New Role of Environmental Impact Assessment in Nuclear Power Plant Construction Planning: Institutionalizing Compensatory Mitigation as a Tool for Precautionary Principle

Akira Tanaka, Professor, Dr. Tokyo City University

Having an environmental impact assessment system in place that prevents negative impact on the ecosystem is the key to effective ecosystem conservation. Now is the time for us to understand the problems with the current environmental impact assessment system and consider fundamental reform for the sake of future generations.

The problems with the current Japanese environmental impact assessment system are twofold: 1) it targets an extremely limited number of projects, and 2) the environmental impact assessments that are conducted are skewed and make no attempt to balance environmental conservation and development.

To the first point, the U.S. conducts thousands of environmental impact assessments annually at the national level under NEPA (National Environ-mental Policy Act), whereas Japan only legally stipulates about 20 per year. The difference is that the U.S. applies the law flexibly to human conduct thought to have considerable environmental impact, for both private and public projects. In contrast, the Japanese law only applies to a limited number of predetermined, large-scale national development projects.

Environmental impact assessments are the only chance for citizens to be publicly informed or express their opinions for projects expected to impact the environment. However, Japan did not even have an environmental impact assessment system in place until 1984. In 1984, cabinet decree institutionalized environmental impact assessments (EIA) under national administrative guidance as a common environmental impact assessment system for various national projects, but power generation projects, including nuclear power, were excluded from this system. Construction started on Reactor 1 of the Fukushima I Nuclear Power Plant, which caused the recent disaster, in 1967. It is important for us to recognize what kinds of preliminary environmental research took place at the time and leverage this in future environmental impact assessment for future generations.

The Environmental Impact Assessment Law was enacted in 1999 and assessment for power projects including nuclear power was finally included in the common system. Radiation contamination was, however, not included in its list of expected environmental impacts. The law did not stipulate radioactive contamination surveys in environmental impact assessments for construction of nuclear power plants. Nuclear power and other power generation projects were once again excluded from the strategic environmental impact assessment system institutionalized in 2007, which asked for environmental impact assessments to be conducted earlier on in projects.

Incidentally, we should recognize that in 1969 in the U.S., NEPA also legislated unification of procedures to disclose information and involve the public in environmental impact assessments, which were previously conducted in disjointed fashion under individual laws.

To the second point, we need to understand what environmental impact assessments are. The priority of environmental conservation measures, or mitigation hierarchy, is especially important. There are three levels of mitigation: avoidance, minimization, and compensation. First, adverse environmental impacts which can be avoided are avoided, even by cancelling the project. Unavoidable impacts are then minimized to the extent possible, with the remaining impact compensated for as a final measure. In recent years, compensatory mitigation made in terms of biodiversity has been termed “biodiversity offsets”. Personally, I have always thought of environmental impact assessment as an impartial study of the mitigation hierarchy combined with appropriate disclosure of information and public participation.

Implementing such environmental impact assessment depends on qualitatively evaluate the environmental impact by using Habitat Evaluation Procedures (HEP), and so on. These measures assess the extent of environmental impact, how much can be avoided, how much can be minimized, and how much will remain. They also assess the scale of compensation that will be needed.

If businesses could have quantitatively expected the impact not only on wildlife but also human habitats (living space)—as well as the type and scale of compensation for such impact—in the early planning stages of development, they could have decided to avoid many of past development projects causing the environmental destruction from the outset. In this regards, the recent nuclear disaster could be no exception

Institutionalizing compensatory mitigation also means giving environmental impact assessments the power to deter irreparable environmental damage.