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Redefining the CBRN risk assessment

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Recent discussions on the nature of nuclear, biological, and chemical (NBC) warfare inevitably lead to the popular statement that the potential terrorist use of chemical and biological warfare agents, radiological "dirty bombs," and nuclear (CBRN) devices represents the greatest threat to NATO and other countries. There is little, if any, discrimination made between the military application of NBC weapons by a nation-state such as North Korea or Pakistan and the terrorist application of CBRN hazards against noncombatant targets, despite the disparity in mass, sophistication, and impact of the two threats.

Introduction

There is almost no international scientific, expert, political or economical meeting in which new threats of world and national security are not discussed. For all that, the threat posed by terrorism is of special concern and receives special attention, particularly when we talk about terrorism with radiological, chemical and biological warfare agents and weapons. After 11 September 2001, when the world could not avoid understanding that terrorism can cause mass casualties, weapons of mass destruction (WMD) that had been marginalized as a threat in the post-cold war period rapidly became significant. Politicians, security services, scientists and experts began to be concerned with WMD again, but in a different context. Nuclear, radiological, chemical, biological and toxin weapons are now considered weapons that terrorist will use if they want to cause mass destruction, disruption and casualties.

It is a fact that terrorism, along with other new kinds of threats, threatens international security and environment, prosperity and human existence. Increasing possibilities of CBR agents purchase and production, and their use by terrorists, necessitate decreasing these possibilities and probabilities; this is the main role of the WMD nonproliferation policies.[1]

Developing and implementing a project on nonproliferation of WMD in this contemporary era necessitates a consideration of all social, political, economic, scientific and technological realities that enable the proliferation of WMD.Meetings of professionals may offer the best hope to surface, highlight and bring pressure to bear on

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governments to develop a political will to mandate dynamic attention to the problem, to provide adequate numbers of knowledgeable professionals to work the problems and to provide the necessary equipment and other resources to assist these professionals in preventing WMD proliferation.

The threats of chemical and biological terrorism and the potential countermeasures

Despite the absence of terrorist chemical or biological attacks during the past year, the threat remains high. The warning in February 2005 from Interpol chief Ronald Noble that groups, most notably Al-Qaeda, are intent on using biological weapons (BW) was the latest attempt to bring the problem back into the public's consciousness and keep it high on the political agenda.

The current threat

While governments and security agencies are better organised against the threat than ever before, the world is still ill-prepared for a bioterrorist attack. Improvised explosive devices are still the preferred mode of attack, but terrorists continue to pursue non-conventional means of inflicting death, injury and panic on an increasingly aware public. Terrorists are aware that, effectively disseminated, a single release of a chemical or biological weapon could cause tens of thousands of casualties. Some observers believe that, because of the technical difficulties in creating such weapons, the chances of a devastating attack are currently small.[2] But the consequences of an extensive deliberate spread of disease, chemically enhanced attack, or mass administration of toxin only has to happen once to be epically catastrophic.

Chemical weapons are still the cheapest and easiest non-conventional option. In April 2004 an Al-Qaeda-inspired plot to blow up chemically enhanced bombs in Amman, Jordan was pre-empted, thereby preventing an attack that could have led to the chemical poisoning of thousands. Common chemicals are widely available and minimal expertise is needed to deploy them. Even if they do not achieve maximum casualties, such crude weapons would at least create maximum panic. Previously, it was thought that the difficulties of developing, weaponising and disseminating chemical, biological and toxin weapons provided high barriers to their use by non-state actors.

Advances in molecular biology, chemistry and engineering have, however, increased the ease by which biological and chemical compounds can be manufactured. Purchasable civilian technologies may be applicable to manufacture of CB weapons. The US Defense Threat Reduction Agency was able to assemble the requisite equipment from civilian sources. Under Project BACUS, a biological agent production facility was successfully built in Nevada from dual-use technology without drawing regulatory attention.

Some experts maintain that the technological barriers to chemical, biological and toxin use have significantly decreased. Others still maintain that delivering such weapons at the required strength still poses challenges. Much depends on the method of dispersal and the conditions prevailing at the time of dissemination. Bombs are not the most efficient method of disseminating micro-organisms. Nature still produces the most devastating dissemination, as made evident by previous pandemics.

Current concerns over a possible pandemic of avian influenza poses a 'natural' threat of worldwide disease that would dwarf most effects at deliberate release. However, it is difficult to trace whether a disease outbreak is man-made or natural, unless clusters of illness and deaths show unusual symptoms that indicate a rare or eliminated disease such as plague or smallpox, or a non-indigenous tropical disease. Such clusters would alert health authorities that a deliberate spread had taken place.

New medicines and equipment

The development of new antibiotic, antiviral or antitoxin medicines is in the forefront of this countermeasures effort; while many agents of concern have an acknowledged treatment, many can be improved to have higher efficacy. Alternately, further investment in methods to induce immunity might provide significant deterrence to terrorist groups planning to use such weapons. Critics have suggested that developing treatments for specific agents does not lower the overall threat, instead forcing a terrorist to choose a different agent. Some experts urge that new, broad-based methods to develop resistance against a wide variety of agents must be developed.

Restricting CBW production

Prevention also involves increasing the difficulty of CB and toxin production by regulating and registering domestic purchase of 'dual-use' equipment. This is a hefty challenge given the wide availability of information, materials and equipment, and that much of the resources needed to make CBW have legitimate scientific purposes. It may also have an adverse economic impact on the chemical, pharmaceutical and health industries, which have a legitimate need for this equipment.

Increasing preparedness

One approach has been through funding training programmes for first responders and equipping them with the tools to detect and protect themselves. Emergency response involves establishing special care facilities for victims and protecting first responders from the weapon's effects. If first responders became victims through inadequate personal protective equipment or contamination of emergency vehicles, increased casualties and greater social disruption could result.

These improvements include further development of hospital and laboratory capacity; development of response networks for timely communication during a bioterror event; development of protocols for communicating between local, state and federal responders; and improved education of physicians and health care providers. Efforts are underway in various countries to develop emergency reserves of medicines.

New global warning system

The Global Public Health Intelligence Network II (GPHIN II), the global 'early warning system' responsible for gathering and disseminating preliminary reports of public health threats around the world, has been enhanced to provide early warning information in all UN languages, allowing additional information to be screened, shared and acted upon quickly. GPHIN II currently identifies, in real time, the first signs of some 40 per cent of outbreaks subsequently verified by the World Health Organisation (WHO). On average, the WHO investigates 200 outbreaks annually of which around 50 will require an international response.

GPHIN was also one of the principle partners to the WHO that contributed to the global response to SARS. Throughout the outbreak, GPHIN provided raw intelligence that helped the WHO maintain up-to-date and high-quality information. Because local news media stories often provide the first indication of a public health threat, GPHIN II monitors global media sources and global health and science websites for early word of disease outbreaks, contaminated food and water, bioterrorism and exposure to chemical and radioactive agents, and natural disasters. It also monitors issues related to the safety of products, drugs and medical devices. Subscribers to GPHIN include government agencies that provide public health surveillance and non-government organisations involved in public health issues.

The importance of intelligence

Intelligence is the all-important countermeasure, and a number of pre-emptive arrests have taken place in NATO countries recently of suspects reportedly plotting CB attacks. US federal law enforcement agencies now have greater power to gather intelligence on terror groups and in the UK anti-terror legislation and powers of arrest have been substantially tightened. Increased information about terrorist groups, combined with apprehension of any who have CBW, helps to provide further barriers to terrorist acquisition and use of these weapons. However, solving the root causes of terrorism – particularly that of an apocalyptic nature – is a far more ambitious prospect.

Smuggling of nuclear materials and terrorism

The increase in the past ten years in trafficking in nuclear materials considerably raises the threat threshold for nuclear terrorism, in particular, the acquisition by terrorists of radiological sources that could be used in radiological dispersal devices (RDDs, dubbed 'dirty bombs'), which are conventional improvised explosive devices (IEDs) laced with radioactive material. There is also a risk of terrorists seizing special nuclear materials (SNM Ð uranium and plutonium).

However, this is generally viewed as a lower risk as SNM are used in nuclear weapons, and are therefore more secure than radioisotopes – millions of sources of which are used in hospitals, research laboratories and oil exploration. They are also used in industries in gauges, sterilisers and metal irradiators and in the home – for example, in domestic smoke alarms.

Fissile materials

There has also been trafficking of SNM by criminal networks in Russia and the former Soviet Union (FSU) and also in south-east Asia due to the interest by terrorist organisations in acquiring nuclear and/or radiological weapons. There are growing stockpiles of fissile materials – 3,700 metric tons of plutonium and highly enriched uranium (HEU) – enough for hundreds of thousands of nuclear weapons, in about 60 countries. Plutonium stocks are a consequence of decommissioned weapons programmes and also the end result of civilian nuclear power programmes.

Lost, stolen, abandoned

The greater risk lies in the acquisition of radioisotopes used in industry or medicine. According to the International Atomic Energy Authority (IAEA), from just eight confirmed cases of trafficking in radioisotopes in 1996, in 2003 there were 51. The greatest number of cases has been recorded in Russia, countries of the FSU and in eastern Europe. Many of the sources are highly radioactive. Hundreds of thermo-generators made in Russia and the US, which produce heat to drive power generators in remote areas and are not adequately secured, each contain as much strontium-90 as was released by the 1986 Chernobyl accident.

Authorities have intercepted attempts at sales of materials, while others have been actual seizures of materials. Out of 300 confirmed cases in a ten-year period up to 2004, more than 200 have occurred in the past five years. The IAEA's statistics also do not include radioactive sources that have not necessarily been stolen but have gone missing. Medical devices and construction equipment have been found abandoned in scrapyards, vehicles and residential buildings, and even inside cupboards, garden sheds, and garages. In the United States, the Nuclear Regulatory Commission receives reports of around one radioactive source per day being lost, stolen or abandoned (this being an equally dangerous occurrence, as abandoned radioactive materials, once handled and dispersed, can cause radiation sickness and possible multiple fatalities). There are still 1,000 radioactive sources unaccounted for in Iraq, mainly as a result of looting episodes at abandoned nuclear facilities following the 2003 invasion.

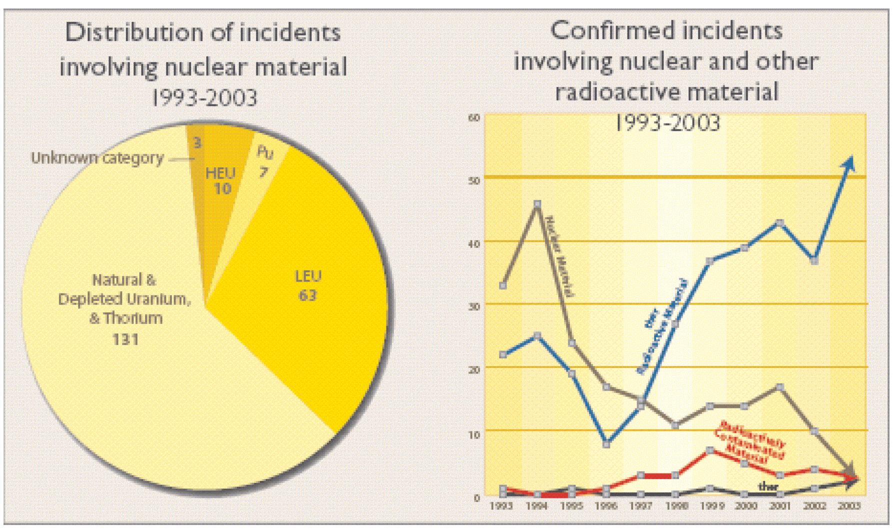

Figure 1. Incidents of nuclear smuggling between 1993–2003
Source: Orlov V.: Illicit Nuclear trafficking & the New Agenda, IAEA Database, 2003

Examples of nuclear smuggling abound in the FSU. Take the arrest at a border crossing point in October 2004 of a resident of Yerevan, Armenia while trying to export cesium-137 (used mainly in medicine) in his car. The confiscated cesium-137 was placed into storage at a special warehouse but the amount was not specified (as is often the case). In 2003 at Tbilisi, Georgia, a driver was stopped by police and found to be carrying lead-lined boxes containing strontium-90 and caesium-137. In Belarus, customs officials seized 26 radioactive cargoes between 1996 and 2003, six of them originating from Russia.

But a recent example involving radioactive sources in the FSU did not involve smuggling: the surrendering by a Russian nuclear physicist of eight containers filled with 400 grams of plutonium-238 (which is not weapons grade) to local police in November 2004. Subsequent Russian media reports said that the amount of plutonium involved was much smaller, totalling only one milligram. This is a typical pattern; initial reports may overestimate or guess at amounts involved, and precise quantities often cannot be verified. But regardless of the amount, a serious security risk is indicated. In this case, according to the scientist, he found the containers eight years ago at a dump.

Trafficking has spread to south and south-east Asia, where police and intelligence operations and occasionally border controls have led to the apprehension of nuclear smugglers. It is suspected that incidents are under-reported or that authorities are not capable of monitoring all trafficking. Of 25 sources stolen from a steel company in Indonesia in October 2000, only three have been recovered. In June 2003 authorities in Thailand, acting on information from American investigators, seized a large, unspecified amount of cesium-137 from a Thai man intercepting a plot to sell it to terrorists. The caesium was believed to have originated in Russian stockpiles and had been taken to Thailand through Laos. Police officials in Thailand said the smuggler had expected to be paid $240,000 for the material, which he believed to be uranium (which, ironically, would not be anything like as radioactive as the caesium).

Where have the sources gone?

In the decade from 1992 the IAEA records at least 370 recorded incidents of illicit nuclear and radioactive material trafficking in the FSU or cases where materials originated in the FSU. Given the number of incidents and their rise – and the long period during which the incidents are said to have occurred – questions remain: who now possesses these materials? Are they now in the hands of Al-Qaeda or the Chechens (who have already attempted deployment of an RDD, in December 1995)? Have they been abandoned by thieves who have not recognised their possible market value? Or have they irradiated people trying to construct weapons out of them or disperse them by other methods?

Some observers believe that RDDs have already been used, for example by insurgents in Iraq, who would have had access to looted nuclear materials. Unless radiation detectors are deployed at the site of explosions, there is no way of knowing if an RDD has been used. Many devices would explode with the same effects as a conventional improvised explosive device. That is, unless sufficient highly radioactive material was used, and in optimum conditions for maximum damage – which could result in mass radiation casualties.

Deliberate dispersal of radioactivity may not necessarily be accomplished by using explosives. The best-known example of such an incident occurred in Goiania, Brazil, in 1987, when locals broke into an abandoned cancer clinic and stole a medical device containing large amounts of caesium. The villagers broke it apart to salvage the metal; within days nearly 30 people suffered serious radiation injuries and four died. Hundreds more were treated for exposure and dozens of buildings were demolished.[3]

Technical obstacles facing terrorists

Should radioisotopes or SNM now be in the hands of terrorists, it may, as many authorities warn, be only a matter of time before they are deployed. However, there are specific technical challenges to such deployment.

Terrorists might, for example, somehow obtain HEU from the more than 130 research reactors worldwide that use HEU as fuel, or break into a nuclear power plant or laboratory and steal SNM.

But what they do with it once they have acquired it is open to a variety of opinions, from those holding that – with expert help, most likely from insiders – terrorists could attack a facility mob-handed, construct an improvised nuclear device (IND), or blow up SNM at the actual site of their theft using smuggled high-explosives. Although details of their construction are classified, it is possible for terrorists to create a sizable nuclear detonation from an IND.

In terms of actually building a fission device, it must be remembered that it has taken just a handful of countries many years to build nuclear weapons, expending vast resources. Despite the proliferation of unclassified information on nuclear bomb-building, the finer details are still classified, and terrorists would probably need help from scientists Ð such as an A Q Khan. Even if a group obtained a complete device – a nuclear warhead – they would need insider knowledge on its permission action links (arming codes) to set it off.

Constructing and detonating a RDD is a far simpler option, as is the abandonment of radioactive material at a location to cause maximum injury. However, even the fabrication of RDDs poses problems for terrorists. While some radiotherapy sources typically contain no more than a few hundred curies of gamma-emitters like cesium-137 or cobalt-60, sources of this size, if removed from their shielded containers could present an acute hazard to individuals handling them.

To get at the source they must somehow extract the isotope, often in powder form, and incorporate it into a weapon without getting fried first. According to some scientists, however, a terrorist could break open certain types of medical or industrial equipment to obtain the radioactive material without receiving a lethal dose. But if they were to steal spent fuel rods from a nuclear power plant, they would probably be irradiated to death before getting as far as inflicting a suicide bomb attack. This is not to say that such an attempt is impossible – but it is not as easy as making and deploying a conventional IED.

Improving security and detection

These factors do not, however, diminish the problem of nuclear trafficking. Various recommendations to improve security include making more technical help available to secure nuclear materials, as well as enhanced law enforcement and improved export and border controls. The IAEA has specifically recommended that an international export control system must completely regulate companies and individuals that potentially comprise the nuclear black market – as it is often those companies, operating on a transnational level, rather than the military or weapons facilities of a country, that further proliferation and trade in such materials. Improved intelligence sharing is also needed to learn more about the routes and patterns of nuclear traffic.

Programmes have been set up, funded by and large by the US, to secure Russia's nuclear materials from its weapons programmes and also the multitude of its other radioactive sources previously used in industry and medicine. The IAEA has said that tracking down some of these latter sources is like 'searching for a needle in a haystack'. An example of the agency's work in this regard is a clean-up operation in Georgia that has been conducted since 1997 to secure strontium sources in a forest area of the country which had seriously irradiated those who had discovered them. However, many more such 'orphan' (discarded) radioactive sources remain lost, abandoned, or otherwise outside of regulatory control.

Improved inventory procedures are also at the heart of furthering security. Inventory accounting procedures at Sellafield were found wanting in February 2005, when as much as 30 kg of plutonium – enough for around six bombs – was reported as 'unaccounted for' as a result of mistakes in inventory accounting. This is somewhat reminiscent of the 100-plus 'suitcase bombs' – miniaturised portable nuclear devices constructed by the FSU – that in the 1990s were rumoured to have gone missing. Although the Sellafield plutonium (as with the Russian suitcase bombs) was claimed to be not actually misplaced, the reports about its 'disappearance' did not inspire public confidence.

Meanwhile, technological solutions are being applied to radiological detection and interception. As well as improved detection devices that can identify isotopes precisely, other, more ambitious programmes are in progress, such as US research at Los Alamos National Laboratory into the use of cosmic ray muon particles – energetic particles that shower Earth from space – to detect smuggled nuclear material held in vehicles and cargo containers.

By tracking the muons, the scientists can see through lead, steel and other heavy shielding that might be used to mask a radioactive source. The X-ray and gamma-ray detectors currently used at US borders are inefficient for detecting nuclear materials shielded with lead or steel, but with an average energy of three billion electron volts, most muons can penetrate about 1.8 m of lead. Unlike airport baggage screeners, which require people to interpret images and data, the muon detector can be trained with known examples until it can directly decide whether a cargo contains nuclear materials.

Inconsequence of WMD conventions and treaties

Existing WMD conventions and treaties do not consider attacks on chemical, oil, pharmaceutical and other facilities as CBR or WMD attacks, as part of their obligations despite the fact that such attacks cause mass casualties and destruction of plant and animal life.[4] Consequently terrorists and some countries may use this kind of attack and avoid sanctions.

Because of this use of conventional weapons to achieve the same results as unconventional weapons, the industry series of CBR meetings originated an initiative of defining WMD as WMD in a limited sense and in a wide sense. WMD in a limited sense includes nuclear, chemical, biological and toxin weapons, agents and precursors. This definition is the same as that referred to by the phrase CBR agents or weapons.

WMD in a broad sense includes all toxic chemical substances if they are used as means of attack or if they are the target of attack, all microorganisms and their products, all industrial facilities that use toxic chemicals (toxic industrial chemicals, TICs, or materials, TIMs) in their process of production, transport and stockpile if they are a target of military or terrorist attack. This goes beyond the current definition of CBR.

Present WMD nonproliferation policy includes only CBR or WMD in a limited sense.

Deficiency of the international approach towards WMD terrorism

WMD nonproliferation policy is also characterized by the lack of unity of international policy towards WMD terrorism. The reasons may lie in different opinions on international terrorism, definitions of WMD, and different approaches to nonproliferation. The creation of a uniform international policy in fighting CBR terrorism is further thwarted by wider political-economic interests and formal alliances between key individual international subjects. There are no common policies in fighting CBR terrorism or common responses on international or even national levels. September Eleventh has only appeared to create a common international policy on WMD terrorism. Security Council resolution 1373 established an antiterrorist committee and world antiterrorist coalition, but still there is no international consensus on policy as can be confirmed by the example of antiterrorist intervention in Iraq. Although NATO does consider CBR as part of WMD, the emphasis in WMD policy is nuclear. The CBRN battalion was established for defence, assessment, identification and decontamination of CBRN agents. The lack of unity within NATO has established a deep gap in the wider international community and has made the creation of a common international policy against terrorism more difficult.[5] International policy on both fighting terrorism and nonproliferation of WMD should be created and realized in close cooperation not only between all UN member states but also on regional levels.

Still another issue confounding nonproliferation of WMD, its doctrine and strategy is the indifference of the political establishment of many of undeveloped countries and countries with economies in transition. Most of these countries do not possess CBR and do not seek to possess them. Since they do not have CBR, they do not consider WMD a threat to them and WMD nonproliferation policy is not taken serious. As a result of these opinions, these countries may sign international agreements on WMD nonproliferation as a formality, but it is without true political will and support, without the needed political and technical expertise, without adequate personnel, materiel, and organizational support. These countries do not have enough experts in the field of CBR weapons and protection, so a critical mass in public opinion cannot be formed that could give positive support to the opinion and actions of the politics. Yet these countries may be at a higher risk for WMD terrorism because of their lack of ability to respond. Additionally, political aptness may be more important than professionalism; so that with a change of government, the small number of security personnel in police and military educated in more developed countries changes also. The results of such situations are politicians not motivated to support WMD nonproliferation and without the science and professional to influence and support the country in such technological issues.

Changing of the proliferation environment

Recent revelations in Iraq, Libya, and Iran underscore the fact that while proliferators are increasingly capable of producing the means to manufacture WMD on their own, most remain dependent on foreign assistance for resolving critical production, design, and development challenges or for supplying special materials or critical technologies and components.

Thus, during the 1990s, the missile programs of Libya, Iraq, and Iran depended on Russian, Chinese, and/or North Korean assistance, while the nuclear programs of Libya and Iran could not have progressed very far without the help of the A.Q. Khan network.

This point cannot be overemphasized: Since World War II, nearly every major missile and WMD program in the developing and the developed world has benefited from some kind of foreign assistance – in the form of official help from friendly states, unauthorized assistance by sympathetic foreign officials, or assistance by government officials, firms, or individuals motivated by mercenary considerations. Programs that did not receive such assistance are the exception rather than the rule (see Table 1).

The cases of Libya, Iraq, and Iran also demonstrate that regional proliferation developments must be seen in a worldwide context against the background of the emergence of a globalized supplier's market, whereby the profit motive and the need to cooperate to circumvent export controls trump ideology and politics as the basis for strategic alliances among proliferators and suppliers.[6]

The appearance of nuclear supplier networks trafficking in the most sensitive technology and know-how and the possible emergence of North Korea as a purveyor of fissile material or weapons could enable aspiring proliferators and states not previously of proliferation concern to acquire WMD without prior warning. These developments also create circumstances in which proliferation roll-back (for example, Libya) or coercive disarmament successes in a country formerly of proliferation concern (for example, Iraq) could be overturned rapidly, should the former proliferator, for whatever reason, revert to its earlier ways.

Such a situation, if it came to pass, would mark the emergence of a true "revolution in proliferation affairs" that not only would greatly complicate efforts to track WMD proliferation but also could pose one of the most difficult challenges to international stability.

Table 1. Foreign Assistance to Select Ballistic Missile and WMD Programme

Origin	Recipient	Type	When	Comments
U.S	USSR	Nuclear	WWII and after	Espionage
Germany	U.S./USSR	Missiles	Post – WWII	Spoils of war
U.S.	UK/France	Nuclear	Late 1940s and after	Official assistance
France	Israel	Nuclear	Mid 1950s – early 1960s	Official/unofficialassistance
USSR	China	Nuclear	Late 1950s	Official assistance
USSR	Syria	CW warheads	Late 1970s – early 1980s	Official assistance
Netherlands	Pakistan	Nuclear	1970s	Industrial espionage
China	Pakistan	Nuclear	1980s	Official assistance
Egypt	DPRK	Missiles	1980s	Official assistance
Germany	Argentina/Egypt/Iraq	Missiles	1980s	Private businessmen*
Germany	Iraq	Nuclear	1980s	Private businessmen*
China	Pakistan	Missiles	Early 1990s	Official assistance
DPRK	Iran/Pakistan/Libya/Syria/Iraq	Missiles	1980s-present	Official assistance
Pakistan	Iran/Libya/DPRK/Others?	Nuclear	Late 1980s – 2003	Private assistance+
Russia	Syria	CW	Early 1990s	Government officials*
China	Syria	Missiles	Early 1990s	Official assistance
Russia	Iran	Missiles	1990s – present	Official assistance+
China	Iran	Missiles	1990s – present	Official assistance
China	Iran	CW	1990s – present	Private businessmen+
Russia	Iraq	Missiles	1990s	Government officials+

Source: Michael Eisenstadt, "Missiles and Weapons of Mass Destruction (WMDs) in Iraq and Iran: Current Developments and Potential for Future Surprises," in The Report of the Commission to Assess the Ballistic Missile Threat to the United States, Appendix III, Unclassified Working Papers, July 15, 1998, 120, available at <http://www.fas.org/irp/threat/bm-threat.htm>, updated.
Key: *Unauthorized or illegal business transactions. + Degree of official knowledge and support unclear.

Conclusions

In sum, lessons learned from experiences in Iraq, Libya, and Iran in the past several years underscore the fact that while the international proliferation regime is frayed and in serious need of revision and updating, many traditional nonproliferation and counterproliferation tools and concepts remain useful. What is needed is not necessarily a new set of tools and concepts, but rather a new understanding of how the traditional tools and concepts may be used to promote the nonproliferation and counter-proliferation objectives of the United States and its allies under new and challenging circumstances.

Awareness of WMD nonproliferation policy can and will expand. The recognition that CBR is a part of WMD has included these agents in international policies that previously had focused only on nuclear weapons. International discussions which aim to involve as much of the scientific and professional public as possible can go along way towards raising awareness of the similarities and differences between different WMD. This can influence easier and quicker changes of international agreements, conventions and protocols. These international discussions can also become a way to involve and increase political will in undeveloped countries and countries with economies in transition and who do not possess WMD.

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