medicine generate radioactive waste. Such waste needs to be managed in a way that keeps people and the environment safe over long periods of time.

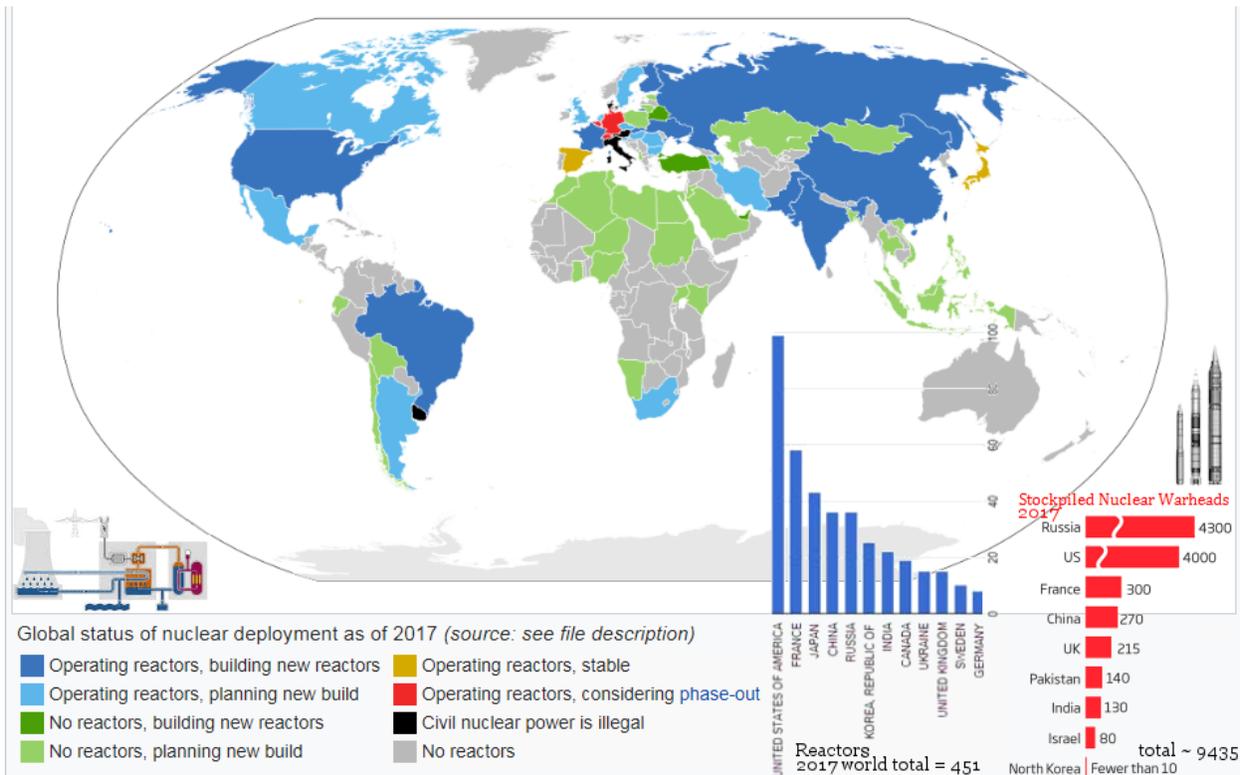
First of all we found a video that you give you an idea how a nuclear reactor works →

<https://www.youtube.com/watch?v=1U6Nzcv9Vws>

28<sup>th</sup> of July 2018

Radioactive waste disposal aims at emplacing waste in a facility which ensures long-term safety through a system of multiple natural and artificial barriers working together to prevent radioactivity from escaping.

This illustration should give you an overview about states which are using nuclear reactors and have thus a higher production of radioactive waste than others:



<https://www.google.com/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=2ahUKEwjqrP09uMHcAhWKJcAKHR6qCS0QjRx6BAgBEAU&url=https%3A%2F%2Funiverse-review.ca%2FF14-nucleus11.htm&psig=AOvVaw3SfZx81fv27dZP1vXU7hO-&ust=1532854913007402>

28<sup>th</sup> of July 2018

A number of alternative disposal options have been developed for managing radioactive waste. The options reflect the specifics of national legislation, geological differences and variations in the amount and characteristics of different waste types.

With the increasing use of nuclear power generation and the widespread use of radioisotopes for beneficial purposes in research, industry, medicine and agriculture, there is a growing need for sharing information and knowledge on disposal approaches. To support Member States in developing disposal programs and solutions, the IAEA's Waste Technology Section assists within the following areas:

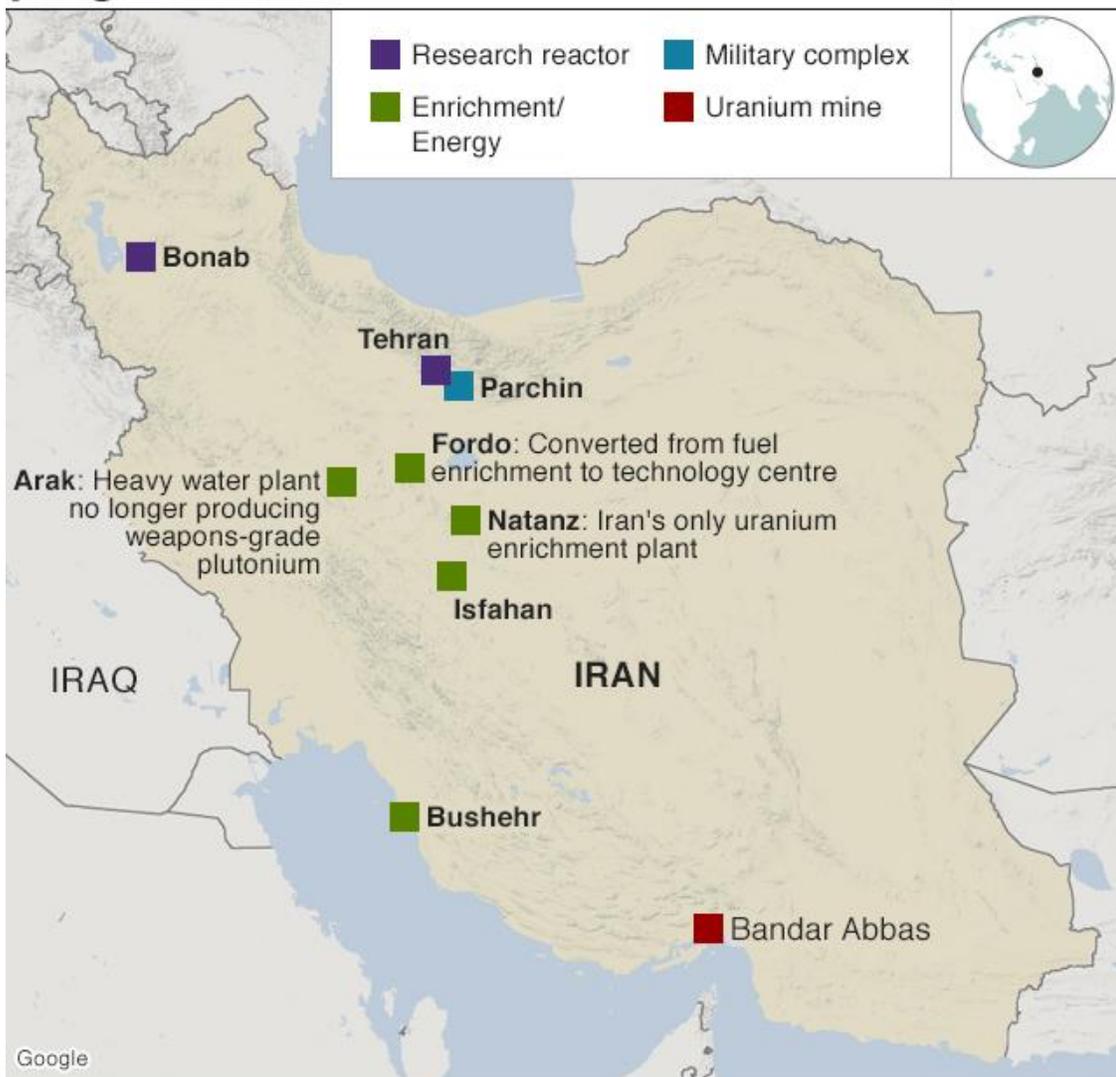
- Establishment of disposal programs within the framework of an integrated national radioactive waste management infrastructure;
- Development of near surface and geological disposal facilities, including borehole disposal for disused sealed radioactive sources;
- Preservation and dissemination of development, operational and post-operational knowledge in waste disposal;
- Upgrading of near-surface repositories;
- Provision of training in the application of waste disposal technologies and enhancing communications between professionals in radioactive waste disposal through the use of Networks (DISPONET and URF Network);
- Addressing scientific, technical, institutional and socio-political issues through stakeholder involvement to support confidence building; and
- Fostering investigations into the use of regional and globally shared disposal facilities (multi-national solutions).

## The atomic deal with the Iran:

In 2015, after many difficult negotiations, Iran agreed on a long-term deal on its nuclear program. The deal was made together with the United States of America, United Kingdom, France, China, Russia and Germany (the P5 and Germany). The deal includes points about:

- Uranium enrichment: Uranium enrichment is used for making reactor fuel and could be used for nuclear weapons. There are two facilities (Natanz and Fordo) where the uranium hexafluoride gas was used to separate out the most fissile isotope U-235.

## Changes agreed under Iran deal to limit nuclear programme



Source: European Parliamentary Research Service

BBC

- Plutonium pathway: Near the town Arak Iran had built a heavy-water nuclear facility. The world power always wanted Arak dismantled because of the proliferation risk. In 2013 the Iran agreed on an interim nuclear deal.
- Covert activity: The former president of the United States, Barack Obama and his administration, expressed their confidence that the Joint Comprehensive Plan of Action (JCPOA) would prevent Iran from building a nuclear program in secret. Inspectors from the International Atomic Energy Agency (IAEA) monitor the activities in Iran and have to verify that no fissile material is moving to a secret location.
- Break-out time: Before July 2015 there was a great stockpile of enriched uranium and almost about 20.000 centrifuges – that would be enough to create 10 bombs, according to the administration of the former president of the United States, Barack Obama. Experts of the United States said that it would take Iran about 3-4 months to collect enough material to create a bomb → the so-called "break-out time"
- Lifting sanctions: The last point includes the sanctions against the Iran. They were imposed by the United Nations, the United States and the European Union to force Iran to halt uranium enrichment crippled its economy and costing the country more than \$160bn in oil revenue from 2012-2016. With the deal Iran gained access to more than \$100bn in assets frozen overseas and so they were able to resume selling oil on the international market and using the global financial system for trading.

You can find the whole article here: <https://www.bbc.com/news/world-middle-east-33521655>

28<sup>th</sup> of July 2018

In its latest resolution, the IAEA has devoted the following section to waste management:

**8.**

**The Safety of Spent Fuel and Radioactive Waste Management**

96. Encourages Member States to plan and develop solutions for the safe management of radioactive waste and spent fuel and, where appropriate, to share experiences and lessons learned in this regard, and put mechanisms in place to ensure resources are available for implementation;
97. Requests the Secretariat, in close cooperation with Member States, to follow up on the outcomes of the IAEA International Conference on the Safety of Radioactive Waste Management, held in Vienna in 2016;
98. Encourages the Agency to continue its activities relating to the safety of facilities for the geological disposal of radioactive waste and, where appropriate, spent nuclear fuel, requests the Secretariat to undertake the further development of guidance on safety of geological disposal facilities, which encourages early engagement of the regulatory bodies in the period before the formal licensing process is launched and through all stages of the life cycle, and encourages Member States to share lessons about their relevant regulatory experiences;
99. Requests the Secretariat to foster information exchange on safety-related aspects of long-term storage of spent nuclear fuel and radioactive waste;
100. Encourages Member States to plan for the management of waste arising from a nuclear or radiological emergency, including waste from damaged facilities, and/or fuel where routine strategies are impractical or less than optimal, and where the potential exists for large volumes of radioactive waste resulting from the emergency and/or environmental remediation;

## Questions to ask yourself:

- Is my country currently operating nuclear power plants? What does it do to protect the public and the environment from the hazards that arise from nuclear waste?
- Is my country (the country I am going to represent) complying with the above resolution (if not, why)?
- What efforts are being made by both the government and scientific community in my country to develop new solutions for final waste storage?

## Preparation for your Position Paper:

The position papers are the collective building blocks of an overall, national position for the conference. It will be the foundation for all negotiation and debate at VIMUN. Delegates are asked to write a position paper on each topic on the committee's agenda. A position paper is one to two pages long and contains:

### **Background of the Problem:**

- Introduction of the country and its history, with a focus on the committee topics
- Relevance of the issue on country.
- Country policies (and justification for these policies) with respect to the topics
- Quotes from the country's leaders about the issue.

### **Past International Action:**

- Conventions and resolutions signed or ratified by the country.
- UN actions that the country has supported or has opposed.
- Actions taken by the government with regard to the issue.
- Statistics to back up the country's position on the issue.

### **Possible Solutions:**

- What the country believes should be done to address the issue.
- What the country would like to accomplish in the committee's resolution.

While drafting your Position Paper, please consider that your overall goal at the conference is to pass one resolution paper. It can help to think about how much you are willing to amend your position, how other delegations view this issue and how you might form blocs in order to reach a two-third-majority in the final vote. It might be necessary for you to make concessions in order to gather enough support for your position.

Along with your Position Paper, you are highly advised to prepare an Opening Speech of 3 Minutes. It is supposed to give other delegations an understanding, what your overall position is and if you are a potential ally. It is advisable not to go into too much detail here, as 3 Minutes can be short and you will have enough time to elaborate during the formal debate.

Most important Rules of Procedure

For a full list of the procedures please visit <http://afa.at/vimun/rules.pdf>

We hope we could provide some guidance for you and cannot wait to meet all of you on Monday to put all of this into practice.

Best wishes,

Jovana Malinovic, Chair

Erwin Kriegshammer, Co-Chair

Tina Novak, Co-Chair

## Links for further research:

<https://www.iaea.org/search/google/iran%20deal>

<https://www.iaea.org/topics/radioactive-waste-and-spent-fuel-management>

<https://www.iaea.org/topics/disposal>

<https://www.theguardian.com/world/live/2018/may/08/iran-nuclear-deal-donald-trump-latest-live-updates>

<https://www.theguardian.com/world/2018/may/08/iran-nuclear-deal-what-is-it-why-does-trump-want-to-scrap-it>

<https://www.nytimes.com/2018/07/17/world/middleeast/iran-sues-us-over-sanctions.html>