

Japan's reprocessing program and proliferation in East Asia

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If the Rokkasho Reprocessing Plant operates as designed for 40 years, it will separate more plutonium than the Soviet Union and the United States together produced for nuclear weapons during their Cold War. If other countries follow Japan's example, the risk of nuclear-weapon proliferation will increase.

Japanese government officials and other reprocessing proponents argue, however, that, since Japan is the only non-weapon state that is allowed to separate plutonium, it should not give up this hard-won right and that, if Japan reprocessed the spent fuel of other countries in the region, the danger of proliferation would be reduced.

It is true that, in 1988, the United States gave its "prior consent" for Japan to reprocess spent fuel that had US content or had been irradiated in US-designed reactors, but it gave the European Union and Switzerland the same approval. Also, Belgium, Germany and Italy had pilot reprocessing plants like Japan. Because of the failure of plutonium breeder reactor programs, however, these countries decided to stop plutonium separation. Today, only Japan and four weapon states-- China, France, India and Russia --continue to insist on reprocessing. The US gave up commercial reprocessing permanently in 1982 and recently, the UK too finally decided to abandon reprocessing.

What about the idea of Japan reprocessing for its neighbors as an alternative to them reprocessing for themselves? The question is why any of these neighbors might want to have their fuel reprocessed to begin with.

In the 1980s, France and the UK each built plants primarily to reprocess fuel for Japan, Germany and some smaller European countries. Due to political opposition to keeping other countries' radioactive wastes, however, the reprocessing contracts required that customer countries take the wastes back.

The customer countries found that the reprocessing waste and the spent MOX fuel from recycling of plutonium in light water reactors were no less dangerous than the original spent fuel and that they still needed to find a region willing to accept a deep underground repository. Almost all the customer countries decided not to renew their reprocessing contracts and to store their older spent fuel safely in dry air-cooled casks pending final disposal.

If Japan truly wants to reprocess its neighbors' spent fuel therefore, it will have to be willing to keep the radioactive waste. Proponents of this idea should also clarify their idea about what would be done with the separated foreign plutonium.

In the meantime, South Korea, in its negotiations with the United States over a new nuclear cooperation agreement, is demanding "nuclear sovereignty" and insisting on the same right to reprocess as Japan. It is not likely to accept as an alternative Japan's offer to reprocess for it. If Japan decides to end its reprocessing, however, South Korea will lose its strongest argument for reprocessing in South Korea.