Eurasia Foundation International Lectures, Fall 2021 Semester
The Construction and Transformation of East Asiaology" Lecture Series (2)
Title: The Impact of Fukushima Accident on Taiwan: The Transformation of Taiwan and Japan's Energy Policy

For the second lecture of the Eurasia Foundation International Lecture of the Chinese Culture University, Professor Shieh, Mu-Chang of Fu Jen Catholic University, who was granted the Order of the Rising Sun, 3rd Class, at the beginning of this year, was invited to deliver a lecture. Professor Shieh gave a speech entitled "The Impact of the Fukushima Accident on Taiwan: The Transformation of Taiwan and Japan's Energy Policy." This lecture used data to analyze Taiwan's and Japan's energy policy objectively and is worth pondering.

Professor Shieh started with introducing the accident of the Fukushima nuclear disaster caused by the massive earthquake that occurred in Japan on March 11, 2011. Professor Shieh continued to explain the issues faced by Taiwan's and Japan's energy policy after the 2011 Tōhoku earthquake and tsunami, the issues related to nuclear safety and ban on Fukushima food imports, and then talked about the threats from China's nuclear power on Taiwan. In the end, Professor Shieh mentioned the attitude towards the issues related to nuclear safety and ban on Fukushima food imports.

Issues in Taiwan-Japan Energy Policy

Energy is the cornerstone of national development and the lifeblood of economic growth. Taiwan relies on imports for almost 97% of its energy, while Japan relies on imports for almost 95% of its energy. Once imports stop, it will cause serious problems for the national economy. After the Fukushima accident, Japan's new energy policy still uses nuclear energy as an important base load energy source. The energy policy of the upcoming Kishida Fumio Administration is to advocate the construction of Small Modular Reactor (SMR) and the research and development of nuclear fusion reactors in nuclear power plant. In recent years, Taiwan has set the goal of becoming a "nuclear-free homeland" and expected to achieve the goal of "nuclear-free" by 2025. The plan includes a target power mix of 30 percent coal, 50 percent natural gas, 20 percent renewables by 2025. Regarding this ratio, Professor Shieh pointed out three concerns, namely (1) insufficient energy diversification, (2) natural gas relies entirely on imports, lack of guarantee for stable and safe supply, and (3) difficulty in achieving the goal of renewable

energy. Two unwarned power outages in May of this year caused worries in the industry circle. The Chinese National Federation of Industries (CNFI) urges the government that "do not abandon any energy allocation easily." Under the premise of safety, CNGI suggests to use zero-emission nuclear power, as a base-load energy option as an "alternative option," to increase the flexibility of power dispatch. Professor Shieh pointed out that facing Taiwan's electricity problem, we need to face and adjust energy policies pragmatically. As for the solution, Japan's approach can be used as a reference. In addition to actively developing renewable energy, under the conditions of "S+3E (Safety, Energy, Environment, Economy)," extending the operation of nuclear power plants like Japan or the United States is the most favorable option for the long-term development of Taiwan's people's livelihood and industry.

The issues related to nuclear safety and ban on Fukushima food imports

The domestic anti-nuclear movement in Taiwan linked with Japan's anti-nuclear groups after 2011 Tōhoku earthquake and tsunami, advocating non-nuclear and anti-nuclear. Professor Shieh argued that whether to continue using nuclear energy is not a "right or wrong question" but a "multiple choice question." He continued to suggest that we need to consider whether we can bear the cost. Professor Shieh indicated clearly that from the perspective of the structure of stratum and oceanic trench (faults) and the distribution of coastlines, it is impossible for Taiwan to have a tsunami-type earthquake like 2011 Tōhoku earthquake and tsunami in Japan. Moreover, from the previous experience, Taiwan's use of nuclear power plants has been ranked among the top 10 in the world in terms of safety and quality. Professor Shieh stated that Taiwan's real nuclear security threat actually comes from China. In ten years, China will become the country with the most numerous nuclear power plants in the world. Most nuclear power plants in China located along the coast of Fujian Province. Once a nuclear crisis occurs, radiation dust will drift to Taiwan through the wind.

Since the Fukushima accident, most people in Japan have suffered from "radiophobia." In order to reassure Japanese public, the Japanese government has set strict standard for radiation in food by adjusting the limits of cesium to 100 Bq/kg for general food. Compared with other countries, the standard is 600 Bq/kg in the E.U., 1,200 Bq/kg in the U.S., and 370 Bq/kg in Taiwan (the same as Japan after the 2016 revision), while the standard of the Codex Alimentarius Commission (CODEX) is 1,000 Bq/kg. Professor Shieh bluntly stated that from the perspective of scientific theories and international standards, accompanied with the strict control of the Japanese government, the 2018 referendum urging the continuous ban on the import of Fukushima food was a

wrong decision. Professor Shieh argued that there are radiations in air and water in the environment in which we live. The harmfulness of radiation depends on the amount of radiation. Concerning nuclear energy policy and Fukushima food import issues, Taiwanese public need a more objective understanding and these issues should be re-examined from the perspective of scientific data. The “nuclear-free homeland” energy policy should be reviewed again in a comprehensive manner with reference to Japan’s practices.

(Website link: https://eurasia.pccu.edu.tw/index.php)
(Written by: Tu Yuchan, Associate Professor, the Department of Japanese Language and Literature)