**The Fukushima nuclear accident**

**The impact of Fukushima’s wastewater to the environment:**

On the 11th. In March 2011, a magnitude 9 earthquake struck northeastern Japan. The earthquake caused serious damage to the Fukushima nuclear power plant. The result has been discharges, explosions of hydrogen bombs, damage to the functioning of control systems and the release of cooling water and the infiltration of radioactive materials into the atmosphere, soil, oceans and groundwater. Since then, nuclear contamination has spread throughout Japan and around the world. The accident occurred when a hydrogen bomb forced the Japanese government to order the use of seawater reactors. After the accident, TEPCO pumped greenhouse gases into the atmosphere and reduced pressure on the reactors. In addition, energy companies add large amounts of cold water to their reactors to cool them down. Then they threw the water into the sea without abusing it. These measures have left the nuclear reactor with large amounts of radioactive material. In February 2013, the World Health Organization released a report stating that cancer rates have not increased significantly worldwide, but that certain populations, such as young children, may have higher rates. In some parts of Japan, for example, infants received an effective dose of 12-25 milligrams (12-25 mg) in the first year after the nuclear accident. As a result, girls were 6 percent and 7 percent more likely to develop breast cancer, respectively, and boys were 7 percent more likely.

地图

描述已自动生成

Figure 1 Radiation pollution area diagram around the nuclear power plant

**The impact to the social perception of the company/country:**

The consequences of the accident at the Fukushima nuclear power plant cannot be ignored. People in the Fukushima region have been evacuated and may not be able to return to their places of origin for a long time to come. At the same time, Japan's national image and trade authority have been undermined by an inadequate response to the accident. The impact of this sorrowful event on society also led to a fall in the stock market. The radiation has caused enormous damage to the export industry. This chain reaction will inevitably lead to significant economic losses, although the exact amount has not yet been calculated.

Fukushima also initiated global panic, with China, Japan, the United States, France and other countries buying iodine. At the same time, the event was critical to global nuclear development in time. Other safety measures have been decided upon around the world, nuclear power plants have been shut down, several projects are still under way to extend life, and nuclear development plans are constantly updated.

In addition, several important lessons from the Fukushima nuclear disaster have led us to believe that, from the need to provide adequate disaster education to build public confidence in organizations and individuals involved in nuclear safety, the accident at the Fukushima nuclear power plant has also fueled enthusiasm for renewable energy. Foreign media have criticized the Japanese government and the Tokyo energy company for their poor communication and effective emergency management. A few years after the accident, the Japanese government called on the victims to return home as soon as possible and abolished individual subsidies. Japan's attention to disaster victims is also gradually diminishing.

**Alternatives:**

Whether a nuclear power plant can operate safely, reliably, and economically is not only dependent on the design and technology adopted, but also closely related to the quality of construction, operation management after completion, and the professional quality and technical level of operators. The prevention and consequences of any accident depend not only on the formulation of response strategies in advance, but also on the attitude and ability to implement the emergency plan. Therefore, nuclear power operating units and management agencies should attach great importance to the construction of nuclear safety culture for all employees.

In addition, the public is full of mystery and fear due to their ignorance of nuclear energy, and the resulting social panic is sometimes more serious than the direct harm. For example, since the nuclear accident, the phenomenon of grabbing iodine and salt in various countries reflects that the public lacks a basic understanding of nuclear energy and radiation protection knowledge. This phenomenon not only affects the normal life of the people, but also affects the orderly development of the economy. In severe cases, it will also lead to social stability question. Therefore, popularizing public awareness of nuclear safety is also crucial to maintaining social stability.

Finally, in addition to developing nuclear energy, the government can also use other clean energy sources, such as hydropower, wind power, etc. As an island country, Japan is rich in coastal wind power and is suitable for large-scale wind power generation.