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MAXWELL AFB, ALABAMA

Issue No. 1041, 18 January 2013

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FARS News Agency – Iran
Sunday, January 13, 2013

Iran's N. Chief: N. Weapons No More Seen as Deterrent

TEHRAN (FNA) - Head of the Atomic Energy Organization of Iran (AEOI) Fereidoun Abbasi reiterated Tehran's steadfast opposition to the acquisition of nuclear weapons, saying that the military nuclear capability is no more seen as a deterrent power.

"We have proved to the world that nuclear and (other) mass destruction weapons are not constituent of power and deterrence, and that real power lies in resort to religious and Islamic traditions (which ban nuclear arms)," Abbasi said in a ceremony in the Western city of Hamedan to mark martyrdom anniversary of Mostafa Ahmadi Roshan, the young Iranian nuclear scientist who was assassinated by Israeli agents last year.

Washington and its Western allies accuse Iran of trying to develop nuclear weapons under the cover of a civilian nuclear program, while they have never presented any corroborative evidence to substantiate their allegations. Iran denies the charges and insists that its nuclear program is for peaceful purposes only.

Tehran stresses that it has always pursued a civilian path to provide power to the growing number of Iranian population, whose fossil fuel would eventually run dry.

Supreme Leader of the Islamic Revolution Ayatollah Seyed Ali Khamenei issued a fatwa on April 17, 2010 declaring that the production, stockpiling, and use of nuclear weapons are all haram (religiously prohibited).

"Iran is not after a nuclear bomb. Why would Iran want a nuclear bomb? Moreover, when an atomic bomb is detonated, it does not just kill enemies. Rather, it kills innocent people as well, and this goes against Islamic beliefs and the principles of the Islamic Republic of Iran. An atomic bomb does not discriminate between good and bad people, and it is not something that the Islamic Republic would use. The Islamic Republic is relying on something that is not affected by bombs, foreign invasions and other such things. Such things only strengthen what the Islamic republic is relying on. The Islamic republic is relying on the people," a part of the fatwa said.

Analysts believe that the fatwa of the Leader of the Islamic Revolution can well serve as a beacon of light for Washington in order to find its way out of darkness and ignorance.

The fatwa issued by the Supreme Leader of the Islamic Revolution, Grand Ayatollah Seyed Ali Khamenei forbidding the production, proliferation and use of nuclear bombs is to be considered a political milestone in Iranian history and one which can salvage the Islamic nation from the spate of external threats and plots.

Fatwa is a religious decree issued by a Muslim leader against a specific issue and it is incumbent upon all Muslims to abide by it. However, in this particular case, the issuance of the fatwa has not only religious but political force as well as the leader in the Islamic Republic is the prime decision-maker.

Meantime, the UN nuclear watchdog has also carried out frequent surprise inspections of Iran's nuclear sites so far, but found nothing to support West's allegations that Tehran pursues military purposes.

The Vienna-based UN nuclear watchdog continues snap inspections of Iranian nuclear sites and has reported that all declared nuclear material in Iran has been accounted for, and therefore such material is not diverted to prohibited activities.

Iran, an NPT-signatory, has also repeatedly called for the removal of all weapons of mass destruction, including nuclear weapons, from across the globe.

<http://english.farsnews.com/newstext.php?nn=9107135373>

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Ha'aretz Daily News – Israel

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Iran could Reach Key Point for Nuclear Bomb by 2014, Experts Say

U.S. nonproliferation experts say Islamic Republic could reach 'critical capability' within this time frame –production of enough weapon-grade uranium for one or more bombs without detection by the West.

By Reuters

January 14, 2013

Iran could produce enough weapon-grade uranium for one or more nuclear bombs by mid-2014, and the United States and its allies should intensify sanctions on Tehran before that point is reached, a report by a group of U.S. nonproliferation experts said.

President Barack Obama should also clearly state that the United States will take military action to prevent Iran from acquiring a nuclear weapon, the report said.

The UN nuclear watchdog, the International Atomic Energy Agency, has expressed concern that Iran's nuclear program has a military dimension. Tehran, which says its nuclear program is for peaceful energy purposes, calls those allegations baseless.

The 154-page report, "U.S. Nonproliferation Strategy for the Changing Middle East," produced by five nonproliferation experts, was expected to be released on Monday.

"Based on the current trajectory of Iran's nuclear program, we estimate that Iran could reach critical capability in mid-2014," the report said.

It defined "critical capability" as the point when Iran would be able to produce enough weapon-grade uranium for one or more bombs without detection by the West.

By mid-2014, Iran would have enough time to build a secret uranium-enrichment site or significantly increase the number of centrifuges for its nuclear program, said David Albright, one of the project's co-chairs and president of the Institute for Science and International Security.

"We don't think there is any secret enrichment plant making significant secret uranium enrichment right now," he told Reuters. But there is "real worry" that Iran would build such a plant, he said.

The report recommends that the United States and its allies intensify sanctions pressure on Iran prior to that point because once Tehran acquires enough weapon-grade enriched uranium it would be "far more difficult to stop the program militarily."

The report recommends that the U.S. government should announce its intention to use sanctions to impose a "de facto international embargo on all investments in, and trade with, Iran" if Tehran does not comply with UN Security Council resolutions.

It also recommends sending a "crystal clear" message to Iran's leaders that U.S. military action would prevent them from succeeding in the pursuit of a nuclear weapon.

"The president should explicitly declare that he will use military force to destroy Iran's nuclear program if Iran takes additional decisive steps toward producing a bomb," the report said.

On the civil war in Syria, the report said that the U.S. government should emphasize to the opposition trying to oust President Bashar Assad that once it comes into power, it will have to work with the international community to destroy Assad's chemical weapons stockpile.

Failure to do so would lead to sanctions and other measures at a time when a new government would need external assistance to consolidate control and develop the economy, the report said.

It also recommended stressing to the Assad government that it should destroy the chemical weapons rather than use them and face prosecution or have them fall into the hands of its opposition.

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In addition to Albright, the other project co-chairs were Mark Dubowitz, executive director of The Foundation for the Defense of Democracies; Orde Kittrie, law professor at the Sandra Day O'Connor College of Law; Leonard Spector, deputy director of the James Martin Center for Nonproliferation Studies; and Michael Yaffe of the Near East, South Asia Center for Strategic Studies at the National Defense University. They were not representing their institutions in this project.

<http://www.haaretz.com/news/middle-east/iran-could-reach-key-point-for-nuclear-bomb-by-2014-experts-say-1.493968>

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Global Security Newswire

Iran's Nuke Fuel Capacity Could Outpace Detection Apparatus: Report

January 14, 2013

By Diane Barnes, *Global Security Newswire*

WASHINGTON -- Iranian atomic operations are outpacing international intelligence and inspection capabilities and, starting next year, could enable Tehran to potentially generate fuel for a bomb before outsiders learn the government had broken prior pledges against such a move, five independent security analysts said in an assessment issued on Monday.

Iran has long rebuffed Western assertions that its nuclear program is anything but a peaceful energy and medical initiative. In the middle of 2014, though, the Persian Gulf regional power will become capable of outmaneuvering surveillance by Western intelligence organizations and the International Atomic Energy Agency, the U.S. specialists projected.

Iran could hit the bomb-fuel milestone sooner than middle of next year either by dramatically boosting the quantity or productivity of its uranium enrichment centrifuges or by refining material of 60 percent purity, according to the analysts. Tehran could also hasten its progress by running a secret uranium enrichment site or by achieving strides in its capacity to produce weapon-usable plutonium, they wrote.

The authors do not believe Tehran possesses "any secret enrichment plant making significant secret uranium enrichment right now," but "real worry" exists that the government could build such a site, David Albright, head of the Institute for Science and International Security, said in comments to Reuters.

The findings urge the Obama administration to "immediately" tighten enforcement of existing unilateral economic measures against Iran. Washington should also unveil plans for the international community to cut off all commerce with Tehran if it does not fall into line with U.N. Security Council resolutions that call for the nation to suspend uranium enrichment operations.

"The U.S. government can achieve such an embargo by using secondary sanctions to pressure foreign companies to halt any such investments in, and trade with, Iran," according to the document.

The analysts pressed the United States "at a minimum" to take actions including the adoption of new insurance restrictions and penalties against buyers of Iranian natural gas.

Among a number of other recommendations are making the threat of armed action against Iran more believable, augmenting "covert efforts to delay and constrain improvement of Iran's nuclear and missile capabilities," and demanding significant concessions by Tehran before agreeing to curb sanctions.

The document separately urges Washington to develop a broad policy for countering WMD threats from Iran and the surrounding region.

"Factors lending urgency to this need include the threat of proliferation in and by Iran, the vulnerable Syrian chemical arsenal, the challenges and opportunities posed by the Arab revolutions, the relatively frequent prior use of weapons

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of mass destruction in the Middle East, several regional states already possessing WMD, and a tense and unstable regional security situation," the authors wrote.

<http://www.nti.org/gsn/article/irans-nuke-fuel-capacity-could-outpace-detection-apparatus-next-year/>

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FARS News Agency – Iran
Tuesday, January 15, 2013

Iran: Parchin Site Not Used for Nuclear Activities

TEHRAN (FNA) - Iran announced on Tuesday that if its rights to use peaceful nuclear technology are recognized, the country will be ready to remove alleged concerns about Parchin military site, stressing that Parchin is just a military site and has never been used for nuclear purposes.

"Parchin is a military zone and continues its activities and is not related to nuclear activities," Iranian Foreign Ministry Spokesman Ramin Mehman-Parast told reporters in his weekly press conference here in Tehran today.

He reminded that Iran has already granted the International Atomic Energy Agency (IAEA) inspectors access to Parchin twice, yet it is ready to remove the UN nuclear watchdogs concerns about the site if its nuclear rights are fully recognized.

He said no matter what the debate might be between the two sides, "the representatives of Iran and the IAEA can resolve the problems through a complete package in which both all our country's nuclear rights are recognized and the possible concerns and ambiguities (of the IAEA) are removed through specific frameworks".

He also expressed the hope that the two sides could reach a comprehensive agreement in the negotiations to be held in Tehran later this week.

"We hope that the same way Mr. Amano's deputy, who heads the (IAEA's) delegation to the talks, had seen the negotiations as to have been positive, we can reach a comprehensive agreement," Mehman-Parast underlined.

Stressing that Iran is always ready for "constructive" talks with the UN nuclear watchdog, he expressed the hope that "with the full recognition of our nuclear rights, the framework of the agreements between Iran and the IAEA would come to produce results at the earliest".

Mehman-Parast also stressed Tehran's preparedness to remove IAEA's technical concerns about Iran's nuclear program.

A delegation of the IAEA is due to arrive in Tehran on Wednesday to discuss issues related to Iran's nuclear program with the Iranian officials.

The latest round of talks between Iran and the IAEA was held in Tehran mid-December and the two sides discussed a modality plan for their cooperation.

<http://english.farsnews.com/newstext.php?nn=9107135975>

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Daily Star – Lebanon

UN Experts, Iran Open Talks on Nuclear Probe

By ALI AKBAR DAREINI, Associated Press
Wednesday, January 16, 2013



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TEHRAN, Iran (AP) — Senior U.N. investigators opened a new round of talks Wednesday with Iranian officials in Tehran in hopes of restarting a probe into allegations that the Islamic Republic carried out atomic bomb trigger tests and other suspected weapons-related studies.

The semiofficial ISNA news agency reported that negotiations started at the headquarters of Iran's Atomic Energy Organization. It gave no further details.

The U.N. meetings are considered an important test of Iran's willingness to address Western concerns before the possible resumption of a wider dialogue with the U.S. and other world powers. Negotiations with the six nations — the United States, Russia, China, Britain, France and Germany — fell apart more than six months ago. Iran has proposed getting them back on track, perhaps as soon as later this month.

The U.S. and others hope the talks will result in an agreement that will require Iran to stop enriching uranium to a higher level that could be turned relatively quickly into the warhead-grade material.

Iran denies such aspirations, insisting it is enriching only to make reactor fuel and isotopes for medical purposes.

Iran is under tough Western oil and banking sanctions over its refusal to halt uranium enrichment.

ISNA said European Union foreign policy chief Catherine Ashton has agreed restart the next round of world power talks with Iran on Jan. 28-29, but no decision has yet been made on the venue. The last round, in Moscow last June, ended in stalemate.

The official IRNA news agency, however, said the talks may not resume until early February.

Before departing for Iran on Tuesday, U.N. team leader Herman Nackaerts said the International Atomic Energy Agency hoped to "finalize the structured approach" that would outline what the agency can and cannot do in its investigation.

IAEA spokeswoman Gill Tudor said the talks would continue Thursday.

The U.N. nuclear watchdog wants to revisit Parchin, a military site southeast of Tehran, to look into allegations that Iran may have tested components needed to develop a nuclear weapon. Tehran has steadfastly denied any such activity.

Iran says the IAEA's suspicions are based on forged intelligence provided by the CIA, Israel's Mossad, Britain's MI-6 and other intelligence agencies, and that Tehran has not been allowed to see the materials to respond to them.

The IAEA also is trying to follow up on other suspicions, including whether Iran did computer modeling of a nuclear warhead core. The agency says it has intelligence information indicating Iran carried out preparatory work for a nuclear weapons test, and development of a nuclear payload for Iran's Shahab 3 intermediate range missile — a weapon that can reach Israel and Europe.

Iranians say they have bitter memories of allowing IAEA inspections and providing replies to a long list of queries over its nuclear program in the past decade. Now, Tehran says such queries should not be revived.

Iranian Foreign Ministry spokesman Ramin Mehmanparast said Tuesday that the Islamic Republic provided detailed explanations to IAEA questions on six outstanding issues in the past, but instead of giving Iran a clean bill of health, the agency leveled new allegations on the basis of "alleged studies" provided by Iran's enemies.

Iran uses that term to refer to allegations about Parchin and other claims that it says the IAEA levels only to keep the issue alive.

Tehran has twice allowed IAEA inspectors into Parchin, but now it says any new agency investigation must be governed by an agreement that lays out the scope of such a probe.

"Obligations of the other party must be clearly specified. If a claim is to be raised on a spot in Iran every day and (the U.N. agency) seeks to visit our military facilities under such a pretext ... this issue will be unending," Mehmanparast said Tuesday.

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President Mahmoud Ahmadinejad acknowledged Wednesday that sanctions have slowed down Iran's growth and disrupted its foreign trade and said the country must move away from a dependence on oil revenues to overcome sanctions.

Addressing parliament, Ahmadinejad said "structural changes" are needed in Iran's economy to counter the sanctions.

<http://www.dailystar.com.lb/News/Middle-East/2013/Jan-16/202449-iaea-experts-back-in-iran-for-fresh-nuclear-talks.ashx#axzz2IArHiOX8>

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France 24 – France

16 January 2013

US Downplays Report of Syria Using Chemical Weapons

By Agence France-Presse (AFP)

AFP - The US government brushed aside a report of a leaked State Department cable indicating that Syria had used chemical weapons in its brutal crackdown on a nearly two-year-old rebellion.

Foreign Policy, an online magazine, said it had acquired a leaked State Department report by US diplomats in Turkey that made a "compelling case" that President Bashar al-Assad's forces had used poison gas.

The report was said to have been based on interviews with activists, doctors and defectors and to represent one of the most comprehensive US efforts to date to investigate claims by the Syrian opposition.

But National Security Council spokesman Tommy Vietor appeared to dismiss the report late Tuesday, saying there was no evidence that Syria had taken new steps towards using chemical weapons.

"The reporting we have seen from media sources regarding alleged chemical weapons incidents in Syria has not been consistent with what we believe to be true about the Syrian chemical weapons program," he said.

"The president was very clear when he said that if the Assad regime makes the tragic mistake of using chemical weapons, or fails to meet its obligation to secure them, the regime will be held accountable."

US President Barack Obama has said the use of chemical weapons or the failure to control chemical arsenals is a "red line" that could lead the United States to intervene more forcefully in the conflict.

US officials last month said that Syria appeared to have taken steps towards mixing and deploying chemical weapons, but after a flurry of media reports and stern warnings from Washington the regime apparently backed off.

According to UN figures, more than 60,000 people have been killed in the violence in Syria since the outbreak of Arab Spring-inspired protests against the Assad family's four-decade-long rule in March 2011.

The demonstrations began peacefully, but escalated into an armed rebellion after Syrian troops fired on protesters.

<http://www.france24.com/en/20130116-us-downplays-report-syria-using-chemical-weapons>

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Pravda – Russia

Secrets of Iranian Nuclear Program

17 January 2013

By Sergei Vasilenko

Issue No. 1041, 18 January 2013

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Lately, Iranian media has been covering the latest achievements of the defense industry of the country. Iran has recently completed Navy military exercises "Velayat-91" and "Great Prophet-7." The Iranian Navy and Iranian Revolutionary Guard Corp (IRGC) successfully tested new military devices.

The world powers remain concerned about the development of missile technology by Iran. Not that long ago, it was reported that Iranian experts invented a new missile launcher providing for more efficient use of anti-ship missiles. The rocket launcher supposedly provides a more accurate and anti-ship missiles of longer range. It was developed by specialists of the Naval University named after Imam Khomeini and the Iranian Ministry of Defense. In addition, U.S. intelligence learned that by 2015 Iran would have intercontinental ballistic missiles capable of reaching the U.S. territory.

According to Habibollah Sayyari, commander of the naval forces of Iran, such rocket launchers would be installed on all types of ships without exception, and in the near future they would be fully operational. Experts believe that the new missile systems will significantly increase the effectiveness of reaching medium-range targets. Obviously, the Iranian military ships already have on-board systems able to hit short-and medium-range targets. However, according to the developers, the new design will significantly improve accuracy. Currently, Iran considers missiles as a major non-conventional, i.e., not prohibited for development, type of weapon.

According to representatives of the Ministry of National Defense, rocket launchers are almost the only way to provide decent resistance during a fight. In addition, having serious missile weapons, Iran will be able to pose a real threat to many world powers. This is precisely the reason why the government is spending most of the state budget on the development of missile programs. This was confirmed by Farhad Khosrokhavar, an Iranian-born French sociologist and expert on contemporary Iran. He believes that the military-technical development of Iran is moving in two directions - a nuclear program and missile program. He thinks that Tehran annually allocates most of the country's resources for the development of these two areas. In addition, the Iranian authorities turn all intelligence, human and organizational efforts to the soonest development of nuclear and missile activities.

One of the problems Iran is faced with is the lack of the required number of research centers and institutes that would help the country to develop new types of missiles independently. Currently, the Iranian authorities are forced to create their rockets based on the Russian, Chinese and North Korean designs. Iran is closely cooperating with the DPRK in the area of rocket and nuclear weapons development. According to experts, over the past 20 years, the Iranian authorities have managed to prepare a decent professional base that could learn from North Korean developers. Currently, the Iranian armed forces are considered the most advanced in the Middle and Near East, but are still inferior to the forces of Pakistan, Turkey and Israel.

The fact that Iran was actively building up its missile power became apparent last summer. According to the news agency *Newsland*, in June of last year, the Pentagon provided the U.S. Congress with a report that stated that the Iranian authorities were making every effort to develop a new missile system that would help to increase the lethal power and precision of short-range missiles. In addition, the report stated that Iran was conducting a global military training and testing of new warships and military aircraft. The Pentagon has also suggested that by 2015 Iran would have intercontinental ballistic missiles. The U.S. authorities are paying close attention not only to the development of the nuclear program, but also the development of missile systems in Iran. Many allies of Iran have already received samples of short-range ballistic missiles for further processing and use in their needs.

In addition, Tehran continues development of such rockets as "Sejil" and "Shahab-3," capable of reaching Israel and Europe. In July of 2012, during a large-scale military exercise "Great Prophet-7," the government of Iran tested a new anti-ship missile system of high accuracy. According to experts, these large-scale exercises and missile tests were carried out in response to the Iranian oil embargo by the United States.

At this time, Iran does not have missiles that can reach Europe, but it is likely only a matter of time. However, as noted by Vladimir Yevseyev, director of the Center for Public Policy Research, now Iran is not able to develop missiles of this range. According to him, the country's potential is not sufficient to create a missile system capable of reaching Europe.



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Currently, the armed forces have only two long-range missiles - "Shahab-3M" with the range of 1,100 kilometers, and its modification - "Eder-1" with the range of 1,600 kilometers.

Naturally, it is not enough to hit targets located in Europe. Development of more effective missiles "Shahab-4" with a potential range of 2,200 kilometers and "Shahab-5" with a range of up to 3,000 kilometers was suspended in 2003 for many reasons. According to Vladimir Yevseyev, Iran's capabilities in this regard have already been exhausted, and, most likely, in the future they will develop solid long-range missiles, but not any time soon. However, Iran does have some operating prototypes, for example, solid-fuel missile "Sejil-2" with the range of 2,200 km.

Developments in this direction may prompt a new three-stage solid-fuel missile with the range of up to 3,500 kilometers, which, however, still will not be enough to become a real threat to Europe. The U.S. authorities also doubt Iran's capabilities in the area of development of ballistic missiles. Experts from the United States Congress have questioned the fact that the Iranian government would be able to create an intercontinental missile that would be a serious threat to America by 2015.

As mentioned above, the possibility of development of such weapons was mentioned in the Pentagon report submitted to the U.S. Congress. A special commission of the Congress stated in its report that at this time, despite some very progressive achievements in the field of missile weapons, Iran will be suspending the development of its missile program due to the lack of resources, as well as professionals and modern technology. Tehran cannot attract foreign developers because of the tough political sanctions imposed by the U.S. on Iran.

According to Tom Collina, a leading fellow with the Washington Arms Control Association, many lawmakers are trying to ensure that by 2015 the U.S. government deploys a missile defense system on the East coast of the country, which is not necessary due to a low probability of Iran creating an intercontinental missile. In addition, Collina said that there was no rush with deployment of missile defense in Europe that is another headache for Russia. The Ministry of Defense of France supported the opinion of their foreign colleagues.

According to Michel Miraya, Head of the Strategy Department of the Ministry of Defense of France, Iran may be dangerous for Europe, but does not pose a threat as Tehran is not strong enough to do that. In its current state, according to Michelle Miraya, the Iranian missile program can not pose a threat to Europe or Russia or the United States. However, he believes that Tehran's gradual development of missile systems cannot be ignored. The European missile defense is aimed, among other things, against missile attack from Iran.

http://english.pravda.ru/world/asia/17-01-2013/123498-iranian_nuclear_program-0/

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Bloomberg News

UN Atomic Inspectors, Iran Fail to Bridge Differences

By Jonathan Tirone

January 18, 2013

United Nations atomic inspectors returned from Tehran without a deal after two days of negotiations with Iranian officials over broader access to suspected nuclear sites.

Iran refused to let the International Atomic Energy Agency team visit the Parchin military complex, where intelligence given to the IAEA suggests nuclear work took place, said chief inspector Herman Nackaerts. The sides will meet again on Feb. 12, he said, without providing more details.

"We had two days of intensive discussions," Nackaerts told journalists today at Vienna International Airport.

"Differences remain, so we could not finalize the structured approach to resolve the outstanding issues regarding possible military dimensions of Iran's nuclear program."

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Failure to clinch a deal doesn't come as a surprise. IAEA Director General Yukiya Amano warned on Jan. 11 that negotiations with Iran would be difficult. The agency is in its 10th year of an investigation into whether the Islamic Republic ever sought nuclear-weapons capabilities. Iran, under dozens of international sanctions, maintains it never tried developing atomic weapons.

The Tehran discussions were the eighth round of meetings in the last year aimed at giving inspectors more access to people, places and documents in the Persian Gulf nation.

<http://www.bloomberg.com/news/2013-01-18/un-atomic-inspectors-iran-fail-to-bridge-differences.html>

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Herald Sun – Australia

N. Korea Tells China it is Planning Nuclear Test: Report

By Agence France-Presse (AFP)

January 12, 2013

A North Korean official has apparently told Chinese authorities that the communist state is planning to conduct a third nuclear test in the coming week, a news report said.

"We've heard a North Korean official in Beijing told the Chinese side that the North planned to carry out a nuclear test between January 13-20," the JoongAng Ilbo daily quoted an unidentified Seoul official as saying.

South Korean officials have a policy of not commenting on intelligence matters.

"We're now stepping up surveillance over the Punggye-ri nuclear test site," the official said in reference to the North's only nuclear test site, where tests were carried out in 2006 and 2009.

With the UN Security Council still debating possible sanctions against the North following the launch of a long-range rocket last month, there has been widespread speculation that Pyongyang may carry out a third nuclear test.

However, Professor Yang Moo-Jin of the University of North Korean Studies in Seoul said there were "no signs of a nuclear test being imminent".

"Chances are slim that the North might push ahead with a nuclear test in this winter season, especially when China is insisting on a moderated response to the rocket launch to prevent a third nuclear test taking place," said Mr Yang.

Last month a US think-tank citing satellite photos said the North had repaired extensive rain damage at the nuclear test site in the northeast of the country and could conduct a detonation on two weeks' notice.

The US-Korea Institute at Johns Hopkins University said satellite photos as recent as December 13 showed Pyongyang was determined to maintain a state of readiness at Punggye-ri.

South Korea's Unification Minister Yu Woo-ik told a parliamentary committee last month it was "highly probable" the North would likely follow up the successful rocket launch with another nuclear test.

"Judging from analysis of intelligence, significant preparations have been made," he said.

North Korea had a track record of conducting nuclear tests following missile launches, which were aimed at developing a delivery system for nuclear warheads, Mr Yu said.

The North's previous nuclear tests were both carried out within months of long-range rocket launches.

Pyongyang insists the launch was a purely scientific mission aimed at placing a polar-orbiting earth observation satellite in space, but most of the world saw it as a disguised ballistic missile test.

<http://www.heraldsun.com.au/news/n-korea-tells-china-it-is-planning-nuclear-test-report/story-e6frf7jo-1226552775205>

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Global Times – China

US Official Warns North Korea against Nuclear Test

By Agence France-Presse (AFP) and Agencies
January 17, 2013

The top US diplomat for East Asian affairs warned North Korea on Wednesday against any "provocative" act, as concerns grow that Pyongyang might be preparing a nuclear test.

"We are very clear in our position that provocative steps are to be discouraged," Assistant Secretary of State Kurt Campbell told reporters in Seoul when asked about the nuclear test speculation.

Campbell was in Seoul to meet with top officials, including president-elect Park Geun-hye.

The North successfully staged a long-range rocket launch in December, sparking global security concerns and drawing UN condemnation and calls from the US and its allies for tougher sanctions.

Pyongyang said the launch was a purely scientific mission aimed at placing a polar-orbiting earth observation satellite in space.

Most of the world saw it as a disguised ballistic missile test that violated UN resolutions imposed after the North's nuclear tests in 2006 and 2009. Both of those tests came after long-range missile launches.

The US-Korea Institute at Johns Hopkins University, citing satellite imagery analysis, said late last month the North was capable of carrying out a nuclear test at two weeks' notice after repairing damage to its test facility.

Campbell said "intense deliberations" were under way at the UN Security Council on how to punish Pyongyang for last month's rocket launch.

"We anticipate formal steps in the Security Council in the immediate future," he said, stressing Washington was in "very detailed conversations" with key players such as Russia and China.

Beijing is resisting any significant tightening of sanctions already in place against Pyongyang.

In a briefing with journalists Wednesday, a South Korean government security expert said North Korea's next nuclear test could see a uranium device used for the first time, rather than plutonium as was the case in 2006 and 2009.

"It needs to spare plutonium obtained from earlier reprocessing of spent fuel rods, while a uranium enrichment program is sustainable for continuous testing," the expert said.

"Such tests are essential for North Korea to miniaturize nuclear weapons to fit them onto missiles," the expert added.

<http://www.globaltimes.cn/content/756407.shtml>

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Focus Taiwan News Channel – Taiwan

Beijing to Trigger Arms Race by Testing Anti-Satellite Missiles

January 15, 2013
By Charles Kang and Maubo Chang, Central News Agency (CNA)

Taipei, Jan. 15 (CNA) China's imminent test-firing of an anti-satellite missile is set to prompt an arms race with the United States and Russia, a Russian military expert has warned.

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The Beijing-headquartered Global Times newspaper quoted Vasily Kashin on its website Tuesday as confirming a U.S. report that Beijing is preparing to fire an anti-satellite missile for the third time, with the apparent objective of blunting Washington's military advantage.

China test-fired its anti-satellite missile in 2007 for the first time and succeeded in destroying an inactive satellite in orbit 850,000 feet above the ground, Kashin said.

In 2012, it carried out a second test by firing another missile.

In both tests, China used KT-1 missiles, which are converted from its DF-21 anti-aircraft carrier missiles.

The KT-1 is being developed to intercept incoming missiles and destroy satellites in low orbit.

In the third test, however, China might use a more powerful missile, said Kashin.

U.S. military experts have said that China is developing a new missile, codenamed the DN-2 or KT-2. If successful, it will make China the only country in the world capable of crippling the U.S. global positioning system, which uses 30 satellites.

In light of the fact that the U.S. depends heavily on the system to train its strategic missiles on targets and to move its troops, the DN-2 will be a serious threat to the U.S. military edge, said Kashin.

Noting that Russia is also actively developing its own anti-satellite weaponry, both missiles and lasers, Kashin predicted that Beijing's test, if successful, will force the U.S. to take counteractive measures and intensify an arms race among the three.

http://focustaiwan.tw/ShowNews/WebNews_Detail.aspx?Type=aIPL&ID=201301150043

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New York Times

Movement of Missiles by North Korea Worries U.S.

By THOM SHANKER and DAVID E. SANGER

January 18, 2013

Page – A3

WASHINGTON — The discovery by American intelligence agencies that North Korea is moving mobile missile launchers around the country, some carrying a new generation of powerful rocket, has spurred new assessments of the intentions of the country's young new leader, Kim Jong-un, who has talked about economic change but appears to be accelerating the country's ability to attack American allies or forces in Asia, and ultimately to strike across the Pacific.

The new mobile missile, called the KN-08, has not yet been operationally deployed, and American officials say it may not be ready for some time. But the discovery that the mobile units have already been dispersed around the country, where they can be easily hidden, has prompted the White House, the Pentagon and intelligence agencies to reassess whether North Korea's missile capabilities are improving at a pace that poses a new challenge to American defenses.

On Thursday, speaking in Italy, the departing defense secretary, Leon E. Panetta, broke from the usual Obama administration script — which is to write off North Korea as a broke and desperate country — and told American troops that he was increasingly worried about another, longer-range North Korean missile, one that was successfully tested last month and reached as far as the Philippines, and could lob a warhead much farther.

"Who the hell knows what they're going to do from day to day?" Mr. Panetta said. "And right now, you know, North Korea just fired a missile. It's an intercontinental ballistic missile, for God sakes. That means they have the capability to strike the United States."



After he spoke, Pentagon officials said Mr. Panetta did not mean to imply that North Korea could now hit the continental United States, although intelligence and military assessments have said that Hawaii is within range. But the North has made progress toward its goal of fielding a missile that could cross the Pacific, a goal the previous defense secretary, Robert M. Gates, warned at the end of his time in office could be fulfilled by 2016.

An intensive study of the long-range missile test-flight conducted by North Korea last month, one administration official said, found that it was “largely a success, if you define success as showing that they could drop a warhead a lot of places in Asia.”

The more immediate mystery for the administration, however, is what North Korea may intend with the intermediate-range KN-08, which was first shown off by the North in a military parade last April. At the time, many analysts dismissed it as a mock-up. In fact, it has never been test-flown. But parts, including the rocket motors, have been tested separately, according to officials familiar with the intelligence reports, who described the missile developments on the condition of anonymity because they were not authorized to discuss the assessments.

Officials familiar with North Korean missile technology say the KN-08 weapon is designed with a range capable of striking South Korea, Japan and parts of Southeast Asia — although with uncertain accuracy.

North Korea is aware that it is a focus of American spy satellites, so the decision to roll the missile around the country to potential deployment sites might well have been partly motivated by a desire to send a message to the United States, or at least to get Washington’s attention — which it did. Officials said that North Korea’s advancements in missile technology were among the most significant reasons that Mr. Panetta, as he approached the end of his tenure, had spent so much time in Asia. Much of his effort has been aimed at spurring the development of a regional missile defense system to be deployed with allies, particularly Japan and South Korea.

There is no evidence that the KN-08 has been fitted with a nuclear warhead. While North Korea conducted nuclear tests in 2006 and in 2009 — just months after President Obama took office — American intelligence officials have said that the North has not miniaturized a nuclear device small enough to be fitted as a warhead atop its missiles. Some believe that may be the goal of its next test — and perhaps, some intelligence reports speculate, of continuing cooperation on missile design between Iran and North Korea. The Iranians, one official noted, “are grappling with the same issues.”

In fact, much remains uncertain about North Korea’s new missile. There was no question where the mobile launching trucks that carried the missile came from: they are Chinese, and almost certainly imported in violation of United Nations sanctions against the North. The new missile, like most in the North Korean arsenal, appeared to be based on Russian technology.

The missile developments are among a number of steps that have convinced American officials that, a year after his ascension as the third generation to inherit the role as North Korea’s dictator, Mr. Kim is proving as confrontational with the West as his father and grandfather. American specialists also warn of the prospect of a third nuclear test, for which preparations are evident.

For the Obama administration, whose last diplomatic effort with the North ended in failure nearly a year ago, the steps are reminders that everything they have tried in the past four years to lure the country out of isolation — or at least contain its nuclear and missile programs — has largely failed.

If nothing else, however, the missile efforts in the North have spurred American efforts to build a network of antimissile capabilities across Northeast Asia. Japan already has one American X-band radar, officially known as the AN/TPY-2, which is a central element in a complex technical architecture for identifying ballistic missiles and coordinating a response by interceptors. And last September, during his travels in the region, Mr. Panetta and his Japanese hosts announced a major agreement to deploy a second advanced missile-defense radar on Japanese territory.

<http://www.nytimes.com/2013/01/18/world/asia/north-koreas-missile-movements-worry-us.html>



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Deccan Herald – India

Indian Scientists Devise 16 Disaster Management Drugs

January 13, 2013

By Indo-Asian News Service (IANS)

Preparing to deal with any future chemical, biological, radiological and nuclear (CBRN) incidents, Indian scientists have devised 16 drugs that can be used for disaster management. These include an anti-cyanide drug, an anti-nerve gas drug and an anti-toxic gas drug.

Several radioactive decorporation agents and drugs for anti-cyanide, anti-nerve gas and toxic gas injuries have been approved by the Drug Controller General of India as trial drugs.

Developed by scientists at the Defence Research and Development Organisation (DRDO) Institute of Nuclear Medicine and Allied Sciences (INMAS) here, the drugs have passed the efficacy test and will be cheaper than those currently available in the market.

“Sixteen new drugs have been approved by the Drug Controller General of India (DGCI) as trial drugs for disaster management. These include an anti-cyanide drug, an anti-nerve gas drug, an anti-toxic gas drug and several radioactive decorporation agents,” Aseem Bhatnagar, in charge of the project at INMAS, told *IANS*.

These will be used as samples for the users, including the armed forces, the paramilitary, the National Disaster Management Authority (NDMA), the Department of Atomic Energy (DAE) and the Ministry of Health.

“Batch production of these drugs is being undertaken in collaboration with the pharmaceuticals industry through contract manufacturing. About 50,000-200,000 doses (licensed for human use) are expected to be manufactured by March 2013,” Bhatnagar said.

The DGCI approvals cover all-India use for 15 years for any number of victims.

Since there cannot be proper phase two trials of drugs useful in disasters, their use in any future incident has been approved as trial drugs due to a legality.

“These shall also be used for continuing clinical trials and for stockpiling. This is necessary to effectively plan stockpiling cost and perpetually (it is envisaged to provide the drug at cost price to the users). The average cost price is expected to be less than 15 percent of market price in all cases,” Bhatnagar said.

Several of these drugs have been patented by the defence ministry.

“The contract has been given to pharmaceutical companies to ensure that quality checks and pricing remains the prerogative of the defence ministry. Besides, adequate stocks can be retained in a cost-effective way and companies can initiate mass production in case of a disaster without any time wastage,” Bhatnagar said.

INMAS previously made and supplied drugs against nuclear, biological and chemical (NBC) incidents during the 2010 Commonwealth Games and to meet an emergency requirement of the Indian Navy.

“We also plan to keep some with the Delhi Metro Rail Corporation (DMRC) for usage during any disaster,” Bhatnagar said.

Scientists say that research and development and coordination will enhance the shelf life of NBC drugs by 60-100 percent and this project is planned in coordination with other government agencies.

“A mission mode project is planned to establish nuclear security in the national capital region by way of drugs, equipment and training to six echelons of medical services around Delhi under a project for seven years,” Bhatnagar added.



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INMAS had developed a skin radioactivity decontamination kit (shudhika) that was given for production to a company in Pune.

"Its market cost is more than Rs. 12,000 and we are developing it for just Rs. 1,000 (less than \$2). Five hundred such kits will be made available to users, including the services, as samples by March," Bhatnagar said.

<http://www.deccanherald.com/content/304992/indian-scientists-devise-16-disaster.html>

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The Hindu Business Line – India

Pak Aims to Develop Smaller Lighter Nuclear Warheads: Report

January 15, 2013

By Press Trust of India (PTI)

Washington, Jan 15: Expanding its nuclear arsenal at a rapid pace, Pakistan is now aiming to develop smaller and lighter atomic warheads more suitable for use on missiles, the Bulletin of the Atomic Scientist has said.

Pakistan is expected to surpass Britain's nuclear stockpiles in a decade, the journal said, referring to the rapid development of nuclear warheads by Islamabad.

"Pakistan has shown clear signs of its intention to grow its nuclear arsenal. Most recently, the country has begun to increase its plutonium production capabilities, with two new plutonium production reactors under construction, as well as a new chemical reprocessing facility," the journal said.

"The country's increased interest in plutonium demonstrates its likely goal to develop smaller, lighter warheads more suitable for use on missiles. In 2011, Nuclear Notebook reported that, in the next decade, Pakistan's arsenal could grow larger than that of Britain's," it said.

According to the journal, the global nuclear stockpile stands at roughly 19,000 nuclear weapons — the nuclear-armed states account for an estimated 420 of those weapons, while the nuclear weapon states have the rest.

"With stocks of fissile material sufficient for an arsenal of up to 200 nuclear warheads, Israel may have the largest stockpile among the nuclear-armed states, while both India and Pakistan each have around 100 warheads," it said.

"Today, these three countries have the largest arsenals they have ever had. This growth trend among key nuclear-armed states stands in stark contrast to Britain, which, with an estimated 225 warheads, has the smallest arsenal of the nuclear weapon states; its arsenal peaked between 1975 and 1980 with 520 warheads," it said.

<http://www.thehindubusinessline.com/news/pak-aims-to-develop-smaller-lighter-nuclear-warheads-report/article4309069.ece>

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RT (Russia Today) – Russia

Russia to Start Building 2 Nuclear Borei Super-Subs in 2013

12 January 2013

Russia is to start building two new advanced nuclear-powered Borei class submarines before year's end. Once complete, they will be lurking under the sea with 20 Bulava nuclear intercontinental ballistic missiles each. One of the submarines may be named Aleksandr Suvorov after one of the most decorated generals of the Russian Empire, a source in the defense industry told the media. Its construction is expected to start on July 28, which is Russian Navy Day.

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The second vessel is likely to be named after Mikhail Kutuzov, the iconic Russian general of the Napoleonic Wars. Its keel is to be laid down in November.

The vessels are to be built by the shipbuilder Sevmash in Severodvinsk in the north of Russia.

Both submarines are of the Borei class, the most modern strategic nuclear-powered submarines in the Russian Navy. The lead vessel of the class, Yuri Dolgoruky, officially entered service on Thursday, with two of his sister-ships currently afloat and undergoing trials.

The two new vessels are distinct from those three, being of an advanced Borei-A version of the same design. They will carry 20 nuclear ICBMs each, as opposed to 16 on the older submarines. They will also have improved maneuverability and better weapon control systems and will generate less noise.

Russia plans to build five Borei-A submarines. The first of them, Knyaz Vladimir, is already in construction.

Earlier this week Defense Minister Sergey Shoigu said the five ships may be complete by 2018. This would be ahead of the schedule, since the initial plan was to launch the last of the submarines by 2020.

Apart from Borei class submarines, the Navy wants to purchase seven Yasen class attack nuclear powered submarines before 2020. The design is comparable to the US Seawolf class submarine in terms of purpose and characteristics.

The lead ship of the series, Severodvinsk, was launched in 2010, while another submarine, Kazan, is currently under construction.

<http://rt.com/news/borei-nuclear-submarines-2013-852/>

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Global Security Newswire

Russia Might Still Use Sea-Fired Nuclear Cruise Missiles

January 14, 2013

By Chris Schneidmiller, *Global Security Newswire*

WASHINGTON -- There is cause to suspect that Russia might be deploying some number of sea-launched cruise missiles tipped with nuclear warheads, two decades after the United States put its version of the weapon into storage, issue experts say.

The Kremlin might also be developing a next-generation version of that same missile type as part of its broader nuclear forces modernization, according to some observers.

If true, the missiles could present a complication to future U.S.-Russian arms control negotiations -- and a stealthy threat in the unlikely event of a nuclear conflict.

"The sky is not falling. I don't think that they're on the verge of deploying large numbers of new nuclear-armed cruise missiles," said arms control specialist Jeffrey Lewis of the James Martin Center for Nonproliferation Studies. "But it's something that's worth taking seriously and thinking about. And, if one is committed to doing more in the arms control field, this is a question that is going to come up."

The United States definitively took its sole line of nuclear sea-launched cruise missiles, the Tomahawk land-attack system, off deployment in the early 1990s. Russia's management of an arsenal with various types of such weapons has been less clear, according to Lewis.

The U.S.-Soviet Strategic Arms Reduction Treaty signed in July 1991 addressed only the class of weapons that generally have greater ranges and explosive yield than tactical nuclear arms intended for battlefield use. However, the sides separately agreed to field no more than 880 nuclear-armed sea-launched cruise missiles and to issue yearly declarations on the deployment counts, Lewis said.

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Just a few months later, President George H.W. Bush announced unilateral pullbacks of tactical nuclear arms under which the Navy would during “normal circumstances” not carry nonstrategic nuclear missiles on surface vessels or attack submarines.

At the time, the United States held about 350 Tomahawk nuclear cruise missiles that could be launched from sea against land targets, according to Hans Kristensen, director of the Nuclear Information Project for the Federation of American Scientists. The Navy, prior to the White House order, kept about 100 of the missiles on attack submarines and other naval vessels on a regular basis, he said.

The Soviets -- and later the Russians -- held a number of dual-capable cruise missiles for deployment on submarines and surface vessels, but only the SS-N-21 was intended as a land-attack weapon, according to Kristensen. Production and deployment figures, though, are hard to come by.

“This is Russian nuclear weapons. There’s so much uncertainty,” he said.

While then-Kremlin leaders Mikhail Gorbachev and Boris Yeltsin responded to Bush’s move by pledging their own tactical weapons rollbacks, they did not “unambiguously commit” to pulling nuclear-armed sea-launched cruise missiles from attack submarines, Lewis said.

The governments in Moscow and Washington never released details of the cruise-missile declarations, which are no longer required following the START treaty’s expiration in 2009.

“It seems likely that Russia declared zero, because if it hadn’t declared zero it may very well have turned into a political issue,” James Acton, a senior associate for nuclear policy with the Carnegie Endowment for International Peace, said in an interview.

Lewis concurred. “I suspect the Soviets (and Russians) did, in fact, declare zero, if only because I would expect any other number to leak,” he wrote in an October post on the Arms Control Wonk blog.

The Obama administration announced the decommissioning of the sea-launched nuclear Tomahawks in its 2010 Nuclear Posture Review. Russia, though, might be going in the other direction, Lewis said.

Then-Russian Defense Minister Sergei Ivanov stated in 2006 that nuclear weapons were being carried by three “multipurpose (i.e. attack)” submarines, rather than the ballistic-missile underwater craft, Lewis stated in his blog post. News reports in recent years have suggested similar deployments.

Kristensen, though, said that Ivanov’s statement was indicative only of “fumbled language” rather than demonstrating Russian nuclear cruise missiles were at sea.

Russia has also faced scrutiny in the last couple years over efforts to sell a short-range cruise missile system that is designed to be hidden and fired from a shipping container. The weapon is manufactured by the same firm that makes the SS-N-21 cruise missile.

“Although I suspect the intended audience for the containerized cruise missiles largely comprise tin-pot dictators ... some Russians apparently see stealth and mobility as a selling point,” Lewis told *GSN*. “For Russia itself, submarines are probably the platform of choice.”

The nation’s ongoing military modernization projects encompass a new attack submarine and new cruise missiles, according to Lewis, who directs his organization’s East Asia Nonproliferation Program.

“They’re working on a new cruise missile. It’s probably for air delivery, but one could imagine them converting them over” for sea deployment, he said.

Among the rumors regarding Russia’s cruise missiles is that a nuclear form of the SS-N-30 is being prepared for the Yasen-class atomic submarine *Severodvinsk*, Kristensen said.



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"In 1991, the United States and the then-Soviet Union, as a political commitment, voluntarily agreed to cease deploying any nuclear sea-launched cruise missiles on surface ships or multipurpose submarines. The United States has no definitive information that the Russian Federation is not abiding by this political commitment," Pentagon spokeswoman Lt. Col. Monica Matoush said in a prepared statement to *GSN*.

The Russian Embassy in Washington said last week it had no information on the matter.

Experts acknowledged that the information is circumstantial rather than definitive, but said Moscow might see cause for fielding nuclear sea-launched cruise missiles or building new ones.

Russian leaders seemingly believe that cruise missiles and other naval nuclear weapons have a role in countering stronger U.S. and NATO sea power, Kristensen stated by e-mail. "Sea-launched cruise missiles provide a relatively stealthy and accurate option to hold at risk a variety of regional targets," Lewis said in an e-mailed follow-up to a telephone interview.

Having the missiles ready for use could be a hedge against burgeoning deployment of U.S. missile defense assets in Europe, Acton added. Submarines could fire a sea-launched nuclear cruise missile from a significant distance -- the SS-N-21 has a range of about 1,860 miles -- and the weapon would have a greater chance of reaching its target than an air-dropped bomb, he said.

"We're dealing with very low-probability, high-consequence scenarios," Acton added. "But if you're thinking of what nuclear weapons are of more or less concern, then those features make Russian sea-launched cruise missiles of more concern."

He said that development of new sea-based nuclear cruise missiles would not necessarily be based on "cold-blooded" Russian strategizing. Rather, they could derive from jockeying for influence between various weapons design bureaus.

The missiles could pose a threat to Obama administration hopes for a follow-up to the New START nuclear arms control treaty that would address tactical as well as strategic nuclear arms, Lewis said. The United States and Russia began implementing New START, which caps deployed long-range warheads at 1,550 and delivery vehicles at 700, in early 2011.

Russia deploys various types of nonstrategic nuclear weapons, but could be particularly reluctant to allow inspection of vessels that might carry sea-launched nuclear cruise missiles as well as conventional weapons.

"Once the Russians spend a bazillion dollars on a new cruise missile, the chance of an arms control agreement is much, much lower," Lewis said. "So I'm definitely engaging in the debate in anticipation of a threat rather than in response to [one]."

An effort to resume SLCM data exchanges could help. This might lead to other confidence-building measures and potentially some sort of agreement on the Russian weapons, Lewis has argued.

The likelihood of Moscow and Washington actually agreeing to such measures in the existing strategic climate, though, is "probably zero," he said.

<http://www.nti.org/gsn/article/russia-might-still-deploy-sub-launched-nuclear-cruise-missiles/>

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Russia & India Report – India

Russia May Resume Production of Nuclear Missile Trains

Russian nuclear trains are quite expensive and rather hard to operate, but their main advantages – stealth and surprise – are worth the trouble.

January 16, 2013

By Vadim Ponomarev, *Expert* magazine

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Russia is planning to resume the production of rail-mobile ballistic missile systems, an unnamed senior official at the Russian military-industrial complex told RIA Novosti.

One would be forgiven for being sceptical about the project if it were not for three compelling factors. The first is the repeated statements by Russian military officials, including Deputy Commander of the Strategic Missile Forces Lieutenant General Vladimir Gagarin (autumn 2009), about the need to revive the production of missile trains. In December 2012, Commander of the Strategic Rocket Forces Lieutenant General Sergei Karakaev told reporters that the work to create rail-mobile ballistic missile systems was already underway.

The second reason is that Russia now in a position, both politically and financially, to restore the “vengeance weapon” that it destroyed hastily in the mid-2000s in order to meet its commitments under the START II Treaty, despite the fact that it was never even ratified (although experts argue that not all of the Russian nuclear missile trains were in fact destroyed). From a political point of view (read: political will), this means using rail-mobile ballistic missile systems as an appropriate response to the lack of guarantees from America and Europe that the European missile defence system will not be used against Russia. “By 2020, the European missile defence system plans to adopt new modifications to the SM-3 missile, capable of intercepting Russian ICBMs. In light of this fact, Moscow will have to take appropriate counter measures,” says Igor Korotchenko, director of the Centre for Analysis of World Arms Trade. “The high hopes that we had placed on the development of Russian-American relations after the START III Treaty was signed were never fulfilled. The strategic partnership announced by the American administration proved to be a mere declaration. A new treaty to further limit strategic offensive arms is unlikely. This is why the restoration of missile trains is very important: along with the heavy liquid-fuelled missile, they will become an effective deterrent to the United States’ nuclear ambitions and its aggressive military plans,” says Strategic Rocket Forces veteran Yuri Zaitsev, Academic Advisor at the Russian Academy of Engineering Sciences.

Soviet-Russian nuclear trains are quite expensive and rather hard to operate, but their main advantages – stealth and surprise – are worth the trouble. They are neither silos, where a missile can be intercepted when it leaves the launcher, nor automobile launch systems, which have a limited range of 300–400 kilometres and are easy to see from space, given contemporary surveillance technologies. A missile train is a standard train that comprises a few refrigerator, mail and passenger cars that is capable of travelling 1,000 kilometres in 24 hours along regular rails and launching the first missile with a range of 10,000 kilometres and 10 warheads within three minutes of command (the Strategic Rocket Forces operated 12 trains of this kind armed with 36 missiles). Financially, Russia is capable of resuming missile train production. Deputy Prime Minister Dmitry Rogozin said today that the number of state defence contracts would double to more than 2 trillion roubles in 2014 compared to 2012.

The third reason for Russia to revive its nuclear missile trains is the technical capability of the country to build such trains. Designers will now have to adapt the old rail-mobile ballistic missile system project to the new missile, either the Bulava or Yars (the production of the special rail-based missile RT-23 UTKh Molodets remained in Ukraine and was demolished); military railmen will need to restore the surface infrastructure at home stations, near Kostroma, Perm and in Krasnoyarsk Region (eyewitnesses claim that the one in the vicinity of Kostroma is in a state of ruin). However, judging by indirect information, the Russian defence complex has even more ambitious plans for missile trains. One of the main challenges for the rail-mobile ballistic missile system is its limited endurance and the need for refuelling (if driven by a diesel locomotive), as well as the low capacity of its power unit. Three locomotives were required to pull a Soviet nuclear train, which naturally unmasked the train. Back in the early 1980s, an alternative was designed for the nuclear train project – a locomotive powered by the BOR-60 fast fission reactor (with a heat power of 60MW and electrical power of 10 MW). However, the locomotive was never built. In February 2011, Russian Railways Vice President Valentin Gapanovich told reporters that the railway operator and the state corporation Rosatom would present the design of a new nuclear-powered train to the public by the end of 2011. There have been no reports about the project since then, which suggests that the locomotive is being developed by defence agencies.

However, there was enough time for military railway specialists to test the gas turbine locomotive working on liquefied natural gas, created back in 2006 on the basis of one of Nikolai Kuznetsov’s gas-turbine engines. In 2009, the engineering prototype of the locomotive was entered into the Guinness Book of World Records, pulling 159 carriages



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weighing 15,000 tonnes on a test track. The machine has a fuel capacity of almost 1,000 kilometres. It is an almost perfect locomotive to move the nuclear missile train (the perfect one being the nuclear-powered machine). But there have thus far only been reports about the civil use of the gas turbine locomotive – the Sinara group plans to build 40 locomotives of this kind for Russian Railways, which will operate them in the Far North and the Far East.

First published in Russian in the "Expert" magazine.

http://indrus.in/articles/2013/01/16/russia_may_resume_production_of_nuclear_missile_trains_21651.html

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RIA Novosti – Russian Information Agency

Russia Starts Third Borey-Class Sub Test

18 January 2013

MOSCOW, January 18 (RIA Novosti) - Russian submarine-builder Sevmash has begun moored tests of the third Borey-class (Project 955) ballistic missile submarine Vladimir Monomakh, the shipyard said on Friday.

"The fourth-generation missile submarine Vladimir Monomakh has been submerged in the water and started moored tests," Sevmash said.

Shipyard sea trials will start in the summer of this year, Sevmash said.

Vladimir Monomakh will be the third and last Project 955 boat, armed with 16 Bulava ballistic missiles. The fourth and subsequent boats will be Project 955A vessels with 20 missiles. The fourth boat, Knyaz Vladimir, is under construction.

Vladimir Monomakh has also been built with the incorporation of the latest acoustic signature reduction techniques, Sevmash said.

The Russian Navy accepted into service the first boat of the class, Yuri Dolgoruky, on January 10. The second in the class, Alexander Nevsky, is currently undertaking sea trials and is due to enter service this year.

The navy plans to operate eight Borey class submarines, with construction ending in 2020.

http://en.rian.ru/military_news/20130118/178859583/Russia-Starts-Third-Borey-Class-Sub-Test.html

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Seattle Times

Monday, January 14, 2013

Boeing's 30,000-Pound Bunker-Buster Bomb Improved, Pentagon Says

Efforts to improve the performance of the U.S. military's heaviest "bunker-buster" bomb have succeeded, according to the Pentagon's testing chief.

By Tony Capaccio, Bloomberg News

WASHINGTON — Efforts to improve the performance of the U.S. military's heaviest "bunker-buster" bomb have succeeded, according to the Pentagon's testing chief.

Tests of the 30,000-pound Massive Ordnance Penetrator made by Boeing demonstrated the redesigned weapon "is capable of effectively prosecuting selected hardened, deeply buried targets," Michael Gilmore, the Pentagon's director of operational testing, said in a report to Congress.

Pentagon officials have said the 30,000-pound (13,600-kilogram) bomb could be used if the United States decides to attack Iran's nuclear program, with its deeply buried and hardened Fordo uranium enrichment facility that holds a stockpile of enriched uranium.

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While Gilmore didn't mention any specific uses for the bomb, he said it is intended to hit targets "requiring significant penetration" that are located in "well-protected facilities."

The testing assessment is the first public discussion of the bomb's capabilities since early last year, when the Pentagon disclosed a need to improve it.

Testing of modifications involved five bomb drops from B-2 stealth bombers at White Sands Missile Range in New Mexico from June to October and two ground tests, according to Gilmore's annual report on Pentagon testing, which he sent to Congress on Jan. 11.

The bomb is six times bigger than the 5,000-pound bunker-buster that the U.S. Air Force and the Israeli Air Force have in their arsenals to attack deeply buried nuclear, biological or chemical sites.

Israel has said it may launch an attack on its own, raising questions about whether it could effectively halt Iran's nuclear program unless the U.S. joined in with the bigger bomb.

Iran, which is under pressure from economic sanctions imposed by the U.S. and the European Union, has said its nuclear program is for civilian purposes.

U.S. Air Force Lt. Gen. Herbert Carlisle cited the 30,000-pound bomb at an industry conference in March as among U.S. capabilities in a potential attack on Iran.

The bomb made by Boeing has "great capability and we are continuing to make it better," he said. "It is part of our arsenal if it is needed in that kind of scenario."

The move to improve the bomb was made shortly after the Air Force took the first delivery in September 2011. The action may have been a response to Iran's announcement on Jan. 9, 2012, that it would begin uranium enrichment at the Fordo facility near Qom that's tunneled into mountains, said Kenneth Katzman, a Middle East military analyst for the nonpartisan Congressional Research Service in Washington.

"This is a very hard target, and the international community believes that if Iran were to attempt a nuclear breakout, it would be conducted at this site," Katzman said last year.

The Pentagon won congressional approval in February 2012 to shift \$81.6 million in funds to improve the bunker-buster.

The Pentagon request to upgrade the bomb was submitted 11 days after the International Atomic Energy Agency confirmed the enrichment activity. The location at Qom is 90 meters (295 feet) under rock, according to David Albright, founder and president of the Institute for Science and International Security in Washington.

Northrop Grumman's B-2 stealth bomber is the only aircraft capable of carrying the weapon.

Pentagon Comptroller Robert Hale said in a Jan. 20, 2012, request to Congress that the money was needed to "fix issues identified in testing, including tail-fin modifications and integrating a second fuse, enhance weapon capabilities, build test targets and conduct live weapon testing. The request funds the immediate requirement to support the desired upgrade schedule."

The 20.5-footlong bomb carries more than 5,300 pounds of explosives and is guided by Global Positioning System satellites, according to a description on the website of the Pentagon's Defense Threat Reduction Agency.

The bomb has a hardened-steel casing and can reach targets as far as 200 feet underground before exploding, according to a December 2007 statement by the Air Force News Service.

http://seattletimes.com/html/business/technology/2020131408_boeingbombxml.html

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Asahi Shimbun – Japan

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China's Space Activities Raising US Satellite Security Concerns

January 15, 2013

Reuters

WASHINGTON - The United States is concerned about China's expanding ability to disrupt the most sensitive US military and intelligence satellites, as Beijing pursues its expanded ambitions in space, according to multiple sources in the US government and outside space experts.

A classified US intelligence assessment completed late last year analyzed China's increasing activities in space and mapped out the growing vulnerability of US satellites that provide secure military communications, warn about enemy missile launches and provide precise targeting coordinates, said the sources, who were not authorized to speak publicly.

"It was a very credible and sobering assessment that is now provoking a lot of activities in different quarters," said one former government official who is familiar with US national security satellite programs.

The intelligence report raised red flags about Beijing's ability to disrupt satellites in higher orbits, according to the sources. China has already conducted several anti-satellite tests at lower orbital levels in recent years.

Given the heightened concerns, Washington is keeping a watchful eye on Chinese activities that could be used to disrupt US satellites. It is also urging Beijing to avoid a repeat of its January 2007 test that created an enormous amount of "space junk," said one senior defense official.

Details of the latest Chinese moves that have raised US concerns remain classified.

US officials charge that China's anti-satellite activities are part of a major military modernization that has seen Beijing test two new stealth fighters; step up cyber attacks on foreign computer networks; and launch more commercial and military satellites in 2012 than the United States.

China still lags behind the United States in most military fields.

"What we're seeing is a heightened sense in the United States that China is a potential threat and that it has the technology to be a threat if it wishes to," said Jonathan McDowell, with the Harvard-Smithsonian Center for Astrophysics.

"As China becomes a space superpower, and given that it does have a significant military component to its space program, it is inevitable that the US will be concerned about threats to its most valued satellite systems, whether or not China actually intends to deploy such aggressive systems," he said.

CREATING SPACE DEBRIS

Six years ago, on Jan 11, 2007, China destroyed one of its own defunct weather satellites in low-earth orbit, which created over 10,000 pieces of debris that pose a threat to other spacecraft. A less-destructive test followed on Jan 11, 2010.

Space experts and US officials say they expect China to continue testing anti-satellite technologies, although they doubt it would repeat the 2007 test, given the massive international outcry it triggered.

Gregory Kulacki, a respected researcher with the Union of Concerned Scientists, reported earlier this month on the group's website that there was "a strong possibility" of a new anti-satellite test by China within the next few weeks.

He said Chinese sources had told him in November that an announcement about an upcoming anti-satellite test had been circulated within the Chinese government, and a high-ranking US defense official confirmed in December that Washington was "very concerned" about an imminent Chinese anti-satellite test.

The Chinese Defense Ministry did not respond to emailed queries by Reuters' Beijing office on the question.

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The Pentagon said it was aware of reports predicting another test, but declined comment on what it called "intelligence matters."

"We monitor carefully China's military developments and urge China to exhibit greater transparency regarding its capabilities and intentions," said Lieutenant Colonel Monica Matoush.

Sources within the US government and outside experts said there was no immediate evidence pointing to the preparations for the type of satellite or rocket launches used by China for past anti-satellite tests at lower orbits.

But they said Beijing could test its anti-satellite weapons in other ways that would be harder to detect, such as by jamming a satellite's signals from the ground or issuing a powerful electromagnetic pulse from one satellite to disable another.

China could also maneuver two satellites very close together at higher orbits, replicating actions it has already taken in lower orbits in August 2010 and November 2010. Such activities could be used to perform maintenance or test docking capabilities for human spaceflight, but could clearly be used for more destructive purposes as well, they said.

The United States has continued to test its own anti-satellite capabilities. In February 2008, a missile fired from a US Navy cruiser in the north Pacific destroyed an ailing American satellite in orbit.

The US government said the satellite's toxic fuel posed a risk upon re-entry of the earth's atmosphere. Skeptics said the test was a message to China.

Any further anti-satellite test by China would be troubling, especially if it occurred at higher altitudes, said Bruce MacDonald, a former White House official who is now a senior director at the US Institute of Peace.

The United States operates its fleet of Global Positioning System (GPS) satellites in medium earth orbit about 11,000 miles (17,700 kilometers) above the surface of the earth, while US military communications and early missile warning satellites are located in geostationary orbit 22,000 miles (35,400 km) above the equator.

Brian Weeden, technical adviser for the nonprofit Secure World Foundation and a former Air Force space and missile expert, said a Chinese anti-satellite test at those higher orbits would put US satellites at risk.

"Some critical US assets in that region have been assumed for the most part to be safe from those kind of attacks," he said. "Such tests would signal that they're not."

<http://ajw.asahi.com/article/asia/china/AJ201301150006>

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Global Security Newswire

Antimissile System Held Back by Kill Vehicle: Pentagon

January 16, 2013

By Rachel Oswald, Global Security Newswire

WASHINGTON -- The United States' principal homeland missile defense program against a feared long-range attack by North Korea or Iran made little demonstrable headway last year in moving beyond a restricted capacity to defeat a small-scale threat, according to a new Pentagon report.

The Ground-based Midcourse Defense system has not had a successful test intercept since 2008. The last two attempts in 2010 both failed, with the most recent effort breaking down due to a malfunctioning hit-to-kill vehicle.

It took the Missile Defense Agency two years to ascertain exactly why the system's Exoatmospheric Kill Vehicle was unable to destroy the dummy missile target; develop fixes for the problem; put in place more rigorous requirements for contractors manufacturing EKV components; and to test the redesigned parts.

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The Defense Department's Director, Operational, Test and Evaluation assessment for fiscal 2012 found that while the cause of the previous test failure had been identified and solved, a live space intercept test was needed to confirm the problem had been truly resolved.

Missile Defense Agency spokesman Richard Lehner on Wednesday said no flight tests were conducted in 2012 "because we were working on fixing the component."

The problem with the kill vehicle was caused by dynamic environments that occur only in space and was identified following extended modeling and ground testing, according to previous statements from the Pentagon branch.

Now that the problem has been solved a fresh test is likely to happen in the "near future," Lehner said in an interview, without offering a specific timeline. It would involve the use of highly sophisticated instruments to assess the performance of improvements to the kill vehicle in a situation that simulates the conditions of the vacuum of space.

If that trial goes smoothly, one flight test and one flight intercept test are planned for the current fiscal year to further assess the fixes made to the kill vehicle, according to Lehner.

There are 30 Ground-based Interceptors in the GMD system spread out in silos at bases in California and Alaska. The long-range antimissile system was created to protect the homeland United States from intermediate-range and intercontinental ballistic missile strikes.

The Exoatmospheric Kill Vehicle is central to the GMD system's Ground-based Interceptor. It is designed to destroy incoming missiles during the midcourse phase of their flight in space. The technology has been used in eight successful GBI test intercepts to date.

The DOD test and evaluation report found the Missile Defense Agency in 2012 did make headway in returning to GMD interception testing after solving the EKV problem "by conducting a ground test campaign consisting of 11 electrical and mechanical tests designed to further characterize [Capability Enhancement II] kill vehicle component capability and performance."

Despite that, the GMD system continues after years of development efforts to only have a "limited capability" to destroy a small-scale missile threat to the United States. Intercept tests to date have involved only one target, while there are plans to move up to two targets at at some point.

Annual DOT&E reports going back to 2004 have not found any significant advancement in the Ground-based Midcourse Defense system's "demonstrated limited capacity against a simple [foreign] threat," according to Kingston Reif of the Center for Arms Control and Nonproliferation, who documented the issue in a Monday post on the Nukes of Hazard blog.

The United States still has some time to improve the GMD system against its intended targets. Though North Korea demonstrated for the first time last month the ability to fire a ballistic missile with a sufficient reach to strike the West Coast, it must still develop a re-entry vehicle, and prove the capability through multiple successful test-firings before it can be said to be a credible strategic missile threat to the United States.

Likewise, Iran is not currently assessed by Congress' research arm to be aggressively advancing its long-range ballistic missile program. A December report by the Congressional Research Service found it was doubtful Iran would have an ICBM capability before 2016.

Lehner pointed out the GMD system was only intended against lower-level missile threats and not the more robust ICBM programs of Russia and China. That means that while MDA officials will work on taking the antimissile program from a "limited capability" to a robust one, it will still be focused only on defending against the "technology we see from a country like North Korea or Iran."

"After we have the intercept test [this year], we'll move along and if the advanced kill vehicle works as it should we will continue our testing program of having a test [every year]," Lehner said.



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<http://www.nti.org/gsn/article/homeland-antimissile-system-held-back-kill-vehicle-pentagon-finds/>

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Time – U.S.

“Son of MX” Basing Schemes on List of Future Air Force ICBM Options

By Mark Thompson

January 18, 2013

The Air Force Nuclear Weapons Center is seeking industry guidance on replacing the nation’s current fleet of 450 Minuteman III land-based intercontinental ballistic missiles sprinkled across Montana, North Dakota and Wyoming with...a new fleet of intercontinental ballistic missiles.

The center’s recent ruminations about the best way to base the new ICBM fleet bring back the glorious MX missile debates of the 1980s:

– Should we put our new ICBM fleet on trucks known as transporter erector launchers (TELs)? *“The TEL must have the capability to leave government land to increase survivability, if required,” the Air Force says. “Survivability is a function of system hardness and mobility; therefore, a key feature will be the speed at which the TEL can depart the operating base when required.”*

– Or maybe hide them in tunnels? *“The Tunnel concept mode operates similar to a subway system but with only a single transporter/launcher and missile dedicated to a given tunnel,” the service says. “The Tunnel is long enough to improve survivability but leaving enough room to permit adequate ‘rattle space’ in the event of an enemy attack.”*

And you thought the Cold War was history!

Assuming the nation sticks with its decision that a nuclear triad – ICBMs, submarines and bombers – is necessary to keep the country safe, the Air Force is exploring five paths to preserve its aging ICBM leg:

- Continued use of the current Minuteman III baseline until 2075 with no deliberate attempt to close identified gaps;
- Current Fixed that incorporates incremental changes to the current Minuteman III baseline to close the gaps;
- New Fixed;
- New Mobile; and
- New Tunnel.

Shades of the MX fight a generation ago! Back then, everything from rails to a cram-the-missiles-close-together *Dense Pack* option was considered as the most secure way to protect MX Peacekeeper missiles from Soviet attack (the 102 MX missiles, bought for \$16 billion, were scrapped after standing guard in 50 silos from 1986 to 2005).

But those first three options above sound, well, rather retro. Let’s see what the Air Force thinks about the other two.

On the mobile ICBM it says:

The Mobile concept employs a new ICBM on a transporter erector launcher (TEL). The systems would be located on government land and be capable of deploying on- or off-road. The TEL must have the capability to leave government land to increase survivability, if required. Survivability is a function of system hardness and mobility; therefore, a key feature will be the speed at which the TEL can depart the operating base when required. Industry inputs should look at the following elements:

- A missile capable of delivering up to two Mk12A or Mk21 reentry vehicles. Guidance needs to account for the deployed mode to ensure adequate accuracy is achieved while maintaining prompt responsive capabilities.
- TEL architecture. The TEL should be capable of both on and off-road travel. Weight considerations should be considered to meet Department of Transportation requirements.
- The weapon control system may consist of some combination of fixed and mobile control systems. For example, a fixed launch control center may be located at the main operating base (MOB), while survivable back up is provided by a

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mobile launch control center that is deployed during higher readiness states. In higher readiness states, the primary mode of communication to and from higher authority needs to be considered by industry.

As for the tunnel notion:

The Tunnel concept mode operates similar to a subway system but with only a single transporter/launcher and missile dedicated to a given tunnel. The vehicle moves at random down the length of the Tunnel. The Tunnel is long enough to improve survivability but leaving enough room to permit adequate "rattle space" in the event of an enemy attack. The diameter of the Tunnel should be designed to fit the missile and the mobile launcher. The self-propelled, unmanned cars can move via rail or in a "trackless" configuration. Launch portals should be available at regular intervals, allowing the transporter's strongback to be raised and the missile launched. During an attack, the launcher vehicle will need protection from ground shock.

Launch communications is addressed in three different modes. Industry should provide a communications architecture for Higher Authority paths between Leadership and mobile Launch Control Centers. Industry should also address Intra-Tunnel communication capability to communicate to the mobile launch control center and launch unit within a given Tunnel.

The Air Force has invited contractors to submit "white papers" detailing their thoughts on the best approach by Feb. 8.

<http://nation.time.com/2013/01/18/son-of-mx-basing-schemes-on-list-of-future-air-force-icbm-options/>

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World Politics Review

OPINION/Global Insights Column

Global Insights: Russia Revitalizes Its Submarine Deterrent

By Richard Weitz

15 January 2013, Column

Russia's next-generation nuclear-powered ballistic-missile submarine (SSBN), equipped with the new Bulava submarine-launched ballistic missile (SLBM), officially entered service with the Russian navy's Northern Fleet on Jan. 10.

Christened the Yuri Dolgoruky, this first Borey-class sub was under construction at the Sevmash shipbuilding company from 1996 to 2008. The ship had originally been intended to carry the much larger Bark SLBM. When the Bark's development problems led the Russian government to abandon it in favor of the smaller Bulava, Russian shipbuilders had to redesign the entire Borey class to accommodate the Bulava -- before the missile had even moved beyond the drawing board.

The Russian military intends the Borey-Bulava combination to serve as the sea-based foundation of its nuclear triad through at least the 2040s. The cost of researching, designing and developing this new SSBN-SLBM combination represents perhaps the most expensive item in recent Russian defense budgets. Estimates are that the Borey-Bulava combination at one point consumed more than one-third of Russia's defense budget. The Russian government has allocated \$132 billion to construct many new submarines and other warships by 2020.

This high spending reflects the importance of the Borey-Bulava systems to Russian policymakers. At the ceremony marking the Yuri Dolgoruky's entry into service, President Vladimir Putin boasted that, "Submarines of that class will become an important element of sea-based strategic forces, a guarantor of global balance and security [for] Russia and its allies."

The Borey-class subs have a 130-member crew and are equipped with advanced sonar, navigation, communications and fire-control systems as well as fourth-generation "stealthy" characteristics. Each ship has a length of 185 feet and a width of 15 feet, can dive to 500 feet and has a submerged speed of 29 knots.

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The first three Borey-class SSBNs will carry 16 Bulava-30 SLBMs and six SS-N-15 cruise missiles each. The second of these ships, the Aleksandr Nevsky, is currently undergoing sea trials, while the third, Vladimir Monomakh, was floated out at the end of last year.

Subsequent Borey vessels will carry 20 rather than 16 Bulava SLBMs. The Knyaz Vladimir, the first submarine of this improved Borey-A class, was laid down in July 2012. The construction of the Alexander Suvorov, the fifth in the series, will begin in July 2013, while the sixth submarine, the Mikhail Kutuzov, will be laid down before the end of this year. The Russian navy aims to have two more Borey-A class SSBNs by 2020. Combined, the eight Borey- and Borey-A-class subs will carry a total of 148 Bulava missiles.

The Bulava, which means “mace” in English, represents one of the few major Russian weapons systems developed since the Soviet Union’s collapse. It is designed to carry 10 maneuverable and independently targeted (MIRVed) nuclear warheads, with a destructive power of some 100-150 kilotons each and a maximum range of some 5,000 miles. On paper, the Bulava’s advanced missile defense countermeasures, solid-fuel propellant, small size, light weight, rapid speed, maneuverability and other capabilities make it a superior deterrent to anything in Russia’s existing SLBM arsenal.

Nevertheless, only in recent years has the Bulava performed well enough in testing for Russian leaders to feel sufficiently confident to commit to its near-term deployment. Originally scheduled to enter into service in 2006, the Bulava’s terrible test record resulted in its remaining a paper system until December 2011, when two successful launches formally ended its test-launching program. Prior to that, about half of the missile’s test launches had failed, sometimes spectacularly. The repeated setbacks embarrassed the Russian defense industry at a time when the Russian government was trying to re-establish Moscow’s claims to great-power status.

The Bulava’s problems resulted from two primary factors. The first was the Russian government’s decision to award the original contract to the wrong design firm and then follow its bad advice. The second was the continuing weaknesses in Russia’s military-industrial complex, especially problems related to production, quality control and systems integration. In particular, the failure to effectively coordinate the input of the dozens of independent subcontractors involved in the program was a major reason for the Bulava’s difficulties.

However, the Russian government felt it had to persist with the Bulava because the weapon has been designed to work with the Borey-class SSBN, which is the only new strategic submarine under production in Russia.

The Russian navy has been waiting impatiently for these boats, as Russia’s existing fleet of subs consists of Soviet-era vessels, all built before 1990. These vessels have been renewed with new SLBMs and other components, but are well past their intended service lives. As a result, only a few Russian SSBNs are available for deployment at any one time, with the remaining vessels either undergoing maintenance or modernization, or in training.

Last February, Adm. Vladimir Vysotsky, the commander-in-chief of the Russian navy, declared that Russia’s SSBNs would resume regular deterrent patrols on or shortly after the date the Yuri Dolgoruky entered into service. This change in deployment posture would mean that at least one Russian strategic submarine would be at sea at any time. For the past decade, Russian SSBN patrols have occurred intermittently, with lengthy gaps in coverage. Whereas during the Cold War the Soviet navy would conduct a few hundred deterrent patrols a year, last year the Russian navy managed only five.

Although Russian designers may finally have gotten the Borey-Bulava combination to work, this success may prove exceptional. The Russian government devoted enormous sums to this very important project and cannot undertake a comparable effort with all its desired military systems. Russian officials have had to announce repeated delays in plans to build new aircraft carriers, for instance. Russian defense companies, having not yet recovered from the traumatic breakup of the Soviet-era military-industrial complex, are still incapable of building such complex weapons systems in a timely manner.

The priority Russian policymakers have accorded the Borey-Bulava combination reflects their determination for Russia to remain a great power with the capacity to deter a U.S. nuclear attack. Although such an attack would never occur in



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any case, the renewal of Russia's strategic deterrent might have a positive impact on relations by reducing Russian prickliness over U.S. missile defenses and other sources of tension in the relationship.

Richard Weitz is a senior fellow at the Hudson Institute and a World Politics Review senior editor. His weekly WPR column, Global Insights, appears every Tuesday.

<http://www.worldpoliticsreview.com/articles/12624/global-insights-russia-revitalizes-its-submarine-deterrent>

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U.S. News & World Report
OPINION/World Report

Chuck Hagel's Troubling 'Global Zero' Nuclear Arms Stance

By Peter Huessy
January 15, 2013

During the tenure of the Bush administration, the United States entered into numerous agreements with many countries, including our Cold War adversary Russia, to deal with the growing danger of nuclear terrorism.

Of particular concern was the development of nuclear weapons in countries such as Pakistan, North Korea, and Iran, for example, and the potential that such states would use terror groups as proxies to deliver such weapons surreptitiously to an American city.

The focus spawned numerous efforts, among them the Proliferation Security Initiative, the development of nuclear detection technology and nuclear forensics, and sanctions on North Korea and Iran, all aimed at stopping the danger of nuclear terrorism. The Moscow Treaty with Russia further eliminated nuclear weapons, dropping our stockpile and deployed strategic nuclear forces nearly 70 percent from their levels in the 1990s.

Thus, for at least a decade, the United States has been grappling seriously with the new challenges of the post-9/11 nuclear age. But will it continue to do so? Or will it pursue a different, and more dangerous, path of disarmament? Those are appropriate questions for the White House's newly announced nominee for Secretary of defense: former Nebraska senator Chuck Hagel.

In an interview with *Al Jazeera* in 2009, Hagel rightly highlighted the growing proliferation dangers now confronting the United States, especially the growing access to nuclear weapons technology being exhibited by rogue states and nonstate actors. But the senator did not mention any of the Bush-era policies adopted to deal with the very problems he highlighted. Instead, he effectively embraced what has colloquially come to be known as "Global Zero"—the idea of sweeping reductions to national nuclear arsenals, with the ultimate goal of eliminating such capabilities outright. And America, Hagel believes, must lead by example.

According to the senator, the United States currently isn't in a position to tell other states they must not develop nuclear weapons, because it itself still has them and uses them in its defense policy. Moreover, since America is the only country to have used nuclear weapons, we have a special obligation to lead the effort to eliminate them. That, in turn, will require first eliminating nuclear weapons as a tool of U.S. deterrence.

But this tactic is fraught with danger. First, experts like Gen. Larry Welch, the former Air Force chief of staff and Strategic Air Command chief, point out that such an effort would be largely unverifiable, and would lead to a "rush to re-arm" among numerous nations in the event of a crisis.

Second, and even more worrisome, are the detrimental effects that Global Zero would have on America's strategic capabilities. If the United States eliminates any nuclear role from our 450 missile-strong land-based ballistic missile deterrent and strategic bombers, as has been suggested by proponents of Global Zero, it would mean that, for the first time in the nuclear age, the United States would be, perhaps inadvertently, moving toward higher instability in the global nuclear balance.

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Most problematic of all, however, is that the idea of Global Zero has little grounding in reality. The current political landscape makes it obvious that an agreement with Iran or North Korea, let alone China, to cap or even curtail their nuclear weapons or associated programs is highly unlikely. Yet proponents of Global Zero still say that international disarmament can be achieved by 2030—a date that lies closer in our future than the end of the Cold War does in our past.

For these reasons, and many others, Global Zero has steadily declined in popularity since its heyday several years ago. Just as clearly, however, the idea still has its proponents in Washington. Indeed, America's new defense secretary might just be one of them.

Peter Huessy is a senior fellow in National Security Affairs at the American Foreign Policy Council in Washington, D.C.

<http://www.usnews.com/opinion/blogs/world-report/2013/01/15/chuck-hagels-troubling-global-zero-nuclear-arms-stance>

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Global Times – China
OPINION/View Points

Clearer Nuclear Policy Ensures Regional Peace

Global Times, January 16, 2013

By Long Xingchun

Judging from the past experience of confrontation between the US and the Soviet Union, we can conclude that nuclear weapons played a key role in preventing a hot war between the two.

The world's powers have a high economic dependency on each other, but nuclear deterrence is still the most effective means of avoiding military clashes between countries. Only when we make China's nuclear policy clearer and more applicable, can we ensure the effectiveness of China's nuclear deterrence.

In 2005, Zhu Chenghu, major general and professor at the National Defense University, said that if China and the US were to engage in a military clash over the Taiwan question, China would have no choice but to respond with nuclear weapons. What he meant was not that China would really start a nuclear war, but that we should let the US know China's bottom line so as to increase the strategic stability of bilateral relations.

The strategy of China's nuclear policy should be clear, while the tactics of the policy should be ambiguous. Strategic-level issues as to whether China should adopt nuclear weapons or under what circumstances China should adopt them can be made clear. As for the range of nuclear weapons and means of transmission, these tactical questions must be responded to in a vague manner.

China commits to no-first-use of nuclear weapons under any circumstances. Actually, while China should not use nuclear weapons to attack other countries, it can use them defensively. Once we make our stance clear, no one will dare to carry out a military attack on China.

China pledges not to use or threaten to use nuclear weapons against countries and regions without nuclear weapons under any circumstances. But if these countries import nuclear weapons or provide bases for those who intend to carry out nuclear attacks against China, they shouldn't fall under China's pledge.

The US and some other nuclear countries have been developing tactical nuclear weapons, trying to make them deployable. If China suffers a tactical nuclear weapon attack, should it take revenge by using nuclear weapons?

One question worth considering is whether China could provide a nuclear umbrella to other countries. Some neighboring countries want to develop nuclear weapons to guarantee their national security in the face of external military threats.

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If China can provide a nuclear umbrella, it can promote the legitimacy of the international system for nuclear non-proliferation and decrease the tension around China caused by nuclear weapons.

While sticking to the basic principle of a no-first-use policy, we should make our nuclear policy more convincing and practical, so as to protect world peace with a more positive attitude.

The author is a scholar at the Beijing Foreign Studies University.

<http://www.globaltimes.cn/content/756348.shtml>

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The Heritage Foundation
OPINION/The Foundry

Senator Jim DeMint: Missile Defense Works

By Michaela Bendikova

January 16, 2013

What do welfare reform and missile defense have in common? Both were gutted under the Obama Administration, says Senator Jim DeMint, who will become Heritage's president in April.

Senator DeMint is correct. President Obama has drastically decreased the funding for the missile defense program since he took office and cut a number of important programs.

In a shameful manner, Obama cancelled plans to deploy a missile defense site in Poland and an X-band radar site in the Czech Republic when he called the Poles on the anniversary of the Soviet invasion. The Obama Administration's fiscal year (FY) 2010 request was \$1.6 billion less than the previous Administration recommended.

Obama cancelled some of the most promising missile defense programs, like the Multiple Kill Vehicle, the Airborne Laser, and the Kinetic Energy Interceptor. These programs were designed to either improve the capability of the existing systems or to provide for boost phase intercept options. The boost phase of a ballistic missile flight is when a missile is the most vulnerable, because it is slow and has not deployed its decoys yet. Only several minutes long, it is also the most challenging phase for the intercept.

The Administration has also not done anything to advance the U.S. space-based missile defense program, which is the best way to protect the country, forward-deployed troops, and allies against the widest spectrum of threats.

The Administration also negotiated the New Strategic Arms Reduction Treaty (New START), which links ballistic missiles and strategic offensive arms and limits missile defenses. The Russians have consistently maintained that this allows them to withdraw from the treaty if the U.S. expands its ballistic missile defense capabilities. Russia also threatened to use nuclear weapons preemptively on U.S. European allies if the Administration proceeds with deployments of the later stages of the European Phased Adaptive Approach (EPAA), its plan for the protection of Europe and eventually the U.S.

In November 2011, Secretary of Defense Leon Panetta said that the EPAA will go away entirely if the sequestration mandated by the Budget Control Act is allowed to take place. If this happens, the Administration will be able to placate the Russians while blaming the defense cuts for reductions to the missile defense program. Such a step would be ill-advised. The threat of a ballistic missile attack is growing, and more than 30 countries possess technologies to make them. North Korea and Iran are openly hostile to U.S. interests. The U.S. must develop a comprehensive layered missile-defense system, including space-based, to protect itself and its allies from this threat.

Michaela Bendikova specializes in missile defense, nuclear weapons modernization and arms control as research associate for strategic issues in The Heritage Foundation's Allison Center for Foreign Policy Studies.

<http://blog.heritage.org/2013/01/16/senator-jim-demint-missile-defense-works/>

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Japan Times – Japan

OPINION/Op-Ed

Thursday, Jan. 17, 2013

China Sets Sights on an 'Outer Space Trump Card'

By MICHAEL RICHARDSON

SINGAPORE — When China destroyed one of its own satellites in space six years ago, it alarmed many other Asia-Pacific countries that have invested heavily in orbiting satellites for telecommunications, Earth observation and scientific research.

China's action caused particular concern in the United States, Japan, Australia, India and other nations that use satellites for defense purposes that can include voice and data communications, surveillance, precise navigation and guidance of bombs and missiles.

In 2008, just over a year after the Chinese test, the U.S. fired a modified ballistic missile defense rocket from a warship to shoot down a malfunctioning American spy satellite about 250 km above the Pacific Ocean. Washington said that the operation was essential to prevent the bus-size craft and its toxic fuel from crashing back to Earth, possibly causing death, injury and damage.

While space has long been used for military reasons, it is not yet a place for stationing weapons — a development that would create a new and highly volatile frontier of international rivalry and geopolitical tensions. Some Western and Asian analysts believe that China may be planning another test of a weapon designed to destroy or damage a satellite in orbit or interfere with its functioning.

The Global Times, an often-nationalistic newspaper published by the People's Daily, flagship of the ruling Chinese Communist Party, said in an editorial on Jan. 6 that the U.S. advantage in space was currently "overwhelming." It pointed out that America had so far refused to negotiate on a treaty to outlaw arms in space that was first proposed by China and Russia in 2008.

Washington says such a treaty could not be verified and that the U.S. needs freedom of action in space. The Global Times said that China therefore needed "an outer space trump card" by showing it could threaten U.S. superiority.

The newspaper added that "against this background, it is necessary for China to have the ability to strike U.S. satellites. This deterrent can provide strategic protection to Chinese satellites and the whole country's national security."

Is the world on the verge of a potential space warfare era in which weapons are based in space with the capability to attack targets there or on the ground?

The U.S. Department of Defense, in its 2012 report to Congress on Chinese military developments, accused China of "developing a multidimensional program to limit or deny the use of space-based assets by adversaries in times of crisis or conflict."

China's test on Jan. 11, 2007, of an anti-satellite (ASAT) weapon to shoot down an aging Chinese weather forecasting satellite in low-earth orbit about 850 km high showed that it had the capability to strike spacecraft in the most widely used satellite traffic belt.

Nearly half of the world's approximately 1020 operational satellites are in low earth orbits, those below 2,000 km. They include spy satellites that need to be relatively close to the surface of the land or sea to take high resolution photographs and other images that are of intelligence and military value.

The Chinese test ended a long period of restraint by the main space users. Only two nations, the former Soviet Union and the U.S., had previously destroyed spacecraft in anti-satellite tests. America's last test was in the mid-1980s.

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As it turned out, China's 2007 ASAT test was not its first, or the last. On Jan. 11, 2010, China fired a similar rocket to the one it used in 2007, but this time as a missile defense test. The intercept occurred at a much lower altitude of about 250 km than the 2007 test and targeted a dummy warhead launched by a ballistic missile instead of a satellite in orbit.

However, there is no technical difference between ASAT interceptors and missile defense interceptors that work above the atmosphere in outer space. For space treaties, the atmosphere is defined to end and outer space to begin at an altitude of 100 km above sea level.

A U.S. State Department cable on China's 2010 test was published by WikiLeaks in March 2011. According to the cable, China carried out flight tests of its direct-ascent anti-satellite interceptor rocket in 2005 and again in 2006.

The Pentagon says that in addition to the direct-ascent anti-satellite weapon that the Chinese military used in 2007 to destroy a satellite, China's counter-space capabilities also include jamming, laser, microwave and cyber weapons.

Its 2012 report to Congress said that over the past two years, China had conducted increasingly complex close proximity operations between satellites, while offering little in the way of transparency or explanation.

China's 2007 test also raised international concerns because the wreckage left more than 3,000 pieces of space debris that are a hazard to operational satellites. Both the satellites and the debris orbit at very high speeds, increasing the risk of collision.

China plans to put many more satellites into low, medium and high orbit above earth, for civilian and military purposes, consolidating its place with the U.S. and Russia as one of the world's three leading space powers.

The 1967 Outer Space Treaty bans the stationing of weapons of mass destruction in space but not anti-satellite weapons.

In an effort to break the deadlock between the U.S. on the one side and China and Russia on the other, the European Union has drawn them and about 40 other countries into negotiations on an international code of conduct for outer space activities.

The EU wants to finalize the voluntary code in 2013. The aim is to limit further space debris, improve international cooperation and create a "peaceful, safe, and secure outer space environment."

Whether such a code, which would not be legally binding, could by itself prevent an arms race in space is doubtful.

However, as China's reliance on orbiting satellites grows to match that of the U.S. and Russia, their mutual interest in stability may prevent conflict in outer space, just as fears of mutually assured destruction have helped to prevent nuclear warfare since 1945.

Michael Richardson is a visiting senior research fellow at the Institute of South East Asian Studies in Singapore.

<http://www.japantimes.co.jp/text/ea20130117mr.html>

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Brookings Institute
OPINION/Research
MEMORANDUM TO THE PRESIDENT
January 17, 2013

Nuclear Arms Control: Another New START

By: Steven Pifer

President Obama has the opportunity — provided that Russian President Vladimir Putin is prepared to engage — to enhance U.S. and global security significantly through further reductions in nuclear arms and a cooperative NATO-



Russia missile defense arrangement. Steven Pifer wrote this memorandum to President Obama as part of Big Bets and Black Swans: A Presidential Briefing Book.

- ***What four non-proliferation objectives should Obama pursue?***
- ***Is there an opportunity for the U.S. and others to ratify the Comprehensive Test Ban Treaty?***
- ***Can renewed nuclear non-proliferation talks improve U.S.-Russia relations?***

New START was one of the key foreign policy achievements of your first term. However, even once it is fully implemented, the United States and Russia will each maintain some 5,000 nuclear weapons, a level that makes little sense 20 years after the end of the Cold War. You have the opportunity — provided that Vladimir Putin is prepared to engage — to enhance U.S. and global security significantly through further reductions in nuclear arms and a cooperative NATO-Russia missile defense arrangement.

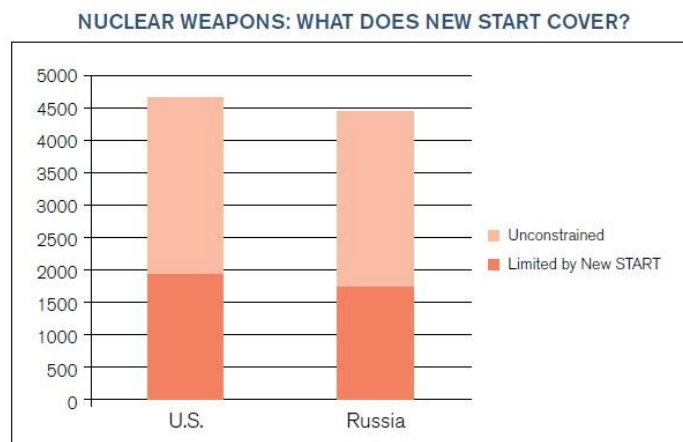
Recommendation:

Your administration should build on the New START Treaty and your 2009 Prague vision, pursuing four objectives:

- Conclusion of a new treaty limiting the United States and Russia each to no more than 2,000-2,500 nuclear weapons, with a sublimit of no more than 1,000 deployed strategic warheads.
- Achievement of a NATO-Russia agreement for a cooperative missile defense of Europe.
- Senate ratification of the Comprehensive Nuclear Test Ban Treaty (CTBT).
- Preparing the ground to multilateralize the nuclear arms reductions process.

Background:

Arms control has made some progress over the past four years, though not as much as we would like. New START's implementation is proceeding smoothly, with the treaty's limits scheduled to take full effect in 2018. A cooperative NATO-Russia missile defense arrangement remains stalled over Moscow's demand for a legal guarantee that U.S. missile defenses not be directed against Russian strategic forces. Even if you were prepared to They have shown little enthusiasm for arms control generally, as evidenced by the fact that the CTBT remains un-ratified.



Your second-term arms control agenda should have four components: negotiation of a new nuclear arms reduction treaty, missile defense cooperation, ratification of the CTBT, and multilateralization of the nuclear arms reduction process.



1. *A New Treaty.* New START covers only 30 percent of the U.S. nuclear arsenal (deployed strategic warheads). You should seek to engage Moscow in negotiation of a new treaty to cover all nuclear warheads — strategic and non-strategic, deployed and non-deployed — with the exception of those in the dismantlement queue (to be dealt with separately). An aggregate limit of 2,000-2,500 warheads would require a 50 percent reduction in the current U.S. and Russian nuclear arsenals. It would be a transformational arms control achievement.

The aggregate limit would create a mechanism under which the United States could trade a reduction in its numerical advantage in nondeployed (reserve) strategic warheads in return for Russia reducing its advantage in non-strategic (tactical) nuclear warheads. Within an aggregate limit of 2,000-2,500 total warheads, there should be a sublimit of 1,000 deployed strategic warheads, covering the weapons of greatest concern. The sublimit would represent a 35 percent cut from the New START limit of 1,550 deployed strategic warheads.

Such reductions would obviate a need for Russia to build back up to the New START limits. That could lead Moscow to cancel its planned new heavy intercontinental ballistic missile (ICBM), which would pose a threat to U.S. ICBMs in their silos while resulting in a more destabilizing force on the Russian side (large numbers of warheads on a relatively small number of vulnerable launchers).

You should reach out to President Putin directly on this. You should aim to conclude a new treaty in 2015, so that it does not have to face a ratification debate in an election year. While negotiating, you should consider early implementation of the New START limits.

NUCLEAR WARHEAD NUMBERS

	U.S.	Russia
Deployed strategic warheads*	~1950	~1750
Nonstrategic warheads	~500	~2000
Non-deployed (reserve) strategic warheads	~2200	~700
Total in arsenals**	~4700	~4500

*Estimated actual numbers, not New START Treaty-accountable numbers

**Numbers do not include retired warheads awaiting dismantlement

2. *Missile Defense.* If Moscow drops its demand for a legal guarantee that U.S. missile defenses are not targeted against Russian strategic forces, the way to a cooperative NATO-Russia missile defense would be open. Your administration could build on ideas already discussed by U.S. military experts, such as transparency, joint exercises, and data fusion and planning/operations centers, both of which would be jointly manned.

You may be able to increase the prospects of a Russian agreement to a cooperative missile defense by offering greater transparency on U.S. programs and plans, including annual declarations and facilitating Russian observation of SM-3 interceptor tests. Your administration should offer the flexibility on U.S. plans, e.g., state that deployment in Europe of the SM-3 Bloc IIB (the interceptor of concern to Russia) could be deferred if Iran is not making progress toward an ICBM capability.

3. *Test Ban.* You should test the possibility of Senate approval of the CTBT. U.S. ratification would encourage others, particularly China, to ratify. A permanent end to nuclear testing would lock in a significant U.S. knowledge advantage.

Arguments in favor of ratification include the success of the stockpile stewardship program, which provides confidence in the reliability of the U.S. arsenal without testing. Improvements in monitoring mean that explosions in excess of 1 kiloton — and in many areas, including North Korea, in excess of .1 kiloton — would be detected (the bomb that destroyed Hiroshima was in the 10-20 kiloton range).

That said, the current testing moratorium, observed by all states except North Korea, is preferable to a failed ratification vote in the U.S. Senate. You should press for a vote only if confident that you have a two-thirds majority in hand.



4. *Multilateralization.* At some point, other nuclear states will need to be brought into the nuclear reduction process. Your administration should work with Moscow to prepare the ground for this.

You will want to approach multilateralization gradually, perhaps by building on the discussions already underway among the UN Security Council Permanent Five. It would be desirable to get third countries to assume a “no increase” commitment in connection with the U.S.-Russian treaty described above. (Their agreement to this would be essential if we seek Russian reductions beyond that treaty.)

A new initiative will advance U.S. interests in a number of ways:

- A new agreement could further reduce the strategic threat to the United States and cut non-strategic warheads that threaten U.S. allies in Europe and Asia.
- Further nuclear reductions would mean having to build fewer systems in the future in order to maintain a modern deterrent. That would save defense resources, particularly when you face expensive decisions on a replacement for the Ohio-class ballistic missile submarine, a new bomber and a new ICBM.
- Further U.S. (and Russian) nuclear reductions can bolster the credibility of American diplomacy on nuclear proliferation. While a new treaty will not change minds in North Korea or Iran, it will strengthen your administration’s ability to secure third-country support to increase pressure and sanctions, at a time of growing tension with North Korea and looming crisis with Iran.
- Further progress on arms control can give a positive impulse to the broader U.S.-Russia relationship, helping to move bilateral relations from their current scratchiness toward a sustainable follow-on to the “reset.”

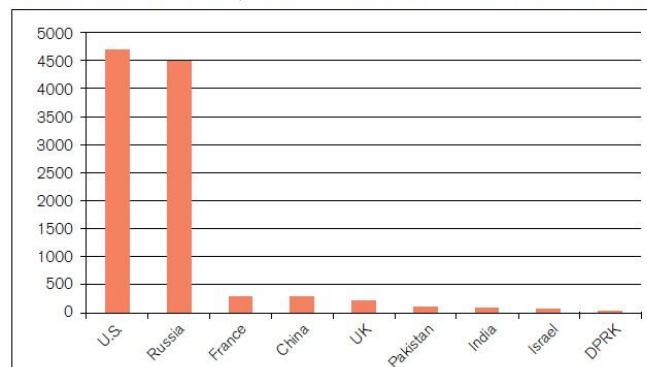
Will President Putin be prepared to deal on further nuclear arms reductions and missile defense cooperation? U.S. advantages in strategic force levels, including in reserve warheads that could be added to the strategic ballistic missile force, give Moscow incentives for a new negotiation. The Russians also likely face budget pressures similar to those confronting the Pentagon. You should raise the new negotiation in your early exchanges with President Putin.

Limiting non-deployed strategic weapons and non-strategic weapons will pose new verification challenges. These are not insurmountable but will require work and creativity.

Attaining a two-thirds vote in favor of ratification for a New START follow-on treaty or CTBT will be difficult, as evidenced by the New START experience in the Senate. The administration — and you personally — will want to engage the Senate early on. While less preferable, if the Senate proves resistant on arms control, you might consider reductions to be made in parallel with reductions by Russia, conducted outside of a formal treaty context.

Third-country nuclear weapons states, particularly China, will resist being drawn into the reduction process as long as U.S. and Russian weapons numbers remain so much larger than theirs. You will have to put this high on your agenda with those countries.

NUCLEAR WEAPONS: U.S., RUSSIA LEVELS VS. THE REST OF THE WORLD





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Conclusion:

Achieving this agenda will not be easy. It will require your direct engagement. But it provides an opportunity to cement your legacy on an issue of key importance for U.S. national security and the future global order.

Steven Pifer is director of the Brookings Arms Control Initiative and a senior fellow in the Center on the United States and Europe. A former ambassador to Ukraine, Pifer's career as a foreign service officer centered on Europe, the former Soviet Union and arms control.

<http://www.brookings.edu/research/papers/2013/01/nuclear-arms-control-another-new-start>

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The Moscow Times – Russia

OPINION

Beware of 2nd Nuclear Age

18 January 2013, Issue 5049

By Paul Bracken

North Korea's launch of a long-range missile in mid-December was followed by a flurry of global condemnation that was almost comical in its predictability and impotence. But the launch underscored a larger reality that can no longer be ignored: The world has entered a second nuclear age. The atomic bomb has returned for a second act, a post-Cold War encore. This larger pattern needs to be understood if it is to be managed.

The contours of the second nuclear age are still taking shape. But the next few years will be especially perilous because newness itself creates dangers as rules and red lines are redefined. This took at least 10 years in the first nuclear age, and this time may be no different.

In the Middle East, South Asia and East Asia, old rivalries now unfold in a nuclear context. This has already changed military postures across the Middle East. Part of the Israeli nuclear arsenal is being shifted to sea, with more atomic warheads being placed on submarines to prevent their being targeted in a surprise attack. Israel is also launching a new generation of satellites to provide early warning of other countries' preparations for missile strikes. If Iran's mobile missiles disperse, Israel wants to know about it immediately.

Thus, the old problem of Arab-Israeli peace is now seen in the new context of an Iranian nuclear threat. The two problems are linked. How would Israel respond to rocket attacks from Gaza, Lebanon or Egypt if it simultaneously faced the threat of nuclear attack by Iran? What would the U.S. and Israel do if Iran carried its threat to the point of evacuating its cities or placing missiles in its own cities to ensure that any attack on them would cause massive collateral damage?

Pakistan has doubled the size of its nuclear arsenal in the last five years. Its armed forces are set to field new short-range tactical nuclear weapons. India became the latest country after the U.S., Russia and China to become a nuclear-triad power — that is, to deploy nuclear weapons on bombers, missiles and submarines. Moreover, India tested an intercontinental ballistic missile last year, giving it the ability to hit Beijing and Shanghai. Finally, India almost certainly has a multiple-nuclear-warhead weapon in development and has also launched satellites to aid its targeting of Pakistan's forces.

In East Asia, North Korea has gone nuclear and is set to add a whole new class of uranium bombs to its arsenal. It has rehearsed quick missile salvos, showing that it could launch attacks on South Korea and Japan before any counterstrike could be initiated.

China, too, is shifting its nuclear forces to mobile missiles and submarines. These weapons can be put on alert in a way that would be highly visible to U.S. satellites and the global media. Thus, the Chinese can easily "nuclearize" a crisis

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with the U.S. or anyone else. They do not have to detonate a nuclear weapon but only alert adversaries to the dramatic increase in the political stakes and dangers of a showdown.

Russia, not wanting to be left out of the act, recently staged the largest nuclear exercises in decades to remind everyone that it remains a serious nuclear player, too.

These individual developments are troubling. But they cannot be understood in isolation from the larger multipolar system of major powers that is forming. To a great extent, this is a nuclear multipolar system. Possessing nuclear weapons contributes to a country's global status as a major power.

To better understand this principle, consider the following question: When was the last time the U.S. or anyone else seriously proposed that India sign the Nuclear Non-Proliferation Treaty, which would force India to give up the bomb. Given the United States' economic problems and looming defense cuts as well as growing Chinese power, there is no longer even a remote possibility that this demand will be made. India has become an accepted, legitimate member of the nuclear club. It is even less likely that China or Russia would disarm for the sake of a nuclear-free world.

But the most urgent problem stems from the breakdown of major countries' onetime nuclear monopoly and the empowerment of smaller countries like North Korea, Pakistan, Israel and possibly Iran. A new set of rules for diplomacy, military strategy and arms control is needed to stabilize this emerging nuclear order. Pretending that it does not exist is not a strategy.

Paul Bracken, professor of management and political science at Yale University, is author of "The Second Nuclear Age."
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<http://www.themoscowtimes.com/opinion/article/beware-of-2nd-nuclear-age/474148.html>

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