#### Arms control measures left tons of highly enriched uranium and plutonium. Plutonium disposition is covered under a separate agreement, the PMDA. This agreement was signed in 2000 but protocols were only brought into force in 2011.

DTIRP 12 DEFENSE TREATY INSPECTION READINESS PROGRAM 2012 Plutonium Management and Disposition Agreement (PMDA) <http://dtirp.dtra.mil/tic/synopses/pmda.aspx>

The Plutonium Management and Disposition Agreement (PMDA), [long title: Agreement Between the Government of The United States Of America and the Government of The Russian Federation Concerning the Management and Disposition of Plutonium Designated as no Longer Required for Defense Purposes and Related Cooperation] is designed to make arms reductions irreversible by ensuring that the United States and Russia transparently dispose of weapons-grade plutonium from their respective defense programs and, thereby, prevent the plutonium from ever being reused for weapons or any other military purpose.

Under the PMDA the United States and Russia each agreed to dispose of no less than 34 metric tons of weapons-grade plutonium by converting it into fuel for use in civil reactors that produce electricity. Combined, this represents enough material for approximately 17,000 nuclear weapons. The PMDA also provides that additional weapons-grade plutonium declared in excess as arms reductions go forward should be disposed of under the same or comparable transparency terms.

In 2006, Russia announced its nuclear energy strategy. This strategy was incompatible with the 2000 PMDA. In 2007, Russia provided clarification of its preferred approach to the disposition of weapons-grade plutonium. This clarification served as the basis for updating the PMDA via the protocol signed on April 13, 2010 by U.S. Secretary of State Hillary Clinton and Russian Foreign Minister Sergey Lavrov. The 2010 protocol enables each party to proceed with completing and operating the facilities needed to depose of weapons-grade plutonium. These facilities will use the plutonium to produce electricity for civilian purposes.

In December 2010, the U.S. Deputy Secretary of Energy and the Russian Director General for the State Corporation "Rosatom” issued the Joint Statement on the Results of the Nuclear Energy and Nuclear Security Working Group Meeting, including the intent to create milestones by February 2011 for bringing the PMDA into force. On May 20, 2011, Russia's State Duma ratified the PMDA and its Protocols. Russian President Dmitry Medvedev approved the amendments to the PMDA on June 7, 2011. On July 13, 2011, Secretary Clinton and Foreign Minister Lavrov exchanged diplomatic notes in Washington, D.C., bringing the PMDA and its Protocols into force.

#### To uphold treaty obligations, the U.S. committed to use MOX – a mixed oxide fuel blending uranium with plutonium. Irradiation of MOX in a nuclear reactor is critical to making the fuel impossible to weaponize in the future – the Russians require MOX to be burned as part of the agreement.

Wolfe 12 [Clinton R. Wolfe, Ph.D.](http://m.chronicle.augusta.com/authors/clinton-r-wolfe-phd) executive director of Citizens for Nuclear Technology Awareness and formerly chaired the Technical Advisory Panel to the U.S. Department of Energy’s Plutonium Focus Area. Sunday, Nov. 18, 2012

MOX is the right course http://m.chronicle.augusta.com/opinion/opinion-columns/2012-11-18/mox-right-course

As a result of that initiative, high-enriched uranium, which had been in Soviet weapons targeting the United States and our allies, was sold to the United States and blended down to make low-enriched uranium for fuel for U.S. nuclear reactors.

After the dissolution of the Soviet Union, the Clinton administration made treaty obligations with the Russians in 1993 to convert weapons of mass destruction into energy for peaceful purposes – an initiative dubbed “Megatons to Megawatts.”

FULLY 50 PERCENT of our nuclear-generated electricity in recent years, or 10 percent of our total electricity generation in the United States, derives from former Soviet weapons. Negotiations between the United States and Russia as to the fate of plutonium-based weapons material resulted in 2000 in a plutonium management and disposition agreement, in which each country committed to dispose of 34 metric tons of plutonium.

The Russians were aware that many approaches that might environmentally immobilize the plutonium in some relatively intractable matrix, such as a ceramic puck, still left the plutonium in a form that could be processed and recovered for use in weapons if we ever changed our minds. All options for disposition of plutonium were multibillion-dollar projects, and in the end all options but one led to very expensive nonproliferation safeguards and security measures ad infinitum.

That one option was MOX. Exposure of the plutonium in a nuclear reactor fuel cycle changes the nature of the plutonium in such a way as to render it unattractive for use in a nuclear weapon.

In addition to the obvious benefit of reducing the attractiveness of the plutonium for weapons, thereby reducing concerns over proliferation and many of the costs associated with safeguards and accountability, MOX provides additional benefits. Thirty-four metric tons of plutonium can provide electricity for a million homes for 50 years, a product worth tens of billions of dollars.

NO OTHER OPTION has any cost recovery component, so MOX embodies the benefits of disposing of the weapons threat, creating clean electricity for 50 million homes, recovering at least partial cost of the program, eliminating the permanent costs of safeguarding the material, and representing an accomplishment achieved by two nations who were near nuclear war – allowing them to step back from the brink of unthinkable destruction and to instead use those instruments of war for peaceful purposes.

We made the right choice. We are more than halfway to completion of the MOX facility, and changing course would be much more expensive than staying the course. We need to demonstrate our commitment to our treaty obligations and bask in the comfort of knowing that mankind can make decisions of this importance and actually pull them off.

You see, the only things from hell are the uses that man chooses for the elements.

#### The US will be unable to fulfill this commitment because no reactors have agreed to use the fuel

Russell 13 Pam Radtke Russell February 11, 2013 Engineering News-Record HEADLINE: DOE Nuclear-Fuel Plant Backers Seek To Avoid Cuts In Project Budget lexis

Supporters of the Dept. of Energy's mixed-oxide-fuel (MOX) fabrication facility under construction in South Carolina are trying to save the $4.8-billion project from being tabled by mandatory spending cuts under the coming sequestration or reductions in the upcoming White House fiscal 2014 budget.

The project, being built by Areva Shaw MOX Services, is expected to be $1 billion to $2 billion over its budget, and DOE has no takers for its end product: fuel for commercial nuclear reactors. Rep. Joe Wilson (R-S.C.) has drafted a letter to the White House asking the administration to consider the national-security consequences of shutting the half-built project.

#### The technology is not an issue. Reactor use is purely an economic matter.

Fleischauer 12 Eric Fleischauer 9-14-12 Decatur Daily MOX or not? Gov’t likes weapons fuel, public doesn’t

http://www.decaturdaily.com/stories/MOX-or-not-Govt-likes-weapons-fuel-public-doesnt,102677

Preston Swafford, chief nuclear officer at TVA, said he believes MOX would be safe in reactors. He said he has no interest in the fuel, however, until Browns Ferry has resolved its operational issues.

“I’m not saying we’re not going to play. I’m not saying we are,” Swafford said Wednesday. He did not attend the hearing. “It’s just so low on my radar screen that I refuse to jump in the fray. I don’t think I do service to the ratepayers of the Valley bringing on one more issue. Now three or four years from now, when the fleet’s back to steady, we’ll take a look at the product.”

Golden said TVA would use MOX only if it decides it’s safe, if the Nuclear Regulatory Commission approves it and if it saves money for ratepayers.

“It has to be cheaper for our customers. Significantly cheaper,” Golden said. “We’re not talking millions or even tens of millions, we’re talking hundreds of millions of dollars in savings. Otherwise, we’re not going to play in the game.”

#### financial incentives are needed to offset the costs

Lyman 2 Edwin S. Lyman, Nuclear Control Institute February 22, 2002 THE REVISED PLUTONIUM DISPOSITION STRATEGY: DOES HOUSE OF CARDS <http://www.nci.org/02NCI/02/pr22502-memo.htm>

The details of how DOE/NNSA intends to carry out the amazing feat of locating three or even two additional reactors for the MOX program without causing any delays to the existing schedule --- and reducing the overall cost of MOX irradiation by several hundred million dollars to boot --- were not discussed in the Report to Congress. As mentioned above, the North Anna plant in Virginia was originally part of the plutonium disposition program, but its owner, Dominion Resources, dropped out in April 2000, in what was described as a business decision. Part of the reason for this was the fact that North Anna would have required additional control rods or modification of the existing control rods to accommodate a 40% MOX loading, which would have been costly. It is highly unlikely that Dominion could be persuaded to participate again in the controversial MOX program without significant economic incentives.

#### The federal government must make a commitment to incentives to get reactor use

Energy Washington Week 10 EnergyWashington Week April 14, 2010 SECTION: Vol. 7 No. 15 HEADLINE: DOE Seeking Agreements With Utilities To Use MOX Fuel In Nuclear Plants

DOE is working to develop agreements with utilities for the purchase of mixed oxide (MOX) fuel, a byproduct of weapons-grade plutonium, to be used for powering domestic nuclear reactors. But the Government Accountability Office (GAO), in a recent report, says utilities have "expressed little interest" in the effort because they are unsure about congressional funding for the program, as well as delays in the construction of MOX-processing facilities and delivery of the fuel.

#### Now funding for the subsidy is being cut and the agreement is in jeopardy

Roff 13 Peter Roff, February 8, 2013 Friday USNEWS.com SECTION: OPINION; Peter Roff; . HEADLINE: Is Obama Failing to Keep Nuclear Materials Out of Terrorists' Hands? lexis

The United States is building a MOX facility at the Energy Department's Savannah River Site in Aiken, S.C., where surplus plutonium currently stored--and guarded at a cost of tens of millions of dollars annually--will be converted into a form that can be burned in civilian nuclear reactors. Not only does this dispose of existing plutonium so that it can never be used by terrorists in a crude nuclear weapon, it will fuel low cost electricity production that will benefit many Americans. On the surface it's a great solution to two different, difficult problems,

Up to now the MOX program has been supported by Presidents Clinton, George W. Bush and now Obama, and the Congress. In 2010, Obama called the MOX Program "real progress in building a safer world."

"In a major and welcomed development, Russia announced that it will close its last weapons-grade plutonium pro-duction reactor. After many years of effort, I'm pleased that the United States and Russia agreed today to eliminate 68 tons of plutonium for our weapons programs--plutonium that would have been enough for about 17,000 nuclear weap-ons. Instead, we will use this material to help generate electricity for our people," the president said.

[See a collection of political cartoons on energy policy.]

Disposing of plutonium is the only way to strengthen nuclear security for good. Last year, an 82-year-old nun and two other antinuclear activists broke into one of the government's most secure nuclear material storage facilities. They vandalized the side of a building holding nuclear material, and wrapped it in crime scene tape. It's lucky they only em-barrassed the Y-12 National Security Complex and the Department of Energy's National Nuclear Security Administra-tion. If they had been terrorists on a mission to steal nuclear material to use in a bomb or on a suicide mission to explode nuclear material the results would have been catastrophic.

Now, however, there are some in the Obama administration who want to slow or eliminate the MOX program and use its funding for other things. This many be pennywise but it is almost certainly pound foolish. Ending MOX so that the green energy fantasy can continue to be funded is muddle-headed policy at best. What good is another Solyndra, especially if it increases--however slightly--the chance that a major American city might be leveled by a crude nuclear bomb?

If the Obama administration cuts funding for the efforts to dispose of plutonium and the MOX program, then the Russians will walk away from the agreement. That will result in not only huge amounts of plutonium not being guarded; it will allow the Russians to potentially reuse this plutonium in new nuclear weapons and allow them to start producing more plutonium again

[Photos: Vladimir Putin's Unusual Adventures]

In a recent bipartisan letter to President Obama, South Carolina Republican Rep. Joe Wilson, South Carolina Dem-ocrat Rep. Jim Clyburn, and four others wrote,

We must stay the course on the MOX Project and create a pathway to safely and responsibly dispose of this excess weapons-grade plutonium. It is our opinion that a failure to complete the MOX facility will lead to a world with more weapons-grade plutonium than necessary--creating additional and unnecessary risk that such material will be stolen or diverted to malicious purposes...It is our responsibility to honor our part of the agreement to ensure Russia upholds their end.

Will President Obama and his administration keep our end of the bargain and make sure the Russians keep theirs? Let's hope politics doesn't enter into this issue and slow or defund the MOX project, for the sake of us all.

#### PLAN-

#### The United States federal government should provide financial incentives for energy production using fuel fabricated with plutonium from dismantled nuclear weapons at a rate compatible with the Plutonium Management and Disposition Agreement. For this energy production, the United States federal government should waive fuel testing requirements, contract companies to provide fabricated fuel, and automatically grant license amendments.

#### ADVANTAGE 1: Terrorism

#### Diversion of weapons plutonium is a serious risk

Kang, et al 2 J. Kang, Seoul, South Korea.; F.N. von Hippel and R. Nelson, Program on Science and Global Security, Princeton; A. MacFarlane, Security Studies Program, MIT Science and Global Security, 10:85–101, 2002 Storage MOX: A Third Way for Plutonium Disposal? <http://www.princeton.edu/sgs/publications/sgs/pdf/10_2kang.PDF>

There are few physical barriers to the quick use of separated plutonium for nuclear weapons. This is why a U.S. National Academy of Sciences (NAS) report has described the United States and Russian stockpiles of excess weapons plutonium as “a clear and present danger to national and international security.”1 Similarly, a Royal Society report on the United Kingdom’s very large stockpile of separated civilian but weapons-usable plutonium concluded that, even in stable Britain, “the chance that the stocks of plutonium might, at some stage, be accessed for illicit weapons production is of extreme concern.”2 There is, consequently, a developing consensus that plutonium cannot be left indefinitely in separated form. It must be made less accessible for weapons use.

Nuclear weapons would be used

BBC 10 BBC News 13 April 2010 Russia and US to dispose of tonnes of surplus plutonium <http://news.bbc.co.uk/2/hi/americas/8618066.stm>

Closing the summit, US President Barack Obama said participants had agreed to secure all the world's vulnerable nuclear material within four years.

Leaders at the 47-nation summit also pledged to take action to prevent terrorist groups obtaining nuclear material, Mr Obama said.

The US president said the four-point plan reached at the summit would make a real contribution to a safer world.

The final communique calls on the 47 nations to work together to prevent nuclear material falling into the hands of "non-state actors".

Earlier, he said: "Terrorist networks such as al-Qaeda have tried to acquire the material for a nuclear weapon and, if they ever succeed, they would surely use it."

"Were they to do so, it would be a catastrophe for the world, causing extraordinary loss of life and striking a major blow at global peace and stability," he added.

#### MOX reduces risk – it's linear

Reilly 13 BILL REILLY, a retired colonel, formerly headed the U.S. Army's reactor program. Sunday, July 1, 2012 Updated: Tue Jan 29, 2013. MOX offers a nuclear power boost http://www.columbiatribune.com/commentary/op-ed/mox-offers-a-nuclear-power-boost/article\_4075b9c4-bd1c-5f22-99fb-0783224782cf.html#.USB3wmfQaSo

Disposing of excess weapons material has been a longstanding goal of the U.S. government. What's behind it is concern that plutonium and another weapons material, highly enriched uranium, could be stolen from stockpiles of dismantled Russian nuclear warheads and sold on the black market to rogue governments or terrorist groups.

A separate agreement with Russia has resulted in the down-blending of nearly 500 metric tons of Russia's excess highly enriched uranium into reactor fuel for use in U.S. nuclear plants. Today, half of the electricity generated at nuclear plants in the United States is produced with fuel derived from dismantled Russian warheads that were once aimed at U.S. targets.

Although the agreement on plutonium covered only a fraction of the stockpiles in both countries, it demonstrates the value of turning megatons into megawatts. Once plutonium is converted into MOX, it no longer is useful for weapons production. As more and more weapons plutonium is destroyed, the risk that some of it might fall into the wrong hands will lessen.

MOX fuel must be burned to completely eliminate the security risk

Skutnik 12 Steve Skutnik, assistant professor of Nuclear Engineering at the University of Tennessee. 9-10-12

The Neutron Economy Wading into the "nuclear zombie" horde

<http://neutroneconomy.blogspot.com/2012/09/wading-into-nuclear-zombie-horde.html>

The NNSA proposal works along the same lines - take what is currently a weapons-grade asset and blend it down (in this case, convert the plutonium into an oxide powder and blend it to about a 4% mixture with uranium) and then burn it in reactors. The advantage to this approach is relatively straightforward: by burning the plutonium in reactors, the plutonium isotopic makeup becomes "scrambled" - basically rendering it useless for weapons, even if it were ever recovered from the spent MOX fuel. Further, the irradiated fuel adds a second physical barrier to theft and diversion - namely that now this material is now trapped inside a highly radioactive fuel rod. (The treaty agreement likewise forbids the two countries from reprocessing the spent MOX fuel for several decades.)

#### Less plutonium in storage makes security easier for that remaining

Bunn 7 Matthew Bunn, senior research associate in the Managing the Atom project at Harvard University's Kennedy School of Government. Previously, he served in the White House Office of Science and Technology Policy He was the study director for the two-volume National Academy of Sciences study Management and Disposition of Excess Weapons Plutonium April 2007 Arms Control Today "Troubled Disposition: Next Steps in Dealing With Excess Plutonium"

http://www.armscontrol.org/print/2326

In principle, disposition of these large stocks—physically transforming them into forms that would be difficult and costly to recover for use in nuclear weapons—could also decrease the risk that some portion of them could be stolen and fall into the hands of terrorists or proliferating states. The British Royal Society warned in 1998 that even in an advanced industrial state such as the United Kingdom , the possibility that plutonium stocks might be “accessed for illicit weapons production is of extreme concern.”[2] This risk, however, is not closely related to the total size of the nuclear material stockpiles, as a building containing one ton of weapons-usable nuclear material poses effectively the same theft risk as a building containing ten tons of such material. If the goal is to reduce the risk of nuclear theft, the first priority should be to remove the nuclear material entirely from as many small, vulnerable facilities as possible and then to beef up security at the remainder.

A disposition program that removed the material from a substantial number of potentially vulnerable buildings could reduce the risk of nuclear theft, but a program that only removed one-quarter of Russia 's excess plutonium stock and only removed some of the plutonium at each location would do little to reduce the risk of nuclear theft and terrorism.

#### Use as fuel encourages better Russian security

SCOWCROFT and PONEMAN '1 Brent Scowcroft, former national security advisor to President Ford and former President Bush, is president of an international consulting firm. Daniel Poneman, who served on the National Security Council staffs of Bush and President Clinton, is a principal in the company October 31, 2001 Los Angeles Times

From Plutonium to Plowshares <http://articles.latimes.com/2001/oct/31/local/me-63602>

Integrating plutonium from weapons into the marketplace would give Russia an incentive to ensure that these materials are protected and accounted for as a revenue-generating asset, rather than depending on continued U.S. handouts for safe storage.

Adding a commercial component to burning plutonium also would free more public money for other fronts in the war against terrorism.

#### Efforts to reduce terrorism strengthen the nuclear taboo and reduce the risks of war

Bin 8 Prof. Li Bin, leading Chinese expert on arms control and is currently the director of Arms Control Program at the Institute of International Studies, Tsinghua University. AND Nie Hongyi, officer in the People’s Liberation Army with an MA from China’s National Defense University and a Ph.D. in International Studies from Tsinghua University This is a translation by Gregory Kulacki of an article published in Chinese in World Economics & Politics, No. 2, 2008. pp.13-19. An Investigation of China – U.S. Strategic Stability <http://www.ucsusa.org/assets/documents/nwgs/Li-and-Nie-translation-final-5-22-09.pdf>

The nuclear taboo is a kind of international norm and this type of norm is supported by the¶ promotion of the norm through international social exchange. But at present the increased threat¶ of nuclear terrorism has lowered people’s confidence that nuclear weapons will not be used.¶ China and the United States have a broad common interest in combating nuclear terrorism. Using¶ technical and institutional measures to break the foundation of nuclear terrorism and lessen the¶ possibility of a nuclear terrorist attack can not only weaken the danger of nuclear terrorism itself¶ but also strengthen people’s confidence in the nuclear taboo, and in this way preserve an¶ international environment beneficial to both China and the United States. In this way even if¶ there is crisis in China-U.S. relations caused by conflict, the nuclear taboo can also help both¶ countries reduce suspicions about the nuclear weapons problem, avoid miscalculation and¶ thereby reduce the danger of a nuclear war.

#### ADVANTAGE: Russian relations

#### Breaking the agreement would be a severe blow to relations

#### The PMDA is crucial to broader cooperation

Digges 6 [Charles Digges,](http://www.bellona.org/persons/1140449402.92)  The Bellona Foundation (an international environmental NGO based in Norway) 20/09-2006

US and Russia sign protocol to continue plutonium disposition plan <http://www.bellona.org/articles/articles_2006/liability_protocol>

The United States and Russia have resolved a long-standing major hurdle paving the way to dispose of tons of excess plutonium in a protocol announced Friday concerning a liability issue that has long stymied the programme, the US Department of State said. But a lack of Congressional funding for the programme, and Russian flip-flopping over how the programme should proceed still threaten to derail the non-proliferation project indefinitely.

Negotiations on the new liability protocol had been completed by the end of 2005, a State Department spokesman said, but the information was not released to the public until just last week.

The liability issue had held up any progress on the controversial Plutonium Disposition Agreement of 2000, signed by former US President Bill Clinton and Russian President Vladimir Putin since September 2003. The programme envisions converting 68 metric tons – 34 tons from Russian and 34 from the United States – of surplus weapons-grade plutonium into mixed oxide, or MOX, fuel for burning in conventional reactors.

This process theoretically would render any plutonium resulting in the waste useless for weapons purposes. The slated amount of plutonium to be converted is equal to the amount needed to create 16,000 nuclear weapons. But Russia has recently expressed that is does not wish to convert its plutonium to MOX.

Environmentalists and non-proliferation experts have critisised the plutonium disposition programme as being dangerous, as it entails the use of MOX, which, before burned, contains four percent pure weapons-grade plutonium that could easily fall into the wrong hands during transport. It is also, by the US Department of Energy’s (DOE’s) own admission, more expensive than alternative disposal methods.

In all, the U.S. is believed to have about 100 metric tons of plutonium and Russia about 145 metric tons.

Shifts in Liability

Under the original Cooperative Threat Reduction (CTR) programme initiated in 1992, Russia bore complete liability for any accidents taking place during CTR funded nuclear remediation and clean up projects.

But a limited exception under the new protocol now stipulates that Russia would not be liable for damages resulting from deliberate wrongdoing on the part of a US employee or contractor, State Department spokesman Sean McCormick said in a statement.

McCormack added that signing the protocol also would have "significant benefits for other cooperative programmes between the United States and Russia," and that important nonproliferation and security discussions were proceeding on the basis of it.

These include US Department of Energy (DOE) programmes to retrain Russian weapons scientists for peaceful work – a programme that also hit a brick wall in the 2003 liability disagreement between Moscow and Washington.

Robert Joseph, under secretary of state for arms control and international security, signed the new protocol for the United States, and Russian Deputy Foreign Minister Sergei Kislyak signed for his government.

"Signing this protocol with our Russian partners formally resolves the issue of what liability framework would apply for cooperation … to eliminate this dangerous material from Russian and U.S. stocks," National Nuclear Security Administration (NNSA) chief Linton Brooks said.

#### The structure of cooperative arrangements is crucial to Russian participation – The PMDA is a model for cooperative structure

Belfer Center 13 Harvard Belfer Center Programs or Projects: The US-Russia Initiative to Prevent Nuclear Terrorism February 8, 2013 Russia in Review: a digest of useful news from U.S.-Russia Initiative to Prevent Nuclear Terrorism for February 1-8, 2013. http://belfercenter.hks.harvard.edu/publication/22743/russia\_in\_review.html

Russia is willing to build interaction with Washington on the disposal of its weapons of mass destruction “on a different and more modern contractual legal basis” after the expiration of the Nunn-Lugar program, Russian Foreign Ministry spokesman Alexander Lukashevich said. (Interfax, 02.05.13).

Citing a source in the Russian delegation at the Munich Security Conference, the Russian newspaper Kommersant on Monday reported that Russia may sign an extension of the Cooperative Threat Reduction Program. The source said that one model for the new agreement could be the protocol signed by U.S. and Russian diplomats in 2010 to amend the 2000 Plutonium Management and Disposition Agreement. The 2010 protocol requires both sides to assume equal financial obligations and to “divide responsibilities in a fair way,” the source said. The source also said the Russian side would like to limit Americans’ access to a number of facilities. U.S. Undersecretary of State Rose Gottemoeller would like to make progress towards crafting a concrete accord when she visits Moscow this month. However, the Russian side will “do nothing in haste” this time, the Russian delegation source said. (Kommersant, RIA Novosti, 02.04.13).

#### Cooperation on PMDA trumps other disagreements

Cherenko 13 Yelena Chernenko, Kommersant February 5, 2013 Russia beyond the headlines http://rbth.ru/international/2013/02/05/russia\_us\_may\_sign\_a\_new\_arms\_disposal\_agreement\_22517.html

Russia may sign a new agreement with the U.S. for cooperation in the disposal of obsolete weapons and in the non-proliferation of weapons of mass destruction, to replace the Nunn-Lugar program. By strengthening cooperation in the spheres where their interests coincide, Russia and the U.S. might heal some of the recent cracks in their relations.

The United States wants to bring its relations with Russia back on track, U.S. Vice President Joe Biden told Russian Foreign Minister Sergey Lavrov. Washington proposes starting the normalization of relations with practical cooperation in spheres that do not give rise to controversy. One such sphere is the non-proliferation of weapons of mass destruction.

Lavrov and Biden met on the fringes of the annual international security conference in Munich, which the Russian foreign minister regularly attends. The American vice president last attended the Munich conference in 2009, when he called on Moscow “to press the reset button.”

In his speech this time around, Biden said that the reset had not been in vain, recalling the signing of the START treaty, the peaceful nuclear energy agreement, Russia’s accession to the WTO, the creation of a bilateral presidential commission, cooperation on Afghanistan, as well as cooperation on the Iran and North Korean nuclear problems.

At the same time, Biden said that the U.S. would “never recognize” the sovereignty of Abkhazia and South Ossetia and would not agree to individual countries having special spheres of influence. He listed other topics on which the U.S. and Russia differ, including Syria, ABMs, NATO expansion, democracy and human rights.

Lavrov, in his turn, also reproached the U.S. for applying double standards during the Arab Spring, in addition to accusing the U.S. of seeking to build NATO-centric relations in Europe, “exploiting the thesis of the Russian threat,” and “artificially dividing integration projects into ‘good’ and ‘bad’ ones.”

It would seem that, after this exchange of mutual accusations, there would have been a lot of plain talking during the Biden-Lavrov meeting. All the more surprising, therefore, was the Russian minister’s controlled statement after the meeting.

“We drew the U.S. vice president’s attention to the fact that they have made some moves that our public opinion received with dismay,” Lavrov said, apparently referring to the Magnitsky Act recently adopted by the U.S. Congress. “We hope there will be no more causes for that.”

A source in the Russian delegation explained Lavrov’s optimism: Biden told the foreign minister that the U.S. would like to put its relations with Russia “back on track” and was thinking about how to do it.

Lavrov was obviously in the mood for compromise after his meeting with Biden. “Both sides understand that, alongside the differences, we have many interests in common,” said Lavrov.

One such interest is in the non-proliferation of weapons of mass destruction (WMD). The Russian authorities decided not to extend the Nunn-Lugar program, which expires in June 2013. Under the program, excessive Russian nuclear warheads and obsolete strategic missiles have been disposed of since the early 1990s, with the U.S. paying the cost. Moscow says it no longer requires these subsidies.

Meanwhile, the source in the Russian delegation explained that Moscow might sign a new agreement with Washington in this field, on the condition that “it is based on equality and meets modern realities.”

The source said an example could be the 2002 agreement on plutonium disposal, which was updated in 2010 and whereby both sides share the cost and responsibility fairly. Under the Nunn-Lugar program, the American contractors hired to work in Russia bear no responsibility for any accidents or emergencies they might cause. When signing the new agreement, Moscow would like to limit U.S. access to some facilities.

#### Failure to abide by the PMDA loses all these cooperative benefits and destroys credibility in all cooperation

Wolfe 11 Clint Wolfe, executive director of Citizens for Nuclear Technology Awareness, and formerly chaired the Technical Advisory Panel to the Department of Energy's Plutonium Focus Area.) July 6, 2011 The Augusta Chronicle - Augusta GA

Examine big picture of MOX mission http://www.c-n-t-a.com/letters.htm#AC1107

I would like to first consider his reference to cost vs. the alternative. The decision to make MOX fuel out of weapons-grade plutonium was reached after considering numerous disposition paths. Each of the alternatives had financial, technical or political shortcomings. Discussions with the Russians over how to dispose of plutonium became necessary after agreements between our countries in 1993 that provided for the dismantling of U.S. and Russian nuclear weapons.

Reciprocity was a given as a matter of trust, and the Russians would not consider treating highly enriched uranium and plutonium as wastes. They maintained, and correctly so, that these materials were valuable sources of energy. As a consequence, blend-down of highly enriched uranium from former Soviet nuclear weapons that were aimed at us and our allies now provides 50 percent of our nuclear generated electricity in the United States today.

This agreement already has netted a huge economic benefit to the United States and to any country with nuclear-generating capacity, as the cost of uranium for fuel has been moderated by this huge supply from the Russian and U.S. arsenals.

The plutonium portion of the weapons agreements was slower in coming to fruition, but each country committed to an initial disposition of 34 metric tons with more possibly to follow. This represents about 50 percent of all the weapons-grade plutonium ever produced in the United States. Conversion of this material into mixed-oxide fuel will power a million homes for more than 50 years, and that energy is worth tens of billions of dollars.

Choosing to delay or cancel the MOX project would require revisiting all the old alternatives, including surveillance, and all of them cost a lot of money. Add to that the potential for our treaty partners to take exception to our reneging, and we introduce the possibility of the loss of credibility in a crucial area of our foreign policy. The Russians were suspicious of proposed disposition paths that left the plutonium in a recoverable state.

So a big-picture look at the MOX project reveals advantages that can't be measured in mere dollars and cents. The project has helped kick-start a dormant nuclear manufacturing supply chain whose rebirth is a must if we are to build the next generation of nuclear power plants.

MOX represents the culmination of two superpowers stepping back from the unthinkable and converting an awesome amount of potential destruction into energy, while rendering the plutonium unusable for weapons for all time.

This modern example of "swords to plowshares" is an amazing achievement in our foreign policy and how we interact with our former adversary. Trashing that accomplishment in the name of tight budgets would be penny-wise and pound-foolish

#### Cooperation on nuclear energy creates a constituency for good relations that can override other disagreements

Weitz ’12 (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. World Politics Review Senior Editor, “Global Insights: U.S.-Russia Arms Control Prospects Under Putin”, World Politics Review, 3-6-2012, [http://www.worldpoliticsreview.com/articles/11681/global-insights-u-s-russia-arms-control-prospects-under-putin)](http://www.worldpoliticsreview.com/articles/11681/global-insights-u-s-russia-arms-control-prospects-under-putin%29)

Finally, Russians are eager to work on civilian nuclear energy cooperation with the United States. The two sides’ [recently ratified 123 agreement](http://www.worldpoliticsreview.com/trend-lines/7701/global-insider-u-s-russia-123-agreement) allows Russian and U.S. firms to cooperate to produce new types of civilian power reactors that would be less prone to proliferation than existing models. Such collaboration could prove very useful in helping develop new commercial stakeholders in both countries that have an interest in maintaining good Russian-U.S. relations. The economic relationship between Russia and the United States remains relatively undeveloped, since Americans buy Russia’s main exports -- oil, gas and weapons -- elsewhere, while various impediments hobble mutual investments. At present, the constituencies favoring strong bilateral ties in both countries are small, consisting mainly of arms control advocates and foreign policy experts.   
As a result, the Russian-U.S. agenda is still dominated by Cold War-type issues, including nuclear arms control,which position the two parties in an adversarial relationship. Only by moving away from this orientation can both sides begin to overcome the mutual confidence gap that exacerbates many of their other differences. Though Putin’s return to the presidency could augur a hard line on a number of issues where the U.S. and Russian positions diverge, his pragmatism and opportunism could lead to progress in the areas where the two sides’ interests overlap.

Relations are critical to preventing conflict in global hotspots  
Nixon Center ‘3 (“Advancing American Interests and the U.S.-Russian Relationship: INTERIM REPORT,” SEPTEMBER 2K3 [HTTP://WWW.NIXONCENTER.ORG/PUBLICATIONS/MONOGRAPHS/FR.HTM)](HTTP://WWW.NIXONCENTER.ORG/PUBLICATIONS/MONOGRAPHS/FR.HTM%29)

The proper starting point in thinking about American national interests and Russia—or any other country—is the candid question: why does Russia matter? How can Russia affect vital American interests and how much should the United States care about Russia? Where does it rank in the hierarchy of American national interests?

As the Report of the *Commission on American National Interests* (2000) concluded, Russia ranks among the few countries whose actions powerfully affect American vital interests. Why?

􀂃First, Russia is a very large country linking several strategically important regions. By virtue of its size and location,Russia is a key player in Europe as well as the Middle East and Central, South and East Asia. Accordingly, Moscow can substantially contribute to, or detract from, U.S. efforts to deal withsuch urgent challengesas North Korea and Iran**,** as well as important longer term problems like Iraq and Afghanistan. In addition, Russia shares the world’s longest land border with China, an emerging great power that can have a major impact on both U.S. and Russian interests. The bottom line is that notwithstanding its significant loss of power after the end of the Cold War, Moscow’s geopolitical weight still exceeds that of London or Paris.

􀂃Second, as a result of its Soviet legacy, Russia has relationships with and information about countries that remain comparatively inaccessible to the American government, in the Middle East, Central Asia and elsewhere. Russian intelligence and/or leverage in these areas could significantly aid the United States in its efforts to deal with current, emerging and still unforeseen strategic challenges, including in the war on terrorism**.**

􀂃Third, today and for the foreseeable future Russia’s nuclear arsenal will be capable of inflicting vast damage on the United States. Fortunately, the likelihood of such scenarios has declined dramatically since the Cold War. But today and as far as any eye can see the U.S. will have an enduring vital interest in these weapons not being used against America or our allies.

􀂃Fourth, reliable Russian stewardship and control of the largest arsenal of nuclear warheads and stockpile of nuclear materials from which nuclear weapons could be made is essential in combating the threat of “loose nukes.” The United States has a vital interest in effective Russian programs to prevent weapons being stolen by criminals, sold to terrorists and used to kill Americans.

􀂃Fifth, Russian stockpiles, technologies and knowledge for creating biological and chemical weapons make cooperation with Moscow very important to U.S. efforts to prevent proliferation of these weapons. Working with Russia may similarly help to prevent states hostile to the United States from obtaining sophisticated conventional weapons systems, such as missiles and submarines.

􀂃 Sixth, as the world’s largest producer and exporter of hydrocarbons (oil and gas), Russia offers America an opportunity to diversify and increase supplies of non-OPEC, non-Mid-Eastern energy.

􀂃 Seventh, as a veto-wielding permanent member of the United Nations Security Council, Russia can substantially ease, or complicate, American attempts to work through the UN and other international institutions to advance other vital and extremely important U.S. interests. In a world in which many are already concerned about the use of U.S. power, this can have a real impact on America’s success at providing global leadership. More broadly, a close U.S.-Russian relationship can limit other states’ behavior by effectively eliminating Moscow as a potential source of political support.

#### --Any of those hotspots could escalate to world war

Ullman 7 Harlan Ullman is a columnist for The Washington Times and a senior associate at the Center for Strategic and International Studies. July 25, 2007 The Washington Times SECTION: HEADLINE: July 1914 redux?; History could repeat itself lexis

On June 28th, 1914 Archduke Ferdinand, heir to the throne of the Austro-Hungarian Empire, and his wife Sophie were shot to death in Sarajevo by Gavrilo Princip. During the next month, that assassination would spark World War I, in part due to a comedy of tragic errors, including Serbian troops mistakenly crossing the Danube and stumbling across the border with Austro-Hungary. A massive mobilization of the Great Powers followed and by then it was too late to restrain the dogs of war.  
Just a few years earlier, conventional wisdom argued that full-scale war in Europe was no longer conceivable. The restraints of closely linked economies made war too expensive to wage and the intermingled ruling royal families aligned by marriage and blood had no grounds for fighting one another. That case was famously and wrongly made in British Nobel Prize-winning economist Sir Norman Angell's The Grand Illusion that captivated fancy European salons in 1910.   
The causes of World War I are thankfully dead and gone. No secret treaties bind great powers to come to the aid of lesser states. Indeed, far fewer armies exist today than existed nearly a century ago, and a major enemy - jihadist extremism - does not even possess one. Yet, with real and potential crises looming from the west coast of Africa to the east coast of Indonesia, the possibility of at least one or more of these danger spots exploding is real. And many leaders could become a 21st-century equivalent of the archduke, ranging from Iraqi Shi'ite cleric Ali al-Sistani to Pakistani President Pervez Musharraf.  
Despite U.S. generals claiming to have achieved "real progress" on the ground in Iraq, the situation is close to if not in extremis. Political reconciliation, a hydrocarbon law and de-Ba'athification remain distant goals. Power and oil production, unemployment, potable water, sewerage, medical and educational facilities and other metrics crucial to societal well-being remain unsatisfactory. A political act as powerful as the destruction of the Golden Mosque in Samarra a year and a half ago could rip the fragile state asunder.  
Palestine and Lebanon are also in or close to civil war, with Fatah and Hamas in a life-and-death power struggle and the Siniora government facing a similar test against Hezbollah. Unconfirmed reports filtering out of the Middle East predict an Israeli strike against Syria, possibly in the Bekaa Valley to take on Hezbollah, at a time when the popularity of its Prime Minister Ehud Olmert makes President Bush look like a rock star.  
Last week, Britain's Guardian wrote that Vice President Dick Cheney was winning the political battle in Washington over taking out Iran's budding nuclear power capacity with a military strike, a rumor that has been circulating for some time. Weekend elections have not clarified what Turkey might do should Kurdistan move closer to independence or if a major conflict and violence erupt there, as in much of Iraq. The recent suicide bombings that killed nearly 100 in Kirkuk raise the stakes that such violence could spill over.  
Afghanistan very much remains the invisible war - out of sight and out of mind. However, conditions continue to deteriorate. Reform of the civil sector has not advanced. Poppy production and corruption continue to swell. And as more Afghan civilians die in friendly-fire or collateral-damage incidents, hearts and minds migrate away from our side to the Taliban and local tribal chiefs.  
Although not in the greater Middle East, Nigeria is vulnerable to an Islamic or jihadist-led revolution. Possessing huge quantities of oil and natural gas, led by a new and untested president and a state where corruption is more than rampant, Nigeria's stability cannot be taken for granted. Indeed, the opposite thinking should be driving contingency planning, especially as the new U.S. Africa Command stands up.  
And then there is Pakistan, potentially the most dangerous place in the world. Gen. Musharraf holds on and does his best to support the United States in battling terror and al Qaeda. But make no mistake, the realities of Pakistan reveal cross-cutting loyalties, national interests that often diverge from America's and a frightening influence of jihadist extremists and fundamentalists. These include thousands of madrassas teaching the most perverted views of Islam, all of which exist in the shadow of dozens of nuclear weapons.  
Of course, there is no certainty (and perhaps not even a chance) that any or even one of these hot spots will detonate a regional explosion with potentially catastrophic consequences. Still, one can be concerned, if not worried. Homeland Security Secretary Michael Chertoff was worried by what his "gut" told him about possible terrorist attacks against America this summer and was promptly derided on the basis of his analysis. My mind - not my gut - asks in a broader context if what we are seeing today may be eerily reminiscent of July 1914 but in slow motion.

#### Cooperation in managing regional conflicts is required to avoid escalaton to nuclear war

Bosco 6 , David Bosco is a senior editor at Foreign Policy magazine. July 23, 2006 Sunday Los Angeles Times

HEADLINE: ARMAGEDDON; Could this be the start of WWIII?; As the Middle East erupts, there are plenty of scenarios for global conflagration. Lexis

IT WAS LATE JUNE in Sarajevo when Gavrilo Princip shot Archduke Franz Ferdinand and his wife. After emptying his revolver, the young Serb nationalist jumped into the shallow river that runs through the city and was quickly seized. But the events he set in motion could not be so easily restrained. Two months later, Europe was at war.  
The understanding that small but violent acts can spark global conflagration is etched into the world's consciousness. The reverberations from Princip's shots in the summer of 1914 ultimately took the lives of more than 10 million people, shattered four empires and dragged more than two dozen countries into war.   
This hot summer, as the world watches the violence in the Middle East, the awareness of peace's fragility is particularly acute. The bloodshed in Lebanon appears to be part of a broader upsurge in unrest. Iraq is suffering through one of its bloodiest months since the U.S.-led invasion in 2003. Taliban militants are burning schools and attacking villages in southern Afghanistan as the United States and NATO struggle to defend that country's fragile government. Nuclear-armed India is still cleaning up the wreckage from a large terrorist attack in which it suspects militants from rival Pakistan. The world is awash in weapons, North Korea and Iran are developing nuclear capabilities, and long-range missile technology is spreading like a virus.  
Some see the start of a global conflict. "We're in the early stages of what I would describe as the Third World War," former House Speaker Newt Gingrich said last week. Certain religious websites are abuzz with talk of Armageddon. There may be as much hyperbole as prophecy in the forecasts for world war. But it's not hard to conjure ways that today's hot spots could ignite.  
Consider the following scenarios:  
\* Targeting Iran: As Israeli troops seek out and destroy Hezbollah forces in southern Lebanon, intelligence officials spot a shipment of longer-range Iranian missiles heading for Lebanon. The Israeli government decides to strike the convoy and Iranian nuclear facilities simultaneously. After Iran has recovered from the shock, Revolutionary Guards surging across the border into Iraq, bent on striking Israel's American allies. Governments in Syria, Jordan, Egypt and Saudi Arabia face violent street protests demanding retribution against Israel -- and they eventually yield, triggering a major regional war.  
\* Missiles away: With the world's eyes on the Middle East, North Korea's Kim Jong Il decides to continue the fireworks show he began earlier this month. But this time his brinksmanship pushes events over the brink. A missile designed to fall into the sea near Japan goes astray and hits Tokyo, killing a dozen civilians. Incensed, the United States, Japan's treaty ally, bombs North Korean missile and nuclear sites. North Korean artillery batteries fire on Seoul, and South Korean and U.S. troops respond. Meanwhile, Chinese troops cross the border from the north to stem the flow of desperate refugees just as U.S. troops advance from the south. Suddenly, the world's superpower and the newest great power are nose to nose.  
\* Loose nukes: Al Qaeda has had Pakistani President Pervez Musharraf in its sights for years, and the organization finally gets its man. Pakistan descends into chaos as militants roam the streets and the army struggles to restore order. India decides to exploit the vacuum and punish the Kashmir-based militants it blames for the recent Mumbai railway bombings. Meanwhile, U.S. special operations forces sent to secure Pakistani nuclear facilities face off against an angry mob.  
\* The empire strikes back: Pressure for democratic reform erupts in autocratic Belarus. As protesters mass outside the parliament in Minsk, president Alexander Lukashenko requests Russian support. After protesters are beaten and killed, they appeal for help, and neighboring Poland -- a NATO member with bitter memories of Soviet repression -- launches a humanitarian mission to shelter the regime's opponents. Polish and Russian troops clash, and a confrontation with NATO looms.  
As in the run-up to other wars, there is today more than enough tinder lying around to spark a great power conflict. The critical question is how effective the major powers have become at managing regional conflicts and preventing them from escalating. After two world wars and the decades-long Cold War, what has the world learned about managing conflict?

#### US-Russian cooperation key to every major impact – specifically global hot spots and climate change

Robert Legvold, Political Science @ Columbia, 2012 (“Meeting the Russian Challenge in the Obama Era.” SpringerLink. Responding to a Resurgent Russia, 1 Russian Policy and Responses from the European Union and the United States. http://www.springerlink.com/content/nn64777758886k5l/fulltext.html) [NOTE: PEER REVIEWED SOURCE]

In this respect, the Obama administration is different from its predecessors. From the start its spokesmen and the president himself stressed Russia’s importance. Undersecretary of State William Burns began a speech in April 2009 with a point he called “glaringly obvious”: “Russia matters.”11 “Few nations,” he said, “could make more of a difference to our success than Russia.” It “remains the only nuclear power comparable to the US at a time when the proliferation of nuclear weapons is a growing danger.” It is “the world’s largest producer of hydrocarbons, and America the largest consumer.” It “remains the largest country on the face of the earth, sitting astride Europe, Asia and the broader Middle East – three regions whose future will shape American interests for many years to come. And as a permanent member of the UN Security Council, Russia will have an influential voice on the most crucial diplomatic challenges of our times, from Iran to North Korea, to anti-piracy and Afghanistan.” When Obama, in his July 2009 commencement address to the students at Russia’s New Economic School, spoke of wanting Russia to occupy “its rightful place as a great power,” he was not simply flattering his audience; he had in mind the number of areas where Russia’s capacity to act as the United States’ partner was key to United States’ success.12 Some of these are obvious. Russia is the other principal steward of nuclear weapons, and therefore, as in the past, a necessary partner if the United States wishes to create a regime giving stability and shape to their bilateral strategic relationship. Beyond this, however, the world of nuclear possessing states is now indisputably multipolar, without many of the stabilizing features slowly built into the US-Soviet relationship over the course of the Cold War. If, as one would hope, the international community begins to address its dangers, leadership can only come from the United States and Russia. Equally obvious, notwithstanding the tensions in the politics over energy, if any movement toward genuine energy security for key consumers, producers, and transit countries can be generated, again, Russia has a large role to play. And it scarcely needs saying that a sustained and comprehensive effort to contain catastrophic terrorism requires Russian cooperation, whatever the differences in the two countries’ precise categorization of terrorist organizations. Other areas where the United States has a stake in cooperation with Russia are less obvious – or at least were until recently. First, as the Obama administration sets about reasserting US leadership in the effort to impede global climate change, China’s role is doubtlessly paramount, but Russia, as the country that ranks third in the emission of greenhouse gases and whose current level of energy inefficiency could, if addressed, produce the greatest gains among major economies, can hardly be ignored.13 Second, Russia is an important player in competition over the vast hydrocarbon reserves in the Arctic region now in play because global warming is opening the waterways to them. Even if estimates suggesting that the region contains 13% of global undiscovered oil and 30% of global undiscovered conventional natural gas prove unrealistic, or even if the development of shale gas in the United States and Europe drains some of the drama from the quest for these resources, the fact that all five Arctic littoral states are vigorously staking claims to them and backing up these claims with military preparations, makes the issue increasingly salient.14 And, because the primary clash sets Russia against the other four, Russia automatically moves to the center. When the Supreme Allied Commander in Europe, General John Craddock, speaks of the Arctic as “not yet a region of conflict,” but one where “environmental and geopolitical developments” could generate “potential military conflict,” Russia may not be his only source of concern, but it surely is his principal one.15 Third, to the extent that state corruption, criminality, and its primary international manifestation, illicit trade, have become a major menace to global welfare, Russia and its post-Soviet neighbors come close to being the problem’s epicenter.16 If the United States hopes to make a dent in the illegal flow of humans, heroin, endangered species, small arms, counterfeit goods, laundered money, and cybercrime, Russia will have to be a critical part of the solution or else it will be remain a major part of the problem. Then come the large, subtle, often overlooked stakes the United States has in relations with Russia. Because they involve remote, conceptually complex geostrategic goals rather than easier-to-understand, harder-to-avoid practical problems, they do not get the attention they merit – provided, of course, that policy for the policymaker means guarding the future and not merely coping with the present. They come in three forms, each vital to the stability of a world the United States would presumably like to see emerge. First, for all of the unarguably acute frictions between the United States and Russia over the role each mean to play in the post-Soviet space, at a deeper level no two countries have a larger stake in mutual security and stability in and around the Eurasian landmass. For Russia this is its vital neighborhood – the glacis keeping external harms at bay or the tinderbox bringing them closer; the natural extension of Russia’s economic space or a swirling arena of economic rivalries. For the United States it is, as Undersecretary Burns said, the great hinterland of the strategic arenas at the core of US foreign policy: Europe, East Asia, and the turbulent Islamic south. Finding a way to cooperate rather than compete in this vast and critical portion of the globe may be the single most consequential aspect of the US-Russian relationship, not only for the two countries but for the broader international community. Second, the prospect of creating a stable, effective, and inclusive security environment in two of these three settings – Europe and East Asia – depends heavily on a workable convergence of US and Russian visions. In Europe such harmonization is decisive; in Asia, it is secondary to the US-Chinese relationship, but still a critical building block. In Europe, unless Washington and Moscow can find a way to work together to escape the current deadlock over European security architecture, little is likely to happen, and the European core will remain vulnerable to security threats all along its eastern periphery, some of them severe indeed. The third of the geostrategic stakes relates to a primary US interest. Scarcely any strategic challenge looms larger for the United States in the next two decades than managing the rise of new major powers, particularly China. Again, Russia enters the picture in important ways. If Russia and the United States join together in promoting a constructive integration of China into an evolving international order, the chance of US success grows. If Russia chooses to play a China card against the United States or provide China a Russia card against the United States, the chance of success shrinks rapidly. Finally, the United States has a historic stake in the relationship with Russia. For the first time in the post-Westphalian history of international politics, the system is not dominated by great power strategic rivalry. It is not marked predominantly and fatally by one or more great powers defining one or more great powers as the principal threat, arming against it/them, and mobilizing alignments in order to counter it/them. Unless one believes naively and with a poor sense of history that this state of affairs can never return – that globalization, the new international economics, or the “earth-is-flat” dynamics have changed everything for good – preserving this blessing should be of some concern to the United States. If one tries to imagine where it could come undone, Russia figures both directly and indirectly: directly, were strategic rivalry between Russia and the United States in and around the post-Soviet space to escalate and assume an enduring character; indirectly, as a wild card in the multiple instances involving China (China vs. the United States, China vs. India, and China vs. Japan).

#### Warming causes a planetary die-off – Geological history, positive feedback and ocean acidification

Bushnell 10 – Dennis, Chief scientist at the NASA Langley Research Center [Dennis Bushnell (MS in mechanical engineering. He won the Lawrence A. Sperry Award, AIAA Fluid and Plasma Dynamics Award, the AIAA Dryden Lectureship, and is the recipient of many NASA Medals for outstanding Scientific Achievement and Leadership.) “Conquering Climate Change,” The Futurist, May-June, 2010

During the Permian extinction, a number of chain reaction events, or “positive feedbacks,” resulted in oxygen-depleted oceans, enabling overgrowth of certain bacteria, producing copious amounts of hydrogen sulfide, making the atmosphere toxic, and decimating the ozone layer, all producing species die-off. The positive feedbacks not yet fully included in the IPCC projections include the release of the massive amounts of fossil methane, some 20 times worse than CO2 as an accelerator of warming, fossil CO2 from the tundra and oceans, reduced oceanic CO2 uptake due to higher temperatures, acidification and algae changes, changes in the earth’s ability to reflect the sun’s light back into space due to loss of glacier ice, changes in land use, and extensive water evaporation (a greenhouse gas) from temperature increases.

The additional effects of these feedbacks increase the projections from a 4°C–6°C temperature rise by 2100 to a 10°C–12°C rise, according to some estimates. At those temperatures, beyond 2100, essentially all the ice would melt and the ocean would rise by as much as 75 meters, flooding the homes of one-third of the global population. Between now and then, ocean methane hydrate release could cause major tidal waves, and glacier melting could affect major rivers upon which a large percentage of the population depends. We’ll see increases in flooding, storms, disease, droughts, species extinctions, ocean acidification, and a litany of other impacts, all as a consequence of man-made climate change. Arctic ice melting, CO2 increases, and ocean warming are all occurring much faster than previous IPCC forecasts, so, as dire as the forecasts sound, they’re actually conservative.

#### ADVANTAGE: Arms control

#### Plutonium disposition is essential to arms control efforts

DOS 10 US Department of State April 13, 2010 Disposition Agreement-2000 Plutonium Management and Disposition Agreement Fact Sheet <http://www.state.gov/r/pa/prs/ps/2010/04/140097.htm>

Secretary of State Hillary Rodham Clinton and Russian Foreign Minister Sergey Lavrov signed the Plutonium Disposition Protocol on Tuesday, April 13.

Overview

The Plutonium Disposition Protocol represents an essential step in the nuclear disarmament process.

The Protocol makes arms reductions irreversible by ensuring that United States and Russia will transparently dispose weapon-grade plutonium from their respective defense programs, thereby preventing the plutonium from ever being reused for weapons or any other military purpose.

The Protocol, thus, exemplifies the Parties’ obligations under Article VI of the Non-Proliferation Treaty and their goals for nuclear disarmament and nuclear security.

By updating the 2000 Plutonium Management and Disposition Agreement (PMDA), each country will proceed to complete and operate facilities that will dispose of at least 34 metric tons of this plutonium by using it as fuel in civil power reactors to produce electricity.

Combined, this represents enough material for approximately 17,000 nuclear weapons.

The PMDA also provides that additional weapon-grade plutonium declared excess, as arms reductions go forward, should be disposed under the same or comparable transparency and other terms.

Disposition activities on both sides will be subject to monitoring and inspections, to provide confidence that the Parties are disposing of weapon-grade plutonium in accordance with the terms and conditions of the Agreement.

U.S. cooperation with the Russian program will be limited to the $400 million pledged in 1999-2000 subject to future appropriations, 25 percent of which will now be spread out over the decades of verified disposition.

Russia’s implementation of its disposition will no longer be contingent on additional U.S. and other donor funding.

#### Lack of disposition impedes arms control

Digges 9 [Charles Digges,](http://www.bellona.org/persons/1140449402.92)  The Bellona Foundation (an international environmental NGO based in Norway) 12/05-2009

Problems of where to store extra plutonium from deeper Cold war weapons cuts dog Obama <http://www.bellona.org/articles/articles_2009/obama_weapons_cuts_storage>

US President Barack Obama plans for deep new cuts in America’s nuclear arsenal comes at a time when the government is facing a 15-year backlog of warheads already awaiting dismantlement, and billions of dollars are needed for new facilities to store and dispose of plutonium.

The move to cut arms, unilaterally proposed by Obama and apparently getting a warm welcome in Russia, has been hailed worldwide by nations anxious to put the dust of the Cold War under the rug forever, and deal with the newer, more specific nuclear threats of smuggling and nuclear terrorism.

But the the traffic jam promises to become all the more challenging bases on promises made by Obama in April to Russian President Dmirty Medvedev to dismantle their nuclear weapons stockpiles well below levels set by current arms pacts that are set to expire.

Many American arms experts, while lauding the goal, have said that the needed infrastructure to dispose of these weapons do not yet exists. Federal Audits and other records reviewed by the US press outlets and Bellona Web confirm this.

According to the National Nuclear Security Administration, a semi-autonomous division of the US Energy Department responsible for nuclear weapons programmes, disposing of the weapons that have already been taken out of commission under the START treaty, which expires in December, will take until 2024, and disposing of the plutonium cores from those weapons will run long past 2030.

These plans do not yet account for the extra weapons that Obama will look to decommission.

But the mammoth effort of paring down the arsenals of the Cold War enemies even further than already planned will present challenges to safe storage of nuclear materials, many highly regarded American scholars are noting.

The risk of nuclear war is real, but can be reduced through negotiation

Reif 12 Kingston [Reif](http://www.armscontrolcenter.org/about/staff/kreif/), director of nuclear nonproliferation at the [Center for Arms Control and Non-Proliferation](http://www.armscontrolcenter.org/) & recipient of a Marshall Scholarship, he was awarded a prestigious Scoville Peace Fellowship in 2008 22 June 2012 Bulletin of the Atomic Scientists 13 days -- and what was learned http://www.thebulletin.org/web-edition/columnists/kingston-reif/13-days-and-what-was-learned

Today's nuclear danger. The Cuban Missile Crisis provides clear evidence that nuclear war is all too possible, especially during an emergency situation in which critical decisions must be made quickly, accurate information is unavailable, and events on the ground cannot be controlled. Moreover, it demonstrates that nuclear war is unlikely to be premeditated, but rather the result of misperception, miscalculation, and risk-taking. In such cases, the first use of nuclear weapons may even seem rational -- or at least more rational than having to respond to a nuclear attack.

While the threat of global nuclear war is significantly less than during the Cold War, the risk of catastrophe has not disappeared. Given today's United States and Russia, the threat of deliberate nuclear attack seems unthinkable, but the danger of accidental or miscalculated deployment is disconcertingly plausible -- especially as thousands of US and Russian weapons remain ready to launch within minutes of a decision to do so. In South Asia, India and Pakistan have already fought two conventional conflicts since acquiring nuclear weapons. In North Korea, an unpredictable and cryptic danger looms. The threat of brazen terrorists wielding nuclear arms is chilling. And the impasse over Iran's nuclear program only heightens tensions. This all increases the complexity and probability of the risk.

The Cuban Missile Crisis has taught us that the threat of nuclear calamity is only an error or misperception away; but the historic crisis is also instructive in other ways: Delaying disaster or making distasteful compromises may be preferable to scare tactics or an outright attack. Take Iran's nuclear program. In a provocative Washington Post article, Harvard's Graham Allison compares the US-Iran standoff to a Cuban Missile Crisis in slow motion. Instead of choosing between attacking Iran's nuclear facilities or acquiescing to a nuclear-armed Iran, Allison argues that President Obama ought to follow in Kennedy's footsteps and "explore alternatives that, however unacceptable, are less catastrophic." (In a nutshell, Allison proposes Iran permanently and verifiably abandon enrichment beyond 5 percent in return for US acceptance of Iran's continued enrichment up to that level.)

The only permanent exit ramp from the specter of nuclear annihilation is the abolition of nuclear weapons. Nuclear disarmament is daunting and not risk-free itself, but there are steps that can be taken now to tackle that challenge and to reduce the chances of a nuclear nightmare. The onus is on the world's two largest nuclear powers -- the United States and Russia -- to continue to lead the charge. The two nations must abandon nuclear postures premised on nuclear war-fighting, pursue more arms control agreements to verifiably eliminate excess weapons, and strive to ensure that policy disagreements do not grow into dangerous crises.

#### --Without negotiations the risk of nuclear war remains high

Krieger, 13 David Krieger, Nuclear Age Peace Foundation 2013 Ten Reasons to Abolish Nuclear Weapons

<http://www.wagingpeace.org/menu/issues/nuclear-weapons/10-reasons-abolish-nw.htm>

4. Avoid Nuclear Accidents. The risk of accidental war through miscommunication, miscalculation or malfunction is especially dangerous given the thousands of nuclear warheads deployed and on high alert status. Given the short time periods available in which to make decisions about whether or not a state is under nuclear attack, and whether to launch a retaliatory response, the risk of miscalculation is high. In addition, the breakup of the former Soviet Union has weakened Russia's early warning system, since many parts of this system were located outside of Russia, and this increases the likelihood of a nuclear accident. Read more about nuclear accidents.

#### The existential risk warrants the effort to avoid nuclear war

Rivers 2 Dennis Rivers, Nuclear Age Peace Foundation and the Peacemaker Community Revised March 30, 2002

Six Arguments for Abolishing Nuclear Weapons <http://nonukes.org/cd18_sixarg.htm>

Reason One: The entire world would be more secure if the planet were free of nuclear weapons.

Nuclear weapons are the only type of weapon in existence that have the capacity to annihilate the human species and countless other species.

The very existence of nuclear weapons leaves open the possibility that a nuclear exchange might take place. This could happen intentionally, inadvertently (as in the Cuban Missile Crisis when the U.S. and USSR almost blundered into nuclear war), or by an accidental launch. The list of historical false alarms is long; for instance, in 1979 someone fed a war game simulation into a North American Air Defense computer. Thinking that the alert was real, fighter planes were scrambled and nuclear bombers were readied before the error was discovered.

In the absence of total nuclear disarmament, terrorists might acquire nuclear weapons. Such a scenario has become more probable since the USSR dissolved. There have been many reports of attempts to smuggle weapons-grade plutonium from Russia. The fewer nuclear weapons there are in the world, the fewer there are for terrorists to try to steal. Every step toward the abolition of nuclear weapons would increase our security.

Without abolition, there is always the danger that nuclear weapons will proliferate - that more and more countries will obtain them. It is ultimately unrealistic to expect that in a world in which some nations rely upon nuclear weapons, other nations will not seek to attain them. A world where there are many nuclear-armed countries would be even more dangerous.

The end of the Cold War has meant that there are no more nuclear-armed opponents, except India and Pakistan. Nuclear weapons do not serve even an arguable purpose when a country has friendly relations with a former opponent.

Independently, disposition is key to non-proliferation leadersip

D'Agostino 9 Thomas D'Agostino, National Nuclear Security Administration Jul 15, 2009 Congressional Testimony

Testimony On “Addressing a New Generation of WMD Threats” Before the House Armed Services Committee

http://nnsa.energy.gov/mediaroom/congressionaltestimony/07.15.09.

As Presidents Obama and Medvedev recently noted in their Joint Statement on Nuclear Cooperation, we are also working to “dispose of existing stockpiles of weapon-grade materials that are surplus to defense needs consistent with our obligations under Article VI of the NPT.” As I shared with some Members of the Committee recently, the United States and Russia have agreed on the basic principles underlying a revised Russian program to dispose of 34 metric tons of surplus Russian weapons plutonium. This revised program is consistent with Russia’s national energy strategy and relies on the use of Russian fast reactors to dispose of the plutonium with certain nonproliferation add-ons. The program includes a U.S. commitment to provide $400 million, subject to the availability of appropriated funds, and a Russian commitment to pay for the balance of the disposition program costs. These changes will be codified in a Protocol that amends the 2000 U.S.-Russian Plutonium Management and Disposition Agreement which we expect to sign in the near future.

In parallel, NNSA is making significant progress on the U.S. plutonium disposition facilities at the Savannah River Site, consistent with our obligations under the 2000 Agreement. Construction of both the MOX Fuel Fabrication Facility and the related Waste Solidification Building are proceeding according to their respective validated cost and schedule baselines.

While some believe that the U.S. plutonium disposition program is no longer a nonproliferation program, I maintain that the U.S. program demonstrates leadership in living up to our nonproliferation commitments by drawing down our nuclear arsenals and materials in a transparent and irreversible manner. The commitment made by Presidents Obama and Medvedev last week in Moscow, as part of the Joint Statement on Nuclear Cooperation, to executing both countries’ commitments under the Plutonium Management and Disposition Agreement demonstrates that this is a vital nonproliferation program. As a result of the U.S. program and reciprocal Russian effort, the United States and Russia will ultimately dispose of enough weapons plutonium for at least 17,000 nuclear weapons.

#### Proliferation causes nuclear war.

Heisbourg ’12, [Francois Heisbourg, Chairman of the International Institute for Strategic Studies, prof at the Geneva Center for Security Policy, July 2012, “How Bad Would the Further Spread of Nuclear Weapons Be?”, <http://www.npolicy.org/userfiles/file/oving%20Beyond%20Pretense%20web%20version.pdf#page=182>]

Human societies tend to **lack the imagination to think through**, and to act upon, what have become known as “**black swan” events** 26 : **That which has never occurred** (or which has happened very rarely and in a wholly different context) **is deemed not to be in the field of reality,** and to which must be added eventualities that are denied because their consequences are too awful to contemplate. The extremes of human misconduct (the incredulity in the face of evidence of the Holocaust, the failure to imagine 9/11) bear testimony to this hardwired trait of our species. This would not normally warrant mention as a factor of growing salience if not for the recession into time of the original and only use of nuclear weapons in August 1945. Nonuse of nuclear weapons may soon be taken for granted rather than being an absolute taboo. Recent writing on the reputedly limited effects of the Hiroshima and Nagasaki bombs 27 may contribute to such a trend, in the name of reducing the legitimacy of nuclear weapons. Recent, and often compelling, historical accounts of the surrender of the Japanese Empire that downplay the role of the atomic bombings in comparison to early research can produce a similar effect, even if that may not have been the intention. 28 However desirable it has been, the end of atmospheric nuclear testing 29 has removed for more than three decades the periodic reminders that such monstrous detonations made as to the uniquely destructive nature of nuclear weapons. There is a real and growing risk that we forget what was obvious to those who first described in 1941 the unique nature of yet-to-be produced nuclear weapons. 30 The risk is no doubt higher in those states for which the history of World War II has little relevance and that have not had the will or the opportunity to wrestle at the time or ex post facto with the moral and strategic implications of the nuclear bombing of Japan in 1945.¶ Unsustainable strains are possibly the single most compelling feature of contemporary proliferation. Examples include tight geographical constraints–with, for instance, New Delhi and Islamabad, located within 300 miles of each other; nuclear multi-polarity against the backdrop of multiple, crisscrossing sources of tension in the Middle East, as opposed to the relative simplicity of the U.S.-Soviet confrontation; the existence of doctrines, such as India’s “cold start,” and force postures, such as Pakistan’s broadening array of battle- field nukes, that rest on the expectation of early use; and the role of non-state actors as aggravating or triggering factors when they are perceived as operating with the connivance of an antagonist state (in the past, the assassination of the Austrian Archduke in Sarajevo in 1914; and in the future, Hezbollah operatives launching rockets with effect against Israel or Lashkar-e-Taiba commandos doing a “Bombay” redux in India?). Individually or in combination, **these factors test crisis management capabilities** more severely than anything seen during the Cold War with the partial exception of the Cuban Missile Crisis. Even the overabundant battlefield nuclear arsenals in Cold War Central Europe, with their iffy weapons’ safety and security arrangements, were less of a challenge: The U.S. and Soviet short-range nuclear weapons so deployed were not putting U.S. and Soviet territory and capitals at risk.¶ It may be argued that these risk factors are known to potential protagonists and that they therefore will be led to avoid the sort of nuclear brinksmanship that characterized U.S. and Soviet behavior during the Cold War in crises such as the Korean War, Berlin, Cuba or the Yom Kippur War. Unfortunately, the multiple nuclear crises between India and Pakistan demonstrate no such prudence, rather the contrary. And were such restraint to feed into nuclear policy and crisis planning, along the lines of apparently greater U.S. and Soviet nuclear caution from the mid-seventies onwards, the fact would remain that initial intent rarely resists the strains of a complex, multiactor confrontation between inherently distrustful antagonists. It is also worth reflecting on the fact that during the 1980s there was real and acute fear in Soviet ruling circles that the West was preparing an out-of-the-blue nuclear strike, a fear which in turn fed into Soviet policies and dispositions. 31¶ The Cold War was a set of crises and misunderstandings that came within a whisker of a nuclear holocaust. India and Pakistan’s nuclear standoff is deeply unstable, not least as a result of the interaction with non-state actors. A multipolar nuclear Middle East would make the Cuban Missile Crisis look easy in comparison.

#### Disposition is the antithesis of reprocessing – it eliminates plutonium stockpiles rather than creating them

Bunn 2 Matthew Bunn, Associate Professor of Public Policy; Co-Principal Investigator, Project on Managing the Atom, Harvard Belfer Center for Science and International Affairs August 2002 U.S. Program for Disposition of Excess Weapons Plutonium <http://belfercenter.hks.harvard.edu/publication/2376/us_program_for_disposition_of_excess_weapons_plutonium.html?breadcrumb=%2Fexperts%2F368%2Fmatthew>

Although plutonium disposition is intended to serve nonproliferation goals, some have seen the dual-track approach, with its acceptance of the use of excess weapons plutonium as fuel in nuclear reactors, as contradicting the long-standing U.S. nonproliferation policy of not supporting reprocessing and recycling of plutonium. Nothing could be further from the truth. As top officials from President Clinton on down have made clear, the United States is "not changing our fundamental policy toward nonproliferation and the nuclear fuel cycle." [16] The dual-track approach is about eliminating stockpiles of separated, weapons-usable plutonium that already exist, not about producing additional stockpiles of separated plutonium by reprocessing. Indeed, it is precisely because the United States feels so strongly about the proliferation risks posed by separated plutonium that it has decided to use both of the best technologies available -- MOX in reactors and immobilization -- to eliminate its excess stockpiles of this dangerous material as rapidly as possible. As such, the United States has committed that the spent fuel resulting from disposition will not be reprocessed, and that the government-owned MOX plant to be built for this mission will only be licensed for this mission and will be dismantled when it is complete.