



General Assembly

Twelfth Session

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Fourth Committee – Special Political and Decolonization Committee

This group works on special topics. It used to help colonies get independence. By 1990 most colonies were independent. For this reason, it added “Special Political” to its name and began to look at other issues not covered by other committees.

There are 17 non-self-governing-territories. These are areas of the world under the control of a state but not strictly part of that state. Some examples are Bermuda, Western Sahara, and Guam. Every year this group discusses what should happen with these areas.

The “Special Political” part of this group looks at other questions that do not fit in the other committees. They look at issues affecting Palestinian refugees, atomic radiation and how to use space for peace. Also, they discuss the topics of peacekeeping, land mines, and public information. The University for Peace is also on their agenda.

Agenda Item 47 – Effects of atomic radiation

Background

Ionizing radiation (atomic radiation) is radiation that carries a lot of energy. It is capable of pushing electrons out of atoms. It is invisible to the human eye and can be dangerous to living things. Every day we are exposed to ionizing radiation that occurs naturally. The sun releases solar radiation every day. There is naturally occurring radiation in soils and rocks. This is transferred to all the foods we eat. However, the dose is so small that it does not harm us.

Radioactive materials release radiation. Many elements are found naturally that are radioactive: uranium, potassium and thorium. When humans discovered all the uses for these radioactive elements we began to be more exposed to radiation. 14% of the radiation humans are exposed to every year comes from man-made sources. Ionizing radiation has many positive uses such as x-rays, creating energy and for cleaning medical equipment. However, it has military uses as well. In World War II the United States developed the atomic bomb. It was dropped on Hiroshima and Nagasaki. It killed hundreds of thousands of people and people were affected negatively by the exposure to radiation for months and years afterwards.

When cells meet ionizing radiation three things can happen: the cells can die; the cells can repair themselves; or the cells can change (mutate) and no longer be helpful. Humans can live with some radiation. Yearly, most people will be exposed to 1-3 mSv of radiation a year. A dental x-ray is 0.01 mSv and a banana has 0.00001 mSv. A trip to Mars would be 250 mSv. According to the World Nuclear Association less than 100 mSv in a year is safe.

The UN created the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) to research and monitor levels of radiation around the world.

Radiation stays in our environment for a long time. It is measured using a term called “half-life”. This refers to how many years it will take the radiation in an element to be reduced by half. Uranium-235, which is used in nuclear power plants, has a half-life of 703.8 million years! Therefore, actions that happened years, decades or even millions of years ago still have an effect today. Radiation humans create today will be a problem for countless generations in the future.

The idea of radiation scares a lot of people. Perhaps it is because it is something that we cannot see but can be dangerous. On the other hand, because it cannot be seen, some people tend to forget the risks. Before scientists discovered the dangers of radiation they worked without any protection. Marie Curie, a radiation researcher, died in 1934 because of radiation. Her notes are still radioactive and people who want to see them need to wear protective clothing. Nowadays, scientists and governments have stricter safety guidelines for radioactive materials. However, some countries are trying to get nuclear power without having proper safety rules in place.

Exposure to unsafe levels of radiation can cause cancer. Ironically, exposure to doctor-monitored levels of radiation can destroy cancer cells. Therefore, we can see that radiation has both positive and negative effects. Nuclear power plants create energy for millions of people around the world. They are cheap to run, effective and do not produce any air pollution or carbon dioxide.

However, mining uranium for nuclear power plants and preparing it takes a lot of energy. Also, after the uranium is used to power the plant it is still radioactive. Governments need to find a place to store the radioactive waste for thousands of years. Until 1993, 11 countries dumped nuclear waste in the oceans. This was finally banned by international agreements. The United States researched sending a rocket with nuclear waste into the sun. The government decided it would be too dangerous and expensive to do.

Companies have been taking advantage of the fact that Somalia does not have a government that can enforce rules and its borders. Since the 1990s ships have been dumping radioactive materials off the coast of Somalia. In 2005, a tsunami broke barrels full of radioactive waste and it made people along the coast sick. Also, there is fear that the radiation might harm local fish stocks.

In 1986 there was an accident at the Chernobyl nuclear reactor in Ukraine. It was the most serious accident in a nuclear power plant ever. The people at the site were running a test which caused an explosion. Radioactive materials escaped. All the countries in the Northern Hemisphere were able to detect something had gone wrong. It killed 30 people and forced 220 000 people to be moved to areas away from the site. Children living in the area at the time are more likely to have thyroid cancer. It is estimated that 1 million people were affected. UNSCEAR still monitors the situation.

The most recent nuclear power plant accident happened in Japan. On 11 March 2011, Japan experienced an earthquake. This damaged the power plant. Then, a tsunami destroyed the cooling equipment of the plant. This caused a nuclear meltdown and released radioactive materials into the environment. There were no deaths due to the accident but UNSCEAR believes there is a risk that children in the area are more likely to develop thyroid cancer. It is a situation the UNSCEAR, Japan and other countries will be monitoring. After this accident, many countries began to rethink their nuclear programs.

Convention on Early Notification of a Nuclear Accident

This convention was adopted 6 months after the Chernobyl nuclear power plant accident in 1986. During the accident, the plant released radioactive materials that could be detected in all the countries in the Northern Hemisphere. The convention asks countries to report date, time, and radioactive materials released in case of an accident. There are 120 parties to this treaty.

Convention on the Physical Protection of Nuclear Material

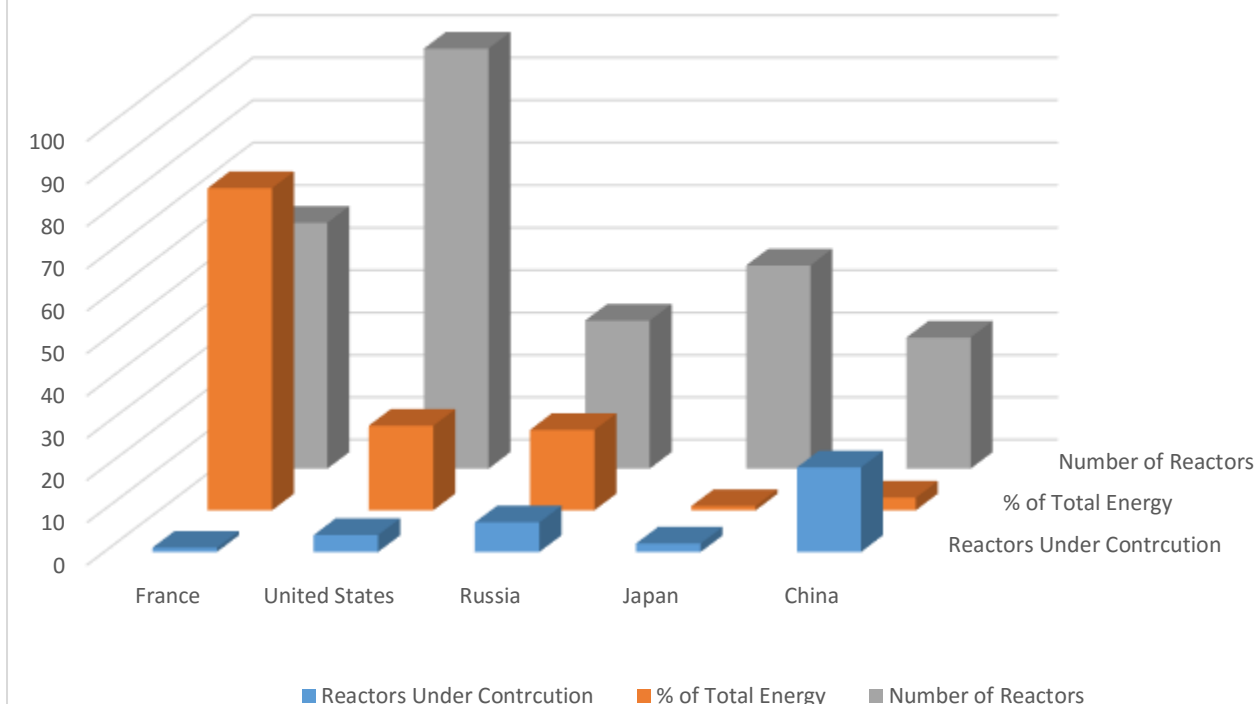
This treaty came into force in 1987. It seeks to protect all nuclear materials being used for peaceful purposes in a country. It also asks states to cooperate in order to stop the smuggling of nuclear material. States should also physically protect power plants to stop them from being attacked. In 2005, it was renegotiated in order to make it stronger. There are 155 states that are parties to this convention.

Convention on Nuclear Safety

This convention became effective in 1996. Countries who sign are supposed to make sure that they have high levels of safety in their nuclear plants. All the countries involved want to improve nuclear safety and meet regularly in order to talk about the best practices. States have to submit reports which the other states check and then offer advice. There are 80 parties to this treaty.

States With Nuclear Power Plants

The 5 Countries With the Most Amount of Reactors



Guiding Questions

1. What sources of radiation is your population exposed to? What is the opinion of the people in your country about radiation exposure?
2. Does your country use nuclear energy? What are some reasons it has decided to use or not use nuclear energy?
3. One of the biggest problems with using radioactive materials is that they sometimes become “orphan sources”. Orphan sources are radioactive materials that end up in unsecure or unsafe situations. Research this problem and what can be done to stop it.
4. How can states work together to lessen the amount of man-made radiation humans are exposed to?
5. Research some of the ways that radiation can be used to benefit humans. How does this balance against the dangers radiation poses?
6. Read this article from 1986 about the Chernobyl disaster: <https://goo.gl/M2wZMG> . How does it show that nuclear disasters create problems farther than just in the country in which they happen?
7. What are the best ways to monitor and study human exposure to radiation? How can countries support this work?
8. Does the problem exist in your community?
9. Who is working on it? NGOs, not for profits, other groups or individuals?
10. Knowing about this problem, how does it impact your world view?
11. How could you make an impact on this issue through your life choices?

Resources

Title	Hyperlink	How is it helpful?
<i>Radiation Treatment</i>	http://www.bbc.co.uk/schools/gcsebitesize/science/add_gateway_pre_2011/radiation/treatmentre v1.shtml	BBC article that gives a good overview of the science behind radiation.
<i>Report on the Fukushima-Daiichi Nuclear Power Accident</i>	https://www.youtube.com/watch?v=rd3xYSpzbuk&feature=youtu.be	A video on the 2013 report by UNSCEAR
<i>UNSCEAR 2013 Report</i>	http://www.unscear.org/docs/publications/2016/factsheet_en_2016_web.pdf	A fact sheet for the UNSCEAR report.
<i>Sources of Ionising Radiation</i>	https://www.epa.ie/pubs/reports/radiation/RPII_Fact_Sheet_Sources_Rad_13.pdf	A fact sheet that explains the sources of ionizing radiation.
<i>Radiation Effects Research Foundation</i>	http://www.rerf.jp/index_e.html	A Japanese-American organization that researches human exposure to radiation.
<i>World Nuclear Association</i>	http://www.world-nuclear.org/	Contains a lot of information about nuclear power plants.
<i>International Atomic Energy Agency</i>	https://www.iaea.org/	A part of the UN that works to use nuclear technologies for peaceful activities.
<i>Factsheets: Country Profiles</i>	https://ola.iaea.org/ola/FactSheets/default.asp	Profiles of countries by the International Atomic Energy Agency.
<i>Country Nuclear Power Profiles</i>	http://www-pub.iaea.org/MTCD/Publications/PDF/CNPP2015_CD/pages/index.htm	An interactive map that examines the nuclear power of various countries.