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# **Nautilus Institute Policy Forum Online: Plutonium Pineapples: Avoiding Awful Choices Over North Korean Nuclear Exports**



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## **Plutonium Pineapples: Avoiding Awful Choices Over North Korean Nuclear Exports**

by Peter Hayes

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## **I. Introduction**

Given the pressures that could lead to armed conflict between the United States and the DPRK in the near future, Peter Hayes, Executive Director of the Nautilus Institute, outlines four scenarios that try to answer whether or not possibilities exist for a peaceful resolution between the United States and the DPRK before November, 2004. Hayes also addresses the questions: What are the strategic elements of such scenarios? What are the pitfalls? If the conflict spins out of control, in what ways could one push towards a peaceful outcome? This Op-Ed was based on the second annual Nautilus Institute US-DPRK Scenarios Workshop held in May 2003.

## **II. Essay by Peter Hayes**

"Plutonium Pineapples: Avoiding Awful Choices Over North Korean Nuclear Exports"

by Peter Hayes

Executive Director, Nautilus Institute

A recurring nightmare posed by North Korea's nuclear weapons program is possible export of nuclear weapons or fissile material. Some like former US Defense Secretary William Perry have referred to soccer ball sized spheres of plutonium being sent out of North Korea. A better image is a plutonium pineapple because it suggests the difficulty customs and security agencies would have in locating such a small item if hidden carefully among trade goods such as fruit.

The prospect of North Korean fissile material, nuclear weapons designs-or even fabricated weapons-ending up in the hands of the likes of Al Qaeda or Iran for use against the United States drives the US agenda in its global war on terrorism.

Why Kim Jong Il would allow export of such a strategic commodity in this fashion for merely venal reasons is not obvious. Above all, he is concerned with regime survival. By exporting nuclear weapons or materials for mere cash to loose cannons in other conflict zones, Kim risks detection, which would all but guarantee the swift military elimination of North Korea. Of course, one cannot dismiss the idea that the DPRK would act irrationally and export plutonium for cash. Its leaders may believe they are unlikely to be caught and if they were, that they would survive the campaign that this act would elicit. Even if the leadership perceives these risks, there may be rogue elements in the DPRK that control the plutonium. There is no guarantee that if regime change were to occur that a more hostile or criminal leadership than Kim Jong Il's regime would not pursue nuclear exports for cash.

Although these possibilities cannot be totally discounted, at least two other motivations for nuclear exports are more credible.

The first would be a revenge attack for an attempted or successful American assassination of Kim Jong Il. The probability of a nuclear DPRK riposte to such an attack is unknowable and doubtless small, but it is finite. Consideration of a possible DPRK response--and not just at the DMZ or in Korea-- should give pause to loose thinking in Administration circles as to the desirability of replicating its attacks on Saddam Hussein.

The second motivation could arise at the brink of war, when Kim Jong Il might decide that a nuclear diversion arranged by DPRK-controlled overseas agents might be the sole path to avoiding US-allied attack. This possibility was examined closely at a recent scenarios workshop on the resolution of the DPRK nuclear issue held at the Nautilus Institute.\*

In a state of protracted high tension the perceived risk of pending pre-emptive attack by the United

States could push the North to use its own trusted overseas operatives to use the export either to project a credible deterrent threat or to deliver an actual nuclear attack against a "soft" target (such as in a port city, either American, or in an allied city via a ship-borne cargo container) or a "hard" target (such as a US coastal base that might be approached by mini- diesel submarine).

Current expert opinion about North Korean nuclear capability holds that it will be some time before the DPRK has sufficient highly-enriched uranium to make multiple atomic bombs, but that they do (or will soon) have enough plutonium (Pu) to do so.

If the DPRK were to export Pu, the resulting danger would not necessarily come from a traditional nuclear weapon. Pu-based atomic bombs require a fairly sophisticated "implosion" design, which in turn requires state-level industrial resources to construct. Non-state actors would be far less likely to have the capability to construct the implosion mechanism and would be reduced to a far less powerful radiological bomb. For these reasons, the DPRK would rely on its own technically competent agents to construct a nuclear weapon.

A crude North Korean Pu-based nuclear weapon would be fairly difficult to export given its likely size and relative fragility. "Plutonium pineapples," smaller quantities of shielded plutonium, could be exported piecemeal without a large bomb mechanism. The latter could be mated later with the plutonium pineapple outside the DPRK. Because this "pre-export" would require time-possibly months-this approach requires creating a "sleeper" overseas nuclear weapon. The location could be on land or at sea-for example, on fishing boats or mini- diesel submarines.

American policy options faced with this array of contingencies depend upon how such an export is made and how it is discovered.

Before the DPRK exports-- or is suspected to have exported plutonium-- the United States is in a position to make a unilateral declaration that, if the DPRK exports Pu, then it "will act decisively." Accordingly, the United States would then work with partners, particularly China and the Russian Federation on a common response. The next step would be to work with the United Nations to develop a general global policy about export including (the currently non- existent) treaty regime and Security Council resolutions on capturing fissile materials. This Security Council effort would be generic but everyone, including Pyongyang, would get the message.

Meanwhile, Washington would set an internal "Secret Red Line," that is, clear plans about how to respond to DPRK export scenarios in hopes of achieving some deterrent effect, when, as is inevitable, the line's existence leaks into the press. The administration's Proliferation Security Initiative appears to be such a strategic response. The objective is general deterrence well ahead of any actual export activity.

Consider the other possibilities related to actual exports in the case that deterrence fails. The United States can suspect such exports have occurred, with intelligence indicating the possibility. The United States can know of such exports with positive proof. Finally, the United States can believe it to be pending, with some ambiguity about details.

Once export happens, other factors come into play. Was the DPRK caught red- handed, or was it just accused? And by whom? Who was the intended recipient-- a state or a non-state actor-- and if the Pu has been exported, has it been captured or is it still out there? Are other exports about to happen?

The United States can treat each such situation as a military/political issue or it can handle it as a criminal/political matter.

The military/political response could include a demand on the DPRK for immediate transparency, information on exports, inspections (for example, with a 3-day deadline to allow UN Security Council consultation etc).

Given the possibility of DPRK escalation in less than three days, including threatened use of the exported plutonium against a global city, the United States may feel obliged to shift immediately to a more forceful military strategy, like a surgical strike on DPRK nuclear and military facilities; a rapid attack on the missile sites and artillery threatening South Korea and Japan (in short, "moving the DMZ 60 miles north"); full-scale naval and aerial interdiction; and global arrests of DPRK agents affiliates within 24 hours of discovery and confirmation of the plutonium export.

If, as seems likely, the fact of such an export becomes public, the political pressure on the White House to act militarily will become enormous, whatever the strategic implications.

As the threat of a pending political-military response may accelerate a still- uncontrolled Pu attack on a global city, the United States may have to adopt an Interpol-type response, treating the export as a criminal matter. That could be a more mature and responsible but also politically more difficult decision.

If the overriding American objectives were the recovery of already exported material to terminate the threat of an attack on a great city and concurrently, the cessation of further exports, then the task would be simplified greatly if the DPRK could be induced to cooperate. Rather than condemning and attacking the DPRK, the United States would characterize the export as criminal smuggling, not a strategic move by the DPRK's leadership. The United States would rely on existing policing institutions such as Interpol, as well as other national and international civil observation and interdiction resources created after 911, especially in transit cities (such as Beijing or San Francisco).

Even unsavory groups such as the global narco-criminal syndicates could play a role in capturing footloose Pu. Such groups are in a business and would not be interested in losing market share and, more importantly, political stability. Additionally, post-use clampdown would hit them hard in their non-nuclear illicit trade.

The underlying strategy of this approach is to reduce the immediate post-export tensions in Korea and to avoid pre-emptive attack by the DPRK. This method lessens the risk of immediate escalation to full-scale war in Korea-- an outcome which is almost guaranteed by a political-military response to DPRK exports. Ironically, it could also be the basis for a reduction of the near-war tensions that drove the DPRK to export plutonium in the first place. If so, then the DPRK nuclear export strategy would have worked from a North Korean perspective, at least in the short term.

The overwhelming policy logic confronting President Bush and his advisors as they move to six-power talks with the DPRK is to avoid getting into the situation where only awful choices as described above are available.

Therefore, the United States has two over-whelming imperatives.

First, no matter how unpalatable, the United States must do whatever it takes to avoid the DPRK obtaining sufficient nuclear material and/or weapons to export at all. Second, the United States must act now to reduce tensions on the Korean Peninsula and to avoid visiting the brink of war except on fundamental issues of US and allied survival. The key to achieving this joint outcome is to move the DPRK from a terrorist state adversary to one that supports pro-actively the global war on terrorism. Figuring out what it will take to achieve this shift on the part of the DPRK is the foremost problem

facing American security analysts advising the White House.

Implementing this strategy is President Bush's single most urgent security problem as well as that of many of the United States keenest allies such as Australia.

\* The full report, A Korean Krakatoa? Scenarios for the Peaceful Resolution of the North Korean Crisis, is at

<https://nautilus.org/wp-content/uploads/2011/12/DPRKscenarios2003.pdf>

### **III. Nautilus Invites Your Responses**

The Northeast Asia Peace and Security Network invites your responses to this essay. Please send responses to: [napsnet-reply@nautilus.org](mailto:napsnet-reply@nautilus.org) . Responses will be considered for redistribution to the network only if they include the author's name, affiliation, and explicit consent.

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