7TH MUN ICT

BACKGROUND

REVIEW OF INTERNATIONAL RADIOACTIVE WASTE DISPOSAL POLICIES

GENERAL ASSEMBLY

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FOREWORD

Welcome delegates to the seventh Model United Nations Instituto Cultural Tampico. We would like to thank you for being part of the General Assembly Committee, where we will discuss topics of worldwide concern. We hope that this experience is as enriching to you as it is to us, and that it will help you develop leadership and communication skills that can be useful in your future.

As nuclear power rises in demand, so does the contamination caused by the mismanagement of the toxic waste it produces. If there is not a proper protocol for getting rid of radioactive waste, there can be negative consequences affecting human health and the environment exposed to it. Sparking a debate about the proper disposal procedures, can prevent illnesses related to radiation exposure in both wildlife and human life.

HISTORY OF THE COMMITTEE

The United Nations General Assembly is one of the six principal organs of the United Nations (UN) and the only body in which every member of the organization is represented and allowed to vote.

The first session of the assembly convened on Jan. 10, 1946, in London, with 51 countries represented. As of 2006 there were 192 members of the General Assembly. Numerous nonmembers, such as states, organizations, and other entities (e.g., the Vatican, the African Union, the International Committee of the Red Cross, and Palestine), maintain observer status, enabling them to participate in the work of the General Assembly.

The General Assembly Committee exercises deliberative, supervisory, financial, and elective functions relating to any matter within the scope of the UN Charter. However, its primary role is to discuss issues and make recommendations, though it has no power to enforce its resolutions or compel state action.

Other functions include admitting new members; selecting members of the Economic and Social Council, the non permanent members of the Security Council, and the Trusteeship Council; supervising the activities of the other UN organs, from which the General Assembly receives reports; and participating in the election of judges to the International Court of Justice and the selection of the secretary-general.

Most work, however, is delegated to six main committees, known as (1) Disarmament and International Security, (2) Economic and Financial, (3) Social, Humanitarian, and Cultural, (4) Special Political and Decolonization, (5) Administrative and Budgetary, and (6) Legal.

The General Assembly has drawn public attention to major issues, thereby forcing member governments to develop positions on them, and it has helped to organize appropriate bodies and conferences to deal with important global problems.

At the beginning of each regular session, the General Assembly also holds a general debate, in which all members participate and may raise any issue of international concern. The number of resolutions passed by the General Assembly each year has climbed to more than 300, and many resolutions are adopted without opposition.

INTRODUCTION

Nuclear power is generated by splitting atoms to release the energy held at the core, or nucleus, of those atoms. This process, nuclear fission, generates heat that is directed to a cooling agent—usually water. The resulting steam spins a turbine connected to a generator, producing electricity. Unlike fossil fuel-fired power plants, nuclear reactors do not produce air pollution or carbon dioxide while operating. However, the processes for mining and refining uranium ore and making reactor fuel all require large amounts of energy.

Radioactive (or nuclear) waste is a byproduct from nuclear reactors, fuel processing plants, hospitals, and research facilities. It can vary greatly in its physical and chemical form. It can be a solid, liquid, gas, or even something

in between, such as sludge. The chemical form of it can vary as well. Radioactive waste can contain radionuclides of very light elements, such as radioactive hydrogen (tritium), or of very heavy elements, such as uranium. It can be classified as high, intermediate, or low level. Depending on the radionuclides contained in it, a waste can remain radioactive from seconds to minutes, or even for millions of years.

A major environmental concern related to nuclear power is the creation of radioactive wastes such as uranium mill tailings, spent (used) reactor fuel, and other radioactive wastes.

Radioactive waste management includes the possession, transportation, handling, storage, and ultimate disposal of waste. The safe management of radioactive waste is necessary to protect public health. If handled improperly, potential exposures of humans to high-level radioactive waste can be dangerous, even deadly. Some radioactive wastes such as certain types of transuranic waste can cause biological effects in humans only if the radionuclides contained in the waste are directly inhaled or ingested. Most low-level radioactive wastes can be handled by humans without any measurable biological effects.

There are only 2 commonly-accepted disposal options that are: Near-surface disposal at ground level, or in caverns below ground level (at depths of tens of meters) this for low-level radioactive waste (LLW) and Deep geological disposal (at depths between 250m and 1000m for mined repositories, or 2000m to 5000m for boreholes) which is the preferred option for nuclear waste management in several countries.

Nevertheless, good handling practices of all radioactive materials and waste should be the goal to provide optimum protection to humans and the environment.

CONTENT

THE PROBLEM

Nuclear fuel remains dangerously radioactive for thousands of years after it is no longer useful in a commercial reactor. Even if all safety precautions are followed, it is no guarantee that a nuclear power plant accident will not occur. If a nuclear power plant accident occurs, the environment and surrounding people could be exposed to high levels of radiation. Waste disposal has become a major problem for policymakers. Spent fuel pools at

nuclear power plants, intended to house nuclear waste only until it is cool enough to be transferred to permanent storage, have increasingly become overcrowded. Due to space constraints, a next relocation plan for radioactive waste needs to be in the works. Plans have been proposed to bury the radioactive waste in several places, but there is no guarantee that spills during transportation or ecosystem contamination will be successfully prevented. There is no current solution to deal with the issue of radioactive waste. Some scientists feel that the idea of building more nuclear power plants and worrying about dealing with the waste later has the potential of a dangerous outcome.

As radioactive material decays, or breaks down, the energy released into the environment has two ways of harming a body that is exposed to it: it can directly kill cells, or it can cause mutations to DNA. If those mutations are not repaired, the cell may turn cancerous. The radioactive byproducts of nuclear energy generation are incredibly damaging to living things because nuclear decay also releases smaller particles that can tear through tissue and damage genetic material. Children are most at risk for thyroid cancer, since their thyroid glands are 10 times smaller than those of adults. Radiation sickness is often fatal and can produce such symptoms as bleeding and shedding of the lining on the gastrointestinal tract. Nuclear waste storage is a societal challenge. There is intense opposition in almost every community near a potential waste site in fear of the potential consequences for their health and environment.

THE UNITED NATIONS´ POSITION

The objective of the United Nations is to ensure that radioactive waste is safely managed, transported, stored and disposed of, with a view to protecting human health and the environment, within the wider framework of an interactive and integrated approach to radioactive waste management and safety.

The Commission on Sustainable Development considered the safety of radioactive wastes during its seventh session in 1999, in relation to transboundary movement of this waste, and again during its ninth session in 2001, in relation to nuclear energy technologies. After several deliberations in this issue, the World Summit on Sustainable Development stressed the importance of effective measures for international maritime transportation and other movement of radioactive material, radioactive waste and spent nuclear fuel, and encouraged Governments to examine and improve measures and internationally agreed regulations regarding the safe handling, transport and disposal of this waste. The United Nations General

Assembly, 19th Special Session in New York, 23-27 June 1997 specifically states that

- Each country has the responsibility of ensuring that radioactive wastes that fall within its jurisdiction are managed properly in accordance with internationally accepted principles, taking fully into account any transboundary effects.
- The international community should make all efforts to prohibit the export of radioactive wastes to those countries that do not have appropriate waste treatment and storage facilities.
- States, in cooperation with relevant international organizations, where appropriate, should not promote or allow the storage or disposal of high-level, intermediate-level or low-level radioactive wastes near the marine environment unless they determine that scientific evidence shows that such storage or disposal poses no unacceptable risk to people or the marine environment and does not interfere with other legitimate uses of the sea.
- There is a need to support the clean-up of sites contaminated as a result of all types of nuclear activity and to conduct health studies in the regions around those sites.

Arab Republic of Egypt

The HLWMC is a waste management treatment and disposal facility that handles all of the liquid waste from Egypt's research reactors and civilian radioisotope production facilities. It is also the only facility in Egypt known to contain hot cells for plutonium extraction research. However, the facility does not house nuclear material requiring IAEA safeguards.

Bolivarian Republic of Venezuela

In late November 2008, Venezuela signed a nuclear cooperation agreement with Russia during a state visit by Russian President Dmitry Medvedev to Caracas. This agreement, much touted by Venezuelan President Hugo Chávez, raises the issue of the extent of Venezuela's nuclear ambitions. Venezuela has almost no nuclear infrastructure, little nuclear expertise, and is a party to the nuclear Non-Proliferation Treaty (NPT) and the Latin American nuclear-weapon-free zone

Commonwealth of Australia

An International Atomic Energy Agency (IAEA) team of experts said Australia is committed to strengthening its regulatory framework for nuclear and radiation safety. Australia uses radiation sources in medical and industrial

applications, as well as in science and research, including a research reactor at Lucas Heights, a suburb of Sydney. The country has storage facilities for low and intermediate level radioactive waste and plans to establish a national radioactive waste management facility.

Federal Republic of Germany

Germany has decided to stop generating electricity from commercial nuclear power plants by 2022. The country has over 30 nuclear power plants and other nuclear facilities, whose decommissioning will create a significant amount of radioactive waste. Germany is also making plans to retrieve radioactive waste from the Asse II former salt mine. The waste will need to be stored until it can be safely disposed. Currently, Germany does not have an operating radioactive waste disposal facility.

French Republic

With 58 nuclear power reactors producing nearly 72% of France's electricity in 2018, France is one of the countries with the highest share of nuclear power in its energy production. Along with this energy, however, France's nuclear fleet is also responsible for producing a significant amount of spent fuel and radioactive waste. The strength of France's national spent fuel policy, in addition to tight legislation and a strong regulatory body, can be attributed to the standardization of its nuclear fleet and the policy of recycling its spent fuel.

New Zealand

New Zealand has taken important steps, including efforts to revise legislation and prepare new regulatory documents, which will strengthen New Zealand's nuclear security regime. New Zealand has taken many steps to establish and strengthen its national nuclear security regime.

People's Republic of China's

China has more than 63,000 radiation sources, with 30 percent of those unregistered and 20 percent consisting of improperly disposed radioactive waste, according to the Xinhua news agency. The country reportedly has had more than 1,500 radiological accidents over the last 50 years that have killed at least eight people. To improve radioactive security, the Chinese State Environmental Protection Administration has announced that government agencies would begin monitoring the production, storage and disposal of all radioactive material and would collect radioactive waste

Republic of Kazakhstan

The proposal to turn Kazakhstan into a commercial importer of radioactive waste has been on the nation's agenda since the summer of 2001. The ongoing debates focus on the import, storage, and subsequent disposal of low- and medium-level radioactive waste on the republic's territory—debates that have revealed the divisive and controversial nature of this issue. According to the official data, Kazakhstan has about 237.2 million metric tons of radioactive waste, with a total radioactivity level of 15.5 million curie (Ci)

Republic of Kenya

Kenya is making notable progress in developing the infrastructure needed to make a knowledgeable decision to embark on a nuclear power program. Kenya has an existing legal and regulatory framework covering radiation sources in agriculture, medicine, industry and research. Kenya completes various planning activities to prepare for the next phase, such as establishing the necessary human resources, management systems, procurement and contract management, leadership development and safety and security culture programs.

Republic of South Africa

South Africa has a robust regulatory framework for nuclear safety but recommended improvements in the oversight of radiation safety. South Africa's Koeberg Nuclear Power Station near Cape Town has two reactors that generate almost 5 percent of the country's electricity. The country also has one research reactor, several fuel cycle and waste management facilities and uranium mines. It also uses many radiation sources in medical and industrial applications.

Russian Federation

About 18% of Russia's electricity production comes from its 38 operating nuclear power reactors (about 28.4 GWe capacity). Russian policy is to close the fuel cycle as far as possible and utilize recycled uranium. However, less than half used fuel is reprocessed. Russia's national operator for radioactive waste management (NO RAO) aims to build, by 2024, an underground research laboratory here and a final decision on an HLW repository is expected by 2025.

State of Japan

Japan is preparing for a decision on how to dispose of large amounts of treated water stored at the Fukushima Daiichi Nuclear Power Station following the 2011 accident. The IAEA and the Japanese Government have been cooperating extensively over the past decade to deal with the aftermath of the Fukushima Daiichi accident, in areas such as radiation monitoring, remediation, waste management and decommissioning.

United Arab Emirates

The UAE, seeking a reliable low-carbon source to meet increasing demand for electricity, is building its first nuclear power plant at the Barakah site in Abu Dhabi. The country of almost ten million people has engaged with Korea Electric Power Company to construct and commission four 1400 MW pressurized water reactors. The UAE is rapidly moving forward with the development of its peaceful nuclear energy sector

Ukraine

About 50% of Ukraine's electricity production comes from its 15 operating nuclear power reactors (about 13.1 GWe capacity). The country has had a policy of direct disposal of used fuel, with the possibility of closing the fuel cycle remaining under consideration. Storage of used fuel for 50 years before disposal is the current policy, mostly at reactor sites. A long-term dry storage facility for spent fuel has been in operation at Zaporozhe since 2001.

United Kingdom of Great Britain and Northern Ireland

About 21% of the United Kingdom's electricity production comes from its 15 operating nuclear power reactors (about 8.9 GWe capacity).The country has had a policy of reprocessing, but is unlikely to reprocess all the used fuel from its AGR reactors and the PWR at Sizewell B.In April 2005 the Nuclear Decommissioning Authority (NDA) formally took ownership of UK nuclear liabilities.

United Mexican States

An International Atomic Energy Agency (IAEA) team of experts completed a review of long term operational safety at the Laguna Verde Nuclear Power Plant (NPP) in Mexico. The team observed that CFE has a good basis to effectively manage LTO. The operator demonstrated that it is implementing preparations for safe LTO in a timely manner.

United States of America

About 20% of US electricity production comes from its 95 operating nuclear power reactors (about 96.8 GWe capacity). The USA is the world's largest producer of nuclear power.US policy since 1977 has been to forbid reprocessing of used fuel and to treat it all as HLW, which the government is responsible for finally disposing of in a geological repository.

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