

Session 3: Fissile Material

Seung Min Woo

KAIST

Summary

These days the issue of fissile material has been studied very carefully, because it contains both of faces. There are four panelists are Will Tobey, John Carlson, Chaim Braun and Tom LaTourrette presents the each issues related with fissile material. The fissile material issues absolutely the one of most important topic among nuclear studies, because the fissile material is the energy source of nuclear power generation as well as the source of nuclear weapon. Therefore, they show what the right way for the future nuclear energy.

To begin with, John Carlson of Lowy Institute addresses that potential dangerous of fissile material enrichment and reprocessing. The mined natural uranium is manufactured to be used as fuel of nuclear power plant. After burning, the spent fuel contains plutonium. In the view point of future energy security, the plutonium is necessary source, whereas it is able to change nuclear weapon. Therefore, the producing of plutonium should be carefully managed in the concept of non-proliferation. The separating between uranium and plutonium from the spent fuel is taking the risk. To solve the problem, the president Bush claimed that the only limited countries are able to reprocess to supply the world wide nuclear power plant. John Carlson asks that how to minimize the plutonium. As an answer of the question, there are two fields in terms of technology and international cooperation. The increasing concern of fast reactor system is the one of technology field. The system is able to burn uranium and plutonium. However, it is required several process in order to manufacture as fast reactor fuel. The several processes include the risk of proliferation. Therefore, we need advanced methodology in order to handle plutonium safely. Moreover, the collaboration is needed to maintain the security and safety.

The next speaker is Chaim Braun of Stanford University. Chaim Braun is working on an analysis of new nuclear power plant prospects in the Middle East, and the potential for nuclear proliferation from prospective nuclear plants in industrializing countries. He mentions that extensions of nuclear fuel supply assurance concepts to regional fuel enrichment plants operated on a 'black box' mode, particularly as applied to the South Asian, Central Asian and South American regions. According to his speech, the international enrichment center is the one of the best solution against proliferation and terrorism. Through the international enrichment center, the countries can share their own knowledge easily, which is able to lead advanced technology as well as clear management of enrichment facility. In addition, he believes that the policy and management regulatory follows International Atomic Energy Agency aspects to be better.

The conclusion of the session is that the fissile material should be handled by advanced technologies and the international cooperation to make a peaceful uses.

* The views expressed herein do not necessarily reflect the views of the Asan Institute for Policy Studies.

* The views expressed here are panel overviews of the Asan Plenum. They do not necessarily reflect the views of the author or the institutions they are affiliated with.
