

The United States Should Forego a Damage-Limitation Capability Against China

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 Whether to attempt to preserve its damage-limitation capability against China is the key strategic nuclear choice facing the United States. The answer is much less clear-cut than when the United States faced the Soviet Union during the Cold War.
- **FEASIBILITY OF DAMAGE LIMITATION.**
 Although technology has advanced significantly over the past three decades, future military competition between the U.S. and Chinese forces will favor large-scale nuclear retaliation over significant damage limitation.
- **BENEFITS AND RISKS OF A DAMAGE-LIMITATION CAPABILITY.**
 The benefits provided by a modest damage-limitation capability would be small, because the United States can meet its most important regional deterrent requirements without one. In comparison, the risks, which include an increased probability of accidental and unauthorized Chinese attacks, as well as strained U.S.–China relations, would be large.
- **FOREGO DAMAGE LIMITATION.**
 These twin findings—the poor prospects for prevailing in the military competition, and the small benefits and likely overall decrease in U.S. security—call for a U.S. policy that foregoes efforts to preserve or enhance its damage-limitation capability.

By Charles L. Glaser

The Key Strategic Nuclear Choice

The key strategic nuclear choice facing the United States is whether to attempt to preserve its “damage-limitation” capability—that is, the ability to reduce significantly the damage China can inflict against the U.S. homeland in an all-out nuclear retaliatory attack. The United States currently has the ability to destroy much of China’s strategic nuclear force (missile silos, ballistic missile submarines, command and control, etc.) in a first strike, which would somewhat reduce the impact of a Chinese retaliatory second strike. U.S. decisions about whether to attempt to preserve this modest damage-limitation capability could greatly affect U.S. force structure, U.S. and Chinese incentives in a crisis, and the U.S. political relationship with China as well as potentially with its regional allies.

Attempting to preserve this damage-limitation capability will require the United States to make large investments in ISR (intelligence, surveillance, and reconnaissance) and possibly in missile defenses designed to defeat China’s strategic nuclear forces. In contrast, if the United States decides to forego a damage-limitation capability, its current forces could still perform the full array of required strategic deterrent missions, including limited nuclear attacks designed to deter conventional war and unlimited retaliation designed to deter all-out nuclear war. A damage-limitation strategy requires competition with China’s nuclear forces; foregoing damage limitation will enable the United States to avoid this competition.

Feasibility of Damage Limitation

What counts as significant damage limitation? During the Cold War, the United States understood damage limitation as the ability to deny the Soviet Union an “assured destruction capability” against the United States, which Secretary of Defense Robert McNamara defined as the ability to destroy 20 to 25 percent of a country’s population and 50 percent of its industrial base in retaliation, after suffering an all-out attack against its nuclear forces. It was estimated that the 200 1-megaton warheads, or the equivalent, could inflict this level of destruction.

More recent estimates that include a fuller set of nuclear effects, fire in particular, show that 40 megaton weapons could inflict this level of damage on the United States. In addition, these calculations do not include the impact of attacks on energy systems, information and communication systems, and major ports and other transportation nodes. If a highly integrated modern industrial economy is fragile, the destruction could be much greater. To acknowledge the uncertainties and their potential implications, we believe a damage-limitation range is more appropriate than a single threshold—from 10 medium-yield warheads to 40 equivalent megatons on cities in a retaliatory attack against the United States. Analysts can reasonably disagree about where within this range reducing the size of a Chinese attack would begin to produce a significantly better outcome for the United States.

China currently deploys about 20 silo-based inter-continental ballistic missiles (ICBMs) and 25 mobile ICBMs capable of delivering warheads against cities in the United States. China is modernizing and expanding

its ICBM force, which is predicted to reach 100 mobile ICBMs by 2030, and also may soon deploy up to 60 submarine-launched ballistic missiles (SLBMs) on its new generation ballistic missile submarine. China's silo-based missiles are highly vulnerable to attacks from extremely accurate U.S. nuclear missiles; we also believe that China's current-generation ballistic missile submarine is highly vulnerable to U.S. anti-submarine warfare capabilities. Consequently, for at least the next decade, China's ability to launch retaliatory strikes will depend on the survivability of its mobile ICBMs.

During peacetime, China's mobile missiles are stored separate from their warheads in garrisons. Their ability to survive a U.S. attack therefore depends on mating warheads with missiles and moving them well out of garrison before the United States attacks in a severe crisis or conventional war. China must also be able to launch its missiles from unprepared positions because the United States is likely to have identified most prepared launch sites.

To preserve its damage-limitation capability, United States would need the ability to find and track Chinese mobile missiles, or to intercept Chinese warheads in flight with a national missile defense (NMD) system, or both. To track mobile missiles, the United States would need a large constellation of space-based radars or a much larger, but overall much less expensive, constellation of small optical radars. We expect, however, that China could defeat these radars with a combination of hiding and decoys, as well as active attacks against U.S. satellites. To intercept warheads in flight, the United States would need a larger and more capable NMD. Here again, we believe that China could defeat this with a combination of countermeasures and attacks that defeat or destroy U.S. tracking radars. In short, if China operates its missile force effectively and pursues technologically feasible reactions, the United States has poor prospects for maintaining a significant damage-limitation capability.

Benefits and Risks of a Damage-Limitation Capability

If critical to ensuring U.S. security, then the United States' best option might be to pursue a damage-limitation capability, even though the probability of success is low. We find, however, that in fact the benefits are small and overall pursuit of a damage-limitation capability could reduce U.S. security.

The United States will be able to continue to meet its extended deterrence commitments to its key East Asian allies without a damage-limitation capability. Most importantly, the combined capabilities of the United States and these allies should be sufficient to prevent China from winning a major conventional war and thereby sufficient to deter large Chinese conventional attacks. In addition, even without a U.S. damage-limitation capability, the possibility that a large conventional war could escalate to a nuclear war should contribute to deterring a large Chinese conventional attack. The United States can enhance this aspect of its nuclear deterrent by planning limited nuclear options (LNOs); a U.S. doctrine that called only for all-out retaliation could fuel Chinese doubts about the credibility of U.S. threats. LNOs should be small and not planned against Chinese nuclear and command-and-control targets. Given the deterrent value of the other components of the U.S. deterrent, the additional deterrent value of a damage-limitation capability is small and will decline further as China modernizes its forces.

Compared to these limited benefits, the potential costs and risks of striving to preserve the U.S. damage-limitation capability are large. Holding vulnerable China's ability to retaliate could generate a variety of escalatory dangers including accidental, unauthorized, and inadvertent nuclear attacks, and early intentional limited nuclear escalation driven by concerns about U.S. preemptive attacks. In addition, U.S. efforts to preserve a damage-limitation capability would fuel strategic nuclear competition that would almost certainly add to strains in U.S.-China relations, which would in turn increase the probability of conflict. Finally, the systems that the United States would likely deploy in pursuit of an effective damage-limitation capability—including an extensive national ballistic missile defense (BMD) designed to protect against Chinese ICBMs and space-based sensors designed to track mobile missiles—would be very expensive.

Forego Damage Limitation

The United States should not try to enhance or preserve whatever damage-limitation capability it now possesses. In part this reflects a technical judgment: China's continuing deployment of mobile missiles has the potential to fully erode U.S. damage-limitation capabilities, although in the mid-term this will depend upon how China operates its forces and in the longer term will depend upon whether the United States develops and deploys systems that can reliably find and destroy mobile targets. More important, however, is that the value of a damage-limitation capability is small. If a damage-limitation capability were necessary for protecting vital U.S. interests, then a case could be made for investing great sums in the pursuit of exotic and unproven technologies to acquire one, even if the probability of limited success were low. The United States, however, faces a much less daunting security environment. The United States can meet its extended deterrence commitments to its key East Asian allies without a damage-limitation capability. Given the military and political risks of adopting the competitive military policies, the overall result of pursuing a damage-limitation capability would be increased U.S. insecurity. ♦

About the Author

Charles L. Glaser is a professor of political science and international affairs at George Washington University and Director of the Institute for Security and Conflict Studies at the Elliott School of International Affairs.

*This policy brief is based on a longer article: Charles L. Glaser and Steve Fetter, "Should the United States Pursue a Damage-Limitation Capability Against China's Strategic Nuclear Force?" forthcoming in the journal **International Security**. That article is one in a series written for the project "U.S. Strategic Nuclear Policy Toward China," which was funded by the Carnegie Corporation of New York. For more on the project, please visit iscs.elliott.gwu.edu.*