

U.S. Nonproliferation Strategy for the Changing Middle East



The Project on U.S. Middle East
Nonproliferation Strategy

January 2013

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Executive Summary



THIS REPORT INCLUDES THE PROJECT CO-CHAIRS' RECOMMENDATIONS FOR U.S. MIDDLE EAST NONPROLIFERATION POLICY. MANY OF THESE RECOMMENDATIONS ARE DRAWN FROM OR INSPIRED BY ROUNDTABLE DISCUSSIONS. HOWEVER, THEY ARE ATTRIBUTABLE ONLY TO THE PROJECT CO-CHAIRS, IN THEIR PERSONAL CAPACITIES.

I. INTRODUCTION

It is imperative for the United States to develop and implement a comprehensive nonproliferation strategy for the Middle East (defined by this report to include North Africa). Factors lending urgency to this need include the threat of proliferation in and by Iran, the vulnerable Syrian chemical arsenal, the challenges and opportunities posed by the Arab revolutions, the relatively frequent prior use of weapons of mass destruction (WMD) in the Middle East, several regional states already possessing WMD, and a tense and unstable regional security situation.

The U.S. government has in recent years invested considerable resources on intelligence community, diplomatic, military, and other nonproliferation efforts to detect, interdict, deter, and defend against proliferation in the Middle East. Relevant treaties; high-level diplomatic initiatives; U.N. Security Council, coalition, and unilateral sanctions; strategic trade controls; and military measures (both defensive and, potentially, offensive), are all in play. Intelligence capabilities of the United States and its allies are an instrument of crucial, crosscutting importance, providing both essential knowledge regarding activities of concern and tools for disrupting them. This report reviews these nonproliferation efforts in light of the paradigm shifts sweeping the region and recommends a comprehensive set of improvements, adjustments, and innovations designed to maximize U.S. (and allied) effectiveness in achieving these nonproliferation goals in the evolving Middle East.

These U.S. nonproliferation efforts in the Middle East have been complemented by a set of poorly funded (and sometimes uncoordinated) collaborative and cooperative programs to promote nonproliferation norms and practices among Middle Eastern governments, civil society, and other local partners. Obstacles to spending Department of Defense funds on such cooperative threat reduction and related efforts in the Middle East were recently removed, permitting significantly expanded U.S. activities in this sphere. The report therefore also includes a comprehensive set of recommendations for how the United States can and should more effectively assist Middle Eastern governments and other local partners to develop their own nonproliferation capacities, cultivate a culture of nonproliferation responsibility, and enhance regional cooperation on nonproliferation issues.

II. IRAN'S NUCLEAR PROGRAM

Iran poses by far the most important and immediate Middle East nuclear proliferation challenge for the United States and the international community. Iran's advancing nuclear program violates U.N. Security Council resolutions, threatens international peace and security, undermines the Nuclear Nonproliferation Treaty, and threatens to spur proliferation elsewhere in the region. The United States—together with the other permanent members of the Security Council (China, France, Russia, and the United Kingdom) plus Germany (the "P5+1")—has pursued negotiations with Iran on

curtailing its nuclear activities. After several rounds of negotiations, these talks have failed to result in agreement. Another round is expected to take place in early 2013.

Next Steps in Economic Sanctions

Sanctions so far have failed to achieve their avowed objective of inducing Iranian Supreme Leader Ali Khamenei and his Islamic Revolutionary Guard Corps (IRGC) to agree to permanently circumscribe, and establish the peaceful nature of, their nuclear program.

Three rounds of failed talks in Istanbul, Baghdad, and Moscow—plus numerous expert-level meetings—have demonstrated that the United States and its allies do not yet have sufficient leverage to make Iran’s leadership yield and agree to meet Iran’s obligations under international law.

We recommend that the United States and its allies impose maximal sanctions pressure on Iran prior to Iran’s reaching “critical capability.” We define “critical capability” as the point at which Iran will be able to produce enough weapon-grade uranium (or sufficient separated plutonium) for one or more bombs before the production of such an amount can reasonably be expected to be detected by the IAEA or Western intelligence services. Our analysis focuses on the speed with which Iran could produce enough weapon-grade uranium (or sufficient separated plutonium) because once the regime acquires such fissile material, it becomes far more difficult to stop the program militarily. That’s because manufacturing nuclear detonators, or assembling nuclear bombs, could be done in small, undetectable facilities.

President Obama has also attached considerable significance to the stage at which Iran’s nuclear program would be sufficiently advanced that it would no longer be possible to in a timely manner detect that Iran is acquiring a nuclear bomb. In the final presidential debate of the 2012 campaign, President Obama said:

“The clock is ticking. We’re not going to allow Iran to perpetually engage in negotiations that lead nowhere. And I’ve been very clear to them, you know... we have a sense of when they would get breakout capacity, which means that we would not be able to intervene in time to stop their nuclear program, and that clock is ticking.”

Based on the current trajectory of Iran’s nuclear program, we estimate that Iran could reach critical capability in mid-2014. Depending on the occurrence (or non-occurrence) of various potential developments, Iran could in fact reach this critical capability either before or after mid-2014. Developments that could expedite the date include Iran’s increasing its enrichment from 20 percent to a level of 60 percent, a significant increase in the number or efficiency of Iran’s centrifuges, the existence of a secret Iranian enrichment facility, or various potential developments relating to Iran’s plutonium

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The United States must intensify sanctions until the impact is so severe—as Iran’s revenues shrink, its currency loses more of its value, and its hard-currency reserves plummet—**that Iran’s leaders change course and curtail their nuclear program.**

production capacity (e.g., reprocessing capabilities). Developments that could delay the date include another Stuxnet-type computer attack on Iran’s nuclear program or other unexpected Iranian difficulties with its centrifuge program. In light of these factors, caution dictates that the United States assume, and plan on the basis, that Iran could reach critical capability in mid-2014.

Given these uncertainties and recognizing that at least one Middle East leader, Israeli Prime Minister Benjamin Netanyahu, has expressed concern that Iran may reach critical capability by the summer of 2013, we believe that the intensification of sanctions we recommend needs to begin as rapidly as possible.

There is no way to know whether the Iranian regime will ever relent in its nuclear ambitions. There is always the possibility that the regime will keep enriching notwithstanding a looming, or even actual, sanctions-induced economic collapse. For sanctions to be given every chance of succeeding, though, the working assumption must be that sufficiently severe economic pressure will cause, or contribute significantly to causing, the Iranian regime to relent.

Economic pressure seems most likely to succeed if it reaches maximum strength at least six months before Iran could reach critical capability. The psychological impact of the pressure will need time to ripple through Iran’s political system, and a regime just weeks away from achieving its nuclear objective seems more likely to try to push on through.

How strong will such economic pressure need to be? Since at least 2009, Secretary of State Hillary Clinton has been threatening Iran with “crippling sanctions.” However, the sanctions on Iran are not yet crippling, and Iran has yet to bring its nuclear program into compliance with UN Security Council requirements. The United States must intensify sanctions until the impact is so severe—as Iran’s revenues shrink, its currency loses more of its value, and its hard-currency reserves plummet—that Iran’s leaders change course and curtail their nuclear program.

The United States should ramp up sanctions against Iran so as to bring the date of maximal economic pressure nearer by significantly increasing the sanctions’ impact on Iran’s international trade and investment, Iranian government revenue, capital flows, inflation, foreign exchange rates, and overall macroeconomic stability, with any necessary calibrations to reflect concessions Iran may make in the course of negotiations.

To maximize the likelihood that Iran experiences sufficient pressure in time to ensure that it will not build nuclear weapons and, instead, agrees to negotiate a timely end to the nuclear crisis, the following steps need to be taken immediately:

- a.** Existing U.S. sanctions on Iran must be implemented with much greater intensity and impact.
- b.** The U.S. government should announce its intention to use sanctions to impose a de facto international embargo on all investments in, and trade with, Iran (other

than provision of humanitarian goods) if Iran does not comply with applicable UN Security Council resolutions. The U.S. government can achieve such an embargo by using secondary sanctions to pressure foreign companies to halt any such investments in, and trade with, Iran.

c. If the U.S. government is unwilling to immediately announce its intention to use sanctions to impose such a comprehensive trade embargo on Iran, the United States should, at a minimum, take the following immediate steps:

i. Consider mechanisms that significantly reduce non-humanitarian trade with Iran

ii. Extend U.S. secondary sanctions to additional specific sectors of Iran's economy

iii. Impose U.S. secondary sanctions against all Iran-related persons and entities on the U.S. Treasury Department's Specially Designated Nationals (SDN) list

iv. Expand sanctions on Iran's energy sector to include purchasers of Iranian natural gas

v. Raise the threshold for exceptions under Section 1245 of the 2012 National Defense Authorization Act, which excepts states continuing to import Iranian crude oil from sanctions if they significantly reduce such exports

vi. Enforce a broader insurance embargo on Iran

vii. Impose sanctions on any entity providing services to Iranian financial institutions or holding Iranian government or IRGC assets

d. Continue working to ensure that implementation of sanctions on Iran does not inadvertently block the provision to Iran of humanitarian goods

Consistent with the Trade Sanctions Reform and Export Enhancement Act of 2000, U.S. sanctions on Iran do not prohibit the export to Iran of "agricultural commodities" (defined by law to include food) or of medicine and medical devices (this report refers to all of these excepted goods collectively as "humanitarian goods"). While this report calls for strengthening U.S. sanctions on other trade with Iran, it does not call for sanctions on the provision to Iran of humanitarian goods.

Concern has been expressed that U.S. sanctions on Iran may be constricting the supply of humanitarian goods to Iran. Despite U.S. sanctions on Iran, U.S. exports to Iran of various humanitarian goods rose considerably in 2012, reportedly due to a U.S. government easing of the approval process for humanitarian exemptions. The United States government should continue working to ensure that implementation of sanctions on Iran does not inadvertently block the provision to Iran of humanitarian goods.

Under the National Defense Authorization Act for Fiscal Year 2013 (“the 2013 NDAA”), Congress has required the President to list and sanction Iranian persons or entities that engage in corrupt activities relating to “the diversion of goods, including agricultural commodities, food, medicine, and medical devices, intended for the people of Iran” or “the misappropriation of proceeds from the sale or resale of such goods.” The Iranian government and its agents reportedly are involved in corrupt activities that are restricting the Iranian people’s access to such humanitarian goods.

Options for Next Steps to Constrain Iran’s Nuclear and Missile Programs

The U.S. and its allies should take the following additional steps to constrain Iran’s nuclear and missile programs:

- a.** Enhance constraints on the supply of goods Iran needs for its nuclear and missile programs, including by taking the following steps:
 - i.** Strengthen the UN Iran Sanctions Committee and its Panel of Experts;
 - ii.** Encourage improved implementation of UN sanctions by China, including by designating China as a “Destination of Diversion Concern” pursuant to Title III of the Comprehensive Iran Sanctions, Accountability, and Divestment Act;
 - iii.** Consider designating Hong Kong and Turkey as Destinations of Diversion Concern;
 - iv.** Place greater priority on encouraging and assisting all countries where diversion is an issue, including those in the Persian Gulf, to both develop and implement comprehensive strategic trade control laws;
 - v.** Further restrict Iran’s use of the international financial system, including by assisting countries with insufficient financial controls and increasing Financial Action Task Force emphasis on nonproliferation;
 - vi.** Improve detection and disruption of procurement efforts, including through: greater government/industry cooperation; expanding the Proliferation Security Initiative to include additional countries (such as India, Malaysia and South Africa); U.S. enactment of implementing legislation for the Protocol to the Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation; encouraging countries to impose stronger sentences on convicted WMD traffickers; and removing impediments to transnational cooperation in prosecuting WMD traffickers;
 - vii.** Carefully monitor Iran’s plutonium-related facilities, including its Russian-supplied nuclear power plant at Bushehr and its still-under-construction heavy-water

facility at Arak, and work with Russia to more rapidly remove all Bushehr spent fuel from storage in Iran.

b. Enhance covert efforts to delay and constrain improvement of Iran’s nuclear and missile capabilities

c. Increase the credibility of the U.S. military threat. The combination of economic sanctions and covert actions may only succeed in preventing Iran from building nuclear weapons if paired with a crystal clear message to Iran’s leaders that it is futile for them to continue to seek such weapons because U.S. military action ultimately will prevent them from succeeding. In other words, it may be necessary to make clear to Iran’s leadership that it is mistaken if it thinks Iran can simply endure sanctions until such time as an Iranian nuclear test results in the West accepting an Iranian nuclear arsenal as a *fait accompli* and consequently lifting sanctions on Iran. In order to increase the credibility of this U.S. military threat, the U.S. should:

i. Undertake additional overt preparations for the use of warplanes and/or missiles to destroy Iran’s nuclear capabilities with high explosives

ii. The President should explicitly declare that he will use military force to destroy Iran’s nuclear program if Iran takes additional decisive steps toward producing a bomb. Possible triggers could include producing weapon-grade uranium or separated plutonium, expelling IAEA inspectors, construction of additional covert nuclear facilities, or undertaking significant additional weaponization activities.

iii. Increase Iranian isolation, including through regime change in Syria and deepening Iran’s diplomatic isolation.

d. Prepare for the possibility of a surprise Iranian test. Iranian acquisition of nuclear weapons would be dangerous for several reasons, none of which would be adequately addressed by containment. Nonetheless, since intelligence can be imperfect, we must take steps now to prepare for the possibility that we will wake up one morning and discover that Iran has acquired a nuclear weapon despite the United States’ best efforts.

Negotiations, Incentives, and Concessions: What Would Constitute an Acceptable Deal?

The United States should offer nuclear sanctions relief to Iran only in response to meaningful concessions by the Iranians that are consistent with the multiple relevant U.N. Security Council resolutions, IAEA Board of Governors resolutions, and U.S. laws. Although the order and timing of each step may be subject to negotiation, these concessions must include:

The combination of economic sanctions and covert actions may only succeed in preventing Iran from building nuclear weapons if paired with a **crystal clear message to Iran’s leaders that it is futile for them to continue to seek such weapons because U.S. military action ultimately will prevent them from succeeding.**

Inspections must be intrusive enough to detect cheating quickly and authoritatively.

Only the tightest controls over Iran's nuclear program and the highest degree of verification and transparency can be considered an acceptable outcome.

- 1) Suspension by Iran of the following proliferation-sensitive nuclear activities: (a) all enrichment-related and reprocessing activities, including research and development, to be verified by the IAEA; and (b) work on all heavy water-related projects, including the construction of a research reactor moderated by heavy water, also to be verified by the IAEA;
- 2) Provision by Iran of such access and cooperation as the IAEA requests to be able to verify the suspensions and to resolve all outstanding issues, as identified in IAEA reports;
- 3) A full accounting and resolution of all outstanding questions about Iran's past and any current (as of the time of agreement) nuclear weapons related activities;
- 4) Complete closure of the Fordow facility and any other deeply buried enrichment facility that is either complete or under construction; and
- 5) Iran's binding agreement to intrusive and comprehensive inspections that are at a minimum as stringent as those outlined in the IAEA's Additional Protocol (to the comprehensive safeguards agreements states must implement under the Nuclear Nonproliferation Treaty), plus additional measures that reflect that Iran has been found in noncompliance with its safeguards obligations.

Inspections must be intrusive enough to detect cheating quickly and authoritatively. Only the tightest controls over Iran's nuclear program and the highest degree of verification and transparency can be considered an acceptable outcome for the P5+1 negotiations. As stated by 73 U.S. Senators in a letter to the President on December 19, 2012, "the time for limited confidence building measures is over" and "there should be absolutely no diminution of pressure on the Iranians until the totality of their nuclear problem has been addressed."

III. PROLIFERATION BY STATE ACTORS (OTHER THAN IRAN) IN THE MIDDLE EAST—CHALLENGES AND OPPORTUNITIES

The U.S. should immediately adopt and begin implementing a concerted, comprehensive nonproliferation strategy for the Middle East, to include:

- a.** Reducing demand by reinforcing the peaceful orientation of nuclear power programs in the region and reinforcing U.S. security commitments
- b.** Controlling supply by:
 - i.** Promoting expanded adherence to the IAEA Additional Protocol (the following NPT member states in the region do not yet have it in place: Algeria, Egypt, Iran, Saudi Arabia, Syria and Tunisia)

ii. Pursuing the adoption, in nuclear cooperation agreements with countries in the Middle East, of provisions that would preclude the development of indigenous enrichment and reprocessing capabilities

iii. Enhancing Middle Eastern governments' capacities to prevent, detect, and interdict illicit WMD-related trade, including by establishing a regional network of national WMD law enforcement coordinators; promoting a culture of nonproliferation responsibility and cooperation throughout the Middle East; and expanding the scope of the Global Initiative to Combat Nuclear Terrorism to include all relevant Middle Eastern countries (e.g., Egypt, Iraq, Kuwait, Oman, and Tunisia are currently not members)

C. Promoting regional cooperation on nonproliferation issues related to the vision of a Middle East WMD-Free Zone (MEW MDFZ). Steps could include:

i. Ensuring that a MEW MDFZ conference, if and when convened, adheres to assurances provided by President Obama and does not produce even more tension between regional parties. The effort, led primarily by Egypt, to pursue a MEW MDFZ has traditionally been a concern for the United States, which has viewed it as aimed primarily at pressuring Israel to renounce its nuclear capability (a step Israel says it cannot take until all of its neighbors are at peace with it).

ii. In light of the fact that all key governments in the region have expressed the view that a MEW MDFZ is an appropriate long term goal, test whether the MEW MDFZ concept can be used as a framework through which to advance more incremental nonproliferation progress in the Middle East. For example, seeking agreement on a set of non-binding practical nonproliferation measures that regional countries could undertake individually, in support of the MEW MDFZ aspiration, in the current Middle East political climate (in other words, without an overall Arab-Israeli peace settlement)

iii. Encouraging and supporting Track Two efforts aimed at bringing together regional parties for non-binding discussions using the MEW MDFZ concept as a framework through which to strengthen nonproliferation in the region. Track Two venues bring officials and non-official experts together to engage in off-the-record, less formal discussions on important and difficult topics and develop recommendations for policymaker consideration. They offer opportunities to explore issues too sensitive for official talks, to creatively address issues that have become gridlocked at the formal level, and to build informal relationships.

d. Encouraging and supporting other possible regional WMD-related confidence-building measures that may be feasible at this time. Regional nonproliferation cooperation should not be tied to the MEW MDFZ concept if to do so is unhelpful to making progress now. The United States should energetically work to promote as

Biosecurity is the most feasible WMD-related area on which to advance regional cooperation, in part because **the overlap between biosecurity measures addressing biological weapons and biosurveillance measures addressing naturally occurring disease outbreaks makes it relatively easy politically for states to undertake measures that address both.**

much regional nonproliferation cooperation as is possible in the current Middle East political climate. This should include the following:

i. The U.S. government should significantly increase financial support for Track Two initiatives in the Middle East on nonproliferation and related issues. The leadership transitions in countries such as Egypt are bringing to power groups with few if any members versed in nonproliferation issues. Track Two conferences and other such dialogues can provide an opportunity to informally engage those political appointees and party leaders, from parties such as Egypt’s Muslim Brotherhood, who have an interest in or nexus to nonproliferation. In addition, support from civil society is critical to developing a culture of nonproliferation responsibility in the changing Middle East. As some Arab states transition away from authoritarian governments, we almost certainly will see greater involvement in national politics by non-governmental organizations. Track Two dialogues could help build support for nonproliferation among such civil society organizations. Track Two also could help cultivate younger nonproliferation experts, scholars, scientists, and practitioners. Unfortunately, some of the most successful Middle East Track Two initiatives are significantly hampered by lack of funding.

ii. The U.S. government should leverage the considerable interest in regional cooperation on biosecurity and biosafety capacity building. Biosecurity is the most feasible WMD-related area on which to advance regional cooperation, in part because the overlap between biosecurity measures addressing biological weapons and biosurveillance measures addressing naturally occurring disease outbreaks makes it relatively easy politically for states to undertake measures that address both.

iii. In that light, the U.S. should support the Middle East Consortium on Infectious Disease Surveillance (MECIDS)—a successful partnership of the Israeli, Jordanian, and Palestinian health ministries. Despite its programmatic success, MECIDS struggles financially, each year barely managing to raise money for a bare bones budget. With additional support, MECIDS could both continue its current work and expand by adding additional partners and projects.

iv. Regional Action Plan for Biosafety and Biosecurity Collaboration. Since 2010, a group of experts, including current and former officials, from nine countries across the Middle East has gathered periodically in a Track Two task force to discuss the potential for regional collaboration on biosafety and biosecurity. The experts group has adopted a regional action plan, for building sustainable capacity to prevent bioterrorism in the Middle East, which was presented at the Biological Weapons Convention Review Conference in December 2011. The regional action plan includes a menu of 20 different regional confidence building activities that the experts agreed could and should be pursued as soon as possible. The activities would be valuable with regard to prevention, detection and response of both infectious disease outbreaks and

bioterrorism. The United States should encourage and support regional implementation of the agreed activities.

e. Special Strategies Relating to New Islamist Governments. New, Islamist governments in the Middle East—and especially the Muslim Brotherhood government of Egypt—pose a particularly important set of nonproliferation challenges and opportunities. History provides several examples of changes of government contributing to transitions away from WMD. On the other hand, there is considerable nonproliferation risk in the emergence of inexperienced, radical Islamist regimes which may be bent on implementing their ideological visions, potentially eager to satisfy nationalists or their hardline bases by taking steps their predecessors chose not to, and insensitive to traditional geopolitical calculations or military balances. These new regimes may also be simply too inexperienced to avoid being caught up in escalatory political dynamics of their own making.

Egypt

The United States should take the following steps to influence the new Egyptian government to remain committed to nonproliferation:

- i.** The Muslim Brotherhood has relatively few foreign policy experts or experienced practitioners. The United States should invest in reaching out to and developing a cadre of Muslim Brotherhood affiliated nonproliferation experts and supporters, including through visits to the United States and Track Two dialogues.
- ii.** Egypt should be encouraged to adhere to the Additional Protocol. If Egypt moves forward with a new nuclear power plant at al Dabaa, or other new nuclear energy projects, adherence to the Additional Protocol would be an important signal that Cairo's intentions are peaceful. Another important signal would be an Egyptian announcement that it will forswear enrichment and reprocessing capabilities.
- iii.** In light of the large amounts of aid that the U.S. provides Egypt, the United States should be very specific with Egypt as to the cost to it of pursuing proliferation, emphasizing to both the Morsi administration and the Egyptian military that pursuing proliferation would harm Egyptian national security by depriving Egypt's military of both U.S. assistance and the resources needed to build and maintain WMD.
- iv.** The United States should also be prepared to, if necessary, make clear to the Egyptian government that proliferation would lead to sanctions and other isolating measures being imposed on it at a time when its most pressing problems involve developing its economy, which requires external assistance.

Syria

The U.S. government should impress upon the Syrian opposition, even before it comes to power, that failure to work with the international community to destroy the Assad regime's chemical weapons will lead to sanctions and other isolating measures being continued on Syria's new government at a time when its most pressing problems will be consolidating its control and developing its economy, both of which will require external assistance. Furthermore, in light of the strong hatred of the Assad regime by the Sunni leaders likely to replace it, it may be worth emphasizing to the Assad regime that it makes more sense to invite international experts to destroy its chemical weapons (under the supervision of the Organization for the Prohibition of Chemical Weapons) than either to use the weapons and face prosecution or to allow the weapons to fall into the hands of its successors.

f. Increase Sanctions Coordination within the USG. To maximize U.S. leverage over current and future proliferators (as well as other targets of U.S. sanctions), the United States government should create an Office of Sanctions Coordination, based at the National Security Council, to coordinate the creative and impactful application of sanctions against specific targets.

IV. PROLIFERATION BY NON-STATE ACTORS IN THE MIDDLE EAST

The 9/11 Commission warned that “the greatest danger of another catastrophic attack in the United States will materialize if the world’s most dangerous terrorists acquire the world’s most dangerous weapons.” There is a significant risk that Middle Eastern terrorists could develop or otherwise acquire weapons of mass destruction and use them to catastrophic effect. The Middle Eastern terrorist groups which are most likely to acquire and use WMD are al-Qaeda, Hezbollah, and Hamas. Al Qaeda has pursued a long-term, persistent and systematic approach to developing WMD. According to various sources, Syria’s Assad regime is considering transferring chemical weapons to Hezbollah. Hamas, the Palestinian terrorist group that controls the Gaza Strip, attempted for several years to use WMD.

The U.S. should take the following steps to more effectively prevent WMD acquisition and use by non-state actors in the Middle East:

- a.** Reduce the risks of Syrian chemical weapons ending up in the hands of other states or non-state actors, including by being prepared to use U.S. assets to address various core contingencies and by urging other great powers to use their influence.
- b.** Reduce the risks of Syrian nuclear materials ending up in the hands of other states or non-state actors.

The 9/11 Commission warned that “the greatest danger of another catastrophic attack in the United States will materialize if the world’s most dangerous terrorists acquire the world’s most dangerous weapons.” There is a significant risk that Middle Eastern terrorists could develop or otherwise acquire weapons of mass destruction and use them to catastrophic effect.

c. Encourage and assist enhancement of Middle Eastern capacity and will to prevent non-state actors from acquiring nuclear, chemical, or biological weapons and their means of delivery. One particularly useful modality for providing such encouragement and assistance is UN Security Council Resolution 1540, passed in 2004, which imposes binding obligations on all U.N. member states to adopt and enforce effective controls to prevent the proliferation of WMD, their means of delivery, and related materials. The Middle East has a relatively weak record of implementation of this resolution.

d. The United States must adopt a clear and unambiguous policy declaring that any states that provide WMD to terrorist groups that then use them will face unrelenting retaliation involving all elements of American power. Key to the effectiveness of this policy is both a strengthening of attribution capacities and a statement that the United States may not wait for perfect proof that a particular WMD used by a state-sponsored terrorist group originated in a particular state sponsor.

e. Make it clear to terrorist groups that they will pay a heavy price for WMD acquisition or use, and that the costs of such acquisition or use will far outweigh the benefits. Accordingly, the U.S. and its allies should strive to weaken terrorist groups as much as possible, so that they do not have the resources to pursue WMD, and ensure that terror groups pay a price for lesser terrorist acts so that credibility is maintained and WMD-related deterrence is taken seriously.

f. Improve detection and response capacity, so that non-state actors will understand that WMD attacks are not worth conducting because they will not cause sufficient damage to outweigh their counterproductive characteristics.

V. COOPERATIVE NONPROLIFERATION PROGRAMS APPLICABLE TO THE MIDDLE EAST

The U.S. government has in recent years, as noted above, invested considerable resources on intelligence community, diplomatic, military, and other counterproliferation efforts to detect, interdict, deter, and defend against proliferation in the Middle East. These U.S. nonproliferation efforts in the Middle East have been complemented by a set of poorly funded (and sometimes uncoordinated) collaborative and cooperative programs to promote nonproliferation norms and practices amongst Middle Eastern governments, civil society, and other local partners. The executive branch recently completed the procedures necessary before Department of Defense funds could be spent on such cooperative threat reduction and related nonproliferation efforts in the Middle East. As a result, it is now possible to significantly expand such U.S. activities in the region, so as to more effectively assist Middle Eastern governments and other local partners to develop their own nonproliferation capacities, cultivate a culture of nonproliferation responsibility, and enhance regional cooperation on nonproliferation issues.

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The lack of a federal office with the mandate to closely follow the various agencies' CTR (cooperative threat reduction)

and related nonproliferation programs in the Middle East, coordinate the programs, and identify gaps may be one reason why several of the existing and potential initiatives with the greatest potential impact lack sufficient funding.

The U.S. government currently spends a total of approximately \$1 billion annually on various cooperative threat reduction programs designed to promote nonproliferation, and reduce WMD threats to the United States, in cooperation with foreign governments. There are more than a dozen such programs, housed predominantly in the Departments of Defense, Energy, State, and Homeland Security. Despite the grave threats posed to the United States by WMD originating in the Middle East (defined by this report to include North Africa), a total of only about 2 percent (approximately \$20 million per year out of a total \$1 billion annually) of cooperative threat reduction (CTR) program funds were being spent in all of the countries of the Middle East (with the exception of Iraq) as of the summer of 2012. A strategically targeted, well-coordinated increase of approximately \$30 million per year allocated to U.S. threat reduction work in the Middle East could make a very significant contribution to advancing U.S. nonproliferation objectives in the region.

The largest of the cooperative threat reduction programs is the Department of Defense's Cooperative Threat Reduction Program (DOD/CTR), for which Congress authorized \$519 million in the 2013 NDAA. With the exception of Iraq, DOD/CTR currently is not doing work in any country in the Middle East (including North Africa). The primary reason for this lack of activity in the region (outside Iraq) is because the executive branch did not until the fall of 2012 complete the bureaucratic procedures necessary to internally authorize DOD/CTR to do work in the Middle East (other than in Iraq). Now that these procedural steps have been completed to authorize this work, it is possible to significantly expand such U.S. activities in the region.

While the Middle East is at exceptionally high risk for WMD proliferation, countries in the region have relatively weak nonproliferation capacity. For example, only one Arab League member state (the UAE) has a comprehensive strategic trade control law.

The United States should establish a Middle East Nonproliferation Initiative to coordinate, and creatively and nimbly advance, cooperative threat reduction and related nonproliferation work in the Middle East. There are many reasons to approach Middle East nonproliferation issues not just on the current country-by-country basis but also on a regional basis. Many Middle East nonproliferation threats have a regional dimension. In addition, various particular characteristics of the region would help lend a synergistic impact to regionally coordinated activities. Furthermore, a set of Middle East nonproliferation programs that were better coordinated with each other could in turn together coordinate, and develop synergies, with such other regional efforts as the State Department's Middle East Partnership Initiative (MEPI), the State Department's Office of the Special Coordinator for Middle East Transitions (which coordinates U.S. government assistance to Middle Eastern countries undergoing transitions to democracy), and relevant programs of the U.S. Agency for International Development.

There is currently no federal office with the authority to closely follow and coordinate the various agencies' CTR and related cooperative nonproliferation work in the Middle East. Indeed, it is remarkably challenging even merely to determine how much CTR and related nonproliferation funding is being spent in the Middle East. The lack of a federal office with the mandate to closely follow the various agencies' CTR (cooperative threat reduction) and related nonproliferation programs in the Middle East, coordinate the programs, and identify gaps may be one reason why several of the existing and potential initiatives with the greatest potential impact lack sufficient funding (or in some cases have no funding).

The Middle East Nonproliferation Initiative Office should both play a coordinating role and have its own programmatic budget. The Initiative Office's coordinating mandate should include the following:

- a.** Coordinate and track U.S. government assistance to promote cooperative threat reduction and related nonproliferation activities in the Middle East
- b.** Provide Congress with an annual report on all Middle East CTR and related nonproliferation activities and programs undertaken by the executive branch
- c.** Develop comprehensive CTR and other nonproliferation assistance strategies for the Middle East and ensure that such assistance tools are aligned with U.S. policy goals
- d.** Work with international donors and institutions on coordinating CTR and related nonproliferation assistance strategies for the Middle East
- e.** Mobilize resources from the U.S. business, foundation, university, think tank, and other sectors to support cooperative threat reduction and nonproliferation in the Middle East

In addition, the Initiative Office should administer an annual budget of \$30 million per year, to be used to promote CTR and nonproliferation in the Middle East, including through region-wide, multi-country, and country-specific grants and contracts, and the use of prizes and challenges. The Initiative's efforts should be designed to achieve specific objectives including the following:

- a.** In coordination with MEPI, promote civil society understanding of, and support for, nonproliferation in emerging democracies such as Egypt, including through outreach to relevant civil society organizations and support for development of nonproliferation-oriented organizations and networks in the region.
- b.** In coordination with the State Department's public diplomacy specialists, promote understanding of, and support for, nonproliferation among reporters and editors of Middle Eastern media outlets.

Europe's recent increased prioritization of nonproliferation issues, plus the recent enhancement of the EU's foreign policy tools, **makes this an especially useful time to consider opportunities for more effective collaboration**

between the U.S. and European Union on Middle East nonproliferation policy and implementation.

- c.** Reach out to and help enhance understanding of, and support for, nonproliferation among emerging leaders of newly ascendant political parties in the Middle East (e.g., emerging foreign affairs leaders of Egypt's Muslim Brotherhood and the Syrian opposition), for example by bringing them to the U.S. for training.
- d.** Encourage and assist improved cooperation between Middle Eastern governments and their private sectors to detect proliferation procurement attempts.
- e.** Dramatically increase results-oriented efforts to encourage and assist Middle Eastern governments to adopt and implement comprehensive strategic trade control laws, including through drafting workshops and targeted public diplomacy efforts.
- f.** Encourage and assist Middle Eastern countries to more effectively prevent, detect, and interdict illicit trade in proliferation-sensitive items, including through investigative and prosecutorial training and through supporting creation of a regional network of national WMD law enforcement coordinators.
- g.** Facilitate enhanced cooperation between U.S., European and other key producer state prosecutors and investigators of illicit strategic exports to the Middle East, including by creation of a regular international forum for sharing of information and best practices.
- h.** Support Track Two dialogues which convene officials and experts from all countries of the Middle East, on a not-for-attribution basis, to discuss cooperative threat reduction and nonproliferation issues. Some of the most successful Middle East Track Two initiatives on nonproliferation issues are significantly hampered by lack of funding.
- i.** Identify, seek agreement on, and support a set of non-binding practical nonproliferation measures which regional countries could undertake individually, in support of the WMDfz aspiration, in the current Middle East political climate. For example, regional parties could commit to reporting regularly, to each other or to a mutually acceptable third party, on their national nonproliferation activities, including legislative measures and hosting of conferences and training activities.
- j.** Consider encouraging, and assisting creation of, a Track One or Track Two experts group charged with investigating, and making recommendations for, the technical dimensions of a regional verification system in support of a Middle East WMDfz.
- k.** Support continuation and expansion of the Middle East Consortium for Infectious Disease Surveillance, a partnership of the Israeli, Jordanian and Palestinian health ministries, which promotes biosurveillance cooperation that would be useful in addressing both natural disease outbreaks and also bioterrorism attacks.
- l.** Encourage and support regional implementation of activities such as those contained in the 20-point action plan, for building sustainable capacity to prevent

bioterrorism in the Middle East, which was agreed upon in a Track Two task force and presented at the Biological Weapons Convention Review Conference in December 2011. Those activities, listed in Chapter 3 of this report, would foster regional prevention, detection, and response capacities.

m. Promote establishment of professional networks that foster voluntary regional interaction on WMD-related issues.

n. Use prizes and challenges to spur innovation in achieving appropriate Middle East nonproliferation objectives. The Middle East Nonproliferation Initiative could, for example: i. issue a challenge, directed at both U.S. nationals and persons in the region, that would seek creative ideas for non-binding practical nonproliferation measures which regional countries could undertake individually, in support of the WMDFZ aspiration, in the current Middle East political climate, or ii. award a prize for the project which best advances nonproliferation in the region through collaboration between students in three or more countries in the region.

Several of the above Middle East nonproliferation objectives are not currently being pursued at all by the U.S. government. Others could, in our view, be pursued more systematically and effectively by a Middle East Nonproliferation Initiative with the recommended level of funding.

VI. ENHANCED PARTNERSHIP WITH EUROPE ON NONPROLIFERATION IN THE MIDDLE EAST

Europe's sophisticated industries, extensive trade and other relationships with the Middle East, and role in NATO, as well as Britain and France's permanent seats on the UN Security Council, make Europe a critical partner for U.S. nonproliferation policy in the Middle East. Europe's recent increased prioritization of nonproliferation issues, plus the recent enhancement of the EU's foreign policy tools, makes this an especially useful time to consider opportunities for more effective collaboration between the U.S. and European Union on Middle East nonproliferation policy and implementation. Some additional steps can be taken by the European Union internally, while other additional steps are for the European Union and United States to take together.

a. Internal EU Steps to More Effectively Combat Proliferation in the Middle East

European Union sanctions on Iran still fall far short of the complete embargo on trade (other than in humanitarian goods) that the U.S. has imposed on Iran. The European Union should announce that, in the absence of progress on Iran's nuclear program, it will impose on Iran a complete embargo on trade (other than in humanitarian goods) similar to that which the U.S. has imposed on Iran. In addition, EU designation, and sanctioning, of Hezbollah as a terrorist organization would significantly weaken one of the Middle East non-state actors most likely to acquire sophisticated WMD and greatly increase the isolation of Iran and pressure on Tehran to halt its illicit nuclear

weapons program. The United States should also strongly encourage the European Union to more effectively promote consistently rigorous implementation of export regulations and procedures across the various countries of the European Union.

b. Enhancing U.S.-Europe Cooperation on Combatting Proliferation in the Middle East

The United States and Europe should work together to more effectively promote nonproliferation in the Middle East by making more effective use on Middle East nonproliferation issues of NATO's Mediterranean Dialogue and Istanbul Cooperation Initiative, prioritizing better matching of U.S. and European Union sanctions lists, and more effectively systematizing cooperation on implementation of Iran sanctions.

Chapter 1: Overview of the Challenges for U.S. Nonproliferation Strategy in the Middle East



THIS REPORT ADDRESSES U.S. NONPROLIFERATION STRATEGY RELATING TO THE MIDDLE EAST AND NORTH AFRICA (“THE MIDDLE EAST”). THE GEOGRAPHIC SCOPE OF THIS REPORT IS THE SAME AS THE PURVIEW OF THE U.S. STATE DEPARTMENT’S BUREAU OF NEAR EASTERN AFFAIRS. IN OTHER WORDS, IT INCLUDES: ALGERIA, SAUDI ARABIA, SYRIA, TUNISIA, UNITED ARAB EMIRATES, AND YEMEN.

Since World War II, more weapons of mass destruction (WMD) attacks have occurred in the Middle East and North Africa (“Middle East”) region than in any other region of the world.² Egypt used chemical weapons against Yemen from 1963 to 1967,³ Iraq used chemical weapons against Iran during the Iran-Iraq War,⁴ Iran reportedly used chemical weapons against Iraq during that same war,⁵ and Libya used chemical weapons against Chad in 1987.⁶ In addition to these uses of chemical weapons against neighbors, Iraq used chemical weapons on Kurds within its territory in 1988.⁷ These uses may indicate that in the Middle East, the taboo against the use of WMD is weaker than in any other region of the world.⁸

The Middle East contains several states with suspected or confirmed offensive biological and/or chemical weapons programs,⁹ one state with a nuclear arsenal,¹⁰ another state developing the capability to build a nuclear arsenal quickly,¹¹ and at least seven states that have acquired ballistic missiles with a range or payload exceeding the guidelines of the Missile Technology Control Regime (MTCR).¹² Even without an Iranian nuclear arsenal or other further proliferation, the Middle East has been aptly described as “a WMD war waiting to happen.”¹³ The further proliferation of WMD in the Middle East tinderbox, with its border disputes, religious fanaticism, ethnic hatreds, unstable governments, terrorist groups, and tendency for conflicts to spiral out of control, seems all too likely to result in disaster.

It is imperative for the United States to develop and implement a comprehensive non-proliferation strategy for the Middle East. Factors lending urgency to this need include the threat of proliferation in and by Iran, the vulnerable Syrian chemical arsenal, the challenges and opportunities posed by the Arab revolutions, the relatively frequent prior use of WMD in the Middle East, the current possession of WMD by several regional states, and a tense and unstable regional security environment.

The specific proliferation challenges that the United States faces in the Middle East during the next four years are both critical and highly diverse. Some, such as Iran’s growing nuclear capabilities, pose direct threats to the United States and its friends and allies. Others, such as Egypt’s demands for a weapon-of-mass-destruction-free zone (WMDFZ) in the region, pose diplomatic dilemmas. Still others, such as the inability of current International Atomic Energy Agency (IAEA) efforts to root out all facets of Iran’s and Syria’s nuclear activities, impinge on endeavors to slow proliferation around the globe. Looming in the background are non-state entities that have been seeking to acquire weapons of mass destruction.

The tools already being used in the Middle East by U.S. nonproliferation policymakers, as well as other tools that are potentially available to meet these challenges, are as diverse as the challenges themselves. Relevant treaties; high-level diplomatic initiatives; U.N. Security Council, coalition, and unilateral sanctions; strategic trade controls; and military measures (both defensive and, potentially, offensive), are all in play. Intelligence capabilities of the United States and its allies are an instrument of crucial,

crosscutting importance, providing both essential knowledge regarding activities of concern and tools for disrupting them.

U.S. nonproliferation activities operate against a backdrop of several pervasive commitments and trends that also must be taken into account. Perhaps of paramount importance are strong U.S. political and military commitments and ties to states in the region that are threatened by nuclear proliferation dangers in Iran and by the potential loss of control over Syria's chemical weapons. The "Arab Spring" revolutions, especially in Egypt and Syria, and the potential resurgence of reformist activism in Iran, may create new opportunities to address proliferation issues, but surely will add to uncertainty regarding the region's politics, including with respect to the Israeli-Palestinian peace process. Growing interest in nuclear energy in the region likely will add further complexity to the regional proliferation equation.

Although Iran's nuclear activities are not at the center of all of these issues, they are the key to many. They provide the model for Syria's nuclear program; the engine for illicit trafficking in nuclear commodities in the region; a major threat to the credibility of the Nuclear Non-Proliferation Treaty (NPT); and a spur to additional regional nuclear power programs. In terms of potential threats to the United States and its friends and allies, the dangers posed by Iran's nuclear program far outstrip those presented by the other issues.

Many of the Middle East's leading violent non-state actors, such as al-Qaeda, profess a deep hatred of the United States and may, like the September 11 suicide bombers, not be possible to deter. WMD, as well as a radiological dirty bomb (a conventional explosive laced with radiological material)—of Middle Eastern origin or deployed by a Middle Eastern state or non-state actor—could end up being used against U.S. forces in the region, U.S. allies, or even the U.S. homeland.

In light of the various, interrelated Middle East proliferation challenges facing the United States and its allies, the United States needs to put forward a comprehensive nonproliferation strategy dedicated to the Middle East. This strategy must in a systematic and coordinated manner address the major proliferation problems besetting this region that is all too likely to experience a proliferation incident and from which WMD attacks against the West and its allies are all too likely to emanate.

The U.S. government has in recent years invested considerable resources on intelligence community, diplomatic, military, and other counterproliferation efforts to detect, interdict, deter, and defend against proliferation in the Middle East. This report reviews these nonproliferation efforts in light of the paradigm shifts sweeping the region and recommends a comprehensive set of improvements, adjustments, and innovations designed to maximize U.S. (and allied) effectiveness in achieving these nonproliferation goals in the evolving Middle East.

It is imperative for the United States to develop and implement **a comprehensive nonproliferation strategy for the Middle East.**

These U.S. nonproliferation efforts in the Middle East have been complemented by a set of poorly funded (and sometimes uncoordinated) collaborative and cooperative programs to promote nonproliferation norms and practices among Middle Eastern governments, civil society, and other local partners. Obstacles to spending Department of Defense funds on such cooperative threat-reduction and related efforts in the Middle East were recently removed, permitting significantly expanded U.S. activities in this sphere. The report therefore also includes a comprehensive set of recommendations for how the United States can and should more effectively assist Middle Eastern governments and other local partners to develop their own nonproliferation capacities, cultivate a culture of nonproliferation responsibility, and enhance regional cooperation on nonproliferation issues.

Chapter 2: Iran's Nuclear Program



**Pressure
Transducer**

14

DURING A VISIT TO IRAN'S NATANZ ENRICHMENT FACILITY, IRANIAN PRESIDENT MAHMOUD AHAMEDINEJAD STANDS "IN FRONT OF A PRESSURE TRANSDUCER MADE IN THE UNITED STATES."¹⁵ A PRESSURE TRANSDUCER MEASURES THE PRESSURE LEVEL IN INDIVIDUAL CENTRIFUGES OR CENTRIFUGE CASCADES, WHICH ARE CENTRIFUGES CONNECTED TOGETHER BY PIPES. IRAN'S CENTRIFUGE PROGRAM HAS REQUIRED HUNDREDS, IF NOT THOUSANDS, OF PRESSURE TRANSDUCERS. SINCE IRAN CANNOT MAKE ADEQUATE ONES DOMESTICALLY, IT HAS REGULARLY SOUGHT THEM ABROAD.

A. IRAN'S NUCLEAR PROGRAM: THE CONTEXT

Iran poses by far the most important and immediate nuclear proliferation challenge in the region for the United States and the international community. Iran's advancing nuclear program violates U.N. Security Council resolutions, threatens international peace and security, undermines the Nuclear Nonproliferation Treaty, and threatens to spur proliferation elsewhere in the region.

Although the U.S. intelligence community has asserted that in 2003 Iran halted a program to design a nuclear device and test various components, there is uncertainty regarding how much progress Iran made before that date and whether some or all elements of the effort continued or were resumed. Iran is understood to have received a nuclear weapon design through the nuclear smuggling network operated by Pakistani nuclear specialist A.Q. Khan.²⁰ It is also possible that Iran has received assistance in this area from North Korea, which has conducted two nuclear tests and has provided medium-range missiles and production technology to Iran, giving it another important strategic capability.²¹

Iran currently has sufficient uranium enriched to between 3 and 5 percent in its Natanz Fuel Enrichment Plant to produce more than six nuclear weapons, if that uranium is further enriched to weapons grade (90 percent enrichment). Iran also is more than halfway to having sufficient 19.9 percent enriched uranium at the Fordow Enrichment Plant and at the Pilot Fuel Enrichment Plant at Natanz to produce one nuclear weapon, if that uranium is further enriched to weapons grade, a considerably faster process than enriching uranium from between 3 and 5 percent to weapons-grade uranium.²² Iran is continuing to add to both stockpiles, contrary to legally binding demands from the UN Security Council that Iran suspend all enrichment activities, as well as other sensitive nuclear activities related to the future production of plutonium (the second material that has been used for nuclear weapons). Indeed, Iran is working to develop advanced uranium enrichment centrifuges that are far more capable of producing enriched uranium, although it has encountered difficulties in doing so.²³

Iran is a party to the Nuclear Nonproliferation Treaty (NPT). As a result, the International Atomic Energy Agency (IAEA) safeguards (i.e., inspects and accounts for) all of Iran's known enriched uranium, and has a mandate to ensure that Iran does not have undeclared material or facilities. There is concern, however, that once Iran accumulates a sufficient quantity of partially enriched uranium, it might renounce these restraints and rapidly develop a small nuclear arsenal. Also, because Iran has refused to give the IAEA access to sites in the country where nuclear-weapon-relevant or parallel military centrifuge activities may have taken place, the agency has been "unable" to "conclude that all nuclear material in Iran is in peaceful activities."²⁴

In addition, Iran has from time to time indicated that it would build additional enrichment facilities, raising concerns that Iran might be able to build a clandestine uranium enrichment plant, and an associated plant to make the uranium hexafluoride feedstock

for this facility, without being detected. This would offer a separate, potentially undetected route to nuclear weapons. A clandestine centrifuge plant also could enable Iran to break out by diverting safeguarded low-enriched uranium to the clandestine facility for rapid upgrading to the level needed for weapons. In this scenario, although the diversion of the safeguarded enriched uranium would be detected, the location of the centrifuge plant would not be known, making its destruction through military intervention impossible.

Were Iran to acquire nuclear arms, the consequences would be dire. A nuclear umbrella would enable Iran to more aggressively pursue its efforts to destabilize states in the region and assert itself as a regional hegemon. A nuclear arsenal also would enable Iran to pose a threat to Israel's existence and, given Iran's current missile capabilities, place U.S. NATO ally Turkey and several other NATO members in southern Europe at risk. In time, as Iran's missile capabilities expand, larger portions of Europe, and eventually the United States itself, could come within range. The United States and northern Europe would be at risk sooner if Iran chose to use ships, trucks, or other such delivery methods to smuggle a nuclear weapon clandestinely into the United States or into one of its security partners. President Obama has expressed concern that if Iran gets "a nuclear weapon that could trigger an arms race in the region, it would undermine our non-proliferation goals, it could potentially fall into the hands of terrorists."²⁵

The United States has pursued a multipronged approach to addressing Iran's nuclear program. One key component of these efforts has involved working through the United Nations Security Council, which has demanded that Iran suspend proliferation sensitive nuclear activities and imposed binding international sanctions that limit Iran's



FOOTAGE OF IRANIAN SHIHAB-3 MISSILE ON PARADE IN IRAN. VISIBLE ON THE FRONT TRUCK IS THE PERSIAN LANGUAGE SLOGAN, "ISRAEL MUST BE DESTROYED."¹⁶ IRANIAN MILITARY PARADES HAVE ALSO REPORTEDLY FEATURED SHIHAB-3 MISSILES "SPORTING BANNERS READING 'DEATH TO AMERICA.'"¹⁷ THE IAEA HAS REPORTED THAT IRAN ALLEGEDLY WORKED PRIOR TO 2004, AND PERHAPS AFTERWARD, TO DEVELOP A NUCLEAR WARHEAD FOR (AND TO MOUNT THE WARHEAD ONTO) THE SHIHAB-3 INTERMEDIATE RANGE MISSILE¹⁸—A WEAPON THAT CAN ALREADY REACH ISRAEL.¹⁹

access to relevant technology and materials and target Iranian individuals and organizations supporting the country's nuclear and missile programs.²⁶ However, Russian and Chinese objections to stronger sanctions have limited the scope and impact of these Security Council measures.

In parallel with its work at the Security Council, the United States has therefore imposed a series of unilateral economic sanctions on Iran that go well beyond what the Council has required. Major recent U.S. laws imposing unilateral sanctions on Iran have included the Comprehensive Iran Sanctions, Accountability, and Divestment Act of 2010 (Public Law 111-195) (CISADA); the National Defense Authorization Act for Fiscal Year 2012 (Public Law 112-81) (the 2012 NDAA); the Iran Threat Reduction and Syria Human Rights Act of 2012 (Public Law 112-158); and the National Defense Authorization Act for Fiscal Year 2013 (the 2013 NDAA).

The EU, Australia, Canada, Japan, and South Korea also have imposed additional sanctions unilaterally. The sanctions imposed by the U.S. and its allies have significantly curtailed investment in Iran's energy sector, constricted sales to Iran of refined petroleum products, and, beginning in early 2012, dramatically reduced global purchases of Iranian crude oil.²⁷

Simultaneously, the United States—together with the other permanent members of the Security Council (China, France, Russia, and the United Kingdom) plus Germany (the "P5+1")—has pursued negotiations with Iran on curtailing its nuclear activities. After several rounds of negotiations, these talks, which are discussed in more detail elsewhere in this report, have failed to result in agreement.²⁸ Another round is expected to take place in early 2013.

B. NEXT STEPS IN ECONOMIC SANCTIONS

1. Sanctions and Iran's Nuclear Policy

While U.S. law has long prohibited almost all trade between the United States and Iran, U.S. allies, including especially those in Europe, only recently have shifted from more limited, targeted sanctions to employing more far-reaching economic measures against Iran. This shift has confronted the Iranian regime with perhaps its greatest economic challenge since the Iran-Iraq War ended in 1988.

Sanctions are having a strong effect on Iran's economy. Iran is facing an erosion in its balance of payments where both its current account and capital account balances are deteriorating simultaneously. U.S. and multilateral sanctions have reduced the amount of foreign currency Iran earns for its exports, reduced foreign investment in Iran, and accelerated the pace at which Iranians are taking money out of the country. Oil revenues, which constitute about 80 percent of Iran's export earnings and more than half

its government budget, are expected to drop from \$93 billion in 2011 to approximately \$50 billion in 2012,²⁹ losses that will grow if global oil prices continue to fall and the European embargo and U.S. oil sanctions take their toll.³⁰ The result is hyperinflation, stagnant growth, and a crumbling currency.³¹

However, sanctions so far have failed to achieve their avowed objective of inducing Iranian Supreme Leader Ali Khamenei and his Islamic Revolutionary Guard Corps (IRGC) to agree to permanently circumscribe, and establish the peaceful nature of, their nuclear program. Three rounds of failed talks in Istanbul, Baghdad, and Moscow—plus numerous expert-level meetings—have demonstrated that the United States and its allies do not yet have sufficient leverage to make Khamenei yield and agree to meet Iran’s obligations under international law.

We recommend that the United States and its allies impose maximal sanctions pressure on Iran prior to Iran’s reaching “critical capability.” We define “critical capability” as the point at which Iran will be able to produce enough weapon-grade uranium (or sufficient separated plutonium) for one or more bombs before the production of such an amount can reasonably be expected to be detected by the IAEA or Western intelligence services. Our analysis focuses on the speed with which Iran could produce enough weapon-grade uranium (or sufficient separated plutonium) because once the regime acquires such fissile material, it becomes far more difficult to stop the program militarily. That’s because manufacturing nuclear detonators, or assembling nuclear bombs, could be done in small, undetectable facilities.

What additional steps must be taken so that economic sanctions have a sufficient impact to force the Iranian leadership to comply with its NPT Security Council, and other nuclear obligations before Iran’s nuclear program reaches critical capability? In addition, what other actions and tools within the entire range of U.S. national and international security assets can be brought to bear to strengthen U.S. diplomatic efforts to convince Iran to abandon its nuclear weapons program? To answer these questions, section 2 examines the current status and rate of advancement of Iran’s nuclear program and section 3 analyzes the current status and rate of weakening of Iran’s economy. Then, in light of these trajectories, section 4 recommends the imposition of specific additional sanctions so as to ensure that sanctions have their maximal potential impact on Iran before Iran’s nuclear program achieves critical capability. These additional sanctions are designed to have a sufficiently powerful impact on Iran—as Iran’s revenues shrink, its currency loses more of its value, and its hard-currency reserves plummet—that Iran’s leaders change course and definitively curtail their nuclear program prior to Iran reaching the critical capability to produce sufficient weapons-grade uranium or plutonium for one or more bombs before such a step can reasonably be expected to be detected by the IAEA or Western intelligence.

The United States—together with the other permanent members of the Security Council (China, France, Russia, and the United Kingdom) plus Germany (the “P5+1”)—has pursued negotiations with Iran on curtailing its nuclear activities. After several rounds of negotiations, these talks, which are discussed in more detail elsewhere in this report, have failed to result in agreement.

2. Iran's Nuclear Program Is Moving Ahead

In spite of the progressive strengthening of economic sanctions, Iran's stockpile of enriched uranium has continued to grow. For example, while the February 2009 IAEA report determined that Iran had produced 1010 kg of U-235 enriched at 3.5 percent,³² by the time of the November 16, 2012 IAEA report, Iran had produced a gross total of 7,611 kg of U-235 enriched at 3.5 percent.³³ This amount of 5 percent enriched U-235 is sufficient for six or seven nuclear weapons if further enriched, according to an analysis by the Institute for Science and International Security (ISIS).³⁴

In addition, Iran has produced, as of November 2012, 232.8 kg of U-235 enriched to nearly 20 percent.³⁵ This amount far exceeds the amount needed for the Tehran Research Reactor, the purported use for this material.³⁶ In August, Iran transferred 96.3 kg of this stockpile to its Esfahan facility for conversion to uranium oxide for fuel plates for its research reactor.³⁷ While the uranium oxide could be converted back to uranium hexafluoride suitable for further enrichment to bomb grade, it would take Iran several months to do so, which would mean that this material would not be useful during a dash to produce weapon grade uranium for a first nuclear weapon. However, this uranium oxide could be converted back for a second or subsequent nuclear weapon, and Iran continues to produce more uranium hexafluoride enriched to nearly 20 percent. While Iran's conversion of this material into oxide has temporarily reduced the nuclear crisis, it does not comprehensively address either the concerns over Iran's growing stocks of enriched uranium or the broader questions about its nuclear program.

Iran also is continuing to increase its number of centrifuges. As of November 16, 2012, the Natanz Fuel Enrichment Plant contained 10,414 IR-1 centrifuges, with 9,156 of those centrifuges enriching.³⁸ The Fordow Fuel Enrichment plant, which is deeply fortified underground in a mountainous region, was brought partially online in 2011 and began enriching uranium to near 20 percent. According to the November 2012 IAEA report, Iran had installed all 2,784 of the centrifuges it planned at the site for the production of nuclear fuel. Of the total number of installed centrifuges, the inspectors reported that 696 centrifuges in four cascades were enriching uranium to the near 20 percent level. Another 696 centrifuges were fully connected in four cascades and ready to enrich uranium. The remaining 1,392 centrifuges, in a total of eight cascades, lacked critical piping and electronics necessary to operate. No date was given as to when any of these last eight cascades would be operational.³⁹

At the same time Iran's stockpile of enriched uranium and number of centrifuges continue to grow, Iran persists in refusing to respond constructively to outstanding issues that the IAEA has identified with regard to possible military dimensions of Iran's nuclear program.

For example, according to the November 2012 IAEA report, Iran is blocking access to the Parchin military site, which is suspected of having housed a containment vessel and support facilities for high explosive tests related to the development of nuclear

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weapons. Iran also is engaged in extensive activities to sanitize the Parchin complex. This lack of access and changes at Parchin are hampering effective verification of suspected military nuclear activities.⁴⁰

How close is Iran to reaching critical capability?

Given the progress that Tehran has already made with its nuclear plans—still-hidden centrifuge manufacturing plants, enrichment facilities at Natanz and Fordow, a likely, now sanitized weaponization facility at Parchin, and an extensive ballistic-missile program—the regime faces a short, relatively inexpensive dash to the nuclear finish line should it choose to take this step.

According to a 2011 report by *The Washington Post*, IAEA officials have concluded that Iran has sufficient technical know-how to design and produce a functioning nuclear implosion device.⁴¹ Such a device would be usable in an underground nuclear explosion or for crude delivery (e.g., transportation by truck, ship, or aircraft). Iran would need more time to make a reliable warhead for a ballistic missile. A 2012 report by the Institute for Science and International Security states that, should Iran choose to do so, it could pursue one of several strategies that would allow it to develop a nuclear weapon. The probability of Iran’s pursuing such a strategy is judged to be medium in 2013.⁴²

There is considerable debate regarding at what stage Iran’s nuclear program would be so advanced that it would no longer be possible in a timely manner to detect Iran’s acquisition of sufficient weapon-grade uranium or plutonium for a nuclear bomb.

For example, in his September 2012 speech to the United Nations, Israeli Prime Minister Benjamin Netanyahu described when he considers that the red line for a nuclear Iran would be reached: the spring or summer of 2013, when he estimates the regime will, “at current enrichment rates,” have enough 20 percent-enriched uranium to make one bomb.⁴³ Netanyahu stated as follows:

In the case of Iran’s nuclear plans to build a bomb...Iran has to go through three stages...[During] the second stage: they have to enrich enough medium enriched uranium...Now they are well into the second stage. By next spring, at most by next summer at current enrichment rates, they will have finished the medium enrichment and move on to the final stage...The red line should be drawn right here...Before Iran completes the second stage of nuclear enrichment necessary to make a bomb. Before Iran gets to a point where it’s a few months away or a few weeks away from amassing enough enriched uranium to make a nuclear weapon.⁴⁴

Netanyahu explained that in his view, “the relevant question is not when Iran will get the bomb” but rather “at what stage can we no longer stop Iran from getting the bomb,” and thus “the red line must be drawn on Iran’s nuclear enrichment program because these enrichment facilities are the only nuclear installations that we can definitely see and credibly target.”⁴⁵

Given the progress that Tehran has already made with its nuclear plans—still-hidden centrifuge manufacturing plants, enrichment facilities at Natanz and Fordow, a likely, now sanitized weaponization facility at Parchin, and an extensive ballistic-missile program—**the regime faces a short, relatively inexpensive dash to the nuclear finish line should it choose to take this step.**

President Obama has also attached considerable significance to the stage at which Iran’s nuclear program would be sufficiently advanced that it would no longer be possible to in a timely manner detect that Iran is acquiring a nuclear bomb. In the final presidential debate of the 2012 campaign, President Obama said:

*The clock is ticking. We’re not going to allow Iran to perpetually engage in negotiations that lead nowhere. And I’ve been very clear to them, you know...we have a sense of when they would get breakout capacity, which means that we would not be able to intervene in time to stop their nuclear program, and that clock is ticking.*⁴⁶

Another of the administration’s most specific statements on this issue was the December 2011 declaration by Defense Secretary Leon Panetta that, “If they proceed and we get intelligence that they are proceeding with developing a nuclear weapon then we will take whatever steps necessary to stop it.”⁴⁷ In September 2012, Panetta expressed confidence in the ability of U.S. intelligence assets to detect an Iranian effort to develop a nuclear weapon in time for the U.S. military to prevent its fruition, stating “we think we will have the opportunity once we know that they’ve made that decision, to take the action necessary to stop (the program)” and “we have the forces in place...to do what we have to do to try to stop them from developing nuclear weapons.”⁴⁸

This report’s recommendations for how the U.S. government should publicly address the question of red lines or triggers for military action against Iran’s nuclear program are contained in the report’s section titled “Credible Threat of Military Action.” We address here the different question of a recommended time frame for the United States and its allies to impose maximal sanctions pressure on Iran.

We recommend that the United States and its allies impose maximal sanctions pressure on Iran prior to Iran’s reaching the critical capability to produce enough weapon-grade uranium (or sufficient separated plutonium) for one or more bombs before the production of such an amount can reasonably be expected to be detected by the IAEA or Western intelligence services. Our analysis focuses on the speed with which Iran could produce enough weapon-grade uranium (or sufficient separated plutonium) because once the regime acquires such fissile material, it becomes far more difficult to stop the program militarily.

Based on the current trajectory of Iran’s nuclear program, we estimate that Iran could reach this critical capability in mid-2014. Depending on the occurrence (or non-occurrence) of various potential developments, Iran could in fact reach this critical capability either before or after mid-2014. Developments that could expedite the date include Iran’s increasing its enrichment from 20 percent to a level of 60 percent, a significant increase in the number or efficiency of Iran’s centrifuges, the existence of a secret Iranian enrichment facility, or various potential developments relating to Iran’s plutonium production capacity (e.g., reprocessing capabilities). Developments that could delay the date include another Stuxnet-type computer attack on Iran’s nuclear program

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or other unexpected Iranian difficulties with its centrifuge program. In light of these factors, caution dictates that the United States assume, and plan on the basis, that Iran is likely to reach critical capability in mid-2014.

Given these uncertainties and recognizing Prime Minister Netanyahu's more accelerated timeline, we believe that the intensification of sanctions we recommend needs to begin as rapidly as possible.

3. Sanctions Have Had a Major Impact on Iran's Economy But Have Not Altered Iran's Nuclear Course

Iran's oil exports have been halved by economic sanctions,⁴⁹ leaving the regime with around \$50 billion in oil income in 2012, and \$37 billion in projected 2013 oil revenues (assuming Iran continues to export 1 million barrels per day at \$100 per barrel).⁵⁰

The Iranian economy has taken a substantial hit from the oil export and other sanctions on Iran. After the rial lost nearly half of its value in a week in October 2012, Tehran began severely restricting access to dollars and euros.⁵¹ That's a clear sign that sanctions are having a strong impact on the Iranian economy. But the currency restrictions also served as a warning sign: In all probability the regime is husbanding foreign exchange reserves, and preparing for a long ordeal.

Since existing sanctions thus far have failed to persuade Iran's leaders to curtail their nuclear program definitively, what additional sanctions steps should be taken prior to Iran's reaching critical capability?

There is no way to know whether the Iranian regime will ever relent in its nuclear ambitions. There is always the possibility that the regime will keep enriching notwithstanding a looming, or even actual, sanctions-induced economic collapse. For sanctions to be given every chance of succeeding, though, the working assumption must be that sufficiently severe economic pressure will cause, or contribute significantly to causing, the Iranian regime to relent.

Economic pressure seems most likely to succeed if it reaches maximum strength at least six months before Iran could go nuclear. The psychological impact of the pressure will need time to ripple through Iran's political system, and a regime just weeks away from achieving its nuclear objective seems more likely to try to push on through.

How strong will such economic pressure need to be? Since at least 2009, Secretary of State Hillary Clinton has been threatening Iran with "crippling sanctions."⁵² However, the sanctions on Iran are not yet crippling, and Iran has yet to bring its nuclear program into compliance with UN Security Council requirements. The United States must intensify sanctions until the impact is so severe—as Iran's revenues shrink, its currency loses more of its value, and its hard-currency reserves plummet—that Iran's leaders change course and curtail their nuclear program.

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

The number of months left for the West to impose maximal economic pressure on Iran in time to persuade Iran to halt its nuclear weapons program depends, of course, on what red line is set and when Iran is projected to cross it.

For example, as mentioned previously, Netanyahu declared in his September 2012 speech to the United Nations that the red line for a nuclear Iran would be reached in the spring or summer of 2013, when he estimates the regime will, “at current enrichment rates,” have enough 20 percent-enriched uranium to make one bomb. Maximum economic pressure would need to occur by February 2013 for the Iranian regime to feel its full impact even four months (let alone six months) before Netanyahu’s red line. If necessary, the 2013 NDAA (discussed further below) and previous U.S. sanctions laws, vigorously implemented, could provide the U.S. government with all the authority it needs to impose near-maximal pressure on Iran. Such vigorous implementation could commence immediately. Implementation also could be adjusted in light of any meaningful concessions by Iran.

If we assume July 2014 as the date on which Iran is likely to achieve critical capability, then American and European sanctions would need to impose maximal economic pressure on Iran by January 2014 (thereby leaving six months for the pressure to ripple through the Iranian political system).

By that calculation, the United States and its allies have about a year to impose such pressure. How far away from maximal economic pressure is the current level of pressure on the Iranian economy?

There is no definitive metric for measuring economic pressure (let alone calculating how much, if any, pressure would be sufficient to tip Iranian nuclear decision making). However, an analysis commissioned by the Foundation for Defense of Democracies (FDD) assessed the efficacy of sanctions by focusing on the Central Bank of Iran’s foreign exchange reserves as the Iranian regime’s principal tool for preventing the deterioration of the country’s balance of payments from turning into a full-fledged economic and financial crisis. The FDD analysis concludes that a key to assessing the ability of economic sanctions to force Iran’s leadership to a fundamental choice is therefore to determine at what point the Central Bank of Iran’s foreign exchange reserves will be insufficient to prevent the severe deterioration of Iran’s balance of payments from turning into such a crisis.

FDD’s economic modeling predicted that under the current sanctions, Iran will run out of foreign exchange reserves in approximately July 2014 (at about the same time that Iran is projected to reach critical capability).

This prediction is based on several assumptions, including that Iran’s foreign exchange reserves totaled \$89.8 billion in January 2012⁵³ and that Iran’s crude oil exports will average 1 million barrels per day through 2013 and 2014, as a reduction in formal exports is offset by covert oil sales and sanctions busting.⁵⁴ Assumptions also were

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made as to Iran's future non-oil exports,⁵⁵ imports,⁵⁶ capital inflows and outflows,⁵⁷ inflation rate,⁵⁸ and exchange rate.⁵⁹

Based on these assumptions, FDD's analysis estimated that Iran would exhaust its foreign exchange reserves by July 2014. Each of the previously discussed inputs on which the model is based can have a significant impact on the exhaustion of reserves date. For example, increasing the end value of oil exports from 1 million to 1.3 million barrels per day (which according to the International Energy Agency is the figure for October 2012), postpones the reserve end date from July 2014 to February 2015. If Iranian spending on imports drops from \$6 billion to \$4 billion a month, which may be reasonable given Iranian efforts to reduce consumption,⁶⁰ the exhaustion of reserves date would be delayed from July 2014 to December 2016. If both these occur together, with oil exports leveling off at 1.3 million barrels per day and imports at \$4 billion per month, this pushes the reserve end date to April 2021.

While Iran's foreign exchange reserves are a useful analytical proxy for assessing the state of Iran's economy, they are not necessarily a determinative metric. Iran may experience a full-blown economic crisis even before it runs out of foreign exchange reserves, for example if it is unable to import the critical goods, equipment and technologies that it needs to run its economy. Economic crisis could also occur significantly later than the date on which Iran exhausts (or reaches a critical level in) its foreign exchange reserves. Even absent sufficient foreign exchange reserves, the Iranian economy could limp along, without undergoing economic complications sufficient to change the decision-making calculus of Iran's leaders with respect to its nuclear program. Saddam Hussein's regime endured years of macroeconomic conditions worse than Iran is currently experiencing.⁶¹ In the case of South Africa, strong sanctions were imposed beginning in 1986,⁶² but the economy learned how to adjust, changes to most apartheid laws did not begin to be made until 1990, and it was not until 1991 that the U.S. government determined that the conditions were met for lifting U.S. sanctions on South Africa.⁶³

There is also recent precedent for an economic collapse failing to alter a country's key policies. In November 2008, Zimbabwe's inflation reached a rate of 98 percent per day (79.6 billion percent per month),⁶⁴ prompting Zimbabwe to issue paper notes denominated at 100 trillion dollars⁶⁵ (these notes can currently be purchased as novelties for about five dollars).⁶⁶ Zimbabwe's economy had been a disaster for years before its peak hyperinflation, and continues to be so, yet Robert Mugabe, Zimbabwe's leader since 1980, has refused to alter the course of his ruinous policies.

Predicting a balance-of-payments crisis is extremely difficult even when all the variables are known. In the case of Iran, there is a lack of timely and accurate data on imports, exports, capital inflows, and capital outflows. There is also uncertainty as to exactly how much foreign exchange reserves Iran currently has or whether those reserves are readily accessible to Iran given the sanctions currently in place. It is also unclear how much Iranian trade occurs at the official versus the unofficial exchange rate.

We recommend that the U.S. government develop its own economic model based on both open source and classified data to better understand, based on current and potential future sanctions, when **the economic impact on Iran will be so severe that Iran's leaders will be under maximal pressure to change course and curtail their nuclear program.**

As a result, while FDD has developed a model that can help users better understand how different trade, investment, inflation, and exchange rate assumptions potentially affect Iran's foreign exchange reserves, it should be used with caution for forecasting purposes given the difficulty in obtaining accurate open source information about Iran's balance of payments. **We recommend that the U.S. government develop its own economic model based on both open source and classified data to better understand, based on current and potential future sanctions, when the economic impact on Iran will be so severe that Iran's leaders will be under maximal pressure to change course and curtail their nuclear program.**

Drawing on FDD's analysis, and with the above caveats in mind about the predictive utility of its economic modeling, **the United States should ramp up coercive sanctions against Iran so as to bring the date of maximal economic pressure nearer by significantly increasing the sanctions' impact on Iran's international trade and investment, Iranian government revenue, capital flows, inflation, foreign exchange rates, and overall macro-economic stability, with any necessary calibrations to reflect concessions Iran may make in the course of negotiations.**

4. Additional Sanctions Necessary to Change Iran's Nuclear Course

To maximize the likelihood that Iran experiences sufficient pressure in time to ensure that it will not build nuclear weapons and, instead, agrees to negotiate a timely end to the nuclear crisis, the following steps need to be taken immediately:

- a.** Existing U.S. sanctions on Iran must be implemented with much greater intensity and impact

President Obama has authority under existing U.S. law to impose sanctions on many more of the thousands of international companies that continue to do business with Iran in contravention of U.S. sanctions. Since taking office, the Obama Administration has imposed sanctions against only 12 international companies (including two Iranian companies operating as international entities) for providing refined petroleum or shipping services to Iran contrary to the provisions of CISADA.⁶⁷ Most of these sanctioned companies are small operators and/or have little or no U.S. commercial or legal exposure, making the penalties more symbolic than substantive.

Under CISADA, the Obama Administration also has sanctioned two foreign banks (China's Bank of Kunlun and Iraq's Elaf Islamic Bank) for doing business with designated Iranian banks,⁶⁸ and imposed fines on a handful of international banks for doing business with Iran in violation of U.S. laws. These banking enforcement measures have been taken in cooperation with the Manhattan District Attorney and New York state banking regulators. Totalling more than \$5 billion, the civil fines imposed are significant but still perhaps relatively small compared to the banking fees generated by these banks for helping Iran (and other states of concern) circumvent sanctions.⁶⁹

As former Rep. Howard Berman (D-Calif.), the ranking member of the House Committee on Foreign Affairs during the 112th Congress, noted in May 2012:

*The Administration has rallied the international community, and especially the European Union, to tighten its sanctions against Iran’s nuclear-weapons program in an unprecedented fashion. As we all know, Congressional focus on sanctions has been crucial in this regard, with this Committee leading the way. That said, **the Administration has yet to use all the tools at its disposal.** The sanctions have had an impact on Iran’s economy, but they are still far from crippling.⁷⁰ (emphasis added)*

b. The U.S. government should announce its intention to use sanctions to impose a de facto international embargo on all investments in, and trade with, Iran (other than provision of humanitarian goods) if Iran does not comply with applicable UN Security Council resolutions

The U.S. government can achieve such an embargo by using secondary sanctions to pressure foreign companies to halt any and all dealings with Iran except for the provision of humanitarian goods. Consistent with the Trade Sanctions Reform and Export Enhancement Act of 2000,⁷¹ U.S. sanctions on Iran do not prohibit the export to Iran of “agricultural commodities” (defined by law to include food),⁷² or of medicine and medical devices⁷³ (this report will refer to all of these excepted goods collectively as “humanitarian goods”). **While this report calls for strengthening U.S. sanctions on other trade with Iran, it does not call for sanctions on the provision to Iran of humanitarian goods.**

Secondary sanctions are economic restrictions —such as denial of access to the U.S. financial system and U.S. markets—designed to inhibit non-U.S. persons and companies abroad from transacting with a target of primary U.S. sanctions.⁷⁴ The more comprehensive the trade and investment embargo imposed on Iran is, and the faster it is imposed, the more rapidly will Iran be threatened with a drastic deterioration in its balance of payments; the depletion of its foreign exchange reserves; difficulty in accessing the equipment, goods, and technologies it needs to run its economy; and a severe economic and financial crisis.

While the United States unilaterally can ratchet up the costs to the Iranian regime of its illicit behavior, sanctions and other political measures will have a stronger impact on the regime if they have greater support from key American allies.

As of 2011, the European Union, for example, maintained a bilateral annual trade relationship with Iran of more than 25 billion euros.⁷⁵ Iran is heavily dependent on Europe for various items that are not yet subject to the EU’s sanctions on Iran. For example, European companies are critical providers to Iran of major industrial equipment, engineering and infrastructure technology, and financial services that enable Iranian trade and investment flows. In contrast, the U.S. embargo on Iran exempts only humanitarian goods.

While this report calls for strengthening U.S. sanctions on other trade with Iran, **it does not call for sanctions on the provision to Iran of humanitarian goods.**

The EU's July 2012 embargo on purchases of Iranian crude oil was a critical step in intensifying Western pressure, and the EU's October 2012 sanctions on Iranian natural gas exports are also a significant measure.⁷⁶ The EU now should be encouraged to implement all of the sanctions measures discussed in this report alongside the United States, so that there is no daylight between the U.S. and European sanctions regimes. This should include EU designation as terrorist organizations of both Iran's Islamic Revolutionary Guard Corps ("the IRGC") and Hizbollah (as discussed in more detail in Chapter 6 of this report).

Japan, South Korea, and other key allies also should expand the breadth of their sanctions on Iran. These countries should designate the IRGC as a terrorist entity, declare Iran as a state sponsor of terrorism, and significantly enhance their nonproliferation and sanctions regimes by prohibiting all trade with Iran except for humanitarian goods.

Canada has set an example by tightening its sanctions regime significantly beyond what is required by Security Council resolutions, including by designating Iran as a state sponsor of terrorism, sanctioning the IRGC in its entirety, expelling all Iranian diplomats from Ottawa, and shuttering its own embassy in Tehran.⁷⁷ If the Canadian government takes the additional step of adding the IRGC to its list of terrorist organizations (which already includes the Quds Force and Hizbollah), it will be only the second country after the United States to do so. The U.S. government should encourage Ottawa to take this step, and, if successful, use this as a basis to persuade the EU and other allies to designate the IRGC (and Hizbollah) as terrorist organizations.

A rigorously implemented embargo on all trade with Iran (other than provision of humanitarian goods) and widespread designation of the IRGC as a terrorist organization would have a major impact on Iran's economy, severely restricting the export of commercial goods and services to Iran, and leading to steep decline in Iran's oil exports. Ending the current oil embargo exceptions for all 20 of Iran's major oil buyers—including China, 10 EU countries, India, Japan, Malaysia, Singapore, South Korea, South Africa, Sri Lanka, Taiwan, and Turkey⁷⁸—would take as many as 1 million barrels per day of Iranian oil off the market, sharply reducing Iran's main source of hard-currency export earnings.

Such a disruption could, possibly, boost global oil prices and have an impact on a still-fragile global economic recovery. However, this impact could be largely mitigated by a coordinated release of U.S. and allied emergency oil reserves and by increased production by non-Iranian oil producers. Indeed, the partially enforced embargo on Iranian crude oil has had far less impact on world oil prices than initially feared because of such increased production and a reduction in world oil demand. While a comprehensive trade embargo should be announced immediately, it might make sense to include a 180-day time line for implementation so as to give Iran's trading partners the ability to unwind their Iranian business relationships.

C. If the U.S. government is unwilling to immediately announce its intention to use sanctions to impose a comprehensive trade embargo on Iran, the United States should, at a minimum, take the following immediate steps:

i. Consider mechanisms that significantly reduce non-humanitarian trade with Iran

The U.S. government (either the executive branch or Congress) should eliminate the non-petroleum trade exclusion available to countries under section 1245 of the 2012 NDAA. This exclusion currently enables these countries to continue with their non-petroleum trade with Iran if they have received an exception for significantly reducing their purchases of Iranian oil (or do not engage in such purchases). Eliminating the non-petroleum trade exclusion would subject to sanctions all non-humanitarian trade with Iran. At a minimum, the U.S. government should adopt a “significant reduction” commercial- trade mechanism similar to the one in section 1245 of the 2012 NDAA that requires countries to reduce their *imports* of Iranian oil significantly in order to qualify for exceptions from U.S. sanctions. In this case, countries would be required to significantly decrease their *export and import* trade of non-petroleum, non-humanitarian commercial goods and services with Iran in order to qualify for an exception to U.S. sanctions.

There may be challenges in verifying the accuracy of trading data used to assess compliance with these exceptions since it will be more difficult to independently verify general commercial trade than it currently is to verify oil shipments. To address this challenge, the sanctions could be designed to penalize countries for false disclosure. As with many of the secondary sanctions imposed to date, those companies with significant U.S. business interests at risk, or which are concerned about their market reputation, would be most likely to comply with a trade ban. At the same time, those companies that do not comply would be in strong position to demand higher prices from Iran, thereby reducing Iranian foreign exchange reserves as Iran pays more for its imports.

The U.S. government should encourage the European Union and other trading partners of Iran to adopt their own comprehensive sanctions on all non-humanitarian trade with Iran so that each jurisdiction can design and enforce its own measures. U.S. secondary measures could be designed to provide carve-outs for European Union and other trading partners of Iran that demonstrate that their own trade sanctions on Iran are substantively as comprehensive as the U.S. secondary measures.

ii. Extend U.S. secondary sanctions to additional specific sectors of Iran’s economy

U.S. sanctions on foreign companies doing business with Iran predominantly target companies doing business with entities in Iran’s energy, military, internal security, and financial sectors. Western efforts to identify and designate IRGC-related entities

Western efforts to identify and designate IRGC-related entities in Iran's economy have been **outpaced by the Iranian regime's ability to create shell companies.**

in Iran's economy have been outpaced by the Iranian regime's ability to create shell companies. By blacklisting key sectors of Iran's economy, the U.S. government can target sanctions evaders more effectively by merely demonstrating that they are involved in specific economic sectors of concern.

The recently passed 2013 NDAA represents a significant advancement of this strategy by taking a sector-based approach to U.S. sanctions. It includes Iran sanctions provisions that impose a blanket prohibition on foreign entities doing business with Iran's energy, shipbuilding, shipping, and port sectors (while maintaining the 2012 NDAA section 1245 exceptions for countries that are significantly reducing their purchases of Iranian oil and adding an additional carve-out for purchasers of Iranian natural gas). Each of these sectors is linked to Iran's proliferation activities, significantly connected to the IRGC, and key to Iran's overall energy and industrial economy.

This sector-based approach to sanctions builds on the sense of Congress expressed in the Iran Threat Reduction and Syria Human Rights Act of 2012—signed into law by President Obama on August 10, 2012—that “the energy sector of Iran remains a zone of proliferation concern since the Government of Iran continues to divert substantial revenues derived from sales of petroleum resources to finance its illicit nuclear and missile activities.”⁷⁹ It also builds on the language in the preamble of U.N. Security Council Resolution 1929, which passed in 2010 with the support of China and Russia, which noted “the potential connection between Iran's revenues derived from its energy sector and the funding of Iran's proliferation sensitive nuclear activities,” and further noted that “chemical process equipment and materials required for the petrochemical industry have much in common with those required for certain sensitive nuclear fuel cycle activities.”⁸⁰

The United States should target additional Iranian economic sectors with similar sector-based secondary sanctions, where there is a link to proliferation or involvement by the IRGC. This sector-based approach to sanctions adopted in the 2013 NDAA should be extended to Iran's automotive, construction, engineering, and telecommunications sectors, and any other sector where there is a link to proliferation and/or IRGC involvement.

For example, there is evidence that the Iranian automotive sector, which is the largest sector of Iran's economy apart from the energy industry,⁸¹ has significant IRGC involvement. Iran's largest automotive companies include Iran Khodro and the Bahman Group. Several significant shareholders of these companies,⁸² including the Industrial Development and Renovation Organization of Iran (IDRO) and Bonyad Taavon Sepah (also known as the IRGC Cooperative Foundation), are already on U.S. and EU sanctions lists.⁸³

Iran's construction and engineering sectors also are heavily influenced by the IRGC. For example, the IRGC conglomerate Khatam al-Anbiya, which is the dominant player in these sectors, has won billions of dollars in no-bid contracts for Iranian

industrial, construction, and public works projects, and is sanctioned by the United Nations, United States and European Union because of its links to the IRGC and its support of Iran's proliferation activities.⁸⁴ In addition, a number of entities and persons connected to the IRGC, and designated for their support of Iran's proliferation activities and repression of Iranian dissidents, are heavily involved in Iran's telecommunications sector.⁸⁵

Sanctions targeting such key Iranian domestic industries would increase the pressure on Iran's macroeconomic stability and undercut financial support for the IRGC and Iran's proliferation activities, but have little impact on the global economy (beyond reducing sales of the particular foreign companies that trade with these industries).

iii. Impose U.S. secondary sanctions against all Iran-related persons and entities on the U.S. Treasury Department's Specially Designated Nationals (SDN) list.

U.S. secondary sanctions should be rapidly implemented to impose penalties on any foreign persons dealing with any Iran-related person or entity on the SDN list, including those designated on WMD, terrorism and human rights grounds, those designated for their links to Iran's Islamic Revolutionary Guard Corps, and those designated as Government of Iran entities. The recently passed 2013 NDAA specifically requires secondary sanctions against any "foreign financial institution that the President determines has, on or after the date that is 180 days after the date of the enactment of this Act, knowingly facilitated a significant financial transaction on behalf of any Iranian person included on" the SDN list (with a few specified exceptions). The U.S. government should rapidly increase the number of Government of Iran entities on its SDN list to include any entity owned or controlled by the Iranian government or acting as an agent or instrumentality of the government. These entities are contributing revenues to, or otherwise facilitating, the Iranian government's operations and WMD, terrorism and human rights violations.

Extending U.S. secondary sanctions to all foreign persons doing business with any Iran-related person or entity on the SDN list, i.e., a much wider range of Iranian entities in key sectors of the Iranian economy, would have a significant chilling effect on international trade with Iran. Given the nature of Iran's economy, and especially its most strategic and lucrative sectors, it will be increasingly difficult for foreign companies to find an Iranian business partner that is not linked either to the IRGC, to Iran's proliferation activities, or to the Government of Iran.

iv. Expand sanctions on Iran's energy sector to include purchasers of Iranian natural gas

The blacklisting of Iran's energy sector should include comprehensive sanctions against Iran's natural-gas industry. While sanctions and mismanagement have significantly curtailed Iran's ability to exploit its natural gas industry, Iran has the

second-largest natural gas reserves in the world, which are a source of significant leverage.⁸⁶

Current U.S. law makes foreign companies subject to sanctions if they invest in Iran's natural-gas sector or transfer various goods, services, and technology to that sector (U.S. companies are already banned from all trade with Iran other than in humanitarian goods). The Iran Threat Reduction and Syria Human Rights Act of 2012, which the president signed into law on August 10, 2012, requires the administration to report to Congress on the possibility of establishing a sanctions regime, similar to that imposed on Iran's oil exports, to target Iran's natural-gas exports.⁸⁷

The U.S. government should move rapidly to impose such sanctions. The European Union on October 15, 2012 imposed a ban on the import, purchase and transport of natural gas from Iran.⁸⁸ The 2013 NDAA, however, exempted some purchases of Iranian natural gas from some U.S. sanctions, reportedly because of concern that countries including Turkey would not be able to find substitutes for Iranian natural gas. Instead of this exemption, the U.S. should provide a special rule (similar to the one for oil) that would enable the administration to except a non-compliant country temporarily from sanctions if it faced exceptional circumstances preventing it from more significantly reducing purchases of Iranian natural gas.

v. Raise the threshold for exceptions under Section 1245 of the 2012 NDAA

Section 1245 of the 2012 NDAA was designed to encourage countries to reduce their purchases of Iranian oil at a pace that the market could absorb without significantly increasing global oil prices. The provision authorizes the president to provide an exception from sanctions for countries that continue to import Iranian crude but have "significantly reduced" their imports.⁸⁹ So far, the Obama administration has granted exceptions to 20 countries for total reductions in oil purchases that reportedly range as low as 20 percent.⁹⁰ These exceptions now appear much more generous than they need to be. The United States should raise the threshold for countries to receive sanctions exceptions under section 1245 of the 2012 NDAA.

The U.S. Energy Information Administration reports every two months on the state of the global oil markets and the availability and price of non-Iranian oil alternatives. These reports have continued to support further reductions in Iranian oil purchases and to note the availability of non-Iranian substitutes.⁹¹ Oil prices are lower than predicted by those who opposed oil sanctions, as new Saudi, Iraqi, and Libyan oil production has increased world capacity, while the European debt crisis and a slowdown in Chinese economic growth rates have put a dent in world oil demand.⁹² The United States also is experiencing a much larger than expected decrease in oil consumption and larger than expected increase in domestic energy production.⁹³ This means that oil markets could likely absorb a more significant reduction in Iranian oil sales without substantially increasing global oil prices. It also gives the U.S. government more

These exceptions now appear much more generous than they need to be.

The United States should raise the threshold for countries to receive sanctions exceptions under section 1245 of the 2012 NDAA.

flexibility to insist that Iran’s oil buyers reduce their purchases at a much more rapid pace if they are to qualify for the future rounds of exceptions.

Interpreting “significantly reduced” to require much larger reductions would discourage many foreign companies from signing or renewing crude oil contracts with Iran. Iran’s overall oil and petrochemical exports would be cut. In addition, Iran’s remaining purchasers would be in a position to extract major price concessions from Iran, reducing Iran’s profits on some or all of its remaining oil and petrochemical exports.

A higher threshold for exceptions could lead to a rapid decrease in Iranian oil sales below 1 million barrels per day, putting further pressure on Iran’s foreign exchange reserves and balance of payments. The capacity of these sanctions to increase pressure on the Iranian regime without threatening the global economic recovery remains dependent on the willingness and ability of non-Iranian oil suppliers to increase output to cover any shortfall in Iranian supply, and could be partially facilitated by a coordinated release of U.S. and international emergency oil reserves. **To more effectively and transparently assess the oil market impact of higher thresholds for exceptions (which would require countries to make major additional reductions in their purchases of Iranian oil), the U.S. Departments of Energy and State should perform detailed modeling and make this analysis available to Congress and the public.**

vi. Enforce a broader insurance embargo on Iran

Insurance and reinsurance services are key to Iran’s continued international trade. While the Iranian government has responded to European maritime insurance sanctions with commitments to provide Iranian insurance for vessels transporting Iranian crude oil to countries purchasing this commodity, and some oil importing countries, such as Japan, have resorted to sovereign guarantees in lieu of private insurance, there is no substitute for the reputation, capital base, and sophistication of international insurance companies. To discourage insurance companies from continuing to underwrite Iran-related trade and projects, **the U.S. government should vigorously enforce the insurance sanctions provisions in the 2013 NDAA. These provisions require the President to impose sanctions on any person that the President determines knowingly, on or after the date that is 180 days after the date of the enactment of the 2013 NDAA, provides underwriting services, insurance, or reinsurance: a) for any activity with respect to Iran for which sanctions have been imposed under the International Emergency Economic Powers Act (IEEPA) or any other U.S. law relating to the imposition of sanctions regarding Iran; or b) to or for any person with respect to sanctioned activities related to the Iranian energy, shipping, or shipbuilding sectors, or any person designated for the imposition of sanctions pursuant to IEEPA in connection with, e.g., involvement with Iran’s proliferation or support for terrorism; or c) who is an Iranian person included on the Treasury Department’s SDN list.** In addition, the United States should carefully scrutinize, and, if warranted, take appropriate action regarding Kish P&I, an Iranian insurance company reportedly providing

...the U.S. government should vigorously enforce the insurance sanctions provisions in the 2013 NDAA.

These provisions require the President to impose sanctions on any person that the President determines knowingly, on or after the date that is 180 days after the date of the enactment of the 2013 NDAA, provides underwriting services, insurance, or reinsurance...

full coverage to the 44 oil tankers of the National Iranian Tanker Company (“NITC”) (the entire Iranian tanker fleet).⁹⁴ Kish allegedly may be putting international customers of Iranian oil at significant risk.⁹⁵

Vigorous enforcement of these new insurance sanctions provisions, or enactment and implementation of a broader insurance embargo, could lead to a significant decline in both Iranian oil exports and Iranian imports and exports of non-petroleum goods and services. While some countries still buying Iranian oil have responded to European maritime insurance sanctions by providing sovereign guarantees or accepting Iranian insurance, the recommended insurance measures would further crimp Iranian oil sales. In addition, Iranian imports and exports could be significantly restricted if international insurance were not available. However, as discussed earlier in this chapter, oil markets could likely absorb a more significant reduction in Iranian oil sales without substantially increasing global oil prices.

vii. Impose sanctions on any entity providing services to Iranian financial institutions or holding Iranian government or IRGC assets

The Iranian government holds financial assets, including foreign exchange reserves, in foreign financial institutions, and depends on the global financial system to facilitate Iran’s international trade. While the U.S. government has taken significant steps to isolate Iran from the formal financial system, additional steps are necessary.

In February 2012, U.S. congressional legislation was introduced that would target the global financial gateway known as SWIFT,⁹⁶ a Belgium-based secure financial messaging system for international financial transactions that 19 Iranian banks and 25 financial entities used more than 2 million times in 2010.⁹⁷ These transactions, The Wall Street Journal reported, amounted to \$35 billion in trade with Europe alone.⁹⁸ Facing this scrutiny, SWIFT expelled approximately 30 Iranian entities designated by the European Union, including the Central Bank of Iran (CBI).⁹⁹ Section 220 of The Iran Threat Reduction and Syria Human Rights Act of 2012 authorizes, but does not mandate, sanctions against entities that provide specialized financial messaging services to Iranian banks including the CBI. SWIFT should face sanctions unless it expels any remaining Iranian entities using its system (which reportedly number more than a dozen).¹⁰⁰

Sanctions also should be expanded to ensure that any foreign bank that is doing business with Iranian financial institutions and subject to sanctions with respect to Iran (whether under CISADA, other congressional legislation, or executive orders) be immediately expelled from the SWIFT system.

But even if SWIFT takes action, other big loopholes remain. For example, in the past, Iran reportedly used the powerful Luxembourg-based financial services company Clearstream to move its money.¹⁰¹ Clearstream recently tightened its procedures. In February 2012, it warned U.S. account-holders that it would start blocking Iranian

securities and other assets that fall under the scope of the sanctions.¹⁰² But due diligence and risk management are not enough. The United States and European Union should require all financial institutions, including Clearstream and its competitors, to disclose—to relevant authorities that can implement asset freezes or other actions prescribed under applicable sanctions laws—if there are any Iranian assets under their management or any services offered to clients holding Iranian assets.

The United States should keep the spotlight on financial institutions, including specialized financial services companies such as SWIFT and Clearstream, to ensure that they take steps to isolate the Iranian banking system. **In addition, the U.S. government should require the freezing of all Iranian assets, including Iranian foreign exchange reserves, held by any financial institution, that belong to the CBI, any Government of Iran entity, or any entity owned or controlled by the IRGC.** Any financial institution not complying should be sanctioned.

d. Continue working to ensure that implementation of sanctions on Iran does not inadvertently block the provision to Iran of humanitarian goods

As mentioned above, U.S. sanctions on Iran do not prohibit the export to Iran of “agricultural commodities” (defined to include food),¹⁰³ or of medicine and medical devices.¹⁰⁴ Concern has been expressed that U.S. sanctions on Iran may be constricting the supply of such humanitarian goods to Iran.¹⁰⁵ **While this report calls for strengthening U.S. sanctions on other trade with Iran, it does not call for sanctions on the provision to Iran of humanitarian goods. In addition, the United States government should continue working to ensure that implementation of sanctions on Iran does not inadvertently block the provision to Iran of humanitarian goods.**

It is important to understand in this context that **despite U.S. sanctions on Iran, U.S. exports to Iran of various humanitarian goods increased considerably in 2012,**¹⁰⁶ **reportedly due to a U.S. government “easing of the approval process for humanitarian exemptions.”**¹⁰⁷ For example, through August 2012, the United States exported to Iran \$89.2 million in wheat and other grains (during 2011, the United States exported no such wheat or grains to Iran, although it did sell Iran \$21 million of maize).¹⁰⁸ Through September 2012, the United States reportedly exported to Iran 126,000 tons of wheat worth \$42 million.¹⁰⁹ In addition, sales of milk products from the United States to Iran during the first eight months of 2012 “more than doubled to \$20.3 million from \$7.8 million.”¹¹⁰

Furthermore, sales of medical, dental, surgical, and “electro-diagnostic” apparatuses rose to \$8 million from \$4.7 million as compared to the same period the previous year.¹¹¹ According to the Wall Street Journal, as of August 2012, major U.S. companies legally selling to Iran via the agricultural commodity, medicine, or medical exemptions from sanctions included Procter & Gamble, Cargill Inc., and Coca-Cola.¹¹²

...the United States government should continue working to ensure that implementation of sanctions on Iran does **not inadvertently block the provision to Iran of humanitarian goods.**

Indeed, total U.S. trade with Iran jumped “to \$199.5 million in the first eight months of 2012 from \$150.8 million a year earlier, according to Census Bureau data.”¹¹³ This increase has not gone unnoticed by the Iranian press, which crowed that “Iran’s lucrative market has persuaded American producers to increase their exports to Iran by one-third this year despite the U.S.-led western sanctions imposed against Iran.”¹¹⁴

Under the 2013 NDAA, Congress has required the President to list and sanction Iranian persons or entities that engage in corrupt activities relating to “the diversion of goods, including agricultural commodities, food, medicine, and medical devices, intended for the people of Iran” or “the misappropriation of proceeds from the sale or resale of such goods.” The Iranian government and its agents reportedly are involved in corrupt activities that are restricting the Iranian people’s access to such humanitarian goods. While the Iranian government has blamed Western sanctions for making it difficult to import medicine and other humanitarian goods (despite the fact that U.S. sanctions do not apply to medicine and other humanitarian goods), corruption appears to be playing an important role.¹¹⁵ For example, *The New York Times* recently reported that medicine shortages in Iran are due in part to “corruption,” including “predatory officials who get kickbacks from import deals” and refusals by corrupt officials to issue licenses for domestic production of medicine.¹¹⁶

As *The Times of London* reported on December 1, 2012, “Iran’s ruling elite continue to enjoy world-class medical treatment while choking off state funding to the health sector and selling drugs at a profit on the black market.”¹¹⁷ An investigation by *The Times* exposed large scale “corruption...with the lives of ordinary Iranians put at risk while the regime profits from the critical shortage of medicines it has created.”¹¹⁸ *The Times* noted that while “essential medical imports to Iran are exempt from the international sanctions imposed to curb Tehran’s disputed nuclear programme,” interviews with “several Iranian sources make it clear that the Revolutionary Guard has exacerbated the health crisis to boost profits.”¹¹⁹ Quoting an Iranian source, another *Times* article explained, “Access to cheap dollars is all controlled by the Revolutionary Guard and the security apparatus. Sanctions are only a fraction of the problem. The real issue is corruption. It suits them if things get worse. They can blame sanctions, while continuing to make a profit.”¹²⁰ According to the *Times*, “Iran’s Revolutionary Guard has exploited” the situation “to bankroll the purchase of sports cars and other luxury goods. At the same time, the powerful militia has excluded Iran’s Health Ministry from access to cheap dollars to purchase medicines and equipment.”¹²¹

U.S. government designation of persons and entities involved in such corrupt activity would be a powerful and appropriate way to accurately shift the blame from the West to the Iranian regime for shortages of food and medicine in Iran. This will be a particularly important step if the West comes under additional pressure from claims that sanctions are creating humanitarian problems for Iran’s people.

“Iran’s Revolutionary Guard has exploited” the situation “to bankroll the purchase of sports cars and other luxury goods. At the same time, the powerful militia has **excluded Iran’s Health Ministry from access to cheap dollars to purchase medicines and equipment.**”

C. OPTIONS FOR NEXT STEPS TO CONSTRAIN IRAN'S NUCLEAR AND MISSILE PROGRAMS

Faced with stalled negotiations and risky military options, the United States and its allies have adopted a range of measures designed to delay or, where possible, thwart Iran's acquisition of illicit nuclear capabilities. These measures are having some significant successes. However, Iran's ability to build nuclear weapons has continued to increase. **The United States and its allies should therefore take the following additional steps to constrain Iran's nuclear and missile programs:**

1. Enhancing Constraints on Supply of Goods Iran Needs for Its Nuclear and Missile Programs

Improved enforcement of U.N. Security Council sanctions across a broad spectrum of countries, and especially by countries that serve as key suppliers or transit points, would reduce Iran's ability to acquire the goods it needs to advance its nuclear and missile programs. According to analyses by the Institute for Science and International Security (ISIS), sanctions, when enforced, have successfully prevented Iran from purchasing goods for its centrifuges, inhibited domestic production of centrifuges, and forced it to make undesirable design changes in its centrifuges.¹²² As a result of sanctions, Iran faces problems acquiring a wide range of vital nuclear dual-use goods, such as high-precision maraging steel, high-quality carbon fiber, vacuum pumps, and pressure transducers.^{122a} Although Iran has tried to produce some advanced equipment domestically, it has found that it must still procure abroad some of the varied types of quality equipment that is necessary to operate a gas centrifuge plant.^{122b} Better implementation and enforcement of export controls remain the foundation of this sanctions effort and their improvement is vital.

The U.N. Security Council should undertake a robust effort to increase compliance with Iran sanctions resolutions, including by buttressing the mandates of the U.N. committee established by U.N. Security Council Resolution 1737 to help oversee U.N. sanctions on Iran and the U.N. committee established to help implement Security Council Resolution 1540 (which imposes binding obligations on all U.N. member states to adopt and enforce effective controls to prevent the proliferation of WMD, their means of delivery and related materials). In addition, the United States should use diplomatic pressure and the weight of its unilateral sanctions to convince holdout and lagging countries to enhance constraints on Iran.

a. Strengthen the U.N. Iran Sanctions Committee and its panel of experts

An Iran Sanctions Committee established pursuant to Resolution 1737 (2006) oversees the enforcement of Security Council resolutions on Iran and Iran's compliance with the provisions of those resolutions. The Committee appoints a panel of experts pursuant to Resolution 1929 to provide annual reports including recommendations on new entities and individuals to sanction. **A stronger mandate from the Security Council for the 1737 Committee and the Panel of Experts, including freer reporting requirements such as the ability to publish reports without Security Council member consensus, political**

As a result of sanctions, Iran faces problems acquiring a wide range of vital nuclear dual-use goods, such as high-precision maraging steel, high-quality carbon fiber, vacuum pumps, and pressure transducers.

China needs to improve its implementation of Security Council sanctions and of its trade controls. China remains a key procurement and transshipment point used by Iranian smugglers.

independence to report freely on lapses by any country, as well as broad publicity over lapses leading to member state action, would help identify and close gaps in implementation. The Committee also should reinvigorate its efforts to assist member states with meeting their obligations under these resolutions. Some member states are thus far failing to provide basic information, about their enforcement of resolutions and about Iranian sanctions violations, to the 1737 Committee and the Panel of Experts.

The 1737 Committee and the Panel of Experts also should be granted more autonomy to designate sanctions-violating entities and individuals for targeted sanctions. Due to the current restraints on their ability to recommend entities and individuals in Security Council member states such as Russia and China, new designations of such individuals and entities are limited to a few per year. More freedom for the Committee and Panel of Experts would send a powerful signal of member states' commitment to enforcing U.N. Security Council resolutions.

b. Encourage improved implementation by China

i. Overview of noncompliance by Chinese entities

China needs to improve its implementation of Security Council sanctions and of its trade controls. China reportedly remains a key procurement and transshipment point used by Iranian smugglers.¹²³ In October 2010, the *Washington Post* reported that, “[t]he Obama administration has concluded that Chinese firms are helping Iran to improve its missile technology and develop nuclear weapons, and has asked China to stop such activity, a senior U.S. official said.”^{123a} The *Post* quoted a senior U.S. official explaining that “China so far has not devoted resources to crack down on violators.”^{123b} “It’s one thing to have a system that looks good on the books,” he said, “and it’s another thing to have a system that they enforce conscientiously.... Where China’s system is deficient is on the enforcement side.”^{123c}

Nearly two years later, there seems to have been little, if any, improvement. In August 2012, the *Post* reported that, “[a]lthough Iran has used Chinese go-betweens in the past, U.S. officials said sanctions have forced the isolated and besieged Iranian government to rely increasingly on China for economic help and access to restricted goods.”^{123d} The article quoted a senior Justice Department official stating, “As some countries have retreated from the Iranian market with the imposition of increased sanctions, many Chinese companies appear to have moved into the void.”^{123e}

The August 2012 *Post* article provided as an example maraging steel, which “is a critical material in a new, highly efficient centrifuge that Iran has struggled for years to build.”^{123f} “Barred by sanctions from buying the alloy legally, Iranian nuclear officials have sought,” said the article, “to secretly acquire it from Western companies.”^{123g} According to the article, “In recent years, U.S. officials say, an increasing number of Chinese merchants have volunteered to help, serving as middlemen in elaborate schemes to obtain the steel and other forbidden material for Iran’s uranium enrichment plants as well as its missiles factories.”^{123h}

“The flow of Western technology to Tehran is so persistent,” said the *Post* in August 2012, “that it has emerged as an irritant in relations between Beijing and Washington, prompting the Obama administration to dispatch two delegations to Beijing since 2010 to complain.”¹²³ⁱ “Yet, despite repeated protests,” said the August 2012 article, “Chinese businessmen continue to offer crucial assistance to Iran’s procurement efforts without fear of punishment or censure, U.S. officials and nuclear experts say.”^{123j}

Public references by U.S. executive branch officials to Chinese noncompliance reportedly sometimes result in annoyed Chinese officials reducing their cooperation with those officials.¹²⁴ At the same time, China seems resistant to taking action unless public attention is drawn to such noncompliance. Keeping all the interactions nonpublic also can provide China with a shield against accountability. **Thus, along with continuing diplomatic overtures to China over these cases, the U.S. executive branch should make selective cases and problems with Chinese private companies public and make clear the desired remedy. Congress and nongovernmental organizations also can have an impact by drawing attention to Chinese noncompliance without the retaliatory complications engendered by U.S. executive branch naming and shaming.**

If selective publicity fails, a demonstrated U.S. and European willingness to enact additional licensing requirements or sanctions against these problematic companies could help spur the Chinese government to act.

ii. Designating China as a “Destination of Diversion Concern”

Title III of the Comprehensive Iran Sanctions, Accountability, and Divestment Act requires the executive branch to designate as a “Destination of Diversion Concern” any country that allows substantial diversion to Iran of proliferation-sensitive U.S.-origin goods, services or technologies. Publicly available information indicates that China fits this law’s definition of a “Destination of Diversion Concern.” However, no such designation has been made.

SUMMARY OF CISADA TITLE III, “PREVENTION OF DIVERSION OF CERTAIN GOODS, SERVICES, AND TECHNOLOGIES TO IRAN”

Title III, “Prevention of Diversion of Certain Good, Services, and Technologies to Iran,” was enacted as part of CISADA on July 1, 2010.¹²⁵ Title III provides that “the President shall designate a country as a Destination of Diversion Concern if the President determines that the government of the country allows substantial diversion of goods, services, or technologies described in section 302(b) through the country to Iranian end-users or Iranian intermediaries.” The provision defines the term “allow” to mean “the government of the country knows or has reason to know that the territory of the country is being used for such diversion.” Upon designating a country as a Destination of Diversion Concern, the president must submit to specified congressional committees a report 1) notifying those committees of the designation; and 2) “containing a list of the goods, services

and technologies described in section 302(b) that the President determines are diverted through the country to Iranian end-users or Iranian intermediaries.”

Not later than 45 days after submitting such a report to Congress, the president must “require a license under the Export Administration Regulations or the International Traffic in Arms Regulations (whichever is applicable) to export to” the designated country a good, service, or technology on the list of items described in section 302(b) that the president has determined are being diverted through the country to Iranian end-users or Iranian intermediaries. Such license applications shall be reviewed “with the presumption that any application for such a license will be denied.” Items described in section 302(b) are goods, services, or technologies “(1) that (A) originated in the United States; (B) would make a material contribution to Iran’s—(i) development of nuclear, chemical, or biological weapons; (ii) ballistic missile or advanced conventional weapons capabilities; or (iii) support for international terrorism; and (C) are—(i) items on the Commerce Control List or services related to those items; or (ii) defense articles or defense services on the United States Munitions List; or (2) that are prohibited for export to Iran under a resolution of the United Nations Security Council.” The president can delay for a 12-month period the imposition of the licensing requirement with respect to a country designated as a Destination of Diversion Concern if the president determines that country’s government is taking various specified steps to improve its performance.

The publicly available information set forth in this section indicates that China “allows substantial diversion of goods, services, or technologies described in subsection 302(b) through the country to Iranian end-users or Iranian intermediaries,” and that the government of China “knows or has reason to know that the territory of the country is being used for such diversion.” China thus fits CISADA’s definition of a “Destination of Diversion Concern.” **The United States should formally designate China as a “Destination of Diversion Concern.”**

Such a designation could reduce the supply to Iran of proliferation-sensitive goods, services, or technologies by 1) enhancing scrutiny by U.S. government licensing agencies of specific proliferation-sensitive exports from the United States to China; 2) increasing pressure on the Chinese government to crack down on diversion through China to Iranian end-users and Iranian intermediaries; and 3) helping secure support from other countries who likewise face challenges in ensuring that sales to China do not end up in Iran. China tends to retaliate against U.S. executive branch naming and shaming, and the U.S. executive branch is particularly vulnerable to such retaliation (for example because its diplomats regularly seek meetings, and engage in negotiations, with Chinese officials on a variety of issues). As a result, it may make sense for Congress to pass legislation specifying that China is a “Destination of Diversion Concern.”

Several recent court cases provide specific, publicly available evidence that Iran uses China as a place to acquire and transship a range of high-tech, dual-use goods from U.S. companies, sometimes through subsidiaries located in China. For example,

evidence of China as a hub for Iran’s illicit procurement efforts is contained in the indictment, announced by federal prosecutors in July 2012, charging Parviz Khaki, a citizen of Iran, and Zongcheng Yi, a resident of China, “for their alleged efforts to obtain and illegally export to Iran U.S.-origin materials that can be used to construct, operate and maintain gas centrifuges to enrich uranium, including maraging steel, aluminum alloys, mass spectrometers, vacuum pumps and other items.”¹²⁶ The indictment alleges that Yi and other conspirators purchased the goods in question from various U.S. companies and “had the goods exported from the United States through China and Hong Kong to Khaki and others in Iran.”¹²⁷

Additional evidence is provided by the case of Susan Yip, who in October 2012 was sentenced to two years in prison for her role in a conspiracy to obtain in the United States and illegally export to Iran parts that “could be used in such military systems as nuclear weaponry” and “missile guidance and development.”¹²⁸ By “pleading guilty, Yip admitted that from 2007 to 2011, she acted as a broker and conduit” for Mehrdad Foomanie of Iran.¹²⁹ According to the indictment, “Foomanie bought or attempted to buy items in the United States and arranged to have them unlawfully shipped to Iran through his companies in Iran, Hong Kong and China.”¹³⁰

Concerns are also raised by the case of Qiang Hu, who was “charged in a May 18, 2012 criminal complaint in the District of Massachusetts with conspiracy to illegally export from the United States to China and elsewhere dual-use pressure transducers in violation of the International Emergency Economic Powers Act.”¹³¹ According to the complaint, “the pressure transducers in question, manufactured by MKS Instruments headquartered in Andover, Mass., are controlled for export by the Commerce Department because they can be used in gas centrifuges to enrich uranium and produce weapons-grade uranium.”¹³² According to the complaint, “Hu worked as a sales manager for a subsidiary of MKS Instruments in Shanghai.”¹³³ Per the U.S. Department of Justice, “Hu and his co-conspirators allegedly caused thousands of MKS export-controlled pressure transducers, worth more than \$6.5 million, to be illegally exported from the United States to unauthorized end-users in China and elsewhere using export licenses fraudulently obtained from the Department of Commerce.”¹³⁴ The complaint alleges that Hu and his co-conspirators “used licenses issued to legitimate MKS business customers to export the pressure transducers to China, and then caused the parts to be delivered to other end-users who were not themselves named on the export licenses or authorized to receive the parts.”¹³⁵ Pressure transducers measure the gas pressure inside a centrifuge, and Iran uses a large quantity of them in its centrifuge plants. Because of the efforts of countries that do enforce Security Council sanctions, Iran has experienced great difficulty in acquiring pressure transducers.

In addition to these 2012 cases involving China, numerous cases from previous years are detailed in the “Summary of Major U.S. Export Enforcement, Economic Espionage, Trade Secret and Embargo-Related Criminal Cases,” which is regularly

“Chinese businessmen continue to offer crucial assistance to Iran’s procurement efforts without fear of punishment or censure, U.S. officials and nuclear experts say.”

Turkey is reportedly a key transshipment point for Iranian efforts to circumvent sanctions.

updated by the U.S. Department of Justice.¹³⁶ This consistent pattern of cases indicates that Iran is a regular customer of critical dual-use goods and raw materials that originate elsewhere, including the United States, but are acquired in China and then shipped to Iran. As a result, these cases demonstrate that China poses a significant diversion concern.

Research and analysis by the Institute for Science and International Security (ISIS) indicates that the China diversion problem is posed primarily by private Chinese companies, rather than state-owned ones. These private companies procure goods for Iran and then transfer or transship them to Iranian entities. The Chinese government today does not do enough to implement and enforce its trade controls, abide by U.N. Security Council sanctions, or otherwise take sufficient steps to stop Iran's efforts to obtain a range of high-tech, dual-use goods and raw materials for its nuclear and other sanctioned programs.

According to ISIS, an example might involve an Iranian front company that is located in Iran. This Iranian-based company would contract with an Iranian-controlled entity in China, which in turn would contract with a Chinese private company to obtain sensitive goods that are widely known to be used in Iran's nuclear program and thus banned for sale to Iran by U.N. Security Council sanctions.¹³⁷ While China makes these particular goods, these Chinese-manufactured goods are not reliable or of high enough quality for centrifuge use.¹³⁸ As a result, Iran seeks Western-manufactured goods available in China, and often searches widely for such goods in China, under the pretense of seeking the lowest price.¹³⁹ The private Chinese company tells the Western suppliers' subsidiaries that the goods will be used domestically in China, although they are in fact intended for export to Iran.¹⁴⁰ Although this is not the only way Iran uses China to acquire sensitive goods, it is reportedly typical.

Hong Kong is also a significant diversion concern. Hong Kong has been a special administrative region of China since it ceased being a colony of Great Britain in 1997. Consistent with the "sense of Congress" expressed in the U.S.-Hong Kong Policy Act of 1992,¹⁴¹ Hong Kong is treated as a separate destination under the U.S. Export Administration Regulations and in some circumstances is subject to more favorable licensing treatment than mainland China. However, there are increasing signs that Hong Kong is failing to effectively police the transshipment and illicit trade practices of the myriad trading and international companies on its territory. As a result, Hong Kong has become a growing diversion concern and hub for Iran's illicit procurement efforts.

For example, the U.S. Government Accountability Office noted in 2012 that "some unlicensed items transshipped illicitly to Iran through Hong Kong were used to build improvised explosive devices used against Coalition troops in Iraq."¹⁴² Concerns regarding Hong Kong as a hub for Iran's illicit procurement efforts also are raised by several of the above-referenced cases involving China. For example, the

case of Susan Yip, who pleaded guilty in 2012 to one count of conspiracy to violate the Iranian Transaction Regulations.¹⁴³ In her guilty plea, Yip admitted to using several companies in Hong Kong to carry out the fraudulent scheme.¹⁴⁴

Additional evidence of Hong Kong as a hub for Iran's illicit procurement efforts is contained in the indictment, announced by federal prosecutors in July 2012, charging Parviz Khaki, a citizen of Iran, and Zongcheng Yi, a resident of China, "for their alleged efforts to obtain and illegally export to Iran U.S.-origin materials that can be used to construct, operate and maintain gas centrifuges to enrich uranium, including maraging steel, aluminum alloys, mass spectrometers, vacuum pumps and other items."¹⁴⁵ The indictment alleges that Yi and other conspirators purchased the goods in question from various U.S. companies and "had the goods exported from the United States through China and Hong Kong to Khaki and others in Iran."¹⁴⁶ A law enforcement official told *The New York Times* that the case "illustrated an emerging trend of smugglers using Hong Kong as a transshipment hub," in contrast with the past, when "it was more common for smuggling networks to use hubs like Malaysia, Singapore and the United Arab Emirates."¹⁴⁷

In addition to designating China as a destination of diversion concern, the U.S. should consider designating Hong Kong.¹⁴⁸ In light of Hong Kong's failure to effectively police transshipments through its territory, the United States should also consider whether to end the preferred export licensing status it has granted Hong Kong in comparison to China.

C. Encourage improved implementation by Turkey

Turkey is reportedly a key transshipment point for Iranian efforts to circumvent sanctions. According to a March 2012 article in *Today's Zaman*, an English-language Turkish newspaper:

With Iran facing US and EU sanctions due to its nuclear program, Turkey has emerged as one of the few valuable outlets for Iranian companies willing to circumvent sanctions. Iranian companies thus seek partnership with or the acquisition of Turkish businesses. According to the Turkish Union of Chambers and Commodity Exchanges (TOBB), foreign companies financed by Iran in 2011 totaled 590, an increase of 41 percent compared to the previous year. That puts Iran on the top of the chart of new foreign companies established in 2011, not only in nominal numbers but percentage-wise as well.¹⁴⁹

Several recent cases indicate that Iran uses Turkish companies to evade sanctions, including by acquisition and transshipment of a range of high-tech, dual-use goods from U.S. or European companies.¹⁵⁰ Evidence of Turkey as a hub for Iran's illicit efforts to procure sensitive U.S.-origin goods is contained in the indictment, unsealed on February 1, 2011, "charging Milad Jafari, an Iranian citizen and

resident, with illegally exporting and attempting to export specialized metals from the United States through companies in Turkey to several entities in Iran – including entities that have been sanctioned for their involvement in Iran’s ballistic missile activities.”¹⁵¹ The indictment “alleges that Jafari and his customers were successful in causing several shipments of...materials to be exported from the United States to Iran via Turkey.”¹⁵²

Additional evidence of Turkey as a hub for Iran’s illicit efforts to procure sensitive U.S.-origin goods is contained in the indictment, announced by federal prosecutors in December 2012, of Murat Taskiran, a Turkish citizen who was the managing director of a company in Turkey,¹⁵³ and Hamid Reza Hashemi, a dual U.S. and Iranian citizen who resides in Iran.¹⁵⁴ According to the U.S. Department of Justice, “Hashemi is alleged to have violated the International Emergency Economic Powers Act (“IEEPA”) by working with others, including Taskiran, to arrange for the export of carbon fiber from the U.S. to his company in Tehran, Iran.”¹⁵⁵ For example, “in March and April 2008, Hashemi, Taskiran, and a Europe-based broker...successfully arranged for the shipment of carbon fiber from the U.S. to [an] Iranian Company.”¹⁵⁶ Iran’s centrifuge program depends in part on imports of high quality carbon fiber, which are increasingly difficult for Iran’s smuggling networks to obtain.¹⁵⁷

The United States should use its relationship with Turkey to urge Ankara to take additional steps to improve its compliance with U.N. sanctions resolutions and limit Iran’s ability to shop illicitly for goods using Turkish territory. The United States should, if necessary, provide Turkey with additional assistance for this effort. If Turkey’s record does not improve, and if there is sufficient evidence that U.S.-origin goods are being diverted, the United States should consider designating Turkey as a destination of diversion concern.

d. Improved implementation by other countries of transit concern

As discussed above, Iran’s nuclear program has depended critically on high-technology equipment produced in the West and Japan. As a result of U.S. diplomatic pressure, the United Arab Emirates (UAE), once a major transshipment hub for nuclear and nuclear-dual use equipment going to Iran, tightened its controls and curtailed this activity beginning in 2007. Press reports indicate that Iran has been attempting to shift its illicit procurement efforts to not only China and Turkey but also Oman and other Gulf states.¹⁵⁸ The UAE is the only Gulf (or indeed Arab) state to have in place comprehensive strategic trade controls.

The United States should place much greater priority on encouraging all countries of diversion concern, including those in the Gulf, to adopt and effectively implement comprehensive strategic trade controls. The United States should do so by taking steps including demonstrating a willingness to impose additional licensing requirements on countries that do not adopt or effectively implement such controls.

Countries of transit concern should be required to provide U.S. licensing agencies with extra documentation substantiating that Iran’s nuclear program would not be the end-user of a sensitive good. As mentioned above, Title III of CISADA requires the president to designate as a “Destination of Diversion Concern,” and impose licensing restrictions on, any country that allows substantial diversion of various U.S.-origin goods, services, or technologies “through the country to Iranian end-users or Iranian intermediaries.”¹⁵⁹ In addition to designating China as discussed above, **the U.S. government should announce a list of countries to which it is investigating the applicability of Title III.** This approach could help encourage countries of transit concern to pass more effective laws and regulations and to better enforce measures against Iran’s illicit nuclear trade. Avoiding the threat of extra requirements already has motivated some countries, such as the UAE and Malaysia, to put more emphasis on stopping Iran’s illicit trade activities on their territories.

A coalition of allies could join together to increase licensing requirements on major countries of transit concern, so as to help prevent against countries transferring imported, controlled, or other proliferation-sensitive goods to Iran.

e. Further restrictions on Iranian access to the international financial system

U.N. Security Council resolutions on Iran prohibit it from using the global financial system to finance its illicit nuclear trade.¹⁶⁰ Nevertheless, Iran has become adept at using the global financial system to facilitate transactions for goods purchased in contravention of U.N. Security Council, coalition, and unilateral sanctions. In response, governments must more effectively leverage the financial system as a line of defense against illicit nuclear trade.

The U.S. government should encourage and assist countries with insufficient financial controls to enact, strengthen, and implement such measures as are necessary to prevent Iran’s proliferation financing. To reduce Iran’s access to the international financial system and increase pressure on it to resolve the nuclear issue, the United States should continue on a unilateral basis to aggressively enforce recent laws sanctioning and fining foreign financial institutions that do significant proscribed business with Iran.

In addition, the Financial Action Task Force (FATF) should increase its emphasis on nonproliferation. The FATF is an international, intergovernmental body that sets standards and promotes effective implementation of legal, regulatory, and operational measures for combating money laundering, terrorist financing, and other related threats to the integrity of the international financial system. FATF members include the United States, the European Commission, China, Russia, and most of the world’s other leading economies.¹⁶¹

The FATF has played a pivotal role in the fight against the financing of terrorism. However, the FATF’s work on combating the financing of proliferation is several steps behind its work on terrorism financing.

Governments must more effectively leverage the financial system as a line of defense against illicit nuclear trade.

Increased transnational cooperation to overcome legal impediments to transnational prosecutions of smugglers and sanctions violators would better deter and prevent Iranian illicit trade.

In February 2012, the FATF recognized that “the proliferation of weapons of mass destruction is a significant security concern, and financial measures can be an effective way to combat this threat,” and adopted a new recommendation aimed at ensuring consistent and effective implementation of targeted financial sanctions related to proliferation when the U.N. Security Council calls for them.¹⁶² The proliferation recommendation was adopted as part of the FATF’s new International Standards on Combating Money Laundering and the Financing of Terrorism & Proliferation.¹⁶³

Next steps for the FATF on countering nonproliferation finance should include working toward a comprehensive set of best practices and capacity-building mechanisms, and then holding FATF members to account for their implementation. The U.S. and other FATF members should work to build broad member state support for these steps.

Countries also should increase their reporting to the U.N. Iran Sanctions Committee¹⁶⁴ and its Panel of Experts¹⁶⁵ about Iran’s efforts to circumvent financial sanctions, and especially instances in which they block transactions or seize assets, so that the Committee can report fully on this matter and recommend new entities or institutions for sanctioning.

f. Improved detection and disruption of procurement efforts

i. Greater government/industry cooperation worldwide

Improved cooperation between governments and the private sector to detect Iranian proliferation attempts would better prevent Iran from illicitly outfitting its nuclear programs and enhance compliance with U.N. Security Council sanctions resolutions on Iran. Government/industry cooperation programs already are successful in Germany and Britain, where they have proven valuable in strengthening national export control and sanctions efforts. As part of such programs, governments inform companies about the latest procurement schemes used by Iran or other proliferators in order to help these firms avoid making accidental bad sales. In addition, private companies provide governments information about Iranian procurement attempts, which is useful in building intelligence assessments about Iran’s requirements, activities, and smuggling techniques.¹⁶⁶

The United States, perhaps surprisingly given its overall leadership in stopping Iran’s smuggling, has found it difficult to implement such a government/industry cooperation system because of regulatory and classification issues relating to this type of information-sharing with companies. However, it should continue attempting to establish such a system through legislative or executive action resolving the classification and regulatory issues.

Countries, such as Great Britain and Germany, that already have close government/industry cooperation, should encourage and assist other countries, particularly China and Turkey, to institute such systems.

ii. Better interdiction/Proliferation Security Initiative (PSI) enforcement

Increased efforts to interdict sensitive items on their way to Iran would render Iran less able to obtain the goods it requires for its nuclear program and provide the United States and its allies with useful information about Iran's needs and activities. In particular, **the PSI, through which participating states agree to stop proliferation cargos crossing their air, terrain, or maritime boundaries, should be expanded to include participation by additional countries.** Several key maritime countries—including India, Malaysia, and South Africa—are not yet members of PSI.¹⁶⁷ The PSI reportedly has proven effective on numerous occasions,¹⁶⁸ and expanded participation would likely lead to more interdictions.

In addition, **the United States should enact implementing legislation for the 2005 Protocol to the Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation.** The United States signed the protocol on February 17, 2006, and the Senate approved it on September 25, 2008.¹⁶⁹ However, ratification cannot be finalized until Congress passes implementing legislation.¹⁷⁰ The House passed such implementing legislation, the Nuclear Terrorism Conventions Implementation and Safety of Maritime Navigation Act of 2012 (H.R. 5889), on June 28, 2012, but the Senate had not done so as of December 30, 2012. In President George W. Bush's note submitting the protocol to the Senate, he summarized as follows its importance to PSI activities: "The 2005 SUA Protocol also provides for a ship-boarding regime based on flag state consent that will provide an international legal basis for interdiction at sea of weapons of mass destruction, their delivery systems and related materials."¹⁷¹

There are also several other ways in which interdiction efforts can be enhanced, including through improved transnational coordination of interdiction operations, better sharing of intelligence information on illicit Iranian and other proliferator shipments, and more effective training and joint exercises. U.S. leadership will be vital to reinvigorate the 10-year-old PSI.

iii. Targeting procurement networks

Sting operations have reportedly proven effective at catching and stopping both major and minor Iranian smugglers and should be expanded.¹⁷² The United States is reportedly the only country currently known to employ sting operations against Iranian efforts to procure proliferation-sensitive dual-use items.¹⁷³ The United States should encourage and assist other countries to use sting operations to: prevent Iran from obtaining items for its nuclear program, put more Iranian smugglers out of commission, and send a stronger message about such countries' unwillingness to tolerate violations of their export control laws.

Increased arrests and prosecutions of nuclear smugglers could delay or interrupt particular procurement operations and help shut down Iran's procurement networks. The United States has spearheaded arrests and indictments against Iranian smugglers

caught operating or passing through U.S. territory. **The United States and European countries should work closely with and encourage other countries to increase their efforts to arrest and indict Iranian smugglers. Stronger sentences against convicted smugglers would also better deter and disrupt procurement operations.**

Increased transnational cooperation to overcome legal impediments to transnational prosecutions of smugglers and sanctions violators would better deter and prevent Iranian illicit trade. Many obstacles currently impede successful transnational prosecutions, including barriers to countries sharing evidence and witnesses, a lack in some cases of bilateral extradition treaties or of both countries criminalizing the same act, a lack of specific laws altogether against smuggling in some countries, and an absence of uniformly strong penalties.¹⁷⁴ For example, France in 2010 refused to extradite to the United States Majid Kakavand, an Iranian businessman indicted by U.S. prosecutors for exporting dual-use items to Iran.¹⁷⁵ The French prosecutor opposed extradition on the grounds that the items were not deemed to be dual-use under French law. Kakavand was set free and left France for Iran.¹⁷⁶

g. Careful monitoring of Iran's plutonium options

The focus of attention regarding Iran's nuclear program has long been on its ability to develop a nuclear bomb using uranium enriched to weapons grade. However, **Iran's potential route to a plutonium-fueled nuclear bomb also deserves careful monitoring.** Concerns about this route have reportedly helped spur a significant recent increase in U.S. monitoring of Iran's Bushehr nuclear power reactor.¹⁷⁷

Plutonium can be extracted from spent fuel produced by nuclear reactors such as Bushehr. As a result, Russia had built Bushehr under an agreement that all spent fuel would be returned to Russia for storage. The IAEA was therefore surprised when Iran announced in October that nuclear fuel rods were being discharged from Bushehr and stored onsite.¹⁷⁸ This discharged fuel reportedly may have included plutonium of weapons-grade or near weapons-grade.¹⁷⁹ (Plutonium that is produced by limited irradiation of reactor fuel, like the Bushehr fuel as of late 2012, contains fewer contaminants that can complicate the use of the plutonium for nuclear weapons). Although the amount of this plutonium in the spent fuel was likely relatively small, it could have been enough to make a handful of nuclear weapons, if it were chemically separated from other fuel constituents by reprocessing.¹⁸⁰ It seems unlikely that Iran will attempt to extract the weapons-grade plutonium from these fuel rods, since Iran is not known to currently have the reprocessing facilities necessary to do so.¹⁸¹ Instead, the discharge was reportedly motivated by safety concerns.¹⁸² However, the discharge sets a troubling precedent, raising questions about whether Iranian engineers could—once they have mastered the necessary technical processes—use a similar maneuver to discharge spent fuel, move to divert it from IAEA safeguards, and extract plutonium from the spent fuel at a secret site.¹⁸³

The plan for Russia's Atomic Power Corporation (Rosatom) to transfer operational control over Bushehr to the Iranian government in March 2013 raises additional concerns about Bushehr.¹⁸⁴ Since the Russian government tends to be more cooperative than the Iranian government with regard to Bushehr, this transfer of control could reduce the IAEA's ability to gain insight into Bushehr's operations. At present, the IAEA is permitted to inspect Bushehr only once every 90 days, and Iran has forbidden the agency from installing video cameras with near-real time surveillance capacity.¹⁸⁵ The U.S. should carefully monitor Bushehr, support the IAEA in installing remote video monitoring of the reactor and spent fuel ponds, and work with Russia to more rapidly remove any spent fuel from storage in Iran.

In addition, Iran is finishing the Arak heavy water reactor despite U.N. Security Council resolutions ordering a halt in its construction. Iran has most recently stated that this reactor will become operational in early 2014. As with Iran's enrichment program, there is little economic or energy security justification for this facility, which is suspected to have been designed to produce weapon-grade plutonium. It is receiving less attention in this report because it is a less imminent threat than the enrichment program. Nonetheless, the Arak heavy water reactor should be closely monitored.

2. Enhancing Covert Efforts to Delay and Constrain Improvement of Iran's Nuclear and Missile Capabilities

Covert activities in Iran should be enhanced, as they (and especially Stuxnet) reportedly have had a measure of success¹⁸⁶ and may avert the need for more violent actions to halt Iran's nuclear advances.

a. Intelligence operations aimed at information gathering on program's status

i. Operations including cyber-infiltrations for data gathering, spying, and aerial surveillance

U.S. and allied intelligence operations aimed at data gathering can provide valuable information and advanced warning about Iran's nuclear activities and plans. Such intelligence gathering operations include traditional spying, use of cyber-infiltrations, and aerial surveillance to reveal new activities and sites. Western governments should assign top priority to expanding, and intensifying cooperation on, their intelligence operations designed to increase knowledge about Iran's activities.

ii. Seeking defector information

The United States and its allies should expand their use of intelligence to obtain data about Iran's plans to expand enrichment sites, build covert ones, move toward a dash for nuclear weapons, and experiment with or conduct nuclear weaponization activities. **The United States and its allies should start programs, if their intelligence agencies do not already have them, to encourage and reward defections from Iranian nuclear projects that are in violation of U.N. Security Council resolutions. A**

whistleblower program should offer asylum for the person and his or her family and a monetary reward for key information about secret or banned activities.

iii. Providing intelligence information to IAEA

Governments reportedly already provide a significant amount of intelligence information to the IAEA^{186a} and should continue to do so. The IAEA plays an important role as a reviewer and synthesizer of such information for its safeguards reporting. It also remains in an optimal position to attempt to seek answers from Iran.

iv. Surveillance and disruption of entire networks

Intelligence and law enforcement agencies should maximize their efforts to survey and disrupt the operations of entire smuggling networks rather than merely singling out a few key actors. Effective operations require coordination across national boundaries to find out what major procurement networks are seeking, detect how they operate, and eventually shut them down through intelligence operations or arrests and prosecutions.

b. Sabotage

Press reports indicate that sabotage has been used to slow the Iranian nuclear program, including through infiltration and disruption of procurement networks^{186b} and cyberattacks designed to inflict physical damage to the program.¹⁸⁷ Judicious use of this tool should be included in continued U.S. efforts to constrain the Iranian nuclear program.

3. Credible Threat of Military Action

In discussing how to prevent Iran from acquiring nuclear weapons, the term “military option” has become a shorthand phrase meaning the use—by the United States, Israel, or both—of warplanes and/or missiles to destroy Iran’s nuclear capabilities with high explosives. In fact, the United States has a spectrum of military options short of bombing that can be used to slow Iran’s nuclear advances, and is reportedly currently employing several of these options.

For example, as noted above, the United States and/or Israel have reportedly undertaken several types of covert operations with impacts in Iran to check Iran’s nuclear program. These include cyberattacks directed against Iran’s uranium enrichment facilities; acts of sabotage possibly including bombings at missile assembly and storage facilities and at facilities associated with Iran’s nuclear program; and, reportedly, the assassination of Iranian nuclear scientists.¹⁸⁸ (The United States has unequivocally denied participating in the assassination of Iranian scientists.)¹⁸⁹

According to press reports, the U.S. Defense Department’s Cyber Command is conducting the U.S. cyber-warfare component.¹⁹⁰ If true, this would make the effort a military operation intended to cause destruction in Iran, but without the use of high explosives

and airborne delivery systems. The cyber-operation, again according to press reports, is continuing after the detection of one major component of that effort, the computer worm known as Stuxnet, which infected Iran's uranium-enrichment centrifuge process controllers and caused 1,000 centrifuges to spin out of control at Iran's Natanz enrichment facility.¹⁹¹ New components of the cyberattack are said to be more sophisticated than Stuxnet.¹⁹² A massive explosion at a missile assembly and storage site in November 2011 and an explosion in December 2011 at a steel mill that may be linked to Iran's missile or nuclear program also have been attributed in the press to acts of sabotage,¹⁹³ although Iranian officials have not made the accusation, claiming that the missile site explosion, for example, was an industrial accident.¹⁹⁴

The combination of economic sanctions and covert actions has yet to persuade the Iranian leadership to comply with the Security Council's demands regarding its nuclear program. **It may be that these tools will succeed in preventing Iran from building nuclear weapons only if paired with a crystal clear message to Iran's leaders that it is futile for them to continue to seek such weapons because U.S. military action ultimately will prevent them from succeeding. In other words, it may be necessary to make clear to Iran's leadership that it is mistaken if it thinks Iran can simply endure sanctions until such time as an Iranian nuclear test results in the West accepting an Iranian arsenal as a fait accompli and consequently lifting sanctions on Iran.**¹⁹⁵ **Such a message requires a military option sufficiently credible to persuade the Iranian leadership now that, at some point between the present day and their acquisition of a nuclear arsenal, the United States will intervene militarily to prevent that outcome.**

Recommendations:

- a.** Undertake additional overt preparations for the use of warplanes and/or missiles to destroy Iran's nuclear capabilities with high explosives, so as to reinforce the credibility of this threat

Iran must be made to understand that the United States is ready to implement this option, if negotiations continue to be unsuccessful and Iran's nuclear capabilities continue to progress. To be effective as a means for increasing pressure on Iran, this threat must be credible. In recent months, the United States has taken a number of important steps implying that it is, indeed, prepared to attack Iranian nuclear sites if necessary. These steps have included:

- » the recent strengthening of U.S. forces in the Persian Gulf and Gulf of Oman;¹⁹⁶
- » recent military exercises in Jordan involving multiple states from inside and outside the region;¹⁹⁷ and
- » the U.S. military's well-publicized acquisition and testing of massive bunker-buster weapons.¹⁹⁸

The combination of economic sanctions and covert actions has yet to persuade the Iranian leadership to comply with the Security Council's demands regarding its nuclear program. It may be that these tools will succeed in preventing Iran from building nuclear weapons only if paired with a crystal clear message to Iran's leaders that it is futile for them to continue to seek such weapons because U.S. military action ultimately will prevent them from succeeding.

Iran's leaders continue to behave as if they do not regard as credible the implication that continued noncompliance will result in their program's destruction.

These preparatory and declaratory actions should continue and should be reinforced. The United States should also: boost the readiness of its forces in the region; strengthen military cooperation with the Gulf States, including through additional military exercises; ask its allies to work with it to demonstrate resolve;¹⁹⁹ deploy additional strike aircraft to the southern Gulf States; and reposition the U.S. aircraft carrier in the Persian Gulf to the Gulf of Oman, where it would reportedly be less vulnerable to Iranian naval weapons, while remaining fully capable of conducting aerial operations over both bodies of water.²⁰⁰

b. Specify red lines or triggers for military action

As a general matter, U.S. officials prefer to preserve flexibility by avoiding specific statements as to what actions by adversaries would trigger U.S. military strikes. However, **it seems highly unlikely that Iran will bring its nuclear program into compliance with international obligations unless Iran's leadership is convinced that proceeding with the program will result in both crippling sanctions and also a military strike sufficient to destroy the program.** Iran's leaders continue to behave as if they do not regard as credible the implication that continued noncompliance will result in their program's destruction. As a result, **the president of the United States should explicitly declare that he will use military force to destroy Iran's nuclear program if Iran takes additional "decisive steps toward producing a bomb."**²⁰¹ Possible triggers could include **producing weapon-grade uranium or separated plutonium, expelling IAEA inspectors, construction of additional covert nuclear facilities, or undertaking significant additional weaponization activities.**

Such a declaration by the president should both 1) specify that military action will, if necessary, be taken to halt Iran from acquiring a nuclear arsenal and 2) provide a clear indication of what broad red lines would result in such action being taken. In each of the president's reported statements on this topic thus far, his willingness to use military force, if necessary, to halt Iran from acquiring a nuclear arsenal has been implicit rather than explicit. For example, in his September 25, 2012 speech to the U.N. General Assembly, Obama stated, "The United States will do what we must to prevent Iran from obtaining a nuclear weapon."²⁰² On March 5, 2012, Obama affirmed, to Israel's Netanyahu, that "my policy is prevention of Iran obtaining nuclear weapons [and] when I say all options are on the table, I mean it."²⁰³ In his speech to the AIPAC Policy Conference on March 4, 2012, Obama stated as follows:

I have said that when it comes to preventing Iran from obtaining a nuclear weapon, I will take no options off the table, and I mean what I say. That includes all elements of American power: a political effort aimed at isolating Iran, a diplomatic effort to sustain our coalition and ensure that the Iranian program is monitored, an economic effort that imposes crippling sanctions and, yes, a military effort to be prepared for any contingency.

Iran's leaders should understand that I do not have a policy of containment; I have a policy to prevent Iran from obtaining a nuclear weapon. And as I have made clear time and again during the course of my presidency, I will not hesitate to use force when it is necessary to defend the United States and its interests.

The most directly that Obama has addressed this issue was during the final 2012 presidential debate, when he stated:

The clock is ticking. We're not going to allow Iran to perpetually engage in negotiations that lead nowhere...we have a sense of when they would get breakout capacity, which means that we would not be able to intervene in time to stop their nuclear program, and that clock is ticking. And we're going to make sure that if they do not meet the demands of the international community, then we are going to take all options necessary to make sure they don't have a nuclear weapon.²⁰⁴

On several other occasions, President Obama has said variants of, “all options are on the table.” Stating that an option is “on the table” is not the same as stating that the option will, if necessary, be used. The specific use by the president of an unambiguous phrase such as “I will use military force if necessary to stop Iran from taking the following steps toward acquiring a nuclear arsenal...” would contribute to the credibility of the military option vis-a-vis Iran’s nuclear program. In making such an explicit statement, the president would enhance the likelihood of Iran peacefully complying with its nuclear nonproliferation obligations, by sending a crystal clear message to Iran’s leaders that it is futile for them to seek nuclear weapons because the U.S. military will ultimately prevent them from succeeding.

C. Increase Iranian isolation, including through regime change in Syria

A key zone of U.S. confrontation with Iran today is Syria, where Washington reportedly is providing political and non-lethal military support to the Free Syrian Army, and Iran is providing political support and a wide range of military equipment to the Assad regime.²⁰⁵ Syria under President Bashar Assad is Iran’s only nation-state ally in the Middle East (and a key conduit from Iran to Hizbollah). The collapse of the Assad government and its replacement by a Sunni-dominated, Saudi and Qatari-backed anti-Iranian government in Damascus would be a grievous strategic setback for Tehran. As the United States attempts to pressure Iran to suspend its nuclear program by means of intensified sanctions, covert operations, and the possibility of future military intervention, Iran’s loss of its key ally could contribute to a tipping point that forces it to accept restraints on its nuclear endeavors.

The United States should consider significantly increasing its support for those elements of the Free Syrian Army that are working to establish a more democratic, accountable, free-market-oriented, and inclusive government in Syria. As noted

above, Iran's loss of its Syrian ally and resulting isolation could be a decisive factor leading Iran to accept restraints on its nuclear activities.

In addition, as requested by 73 members of the U.S. Senate in a letter to the President on December 19, 2012, the President should "work to deepen Iran's diplomatic isolation by encouraging countries to expel Iranian diplomats and close Iranian missions, as Canada recently did, given Iran's use of its embassies and consulates to engage in proliferation and terrorism-related illicit activities."²⁰⁶

d. Potential Israeli air strike against Iran

Because Israel perceives Iran's acquisition of nuclear weapons to be a potential threat to Israel's very existence, Prime Minister Netanyahu and other senior Israeli officials repeatedly have underscored that Israel is prepared to attack Iran's nuclear facilities if other alternatives for halting its nuclear program appear to be ineffective and Iran's capabilities continue to grow. However, the U.S. military's capacity to attack Iran's nuclear facilities is far stronger than Israel's. U.S. strategy has been to forestall unilateral Israeli action by reassuring Israel that time remains to halt the Iranian program by other means. According to press reports, Washington has thus sought to cooperate with Israel in the ongoing cyber attacks on Iran's enrichment facilities and, possibly, in certain other covert sabotage operations in Iran.²⁰⁷ For the moment, Israel appears to be satisfied with this arrangement, but as recently as his September 2012 speech to the U.N. General Assembly, Netanyahu underscored that Israel may not be able to wait much longer before mounting an attack. We support efforts to reassure Israel of U.S. commitment to take military action if necessary to prevent Iran from acquiring a nuclear bomb.

4. If We Wake Up One Morning and Discover Iran Has Acquired a Nuclear Weapon Despite Our Best Efforts, What Will Be the Best Options for Attempting to Deter Its Use? What Steps Should Be Taken Now to Facilitate Those Deterrence Options?

We urge aggressive measures to prevent Iran's development of nuclear weapons because we are deeply skeptical of the potential for containing a nuclear-armed Iran. **Iranian acquisition of nuclear weapons would be dangerous for several reasons, none of which would be adequately addressed by containment. Nonetheless, since intelligence can be imperfect, we must be prepared for the possibility that we will wake up one morning and discover that Iran has acquired a nuclear weapon despite the United States' best efforts.** In this section, we therefore first discuss why we are deeply skeptical of the potential for containing a nuclear-armed Iran and then discuss what steps should be taken now in case Iran ends up acquiring a nuclear weapon despite our best efforts.

a. U.S. policy should be to stop Iran from acquiring a nuclear weapon

Iranian acquisition of nuclear weapons would be dangerous for three main reasons, none of which would be adequately addressed by containment:

i. Risk Iranian nuclear weapons will be used

There is a risk that Iran’s nuclear weapons might end up being used against the United States or one of its allies. The Iranian leadership’s apocalyptic messianism and exaltation of martyrdom may make it less possible to deter Iran’s leadership from using nuclear weapons. The United States cannot count on nuclear-armed Iranian leaders, as they view the world through their particular ideological prism and bounded rationality, to fully understand every action by the U.S.; yet deterrence depends on mutual understanding of the other’s strengths and weaknesses, motivations and abhorrence, risk aversion and assertiveness. In addition, there is a significant risk of rogue elements in Iran’s fragmented government taking it upon themselves to transfer nuclear arms or sensitive nuclear technology to terrorist or other allies. As we saw with Pakistan’s Khan—who reportedly supplied nuclear technology to Iran, Libya, and North Korea under the comparatively secular and responsible Musharraf government—one key rogue figure can be sufficient to share an insecure country’s nuclear technology with others.

Another way in which Iran’s nuclear weapons might end up being used against the United States or one of its allies is miscalculation, which we now know resulted in several close calls with the Soviet Union/Russia, including during the Cuban Missile Crisis, the Yom Kippur War,²⁰⁸ and since then. For example, in 1995 the launch of a Norwegian weather rocket “prompted fears in Russia that a surprise attack was under way, leaving President Boris Yeltsin and his top aides to ponder a possible retaliatory strike.”²⁰⁹ Fortunately, relations between the United States and Russia were good enough that Yeltsin decided there must be a mistake, that the United States could not possibly be attacking. Absent similar reservoirs of goodwill between the United States and Iran (or Israel and Iran), a miscalculation could result in disaster.

ii. Iranian nuclear arsenal will embolden Iranian aggression and subversion

Another major danger that an Iranian nuclear arsenal would pose to the United States and its allies is that, even if Iran never engages in a nuclear attack, an Iranian nuclear umbrella will embolden Iran and make Iran even more aggressive than it is today. Even without possessing a nuclear umbrella, Iran has taken very aggressive actions, directly or through its surrogates, against the United States and its allies, including the 2011 plot to assassinate the Saudi ambassador to the United States at a restaurant in Washington, D.C.;²¹⁰ the 1996 bombing of the Khobar Towers in Saudi Arabia, which killed 19 U.S. servicemen and one Saudi and wounded 372 others; the 1994 bombing of the Jewish cultural center in Buenos Aires, killing 85 people;²¹¹ the

1992 bombing of the Israeli Embassy in Argentina, killing 29 people;²¹² the October 1983 bombing of the U.S. Marine barracks in Beirut, killing 241 people;²¹³ and the April 1983 bombing of the U.S. Embassy in Beirut, killing 63 people.²¹⁴ Iran also has transferred long-range missiles to the Hamas and Hizbollah terrorist groups.²¹⁵

There is no evidence that Iran will behave any more responsibly if it acquires a nuclear arsenal. As one regional official said in a non-attribution format, “We have seen what Iran does when they don’t have nukes. What will they be like when they get one? It would be a nightmare.”²¹⁶

It is worth noting in this regard that Pakistan, a country run at the time by relative moderates, clearly was emboldened by its nuclear umbrella to become much more aggressive against India. After Pakistan acquired nuclear weapons, the Indian military reportedly assumed that with Pakistan’s survival assured, Pakistan would become less aggressive. The Indian military was wrong.

Following its acquisition of nuclear weapons, Pakistan exploited local opportunities in Kashmir to foment drastically increased terrorism and then, in the spring of 1999, infiltrated into the Kargil area of Kashmir and seized territory held by India. At the time, Pakistan was led by Prime Minister Nawaz Sharif and by General Pervez Musharraf, who was chief of staff of Pakistan’s armed forces at the time and then became president of Pakistan.

At a conference in 2002, “senior military officials from both India and Pakistan acknowledged that nuclear deterrence was much harder than they had been led to believe it would be [and] expressed that their countries actually had become less secure since the covert introduction of nuclear capabilities in the 1980s and the overt demonstration of these capabilities in the late 1990s.”²¹⁷ At this same conference, Dr. Peter Lavoy, who currently serves as Principal Deputy Assistant Secretary of Defense for Asian and Pacific Security Affairs, observed that while “according to Western scholars, the introduction of nuclear weapons into a region of conflict is supposed to create a logic of military escalation avoidance,” instead “the calculations of Pakistani military planners seemed to follow the logic of the ‘stability-instability paradox,’ according to which the side that is willing to run greater risks is able to use military force to obtain territorial or political gains, thereby placing the pressure on the other side to escalate to the nuclear, or near-nuclear, level—which, the logic goes, it will refrain from doing.”²¹⁸

If Iranian military planners adopt the same logic as did the Pakistani military planners, a nuclear-armed Iran would act even more aggressively toward the United States and its regional security partners than Iran has already, on the assumption the United States and its allies will not push back hard because they are so determined to avoid increasing the risk of a nuclear conflict. It is worth noting in this regard that containment strategies seem even less likely to be effective with a revolutionary, non-status quo power such as Iran than they were with Pakistan.

iii. Iranian nuclear arsenal could spur further proliferation in Middle East

The third major danger of Iran acquiring a nuclear arsenal is that several of its neighbors in the Middle East could feel compelled to acquire their own nuclear weapons in response. Saudi Arabia's King Abdullah has explicitly warned the United States that if Iran obtains nuclear weapons, his nation will seek to do so as well. "If they get nuclear weapons, we will get nuclear weapons," Abdullah told Dennis Ross, then a U.S. government official, during a meeting between the two in April 2009.²¹⁹ It might take Saudi Arabia only a relatively short time to acquire nuclear weapons, as there are persistent reports that Saudi Arabia financed Pakistan's nuclear program on condition Pakistan be prepared to transfer bombs to Saudi Arabia (or the capability to make them) if and when the Saudis request them.²²⁰ Other Middle Eastern states could follow.²²¹

A cascade of proliferation in the Middle East could lead to the worldwide collapse of the already tottering NPT regime. In addition, the proliferation of nuclear weapons in the Middle East tinderbox, with its border disputes, religious fanaticism, ethnic hatreds, unstable governments, terrorist groups, and tendency for conflicts to spiral out of control, seems likely to result in a devastating nuclear war.

While a proliferation cascade may not be the inevitable response to an Iranian nuclear arsenal, Iran should expect that its neighbors will react by adopting a number of measures to shore up their security, including obtaining security assurances, investing in nuclear technologies, enhancing their conventional military capabilities, and, possibly, acquiring nuclear arsenals of their own. All of these measures will cause instability and escalate tensions in an already tense region.

iv. Containment strategy will lack credibility after failure to prevent Iran from acquiring a nuclear weapon

It is also worth noting that the success of containment depends, as does the success of prevention, on the perceived and actual willingness of the United States to use force against Iran should Tehran cross Washington's red lines. If the United States were unwilling to use force to prevent an Iranian nuclear arsenal, what credibility would it have in threatening to use force against Iran once Iran had a nuclear arsenal?

b. Several deterrence-maximizing steps should be taken now in case Iran ends up acquiring a nuclear weapon despite U.S. best efforts

It is difficult to explore this contingency, since we have urged various measures to prevent Iran's ultimate development of nuclear arms.

With so much continuing uncertainty about the future course of the Iranian nuclear program, we believe it is premature for the United States to consider extending ironclad security guarantees (of the kind enjoyed by U.S. NATO allies, Japan, and South Korea) to Iran's Gulf neighbors that might be threatened by a future Iranian

nuclear arsenal. Indeed, if the current administration were to propose this step at this time, it could meet significant opposition from members of Congress concerned that it represents a step toward accepting an Iranian nuclear program. Such opposition could, in turn, *reduce* the confidence of the Gulf States in current U.S. commitments to their security. Extending binding security guarantees at a later time may be appropriate, but should be weighed in the context of events at that juncture.

i. Reinforce existing military support for regional partners

In the meantime, however, we believe **it is important to reinforce existing military ties with U.S. regional security partners**, especially after the withdrawal of U.S. forces from Iraq, because even now, Iran poses a decided threat to many of them, including especially the Gulf States. This process of reinforcement is already under way, with many of these regional states acquiring advanced Western conventional weapon systems, exercising with U.S. and other Western militaries, and, in some cases, providing bases for Western forces.²²² The deployment of missile defenses in Turkey, Qatar, UAE, Kuwait, and Bahrain²²³ is another important component of this effort. Iran's ability to use a nuclear arsenal as an umbrella under which to pursue covert efforts to undermine other governments in the region through subversion and terrorism, without fear of retaliation, can perhaps be mitigated somewhat by such enhanced U.S. military and political ties to states in the region.

ii. Prepare to sustain sanctions regime to weaken Iran

Another key component of U.S. strategy, should Iran acquire nuclear arms, will be to maintain sanctions and pressure on Tehran for the long term, aimed at constraining, deterring, and ultimately changing decision-making inside the Iranian regime. Current efforts to isolate Iran internationally also can be valuable for containing Iran should it acquire nuclear arms in the future. **The United States should: continue to encourage the European Union, Japan, South Korea, Canada, Australia, and other like-minded states to impose economic sanctions against Tehran beyond those mandated by the U.N. Security Council; work to diminish Iran's influence within the Organization of Petroleum Exporting States;²²⁴ and attempt to weaken links between Iran and China, and Iran and Russia.**

iii. Prepare to sustain efforts to constrain Iranian nuclear and missile program procurements

Preparations for the contingency of a nuclear-armed Iran also must consider that country's potential delivery systems. Today, Iran's missile capabilities already enable it to reach the Gulf region, Israel, and parts of Turkey.²²⁵ The dangers of a post-nuclear Iran would profoundly increase, however, if Iran were able to develop missiles capable of reaching Europe or the United States, because this would create the possibility that the United States and its allies might be self-deterred from confronting Iran in a crisis for fear of a nuclear strike on their homelands. Iran's successful

launch of three satellites, the most recent in February 2012, using the multistage Safir 1-B rocket, indicates that it is making significant progress in developing long-range delivery systems. Indeed, a recent U.S. government analysis declared that, “With sufficient foreign assistance, Iran may be capable of flight-testing an intercontinental ballistic missile by 2015.”²²⁶

Iran reportedly remains dependent on imports for key components of its missile systems.^{226a} **Efforts to block Iran’s procurement of key missile system components should be intensified, through enhanced implementation of supplier-country export controls and interdiction strategies.**

We also note, as discussed earlier, that the Iranian missile program may have been the target of sabotage. Judicious use of this tool should be included in continued U.S. efforts to constrain the Iranian nuclear program.

iv. No acceptance of Iranian nuclear status

The Iranians undoubtedly have taken note of the West’s ultimate acquiescence in the nuclear weapons status of India and Pakistan. **The United States and its allies must make clear, both before Iran acquires a nuclear arsenal and following any such acquisition, that they will not acquiesce in Iran’s nuclear weapon status.** As with North Korea, our focus should be on rolling back this program and eliminating this dangerous capability. Our goal should be to maintain pressure on Iran until it concedes to following the South African model by renouncing nuclear weapons and accepting enhanced inspections.

5. Negotiations, Incentives, and Concessions: What Would Constitute an Acceptable Deal?

a. The negotiations thus far

Negotiations with Iran on constraining its nuclear program may soon resume. Past negotiations between Iran and the P5+1 (a reference to the five permanent members of the U.N. Security Council—China, France, Russia, the United Kingdom, and the United States—plus Germany) have not borne fruit.

U.N. Security Council Resolution 1737, which is legally binding on all U.N. member states including Iran, orders in its paragraph 2 that “Iran shall without further delay suspend the following proliferation sensitive nuclear activities: (a) all enrichment-related and reprocessing activities, including research and development, to be verified by the IAEA; and (b) work on all heavy water-related projects, including the construction of a research reactor moderated by heavy water, also to be verified by

the IAEA.”²²⁷ Resolution 1737, in its paragraph 8, also orders that “Iran shall provide such access and cooperation as the IAEA requests to be able to verify the suspension outlined in paragraph 2 and to resolve all outstanding issues, as identified in IAEA reports.”²²⁸ Resolution 1737, as well as Resolutions 1747, 1803, and 1929, which reaffirm it, impose sanctions on Iran and affirm that the Security Council “shall terminate” the sanctions “as soon as it determines that Iran has fully complied with its obligations under the relevant resolutions of the Security Council and met the requirements of the IAEA Board of Governors, as confirmed by the IAEA Board.”²²⁹

Broadly speaking, the P5+1 have demanded that Iran comply with the above-referenced requirements of U.N. Security Council Resolutions 1737, 1747, 1803, and 1929 as a condition for the lifting of U.N. sanctions (as well as related sanctions imposed by the United States, the European Union, and a number of other states). Iran, for its part, has steadfastly rejected suspending its enrichment-related and reprocessing activities, arguing that these demands contradict its “inalienable right” to enjoy the full benefits of the peaceful uses of nuclear energy pursuant to Article IV of the NPT.

In recent negotiations, both sides have proposed differing series of step-by-step measures to advance the process. For example, in 2012 the P5+1 reportedly proposed partial limitations on Iran’s sensitive activities (a freeze on the production of 20 percent enriched uranium, closing of the Fordow enrichment plant, and transfer out of Iran of existing stocks of 20 percent enriched uranium), in return for which the P5+1 would provide: fuel for the existing medical isotope-producing Tehran Research Reactor; medical isotopes for cancer patients in Iran; safety-related inspection and repair in Iran, and provision of spare parts, for Iranian commercial aircraft; and cooperation in Iran’s acquiring an additional medical-isotope-producing reactor.²³⁰ No relief from sanctions was to be given at this stage, however.

Iran in 2012 reportedly proposed a step-by-step process under which the P5+1 would sequentially acknowledge Iran’s right to enrich uranium, end unilateral and multilateral sanctions against Iran outside of the Security Council resolutions, terminate the U.N. sanctions and remove Iran’s nuclear file from the Security Council’s agenda, and begin cooperation on new nuclear energy projects.²³¹ In return, Iran would reaffirm its opposition to nuclear weapons, cooperate with the IAEA to resolve concerns about the “possible military dimensions” of the Iranian nuclear program, and begin cooperation with the P5+1 on a number of regional issues.²³² However, under Iran’s proposal, Iran would not take steps to limit its enrichment of uranium or otherwise restrain its nuclear program.

Given the great differences between these two packages, it is not surprising that the two sides remain far apart and, given the rejection by hard-liners in Tehran of a first-step accommodation that seemed to be in hand in late 2009, it is by no means clear that a meeting of the minds in the current negotiations will be possible. In the meantime, both sides have taken steps that escalate the pressure on the other—the

P5+1 by expanding sanctions and Iran by enriching uranium to the 20 percent level and enlarging its stockpiles of 20-percent and 3.5-percent enriched material.²³³

As discussed earlier in this report, an agreement by Iran to halt its noncompliance appears unlikely in the absence of Iranian leaders 1) being put to a choice between their nuclear program and a severe economic crisis, and 2) being persuaded that to continue their current nuclear course will be futile because U.S. military intervention ultimately will prevent Iran from acquiring a nuclear bomb.

i. Sanctions-related incentives for Iran to comply with its nuclear nonproliferation law obligations

One principal incentive for Iran to comply with the legally binding demands of the U.N. Security Council is relief from the economic sanctions imposed pursuant to the Council's resolutions on Iran. Such relief could include an easing of existing sanctions, postponement of the imposition of new sanctions pursuant to the Council's resolutions, or both. As noted above, the U.N. Security Council resolutions imposing sanctions on Iran explicitly state that the Security Council shall terminate its sanctions "as soon as it determines that Iran has fully complied with its obligations under the relevant resolutions of the Security Council and met the requirements of the IAEA Board of Governors, as confirmed by the IAEA Board."²³⁴

In addition, as discussed earlier in this report, the unilateral and coalition sanctions imposed by the United States, the European Union, and several other states are significantly curtailing the access of Iranian banks, including the Central Bank of Iran, to the international banking system, placing an enormous burden on Iran's trade with the outside world. Sanctions are also limiting Iranian imports of refined petroleum products, driving down Iranian production of oil and natural gas, and curtailing Iranian crude oil sales by more than 50 percent. These measures have contributed substantially to the Iranian rial's plummeting in value. New sanctions by the United States and its allies may soon further increase the pressure on Iran.

ii. Additional incentives for Iran to comply with its nuclear nonproliferation law obligations

There are strong reasons to doubt whether there are any positive incentives, that the United States and its allies could conceivably offer to Iran, that could make a significant contribution to persuading Iran to halt its sensitive nuclear activities. On June 6, 2006, EU representative Javier Solana formally presented to Iran a P5+1 offer of substantial incentives to Iran that was subsequently included at Annex II of U.N. Security Council Resolution 1747 of March 24, 2007, and has remained on the table ever since.²³⁵ The listed incentives include: negotiations on an EU-Iran trade agreement and acceptance of Iran into the World Trade Organization, negotiation and implementation of a Euratom/Iran nuclear cooperation agreement, possible sale to Iran of light-water nuclear research reactors, guarantees of nuclear fuel, and support

for agricultural development in Iran and the modernization of Iran's telecommunications infrastructure.

In addition, President Obama, during his first year in office, extended his hand to Iran with various incentives. Seven days after his inauguration, he declared, "if countries like Iran are willing to unclench their fist, they will find an extended hand from us."²³⁶ During the rest of 2009, the Obama administration followed up on the January 27, 2009 declaration with numerous friendly gestures to the Iranian regime. The United States used terminology suggesting it was no longer seeking regime change, emphasized its disinterest in using military force against Iran's nuclear program, for a year stopped seeking significantly stronger sanctions against Iran, and offered Iran a generous deal relating to its Tehran Research Reactor. The United States reportedly also offered to restore diplomatic relations with Iran, to eventually include reopening embassies.²³⁷ However, as President Obama stated in his speech of March 20, 2010 to the Iranian people on the occasion of Nowruz, the Iranian new year, the Iranian leadership "refused good faith proposals from the international community...Faced with an extended hand, Iran's leaders have shown only a clenched fist."²³⁸

Iran's leadership has continued to emphasize its unwillingness to compromise over its nuclear program.²³⁹ In addition, some analysts have suggested that Iran's leadership feels it needs antagonism between Iran and the West to sustain its survival, and that many of what would be incentives to other regimes (for example, improved relations with the United States and increased interchange with Europe) would in fact be disincentives to the Iranian regime, as they would risk undermining its control over the Iranian people.²⁴⁰

Nonetheless, it is worth noting what positive incentives might be available to contribute toward inducing Iran to comply with its international legal obligations and address concerns regarding its nuclear program. In addition to the positive incentives listed in Annex II of U.N. Security Council Resolution 1747, it might make sense, as part of a comprehensive resolution of the conflict between the United States and Iran (to include also a halt in Iranian state sponsorship of terrorism), to provide Iran with some form of security assurance. Such assurance could include a reaffirmation of the following statement included in the Algiers Accords that settled the hostage crisis: "The United States pledges that it is and from now on will be the policy of the United States not to intervene, directly or indirectly, politically or militarily, in Iran's internal affairs."²⁴¹

As a practical matter, the U.S. government's ability to provide various incentives to Iran for complying with its nuclear nonproliferation law obligations will be limited by several U.S. laws that impose sanctions on Iran based on the Iranian regime's support for terrorist organizations and its human rights abuses against the Iranian people. The Iranian regime's continuation of these activities would mean that those

sanctions imposed in response to these activities also would continue, potentially regardless of Iranian concessions on the nuclear front.

However, the United States should be careful to avoid being seen as “moving the goal posts” on what is expected from Iran in order to achieve nuclear sanctions relief. This means lifting the nuclear sanctions on Iran if Iran takes the required steps in the nuclear arena, rather than conditioning the lifting of the nuclear sanctions on progress in non-nuclear arenas.

b. Elements of an Acceptable Deal

In light of the various previously discussed factors, **the United States should offer nuclear sanctions relief to Iran only in response to meaningful concessions by the Iranians that are consistent with the multiple relevant U.N. Security Council resolutions, IAEA Board of Governors resolutions, and U.S. laws. Although the order and timing of each step may be subject to negotiation, these concessions must include:**

1) suspension by Iran of the following proliferation-sensitive nuclear activities: (a) all enrichment-related and reprocessing activities, including research and development, to be verified by the IAEA; and (b) work on all heavy water-related projects, including the construction of a research reactor moderated by heavy water, also to be verified by the IAEA;

2) provision by Iran of such access and cooperation as the IAEA requests to be able to verify the suspensions and to resolve all outstanding issues, as identified in IAEA reports;

3) a full accounting and resolution of all outstanding questions about Iran’s past and any current (as of the time of agreement) nuclear weapons related activities;

4) complete closure of the Fordow facility and any other deeply buried enrichment facility that is either complete or under construction; and

5) Iran’s binding agreement to intrusive and comprehensive inspections that are at a minimum as stringent as those outlined in the IAEA’s Additional Protocol (to the comprehensive safeguards agreements states must implement under the Nuclear Nonproliferation Treaty), plus additional measures that reflect that Iran has been found in noncompliance with its safeguards obligations.

As stated by 73 U.S. Senators in a letter to the President on December 19, 2012, “the time for limited confidence building measures is over” and “there should be absolutely no diminution of pressure on the Iranians until the totality of their nuclear problem has been addressed.”²⁴²

Inspections must be intrusive enough to detect cheating quickly and authoritatively. As the 73 Senators stated in their letter to the President on December 19, 2012, “we

remain very skeptical of any proposal that would allow the current Iranian government to possess an enrichment capability in any form, given its long track record of deceptive and illicit conduct.”²⁴³ Only the tightest controls over Iran’s nuclear program and the highest degree of verification and transparency can be considered an acceptable outcome for the P5+1 negotiations.

Chapter 3: Proliferation by State Actors (Other Than Iran) in the Middle East—Challenges and Opportunities



IN SEPTEMBER 2007, AN ISRAELI BOMBING RAID DESTROYED A NUCLEAR REACTOR AT THIS LOCATION IN DAIR ALZOUR, SYRIA. THIS AUGUST 7, 2007 DIGITAL GLOBE/ISIS IMAGE SHOWS THE NEARLY COMPLETE REACTOR COMPLEX WITH THE REACTOR BUILDING VISIBLE IN THE CENTER OF THE IMAGE. SYRIA'S FAILURE TO DECLARE THIS REACTOR, AND PROVIDE DESIGN INFORMATION FOR IT, TO THE INTERNATIONAL ATOMIC ENERGY AGENCY (IAEA) WAS DETERMINED BY THE IAEA BOARD OF GOVERNORS TO HAVE "CONSTITUTED NON-COMPLIANCE BY SYRIA WITH ITS OBLIGATIONS UNDER ITS NPT SAFEGUARDS AGREEMENT."²⁴⁴

A. OVERVIEW

The Middle East poses significant nonproliferation challenges. Several states in the region have yet to join the major nuclear, chemical, and biological weapons treaties; some states that have joined the treaties are not in compliance with them; and various states in the region reportedly possess weapons of mass destruction. In addition, several Middle East-based non-state actors reportedly have sought to acquire such weapons. There is also growing interest in nuclear energy by several states in the region, which potentially creates new risks of WMD proliferation.

Progress on security-related issues such as nonproliferation is particularly difficult because the Middle East suffers from domestic instability and transborder conflict, with several countries in a state of war with each other and many refusing to recognize Israel's legitimacy and conduct diplomatic relations with it. Even among those Middle Eastern states that have normal diplomatic relations with each other, cooperation is relatively rare, with a severe lack of region-wide integration and institutional interaction. These impediments make it harder to implement regional nonproliferation strategies.

Despite these challenges, there is considerable Middle Eastern interest in nonproliferation. For example, there is widespread support for the aspirational goal of making the Middle East a zone free of weapons of mass destruction, many of the states in the region have taken significant steps to counter proliferation, and there is considerable Track Two interest in regional cooperation on at least some WMD-related issues (particularly in the biosecurity arena). Middle East Track Two dialogues continue to bring officials and non-official experts together, from across the region, to engage in off-the-record, less formal discussions on important and difficult nonproliferation-related topics, and to develop recommendations for policymaker consideration.

On the other hand, there is considerable speculation that the Middle East is on the verge of a nuclear arms race, particularly if Iran acquires nuclear weapons. Underscoring this speculation is the assumption that the Iranian program already is sparking a nuclear cascade effect, whereby several Arab states have begun the process of building their own nuclear technology infrastructure and in some cases acquiring nuclear power reactors.

Caution should be exercised in assuming that a nuclear weapons cascade is inevitable and there is therefore nothing the United States will be able to do to stop or at least reduce such a cascade effect if Iran gets the bomb. As discussed earlier, Saudi Arabia's King Abdullah has explicitly warned the United States that if Iran obtains nuclear weapons, Saudi Arabia will seek to do so as well. "If they get nuclear weapons, we will get nuclear weapons," Abdullah told Dennis Ross during a meeting between the two in April 2009.²⁴⁵ In addition, there seems a significant likelihood that other Arab countries might follow suit. The International Institute for Strategic Studies (IISS), in an

Saudi Arabia's King Abdullah has explicitly warned the United States that if Iran obtains nuclear weapons, Saudi Arabia will seek to do so as well. "If they get nuclear weapons, we will get nuclear weapons," Abdullah told Dennis Ross during a meeting between the two in April 2009.

influential 2008 study titled “Nuclear Programmes in the Middle East: In the Shadow of Iran,” assessed that “if Tehran’s nuclear program is unchecked, there is reason for concern that it could in time prompt a regional cascade of proliferation among Iran’s neighbors.”²⁴⁶

However, the theory of a nuclear weapons cascade—if one country in a region acquires a nuclear weapon others will axiomatically also acquire such weapons—is unproven. The history on this effect is mixed. True, India’s acquisition of a nuclear arsenal motivated Pakistan to follow suit. However, China’s nuclear arsenal did not result in South Korea or Taiwan acquiring nuclear weapons (though they tried, twice in the case of Taiwan, in response to China’s nuclear weapons but were stopped by U.S. interventions) and Russia’s neighbors—Belarus, Kazakhstan, and Ukraine—relinquished the nuclear weapons on their territories which they had inherited after the fall of the Soviet Union.²⁴⁷ In the Middle East, at least one of Israel’s neighbors, Egypt under Gamal Abdel Nasser and Anwar Sadat, is known to have made an explicit decision not to pursue nuclear weapons following Israel’s acquisition of them.²⁴⁸ All of this suggests that a nuclear weapons cascade in the Middle East may not be inevitable but rather might be influenced through wise U.S. policy choices.

If Iran does acquire nuclear weapons, Arab states, and especially those in the Persian Gulf, are very likely to seek more explicit security assurances from the United States and other powers, purchase additional conventional weapons, and signal greater interest in dual-use nuclear technology. This will be the case whether or not these states move decisively to acquire their own nuclear weapons.

The United States can and should take steps now to allay the fears of allies and friends in the Middle East, and prevent or minimize proliferation in the region. The United States should immediately adopt and begin implementing a concerted, comprehensive nonproliferation strategy for the Middle East that is designed to prevent potential nuclear weapons proliferation in the Middle East as part of the establishment of a broader nonproliferation norm in the region. This strategy should seek to reduce demand; restrict supply; promote regional cooperation on nonproliferation issues; respond to burgeoning WMD programs; and, where possible, dismantle weapons and infrastructure. Such a strategy should not wait for the outcome of negotiations with Iran to stem its nuclear weapons ambitions, or for some future day when Iran is, despite the United States’ best efforts, identified as having a weapon.

B. REDUCE DEMAND

1. Reinforce peaceful orientation of nuclear power programs in region

The IISS study titled “Nuclear Programmes in the Middle East: In the Shadow of Iran” reported that “between February 2006 and January 2007, at least 13 countries in the Middle East announced new or revived plans to pursue or explore civilian nuclear energy.”²⁴⁹ The study stated that “Iran’s development of dual-use nuclear technologies...motivates at least some of its neighbors to seek fledgling nuclear capabilities of their own...in order to provide a counterbalance to Iran, both laying the ground for a possible future security hedge and bestowing national prestige in the context of historic rivalries.”²⁵⁰

As required by Title V of the Nuclear Nonproliferation Act of 1978,²⁵¹ **the United States should encourage and assist states in the region to develop alternatives to nuclear energy.**

However, if Middle Eastern countries nevertheless move ahead with these nuclear programs, the United States should actively work with them not only to ensure that these efforts will not lead to military nuclear programs, but also to instill a nonproliferation culture within those countries. Assistance towards this goal should include training and other help with safety and security equipment, practices, and legislation. The UAE and Morocco are turning into textbook cases of the right approach. Various U.S. agencies, particularly the Department of Energy, have been working steadfastly to educate regional officials and nuclear engineers about best practices in securing nuclear material and the economic disadvantages of making nuclear fuel indigenously by means of domestic uranium enrichment programs. The State Department emphasizes the role of strategic trade controls and effective border security. The U.S. Central Command and the Defense Threat Reduction Agency sponsor courses and symposia on countering WMD, primarily oriented to military officials. All of these efforts should continue. The U.S. should also find ways to reward countries that set good nonproliferation examples.

2. Reinforce United States security commitments

Concurrently, **the United States should employ a broad range of declaratory and operational measures that affirm America’s commitment to the defense of its friends and allies in the region.** In consultation with those friends and allies, the United States, as suggested in previous sections, should reiterate its positive security assurances, assist its allies with building up their conventional defenses, and station and reposition U.S. troops, naval forces, and equipment in the region. The United States also should encourage other friendly international players to increase their presence in the Gulf to demonstrate global interest in sustaining stability and security in the region. Such a recognizable global commitment should, in theory, lessen the demand by the regional parties to acquire weapons of mass destruction for their protection against a nuclear-armed Iran.

In addition, the United States should continue working with regional parties to resolve regional security concerns and end territorial disputes.

C. CONTROL SUPPLY

1. Expand adherence to IAEA Additional Protocol and tighten United States nuclear cooperation agreements to preclude enrichment and reprocessing in the Middle East

The United States should work with both regional states and nuclear supplier states to strengthen nonproliferation measures. **A top priority should be increased ratifications of and implementation of the Additional Protocol, which, when added to a state's IAEA comprehensive safeguards agreement, expands the IAEA's effectiveness in accessing nuclear facilities and activities and in obtaining additional information as part of verifying the absence of undeclared material or activities.** The Iran case has demonstrated the importance of the Additional Protocol. Absent an Additional Protocol, the IAEA likely will be unable to confirm the absence of undeclared nuclear material or activities in Iran. At present, the following NPT member states in the Middle East have Additional Protocols in effect: Bahrain, Jordan, Iraq, Kuwait, Libya, Morocco, Turkey, and the UAE.²⁵² Algeria, Egypt, Iran, Saudi Arabia, Syria, and Tunisia are NPT member states that have yet to take this step. **The United States should encourage additional states in the region to ratify and implement the Additional Protocol to their IAEA safeguards agreements. In addition, the Nuclear Suppliers Group (NSG) guidelines should be extended to prohibit exports to states that have not ratified an Additional Protocol. Concurrently, the United States should seek to improve information-sharing between NSG members and the IAEA, including on export approvals and denials and on technological capabilities of importing states.**

The United States should also continue to pursue adoption of the nonproliferation "Gold Standard"—formal renunciation of domestic enrichment and reprocessing programs—in its future peaceful nuclear cooperation agreements with countries in the Middle East so as to preclude the development of indigenous enrichment and reprocessing capabilities. In the Middle East, incorporating such provisions in new agreements for cooperation will be necessary to promote security.

The United States also should aggressively pursue the adoption by all nuclear supplier states of a policy that nuclear assistance agreements with countries in the Middle East will include either a renunciation by recipient states of indigenous enrichment and reprocessing capabilities or international control and operational authority over national enrichment and reprocessing facilities, so as to provide sufficient assurances that the recipient is not pursuing a military nuclear program.

Future U.S. nuclear cooperation agreements with states interested in starting or expanding domestic nuclear programs should be based on the requirement that these

states forgo making nuclear fuel indigenously—i.e., do not acquire enrichment and reprocessing capabilities—so long as nuclear fuel is provided economically by the international community. The model for such an agreement is the January 15, 2009 peaceful nuclear cooperation agreement between the UAE and the United States. This bilateral agreement affirms the UAE will not enrich and reprocess.²⁵³ At current global low prices for nuclear fuel and with supply abundant, there is no good reason for countries to undertake economically inefficient programs to produce their own nuclear fuel.

Unless restraints on enrichment and reprocessing and the Additional Protocol are widely adopted, the development of nuclear power programs in the region could pose a serious proliferation threat in the years ahead. The United States should seek to replicate in nuclear cooperation agreements with other countries the precedent set by the U.S.-UAE nuclear cooperation agreement.

The U.S.-UAE agreement provides that its terms “shall be no less favorable in scope and effect than those which may be accorded, from time to time, to any other non-nuclear weapon state in the Middle East in a peaceful nuclear cooperation agreement.”²⁵⁴ The agreement further provides that “[i]f this is, at any time, not the case,” the United States, “if requested by the Government of the United Arab Emirates, will consult with the Government of the United Arab Emirates regarding the possibility of amending this agreement so that the position described above is restored.”²⁵⁵ This provides added incentive for the United States to obtain “Gold Standard” and Additional Protocol commitments in future agreements with other regional states.

The United States also should pursue the following supply control measures:

a. In light of the potential for a state that has received nuclear technology to withdraw from the NPT and nullify its IAEA full-scope safeguards agreements, with regard to future nuclear transfers to the Middle East, nuclear suppliers should “**insist on item-specific bilateral safeguards agreements as back-up arrangements that would retain their validity under any circumstances.**”²⁵⁶

b. Nuclear suppliers should agree that any nuclear research reactors sold to the Middle East “**must be of the most proliferation-resistant variety.**” In other words, suppliers should refuse to sell: 1) heavy-water or gas-graphite reactors, which are well-suited to the production of weapons-grade plutonium and use natural uranium as fuel; 2) research reactors fueled by highly enriched uranium (HEU); and 3) research reactors of greater capacity than necessary to achieve their specified peaceful purposes (smaller capacity reactors produce less plutonium, and “no more than 10 MWt [megawatt thermal] is needed to manufacture isotopes for medical and industrial use, not the 40 MWt” of Iran’s Arak reactor).²⁵⁷

c. To reduce the risk of fresh low-enriched uranium (LEU) fuel being diverted, “**suppliers should limit the provision of power-reactor fuel to one reloading at a time (in contrast to the 2.25 loads Russia provided to Iran in December 2007–January 2008).**”²⁵⁸

Unless restraints on enrichment and reprocessing and the Additional Protocol are widely adopted, the development of nuclear power programs in the region could pose a serious proliferation threat in the years ahead.

d. Suppliers also should require either the taking back of any spent fuel generated by a reactor or providing for the removal of the fuel to a nuclear weapons state for reprocessing without the return of any plutonium (the latter option is permitted under the U.S.-UAE agreement.)²⁵⁹

2. Enhance Middle Eastern governments' capacities to combat illicit trade in WMD-related technologies and materials and to protect against WMD

a. Establishment of a regional network of national WMD law enforcement coordinators

The United States is reportedly the only country to have designated a single person responsible for overseeing all law enforcement operations related to countering WMD terrorism domestically at the national level. This step was taken in July 2006, when the FBI consolidated all WMD operations into a new WMD Directorate charged with developing countermeasures, intelligence analysis, and investigative operations. The head of the national WMD Directorate supervises WMD coordinators in FBI field offices, who serve as the primary points of contact on WMD-related issues and attacks for local emergency responders, regional officials, industries, hospitals, laboratories, veterinary clinics, academics, and the public.

The United States should lead a concerted effort to encourage other countries, especially those in the Middle East, to create similar national WMD law enforcement coordinators, who could then form a regional network to facilitate transnational law enforcement efforts. This "WMD Law Enforcement Coordinators Initiative" should receive the endorsement of multilateral organizations, and could be codified in global or regional treaties.

b. The United States also should **create and promote mechanisms for facilitating interaction among the regional parties, the United States, and other exporting states on regulatory and law enforcement issues related to strategic trade** and controlling sensitive dual-use goods. For example, there is no existing regular international forum for sharing of information and best practices among prosecutors who specialize in strategic trade control violations; such a forum should be established.

c. The United States should more vigorously encourage and assist regional governments to develop and implement effective laws and systems for preventing the proliferation of WMD, their means of delivery, and related materials. This is further discussed in the section below on enhancing implementation of U.N. Security Council Resolution 1540.

There is no existing regular international forum for sharing of information and best practices among prosecutors who specialize in strategic trade control violations; such a forum should be established.

3. Cultivate a culture of nonproliferation responsibility and cooperation throughout the Middle East at the official level and in civil society and the private sector

Steps toward developing such a culture include training, creating networks and workshops to circulate information and build cooperation within and across ministries, and developing champions within the government and in civil society. Engaging the private sector is also critically important, as companies are the first line of defense against proliferation by stopping suspicious purchases.

4. Expand the scope of the Global Initiative to Combat Nuclear Terrorism (GICNT)

- a.** include all relevant Middle Eastern countries (e.g., Egypt, Iraq, Kuwait, Oman, and Tunisia are currently not members);²⁶⁰
- b.** encompass all forms of WMD, i.e., chemical, biological, and radiological as well as nuclear; and
- c.** under this expanded network, work with Middle East states to strengthen their capacity to prevent, detect, and respond to chemical, biological, radiological, and nuclear (CBRN) terrorism and improve accountability and physical protection of CBRN facilities. Many of the same tools pioneered by GICNT with regard to combating nuclear terrorism could be applied effectively to combating other forms of WMD terrorism.

5. Support participation by additional Middle Eastern countries in the International Framework for Nuclear Energy Cooperation (IFNEC)

The IFNEC (formerly known as the Global Nuclear Energy Partnership) provides a forum for cooperation among participating states to explore mutually beneficial approaches to ensure that any use of nuclear energy for peaceful purposes proceeds in a manner that is efficient and meets the highest standards of safety, security, and non-proliferation.²⁶¹ Only a handful of Middle Eastern countries are currently among the 31 members of IFNEC (Jordan, Kuwait, Morocco, Oman, and the UAE),²⁶² with several more participating at a lower level as observers (Algeria, Bahrain, Egypt, Qatar, Saudi Arabia, and Tunisia).²⁶³ IFNEC is particularly relevant to the Middle East, which is reportedly on the cusp of a nuclear energy renaissance.²⁶⁴ All Middle East states interested in developing nuclear power plants should be urged to join the IFNEC.

D. PROMOTE FURTHER REGIONAL COOPERATION ON NONPROLIFERATION ISSUES

1. The weapons-of-mass-destruction-free zone concept and conference—opportunities and challenges

The effort, led primarily by Egypt, to pursue a Middle East weapons-of-mass-destruction-free zone (MEWMDZFZ) has traditionally been a concern for the United States, which has viewed it as aimed primarily at pressuring Israel to renounce its nuclear capability (a step Israel says it cannot take until all of its neighbors are at peace with it).²⁶⁵ Egypt, with the support of the Arab League, has pursued this initiative most aggressively at the NPT review conferences, held every five years, where it has demanded progress toward the zone as the price for supporting final conference documents reaffirming NPT parties' support for the treaty. Since such documents must be agreed to by consensus, Egypt has had considerable leverage in pursuing its goals. At the 2010 NPT Review Conference, Egypt was able to gain agreement that a regional conference on the zone would be convened in 2012.

In November 2012, after extensive, but unfruitful, negotiations regarding the modalities of the MEWMDZFZ conference, the U.S. State Department announced that the conference would be postponed indefinitely.²⁶⁶ The Department's statement explained that "the conference cannot be convened because of present conditions in the Middle East and the fact that states in the region have not reached agreement on acceptable conditions for a conference."²⁶⁷ The statement referred to the challenges of organizing "a successful conference against the backdrop of turmoil and dramatic political change taking place in the Middle East and Iran's continuing defiance of its international non-proliferation obligations."²⁶⁸ The Department's spokesperson later explained that the decision to postpone was "the consensus view" of key countries involved in organizing the conference.²⁶⁹

Israel had been wary of any steps that might advance the zone for fear that this might erode its nuclear deterrent, especially without a comprehensive peace agreement in place. The United States, cognizant of Israel's apprehensions, but also eager to sustain broad support for the NPT, had been forced into difficult negotiations with Cairo and Jerusalem to accommodate their respective concerns. Convening the conference also was complicated by the turmoil in Egypt, the civil war in Syria, and the continuing deadlock over Iran's nuclear program.

Although the MEWMDZFZ conference has been postponed, it is worthwhile to briefly review the history of the concept and consider its implications for a comprehensive U.S. strategy to promote nonproliferation in the Middle East.

In 1995, the United States co-sponsored a resolution on the Middle East²⁷⁰ during the NPT review and extension conference, as part of negotiations that gained international support for extending the Nuclear Nonproliferation Treaty indefinitely. The resolution

called on “all States in the Middle East to take practical steps in appropriate forums aimed at making progress towards, inter alia, the establishment of an effectively verifiable Middle East zone free of weapons of mass destruction, nuclear, chemical and biological, and their delivery systems.”²⁷¹

As a follow up to this resolution, the 2010 NPT Review Conference in its Action Plan agreed by consensus to convene a special conference, “in 2012, to be attended by all States of the Middle East, on the establishment of a Middle East zone free of nuclear weapons and all other weapons of mass destruction, on the basis of arrangements freely arrived at by the States of the region, and with the full support and engagement of the nuclear-weapon States.”²⁷² The Action Plan also mandated the U.N. secretary-general and the three co-sponsors of the 1995 Middle East Resolution (Russia, the United Kingdom, and the United States) to appoint, in consultation with the states of the region, a facilitator who would conduct consultations and undertake preparations for the convening of the 2012 Middle East conference. The facilitator also was tasked with assisting “in implementation of follow-on steps agreed by the participating regional states at the 2012 conference” and reporting to the NPT 2015 Review Conference and its Preparatory Committee meetings (to be held in 2013 and 2014). Finland agreed to host and facilitate the 2012 Middle East conference. If all Middle East parties attend this conference once it has been rescheduled, it will be the first convocation where all regional states will be present for the express purpose of deliberating about a MEW MDFZ.

As one participant put it at a roundtable on the zone, Israel and the Arabs have fundamentally different views of nuclear arms control negotiations. For the Israelis, such negotiations can be concluded only in conjunction with a comprehensive regional peace. For the Arabs, nuclear arms control is completely disconnected from regional peace and security. As a result of these differences, region-wide nuclear arms control in the Middle East is an elusive goal.

In its announcement of the MEW MDFZ conference postponement, the United States government did not provide a time frame for rescheduling.²⁷³ However, the British government’s postponement announcement implied that the meeting should be held in 2013²⁷⁴ and the Russian government announcement suggested that the meeting be held no later than April 2013 (prior to the 2013 NPT Review Conference Preparatory Committee meeting to be held from April 22 to May 3, 2013).²⁷⁵

The United States should do all that it can to ensure that the MEW MDFZ conference, if and when convened, actually promotes nonproliferation and reconciliation in the region, rather than producing even more tension between regional parties. Of equal significance, in accordance with the 2010 NPT Review Conference Action Plan, the United States should seek to ensure that any outcome from the conference is derived “on the basis of arrangements freely arrived at by the States of the region.” The United States should not join or endorse any outcome that fails to adhere to the assurances about the

conference which were given to Israel by President Obama in July 2010 and by the U.S. National Security Advisor at the time, James L. Jones.²⁷⁶

As reflected in the failed efforts to merely convene a MEWMDFZ conference, full negotiation of, and especially implementation of, a MEWMDFZ is likely an unrealistic objective in the absence of comprehensive and durable peace in the region. **However, the fact that all key governments in the region have expressed the view that such a WMDFZ is an appropriate long-term goal²⁷⁷ is in itself an important commonality that may help provide a vehicle for shorter-term progress on nonproliferation issues.**

In light of this common rhetoric, a shared interest in various nonproliferation steps (especially in the biosecurity arena) that fall short of a MEWMDFZ, and the MEWMDFZ Conference mandate and process, **the United States should consider testing whether the MEWMDFZ concept can be used as an inspiration for advancing more incremental nonproliferation progress in the Middle East.** In other words, the United States should, as one element of an integrated nonproliferation policy toward the Middle East, consider developing and advocating an action plan to use the regionally shared aspiration of some day establishing a WMDFZ in the Middle East as a basis upon which in the shorter term to advance less sweeping nonproliferation objectives in the region and also, if feasible, help achieve a Comprehensive Test Ban Treaty and universal, verifiable Fissile Material Cutoff Treaty.

Even if a MEWMDFZ conference does not occur, the United States should consider adopting and advocating for a set of actions that could use the possible establishment of a MEWMDFZ as a framework through which to strengthen nonproliferation in the region. However, this action plan should not include the immediate start of negotiations on a MEWMDFZ unless all regional parties concur with such negotiations.

Actions that could be pursued as part of this plan include the following:

a. The United States should seek agreement on a set of non-binding practical nonproliferation measures that regional countries could undertake individually, in support of the MEWMDFZ aspiration, in the current Middle East political climate—in other words, without an overall Arab-Israeli peace settlement. For example, regional parties could commit to reporting regularly—to each other or to a mutually acceptable third party—on their national nonproliferation activities, including adherence to and compliance with international obligations, as steps contributing toward a MEWMDFZ. These reported activities could include legislative measures in implementation of U.N. Security Council Resolution 1540; hosting of conferences and training activities related to regional security and border control issues; establishing national monitoring and verification centers that could augment an eventual regionally based verification regime for a WMDFZ; and adoption by local scientists and companies of codes of conduct for dealing with toxins and chemicals. Cumulatively, these measures could contribute significantly to the development of a regional “culture of nonproliferation responsibility.” Such national capacity building also

The United States should energetically work to promote as much regional nonproliferation cooperation as is possible in the current Middle East political climate.

would build a sense of ownership for establishing the zone among the regional parties, which have thus far tended to look passively to the sponsors of the Middle East Resolution for making progress on the zone.

b. Parties could consider establishing an experts group charged with investigating, and making recommendations for, some of the technical dimensions of a regional verification system in support of a MEW MDFZ. The idea of segregating scientific and technical issues from knotty political questions is borrowed from the process used in the negotiation of the Comprehensive Test Ban Treaty. While the diplomats slowly worked out thorny political issues, technical experts met separately in order to hammer out a viable verification regime for detecting and reporting on nuclear tests. When treaty negotiators were, after 17 years, finally ready to incorporate a verification mechanism, most of the technical work on such a mechanism had already been done.

c. The United States, other leading powers, and regional parties could politically endorse and pledge sustained financial support for Track Two efforts aimed at bringing together regional parties for non-binding discussions using the MEW MDFZ concept as a framework through which to strengthen nonproliferation in the region. Track Two diplomacy is a useful tool for making progress, especially when formal negotiations are stymied. Such an approach could build on the several Middle East Track Two initiatives currently operating, including some focusing on the MEW MDFZ concept. Track Two programs are also well suited for bringing civil society elements into the dialogue on nonproliferation, which is especially important now that Arab citizens are taking on a larger role in governance throughout the Middle East.

2. Other possible regional WMD-related confidence-building measures that may be feasible at this time

The United States should energetically work to promote as much regional nonproliferation cooperation as is possible in the current Middle East political climate. As discussed further in Chapter 5, we strongly recommend that Defense Department cooperative threat reduction funds, which have recently been made available for the Middle East, be used in part to support such regional nonproliferation cooperation initiatives. **Such regional nonproliferation cooperation should not be tied to the MEW MDFZ concept if to do so is unhelpful to making progress now. Regional nonproliferation cooperation measures that should be promoted by the United States at this time include the following:**

a. The U.S. government should significantly increase financial support for Track Two initiatives in the Middle East on nonproliferation and related issues

Track Two venues bring officials and non-official experts together to engage in off-the-record, less formal discussions on important and difficult topics and develop recommendations for policymaker consideration. They offer opportunities to

explore issues too sensitive for official talks, to creatively address issues that have become gridlocked at the formal level, and to build informal relationships. The leadership transitions in countries such as Egypt are bringing to power groups with few if any members versed in nonproliferation issues. Track Two conferences and other such dialogues can provide an opportunity to informally engage political appointees and party leaders, from parties such as Egypt's Muslim Brotherhood, who have an interest in or nexus to nonproliferation. In addition, support from civil society is critical to developing a culture of nonproliferation responsibility in the changing Middle East. As some Arab states transition away from authoritarian governments, there will almost certainly be greater involvement in national politics by non-governmental organizations. Track Two dialogues could help build support for nonproliferation among such civil society organizations. Track Two also could help cultivate younger nonproliferation experts, scholars, scientists, and practitioners.

Unfortunately, some of the most successful Middle East Track Two initiatives are significantly hampered by lack of funding. Allocating up to \$10 million annually for various Track Two efforts organized by respected U.S. NGOs and universities would contribute substantially to regional cooperation on nonproliferation.

b. The U.S. government should leverage the considerable interest in regional cooperation on biosecurity and biosafety capacity building

It has become clear, from both Track One (official) initiatives and Track Two dialogues, that biosecurity is the most feasible WMD-related area in which to advance regional cooperation. As discussed in Chapter 4, biological weapons are of considerable interest to terrorist groups. However, they are of relatively little interest to modern armies.²⁷⁸ At the same time, the overlap between biosecurity measures addressing biological weapons and biosurveillance measures addressing naturally occurring disease outbreaks makes it relatively easy politically for states to undertake measures that address both.

i. Supporting the Middle East Consortium on Infectious Disease Surveillance

The overlap between biosecurity measures addressing biological weapons and biosurveillance measures addressing naturally occurring disease outbreaks has already facilitated one very successful cooperative enterprise in the Middle East, the Middle East Consortium on Infectious Disease Surveillance (MECIDS)—a partnership of the Israeli, Jordanian, and Palestinian health ministries.²⁷⁹ MECIDS is one of the few projects of any kind in which Israeli, Jordanian, and Palestinian Authority officials and experts are currently successfully working together. All three governments realize that their borders are virus-permeable and that cooperation in this sphere is a necessity. MECIDS offers multinational training courses for health workers from Israel, Jordan, and the Palestinian Authority, giving them a chance to meet each other while honing their professional skills and creating a system through which the

The U.S. government should leverage the considerable interest in regional cooperation on biosecurity and biosafety capacity building.

participating Ministries of Health share information directly. MECIDS also facilitates collaboration between Israel, Jordan, and the Palestinian Authority to implement action plans in the event of a disease outbreak. In this context, it provided a mechanism for coordination on aviation influenza outbreaks in the three countries. Many of the MECIDS measures addressing public health would be exceptionally valuable in the case of a bioterrorist attack.

Despite its programmatic success, MECIDS struggles financially, each year barely managing to raise money for a bare bones budget. **With additional support, MECIDS could continue its current work and expand by adding additional partner countries and projects.**

ii. Regional action plan for biosafety and biosecurity collaboration

Since 2010, a group of experts, including current and former officials from across the Middle East and North Africa, has gathered periodically in a Track Two task force to discuss the potential for regional collaboration on biosafety and biosecurity. The group includes participants from nine countries in the region, as well as the United States, the European Union, and the United Nations. The experts group has adopted a regional action plan for building sustainable capacity to prevent bioterrorism in the Middle East, which was presented at the Biological Weapons Convention Review Conference in December 2011.²⁸⁰ The plan includes a menu of 20 different regional confidence-building activities that the experts agreed could and should be pursued as soon as possible. None of these activities would require binding legal commitments. Almost all would be valuable with regard to the prevention, detection, and response of both infectious disease outbreaks and bioterrorism. Most could be undertaken at either the governmental or the non-governmental level or both. **The United States should encourage and support regional implementation of the agreed activities, including:**

aa. Regional activities to Foster Prevention

- » Data and information exchange and cooperation, including joint workshops, with regard to biosafety and biosecurity legislation, regulation, and export control systems
- » Drafting of regional, non-binding guidance and codes of conduct for science and industry on best practices in biosecurity, biosafety, and genetic research
- » Organization of a regional federation of national biosafety associations
- » Joint regional workshops and conferences on education and ethics in the life sciences, including exchanges of information and discussion of current status and cooperation in education programs for scientists and students

A group of experts, including current and former officials from across the Middle East and North Africa, has adopted a regional action plan for building sustainable capacity to prevent bioterrorism in the Middle East...a menu of 20 different regional confidence-building activities that the experts agreed could and should be pursued as soon as possible.

bb. Regional activities to Foster Detection

- » Joint workshops/conferences on methods for detection, diagnosis, pathogenesis and treatment of relevant pathogens
- » Joint workshops/conferences on epidemiological research programs and policies for treatment and response to epidemics
- » Joint training courses for law enforcers including police, customs, border security, and regulatory compliance officials with regard to identifying relevant anomalous activities, maintaining and sharing information on relevant criminal and terrorist activities, and investigating pathogen release

cc. Regional activities to Foster Response

- » Development of a list of national and regional contacts for biological emergencies
- » Development of planning guidance for response and recovery following biological incidents
- » Joint tabletop exercises for first responders focusing on optimal modalities for meeting bioweapons attacks in the region, including victim treatment and hospital care, decontamination of affected sites, and imposition of quarantine and other restrictions on travel
- » Joint workshops on mechanisms for ensuring rapid and effective access to medical countermeasures in the wake of biological weapon attacks, including research and development, manufacturing, and stockpile of vaccines; delivery logistics; and dispensing strategies

Several of the proposed confidence-building activities are similar to efforts already undertaken in some countries in the region on a unilateral basis to increase national capacities to address biological threats. However, cross-national collaboration on such projects has, with the exception of MECIDS, generally been limited and piecemeal. Few biological threat management activities in the Middle East thus far have been broadly inclusive of countries in the region.

C. Establish funding source to encourage and support creative, practical projects advancing regional nonproliferation cooperation

The Track Two task force has sought funding to implement projects on its above-referenced menu of recommended confidence-building activities, only to discover that there is no funding source that prioritizes support for such activities. As discussed in additional detail in Chapter 5, **the U.S. government should create a funding**

The U.S. government should create a funding source that leverages the existing interest in regional cooperation on biosecurity- and biosafety-capacity building by prioritizing the awarding of grants and contracts in support of creative, practical projects that would advance such regional cooperation on biosecurity/biosafety and other nonproliferation issues.

source that leverages the existing interest in regional cooperation on biosecurity- and biosafety-capacity building by prioritizing the awarding of grants and contracts in support of creative, practical projects that would advance such regional cooperation on biosecurity/biosafety and other nonproliferation issues. Those eligible for such grants and contracts should include governmental and non-governmental organizations, including educational and other non-profit institutions. Some of the funding could be used in support of prizes and challenges, policy tools that have been used by federal agencies with increasing success in recent years to spur innovation and solve tough problems. Prizes and challenges can enable the funding agency to establish an ambitious goal without having to predict which team or approach is most likely to succeed; benefit from novel approaches without bearing high levels of risk; reach beyond the “usual suspects” to increase the number of minds tackling a problem; bring out-of-discipline perspectives to bear; increase cost-effectiveness to maximize the return on taxpayer dollars; and pay only for success.²⁸¹

d. The United States should promote establishment of professional networks that foster voluntary regional interaction on WMD-related issues

For example, a Middle East Emergency Mitigation and Consequence Management Response Network could supplement initiatives at the national level to stem proliferation, but focus on promoting cooperative assistance between regional states. Such an effort would be instrumental not only for responding to the aftermath of WMD incidents, but also other disasters (both man-made and natural). It would link the national emergency crisis rooms and command centers that in each country would coordinate first responders, law enforcement, military, health and medical personnel, hospitals, agricultural agents, and pharmaceutical suppliers. It also could assist countries with the establishment of national response protocols and with identifying shortfalls in national capacity for responding to incidents. This network could play a helpful role in a broader initiative to promote a culture of WMD responsibility, including by engaging emergency mitigation and consequence management experts and officials.

There also appears to be potential, even in the current political circumstances, for regional efforts to promote adoption of codes of conduct by scientists and companies in the Middle East. For example, in July 2012, a group of chemists from around the Middle East drafted a path-breaking code of conduct for chemists throughout the region. The group consisted of eleven chemists, each from a different nation in the region. There is an ongoing effort to secure sufficient funding to develop a similar process and code of conduct for life scientists from around the region.

E. RESPOND TO BURGEONING WMD PROGRAMS

The single most important factor in stemming additional proliferation by state actors in the Middle East is the international community's success, or lack thereof, in halting Iran's burgeoning nuclear program. If Iran is prevented from acquiring a nuclear arsenal, or the capacity to acquire one readily, additional proliferation by state actors in the Middle East will be minimized. However, if Iran acquires a nuclear arsenal, or appears to be on the verge of one, additional proliferation by state actors in the Middle East will be far more likely. As discussed in more detail elsewhere in this report, some Middle Eastern states may decide that their optimal protection against an Iranian nuclear arsenal would be a nuclear arsenal of their own. In addition to increasing the perceived value to Iran's neighbors of having their own nuclear arsenals, Iran's acquisition of a nuclear arsenal also may encourage such states to conclude that they, too, could "get away with it" and acquire nuclear weapons at a bearable price.²⁸²

Even if Iranian acquisition of nuclear weapons does not immediately result in a regional nuclear weapons proliferation cascade, it will have a major impact on proliferation by other state actors in the region. Some regional states may respond to an Iranian arsenal by pursuing ostensibly civilian nuclear programs in order to shorten the time it would take for them to acquire nuclear weapons. Others may respond by pursuing chemical or biological weapons of mass destruction as a "poor man's deterrent" to Iran's nuclear arsenal.

The international community's success, or lack thereof, in preventing the use or proliferation of Syria's chemical weapons will also have a major impact on proliferation decisions by other state actors in the region.

This report's recommendations regarding Iran's nuclear program and Syria's chemical arsenal are thus important for stemming WMD proliferation not only by Iran and Syria but also by their neighbors in the region.

F. SECURING OR DISMANTLEMENT OF WMD AND INFRASTRUCTURE

Similar to what it has done for the former Soviet Union, the United States should partner with other G-20 countries to establish a fund for the specific purpose of financing the cooperative dismantlement of WMD and WMD-related infrastructure created by Syria's Assad regime or other tottering or fallen regimes in the Middle East.

Such a fund would offer monetary incentives for countries in the Middle East to abandon aspects of their WMD programs, or assist them in coming into full compliance with IAEA safeguard and other nonproliferation treaty obligations.

There is considerable nonproliferation risk in the emergence of inexperienced, radical Islamist regimes which may be bent on implementing their ideological visions, eager to satisfy nationalists or their hard-line bases by taking steps their predecessors chose not to, and insensitive to traditional geopolitical calculations or military balances.

G. SPECIAL STRATEGIES RELATING TO NEW ISLAMIST GOVERNMENTS

New, Islamist governments in the Middle East—and especially the Muslim Brotherhood government of Egypt—pose a particularly important set of nonproliferation challenges and opportunities. **History provides several examples of changes of government contributing to transitions away from WMD. On the other hand, there is considerable nonproliferation risk in the emergence of inexperienced, radical Islamist regimes which may be bent on implementing their ideological visions, eager to satisfy nationalists or their hard-line bases by taking steps their predecessors chose not to, and insensitive to traditional geopolitical calculations or military balances.** These new regimes may also be simply too inexperienced to avoid being caught up in escalatory political dynamics of their own making.²⁸³

LEARNING THE LESSONS OF NONPROLIFERATION HISTORY: HOW PREVIOUS CHANGES OF GOVERNMENT CONTRIBUTED TO TRANSITIONS ON WMD

History provides several examples of changes of governments contributing to transitions away from WMD. For example, after Argentina and Brazil transitioned from military to democratic rule, they both decided to step back from the nuclear weapons related programs they were pursuing as rivals.²⁸⁴ Both countries’ “civilian leaders perceived that covert nuclear programs were impeding their efforts at bilateral, regional, and international economic cooperation.”²⁸⁵ For example, with the arrival of a civilian regime, Brazil’s conception of power and prestige changed, with the newly predominant view favoring cooperation as the best route to regional leadership.²⁸⁶ As a result, Argentina and Brazil during the 1990s joined the NPT and established the Argentine-Brazil Agency for Accounting and Control of Nuclear Materials (ABACC), which is responsible for verifying compliance with their joint agreement to pursue only peaceful nuclear activities.²⁸⁷

When the Soviet Union broke up, Belarus, Kazakhstan, and Ukraine found themselves in possession of nuclear weapons. However, all three decided to sign the NPT and transfer their nuclear weapons to Russia for destruction. The new governments of Belarus, Kazakhstan, and Ukraine chose to give away these nuclear weapons in return for security assurances and economic assistance from the United States and Russia. For Ukraine, which both inherited the largest arsenal and had the greatest capacity to maintain it, the security assurances were especially important, “especially Russian willingness to honor existing borders, the commitment by the three nuclear powers (Britain, Russia, and the United States) not to use or threaten force, particularly with nuclear weapons, or to employ economic coercion against Ukraine.”²⁸⁸ Interestingly, the Ukrainian “military was very much in favor of nuclear disarmament in return for getting more spending for conventional forces,” believing that “the maintenance costs of nuclear weapons would swallow the scarce resources needed to provide basic support to the armed forces.”²⁸⁹ Meanwhile, Ukraine’s political leadership was concerned that continued nuclear

possession would lead to the imposition of sanctions and other isolating measures on Kiev at a time when its most pressing problems were consolidating its independence and developing its economy, both of which required external assistance.²⁹⁰

South Africa's decision to dismantle its nuclear arsenal and join the NPT in 1991 appears to have been motivated by one overriding factor. The F.W. De Klerk government decided to end apartheid so that South Africa could end its economic isolation and rejoin the international community. Maintaining South Africa's nuclear program risked prolonging that isolation.²⁹¹

In contrast, at least one change of government has contributed to a transition toward WMD. India detonated a single nuclear explosive device in 1974,²⁹² but insisted the test was a "peaceful nuclear explosion" and did not act to turn the technology demonstrated during the test into a deployed, acknowledged nuclear arsenal.²⁹³ India changed course in May 1998, after the election of Prime Minister Atal Behari Vajpayee, when it set off five nuclear explosions and declared itself a nuclear weapons state.²⁹⁴ Vajpayee had come to power at the head of the Hindu nationalist Bharatiya Janata Party (BJP). George Perkovich, in his meticulously researched book titled *India's Nuclear Bomb*,²⁹⁵ concludes that domestic political considerations, rather than national security concerns, drove the Vajpayee government's decision to test—indeed Perkovich says the test "had no articulated strategic or doctrinal necessity."²⁹⁶ These domestic considerations included the desire of the fervently nationalist new prime minister to "satisfy the BJP's hard-line base" by "asserting the BJP's uniqueness" through "mak[ing] the new government's mark."²⁹⁷

Will the change in some Middle Eastern countries from secular, autocratic regimes to new, democratically elected Islamist regimes contribute to transitions toward or away from WMD? How can the United States and its allies influence decision-making by such Islamist governments on whether to develop WMD and what to do with existing WMD?

1. Egypt

One important such Middle Eastern transition is that in Egypt. With the ascension to the Egyptian presidency of Mohamed Morsi, from the Muslim Brotherhood, the Brotherhood's views on WMD issues are of heightened significance. As of the date of this report's drafting, Morsi and his team had made very few comments on WMD issues since his inauguration and, indeed, since the commencement of Egypt's revolution. Morsi addressed the issue briefly in his speech to the U.N. General Assembly on September 26, 2012. In comments very similar to those of Egypt's diplomats in the Mubarak era, Morsi said, "The will of the people, especially in our region, no longer tolerates the continued non-accession of any country to the Nuclear Non-Proliferation Treaty and the non-application of the safeguards regime to their nuclear facilities..."

And I say it very clearly: the only solution is to get rid of nuclear weapons, and all weapons of mass destruction.”²⁹⁸

Notwithstanding Morsi’s statement at the United Nations, previous Brotherhood positions on the issue during his tenure with the organization give cause for concern that a Brotherhood-led Egypt might seek nuclear weapons and not oppose Iran’s nuclear program. Top Brotherhood figures made a flurry of worrisome comments about WMD issues in 2005 and 2006 before, for unclear reasons, they stopped talking about WMD issues for several years. During the 2005 parliamentary elections, the Brotherhood’s platform called for a revival of Egypt’s nuclear power program.²⁹⁹ Then, at a July 2006 joint session of the foreign affairs, Arab, defense, and national security committees of the Egyptian parliament, Dr. Hamdi Hassan, spokesperson of the Muslim Brotherhood parliamentary caucus, stated that the Brotherhood was interested not only in using nuclear power for meeting Egypt’s energy needs, but in creating an Egyptian nuclear arsenal: “We [Egyptians] are ready to starve in order to own a nuclear weapon that will represent a real deterrent and will be decisive in the Arab-Israeli conflict.”³⁰⁰

As the Brotherhood began openly calling for Egypt to develop a nuclear arsenal, it also began challenging the Mubarak government’s opposition to Iran’s acquisition of nuclear weapons. For example, the Brotherhood’s deputy spiritual guide stated in April 2006 that an Iranian nuclear weapon would benefit the Islamic world by counterbalancing Israel’s nuclear arsenal.³⁰¹ Interestingly, “quotes or statements on nuclear weapons did not appear on either the Arabic or the English official MB websites” between 2006 and Morsi’s inauguration.³⁰² However, a Qatari newspaper reported on September 5, 2008 that a new book, called *Jurisprudence of Jihad*, by Yusuf al-Qaradawi, perhaps the most influential Islamic jurist associated with the Muslim Brotherhood, contained a *fatwa* (Islamic ruling) calling on the Muslim world to acquire nuclear weapons “in order to strike terror in our enemies.”³⁰³

There is precedent for Egypt’s pursuing nuclear weapons. The Egyptian government explored nuclear weapons development between 1960 and 1967, reportedly including several unsuccessful attempts to purchase nuclear weapons or weapons technology from China and the Soviet Union.³⁰⁴ However, Egypt’s devastating defeat in the Six Day War of June 1967 “changed Egypt’s strategic outlook.”³⁰⁵ Regaining the Sinai peninsula “occupied by Israel became the paramount national objective, and this meant devoting scarce resources to rebuilding and strengthening Egypt’s conventional arms capabilities,” not investing in the nuclear option in a difficult budgetary climate (the war cost Egypt foreign assistance, the loss of Sinai oil, and the closure of the Suez Canal).³⁰⁶

When Robert Einhorn, currently the State Department’s Special Advisor for Nonproliferation and Arms Control, researched his 2004 book chapter on Egypt’s nuclear program, he asked Egyptian experts whether they could foresee a change in Egypt’s commitment to forgo nuclear weapons. Virtually all told Einhorn that they did

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not expect any change “as long as Mubarak is in power.”³⁰⁷ However, even Mubarak’s Islamic religious establishment occasionally spoke out in favor of an Egyptian nuclear arsenal. For example, in 1999 Mohammed Sayyid al-Tantawi, the Grand Imam of al-Azhar mosque and university, and the highest-ranking cleric in Egypt, called on Muslims “to acquire nuclear weapons as an answer to the Israeli threat.”³⁰⁸ Then, in 2002, al-Azhar’s Religious Ruling Committee issued a *fatwa* declaring that nuclear weapons development was a religious duty for Muslims.³⁰⁹

In addition, Egypt’s nuclear program, during Mubarak’s later years, came under IAEA scrutiny over compliance issues, with the IAEA in 2005 issuing a report concluding that, “The repeated failures by Egypt to report nuclear material and facilities to the agency in a timely manner are a matter of concern.”³¹⁰ The detection of highly enriched uranium in 2007 and 2008 at Egypt’s Inshas research reactor raised additional concerns.³¹¹ Furthermore, Egypt today reportedly possesses substantial expertise to advance a nuclear program, with more than 1,400 trained scientists.³¹² Egypt’s nuclear program currently includes two research reactors; uranium mining, milling, and fuel fabrication facilities; and a Hot Laboratory and Waste Management Center capable of small-scale plutonium extraction.³¹³ The larger of Egypt’s two research reactors has been reported to be capable of producing more than 6 kilograms of plutonium annually, enough for one bomb’s worth of fissile material each year³¹⁴ (however, the actual capacity is more likely just over 1 kilogram per year).³¹⁵

In July 2012, shortly after he came into office, Morsi reportedly was presented with a study endorsing construction of a nuclear power plant at al Dabaa, a project that had been controversial since its announcement under ousted President Hosni Mubarak.³¹⁶ Egypt’s economy is in exceptionally poor shape. It would seem most rational for the Morsi administration to focus on investing in Egypt’s economy rather than on a new nuclear program. However, the Muslim Brotherhood may find itself tempted to exploit the nuclear issue’s exceptional emotional and nationalistic appeal, and there is precedent for governments (e.g., Pakistan’s) acting consistently with the previously referenced statement of Dr. Hassan, the Muslim Brotherhood spokesperson, that Egyptians “are ready to starve in order to own a nuclear weapon.” In addition, even if Egypt’s government were simply to take steps indicative of pursuing a nuclear weapons program, without investing heavily in them at this time, such steps could contribute significantly to proliferation in the region. As Einhorn put it in 2004, Egypt “has been one of the stalwarts of the NPT regime,” and its defection from it would be “devastating...the United States and other interested governments must therefore do whatever they can to help keep Egypt safely in the non-nuclear camp.”³¹⁷

The United States should take the following steps to influence the new Egyptian government to remain committed to nonproliferation:

Even if Egypt’s government were simply to take steps indicative of pursuing a nuclear weapons program, without investing heavily in them at this time, such steps could contribute significantly to proliferation in the region.

History demonstrates that timing is critical with regard to governmental transitions and WMD. At the moment a regime falls, there is an openness in the situation that can be exploited by both proliferators and nonproliferation proponents.

a. The Muslim Brotherhood has relatively few foreign policy experts or experienced practitioners. The United States should invest in reaching out to and developing a cadre of Muslim Brotherhood affiliated nonproliferation experts and supporters, including through Track Two dialogues and visits to the United States. U.S. and allied non-governmental organizations could contribute by independently, but in coordination with the U.S. government, reaching out to this group to achieve this public diplomacy objective.

b. Egypt should be encouraged to adhere to the Additional Protocol. If Egypt moves forward with a new nuclear power plant at al Dabaa, or other new nuclear energy projects, adherence to the Additional Protocol would be an important signal that Cairo's intentions are peaceful. Another important signal would be an Egyptian announcement that it will forswear enrichment and reprocessing capabilities.

c. In light of the large amounts of aid that the U.S. provides Egypt, the United States should be very specific with Egypt as to the cost to it of pursuing proliferation, emphasizing to both the Morsi administration and the Egyptian military that pursuing proliferation would harm Egyptian national security by depriving Egypt's military of both U.S. assistance and the resources needed to build and maintain WMD.

d. The United States should also be prepared to, if necessary, make clear to the Egyptian government that proliferation would lead to sanctions and other isolating measures being imposed on it at a time when its most pressing problem is developing its economy, which requires external assistance.

2. Syria: influencing its potential future Islamist rulers

While Syria's secular, autocratic Assad regime was still in place when this report went to press, it seemed likely that a new, Sunni-dominated government, possibly with strong Islamist tendencies, would eventually replace it. History demonstrates that timing is critical with regard to governmental transitions and WMD. At the moment a regime falls, there is an openness in the situation that can be exploited by both proliferators and nonproliferation proponents.

For example, during the Qadhafi government's collapse, some 15,000 of a total 20,000 man-portable-air-defense systems (MANPADS) went missing.³¹⁸ According to Peter Bouckaert, director of emergencies at Human Rights Watch, the primary reason the MANPADS went missing was because their storage facilities were left unguarded during the turmoil.³¹⁹ The longer turmoil continues in a WMD-possessing state, the more opportunities there may be for WMD to end up in the wrong hands.

A similarly important, but different, lesson can be derived from the Belarusian, Kazakh, and Ukrainian leaderships' decisions, following independence, to give up their inherited nuclear weapons. At a time of particular economic and political vulnerability, these new regimes acted in part out of concern that continued nuclear possession would lead to the imposition of sanctions and other isolating measures at a time when their most pressing problems were consolidating their power and developing their economies, both of which required external assistance. Had the international community not acted quickly to persuade these countries to part with their nuclear weapons, the moment of opportunity might have been lost.

As a result, **the U.S. government needs maximum legal and financial flexibility to respond to nonproliferation opportunities. The lack of sufficient legal and financial flexibility reportedly has continued to be a problem for the U.S. government, including with regard to chemical weapons and anti-aircraft missile disposition in the wake of the Qadhafi regime's fall.**³²⁰

In the specific case of Syria, the U.S. government should impress upon the Syrian opposition, even before it comes to power, that failure to work with the international community to destroy the Assad regime's chemical weapons will lead to sanctions and other isolating measures being continued on Syria's new government at a time when its most pressing problems will be consolidating its control and developing its economy, both of which will require external assistance. Furthermore, in light of the strong hatred of the Assad regime by the Sunni leaders likely to replace it, it may be worth emphasizing to the Assad regime that it makes more sense to invite international experts to destroy its chemical weapons (under supervision of the Organization for the Prohibition of Chemical Weapons) than a) use them and face prosecution or b) allow them to fall into the hands of its successors.

Should the international community persuade a Syrian government to give up its chemical weapons, it will be important to remember another lesson from Libya. After the Qadhafi government's collapse, it was discovered that Libya had stockpiled hundreds of special artillery shells filled with chemical weapons,³²¹ contrary to: President Moammar al-Qadhafi's 2004 ratification of the Chemical Weapons Convention; Qadhafi's commitment to the United States, Britain, and the United Nations to declare and destroy all of Libya's chemical weapons; and subsequent inspections by U.S. and other experts. **To be effective, WMD-related monitoring and verification authorities must be exceptionally rigorous and intrusive; as the Libyan example shows, even rigorous and intrusive inspections can miss important stockpiles.**

For recommendations specifically focused on hindering and deterring Hizbollah, al-Qaeda affiliates, and other non-state actors from acquiring Syrian chemical weapons, please see this report's Chapter 4 on proliferation by non-state actors in the Middle East.

To be effective, WMD-related monitoring and verification authorities must be exceptionally rigorous and intrusive; as the Libyan example shows, even rigorous and intrusive inspections can miss important stockpiles.

H. INCREASE SANCTIONS COORDINATION WITHIN THE USG

To maximize U.S. leverage over current and future proliferators (as well as other targets of U.S. sanctions), the U.S. government should create an Office of Sanctions Coordination (a “Sanctions Directorate”) based at the National Security Council, to coordinate the creative and impactful application of sanctions.

Sanctions have become a critical tool for achieving U.S. foreign policy objectives, including combating proliferation around the world. Increasingly nimble, targeted, and powerful, sanctions comprise a suite of instruments that include a) unilateral direct sanctions that impose export control restrictions on U.S.-origin goods and services; b) unilateral secondary (“third country”) sanctions that are aimed at restricting trade in goods and services originating in third countries (e.g., sanctions designed to deter foreign companies from supplying refined petroleum or banking services to Iran); and c) sanctions applied multilaterally (for example by the U.N. Security Council or by a coalition of allies, such as the European Union in coordination with the U.S.).

There are currently more than two dozen U.S. sanctions programs designed to achieve national security and foreign policy objectives. These programs range from broad regime-based efforts to more targeted endeavors against proliferators, drug traffickers, and organized crime. The importance and power of sanctions has been enhanced as globalization has increased economic interdependence, providing the United States with more leverage over companies and jurisdictions around the world—including in places such as Russia and China—that rely on U.S. markets, on the U.S. financial system directly, or on international banks that prefer to comply with U.S. regulations. At the same time, the United States has placed increasing emphasis on non-military alternatives, such as sanctions, for achieving national security and foreign policy objectives.

Establishing a White House Office of Sanctions Coordination (a “Directorate for Sanctions” within the National Security Council) would fill an important gap. Despite the ubiquity of sanctions, there is no White House office responsible for assessing the wider economic impacts of sanctions, coordinating competing interagency sanctions equities, ensuring that different sanctions programs do not operate at cross purposes, assessing the successes and weaknesses of sanctions regimes, and collecting and disseminating lessons learned. Despite the increasing U.S. reliance on sanctions, there is no one at the White House responsible for fulfilling the National Security Strategy’s admonishment to make sure sanctions are “strong enough to change behavior.”³²²

The task of coordinating U.S. sanctions authorities is complicated by the fragmented system for designing, implementing, and enforcing various regimes. Responsibility is divided among several different federal agencies, including the departments of Commerce (dual-use export controls), State (arms export controls and energy

sanctions), Treasury (financial sanctions), and Justice (various enforcement functions relating to U.S.-origin goods). Due to historical happenstance, different agencies have lead responsibilities for similar aspects of different sanctions programs. For instance, Treasury has the lead in licensing under the Iran program, but Commerce the lead for licensing (of the very same goods) under the Syria program.

The U.S. Government Accountability Office has critiqued one part of the sanctions policy apparatus—the U.S. government’s system for imposing export control restrictions on U.S.-origin goods—concluding that it suffers from “a lack of systematic assessments, poor interagency coordination, and inefficiencies in the license application process.”³²³ In addition, an Obama administration study in 2009 concluded that “the U.S. export control system has a complicated structure with multiple agencies and control lists, which has led to jurisdictional confusion and hindered the ability of allies to cooperate with U.S. forces.”³²⁴ The administration’s initiative to address the export control coordination problems, including by loosening controls over goods deemed less sensitive, has met with controversy and moved slowly.³²⁵

In contrast, a White House Office of Sanctions Coordination could be created quickly and please both advocates of more powerful sanctions and advocates of sanctions that are better coordinated and thus less burdensome on the U.S. business community.

The primary role of an Office of Sanctions Coordination would be to coordinate the creative and impactful application against specific targets (such as Iran, Hizbollah, or Syria) of the full range of unilateral direct, unilateral secondary, and multilateral sanctions.³²⁶ Its role would be strategic, providing the White House with a cross-regional, cross-program, and interagency tool for maximizing sanctions’ effectiveness and efficiency in achieving U.S. national security and foreign policy objectives.

With its overview of the entire sanctions arena, the Office of Sanctions Coordination will be uniquely positioned to ensure that sanctions will be as effective and efficient as possible. It will help ensure that limited sanctions resources are optimally deployed, that lessons learned are shared systematically across the interagency community, and that innovations are vigorously pursued. In addition, the office will ensure that sanctions are well coordinated, so as to avoid unnecessarily burdening financial institutions and inadvertently chilling permitted trade and other commerce.

To maximize U.S. leverage over current and future proliferators (as well as other targets of U.S. sanctions), the U.S. government should create an Office of Sanctions Coordination (a “Sanctions Directorate”) based at the National Security Council, to coordinate the creative and impactful application of sanctions.

Chapter 4: Proliferation by Non-State Actors in the Middle East



AN OCTOBER 23, 1983 SUICIDE TRUCK BOMBING BY HIZBOLLAH DEVASTATED A BARRACKS HOUSING U.S. MARINE PARTICIPANTS IN THE MULTINATIONAL PEACEKEEPING FORCES IN BEIRUT, KILLING 241 AMERICANS. IN MAY 2003, IN A CASE BROUGHT BY RELATIVES OF SOME OF THE U.S. MARINES WHO WERE KILLED, U.S. DISTRICT COURT JUDGE ROYCE C. LAMBERTH RULED THAT THE ISLAMIC REPUBLIC OF IRAN WAS RESPONSIBLE FOR THIS ATTACK BY HEZBOLLAH OPERATIVES.³²⁸ IRAN'S THEN-MINISTER OF REVOLUTIONARY GUARDS WAS QUOTED ADMITTING THAT IRAN PROVIDED THE EXPLOSIVES FOR THE BLAST,³²⁹ WHICH THE FBI DETERMINED WAS THE LARGEST NON-NUCLEAR EXPLOSION SINCE WORLD WAR II. ³³⁰ IRAN'S PRESIDENT IN 1983, WHEN IT ORDERED THE ATTACK, WAS ALI KHAMENEI, IRAN'S CURRENT SUPREME LEADER.

According to President Obama, “The single most important national security threat we face is nuclear weapons falling into the hands of terrorists.”³³¹ Similarly, former Secretary of Defense Robert Gates said, “Every senior leader, when you’re asked what keeps you awake at night, it’s the thought of a terrorist ending up with a weapon of mass destruction, especially nuclear.”³³² The 9/11 Commission warned that “the greatest danger of another catastrophic attack in the United States will materialize if the world’s most dangerous terrorists acquire the world’s most dangerous weapons.”³³³

There is a significant risk that Middle Eastern terrorists could acquire or develop weapons of mass destruction and use them to catastrophic effect. This section will first provide a brief overview of the feasibility and consequences of a terrorist group or other non-state actor acquiring and using a nuclear, chemical, or biological WMD. Then it will analyze the potential for such acquisition and use by the three most likely Middle Eastern terrorist groups: al-Qaeda, Hizbollah, and Hamas. Finally, it will provide recommendations for enhancing U.S. and allied efforts to prevent WMD acquisition and use by non-state actors in the Middle East.

A. FEASIBILITY AND CONSEQUENCES OF NON-STATE ACTOR ACQUISITION AND USE OF WMD

1. Nuclear

According to a 2002 study by the National Research Council, “the basic technical information needed to construct a workable nuclear device is readily available in the open literature...the primary impediment that prevents countries or technically competent terrorist groups from developing nuclear weapons is the availability of SNM [special nuclear material], especially HEU.”³³⁴ Similarly, a 1977 study by the U.S. Office of Technology Assessment found that, “a small group of people, none of whom have ever had access to the classified literature, could possibly design and build a crude nuclear explosive device...Only modest machine-shop facilities that could be contracted for without arousing suspicion would be required.”³³⁵

The International Atomic Energy Agency has since 1995 recorded more than 2,200 incidents of theft or other unauthorized activity involving nuclear and radioactive materials (including more than a dozen incidents involving HEU or plutonium).³³⁶ The number of undetected incidents may be just as high if not higher, especially since smuggling networks are reported to have acquired containers capable of smuggling enriched uranium without detection by even sophisticated monitoring equipment.³³⁷

Estimates, published in recent years, of the chance that terrorists will detonate a nuclear bomb in a U.S. city within a decade range from 1 percent to 50 percent.³³⁸ Such estimates are based more on guesswork than science. Even if the correct probability is on the lower end of this range, the priority placed on preventing such a detonation must take into account the devastating consequences of such an attack. Detonation of

a small, crude nuclear weapon in a major city could kill more than 500,000 people and cause more than \$1 trillion in damage.³³⁹ Given these consequences, even a low probability is enough to make it a top priority for the United States to prevent terrorist group acquisition and use of nuclear weapons.

2. Biological

The Commission on the Prevention of WMD Proliferation and Terrorism (also known as the Graham/Talent WMD Commission) assessed in 2008 that “terrorists are more likely to be able to obtain and use a biological weapon than a nuclear weapon.”³⁴⁰ The basis of this judgment was the commission’s “belief that the widespread and growing availability of biotechnology, combined with the relative lack of security awareness in the life sciences community as compared to the nuclear industry, makes biological weapons the more attractive and readily available weapon of mass destruction for terrorists.”³⁴¹ “If a single scientist acting alone could perpetrate the 2001 anthrax attack in the United States, as the FBI tells us was the case, then it is certainly plausible that a terrorist group could launch a biological attack without the active assistance of a state,” stated Stephen Rademaker, a commission member who previously served as Assistant Secretary of State for International Security and Nonproliferation.³⁴²

The damage caused by any particular biological attack will depend on various factors including the infectivity and lethality of the pathogen (disease-causing agent) or biotoxin (poisonous substance produced by a living organism); the dissemination scope, magnitude, and means (e.g., aerosol dissemination or food or water supply contamination); and the length of time it takes to detect and treat those who are exposed or have become ill.³⁴³ The Congressional Research Service has estimated that effectively disseminated, a single release of a biological weapon could “cause tens of thousands of casualties.”³⁴⁴ A particularly deadly biological attack occurred during World War II, when Japanese army Unit 731 dropped plague-infected fleas in China, reportedly resulting in more than 50,000 deaths.³⁴⁵

3. Chemical

Chemical weapons have been the weapon of choice in each of the confirmed WMD attacks in the Middle East since World War II.³⁴⁶ In addition, the vulnerability of Syria’s chemical weapons during that country’s civil war makes them the sophisticated WMD most likely to fall into the hands of a Middle East terrorist group within the short term.

The damage caused by any particular chemical weapon attack depends on various factors including the lethality of the chemical used; the dissemination scope, magnitude, and means; and the length of time it takes to detect and treat those who are exposed. During World War I, the use of several different types of chemical weapons, including mustard gas, resulted in 90,000 deaths and more than 1 million casualties.³⁴⁷ The

Intergovernmental Organization for the Prohibition of Chemical Weapons estimates that “the use of chemical weapons by terrorists could have devastating consequences, resulting in thousands of casualties.”³⁴⁸ Sarin, a chemical nerve agent, was released in the Tokyo subway system in 1995 by the Aum Shinrikyo cult, resulting in more than 5,000 people sickened and a dozen deaths.³⁴⁹

B. MIDDLE EAST TERRORIST GROUPS MOST LIKELY TO ACQUIRE AND USE WMD

1. Al-Qaeda and its affiliates

While a number of terrorist groups have sought weapons of mass destruction over the years, “al-Qaeda is the only group known to be pursuing a long-term, persistent and systematic approach to developing weapons to be used in mass casualty attacks,” according to Rolf Mowatt-Larssen, former Director of Intelligence and Counterintelligence at the U.S. Department of Energy.³⁵⁰ Mowatt-Larssen notes, “al-Qaeda’s efforts to acquire a nuclear and biological weapons capability were concentrated in the years preceding September 11, 2001.”³⁵¹ However, al-Qaeda and its affiliates have continued to seek WMD until the present day.

The relatively well-documented key events in al-Qaeda’s past efforts to justify and operationalize the acquisition of WMD provide insight into both potential future al-Qaeda efforts and how another Middle Eastern terrorist group or other non-state actor might acquire WMD. Al-Qaeda’s first known attempt to use WMD against the United States was the car bomb detonated under the World Trade Center in New York City in February 1993. The goal of Ramzi Yousef, who masterminded the attack, was to “engulf the victims trapped in the North Trade Tower in a cloud of cyanide gas.”³⁵² However, the explosion incinerated the gas, greatly decreasing the number of casualties.³⁵³

In 1998, Osama bin Laden declared, in an interview with *Time* magazine, that it is an Islamic duty to acquire weapons of mass destruction:

*Acquiring [chemical and nuclear] weapons for the defense of Muslims is a religious duty. If I have indeed acquired these weapons, then I thank God for enabling me to do so. And if I seek to acquire these weapons, I am carrying out a duty. It would be a sin for Muslims not to try to possess the weapons that would prevent the infidels from inflicting harm on Muslims.*³⁵⁴

One of the most frightening episodes in al-Qaeda’s efforts to acquire WMD began in June 2000, when the Pakistani non-governmental organization Umma Tameer e Nau (UTN) was formed.³⁵⁵ UTN’s leadership included retired Pakistani nuclear scientist Sultan Bashiruddin Mahmood (former director general of the Pakistan Atomic Energy Commission and chief of Pakistan’s Khushab plutonium reactor) and Chaudry Abdul

Majeed, a former scientist at the Pakistan Institute of Nuclear Science and Technology. UTN members included other engineers, experts and scientists in the Pakistani scientific and military establishment.³⁵⁶ According to various sources including the United Nations, UTN met with bin Laden and other al-Qaeda leaders to provide information about, and discuss the development of, chemical, biological, and nuclear weapons.³⁵⁷ UTN CEO Bashiruddin Mahmood reportedly offered to construct chemical, biological, and nuclear weapons programs for both al-Qaeda and Libya.³⁵⁸

UTN reportedly was shut down in October and November 2001, when a long list of UTN members and associates were detained by the Pakistani intelligence service at the request of the U.S. government.³⁵⁹ However, UTN provides a chilling warning of the type of collaboration that is possible between a terrorist group and sympathizers within the scientific establishment of a WMD-possessing state.

Al-Qaeda also has made a series of independent efforts to acquire WMD, both before and after September 11, 2001. For example, al-Qaeda reportedly made multiple attempts to acquire nuclear weapons and fissile material.³⁶⁰ In the late 1990s, al-Qaeda reportedly conducted, on animals at a training camp in Afghanistan, experiments that included “testing the lethality of crude toxins and poisons, including cyanide creams, ricin, mustard, sarin, and botulinum.”³⁶¹ In 1999, Ayman Zawahiri, who was then bin Laden’s deputy and is currently al-Qaeda’s leader, recruited Pakistani government biologist Rauf Ahmed to secretly develop one biological weapons program,³⁶² while a former captain in the Malaysian army, Yazid Sufaat, who had a degree in biochemistry from California Polytechnic State University, was recruited to develop a second, anthrax-focused biological weapons program.³⁶³

In 2003, the arrest of operatives of Abu Musab al-Zarqawi, who was associated with and then joined al-Qaeda, disrupted planned ricin/cyanide attacks in the United Kingdom, Spain, Italy, and France.³⁶⁴ These included a plan to use ricin on the London Underground.³⁶⁵ Also in 2003, Ayman Zawahiri called off a cyanide attack against New York’s subway system.³⁶⁶ Zawahiri reportedly told the terrorists, who were already in New York, not to carry out the attack because “we have something better in mind.”³⁶⁷ In April 2003, MSNBC reported that “deadly toxins ricin and botulinum were present on two items found at a camp in a remote mountain region of northern Iraq allegedly used as a terrorist training center by Islamic militants with ties to the al-Qaida terrorist network.”³⁶⁸

A letter dated March 28, 2007, which was obtained by U.S. forces during the Abbottabad, Pakistan raid that killed bin Laden, discussed the potential use of chlorine gas by al-Qaeda operatives in Iraq.³⁶⁹ The letter’s author, who is unknown but apparently not bin Laden, “informed” the al-Qaeda operatives “that matters as serious as this required centralized [coordination] and permission from the senior [al-Qaeda] leadership, because the gas could be difficult to control and might harm some people, which could tarnish our image, alienate people from us, and so on.”³⁷⁰ The project was put “on hold for now.”³⁷¹

Retired Pakistani nuclear scientist Sultan Bashiruddin Mahmood (former director general of the Pakistan Atomic Energy Commission and chief of Pakistan’s Khushab plutonium reactor)...reportedly offered to construct chemical, biological, and nuclear weapons programs for both al-Qaeda and Libya.

Al-Qaeda in Iraq, which is operating in Syria as Jabhat al-Nusra, has apparently already conducted mass casualty attacks in Iraq using chlorine gas, an industrial chemical employed as a chemical warfare agent in World War I.

In 2009, Abdullah al-Nafisi, an al-Qaeda ideologist, stated that al-Qaeda is casing the U.S. border with Mexico to assess how to send terrorists and weapons into the U.S.³⁷² “Four pounds of anthrax—in a suitcase this big—carried by a fighter through tunnels from Mexico into the U.S. are guaranteed to kill 330,000 Americans within a single hour if it is properly spread in population centers there,” said al-Nafisi.³⁷³ He stated that in contrast with the 9/11 attacks, “there is no need for airplanes, conspiracies, timings and so on” because “one person, with the courage to carry 4 pounds of anthrax, will go to the White House lawn, and will spread this ‘confetti’ all over them, and then we’ll do these cries of joy...a real celebration.”³⁷⁴

In August 2011, *The New York Times* reported that U.S. officials believed that al-Qaeda in the Arabian Peninsula (AQAP) “is trying to produce the lethal poison ricin, to be packed around small explosives for attacks against the United States” in shopping malls, airports, or subway stations.³⁷⁵ Ricin is “so deadly that just a speck can kill if it is inhaled or reaches the bloodstream.”³⁷⁶ A month prior to the report, Michael E. Leiter, former director of the National Counterterrorism Center, said that, “The potential threat of weapons of mass destruction, likely in a simpler form than what people might imagine but still a form that would have a significant psychological impact, from Al Qaeda in the Arabian Peninsula in Yemen, is very, very real.”³⁷⁷

In May 2012, the eighth issue of *Inspire* magazine, published by al-Qaeda in the Arabian Peninsula, included a posthumously published article by Anwar al-Awlaki titled “Targeting the Populations of Countries at War With Muslims.”³⁷⁸ In the article, al-Awlaki, who had been killed in a U.S. drone strike in September 2011, wrote, “The use of poisons or chemical and biological weapons against population centers is allowed and is strongly recommended due to its great effect on the enemy.”³⁷⁹

There is increasing concern that al-Qaeda, including especially its Jabhat al-Nusra affiliate, is among the jihadist groups taking advantage of the rebellion in Syria.³⁸⁰ In October 2012, the Jabhat al-Nusra group “fought alongside rebels who seized a government missile defense base in Syria,” raising “fears that extremists are taking advantage of the situation to get advanced weapons.”³⁸¹ In this light, it is possible that an al-Qaeda affiliate or other jihadist group will acquire portions of the Syrian chemical weapons arsenal. As Russian Deputy Foreign Minister Gennady Gatilov said in August 2012, when expressing concern about Syrian chemical weapons falling into the hands of terrorist groups: “As we all know, among the opposition are terrorist elements, in particular belonging to al-Qaeda...if all of a sudden, as a result of some actions, these weapons were to fall into the hands of terrorists who could take a totally irresponsible attitude towards them, this would be a very serious development...”

Indeed, al-Qaeda in Iraq, which is operating in Syria as Jabhat al-Nusra, has apparently already conducted mass casualty attacks in Iraq using chlorine gas, an industrial chemical employed as a chemical warfare agent in World War I. The attacks, numbering a dozen or more, took place in 2006 and 2007, during the height of the civil conflict

in Iraq and typically involved blowing up tanks containing up to two hundreds gallons of chlorine. In one attack in mid-March 2007, 250 individuals were sickened.³⁸²

While al-Qaeda and its affiliates reportedly have been weakened in recent years, there are indications that they still seek to acquire and use WMD and continue their efforts to accomplish that objective.

2. Hizbollah

Various U.S. officials have expressed grave concern that Hizbollah or other extremists could acquire Syrian chemical weapons. For example, Defense Secretary Panetta told CNN, “It would be a disaster to have those chemical weapons fall into the wrong hands, hands of Hizbollah or other extremists in that area.”³⁸³ When he mentioned other extremists, Panetta may have been referring to jihadists such as the Jabhat al-Nusra group in Syria, or to the many Palestinian militant groups, including Hamas and the Popular Front for the Liberation of Palestine-General Command, which have long had a presence in Syria.³⁸⁴

In August 2012, President Obama said, “We cannot have a situation where chemical or biological weapons are falling into the hands of the wrong people...we have been very clear to the Assad regime—but also to other players on the ground—that a red line for us is we start seeing a whole bunch of chemical weapons moving around or being utilized.”³⁸⁵ According to various sources including a major general who defected from the Syrian military, Syria’s Assad regime is considering transferring chemical weapons to Hizbollah.³⁸⁶ It was reported that Obama’s delineation of his above-referenced “red line” resulted from U.S. intelligence officials advising him that Iran’s leadership was pressing Syria’s Assad to transfer stockpiles of his chemical weaponry to Hizbollah.³⁸⁷

Stratfor, a global intelligence company, has suggested that “Hizbollah may be the militant organization in the region that could most effectively utilize Syrian chemical munitions,” since the group “possesses a large inventory of artillery rockets, which could be used to deliver the type of barrage attack required for a successful chemical weapon attack.”³⁸⁸ However, Stratfor also cautioned that Hizbollah would have strong incentives not to engage in a chemical weapon attack on Israel’s armed forces or population, as Israel would likely respond with massive retaliation and be seen internationally as having just cause for doing so.³⁸⁹

It might not be inconsistent with such logic for Hizbollah to acquire Syrian chemical weapons as a deterrent intended to be brandished but not deployed in case Israeli troops enter Lebanon as they have done in the past. Of course, once such a deterrent is acquired, the possibility of its use—in extremis, by an undeterrable leader or rogue actor, or due to miscalculation—is always present. The Israeli government is concerned enough about the prospect of Syrian chemical weapons being transferred to Hizbollah that it has made clear it will take military action if it detects such a transfer.³⁹⁰

Various U.S. officials have expressed grave concern that Hizbollah or other extremists could acquire Syrian chemical weapons. For example, Defense Secretary Panetta told CNN, “It would be a disaster to have those chemical weapons fall into the wrong hands, hands of Hizbollah or other extremists in that area.”

However, according to Brigadier General (ret). Shlomo Brom, a respected analyst at Israel's Institute for National Security Studies who previously served as Israel's deputy national security advisor, "The likelihood of the chemical weapons being transferred to Hizbollah hands...seems low."³⁹¹ It is "highly doubtful that Hizbollah would be interested in having responsibility for chemical weapons, whose usefulness against a protected population like Israel with the ability to respond is questionable," Brom argues.³⁹²

Hizbollah has a long record of engaging in bloody terrorist attacks, including against civilian targets such as the Jewish community center in Buenos Aires, which Hizbollah bombed in 1994, killing 85 people. Most recently, Matthew Olsen, the director of the U.S. government's National Counterterrorism Center, stated in September 2012 that "the mid-July attack on an Israeli tourist bus in Burgas, Bulgaria, that killed six...and the January plotting against tourists in Bangkok all bear the hallmarks of Hizballah."³⁹³ However, there are few if any reported historical incidents of Hizbollah use of, or even interest in, WMD.

According to Brom, it is far more plausible that Syria's chemical weapons will "fall into the hands of armed rebels, including extreme groups associated with al-Qaeda."³⁹⁴ Reports from jihadist websites have recently emerged suggesting opposition members have found chemical and biological weapon equipment.³⁹⁵

3. Hamas

Hamas, the Palestinian terrorist group that controls the Gaza Strip, attempted for several years to use WMD. For example, in 1999, Israeli and Palestinian authorities foiled a Hamas chemical attack.³⁹⁶ In 2001, Hamas laced suicide bombs with pesticides and rat poison.³⁹⁷ In January 2002, the *Times of London* reported that "Israeli intelligence chiefs believe that Palestinian bomb-makers are trying to acquire lethal toxins to use in future suicide attacks."³⁹⁸ A few months later, Hamas issued a statement saying, "When we reach that stage using chemical weapons, the gates will be opened to launch suicide attacks with Allah's help."³⁹⁹ In August 2002, an indictment issued against the head of the Hamas cell responsible for a March 2002 suicide attack in Netanya, revealed that Hamas operatives "intended to use...cyanide in the near future for a mass attack."⁴⁰⁰ The March 2002 bombing itself was reportedly meant to include cyanide, but a technical malfunction prevented this from occurring.⁴⁰¹

In 2003, the Israel Defense Forces reported that a manual, titled "The Mujahedeen Poisons Handbook," had been published on a Hamas website.⁴⁰² The manual detailed "how to prepare various homemade poisons, chemical poisons, poisonous gases, and other deadly materials for use in terrorist attacks."⁴⁰³ In June 2006, *Haaretz* reported, "Hamas operatives in the West Bank have experimented with adding toxic chemicals to their bombs."⁴⁰⁴

However, there are fewer reports in recent years of use or attempted use of WMD by Hamas. Even before Hamas gained control of the Gaza Strip in 2007, it was reported that “on its website, Hamas has admitted that it has not used chemicals to more devastating effect because of the fear of Israeli reprisals.”⁴⁰⁵ Now that Hamas controls a territory, the likelihood of Hamas choosing to engage in a large-scale WMD attack appears relatively low, especially considering the likelihood of an “immediate and massive” preemptive or retaliatory strike by Israel.⁴⁰⁶ Although Hamas-conducted chemical and/or biological attacks would create panic among the Israeli populace, from a cost-benefit analysis, such attacks might not make sense for Hamas.

As with Hizbollah, Hamas seems most likely to acquire WMD not for immediate use but as a deterrent intended to be brandished in case Israeli troops threaten to enter Gaza as they have done in the past. Of course, once such a deterrent is acquired, the possibility of its use—in extremis, by an undeterrable leader or rogue actor, or due to miscalculation—is always present.

C. HOW THE U.S. CAN MORE EFFECTIVELY WORK TO PREVENT WMD ACQUISITION AND USE BY NON-STATE ACTORS IN THE MIDDLE EAST

1. Reduce the risks of Syrian chemical weapons ending up in the hands of other states or non-state actors

The ongoing turmoil in Syria threatens continuity of control by national authorities over the country’s extensive chemical weapons arsenal. The arsenal includes classic agents, such as mustard, and more advanced nerve agents, such as sarin and possibly the nerve agent VX, as well as delivery systems that include artillery shells, aerial bombs, and missile warheads.⁴⁰⁷ It is believed that most of the agents are held in bulk form, leaving uncertain how many munitions might be in “ready-to-use” form.⁴⁰⁸

In contrast to Libya’s chemical arsenal, which “consists of unwieldy canisters filled mostly with mustard gas, the World War I-era blistering agent, Syria possesses some of the deadliest chemicals ever to be weaponized, dispersed in thousands of artillery shells and warheads that are easy to transport.”⁴⁰⁹ According to Charles Blair, a senior fellow at the Federation of American Scientists, “Syria has one of the largest and most sophisticated chemical weapons programs in the world and may also possess offensive biological weapons.”⁴¹⁰ The sheer size of the program has led to estimates by the U.S. military that it would take at least 75,000 troops to secure Syria’s chemical weapons facilities.⁴¹¹

In March 2012, *The Wall Street Journal* reported that the “American and Jordanian militaries are jointly developing plans to secure what is believed to be Syria’s vast stockpile of chemical and biological weapons.”⁴¹² In May 2012, *The Washington Post* reported that the United States was “accelerating its planning with Middle Eastern

To date, Syria has not been willing to share its chemical arms with Hizbollah, but in the chaos that might precede or follow the collapse of the Assad regime in Damascus, custodians of these arms might be prepared to do so for financial gain or they might abandon their posts, leaving the chemical weapons depots open to looting.

allies for a series of potentially fast-moving crises in Syria in the coming months, including the possible loss of government control over some of the country's scattered stocks of chemical weapons.”⁴¹³ A month later, CNN reported that “U.S. satellites are monitoring the chemical and biological weapons sites around the clock.”⁴¹⁴

Syria's chemical arsenal has posed a threat in the region, particularly to Israel, for several decades, but has never been used, suggesting that Israel's potent retaliatory capabilities have deterred such action. The current unrest within Syria, however, has introduced new concerns.

Of greatest concern to U.S. (and Israeli) officials is that elements of this arsenal might come into the hands of extremist non-state groups, such as Hizbollah or an al-Qaeda faction, against whom Israel's deterrent capability might have little practical utility. With an existing ability to threaten Israel with thousands of rockets and shorter-range missiles, Hizbollah's military punch would be significantly increased by the addition of chemical weapons. To date, Syria has not been willing to share its chemical arms with Hizbollah, but in the chaos that might precede or follow the collapse of the Assad regime in Damascus, custodians of these arms might be prepared to do so for financial gain or they might abandon their posts, leaving the chemical weapons depots open to looting. Other dangerous scenarios, such as acquisition of these weapons by an al-Qaeda or other extremist groups, or even the use of these weapons by the Assad regime or an opposition group during the Syrian civil war, cannot be ruled out. Indeed, use by Assad loomed as an imminent danger in early December 2012.⁴¹⁵

a. U.S. response to varying contingencies

The United States should therefore carefully monitor the status of all known Syrian chemical weapons sites, as well as the related movements of pro-Western rebel forces, forces affiliated with al-Qaeda and other terrorist groups, and forces loyal to the Assad regime, and prepare to address three core contingencies:

i. If pro-Western rebel forces gain control of a site, the United States should immediately offer to provide assistance in monitoring the facility, with the aid of an international team of specialists that has been readied in advance for rapid deployment to such sites.

Cooperation with the specially trained, incumbent Assad-regime-appointed facility managers at such sites should be sought, with the promise of protection, continued payment of salaries, and provision of food and other supplies. The international presence, in this and other contingencies, will help create an environment conducive to the ultimate elimination of the chemical arms at these sites.

ii. For sites that are abandoned by pro-Assad forces, Washington should facilitate the seizure of the sites by pro-Western rebel elements and deploy an international team to monitor the location as rapidly as possible.

iii. If al-Qaeda affiliated forces (or those linked to other terrorist groups) appear poised to gain control of a site, however, U.S. special forces, possibly with those of neighboring U.S. security partners and pro-Western Free Syrian Army contingents, must be ready to intervene preventively, possibly with close air support, if needed.

The Administration should consult with Congress and, if appropriate, obtain Congressional pre-authorization for such action. The United States, after gaining control of the site, should deploy the international team of monitors, as discussed above.

b. Urge other great powers to use their influence

Other great powers, including Russia, may in at least some cases share the U.S. opposition to WMD proliferation and use. Russia's concerns may be influenced by its experience with Muslim rebels in Chechnya. During the Syrian uprising, Russia apparently has pressured the Syrian government not to use or transfer its chemical weapons arsenal. In August 2012, Russian Deputy Foreign Minister Gennady Gatilov said, "we have guarantees from the Syrian government that it will not take steps involving chemical weapons, and I want to reiterate that on this issue we will restrain it in all ways possible and work toward the goal of preventing such things from happening."⁴¹⁶ Gatilov also expressed concern about Syrian chemical weapons falling into the hands of terrorist groups: "As we all know, among the opposition are terrorist elements, in particular belonging to al-Qaeda...if all of a sudden, as a result of some actions, these weapons were to fall into the hands of terrorists who could take a totally irresponsible attitude towards them, this would be a very serious development...we all understand that chemical weapons should not be used or fall into the hands of those groups who will not be controlled in their actions."⁴¹⁷

c. Influence Syrian government decision making

For recommendations relating specifically to influencing decision making by the current or a future Syrian government regarding Syrian chemical weapons, please see Chapter 3 of this report.

2. Reduce the risks of Syrian nuclear materials ending up in the hands of other states or non-state actors

Syria is known to have a range of nuclear materials and facilities declared to the IAEA. It is also thought to have undeclared natural uranium left over from its destroyed nuclear reactor and possibly to have a secret infrastructure to make reactor fuel. The United States should carefully monitor the status of all known or suspected Syrian nuclear sites, as well as the related movements of pro-Western rebel forces, forces affiliated with al-Qaeda and other terrorist groups, and forces loyal to the Assad regime.

These nuclear materials are not as dangerous as Syria’s chemical weapons and cannot be used directly to make nuclear weapons. Nonetheless, the U.S. government should prepare itself to remove the materials in coordination with the IAEA as soon as possible, and should be prepared to take steps to prevent these sites and materials from falling into the hands of terrorist organizations.

3. Encourage and assist enhancement of Middle Eastern capacity and will to prevent non-state actors from acquiring nuclear, chemical, or biological weapons and their means of delivery

The United States should encourage and assist enhancement of Middle Eastern capacity and will to prevent non-state actors from acquiring nuclear, chemical, or biological weapons and their means of delivery. One particularly useful modality for providing such encouragement and assistance is U.N. Security Council Resolution 1540, passed in 2004, which imposes binding obligations on all U.N. member states to adopt and enforce effective controls to prevent the proliferation of WMD, their means of delivery, and related materials. Paragraph 7 of Resolution 1540 “recognizes that some States may require assistance in implementing the provisions of this resolution” and “invites States in a position to do so to offer assistance as appropriate in response to specific requests to the States lacking the legal and regulatory infrastructure, implementation experience and/or resources for fulfilling” the resolution’s requirements.

Several of the obligations in Resolution 1540 specifically reference preventing non-state actors from acquiring WMD and their means of delivery, including the following:

» “All States shall refrain from providing any form of support to non-State actors that attempt to develop, acquire, manufacture, possess, transport, transfer or use nuclear, chemical or biological weapons and their means of delivery”;

» “All States, in accordance with their national procedures, shall adopt and enforce appropriate effective laws which prohibit any non-State actor to manufacture, acquire, possess, develop, transport, transfer or use nuclear, chemical or biological weapons and their means of delivery, in particular for terrorist purposes, as well as attempts to engage in any of the foregoing activities, participate in them as an accomplice, assist or finance them”

Others of the obligations imposed on member states by Resolution 1540 are also very important for preventing non-state actors from acquiring nuclear, chemical, or biological weapons or their means of delivery, including the requirements to develop and maintain “appropriate effective”:

- » “Measures to account for and secure such items in production, use, storage, or transport;”
- » “Physical protection measures;”
- » “Border controls and law enforcement efforts to detect, deter, prevent, and combat, including through international cooperation when necessary, the illicit trafficking and brokering in such items;” and
- » “Export and trans-shipment controls over such items.”

To assist with implementation of the resolution, the Security Council established a Resolution 1540 Committee, which promotes the sharing of lessons learned and best practices, receives and publishes reports from states on their implementation of the resolution, and produces a matrix reflecting what steps states have taken to implement the obligations of the resolution. A review of the national reports submitted to the Resolution 1540 Committee, as well as discussion during the Project roundtables, indicates that the Middle East has a relatively weak record of implementation of the resolution.

This report’s Chapter 5, on cooperative threat-reduction programs applicable to the Middle East, contains several recommendations designed to maximize these programs’ effectiveness in encouraging and assisting enhancement of Middle Eastern nonproliferation capacity and will, including through the modality of Resolution 1540. Implementation of these recommendations could contribute significantly to preventing Middle Eastern non-state actors from acquiring nuclear, chemical, or biological weapons and their means of delivery.

4. Deny al-Qaeda a base

Non-state actors could either acquire WMD from a state or, potentially, create their own. For a terrorist group or other non-state actor to create its own WMD, and especially nuclear weapons, requires motivation, expertise, resources, time, and space.

While at least two other non-state actors operating in the Middle East have sought WMD over the years, none has had such a systematic and ongoing pursuit as al-Qaeda. As multiple scholars have noted, al-Qaeda’s main pursuit occurred prior to 9/11, when it had an established base in Afghanistan that provided it with time and space to create WMD laboratories.

While al-Qaeda and its affiliates have continued to pursue WMD since 9/11, the activity has not been on the same level as before that time, and a significant portion of this must be attributed to the group’s lack of a strong base of operations. **It is crucial that**

A review of the national reports submitted to the Resolution 1540 Committee, as well as discussion during the Project roundtables, indicates that the Middle East has a relatively weak record of implementation of the resolution.

America and its allies work together to ensure that al-Qaeda does not reestablish a formidable base.

The two non-state actors in the Middle East that would appear to currently have the time and spaces to create their own WMD are Hizbollah and Hamas. Thus it is particularly important to work to reduce their motivation and deny them the necessary expertise and resources.

5. State a clear and unambiguous retaliation policy for state sponsors

The quickest way for a terrorist group to acquire sophisticated WMD would be to receive it from a state sponsor. Hizbollah receives strong support, including weapons, from Iran and Syria. Hamas is an offshoot of Egypt’s Muslim Brotherhood and receives strong support, including weapons, from Iran. **The United States must adopt a clear and unambiguous policy declaring that any states that provide WMD to terrorist groups that then use them will face unrelenting retaliation involving all elements of American power. Key to the effectiveness of this policy is both a strengthening of attribution capacities and a statement that the United States may not wait for perfect proof that a particular WMD used by a state-sponsored terrorist group originated in a particular state sponsor.** Illustrative was the comment by Stephen Hadley, Bush’s National Security Advisor, that “the United States will hold any state, terrorist group, or other non-state actor or individual fully accountable for supporting or enabling terrorist efforts to obtain or use weapons of mass destruction—whether by facilitating, financing, or providing expertise or safe haven for such efforts.”⁴¹⁸

6. Make it clear to terrorist groups that they will pay a heavy price for WMD acquisition or use and that the costs of such acquisition or use will far outweigh the benefits

The 9/11 and subsequent attacks by Islamist suicide bombers raised the question of whether or not it is possible to deter non-state actors who have members willing to commit suicide for their cause.⁴¹⁹ Thomas Schelling’s classic definition describes deterrence as “persuading a potential enemy that he should in his own interest avoid certain courses of activity.”⁴²⁰ Deterrence by punishment involves “threatening to harm something an adversary values.”⁴²¹ Deterrence by denial reduces “the perceived benefits an action is expected to provide.”⁴²²

While terrorists may not value the same things states do, many terrorists do value such things as operational and tactical success, achieving strategic objectives, popular sympathy, religious legitimacy, and functioning safe havens.⁴²³ Thus, while deterrence cannot guarantee success in preventing non-state actor acquisition or use of WMD, and should not be the only U.S. strategy but rather a part of a larger tool kit, it can make

The United States must adopt a clear and unambiguous policy declaring that any states that provide WMD to terrorist groups that then use them will face unrelenting retaliation involving all elements of American power.

a positive contribution to preventing such actions by non-state actors, and a partially effective deterrent is better than no deterrent.⁴²⁴

At the same time, U.S. and allied policymakers must be prepared for the possibility that some of our adversaries, who care more about heavenly than earthly rewards and/or are motivated by apocalyptic millennialist views, may be willing to turn their entire terrorist group or even their entire state into the equivalent of a suicide bomb.⁴²⁵

However, it may be that with regard to all but the most apocalyptically minded terrorist groups it is worth trying to demonstrate that WMD acquisition and use will be counterproductive to the achievement of the terrorist group's goals. Due to its uncontrollable, indiscriminate, and unpredictable nature, WMD use is liable to be more brand damaging than is the use of conventional weaponry.⁴²⁶ U.S. public diplomacy efforts could discretely emphasize that WMD terrorism would likely kill Muslims alongside non-Muslims and discretely publicize cases of barbaric attacks damaging the perpetrators' long-term goals. One example of backfiring barbarism occurred when Ayman al-Zawahiri criticized Abu Musab al-Zarqawi's barbaric attacks in Iraq and Jordan for having "alienated the broader Arab and Muslim community" and thereby damaged al-Qaeda's ability to achieve its long-term strategic goals.⁴²⁷

Hizbollah appears to be susceptible to classic deterrence. Israel's full-scale retaliatory attacks against Hizbollah in 2006 reportedly helped Israel deter Hizbollah from again attacking Israel in 2008 as Israel went to war against Hamas in Gaza.⁴²⁸ Israeli military leaders made clear to Hizbollah the cost of entering the fray in 2008, including the potential for harm to Hizbollah's infrastructural, military, and political assets.⁴²⁹

The United States and its allies also should strive to weaken terror groups as much as possible, so that they do not have the resources to pursue WMD, and ensure that terror groups pay a price for lesser terrorist acts so that credibility is maintained and WMD-related deterrence is taken seriously.

For example, Hizbollah has paid a remarkably small price for its various terrorist attacks on U.S. and Israeli targets. While the United States has included Hizbollah on its list of terrorist groups⁴³⁰ (with regard to which it is unlawful for a person in the United States or subject to U.S. jurisdiction knowingly to provide "material support or resources"), the European Union continues to refuse to add Hizbollah to its list of designated terrorist organizations. As a result, "thousands of its members and supporters operate with few restrictions in Europe, raising money that is funneled to the group's leadership in Lebanon" and is used for purposes that, according to Western intelligence services, include "carrying out terrorist attacks."⁴³¹ The European Union's stated rationale for declining to list Hizbollah—that there is insufficient "tangible evidence of Hizbollah engaging in acts of terrorism"⁴³²—flies in the face of the facts, is flatly contrary to the decisions of various U.S. federal courts that have carefully studied these facts, and starkly undercuts the credibility of efforts to deter Hizbollah. For more on

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the European Union and Hizbollah, please see this report’s Chapter 6, titled “Enhanced Partnership with Europe on Nonproliferation in the Middle East.”

7. Improve detection and response capacity

The United States and its allies should, as best as possible, demonstrate that WMD attacks are not worth conducting because they will not cause sufficient damage to outweigh their counterproductive characteristics. As former Assistant Secretary of State Stephen Rademaker put it in congressional testimony, “highly effective response capabilities are probably our most effective means of preventing a biological weapons attack.” Rademaker said, “If terrorists or other potential attackers are satisfied that any biological attack on us will likely fail, in the sense that it can be expected to cause few or no casualties due to our ability to rapidly detect and mitigate the effects of the attack, they will be much less interested in attacking us with such weapons.”⁴³³ Highly effective response capabilities might help deter a first WMD attack; they would likely prove even more effective in deterring subsequent attacks, by demonstrating their futility.

U.S. support for initiatives such as the following would improve response capacity among its Middle Eastern allies:

a. Improve regional law enforcement and public health detection and surveillance capacity

This could be achieved through supporting joint training courses for law enforcers (including police, customs officials, border security, and regulatory compliance officials) and scientists with regard to: identifying anomalous activities that might suggest a covert WMD threat, maintaining and sharing information on relevant criminal and terrorist activities, investigating and attributing pathogen and other WMD releases, and apprehending culpable persons. For example, the FBI and Centers for Disease Control have developed best practices and guides on the conduct of joint criminal and epidemiological investigations of suspected biological incidents and could share what they have developed.

b. Improve regional response capacity

For example, encouraging and supporting:

i. joint exercises for first responders focusing on optimal modalities for meeting WMD attacks in the region, including victim treatment and hospital care, decontamination of affected sites, and imposition of quarantine and other restrictions on travel

ii. joint workshops on mechanisms for ensuring rapid and effective access to medical countermeasures in the wake of WMD attacks, including: research and development, manufacturing, and stockpiles of vaccines and other medicines; delivery logistics; and dispensation strategies

The United States and its allies should, as best as possible, demonstrate that WMD attacks are not worth conducting because they will not cause sufficient damage to outweigh their counterproductive characteristics.

8. Discretely urge Saudi Arabia and other states with strong ties to religious establishments to seek *fatwas* condemning WMD

While al-Qaeda and others have published several *fatwas* in favor of the acquisition and use of WMD, several other influential figures and groups have condemned WMD acquisition and use as forbidden by Islamic law.⁴³⁴ For example, Hamas' Abu Shannab has stated that the use of poison is contrary to Islamic teachings.⁴³⁵ The U.S. government should discretely encourage leaders of Arab states with strong ties to the Islamic religious establishment, such as those of Saudi Arabia, to generate and disseminate new and authoritative *fatwas* condemning both the acquisition and use of WMD in order to delegitimize al-Qaeda's position. In some cases, the *fatwas* already exist and simply need to be maximally publicized so as to reinforce adherence to them and induce others not yet abiding by their guidelines to accept their rationale.⁴³⁶ Such engagement with matters of Islamic doctrine needs to be done with sensitivity and discretion, lest it be seen as inappropriate meddling and lead to negative rather than positive results.

Chapter 5: Cooperative Nonproliferation Programs Applicable to the Middle East



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IN 2011, REBEL FIGHTERS UNCOVERED THESE SHELLS,
WHICH WERE FILLED WITH HIGHLY TOXIC MUSTARD AGENT,
AT TWO SITES IN CENTRAL LIBYA.⁴³⁸

The U.S. government has in recent years, as noted in previous chapters, invested considerable resources on intelligence community, diplomatic, military, and other nonproliferation efforts to detect, interdict, deter, and defend against proliferation in the Middle East (defined by this report to include North Africa). The other chapters of this report review these nonproliferation efforts in light of the paradigm shifts in the region and recommend a comprehensive set of improvements, adjustments, and innovations designed to maximize U.S. (and allied) effectiveness in achieving these nonproliferation goals in the evolving Middle East.

These U.S. nonproliferation efforts in the Middle East have been complemented by a set of poorly funded (and sometimes uncoordinated) collaborative and cooperative programs to promote nonproliferation norms and practices among Middle Eastern governments, civil society, and other local partners. The executive branch recently completed the procedures necessary before Department of Defense funds could be spent on such cooperative threat reduction and related efforts in the Middle East. As a result, it is now possible to significantly expand such U.S. activities in the region. This chapter in particular therefore focuses on providing a comprehensive set of recommendations for how the United States can and should more effectively assist Middle Eastern governments and other local partners to develop their own nonproliferation capacities, to cultivate a culture of nonproliferation responsibility, and to enhance regional cooperation on nonproliferation issues.

The U.S. government currently spends approximately \$1 billion annually on various “cooperative threat reduction programs” designed to promote nonproliferation, and reduce WMD threats to the United States, in cooperation with foreign governments. There are more than a dozen such programs, housed predominantly in the Departments of Defense, Energy, State, and Homeland Security. Despite the grave threats posed to the United States by WMD originating in the Middle East (defined by this report to include North Africa), a total of only about 2 percent (approximately \$20 million per year out of a total \$1 billion annually) of the various agencies’ cooperative threat reduction (CTR) program funds were being spent in all of the countries of the Middle East (with the exception of Iraq)⁴³⁹ as of the summer of 2012.

This chapter will first provide an overview of existing cooperative threat reduction programs as they relate to the Middle East. Then it will discuss how U.S. cooperative threat reduction program funds could be used to more effectively address nonproliferation challenges and opportunities relating to the Middle East. As this report has discussed, the Middle East poses to the United States and its allies an exceptionally dangerous and difficult set of nonproliferation challenges, and an exceptionally important set of nonproliferation opportunities. This chapter will specify a number of ways in which U.S. cooperative threat reduction strategies and activities relating to the Middle East could be enhanced to address these challenges and opportunities more effectively. Several of the most effective, or potentially effective, existing initiatives—such as the Middle East Consortium for Infectious Disease Surveillance—have consistently

U.S. cooperative threat reduction program funds could be used to more effectively address nonproliferation challenges and opportunities relating to the Middle East.

had trouble cobbling together enough funds to survive year to year in minimal form. Additional recommended initiatives could, at a relatively small cost, contribute significantly to protecting the United States from the threat of WMD originating in the Middle East. As noted above, now that the Department of Defense Cooperative Threat Reduction (DOD/CTR) program has been authorized by the executive branch to support programs in the Middle East, important new opportunities to address proliferation challenges in the region can more readily be pursued.

A. OVERVIEW OF EXISTING COOPERATIVE NONPROLIFERATION PROGRAMS AS THEY RELATE TO THE MIDDLE EAST

Most, if not all, of the U.S. government's current cooperative threat reduction (CTR) programs have their genesis in Congress' efforts, beginning in 1991, to provide assistance to dismantle, and prevent proliferation of, Soviet nuclear, chemical, and biological weapons (as a result, these programs are sometimes referred to collectively as the Nunn/Lugar program, named for the two U.S. Senators who took the lead in advocating for them). Over the past decade, approximately 80 percent of total U.S. cooperative threat reduction program funding has been spent in the former Soviet Union (FSU) and 20 percent in countries outside the FSU.⁴⁴⁰

Since its inception, CTR has expanded to confront a number of issues "including biological and chemical security; prevention and mitigation of infectious disease and other biological weapons threats; enhancing border security; strengthening export controls; developing nuclear forensics capabilities; interdicting illicit trafficking; and preventing radiological terrorism."⁴⁴¹ To reflect this evolution, the State Department's Coordinator for Threat Reduction, Ambassador Bonnie Jenkins, developed the following definition of CTR:

*Cooperative Threat Reduction is a set of USG programs and initiatives to address the complex challenges posed by weapons of mass destruction to national security and global stability. These collaborative activities operate globally to engage key partners in building awareness, trust, and local capacity to secure WMD-related materials, technologies, and knowledge; prevent their misuse; and reduce or mitigate the risks caused by their availability. Working through a cooperative network of civil society, inter-agency, and international institutions and relationships, CTR initiatives are tailored to unique national, regional, and cultural conditions.*⁴⁴²

The U.S. government's cooperative threat reduction work is spread across more than a dozen different programs, some of which are more transparent than others, at several different federal agencies, and there is no central mechanism or individual that tracks or coordinates all of the work being done in the Middle East. As a result, it is remarkably challenging merely to determine how much cooperative threat reduction funding

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The largest of the cooperative threat reduction programs is the Department of Defense's Cooperative Threat Reduction Program (DOD/CTR), for which Congress authorized \$519 million in the FY 2013 budget. The executive branch did not until the fall of 2012 complete the bureaucratic procedures necessary to internally authorize DOD/CTR to undertake work in the Middle East (other than in Iraq). Now that these procedural steps have been completed to authorize this work, it is possible to significantly expand such U.S. activities in the region.

is being spent in the Middle East. A lengthy unpublished analysis of U.S. nonproliferation and threat reduction assistance to the Middle East and North Africa, which was prepared in March 2012 by the Congressional Research Service (CRS) for U.S. Rep. Brad Sherman, advised him that “a small percentage of threat reduction/nonproliferation funds are being spent in the MENA region.”⁴⁴³ Based on the program-by-program numbers contained in that CRS analysis, additional research, and a not-for-attribution roundtable focused on U.S. threat reduction work in the Middle East, **it appears that a total of no more than 2 percent (approximately \$20 million per year) of cooperative threat reduction program funds (out of the \$1 billion per year appropriated largely to the Departments of State, Energy, and Defense) is being spent in all of the countries of the Middle East (with the exception of Iraq).**

We do not suggest that U.S. cooperative threat reduction program funding for the Middle East should grow to rival the magnitude of the funding allocated to projects in the FSU, several of which required large capital infrastructure expenditures. As noted by the unpublished CRS memorandum, activities that are relevant to the Middle East “do not require large capital infrastructure costs and are relatively low cost.”⁴⁴⁴ As a result, and as we discuss in more detail below, **a strategically targeted, well-coordinated increase of approximately \$30 million per year in the funding allocated to U.S. cooperative nonproliferation work in the Middle East could make a very significant contribution to advancing U.S. nonproliferation objectives in the region. We note that the Department of Defense recently has been authorized to expend funds to support cooperative threat reduction efforts in the Middle East.**

The following is a brief overview of the key U.S. cooperative threat reduction programs as they relate to the Middle East.

1. Department of Defense Cooperative Threat Reduction Program

The largest of the cooperative threat reduction programs is the Department of Defense's Cooperative Threat Reduction Program (DOD/CTR), for which Congress authorized \$519 million in the FY 2013 budget.⁴⁴⁵ With the exception of Iraq, DOD/CTR currently is not doing work in any country in the Middle East (including North Africa).⁴⁴⁶ The primary reason for this lack of activity in the region (outside Iraq, projects in which are discussed below) is because the executive branch did not until the fall of 2012 complete the bureaucratic procedures necessary to internally authorize DOD/CTR to undertake work in the Middle East (beyond Iraq).⁴⁴⁷ Now that these procedural steps have been completed to authorize this work, it is possible to significantly expand such U.S. activities in the region.

Congress has specifically encouraged DOD/CTR to expand into the Middle East. One important example of congressional support for expansion of the DOD/CTR program beyond the former Soviet Union was included in Section 1306 of the FY2008

National Defense Authorization Act (Public Law 110-181). Section 1306 expressed the “sense of Congress” that DOD/CTR should be “strengthened and expanded, in part by developing new CTR initiatives.” It stated that these new initiatives should “include broader international cooperation and partnerships, and increased international contributions.” It also suggested that these new initiatives could include “programs and projects in Asia and the Middle East.” Section 1306 also mandated that the National Academy of Sciences conduct a study “to analyze options for strengthening and expanding the CTR Program.”

The National Academy completed this study and released its report, titled “Global Security Engagement: A New Model for Cooperative Threat Reduction,” in April 2009.⁴⁴⁸ The report suggested various specific possible future DOD/CTR activities in the Middle East, including:

- » Encouraging and assisting with security and destruction of chemical weapons stockpiles⁴⁴⁹
- » Promoting accession to the Chemical Weapons Convention, including by providing chemical weapons detection and interdiction equipment and training and providing training for parliamentarians and national technical advisers⁴⁵⁰
- » Promoting industrial chemical safety and security in the region, including by encouraging and assisting protection of chemical facilities and protection of cargoes of hazardous chemicals in transit⁴⁵¹
- » Promoting biological safety, security, and disease surveillance programs⁴⁵²
- » Promoting implementation of U.N. Security Council Resolution 1540 (which imposes binding obligations on all U.N. member states to take and enforce effective measures against the proliferation of WMD, their means of delivery and related materials), with particular emphasis on counter-trafficking obligations⁴⁵³
- » Facilitating incident/emergency response training programs⁴⁵⁴
- » Strengthening export controls and border security, including maritime security⁴⁵⁵

However, DOD/CTR is still not engaged in any of these activities in any Middle Eastern country other than Iraq.

As this report delineates, there is considerable valuable nonproliferation work that could be done in the Middle East with relatively small amounts of additional funding. **The U.S. government should swiftly allocate at least \$30 million per year in DOD/CTR and other CTR funds to do cooperative nonproliferation work in the Middle East outside Iraq. As discussed below, those funds should be allotted to a new Middle East**

There is considerable valuable nonproliferation work that could be done in the Middle East with relatively small amounts of additional funding.

Nonproliferation Initiative that can creatively and nimbly advance U.S. nonproliferation priorities in the Middle East.

2. State Department Programs

The Department of State's International Security and Nonproliferation (ISN) bureau manages several assistance programs that aim to help foreign governments and international organizations prevent weapons of mass destruction proliferation or terrorism. ISN's Nonproliferation and Disarmament Fund (NDF), Export Control and Related Border Security (EXBS), and Global Threat Reduction programs are the most prominent of its nonproliferation-related assistance programs.

a. Nonproliferation and Disarmament Fund (NDF)

The NDF has been a key U.S. government tool for assisting countries both inside and outside the FSU with time-sensitive WMD, missile, or other dismantlement, disposition, and related nonproliferation and disarmament activities. Because NDF funds may be used "notwithstanding any other provision of law," the NDF can fund activities in countries where other programs are unable to work due to U.S. sanctions or other legal restrictions. The NDF was, for example, instrumental in "the safe removal of nuclear infrastructure from Libya to secure facilities in the United States within a few weeks time."⁴⁵⁶ NDF also helped eliminate short-range ballistic surface-to-surface missiles in Libya.⁴⁵⁷ In light of its special "notwithstanding" authority and the various U.S. sanctions on Syria, NDF likely will be involved in any U.S. effort to secure or dismantle chemical weapons in Syria.

b. Export Control and Related Border Security Program (EXBS) and Global Threat Reduction/WMD Terrorism Programs

The ISN bureau's EXBS and Global Threat Reduction programs are appropriated under the Nonproliferation, Antiterrorism, Demining and Related Programs (NADR) account of the Foreign Operations Appropriations Act. Within NADR, the total funds for "Combating Weapons of Mass Destruction Programs in the Middle East" are as follows: \$8.795 million in FY2012, \$7.415 million in FY2011, an estimated \$10.6 million in FY2012, and a requested \$6.4 million in FY2013.⁴⁵⁸ The FY2013 requested budget thus includes a \$4.2 million decrease for NADR "Combating Weapons of Mass Destruction Programs in the Middle East." This includes a decrease in the budget for Egypt from \$3 million in FY2011 and FY2012 to zero in FY2013.⁴⁵⁹ **The U.S. government should restore the proposed \$4.2 million decrease for NADR Combating WMD Programs in the Middle East. In light of the nonproliferation challenges and opportunities posed by the Arab Spring, Syria's chemical weapons, and Iran's nuclear program, nonproliferation programs for the Middle East should be significantly expanded, not drastically reduced.**

i. Export Control and Related Border Security Program

The EXBS program “seeks to prevent the proliferation of weapons of mass destruction (WMD) and advanced conventional weapons by helping to build effective national export control systems in countries that possess, produce, or supply strategic items as well as in countries through which such items are most likely to transit.”⁴⁶⁰ According to the EXBS website, “the EXBS Program provides assistance in Five Core areas:

- » Laws and Regulations
- » Licensing
- » Enforcement
- » Government-Industry Cooperation
- » Interagency Cooperation Coordination”⁴⁶¹

EXBS has worked over the past decade with at least a dozen of the 21 member states of the Arab League.⁴⁶² FY2012 congressional budget request documents provide a useful snapshot of EXBS activities in the Middle East, highlights of which include:

- » Egypt: EXBS funds for Egypt are mainly spent on providing support for “complex nonintrusive imaging equipment for combating illicit arms transfers to entities of proliferation concern.” The EXBS program also provides enforcement training to Egyptian border-security agencies to strengthen their ability to detect and interdict strategic goods.⁴⁶³
- » Iraq: EXBS is providing equipment and training to Iraqi enforcement agencies.⁴⁶⁴
- » Jordan: EXBS is assisting Jordan with drafting export control legislation and providing Jordan with advanced technology and training for the detection and interdiction of strategic goods.⁴⁶⁵

Unfortunately, only one Arab League member state (the United Arab Emirates) has a comprehensive strategic trade control law.⁴⁶⁶ A comprehensive strategic trade control law is an elemental part of an effective export control system. Such a law is also essential to compliance with U.N. Security Council Resolution 1540, which mandates that all UN member states shall—with regard to materials related to “the proliferation of nuclear, chemical, or biological weapons and their means of delivery”—establish and maintain “appropriate laws and regulations to control export, transit, transshipment and reexport” as well as establish and enforce “appropriate criminal or civil penalties for violations of such export control laws and regulations.” **The U.S. government should place increased, results-oriented emphasis on**

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encouraging and assisting additional Arab League member states to develop and implement comprehensive strategic trade control laws.

ii. Global Threat Reduction/WMD Terrorism Programs

The State Department's Global Threat Reduction programs include Global Biosecurity Engagement, Chemical Security Engagement, and Nuclear Security Assistance. Each of these programs has activities in the Middle East. Highlights include engagement programs with Iraqi and Libyan scientists and engineers, with the goal of redirecting WMD expertise to peaceful pursuits and enhancing security at Iraqi facilities that house potentially dangerous biological and chemical materials.⁴⁶⁷ The United States has spent \$31 million in total on these engagement programs between FY2002 and FY2010.⁴⁶⁸

3. Department of Energy Programs

The National Nuclear Security Administration (NNSA) at the Department of Energy (DOE) manages several programs that provide nonproliferation-related assistance to countries in the Middle East. Highlights include:

- a.** The Second Line of Defense (SLD) program helps foreign countries establish detection capabilities for nuclear materials, including by placing detection equipment at points of exit and entry. The SLD program has done work with ports in Israel, Jordan, Lebanon, Oman, and the UAE.⁴⁶⁹
- b.** The Global Initiatives to Prevent Proliferation program has worked in Iraq and Libya to engage former WMD scientists, technicians, and engineers in doing various types of non-WMD work.⁴⁷⁰
- c.** The Department of Energy has worked with countries in the Middle East to build technical capacities for implementing IAEA safeguards and to develop safe and secure nuclear energy infrastructures.⁴⁷¹ For example, DOE supported development in Abu Dhabi of the Gulf Nuclear Energy Infrastructure Institute, a nuclear energy safety, safeguards, and security training institute for new nuclear energy operators, managers, and regulators in the region.⁴⁷²
- d.** DOD/NNSA's Global Threat Reduction Initiative works to secure, protect, and in some cases remove vulnerable nuclear and radiological materials at civilian facilities around the world. GTRI spent \$2 million in the Middle East in FY2011. Highlights of its work in the region over the past decade include the following:

i. Removal of U.S.-origin spent fuel from Israel (paid for by Israel)

ii. Security upgrades to radiological source facilities in Yemen and Egypt

iii. Building of consolidated storage facility for radiological sources in Jordan

iv. Conversion of Libya's Tajoura Research Center from HEU to LEU fuel and removal from Libya of all HEU fresh and spent fuel⁴⁷³

4. Department of Homeland Security Programs

Two Department of Homeland Security programs, the Container Security Initiative and the Secure Freight Initiative, are designed to increase the likelihood that nuclear material or a nuclear weapon would be identified and interdicted if shipped as cargo. The Container Security Initiative partners with five ports in the Middle East (Alexandria, Egypt; Haifa and Ashdod, Israel; Dubai, UAE; and Port Salalah, Oman); the Secure Freight Initiative partners with Port Salalah, Oman.⁴⁷⁴

B. WEAKNESSES OF EXISTING COOPERATIVE PROGRAMS AS THEY RELATE TO THE MIDDLE EAST

1. Turf battles and lack of coordination

The various federal agencies' cooperative threat reduction and related nonproliferation programs have for decades been marked by near-constant battles over turf, both among agencies and within them.⁴⁷⁵ One turf battle reportedly delayed for years (until October 2012) the completion of the internal bureaucratic processes necessary for DOD/CTR to work in Middle Eastern countries (beyond Iraq). As a result, a frustrated Sen. Richard Lugar in February 2011 introduced S. 293, a bill "to modify the authority to use Cooperative Threat Reduction funds for proliferation threat reduction projects and activities outside the states of the former Soviet Union." The bill would do nothing other than remove the statutory requirement that the Secretary of State must concur with the Secretary of Defense before DOD/CTR can undertake work outside the FSU. Lugar's floor statement introducing the bill explained it as follows:

[T]he State Department has not been efficient in carrying out concurrences required by existing law...burdensome and ultimately un-executable inter-agency concurrence, determination and notification processes for the global Nunn-Lugar program are limiting accomplishments...too often, bureaucratic politics and inertia have intervened to prevent timely success.

After conducting an in-depth assessment of U.S. cooperative threat reduction programs, Elizabeth Turpen, at the time a scholar at the Henry L. Stimson Center in Washington, D.C., concluded in 2007 that, "[t]he maverick, innovative approaches in the early years of threat reduction that yielded rapid progress have long since given way to turf battles between agencies, insufficient high-level attention to lay the foundation for more intensive and expeditious cooperation, and congressional and bureaucratic propensities for muddling through."⁴⁷⁶ Turf battles slow progress and squander energy; they also undercut coordination by making program officers reluctant to share data, ideas, and plans lest bureaucratic rivals hijack them.

Such turf battles and lack of coordination were a major motivation behind Congress mandating the creation of an “Office of the United States Coordinator for the Prevention of Weapons of Mass Destruction Proliferation and Terrorism,” in the Implementing the 9/11 Commission Recommendations Act of 2007. Soon after taking office, President Obama appointed Gary Samore to the position of Special Assistant to the President and White House Coordinator for Arms Control and Weapons of Mass Destruction, Proliferation, and Terrorism. Samore reportedly has done an excellent job with the tools available to him in this position. However, the Coordinator’s ability to mediate turf battles and coordinate program activities reportedly has been hindered because he and his team have “limited authority to direct the agencies”⁴⁷⁷ and have been given no “budgetary authority over the federal agencies.”⁴⁷⁸

There is a particular lack of coordination among programs designed to promote a culture of WMD-related responsibility, safety, and security in the Middle East. Currently, the Departments of State, Defense, and Energy are largely working independently of one another in promoting nonproliferation practices with individual Middle East countries. There has been no concerted effort to coordinate these initiatives to ensure that Middle East officials responsible for nonproliferation are systematically engaged and interacting with their regional counterparts and the United States. Partly in response to this lack of coordination on an increasingly important issue, part C of this chapter recommends the creation of a Middle East Nonproliferation Initiative with direct authority over a budget to be used to promote cooperative nonproliferation in the Middle East.

2. Lack of a holistic approach to Middle East nonproliferation issues

As this report has discussed, **there are many reasons to approach Middle East cooperative nonproliferation issues not just on the current country-by-country basis but also on a regional basis. Many Middle East nonproliferation threats have a regional dimension, including that: Iran’s nuclear program benefits from material smuggled in via its neighbors, an Iranian nuclear arsenal risks encouraging proliferation by other countries in the region, Syrian chemical weapons could end up in the hands of Lebanese non-state actors, several states in the region have the ability to discourage WMD acquisition by non-state actors located in other countries (e.g., Qatar has influence over Hamas), and WMD attacks are likely to affect populations beyond those of the target state. In addition, various particular characteristics of the region would help lend a synergistic impact to regionally coordinated activities, including that most countries in the region share a common language (Arabic) and culture, belong to various regional organizations (e.g., the Arab League and the Gulf Cooperation Council), and share particular distinct challenges (e.g., the lack of comprehensive strategic trade control laws).**

Furthermore, a set of Middle East nonproliferation programs that were coordinated with each other could in turn together coordinate, and develop synergies, with such other regional efforts as the Middle East Partnership Initiative, the State Department’s Office of the Special Coordinator for Middle East Transitions (which coordinates U.S.

There are many reasons to approach Middle East cooperative nonproliferation issues not just on the current country-by-country basis but also on a regional basis.

government assistance to Middle Eastern countries such as Egypt, Libya, and Tunisia, which are undergoing transitions to democracy), and relevant programs of the U.S. Agency for International Development. Coordination efforts with these broader assistance initiatives should take into account the ideas included in reports urging greater synergy between nonproliferation and economic development assistance.⁴⁷⁹

However, there is no federal office with the mandate to closely follow and coordinate the various agencies' CTR and related cooperative nonproliferation work in the Middle East. Indeed, as discussed above, it is remarkably challenging even simply to determine how much cooperative threat reduction and related nonproliferation funding is being spent in the Middle East. U.S. cooperative threat reduction programs worldwide would benefit from more coordination. As the Congressional Research Service put it in March 2012 with regard to U.S. cooperative threat reduction programs worldwide: "Most analysts agree that a comprehensive strategic plan would allow for the development of an overall set of goals for U.S. assistance, better coordination among programs, a more consistent method to set priorities and measure progress, and a coordinated way to determine when and how the United States had achieved its goals and could complete a program."⁴⁸⁰ Regardless of when or if a comprehensive strategic plan is developed for programs worldwide, such programs in the Middle East would clearly benefit immediately from such a plan.

3. Lack of funding for some of the existing and potential initiatives with greatest impact

The lack of a federal office with the mandate to closely follow the various agencies' CTR and related nonproliferation programs in the Middle East, coordinate them, and identify gaps may be one reason why several of the existing and potential initiatives with the greatest potential impact lack sufficient funding (or in some cases have no funding). These include the Middle East Consortium for Infectious Disease Surveillance, various Middle East regional biosecurity cooperation ideas developed on a Track Two basis, and other ideas listed below.

C. RECOMMENDED CREATION OF A MIDDLE EAST NONPROLIFERATION INITIATIVE

The U.S. government should create a Middle East Nonproliferation Initiative. The Initiative could be based in either the Defense Department or the State Department. The Defense Department now has far more nonproliferation funding that could be focused on the Middle East. However, the State Department may be better positioned to coordinate Middle East Nonproliferation Initiative funding with similar cross-cutting, action-oriented programs such as the Middle East Partnership Initiative (located in the State Department's Near East Bureau) and the Office of the Special Coordinator for Middle East Transitions (located in the Office of the Deputy Secretary of State).

The lack of a federal office with the mandate to closely follow the various agencies' CTR and related nonproliferation programs in the Middle East, coordinate them, and identify gaps may be one reason why several of the existing and potential initiatives with the greatest potential impact lack sufficient funding (or in some cases have no funding).

The Middle East Nonproliferation Initiative Office should both play a coordinating role and administer its own programmatic budget. The Office's mandate should thus include the following:

- 1. Coordinate and track U.S. government assistance to promote cooperative threat reduction and related nonproliferation activities in the Middle East**
- 2. Provide Congress with an annual report on all Middle East nonproliferation activities and programs undertaken by the executive branch**
- 3. Develop comprehensive CTR and other nonproliferation assistance strategies for the Middle East and ensure that such assistance tools are aligned with U.S. policy goals**
- 4. Work with international donors and institutions on coordinating CTR and other nonproliferation assistance strategies for the Middle East**
- 5. Mobilize resources from the U.S. business, foundation, university, think tank, and other sectors to support cooperative threat reduction and other nonproliferation objectives in the Middle East**
- 6. Administer an annual budget of \$30 million per year, to be used to promote cooperative threat reduction and other nonproliferation objectives in the Middle East.**

The Initiative's tools should include region-wide, multi-country, and country-specific grants and contracts, and the use of prizes and challenges. The Initiative's efforts should be designed to achieve specific objectives including the following (most of which are explained in more detail elsewhere in this report):

- a.** In coordination with MEPI, **promote civil society understanding of, and support for, nonproliferation in emerging democracies such as Egypt**, including through outreach to relevant civil society organizations and grant, training, and other support for development of nonproliferation-oriented organizations and networks in the region.
- b.** In coordination with the State Department's public diplomacy specialists, **promote understanding of, and support for, nonproliferation among reporters and editors of Middle Eastern media outlets**
- c.** **Reach out to and help enhance understanding of, and support for, nonproliferation among emerging leaders of newly ascendant political parties in the Middle East** (e.g., emerging foreign affairs leaders of Egypt's Muslim Brotherhood and the Syrian opposition), for example by bringing them to the United States for training and supporting their participation in Track Two dialogues.
- d.** **Encourage and assist improved cooperation between Middle Eastern governments and their private sectors to detect proliferation procurement attempts.**

e. Dramatically increase results-oriented efforts to encourage and assist Middle Eastern governments to adopt and implement comprehensive strategic trade control laws, including through enhanced training, drafting workshops, and targeted public diplomacy efforts.

f. Encourage and assist Middle Eastern countries to more effectively prevent, detect, and interdict illicit trade in proliferation-sensitive items, including through investigative and prosecutorial training and through supporting creation of a regional network of national WMD law enforcement coordinators.

g. Facilitate enhanced cooperation between U.S., European and other key producer state prosecutors and investigators of illicit strategic exports to the Middle East, including by creation of a regular international forum for sharing of information and best practices.

h. Support Track Two dialogues that convene officials and experts from all countries of the Middle East, on a not-for-attribution basis, to discuss cooperative threat reduction and other nonproliferation issues. Some of the most successful Middle East Track Two initiatives on nonproliferation issues are significantly hampered by lack of funding. For example, the exceptionally useful Track Two nonproliferation dialogues that take place under the auspices of the UCLA Center for Middle East Development are regularly threatened with cancellation, and nearly always are able to invite only a smaller than optimal number of participants, due to a shortage of funding.

i. Identify, seek agreement on, and support a set of non-binding practical nonproliferation measures that regional countries could undertake individually, in support of the WMDFZ aspiration, in the current Middle East political climate. For example, regional parties could commit to reporting regularly, to each other, or to a mutually acceptable third party, on their national nonproliferation activities, including legislative measures and hosting of conferences and training activities.

j. Consider encouraging and assisting creation of a Track One or Track Two experts group charged with investigating, and making recommendations for, the technical dimensions of a regional verification system in support of a Middle East WMDFZ.

k. Support continuation and expansion of the Middle East Consortium for Infectious Disease Surveillance, a partnership of the Israeli, Jordanian, and Palestinian health ministries, which promotes biosurveillance cooperation that would be useful in addressing both natural disease outbreaks and also bioterrorism attacks.

l. Encourage and support regional implementation of activities such as those contained in the 20-point action plan, for building sustainable capacity to prevent bioterrorism in the Middle East, which was agreed upon in a Track Two task force and presented at the BWC Review Conference in December 2011. Those activities, listed in this report, include regional activities to foster prevention, detection, and response capacities.

The Middle East
Nonproliferation Initiative
Office should both play
a coordinating role and
administer its own
programmatic budget.

m. Promote establishment of professional networks that foster voluntary regional interaction on WMD-related issues, including a Middle East Emergency Mitigation and Consequence Management Response Network. Relatedly, this Middle East Nonproliferation Initiative could partner with the Departments of Justice, Homeland Security, and Health and Human Services to encourage and support improved regional WMD-related capacities for law enforcement and public health detection and response.

n. Some of the funding could be used in support of prizes and challenges, policy tools that have been used by federal agencies with increasing success in recent years to spur innovation and solve tough problems. Prizes and challenges can enable the funding agency to establish an ambitious goal without having to predict which team or approach is most likely to succeed; benefit from novel approaches without bearing high levels of risk; reach beyond the “usual suspects” to increase the number and type of minds tackling a problem; bring out-of-discipline perspectives to bear; increase cost-effectiveness to maximize the return on taxpayer dollars; and pay only for success.⁴⁸¹ The State Department recently issued a challenge that seeks creative ideas from the public on how to use commonly available devices to help confirm whether states are complying with treaties or international arrangements addressing weapons and nonproliferation.⁴⁸² The Middle East Nonproliferation Initiative could, for example: i. issue a challenge, directed at both U.S. nationals and persons in the region, that would seek creative ideas for non-binding practical nonproliferation measures that regional countries could undertake individually, in support of the WMDFZ aspiration, in the current Middle East political climate, or ii. award a prize for the project that best advances nonproliferation in the region through collaboration between students in three or more countries in the region.

Several of the above Middle East nonproliferation objectives are not currently being pursued at all by the U.S. government. Others could, in our view, be pursued more systematically and effectively by a Middle East Nonproliferation Initiative with the recommended level of funding.

Chapter 6: Enhanced Partnership with Europe on Nonproliferation in the Middle East



PRESIDENT OBAMA AND MR. HERMAN VAN ROMPUY,
PRESIDENT OF THE EUROPEAN COUNCIL, AT THE US-EU SUMMIT
IN NOVEMBER 2011.⁴⁸³

Europe's sophisticated industries, extensive trade and other relationships with the Middle East, and its role in NATO, along with Britain and France's permanent seats on the U.N. Security Council, make Europe a critical partner for U.S. nonproliferation policy in the Middle East. Europe's recent increased prioritization of nonproliferation issues, plus the recent enhancement of the European Union's foreign policy tools, makes this an especially useful time to consider what opportunities there might be for more effective collaboration between the United States and European Union on Middle East nonproliferation policy and implementation.

Europe has taken an increasingly aggressive role vis-à-vis Iran's nuclear program, with its crude oil import ban and other sanctions on Iran making a significant contribution to squeezing Iran's economy and foreign currency reserves. In December 2010, the European Union launched its External Action Service, which serves as a foreign ministry and diplomatic corps for the European Union, implementing the European Union's Common Foreign and Security Policy and other aspects of the European Union's external representation. The External Action Service has, among other things, significantly increased the number of EU staff members focused on sanctions implementation.

However, there is much more that Europe can do to prevent proliferation in the Middle East. The European Union can take some additional steps internally, while other additional steps are better undertaken by the European Union and United States together.

A. INTERNAL EU STEPS TO MORE EFFECTIVELY COMBAT PROLIFERATION IN THE MIDDLE EAST

1. European Union should further reduce trade with Iran

The European Union considerably strengthened its Iran sanctions on October 15, 2012.⁴⁸⁴ The important new EU measures included banning the import of natural gas from Iran into the European Union, prohibiting vessels belonging to EU citizens or companies from transporting or storing Iranian oil and petrochemical products, and banning the export to Iran of additional materials relevant to the Iranian nuclear and ballistic programs. In addition, and perhaps most important, the European Union "prohibited all transactions between European and Iranian banks, unless they are explicitly authorized in advance by national authorities under strict conditions."⁴⁸⁵

However, EU sanctions on Iran still fall far short of the complete embargo on trade (other than in humanitarian goods) that the United States has imposed on Iran. The European Union should announce that, in the absence of progress on Iran's nuclear program, it will impose on Iran a complete embargo on trade (other than in humanitarian goods) similar to that which the United States has imposed on Iran.

Prior to the October 15, 2012 additional sanctions, the European Union was one of Iran's largest trading partners, importing almost one-third of Iranian exports and

serving as a major exporter of machinery, chemicals and transportation goods to Iran.⁴⁸⁶ In 2011, the estimated value of trade between the European Union and Iran was €26.38 billion.⁴⁸⁷ In FY2011, 52.9 percent of the European Union's exports to Iran were machinery and transport equipment.⁴⁸⁸ Germany, Italy, and France ranked as Iran's largest trading partners within the European Union in 2011.⁴⁸⁹ Unless its new banking restrictions are implemented very aggressively and have a greater than expected impact, the October 15, 2012 EU sanctions appear likely to significantly reduce but not end non-humanitarian EU trade with Iran. In light of Iran's intransigence, the European Union should take the additional steps necessary to increase Western negotiating leverage by announcing that, in the absence of progress on Iran's nuclear program, it will halt all non-humanitarian trade with Iran.

2. EU should designate and sanction Hizbollah as a terrorist organization

The European Union has thus far failed to designate and sanction Hizbollah, the Lebanese-based Iranian proxy, as a terrorist organization. According to sources including a major general who defected from the Syrian military, Syria's Assad regime is considering transferring chemical weapons to Hizbollah.⁴⁹⁰ As a result, Hizbollah is one of the Middle East non-state actors most likely to acquire sophisticated weapons of mass destruction. Hizbollah is also a key backer of Syria's Assad regime.⁴⁹¹ In addition, Hizbollah is one of the Iranian regime's key strategic assets, expanding the regime's reach both geographically and by undertaking terrorist activities as its proxy.⁴⁹²

EU designation, and sanctioning, of Hizbollah as a terrorist organization would significantly weaken one of the Middle East non-state actors most likely to acquire sophisticated WMD and greatly increase the isolation of Iran and pressure on it to halt its illicit nuclear weapons program.

The United States has since 1997 designated Hizbollah as a Foreign Terrorist Organization.⁴⁹³ According to the U.S. State Department's 2011 report on terrorism, Hizbollah's terrorist attacks have included the suicide truck bombings of the U.S. Embassy and U.S. Marine barracks in Beirut in 1983; the 1985 hijacking of TWA flight 847, during which a U.S. Navy diver was murdered; and the attacks on the Israeli Embassy in Argentina in 1992 and on the Argentine-Israeli Mutual Association in Buenos Aires in 1994.⁴⁹⁴ The report noted that in 2011 Hizbollah is "believed to have" carried out two attacks against U.N. peacekeepers in Lebanon.⁴⁹⁵ Also in 2011, the U.N.-based Special Tribunal for Lebanon, an international tribunal investigating the 2005 assassination of Lebanese Prime Minister Rafik Hariri, indicted four Hizbollah members.⁴⁹⁶

Hizbollah appears to have continued engaging in terrorist activity during 2012. Matthew Olsen, the director of the U.S. government's National Counterterrorism

EU designation, and sanctioning, of Hizbollah as a terrorist organization would significantly weaken one of the Middle East non-state actors most likely to acquire sophisticated WMD and greatly increase the isolation of Iran and pressure on it to halt its illicit nuclear weapons program.

Center, stated in September 2012 that “the mid-July attack on an Israeli tourist bus in Burgas, Bulgaria, that killed six, the early July arrest of an operative in Cyprus, and the January plotting against tourists in Bangkok all bear the hallmarks of Hizbollah.”⁴⁹⁷

According to the State Department report, “Iran has assisted in rearming Hizbollah, in direct violation of United Nations Security Council Resolution 1701...Iran has provided hundreds of millions of dollars in support of Hizbollah in Lebanon and has trained thousands of Hizbollah fighters at camps in Iran.”⁴⁹⁸

While the United States, Canada and the Netherlands have designated (and impose sanctions against) Hizbollah as a terrorist organization, the European Union has not. As a result, thousands of Hizbollah “members and supporters operate with few restrictions in Europe, raising money that is funneled to the group’s leadership in Lebanon.”⁴⁹⁹ Hizbollah is especially active in Germany. According to domestic German intelligence, the group had 950 members and supporters in 2011, up from 900 in 2010.⁵⁰⁰

In August 2012, the Hizbollah secretary general, Hassan Nasrallah, stated that if Hizbollah were to be blacklisted in the European Union, it “would dry up the sources of finance, end moral, political and material support, stifle voices, whether they are the voices of the resistance or the voices which support the resistance, pressure states which protect the resistance in one way and another, and pressure the Lebanese state, Iran and Iraq, but especially the Lebanese state, in order to classify it as a state which supports terrorism.”⁵⁰¹

When asked why the European Union has yet to designate Hizbollah as a terrorist organization, Erato Kozakou-Marcoullis, the foreign minister of Cyprus, which holds the European Union’s rotating presidency during the second half of 2012, said, “There is no consensus among the EU member states for putting Hizbollah in the terrorist-related list of organizations...should there be tangible evidence of Hizbollah engaging in acts of terrorism, the EU would consider listing the organization.”⁵⁰²

The U.S. State Department and various federal judges for at least 15 years have found that there is tangible evidence of Hizbollah engaging in acts of terrorism.⁵⁰³ In addition, Congress has attempted to use its influence to urge the European Union to designate Hizbollah as a terrorist group. In September 2012, 76 American senators sent a letter to Catherine Ashton, the EU’s high representative for foreign affairs and security policy, saying “Primarily through Iran’s Republican Guard Corps, Hizbollah has been the largest beneficiary of Iran’s support for terrorist activities, and in the past year, there has been a sharp spike in terrorist attacks planned by Iran and Hizbollah throughout the world.”⁵⁰⁴ **The European Union should promptly designate and sanction Hizbollah as a terrorist organization.**

The U.S. government, and especially its executive branch, should continue to urge the EU to designate Hizbollah as a terrorist organization.

The United States should strongly encourage the European Union to more effectively promote consistently rigorous implementation of export regulations and procedures across the European Union. More uniformly rigorous implementation of trade controls will prevent countries such as Iran from taking advantage of states where enforcement of EU laws and regulations is lax.

3. Encourage enhanced trade control coordination between EU Member States

While EU members share common trade control rules, each country is responsible for its own implementation of these rules. As a result, inconsistencies occur between how different countries implement those rules, including with regard to proliferation-sensitive dual-use goods. **The United States should strongly encourage the European Union to more effectively promote consistently rigorous implementation of export regulations and procedures across the European Union.** More uniformly rigorous implementation of trade controls will prevent countries such as Iran from taking advantage of states where enforcement of EU laws and regulations is lax.⁵⁰⁵

The European Union should also develop an information exchange mechanism so that relevant officials in countries across the European Union can access a central trade control database and efficiently share information related to preventing dual-use goods from being transferred illegally.⁵⁰⁶

B. ENHANCING U.S.-EU COOPERATION ON COMBATING PROLIFERATION IN THE MIDDLE EAST

1. Make more effective use on Middle East nonproliferation issues of existing transatlantic defense and security organizations

Since its enforcement of a no-fly zone over Libya from March to October 2011, NATO as an institution has played a limited military role in the Middle East. NATO, as such, was not listed as participating, for example, in the massive 19-nation May 2012 Eager Lion exercise in Jordan. Nor did it participate in the International Mine Countermeasures Exercise in the Persian Gulf in September 2012, involving 30 countries, although in both exercises key NATO members did participate.⁵⁰⁷ And, when on December 4, 2012, NATO Secretary-General Anders Fogh Rasmussen echoed President Obama's warning to Bashar al-Assad against using Syria's chemical weapons, he was careful to state that "if anybody resorts to these terrible weapons I would expect an immediate reaction from the international community," rather than declaring that NATO would intervene.⁵⁰⁸

NATO's December 5, 2012, decision to send Patriot missile defense batteries to Turkey constituted a more direct engagement in the region, with the exclusive goal of averting the spread of the violence in Syria beyond that country's borders. NATO officials made clear that the defensive system would not be used to enforce a no-fly zone over a corridor in Syria or otherwise engage Syrian forces.⁵⁰⁹

Nonetheless, NATO currently has several initiatives relating to nonproliferation. NATO's WMD Initiative, which includes a WMD Center, focuses on information

sharing, defense planning, nonproliferation, and civilian protection.⁵¹⁰ Additionally, NATO has several initiatives focused on increasing CBRN defensive capabilities.⁵¹¹

NATO also has a number of efforts focused on the Middle East. In 1994, NATO founded the Mediterranean Dialogue (MD), which includes Algeria, Egypt, Israel, Jordan, Mauritania, Morocco, and Tunisia. Annual forums are held during which members attend seminars and participate in workshops covering a number of security related issues.⁵¹² In 2004, NATO launched the Istanbul Cooperation Initiative (ICI) as a forum for bilateral cooperation on mutually concerning security issues between NATO, the Middle East and North African states.⁵¹³ The ICI currently has four participant countries: Bahrain, Kuwait, Qatar, and the United Arab Emirates.⁵¹⁴ Saudi Arabia and Oman also reportedly are interested in participating in the ICI.⁵¹⁵ Concern has been expressed that NATO has not invested sufficiently in the MD and the ICI, instead giving them “mere lip service,” with no significant activities “beyond the occasional meeting or limited joint training exercises.”⁵¹⁶ **NATO should invest more in its MD and ICI. NATO also should increase MD and ICI efforts to promote nonproliferation cooperation, including by using the MD and ICI to build regional nonproliferation relationships among participating countries, rather than just bilateral relationships with NATO. For example, NATO could create a program within the ICI specifically geared toward promoting nonproliferation cooperation between its partner states.** The program could focus, at least at the beginning, on relatively technical issues of nonproliferation cooperation rather than attempting to tackle larger political questions.

2. Prioritize better matching of U.S. and EU sanctions lists

There will inevitably be times when the United States, for important policy reasons, will choose to have broader nonproliferation sanctions than the European Union, and vice versa. However, non-substantive discrepancies should be minimized, as coordination can contribute to stronger and more effective sanctions regimes. When the United States enacts sanctions against new entities and persons identified as engaging in proliferation, the European Union should strive if possible to sanction the same entities and persons, and vice versa.

3. More effectively systematize cooperation on implementation of Iran sanctions

The level of coordination between the United States and Europe on Iran sanctions implementation has in some ways not yet reached the level of coordination that existed with regard to Serbia. In that case, the United States and Europe created an international monitoring and implementation group—including experts on customs, export controls, and financial measures—that monitored sanctions implementation, shared information, facilitated coordination, and interfaced with the United Nations and its sanctions committee.

4. The United States and Europe should develop joint sanctions assistance mission (SAM) teams to systematically collaborate in implementing sanctions on Iran

These teams can be modeled on the SAM teams that were deployed to assist with the implementation of U.N. Security Council Resolution 757 against Serbia and Montenegro, often referred to at that time as the Former Republic of Yugoslavia (FRY). The SAMs monitored sanctions implementation at several FRY border checkpoints. Each “frontline state” was assigned a lead country to manage the operations. Victor Comras, who led the FRY sanctions effort for the United States, notes that “while the SAM teams had no direct authority to enforce the sanctions measures, they were able to report suspected sanctions violations directly to SAMCOM in Brussels via a secure voice and facsimile communications system” and “were also able to advise local customs officers concerning potential violations, for example, which cargoes should be stopped for inspection.”⁵¹⁷ The SAM teams were exceptionally useful vehicles for putting experts on the ground at the FRY’s borders.

By creating SAM teams for Iran sanctions implementation, the United States and Europe can enhance coordination with Iran’s neighboring states while also increasing coordination and cooperation between the U.S. and Europe. For each of Iran’s neighbors, the SAM team lead could be assigned to a capable U.S./EU country that is particularly politically palatable to that neighbor. If any of Iran’s neighbors does not welcome a formal SAM team presence on its border, the SAM concept could be modified to have a joint U.S.-EU team based elsewhere in the region, or in Brussels, responsible for focusing on implementation by, and coordinating information-sharing with, that neighbor.

The overall implementation of sanctions against the FRY was facilitated by an informal working group including the United States, the European Community, and the Commission on Security and Cooperation in Europe (CSCE).⁵¹⁸ The group served as a means of communication and coordination of U.S. and European efforts to implement sanctions successfully. Analogous informal working groups should be strengthened with regard to Iran sanctions implementation. ■

ENDNOTES

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- 56 Imports are calculated endogenously. To do this, the model applies a two-step process. Since the principal shock to the Iranian economy from sanctions is a reduction in exports, the model first tries to access the change in final demand of goods and services based on the change in exports. The model then assesses the quantity of goods and services Iranians would need to import to fulfill that demand, taking into account the real appreciation or depreciation of the currency. Further details on this calculation are available upon request.
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173 Per not-for-attribution interviews.

174 Per discussion at not-for-attribution roundtable. There may also be some changes to U.S. law which could help facilitate successful investigation and prosecution of cases involving the diversion to illicit WMD programs of U.S.-origin dual use goods. For example, while some proliferation-sensitive items cannot be exported from the United States without a license from the federal agency with jurisdiction over the item (e.g., Commerce for dual use items), many items valuable to WMD programs can be exported without a license (but may be nevertheless subject to end use controls). Investigators and prosecutors can find it particularly challenging to investigate and successfully prosecute diversion cases where no license was required for the initial export from the United States. In order to provide greater security against such diversions and to assist investigations arising from such diversion schemes, the United States could require licenses for any item subject to the Export Administration Regulations (EAR) that is exported from the United States knowingly to the military, intelligence and internal police services of all countries listed as embargoed destinations in section 126.1 of the International Traffic in Arms Regulations or within Country Group D:1 of the EAR (15 Code of Federal Regulations § 740 Supp. 1).

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440 In its annual report to the G-8 Global Partnership Against the Spread of Weapons and Materials of Mass Destruction, the United States said that from 2002 to 2010, it had spent \$8.8 billion in the FSU and \$2.2 billion in countries outside the FSU.

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447 Until 2003, Congress limited the use of DOD/CTR funds to programs in the FSU. The FY2004 National Defense Authorization Act authorized the use of DOD/CTR funds outside the FSU in emergency situations. In section 1305 of the FY2008 National Defense Authorization Act, Congress for the first time specifically allocated funds for new initiatives outside of the FSU and eliminated the restriction that such expenditures occur only in emergency situations. However, section 1305 requires that DOD/CTR projects outside the FSU have the "concurrence of the Secretary of State." This concurrence requirement has reportedly been problematic. In February 2011, Sen. Dick Lugar introduced S. 293, a bill "to modify the authority to use Cooperative Threat Reduction funds for proliferation threat reduction projects and activities outside the states of the former Soviet Union." The bill would literally do nothing other than remove the requirement that the Secretary of State has to concur with the Secretary of Defense before DOD/CTR can undertake work outside the FSU. Lugar's floor statement introducing the bill explained it as follows:

[T]he State Department has not been efficient in carrying out concurrences required by existing law...burdensome and ultimately un-executable interagency concurrence, determination and notification processes for the global Nunn-Lugar program are limiting accomplishments...too often, bureaucratic politics and inertia have intervened to prevent timely success.

As of the date of publication of this report, S. 293 had not been passed by either house of Congress. However, DOD/CTR did in the fall of 2012 finally receive the internal bureaucratic authorization necessary to do work in the Middle East (beyond Iraq).

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Project on U.S. Middle East Nonproliferation Strategy

ABOUT THE PROJECT

The non-partisan Project on U.S. Middle East Nonproliferation Strategy convened five not-for-attribution roundtables at which leading experts from the U.S. government, think tanks, and academia discussed how to more effectively address Middle East nonproliferation challenges and opportunities in light of paradigm-shifting regional developments, including the turmoil in Syria (with its massive chemical arsenal), the replacement of an Egyptian government which had rejected a nuclear option, the rise of Islamist parties in Egypt and elsewhere, and Iran's advancing nuclear program. This report includes the Project co-chairs' recommendations for U.S. Middle East nonproliferation policy. Many of these recommendations are drawn from or inspired by the roundtable discussions. However, they are attributable only to the Project co-chairs, in their personal capacities.

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