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# The Impact of a Limited Nuclear Free Zone on Deployed Nuclear Weapons in Northeast Asia

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Introduction:

The idea of nuclear free zones in Northeast Asia is not new. In fact there are numerous references to such a ideas in the speeches and declaratory policies of the leaders of North Korea, the former Soviet Union, and the Socialist Party of Japan., even since the late 1970s. These ideas will not be reviewed in detail in this context, but normally they were general, contained vast regions of operating area of the Pacific Ocean, and were not

believable or realistic given the political rhetoric and invective of the Cold War era in which they were generated.

The objective of this paper is to review the impact of a concept, born in late 1991 and tested in U.S. government and academic circles as early as February 1992, that would attempt to limit the deployment of nuclear weapons within a described zone of Northeast Asia -- a circle 1200nm in radius and centered in the middle of the DMZ of the Korean Peninsula. Central to the idea is the creation of a multinational verification agency, based in Vladivostok, that would oversee implementation and execution of the agreement. This organization would become the first operating regional institution with security responsibilities that would meet at a working level on a regularized -- perhaps daily -- basis. Its responsibilities would be to insure that nuclear weapons possessing states with forces in the region, Russia, China, and the United States, have, indeed, removed weapons as promised. Further, however, the verification organization, manned by specialists from all the areas in the zone (China, Japan, North and South Korea, Mongolia, Russia, Taiwan, and the United States) would be authorized and expected to inspect the nuclear power and research programs of the non-nuclear weapons possessing states -- Japan, the two Koreas, Mongolia, and Taiwan -- to insure that pledges not to weaponize their programs are being maintained.

While the area would enjoy the benefits of having nuclear weapons removed from the immediate area of the zone, realization of the concept would also accelerate the development of a cooperative regional security community that would replace confrontation of the Cold War Era with a sense of developing cooperation. Reciprocal access to military and nuclear installations throughout the zone, as found in the 1991 North-South bilateral denuclearization agreement for the Korean Peninsula, would begin to build a sense of trust, offer a reassuring transparency into hitherto secret defense facilities, and most importantly, provide a supportive environment for the final realization of the denuclearization of the Korean Peninsula. Reducing the isolation and political paranoia of the leaders of the Democratic Peoples Republic of Korea could indeed occur in the near and mid-term. Of critical importance to the long-term is the creation of a regional security community that has as its long-term partner, the United States working with its Asian neighbors to insure a stable security environment for the general prosperity of the entire region.

Central to the success of such a concept is the commitment of Japan, especially, to open its plutonium reprocessing facilities and nuclear storage areas to the multinational inspectors. No one item is more destabilizing to the states of East Asia than the eight tons of plutonium held by a dynamic and vibrant Japan.

Even though Japan's reprocessing program is under full IAEA safeguards, conversations with policy makers of the states of the region reveal a very deep and abiding concern over this program for an energy alternative for the future. Japan's leadership in this effort is a natural outgrowth of its worldwide commitment to see the nuclear weapons threat disappear from the earth. This would be a step that the new Socialist Prime Minister of Japan could begin during his tenure as leader of a new and remarkable coalition of political forces in Japan.

The enthusiastic involvement of all the states mentioned above is required, however, and could be realized as a result of the "window of opportunity" offered to the international community by President Jimmy Carter's bold trip to North and South Korea. Exposure of the concept to military and civilian policy makers, academics, and civic bodies in the nations mentioned above by the author reveals a consistent positive if cautious reception. However, for this paper, it is appropriate to examine what would be the impact on the deployment patterns of nuclear weapons states of such a concept and what might be the feasible ways to approach actual implementation after having heard the critique of the security communities of the countries concerned.

Deployment Patterns of Nuclear Weapons States within the Zone:  
(Please Refer to Map 1)

Russia: Until the Nuclear Weapons Databook, Volume V, was published in April 1994, the most difficult nuclear weapons deployment pattern to describe was China's; however, since this much needed book reached our hands, only one nation in the Northeast Asian region stands out as difficult to project. That country, unfortunately for this paper, is Russia. However, parameters can be outlined and maximums can probably be described with some degree of reliability. Precise data, that capture the ongoing reduction and modernization of strategic systems in this area due to START reductions are difficult to obtain. In any case, what can be shown is the nature of the impact of the realization of a limited NFZ, even if we cannot at this juncture, identify each and every nuclear weapons site, and describe the kind of systems present.

One of the problems is, of course, the increasingly chaotic nature of the Russian state and the manner in which it supports its military establishment. According to recent preliminary studies by Barry Blechman, Gerald Segal, and William Arkin and Robert Norris, a very unclear and changing picture of Russian nuclear forces is gleaned. Segal presents us with the reported finding of a "wagon-load of nuclear missiles near Kurgan (western Siberia) which were 'misplaced due to the negligence of railway staff.'" While western Siberia is not within the LNEA zone, the notion that tactical missiles can be "found" in railway cars at

random marshalling yards throughout Russia, does not build confidence in the reliability of our regional accounting.

The most recent publication of IISS (a map of strategic systems published in 1992) showing the placement of Russian strategic nuclear weapons shows that there are five principal nuclear installations in the zone. Beginning with the SS-11 base at Drovyanaya, just east of Lake Baikal, with 50 launchers and one warhead per launcher, the facilities progress eastward in the following manner:

- Yasnaya SS-11 Base with 90 launchers

- Svobodnyy SS-11 Base with 60 launchers

- Ukrainka Air Base with 45 TU-95 Bears (with 16 ALCMs per aircraft)

- Pavlovskoye Naval Base with 6 Delta 1 SSBNs, and possibly 3 Yankee SSBNs. Outside the zone at 1500nm from the DMZ is the Ribacniy Naval Base with three Delta 1 subs and 9 Delta 111 SSBNs. The Delta 1s carry 12 SS-N-8 missiles with one warhead each; the Delta 111's carry 16 SS-N-18 with three warheads per launcher. The Yankees have 16 SS-N-6 missiles with one warhead apiece. If the above figures are correct, Russian strategic warheads number approximately 1040 within the zone. Tactical warheads have been estimated at 1000 for "the Russian portion of Northeast Asia." Thus, in a very rough way, we can estimate that somewhat over 2040 to 2050 Russian warheads are within the zone depicted as the LNFZ for Northeast Asia. Given the range of the various strategic systems involved, all members of the NFZ are at risk from these strategic forces. The tactical weapons will be assumed to threaten only immediate border areas, but could actually threatened areas as much as 500 nm from their location if tactical air is the method of employment. (Refer to the equal range projection chart for a visual understanding of possible targets within range of tactical systems. Map 2) While counting installations and projecting range capabilities for hardware depicts one kind of image, there is another side of the Russian East Asian deployment profile that needs to be fully appreciated to understand why Russia may be interested in adherence to a limited nuclear free zone in Northeast Asia. Since 1989 and the fall of the Soviet Union a dramatic transformation of the military instrument in Russia, especially the Russian Far East, has occurred. This transformation is not pretty. It includes the discovery of an abandoned railway car with tactical missiles aboard, Air Force pilots not being paid for more than five months, "the virtual disappearance of the ex-Soviet Pacific Fleet," and extremely low states of operational readiness by Russian nuclear submarines. A visit to Vladivostok reveals a fleet and its personnel reduced to very low operational

standards. The overall cumulative impact of these individual events will have the probable effect of reducing the corporate effectiveness of the nuclear instrument in the Russian Far East, but increase the likelihood for specific and discrete unauthorized events involving nuclear weapons. It would seem to be imperative to reduce these possibilities as fast as possible. Thus, the LNFZ may prove to be useful domestically to the Russian Government in reducing the presence of a very worrisome element, and internationally by providing a new leadership role for the Russian Government in East Asia. This is especially important in assuring the economic revitalization of the Russian Far East by providing an additional tie to the vibrant economies of the nations involved in the Zone.

China: The location of Chinese nuclear weapons within the zone has become known through the excellent scholarship of the Nuclear Weapons Databook, Volume V. From the information available in this new publication, and other sources, especially the IISS Military Balance, 1993-1994, it is clear that the Peoples' Republic of China has an ICBM force of 4-6 DF-5 missiles with a range of at least 13,000 kilometers, 10-15 DF-4 missiles with 4750 km range, and approximately 60 DF-3 missiles capable of reaching 2800km. (Refer to Map 1 for locations of individual sites, and Appendix A for a table to provide specific site and weapons system information.) Warhead yields for the three classes of missiles are estimated to be 5 megatons (MT) for the DF-5, 3 mt for the DF-4, and 2 mt for the DF-3s. As Victor Gilinsky has opined, just focusing the world's attention on the inordinate size of the Chinese operational warheads would be a useful endeavor. While the author agrees that the use of such warheads is unconscionable from a tactical standpoint, they substantiate the declaratory statements of the PRC Government of a no-first-use policy; they have, in essence, operationalized a minimum deterrence policy by employing such warhead sizes. More will be said later about the very unique nuclear weapons program pursued by the PRC. The various range capabilities of the missiles reflect an evolution of PRC threat perception and, of course, available technology. The DF-3 was capable of reaching Clark Air Field in the Philippines; the DF-4 was designed to bring Guam and U.S. military facilities there under attack, but later adapted to the need to be able to threaten Moscow with nuclear weapons. The DF-5 has a range of between 13,000 and 15,000 km and can reach any target in Russia or the United States. All known locations of the DF-4 missile can place at risk all the major U.S. bases in East Asia, and even the DF-3 can challenge most U.S. Forces based in Japanese installations. Of special note, again, is the fact that the Chinese have exercised a considerable degree of restraint in deploying their strategic systems. Over a period of possibly eight years, or more, they have chosen to produce and deploy approximately 4 to 6 ICBMs when their capability far exceeded that number. Only two of these ICBM have they placed in

hardened underground silos. The total deployment of nuclear weapons within the limited nuclear free zone reveals the following:

- Six sites of DF-3 missiles for approximately 48 warheads

- Two (possibly 3) DF-4 sites for 9 warheads

- Three (possibly 2) DF-5 sites for 6 warheads

- Two SSBNs each with 12 DF-21 SLBMs 9 with a range of approximately 1700 km

- Thirty-six road mobile DF-21a missiles with 1700km range

- 150 tactical warheads

Within the limited NFZ we can assume a total of approximately 273 nuclear warheads possessed by the PLA. Less than 40, approximately 36, weapons can be located outside the zone making the total impact of this regime very severe on the PRC deterrent system if implemented in its original form - that is - that all weapons within the zone be relocated or removed. In the Russian case, interest in a limited nuclear free zone can be shown to be consistent with past declaratory policies and current internal imperatives. However, in the Chinese case there has historically been little or no interest in regional arms control efforts -- with the exception of a willingness to negotiate regarding the Sino-Russian border. Beijing's long stance regarding nuclear weapons arms control has been that until the major nuclear powers significantly reduced inventories, the PRC would not be interested in nuclear arms reduction talks. Beijing has also, since the end of the Cold War, increased its defense budget at least ten percent each year, and has adopted a new defense doctrine more outwardly oriented or aggressive than Mao's completely defensive People's War. This new "Partial War" planning concept emphasizes "preparing for a war with one of China's other neighbors" (not Russia). In this new concept the PLA is to seize the initiative at the outset of conflict and defeat the enemy as rapidly as possible. Holding in mind China's often repeated pledge of "no first use" with regard to nuclear weapons, we must assume that nuclear weapons are not integrated into the concept of partial wars unless something unforetold occurred. China at this time may, however, be interested in a limited nuclear free zone. When this LNFZ proposal was first presented in Beijing to a March 1992 conference co-sponsored by the Institute for Global Concerns and CISTP, the Chinese response was acute, adamant, and severe. No Chinese involvement! However, a year later, March 1993, a perceptible and positive change had taken place. (One week prior to the North Korean announcement of possible withdrawal from the NPT regime.) Thus, even though the LNFZ concept involves a disproportionate number of its limited nuclear resources, the PRC may be willing to

discuss such a concept (with the aim of minimizing its impact on its deterrent forces) in order to be assured that the other nations in East Asia, especially Japan and North Korea, would not take a full nuclear option in the future. Of course, involvement as a major player in such a regional or sub-regional system would assure the PRC formative access to a new process that would ultimately pay back handsome economic development dividends.

The United States: In recognition of a new international situation after the end of the Cold War, President George Bush in September 1991 made the unilateral decision to remove tactical weapons from U.S. ground and naval forces worldwide. This new policy removes operational deployments of tactical nuclear weapons from Northeast Asia - both land and sea-based. U.S. strategic systems are not located in the zone, but eight Trident submarines do operate out of Bangor, Washington, with the Trident 1 C4 missile. It is unlikely initially that official U.S. policy will support the creation of a limited NFZ in NEA without some significant groundswell of support for the idea coming out of Asia first. With regard to nuclear free zones, it has long been U.S. policy to support those that are developed, mature and are supported by the states of the region involved. In this case, the states of the region are focusing on possible nuclear proliferation in the DPRK and are not looking at the root causes of North Korean action. Also, there is no developed track record of these particular states working closely in such a venture. While the notion that such a regime cannot be attempted in Asia has been heard by this author, it does involve certain evidence of mental entrapment. Additionally, there are issues involving the "innocent free passage" of naval vessels through the zone that will make the U.S. reluctant to declare this status when traveling in international waters but still within the zone. The U.S. Navy will have to be convinced that, in essence, the restrictions possible under such a zone are in the national interest, even though some slight operational restrictions may have to be endured. The United States must address the limited nuclear free zone concept as a method to begin the building of a security community in NEA so that American influence can remain supportive over the long-term, but not "overly" involved. It is a way to begin sharing leadership through, first, the mechanism of the verification agency, and later, other security areas as trust and transparency materialize from the day-to-day operation and interaction of the Agency staff. A Realistic Limited NFZ for NEA: In presenting this concept to specialists of the two nuclear weapons states of the region, it is clear that a total ban and removal of all nuclear weapons from the zone would not be initially acceptable. Certain weapon system exceptions would have to be made. These modifications in the original total ban could include all SSBNs and their associated SLBMs. Thus, in the case of Russia, the approximately 9 SSBNs reportedly operating out of Pavlovskoye, near Vladivostok in the Maritime Province,

would be exempted from the first phase of regime implementation, and would be permitted to remain in the Zone. In the Chinese case, it would be appropriate to exempt their two SSBNs possibly operating out of Qingdao, as submarine launched missiles admittedly are a more stable and generally recognized retaliatory form of weapons system. However, in the Chinese case, it will be noticed (Refer to Map 1) that all of the sites identified as DF-5 (ICBM) installations are quite within the Zone. If this is, in truth the case, it would seem very unlikely that the PLA and PRC would ever agree to the inclusion of such installations in the first phase of a limited NFZ. Likewise, the two DF-4 sites, missiles with a range of approximately 4800km would be likely candidates for exemption from the first phase. For those who ask "why exempt DF-4s and DF-5s?" the author would reply that these systems place at risk U.S. forces and political centers in the United States itself. To realize their elimination, of course, is in the long-term interest of U.S. national security, however, initially, the concept of "shared risk" must be applied to Zone implementation so that we may transit through transparency, trust building, and ultimate reciprocal weapons reduction. By including within the Zone, the PRC nuclear retaliatory systems that include the 48 DF-3s, the 36 DF-21A road mobile 1700km missiles and the approximately 150 tactical (air delivered and artillery fired weapons) consist of over 70 percent of the nuclear systems within the Zone. Under the current concept of the limited NFZ, these weapons could be relocated outside the zonal boundary. (Of course, this is the case in the Russian situation as well, however, the existence of agreed upon weapons reduction goals under Start II makes it less likely that the Russians would take the opportunity to relocate strategic resources, just take early credit for the Year 2003 goal. This is not necessarily the case for tactical weapons. An incentive program for the turning in of special nuclear materials could be the international equivalent of the gun buy back programs now seen throughout cities in the United States.) Readers may be asking why the LNFZ concept relocates and does not destroy weapons not exempted within the Zone? Ultimately, that is the goal, but the object initially is to create a working confidence building measure (CBM) that would more accurately be termed a confidence building mechanism. The fact that an international organization would be created, operate out of Vladivostok, and bring together on a regularized basis, military and civilian specialists of the countries concerned cannot be stressed enough. This does not exist in Asia. In Europe we see deep redundancy in this regard. Even Russia is becoming a Partnership for Peace partner of NATO. And to some observers, I would maintain this is not a cultural difference, but the legacy of unfortunate historic political involvement and events over the past century. The fact that nuclear weapons brought together such intractable foes as the United States and the Soviet Union should not be overlooked. The same fundamental interest in controlling one of man's most



devastating inventions can function to create a new security system for Northeast Asia. To finally institutionalize the process of substantive arms control and arms reduction in the Asian area -- the only area where they have been use in anger -- and to use this process to build a stable security environment certainly must be a policy goal for all nations of the region as we approach the 21st Century. In discussions in April 1994 with members of the Russian General Staff, Russian Security Council, Foreign Ministry and security academics in Moscow and Vladivostok, excitement and interest in the concept was evident, but as mentioned above a total ban of weapons within the Zone was seen as premature. However, the Deputy Director of the Russian Security Council, Colonel General Valeri Manilov, termed the concept "a marvellous idea that must be operationalized." His concept of operationalization was to immediately focus on the area of and adjacent to the Korean Peninsula. In fact, if we were to examine the attached chart of 500 nm circles emanating from the Korean Peninsula, we would observe what Manilov more or less considers the "operationalization" of the idea. (See Map 2) His suggestion would be to immediately bring a non-nuclear zone to a circle immediately surrounding the Korean Peninsula, possibly involving some territory of Russia, China, and Japan. A circle that fully inscribes all of the Korean Peninsula also could include Vladivostok, Qingdao, Shenyang, Hiroshima, Nagasaki, Kobe and Osaka and would also include the U.S. base at Sasebo. There would be two SLBM test centers in the Chinese area as well as one DF-4 installation. Of course, the Chinese and Russian SSBN bases mentioned above would be within this circle, but possibly exempted. Creating such a first phase would allow for all the required infrastructure to be created and to begin the all important administrative day-to-day meetings. It would also have most of the ingredients of the more expanded zone that could be implemented by an agreed schedule -- possibly five or ten years. Such a delay in full zonal implementation would also provide the PRC with a vantage point to see if the U.S. and Russia achieve their agreed upon cuts for the Year 2003. Next Steps: It is clear from discussions in China, Japan, South Korea, Mongolia, Russia, and the United States that considerable positive interest exists in a limited NFZ for Northeast Asia. However, it is clear that the details of such a concept must come "out of Asia," and not be seen as the child of the United States. The member states of the proposed zone must be present at the formulation of such an accord. In this light, four retired general officers from China, Japan, South Korea, and Russia have agreed to join CISTP and Georgia Tech and their American colleagues in a three-month examination of Pacific Security Issues and will focus on creating a draft agreement that will be placed before a student simulation of a regional LNFZ negotiation conference in March of 1995. Once this is done, the four general officers will join in briefing their recommendations and the results of the simulation to interested government and academic

circles in Washington, Boston, and San Francisco.

It would be appropriate after such a draft agreement has been vetted throughout the American security studies community to hold an international conference on neutral ground where this draft agreement may be debated and a possible new and further consensus derived. Much work has been done to realize a limited NFZ in NEA, but as all recognize, it will take much more. Ultimately, there is no insurmountable reason why nuclear arms control and nuclear arms reduction should not be on the official agenda of the nations of East Asia. Further, there is no insurmountable reason why the United States should not take a supportive role in husbanding this effort. In an era when big power rivalry has given way to increasingly effective regional arrangements in other areas of the world, it is time to set our policy objectives higher than in the past or at present. In this new era, we must free ourselves of foreign policy approaching near sighted myopia; we must strive to build an international security system built on cooperation, not confrontation. As the Chinese say, the journey of 20,000 li must begin with the first step. It's time to begin.

#### Endnotes

1. Gerald Segal, "Nuclear Forces in Northeast Asia," in the series Northeast Asia Peace and Security Network, pp. 1-2.
2. According to The Military Balance 1993-1994, the total number of SS-11s in the Russian inventory has dropped to 100. That makes it difficult to have 200 as indicated above in the named complexes.
3. See Gerald Segal, "Nuclear Forces in Northeast Asia," p. 2. The IISS Military Balance for 1993-1994 lists only one warhead for the SS-N-6 and 8 vice 2 as found in Segal's May 1994 paper. Of course, if the Segal figure is correct, the figures above increase further.
4. Ibid., p. 2.
5. Ibid.
6. Presentation by Barry Blechman, 6 May 1994.
7. As the author did in April 1994.
8. IISS, Military Balance, 1993-1994, p. 244.
9. Again according to the Nuclear Weapons Databook, Volume V.
10. See the attached map for locations of the various missiles within the zone. The road mobile and tactical missiles have just

been assumed to be within the zone at this time. See the Nuclear Weapons Database, Volume V.

11. The Ministry of National Defense, The Republic of Korea, Defense White Paper 1993-1994, p. 47.

12. John Garver, "Organizational Capabilities of the Chinese PLA," Project on the Capacity of Military Organizations: Selected Asian Nations. Joint Management Services, January 14, 1993, p. 7.

13. See Gerald Segal's assumptions regarding this matter in his "Nuclear Forces in Northeast Asia." In light of the U.S. policy of neither confirming nor denying this situation, it will be assumed that tactical weapons have been removed from South Korea -- as asserted by the ROK President -- and are not anywhere in the area.

14. See NWD 93-4 "Nuclear Alert After the Cold war," William Arkin and Robert Norris, Oct. 18, 1993, p. 2.

15. Interview in Moscow, April 1994.

16. Positive discussion have also been conducted with U.S.-based representatives of North Korea and Taiwan. The author hopes to visit both areas soon.

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